Service Performance Insight, LLC

2018 Professional Services Maturity™ Benchmark

KIMBLE

February 2018

Service Performance Insight

Service Performance Insight (SPI Research) is a global research, consulting and training organization dedicated to helping professional services organizations (PSOs) make quantum improvements in productivity and profit. In 2007, SPI developed the PS Maturity Model™ as a strategic planning and management framework. It is now the industry-leading performance improvement tool used by over 20,000 service and project-oriented organizations to chart their course to service excellence.

The core tenet of the PS Maturity Model™ is PSOs achieve success through the optimization of five Service Performance Pillars™:

- Leadership
- Client Relationships
- Human Capital Alignment
- Service Execution
- Finance and Operations

The SPI Advantage – Research

SPI Research provides an informed and actionable third-party perspective for clients and industry audiences. Our market research and reporting forms the context in which both buyers and sellers of information technology-based solutions maximize the effectiveness of solution development, selection, deployment and use.

The SPI Advantage – Consulting

SPI Research brings years of technology service leadership and experience to every consulting project. SPI Research helps clients ignite performance by objectively assessing strengths and weaknesses to develop a full-engagement improvement plan with measurable, time-bound objectives. SPI Research offers configurable programs proven to accelerate behavioral change and improve bottom line results for our clients.

To provide us with your feedback on this research, please send your comments to:

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For more information on SPI Research, please visit:

www.spiresearch.com

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Table of Contents

Figures

Tables

Welcome to the 2018 Benchmark Report - Don't Miss our Related App!

It is always interesting to look over the neighbours' walls and see how their gardens are growing. In a sense, the 11th annual Service Performance Insight's Professional Services Maturity Benchmark Report is an opportunity to do that.

From the responses of hundreds of PS firms who share generally confidential information, such as detailed financial statements, the team at SPI are able to draw conclusions about what is happening across the industry as a whole. That gives you an opportunity to compare your own numbers with the average. (Kimble has also created an app to do this using SPI data which you can find at https://www.kimbleapps.com/vitalsigns/). The report also identifies and analyses trends that you may or may not see in your own business.

For instance, the report shows revenue growth falling back somewhat - to an average of 8% year on year. But much more encouragingly, profitability, measured as EBITDA, has never been higher, at 16.8%. The underlying trend here appears to be the beginnings of a rise in productivity, with billable hours up and administrative hours down across the sector.

This pattern is one we see at many of our customer organizations. Kimble is all about supporting professional services businesses to grow and scale while reducing the administrative burden.
The widespread adoption of Professional Services Automation may result in increasing productivity and profitability across the PS sector throughout 2018. But, I would argue, technology won't do this alone. I often say that an application is only as good as the behaviour it drives.

Kimble comes with a configurable out of the box functionality which led to it ranking highest for both time-to-value and customer satisfaction in G2 Crowd's Winter 2018 report. It also comes with a best practice framework, laid out in a series of Best Practice Guides available on the Kimble website. These show how PSA can be used most effectively to create accurate forecasts, resource proactively, and adapt to changing markets, improving business performance.

Kimble was founded by people like myself, who previously grew and sold consulting businesses. We are focused on the Professional Services sector and have a dedicated development team who are constantly honing the product.

We know that many of our customers are experiencing growth in both revenue and profit above the average, and we would like to congratulate them. We would also like to congratulate three of our customers who were included on the Best of the Best list.

Having had a look at the report and seen what is happening in the best-performing gardens, you may feel yours could do better. If you think Professional Services Automation may be of interest, or if would like more information about our Best Practice Framework, please do get in touch via the Kimble website.

Mark Robinson

2017 Was a Very Good Year for Professional Services

The global economy appears to have finally recovered from the Great Recession of 2008. The stock market has surpassed all previous high-water marks, with no apparent end in sight for one of the longest bull markets in history. Revenue growth in the 4 trillion-dollar Professional Services sector slowed somewhat in 2017 but headcount growth soared to its highest level in over 10 years, predicting strong revenue growth in 2018. In this, the 11th annual Professional Service Maturity™ benchmark, PS industry fundamentals remain very strong.

Based on input from 456 PS firms from around the world, year over year PS revenue growth, for the 2nd year in a row, dropped below 10% to 8%. But PS job creation rose to a new high of 9.3% as skilled millennial workers continued to surpass retiring baby boomers to become one of the largest cohorts. The consulting job market is white-hot but appears to have stabilized somewhat as voluntary and involuntary attrition declined to 12.4% from its peak in 2016 of 13.5%.

The 456 PS organizations represented in this benchmark employ over 158,000 consultants who each produced, on average, $196,000 in annual revenue; collectively these firms generated over $25 billion in PS revenue. With improvement in most major metrics, these firms reported significantly higher year over year earnings with average net profit moving up from 14.2% in 2016 to 16.8% in 2017. This is the highest average net profit ever reported in this benchmark.

Many leading indicators improved in 2017. Backlog grew from 45.6% to 46.2% while consultant billable utilization increased from 70.4% to 71.5%. Higher utilization, combined with a richer percentage of billable headcount (75.5% in 2017 versus 74.6% in 2016) were the primary catalysts for profit improvements.

Signs of increasing competitive pressures were evidenced by a decline in the size of the sales pipeline from 189% to 174%; while the win ratio decreased from 48.5% to 48%. With the surge of hiring, firms had to spend time and energy recruiting and ramping new consultants which resulted in a decline in revenue per consultant (from $205K to $196K) and revenue per employee (from $163K to $159K).

In 2017, the perennial challenge of talent management has risen to the top of the list, closely followed by the on-going issue of achieving revenue and margin targets. To remain competitive, PSOs must intensely focus on creating a continuous learning environment with meaningful work. Great places to work are characterized by the investments they make in their cultures and employees.

As Service Performance Insight celebrates our 11th year in covering, analyzing and working to help improve productivity and profit for professional services organizations, we say thank you. We especially thank the thousands of firms who have contributed to this vast body of knowledge and our industry sponsors who help make this high-quality research possible. Most importantly, we thank you, our readers, who depend on the PS Maturity™ Benchmark to evaluate and improve performance. We hope the insights provided by this, our eleventh PS Maturity™ benchmark, will prepare you for the challenges and opportunities that lie ahead.

1. Foreword

Despite growing protectionism and nationalism, 2017 was a banner year for business, especially in the tech sector. The people-based professional services industry transcended looming changes in healthcare, taxation and the ability to employ non-resident workers with ease, producing the highest net profit yet recorded. Tech companies seem to have adapted to new security and accounting standards without a hiccup. Hybrid business models and billing models have not dampened the productivity or profit of Professional Services organizations; in fact, many firms reported 2017 as their best year ever. Based on a surge in hiring, the PS sector is poised for another record year in 2018.

Service Performance Insight (SPI Research) is proud to introduce the ***eleventh-annual Professional Services Maturity™ Benchmark***. For over a decade we have researched, benchmarked and built a maturity model to:

- Δ Help professional services (PS) executives better understand how their organization compares to others that are both similar in size and scope of work, as well as to the broader professional services market; and,
- Δ Provide an objective, fact-based framework for performance improvements that helps pinpoint the areas that will provide the greatest impact.

In 2007, SPI Research developed the PS Maturity Model™ as a strategic planning and management framework. It is now the industry-leading performance improvement tool used by over 20,000 service and project-oriented organizations to chart their course to service excellence.

The Numbers Don't Lie

The PS Maturity™ model helps executives compare and analyze their own performance so they can build consensus around the actions to take, and where to start, while quantifying the benefits of change. Analyzing the benchmark data by vertical market, geographic region and organization size gives PS executives an

Table 1: Five-year PS Key Performance Metrics

Key Performance Indicator (KPI)	2013	2014	2015	2016	2017
Annual PS revenue growth	10.0%	10.0%	10.2%	9.0%	8.0%
Annual PS headcount growth	7.5%	8.1%	7.8%	6.5%	9.3%
Percentage of billable personnel	71.2%	75.1%	70.4%	74.6%	75.5%
Employee Attrition	8.3%	8.9%	12.9%	13.6%	12.4%
Annual revenue per consultant (k)	$193	$197	$198	$205	$196
Annual revenue per employee (k)	$155	$167	$157	$163	$159
Profit (EBITDA %)	11.4%	13.2%	15.5%	14.2%	16.8%

Source: SPI Research, February 2018

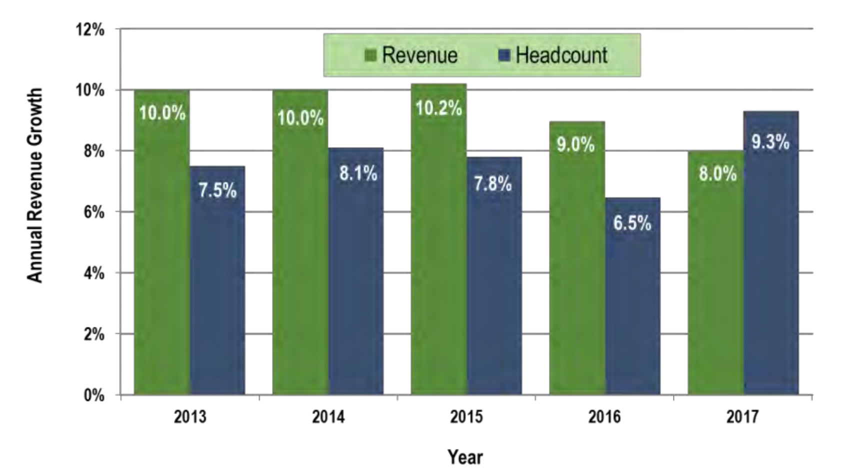
accurate comparison to their peers and the market at large. Over 3,000 firms have completed SPI's benchmarking surveys over the past eleven years.

Change is constant in professional services with each year bringing new geopolitical, socioeconomic and technology disruption. After all, without disruption and change, professional services would not exist, because clients would not need expert help to navigate new opportunities and landmines. Over the past eleven years of benchmarking, Service Performance Insight (SPI Research) has seen great change in the marketplace, particularly in the ever-growing adoption of integrated, cloud-based business applications which have helped firms wring ever higher levels of productivity and profit out of this labor-based business.

This year's survey reached a near-record number of respondents (456). With growth in the number of completed surveys, data accuracy improves and enables us to expand coverage into more sub-verticals and geographies. This wealth of data means the depth, breadth and accuracy of the benchmark continues to expand. This year we have significantly improved the statistical depth and data validity for architects and engineers, accountancies and marketing and advertising firms. We also garnered input from a host of new PS segments such as government contractors and healthcare services. Every year SPI Research has worked to broaden the survey to reach more geographic regions so that it truly represents a worldwide performance survey. While we have not achieved all our goals, we are told this benchmark is the gold standard for the consulting industry. It is used by well over 20,000 billable professional services organizations to benchmark their operations and gain insight into ways they can improve.

Productivity improvements are critical in professional services. As the global economy picks up steam, organizations in every industry are having to work harder to achieve higher productivity, without adding substantial cost. ***For the first time, PS headcount growth exceeded revenue growth, indicating firms are feeling confident enough in the future to hire in advance of sales (Figure 1).*** This is really a big deal as it means firms are poised for growth in 2018. To combat the shortage of skilled consultants, PSOs are using a host of creative recruiting and skill-building strategies to squeeze ever higher levels of productivity from their workforces.

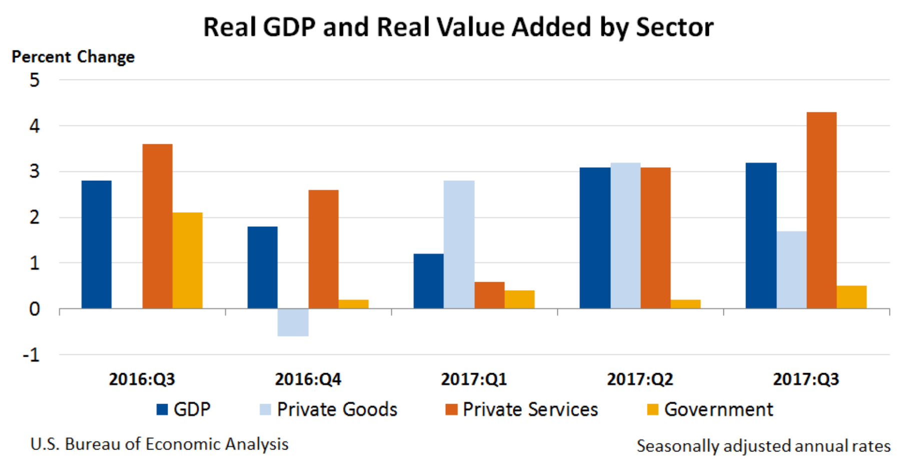
Figure 1: Annual PS Revenue Growth vs. Headcount Growth



Source: SPI Research, February 2018

PS Sector Growth is Slowing

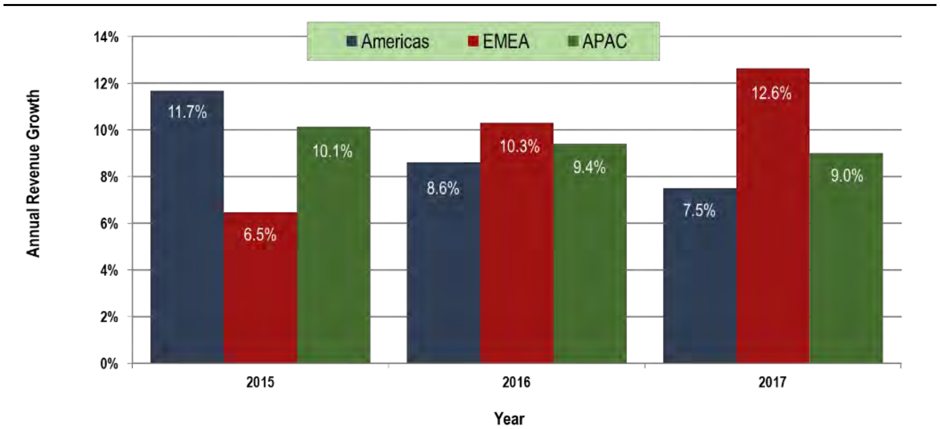
Figure 2: 2017 US Sector GDP



Source: Bureau of Labor Statistics 2018

The world has become services driven. The service sector is both the largest and the fastest growing component of the U.S. economy. Fifty years ago, the service sector accounted for 60% of U.S. output and employment. Today, the service sector's share of the U.S. economy has risen to 80%. Look under the hood of almost any industry and you will find traditional healthcare, financial services and manufacturing companies looking to grow services as a predictable and profitable revenue stream. This unprecedented growth in the services economy is not without its own set of challenges as new business models and buying preferences emerge. Service providers are exploring subscription, usage based and managed services pricing and billing models, hoping to secure annuity clients and revenue streams.

Figure 3: Annual Revenue Growth by Geography

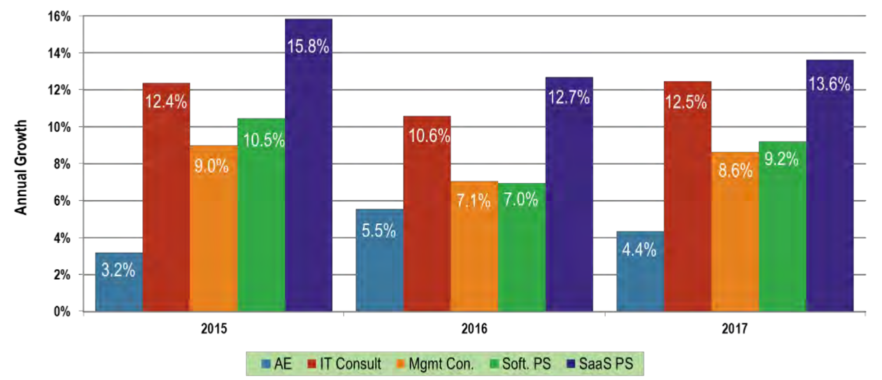


Source: SPI Research, February 2018

Although professional service industry growth continued, revenue growth slowed from 10.2% in 2015 to 8% in 2017 (Figure 3). This is the second time since the recession that overall PS sector revenue growth has dipped below 10%. By geography, EMEA reported significant improvement while the Americas and Asia-Pacific experienced a decline. After years of tepid growth, Europe is making a recovery with revenue growth expanding from 6.5% in 2015 to 12.6% in 2017. The euro zone's annual economic growth rate outstripped that of the U.S. in the third quarter setting up 2017 as the best year for the currency area since financial markets crashed a decade ago. For the year, the Eurozone was on track with the U.S. at 2.5% GDP growth. PS revenue growth slowed from 11.7% in 2015 to 7.5% in 2017 in the Americas. Asia-Pacific also experienced a decline in revenue growth from 10.1% to 9.0%.

Underlying top level year over year revenue growth, we see uneven sector performance with organizations focused on the cloud, security, IOT, analytics and artificial intelligence experiencing significant growth while more traditional segments of accounting, architecture and networking are seeing consolidation and price pressure (Figure 4). Now is the time for all PSOs to carefully evaluate their markets and market positioning to ensure they stay ahead of the curve and to seize emerging market opportunities before they become mainstream and commoditized.

Figure 4: Annual Revenue Growth by PS Industry Segment

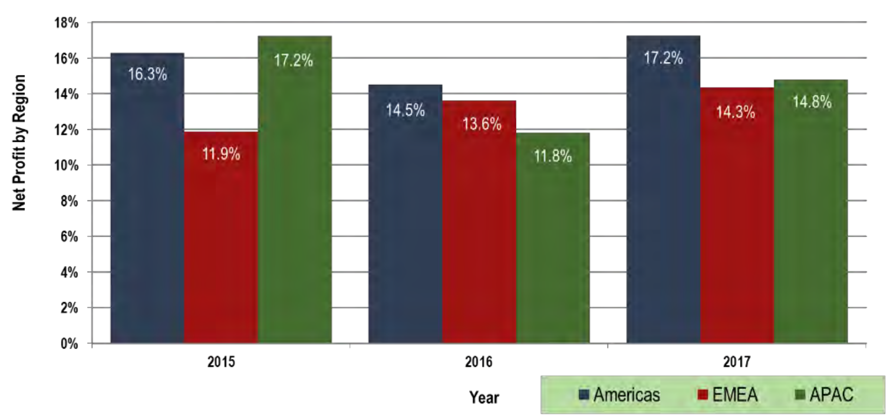


Source: SPI Research, February 2018

But Profits Soar!

Overall PS sector net profit climbed to its highest ever reported ceiling of 16.8% (Figure 5). Buoyed by cloud consulting net profits of 26.2%, more and more service providers added cloud consulting competencies to grab some of the fairy dust. When comparing year over year income statements, the percentage of low margin pass through revenue (hardware, software and equipment) and zero margin re-billable travel declined, which had a positive impact on net profit as these are dilutive sources of

Figure 5: Net Profit Comparison by Geographic Region



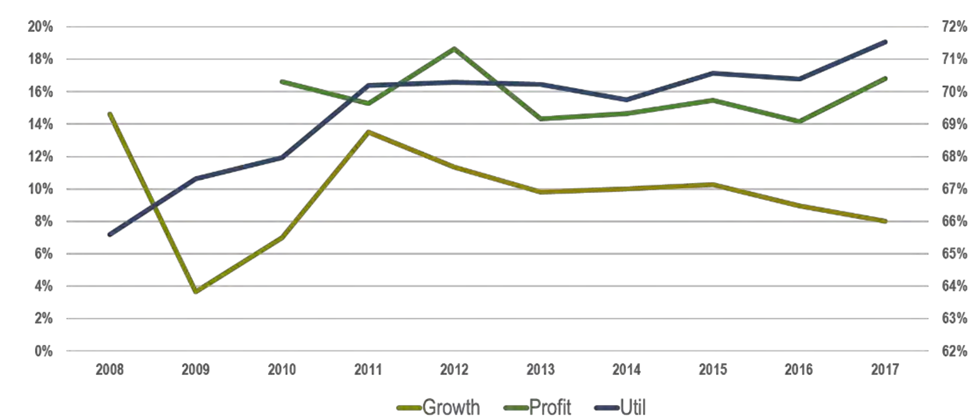
Source: SPI Research, February 2018

revenue. Pass-through revenue has a negative impact on overall profit because these revenue sources produce less margin than direct labor margins.

Show Me the Money!

For anyone who wants to know how money is made in a labor-based business, you need to look no further than at workforce productivity. Despite legions of time-saving devices and technology, no one has yet found a way to make an hour longer than 60 minutes, nor have they discovered how to make a day last more than 24 hours. But what the PS industry is finally discovering is the secret is to work smarter not harder. This means PSOs are reducing the time and annoyance of administrative tasks like entering time and business expenses or writing and continually updating project status reports. No more endless resource scheduling meetings. No more entering and reentering reams of data into finance and accounting systems. Instead of getting on an airplane at the crack of dawn on a Monday morning and returning tired and exhausted on a Friday night, consultants can now work from the comfort of home. As shown in Figure 6, PS workforce productivity improved in 2017 and so did profit. Billable hours went up while administrative hours went down. Anytime there is a significant uptick in billable utilization, profits move up in tandem. Growth is one of the best catalysts for productivity as consultants do their best and most profitable work when there is plenty of it to go around. Time and time again we see a powerful correlation between growth and profit.

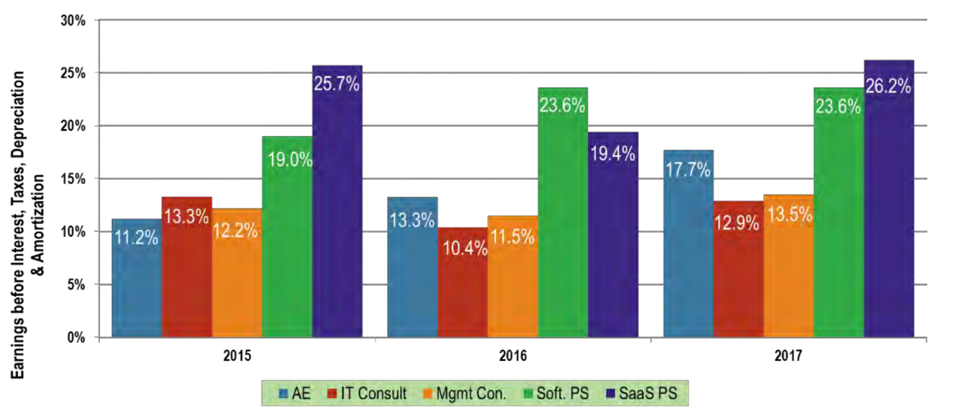
Figure 6: Growth vs. Profit VS Utilization



Source: SPI Research, February 2018

Figure 7 shows the wide disparity in reported net profit for the five largest verticals represented in the benchmark. Clearly the fastest growing segments, embedded cloud and Software PS, produce the best margins based on high demand and the ability to deliver remotely. With more input from architect and engineering firms, along with a commensurate improvement in the construction industry, their profit also improved nicely. In fact, all five PS sub-verticals reported better year over year profit. The overall fundamentals of the Professional Services industry remain very strong with PSOs making tremendous strides in improving productivity. Today far less time and cost are spent on administration and travel as PS-specific business applications have enhanced productivity and virtual consulting delivery has reduced the burden and cost of travel.

Figure 7: Net Profit (EBITDA) by PS Industry Segment

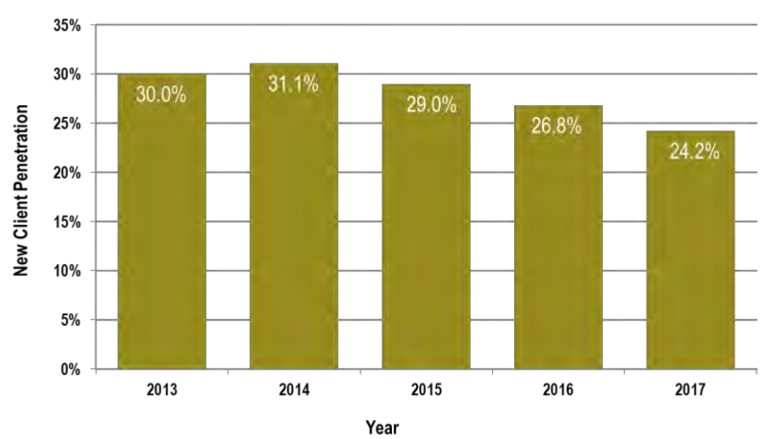


Source: SPI Research, February 2018

Competition Intensifies

Despite primarily good news and positive improvements in net profit and project backlog, some issues demand consideration. Across the benchmark, many of the client relationship metrics declined. The ratio of new client to existing client revenue declined from 26.8% of total revenue in 2016 to 24.2% in 2017 (Figure 8). With the economy finally growing again, PSOs are garnering more repeat business from existing clients. This scenario is not a bad thing, but it means they are not as aggressively going after new client revenue as they had to during the lean times. In a global market with new entrants springing up daily to challenge the status quo, all PSOs must improve their sales, marketing and solution development capabilities.

Figure 8: Percentage of Total Revenue from New Logo Clients

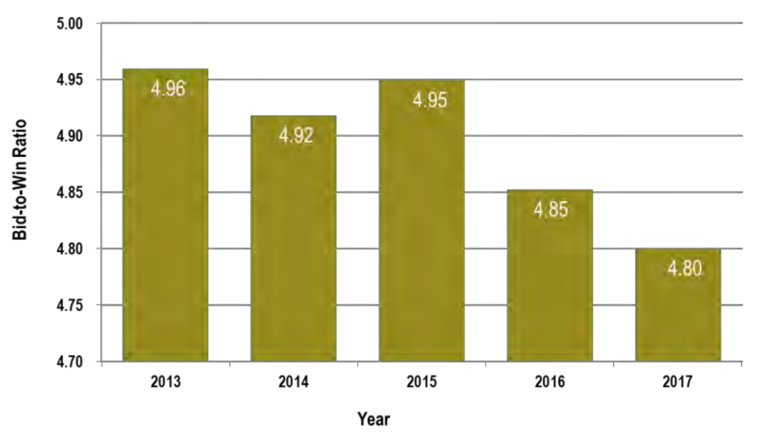


Source: SPI Research, February 2018

One of the proven success formulas for aligning sales and service delivery continues to be integrated CRM and PSA applications which coordinate the entire customer lifecycle and shine a light on customer issues and opportunities. A powerful indication of increasing competition is the Bid-to-Win ratio (Figure 9). This metric measures the number of winning bids or proposals out of every 10 submitted.

It is certainly correlated with the size of the sales pipeline and sales effectiveness. Lower Bid-to-Win ratios portray heightened competition but may also be a symptom of underlying sales and marketing issues. Strategies to improve Bid-to-Win ratios should start with a reexamination of market positioning and service packaging.

Figure 9: Bid-to-Win Ratio



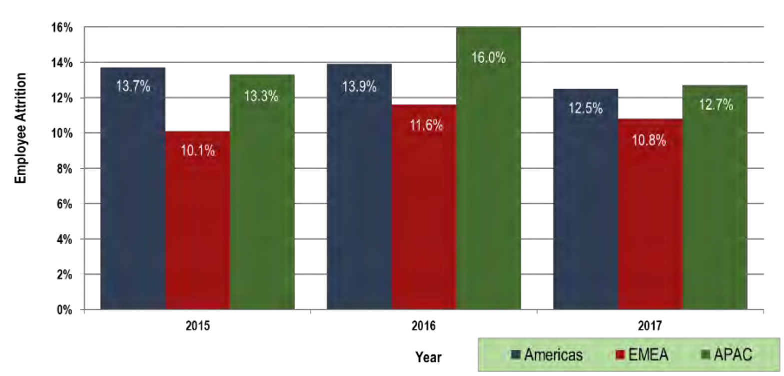
Source: SPI Research, February 2018

Do target buyers know about your firm? Do current clients provide a rich source of referrals and repeat business or are they lukewarm on the value you provide? What is the common element in the deals you win? Lose? How can you improve your hit ratio? Should you more carefully scrub your sales pipeline to remove unreliable long shots?

You're Hired!

In 2018 a war for talent is raging. Unemployment has declined to 4.1%, the lowest it has been since the runup to the Dot.com bust of 2001. Unemployment is even lower for jobs requiring a bachelor's degree or better, at 2.1%. To attract skilled talent, firms are brandishing their reputations as a great place to work by offering not only more money but also a host of other benefits including job-sharing, working from home, parental leave and generous time-off policies including sabbaticals. In 2017, for the first time in this benchmark, headcount growth exceeded revenue growth, meaning firms are hiring in advance of sales. This indicates firms are confident enough in future business to make strategic hires, believing there will be enough work to sustain new recruits. On the good news front, the average time to recruit and ramp new hires eased somewhat to 113.3 days in 2017, down from 116.6 days in 2016. Total attrition (both

Figure 10: Employee Attrition by Geography



Source: SPI Research, February 2018

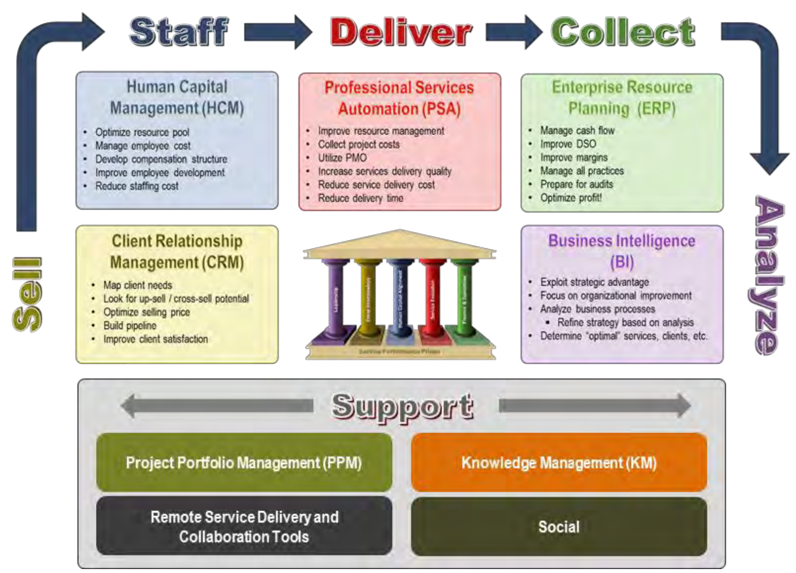
voluntary and involuntary) also declined from 13.5% to 12.4% (Figure 10). Attrition is undoubtedly one of the most vital metrics to watch, as the cost to replace a valuable employee is more than $150,000.

Information – more essential than ever before!

As competition and volatility intensify, information has become a competitive weapon to increase performance and profit. Lack of an effective information infrastructure is no longer an option! SPI Research has seen a gradual increase in the use of information technology to run finance and accounting, sales and marketing, human resources, service delivery, and business analysis and reporting.

These solutions are core to the success of each department, but better serve the entire PSO when they are integrated. Integrated business solutions enable all team members to have access to one source of the truth, expediting fact-based decisions and real-time response to opportunities and challenges. Being able to visualize changes and trends by client, employee, service line and market brings into focus problems and facilitates investment in the most-promising growth avenues.

Figure 11: Integrated Information Drives Performance Higher!



Source: SPI Research, February 2018

While these core solutions help PSOs run the business, the number and variety of ancillary applications has grown exponentially particularly in the areas of social, remote service delivery, collaboration and knowledge management. These solutions help make employees at all levels more productive, which ultimately impacts project margins and organizational profitability. On the downside, the pace of technology change, overlap and interdependence has become significantly more complex, with shorter and shorter product release cycles. The abundance of overlapping solutions has made the job of technology consultants and IT professionals ever harder as the breadth and depth of knowledge they must possess has become almost overwhelming.

2018 is going to be a good year in PS

With global economic recovery, developed nations are experiencing the best GDP growth they have seen in ten years. With the stock market at an all-time high and inflation under control, 2018 looks to be a good year for business. In the Professional Services sector, times are good, with plenty of interesting work and abundant client challenges. SPI Research sees a new millennial workforce, nursed on technology and instant global communication, take charge. Knowledge workers around the world are increasingly becoming more consultant-like with heightened expectations for measurable work effort and output.

Businesses and business models are being upended by a move to usage-based consumption, subscription billing and managed services. Millennial and line of business buyers demand ease and access, with price becoming less important. Yet the age-old professional services business model based on applying specialized knowledge and skills to solve complex problems persists and thrives. Transformation is coming slowly to this industry, with incremental improvements seen in productivity, knowledge capture and repeatable frameworks; we are not yet seeing revolutionary changes. If anything, the world of professional services is becoming more attractive, no longer so focused on basic “infrastructure and plumbing” supplied by armies of developers, they are now able to focus on more meaningful business processes and truly impactful transformation and change management.

The professional services market is upbeat and growing. No let-up in demand is seen and clients seem content to engage specialized service providers in traditional ways – focused on project outcomes but still based on traditional time and materials pricing. The 2018 PS Maturity™ benchmark shows firms are increasingly getting back to basics with a focus on workforce productivity and financial hygiene. Good old sales and service delivery collaboration and blocking and tackling are the elements of transformation, not massive business model changes. The winners spend their time closely watching the market, jumping in and seizing opportunities as soon as they can, while wringing higher productivity out of cash cow solutions to pay for these investments.

Today, discussions of “brand” and “culture” come up in most professional services conversations because establishing the firm as a fantastic place to work is the most important element in attracting and retaining a high caliber workforce. The key to success is having the best talent available to capture new opportunities. Top performers understand they must create a compelling vision of the future and quickly hire to bring that vision into reality. Now is not the time for PSOs to rest on old skills, competencies and systems, more than ever before they need to be bold and disciplined to seize new solutions before they become mainstream.

The pace and magnitude of technology change at times seem insurmountable but somehow millions of consultants find a way to stay abreast of this mounting complexity to make sense of it all for their clients. New technologies continue to transform the professional services market, and nowhere is this more evident than in the social, mobile, analytics and collaboration (SMAC) space. These solutions, many of which are embedded in core business suites such as Enterprise Resource Planning (ERP or Core Financial Management (CFM)), Client Relationship Management (CRM), Professional Services Automation (PSA), and Human Capital Management (HCM), are becoming increasingly critical to the success and growth in professional services. Professional Services is an employee driven market, and providing the best tools that provide the best insight underlies all performance improvements.

2. The Professional Services Maturity™ Model

SPI Research has spent over a decade benchmarking varying levels of operational control or process "maturity" to determine the characteristics and appropriate behaviors for Professional Services Organizations based on their organizational lifecycle stage. The fundamental questions SPI Research was seeking to answer when the PS Maturity™ Benchmark was first conceived remain our primary focus:

- Δ What are the most important focus areas for professional services organizations (PSOs) as their businesses mature?
- Δ What is the optimum level of maturity or control at each phase of an organization's lifecycle?
- Δ Can diagnostic tools be built for assessing and determining the health of key business processes?
- Δ Are there key business characteristics and behaviors that spell the difference between success and failure?

The original concept behind SPI Research's PS Maturity Model™ was to investigate whether increasing levels of standardization in operating processes and management controls improve customer satisfaction and financial performance. ***The 2018 PS Maturity™ Benchmark demonstrates that increasing levels of business process maturity do indeed result in significant performance improvements (Table 2).***

Table 2: Maturity Matters!

Key Performance Measurement	Maturity Level 1-2	Maturity Level 3	Maturity Level 4-5
Percentage of respondents	54.6%	25.0%	20.4%
Year-over-year change in PS revenue	4.2%	9.7%	16.0%
Deal pipeline / qtr. bookings forecast	135%	182%	251%
Employee billable utilization	64.3%	74.8%	82.2%
Projects delivered on-time	75.2%	83.3%	84.8%
Annual rev. per billable consultant (k)	$134	$215	$258
Annual revenue per employee (k)	$102	$175	$220
PS EBITDA	6.1%	15.2%	25.9%

Source: SPI Research, February 2018

In fact, SPI Research found that high levels of performance have far more to do with leadership focus, organizational alignment, effective business processes and disciplined execution than "time in grade." Relatively young and fast-growing organizations can and do demonstrate surprisingly high levels of maturity and performance excellence if their charters are clear.

Further improvements accrue when their goals and measurements are aligned with their mission, and they make the investments they need in talent and systems to provide visibility and appropriate levels of business control. Of course, it certainly helps if they are also well-positioned within a fast-growing market.

The core tenet of the PS Maturity Model™ is service and project-oriented organizations achieve success through the optimization of five Service Performance Pillars™:

1. **Leadership** – Vision, Strategy and Culture
2. **Client Relationships**
3. **Human Capital Alignment**
4. **Service Execution**
5. **Finance and Operations**

Within each of the Service Performance Pillars™, SPI Research developed guidelines and key performance maturity measurements. These guidelines cut across the five service dimensions (pillars) to illustrate examples of business process maturity. This study measures the correlation between process maturity, key performance measurements and service performance excellence.

Service Performance Pillars™

Twelve years ago, SPI Research developed a model that segments and analyzes a PSO into five distinct areas of performance that are both logical and functional. We call the five underpinning elements Service Performance Pillars™ because they form the foundation for all professional services organizations (Figure 12):

Figure 12: **Service Performance Pillars™**

Source: SPI Research, February 2018

1. **LEADERSHIP - VISION, STRATEGY AND CULTURE**: (*CEO*) a unique view of the future and the role the service organization will play in shaping it. A clear and compelling strategy provides a focus for the organization and galvanizes action. Effective strategies bring together target customers, their business problems, and how a solution solves those problems differently, uniquely, or better than its competitors. For a service strategy to be effective, the role and charter of the service organization must be defined, embraced, communicated and supported throughout the company. Depending on whether the service strategy is to primarily support the sale of products, or to drive service revenue and profit; service organization goals and measurements will vary. Leadership skills and competencies must mature as the organization matures. Culture is the unwritten customs, behaviors and beliefs that determine the “rules of the game” for decision making, structure and power. The core leadership pillar processes include setting strategy, business planning and management.

2. **CLIENT RELATIONSHIPS**: (*Marketing and Sales*) the ability to communicate effectively with employees, partners and customers to generate and close business and win deals. Effective client

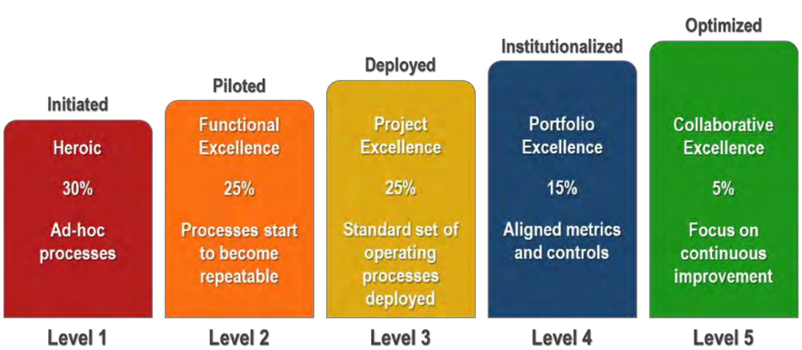
management involves developing a clear and compelling go-to-market strategy which defines target buyers, their requirements and how our solution solves those challenges in a differentiated way. This pillar encompasses all aspects of marketing, lead generation, quoting and selling solutions as well as contract management and partnering. The core business processes performed in the client relationships pillar include marketing, selling and the entire quote to cash business process.

3. **HUMAN CAPITAL ALIGNMENT**: (*Human Resources*) the ability to attract, hire, retain and motivate a high-quality consulting staff. With changing workforce demographics, talent management has increased in importance. High-caliber employees represent the essence, brand and reputation of the firm. PSOs are starting to adopt hybrid on and off-site staffing models which put increased pressure on customer-facing staff to develop client relationships and more carefully define client requirements. Demands for career planning, skill development and flexible work options have intensified. The core human capital management processes include recruiting, hiring, training, compensation, performance and career management.
4. **SERVICE EXECUTION**: (*Engagement/Delivery*) the methodologies, processes and tools to effectively schedule, deploy and measure the quality of the service delivery process. Service execution involves several factors: from resource management, to delivering projects in a predictable and acceptable time frame, to reducing cost while improving project quality and harvesting knowledge. Processes include resource management, capacity planning, project planning and quality control, knowledge management and methodology and tool development.
5. **FINANCE AND OPERATIONS**: (*CFO*) the ability to manage services profit and loss — to generate revenue and profit while developing repeatable operating processes. The finance and operations pillar focuses on revenue, margin and cost and the financial, contractual and IT operating processes and controls required to run a profitable and predictable business.

Professional Services Maturity™ Model Benchmark Levels

The model is built on the same foundation as the Capability Maturity Model (CMM), which has been adopted for software development; but is specifically targeted toward billable PSOs, that either exclusively sell and deliver professional services or complement the sale of products with services. Figure 13 depicts maturity level progression and outlines primary characteristics for each maturity level:

Figure 13: **Services Maturity™ Model Levels**



Source: SPI Research, February 2018

- ***LEVEL 1*** ***— INITIATED "HEROIC"*****: (APPROXIMATELY 30% OF PSOS)** at maturity Level 1, *processes are ad hoc and fluid*. The business environment is chaotic and opportunistic, and the focus for a PSO is primarily on new client acquisition and reference building. Often professional service employees at this level are chameleons — able to provide presales support one day and develop interfaces and product workarounds the next. Success depends on the competence and heroics of people in the organization, and not on the use of proven processes, methods or tools. Practices and procedures are informal, and quality is based on individual experience and aptitude. ***Level 1 organizations are often characterized as "informal" and "heroic".***

- ***LEVEL 2*** ***— PILOTED "FUNCTIONAL EXCELLENCE"*****: (APPROXIMATELY 25% OF PSOS)** at maturity level 2, *processes have started to become repeatable*. Best practices may be demonstrated in discrete functional areas or geographies, but they are not yet documented and codified for the entire organization. Basic processes have been established for the five Professional Services Performance Pillars, but they are not yet universally embraced. Operational excellence and best practices may be discerned <u>within</u> functions but not across functions. ***By Level 2 individual Functional Excellence should have emerged in key areas.***

- ***LEVEL 3*** ***— DEPLOYED "PROJECT EXCELLENCE"*****: (APPROXIMATELY 25% OF PSOS)** at maturity level 3, *the PSO has created a set of standard processes* and operating principles for all major service performance pillars but renegades and "hold-outs" may still exist. Management has established and started to enforce financial and quality objectives on a global basis. Processes have been established to focus on effective execution and there is spotlight on alignment <u>between</u> and <u>across</u> functions. By level 3 project delivery methodologies and quality measurements are in place and enforced across the organization. ***Level 3 organizations should exhibit "Project Excellence" with a consistent, repeatable project delivery methodology.***

- ***LEVEL 4*** ***— INSTITUTIONALIZED "PORTFOLIO EXCELLENCE"*****: (APPROXIMATELY 15% OF PSOS)** at maturity level 4, *management uses precise measurements, metrics and controls, to effectively manage the PSO*. Each service performance pillar contains a detailed set of operating principles, tools and measurements. Organizations at this level set quantitative and qualitative goals for customer acquisition, retention and penetration, in addition to a complete set of financial and quality operating controls and measurements. Processes are aligned to achieve leverage. The portfolio is balanced with a focus on project selection and execution. ***Level 4 organizations should exhibit "Portfolio Excellence".***

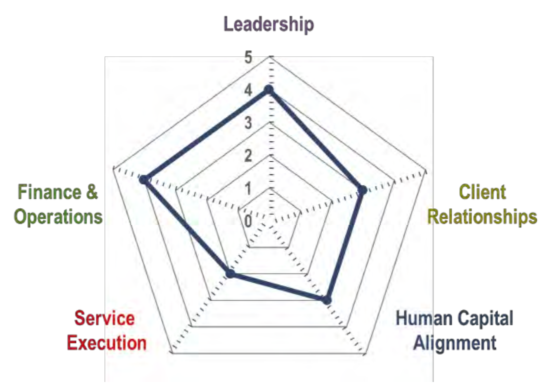
- ***LEVEL 5*** ***— OPTIMIZED "COLLABORATIVE"*****: (APPROXIMATELY 5% OF PSOS)** at maturity level 5 *executives focus on continual improvement of all elements of the five performance pillars*. A disciplined, controlled process is in place to measure and optimize performance through both incremental and innovative technological improvements. Quantitative process-improvement objectives for the organization are established. They are continually revised to reflect changing business objectives, and used as criteria in managing process improvement. Initiatives are in place to ensure quality, cost control and client acquisition. The rough edges between disciplines, functions, and specialties have been smoothed to ensure unique problems can be addressed quickly without excessive bureaucracy or functional silos. ***Level 5 organizations are visionary and collaborative both internally and with clients and external business partners.***

Over the past decade, over 20,000 PSOs have studied the PS Maturity Model ™ and now use the concepts and key performance measurements to pinpoint their organization's current maturity and develop improvement plans to advance lagging areas.

SPI Research summarizes individual PSO performance in a SPIder chart (Figure 14). The maturity scorecard provides a measurement for each organization in comparison to the benchmark maturity definitions and peer organizations. It provides an invaluable tool to analyze current performance and prioritize future improvement initiatives.

This graphical depiction of the Service Performance Pillars™ by maturity level enables PS executives to quickly scorecard their organization's performance and diagnose areas of relative strength and weakness.

Figure 14: Service Performance Pillar **Maturity™**



Source: SPI Research, February 2018

Building the Professional Services Maturity™ Model

With core benchmark information gleaned across all primary business functions, SPI Research built the Professional Services Maturity™ Model that determines organizational maturity — by pillar — and provides guidance to advance to the next level (Table 3).

Table 3: Performance Pillars Mapped Against Service

	Level 1 Initiated	Level 2 Piloted	Level 3 Deployed	Level 4 Institutionalized	Level 5 Optimized
Leadership	Initial strategy is to support product sales and provide reference customers while providing workarounds to complete immature products. Leaders are "doers".	PS has become a profit center but is subordinate to product sales. Strategy is to drive customer adoption and references profitably. Leaders focus on P&L and client relationships.	PS is an important revenue and margin source, but channel conflict still exists. Services differentiate products. Leadership development plans are in place. Leaders have strong background & skills in all pillars.	Service leads products. PS is a vital part of the company. Solution selling is a way of life. PS is included in all strategy decisions. Succession plans are in place for critical leadership roles	PS is critical to the company. Service strategy is clear. Complimentary goals and measurements are in place for all functions. Leaders have global vision and continually focus on renewal & expansion.

2018 Professional Services Maturity™ Benchmark

	Level 1 Initiated	Level 2 Piloted	Level 3 Deployed	Level 4 Institutionalized	Level 5 Optimized
Client Relationships	Opportunistic. No defined solution sets or Go to Market plan. Focus is on new customers and reference building. Individual heroics, no consistent sales, marketing or partnering plan or methodology. No consistent estimating, quoting or contract management processes. Ad hoc, one-off projects.	Start to use marketing to drive leads. Multiple sales models. Start investing in sales training, CRM & sales methodology. Start measuring sales effectiveness & client satisfaction. Start developing partners and partner programs. Some level of proposal reviews and pricing control.	Marketing, inside sales, solution sales with defined solution sets. CRM integrated with financials and PSA. Deal, pricing and contract reviews. Partner plan and scorecard. Tight pricing and contract mgmt. controls. High levels of customer satisfaction.	CRM, PSA, ERP/CFM integration provides 360-degree view of client relationships. Business process, vertical and horizontal solutions. Vertical client centers of excellence. Top client and partner programs. Global contract and pricing management. Key partner relationships. Strong customer reference programs.	Executive relationships. Thought leadership. Brand building and awareness. High customer satisfaction. Integrated sales, marketing and partnering programs. Consistent, high quality marketing, sales, contract management and pricing processes, systems and measurements. High quality references.
Human Capital Alignment	Hire as needed. Generalist skills. Chameleons, Jack of all Trades. Individual heroics. May perform presales as well as consulting delivery and project management.	Begin forecasting workload. Start developing job and skill descriptions & compensation plans. Rudimentary career paths. Start measuring employee satisfaction.	Resource, skill and career management. Employee satisfaction and engagement surveys. Training plans. Aligned goals and measurements with compensation. Attrition <15%	Business process and vertical skills in addition to technical and project skills. Career ladder and mentoring programs. Training investments to support career. Low attrition, high satisfaction	Continually staff and train to meet future needs. Highly skilled, motivated workforce. Outsource commodity skills or peak demand. Sophisticated variable on and off-shore workforce models.
Service Execution	No scheduling. Reactive. Ad hoc. Heroic. Scheduling by spreadsheet. No consistent project delivery methods. No project quality controls or knowledge management.	Skeleton methodology in place. Centralized resource mgmt. Initiating project mgmt. and technical skills. Starting to measure project satisfaction and harvest knowledge.	PSA deployed for resource and project management. Collaborative portal. Earned Value Analysis. Project dashboard. Global Project Management Office, project quality reviews and measurements. Effective change management.	Integrated project and resource management. Effective scheduling. Using portfolio management. Global PMO. Global project dashboard. Global Knowledge Management. Global resource management.	Integrated solutions. Continual checks and balances to assure superior utilization and bill rates. Complete visibility to global project quality. Multi-disciplinary resource management.
Finance and Operations	The PSO has been created but is not yet profitable. Rudimentary time & expense capture. Limited financial visibility and control. Unpredictable financial performance. Rudimentary contract and risk management.	5 to 15% margin. PS becoming a profit center but still immature finance and operating processes. Investment in CFM and PSA to provide financial visibility. May not have real-time visibility or BI. Standard Library of Contracts and Statements of Work.	15 to 25% margin. PS operates as a tightly managed P&L. Standard methods for planning, resource mgmt., time & expense mgmt., cost control & billing. In depth knowledge of all costs at the employee, sub-contractor & project level. Processes in place for contract management, legal and pricing decisions.	PS generates > 20% of overall company revenue & contributes > 30% margin. Well-developed finance and operations processes and controls. Systems have been implemented for CRM, PSA, CFM and BI. IT integration and real-time visibility. Systems have been implemented for contract management, legal and pricing decisions.	> 30% margin. Continuous improvement and enhancement. High profit. Integrated systems. Global with disciplined process controls and optimization. Completely integrated financial, CRM, resource management, contracts and pricing systems, processes and controls.

Source: SPI Research, February 2018

Why Maturity Matters

SPI Research believes wide support for the PS Maturity™ model is due to its holistic approach to measuring performance. ***Maturity is determined through alignment and focus both within <u>and</u> across functions.*** For example, although financial measurements are of primary importance they are equally weighted and correlated with leadership and sales and quality measurements to ensure organizations improve across all dimensions, not just in terms of financial performance. However, if the organization is profit-motivated (which most are), increasing maturity levels do show up in significant bottom-line profit. Figure 15 highlights major key performance measurements by maturity level and should alone be an important reason why PS executives should look deeper into using it to increase profits.

Figure 15: Professional Services Maturity™ Progression

	Level 1 Initiated	Level 2 Piloted	Level 3 Deployed	Level 4 Institutionalized	Level 5 Optimized
Confidence in PS leadership (5 pt. scale)	3.28	3.98	4.31	4.83	5.00
Year-over-year change in PS revenue	3.0%	5.7%	9.7%	13.8%	22.2%
Bid-to-win ratio (per 10 bids)	3.40	4.11	5.21	6.39	7.58
Deal pipeline relative to qtr. bookings forecast	125%	147%	182%	243%	275%
Employee billable utilization	60.3%	69.2%	74.8%	81.4%	84.6%
Projects delivered on-time	72.7%	78.1%	83.3%	82.7%	90.8%
Annual revenue per billable consultant (k)	$104	$169	$215	$247	$291
Annual revenue per employee (k)	$77	$130	$175	$208	$253
Profit (EBITDA)	**4.7%**	**7.8%**	**15.2%**	**22.6%**	**35.2%**

Source: SPI Research, February 2018

Pillar Importance and Organizational Maturity

The results and insights gained in the past eleven years have confirmed SPI Research's original hypothesis that ***service organizations must develop a balanced and holistic approach to improving all aspects of their business as they mature.*** SPI Research has discovered that the emphasis on individual service pillar performance shifts as organizations mature. Excellence in only one specific service performance pillar does not create overall organizational success – rather it is the ***appropriate balance and alignment within and across performance pillars***, which leads to sustainable success.

456 firms are represented in this year's survey, however, not every firm answered every question. Therefore, if a firm did not answer a specific question no analysis will be conducted on its impact. The following table shows the correlation of EBITDA (profit) and Annual revenue growth. This table compares all of the surveys with those that answered this specific question. SPI Research will eliminate the 8 firms that did not complete this questions and therefore the EBITDA is 16.6% vs. the actual survey average of 16.8%. We do this because showing blank answers does not really provide value to the reader (unless there is a high percentage of blanks).

Annual Revenue Growth	Surveys	Comp. %	EBITDA w/ Blanks	EBITDA w/o Blanks
Blank	8	1.8%	20.0%	
Under -10%	45	9.9%	17.2%	17.2%
-10% - 0%	34	7.5%	13.2%	13.2%
0% - 5%	98	21.5%	16.1%	16.1%
5% - 10%	98	21.5%	14.0%	14.0%
10% - 15%	52	11.4%	18.1%	18.1%
15% - 25%	62	13.6%	18.9%	18.9%
Over 25%	59	12.9%	19.4%	19.4%
Total/Avg.	456	100.0%	16.8%	16.6%

Table 4 depicts the relative service performance pillar importance by organizational maturity level. Many professional services organizations are established without an initial focus toward optimizing performance.

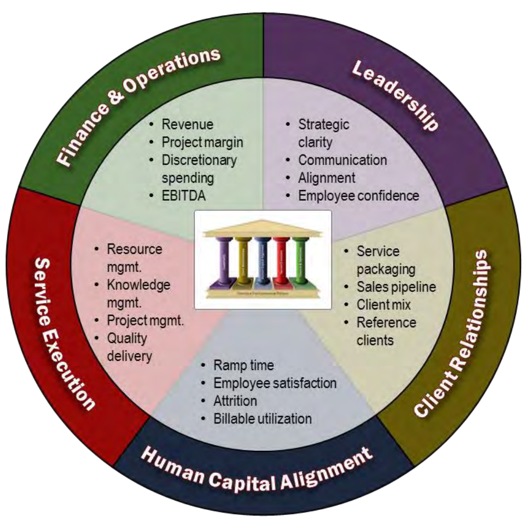
Table 4: Service Pillar Importance by Organizational Maturity Level

Pillar	Initiated	Piloted	Deploy.	Inst.	Opt.
Leadership	◔	◑	◑	●	●
Client Relationships	●	◕	◕	◕	●
Human Capital Align.	◔	◑	◕	●	●
Service Execution	◔	◑	◕	●	●
Finance and Operations	◔	◔	◕	●	●

Source: SPI Research, February 2018

PSOs begin with the goal of establishing a client and reference base. They may be operated as a cost center or as an adjunct to the product function to establish alpha and beta customers and to provide early product feedback. Initially they often perform presales, training, quality assurance and service delivery tasks. They hope to deliver services that are both profitable to them as well as valued by their clients, but in reality, they take the position that "just about any deal is a good deal." The emphasis at **Level 1** maturity is on building client references and recruiting highly skilled generalist consultants who are experienced enough and flexible enough to perform heroic feats to ensure early customer success.

Figure 16: PS Performance Pillars – Core KPIs



Source: SPI Research, February 2018

By **Level 2**, although primary focus is still to create reference customers, more emphasis is placed on human capital alignment for recruiting and ramping skilled employees, partners and contractors. Service execution focus is on developing repeatable project delivery methods and quality processes. At these early stages, many embedded professional services organizations have a strong product-driven focus and the role of the service organization is subordinate to products. Conflicts between service profit, client success and driving product revenue are often characteristic of Level 2 embedded service organizations.

By **Level 3** the organization must move toward a more balanced focus on all elements of the business by investing in systems, operating processes and repeatable methods to sustain growth and ensure quality. Level 3 maturity should be the aspirational target of all PS organizations because it is at level 3 that an on-going, profitable and sustainable business has emerged. At level 3 the charter of the PS organization is clear. If the organization is an embedded PS organization within a product company, PS has a seat at the executive table and is seen as adding value that transcends product implementation, integration and customization. Increasingly, embedded PS has become a critical component of ensuring customer adoption and may play a leading role in driving product management direction and strategy. Independent Level 3 PSOs are financially and operationally strong with a clear focus on targets markets and sustainable, repeatable business processes and quality controls. They have built a compelling, differentiated portfolio which is brought to life by specialized, knowledgeable consultants. At level 3, heroics and firefighting are no longer the standard way of doing business as disciplined management systems, controls and integrated systems ensure predictability and repeatability.

At **Level 4** the organization has implemented structured business processes and utilizes integrated information systems to assure there is "one view of the business". Level 4 organizations are seen as true industry leaders in their target markets. They have developed a unique and differentiated culture which attracts industry-leading consultants and clients. More than average firms, Level 4 organizations are extremely transparent. They typically have strong management controls and visibility into all facets of the business by providing dynamic, real-time access to empowered team members. Level 4 organizations continually expand their horizons and boundaries – whether it is through geographic, vertical market or technology platform expansion.

Finally, at **Level 5** the organization is running very efficiently, and the focus is on continual improvement and innovation. Level 5 firms are the Best-of-the-Best. They are excellent in all functional areas but have transcended functional excellence with a collaborative, knowledge and intellectual property centric focus. Very few firms achieve sustained Level 5 performance.

3. Survey Demographics

Professional Services is one of the fastest growing segments of the global economy due in large part to the fact that companies in all other vertical industries are increasingly outsourcing and out-tasking their non-core business processes and technology to specialized consulting providers.

Today, the global professional services industry is made up of over 10 million firms with combined annual revenue of more than $4 trillion. It is also highly fragmented as the top 200 largest firms (each with more than 5,000 employees) account for less than 5 percent of that revenue. This finding has positive implications for the growth potential of professional services firms: there is room in the market for innovative and effective newcomers that can effectively harness skilled talent to provide specialized insights and knowledge.

Firms in the professional service industry provide accounting, advertising and marketing, architectural, management consulting, engineering, IT, legal, and research services. These companies provide the knowledge and skills of their employees, typically on an assignment basis, where an individual or team is responsible for the delivery of high value services to the client.

Each year SPI Research has expanded vertical market coverage to include additional specialized service segments to depict the nuances and metrics which pertain to these sub-verticals. SPI's coverage this year has expanded into healthcare; Value-Added Resellers, Managed Service providers and Research and Development organizations. This year the benchmark also provides more in-depth analysis of the architecture, engineering and marketing and advertising segment. The legal industry is the only major professional services market which is not covered in this report as the requirements, processes and systems used by the legal industry tend to be very specialized.

Unlike other industries, Professional Services is almost 100% a knowledge and people-based industry. The developed regions of North America, Europe and Asia-Pacific are rich in this resource. Growth in this segment will depend heavily on concentrated efforts to attract and use skilled talent in the most proven efficient and profitable ways to sharpen the business performance of professional services firms.

For this benchmark, SPI Research surveyed 456 billable Professional Services Organizations (PSOs) from October through December 2017. The following sections outline the key markets which comprise the global professional services industry and breakdown the 2017 survey demographics in several key areas (market, organization size, and geographic region) to help PS firms compare their individual results to the benchmark.

The North American Professional Services Market

SPI Research uses the North American Industry Classification System (NAICS) to analyze the U.S. services market. The primary Professional Services designation is NAICS 54xx which defines PS sub-verticals as ***"Those in this subsector engage in business processes where human capital is the major input. These***

establishments provide the knowledge and skills of their employees, often on an assignment basis, where an individual or team is responsible for the delivery of high value services to the client. The individual industries of this subsector are defined based on the particular expertise, training and credentials of the services provider (Table 5)".

Table 5: Vertical PS Markets — the North American Industry Classification System

Code	Market	Description	US Census 2015 Revenue	Employees (1,000s)	CAGR 2014-2015
5112	Software	Software publishing, both public and private software companies. Total revenue is reported. PS typically represents ~ 20% of revenues.	$190.7B	386	3.6%
518	Data Services	Data processing, hosting and related services	$104.5B	392	5.1%
5411	Legal	This industry is comprised of legal practitioners known as lawyers or attorneys (i.e., counselors-at-law) primarily engaged in the practice of law. Firms in this industry may provide a range of expertise or specialize in specific areas of law, such as criminal law, corporate law, family and estate planning, patent law, real estate law, or tax law.	$261.0B	1,114	4.8%
5412	Accounting/ Tax Prep/ Bookkeeping / Payroll	This industry comprises establishments primarily engaged in providing services, such as auditing and accounting, designing accounting systems, preparing financial statements, developing budgets, preparing tax returns, processing payrolls, bookkeeping, and billing. Accountants are certified to ensure they have and maintain competency in their field.	$163.4B	888	10.4%
5413	Architectural, Engineering and Related Services	This industry comprises establishments primarily engaged in planning and designing residential, institutional, leisure, commercial, and industrial buildings and structures by applying knowledge of design, construction procedures, zoning regulations, building codes, and building materials.	$223.5B	1,277	-0.7%
5414	Specialized Design Services	This industry group comprises establishments providing specialized design services (except architectural, engineering, and computer systems design).	$20.98B	111	-2.3%
5415	Computer Systems Design Services Related Services	(IT Consulting) – This industry comprises establishments primarily engaged in providing expertise in the field of information technologies through one or more of the following activities: (1) writing, modifying, testing, and supporting software to meet the needs of a particular customer; (2) planning and designing computer systems that integrate computer hardware, software, and communication technologies; (3) on-site management and operation of clients' computer systems and/or data processing facilities; and (4) other professional and technical computer-related advice and services.	$351.58B	1,442	4.4%
5416	Management Science and Technical Consulting Services	(Management Consulting) – This industry comprises establishments primarily engaged in providing advice and assistance to businesses and other organizations on management issues, such as strategy and organizational planning; financial planning and budgeting; marketing objectives and policies; human resource policies, practices, and planning; production scheduling; and control planning.	$207.34B	991	11.3%
5417	Scientific Research and Develop. Services	This industry group comprises establishments engaged in conducting original investigation on a systematic basis to gain new knowledge (research) and/or the application of research findings or other scientific knowledge for the creation of new or significantly improved products or processes (experimental development). The industries within this industry group are defined on the basis of the domain of research; that is, on the scientific expertise of the establishment.	$149.09B	620	0.3%

Code	Market	Description	US Census 2015 Revenue	Employees (1,000s)	CAGR 2014-2015
5418	Advertising and Related Services	(Marketing and Communications) – This industry comprises establishments primarily engaged in creating advertising or public relations campaigns and placing advertising in periodicals, newspapers, radio and television, or other media. These firms are organized to provide a full range of services (i.e., through in-house capabilities or subcontracting), including advice, creative services, account management, production of advertising material, media planning, and buying (i.e., placing advertising).	$112.76B	408	2.1%
5419	Other Professional, Scientific, Technical Services	(Other PS) – This industry group comprises establishments engaged in professional, scientific, and technical services not listed above.	$76.2B	573	7.8%
5613	Employment Services	Staffing, temporary employment, placement and employment search services	$324.7B	4,277	11.4%
	2015 Total	US Estimated Professional, Scientific and Technical Services	$2.015 Trillion	12.479 Million	

Source: US Census and SPI Research, February 2018

Per the 2015 US Census, professional, scientific, and technical services (NAICS 54xx) revenue was $1.56 trillion, up 4.7 percent from 2014. Across the service industries, the fastest growing segments in 2015 were employment services (recruiting and staffing) 11.4%; management consulting 11.3% and accounting 10.4%. Two segments experienced market contraction from 2014 to 2015. Specialized design service revenue declined -2.3% and architectural, engineering and related services declined -.7%.

Additional industry segments which generate substantial professional service revenue include software (NAICS 5112); Data Services (NAICS 518) and Employment Services (NAICS 5613). Including these segments, the US professional service industry generated approximately $2 trillion in revenue in 2015 and employed 12.5 million US-based workers.

The US market represents roughly 50% of global professional services revenue which leads to a global revenue estimate of over $4 trillion, providing employment for over 25 million professional service workers. These figures exclude revenues and PS employees in telecommunications, financial services and healthcare services.

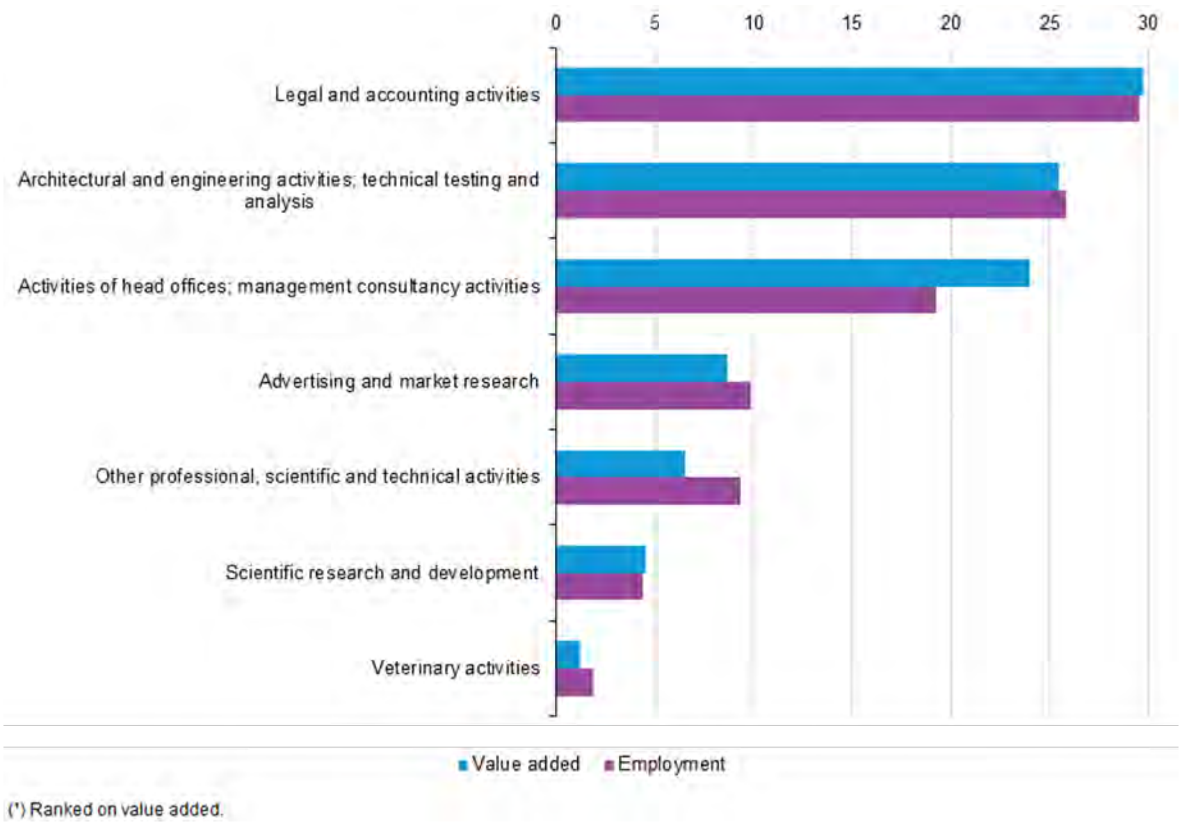
The European Professional Services Market

In 2017, for the first time since the great recession of 2008, the Eurozone economy outpaced the U.S. For calendar year 2017, Eurozone GDP expanded at 2.5%. With economic recovery, the Eurozone jobless rate dropped to a 9-year low. The unemployment rate in the Euro Area fell to 8.7 percent in November 2017 from 8.8 percent the previous month. It was the lowest jobless rate since January 2009. Strong euro zone growth was powered by the biggest economy Germany, but France was not far behind. Brexit has had a dampening effect on the UK with GDP growth at 1.5%.

Two major segments make up the professional services market in Europe – professional, scientific and technical professional services organizations and computer programming and consultancy organizations. Europe boasts a strong and growing consulting market with the fastest growth occurring in technology-oriented eastern European countries due to a burgeoning supply of well-educated and technically skilled workers. Out of the 30 countries which comprise Europe, the largest producers of professional services are also the largest consumers with Germany, the UK and France in the lead.

According to Eurostat, in 2015 there were 3.9 million businesses in Europe classified as professional, scientific and technical that employed 11.5 million people. These organizations generated EUR 1.238 trillion in revenue. Within this sector, there are 726,000 management consultancies that employ 1.6 million people and generate EUR 189 billion in revenues (Figure 17).

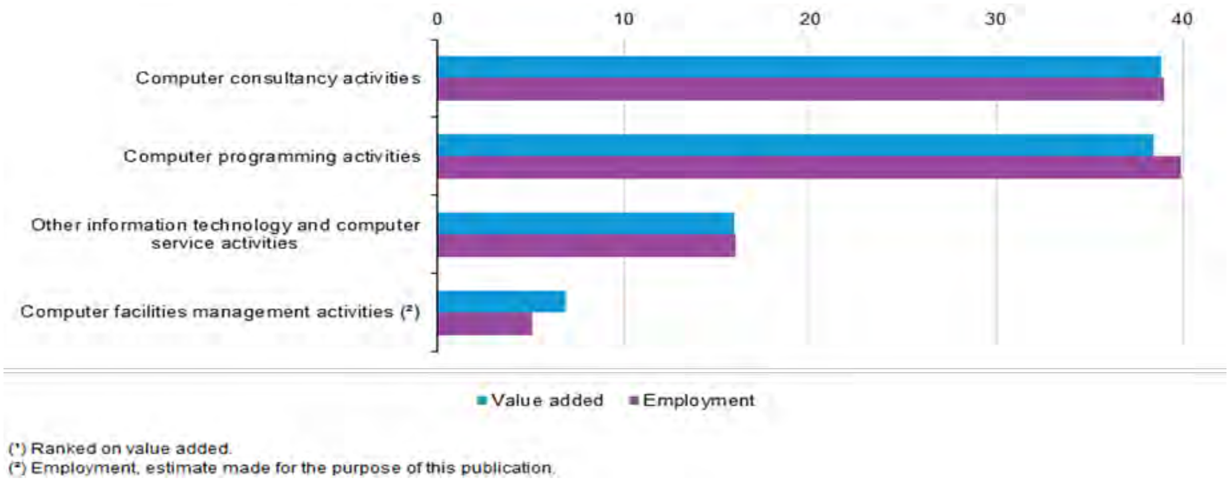
Figure 17: European Professional, Scientific and Technical Service Revenue and Employment



Source: Eurostat, 2015

In Europe additional industry segments which generate substantial professional services revenue include information and communication services of which the computer programming and consultancy sector employed 2.8 million people, or 47% of those employed in the sector as a whole in Europe. They generated EUR 420 billion in revenue, which was 35% of the information and communication services sector (Figure 18). All enterprise software companies include a component of professional services as do independent IT consultancies which tend to specialize by software or hardware platform and/or vertical industry.

Figure 18: European Computer Programming and Consultancy Services



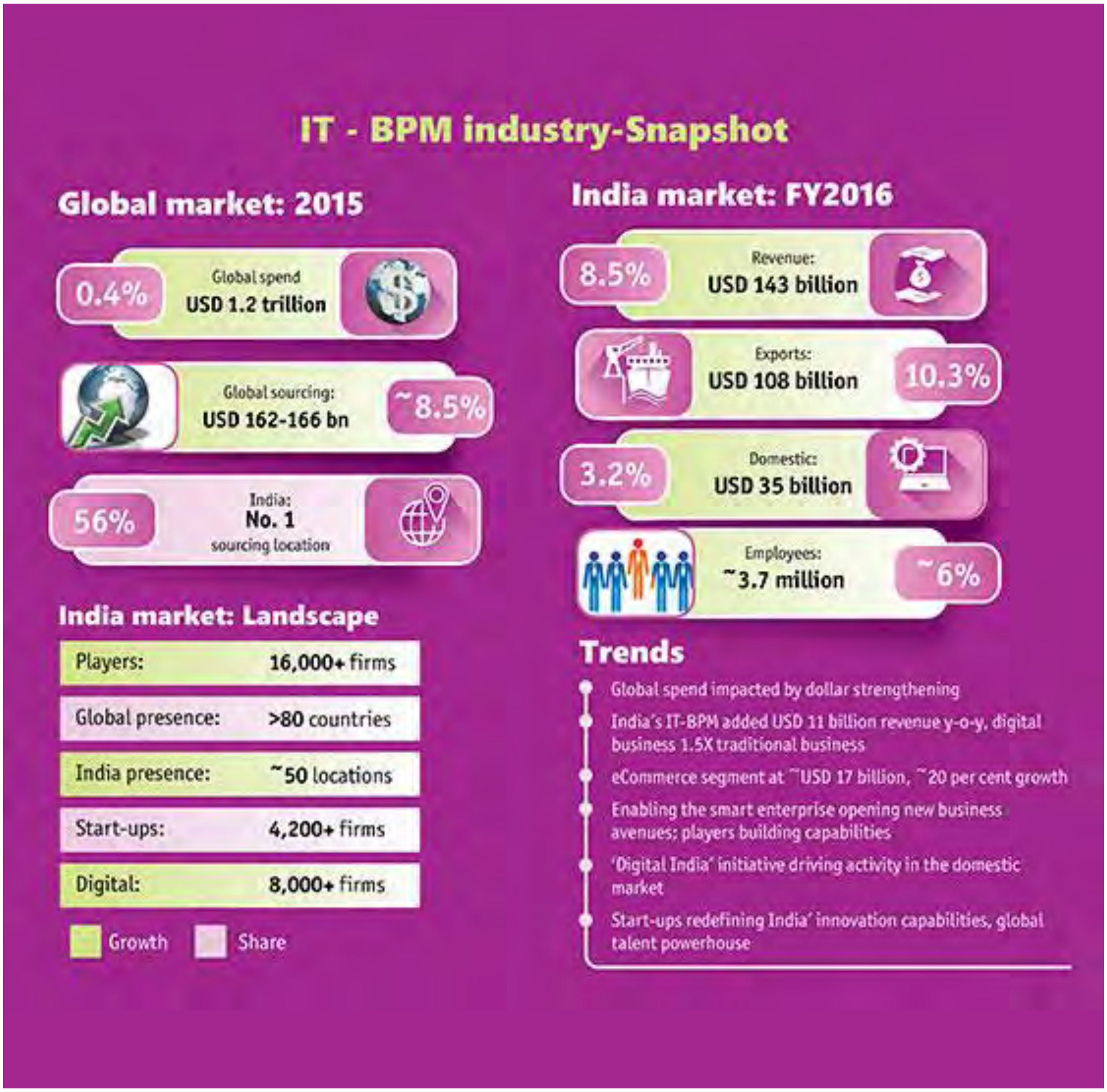
Source: Eurostat, 2015

The Asia-Pacific Professional Services Market

An important contributor to the Asia-Pacific (APac) economy both in terms of employment and productivity improvement, the professional services sector includes accounting, advertising and marketing, architecture, human resources, engineering, IT, management, operations, legal, and scientific research services. Across the Asia-Pacific region professional service sector employment growth and revenue impact is strong and growing:

- ∆ India has long held a leading position in technology services with revenues in excess of $150 billion ($75 billion in IT services; $28 billion in BPM; $22 billion in research and development; $17 billion in ecommerce: $14 billion in hardware and $6.5 billion in software services). India employs over 3.7 million technology service workers; ~ 35% are women. (Source: NASSCOM)
- ∆ Several regions including Singapore, the Philippines, Malaysia, New Zealand and Australia cite professional services as their fastest growing economic sector.
- ∆ China has committed in its 12th five-year plan (2011-2015) to make services sector development a strategic priority with emphasis on key services sub-sectors such as **finance, logistics, education and healthcare.** (Source: China Services Brief 2011)
- ∆ Driven by the growth in IT investment and China's information sector, revenue for the IT Services industry has been growing at an annualized rate of 6.3% over the past five years. In 2014, China’s IT service revenue totaled $111.7 billion, up 7.1% from 2013. (Source: IBIS)

Figure 19: **India's IT Services Economy**



Source: Nasscom 2016

Global IT Spending

Worldwide IT spending is projected to total $3.5 trillion in 2017, a 2.4 percent increase from 2016, according to [Gartner, Inc](). This growth rate is up from the previous quarter's forecast of 1.4 percent. The bright spot for the IT industry has been the software and IT services segments. Software spending is projected to grow 8.6 percent in 2018 to $381 billion (see Table 6). IT services spending is on pace to grow 4.7 percent in 2018 to reach $966 billion. According to Gartner, "The impact of digital business is giving rise to new categories; for example, the convergence of "software plus services plus intellectual property." These next-generation offerings are fueled by business and technology platforms that will be the driver for new categories of spending."

Table 6: Worldwide IT Spending Forecast (Billions of U.S. Dollars)

	2016 Spending	2016 Growth (%)	2017 Spending	2017 Growth (%)	2018 Spending	2018 Growth (%)
Data Center Systems	170	-0.3	171	0.3	173	1.2
Software	326	5.3	351	7.6	381	8.6
Devices	630	-2.4	654	3.8	677	3.6
IT Services	894	3.2	922	3.1	966	4.7
Communications Services	1,374	-1.3	1,378	0.3	1,400	1.6
All IT	3,396	0.3	3,477	2.4	3,598	3.5

Source: Gartner, 2017

What's Hot and What's Not in IT

Based on a survey of 700 North American IT leaders conducted by TEK Systems, IT leaders anticipate information security (46 percent), cloud computing (38 percent), business intelligence and big data analytics (28 percent) will have the biggest impact on their business (Table 7). Networking has slipped from being viewed as the third-most impactful area to tenth position this year. Sixty-five percent of IT leaders expect to increase their spending on security in 2017. Cloud represents another big investment, with 3 in 5 IT leaders expecting to increase spending. Digital marketing is also a big growth area.

Table 7: IT Technology Impact Stack Ranking

IT Technology Impact Ranking	2015	2016	2017
Security	1 (52%)	1 (47%)	1 (46%)
Cloud computing	5 (29%)	4 (26%)	2 (38%)
Business intelligence / big data	2 (41%)	2 (31%)	3 (28%)
Digital marketing / customer experience	-	7 (22%)	4 (26%)
Enterprise resource planning	4 (31%)	8 (20%)	5 (21%)
Virtualization / software-defined networks	7 (21%)	6 (26%)	6 (21%)
Mobility	3 (36%)	5 (26%)	7 (19%)
Digital transformation*	-	-	8 (18%)
Data center consolidation	6 (24%)	11 (13%)	9 (18%)
Networking	-	3 (30%)	10 (17%)
IoT	8 (16%)	9 (14%)	11 (14%)
Consumerization of IT / BYOD	9 (13%)	10 (14%)	12 (8%)

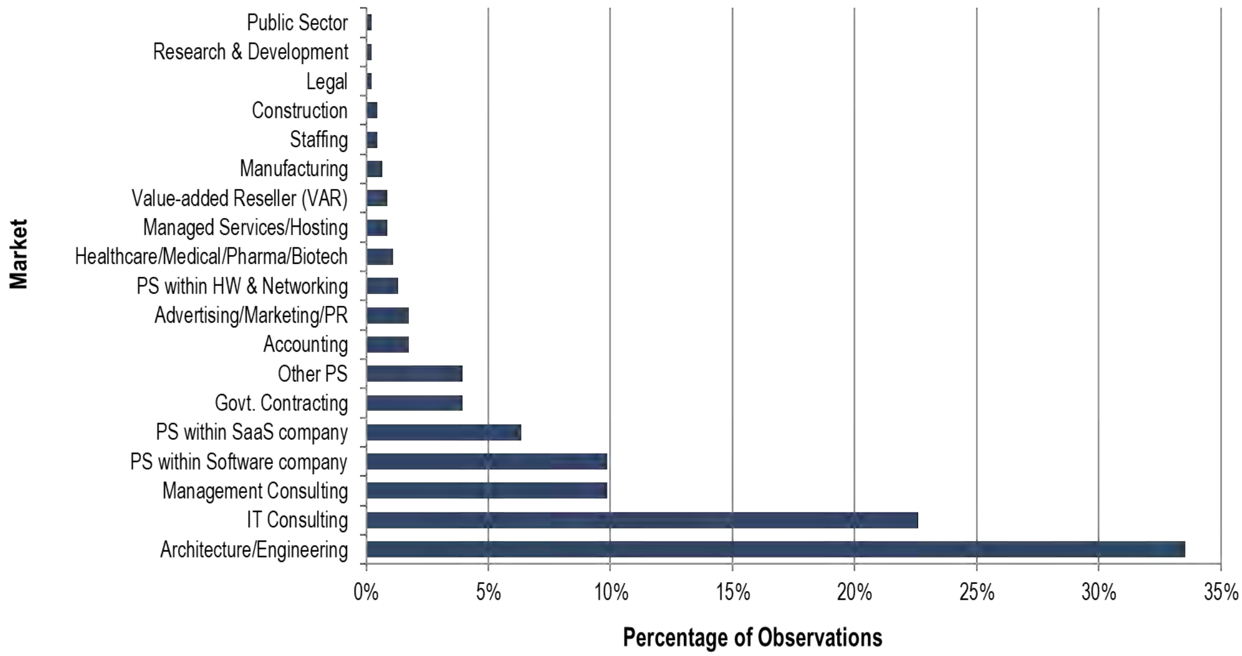
Source: TEK Systems Annual IT Forecast, 2017

PS Maturity™ Benchmark Vertical Market Demographics

The 2018 PS Maturity™ benchmark is the most comprehensive global study of the professional services industry as it is based on 456 participating organizations representing over 158,000 consultants (Figure 20). The percentage of completed surveys representing the top thirteen vertical market segments is as follows:

- ∆ ***Architects and Engineers***: Architects and engineers – 33.6% representing 153 firms with ~ 25,000 architects and engineers;
- ∆ ***IT Consulting***: Systems Integrators and developers – 22.6%, 103 firms representing ~ 24,000 consultants;
- ∆ ***Software PS***: Service divisions within software companies – 9.9%, representing 45 firms and ~ 33,000 consultants;
- ∆ ***Management Consulting***: Management consultancies – 9.9% representing 45 firms and ~ 11,000 consultants;
- ∆ ***SaaS PS***: Service divisions within software-as-a-service providers – 6.4% representing 29 firms and ~ 9,000 consultants;
- ∆ ***Government Contracting***: Firms providing professional services to Government agencies – 3.9% representing 18 firms with ~ 34,000 consultants;
- ∆ ***Marketing and Advertising***: Advertising, marketing, communication firms – 1.8% representing 8 firms and ~ 1,000 consultants;
- ∆ ***Accountancies***: Accounting firms – 1.8% representing 8 firms with ~ 1,000 accountants and auditors;
- ∆ ***Hardware (and Networking) PS***: Service divisions within hardware and networking manufacturers – 1.3% representing 6 firms with ~ 6,000 consultants;
- ∆ ***Healthcare/Medical/Pharma/Biotech***: 1.1% representing 5 firms with ~ 500 project-based professionals;
- ∆ ***Value-Added Resellers:*** resell hardware, software and provide technology services, training and support – 0.9% representing 4 firms with ~ 1,000 consultants;
- ∆ ***Managed Services:*** Provide hosting and managed and outsourced services – 0.9% representing 4 firms with ~ 500 consultants;
- ∆ ***Other PS***: business optimization, training – 6.12% representing 28 firms and ~ 12,000 consultants; "Other PS" includes other types of PSOs such as manufacturing, legal, construction, staffing, R&D and organizations that did not squarely fit into other specific professional services verticals.

Figure 20: Vertical Market Distribution



Source: SPI Research, February 2018

Table 8 shows participant demographics for the past eleven years. For the past four years, IT consultancies have been the largest participating market, closely followed by PS within software firms.

Table 8: Number of Participating Firms by Vertical Market (2007 through 2017)

Market	Type	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
IT Consulting	PSO	13	24	50	67	61	69	115	86	190	133	103	911
PS within Soft.	ESO	34	66	89	57	56	45	45	47	89	57	45	630
Mgmt. Consult.	PSO	2	12	22	22	31	34	24	27	68	46	45	333
Arch./Engr.	PSO	0	0	4	6	7	8	6	10	50	35	153	279
Other PS	PSO	2	13	30	22	13	31	21	24	13	46	49	264
PS within SaaS	ESO	0	0	18	19	26	23	16	13	43	41	29	228
PS within HW/Net	ESO	1	3	12	9	10	9	4	4	16	6	6	80
Advertising	PSO	0	0	0	6	10	11	6	4	12	9	8	66
Accounting	PSO	0	0	0	6	2	4	1	5	13	9	8	48
VAR	ESO	0	0	0	0	0	0	0	0	14	14	4	32
Mgd Services	ESO	0	0	0	0	0	0	0	0	17	8	4	29
Res. & Dev.	PSO	0	0	0	0	0	0	0	0	15	7	0	22
Staffing	PSO	0	0	0	0	0	0	0	0	9	5	2	16
Total		52	118	225	214	216	234	238	220	549	416	456	2,938

Source: SPI Research, February 2018

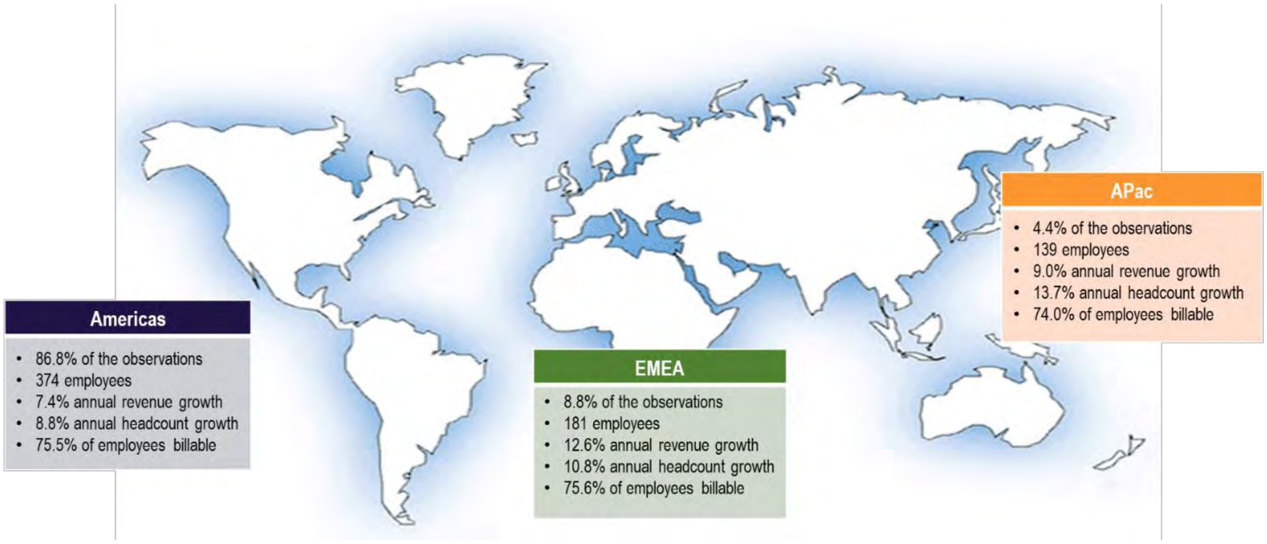
Table 9: Survey Participant Demographics by Organization Type and Geographic Region

Key Performance Indicator	2016	2017	ESO	PSO	Amer.	EMEA	APac
Surveys	416	456	117	339	396	40	20
Size of PS organization (employees)	499	347	791	194	374	181	139
Annual company revenue (mm)	$197.9	$127.9	$363.2	$47.8	$137.1	$67.1	$69.8
Total PS revenue (mm)	$85.8	$57.1	$126.4	$33.1	$62.2	$25.4	$21.9
YoY change in PS revenue	9.0%	8.0%	9.9%	7.4%	7.4%	12.6%	9.0%
YoY change in PS headcount	6.5%	9.3%	9.8%	9.1%	8.8%	10.8%	13.7%
% of employees billable	74.6%	75.5%	74.4%	75.8%	75.5%	75.6%	74.0%
% of PS rev. delivered by 3rd-parties	11.4%	12.6%	14.4%	12.0%	12.7%	11.7%	13.8%
M&A over the past three years	1.02	0.67	1.51	0.37	0.70	0.47	0.43

Source: SPI Research, February 2018

By geography, EMEA experienced the greatest growth followed by APAC, with North America experiencing the least growth in both revenue and headcount. EMEA showed the highest percentage of billable employees, which means lower management and non-billable overhead. APAC relied the most heavily on third parties for additional revenue (13.8%). According to Equiteq, the Americas reported the highest level of merger and acquisition activity with 1,271 deals. EMEA was not far behind with M&A deal volume growing to 1,094 deals.

Figure 21: Regional Demographics



Source: SPI Research, February 2018

By organization size, the largest organizations grew the fastest and added the most PS headcount (Table 10). The smallest organizations experienced the fewest mergers and acquisitions (as expected), while the largest experienced the most; they also had the highest percentage of billable employees and relied the most heavily on subcontractors to generate revenue. In the high-growth professional services world, mergers and acquisitions are increasingly seen as the fastest way to augment growth and to expand into hot new service and technology segments. Increasingly, the largest firms are augmenting their capabilities in SMAC (Social, Mobile, Analytics and the Cloud) while also investing in more strategic and industry-focused practices.

Table 10: Survey Participant Demographics by Organization Size

Key Performance Indicator (KPI)	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Surveys	41	107	140	96	37	35
Size of PS organization (employees)	5	20	65	200	500	3,117
Annual company revenue (mm)	$2.5	$27.0	$44.2	$118.4	$223.5	$807.9
Total professional services revenue (mm)	$2.5	$4.8	$17.2	$30.8	$87.3	$451.4
Year-over-year change in PS revenue	9.0%	5.0%	8.3%	8.2%	11.0%	10.9%
Year-over-year change in PS headcount	8.4%	10.5%	9.2%	8.0%	8.6%	11.0%
% of employees billable or chargeable	74.5%	75.8%	75.3%	75.8%	74.3%	76.2%
% of PS revenue delivered by 3rd-parties	7.7%	12.3%	12.9%	12.4%	15.5%	16.2%
M&A over the past three years	0.09	0.18	0.39	0.67	1.65	2.89

Source: SPI Research, February 2018

Tables 11 and 12 further analyze the survey demographics by vertical market, highlighting the markets surveyed. According to this year's survey, SaaS PS reported the highest year over year PS revenue growth at 13.6%. They were followed by IT consultancies at 12.5%. Until this year, PS industry annual revenue growth has always been higher than PS headcount growth. This is the first year that hiring exceeded revenue growth, indicating firms feel optimistic enough about their future growth prospects to hire in advance of sales. This means the PS industry as a whole is poised for tremendous growth in 2018. With global economic improvement, expect PS to significantly outpace the overall economy.

Table 11: Survey Participant Demographics by Vertical Market

Key Performance Indicator (KPI)	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Surveys	153	103	45	45	29
Size of PS organization (employees)	167	232	728	249	295
Annual company revenue (mm)	$33.0	$51.3	$437.7	$58.0	$150.6
Total professional services revenue (mm)	$31.3	$24.2	$106.2	$55.7	$15.4
Year-over-year change in PS revenue	4.4%	12.5%	9.2%	8.6%	13.6%
Year-over-year change in PS headcount	7.7%	11.5%	9.9%	9.8%	11.7%
% of employees billable or chargeable	76.2%	75.4%	73.6%	77.2%	75.5%
% of PS revenue delivered by 3rd-parties	12.7%	13.2%	10.7%	7.4%	15.5%
M&A over the past three years	0.27	0.54	1.91	0.27	0.59

Source: SPI Research, February 2018

Table 12: Survey Participant Demographics by Vertical Market

Key Performance Indicator (KPI)	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Surveys	18	8	8	6	41
Size of PS organization (employees)	1,898	108	163	1,028	337
Annual company revenue (mm)	$370.6	$10.6	$18.1	$1,183.3	$179.0
Total professional services revenue (mm)	$369.3	$10.0	$15.3	$177.5	$74.0
Year-over-year change in PS revenue	9.7%	-3.9%	5.9%	5.8%	6.5%
Year-over-year change in PS headcount	11.3%	11.6%	5.6%	8.8%	5.6%
% of employees billable or chargeable	81.5%	61.9%	81.3%	78.3%	71.8%
% of PS revenue delivered by 3rd-parties	22.1%	7.2%	12.5%	20.8%	12.4%
M&A over the past three years	2.00	0.25	0.69	2.83	0.78

Source: SPI Research, February 2018

Type of Work Sold

SPI Research analyzes the type of work sold. In this year's survey, due to the large number of architecture and engineering firms, the percentage of “other” revenue doubled to 20.1%. Technology and IT consulting were about 1/3 of all the work sold. As one might expect, embedded service organizations sell almost half their services as technology or IT consulting. These numbers have more to do with the mission of the organization than anything else. Embedded service organizations tend to sell both technology consulting and more hardware and software than independent professional service providers.

In Europe, and Asia, the percentage of technology consulting was significantly higher than business or management consulting. These figures highlight the movement towards a digital economy in regions outside of the United States (Table 13).

Table 13: Type of Work Sold by Organization Type and Geographic Region

Key Performance Indicator	2016	2017	ESO	PSO	Amer.	EMEA	APac
Business / management consulting	23.8%	27.4%	16.6%	31.2%	27.6%	30.6%	17.8%
Technology or IT consulting	41.1%	31.9%	48.7%	26.0%	29.5%	45.8%	51.9%
Subscription services	NA	2.7%	6.5%	1.4%	2.0%	7.2%	7.2%
Managed services	10.4%	10.4%	10.5%	10.3%	10.6%	9.5%	7.2%
Staff augmentation	6.3%	4.3%	5.4%	3.9%	4.5%	1.6%	4.9%
Hardware, software or equipment	7.5%	3.2%	7.0%	1.8%	3.0%	2.9%	6.6%
Other	10.7%	20.1%	5.3%	25.3%	22.7%	2.5%	4.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPI Research, February 2018

Table 14: Type of Work Sold by Organization Size

Key Performance Indicator (KPI)	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Business / management consulting	40.6%	25.4%	30.9%	23.7%	14.7%	28.1%
Technology or IT consulting	27.3%	27.1%	29.0%	38.6%	45.2%	30.3%
Subscription services	1.9%	2.5%	2.7%	2.1%	1.7%	7.1%
Managed services	2.1%	14.8%	8.7%	11.1%	10.4%	11.6%
Staff augmentation	4.6%	2.2%	3.4%	6.3%	6.9%	5.7%
Hardware, software or equipment	1.0%	1.6%	2.6%	5.5%	1.1%	8.1%
Other	22.5%	26.3%	22.7%	12.7%	20.0%	8.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

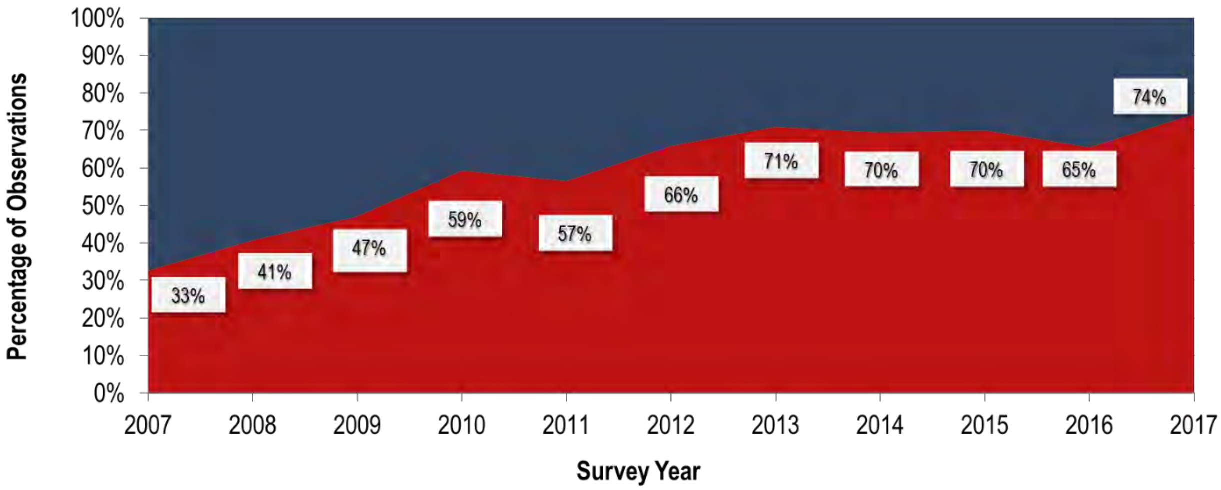
Source: SPI Research, February 2018

The breakdown of services sold becomes a little more interesting as organizations are parsed by size. Smaller firms tend to sell more business or management consulting than the larger firms. Because of the spike in the number of architecture and engineering firms who participated in the survey this year, we see the percentage of "other" increasing to 20% across the benchmark as this refers primarily to architecture and engineering work.

PSO Type

Many of the concepts and uses of professional services described in this report also exist within product-driven organizations. Thus, SPI Research uses the term "embedded service organization" (ESO) to describe the rapidly expanding market for service organizations within product companies. Within professional services, the fastest growing segment is software and IT services (Figure 22).

Figure 22: Independent vs. Embedded Survey Orgs Surveyed (2007 – 2017)



Source: SPI Research, February 2018

There are more than 100,000 software and IT services companies in the United States, and more than 99 percent are small and medium-sized firms (i.e., under 500 employees). This total includes software publishers, suppliers of custom computer programming services, computer systems design firms, and facilities management companies. This segment of the PS industry draws on a highly educated and skilled US-based workforce of nearly two million people.

SPI Research analyzes billable PSOs in several ways with a focus on two macro segments – independents and embedded PS organizations:

- ∆ ***Independent Professional Services Organizations (PSOs)***: Independent PSOs sell, deliver, and invoice for professional services to external clients. Clients hire systems integrators, IT consultancies (SIs) and Value-Added Resellers (VARs) to implement or integrate technology based on their strategic competence or specialized industry or product knowledge. Clients hire management consultancies to provide strategic insight, guidance, facilitation and coaching. Independent PSOs typically provide expertise, knowledge, skills and business practices that are more specialized than those found within internal organizations. In this study a majority of the independent PSOs were IT consultancies, Systems Integrators (SIs) or VARs, with the remainder representing Management Consultancies (MCs), Accountants, Marketing and Advertising and Architects and Engineers. Healthcare services including staffing; management consulting; technology and business process consulting represent one of the fastest growing sectors as the healthcare industry is forced to automate and improve patient reporting. The participating PSOs represented a broad spectrum from some of the largest independent service providers in the world to extremely small, independent regional and specialty service providers. The vast majority of responding independent PSO's are privately held.
- ∆ ***Embedded Services Organizations (ESOs)***: ESOs operate much like PSOs; however, they are part of a product-driven organization. The majority of ESO participants focus exclusively on their company's own technology but many of the largest ESOs like IBM and HP services provide global IT consulting, managed services and outsourcing not associated with their company's products. For the small to mid-size ESOs, their primary charter is to successfully implement their company's products. Increasingly the charter of embedded PS has expanded to include client adoption with a focus on reducing time to value. While they are focused on professional service revenue and profit, they are often asked to perform non-billable presales, proof of concept and customer satisfaction services at little to no charge. They enable external clients but must also support internal sales, support and engineering constituencies. At maturity levels 1 and 2, their primary focus is on project delivery and building a reference base. For ESOs, lead generation, marketing and sales are primarily provided by the product sales organization. In this survey a majority of the ESOs were part of independent software vendors (ISVs) who primarily provide on-premise software however the percentage of respondents representing SaaS (cloud) providers is rapidly expanding. Almost all legacy on-premise software providers are moving to the cloud. SPI Research shows both on-premise and SaaS results.

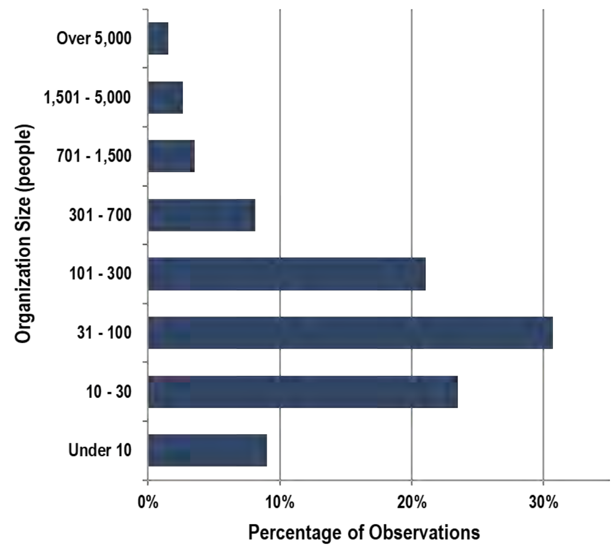
SPI Research uses this segmentation because independent consultancies must fund sales and marketing and back-office operations for finance, operations, facilities, IT and recruiting in a way that embedded organizations generally do not. Independents incur a higher cost of operation than captive (embedded) organizations do. However, the following chapters will demonstrate independent PSOs generally outperform their embedded counterparts because their sole focus is on delivering high-quality services at a profit. Independents generally are focused on client delight and service revenue and profit growth, versus embedded where the goals of delivering profitable services may be subordinate to customer product adoption and driving incremental product sales.

Organization Size

The average size organization in the Professional Services Maturity™ Benchmark went down from 499 to 347 employees in this year's survey. This year's survey is based on firms who employee more than 158,000 consultants worldwide making it the most comprehensive study of the Professional Service industry.

Figure 23 highlights survey distribution by PS headcount. The largest percentage of firms have between 31 and 100 employees, which has been the case for several years now. Embedded services organizations average 791 PS employees whereas independents averaged 194. Firms headquartered in EMEA averaged 181 PS employees; the Americas averaged 374 and Asia-Pacific averaged 139 PS employees per firm. Software PS organizations averaged 728 PS employees, highlighting the importance of embedded PS within these organizations. IT consultancies (232) and Management consultancies (249) also had a substantial PS workforce. The largest survey sample, AE firms, averaged 167 employees.

Figure 23: Organization Size



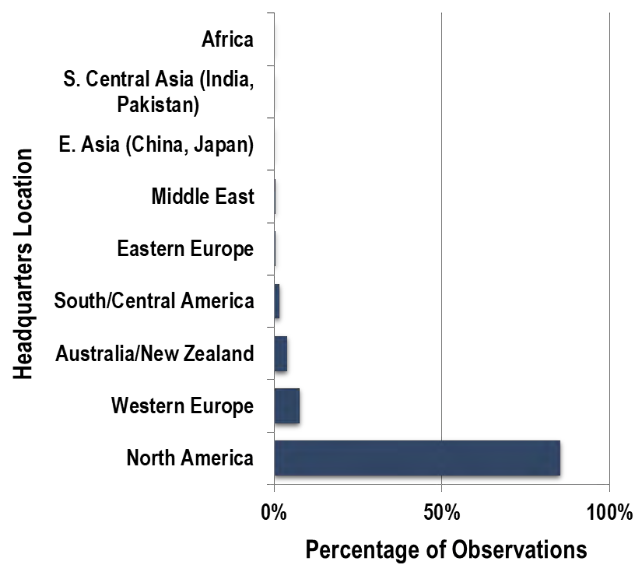
Source: SPI Research, February 2018

Headquarters Location

SPI Research works with professional services organizations from around the world and encourages them to participate in the benchmark survey. Survey participation from firms headquartered outside of North America, (Europe, Middle East, Africa (*EMEA*) and Asia-Pacific (*APac*)) declined this year to less than 20%. (Figure 24).

It is important to note that regardless of where the organization has its headquarters, a significant number of employees may reside outside of the headquarters location. This is especially true for larger organizations. Therefore, the benchmark does reflect global organizations with a worldwide PS workforce.

Figure 24: Headquarters Location – Region

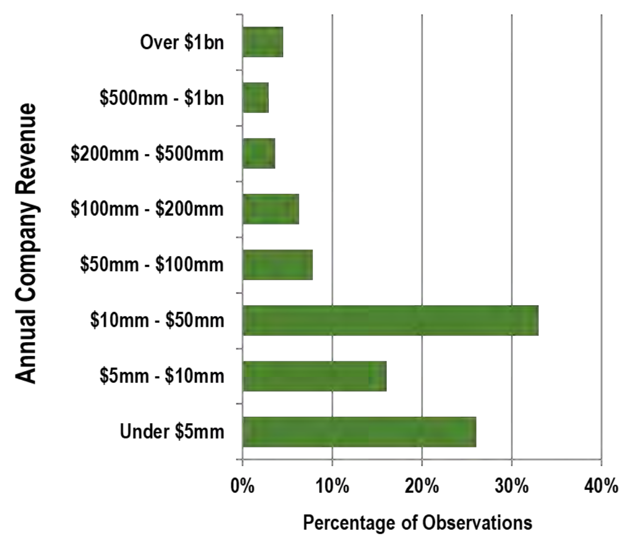


Source: SPI Research, February 2018

Total Company Revenue

In this survey, many of the PS organizations are part of a larger enterprise that also sells a variety of other products and services. Many of the independent professional service providers also sell products or the responding group is an individual practice within a larger firm. Many technology service organizations have multiple lines of business which may include management consulting, managed services, outsourcing and staffing. Therefore, it is important to note total annual company revenue. In this year's survey the average organization generated $128 million in total revenue including $57 million in PS revenue (Figure 25). It is important to note that the percentage of total revenue produced by PS increased to 44.5% this year, reflecting the predominance of independent consultancies and the increase in PS revenue as a percentage of total revenue produced by embedded service organizations.

Figure 25: Total Company Revenue



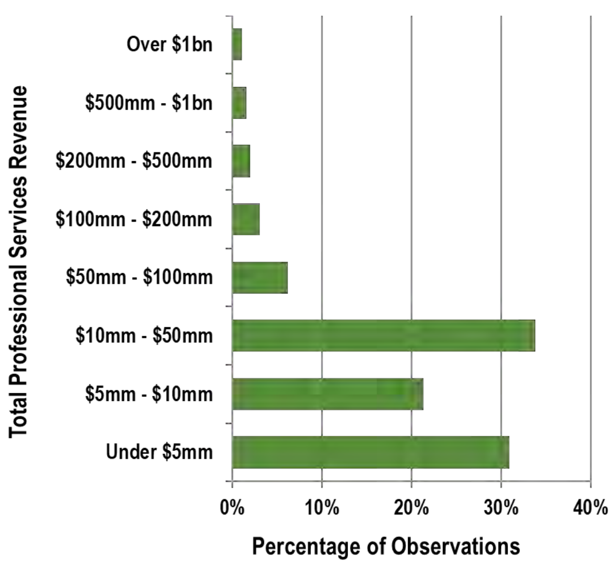
Source: SPI Research, February 2018

Total PS Revenue

Figure 26 shows 86% of the organizations surveyed have professional services revenue of less than $50 million. The global PS market is primarily comprised of firms with less than $50 million in revenue, but SPI Research works especially hard to survey larger professional services providers to better understand the dynamics impacting their business and how they can improve organizational performance.

Embedded PSOs averaged $126 million in PS revenue and the independents averaged $48 million. The average across all 456 participants was $57 million compared to $86 million in 2016 and $81 million in 2015. In this year's survey firms headquartered in the Americas ($62.2mm) produced more than double the PS revenue generated by EMEA and APac headquartered firms ($25.4mm and $21.9mm respectively).

Figure 26: Total Professional Services Revenue

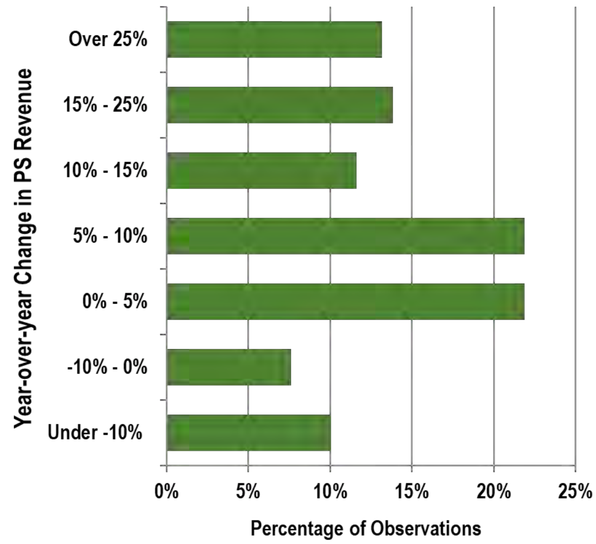


Source: SPI Research, February 2018

Year over year change in PS Revenue

In 2017 the survey reported the slowest revenue growth over the past 5 years, at 8.0%. The revenue growth number was reduced by a significant percentage of new surveys from the Architecture/Engineering markets, where revenue growth was only 4.4%. 27% of the firms grew revenues by over 15% (Figure 27). More than 40% of the firms grew revenues by less than 5% in 2017.

Figure 27: Year-over-Year Change in PS Revenue



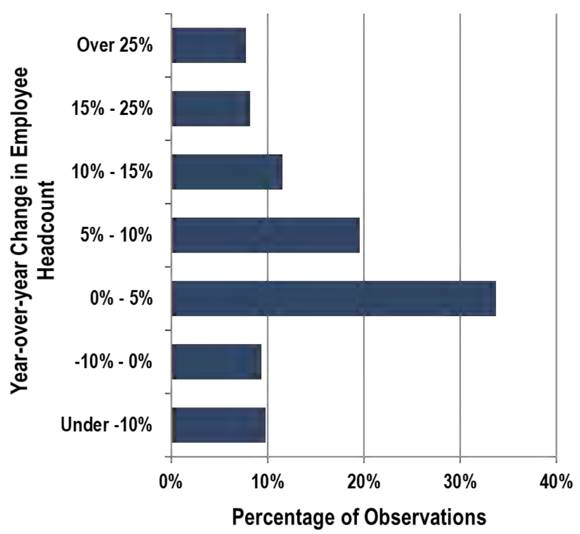
Source: SPI Research, February 2018

Independent providers averaged 7.4% revenue growth whereas embedded service providers grew at 9.9%. Firms with more than 300 employees grew the fastest at 11.0%. All other size PSOs grew at less than 10%. It is important to note that revenue growth in 2017 slowed across most segments and sizes of organizations, indicating overall PS revenue growth is slowing. This is an important metric to watch as growth in the sector may be entering a new phase of less than 10% year over year revenue growth, leading to greater consolidation and potentially price erosion. The professional services market can absorb growth rates of 5% to 10% through efficiency gains and better management of external subcontractors without significant increases in hiring. However, when growth rates rise above 10%, professional services organizations must add full-time employees.

Year-over-year change in PS Headcount

2017 saw a surge in headcount growth. Typically, headcount growth trails revenue growth by approximately 3 percentage points but this year, for the first time in this benchmark, headcount growth exceeded revenue growth by 1.3% at 9.3% (Figure 28).

Figure 28: Year-over-Year Change in PS Headcount



Source: SPI Research, February 2018

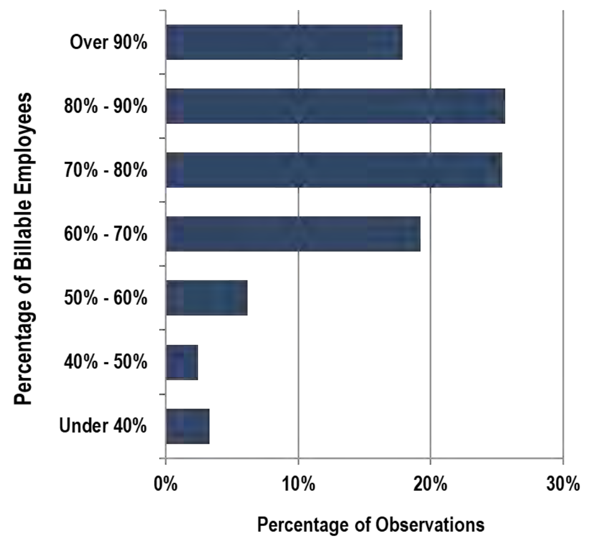
Both embedded and independents grew their employee headcount by over 9% (9.8% for embedded and 9.14% for independents). The Asia-Pacific region showed the largest increase in headcount at 13.7%, followed by EMEA at 10.8%. The Americas grew headcount at 8.9%, which is still very high compared to other years.

The largest growth in terms of headcount in the surveys came from organizations with over 700 employees, at 11.0%. This was followed by organizations with between 10 and 30 employees at 10.5%. These statistics show growth is on the horizon in professional services. With this surge of hiring, wage growth cannot be far behind.

Percentage of Employees Billable or Chargeable

SPI Research found the percentage of billable employees billable grew from 74.6% in 2016 to 75.5% in 2017 (Figure 29). This increase shows PSOs have worked hard to eliminate non-revenue producing positions. Both embedded and independents were close at 74.4% and 75.8% respectively. The Asia-Pacific region reported 74% of their employees billable, whereas the Americas led with 75.5% billable employees. There were no significant differences as organizations grew in size, although the largest organizations, those with over 700 employees, did lead the pack at 76.2%. Of the largest vertical markets, (those with over 20 surveys), management consultancies led the way with 77.2% of their employees billable.

Figure 29: Percentage of Employees Billable



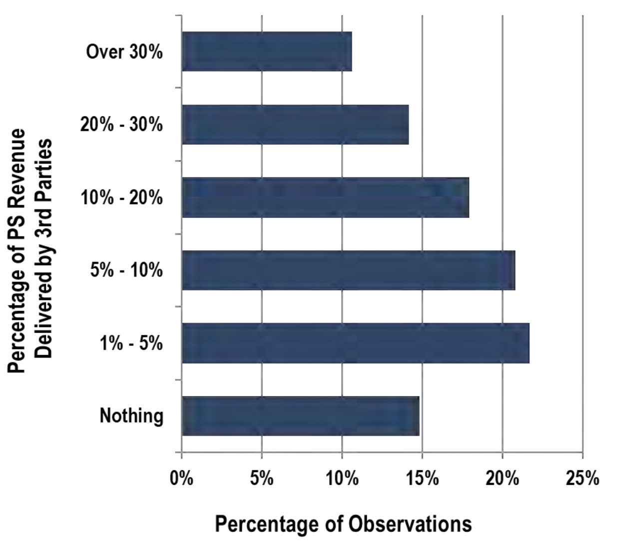
Source: SPI Research, February 2018

Excessive non-billable headcount creates a top-heavy organization or is a symptom of poor sales and marketing effectiveness and/or poor systems. But as in all things PS, there is a delicate balance that must be maintained. Non-billable headcount and time is a necessary component of leadership and developing infrastructure, systems and tools which support growth, consistency and quality.

Percentage of PS Revenue Delivered by Third Parties

Figure 30 shows the distribution of survey responses in terms of the amount of revenue generated by third-party resources. The average percent of PS revenue generated by subcontractors was 12.6%, up from 11.4% in 2016. ESOs used a third-party workforce to generate 14.4% of revenue, whereas independents reported 12.0%. The Asia-Pacific professional service providers used a third-

Figure 30: Percentage of PS Rev. Delivered by 3rd-parties



Source: SPI Research, February 2018

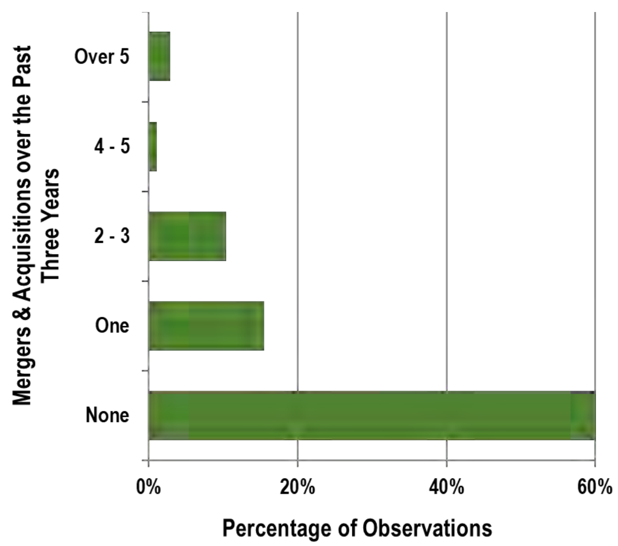
party workforce 13.8% of the time, the Americas 12.7%. Hardware and networking providers used the most outside subcontractors at 20.8%, accountancies used the least at 7.2%.

As one might expect, smaller PSOs used a third-party workforce less than larger ones. Firms with under 10 employees used an external workforce to deliver 7.7% of their revenue, which grew steadily to 16.2% for those organizations with over 700 employees. The use of subcontractors grows proportionately with organization size.

Mergers and Acquisitions over the Past Three Years

Five years ago, SPI Research began tracking the number of mergers and acquisitions organizations have been involved in (either as the acquirer or acquired). According to this benchmark, M&A activity fell from 1.02 mergers and acquisitions in 2016 to 0.67 in 2017 (Figure 31). Part of this has to do with a larger number of small PSOs sampled in 2017. ESOs led the way with an average of 1.51 mergers and acquisitions; independents only averaged 0.37. M&A activity was most prevalent in the Americas, with an average of 0.7, compared to EMEA and Asia-Pacific, with 0.47 and 0.43 respectively.

Figure 31: Three-year Mergers & Acquisitions



Source: SPI Research, February 2018

Understandably, the largest firms in the sample had the most M&A activity. Those organizations with over 700 employees averaged 2.89, compared to those with under 10 employees at 0.09. SPI Research expects M&A activity to pick up in 2018, as the economy grows, and talent shortages intensify.

Software professional services averaged 1.91 mergers and acquisitions compared to only 0.27 for architecture and engineering, accountancies and management consultancies. The software and SaaS markets are picking up; making acquisitions an attractive alternative to gain new technologies and expertise.

Table 15: Consulting Sector Merger and Acquisition Activity and Deal Multiples

Demographic	Deal Value Revenue Multiples	Public Deals EBITDA Multiples	2016 Number of Deals
Management Consulting	1.4X	10.2X	946
IT Consulting	1.1X	8.0X	787
Media	1.8X	11.4X	615
Engineering	0.6X	6.9X	326
HR	0.5X	11.1X	228
Total			2,902

Source: Equiteq 2017 Global Consulting M&A Report

Please refer to Equiteq's Global Consulting M&A report 2017 for an overview of consulting M&A activity including deal structure and revenue and

EBITDA multiples. According to Equiteq, (consulting industry merger and acquisition specialists) 2,902 acquisitions occurred across the global consulting industry in 2016. North American firms led the buying frenzy with 1,271 deals; followed by Europe with 1,094 deals and Asia-Pacific with 397. Average deal values, shown as a multiple of trailing twelve-month revenues, reached 1.4X in North America while deal values were .9X in Europe and 1.4X in Asia-Pacific. The big consulting and advertising organizations (Dentsu, Accenture, Deloitte and WPP) were the most prolific acquirers. The market is experiencing overlap and convergence particularly in the areas of strategy, technology and global marketing networks.

55.5% of the acquisitions reported were under $20M, reflecting the fact that the vast majority of consulting firms are small with revenues below $20 million. Mergers and acquisitions can provide a viable PS growth formula as they bring new clients, ideas, skills and competencies. But deal structure is very important to ensure that the rainmakers, visionaries and subject matter experts who founded and grew the firm stay and contribute after the acquisition. A key ingredient of acquisition retention is to move quickly to a common business application infrastructure to ensure all employees have visibility to the business and how they can contribute. Another best practice in people-based businesses is to move quickly to consolidate finance, operations and human resources as these important functions can drive standardization in measurements, finance, reporting, job profiles and compensation. Typical consulting leader earn outs are three years to ensure the firm's leaders and visionaries stay on to ease the transition.

4. Best-of-the-Best

SPI Research annually conducts in-depth analysis of the top 5% of PS Maturity™ benchmark participants to uncover the reasons for their superlative performance. The leading (according to the PS Maturity™ model) organizations have been named "Best-of-the-Best" after a careful audit of their survey responses and in-depth interviews with their lead service executive.

In this year's benchmark, SPI Research names the top 20 firms, each scoring 20 or above (out of 25) on the PS Maturity™ Model. The following sections highlight some of the findings comparing the "best" preforming organizations to the rest of the survey participants.

Introducing the 2018 Best-of-the-Best Service Organizations

According to Service Performance Insight's **2018 Professional Services Maturity™ Benchmark** out of 456 participating organizations, twenty firms (5%) significantly outperformed the benchmark average by excelling in all five service performance dimensions – **Leadership, Client Relationships, Human Capital Alignment, Service Execution and Finance and Operations.** The top 20 firms outperformed their peers and the benchmark average with significantly higher profit and more satisfied clients (Table 16).

One of the characteristics that differentiates this year's top performers is the emphasis they place on building unique, employee-centered cultures. Whether it is parental leave for all employees or providing employee ownership or career opportunities regardless of gender, these firms have built collaborative cultures in which continuous growth and teamwork are prized. Their emphasis on building an open and ethical work environment manifests in low levels of attrition and high levels of employee satisfaction and referrals.

Table 16: Best-of-the-Best Performance Advantage

Measurement	Top 20 Firms	All Others	Advantage
EBITDA	26.3%	16.1%	63%
Size of PS Organization (employees)	490	340	44%
Year over year revenue growth	19.4%	7.5%	159%
Year over year PS headcount growth	19.8%	8.7%	126%
Average revenue per project (k)	$193	$169	14%
Annual revenue per employee (k)	$221	$155	43%
Projects delivered on-time	90.2%	79.2%	14%
Reference clients	88.8%	74.0%	20%

Source: SPI Research, February 2018

This year's top performers are experiencing tremendous growth. Many have both acquired and been acquired, as larger firms seek to grab some of their magic. A top challenge is maintaining their esprit de corps as they grow. To ensure their cultures of continuous learning are passed down to newcomers and the next generation of leaders, they have built strong consulting and leadership development programs, emphasizing and supporting accountability at all levels.

They believe in working hard and celebrating often. All-company meetings occur on a regular basis, providing a platform for team building, learning and sharing. To support growth, many top performing firms have built robust college recruiting and training programs, often supported by summer internship programs. College hires are typically brought onboard through "classes" who start at the same time, work in the same office, and go through training together. Top firms are also constantly on the lookout for experienced, strategic hires. They are not afraid to invest in superlative senior hires around whom they can build new business lines and solutions.

Other elements of their success include open books and transparent communication, so all levels of the organization have the accurate data they need to make proactive, fact-based decisions. Transparency binds employees to the direction and strategy of the firm, propelling superlative execution. Integrated business applications are an essential component of supporting high levels of employee and revenue growth because they provide real-time visibility to all facets of the business.

SPI Research is proud to announce the 2018 top performers. Due to privacy policies, several of the top twenty Best-of-the-Best Professional Services organizations declined to provide their profiles however their metrics and best practices are included in the "Best-of-the-Best" analysis.

Advoco

Advoco is a leading Enterprise Asset Management (EAM) consulting services company that has seen continual growth since its founding in 2002. By optimizing our clients' business performance through an improved application and implementation of Infor EAM, Advoco forms a trusted partnership and meets the complex needs of leading organizations around the world.

Steve Brindle, Founder and Partner, Advoco

Please tell us about your firm's top accomplishments in 2017.
At the start of the year we set out to increase our service revenue by 25% to break $10m. Despite a slow start, we recruited hard and ended up hitting the goal by the end of November and getting closer to $11m by the end of the year.

Please tell us about the aspects of your firm that you are most proud of.
The main aspect I'm proud of is the team that we have put together – there is a true spirit of camaraderie in all our offices and projects. People are very willing to help fellow team members and to mentor the large number of new hires we brought on during the year.

This leads to a very high quality of work that we hold ourselves up to. Our Vision statement is to "Earn the title of Trusted Advisor – Expect Success" – we take this seriously in all our client engagements and it is a fundamental part of our culture.

Please tell us why your firm is a great place to work.
We expect high standards, but we have fun meeting them! This year for exceeding the revenue target we took the whole company, plus significant others – over 100 people – to a Sandals resort in the Bahamas for three nights as a show of thanks. We also make wine in our California office: picking, crushing, fermenting, barreling and bottling it all ourselves. Staff come out to help with the various activities, especially the picking in September. We have two fitness challenges a year; give time and money to local charities; and have frequent less formal social events like happy hours. In 2017 we won "Best Place to Work in South Carolina" – so we seem to be doing something right!

Please tell us about the top challenges your firm is facing in 2018.
The top challenge is to maintain our culture as the company grows. The ability to know everyone in the organization gets harder as our headcount goes up. We restructured our delivery teams to, hopefully, enable ongoing growth and adjusting to this. Ensuring efficient utilization will be key to our success in 2018.

Please tell us how you plan to continue to be a Best-of-the-Best professional services organization.
We aim to double our service revenue by 2020 – our slogan is "$20m by 2020". Maintaining healthy growth and balancing all aspects of the company to support this (Sales, Delivery, Technology, Back-Office) is going to be our focus over the coming years. If we get this right, we will continue to be a Best-of-the-Best professional services organization.

Altius

Altius offers the depth of experience and expertise of a big brand consultancy with the flexibility and agility of a niche firm. Since 1993, Altius has been helping companies better understand the data that drives their organization through our products, business intelligence consulting services, and support.

Steve Anderson, Non-Executive Director, Altius

Please tell us about your firm's top accomplishments in 2017.

- Revenue growth of 60%
- Profit growth of 100%
- Increase in permanent headcount from 100 to 150 people
- Successful delivery of leading edge data platform and data science projects to multiple clients
- Our Automated Trading Engine has been highlighted as a driver of business performance
- Closed our largest annuity contract to date which was over £7m
- Selected as a 'Great British Scaleup' by TechMarketView
  Awarded Silver Accreditation for Investors in People

Please tell us about the aspects of your firm that you are most proud of.
Our client focus and delivery focus together with the level of innovation we have demonstrated. These combined have enabled us to develop long term annuity relationships with our clients. We consistently

identify the latest technology developments and invest in them, so we can help our clients stay at the leading edge of deriving value from data.

Please tell us why your firm is a great place to work.
We have a very flat structure where everybody works as a team to deliver great products and services for our clients. We give people autonomy, accountability and responsibility across the business. The team highlights the quality of their peers as a key aspect of working at Altius. We constantly drive innovation and provide our consultants with the opportunity to work at the leading edge of data projects. We also recognise the need for staff to collaborate outside of client delivery and so we have an active social calendar.

Please tell us about the top challenges your firm is facing in 2018.
Continue to recruit the best talent
Continue to grow our sales capacity
International expansion
Deliver new R&D from Altius Labs to ensure we stay at the forefront of data innovation

Please tell us how you plan to continue to be a Best-of- the-Best professional service organization.
Maintain a focus on delivering client benefits
Continue to share the vision for growth with employees
Ensure staff have the support they need to maximise their project delivery and personal development
Maximise sales and operational efficiency using Kimble PSA to run the business

Beck Engineering

Beck Engineering, Inc.* provides civil engineering and land surveying services for both the private and public sectors. By providing an array of services, Beck Engineering is able to deliver successful design, project management, and construction services. The firm has established an exceptional reputation in the Iowa Great Lakes and surrounding region.

Brad Beck, Founder and President, PE, PLS Beck Engineering

Please tell us about your firm's top accomplishments in 2017. Beck Engineering, Inc. made many great advances in 2017 and we are excited about the direction of our firm. To begin, we implemented the Aileron professional management system which has allowed us to be more intentional in all facets of our business. We started Beck Engineering University (BEU) to foster personal development for our newer hires. In the 3rd quarter of 2017, BEI hosted our first Board of Advisors meeting with three individuals from our community that have been highly successful business men in the State of Iowa and beyond. Finally, we capped an amazing year off by receiving the Iowa Great Lakes Corridor Small Business of the Year Award!

Please tell us about the aspects of your firm that you are most proud of.
First and foremost, we are proud of our culture. We focus on developing our people and treating them like family. We know that our growth will be driven by their growth. We are extremely proud of the fact that in the history of our firm we have never been involved in arbitration, mediation, litigation or any other legal issues. Living by our core values of being honest, responsible, and responsive, self-motivated and keeping a positive attitude has allowed us to avoid any legal problems. This is a testament to the high quality of our work.

Please tell us why your firm is a great place to work.
Our firm is a great place to work because we put our people first. We have fun and work hard together to grow and be the best we can be. Our mission, vision and purpose lead us every day. Mission: Build Relationships. Vision: Better Communities. Purpose: Create Opportunities. We build relationships with our team members and clients to better the communities we live in and work in, and by doing this we create opportunities for our employees, our clients and the communities we serve. When we follow these ideals success happens for ourselves, our clients and our community.

Please tell us about the top challenges for your firm is facing in 2018.
In 2018 our top challenge will continue to be balancing growth of the firm with people development. Our projects are successful as a result of our people and we want to continue to provide top quality work for our clients. Our purpose is to create opportunities and we do that by developing our people and then promoting from within.

Please tell us about how you plan to continue to be a Best-of-the-Best professional services organization.
Our firm will continue to be a Best-of-the-Best professional services organization by staying focused on our strategic plan and utilizing the exceptional resources that we have been given including the Aileron professional management system, our Board of Advisors and our people.

Thank you for allowing us this opportunity to share the exciting things that are happening here at BEI.

Cloudera

At Cloudera, we believe that data can make what is impossible today, possible tomorrow. We empower people to transform complex data into clear and actionable insights. We deliver the modern platform for machine learning and analytics optimized for the cloud.

Greg Marron, Director of Professional Services Operations at Cloudera

Please tell us about your firm's top accomplishments in 2017.

Net expansion rate of 135%, SW revenue grew 51%, professional services delivered successful engagements to over 400 customers

Please tell us about the aspects of your firm that you are most proud of.
We were the first commercial provider of Hadoop and continue to be the market leader. We have continued to innovate and are now positioned as leaders in Machine Learning and Advanced Analytics solutions, on-premise and in the Cloud.

Please tell us why your firm is a great place to work.
We have a great culture with great people. We also have a great opportunity as we are competing in a market that is expected to expand at 21% per year over the next 4 years.

Please tell us about the top challenges your firm is facing in 2018.
Improving leverage and productivity out of our sales stack. We will also need to innovate rapidly in order grab market share that is shifting to the cloud.

Please tell us how you plan to continue to be a Best-of-the-Best professional service organization.
We deliver value to our customers by providing the best and brightest resources. We will continue to invest heavily in training and in our college hire program, which has proven to provide a great source of talent. We are also investing in our asset management program, so that we can harness and reuse tools and best practices. We have also acquired a machine learning PS practice and will look to leverage that practice to drive innovation across our customers.

Codezero Consulting

Code Zero Consulting is a cloud focused consulting, IT systems development, and software integration provider founded by highly skilled executives, architects, developers, and overall great people.

John Hildreth, Managing Partner Codezero Consulting

Please tell us about your firm's top accomplishments in 2017.
We are very proud of our fantastic team members, the resonation of our offerings in the market, and the rapid growth we experienced in 2017. We are a Salesforce Consulting partner and we reached Silver status in 2017, less than a year after our founding. We are currently on track to achieve Gold status in 2018. Our dedication to providing the best solutions to our clients' most complex problems was recognized by our customer satisfaction level which is in the top 1% of Salesforce consulting partners. Our performance has enabled us to become one of the first partners certified globally to implement Salesforce Billing, a new offering, positioned to become a major part of our business in 2018.

Please tell us about the aspects of your firm that you are most proud of.
One of the driving forces in the founding of Code Zero was creating a collaborative and supportive culture. We were able to quickly grow to serve our expanding client base while preserving these values all while creating a solid framework for continued growth. We are proud of our culture. We like to keep it real and stay down to earth. We are genuine and transparent, not only with each other but with our clients as well. We are also very proud of the results that we provide to our clients. Given the competitiveness of today's business environment where everyone is trying to separate themselves from the pack, we know that a "one size fits all" solution won't work. We enjoy guiding and collaborating with clients to creatively address each business problem and apply our broad industry experience. Our priority is to ensure we meet our clients' requirements and to be truly relevant for each client's business model and maturity level while still being very easy to do business with.

Please tell us why your firm is a great place to work.
The founding team at Code Zero took their experience from global consulting firms to create an evolved firm that is able to provide the same level of maturity as the larger firms, while still staying fun and flexible. Code Zero has built a collaborative atmosphere where consultants collaborate, learn, and share their knowledge with customers. When a new client requirement comes our way, we provide a "think-tank" like place to solve it. Imagine going to a place where you can participate in collaborative solutioning sessions solving complex business challenges with like-minded individuals- this is Code Zero every day.

Please tell us about the top challenges your firm is facing in 2018.
We have great energy and momentum leading into 2018. We are growing quickly, but we also want to grow smart and ensure we preserve our culture and delivery excellence. A key component will also be protecting our margins while still remaining competitive.

Please tell us how you plan to continue to be a Best-of- the-Best professional service organization.
We will keep our eye on our culture and employee happiness as we continue to grow. A healthy culture breeds passion and productivity towards all the work we do. We will continue to provide the best support and solutions to our clients, spend the time to hire the best consultants, and enable their continued professional growth. We understand that accurate measurement of our firm's performance will allow for more effective management so we will continue to refine our KPIs across all aspects of the business to provide more visibility into what is working and what isn't.

Coveo

Coveo makes business personal. As the pioneers of cloud-based AI-powered search and recommendations, Coveo has always been driven by making the lives of our customers easier. Coveo is dedicated to helping organizations deliver more personalized experiences at scale, by ensuring that every customer, partner and employee has contextually relevant information at every interaction.

Alain Bouchard, Vice President, Professional Services

Please tell us about your firm's top accomplishments in 2017.
Last year was an exceptional year for Coveo. We achieved several product milestones including the announcement of the Coveo for Salesforce Family of Products and free Coveo AI-Powered Search on the Salesforce AppExchange, becoming HIPAA compliant and passing the SOC 2 examination, as well as introducing early access to Coveo for Microsoft Dynamics 365 and Coveo on Elasticsearch. We held our first ever customer conference, Coveo Impact, and launched the Coveo Relevance Maturity Model™. The model is an easy-to-use framework to assess your organization's level of relevance today, where it should be, and the tools required to make it possible.

Please tell us about the aspects of your firm that you are most proud of.
Our product milestones have enabled us to honor our brand promise of delivering relevance at scale. We have seen truly innovative use cases of the Coveo platform and are proud of our customers and partners' willingness to embrace digital transformation in new and exciting ways. We are also extremely proud of our team, for they are the ones who make it all possible. We underwent significant expansion

in 2017. Our Quebec City headquarters moved to a larger space and we grew the Montreal office, for a combined total of 78 new hires. Thanks to the hard work of our incredible employees, partners and customers, we were recognized as a leader in both the Gartner Magic Quadrant for Insight Engines and The Forrester Wave™: Cognitive Search and Knowledge Discovery Solutions,

Please tell us why your firm is a great place to work.
Our values are the backbone of our culture. We are passionate, we believe collaboration is the key to success and everything we do is done with integrity. Innovation is not just a buzzword, it's a way of life at Coveo. We are always working on the next big idea and encourage our team to try new things, learn, grow and have an impact on the business. We also offer great perks like team building exercises, healthy snacks, fitness bursaries and more!

Please tell us about the top challenges your firm is facing in 2018.
When growing fast, it's important to remain laser-focused. To paraphrase Michael Porter, strategy is what you don't do. We are focused on ensuring our enterprise customers can deliver the most relevant experience at every interaction to their customers, partners and employees. We stay focused on the technology, people and processes required to achieve high relevance and best quality for our clients, and don't let other potentially interesting diversionary projects pull us away from this mission.

Please tell us how you plan to continue to be a Best-of-the-Best professional service organization.
Constant investment in people - not just our own people, but the people within our ecosystem: our partners and our customers - is crucial. Mentoring professional service professionals both within and outside our company is vital to broaden the reach of what we can deliver for our clients. Coupling that with constant feedback and continual improvements in tools, processes and work practices, ensure we continue to get better and better at delivering projects on time and over expectations.

Enforce

Enforce is leveraging the cloud to build a better consulting firm. Enforce works with leading cloud application software companies in implementation and solution optimization from solution delivery centers in San Francisco and Dallas. Enforce is a proud implementation partner of Ceridian and its Dayforce cloud Human Capital Management (HCM) application.

Tim Dilley, President and CoFounder, Enforce LLC

Please tell us about your firm's top accomplishments in 2017. Since our founding in 2016 we have already grown the firm to 50 consultants with plans to grow to more than 100 within 18 months. We work with private pre-IPO cloud software providers to become their number one solution delivery partner. We are Ceridian's largest partner and have recently developed partnerships with nCino(banking software on the Salesforce platform) and Percolate marketing automation software. We are working to build a sizable national practice. We are bringing our knowledge of cloud applications to mid-market customers. We commit to only one software provider per market segment.

Please tell us about the aspects of your firm that you are most proud of.
Our lead company value is teamwork. We operate in teams of 5 or 6 to support a collection of customers. We are very metrics and goals driven.

Please tell us why your firm is a great place to work. Most of our team is in Dallas – we recruit heavily from the Dallas area universities. Our experienced hires come up to speed in two to three months. College hires take a bit longer. We focus intently on recruiting the best talent.

Please tell us about the top challenges your firm is facing in 2018. To continue to innovate service delivery. Our goal is to be the number one provider for each of our partners.

Please tell us how you plan to continue to be a Best-of-the-Best professional service organization. We hope to hit 100 people within the next 12 to 18 months. We plan to launch another partnership this year. Many of the top cloud integrators have been acquired so we are quickly growing into being one of the top service providers. This is not a lifestyle business, we are intently focused on market expansion.

Integrated Project Management Company

Integrated Project Management Company, Inc. (IPM) is a leading project management consulting firm specializing in planning and implementing strategic and critical projects in the life sciences, healthcare, and consumer products sectors. Our leadership approach combines clients' internal capabilities and legacy knowledge with IPM's proven ability to inspire stakeholder engagement and buy-in to achieve project objectives. Since our inception in 1988, IPM has served more than 350 clients, from Fortune 100 companies to startups, and completed nearly 4,000 projects.

Timothy J. Czech, Chief Financial Officer, IPM

Please tell us about your firm's top accomplishments in 2017.
2017 has been a year of tremendous accomplishment for IPM. For the eighth consecutive year, we were named a Top Workplace by Fortune Magazine and Great Place to Work. We were also awarded the Illinois Performance Excellence (ILPEx) Gold Award. We have experienced record-breaking growth in revenue and headcount in all our offices.

Please tell us about the aspects of your firm that you are most proud of.
Overall, I am most proud of our company's culture, which is the umbrella under which fall our stellar employees, superb employee benefits, philanthropic efforts, and company performance bonus program.

Please tell us why your firm is a great place to work.
Simply stated – we care. We care for each other, our clients, and the communities where we live. Members of our seven offices gather as a company four times per year for our Staff meetings meant to build camaraderie and company affinity. This year, we will celebrate IPM's 30th anniversary on Coronado Island. Employees and their guests will enjoy an all-expense paid extended weekend on the island.

Please tell us about the top challenges your firm is facing in 2018.
In 2018, as in every year, our greatest challenge is balancing supply and demand. It is a delicate balance to match our recruiting efforts with the right number of resources at the right time to match client demand. IPM hires the best of the best, in fact on an average year we only hire approximately .5% of all resumes received. We have a comprehensive recruiting process starting with a phone screen, assessment, local office round one interview and then require all candidates to come to the corporate office for a round two interview to ensure cultural alignment. Once we make a great hire we invest in them through a three week orientation and then it is off to consult with our excellent clients. Having the perfect resource available at the exact time that a client needs our help is a challenge and one that I believe all consulting firms face.

Please tell us how you plan to continue to be a Best-of-the-Best professional service organization.
As part of IPM's Strategic Plan, this year we established our 2025 Vision and Goals, replacing our 2020 Vision and goals established back in 2010. Our 2025 Vision and Goals will be unveiled to our entire organization during our February 2018 meeting. This Vision establishes the overall framework and strategy that will guide IPM over the next seven years.

We established priorities that address our offerings to the marketplace, our obsession with our reputation, continued financial success, ongoing efforts to give to those in need, and – of course – great care and concern for our people.
By executing this plan we will continue to be one of the Best-of-the-Best firms!

Logical Design Solutions, Inc.

Logical Design Solutions (LDS) is a management consultancy specializing in digital strategy and design for global organizations. We partner with clients to envision and design emerging digital ecosystems. Our work can be found wherever business ecosystems are complex and changing, and where the human element is of critical importance.

Bruce Lovenberg, CPA Chief Financial Officer, Logical Design Solutions

In 2017 Logical Design Solutions made great strides toward moving into a new business model that was focused on the delivery of services in HR Transformation to having a complete focus on Enterprise Digital Transformation. We successfully completed several projects that involved robots and other devices, artificial intelligence and machine learning in solutions that spanned organizations such as Operations, Supply Chain and R&D/Innovation. This shift in business model has led to the development of a full pipeline of enterprise digital opportunities that we will develop in 2018.

"LDS is honored to be named a "Best-of-the-Best" consulting firm for the 9th year in a row, the only firm to have received this prestigious honor every year. Making the decision to implement a Professional Service application is the easy part, understanding and managing by the information it provides is hard. The SPI Research PS Maturity Model™ and five Service Performance Pillars™ gives you what you need to bring it all to life."

Oxford Computer Group

Oxford Computer Group is a worldwide leader in the implementation and management of identity, mobile devices and data protection services for enterprise class businesses. We deploy on-premises, hybrid and cloud solutions depending on the needs of our clients. We are a Microsoft Partner of the Year in our specialization.

Jeremy Wilson, Operations Director

Please tell us about your firm's top accomplishments in 2017.
2017 saw our business grow significantly. We added additional solution practices and hired subject matter experts to enable us to provide a comprehensive portfolio of services and solutions to our customers. Helping them to define and implement exactly the right enterprise identity and information security framework to support their success, liberate their data and mobilize their staff - whilst keeping them safe, and their customers, partners and consumers secure.

Please tell us about the aspects of your firm that you are most proud of.
We are very proud of our technological expertise, our people, culture and values, which are the key to driving the success of our organization.

Please tell us why your firm is a great place to work.
OCG is a great place to work, where we enjoy our work and feel pride in what we do. We have an ethical and respectful approach to how we engage with our clients. We have developed a strong culture and environment, where we provide opportunities for role and career development, alongside the chance to work with leading edge technologies and solutions.

Please tell us about the top challenges your firm is facing in 2018.
To continue to grow and sustain our position as the complete experts in securely liberating enterprise data and workforces using Microsoft technologies. We need to continue to keep our skills at the cutting edge while extending our portfolio of service offerings and delivery models to meet our customers' needs. This will include further IP and tools to complement the Microsoft product stack; further managed service offerings, and new engagement models in addition to our established project business.

Please tell us how you plan to continue to be a Best-of-the-Best professional service organization.
Continue to grow our portfolio of quality clients with whom we work in long term partnership – helping them to fully benefit from the opportunities that technological advances offer, by maintaining our close relationship with Microsoft, keeping our skills and knowledge at the cutting edge and innovating products and services which help our customers stay ahead.

Pariveda Solutions, Inc.

***Pariveda Solutions* is a technology strategy and solutions firm focused on developing exceptional people to solve our clients' most complex and valuable business problems. We are multifaceted problem solvers who provide strategic consulting services and custom application development solutions for mobility, cloud computing, data, portals, collaboration, CRM, custom software and enterprise integration.**

Kerry Stover, Chief Operating Officer, Pariveda Solutions

Please tell us about your firm's top accomplishments in 2017.
2017 was a year of many accomplishments and achievements for Pariveda. We surpassed the $100M revenue level in 2017 as we increased revenue 11% to $109M and we expanded our national footprint by opening an office in Philadelphia, our 10th major U.S. market. Internally our processes expanded and deepened with the use of Holacracy. This gave us further capabilities to provide a safe career and respect for the individual while increasing adaptivity in our organization. We deployed our new methodology across all offices to formalize the common language of our work. Our brand was brought to life through the production of a new public website which showcases our work and the passion behind it.

Central to our organization is the tenet of talent development, an area in which we achieved significant milestones this year. Highground, a performance feedback system, was chosen and deployed across the entire firm in support of our commitment to developing people to their fullest potential. In addition, a new Manager School was deployed to improve entry into the role and increase engagement across the level. Two Vice Presidents and nine Principals were promoted internally. Open Air PSA was also able to assist in the growth of our people as we implemented generic resources to improve the matching process and increase visibility to the backlog. This now helps our management team place fins on the best projects for their career growth.

Please tell us about the aspects of your firm that you are most proud of.
We are very proud of our commitment to long-term relationships with our clients. 94% of our revenue in 2017 came from repeat and referral clients. Our employee feedback this past year earned us recognition in numerous local awards as well as high rankings in national awards such as Glassdoor and Consulting Magazine. Furthermore, seeing the success of our mission to develop people with 60% of employees being promoted in 2017 gives us pride as we watch them grow their careers.

Please tell us why your firm is a great place to work.
Pariveda, at its core, believes each person has the potential to grow. We establish policies, procedures, frameworks and guides around the central idea that this growth is essential and important in a person's career. This is not only found in our transparent career path and promotion review cycle but also in the daily interaction between our associates. When this level of care and thought goes into a person's career growth and work life they discover a safe, respectful, open and caring environment prime for learning. Yes, there are challenges along the path for our employees, but these are met with support and guidance that helps them extend similar support and guidance to others in the firm.

Please tell us about the top challenges your firm is facing in 2018.
2018 will continue to be a year of growth for Pariveda. We need to deepen our delegation of authority and the accountabilities within our firm along with implementing tools and processes that provide visibility to and promote the rapid escalation of issues. We need to effectively diffuse the skills and processes to sell and deliver new capabilities in business and product consulting across our offices. Our brand will also be challenged as we work to extend it to support not only the new capabilities but also in the new cities we take our solutions.

Please tell us how you plan to continue to be a Best-of-the-Best professional service organization.
A continued corporate focus to increase our operational excellence will allow us to remain highly effective in areas distinctive to our architecture. In addition, we will increase rigor on internal operations needing to scale. We are adding an executive level position focused solely on client relationships to deepen that commitment to this distinct component of our architecture. Finally, we will continue to be excellent in our talent development processes so that our mission of developing our people to their highest potential will remain the same, enabling our ability to co-create value with our clients.

TeamFit

TeamFit is an online platform enabling services and consulting firms to get an accurate and up-to-date view of the skills of their extended talent network so that they can build the best project teams and optimize utilization. Individual consultants and freelancers use TeamFit to demonstrate their skills, build their networks and to get on the best projects.

Steven Forth, Co-Founder, TeamFit

Top Step Consulting

TOP Step Consulting improves business efficiency and productivity for Professional Service operations by providing consulting and implementation services for Professional Services Automation software. TOP Step Consulting is an eight-time Best-of-the-Best winner.

Jodi Cicci, President and CEO TOP Step Consulting

Please tell us about your firm's top accomplishments in 2017.

- Refocusing the company to support a single PSA vendor and all related integration technologies
- Becoming an official NetSuite Alliance Partner
- Making the Inc 5000 list for the 3rd year in a row
- Making Consulting Magazine's fastest growing companies list the 3rd year in a row
- In a 'refocus' year, still reaching 97% of revenue target
- We celebrated our 10-year anniversary in June 2017!

Please tell us about the aspects of your firm that you are most proud of.

- Customer support and loyalty
- Our strong reputation amongst the OpenAir Community, partners, and customers
- A solid team of colleagues driving the company goals and vision
- Giving back to customers each month in our newsletters

Please tell us why your firm is a great place to work.

- Team members enjoy solving customer problems – happy customers / happy team!
- Always new things to learn with every customer and challenge
- Strong sense of team - if someone needs help or coverage or backup, we're always jumping in to help!
- Flexible schedules and working from home
- Internal training on a bi-weekly basis (brunch n learns)

Please tell us about the top challenges your firm is facing in 2018.

- With a focused PSA practice now, the challenge will be to ensure we have a steady pipeline and new opportunities to build on experiences/technologies related to OpenAir
- Staffing and ramping people up quickly on our expertise
- New executive management in place – maintain customer base and reputation (luckily our new CEO has been with the firm 9 of the 10 years so his reputation precedes him)

Please tell us how you plan to continue to be a Best-of-the-Best professional service organization.

- Continue to build the team knowledge base and 'sense of team' with company vision
- Focus on cost control
- Continue to promote a spirit of learning and knowledge transfer within our team and to our customers
- Become a key partner to NetSuite
- Set realistic revenue goals that support company growth while allowing for the inevitable unplanned hurdles that come with running a company year after year.
- Listen to our customers!

UHY

UHY is a leading professional services firm whose mission is to allow our clients to prosper and our people to realize their potential. We do this by offering financial and operational transformation services through our full suite of Management and Technology Consulting services.

Frank Fenello, Managing Director UHY Advisors

Please tell us about your firm's top accomplishments in 2017.

Our number one accomplishment in 2017 is having an all-star team. We place a high priority on our employees' career development and on their general happiness and well-being. This focus has brought our employee engagement score to an all-time high.

Please tell us about the aspects of your firm that you are most proud of.

Our biggest source of pride at UHY is that our most valuable asset, our people, are proud to work here. Our people have built our culture, and they take pride in UHY. We developed value statements with our employees, instead of dictating to them. Our clients are also our biggest fans and, to us, this is a true testament to the quality of service we offer. Most of our work comes from referrals and our current and former clients championing our work.

Please tell us why your firm is a great place to work.
UHY is a great place to work because of our open, honest, and ethical culture. By collecting open as well as anonymous feedback from our team, we have been able to take the desires of our team and turn them into reality. Last year alone, we implemented an open PTO policy, incorporated our core values into everything we do, and implemented a collaborative Professional Services Automation tool to better serve our clients and our internal team. Our people and our culture are the core of what makes UHY a great place to work.

Please tell us about the top challenges your firm is facing in 2018.
As of December 31, 2017, UHY acquired Bright Point Consulting adding additional capabilities to the firm, including the ability to implement Host Analytics and Workiva for our clients. We will focus on integrating the two companies and managing growth from the additional lines of service we are able to offer our clients. It is paramount for UHY to maintain the culture we have built as well as the quality services we offer our clients.

Please tell us how you plan to continue to be a Best-of-the-Best professional service organization.
Our philosophy is to focus on doing the right thing for our people, clients and company. We will continue to live our core values in order to maintain our culture and quality of service, which will allow us to continue to be a Best-of-the-Best professional services organization.

Vision Solutions

***Vision Solutions* is a premier provider of software solutions designed to protect data, minimize downtime and maximize resources for the modern data center. Vision Solutions® delivers workload migrations, high availability, disaster recovery and data sharing — across any hardware and any physical, virtual or cloud-based environment.**

Terry Plath, Vice President Global Services, Vision Solutions

Please tell us about your firm's top accomplishments in 2017.

In 2017, we witnessed a 63% revenue growth of our Managed Service practice, and surpassed the $2 million revenue and 100 customer mark just 2 ½ years after launching the offering. Additionally, we achieved an all-time high 39.2% EBITDA for PS while maintaining 93% customer satisfaction on projects and no escalations resulting from delivery quality issues.

Overall, one of the biggest highlights of 2017 was the $1.26 billion acquisition by Centerbridge Partners that merged Vision Solutions and Syncsort under the Syncsort name. This acquisition set the stage for many more that enabled Syncsort to carve out its own niche and establish itself as a leader in the “Big Iron to Big Data” market. We also oversaw the successful sale of Double-Take Software to Carbonite, renewing our focus on data protection, high availability and IT automation software to our customers.

Please tell us about the aspects of your firm that you are most proud of.
The Vision Solutions team is comprised of team members that are truly experts in business resilience and high availability/disaster recovery. We pride ourselves on being the go-to source to, literally, to prevent major system outages and mass data loss at many of the world's premier corporations. Since I joined the team in 2014, our consulting team has experienced only one voluntary departure proving our positive work environment and complete commitment to our line of work. As the leading experts in the "Big Iron to Big Data" space we are continuously expanding our capabilities and the breadth of our capacity to help our customers through data and server security, data quality, data integration and system infrastructure optimization

Please tell us why your firm is a great place to work.
Syncsort is a company with limitless opportunities and each employee can expand his or her skillsets to new product areas. Despite Syncsort's quick pace of growth, the company provides flexible work arrangements coupled with a very reasonable work/life balance and travel requirements. All our consultants work from their home offices and flex their hours to meet the needs of our customers. Additionally, over 90% of our projects are delivered remotely. Syncsort is also proud to have several women in senior technology roles – our R&D team is 40 percent women and our engineering team is close to 50 percent women, something of a rarity at tech companies. In fact, our Chief Technology Officer is among a small number of women in such roles in comparably sized tech companies. She started in several engineering roles, and then was promoted to management roles and then to our executive leadership team as a General Manager role for a business unit, and then to CTO.

Please tell us about the top challenges your firm is facing in 2018.
Looking ahead to 2018, there are two top challenges we face. The global services organization under Syncsort has nearly doubled in size and we are now tasked with the role of integrating this organization into a much larger corporation. Additionally, maintaining the continued growth and renewal of our Managed Service customer subscriptions will be a priority.

Please tell us how you plan to continue to be a Best-of-the-Best professional service organization.
Our plan to continue to earn the recognition as a Best-of-the-Best professional service organization is to assess implementing a new PSA system with stronger resource scheduling/optimization and forecasting capabilities, and to continue to improve customer satisfaction via delivery quality. But, most importantly, we will continue to reward our service professionals for their consistent, high-quality performance and their dedication to the company.

Withum

WithumSmith+Brown, PC ("Withum") is a nationally ranked Top 30 Firm that empowers clients with innovative tools and solutions to address their accounting, tax and advisory needs. Our highly responsive team of professionals offers deep industry expertise and service experience to help our clients grow and thrive— to Be in a Position of Strength.

Daniel Cohen-Dumani   Partner WithumSmith+Brown, Board Member

Please tell us about your firm's top accomplishments in 2017.
Our firm, previously known as Portal Solutions, merged with WithumSmith+Brown, P.C. a top 25 public accounting firm. We were rebranded as Withum Digital. We were able to quickly integrate, enabling 20% growth in Q3 and Q4 of 2017.

Please tell us about the aspects of your firm that you are most proud of.
We have transitioned 10% of our business to a managed services model and are able to leverage and market packaged intellectual property.

Please tell us why your firm is a great place to work.
We practice the WithumWay which encompasses a focus on our clients, employees and community. We think client centricity, work hard and play hard, get engaged in the community, collaborate in everything we do with a vision for continuous growth.

Please tell us about the top challenges your firm is facing in 2018.
Attracting top talent in a competitive labor marketplace. It is becoming more and more challenging to attract experienced talent as there is fierce competition in our industry.

Please tell us how you plan to continue to be a Best-of-the-Best professional service organization.
We will continue our large investment in training and mentoring our professional consultants including internal learning opportunities and information knowledge sharing.

Best-of-the-Best Demographics

Table 17 compares the 20 best-of-the-best performing PSOs to the other 436 in this year's survey. Best-of-the-Best organizations tend to be more specialized than the average firm in the benchmark. This year's top performers are larger than average firms, with 490 PS employees compared to 340 for the rest. Eight are independent IT consultancies; five are embedded PS organizations within fast-growing technology companies; five are management consultancies; one is an engineering firm; and one is a government contractor.

Table 17: Best-of-the-Best Comparison – Demographics

Key Performance Indicator (KPI)	Best	Rest	▲
Number of firms	20	436	
Size of PS organization (employees)	490	340	44%
Annual company revenue (mm)	$149.6	$126.9	18%
Total professional services revenue (mm)	$112.6	$54.5	107%
Year-over-year change in PS revenue	19.4%	7.5%	159%
Year-over-year change in PS headcount	19.8%	8.7%	126%
% of employees billable or chargeable	79.3%	75.3%	5%
% of PS revenue delivered by 3rd-parties	9.4%	12.8%	-26%
M&A over the past three years	0.64	0.67	-4%

Source: SPI Research, February 2018

The IT consultancies specialize in enterprise-class solutions for complex problems in data management, human capital management and high-growth cloud platform implementation, migration, integration and transformation. They serve a wide variety of industries with specialized expertise and deep domain knowledge.

This year's Best-of-the-Best are characterized by high growth, profit, and high levels of client satisfaction. Every year we find the best firms are also the fastest growing. On average, they grew year over year PS revenue by 19.4%; almost three times the revenue growth of average firms (7.5%). Year-over-year employee headcount growth was equally impressive at 19.8%, which is almost three times the headcount growth of average firms (8.7%). For these fast-growing firms one of their top challenges is finding and nurturing the talent they need to sustain their dynamic growth while maintaining a culture of excellence.

The Best feature a much higher percentage of billable employees, and depend slightly less on third-party resources, preferring to recruit and deploy their own talented resources without heavily relying on subcontractors which translates to higher levels of both employee and client satisfaction.

Over half of this year's top performers augmented their organic growth with acquisitions or were acquired by larger firms. Top-performing firms were able to use their own transformation and change management capabilities to quickly integrate and take advantage of acquisitions as a catalyst for growth.

Pillar Performance

The following sections highlight the results of this year's Best-of-the-best professional services organizations (PSOs) and compare their results with the rest of the survey participants.

Leadership

The leading firms are highly specialized. They concentrate on specific high-growth technology or IT segments or vertical industries. The executives of top-performing firms are seasoned professionals – often with a track record of founding and growing multiple prior consulting organizations.

Leaders at the best firms foster a work environment that is fair and well-managed with ample rewards and career progression. Because employees understand and share in the success of these organizations, the atmosphere is one of cooperation and loyalty.

A recurring theme from this year's leaders is their strong sense of community. The leaders of the top firms are seen as visionaries within the markets they serve, they see their role as one of truly helping improve the lives of their clients and employees. They select clients and projects because they share the same values, whether it is a love of transformational change or desire to make a difference through leading edge programs. Their sense of pride and commitment comes through in the organizations they have developed.

Leaders discussed the importance of building a unique, employee-centric culture which in turn becomes a source of competitive differentiation. In today's competitive talent market establishing a strong reputation as a great place to work and grow is paramount to building brand awareness and success. While each leader discussed the importance of client success, they also discussed the importance of creating engaged employees to carry on the culture and position the firm for the future. A key area of differentiation is that top firms significantly invest in employee development. On average, they provide 10.4 days of employee training compared to 7.6 days for average firms.

Table 18: Best-of-the-Best Comparison – Leadership Pillar (1 to 5 Scale)

Key Performance Indicator (KPI)	Best	Rest	▲
Well understood vision, mission and strategy	4.67	3.75	24%
Confidence in PS leadership	4.86	4.01	21%
Ease of getting things done	4.38	3.80	15%
Goals and measurements in alignment	4.52	3.73	21%
Employees have confidence in PSO's future	4.62	3.94	17%
Effectively communicates w/employees	4.33	3.72	16%
Embraces change - nimble and flexible	4.48	3.75	19%
Innovation focused	4.48	3.64	23%

Source: SPI Research, February 2018

Table 18 compares the leadership metrics of the highest performing organizations with the remainder of the survey. The two highest differential scores are clarity of vision, mission and strategy and innovation focus. Leading PSOs emphasize the importance of establishing a clear and differentiating vision, based on innovation, which is widely communicated and shared throughout the organization; cemented by congruent goals and measurements. Their focus on innovation means they strive to continually stay ahead of the pack, investing in new technologies and ideas long before they become mainstream. Their clarity of purpose provides a powerful foundation for their unique cultures which support and accelerate market differentiation, in turn leading to strong employee confidence in the future.

Glassdoor research shows effective leadership is the number one determinant in creating a Best Place to Work as the somewhat intangible attributes of "Mission"; "Culture"; "People" and "Transparency" are the characteristics that distinguish top-performing firms.

Client Relationships

Many of this year's Best-of-the-Best do not employ traditional solution sales people. The independent IT and management consultancies depend on their regional practice leaders to be the chief rainmakers in their region or domain. Although practice leaders are charged with developing a book of business, they are also charged with personal billability goals to ensure they continue to be recognized experts in their field. Independent Best-of-the-Best firms expect their practice leaders to be consultants first, able to truly add value to executive relationships. Repeat business and referrals are the primary source of new business, a strong testimony to superlative client relationships and results. Their percentage of reference clients is 88.8% compared to only 74% for average firms.

The embedded PSOs primarily rely on the product sales force. They have forged a strong partnership with product sales and have built sales tools and service packages to guide and shape consulting engagements. These service packages enable the product sales force to position and quote services, leading to higher product and service attach rates. PS is regarded as a significant and growing source of top-line company revenue, not a necessary evil. In many cases, their lead services executive is also responsible for global support, professional services and account management with the title of Chief Customer Success officer, acknowledging the important role services plays in ensuring client success. A relatively new set of metrics has emerged for embedded PS, focused on customer adoption. The cloud PSOs measure not only the number of licenses, seats and client revenue but also the depth of client adoption and engagement by building dashboards and scorecards which depict client usage and adoption.

Table 19: Best-of-the-Best Comparison – Client Relationships Pillar

Key Performance Indicator (KPI)	Best	Rest	▲
Total annual number of active clients	178	299	-41%
Revenue from current clients - Existing services	42.2%	61.1%	-31%
Revenue from current clients - New services	14.6%	15.7%	-7%
Revenue from new logo clients - Existing services	29.7%	15.7%	89%
Revenue from new logo clients - New services	13.5%	7.6%	79%
Bid-to-Win ratio (per 10 bids)	6.81	4.70	45%
Deal pipeline relative to qtr. bookings forecast	295%	168%	76%
Sales cycle (days: qualified lead to contract sign.)	96	90	(0)
Average service discount given	5.1%	5.0%	-3%
Solution development effectiveness	3.90	3.51	11%
Service sales effectiveness	3.85	3.40	13%
Service marketing effectiveness	3.76	3.17	19%
Percentage of referenceable clients	88.8%	74.0%	20%

Source: SPI Research, February 2018

Almost all of this year's Best-of-the-Best rely on CRM applications to improve their sales and marketing effectiveness. Eleven of the top firms use Salesforce.com as their CRM. Several firms credited the tight integration between their CRM and PSA applications as a catalyst in building collaboration between sales and service delivery. They have instituted consistent sales processes and bid reviews to ensure they are focused on the type of projects they are most likely to win and to maintain pricing and contract terms within guidelines. Because they are the premium supplier in their well-defined markets, they often do not have to compete for business. They are chosen based on referrals, their demonstrated competence, and high levels of customer satisfaction. When they do compete, they are far more likely to win as their win ratio is 68% compared to 47% for average firms.

Survey results revealed the percentage of revenue from new clients was 43.2% for Best-of-the-Best firms compared to 23.3% for average organizations. New client expansion is a key ingredient of their high growth and profitability. Leaders give higher marks for sales, marketing and solution development effectiveness. Interviews revealed leaders do not have the schism between sales and service delivery which is so apparent in many PSOs. Sales and delivery collaboration produced higher win ratios, larger sales pipelines and more reference customers. They are well-positioned in their markets due to specialization and a focus on solution development which resulted in much higher levels of sales and marketing effectiveness as well as repeatability with institutionalized quality in their projects.

Human Capital Alignment

Talent is a primary focus and hot topic for all service firms. In an increasingly competitive talent market, top performing firms are becoming laser-focused on their employment brand. Organizations are embracing technology to help reinvent the workplace with knowledge-sharing, team-building, transparency and collaboration at the core of their continuous learning cultures.

Table 20 compares Human Capital Alignment pillar key performance indicators between the Best-of-the-Best organizations and the remainder. The table shows more employees would recommend their firm as a great place to work; they receive higher levels of training investment and are more likely to understand and take advantage of career advancement opportunities. They also are paid more plus they receive a host of additional benefits including family leave; sabbaticals; excellent medical coverage; employee ownership; spouse inclusion in company trips and time and money investments in giving back to their communities. Glassdoor reports more than half of the highest paying jobs in the U.S. are in IT consulting roles.

Table 20: Best-of-the-Best Comparison – Human Capital Alignment Pillar

Key Performance Indicator (KPI)	Best	Rest	▲
Percentage of workforce that is male	68.6%	64.7%	6%
Employee annual attrition - voluntary	8.0%	7.5%	-6%
Employee annual attrition - involuntary	3.5%	4.9%	28%
Recommend company to friends/family (1 to5)	4.81	4.36	10%
Management to employee ratio	10.27	10.05	2%
Days to recruit and hire for standard positions	60.7	60.8	0%
Days for a new hire to become productive	47.9	52.7	9%
Guaranteed annual training days / employee	10.36	7.64	36%
Well-understood career path for all employees (1 to 5 scale)	3.62	3.18	14%
Employee billable utilization	78.3%	71.2%	10%
Annual fully loaded cost per consultant (k)	$111	$108	-3%

Source: SPI Research, February 2018

Each top firm emphasized the importance of culture. Culture goes way beyond establishing a mission statement – it must be unique and inspiring to attract the type of consultants and clients the firm can best serve. Many of this year's Best-of-the-Best have also been recognized as "Best Places to Work" by other publications. Innovative employee engagement programs include: annual company retreats which may include spouses; generous healthcare and parental leave policies; flexible work schedules; health and wellness programs; significant investments in employee training and career development and a consistent focus on fun, team-building, collaboration and communication.

Top performing firms place a premium on high quality recruiting and on-boarding programs resulting in faster recruiting and ramping times combined with higher billable utilization. They hire "A" players.

They invest a lot in them and expect a lot from them. Billable utilization targets of the best firms average 80% or higher – more than 10% higher than the typical industry utilization of 70%. This means top performing consultants can bill 200 more hours per year than those at average firms. According to Best Place to Work research, a key determinant of consultant dissatisfaction is not excessive work hours but having to deal with bureaucracy, meetings and time-wasting activities.

The leading firms use a variety of innovative recruiting strategies – from establishing strong partnerships with local universities, to attracting more senior consultants from their competitors. Just as in selling, referrals are a key source of new hires because the best and brightest invite their friends to join them. Once on board, the best firms offer new hire orientation and on-boarding programs which include shadowing and mentoring to quickly bring new hires up to speed. Leading firms have discovered they simply cannot rely on stealing top talent from their competitors – they need to grow their own. Several firms recruit from local universities (MIS and Engineering) and then invest over 90 days in teaching new hires both the industry and technology. This strategy, although initially expensive, results in qualified consultants who can hit the ground running after their on-boarding program has been completed. Other fascinating recruiting strategies include personality testing for cultural fit, communication and organizational skills in addition to technical knowledge.

Top firms also invest in helping consultants build their own networks and communities – they encourage their young consultants to build strong college and network ties… to serve these communities with their talents but also as a source of recruiting and business referrals. With young millennial consultants, continuous learning is a perquisite which means top firms understand employee career and knowledge aspirations and ensure top performers are assigned to the projects, clients and geographies they are most interested in.

Just finding talent is not enough. This year's Best-of-the-Best firms focused on ramping and employee training to develop a qualified workforce. Some create rotational assignments to give their employees greater exposure to other services and clients. Employees who are continually learning and expanding their knowledge base tend to stay with their employer. When the work is not challenging or interesting, morale suffers, and attrition rises. Several of the smaller firms are 100% virtual – in other words, they don't invest in expensive facilities but keep morale high with in-person weekly and quarterly meetings to enhance communication and team-building.

Service Execution

Table 21 compares service execution metrics between the Best-of-the-Best organizations and the remainder. High quality service execution is what really sets top performing PSOs apart. They are highly disciplined in all facets of service execution. The table points out the leaders are able to staff projects faster because most of them rely on a commercial PSA application. They deliver projects with quality and integrity and are far more likely to use a standardized delivery methodology which results in more projects delivered on-time, fewer project overruns and fewer project cancellations. Because the Best firms deploy the best consultants and effectively use PSA to exceed client expectations, every facet of their projects is more profitable.

They make more money on both time and materials and fixed price projects; but they also excel in the judicious use of subcontractors, only using the best outside resources while ensuring they make margin on them. Leaders focus on all aspects of quality service delivery, with higher marks for resource management, estimating; change control processes and knowledge management processes. Their focus on service delivery excellence produces superlative productivity with 79.3% of their employees in billable roles and 78.3% billable utilization.

Table 21: Best-of-the-Best Comparison – Service Execution Pillar

Key Performance Indicator (KPI)	Best	Rest	▲
Average project staffing time (days)	7.50	9.01	17%
Number of projects delivered per year	286	405	-49%
Average revenue per project (k)	$193	$169	14%
Concurrent projects managed by PM	6.69	6.16	9%
Average project staff (people)	3.64	4.49	-19%
Average project duration (months)	5.05	6.44	-22%
Projects delivered on-time	90.2%	79.2%	14%
Projects canceled	1.7%	2.0%	16%
Average project overrun	5.1%	8.4%	39%
Use a standardized delivery methodology	75.7%	69.4%	9%
Project margin for time & materials projects	50.0%	30.7%	63%
Project margin for fixed price projects	52.1%	30.5%	71%
Average project margin — subs, offshore	41.8%	22.0%	90%
Effect. of resource management process	4.14	3.47	19%
Effect. of estimating processes and reviews	4.10	3.52	16%
Effect. of change control processes	3.67	3.37	9%
Effect. of project quality processes	3.81	3.61	6%
Effect. of knowledge management processes	3.48	3.30	5%

Source: SPI Research, February 2018

Because every leader relies on a PSA application they can build and reinforce project delivery standards which result in precision execution and high levels of quality, productivity and profitability. They credit their PSA with improving resource, project management, time and expense capture and billing, leading to higher levels of billable utilization and on-time project completion. This year's Best-of-the-Best were uniform in their commitment to developing standardized methodologies. In addition to repeatable processes and templates, they are focused on measuring quality and client satisfaction. Most estimates, proposals and changes go through a rigorous evaluation to ensure proper risk management and margin analysis.

Finance and Operations

The Best-of-the-Best are focused on financial success and stability. The Professional Services Maturity Model™ scoring over-weights financial success; meaning the leaders in this survey were much more profitable than their peers. Table 22 shows the enviable financial results from this year's Best-of-the-Best. They produced significantly more net profit (26.3% compared to 16.1%) than average firms in the benchmark. This high level of profitability is derived from more revenue per employee, project and consultant. The Best-of-the-Best can be characterized as running a very tight financial ship as they are appropriately metrics driven and have real-time visibility to all facets of the business.

They are frugal with non-essential expense. In particular, they refrain from overspending on fancy offices and non-billable travel, preferring to invest in the skill and career development of their employees. The Best-of-the-Best make money on every aspect of the business with high subcontractor margins (41.8%); high time and materials project margins (50.0%); and higher fixed price project margins (52.1%). The leaders enter each quarter with significantly more revenue in backlog (66.9%), which creates greater financial stability and predictability. They are much more likely to have achieved both their annual revenue and margin targets which shows they are running a well-planned and predictable business.

Table 22: Best-of-the-Best Comparison – Finance and Operations Pillar

Key Performance Indicator (KPI)	Best	Rest	▲
EBITDA	26.3%	16.1%	63%
Annual revenue per billable consultant (k)	$265	$191	39%
Annual revenue per employee (k)	$221	$155	43%
Quarterly revenue target in backlog	66.9%	44.9%	49%
Percent of annual revenue target achieved	102.4%	92.4%	11%
Percent of annual margin target achieved	102.9%	88.2%	17%
Revenue leakage	2.64%	4.50%	41%
% of inv. redone due to error/client rejections	1.7%	2.2%	23%
Days sales outstanding (DSO)	46.2	48.3	4%
Quarterly non-billable expense per employee	$1,536	$1,620	5%
% of billable work is written off	1.26%	2.85%	56%
Executive real-time wide visibility	4.10	3.64	13%

Source: SPI Research, February 2018

The Best-of-the-Best PSOs Use and Integrate PS Applications

All of this year's top performers have deployed a commercial finance and accounting solution which is partially integrated with their PSA application for billing and revenue recognition. On the financial side of the business, they rely on Deltek; NetSuite; Microsoft Dynamics; QuickBooks; FinancialForce and Sage. Eleven use Salesforce as their CRM. Other popular CRM solutions include Deltek; Microsoft and Sage. One of the secrets to success of the Best is that a much higher percentage of them use a commercial PSA. The PSA solutions used are: Deltek; NetSuite/OpenAir; Projector PSA; FinancialForce PSA; Kimble; Microsoft Dynamics; Mavenlink and Changepoint.

SPI is continually asked:

- ∆ At what size should a PSO start to evaluate and acquire business applications?
- ∆ What are the most prevalent business applications and what should our priority be for application acquisition?
- ∆ What is the impact of each of the primary business applications?
- ∆ Which is better – a best of breed stand-alone application or an integrated suite?
- ∆ What is the benefit of application integration?

Table 23 shows application usage, satisfaction and integration of each of the core PS business applications for the top performing (top 5%) survey participants compared to the remainder. The table provides a powerful illustration of the benefits of PS application usage and integration. Across all application categories, top performing firms are more likely to have implemented a commercial business application and much more likely to have integrated it with the core financial application. Likewise, top performing organizations are much more likely to have integrated their CRM and PSA applications to provide real-time visibility and collaboration between sales and service delivery. This visibility gives them much greater insight into customer information and promotes information sharing which enhances both sales and service delivery effectiveness.

Table 23: Best-of-the-Best App. Adoption, Integration, and Satisfaction

Solution	Best	Rest	Delta
Commercial financial mgmt. sol. (CFM)	100.0%	94.9%	5%
Satisfaction with financial solution	3.55	3.97	-10%
Commercial CRM solution	100.0%	75.4%	33%
Satisfaction with CRM solution	4.16	3.85	8%
CRM is integrated with CFM	23.5%	42.4%	-44%
Commercial PSA	85.7%	66.4%	29%
Satisfaction with PSA solution	4.24	3.87	9%
PSA is integrated with CFM	50.0%	63.1%	-21%
Level of CRM and PSA Integration	52.4%	30.4%	72%
Commercial HCM solution	68.4%	55.3%	24%
Satisfaction with HCM solution	3.92	3.57	10%
HCM is integrated with CFM	23.1%	36.6%	-37%
KM solution	70.0%	43.8%	60%
Satisfaction with KM solution	4.07	3.78	8%
Remote service delivery tool	85.0%	65.9%	29%
Satisfaction with RSD solution	4.06	3.81	7%
Social networking tool	100.0%	87.2%	15%
Satisfaction with social networking tool	3.82	3.77	1%

Source: SPI Research, February 2018

Best-of-the-Best Conclusions

Each year it is inspiring to meet with leaders of the Best-of-the-Best organizations. They are justifiably proud of the unique Professional Services organizations they have built, but their pride is focused on their employees and client results, not on themselves. An area that sets the leaders apart is their in-depth knowledge of their markets and solutions. They understand and have visibility to all aspects of the business, even though many of them run very large organizations.

More than average firms, they are truly passionate about building an exceptional organization, not just for today, but for decades to come. They are willing to honestly look at themselves and the business and make changes to ensure they continue to be the premium firm. Their sterling reputation for delivering high quality results is a key ingredient in their success as most often new business comes from referrals. One executive spoke of a CIO client that had brought them into four different organizations as he made career moves.

A few of this year's Best-of-the-Best have been winners' year-after-year, both throughout the great recession and now again when the consulting market is hot. The independents have aligned themselves with the latest and greatest technologies. They are constantly reinventing themselves to ensure they are on the cutting edge of the best technology solutions for their markets. The leaders of the embedded PSOs have a seat at the executive table – PS is seen as a critical element of the business and a major source of revenue, profit and client product adoption.

Excellence is within the grasp of all PS organizations – but it takes hard work, determination and constant vigilance. Service Performance Insight finds it gratifying that leading organizations rely on the PS Maturity™ benchmark to guide their investments and performance. "You get what you measure" so reference the superlative results of this year's Best-of-the-Best to build your own organizations for the future!

5. Professional Services Vertical Market Analysis

The breakdown by vertical market participation in this year's survey was quite different from any other year in the 11 years SPI Research has benchmarked. Of the 456 surveys received, 153 came from architecture and engineering firms. This total was approximately 4 times the average number of architecture and engineering surveys. Therefore, the results for the 2018 benchmark have a slight bias toward A&E firms. In this chapter we provide detailed analysis for the top five market segments so organizations can compare themselves to their peers.

Over the past three years, SPI Research has received over 100 surveys from each of the following five vertical markets:

- ***IT Consulting*** – 425 surveys collected over the past three years;
- ***Architecture and Engineering firms*** – 273 surveys;
- ***PS within Software*** – 191 surveys; and,
- ***Management Consultancies*** – 159 surveys;
- ***PS within SaaS*** – 113 surveys.

In the following sections SPI Research highlights the trends for these important markets.

IT Consulting

The IT Consulting market is on fire! The movement to the Cloud, Internet of Things (IoT), Artificial Intelligence (AI), self-driving cars and other technologies, shows the importance of technology, and in particular, IT consulting. Almost all industries have embraced the cloud, which puts IT consulting

Table 24: IT Consulting

Key Performance Indicator (KPI)	2015	2016	2017	3-yr. avg.
Surveys	189	133	103	142
YoY change in PS revenue	12.4%	10.6%	12.5%	11.8%
YoY change in PS headcount	9.7%	8.3%	11.5%	9.7%
Bid-to-win ratio (per 10 bids)	4.81	5.07	4.76	4.87
Deal pipeline relative to qtr. bookings forecast	172%	196%	191%	182%
New clients	26.6%	27.9%	28.9%	27.3%
Service discount given	7.6%	7.0%	6.2%	7.2%
Total attrition	14.1%	13.8%	14.3%	14.0%
Employee billable utilization	71.5%	71.2%	74.7%	72.0%
Standardized delivery meth. use	67.4%	71.5%	69.6%	68.8%
Projects delivered on-time	77.3%	78.9%	81.2%	78.4%
Projects canceled	2.4%	1.7%	1.5%	2.1%
Project overrun	10.0%	7.6%	7.2%	8.9%
Project margin	35.9%	36.5%	36.5%	36.1%
Annual revenue / consultant (k)	$199	$205	$200	$201
Annual revenue / employee (k)	$154	$165	$155	$157
Qtr. revenue target in backlog	43.7%	45.8%	46.9%	44.8%
% of ann. revenue target met	90.6%	93.2%	93.4%	91.7%
% of annual margin target met	88.9%	92.0%	89.1%	89.7%
Profit (EBITDA %)	13.3%	10.4%	12.9%	12.5%

Source: SPI Research, February 2018

services at a premium. SPI Research expects 10% plus growth per year for the foreseeable future. Over the past three years SPI Research has seen solid growth in terms of revenue and headcount. The deal pipeline also looks great, and IT consultancies have a healthy percentage of new client revenue.

The results show steady improvement in service delivery, as most of the important KPIs have improved over the past three years. While financial metrics continue to look strong, they took a slight dip in 2017 due to intense hiring, which weighed down revenue per employee and consultant averages (Table 24). Both of these metrics should rebound in 2018 as the influx of 2017 new hires come up to speed. IT Consultancies are building backlog and are closer to meeting annual revenue target goals. The bottom line is profitability is near its three-year high for IT consultancies, which bodes well going forward.

Architecture/Engineering

The architecture and engineering market is in search of growth. For the past several years average revenues have increased at less than 5% annually (Table 25). However, with the potential promise of new infrastructure in the United States, as well as continued global expansion, the market could grow faster in the coming years. A/E firms have added headcount faster than they have grown revenues during this time period, which is atypical compared to the rest of the professional services market.

Table 25: Architecture/Engineering

Key Performance Indicator (KPI)	2015	2016	2017	3-yr. avg.
Surveys	49	35	153	79
YoY change in PS revenue	3.2%	5.5%	4.4%	4.3%
YoY change in PS headcount	4.0%	5.9%	7.7%	6.7%
Bid-to-win ratio (per 10 bids)	4.60	4.44	4.80	4.60
Deal pipeline relative to qtr. bookings forecast	143%	152%	143%	144%
New clients	21.9%	18.2%	14.9%	20.6%
Service discount given	4.0%	2.8%	1.7%	3.6%
Total attrition	10.3%	9.5%	10.4%	10.2%
Employee billable utilization	73.0%	75.4%	70.4%	73.1%
Standardized delivery meth. use	65.1%	77.2%	72.1%	67.7%
Projects delivered on-time	76.8%	76.3%	79.0%	77.0%
Projects canceled	3.9%	1.8%	2.4%	3.4%
Project overrun	8.9%	6.7%	9.0%	8.6%
Project margin	21.3%	28.9%	25.7%	22.9%
Annual revenue / consultant (k)	$142	$184	$175	$152
Annual revenue / employee (k)	$110	$149	$146	$120
Qtr. revenue target in backlog	34.6%	38.8%	43.7%	36.3%
% of ann. revenue target met	91.7%	94.0%	93.8%	92.3%
% of annual margin target met	85.7%	87.0%	88.3%	86.2%
Profit (EBITDA %)	11.2%	13.3%	17.7%	12.2%

Source: SPI Research, February 2018

The A/E market moves forward in a slow, but steady, fashion, with perhaps fewer new clients than in the other markets, but also lower discounts and price concessions. A/E firms offer more specialized services than management and IT consultants, so the number of acquisitions in the market are more muted. Equiteq reported fewer engineering acquisitions in 2017 but higher valuations. Since most A&E firms are relatively small, the average acquisition deal value was $13.2M. Architecture and engineering requires highly trained engineers, most of whom possess a Professional Engineer license, and therefore very little competition from outsiders. Project delays and overruns are par for the course in this market, as changes in design always take a significant amount of time and approvals to implement. It is just the nature of the beast in the A/E market. These organizations must focus on better planning and scheduling to meet higher levels of growth, margin and profitability.

PS within Software Companies

The professional service organizations within software companies have grown less than a majority of their PS peers over the past three years. They have shown greater efficiency by adding far less headcount than their increases in revenue, but they are not as profitable as their PS within SaaS counterparts because they are experiencing price pressure. But of course, the market is changing, and many, if not most of these professional service providers, will probably move to the SaaS model in the next few years, if they have not already.

From a sales perspective, PS within software organizations have built solid pipelines and generate more than 1/3 of their revenues from new customers, indicating market expansion (Table 26). However, when it comes to service execution, they lag many of their peer vertical markets with low levels of on-time completion and larger project overruns.

Table 26: PS within Software Companies

Key Performance Indicator (KPI)	2015	2016	2017	3-yr. avg.
Surveys	89	57	45	64
YoY change in PS revenue	10.5%	7.0%	9.2%	9.1%
YoY change in PS headcount	6.8%	2.9%	9.9%	6.4%
Bid-to-win ratio (per 10 bids)	5.04	4.85	5.13	5.01
Deal pipeline relative to qtr. bookings forecast	212%	198%	211%	208%
New clients	34.5%	36.4%	34.0%	34.9%
Service discount given	11.8%	9.1%	8.3%	10.5%
Total attrition	13.6%	10.7%	12.0%	12.6%
Employee billable utilization	68.0%	66.5%	70.1%	68.0%
Standardized delivery meth. use	63.4%	71.5%	63.8%	65.6%
Projects delivered on-time	71.4%	78.2%	76.5%	74.1%
Projects canceled	2.7%	1.7%	2.0%	2.3%
Project overrun	12.3%	9.2%	9.3%	10.9%
Project margin	36.0%	35.3%	34.6%	35.6%
Annual revenue / consultant (k)	$226	$215	$205	$219
Annual revenue / employee (k)	$184	$171	$175	$179
Qtr. revenue target in backlog	45.3%	54.3%	54.5%	49.2%
% of ann. revenue target met	93.5%	93.1%	94.2%	93.5%
% of annual margin target met	89.4%	90.9%	89.1%	89.7%
Profit (EBITDA %)	19.9%	23.6%	23.6%	21.5%

Source: SPI Research, February 2018

PS with software companies do demonstrate superior financial results. They have some of the highest revenues per consultant and employee in the business. They also have much higher profits than many of the other PS markets. Sales of on-premise software solutions are much slower than compared to their SaaS counterparts, they still are operating at an exceptional financial level.

Management Consulting

Management consultancies have underperformed over the past three years in terms of revenue growth. While these organizations do have higher than average bid-to-win ratio ratios, their deal pipeline is less than many of the other PS markets (Table 27).

Attrition is always important in this market, as these highly trained and well-educated individuals will typically leave their company at the drop of a hat if there are more exciting challenges somewhere else.

Management consultancies tend not to use standardized delivery methodologies, as they consider each project unique, and work with their clients to demonstrate the value they deliver on a custom basis. The bottom line is management consultancies have underperformed in terms of corporate profit compared to the other vertical markets. Much of this comes down to operational performance, in other words the delivering of projects efficiently and effectively, to reduce waste and achieve high levels of profitability. In many pure play management consultancies strategy and go-to-market strategies must still be handcrafted so they are less likely to be able to package and productize their solutions.

Table 27: Management Consultancies

Key Performance Indicator (KPI)	2015	2016	2017	3-yr. avg.
Surveys	68	46	45	53
YoY change in PS revenue	9.0%	7.1%	8.6%	8.3%
YoY change in PS headcount	5.0%	1.6%	9.8%	5.4%
Bid-to-win ratio (per 10 bids)	5.39	4.76	4.93	5.15
Deal pipeline relative to qtr. bookings forecast	151%	173%	189%	163%
New clients	23.8%	23.4%	31.1%	24.9%
Service discount given	4.9%	5.2%	5.5%	5.1%
Total attrition	11.5%	16.8%	12.6%	13.0%
Employee billable utilization	70.9%	70.9%	71.8%	71.1%
Standardized delivery meth. use	61.6%	66.2%	65.4%	63.4%
Projects delivered on-time	83.6%	85.3%	84.5%	84.2%
Projects canceled	2.1%	1.9%	1.9%	2.0%
Project overrun	6.8%	7.9%	7.3%	7.2%
Project margin	37.2%	38.2%	39.4%	37.8%
Annual revenue / consultant (k)	$216	$197	$232	$214
Annual revenue / employee (k)	$178	$159	$197	$176
Qtr. revenue target in backlog	33.8%	37.7%	40.3%	35.9%
% of ann. revenue target met	91.4%	90.0%	89.6%	90.7%
% of annual margin target met	92.7%	87.9%	90.3%	91.1%
Profit (EBITDA %)	12.2%	11.5%	13.5%	12.2%

Source: SPI Research, February 2018

PS within SaaS Companies

Professional services within SaaS companies are the fastest growing market SPI Research tracks. This trend will not change, as every industry looks to move their information infrastructure to the cloud to streamline business processes and empower employees regardless of location.

PS within SaaS are adding headcount faster than the rest of the market! These organizations continue to hire the best and brightest, with the promise that this market is still in its infancy. This market employs the youngest workforce with 1/3 of PS employees below 30; another 38.9% of their employees are in their 30's (Table 28). Unfortunately, even though they are comprised of bright millennials, just like their more traditional counterparts, 66% of their employees are male.

Table 28: PS within SaaS Companies

Key Performance Indicator (KPI)	2015	2016	2017	3-yr. avg.
Surveys	43	41	29	38
YoY change in PS revenue	15.8%	12.7%	13.6%	14.1%
YoY change in PS headcount	13.1%	10.6%	11.7%	11.8%
Bid-to-win ratio (per 10 bids)	5.18	4.97	5.74	5.25
Deal pipeline relative to qtr. bookings forecast	190%	203%	213%	197%
New clients	45.3%	51.5%	46.4%	46.9%
Service discount given	11.8%	14.2%	12.5%	12.5%
Total attrition	11.4%	11.8%	13.3%	11.9%
Employee billable utilization	67.9%	68.8%	67.1%	67.9%
Standardized delivery meth. use	72.7%	76.7%	68.6%	72.7%
Projects delivered on-time	70.9%	74.9%	73.0%	72.2%
Projects canceled	2.1%	2.1%	1.8%	2.1%
Project overrun	11.4%	10.0%	9.2%	10.6%
Project margin	33.6%	35.3%	35.4%	34.3%
Annual revenue / consultant (k)	$205	$188	$196	$199
Annual revenue / employee (k)	$170	$151	$157	$163
Qtr. revenue target in backlog	40.2%	51.3%	49.1%	44.5%
% of ann. revenue target met	90.0%	92.0%	94.3%	91.3%
% of annual margin target met	90.6%	88.8%	93.6%	90.9%
Profit (EBITDA %)	25.7%	19.4%	26.2%	24.4%

Source: SPI Research, February 2018

PS within SaaS is definitely a fast-growing market. These organizations report some of the best sales KPI's in the professional services industry, with bid-to-win ratio's, deal pipelines, and sales to new clients significantly higher than those reported in all of the other markets. Of course, this makes sense, as cloud-based solution growth is meteoric.

SPI Research was particularly interested in the overall profitability of PS within SaaS organizations. While profit was down a year ago, it skyrocketed to over 26% in this year's benchmark. This profitability bodes well for the industry, as SaaS PSOs are generating the profit they need to reinvest in their employees and products.

6. Professional Services Business Applications

In a business climate driven by technology, disruption and skilled talent shortages, professional services organizations must themselves become technology-enabled. In the past, PS technology use was confined to operations and service execution, it now has become mandatory, extending virtual workspaces, enhancing collaboration and knowledge sharing, providing the basis for effective recruiting, hiring and employee engagement and furnishing the tools for planning, budgeting, forecasting and analyzing. Top performing services organizations have deployed integrated business applications across all aspects of the business, giving them unprecedented visibility and control to see and take advantage of business changes in real-time.

Technology understanding and use, has become a strategic imperative to exploit globalization and drive market growth. Barriers to entry are being lowered as faster, nimbler, more technology-savvy firms seize top clients and markets. In this climate, new entrants focused on niches, specific functions and underserved constituents can quickly grow and make an impact on larger, more entrenched players. At the same time, consultants are demanding easy-to-use, contextual, socially aware systems which mimic the applications they use in their personal lives. Mobile is no longer a nice to have, it has become a strategic imperative to reach an increasingly global and virtual client base and workforce.

The growth engine of the world's economy has shifted from manufacturing to project-based, people-centric services businesses. These businesses rely on project-based Enterprise Resource Planning (ERP), also known as Services Resource Planning (SRP), applications to manage the financial aspects of the firm. These solutions automate core business processes such as quote-to-cash, resource and talent management, time capture and billing, and provide the real-time visibility necessary to improve organizational efficiency and effectiveness.

Services firms are uniquely people-driven organizations. They depend on the knowledge and skills of a talented workforce to sell, staff and deliver a range of services typically on a project or contract basis. The fundamental financial requirements of service-based businesses are very different from classic manufacturing and supply-chain focused ERP applications as they must include functionality for managing resources (people) and projects (tasks). Increasingly, project-based ERP application providers also add rich talent management capabilities to support recruiting, on-boarding, compensating and rewarding the employees who are the core asset of service-based businesses.

Project- and service-based extensions to enterprise ERP applications started to appear in the late 1990's at the same time stand-alone Professional Service Automation (PSA) solutions supporting resource scheduling and time capture and billing became available. Over the past seventeen years, project accounting, resource management and time capture and billing modules have been added to many ERP applications. Now most project-based ERP providers also add Human Capital Management (HCM) or talent management extensions to accentuate the important role that recruitment and engagement of a talented workforce has in today's economy. Support for specialized billing methods and complex revenue recognition rules for subscriptions, time and materials, work-in-process, deliverables-based or percentage completion are also important project-based ERP extensions.

This chapter provides PS executives and software application providers insight into the level of market adoption, integration and satisfaction with core Professional Services business applications from this year's benchmark survey. ***This study is not intended to be an overall application market adoption survey***. The solutions highlighted in this chapter help PSOs optimize operational effectiveness through increased visibility, streamlined business processes and cost management.

The Cloud First

For Professional Services organizations, the cloud debate is over, and the cloud won. Once considered a threat to jobs and consulting profitability, the cloud is now heralded as the global economic engine underpinning innovation, new business models and revenue growth. The worldwide public cloud services market grew 28.6% year over year in the first half of 2017 (1H17) with revenues totaling $63.2 billion, according to new results from IDC. Among the three primary segments of public cloud services (SaaS, PaaS and IaaS), the SaaS segment, which holds 68.7% of overall market share, was the slowest growing segment with a 22.9% year-over-year growth rate. The IaaS segment represented 17.8% of the public cloud services market in 1H17 and continues to exhibit strong year-over-year growth at 38.1% (Table 29). Amazon Web Services leads this segment in market share and growth. In addition, the last three years have seen a resurgence of focus on public cloud IaaS by major technology companies. Notable among these are major North American technology players like Microsoft, Google, Oracle, and IBM; as well as Asia/Pacific-based providers such as Fujitsu, Alibaba, and Huawei.

Table 29: Worldwide Public Cloud Services Revenue

Segment	1H 2017 Revenue (bn)	1H 2016 Revenue (bn)	Growth
Infrastructure as a Service (IaaS)	$11,236	$8,138	38.1%
Platform as a Service (PaaS)	$8,567	$5,702	50.2%
Software as a Service (SaaS)	$43,400	$35,310	22.9%
Total Cloud	$63,260	$49,179	28.6%

Source: IDC 2017

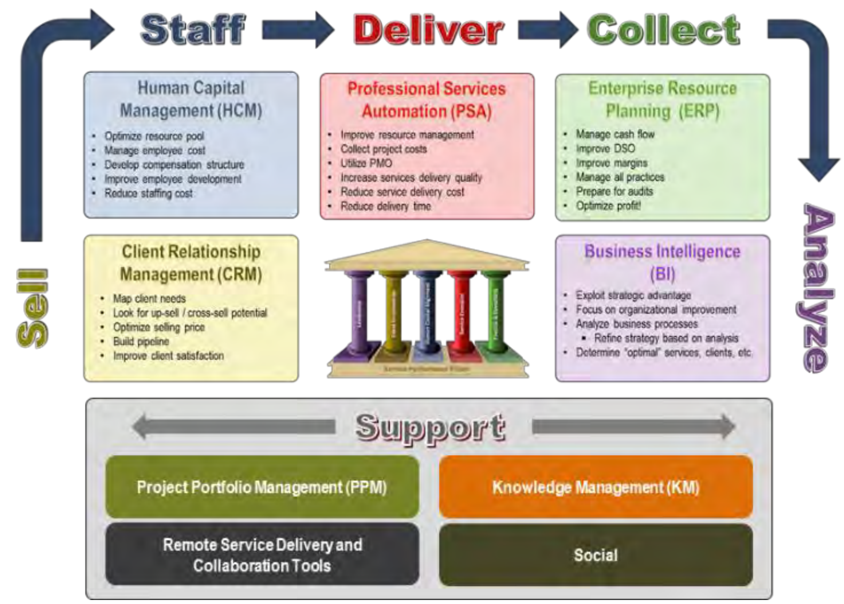
IDC reports that spending on public cloud accounts for less than 5% of total IT spending and 15% of total software spending today, but is expected to grow at six times the rate of overall IT spending from 2015 through 2020. Public spending on cloud computing will surpass $120 billion in 2017.

Today's Professional Services organizations are not only adopting cloud applications to run their own businesses, but they must also start making strategic decisions regarding the cloud platforms they will support. According to the Rightscale State of the Cloud 2017 report, lack of resources, security, and optimizing cloud spending are the top challenges for cloud users. This means there is a tremendous opportunity for Professional Service providers. For example, Amazon Web Services supports over one-million active enterprise users, providing an enormous services opportunity to help companies build cloud native applications, provide e-business hosting, develop enterprise applications, replace legacy applications and support managed services. IDC reports Salesforce and its ecosystem of customers and partners will drive nearly 1.9 million new jobs and more than $389 billion in new GDP impact worldwide by 2020.

Primary Professional Services Business Applications

The primary business applications used by Professional Services organizations are:

Figure 32: Core Professional Services Business Applications



Source: SPI Research, February 2018

- ∆ ***Financial Management or Enterprise Resource Planning (ERP)***: The fundamental solution required to accurately collect and report financial transactions.
- ∆ ***Client Relationship Management (CRM)***: The automation of client relationship processes to improve sales and marketing efficiency and effectiveness.
- ∆ ***Professional Services Automation (PSA)***: The initiation, planning, execution, close and control of projects and services through the management and scheduling of resources that include people (both internal and partners), materials and equipment.
- ∆ ***Human Capital Management (HCM)***: Talent management solutions for recruiting, hiring, compensation, goal-setting and career and performance management which rely on integration with and extracts from the employee database.
- ∆ ***Business Intelligence (BI)***: The assembly and use of information to improve decision-making.

Both embedded and independent professional services organizations require similar functionality. The service industry's use of technology has typically lagged the manufacturing sector, but the global size, complexity and growth of today's service businesses has increased the need for specialized applications along with the demand for real-time information. Table 30 shows the various departments within a typical professional services organization (with more than 30 people), and depicts departmental requirements and core business applications.

Table 30: PSO Departments and Information Needs

Department	Core Requirements	Core Applications
Executive & Administrative	Strategic planning, budgeting, management reporting, decision support	Business Intelligence, Budgeting, Planning and Reporting
Human Resources	Payroll, Benefits, Recruiting, Hiring, Training, Compensation, Performance and Career Management	Human Capital Management, Payroll, Benefits, Recruiting, Performance Mgmt.
Legal	Patents, law suits, contract management and approvals	Contract or Case Management
Finance & Accounting	Financial management, operations, planning, forecasting, budgeting. Time & expense capture, billing, collections.	Financials, Budgeting & Planning, Forecasting, Billing, Collections
Marketing & Sales	Marketing automation, sales force automation, account, contact and territory management, pricing & proposals.	Marketing Automation Client Relationship Management, Contract Management
Purchasing	Material, equipment and external service procurement.	Procurement
Service Delivery	Estimating, Project Management, Resource management and staffing, Knowledge Management and Collaboration, Quality Management. Social networking tools and web and video conferencing and remote service delivery tools.	Professional Services Automation: (Project Management, Resource Management, Knowledge Management, Collaboration, Remote Service Delivery)
Information Technology	Project scheduling, technology evaluation, systems development and implementation	Application Lifecycle Mgmt., Project Portfolio Management
Research & Development	New service development; knowledge sharing; template, tool and methodology development	Product Lifecycle Management (PLM), Knowledge Management, Code Repository

Source: SPI Research, February 2018

PS Solution Adoption

In this year's survey, reported commercial adoption increased in ERP and HCM but declined in all other areas. The abundance of high quality, affordable cloud-based solutions has enabled greater numbers of PSOs to adopt commercial business applications, yet a surprisingly high number of firms still rely on antiquated homegrown applications and spreadsheets. SPI's discussions with the leading application providers shows that cloud-based applications are outselling non-cloud by a factor of greater than six-to-one. Cloud solutions are especially important in the professional services sector, as today's virtual consulting organizations may have skilled employees located across the globe, not collocated in physical offices. The cloud has enabled PS executives and workers at all levels greater mobile access to the information they need to improve visibility and management control of resources and projects.

Figure 33 compares the adoption of commercial solutions versus home grown, and organizations that still rely on spreadsheets. The table shows less than 5% of the organizations surveyed do not have a formal CFM or accounting solution, meaning they probably use Excel and email to run the business.

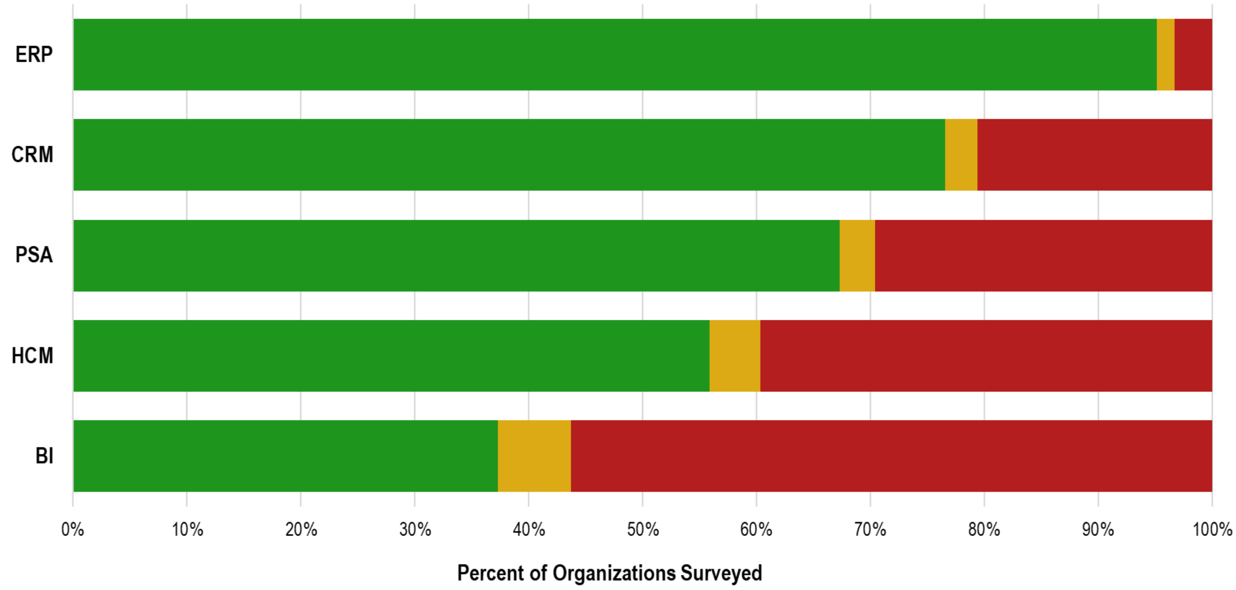
Social networking has now moved to become the number two most-used solution, edging out CRM for the first time. CRM adoption surpassed PSA adoption five years ago, when cloud-based CRM applications, primarily from Salesforce.com, became the standard. CRM usage is often misleading as many firms may only purchase a limited number of sales seats whereas they require PSA functionality (and licenses) for all billable members of the organization. More and more firms are also investing in Marketing Automation to generate leads, track prospects and build the brand.

Table 31: Commercial Solution Adoption

Solution	2015	2016	2017
Enterprise Resource Planning (ERP)	95.3%	91.4%	95.1%
Social Networking (SN)	81.7%	87.8%	87.8%
Client Relationship Management (CRM)	86.3%	84.8%	76.5%
Professional Services Automation (PSA)	79.8%	80.0%	67.3%
Remote Service Delivery (RSD)	77.4%	80.6%	66.8%
Human Capital Management (HCM)	56.8%	54.4%	55.9%
Knowledge Management (KM)	61.8%	57.4%	45.0%
Business Intelligence (BI)	45.4%	45.8%	37.3%

Source: SPI Research, February 2018

Figure 33: Commercial Solution Adoption



Source: SPI Research, February 2018

Reported CRM and PSA business adoption declined this year to 76.5% and 67.3% respectively because the survey included significantly more architect and engineering firms. These firms rely on specialized project-based ERP solutions (primarily from Deltek), not standalone CRM and PSA Applications. Increasingly legacy on-premise applications are being replaced by cloud-based PSA applications. Many standalone PSA solutions are not yet integrated with the core financial (ERP) solution or the CRM application. SPI's research continually points to application integration as a key enabler of superlative business performance.

Human Capital Management (HCM) applications have experienced the greatest growth in PS adoption in recent years. As new cloud-based, powerful HCM applications have come to market expect to see adoption continue to rise to equal or even surpass PSA. It only makes sense that people, the crown jewels of the consulting profession, will benefit from applications which empower employees to manage their own skill and career development. Further, HCM solutions provide benefits in improved recruiting and learning management which can be significant as the average PSO spends more than 2% of total revenue on recruiting and another 1 to 2% on training. HCM applications are starting to provide powerful learning management platforms so employees have a single system of record to enhance skills.

Remote service delivery tools have likewise become prevalent, enabling consultants to work on client projects and machines remotely. These powerful tools have ushered in the wave of offsite consulting and virtual project delivery which have radically improved consulting productivity. Interestingly, knowledge management still lags other application areas despite the productivity and quality improvements it provides. A plethora of open-source tools knowledge and collaboration solutions are starting to encroach on Microsoft's SharePoint as the dominant knowledge management tool. Stand-alone BI applications are losing market-share across the PS industry because new Artificial Intelligence, Reporting and Analytic functionality is being built into core applications, removing the need to buy a standalone Business Intelligence solution.

Each year SPI Research's Professional Services Maturity™ Benchmark quantifies the benefits achieved by services organizations with solutions that integrate Client Relationship Management and financial processes, Human Capital Management and financial processes, and Professional Services Automation and financial processes. Of course, the systems themselves are only part of a broader firm-wide commitment to behavioral change that fosters collaboration and enhanced communication, coordination and quality management.

Table 32 compares business solution adoption and satisfaction along with the level of financial management (ERP) integration. The Americas usage of ERP surpasses that of EMEA and APAC. For the past two years, European headquartered firms have made big investments in PSA with their usage of PSA now surpassing other geographies. Likewise, with the availability of a more stable and secure internet in Australia and New Zealand, both regions have invested heavily in cloud applications. Understandably, application satisfaction is highly correlated with usage. Typically, application satisfaction improves as business applications become more widely adopted. Surprisingly, satisfaction with CFM surpassed satisfaction with all other solutions this year. HCM received the lowest overall satisfaction ratings. HCM, without a strong focus on the transformational capability of human resources, can become another information silo.

The level of solution adoption is much higher within embedded PS organizations. Table 32 shows CRM is significantly more prevalent in embedded service organizations than in independents (PSOs), but this is to be expected because embedded service organizations (ESOs) tend to be larger and have a strong product-oriented sales force who are responsible for bringing services into deals. Generally, these organizations are part of a larger product organization; larger organizations must rely more heavily on business applications to improve performance.

Table 32: Business Application Use by Organization Type and Geographic Region

Key Performance Indicator (KPI)	2017	ESO	PSO	Americas	EMEA	APac
Commercial CFM solution used	95.1%	95.7%	94.9%	95.7%	89.7%	95.0%
Satisfaction with CFM solution	3.95	3.86	3.98	3.95	3.80	4.15
Commercial CRM solution	76.5%	95.3%	70.3%	75.0%	82.9%	94.7%
Satisfaction with CRM solution	3.87	4.08	3.78	3.85	3.96	4.00
CRM is integrated with CFM	41.3%	45.3%	39.6%	43.3%	34.6%	22.2%
Commercial PSA solution	67.3%	80.3%	62.8%	64.4%	95.0%	70.0%
Satisfaction with PSA solution	3.89	3.96	3.86	3.84	4.30	3.71
PSA is integrated with CFM	62.5%	54.9%	65.9%	65.0%	50.0%	50.0%
Commercial HCM solution	55.9%	81.3%	47.0%	57.8%	43.2%	45.0%
Satisfaction with HCM solution	3.59	3.45	3.68	3.62	3.22	3.69
HCM is integrated with CFM	35.9%	40.0%	33.4%	36.1%	28.1%	41.7%
Commercial BI solution	37.3%	54.8%	30.9%	35.8%	39.5%	57.9%
Satisfaction with BI solution	3.86	3.89	3.84	3.82	3.93	4.18
BI is integrated with CFM	50.0%	59.0%	43.4%	48.8%	59.1%	55.0%
Commercial KM solution	45.0%	67.6%	37.1%	41.7%	67.6%	65.0%
Satisfaction with KM solution	3.80	3.77	3.82	3.74	3.87	4.38
Comm. Remote service delivery tool	66.8%	78.0%	63.0%	65.2%	75.7%	80.0%
Satisfaction with RSD solution	3.83	3.67	3.89	3.82	3.70	4.19
Commercial Social networking tool	87.8%	90.1%	87.0%	86.7%	94.9%	95.0%
Sat. with social networking tool	3.77	3.79	3.77	3.76	3.77	3.95
CRM / PSA integration	31.5%	46.6%	26.2%	29.4%	48.8%	37.5%

Source: SPI Research, February 2018

As one might expect, Table 33 shows higher levels of solution adoption as organizations expand. And for the most part, greater solution integration with core financials also increases as organizations get larger. Even with the proliferation of affordable and easy-to-use cloud solutions, the smallest organizations will always lag in their adoption rates. SPI Research has seen adoption increase in both large and small organizations. This figure highlights the importance professional services organizations have placed on building a strong financial application infrastructure to enhance visibility and management control resulting in higher productivity and profit.

Table 33: Business Application Use by Organization Size

Key Performance Indicator (KPI)	Under 10	10 - 30	31 - 100	101 - 300	301 - 700	Over 700
Commercial CFM solution used	82.5%	96.2%	95.0%	95.7%	100.0%	100.0%
Satisfaction with CFM solution	4.00	3.96	3.99	3.86	3.89	4.13
Commercial CRM solution	45.0%	59.8%	83.0%	87.4%	90.6%	96.8%

Key Performance Indicator (KPI)	Under 10	10 - 30	31 - 100	101 - 300	301 - 700	Over 700
Satisfaction with CRM solution	3.64	3.84	3.96	3.73	4.00	4.07
CRM is integrated	28.9%	32.5%	43.9%	41.4%	44.4%	53.6%
Commercial PSA solution	41.5%	63.2%	73.9%	64.9%	72.2%	85.7%
Satisfaction with PSA solution	4.17	4.02	3.90	3.73	3.75	4.36
PSA is integrated	62.5%	50.8%	65.2%	66.4%	61.5%	76.9%
Commercial HCM solution	17.5%	36.0%	57.7%	67.0%	83.3%	94.1%
Satisfaction with HCM solution	4.00	3.73	3.69	3.44	3.39	3.33
HCM is integrated	80.0%	40.0%	20.9%	44.0%	26.8%	50.0%
Commercial BI solution	18.9%	15.6%	35.5%	54.4%	45.2%	77.4%
Satisfaction with BI solution	4.00	3.56	3.89	3.85	3.88	4.00
BI is integrated	50.0%	23.3%	43.8%	51.2%	68.8%	60.0%
Commercial KM solution	28.2%	32.3%	46.6%	53.9%	48.6%	67.6%
Satisfaction with KM solution	4.09	3.90	3.95	3.55	3.53	3.63
Comm. Remote service delivery tool	60.0%	61.0%	65.4%	69.3%	65.7%	93.8%
Satisfaction with RSD solution	3.87	3.90	3.99	3.66	3.74	3.79
Commercial Social networking tool	95.1%	84.4%	84.4%	93.1%	88.9%	87.5%
Satisfaction with social networking tool	3.69	3.82	3.86	3.63	3.71	3.92
CRM / PSA integration	11.0%	22.4%	41.4%	28.7%	37.8%	40.6%

Source: SPI Research, February 2018

Table 34 shows embedded services organizations (Software/SaaS/Hardware PS) have higher adoption rates than independents. Generally, these organizations are part of a larger technology-focused product organization, larger organizations tend to rely more heavily on business applications to improve performance. Architects and Engineers and Management Consultancies reported lower levels of application usage across most categories. This is clearly an area for improvement across these industries.

Table 34: Business Application Use by Vertical Service Market

Key Performance Indicator (KPI)	Arch./ Engr.	IT Consult	Software PS	Mgmt. Consult	SaaS
Commercial CFM solution used	100.0%	94.1%	95.6%	80.0%	96.6%
Satisfaction with CFM solution	4.12	3.91	3.70	4.03	3.75
Commercial CRM solution	56.6%	90.2%	97.6%	69.8%	100.0%
Satisfaction with CRM solution	3.46	4.08	4.21	4.00	4.29
CRM is integrated	52.3%	31.8%	53.8%	23.3%	46.0%
Commercial PSA solution	49.3%	77.7%	84.4%	70.5%	93.1%
Satisfaction with PSA solution	3.86	3.88	4.10	4.10	4.00

Key Performance Indicator (KPI)	Arch./ Engr.	IT Consult	Software PS	Mgmt. Consult	SaaS
PSA is integrated	86.0%	56.7%	62.2%	45.0%	42.0%
Commercial HCM solution	42.9%	51.5%	81.4%	47.7%	72.4%
Satisfaction with HCM solution	3.69	3.78	3.36	3.90	3.41
HCM is integrated	46.5%	26.5%	45.5%	21.4%	30.0%
Commercial BI solution	16.7%	42.6%	54.5%	33.3%	41.4%
Satisfaction with BI solution	3.39	4.11	3.78	3.78	4.21
BI is integrated	31.3%	45.1%	52.0%	46.7%	53.6%
Commercial KM solution	22.1%	55.4%	77.3%	48.8%	75.9%
Satisfaction with KM solution	3.72	3.98	3.63	3.75	3.71
Comm. Remote service delivery	50.4%	76.0%	86.0%	72.7%	72.4%
Satisfaction with RSD solution	3.88	3.89	3.94	3.87	3.62
Comm. Social networking tool	81.0%	91.1%	90.7%	90.9%	96.6%
Sat. with social networking tool	3.57	3.93	3.83	4.00	4.04
CRM / PSA integration	19.7%	36.9%	48.9%	27.8%	69.0%

Source: SPI Research, February 2018

Table 35 shows government contractors, accountancies, marketing and advertising and hardware PSOs and VARs rely on CFM applications with 100% adoption reported.

Table 35: Business Application Use by Vertical Service Market Continued

Key Performance Indicator (KPI)	Gov. Cont.	Account	MarCom	Hardware	All Others
Commercial CFM solution used	100.0%	100.0%	100.0%	100.0%	90.2%
Satisfaction with CFM solution	4.22	3.00	3.25	3.67	3.97
Commercial CRM solution	71.4%	50.0%	100.0%	100.0%	86.8%
Satisfaction with CRM solution	3.40	3.50	3.57	4.00	3.76
CRM is integrated	35.0%	83.3%	33.3%	12.5%	35.9%
Commercial PSA solution	33.3%	75.0%	87.5%	100.0%	70.7%
Satisfaction with PSA solution	3.83	2.17	4.14	4.17	3.63
PSA is integrated	91.7%	87.5%	83.3%	25.0%	53.4%
Commercial HCM solution	88.9%	57.1%	50.0%	100.0%	62.2%
Satisfaction with HCM solution	3.27	2.75	3.50	3.67	3.48
HCM is integrated	32.1%	66.7%	12.5%	30.0%	38.6%
Commercial BI solution	83.3%	66.7%	25.0%	80.0%	41.2%
Satisfaction with BI solution	3.80	4.00	3.33	3.75	3.69
BI is integrated	90.0%	83.3%	50.0%	50.0%	46.4%

Key Performance Indicator (KPI)	Gov. Cont.	Account	MarCom	Hardware	All Others
Commercial KM solution	41.2%	16.7%	25.0%	83.3%	40.0%
Satisfaction with KM solution	4.00	4.00	3.00	4.00	3.79
Comm. Remote service delivery	62.5%	66.7%	62.5%	80.0%	72.2%
Satisfaction with RSD solution	3.20	3.67	4.25	4.00	3.64
Comm. Social networking tool	76.5%	100.0%	100.0%	100.0%	89.2%
Sat. with social networking tool	3.31	4.20	3.60	4.00	3.48
CRM / PSA integration	13.9%	28.6%	14.3%	25.0%	31.7%

Source: SPI Research, February 2018

Solution Satisfaction

Table 36 shows application satisfaction (1: very dissatisfied to 5: very satisfied). Satisfaction with CFM tops the list followed by PSA and CRM. Satisfaction levels are relatively low for Social Networking and Human Capital Management. Human Capital Management has experienced declining satisfaction because these applications have for the most part remained standalone with limited integration with either CFM or PSA.

Table 36: Solution Satisfaction

Solution	2015	2016	2017
Corporate Financial Management (CFM)	3.7	3.67	3.95
Professional Services Automation (PSA)	3.79	3.8	3.89
Client Relationship Management (CRM)	4.01	3.9	3.87
Business Intelligence (BI)	3.7	3.49	3.86
Remote Service Delivery and Collaboration	3.88	3.79	3.83
Knowledge Management (KM)	3.69	3.51	3.8
Social Networking	3.7	3.8	3.77
Human Capital Management (HCM)	3.7	3.36	3.59

Source: SPI Research, February 2018

Financial Management Applications (Enterprise or Service Resource Planning)

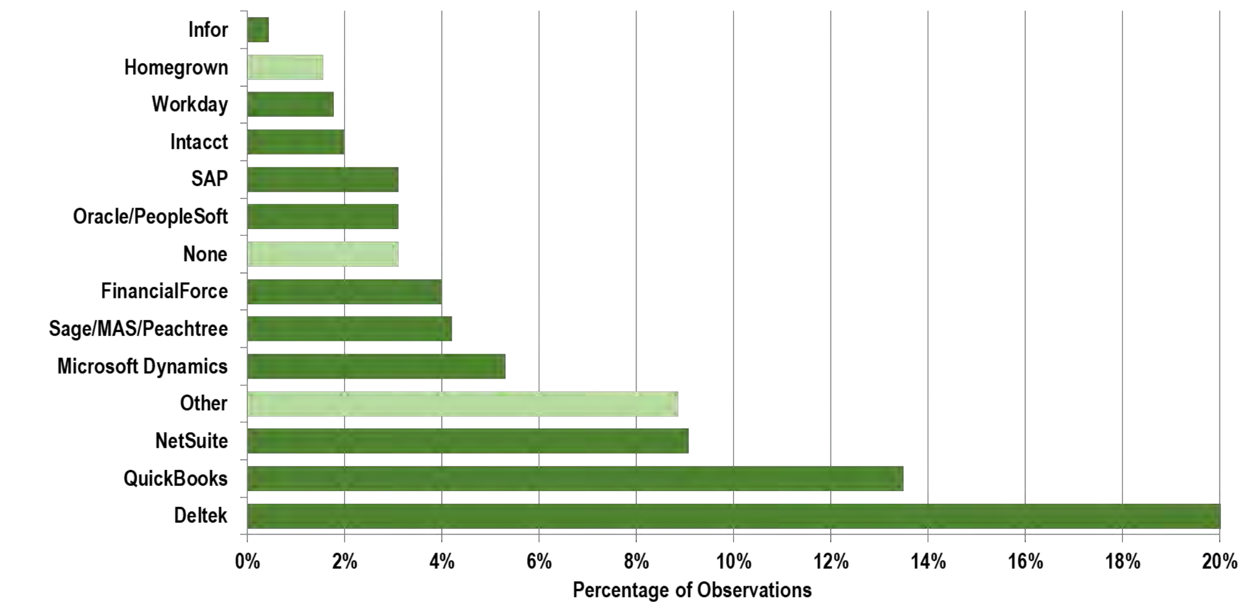
Corporate Financial Management (CFM) [Finance and Accounting, (ERP or SRP)], is the primary application required to accurately collect, bill and report financial transactions. CFM collects and manages all financial information (expenses, invoices, etc.) to provide management reporting and visibility into total service revenue, cost and profitability. Project-driven, human capital intense businesses like professional services have unique financial management requirements including support for complex contract types and billing arrangements. Revenue recognition is also complex and must conform to local accounting and taxation rules while providing support for multicurrency, multilingual transactions for global firms. Seamless integration between the system of record (PSA) for managing resources and projects and the financial management solution for payroll, expense management, invoicing, revenue recognition and project accounting is critical.

This year's survey included responses from 153 architect and engineering firms, almost all of whom use Deltek's project-based CFM solution, catapulting it to the most-used CFM solution at 40%. As we have seen every year, QuickBooks is the leading financial solution for small and medium sized PSOs with 13.5% of survey respondents using it. QuickBooks market-share is expected to decline as cost effective low-end solutions come to market with the project accounting and resource management functionality required by PS firms (Figure 34).

Corporate Financial Management (CFM)

- Activity Based Management
- Asset Management
- Cash Management
- Collection Management
- Contract Management
- Financial Analytics
- General Ledger
- Internal Controls
- Lease Management
- Payables
- Planning and Budgeting
- Property Management
- Receivables
- Revenue Management
- Risk Management
- Treasury

Figure 34: Financial Management Solution Used



Source: SPI Research, February 2018

NetSuite is the third most prevalent accounting solution, used by 9% of respondents. Microsoft Dynamics, Sage/Intacct and FinancialForce are also strong competitors in this market. SAP and Oracle financials still dominate with the largest organizations, but they are increasingly feeling pressure from Workday as Workday's people-centric CFM is more appropriate for PS organizations. Many of the smaller organizations (less than 10 employees) do not use a financial management solution.

The figure highlights (light green) that several firms use either homegrown solutions, other commercial solutions not included on the list, or no official financial solution at all. The financial management solution is critical for managing PS finance and accounting, regulatory reporting and profit analysis.

Client Relationship Management (CRM)

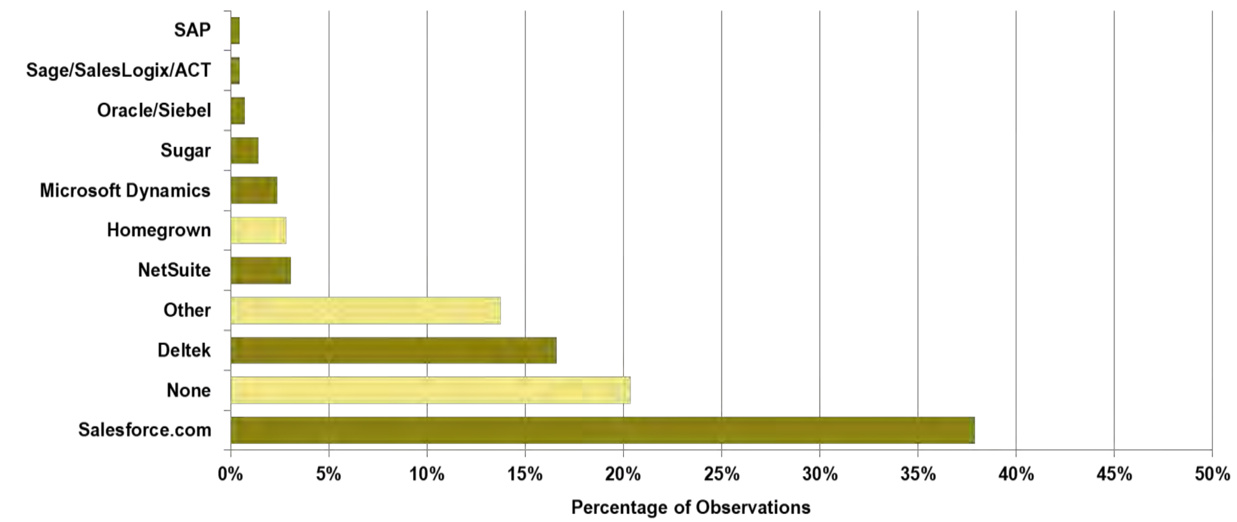
Client Relationship Management (CRM)

- Client Analytics
- Marketing
- Partner Relationship Management
- Proposals
- Sales
- Service

CRM supports the management of client relationships and is designed to improve sales and marketing effectiveness. CRM automates lead, contact and campaign management, sales pipeline, territory and contract management. Many CRM applications also provide powerful call center functionality for issue management; call handling; trouble ticketing and problem resolution. CRM allows PSOs to track clients through the engagement (bid to bill) lifecycle, and to specifically target customer segments and offers by understanding details of the relationship. CRM supports analysis by client, geography and portfolio.

Figure 35 shows Salesforce.com dominance once again with use by 38% of the organizations surveyed. Deltek's integrated CRM, part of its project-based CFM portfolio, moved into second place with 17% adoption. NetSuite's CRM, part of its CFM suite, and Microsoft Dynamics CRM are also prevalent. Salesforce remains dominant but is losing market-share within PS because CRM functionality is provided by the project-based ERP suppliers without the high cost of Salesforce.

Figure 35: Client Relationship Management (CRM) Solution Used



Source: SPI Research, February 2018

Table 37 compares organizations using CRM to those who do not. 23% of the organizations surveyed do not use any type of CRM solution. As the table shows, CRM benefits organizations in terms of growth. CRM users experienced significantly greater revenue and headcount growth. They have larger sales pipelines, more revenue from new clients and many more active clients and projects. CRM users report larger, more profitable projects. Improved sales effectiveness leads to a more efficient use of resources down the line. Profitability is clearly enhanced when CRM is integrated with PSA and the CFM application.

Table 38 further depicts CRM impact, comparing those organizations not using CRM at all to those organizations using non-integrated CRM, and then to organizations using CRM integrated to the core financial solution. This table highlights the benefits organizations receive as they move from no CRM to nonintegrated CRM to integrated CRM. While these benefits might not be revolutionary, they do underscore greater visibility and improved alignment between sales and service delivery. These benefits are amplified as organizations grow.

Table 37: Impact – Client Relationship Management (CRM) Use

KPI	CRM Used	CRM Not Used	▲
Survey responses (commercial CRM)	323	99	
Year-over-year change in PS revenue	8.5%	5.5%	55%
Year-over-year change in PS headcount	9.5%	8.1%	17%
Percentage of new clients	26.7%	16.3%	64%
Deal pipeline relative to qtr. bookings forecast	187%	129%	44%
Total annual number of active closed clients	325	105	211%
Number of projects delivered per year	466	174	168%
Average revenue per project (k)	$171	$154	12%
Project margin	33.0%	27.7%	19%

Source: SPI Research, February 2018

Table 38: Impact – Commercial CRM Integration

KPI	CRM Not Used	Used, Not Integrated	Used, Integrated
Survey responses	99	130	170
YoY change in PS headcount	8.1%	8.7%	9.6%
Deal pipeline relative to qtr. bookings forecast	129%	185%	187%
New clients	16.3%	25.5%	27.4%
Percent of annual revenue target achieved	91.8%	93.0%	93.6%

Source: SPI Research, February 2018

Professional Services Automation (PSA)

Professional Services Automation (PSA)

- Collaboration
- Invoicing
- Portfolio Management
- Project Accounting
- Project Analytics
- Project Costing
- Project Management
- Resource Management
- Time & Expense

Professional Services Automation provides the systems basis for initiation, planning, resource management, scheduling, execution, close and control of projects and services. PSA provides a resource and project dashboard including the demand forecast. It helps manage service delivery by overseeing opportunities, staffing, project management, and collaboration. PSA is typically the system of record for resource skills, competencies and preferences with integration to the employee and contractor database. It is used to collect time and expense by project and resource down to the task level, so it is the system of record for resource utilization and project cost and estimating. Most PSA applications now offer billing modules with some level of revenue recognition by type of billing method – time and materials, work in process or fixed price. They also support accurate time and expense capture. PSA extensions for the construction industry include modules for material costs and procurement. Although PSA is still focused on enabling project- and services-driven organizations to better plan, staff, execute and collect all relevant information related to projects, it has become much more than that. It has become the core solution for business planning with a view of the best projects, best clients, best services and best people to translate the business plan into reality.

Figure 36: PSA Supports the Services Delivery Lifecycle (SDL)

Source: SPI Research, February 2018

Core modules

PSA vendors segment their products into application modules that emphasize the management of costs, clients and resources:

- ∆ ***Opportunity Management***: The management of client information, sales activities, proposals, and contracts to improve sales effectiveness. Some PSA solutions let a CRM tool handle opportunity management; and instead focus on resource demand management and forecasting functions based on the opportunities tracked in the CRM application.
- ∆ ***Engagement Management***: The management and control of the overall set of project deliverables and customer communication.
- ∆ ***Resource Management***: The management processes associated with resources (people, material, equipment, etc.) used during the services delivery lifecycle. Includes capacity planning and resource scheduling.

- ***Project Management***: The initiation, planning, execution, close and control of projects.
- ***Project Accounting***: The tracking of project-related costs to determine budget to actual costs and profitability.
- ***Time and Expense Management***: The capture and tracking of project-related time and expense information.
- ***Invoice Management***: The preparation and presentation of invoices based on information captured from the time and expense module or from pre-assigned time or project completion milestones.
- ***Practice / Management Reporting:*** Core reports include project dashboards, resource management and utilization dashboards, capacity planning and forecasting, project profitability.

Additional modules

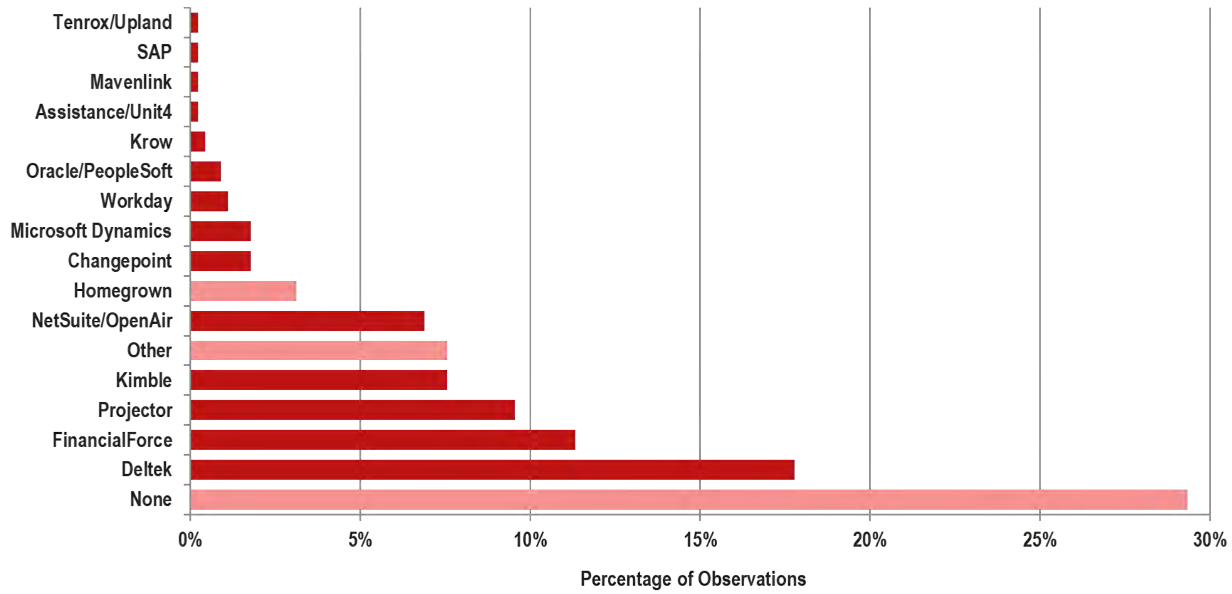
While every PSA solution is unique, some have expanded their capabilities through additional modules including:

- ***Social:*** The ability to easily incorporate social channel information from LinkedIn, Facebook, Twitter, etc. along with social collaboration to facilitate knowledge sharing.
- ***Collaboration Management***: The management of information used to create effective communication and iterative knowledge sharing during the services delivery lifecycle.
- ***Knowledge Management***: The centralization of information improves operational efficiency. This information can be anything related to the ongoing business and includes information on resources, projects, tools, templates, methods and clients.
- ***Revenue Management***: PSA solutions provide deferred revenue and work in progress tracking and revenue reporting to automate revenue reporting for time and materials, fixed bid, milestone-based and term engagements.
- ***Performance Management***: The use of information to determine effectiveness and budget to actual performance for different aspects of the organization.

PSA Solution Adoption

Figure 37 shows Deltek garnered first place this year as the most adopted PSA solution with approximately 18% (80 firms) of the survey. FinancialForce PSA is the second-most prevalent solution with 11% (51 firms) of survey respondents. Projector is third with 10% (43 firms). NetSuite is fourth with 7% (31 firms). None and other were reported by 28% (164 firms). Interestingly, the average size of the organizations that do not use a PSA is quite large at 241 PS employees. Kimble, a PSA provider built on the Salesforce 1 platform, has gained considerable market momentum particularly in Europe with 8% (34 firms) of benchmark participants using it. Several newcomers are making strides in PSA. Workday PSA is used by large enterprises. Krow, UNIT4 (who acquired Assistance PSA last year) and Mavenlink are all making inroads into the small to medium size market.

Figure 37: Professional Services Automation (PSA) Solution Used



Source: SPI Research, February 2018

PSA Benefits

When it comes to PSA software, project- and services-based organizations now have a range of attractive choices – systems that are designed to support the needs of the always-on, virtual, mobile service economy by providing several key benefits:

- Project revenue and cost data is contained in a central database.
- The user interface is consistent across all applications.
- Costs and deliverables reside in the same place, so productivity can be measured, analyzed and improved at the territory, account, project and individual resource level.
- Reporting and analytics are embedded within the application, alerting decision-makers to issues before they become problems.
- A more seamless audit trail to better identify success and failure points.
- Enhanced support for global operations with multicurrency, multilingual applications, which conform to local regulations and taxes.
- Lower administration costs due to fewer manual, error-prone spreadsheets and costly data re-entry.
- One-source of the truth – real-time information visibility, constantly updated.

There are many more benefits provided by integrated PSA solutions. It is intuitively obvious that with one consistent set of information, decision-makers have the visibility and control they need to improve organizational performance.

Table 39 compares PSOs using PSA solutions to those that do not. The results in this table are very powerful. Professional Services Automation solutions continue to drive significant operational performance benefits, which can yield higher revenue and profit for professional services organizations. The use of PSA is on the rise due to the need to better manage projects and resources, especially in more technical disciplines, as it has become increasingly difficult to find, hire, retain and deploy talent. PSA solutions help match the right resources, with the right skills at the right time to the right projects. PSA solutions yield several core benefits to PSOs, but most executives only need to look to the 3% increase in billable utilization, as the reason to select PSA. Almost all key metrics improve with PSA adoption. As shown in the table these systems pay for themselves with higher net profits.

Table 39: Impact – Professional Services Automation (PSA) Use

KPI	PSA Used	Not Used	▲
Survey responses	66.4%	32.2%	
Year-over-year change in PS revenue	9.2%	5.5%	67%
Year-over-year change in PS headcount	10.2%	7.4%	36%
Employee billable utilization	73.2%	68.7%	6%
Average project staffing time (days)	8.37	10.19	18%
Project margin	34.0%	27.4%	24%
Annual revenue per billable consultant (k)	$203	$179	14%

Source: SPI Research, February 2018

Table 40 highlights the benefit of integrated PSA versus standalone PSA. Again, the results demonstrate integrated PSA enables organizations to operate at higher levels of efficiency. Perhaps most notable in this table is the increase billable utilization as PSOs move from spreadsheets to PSA to integrated PSA.

Table 40: Impact – Commercial PSA Integration

KPI	PSA Not Used	Used, Not Integrated	Used, Integrated
Survey responses	147	72	148
YoY change in PS revenue	5.5%	8.5%	8.7%
YoY change in PS headcount	7.4%	8.2%	10.2%
Deal pipeline relative to qtr. bookings forecast	155%	166%	181%
Employee billable utilization	68.7%	70.6%	73.4%
% of annual rev. target achieved	92.3%	92.7%	94.1%

Source: SPI Research, February 2018

Because the delivery of services is where PSOs make their money, and because PSA is the primary application used by project managers and others responsible for services delivery, it is easy to understand why the operational and financial benefits are so significant. SPI Research has always recommended organizations with more than 20 employees utilize PSA. With the affordable cloud-based solutions now available, PSA should also be considered by smaller organizations.

Human Capital Management (HCM)

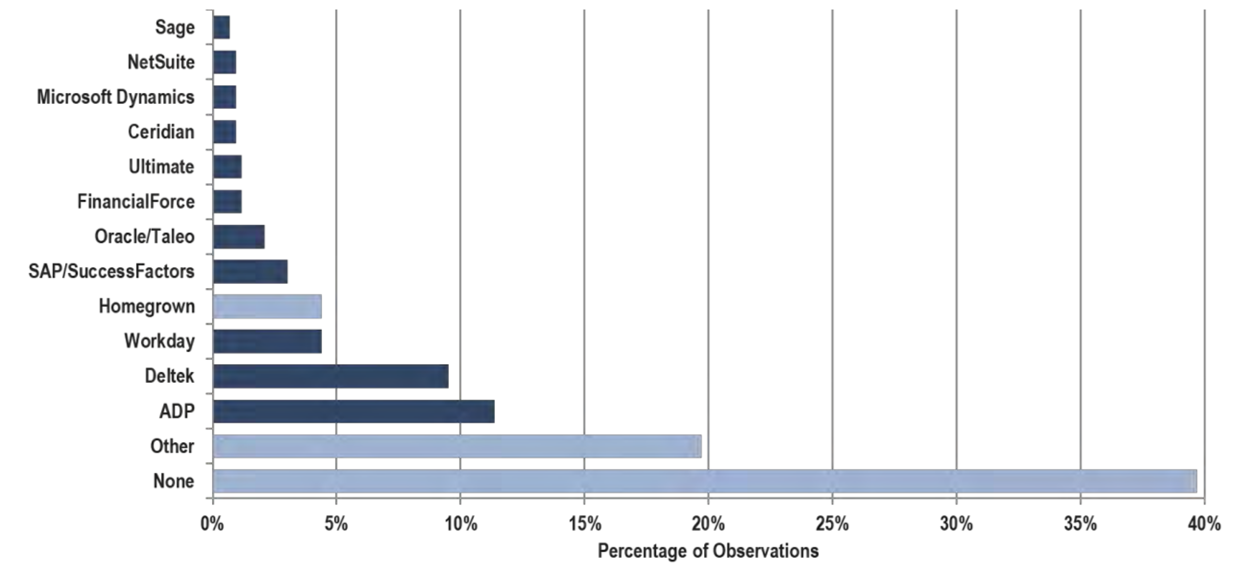
Human Capital Management (HCM) solutions (also known as talent management solutions) give employers the tools to effectively recruit, hire, onboard, train, evaluate and compensate employees. By tracking performance, skills and career progression, HCM helps companies create and maintain a high-performance workforce. Key software modules include recruiting, employee learning, skills tracking, compensation, performance management, policy compliance, and succession planning — each of which help organizations manage personnel growth and development.

HCM benefits the PSO by maintaining a database of skills, benefits and pay rate information that is used for resource scheduling, recruiting and performance and career management. Effective HCM solutions provide rich applications that allow consultants to manage their own careers and skill development (training) and bid on the projects of greatest interest for them.

Human Capital Management (HCM)

- Benefits
- Payroll
- Recruitment
- Time and Labor
- Training Administration
- Workforce Analytics

Figure 38: Human Capital Management (HCM) Solution Used



Source: SPI Research, February 2018

Figure 38 shows that many professional services organizations do not yet use HCM solutions. However, their prevalence among the largest PSOs is significant. With new cloud-based solutions coming to market that specifically target the management of human capital, coupled with the need to better manage employees from recruitment and hiring through training to retirement, HCM use will undoubtedly increase significantly in the coming years. Of the solutions highlighted in this year's benchmark, ADP, Deltek and Workday are leaders, however, SAP Successfactors, Oracle/Taleo, FinancialForce and Ultimate are not far behind. These cloud-based solutions are beginning to gain acceptance as PSOs realize talent is their most valuable asset. Most of the solutions found in this benchmark are provided by CFM solution providers, who generally offer integration with other applications in their suites.

The leading provider, ADP, with approximately 11% of survey participants, Ceridian, Ultimate and Fairsail (Sage), offer HCM solutions that are not part of an ERP suite. Even though a majority of the PSOs that utilize HCM are larger in employee headcount, it is not only for large organizations, it is for organizations focused on finding, hiring and keeping the best employees.

Table 41 highlights some of the differences between firms utilizing HCM and those who do not. In this year's survey 60% of the organizations use HCM, although the table also highlights they are four times as large. Key benefits show up in a higher proportion of billable headcount, shorter recruiting times, happier employees and larger projects.

Table 41: Impact – Human Capital Management (HCM) Use

KPI	HCM Used	HCM Not Used	▲
Survey responses	52.9%	41.7%	
Year-over-year change in PS revenue	8.7%	7.3%	19%
Year-over-year change in PS headcount	8.9%	9.7%	-8%
Recommend company to friends/family	4.45	4.28	4%
Management to employee ratio	10.25	9.71	6%
Days to recruit and hire for standard positions	59.5	63.0	6%
Project duration (man-months)	31.4	24.3	29%
EBITDA	18.0%	15.0%	20%

Source: SPI Research, February 2018

Higher billable utilization occurs because the right people with the right skills are available to do the work. Larger management span of control reduces the cost of non-billable management and enhances the bottom-line. The fact is that as organizations grow, human capital management becomes increasingly important. HCM solutions provide greater visibility into employee skills, preferences, training and career advancement. They ensure equitable compensation and are an integral component of pay for performance and reward systems.

Talent management is central to PS performance as the skills and attitudes of the consulting workforce provide tangible evidence of consulting value. And with better management of personnel, PSOs can ensure talent is on staff and available when needed, which helps the organization grow faster. HCM solutions, in conjunction with PSA, drive greater billable utilization, which results in higher revenue per employee and profitability. Most of the new breed of cloud-based HCM applications offer mobile access from anywhere, making it easy for employees to keep their profiles and time-off requests up-to-date. Several HCM vendors are adding rich predictive analytics, providing visibility into levels of employee engagement to spot employees who are likely to quit. Their recruiting tools are very powerful with out-of-the-box integration to all the top job sites.

Table 42: Impact – Commercial HCM Integration

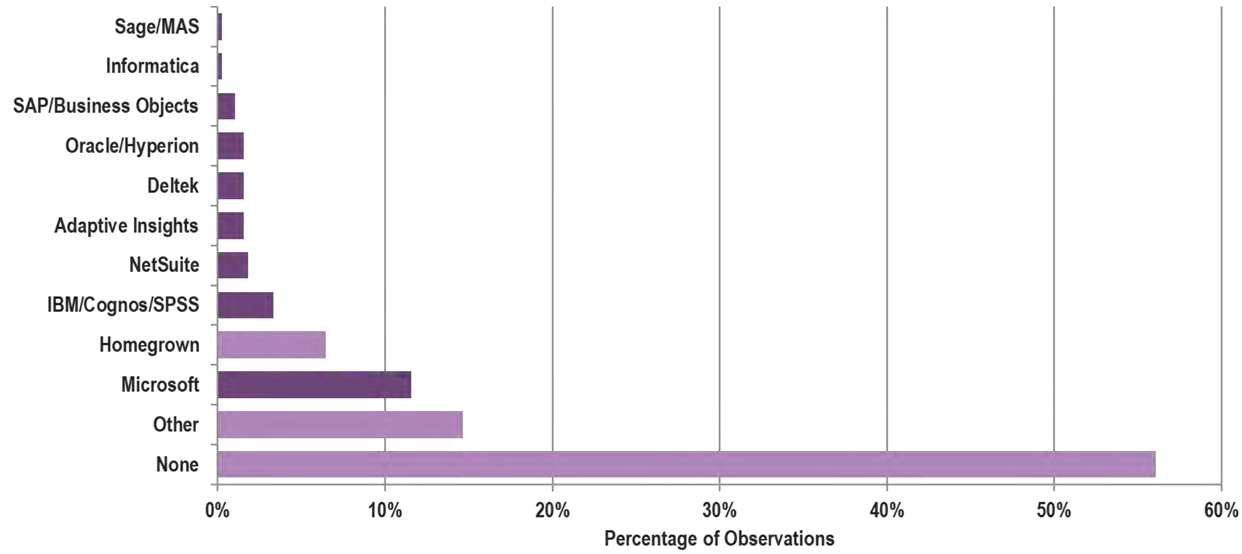
KPI	HCM Not Used	Used, Not Int.	Used, Int.
Survey responses	190	110	54
Size of PS organization (employees)	85	347	585
% of employees billable or chargeable	75.2%	76.4%	78.5%
Time from recruit to bill (days)	113	109	107
Recommend company to friends/family	4.28	4.42	4.60
Project duration (man-months)	26.1	39.0	39.5
Quarterly non-billable expense per emp.	$1,634	$1,565	$1,444

Source: SPI Research, February 2018

Business Intelligence (BI)

Business Intelligence integrates information from core business applications to improve strategic analysis, demand and capacity planning, budgeting, forecasting and financial planning. BI solutions continue to increase adoption in PSOs, whether they are offered as stand-along tools or part of the business applications themselves for reporting and analysis. As professional services organizations mature, BI becomes a more critical tool to provide real-time visibility to all aspects of the operation — allowing executives to spot trends and take corrective action early. It also is an important solution for annual planning, as PS executives try to uncover areas where additional growth and profit can be extracted.

Figure 39: Business Intelligence (BI) Solution Used



Source: SPI Research, February 2018

Figure 39 shows relatively low adoption levels of Business Intelligence in this year's survey, similar to those in the past. None, Other, Microsoft and homegrown are the most prevalent BI solutions. Of the application suite providers, IBM/Cognos/ SPSS, NetSuite and Adaptive Insights each have a wide following. The trend continues toward leading providers offering BI in the cloud, providing greater accessibility for executives around

Table 43: Impact – Business Intelligence (BI) Use

KPI	BI Used	BI Not Used	▲
Survey responses	31.8%	53.5%	
Total professional services revenue (mm)	$114.7	$27.4	318%
Year-over-year change in PS revenue	11.1%	7.4%	49%
Year-over-year change in PS headcount	11.7%	8.4%	40%
Deal pipeline / qtr. bookings forecast	199%	163%	22%
New clients	28.1%	24.1%	16%
Quarterly revenue target in backlog	51.5%	43.9%	17%

Source: SPI Research, February 2018

the world as well as ease of deployment and mobile access.

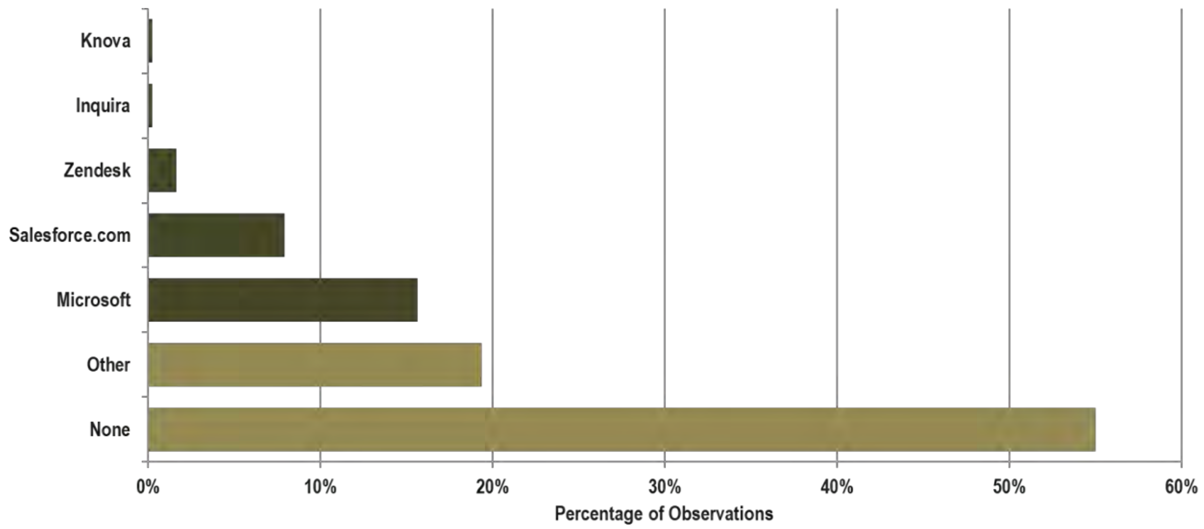
The results in this table highlight some of the core benefits organizations have achieved that use BI solutions. While each improvement is impressive, growth in both revenues and headcount stands out. The fact is BI is a strategic solution that helps PSOs plan, budget and forecast the business. Its powerful "what if" analysis tools help PSOs model capacity and resource plans to achieve optimal results.

Knowledge Management (KM)

Knowledge Management should be a core application for all PSOs as knowledge, unique intellectual property, methods and tools are the primary source of service provider differentiation. Unfortunately, 55% of the organizations surveyed reported they do not use a knowledge management application.

As the workforce becomes more global and intellectual property more valuable, it becomes increasingly important to have shared processes, procedures and templates. SPI Research sees Knowledge Management as a key source of differentiation, consistency and quality. With the advent of inexpensive cloud-based knowledge management applications we expect significant investment in this area.

Figure 40: Knowledge Management (KM) Solution Used



Source: SPI Research, February 2018

Figure 40 shows once again Microsoft's SharePoint is the market leader with 16% of the firms in this survey. SharePoint's continued dominance has led to a rich after-market for add-ons, which make the product easier to use and more powerful. There are a variety of solutions available, but SPI Research found Microsoft's SharePoint to be the industry leader by a wide margin. Salesforce.com is the second most prevalent KM application, with 8% of the market.

Table 44 compares PSOs using knowledge management solutions to those that do not. In this year's survey the organizations using Knowledge Management were larger. Organizations using KM tend to be more efficient in all aspects of their business, especially in the sale and delivery of services. KM also contributed to higher revenues per consultant and employee along with improved margins.

Table 44: Impact – Knowledge Management (KM) Use

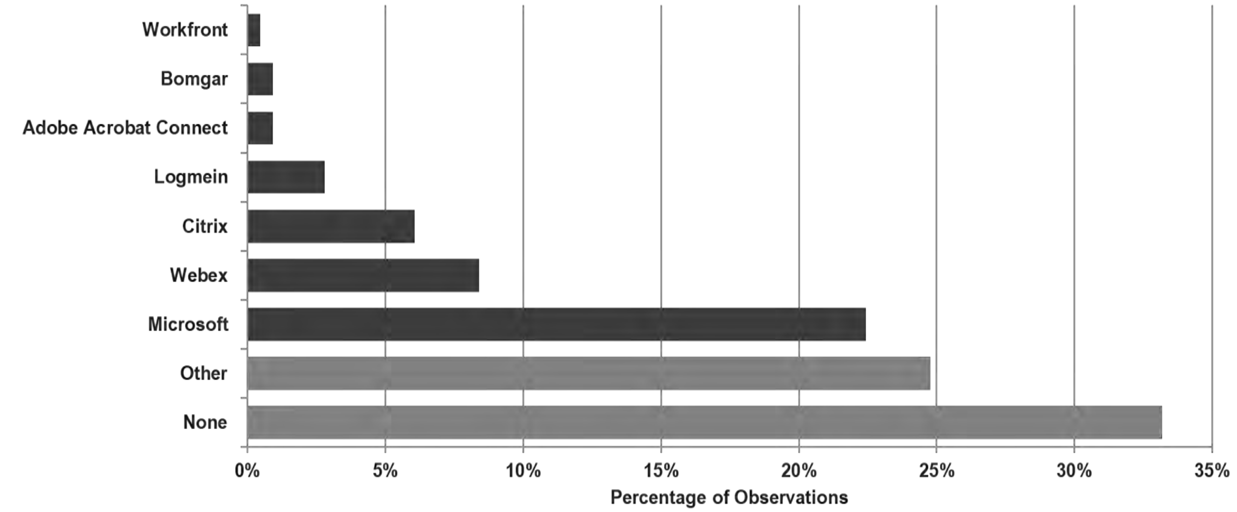
KPI	KM Used	KM Not Used	▲
Survey responses	42.3%	51.8%	
New clients	30.5%	19.3%	58%
Bid-to-win ratio (per 10 bids)	4.97	4.68	6%
Deal pipeline relative to qtr. bookings forecast	199%	156%	28%
Annual revenue per billable consultant (k)	$213	$183	16%
Annual revenue per employee (k)	$172	$149	15%
Quarterly revenue target in backlog	49.4%	43.9%	13%
Project Margin	35.5%	28.8%	24%
EBITDA	16.6%	16.5%	1%

Source: SPI Research, February 2018

Remote Service Delivery (RSD) and Collaboration Tools

Like Knowledge Management (KM), Remote Service Delivery and collaboration tools have become increasingly important for virtual project delivery, communication and collaboration. They provide a platform for consultants and clients to work together, regardless of physical location. Professional services consultants utilize these technologies to serve remote clients virtually. In the past consultants, could only serve one client at a time, with expensive and time-consuming travel the norm. Advances over the past years have added video, recording, editing, polling and white-boarding functionality, meaning team members can now see each other (if desired) along with sharing information and computer screens.

Figure 41: Remote Service Delivery and Collaboration Tool Used



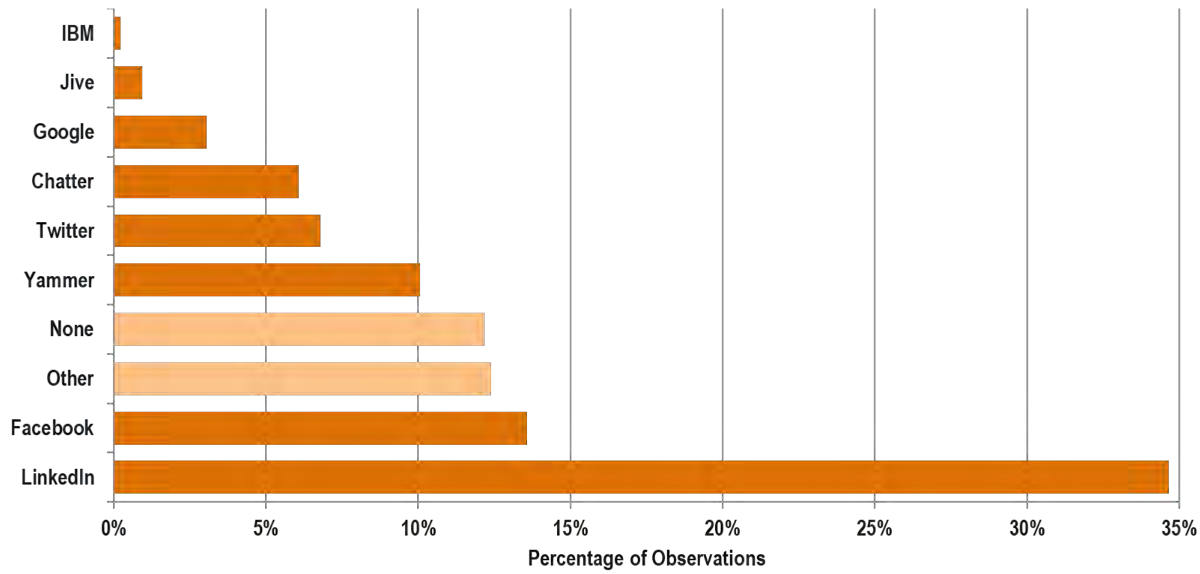
Source: SPI Research, February 2018

Figure 41 shows results similar to past years. Microsoft, WebEx and Citrix lead in adoption. Microsoft, in particular, with the purchase of Skype and LiveMeeting, has greatly enhanced its remote service delivery capabilities. Given their relatively low cost and ease of deployment, remote service delivery tools should be on the "must have" list for PSOs of any size.

Social Networking

Five years ago, SPI Research began to include social networking/media as part of our application analysis. These tools are being relied on, now more than ever, as organizations work both internally and externally to find, hire, communicate and market to the best people. Social media has become essential to help professional services organizations build their brand through thought leadership and market outreach. Collaboration tools like Yammer, Chatter and Jive have replaced email as the preferred method of communication for millennials.

Figure 42: Social Networking (SM) Solution Used



Source: SPI Research, February 2018

Even the most controlling organizations must recognize and support the trend toward personal devices and social networking if they wish to attract and retain young, connected workers. The downside of the social networking explosion is that it can easily become a time-sink and source of unproductive web-surfing hours, so the trick is to exploit collaboration, knowledge-sharing and crowd-sourcing without lost productive time. Figure 42 shows LinkedIn continues to be the dominant social networking platform, with more than 35% of the organizations surveyed using it. In the last year Facebook has become the second most prevalent tool (14%). Yammer is used by 10% and Salesforce Chatter at 6%.

Application Integration

While the core business solutions support individual departments in their efforts to become more productive and profitable, as these solutions are integrated with the core financial management

Figure 43: Success depends on inter-departmental cooperation

Source: SPI Research, February 2018

solution (ERP) they create additional insight and value (Figure 43). For instance, CRM integrated with CFM provides sales executives with the insight necessary to develop a pricing strategy, supporting the highest probability of winning the bid with maximum profitability. Without this integration, it would be much more difficult to conduct this type of analysis. Today's PSOs simply cannot operate with functional silos as the lines between sales, delivery and finance become blurred.

It is also important for applications to communicate with each other. PSA, integrated with CRM, provides visibility from the sales pipeline to the resource schedule, ensuring the right resources are available when needed. With integrated HCM, human resources, recruiting and resource management all benefit from visibility into in-demand skills, consultant preferences and career aspirations.

Table 45: Solution Integration with Core Financials

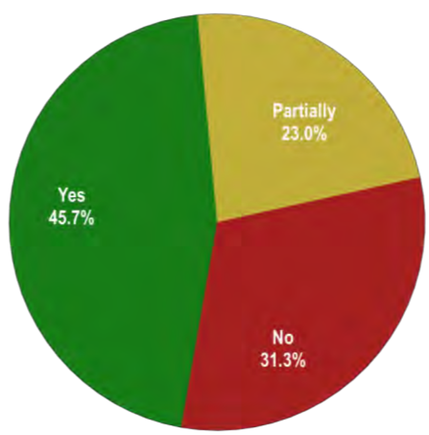
Solution	2015	2016	2016
Professional Services Automation (PSA)	56.4%	53.5%	62.5%
Business Intelligence (BI)	50.8%	42.4%	50.0%
Client Relationship Management (CRM)	42.3%	39.7%	41.3%
Human Capital Management (HCM)	40.7%	34.9%	35.9%

Source: SPI Research, February 2018

Table 45 shows higher levels of integration in this year's benchmark. SPI Research believes integration between CRM, PSA and core financials is an essential ingredient in superlative performance. Integration provides visibility to all parts of the organization and helps break down organizational silos.

Achieving client delight and profit in professional services requires tight coordination between demand and supply which can only be achieved through integrated business applications. Many firms that have worked with SPI Research over the past several years have concentrated on application integration as they have learned its benefits and worked with their vendors to ensure the integration happens.

Figure 44: Is CRM Integrated with PSA?

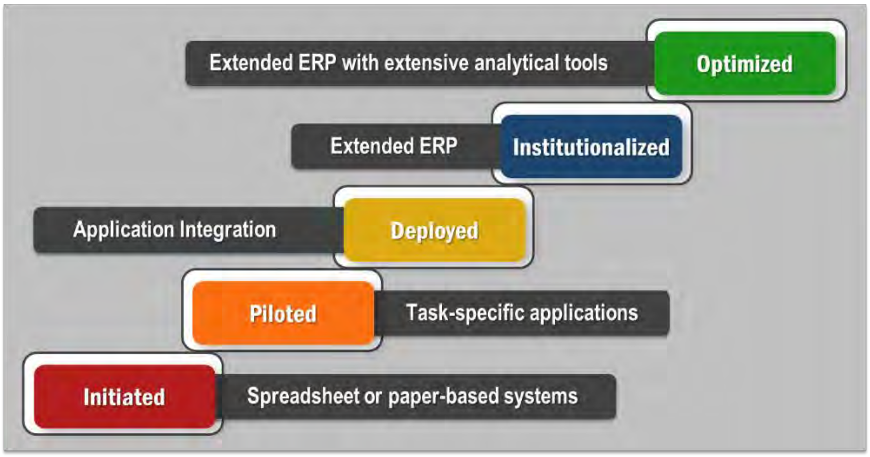


Source: SPI Research, February 2018

Participants were asked if their CRM and PSA applications were integrated, underscoring the importance of connecting sales and service delivery for a more comprehensive view of clients (Figure 44). This year's survey showed that 45.7% of the PSOs surveyed integrated CRM with PSA. This is a dramatic improvement over the dismal 23% level of CRM and PSA integration reported in previous years. PSOs are waking up to the necessity of coordinating sales with service delivery. This integration improves customer satisfaction and defines quality execution. Typically, application suites, such as Deltek, FinancialForce.com, Microsoft, NetSuite and SAP offer out-of-the-box integration between their core business solutions making a 360-degree view of clients and projects possible.

The Professional Service IT Maturity™ Model

Figure 45: Professional Service IT **Maturity™** Level



Source: SPI Research, February 2018

While every PSO uses technology somewhat differently — with different applications and varying levels of integration — SPI Research believes one of the best ways to improve organizational performance is to deploy integrated applications to provide a 360-degree view of clients and projects to facilitate decision-making. Figure 45 highlights the PS IT Maturity™ Model. As PSOs move from "manual" solutions (spreadsheet or paper-based) toward integrated and single user-interface solutions, performance improves. SPI Research's PS IT Maturity™ Model levels are:

- **Level 1: Initiated** – ***Ad Hoc***: Most PSOs begin with manual or spreadsheet-based tools to run the business. Time and expense capture is manual, sporadic and ad hoc. Billing is performed manually or through the backend financial application.
- **Level 2: Piloted – *Application Specific***: As they grow and engage in more structured processes, organizations deploy task specific applications (time and expense), project management (PM) and Knowledge Management (KM), Client Relationship Management (CRM), etc. to better manage work and to create an audit trail, albeit rudimentary, for tracking work. Many of these task specific applications provide a database to improve reporting.
- **Level 3: Deployed – *Integrated Applications***: As organizations mature they deploy greater integration of business applications with the core financial (Enterprise Resource Planning (ERP)) solution. At this level, they begin to evaluate the time and cost factors associated with integration

of various point releases. Emphasis at this level is on creating effective management reports to provide visibility into all facets of the business.

- ∆ **Level 4: Institutionalized – *Extended ERP***: An increasing number of PSOs at this level of maturity begin to add various components of ERP applications rather than continually integrate disparate applications. SPI Research uses the term extended ERP or SRP (Service Resource Planning). Now professional services organizations are purchasing both core financials as well as other pre-integrated application suites from the same ERP solution provider. Currently CRM is the most popular application that is purchased pre-integrated with financials, closely followed by Professional Services Automation (PSA). Other applications that are being acquired from the same ERP vendor include human capital management, business intelligence, and procurement.
- ∆ **Level 5: Optimized – *Extended ERP and Analytics***: Finally, as the PSO has significant integration in its application infrastructure it turns the solution loose to efficiently surface and report data to optimally measure and transform the organization. Most, if not all, core applications are integrated to provide visibility into the work being sold, executed, and closed.

While not every PSO is run with a completely integrated set of business applications, SPI Research has seen the level of integration increase significantly. In today's fast-paced business climate, winners invest in integrated systems, leaving those who still rely on manual systems and processes in the dust.

Figure 46: PS Dashboard

Source: SPI Research, February 2018

7. Leadership Pillar

Growth, growth and more growth. Each year SPI Research finds a direct correlation between growth and success in Professional services. Given that the PS industry is built on the application of unique knowledge and domain expertise it is sometimes hard to understand why the growth dynamic is so important. But… it is. In professional services and the wider world of technology, leading firms create dominant market positions. There is a compounding effect of how customers make decisions, the networks and ecosystems that are created, and the ability to scale as a firm that means there is a significant advantage for the companies that grow the fastest. By establishing market-leading positions, premium PS firms are able to win the best deals and turn those deals into wildly satisfied clients who continue to buy and provide referrals. They become known as innovators in their markets. They produce tangible results and harvest the knowledge gained to do an even better job the next time. They build a culture which embodies their values which further attracts prospective consultants and clients who identify with those attributes.

But growth comes with a price. The unique knowledge, vision and passion that a consulting leader brings to founding a hot new firm must be nurtured and continuously kindled within new employees. The leader must simultaneously learn to let go and grow at the same time. Micro-managing does not work in PS, cultivating a reputation and repeatable skills, competencies and processes does. Most independent consulting firms can easily grow from 20 to 50 consultants, but after that things get more interesting. This is when firms must move from heroic to repeatable and founders must move from doers and fire fighters who wear all the hats to leaders and visionaries. The leaders who can't make this transition must have the courage to bring in new talent who can take the firm to the next level.

As professional services organizations grow, leadership challenges intensify. SPI's research into this topic over the past twelve years has shown a powerful correlation between financial success and confidence in leadership. In small organizations, leadership by walking around can work. But as the organization grows in size and scope, complexity, and geographic dispersion, communication and alignment become issues. PSOs must implement policies to ensure communication, collaboration and alignment do not suffer with expansion. Systems and processes must be implemented to provide visibility and management control.

Leadership development, succession planning and funding growth are big challenges for independent PSOs. Many consider mergers and acquisitions to augment organic growth. Employee ownership is a viable option as the founder nears retirement. A chief concern is "How best to monetize value while building a firm for the future?" Table 46 shows the Leadership Maturity model and the best leadership style for each level of maturity.

Table 46: The Leadership Maturity Model

	Level 1 Initiated	Level 2 Piloted	Level 3 Deployed	Level 4 Institutionalized	Level 5 Optimized
Leadership	Initial strategy is to support product sales and provide reference customers while providing workarounds to complete immature products. Leaders are "doers".	PS has become a profit center but is subordinate to product sales. Strategy is to drive customer adoption and references profitably. Leaders focus on P&L and client relationships.	PS is an important revenue and margin source, but channel conflict still exists. Services differentiate products. Leadership development plans are in place. Leaders have strong background & skills in all pillars.	Service leads products. PS is a vital part of the company. Solution selling is a way of life. PS is included in all strategy decisions. Succession plans are in place for critical leadership roles	PS is critical to the company. Service strategy is clear. Complimentary goals and measurements are in place for all functions. Leaders have global vision and continually focus on renewal & expansion.
Leadership Styles by Maturity Stage	The Entrepreneur. Leaders are "doers". In small companies, PS leaders are technically competent and directly perform engagement activities in addition to recruiting and ramping new consultants. Typically, they possess stronger technical than business or leadership skills.	The Generalist. The emerging PS leader must start to focus on HR, Finance and Operations while nurturing close relationships with clients and partners. At this stage, setting strategic vision and strategy are less important than strong operational management skills.	The General Manager. By the deployed stage, the PS leader must start to focus on setting vision and strategy and forging strong partnerships with clients and the cross-functional leadership team. The PS leader must exhibit strong operational and process management skills. He must have a strong background in sales, finance and operations. Focus at this stage is on recruiting strong functional leaders to scale the organization.	The Strategist. By the institutionalized phase, the PS leader has developed a strong leadership team and institutionalized operating processes in all five service performance pillars. His primary focus is strategy, business planning and establishing strategic partnerships and alliances. At this stage, he must "lead", "inspire" and "communicate". He must be able to attract and retain high quality functional leaders.	The Leadership Team. As the PS organization matures, the leader becomes more strategic and able to effectively communicate and inspire. All functional areas have strong, sustainable operating processes. His focus is on ensuring alignment within the organization while continually forging new business partnerships. The leadership team constantly focuses on innovation and operational excellence.

Source: SPI Research, February 2018

Leadership challenges are much the same but also very different in embedded PSOs. These organizations exist to ensure the successful implementation and adoption of the company's products. They are not given the latitude to develop services for services sake, but rather must serve the best interests of the company's products, even if those interests undermine PS productivity and profitability. In embedded PSOs the primary leadership challenge is one of charter conflict and forging cross-functional relationships. Embedded PS executives are tasked with developing a high-quality consulting business, but consulting is subordinate to product proliferation. A new, more strategic role is emerging to drive client adoption and optimization. This role requires significantly greater alignment with sales, support and product development so collaboration and team-building skills are paramount.

The Leadership Index

It is impossible to work in Professional Services and conclude that leadership does not matter. Most of us intuitively understand leadership's importance, but few studies have been able to quantify its benefit.

This study does just that. SPI Research has developed a Leadership index that focuses on the most important aspects of leadership to measure its impact. You will be as astounded as we were to discover that great or poor leadership permeates every facet of PSO performance!

For several years, SPI Research has asked a series of questions regarding various aspects of professional services vision, strategy and leadership including confidence, clarity and alignment. Strategic decisions set the direction and tone for the PSO and affect all functions because vision and strategy determine goals and objectives, the types of clients to pursue, the types of services to offer and the interrelationship between functions.

The leadership questions have evolved into eight core questions that examine how various dimensions of leadership impact performance. The questions ask, “please rate the following aspects of your organization in terms of how well it operates (1: not well - 5: very well)”:

1. The vision, mission and strategy of the PSO is well understood and clearly communicated
2. Employees have confidence in PS leadership
3. It is easy to get things done within the PS organization
4. Goals and measurements are in alignment for the service organization
5. Employees have confidence in the future of the PS organization
6. The organization effectively communicates with employees
7. The organization embraces change, it is nimble and flexible
8. The organization focuses on innovation and is able to rapidly take advantage of changing market conditions

SPI Research created a “***Leadership Index***” by ranking the aggregate leadership scores for all eight questions by survey participant. The minimum score for the leadership index would be eight, if the survey participant stated “1 - not well” for each of the eight questions. The maximum would be 40, if the participant stated “5 - very well”, for each question.

As statisticians, a perfect day is when a key performance measurement clearly correlates with most measures of performance. Well, the dimensions of leadership are one of those perfect statistics. As the leadership dimensions improve, so do all major key performance metrics (Table 47). One might expect “Confidence in Leadership” and “Confidence in the Future” to improve along with clarity of vision and strategy but the truly remarkable finding around leadership is that all the major operational metrics – revenue per person, utilization, project margin and on-time project completion improve as well. It is amazing how strategic clarity permeates all aspects of operational performance. If the strategy is clear and compelling, people-based organizations will find a way to accomplish it.

With strong leadership, employees understand what’s required of them, and can go about conducting their daily business with confidence their work supports corporate objectives. Strong leadership helps employees get on the same page, working toward a common goal. Happy employees are more productive and deliver higher levels of client satisfaction and profitability.

Table 47 depicts the percentage of survey respondents by overall leadership index rating compared to key operational measurements. As shown in the table, effective leadership has a powerful impact on all aspects of performance.

More than any other factor, good, or poor leadership impacts all facets of the business driving stronger growth, higher billable utilization, better on-time project delivery, more winning proposals and higher levels of customer satisfaction. The reverse is also true. Poor leaders can sabotage cross-functional alignment, leading to organizational alienation, functional silos and chaos. Leaders who are not able to transition to more strategic roles can create heroic, reactive organizations characterized by fire-fighting, in-fighting and burnout. Many top-performing organizations have reported adding SPI's leadership questions to their employee surveys to help them measure and quantify employee confidence in leadership.

Table 47: Leadership Impact Based on Leadership Maturity Scores

Key Performance Indicator (KPI)	8 - 25	26 - 30	31 - 35	36 - 40
Percentage of respondents	22.2%	18.4%	35.4%	24.0%
Year-over-year change in PS revenue	3.2%	5.2%	9.5%	12.7%
% of employees billable or chargeable	70.5%	73.8%	76.3%	79.8%
Revenue from new clients	21.5%	23.0%	22.2%	31.8%
Bid-to-Win ratio (per 10 bids)	4.44	4.43	4.79	5.44
Percentage of referenceable clients	70.3%	73.9%	74.5%	78.5%
Consultant Ramp time (days)	125.0	116.1	113.9	103.4
Recommend company to friends/family (5 pt.)	3.52	4.15	4.57	4.81
Well-understood career path for all employees	2.55	2.98	3.29	3.81
Employee billable utilization	69.9%	67.5%	72.8%	74.0%
Projects delivered on-time	74.1%	80.4%	80.7%	85.0%
Use a standardized delivery methodology	65.2%	66.8%	68.3%	76.0%
Annual revenue per billable consultant (k)	\$183	\$213	\$190	\$209
Annual revenue per employee (k)	\$149	\$155	\$159	\$171
Profit (EBITDA %)	10.6%	17.6%	20.0%	17.9%

Source: SPI Research, February 2018

Leadership Issues

When things go wrong, it most often starts at the top and then cascades downward throughout the organization, ultimately showing up in poor financial performance. Eliminating the root causes of dysfunction and inefficiency go a long way toward driving organizational success. The most common leadership issues facing PSOs include:

- Δ ***Unclear strategy*** – lack of clarity around target markets, target clients and why we win. Inability to capitalize on market opportunities due to lack of alignment, lack of employee engagement or leadership and cultural issues. No leverage to drive repeat sales, limited competitive differentiation, poor sales, marketing and service delivery execution.
- Δ ***Lack of alignment –*** unclear service charters – particularly a problem for embedded service organizations – with conflict between driving revenue and margin versus helping the overall company achieve its objectives of market expansion and client adoption.

- Δ ***Silos*** – exist in all companies – they usually occur in the choppy waters between groups or functions where responsibility and accountability are blurry. A classic example… who is responsible for driving new service revenues – is it sales or delivery? How can disconnected processes and poor handoffs be improved?
- Δ ***Reactive not proactive*** – because the organization lacks real-time visibility into all facets of the business, leaders must rely on past business performance rather than being able to spot trends and take advantage of them in real-time. Running the business by spreadsheet makes administration overly burdensome with endless rounds of manual spreadsheet inputs. Managers have no ability to analyze and recalibrate to take advantage of changing market conditions leading to missed targets and a demoralized workforce.
- Δ ***Skills imbalance*** – the logical extension of organizational silos… where all parties are not aligned … not selling what we can deliver or not being able to deliver what has been sold. Not enough or too many people with the right skills, excessive non-billable headcount, sub-par utilization, difficulty in recruiting, ramping, retaining and inability to quickly, easily staff projects.
- Δ ***Immature processes*** – disparate or poor systems and tools. Inconsistent project methods; lack of tools and intellectual property leading to low repeatability and inability to drive efficiency and reuse.
- Δ ***Poor quality and customer satisfaction*** – Failed projects, cost overruns, difficulty securing references. No quality review processes and/or poor project visibility into budget to actuals.
- Δ ***Poor financial performance*** – All of the above factors – lack of strategic clarity, poor alignment, silos, and of out-of-date information contribute to reactive, rearview mirror business forecasting and planning. The net result is revenue and margin below targets, poor forecasting accuracy, unpredictability and high levels of risk.

Culture

When organizational culture is strong — employees do things because they believe it is the right thing to do and feel they will be rewarded for their actions. However, if the leadership team lacks integrity or squelches diversity, cultures can morph into "cults", "cliques", "castes" and "insider clubs". The positive aspect of organizational culture is that the unwritten code of behavior helps team members prioritize activities and make decisions. The negative aspects of culture come from unbalanced forms of power which exclude individuals and teams from decision-making. Employees who challenge group norms are often rejected or seen as a negative influence by the rest of the group, because they upset the status quo.

- Δ ***Creative***: In a creative culture, the primary driver is self-expression. Leaders (like Steve Jobs of Apple) focus on creative brilliance and celebrate individuals and teams who "break the mold" by discovering new innovations. The organization structure is fluid and typically based on self-organizing work teams with collaborative project groups. Creative cultures foster an environment where discontinuous innovation is possible, for example, Apple moving from PCs to the wildly successful iPod. ***The unbalanced form of creative cultures are "cults", fashioned after a dynamic and visionary leader who can inspire the team to "drink the Koolaid" regardless of the consequences.*** The favored function is research and development.

- ∆ ***Competitive***: In competitive cultures, the primary driver is personal and team achievement, often defined as "winning". Leaders (like Larry Ellison of Oracle) are focused on "beating the competition" and often create quarterly "competitive hit lists" to squash the competitive enemy of the month. Individual knowledge and "killer instincts" are prized. Individual achievement is celebrated above teamwork. Competitive cultures and leaders focus intently on "management dashboards" showing competitive trends and market-share gains. The organization structure is typically based on "tiger teams" tasked to achieve specific, measurable goals. ***The unbalanced form of a competitive culture is winning at any cost. Overly competitive cultures often blur the line between "competing" and "cheating" with personal value based on unnatural competitive wins and compensation (like the Russian Olympic team). Overly competitive cultures may form "cliques" organized around sales superstars.*** Favored functions are sales and product development.
- ∆ ***Controlled***: In controlled cultures, the primary driver is order and alignment. Leaders (like Lou Gerstner of IBM) tend to create hierarchical reporting structures where power and authority are vested at the top. Operational excellence is valued based on quarterly improvement metrics and benchmarks. The organization focuses intently on creating annual and quarterly business plans and key performance measurements. Negative aspects of controlled cultures can be excessive bureaucracy, red tape and too many rules. ***The unbalanced form of a controlled culture is represented by "castes" where individual competency and achievement are relegated to a backseat in favor of maintaining order and the status quo***. Favored functions are finance and manufacturing.
- ∆ ***Collaborative***: In collaborative cultures, the primary driver is teamwork and building consensus. Leaders (like Dave Packard of HP) tend to focus on solving a problem based on building a shared view of the result. The negative aspects of collaborative cultures can be slow decision-making and excessive time to evaluate alternatives. Trustworthiness and teamwork are valued above creativity and aggressiveness. Collaborative companies seek to develop deep, long-lasting relationships with their clients and tend to measure the entire organization on customer satisfaction. Matrix management and complex double and triple line reporting structures are typical of collaborative companies. ***The unbalanced form of collaborative culture is "insider clubs" and "analysis paralysis" where unwarranted time and effort is spent on reaching group consensus.*** Favored functions are marketing and customer service.

In this year's survey, SPI asked, "Which of the following terms best describes your organization's culture?" The impact of culture is highlighted in Table 48. A collaborative culture is the dominant cultural type (64.6%) for PS organizations which makes sense because by nature, professional services organizations are based on dynamic, self-governing, mutually supportive teams of experts who come together to deliver client projects.

Table 48: Impact – Corporate Culture

Organizational Culture	Survey %	Rev. growth	Deal pipeline	Emp. attrition	EBITDA
Creative	14.0%	6.6%	164%	11.5%	17.9%
Competitive	9.2%	8.4%	194%	11.9%	16.2%
Controlled	12.2%	4.1%	155%	16.3%	17.8%
Collaborative	64.6%	8.0%	174%	12.3%	16.8%
Total/Average	100.0%	7.4%	172%	12.6%	17.0%

Source: SPI Research, February 2018

Competitive cultures drive the highest revenue growth with the largest sales pipelines. Controlled cultures experience the highest level of attrition and the lowest growth but are very profitable. Creative cultures were the most profitable but reported moderate revenue growth.

Survey Results

Challenges facing PSOs

Each year SPI Research asks participants to rank the key challenges facing them. This year "talent management" overtook "improving sales and marketing" as the number one challenge. Interestingly, the severity of these challenges has increased year over year indicating PSOs are more acutely aware of the competitive pressures facing them in attracting top talent and achieving revenue and margin targets. Each year we see a new crop of aggressive new entrants, armed with fresh approaches, who challenge the status quo. The scarcity of top talent and market saturation are intensifying. Going forward the ongoing technical talent shortage will continue to be a top challenge as attracting the best and brightest employees is a daunting task. 2017 was a banner year for PS, but coming out of one of the best years on record, organizations are worried they won't be able to repeat the same performance in 2018 hence "achieving revenue and margin target" has risen to the second-greatest challenge.

Table 49: Challenge by Organization Type and Geographic Region

Challenge	2016	2017	ESO	PSO	Amer.	EMEA	APac
Talent Management	4.20	4.35	4.21	4.40	4.37	4.30	4.15
Achieve Revenue and Margin Targets	4.29	4.31	4.26	4.33	4.31	4.20	4.40
Improve Sales and Marketing	4.31	4.27	4.26	4.27	4.26	4.21	4.40
Communication Across PSO	4.20	4.21	4.15	4.23	4.22	4.10	4.30
Improve Quality and Consistency	4.08	4.16	4.05	4.20	4.18	4.10	3.95
Support Rapid Growth and Expansion	4.16	4.12	4.24	4.07	4.10	4.13	4.40
Vision and Strategy	4.07	4.07	4.08	4.07	4.06	4.23	4.10
Improve / Expand Portfolio and Markets	3.97	3.92	4.02	3.89	3.92	3.93	4.00
Alignment Between Functions or Groups	3.71	3.79	3.92	3.75	3.80	3.73	3.80

Source: SPI Research, February 2018

When comparing the key challenges of embedded versus independent service providers (Table 49), the top challenge for ESOs is "achieving revenue and margins" and "improving sales and marketing" while independents struggled with "talent". Year after year the difficult work of finding, recruiting and hiring top talent seems to get harder and harder. So, does the work of properly identifying, positioning and closing profitable deals. Both embedded and independent PSOs often describe a shifting mosaic of recruiting techniques and a revolving door of solution sellers and sales models, none of which seem to produce enough new consultants or enough deals. Clearly top service providers must continually strive to improve both their talent and sales strategies.

By geography, talent management was the number one challenge in the Americas and EMEA. The only challenge not reported as urgent in Asia is "improving quality and consistency". PSOs need to remember lasing improvement requires focus and follow-through. Having too many top challenges and improve priorities is a recipe for disaster. Table 50 depicts challenges by organization size, the number one challenge is highlighted in red.

Table 50: Challenge by Organization Size

Challenge	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Vision and Strategy	3.76	4.09	4.16	4.10	3.97	4.12
Communication Across PSO	3.95	4.22	4.33	4.17	4.08	4.26
Support Rapid Growth and Expansion	3.83	4.05	4.14	4.16	4.27	4.29
Improve Sales and Marketing	4.07	4.31	4.34	4.24	4.14	4.24
Improve / Expand Portfolio and Markets	3.56	3.82	3.89	4.11	3.86	4.32
Alignment Between Functions or Groups	3.37	3.59	3.81	3.99	4.00	4.09
Improve Quality and Consistency	4.00	4.13	4.18	4.17	4.24	4.26
Talent Management	3.90	4.28	4.49	4.41	4.49	4.26
Achieve Revenue and Margin Targets	4.24	4.13	4.42	4.31	4.38	4.38

Source: SPI Research, February 2018

Table 51 and 52 depict top challenges by vertical market. The number one challenge in each vertical is highlighted in red. The cloud service providers are struggling with rapid growth and expansion. Regardless of market, the majority of PSOs seem to perennially struggle with achieving revenue and margin targets, talent management and improving sales and marketing. In the labor-intensive world of PS, these ever-present threats require on-going management commitment and focus.

Table 51: Challenge by Vertical Market

Challenge	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Vision and Strategy	4.04	4.10	4.04	4.20	4.17
Communication Across PSO	4.27	4.25	4.04	4.20	4.31
Support Rapid Growth and Expansion	3.98	4.26	4.04	4.00	4.45
Improve Sales and Marketing	4.14	4.32	4.11	4.43	4.34
Improve / Expand Portfolio and Markets	3.88	3.83	4.00	3.84	3.86
Alignment Between Functions or Groups	3.85	3.64	3.87	3.68	4.10
Improve Quality and Consistency	4.38	4.01	3.86	4.23	4.41
Talent Management	4.50	4.42	4.00	4.09	4.31
Achieve Revenue and Margin Targets	4.35	4.29	4.27	4.27	4.21

Source: SPI Research, February 2018

Table 52: Challenge by Vertical Market

Challenge	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Vision and Strategy	4.11	4.00	4.00	3.67	4.03
Communication Across PSO	4.33	4.00	4.25	4.17	3.97
Support Rapid Growth and Expansion	4.28	4.00	3.75	4.17	4.26
Improve Sales and Marketing	4.28	4.00	4.25	4.17	4.59
Improve / Expand Portfolio and Markets	4.50	4.14	4.25	4.17	3.92
Alignment Between Functions or Groups	4.00	3.86	3.25	4.33	3.69
Improve Quality and Consistency	4.11	4.29	3.50	4.50	3.90
Talent Management	4.56	4.43	4.13	4.50	4.23
Achieve Revenue and Margin Targets	4.22	4.38	4.50	4.50	4.31

Source: SPI Research, February 2018

Steps Taken to Improve Profitability

Table 53 depicts improvement priorities with the number one priority shaded in red. This year "improving marketing" has risen to the top, closely followed by "improving the solution portfolio". This means organizations are reexamining their marketing strategies and looking to both expand and consolidate their solutions portfolio.

Table 53: Steps Taken to Improve Profitability by Organization Type and Geographic Region

Steps Taken to Improve Profitability	2016	2017	ESO	PSO	Amer.	EMEA	APac
Improve solution portfolio	4.14	3.58	3.95	3.45	3.50	4.10	4.05
Improve marketing effectiveness	3.79	3.87	3.79	3.89	3.86	3.83	4.15
Improve sales effectiveness	3.76	3.82	3.93	3.78	3.79	4.00	4.10
Increases rates	4.01	3.25	2.96	3.35	3.22	3.55	3.20
Improve hiring and ramping	4.11	3.68	3.62	3.70	3.67	3.90	3.45
Improve methods and tools	4.04	3.71	3.89	3.65	3.69	3.88	3.80
Improve utilization	4.04	3.76	3.62	3.80	3.75	3.75	3.95
Reduce non-billable time	4.08	3.50	3.46	3.52	3.52	3.30	3.55

Source: SPI Research, February 2018

They are also keenly focused on adapting to shifting business models, with everything moving to "as a service" consumption-based pricing. Despite the emphasis on marketing, this year's benchmark results show marketing spending declined as a percentage of total revenue from 2.1% to 1.9%. If organizations are serious about improving marketing effectiveness they are going to double down on marketing expenditures. The top priorities by organization size are improving sales and marketing effectiveness.

Table 54: Steps Taken to Improve Profitability by Organization Size

Steps Taken to Improve Profitability	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Improve solution portfolio	3.34	3.41	3.64	3.65	3.46	4.06
Improve marketing effectiveness	3.78	4.00	3.91	3.81	3.57	3.88
Improve sales effectiveness	3.46	3.77	3.92	3.88	3.84	3.79
Increases rates	3.12	3.14	3.36	3.29	2.97	3.48
Improve hiring and ramping	3.24	3.53	3.86	3.76	3.59	3.79
Improve methods and tools	3.54	3.77	3.68	3.74	3.62	3.91
Improve utilization	3.46	3.67	3.99	3.74	3.62	3.64
Reduce non-billable time	3.15	3.37	3.65	3.57	3.41	3.64

Source: SPI Research, February 2018

Well understood vision, mission and strategy

Clear leadership direction and effective bi-directional communication are critical success factors. Employees who lack an understanding of the service vision, mission and strategy have no ability to work toward realizing it whereas those who comprehend, espouse and support the organization's mission will work tirelessly to achieve it. In this year's survey, clarity of vision, mission and strategy directly correlated with the percentage of billable employees, a great place to work, on-time project delivery and net profit.

Table 55: Impact – Well understood vision, mission and strategy

	Survey %	% of emp. billable	Rec. to family/ friends	On-time project delivery	EBITDA
1: Very ineffective	1.8%	69.4%	3.00	69.3%	13.5%
2	7.7%	71.6%	3.56	71.5%	12.8%
3	19.9%	73.8%	4.01	78.5%	13.0%
4	50.4%	75.6%	4.54	80.1%	19.0%
5: Very effective	20.1%	79.2%	4.78	84.3%	17.7%
Total/Average	100.0%	75.6%	4.38	79.8%	17.0%

Source: SPI Research, February 2018

Confidence in PS leadership

The tools for effective leadership, clarity of purpose and alignment exist within all service organizations. By investing in these critical aspects, service organizations can manage their own destiny. SPI Research continues to discover most key performance measurements improve as confidence in leadership increases. According to survey results, few other factors have the same impact on the overall health and well-being of the service organization. Poor leadership creates a negative spiral effect — poor human capital results (high attrition, low morale, poor employee engagement) — which in turn lead to low levels of client satisfaction and poor financial results.

Because PSOs rely on the quality and commitment of the consulting staff, poor leadership produces an immediate and long-lasting negative effect. Fortunately, positive changes in leadership can also produce immediate improvements because PSOs exhibit amazing resiliency and can heal and regenerate themselves rapidly. Unlike product-based organizations, extremely rapid turnarounds are possible in people-based PS organizations.

Table 56: Impact – Confidence in PS leadership

	Survey %	Deal pipeline	Emp. attrition	Rec. to family/ friends	EBITDA
1: Very ineffective	0.7%	117%	11.8%	2.67	13.0%
2	4.4%	145%	19.4%	3.21	9.7%
3	13.8%	166%	17.1%	3.66	13.5%
4	51.8%	170%	12.3%	4.47	17.8%
5: Very effective	29.3%	196%	9.1%	4.75	17.7%
Total/Average	100.0%	175%	12.3%	4.37	16.8%

Source: SPI Research, February 2018

Ease of getting things done

SPI Research asked participants whether it was easy to get things done within their organization, meaning minimal red tape, able to quickly and easily assign qualified resources, with limited bureaucracy. Organizations that provide an infrastructure that employee productivity enhance both employee satisfaction and financial success.

Table 57: Impact – Ease of getting things done

	Survey %	% of emp. billable	Billable util.	Exec. Realtime Visibility	EBITDA
1: Very ineffective	1.6%	67.1%	64.2%	2.20	8.9%
2	5.1%	71.4%	68.0%	3.26	15.9%
3	20.7%	72.6%	69.9%	3.51	14.4%
4	54.7%	75.8%	72.0%	3.67	18.1%
5: Very effective	18.0%	80.2%	73.5%	4.10	17.2%
Total/Average	100.0%	75.6%	71.5%	3.67	16.9%

Source: SPI Research, February 2018

Table 57 shows a majority of firms reported it is relatively easy to get things done. As ease of getting things done improves, so do other metrics including the percentage of billable employees, utilization and EBITDA. Clearly real-time visibility is a key component of getting things done quickly and efficiently.

Goals and measurements in alignment

Another survey question asked, "Are goals and measurements in alignment for the service organization?" Alignment speaks to a clearly articulated strategy with goals and measurements reinforcing the organization’s purpose and stimulating action. Alignment or lack of alignment has a significant impact on bottom-line performance. Lack of alignment emanates from a lack of clarity and conflicting or too many priorities. It is characterized by low levels of employee engagement and functional silos or factions.

The highest performing service organizations exhibit clarity of purpose and alignment around a succinct set of core values and initiatives. Effective measurements and compensation reinforce those values, linking strategy to execution. As shown in Table 58 goals and measurements in alignment had a profound impact on the size of the sales pipeline, achievement of revenue and margin targets and net profit.

Table 58: Impact – Goals and measurements in alignment

	Survey %	Deal pipeline	% of ann. rev. target	% of ann. margin target	EBITDA
1: Very ineffective	2.0%	117%	81.4%	91.4%	11.6%
2	6.2%	146%	85.2%	81.2%	14.2%
3	24.8%	171%	91.0%	85.9%	14.9%
4	47.0%	175%	94.5%	89.9%	17.5%
5: Very effective	20.0%	197%	95.7%	93.8%	19.4%
Total/Average	100.0%	175%	93.0%	89.2%	16.9%

Source: SPI Research, February 2018

Employees have confidence in the PSO's future

The level of employee confidence in the future of the PS organization has a significant impact on almost all key performance measurements. Firms with the highest levels of employee confidence experienced the highest levels of revenue growth, were more often seen as a great place to work, and experienced fewer project overruns. Capping it all off, they were also more profitable.

Table 59: Impact – Employees have confidence in PSO's future

	Survey %	Rev. growth	Rec. to family/ friends	Avg. project overrun	EBITDA
1: Very ineffective	0.7%	13.3%	2.67	14.2%	13.0%
2	4.0%	-3.1%	3.17	13.1%	9.9%
3	20.2%	4.1%	3.89	9.6%	13.2%
4	47.8%	8.3%	4.49	8.3%	18.5%
5: Very effective	27.3%	12.2%	4.79	6.2%	17.5%
Total/Average	100.0%	8.1%	4.38	8.2%	16.8%

Source: SPI Research, February 2018

"The world loves a winner" seems to be an appropriate description for the positive results of the organizations with the highest levels of employee confidence. A key "chicken or egg question" always arises around "confidence in the future" as typically the highest performing and fastest growing organizations propel employees to have confidence in the future, while low confidence is indicative of organizations in turmoil or going through massive change as they reposition themselves to take better advantage of the future. A key consideration for firms that experience low to no growth is how to reposition themselves onto a growth path.

Effective employee communication

Respondents were asked to rate "our organization effectively communicates with employees". Independents reported better communication than ESOs.

This year, communication improved directly in proportion with the size of the organization, meaning the largest organizations have invested in formal internal communication protocols. Talk may be cheap but without bidirectional communication, employees quickly become disenfranchised. Creating an effective communication plan should be part of any improvement plan.

Table 60: Impact – Effective employee communication

	Survey %	Emp. attrition	Rec. to family/ friends	% of annual revenue target	EBITDA
1: Very ineffective	1.6%	15.1%	2.71	80.0%	10.3%
2	7.3%	14.3%	3.58	90.0%	12.4%
3	22.0%	13.4%	4.16	91.5%	12.9%
4	52.3%	12.1%	4.52	94.0%	19.5%
5: Very effective	16.7%	10.4%	4.77	94.1%	16.3%
Total/Average	100.0%	12.3%	4.38	93.0%	16.9%

Source: SPI Research, February 2018

Embraces change - nimble and flexible

Change is a way of life for 21st century professional services organizations. One of the primary reasons why more and more companies out-task IT, accounting, law, architecture, strategy and marketing to specialized PS organizations is that the pace and amount of change and complexity is impossible to keep up with, so they must reply on external consultants and specialists. Each leadership dimension impacts all other leadership dimensions. Nimble organizations that can easily adapt to change have higher levels of billable employees and are considered better places to work. The glue that binds superlative leadership scores is always executive real-time visibility. Numbers don't lie so the best led organizations invest in integrated systems to allow them to see and take advantage of market changes instantly. EBITDA or net profit is achieved by well-led organizations who understand and invest in effective leadership.

Table 61: Impact – Embraces change - nimble and flexible

	Survey %	% of emp. Billable	Rec. to family/ friends	Exec realtime visibility	EBITDA
1: Very ineffective	2.4%	70.5%	2.73	2.78	14.2%
2	8.0%	74.1%	4.03	3.27	12.6%
3	22.6%	74.7%	4.15	3.46	14.7%
4	42.8%	75.7%	4.50	3.72	18.7%
5: Very effective	24.2%	77.4%	4.67	4.00	17.4%
Total/Average	100.0%	75.6%	4.38	3.67	16.9%

Source: SPI Research, February 2018

Innovation focused

Innovation is a hot topic these days as technology innovators like Apple have created new markets and destroyed leaders like Research in Motion who were not able to see and respond to a "consumer-based" future. Research into the science of innovation shows innovators are more likely to take risks and have a high tolerance for failure.

Table 62: Impact – Innovation focused

	Survey %	% of emp. Billable	Emp. attrition	Billable util.	EBITDA
1: Very ineffective	2.4%	65.5%	15.3%	66.0%	10.2%
2	8.9%	72.4%	14.6%	68.8%	12.5%
3	27.5%	74.7%	13.8%	70.9%	16.3%
4	40.6%	76.9%	11.4%	72.3%	18.5%
5: Very effective	20.6%	77.0%	10.8%	72.7%	17.2%
Total/Average	100.0%	75.6%	12.3%	71.5%	16.9%

Source: SPI Research, February 2018

In professional services, innovation comes from exploring and embracing new business models, processes and technologies to improve productivity and quality. To the extent thought leadership can be considered a component of innovation, PSOs excel at innovation. The benchmark results depict the importance of striving for new and innovative solutions to problems. Innovative organizations provide employees with the confidence to know the organization will be around for years to come, and they will be continually challenged and personally grow as the organization expands. Innovation focus is not organization size dependent. One of this year's Best-of-the-Best PSOs said their belief is "great ideas come from anywhere". This organization has built a culture or empowerment, embracing innovation. Any employee with a great idea, at any level, can build a business case and receive funding and support to tackle internal problems or create new solutions. Over 60% of survey participants gave high marks for innovation. With innovation, the percentage of billable employees grows, attrition declines, utilization increases as does profit.

8. Client Relationships Pillar

The Client Relationships pillar focuses on the activities associated with business development and client management. Finding and retaining customers is a primary means of growing a business and is always one of the top challenges for PS firms.

In this chapter, SPI Research provides the PS Sales and Marketing Maturity Model™, along with statistics showing the benefits of sales and marketing investments. This chapter examines service sales and marketing effectiveness, win ratios and the impact of building a robust sales pipeline. Since referrals are a primary driver of repeat business, SPI Research also explores the correlation between client satisfaction and business success.

Cultivating new and repeat clients is the lifeblood of the service industry. Professional services organizations are in business to provide knowledge, expertise and guidance. Their sales and marketing organizations must define target markets and solutions by understanding client's key challenges. The job of service sales and marketing is to generate awareness and identify and close opportunities. Services are intangible, so the job of service sales and marketing has the added difficulty of creating concrete proof of the firm's knowledge, experience, differentiation and quality.

Table 63 highlights the five levels of maturity in the Client Relationships pillar. As sales and service delivery processes mature, organizations move from selling anything and everything to anyone, to a more careful and selective approach to client selection; solution creation; deal capture; contract and pricing management, reference building and partnering.

Table 63: **PS Sales and Marketing Maturity Model™**

	Level 1	Level 2	Level 3	Level 4	Level 5
Client Relationships	Opportunistic. No defined solution sets or go to market plan. Focus is on closing deals and reference building. Individual heroics, no consistent sales, marketing or partnering plan or methodology. Ad hoc, one-off projects.	Start to use marketing to drive leads. Multiple sales models. Start investing in sales training, CRM & sales methodology. Manual integration with PSA. Start measuring sales effectiveness & customer satisfaction. Start developing partners and partner programs. Some level of proposal reviews and pricing control.	Marketing, inside sales, solution sales with defined solution sets. CRM integrated with PSA. Deal, pricing and contract reviews. Partner plan and scorecard. Tight pricing and contract mgmt. controls. High levels of customer satisfaction.	CRM, PSA, CFM integration provides 360-degree view of client relationships. Business process, vertical and horizontal solutions. Vertical centers of excellence. Top client and partner programs. Global contract and pricing management. Key partner relationships. Strong customer reference programs.	Executive relationships and client advisory board. Thought leadership. Brand building and awareness. High customer satisfaction. Integrated sales, marketing and partnering programs. High quality references.

Source: SPI Research, February 2018

The effectiveness of the organization's sales and marketing efforts determines the quality and size of the pipeline; bid-to-win ratios; discounts; client satisfaction and the length of the sales cycle. Effective sales and marketing organizations continually uncover new opportunities while ensuring existing customers continue to buy and refer. Today's successful PSO, whether embedded or independent, is increasingly taking charge of its own destiny by investing in sales, marketing and service packaging.

Table 64 shows why "improving marketing and sales effectiveness" has moved to the number one and two improvement priorities. Perennially sales, marketing and solution development effectiveness scores are some of the lowest in the benchmark. Dissatisfaction with service marketing continually peaks the top of the dissatisfaction list as PS organizations are never satisfied with the number and quality of leads generated by marketing or the quality of references. These are subjective questions in which survey respondents are asked to "rate the effectiveness" of sales, marketing and solution development. Although the subjective sales and marketing questions revealed dissatisfaction, the objective sales metrics were not as conclusive. They show mixed results with fewer wins and smaller sales pipelines but improvement in the length of the sales cycle and strong improvements in customer referenceability.

An examination of the type of work sold shows a decline in time and materials contracts in favor of fixed fee and managed service contracts. "Managed services" was added as a contract type this year.

Table 64: Client Relationships Pillar 5-year trend

Key Performance Indicator (KPI)	2013	2014	2015	2016	2017
Bid-to-Win ratio (per 10 bids)	4.96	4.92	4.95	4.85	4.80
Deal pipeline relative to qtr. bookings forecast	190%	199%	172%	189%	174%
Sales cycle (days: qualified lead to contract signing)	95	91	88	92	90
Average service discount given	N/A	7.3%	7.7%	7.7%	5.0%
Solution development effectiveness (1 to 5 scale)	2.99	3.00	3.59	3.47	3.53
Service sales effectiveness (1 to 5 scale)	3.24	3.14	3.57	3.42	3.42
Service marketing effectiveness (1 to 5 scale)	2.70	2.72	3.29	3.07	3.20
Percentage of referenceable clients	74.5%	73.7%	70.4%	71.5%	74.7%
Time & materials % of work sold	51.7%	58.8%	46.7%	55.4%	49.8%
Fixed time / fixed fee % of work sold	44.0%	36.3%	39.7%	38.9%	40.8%
Shared risk / performance-based % of work sold	2.8%	2.1%	6.4%	2.8%	2.2%
Managed Services	NA	NA	NA	NA	4.4%
Other	1.5%	2.9%	7.2%	2.9%	2.8%

Source: SPI Research, February 2018

PS Sales Maturity

As part of the PS Sales and Marketing Maturity Model™, SPI Research focuses on key success criteria and processes associated with PS sales, marketing and partnering. SPI Research charts its definitions of sales maturity levels and shows how they progress as the organization enhances the knowledge and practice of solution selling resulting in superior client value (Table 65).

The table depicts PS sales maturity progression. As organizations enhance their solution selling capabilities, methods, systems and tools, overall sales effectiveness improves. These efforts pay for themselves in higher percentages of sales quota achievement; better sales forecasting accuracy; improved pricing and estimating accuracy resulting in fewer project overruns; faster sales cycles due to better deal qualification; larger deals; more PS revenue by account; larger pipelines and significantly stronger reference clients.

Table 65: **PS Sales Maturity Model™**

	Level 1	Level 2	Level 3	Level 4	Level 5
	Ad Hoc, Opportunistic, Heroic	Piloted, Experimental, Pockets of Excellence	Deployed, Basics in Place for All Key Elements	Institutionalized, in the Company DNA / Fabric	Visionary, Agile, Innovative, Continuous Renewal and Improvement
Client Value	Handcrafted projects, unique, highly dependent on individual team member skills.	Limited replication or codification of service solutions. Point product solutions primarily focused on rapid implementation. Starting to focus on adoption.	Clear, value-based sales and marketing messages developed for product / vertical /geographic audiences. Some level of client value and ROI measurement.	Client-centric, high value services developed and packaged. Demonstrated, measurable business value.	Partnerships exist with most strategic, forward-thinking clients to develop and enhance leading edge services. Solutions deliver clear and significant value.
Sales Process	Opportunistic and instinctive with ad hoc service offerings. No consistent sales methodology. Variation in pricing methods. Inconsistent proposals, quotes, contracts. Limited to no investment in sales training, methods or tools.	Dedicated solution selling teams. Repeatable process for point solutions. Implementing sales methodology, reinforced in CRM. Reusable proposal boilerplate. Informal proposal roles and self-governing proposal teams. Standard price list and discount authority. Developing standard estimating tools.	Consistent solution selling methods & tools reinforced and supported in CRM. Solution-oriented best practices. Consistent estimating and risk evaluations. Bid qualification criteria. Standard contracts and statements of work. Clear roles, responsibilities and timelines. Sales organization trained to effectively sell solutions.	Solution and value selling is a way of life with appropriate measurements and controls with fully integrated supporting systems and tools. Sophisticated selling strategies including quantified client value with improved KPIs and positive ROI.	Established thought leadership and trusted advisor at highest levels. Continual investment in improving and expanding service portfolio as a means of market expansion. Effective proposal center delivers timely, high-quality estimates, proposals, contract and risk reviews.
Partners	Ad hoc and opportunistic without clearly defined roles.	Partner plan in place, but conflicts still exist. Defined partner programs to extend market reach.	Solution sets designed with partners in mind (defined roles and deliverables for prime, hybrid, sub). Top partner program.	Co-development with partners. Partners are integral part of service packaging and rollout.	Co-opetition. Partners contribute to company's overall service innovation by providing SME feedback and insights.
Client Sat Programs	Ad hoc reference requests. No formal program. Heroic.	Client reference programs established to extend market reach.	Proof, testimonials and references to support solution client value. Consistent, ongoing satisfaction measures.	Client advisory board influences roadmap, participates in beta programs.	Strategic clients are company and service evangelists.

Source: SPI Research, February 2018

PS Sales Effectiveness Metrics

Service sales effectiveness is a subjective question but typically refers to the percentage of sales people who achieve quota and the probability that the sales organization will achieve its forecast and targets. SPI Research asked respondents to rank the effectiveness of the service sales organization on a scale from 1 to 5 with 5 representing perfection (Table 66). Sales effectiveness has a profound impact on all aspects of PS but unfortunately 11.2% of respondents give sales effectiveness a failing grade of 1 or 2; 39.6% give sales effectiveness an "OK" score of 3; less than half (49.2%) give sales effectiveness high marks. This year's average rating of sales effectiveness remained the same as last year at 3.42 (68%). With slowing PS market growth, the age-old schism between sales and service delivery is rearing its ugly head again. ESOs gave lower marks for sales effectiveness (3.33 or 66%) than independents (3.46 or 68%). By geography, Asia-Pacific gave the highest score of 3.50 (70%) and the Americas gave the lowest of 68%.

Table 66: Impact – Service sales effectiveness

Service sales effectiveness	Survey %	New clients	Bid-to-win ratio	Deal pipeline	Project margin
Very Ineffective	2.1%	15.3%	3.00	150%	24.3%
Ineffective	9.1%	22.5%	4.46	148%	26.0%
Neither Effective nor Ineffective	39.6%	22.8%	4.54	170%	28.8%
Effective	42.9%	24.6%	4.75	176%	30.7%
Very Effective	6.3%	32.4%	4.81	194%	40.9%
Total/Average	100.0%	24.0%	4.61	172%	30.0%

Source: SPI Research, February 2018

PS Marketing Maturity

The global economy has evolved into a services economy with services like health care, technology and consulting representing the hottest areas of growth. Marketing services is an important skill, and a tough one, for businesses to master. Without a tangible product to show and tell customers about, service marketers must be adept at pulling together all the pieces of the marketing mix to demonstrate value for their target clients. Services are inherently intangible, are consumed simultaneously at the time of their production, and cannot be stored, saved or resold once they have been used. Service offerings are unique and cannot be exactly repeated even by the same service provider for the same customer. Service marketing has become a big business with a focus on establishing the services brand, generating awareness and leads while providing powerful tools and collateral to support service sales and delivery. Service marketing typically produces customer case studies and client testimonials.

Relationships Are Key

In service marketing, because there is no tangible product, relationships are key – both with the services sales force and clients. Service marketers must listen to and understand the needs of customers and prospects to identify the compelling reasons they buy and what attributes they most care about to build differentiation for the firm. The role of service marketing is to identify target markets and clients and to position the firm and its solutions in a differentiated way while supporting the sales force with lead generation and reference building activities. In many organizations, service marketing is also responsible for developing customer references, testimonials, case studies and client advisory boards.

Services Marketing versus Service Lifecycle Management

A key finding from this benchmark is most PS organizations are confusing service marketing with service lifecycle management. Service marketing is clearly an aspect of service lifecycle management but most often does not encompass the truly transformational elements of building a services portfolio comprised of repeatable sales and service delivery methods and tools, which we include in the larger scope of service lifecycle management.

Table 67: **PS Marketing Maturity™ Levels**

	Level 1	Level 2	Level 3	Level 4	Level 5
	Ad Hoc, Opportunistic, Heroic	Piloted, Experimental, Pockets of Excellence	Deployed, Basics in Place for All Key Elements	Institutionalized, in the Company DNA / Fabric	Visionary, Agile, Innovative, Continuous Renewal and Improvement
Client Value	Handcrafted projects, unique, highly dependent on individual team member skills.	Limited replication or codification of service solutions. Point product solutions primarily focused on rapid implementation.	Clear, value-based sales and marketing messages for product, vertical, geographic audiences. Some level of client value and ROI measurement.	Client-centric, high value services developed and packaged. Demonstrated, measurable business value.	Partnerships exist with most strategic, forward-thinking clients to develop and enhance leading edge services.
Marketing	Tactical. Limited to no investment in service marketing.	Campaign-driven, focused initiatives. Service marketing includes collateral, web and in-person seminars, and other promotions with voice of the customer for specific service offers.	Programmatic and comprehensive. Service marketing - target-market and segment focus to establish differentiation.	Strategic and global, service portfolio reflects and supports brand and industries. Service portfolio management and strategic marketing efforts aligned.	Brand, thought leadership, and innovation are established and supported through all marketing activities. High brand value.
Team Definition and Composition	None. Lack of service marketing organizational definition.	Organizational structure includes borrowed or rotational roles to support service marketing efforts.	Permanent service marketing roles defined, staffed and funded.	Effective service marketing leadership and management.	Service marketing organization is strategic and continually impacts company's success.
Marketing Budget Plan / Business Plan	No budgeting for service marketing. Business planning does not incorporate service marketing. Ad hoc, one off, impact not measurable.	Budgeting includes service marketing costs and projected results. Business planning capabilities are based on individuals' experiences.	Budgeting process fully incorporates service marketing investments, revenue, profit planning. Mature business planning capabilities.	Service marketing and portfolio planning is a strategic component of annual budgeting process.	Decisions to fund service marketing are based on complex, reliable business modeling levers as part of budget plan. Service marketing business plan justification is mature - comprehensive, fact-based, insightful.

Source: SPI Research, February 2018

SPI Research recommends organizations start with service marketing – creating lead generation campaigns, sales tools, service descriptions, service packages and value-based presentations. Each of these activities will add value to the organization and will start to build brand-awareness and generate leads. After the organization gains success and traction with service marketing it will be in a better position to tackle true service lifecycle management, which not only involves sales and marketing but also extends to product management and service execution with repeatable delivery tools, methods and systems.

Service Marketing Effectiveness

Having a service marketing focus is not enough. Marketing must develop effective thought leadership, lead generation campaigns, sales tools and sales enablement to increase the firm's brand awareness, showcase thought leadership and bring in qualified leads. The most successful PS marketing efforts require a strategic focus to ensure they augment and enhance the firm's strategy. Marketing should be charged with bringing the firm's vision and strategy to life through effective positioning. Without a seat at the executive table, marketing will be relegated to tactical lead generation and sales support activities. Effective marketing requires dedicated, skilled personnel along with sustained funding.

SPI Research asked how effective service marketing was on a scale of 1 to 5, with 5 representing excellent (Table 68). Marketing effectiveness has consistently been given an even worse score than sales effectiveness. This year marketing effectiveness improved from a lousy score of 3.07 (60%) to 3.2 (64%) in 2017. Almost 20% of organizations give marketing effectiveness a failing grade of 1 or 2. For the 39.7% of firms who gave their marketing efforts a strong score of 4 or 5, marketing has a positive impact on win ratios and net profit. Marketing is certainly worth the expense if it is well-staffed, fully funded and positioned strategically.

Table 68: Impact – Service marketing effectiveness

Service marketing effectiveness	Survey %	Bid-to-win ratio	Emp. attrition	Rec. to family/friends	EBITDA
Very Ineffective	4.9%	4.44	13.9%	3.53	18.8%
Ineffective	15.9%	4.36	13.2%	4.20	17.1%
Neither Effective nor Ineffective	39.5%	4.50	12.4%	4.33	18.4%
Effective	33.9%	4.81	11.0%	4.46	20.1%
Very Effective	5.8%	4.93	7.1%	4.86	22.6%
Total/Average	100.0%	4.60	11.8%	4.35	19.0%

Source: SPI Research, February 2018

Solution Development Effectiveness

Solution development effectiveness requires consistent PS and Sales executive funding and support. Ad hoc teams of benched consultants cannot be effective in developing a compelling and meaningful solution development strategy and program. Based on the [Service Lifecycle Management Maturity Model™ benchmark,](#) very few organizations are effective at service productization. Creating an effective and efficient solution development process is, in itself, a difficult undertaking. Most firms are struggling to do this because solution development crosses over traditional functional boundaries and requires cross-organizational collaboration and change. Getting all the constituent groups – professional services, sales, marketing, product management and channel partners – on the same page to create compelling solutions for targeted markets is a daunting task.

Solution development requires significant leadership, organizational commitment, money and on-going change management. SPI Research believes that the following are critical success factors for instantiating and sustaining a successful solution development program:

- Articulated and understood services strategy;
- Service productization program vision;
- Active executive sponsorship;
- Market-driven focus;
- Global company adoption of program;
- Resource commitment;
- Cross-functional participation; and
- Common sales and delivery method, tools, and templates.

Table 69: Impact – Solution development effectiveness

Solution development effectiveness	Survey %	New clients	Bid-to-win ratio	Rec. to family/ friends	Project margin
Very Ineffective	2.1%	7.0%	3.44	3.50	18.8%
Ineffective	8.0%	22.2%	4.11	3.77	24.9%
Neither Effective nor Ineffective	36.8%	23.1%	4.63	4.24	29.9%
Effective	41.5%	25.5%	4.65	4.50	30.6%
Very Effective	11.6%	27.5%	4.97	4.69	34.0%
Total/Average	100.0%	24.2%	4.61	4.34	30.0%

Source: SPI Research, February 2018

SPI Research asked how effective solution development was on a scale of 1 to 5, with 5 representing excellent (Table 69). Solution Development effectiveness has consistently been given a lower score than sales effectiveness but higher marks than marketing effectiveness. This year overall solution development effectiveness (3.53 or 70.6%) improved from (3.47 or 69.4%) last year. For the 53.1% of firms who gave their solution development efforts a passing score of 4 or 5, solution development had a positive impact on new client revenue, win ratios and project margins.

Survey Results

The following section reviews and analyzes 2018 PS Maturity™ benchmark results from 456 participating Professional services organizations. In this section SPI Research analyzes 20 Client Relationship key performance measurements that are critical for measuring sales, marketing and solution development effectiveness.

The percentage of overall revenue from new clients is an important indicator of market expansion. A higher percentage of new client revenue shows the organization is expanding beyond its installed base. The size of the deal pipeline, the percentage of revenue from new clients and win ratios declined year over year. On the positive side, the length of the sales cycle and the level of discounting decreased while the percentage of reference customers improved significantly from 71.5% to 74.7% (Table 70).

The Bid-to-Win ratio shows the number of winning proposals for every 10 proposals submitted. It is a strong indicator of the level of competition and portends market saturation when the win ratio declines below 5, indicating firms are winning less than 50% of their opportunities. The win ratio declined year over year from 4.85 to 4.80. The ratio declined most significantly in the Americas (4.91 to 4.84) and EMEA (4.64 to 4.31) as competition intensified in these regions. Asia reported a higher winning ratio this year (5.17 vs 4.93).

Table 70: Client Relationships KPIs by Organization Type and Geographic Region

Key Performance Indicator	2016	2017	ESO	PSO	Amer.	EMEA	APac
Surveys	416	456	117	339	396	40	20
Revenue from new clients	26.8%	24.2%	31.6%	21.7%	23.5%	29.8%	27.4%
Bid-to-Win ratio (per 10 bids)	4.85	4.80	4.96	4.75	4.84	4.31	5.17
Deal pipeline relative to qtr. bookings forecast	189%	174%	214%	161%	172%	185%	195%
Sales cycle (days: qualified lead to contract signing)	92	90	110	84	92	75	98
Avg. service discount given clients	7.7%	5.0%	8.5%	3.8%	4.8%	6.0%	5.6%
Percentage of referenceable clients	71.5%	74.7%	68.4%	76.8%	75.4%	67.4%	76.8%
Solution development effectiveness	3.47	3.53	3.50	3.54	3.51	3.55	3.75
Service sales effectiveness	3.42	3.42	3.33	3.46	3.42	3.45	3.50
Service marketing effectiveness	3.07	3.20	2.99	3.27	3.22	3.03	3.20

Source: SPI Research, February 2018

The size of the deal pipeline is an important predictor of future revenue. ***The size of the deal pipeline in comparison to the quarterly sales forecast decreased from 189% last year to 174% this year. This significant decline is a powerful predictor of slowing future growth in PS revenues.*** Table 70 shows the size of the deal pipeline compared to the quarterly bookings forecast is stronger for ESOs. ESOs reported significant improvement in the size of their sales pipelines which grew from 202% last year to 214% this year. On the other hand, independent PSO pipelines declined sharply from 181% to 161%. By geography the deal pipeline is strongest for Asia and weakest for the Americas. These figures have reversed from last year's results. This metric portends stronger growth in Asia and weaker growth in the Americas. The size of the EMEA pipeline remains relatively unchanged year over year.

The level of discounting is an indicator of increased competition as well as slowing demand. Average discounts declined significantly from 7.7% to 5.0%. This is a very positive sign as it indicates strong demand and better control over contract pricing. In services, discounting has a direct impact on profit as it is impossible to make up discounts with volume. ESOs reported higher levels of discounting, longer sales cycles and fewer client references than independents. The highest average discounts were reported by hardware and networking PSOs at 13.8%.

By organization size, the deal pipeline is strongest for the largest organizations and weakest for the smallest (Table 71). The smallest firms tend to live deal to deal with limited future visibility. Interestingly, client referenceability tends to decline with organization size as larger PSOs cannot afford to provide a personalized touch and approach to each client. For small firms, making every client a success is a business imperative.

Table 71: Client Relationships KPIs by Organization Size

Key Performance Indicator (KPI)	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Surveys	41	107	140	96	37	35
Revenue from new clients	26.6%	24.8%	24.2%	23.0%	22.2%	25.2%
Bid-to-Win ratio (per 10 bids)	5.26	4.96	4.93	4.37	4.50	4.71
Deal pipeline relative to qtr. bookings forecast	126%	153%	179%	180%	214%	223%
Sales cycle (days: qualified lead to contract signing)	66	83	92	98	96	112
Average service discount given clients	3.4%	3.6%	5.1%	6.1%	5.2%	7.3%
Percentage of referenceable clients	78.8%	77.8%	74.8%	71.8%	74.8%	67.1%
Solution development effectiveness	3.50	3.57	3.55	3.41	3.50	3.68
Service sales effectiveness	3.53	3.39	3.40	3.42	3.41	3.55
Service marketing effectiveness	3.03	3.20	3.26	3.11	3.32	3.29

Source: SPI Research, February 2018

By vertical, government contractors reported the strongest deal pipeline (300%) while advertising and marketing agencies reported the weakest (75%). Embedded software ESOs reported the highest levels of client referenceability (80%), hardware service providers reported the poorest (51.3%). Service discounting was highest for hardware PSOs (13.8%) and lowest for architects and engineers (1.7%). The length of the sales cycle is longest for government contractors (156 days) and shortest for hardware PSOs (69 days). Tables 72 and 73 show key client relationships metrics by vertical market.

Table 72: Client Relationships KPIs by Vertical Market

Key Performance Indicator (KPI)	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Surveys	153	103	45	45	29
Revenue from new clients	14.9%	28.9%	34.0%	31.5%	46.4%
Bid-to-Win ratio (per 10 bids)	4.80	4.76	5.13	4.93	5.74

Key Performance Indicator (KPI)	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Deal pipeline relative to qtr. bookings forecast	143%	191%	211%	189%	213%
Sales cycle (days: qualified lead to contract signing)	87	86	111	72	101
Average service discount given clients	1.7%	6.2%	8.3%	5.5%	12.5%
Percentage of referenceable clients	78.4%	75.4%	67.1%	80.0%	66.9%
Solution development effectiveness	3.45	3.59	3.52	3.62	3.57
Service sales effectiveness	3.42	3.49	3.29	3.47	3.57
Service marketing effectiveness	3.47	3.05	2.95	3.26	3.04

Source: SPI Research, February 2018

Table 73: Client Relationships KPIs by Vertical Market

Key Performance Indicator (KPI)	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Surveys	18	8	8	6	41
Revenue from new clients	11.5%	14.4%	18.1%	27.0%	21.7%
Bid-to-Win ratio (per 10 bids)	4.32	2.75	4.69	5.50	4.38
Deal pipeline relative to qtr. bookings forecast	300%	131%	75%	190%	138%
Sales cycle (days: qualified lead to contract signing)	156	80	75	69	86
Average service discount given clients	5.1%	4.6%	2.8%	13.8%	3.8%
Percentage of referenceable clients	71.6%	68.6%	74.4%	51.3%	72.0%
Solution development effectiveness	3.56	3.29	3.63	2.80	3.59
Service sales effectiveness	3.06	3.29	3.50	2.80	3.49
Service marketing effectiveness	2.88	3.29	3.38	2.20	3.18

Source: SPI Research, February 2018

Type of Work Sold

IT consultancies (103 firms) and embedded PS organizations within technology companies (117) dominated this year's benchmark, so it is no wonder that 31.9% of the work sold was IT or technology consulting while 27.4% was management consulting. Both embedded and independents are delivering more business and management consulting – encroaching on the pure play management consultancies. Management consultancies reported 79.1% of their work is business and management consulting but 8.8% of their work is IT or technology consulting related.

Table 74 depicts the types of work sold by embedded and independent service providers and by major geographic regions. This year ESOs delivered 16.6% of their work as management consulting, showing the shift towards business process consulting, away from technical consulting. They also have been growing their subscription and managed service revenues.

Table 74: Type of Work Sold by Organization Type and Geographic Region

Type of Work Sold	2016	2017	ESO	PSO	Amer.	EMEA	APac
Business/Management Consulting	23.8%	27.4%	16.6%	31.2%	27.6%	30.6%	17.8%
Technology or IT Consulting	41.1%	31.9%	48.7%	26.0%	29.5%	45.8%	51.9%
Subscription Services	NA	2.7%	6.5%	1.4%	2.0%	7.2%	7.2%
Managed Services	10.4%	10.4%	10.5%	10.3%	10.6%	9.5%	7.2%
Staff Augmentation	6.3%	4.3%	5.4%	3.9%	4.5%	1.6%	4.9%
Hardware, software, equipment	7.5%	3.2%	7.0%	1.8%	3.0%	2.9%	6.6%
Other	10.7%	20.1%	5.3%	25.3%	22.7%	2.5%	4.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPI Research, February 2018

Today many IT consultancies have equal numbers of business analysts and technical consultants – they focus on business process improvement and streamlining cumbersome business processes. Increasingly technology-focused PS providers are adding industry and domain experts to ensure horizontal technologies can be adopted and modified to reflect the unique needs of vertical industry clients.

The underlying technologies themselves no longer require extensive customization and integration; they have become easier to install and integrate with standard data loaders and connectors. Ensuring user adoption has become the primary concern of embedded ESOs. This means today's consultants need to understand business processes and what business users want and need to drive user adoption. Technology consulting now includes workflow mapping, business process modelling, rollout plans and administrator and end-user training with a focus on user adoption.

Over time SPI Research has seen a slight increase in business consulting and a decrease in technology consulting but certainly not the dramatic changes we would have predicted. Managed service revenue has increased slightly over the past five years from 7.3% in 2012 to 10.4% in 2017 but this increase is also not as dramatic as we would have expected.

Interestingly, the types of consulting organizations who derive a significant portion of revenue from managed services are accountancies (16.3%); managed service providers (30%) and VARs (10%). This means they are providing hosting services for their clients, taking over managing aspects of hardware, software and personnel for specific departments or applications. Most SaaS embedded ESOs have started adding managed service offers as they out-task elements of running their applications for their clients. For many independents, the promise of managed services as a source of annuity revenue has not been fully realized because the technology manufacturers themselves have grabbed these opportunities by offering better economies of scale and enhanced security.

In this benchmark, staff augmentation has declined to 4.3% although economic reports show a strong overall increase in staffing. Staffing providers, squeezed by vendor service agreements, are starting to move upstream to offer business and IT consulting. Pure play staffing and managed services are drifting toward commoditization – with too many competitors chasing too few opportunities. The margins in this low end of the market have become razor thin as large buyers demand vendor service agreements with low rates for common skills. Mergers and acquisitions in both staff augmentation and managed services are common as suppliers seek to improve their own economies of scale.

New Client Penetration

Table 75 shows the impact of adding new clients. 62.5% of the benchmark participants produced less than 30% of their revenue from new clients which may inhibit future growth and profitability. SPI Research believes at least 30% of annual revenue should come from new clients for PS organizations to remain vibrant and viable. Throughout this study SPI Research has demonstrated the strong correlation between growth and profitability. The bottom-line is PS organizations must constantly expand their markets, client and solution repertoire to stay in touch with market changes and ahead of the competition. New clients allow PSOs to reap the benefits of previous client experiences and knowledge without the baggage of long-term relationships in which both provider and client may have become complacent. New clients provide the opportunity to expand knowledge, skills and services.

Table 75: Impact – Percentage of Business from New Clients

% of revenue from new clients	Survey %	Annual Revenue Growth	Employee Growth	Size of Pipeline	Billable Utilization	Project Margin	EBITDA
Under 10%	25.6%	5.0%	8.2%	145.1%	72.5%	27.4%	16.9%
10% - 20%	15.4%	2.6%	7.2%	160.2%	69.6%	30.1%	17.0%
20% - 30%	21.5%	9.4%	8.3%	175.0%	72.7%	32.9%	15.8%
30% - 40%	11.6%	9.8%	9.3%	182.3%	72.2%	31.8%	14.4%
40% - 50%	9.5%	10.9%	11.3%	207.1%	72.8%	37.9%	16.5%
Over 50%	16.3%	13.7%	13.8%	203.6%	68.7%	34.5%	18.9%
Total/Average	100.0%	8.1%	9.4%	174.3%	71.5%	31.7%	16.6%

Source: SPI Research, February 2018

Primary Service Sales Measurement

SPI Research asked about the primary measurement for service sales people. The leading answer was "service revenue" for 33.7% of survey respondents. The second-most prevalent sales measurement is "all of the above" with 30.9% of service reps measured on service revenue, service bookings, margin and client satisfaction (Table 76). "Service bookings" is the primary measurement for 17.6%. 11% of the organizations measure their service sales people on client satisfaction; 6.8% on margin.

SPI Research frequently receives questions regarding how the service sales force should be measured. The table provides a fascinating view of the cause and effect of service sales measurements. With so many variables in sales compensation, there appears to be no right or wrong measurement as all forms of sales measurement demonstrate pluses and minuses.

Table 76: Impact – The Effect of Sales Measurements on Performance

Primary Service Sales Measurement	Survey %	Annual Revenue Growth	Bid-Win Ratio	Size of Pipeline	Refer. Clients	On-time project delivery	Rev. per billable consult.	EBITDA
Service Revenue	33.7%	8.2%	4.73	171%	71.8%	78.6%	$193	14.5%
Service Bookings	17.6%	7.3%	4.92	199%	70.1%	78.3%	$214	17.3%
Service Margin	6.8%	13.5%	4.47	190%	74.6%	80.6%	$194	12.0%
Client Satisfaction	11.0%	8.4%	4.91	171%	77.0%	77.4%	$203	23.5%
All of the Above	30.9%	8.0%	4.86	164%	79.4%	82.7%	$185	19.2%
Total / Average	100.0%	8.4%	4.80	175%	74.6%	79.8%	$195	17.3%

Source: SPI Research, February 2018

A big drawback to incenting sales with too many metrics is that they become hard to measure and enforce. Although service revenue measurements are the most common (33.7%), they appear to produce mediocre performance particularly in reference clients and win ratios.

This year service bookings measurements produced the largest pipelines. Service margin targets are harder to measure and calculate as they can only be measured after the project has been completed. Many firms are switching to "Service Margin" as a primary metric but they use "average cost" figures to calculate deal margin to simplify sales compensation. Interestingly, service margin as the primary sales measurement produced the worst win ratio, but it did produce a large pipeline and respectable on-time project delivery.

"Client satisfaction" as the primary sales measurement was reported by 11% of the benchmark respondents. With client satisfaction as the primary measurement, service sales people have a vested interest in the quality and timeliness of project delivery. In this year's survey, for sales teams based on client satisfaction, their firms delivered good on-time project delivery but counterintuitively, the best overall profit results. This year "client satisfaction" appears to produce the best profit results but lackluster revenue growth. The pursuit of client satisfaction at any cost may incent the sales force to drive service delivery "to do whatever it takes" without regard to margin or future growth.

Regardless of primary sales measurement, clarity and fairness drive the best results. SPI recommends an open book approach to allow sales people to measure and improve their own performance.

Primary Target Buyer

SPI Research asked, "who is the primary buyer for your services"? For the 456 benchmark respondents, the primary target buyer is most likely to be a line of business executive (46.6%); other (23%); the CIO (15.9%) and CEO (8.4%). The prevalence of line of business buyers has increased significantly from 39.7% to 48.6%. Each year we see the prevalence of CIOs as the primary buyer decline from 28.3% last year to only 15.9% this year. It is getting tougher and tougher to sell consulting to CIOs as they are seeking to reduce the number of vendor relationships while squeezing vendor profits. Only two firms primarily sell to purchasing.

Table 77 correlates primary buyer type with other key metrics. Without knowing other aspects, it is hard to come up with definitive best practices, but this analysis does reveal some interesting comparisons. Although "calling at the top" is a favored strategy, it appears firms who primarily sell to the CEO have the worst revenue growth, smallest backlogs, project margins and EBITDA. It is hard to get to the CEO and if the CEO is really the decision-maker the project is either very strategic or the organization is very small. This year selling to the COO produced good results with the best project and net margins.

Table 77: Impact – Primary target buyer for services

Primary target buyer for services	Survey %	Revenue growth	New clients	Bid-to-win ratio	Quarterly Backlog	Project margin	EBITDA
CEO	8.4%	6.1%	26.5%	4.90	39.4%	29.3%	12.8%
COO	5.7%	7.5%	22.1%	4.28	46.7%	35.3%	24.7%
CIO	15.9%	10.1%	26.9%	4.97	46.3%	36.3%	13.6%
Line of Business	46.6%	8.7%	25.0%	4.80	44.3%	31.3%	17.1%
Purchasing	0.5%	16.3%	15.5%	5.50	80.0%	34.3%	8.1%
Other	23.0%	6.7%	20.7%	4.73	51.6%	29.2%	18.5%
Total/Average	100.0%	7.9%	25.1%	4.76	44.3%	32.8%	16.5%

Source: SPI Research, February 2018

The majority of firms sell to a line of business executive. Selling to this buyer type has become a necessity as buying power for many modern, mobile, business applications has shifted to line of business buyers, away from IT. To effectively sell to line of business buyers, solution sellers must truly understand the business and the key metrics and processes that drive it.

Bid-to-Win Ratio

Another critical KPI in the Client Relationships pillar is the Bid-to-Win ratio, which measures the number of wins per ten bids. The Bid-to-Win ratio is a powerful metric for judging sales and marketing effectiveness, but must be analyzed in conjunction with the size of the pipeline; the length of the sales cycle and the cost to pursue the bid. If the Bid-to-Win ratio is too high, it may be an indication that the organization is not aggressive enough in targeting new clients and new services. If it is extremely low, it is an indication the firm is competing in a commoditized market or is

Table 78: Impact – Bid-to-win ratio (per 10 bids)

Bid-to-win ratio (per 10 bids)	Survey %	% of emp. Billable	Employ. attrition	Ann. rev./ emp. (k)	Project margin
1 - 2 wins	15.4%	72.2%	13.4%	$147	29.1%
3 - 4 wins	31.8%	73.7%	13.4%	$150	30.4%
5 - 6 wins	29.1%	75.1%	12.5%	$154	31.4%
7 - 8 wins	18.2%	81.4%	10.5%	$183	34.8%
Over 8 wins	5.5%	81.5%	9.0%	$195	37.4%
Total/Average	100.0%	75.7%	12.4%	$159	31.7%

Source: SPI Research, February 2018

not well-positioned or is not doing a good job of qualifying deals. The best deals are those that do not require a bid (sole source) because the client has done business with the firm before and knows they will do a good job or they are so clearly the premium supplier that no one else need be considered.

Bid-to-Win ratios were very similar year to year. 15.4% reported Bid-to-Win ratios of 1 to 2; 31.8% reported 3 to 4; 29.1% reported a ratio of 5 to 6 out of 10; 18.2% reported 7 to 8 and 5.5% over 8 (Table 78).

The table depicts the positive impact of improving bid to win ratios through better deal qualification; reference selling; improved positioning to target the right markets and clients; and improving overall quality and client satisfaction resulting in more and better referrals. This year the optimal ratio is over 8 wins with the highest revenue growth; most billable employees; lowest attrition; highest revenue per employee and best project margins.

Deal Pipeline Relative to Quarterly Bookings Forecast

The deal pipeline as compared to the quarterly bookings forecast is an important leading indicator that provides insight into sales effectiveness and future revenue. The size of the deal pipeline shows direct correlation to all major growth indicators – revenue growth; revenue per billable employee; percentage achievement of the annual revenue plan and billable utilization.

Table 79: Impact – Size of deal pipeline

Deal pipeline relative to qtr. bookings forecast	Survey %	Revenue growth	% of annual revenue target	% of annual margin target	Project margin
Less than forecast	15.9%	4.0%	85.9%	83.6%	29.2%
Same as forecast	33.3%	6.4%	92.6%	88.4%	29.2%
2X forecast	27.7%	9.2%	94.3%	91.6%	33.8%
3X forecast	14.9%	11.9%	95.4%	89.4%	34.7%
4X forecast	8.2%	14.6%	96.8%	93.5%	36.1%
Total/Average	100.0%	8.3%	92.8%	89.1%	31.9%

Source: SPI Research, February 2018

A good sign of growth ahead is that 50% of benchmark participants reported their deal pipeline was two times or larger than the forecast! This is down from 60% last year indicating growth is slowing in some markets. Overall the size of the deal pipeline declined from 189% in 2016 to 174% in 2017. This is a dangerous decline and one that should be monitored carefully as the size of the deal pipeline is directly tied to future revenue growth. As shown in Table 79 larger sales pipelines have a positive impact on revenue growth; achievement of annual revenue and margin targets and profits.

Embedded PSOs reported strong gains in pipeline growth, with their pipelines swelling from 202% to a very healthy 214% in 2017. Unfortunately, independent pipelines diminished precipitously from 181% in 2016 to a worrisome 161% in 2017. Firms headquartered in the Americas led the decline as they saw their pipelines drop from 191% to 172%. By industry vertical, marketing and advertising agencies reported the most anemic pipelines of only 75%. If they cannot generate more interest, they have no hope of achieving their annual revenue and margin forecasts. VARs (Value-added resellers) reported the strongest pipelines at 275%. SPI Research recommends firms pay very careful attention to this metric and take corrective action if their pipelines dip below 200% of forecast.

Length of the Sales Cycle

The length of the sales cycle measures the time it takes to move a qualified lead to a signed contract. Sales cycle length is a leading indicator of demand as sales cycles elongate when the economy is contracting and shrink when the economy is expanding. The overall average length of the sales cycle declined this year from 92 to 90 days. Embedded ESOs reported much longer sales cycles (110 days) than independents (84 days). The length of the sales cycle increases proportionately with the size of the organization as larger organizations have more players involved and focus on larger, more complex deals.

Table 80: Impact – Sales cycle (days: qualified lead to contract sign.)

Sales cycle	Survey %	Bid-to-win ratio	Deal pipeline	Quarter. Backlog	EBITDA
Under 30 days	7.7%	5.85	111%	36.2%	15.7%
30 - 60 days	18.7%	5.47	148%	44.2%	16.1%
60 - 90 days	28.3%	4.85	159%	44.4%	16.6%
90 - 120 days	22.7%	4.12	171%	44.6%	17.8%
120 - 150 days	9.8%	4.71	218%	49.0%	16.0%
Over 150 days	12.9%	4.25	257%	58.5%	18.1%
Total/Average	100.0%	4.79	174%	46.0%	15.6%

Source: SPI Research, February 2018

Organizations with the shortest sales cycles reported some of the worst metrics with moderate revenue growth, small pipelines, backlogs and margins. The optimum sales cycle appears to be over 150 days, producing the largest pipeline, most revenue from new clients and highest net margins. Longer sales cycles correlate with larger projects. Firms should strive for overall portfolio balance with a mix of easy to close fixed price assessments combined with longer and more complex custom projects.

Service Discounting

In professional services, it is more difficult to develop a pricing strategy than in product-based organizations. It is easy to do comparative shopping at a grocery store or for products on-line. In professional services, pricing is more art than science with wider variability in terms of costs, estimates, proposals and pricing. Professional services executives cannot just look at expected project cost, sales forecasts, or some other key performance indicator to set pricing. Supply and demand definitely come into play. The more unique the offering; the more demonstrable the return on investment; the larger the reference base; the harder to find required skills; the more premium pricing is warranted.

Past win ratios are critical, but must be viewed in conjunction with past and projected project margins to determine the optimal pricing strategy. Professional services executives should not mind losing bids when they hurt margin because “bargain basement” pricing rarely results in win-win partnerships. If firms are continually asked to discount pricing it is a sure sign that something is wrong. Either they have not properly demonstrated their value, or they are moving into a commodity market or they have not done a good job of differentiating their services.

There is absolutely no way service organizations can make up in volume the amount they lose per deal because margins are too thin and there is no way to recoup hours worked at cheap rates. Table 81 shows that "no discount at all" provided by 36.7% of survey respondents, delivers the best performance.

Table 81: Impact – Service Discounting

Average Service Discount	Survey %	Bid-to-win ratio	On-time project delivery	Project overrun	Std. del. meth. used
None	36.7%	4.94	82.5%	8.2%	71.8%
Under 5%	25.2%	4.80	81.7%	6.7%	69.2%
5% - 10%	24.5%	4.70	78.5%	8.1%	69.0%
10% - 20%	10.8%	4.55	71.4%	11.3%	67.3%
20% - 30%	1.6%	4.07	72.9%	13.3%	64.3%
Over 30%	1.1%	5.50	66.0%	16.5%	74.0%
Total/Average	100.0%	4.80	79.8%	8.3%	69.9%

Source: SPI Research, February 2018

As shown in the table, most firms (86.4%) offer discounts of 10% or less. Although limiting discounting might impact growth, it enhances bid-win ratios, billable utilization, on-time project delivery and client referenceability. Firms who refrain from discounting do a better job of using standardized methods and tools, resulting in fewer project overruns.

Profit is the fuel that drives expansion. While not every project achieves its desired profitability goal, one or two money-losing projects can quickly undermine all net profit. Critical analysis should be undertaken to review the project and client portfolio to determine the types of clients and projects that make the most money. Quite often this analysis reveals 80% of profit is coming from only 20% of clients and conversely, the firm may make no money at all on smaller transactions or certain customers.

When creating a large bid, all costs including sales costs should be measured. Very few projects are delivered precisely on time and on budget, so change control is an important element of pricing. If a client demands pricing concessions, scope must be contained, but the client must also understand and accept the risks. Best practices in pricing include creating a dedicated proposal center to ensure all proposals are of the highest quality. Bid, estimate, pricing and contract reviews are all good investments which pay dividends by improving project margins and reducing the risk of overruns and losses.

Referenceable Clients

The percentage of reference clients is considered one of the most important KPIs in the professional services sector. This year, average "client referenceability" improved from 71.5% in 2016 to 74.8% in 2017. Independents led the rally in client satisfaction with their average scores improving from 75.4% to 76.8%. Table 82 shows 48.8% of the benchmark respondent's claim over 80% of their clients are referenceable. On the other hand, a third (33.4%) report less than 70% of their clients are referenceable. This is a very concerning metric. ***Embedded organizations reported only 68.4% of their clients are referenceable. Independents fared better with 76.8% referenceable clients. Clearly these numbers must improve to sustain PS industry growth.***

Client references have a strong correlation with service sales effectiveness; the length of the sales cycle; ease of getting things done and whether employees would recommend the PSO as a great place to work. The relationship between client and employee satisfaction is irrefutable.

Client references are a leading indicator of organizational success. As this percentage increases, so does the probability of high levels of growth; better win ratios and lower sales costs. Any maturity improvement plan must address measuring and improving client satisfaction and building references. Best practices include post-project engagement surveys; acquiring client references and testimonials as part of project close-out along with frequent and consistent project quality reviews. Executive teams should review the project dashboard at weekly meetings and immediately assign executives to troubled projects.

Table 82: Impact – Percentage of "referenceable" clients

% of "referenceable" clients	Survey %	Bid-to-win ratio	On-time project delivery	% of annual revenue target	% of annual margin target
Under 50%	13.5%	4.51	75.5%	91.5%	87.6%
50% - 60%	8.5%	3.79	73.6%	86.9%	83.4%
60% - 70%	11.4%	4.49	74.8%	91.9%	87.0%
70% - 80%	17.8%	4.76	77.3%	92.7%	87.1%
80% - 90%	24.6%	4.89	82.6%	93.3%	89.6%
Over 90%	24.2%	5.49	86.4%	96.3%	94.2%
Total/Average	100.0%	4.82	79.9%	93.0%	89.2%

Source: SPI Research, February 2018

Pricing and Deal Structure

Every year, SPI Research has seen a shift in pricing and deal structure, as clients have become increasingly concerned about risk and cost overruns, and have pushed more accountability to the PSO through fixed fee or shared risk contracts. Until 2014 the percentage of fixed fee work steadily increased from 35.5% in 2009 to 44% in 2013. ***In 2014 SPI Research saw a resurgence in time and materials priced contracts – signaling increased demand for services. 2014 was the first time in eight years that we saw an increase in time and materials pricing from 51.7% in 2013 to 58.8% in 2014.***

This trend reversed in 2017 with time and materials contracts now representing 49.8% of all contracts.

This year SPI Research added managed services contracts and were surprised to see, despite all the "buzz", managed service contracts represent less than 5% of the portfolio. Time and materials-based pricing puts emphasis on accurate resource management, time collection and reporting. Fixed price pricing puts an emphasis on accurate estimates, project costing and change management. Either way PSA applications are critical to support accurate time and cost capture and billing.

Table 83 compares billing models for embedded and independent PSOs. ESOs have been steadily shifting to fixed fee contracts – moving from 34% in 2009 to 46.6% in 2013. ***The trend reversed in 2014 with ESOs shifting back to time and materials contracts. Now in 2017 we see ESOs are once again favoring time and materials contracts (51.5%)***. Independents have always preferred time and materials contracts, but they too have shifted to more fixed price work, from 37% in 2009 to 43.1% in 2017. By geography, time and materials is the prevalent pricing structure. EMEA predominantly sells time and materials contracts although they are often "daily" contracts which are far less favorable for the service provider than hourly contracts.

Table 83: Fee Structure by Organization Type and Geographic Region

Fee Structure	2016 Survey	2017 Survey	ESO	PSO	Americas	EMEA	APac
Time & Materials	55.4%	49.8%	51.5%	49.2%	48.2%	63.1%	52.9%
Fixed Time / Fixed Fee	38.9%	40.8%	34.1%	43.1%	42.3%	26.0%	41.7%
Shared Risk / Performance based	2.8%	2.2%	3.5%	1.7%	2.1%	3.7%	0.8%
Managed Services	NA	4.4%	6.7%	3.6%	4.2%	6.0%	4.5%
Other	2.9%	2.8%	4.2%	2.4%	3.1%	1.3%	0.2%
Total / Average	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPI Research, February 2018

By vertical, architects and marketing and advertising firms rely on fixed price contracts (Table 84). IT consultancies favor time and materials contracts (62.9%). Staffing providers reported 50% of their contracts are "shared risk or performance-based". As the SaaS market has become more mature a greater emphasis is being placed on customer adoption, so SaaS firms focus on "time to value" with fixed price rapid implementation contracts. Net profit is not necessarily tied to pricing structure as it is possible to make good service margins with either time and materials or fixed price contracts. Accurate estimating, excellent project management, good communication and change control are the most important elements in ensuring quality services are delivered at planned margins.

Table 84: Fee Structure by Service Market Vertical

Fee Structure	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Time & Materials	41.7%	62.8%	56.9%	50.4%	57.5%
Fixed Time / Fixed Fee	55.1%	26.9%	35.3%	39.0%	34.7%
Shared Risk / Performance based	0.7%	1.6%	1.0%	2.1%	0.8%
Managed Services	0.9%	6.6%	5.5%	4.2%	5.6%
Other	1.6%	2.1%	1.3%	4.3%	1.3%
Total / Average	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPI Research, February 2018

Table 85: Fee Structure by Service Market Vertical

Fee Structure	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Time & Materials	37.5%	41.9%	38.6%	46.0%	43.3%
Fixed Time / Fixed Fee	26.9%	24.4%	61.4%	46.0%	39.1%
Shared Risk / Performance based	12.1%	0.0%	0.0%	2.0%	7.9%

Fee Structure	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Managed Services	2.4%	16.3%	0.0%	6.0%	9.0%
Other	21.2%	17.5%	0.0%	0.0%	0.6%
Total / Average	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPI Research, February 2018

9. Human Capital Alignment Pillar

2018 marks the 10th anniversary of the great recession with an uneven global recovery and a seismic, ever-expanding rift between the technology enabled world of the "haves," which is increasingly at odds with the technology deprived world of the "have nots". The shift to a digital economy is fundamentally rewriting the rules of employment relationships. Technologies like AI (Artificial Intelligence), Social, Mobile and Analytics are fueling disruption and change in both our personal and professional lives.

Despite the abundance of productivity-enhancing technology, the Bureau of Labor Statistics and OECD report since the recession, workforce productivity growth has actually declined to its lowest level since 1947 to 1.1%. Labor productivity is a measure of economic performance that compares the amount of goods and services produced (output) with the number of labor hours used in producing those goods and services. World-recognized economists have developed a host of theories to explain lower workforce productivity. One of the most plausible explanations comes from Andy Haldane, the Bank of England's Chief Economist. The culprit is the divergence between high-productivity firms and low-productivity firms that has been widening for decades. His theory is that the top 5% of highly productive (frontier) firms in today's globalized markets, network economies of scale and scope are more potent, generating natural monopolies in which single or small sets of players dominate market share. While a greater number of "laggards" are failing further and further behind, weighing down productivity.

SPI's own PS Maturity™ research over the past twelve years corroborates the notion that only a handful (less than 20%) of Professional services organizations achieve greatness. These leaders are able to quickly seize market opportunities and drive best-in-class performance through the effective use of technology in conjunction with enlightened management and workforce practices.

Over this same timeframe, real growth in billable hours (utilization) has been miniscule. Almost all PS productivity growth has come from the effective use of technology to lower overhead and administrative costs in combination with the move to virtual (off-site) consulting delivery. PS employees are working the same number of annual hours (2,040 hours per year) but are working smarter through the use of agile development methodologies; virtual consulting delivery (limiting travel time); maximizing the ability to multi-task across multiple projects while limiting administrative time for time and expense capture and meetings. The Best-of-the-Best place a premium on recruiting, engaging and retaining a best in class workforce.

Today's consulting workforce is increasingly virtual, with almost as many consulting hours delivered off-site as on the client's site. In this year's benchmark, 21.3% of consultants primarily work from home with another 4.9% described as contingent workers either onshore or off. The new world of consulting work depends on a multi-lingual, multi-generational, multi-cultural, technically-skilled, project-based workforce.

Top performing organizations continually point to their unique, employee-oriented cultures as the number one element in their business success. Culture is defined as the system of values, beliefs and behaviors that define how work really gets done. Culture brings together the implicit and explicit reward systems that define how an organization works in practice, no matter what an organizational chart, business strategy, or corporate mission statement may say.

SPI Research's "Human Capital Alignment" pillar encompasses all elements of the Professional Services workforce strategy. Human Capital Alignment focuses on both the people processes and systems required to recruit, hire, ramp, retain and motivate a high-quality consulting workforce. The following table shows how PSOs mature across the Human Capital Alignment pillar:

Table 86: Human Capital Alignment Maturity Model

	Level 1 Initiated	*Level 2 Piloted*	*Level 3 Deployed*	*Level 4 Institutionalized*	*Level 5 Optimized*
Human Capital Alignment	Hire as needed. Generalist skills. Chameleons, Jack of all Trades. Individual heroics. May perform presales as well as consulting delivery.	Begin forecasting workload. Start developing job and skill descriptions & compensation plans. Rudimentary career paths. Start measuring employee satisfaction	Resource, skill and career management. Employee satisfaction surveys. Training plans. Goals and measurements aligned with compensation. Attrition <15%	Business process and vertical skills in addition to technical and project skills. Career ladder and mentoring programs. Training investments to support career. Low attrition, high satisfaction	Continually staff and train to meet future needs. Highly skilled, motivated workforce. Outsource commodity skills or peak demand. Sophisticated variable on and off-shore workforce model.

Source: SPI Research, February 2018

Today's Professional Services leaders must squarely confront the realities of attracting and retaining a younger workforce against the backdrop of a technical labor shortage. Globalization has significantly impacted workforce strategies with many service providers providing hybrid on and off-site resources via regional and global competency centers. Based on technology advances, consulting emphasis is shifting toward business process and vertical industry expertise however demand for horizontal application and technical skills still remains high. SPI Research found Human Capital Alignment metrics contain the highest number of performance indicators with extremely strong correlation to success — meaning, employees, and how they perform once onboard determine success or failure (Table 87).

Table 87: Human Capital Alignment Performance Indicators tied to Maturity levels

Maturity Level	Level 1	Level 2	Level 3	Level 4	Level 5
Recommend Company to Friends/Family (1-5 scale)	3.94	4.29	4.60	4.71	4.92
Employee annual attrition - voluntary	10.8%	7.5%	6.4%	6.3%	3.3%
Employee annual attrition - involuntary	5.7%	5.4%	4.7%	3.2%	3.0%
Non-billable project hours	153	124	85	90	41
Billable Project Hours	1,312	1,447	1,573	1,653	1,748
Well-understood career path for all employees (1-5 scale)	2.59	3.04	3.40	3.77	4.17
Employee billable utilization	60.3%	69.2%	74.8%	81.4%	84.6%
PS Profit (EBITDA)	4.7%	7.8%	15.2%	22.6%	35.2%

Source: SPI Research, February 2018

The Talent Shortage

The world's greatest economic asset is the hard work, motivation and resilience of its workers. When employees can master new skills, contribute their full talents, and be rewarded fairly, businesses, families and communities thrive. However, too many workers do not progress to more senior roles, despite their desire to learn new skills and earn higher-paying jobs. Increasingly developed nations are creating initiatives to realize the full potential of their workforces, by empowering workers with the education and training they need to contribute more, earn higher wages and build a fulfilling career.

In the technology professional services market, the war for talent continues unabated. In fact, the gap between the demand for technology consulting workers and the talent with the requisite critical thinking, analytic and communication skills to fill these roles is widening. The world's economy has become knowledge and project-based, yet a looming talent cliff threatens to derail economic growth.

By 2018, the US will face a projected **shortfall of 223,800** workers with background in Science, Technology, Engineering and Math. By 2022, the U.S. is projected to have a deficit of at least one million college-trained workers in science- and technology-related fields. McKinsey's and Deloitte's research projects a shortage of 30 to 40 million college-educated workers by 2020, projecting future unemployment gaps in India and China where educational opportunities are limited.

Global forces have come together to produce this talent cliff tsunami:

- Baby Boomers (born between 1946 and 1964) are exiting the workforce without enough skilled gen X, gen Y and millennial workers to replace them. The first baby boomers started turning 65 in 2011. 80 million will exit the workforce over 20 years—which yields 4 million a year, or *10,000* a day who must be replaced. In 2016, millennials surpassed baby boomers as the largest cohort. To engage this new generation of workers, management and employment practices must fundamentally change to become more inclusive with a focus on life-work balance.
- Underfunding of education particularly in Science, Technology, Engineering and Math meaning not enough college graduates with the requisite skills for today's technology-centric roles. Education systems are struggling to keep up with the need to arm the workers of tomorrow with active, hands-on technology-based learning. At the same time, efforts must be made to overcome the traditional gender bias which persists for learners, employees and employers in technology fields.
- A growing gender gap in which less than 25% of IT jobs in developed countries are held by women. According to HR Magazine, lack of gender diversity in IT costs the UK over $4 billion annually. Further, in a 2014 TechWeek study of the UK, only one in 20 IT job applicants is a woman. This growing gender gap starts at an early age with parental and education bias which mushrooms throughout education and employment systems to solidify IT gender bias.
- Combined with unenlightened immigration policies which have capped the number of visas for skilled knowledge workers. In the U.S., for the past five years the H1B cap of 65,000 and an additional 20,000 M1 master's degree visas has been met just 4 days after the opening of the

visa application process. The number of applicants has risen to more than 240,000 for these coveted work visas. That's up significantly from 2014 (172,500 applications) and nearly double the applicants from 2013 (124,000) but since 1990 legislation, only 85,000 H1B visas have been granted annually. The Trump administration is reviewing the H1B policy which could lead to lower quotas and greater shortages.

All of this at exactly the same time that growth in professional service revenue is surging and “buy local” has become a new mantra! Highly skilled workers are in great demand, making it critical for organizations to become a “talent magnet” to create a steady pipeline of top people.

Where the Jobs Are

Based on a survey of 700 North American IT leaders conducted by TEK Systems, programmers and developers prevail as the most critical IT skill sets year over year, with more than 40 percent of IT leaders consistently putting them at the top of the skills they need. Software engineers are also in demand. Quality assurance (QA) and testing roles have nearly quadrupled from 5 percent to 19 percent since last year. Project managers have held steady in the top three rankings since 2015.

In terms of difficulty in finding top talent, IT leaders say programming and development talent represent the most difficult-to-find skills. Networking and security skills hold the second and third most difficult-to-fill rankings this year, according to 29 percent and 28 percent of IT leaders, respectively. Although still hard to find, the severity of talent shortages in networking and security is diminishing. Architects have replaced database administrators as the fourth most difficult to find. Interestingly, mobile skillsets have moved from 11th to last position this year as software suppliers have increasingly incorporated mobility into their platforms, requiring fewer IT consultants.

Table 88: Difficulty in Finding Top IT Talent

Difficulty in Finding Talent Ranking	2015	2016	2017
1	Programmers and developers (44%)	Programmers and developers (65%)	Programmers and developers (42%)
2	Software engineers (35%)	Security (45%)	Networking (29%)
3	Architects (34%)	Software engineers (42%)	Security (28%)
4	Project managers (33%)	Database administrators* (39%)	Architects (28%)
5	Security (32%)	Project managers (38%)	Software engineers (27%)
6	Business analysts (25%)	Networking* (37%)	Project managers (23%)
7	Business intelligence (24%)	Architects (36%)	Business intelligence (19%)
8	Big data (23%)	Business analysts (35%)	Database administrators (18%)
9	Help desk / technical support (21%)	Business intelligence (34%)	Business analysts (18%)

Difficulty in Finding Talent Ranking	2015	2016	2017
10	Cloud (14%)	Big data (28%)	Cloud (15%)
11	Mobile (11%)	Mobile (27%)	Big data (13%)
12	Social technology experts (9%)	Help desk / technical support (24%)	Help desk / technical support (11%)
13	-	Digital marketing* (22%)	Quality assurance / testing (11%)
14	-	Cloud (15%)	Digital marketing (11%)
15		Quality Assurance (15%)	Mobile (9%)

Source: TEK Systems Annual IT Forecast, 2017

Talent Priorities

Changing workforce dynamics are driving PS executives to create a different type of workforce that requires technical and client management competency with equal parts of flexibility, autonomy and accountability. One of the most important challenges for today's Professional Services leaders is competing for top talent in a level, global, web-enabled playing field of "digital natives" who value collaboration and "cool" new technologies more than security and remuneration. Today's Human Capital Alignment challenges include:

- Attracting, retaining and motivating top talent;
- Managing through a technical labor shortage;
- Overcoming traditional gender biases to educate, attract and retain more female and minority workers;
- Taking on the increased burden of healthcare costs which continue to rise faster than workforce productivity improvements;
- Worldwide growing income and wealth inequality which reduces the ability of low-skilled workers to climb the economic and educational ladder to become the professional services employees of the future;
- Managing a global, multi-lingual, multi-cultural, multi-generational workforce; and,
- Managing a variable and/or contingent workforce.

Figure 47: 2018 Workforce Priorities

Source: SPI Research, February 2018

Talent Strategies

To fill the workforce void, more and more PSOs are developing innovative new talent strategies: close partnerships with local universities; new hire internships; job-sharing programs; flexible work – study – childcare options; on-boarding programs; on-the-job training and mentoring combined with extensive “on-shore” assignments for “off-shore” employees. Increasingly the reputation of the firm as a “great place to work” is just as important and intimately intertwined with “client referrals.” What this all boils down to is that talent is fast becoming the number one make-it or break-it element in professional services growth – or even survival.

To meet these demands, top PSOs are:

- ∆ Focusing on programs to hire and train entry-level talent with skills in science, technology, math and engineering combined with strong written and oral communication skills.
- ∆ Investing in internships and college hiring to groom the next generation of consultants.
- ∆ Cross-training current employees who have strong analytic and communication abilities.
- ∆ Sponsoring training and work visas for international workers with strong backgrounds and skills.
- ∆ Offering flexible work arrangements – work from home, job-sharing, remote service delivery and child care options along with generous time-off and sabbatical arrangements.
- ∆ Building a culture of excellence – the best and brightest are attracted by leading edge technologies, clients and projects including a culture that supports collaboration and innovation.
- ∆ Paying for performance – linking compensation to knowledge and skills growth along with contributions to the practice – not just revenue generation alone.
- ∆ Investing in employee engagement – Communication, training, recognition, equitable pay, team building events and flexible work arrangements are essential to keeping a talented workforce engaged.

Finding, attracting and engaging a talented workforce is both the top challenge and the top success factor for today’s professional services organizations. The age-old tactic of stealing skilled consultants from competitors and clients is no longer effective with too many firms competing for too few experts. More than ever before, the hallmark of the Best-of-the-Best PS organizations is their focus on college hiring and developing their own young consultants from the ground up. This focus favors rapidly growing firms who can build and sustain recruiting relationships with top universities. Top firms are developing summer internship programs and new hire on-boarding programs. Although these programs are expensive, they are well worth the effort when they manifest in young, highly skilled and highly motivated consultants who feel they are part of a vibrant culture which promises them career and knowledge advancement. Today's workers also crave a sense of mission to give purpose to their work.

The impact of technology on the new world of work is all-encompassing – social interconnectivity through LinkedIn, Facebook, Twitter, Glassdoor and a host of other networking sites has transformed recruiting and retention. So much so that in-demand consultants with hard-to-find skills are besieged by unsolicited job opportunities. The concepts of brand and employee engagement have never been more important. This means PS firms must not only be a great place to work but must increasingly differentiate themselves through their unique cultures, using their reputation as a primary recruiting and retention tool. At the same time, consultants are building their own brands – publishing their own opinions, thought leadership and intellectual property making it harder than ever before to safeguard the firm's knowledge assets.

Best Talent Practices

Based on our research and discussions with top-performing PS organizations, four areas must be addressed to develop best consulting talent practices.

1. **Confidence in leadership** - Like everything else, it starts with effective leadership. Leaders who are clear about the future direction of the firm, who can take advantage of changing market dynamics and are able to openly and honestly communicate the direction of the company and the role employees play in shaping it, are crucial to success. PS is a logical, knowledge-driven business so leaders must focus on clarity and a few but impactful improvement priorities. Each of the best firms emphasizes open and transparent communication based on a foundation of ethical leadership, open books and systems.
2. **Great place to work** – top performing firms find innovative ways to help over-worked consultants maintain life/work balance. From a facility point of view, firms focus on two priorities – creating open, team-centric workspaces where project teams can meet and collaborate as well as virtual work-from-anywhere environments with state-of-the-art collaboration and remote access tools. Despite the fact that most work is delivered virtually or at the client's site, top firms ensure there are opportunities throughout the year for consultants to meet face-to-face to enhance their knowledge and skills while celebrating achievements. An ethical, open and recognition rich environment provides the cornerstone of great work places.
3. **Culture** – in today's fast-paced consulting environment the concept of culture is more important than ever. Meet with any top performing firm and you will instantly recognize what sets it apart. It may be a focus on only hiring the best and brightest from certain universities…building a collegial, knowledge-intense environment. It may be building a community-based culture…

with a premium placed on local hiring, community relationships and driving business on a local level. Or it may be a culture based on pushing the technology envelope…always seeking the next big thing and willing to invest in innovation. Firms must understand and deliberately focus on what sets them apart to be able to build a brand that embodies the type of clients and employees who will be a best fit.

4. **Growth opportunities** – the best firms provide rich environments for continuous learning. They offer opportunities for formal and informal growth – mentoring, coaching, lunch and learns, best practices, knowledge repositories, collaboration environments and centers of excellence. In today's turbulent talent market, career, skill and knowledge growth are an imperative.
5. **Job Fit** – today's top firms include personality fit as a recruiting essential. Best practices include in-person team interviews along with personality profile testing and scenario role plays. Verification of technical skills and know-how and real on-the-job experience are becoming standard. These subjective assessments elongate hiring times but are offset by better engagement and retention with greater clarity in job roles, job descriptions and skill profiles.

Table 89: Workforce Engagement Best Practices

Job Fit	Growth Opportunities	Culture	Great Place to Work	Confidence in Leadership
Clear Job Roles & Descriptions	On-boarding & training	Agile, performance oriented	Virtual/flexible/ remote work	Mission & Purpose
Well-defined skills	Mentoring Coaching	Collaborative Communicative	Recognition Rich	Invest in people
Personality fit	Access to knowledge	Hire the best	Ethical, open	Trust & transparency

Source: SPI Research, February 2018

The Consulting Pyramid

The traditional consulting pyramid (Figure 48) is a workforce model based on "Finders, Minders and Grinders." The Managing Partner (PS VP) is the chief client relationship manager, responsible for developing a trusted advisor relationship with key clients. The Managing Partner is responsible for developing new business and managing the profitability of the practice. The "Minders" are the regional managers, project managers, engagement managers and case team leaders responsible for translating the customer's requirements into a project plan and then managing all aspects of project delivery. In the traditional consulting pyramid, the "Grinders" are the technology and business consultants who perform the majority of the work. In the traditional model, the "Grinders" (young consultants fresh out-of-college or graduate school), deliver the majority of project billable hours and profit.

Many independent PS firms have developed a solution selling sales force, often with lackluster results. The fundamental reason why the classic consulting pyramid has lasted for years is that PS clients do not want to be "sold" – they seek consulting firms based on their demonstrated ability in solving specific business problems. Prospective consulting clients require senior practice leaders to help them articulate and design solutions. On the other hand, embedded PSOs rely heavily on the product sales force to bring them into deals so the role of embedded PS leaders is one of forging alliances with other cross-functional executives as well as building the overall PS governance structure.

Figure 48: The Consulting Pyramid - Finders, Minders and Grinders

Source: SPI Research, February 2018

HCM Business Applications

On the technology front, Human Capital Management (HCM) systems are increasing in importance and usage across the service industry. Traditional HCM applications for recruiting, performance, learning and compensation are moving to the cloud with exciting new social functionality combined with mobile employee access for self-managing careers, skills and preferences. The training industry has exploded with innovation, merging learning and skill-building with on-line video and gamification. In the people-based business of PS, it is only a matter of time before talent management (HCM) and resource management (PSA) functionality become intertwined. Already exciting new cloud-based solutions from Workday, Oracle/NetSuite/Taleo and SAP/Successfactors are starting to emerge to seamlessly post job requisitions and skill profiles based on resource demand. Soon vendors and consulting firms alike will make employees central to their value proposition by designing systems that mirror and automate all facets of the employee lifecycle from recruitment to retirement.

Supporting global workforce flexibility comes with a price and makes it impossible to run a PS organization by spreadsheet. Resource management and HCM applications are mandatory to accommodate global mobility, staffing and career management. No longer do employees need offices and laptops to stay abreast of business. Now, a smart phone is all they need to stay connected with coworkers and clients. Alerts help consultants to quickly respond to critical issues. At the same time, the ubiquitous and ever-expanding flow of information has obsolesced traditional hierarchical management and communication structures, requiring a new, more collaborative form of leadership.

Survey Results

SPI Research analyzed 27 Human Capital Alignment key performance measurements that are critical to attaining superior employee performance. Table 90 portrays trends in human capital alignment. The chief issues facing PS employers are recruiting and retention. Skilled employees have more career choices than ever before resulting in high levels of voluntary attrition. This year, the number of employees who would recommend their company as a great place to work increased slightly. Some overwhelmed consultants are choosing to leave professional services altogether, preferring the stability and lower stress of corporate positions.

Table 90: Human Capital Alignment Pillar 5-year trend

Key Performance Indicator (KPI)	2013	2014	2015	2016	2017
Voluntary attrition	8.3%	8.9%	7.9%	8.0%	7.6%
Recommend company to friends/family (1 to 5 scale)	4.28	4.24	4.19	4.28	4.38
Management to employee ratio	10.13	10.05	11.52	10.00	10.06
Days to recruit and hire for standard positions	61.2	61.8	60.5	62.2	60.8
Days for a new hire to become productive	68.7	64.1	57.9	55.4	52.5
Guaranteed annual training days / employee	9.01	8.20	8.92	8.33	7.78
Well-understood career path for all employees (1 to 5 scale)	3.23	3.14	3.29	3.17	3.20
Employee billable utilization	70.1%	71.0%	70.6%	70.4%	71.5%

Source: SPI Research, February 2018

As the table shows, most human capital metrics improved in 2017. Importantly, after increasing each year since the end of the recession, voluntary attrition declined slightly from 8 to 7.6%. The percentage of companies who would recommend their company as a great place to work grew from 85.6% to 87.6%. Management span of control increased this year while the days to recruit, hire and onboard new employees decreased, signaling better balance in the job market. Other signs of improvement are shown in higher billable utilization and enhancements in career management. Table 91 summarizes important talent management questions by organization type and location.

Table 91: Human Capital Alignment by Organization Type and Geographic Region

Key Performance Indicator (KPI)	2016	2017	ESO	PSO	Amer.	EMEA	APac
Surveys	416	456	117	339	396	40	20
Employee annual attrition - voluntary	8.0%	7.6%	8.5%	7.3%	7.5%	7.6%	8.9%
Employee annual attrition - involuntary	5.5%	4.8%	4.8%	4.8%	5.0%	3.2%	3.8%
Recommend company to friends/family	4.28	4.38	4.28	4.41	4.41	4.20	4.15

Key Performance Indicator (KPI)	2016	2017	ESO	PSO	Amer.	EMEA	APac
Management to employee ratio	10.00	10.06	11.82	9.48	10.14	9.52	9.57
Days to recruit and hire for standard positions	62.2	60.8	64.9	59.4	61.4	60.8	49.5
Days for a new hire to become productive	55.4	52.5	69.9	46.8	53.1	53.6	39.8
Guaranteed annual training days / employee	8.33	7.78	8.74	7.47	7.67	8.38	8.50
Well-understood career path for all emp.	3.17	3.20	2.99	3.27	3.17	3.38	3.30
Employee billable utilization	70.4%	71.5%	70.7%	71.8%	71.5%	71.8%	72.3%
Annual fully loaded cost per consultant (k)	N/A	$108	$112	$107	$111	$83	$80

Source: SPI Research, February 2018

Independents are more likely to refer their firm as a great place to work than their embedded counterparts. Employees in the Americas are more likely to recommend the firm as a great place to work than their counterparts in EMEA or APAC. Management span of control increased slightly year over year, moving from 10 in 2016 to 10.06 in 2017. The average time to recruit, hire and ramp a new consultant is 113.3 days, improving 4 days from 117.7 days in 2016. Obviously, reducing the time and cost of finding and ramping new employees has a major impact on growth and profitability. Interviews with this year's Best-of-the Best revealed innovative college hiring and ramping programs – with intense on-boarding programs of three months or more to ensure new consultants are successful and productive. The need for skill and leadership development has resulted in a big increase in the days of guaranteed training – moving from 3.8 days in 2008 to over 7.8 days on average in 2017. PS organizations of all types and sizes are investing in training to ensure their workforces remain engaged by enhancing their skills.

PS organizations are finally starting to realize the importance of providing employee career paths and opportunities – this has led to a slight improvement in the benchmark of "a well-understood career path," which has advanced from a score of 2.67 out of 5 (53%) in 2009 to 3.2 (64%) in 2017.

Table 92 shows the human capital alignment scores by organization size. Attrition tends to rise in direct proportion to organization size as employees feel less ownership and their work becomes more impersonal. This year organizations with 300 to 700 employees reported the highest voluntary attrition (10.6%). One of the reasons for this is that these size organizations are experiencing the highest levels of mergers and acquisitions which often lead to attrition. Interestingly, this year employees within the largest firms were the most likely to recommend their company as a great place to work. In past surveys, smaller organizations were reported to be the best places to work. This important employee engagement metric increased this year from 4.28 (85.6%) in 2016 to 4.38 (87.6%).

Table 92: Human Capital Alignment KPIs by Organization Size

Key Performance Indicator (KPI)	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Surveys	41	107	140	96	37	35
Employee annual attrition - voluntary	2.3%	6.0%	8.4%	8.9%	10.6%	9.0%
Employee annual attrition - involuntary	3.1%	3.7%	5.6%	5.4%	5.1%	4.6%

Key Performance Indicator (KPI)	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Recommend company to friends/family	4.41	4.38	4.33	4.35	4.46	4.52
Management to employee ratio	7.25	8.59	9.89	10.43	13.71	14.17
Days to recruit and hire for standard positions	70.2	61.9	58.4	57.8	58.7	65.5
Days for a new hire to become productive	55.2	57.8	52.6	46.9	48.0	51.7
Guaranteed annual training days / employee	6.52	7.48	7.93	7.62	8.07	10.00
Well-understood career path for all emp.	3.25	3.16	3.20	3.21	3.34	3.07
Employee billable utilization	67.3%	70.7%	70.0%	73.8%	74.9%	76.6%
Annual fully loaded cost per consultant (k)	$109	$103	$109	$110	$103	$109

Source: SPI Research, February 2018

Employee to management ratios increase with the size of the organization due to economies of scale and investments in systems and tools which improve management visibility. The time to recruit new consultants is highest for the largest firms (65.6 days); but they reported ramping time of 51.7 days which is down significantly from 65.5 days reported in 2016. This means the largest firms are taking 118.2 days to find, hire and ramp new employees. Smaller firms with 100 to 300 employees are far more agile, reporting it takes 104.7 days to find and onboard new employees. All organizations need to focus on reducing their recruiting and ramping time and costs. Billable utilization increases with organization size as the largest organization reported the highest average billable utilization of 76.6%.

Table 93: Human Capital Alignment KPIs by Vertical Market

Key Performance Indicator (KPI)	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Surveys	153	103	45	45	29
Employee annual attrition - voluntary	6.5%	8.6%	6.9%	7.9%	9.6%
Employee annual attrition - involuntary	4.1%	5.7%	5.1%	4.8%	3.7%
Recommend company to friends/family	4.49	4.32	4.23	4.45	4.29
Management to employee ratio	8.99	10.23	10.85	10.02	10.97
Days to recruit and hire for standard positions	62.9	53.1	64.0	63.9	73.4
Days for a new hire to become productive	47.8	47.1	78.7	39.3	85.2
Guaranteed annual training days / employee	6.79	8.21	10.30	7.20	9.82
Well-understood career path for all emp.	3.19	3.25	3.07	3.34	3.04
Employee billable utilization	70.4%	74.7%	70.1%	71.8%	67.1%
Annual fully loaded cost per consultant (k)	$99	$110	$111	$127	$102

Source: SPI Research, February 2018

Tables 93 and 94 show key Human Capital Alignment metrics by market. IT Consultancies reported the highest attrition at 14.3% while embedded hardware and networking PS reported the lowest at 6.4%. Government agencies and contractors had the largest management span of control (16) while marketing and advertising firms had the smallest (6.25). Accountancies reported the greatest investment in employee training (10.42 days) while government contractors had the least (4). It takes the least amount of time to recruit and ramp new hires in government contracting (82 days) and the longest time in embedded SaaS software (138.6 days). Billable utilization is highest for architects and accountants at 75.4% while embedded hardware and networking organization reported the lowest billable utilization at 62.5%.

Table 94: Human Capital Alignment KPIs by Vertical Market

Key Performance Indicator (KPI)	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Surveys	18	8	8	6	41
Employee annual attrition - voluntary	9.3%	7.3%	8.9%	3.0%	7.5%
Employee annual attrition - involuntary	3.7%	3.5%	4.9%	3.4%	6.4%
Recommend company to friends/family	4.31	4.00	4.38	4.80	4.32
Management to employee ratio	16.00	10.00	6.25	12.00	10.40
Days to recruit and hire for standard positions	51.0	60.0	60.0	69.0	60.0
Days for a new hire to become productive	31.0	45.0	37.5	51.0	60.0
Guaranteed annual training days / employee	4.00	10.42	6.25	8.75	8.07
Well-understood career path for all emp.	2.71	3.83	3.13	3.20	3.29
Employee billable utilization	80.0%	71.0%	71.3%	65.0%	68.9%
Annual fully loaded cost per consultant (k)	$124	$94	$105	$101	$115

Source: SPI Research, February 2018

Workforce Age and Gender

- 1927 - 1945 - Silent Generation or Traditionalists
- 1946 - 1964 - Baby Boomers
- 1965 - 1983 - Gen X or the Busters
- 1984 - 2002 - Gen Y or the Millennials
- 2003 - Current Gen Z or the Digital Generation

SPI Research asked questions about the age and gender of the global PS workforce. ***PS continues to be a young man's game with 50% of the workforce under age 40 while 64.8% of the workforce is male.*** This year the percentage of employees under 30 increased from 22% to 23.1% while over age 50 employees increased from 17.7% to 19.4%. Embedded PSOs reported slightly younger workforces as they tend to provide better on-boarding programs than their independent counterparts and require the latest technical skills. The Americas has the oldest workforce with the most employees over 40 (45.6%). EMEA is the most male-dominated with 67.1% male PS employees. The percentage of females decreased this year from 36.3% to 35.2%. The Americas is leading the way in bringing women into the PS workforce with 36.5% females. Although 2018 started with an outcry of "time is up" feminism it will take years for women to catch up with men in the world of technology consulting. Strong female role models are needed along with an increased focus on stem training and education for women.

Table 95: Workforce Age and Gender by Organization Type and Geographic Region

Workforce Age (years)	2017	ESO	PSO	Americas	EMEA	APac
Under 30	23.1%	23.4%	22.9%	23.1%	25.3%	18.1%
30 - 40	31.9%	33.9%	31.2%	31.4%	33.3%	38.3%
40 - 50	25.7%	26.1%	25.5%	25.7%	24.6%	27.7%
Over 50	19.4%	16.6%	20.4%	19.9%	16.9%	15.9%
Average Age (Years)	39.6	39.0	39.8	39.7	38.7	39.5
Percentage Male	64.8%	66.4%	64.3%	64.5%	67.1%	66.3%

Source: SPI Research, February 2018

Table 96: Age of Workforce by Organization Size

Age of Workforce	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Under 30	13.5%	24.1%	23.9%	21.7%	29.3%	26.1%
30 - 40	24.5%	30.4%	32.5%	34.8%	33.4%	32.8%
40 - 50	25.8%	25.7%	26.8%	26.1%	23.2%	22.4%
Over 50	36.2%	19.7%	16.9%	17.5%	14.1%	18.8%
Average Age (Years)	44.4	39.6	39.1	39.4	37.6	38.9
Percentage Male	65.9%	64.8%	63.5%	66.4%	65.0%	65.0%

Source: SPI Research, February 2018

When comparing workforce demographics by organization size, in general the average age of the workforce is older for smaller firms as many experienced consultants leave large firms to start their own. The largest organizations have the highest percentage of employees under 30 as they invest in college recruiting. Large firms like Deloitte and Accenture provide an excellent introduction to the world of consulting because they provide structured on-boarding programs combined with career planning and progression.

By vertical market, the big three – IT, Management Consulting and hardware and networking are heavily male dominated with more than 70% male employees. Only accountancies and marketing and advertising firms have more female employees than male. They also have the youngest workforces with an average age of approximately 36 years. Government contractors employ the most over 50 employees with more than a third of their workers over 50. Many career military and government employees are able to retire early and move into contracting roles. Embedded cloud (SaaS) PSOs contain the most under age 30 employees with almost 1/3 of their employees in their 20s. They also have the fewest employees (only 7.6%) over age 50.

Table 97: Age of Workforce by Vertical Market

Age of Workforce	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Under 30	23.5%	22.9%	24.5%	18.2%	32.5%
30 - 40	30.6%	34.8%	32.3%	22.6%	38.9%
40 - 50	23.8%	27.4%	27.8%	26.3%	21.0%
Over 50	22.1%	14.9%	15.4%	32.9%	7.6%
Average Age (Years)	40.0	38.8	38.8	43.2	35.6
Percentage Male	64.7%	69.9%	70.0%	58.5%	65.9%

Source: SPI Research, February 2018

Table 98: Age of Workforce by Vertical Market

Age of Workforce	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Under 30	11.2%	29.2%	29.9%	24.4%	20.7%
30 - 40	30.8%	41.7%	37.4%	36.0%	29.8%
40 - 50	24.5%	15.8%	22.9%	26.6%	31.1%
Over 50	33.5%	13.3%	9.9%	13.0%	18.4%
Average Age (Years)	43.9	36.7	36.5	38.1	40.2
Percentage Male	61.7%	47.1%	49.4%	70.0%	60.5%

Source: SPI Research, February 2018

Employee Annual Attrition

Employee attrition or turnover is defined as the average number of employees who left the company, either voluntarily or involuntarily, over the past year divided by the number of starting employees. Voluntary attrition, employees who leave that are not asked to leave, is one of the most important key performance indicators in the services sector as employees are the most valuable resource. Involuntary turnover typically refers to an employer decision to terminate the employee. Reasons for involuntary turnover include poor performance, excessive absenteeism or violation of a workplace policy that is considered a terminable offense. Attrition due to layoffs, reduction in force or job elimination is typically involuntary because the employment relationship ends based on the employer's circumstances, not the employee's decision to leave. Annual attrition in the professional services sector has been steadily climbing since the recession ended. With the economy continuing to pick up, and more new jobs available, average attrition has climbed to 12.4% in 2017 from 7.2% in 2012 coming out of the recession.

Table 99 shows the correlation between voluntary attrition and revenue growth and profit. This table demonstrates the negative consequences of high voluntary attrition rates. As attrition rises, most other aspects of performance suffer. The probability of on-time project delivery decreases while project overruns increase. Remaining employees must pick up the pieces from exiting workers and must quickly come up to speed to reestablish client relationships. Clients are forced to back-track to reestablish previous decisions and vendor commitments.

Table 99: Impact – Voluntary Attrition

Employee annual attrition - Voluntary	Survey %	Rev. growth	Rec. to family/friends	Bid-to-win ratio	EBITDA
None	13.7%	9.3%	4.48	5.53	19.8%
1% - 5%	31.0%	7.1%	4.64	4.86	19.9%
5% - 10%	28.7%	10.0%	4.36	4.71	15.1%
10% - 15%	15.2%	9.0%	4.08	4.37	15.0%
15% - 25%	8.8%	7.0%	4.08	4.81	14.6%
Over 25%	2.6%	5.0%	3.73	4.23	8.0%
Total/Average	100.0%	8.5%	4.38	4.81	17.0%

Source: SPI Research, February 2018

The costs of high voluntary attrition permeate all aspects of the firm. Lower employee engagement influences the firm's ability to recruit top talent based on employee referrals. The very real cost to replace leaving employees shows up in 113 work days on average to find, recruit, hire and ramp new consultants. But this lost time is just the tip of the iceberg, as it does not measure lost productivity time for recruiters and managers nor the impact on the remaining workforce from taking over work after a valuable employee has left. SPI Research believes the real cost to replace a valuable consultant is more than $150,000 causing a big bottom-line profit impact and making it hard to increase revenue and margins when firms must backfill leaving employees.

Table 100: Impact – Involuntary Attrition

Employee annual attrition - Involuntary	Survey %	% of emp. Billable	Bid-to-win ratio	Rec. to family /friends	On-time project delivery
None	25.8%	77.1%	4.94	4.42	82.5%
1% - 5%	42.9%	76.4%	4.88	4.51	79.6%
5% - 10%	19.0%	74.4%	4.70	4.28	78.5%
10% - 15%	6.9%	73.0%	4.72	4.21	79.8%
15% - 25%	4.7%	72.3%	4.29	3.70	71.8%
Over 25%	0.7%	75.0%	2.17	3.67	85.0%
Total/Average	100.0%	75.7%	4.80	4.38	79.8%

Source: SPI Research, February 2018

Table 100 shows the correlation between involuntary attrition and on-time project delivery. Involuntary attrition or layoffs have a temporary positive impact on per consultant and per employee revenue yield as well as utilization because available work is performed by fewer employees. However, the long-term effects of involuntary attrition show up in lower top-line growth and long term poor employee engagement. Interestingly, voluntary attrition rises directly in response to involuntary attrition as non-impacted employees fear they will be next or become disenfranchised with their prospects for long-term career growth.

Organizational Structure

Table 101 depicts organization structure with functional predominant. This means most PSOs have defined functions for sales and marketing, project delivery, finance and operations, service engineering, human resources, etc. The second most prevalent structure is line of business or product-oriented meaning groups are organized by vertical industries or products. Matrix-oriented structures are favored, particularly by larger organizations which may have double-line reporting by geography, vertical, competency or product. Increasingly large organizations are creating technical and vertical competency centers of experts who are deployed to support geographical or account-based teams with specialized expertise. Geographic organizations are prevalent for new, young organizations as they expand city to city, state to state and country to country. Only 10% of organizations are structured primarily by account although account-specific teams exist within most large organizations.

Table 101: Primary organizational structure

Primary organizational structure	Survey %	Revenue growth	% of emp. billable	Employee attrition	Billable utilization	Project margin	EBITDA
Functional	33.7%	9.7%	76.7%	12.2%	70.6%	30.8%	14.5%
Line-of-business/product	26.2%	8.2%	74.5%	13.4%	72.6%	31.8%	16.5%
Matrix	15.3%	9.9%	73.3%	11.7%	71.5%	35.9%	18.5%
Account/Customer	11.8%	4.8%	79.7%	11.7%	75.7%	29.3%	20.8%
Geographic	9.0%	6.6%	76.3%	12.0%	67.8%	33.8%	17.4%
Other	4.0%	5.5%	72.0%	13.6%	66.7%	25.9%	24.6%
Total/Average	100.0%	8.3%	75.7%	12.4%	71.5%	31.7%	17.0%

Source: SPI Research, February 2018

Why Employees Leave

Why do employees leave? Obviously, employees leave for a variety of reasons, but in many cases there is one primary catalyst which is the reason for moving on. Table 102 shows the top reasons why employees leave professional services organizations. The number one rationale (40%) is "better opportunity" which translates to a better work environment, perhaps better compensation or more opportunity for advancement. "Other (20.6%)" moved into second place. "Other" covers a magnitude of issues – "work/life" balance or leaving the industry entirely. "Money" is the third most prevalent reason employees leave.

A younger, less traditional workforce requires challenging projects; exposure to hot new technologies and leading-edge clients plus training, communication and teamwork to remain engaged but money is often a determining factor. "Lack of career advancement" was cited as the primary reason to leave by 9.3%. Interestingly these firms experienced the least growth which would explain why career opportunities are limited. "Management dissatisfaction", "Stress" and "Travel" are also major reasons employees quit. Travel continues to be a major consulting industry downside, as employees oftentimes leave for less-interesting, but more stable internal positions. Fortunately, remote service delivery tools and the ability to deliver more work virtually are having a beneficial effect on reducing travel time, cost and employee burnout. Interestingly firms with the highest travel burden produced the best on-time project delivery and highest revenue per consultant. The Best-of-the-Best firms place a premium on their employees – finding ways to combine career development; challenging and exciting projects; with family/life/work balance and a measure of fun.

Table 102: Why employees leave

Why employees leave	Survey %	Org. Size (emp.)	Revenue growth	Employee attrition	On-time project delivery	Ann. rev./ consult (k)	Ann. rev./emp. (k)
Better opportunity	40.7%	378	8.3%	12.9%	79.4%	$194	$160
Other	20.6%	273	8.7%	9.3%	84.6%	$200	$166
Money	13.6%	271	8.7%	11.8%	79.0%	$179	$144
Lack of career advancement	9.3%	281	5.1%	14.8%	77.2%	$211	$184
Management dissatisfaction	7.0%	336	7.5%	15.3%	74.8%	$184	$135
Stress	4.9%	290	13.1%	13.5%	71.4%	$199	$142
Travel	4.0%	238	6.9%	11.6%	88.3%	$214	$163
Total/Average	100.0%	320	8.3%	12.3%	79.8%	$195	$159

Source: SPI Research, February 2018

Recommend Company to Friends and Family

One of the most important employee engagement measurements is whether an employee would recommend their company "as a great place to work" to their friends and family. More than any other key performance measurement in the Human Capital Alignment pillar, recommending one's company as a great place to work is considered the litmus test of employee engagement.

Table 103 shows the impact of workplace satisfaction. The good news is 52.8% of the organizations in the survey would highly recommend their work environment. Great places to work are characterized by high employee engagement, a strong culture of achievement and confidence in the future.

Table 103: Impact – Recommend company to friends and family

Recommend company to friends/family	Survey %	% of emp. Billable	On-time project delivery	% of annual revenue target	% of annual margin target
Definitely not	0.9%	57.5%	62.5%	73.8%	80.0%
Probably not	2.5%	75.0%	74.1%	86.1%	83.3%
Don't know	6.9%	69.0%	75.7%	87.9%	83.6%
Probably	36.9%	75.8%	78.2%	91.9%	88.4%
Definitely	52.8%	77.0%	82.1%	95.3%	90.9%
Total/Average	100.0%	75.8%	79.9%	93.1%	89.2%

Source: SPI Research, February 2018

Management-to-Employee Ratio

The management-to-employee ratio divides the number of employees by the number of people managers. Management-to-employee ratio (also referred to as "management span of control") is an important measurement of management effectiveness and is an indication of lean or excessive management overhead. The average management-to-employee ratio declined to 1 to 10 this year.

With a significant upturn in business, firms are starting to hire again and are finding the burden of recruiting and ramping new employees is putting tremendous pressure on already stretched managers. Few small and medium-size firms have effective management training programs, so we are seeing a significant number of "battle-field" promotions without the requisite support structure. The Best-of-the-Best organizations are starting to add "team leader" positions to groom the next generation of leaders.

Table 104: Impact – Management to employee ratio

Management to employee ratio	Survey %	Org. Size (emp.)	Revenue growth	Ann. Revenue /emp. (k)	Project margin
1:5	35.9%	183	6.5%	$154	30.1%
1:10	38.9%	289	8.3%	$158	32.1%
1:15	16.6%	440	10.1%	$162	33.1%
1:20	4.9%	669	12.6%	$170	36.2%
Over 1:20	3.7%	928	7.7%	$161	28.5%
Total/Average	100.0%	318	8.1%	$158	31.6%

Source: SPI Research, February 2018

SPI Research found Table 104 interesting because it shows the impact of management to employee ratios. Larger organizations have larger management span of control because presumably they have more support systems. The optimal management span of control appears to be 1 to 15 or 20 as these organizations reported high growth and high revenue per employee and project margins. A larger span of control reduces the cost of management overhead. It can be effective if employees clearly understand the work they are asked to perform and have a rich support structure of mentors, tools and knowledge to guide them, so they don't have to rely solely on management for direction.

The table compares the management-to-employee ratio to other key performance indicators for the 456 PSOs in the survey. 74.8% of the organizations maintain a 1:10 or less management to employee ratio. As the ratio increases, so do many of the key financial metrics. The key to profitable growth is finding the right balance of respected managers to employees. Integrated business applications and strong communication practices along with standardized methods, tools and knowledge sharing all contribute to higher productivity with less reliance on management overhead.

Time to Recruit and Hire for Standard Positions

SPI Research considers the length of time to recruit and ramp new employees to be very important determinants in overall performance and sustainable growth. "Ramping" time is critical because it not only focuses on making employees productive faster, but also reduces the non-billable time and cost of other resources who support the hiring and on-boarding process.

Most firms do not track the full cost of recruiting and hiring, but it is substantial (in many cases over 50% of the first-year new hire base salary). This year the average cost of recruiting is 0.7% of total revenue. The most mature firms create a dedicated recruiting function, armed with in-depth skill and personality profiles for targeted positions. Since all indicators point to a continuing talent shortage in PS – firms would be well-served to examine and improve their recruiting, on-boarding and training functions. Recruiting must be closely aligned with the sales pipeline and resource management plan.

Table 105: Impact – Time to recruit and hire

Time to recruit and hire for standard positions	Survey %	Billable util.	On-time project delivery	Project overrun	Real-time visibility
Under 1 month	9.1%	76.7%	83.7%	7.0%	4.09
30 - 60 days	46.2%	73.3%	79.5%	8.3%	3.64
60 - 90 days	32.6%	68.9%	79.0%	8.2%	3.70
90 - 120 days	9.1%	68.1%	78.7%	8.3%	3.50
Over 120 days	3.0%	68.3%	80.8%	10.2%	2.88
Total/Average	100.0%	71.5%	79.7%	8.2%	3.66

Source: SPI Research, February 2018

Table 105 compares the time required to recruit for standard positions (such as consultants) to other key performance indicators. As it takes longer to recruit and hire, billable utilization suffers, because current employees must spend more time helping with the process, which limits their billable time. Project overruns increase because more seasoned employees are tasked with time to hire and ramp new employees plus new hires are not available to fill required roles and may make mistakes due to inexperience. A key factor in longer recruiting times is the fact that these organizations report poor visibility to the sales and resource pipeline. Clearly organizations with long recruiting times need to do a better job of defining roles and starting the recruiting process in time to fill critical resource requirements. Maintaining a “warm pool” of candidates is a good practice.

Time for a New Hire to Become Productive

Table 106 shows 33.7% of the PSOs in the survey reported over 60 days for a new consultant to become productive. Well-structured on-boarding and mentoring programs are mandatory for organizations planning on significant growth. This year the average time for a new hire to become productive declined to 52.5 days down from 64.1 days in 2014. This 11.6-day improvement in ramping time is significant. At $150 per hour, faster on-boarding translates to a

Table 106: Impact – Time for a new hire to become productive

Time for a new hire to become productive	Survey %	Revenue growth	Billable util.	On-time project delivery	Real-time visibility
Under 1 month	35.8%	8.7%	75.9%	83.8%	3.77
30 - 60 days	30.4%	7.9%	69.1%	77.8%	3.68
60 - 90 days	16.4%	9.0%	72.5%	76.9%	3.59
90 - 120 days	11.0%	7.7%	66.8%	76.6%	3.51
Over 120 days	6.3%	6.3%	62.3%	81.0%	3.48
Total/Average	100.0%	8.3%	71.4%	79.9%	3.67

Source: SPI Research, February 2018

potential gain in revenue per consultant of $13,920 per year. This is one metric that has shown considerable improvement over the last five years as firms focus on improving their on-boarding programs.

Guaranteed Training Days per Employee per Year

The guaranteed number of training days per employee per year is the average number of training days budgeted each year per employee. Like the annual training budget, this indicator, while promised to employees, is not necessarily utilized, but does reflect the organization's commitment to employee development and shows the organization is investing in the future of its employees.

Across the benchmark the average cost of training is 1% of total revenue. Best-of-the-Best organizations mandate more than two weeks of training per year. Almost 10% of firms provide three weeks or more of training per year. Several Best-of-the-Best firms put new hires through intensive three-month scenario-based training programs where they work as a team to develop requirements, architect and implement real-world solutions. PSOs find investments in both technical and interpersonal skill building pay dividends.

In this year's benchmark, higher numbers of guaranteed training days positively correlate with net profit (Table 107). Access to high quality training is a major attraction driver. Many firms report they bring together the entire consulting team twice a year for skill-building, reinforcing the company's direction and strengthening collaboration and team-building. Team meetings give road warriors a break and allow them to establish new friendships and partnerships while rejuvenating. Several of the Best-of-the-Best firms include significant others and spouses in their annual events to thank them for holding down the fort while their road-warrior partners delight clients.

Table 107: Impact – Guaranteed training days

Guaranteed training per employee/year	Survey %	New clients	Rec. to family/friends	Ann. rev./ consult (k)	EBITDA
None	2.1%	15.0%	3.22	$156	9.6%
Under 5 days	33.2%	18.6%	4.31	$186	16.1%
5 - 10 days	41.6%	24.8%	4.45	$201	16.7%
10 - 15 days	13.6%	29.2%	4.48	$211	16.8%
15 - 20 days	3.1%	33.9%	4.54	$225	19.2%
Over 20 days	6.4%	36.2%	4.22	$172	26.3%
Total/Average	100.0%	24.2%	4.37	$195	17.0%

Source: SPI Research, February 2018

Well-Understood Career Path for all Employees

The survey asked if the organization provides a well understood employee career path, meaning as employees are hired and move within different positions, is there a planned next step for their career progression (Table 108). This KPI is important because it shows the firm's commitment to employee skill growth and career development. Even though this question is subjective, and answered by PS executives, who might have a bias, the results show how important career development is.

It shows employees with a well-defined career path are more likely to recommend their firm as a great place to work and are less likely to leave. Interestingly, employees work harder and are happier at firms with well-defined career paths. Numerous studies have shown that employees become increasingly productive with longer tenure so keeping them engaged is an investment worth making.

Table 108: Impact – Well understood career path

Well-understood career path for all emp.	Survey %	% of emp. Billable	Emp. attrition	Rec. to family/ friends	Billable util.
Strongly Disagree	5.4%	67.1%	17.5%	3.41	69.4%
Disagree	16.9%	70.1%	12.3%	4.12	69.4%
Neither Agree nor Disagree	37.7%	75.7%	11.9%	4.45	70.7%
Agree	32.3%	75.6%	10.4%	4.46	71.0%
Strongly Agree	7.7%	82.4%	12.0%	4.78	77.0%
Total/Average	100.0%	74.8%	11.8%	4.37	71.0%

Source: SPI Research, February 2018

Consultant Billable Utilization

SPI Research defines employee utilization on a 2,000 hour per year basis. Employee utilization is calculated by dividing the total annual billable hours by 2,000. This key performance indicator is central to organizational profitability. Utilization is consistently the most measured key performance indicator but must be examined in conjunction with overall revenue and profit per person along with leading indicators like backlog and size of the sales pipeline to become truly meaningful. Utilization is a major indicator of opportunity and workload balance. It provides a signal to expand or contract the workforce.

To improve margins, PS executives must continually focus on increasing employee billable utilization, as well as increasing the percentage of billable employees. The primary gain from increased utilization is a significant increase in net profit.

Table 109 shows the actual (not theoretical) benefits this year's firms experienced from increasing employee utilization. This year the results favored organizations who reported billable utilization from 80 90%. This level of utilization produced the best net margin. Understandably, firms reporting the highest levels of utilization also deliver the largest projects, making it easier to keep utilization high without the churn associated with short projects. Running a growing PS organization at greater than 80% utilization can produce strong profits but may not be sustainable over the long run as employees burnout and leave. At the other

Table 109: Impact – Billable Utilization

Employee utilization	Survey %	% of emp. billable	New clients	Project duration (man-months)	EBITDA
Under 50%	5.1%	61.0%	27.7%	17.9	11.7%
50% - 60%	10.6%	70.1%	22.7%	25.9	14.2%
60% - 70%	26.3%	74.7%	26.7%	26.1	15.7%
70% - 80%	32.3%	77.9%	24.4%	30.3	17.4%
80% - 90%	21.2%	82.0%	21.4%	48.4	22.1%
Over 90%	4.6%	83.4%	17.0%	50.2	10.9%
Total/Average	100.0%	76.5%	24.0%	32.8	17.0%

Source: SPI Research, February 2018

end of the spectrum, organizations who reported less than 50% utilization reported the worst metrics in all categories except attrition. The key to success is to have the right balance of meaningful work with enough time set aside for skill and client relationship building.

Although PS firms would like to abandon the billable utilization metric (and all the accompanying time tracking it entails), unfortunately there is no other metric which provides as good a picture of workforce productivity. Perhaps as more and more firms shift to fixed price work the focus on billable utilization will decline but if this is the case firms must ratchet up their focus on project accounting and budget to actual performance. But here again, how can budget to actual performance be measured without tracking work hours?

Annual Hours

Always one of the most anticipated metrics from the annual PS Maturity™ benchmark survey is the breakdown of work hours. Most organizations put a lot of focus on consultant time spent on both billable and non-billable tasks. Across the benchmark, billable utilization soared from 1,407 to 1,500 hours on average in 2017 (Table 110). This is the highest number of billable hours reported over the past 12 years. Embedded organizations reported an increase in billable hours from 1,348 to 1,467; independents also reported an increase in billable hours from 1,440 to 1,510. This increase in average billable hours means firms were able to realize over two work weeks of billable time per employee. With average bill rates across the services industry of $150 per hour this means may firms saw consultants bill over $12,000 per year!

The surge in billable hours came at the expense of vacation time which declined from 182 to 164 hours; training time declined almost a full week from 84 to 59 hours; administrative time declined from 150 to 132 hours and non-billable business development and projects hours declined by 18 and 19 hours respectively.

Table 110: Hours Worked by Organization Type and Geographic Region

Hours Worked	2016	2017	ESO	PSO	Amer.	EMEA	APac
Vacation / personal / holiday hours	182	164	169	163	159	211	175
Education / training hours	84	59	70	56	57	73	80
Administrative hours	150	132	143	129	135	107	130
Non-billable bus. dev. sales support	128	110	97	115	106	147	117
Non-billable project hours	130	111	130	105	110	109	119
Total Billable hours	*1,407*	*1,500*	*1,467*	*1,510*	*1,514*	*1,397*	*1,433*
Billable hours on-site	760	863	754	897	870	887	710
Billable hours off-site	647	637	713	613	644	510	723
Total hours	2,081	2,076	2,077	2,076	2,080	2,045	2,054

Source: SPI Research, February 2018

For the first time in over a decade, the number of hours worked on-site increased from 760 to 863 hours while off-site billable hours decreased from 647 to 637. A contributing factor to this change is that this year's benchmark included many more architect and engineering firms who still perform the majority of their work on-site.

Across all job titles, billable utilization is higher for independents than embedded service organizations as embedded organizations must contend with more non-billable work to support product sales or to fix product or relationship issues. The average ESO consultant spends 110 hours (2.75 weeks) on non-billable business development activities while the independents spend somewhat less at 97 hours.

Table 111 shows consultants in the Americas were billable 1,514 hours; EMEA based consultants billed the least hours at 1,397 and Asia Pacific consultants billed 1,433 hours. Workaholic Americans take shorter vacations; spend less time in training; and more time on non-billable administration. This year APAC firms invested the most in education and training followed by EMEA. Excessive administrative time usually results from not having enough billable work combined with poor systems and processes.

Table 111: Hours Worked by Organization Size

Hours Worked	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Vacation / personal / holiday hours	173	151	174	163	155	169
Education / training hours	53	53	66	63	48	65
Administrative hours	129	154	149	108	90	83
Non-billable bus. dev. sales support	150	111	121	94	86	77
Non-billable project hours	130	120	95	113	114	115
Total billable hours	*1,446*	*1,493*	*1,461*	*1,532*	*1,594*	*1,592*
Billable hours on-site	667	840	835	927	918	1,134
Billable hours off-site	779	653	626	605	676	458
Total hours	2,080	2,081	2,065	2,073	2,087	2,101

Source: SPI Research, February 2018

Table 112 shows firms become more productive as they grow from small to large. Both total work hours and billable hours per year increase as firms grow. This year the smallest organizations billed the least hours – averaging more than 100 fewer billable hours than the largest organizations. This table clearly shows why economies of scale are important for labor-based businesses as larger organizations are able to provide more training time and much less wasted time on administration.

By vertical, government contractors billed far more hours (1,856) than any other discipline. The reason for this is they are predominantly performing staff augmentation roles in which they are only paid when they are billable. IT consultants billed 1, 556 hours, closely followed by advertising and marketing employees who were billable 1,549 hours per year. Accountants billed the least hours at 1,196 but spent the most time in non-billable administration (213). Embedded SaaS consultants were second worst in billable hours at 1, 333 because they spent significant time in non-billable business development and sales support (134) as well as 181 hours in non-billable project time.

Table 112: Hours Worked by Vertical Market

Hours Worked	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Vacation / personal / holiday hours	157	153	164	199	162
Education / training hours	47	72	73	47	91
Administrative hours	151	98	182	134	165
Non-billable bus. dev. sales support	96	91	93	180	134
Non-billable project hours	96	99	145	82	181
Total billable hours	*1,533*	*1,556*	*1,418*	*1,432*	*1,333*
Billable hours on-site	1,014	824	607	800	372
Billable hours off-site	519	732	811	632	961
Total hours	2,080	2,068	2,075	2,075	2,067

Source: SPI Research, February 2018

Across the benchmark, most organizations reported their employees work a standard 2,080-hour year although this does not encompass all the personal hours today's workers spend responding to texts and email which barrages them 24 hours a day. Software, advertising and marketing and hardware consultants spent the most time on vacation while IT consultants spent the least. Accountants spent the most time in training which is bound to go up in 2018 based on new tax legislation in the US. Architects and engineers spent the least time on administration while management consultants spent the most. Accountants and embedded software consultants spend the most time in business development and sales support while government contractors spend the least. Other and SaaS PS spend the most time on non-billable project activities.

Table 113: Hours Worked by Vertical Market

Hours Worked	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Vacation / personal / holiday hours	175	158	216	238	161
Education / training hours	15	125	43	78	61
Administrative hours	16	213	60	55	131
Non-billable bus. dev. sales support	1	188	159	70	186
Non-billable project hours	8	175	68	170	187
Total billable hours	*1,866*	*1,196*	*1,549*	*1,484*	*1,358*
Billable hours on-site	1,613	708	834	735	810
Billable hours off-site	253	488	715	749	548
Total hours	2,079	2,053	2,095	2,094	2,083

Source: SPI Research, February 2018

Employee Location

A fascinating topic is the composition and location of employees in the new world of project-based work. This year SPI Research saw an increase in the percentage PS workers who work from headquarters locations with a corresponding decrease in home-based workers. Since many PSOS are now starting to focus on college hiring they are finding young workers perform better in office environments where they can get the support and mentoring they need to grow. Not surprisingly with protectionism growing in the Americas and EMEA, only a small percentage of workers were located in offshore locations. Almost a quarter of American PS workers work from home while only 12.3% of APac workers do. EMEA has the largest concentration of employees working from a headquarters office (57.4%). Embedded PSOs continued to increase their reliance on offshore workers from 6% to 6.9% while independent decreased their offshore workers from 6.2% to 4.3% Many PS firms are reducing their usage of offshore workers as labor costs and turnover have skyrocketed in favored offshore destinations like India. Offshore quality and security concerns are also starting to offset offshore labor cost advantages.

Table 114: Workforce Location by Organization Type and Geographic Region

Employee Location	2016	2017	ESO	PSO	Americas	EMEA	APac
Headquarters	46.1%	53.7%	34.9%	59.7%	53.9%	57.4%	43.2%
Branch offices	21.5%	20.1%	26.0%	18.2%	19.7%	17.1%	32.6%
Home based	27.5%	21.3%	32.1%	17.9%	22.1%	18.8%	12.3%
Offshore / Nearshore	4.9%	4.9%	6.9%	4.3%	4.4%	6.8%	11.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPI Research, February 2018

Table 115 shows the use of offshore workers is most prevalent in the largest firms and least prevalent in small firms with 10 to 30 employees. Smaller firms favor having employees report to the headquarters location while the majority of employees work from branch offices in the largest firms. The smallest firms have the most home-based employees as they are able to hire and assimilate senior hires wherever they can find them.

Table 115: Workforce Location by Organization Size

Employee Location	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Headquarters	59.5%	67.6%	54.9%	48.2%	35.8%	25.0%
Branch offices	1.2%	8.1%	20.2%	27.8%	39.2%	45.4%
Home based	33.0%	22.4%	20.7%	17.8%	20.5%	14.8%
Offshore / Nearshore	6.3%	1.9%	4.2%	6.1%	4.5%	14.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPI Research, February 2018

By vertical market, architects and engineers favor headquarters-based employees while government contractors and hardware consultants predominantly work from branch offices. Advertising and marketing firms use the most offshore workers, closely followed by IT consultancies. Architects and embedded software PS use the fewest offshore workers. Management consultants are predominantly home-based.

Table 116: Workforce Location by Vertical Market

Employee Location	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Headquarters	74.8%	42.4%	31.8%	46.4%	37.8%
Branch offices	20.1%	18.6%	21.8%	15.1%	20.8%
Home based	4.8%	29.9%	39.8%	32.5%	33.0%
Offshore / Nearshore	0.3%	9.1%	6.6%	5.9%	8.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

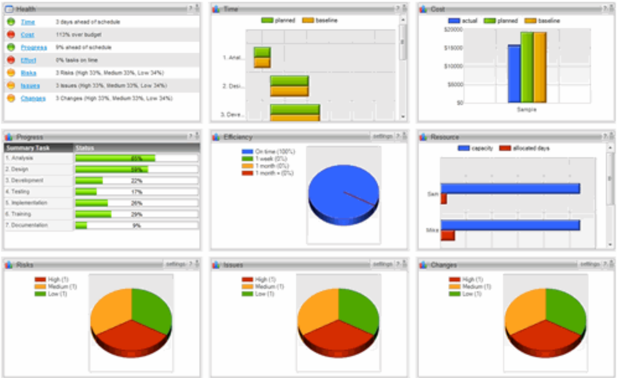
Source: SPI Research, February 2018

Table 117: Workforce Location by Vertical Market

Employee Location	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Headquarters	31.4%	84.8%	59.8%	29.5%	49.4%
Branch offices	55.5%	5.2%	16.3%	34.0%	15.7%
Home based	10.4%	5.8%	8.1%	33.9%	30.0%
Offshore / Nearshore	2.7%	4.2%	15.8%	2.6%	4.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPI Research, February 2018

10. Service Execution Pillar



The Service Execution Pillar measures the quality, efficiency and repeatability of service delivery. It focuses on the core activities for planning, scheduling and delivery of service engagements. Regardless of the maturity of every other area of the PSO it will not succeed unless it can successfully and profitably deliver services, with an emphasis on quality, timeliness and customer value.

The Service Execution pillar is where money is made in professional services. Work must be scoped, bid, sold, delivered and invoiced in order to generate revenue and maximize project margin. The alignment of sales, service and finance is critical for success. All project-related information (time, expense, project details and knowledge) must be captured to be invoiced and to improve the next service delivered.

In an increasingly competitive consulting marketplace, success most often comes down to operational excellence – with visibility and management controls in place to ensure effective resource and project management. Done right, gross project margins of more than 60% are possible. Done wrong, project yields can drop to single digits, or go negative.

Table 118 highlights the maturity levels in the Service Execution pillar, as the PSO moves from basic reactive "all hands-on deck" project delivery to greater efficiency, repeatability and higher quality service execution.

Table 118: Service Execution Performance Pillar Mapped Against Service Maturity

	Level 1 Initiated	Level 2 Piloted	Level 3 Deployed	Level 4 Institutionalized	Level 5 Optimized
Service Execution	No scheduling. Reactive. Ad hoc. Heroic. Scheduling by spreadsheet. No consistent project delivery methods. No project quality controls or knowledge management.	Skeleton methodology in place. Centralized resource mgmt. Initiating project mgmt. and technical skills. Starting to measure project satisfaction and harvest knowledge.	PSA deployed for resource and project management. Collaborative portal. Earned Value Analysis. Project dashboard. Global Project Management Office, project quality reviews and measurements. Effective change management.	Integrated project and resource management. Effective scheduling. Using portfolio management. Global PMO. Global project dashboard. Global Knowledge Management. Global resource management.	Integrated solutions. Continual checks and balances to assure superior utilization and bill rates. Complete visibility to global project quality. Multi-disciplinary resource management.

Source: SPI Research, February 2018

Strategic Resource Management for PSOs

Given market growth and an increasing talent shortage, effective resource management has become critical as the supply of qualified consultants is outstripped by the demand for services. Improving and maintaining high levels of billable utilization is a constant challenge requiring a delicate balance between demand (sales) and supply (delivery).

Resource management business processes

One of the most important elements of service execution is resource management and scheduling. SPI Research has developed a "Resource Management Maturity Model" in Table 119:

- ∆ ***Sales Pipeline:*** Integration of the sales project pipeline with resource requirements and availability.
- ∆ ***Resource Management:*** The process for scheduling and deploying resources. Resource management can be centralized or decentralized.
- ∆ ***Functional Interlock:*** Alignment between the sales project pipeline, the resource management process, the recruiting process, the human resource onboarding and skill development processes and the resources themselves.
- ∆ ***Human Resource Processes:*** Recruiting, onboarding, ramping, and resource skill development.
- ∆ ***Resources:*** The consultants and contractors available to deliver projects and engagements.

Table 119: The Resource Management Maturity Model

	Level 1 Initiated	Level 2 Piloted	Level 3 Deployed	Level 4 Institutionalized	Level 5 Optimized
Service Execution	No scheduling. Reactive. Ad hoc. Heroic. Scheduling by spreadsheet. No consistent project delivery methods. No project quality controls or knowledge management.	Skeleton methodology in place. Beginning to centralize resource mgmt. Initiating project mgmt. discipline. Starting to measure project satisfaction and harvest knowledge.	PSA deployed for resource and project management. Collaborative portal. Earned value analysis. Project dashboard. Global Project Management Office, project quality reviews and measurements. Effective change management.	Integrated project and resource management. Effective scheduling. Using portfolio management. Global PMO. Global project dashboard. Global knowledge management. Global resource management.	Integrated solutions. Continual checks and balances to ensure superior utilization and bill rates. Complete visibility to global project quality. Multi-disciplinary resource management.
Sales Pipeline	Sales pipeline and forecast is disconnected from scheduling. Reactive or no sales resource demand forecast or plan.	Standalone CRM and resource forecast. Limited visibility into resource schedule or available skills.	CRM and resource management applications deployed. Sales starts forecasting future resource and skill requirements by engagement.	Fully integrated CRM and Resource management. High levels of pipeline forecast accuracy. Ability to dynamically and automatically map the sales forecast to resource requirements.	Optimized and integrated CRM and resource management. Sales visibility into resource availability and skills. Strong analytic and query tools.
Functional Interlock	Reactive resource brokering and bartering. Sales picks and commits resource "favorites." Time-consuming manual scheduling.	Weekly resource brokering meetings to assign resources and discuss future projects and resources requirements.	Centralized resource management function handles the majority of resource requests and schedules. At least manual integration between CRM and PSA.	Centralized resource management function handles resource requests and schedules. Integrated with HR for recruiting and resource skill development.	Completely optimized and seamless sales -> resource management -> recruiting -> skill and career development processes.

	Level 1 Initiated	Level 2 Piloted	Level 3 Deployed	Level 4 Institutionalized	Level 5 Optimized
Consulting Resources	Reactive and ad hoc scheduling. No visibility to future projects. No career or skill plan. Broad job requirements but limited training or support. Firefighting leads to consultant burnout.	Project initiation and closeout processes. Some visibility into future projects. Some ability to plan and express project preferences. Training support to improve skills.	Central PMO and resource management provide methodology guidance and oversight. Ability to input skill and role preferences. Visibility to upcoming projects. Reasonable notice given for schedule changes. Integrated career & skill development plans.	Fully integrated systems and tools to support career and skill growth. Self-service employee portal allows employees to continually maintain and update skills and preferences. Visibility to preferred assignments. Career planning and training. Predictable schedule.	Global, on-site, off-site roles. Ability to view and bid on preferred assignments. Employees have input to and control over their career and skill progression. Specialized horizontal, vertical and technical roles. Career growth. High employee satisfaction.

Source: SPI Research, February 2018

Which resource management strategy is best?

To improve utilization, PSOs must improve resource management effectiveness. As the following chart shows, there are pluses and minuses to different resource management strategies. Green shading indicates “Best in Class” and red shading indicates “Worst in class” based on responses from 456 firms. This year Center of Excellence resource management delivered the best results while “Other” appears to deliver the worst results, particularly if resources are hoarded by account, prohibiting redeployment to more lucrative clients and services.

SPI’s research shows there may not be "one magic bullet" resourcing strategy that is clearly superior to all others. The five strategies that follow enable PSOs to manage talent and fulfill client demands. Although centralized resource management is the most prevalent strategy, each organization must create a resourcing strategy that works best for their business, with the ultimate goal of increasing utilization *and* client and employee satisfaction.

1. **Centrally-managed** – Most resource management pundits favor "centralized" resource management. It provides superior management visibility into the entire project backlog and level of skills required both today and in the future. In centralized resource management, a dedicated resource management team is responsible for managing the master resource schedule and making staffing decisions based on skills, availability, location, cost, etc. Centralized management is the most efficient way to manage a large workforce. In this year’s benchmark, centralized management produced high average billable utilization as well as good project margins and on-time project delivery and net profit (EBITDA).
2. **Local resource management** – Local resource management is the preferred form of resourcing for young organizations where the workforce is small enough to foster real esprit de corps, and employees wear many hats. Smaller organizations can't afford the overhead of a dedicated resource management function, as relationships and roles are fluid, requiring more local control and finesse. Staffing locally also provides the benefit of closer client relationships and less travel.
3. **By horizontal skill sets** – Managing resources by horizontal skill set is useful for developing best practices, repeatable processes and shared knowledge. For example, many firms have project and program managers report directly or indirectly to the Project Management Office (PMO). By

building affinity around "birds of a feather," project managers or specialized consultants can more easily share best practices and standardize methodologies, templates, etc. As organizations grow, a horizontal or competency-based overlay reporting structure can help firms develop repeatable best practices and deep, shared domain expertise while still enjoying the efficiency of centralized management.

4. **Account-based** – Resource management by account may be a good strategy for very large accounts where there is a strong backlog of projects, but account-based resourcing can cause big issues if account revenue dries up. An example was Electronic Data Systems' (EDS) reliance on revenue from General Motors. As the relationship with General Motors soured, and its fortunes began to wane, Electronic Data Systems was left holding the bag. The other drawback to account-based resourcing is that it narrows consultant range of experience as teams are not exposed to different business models and client challenges.

5. **Centers of excellence** – The current trend towards vertical Centers of Excellence (COE) was pioneered by Accenture over the last decade. The advantage of industry-specific "Centers of Excellence" is the development of deep industry domain knowledge. In theory, each Center of Excellence acts as a clearinghouse for specialized knowledge, expertise and solutions. Clients and prospects delight in seeing a "Vision of the Future" for their unique industry challenges. The downside of COE can be excessive overhead, the creation of an ivory tower mentality along with the inability to learn from emerging new horizontal and vertical trends. Further, use of horizontal skills sets and technologies outside the COE can become cumbersome and inefficient. Centers of Excellence are favored for outsourced consulting – particularly development and managed service centers where consultants are collocated to maximize collaboration, design and quality control while minimizing cost.

Table 120: Impact – Resource Management Strategy

Resource Mgmt. Strategy	Survey %.	Use Standard Delivery Tools	Project Margin	Employee Billable Utilization	On-time Delivery	EBITDA
Centrally Managed	49.4%	70.2%	32.4%	72.6%	80.4%	16.8%
Locally Managed	27.0%	68.3%	28.4%	70.8%	80.4%	15.9%
Center of Excellence	5.8%	74.3%	33.1%	79.3%	80.6%	16.4%
By Account	7.0%	69.3%	31.7%	70.9%	78.3%	20.0%
By Horizontal Skill Set	8.4%	73.1%	35.6%	64.5%	77.2%	15.5%
Other	2.4%	54.4%	33.4%	61.7%	76.7%	8.2%
Total / Average	100.0%	69.7%	31.6%	71.5%	79.9%	16.5%

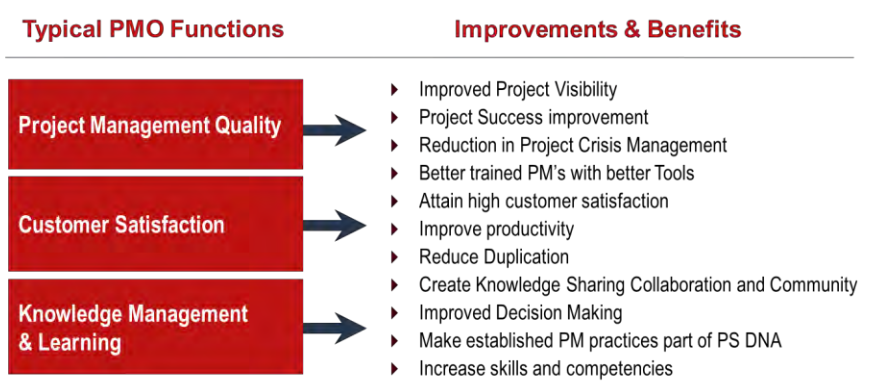
Source: SPI Research, February 2018

Table 120 shows 49.4% of respondents manage resource management centrally, with locally managed resource management coming in second at 27%. It is important to remember professional services organizations are based on the unique knowledge, skills and personalities of a highly motivated and compensated workforce. So, erring too far in making resource management more science than art may not always take best advantage of hard-to-find experts. Leading firms understand the skills required and available, and work toward providing additional training to improve employee performance, while ensuring individual travel, project-types and career aspirations are factored in. Investment in people, processes and systems allows these organizations to minimize employee attrition and drive utilization to high levels. SPI's research shows PSOs that create standard job positions clarify the skills their workers must have. Providing visibility and additional training helps increase both productivity and morale, both of which improve organizational performance.

The Role of the Project Management Office

PMOs are typically dedicated groups who create and maintain quality standards for project delivery. The primary goal of a PMO is to achieve benefits from standardizing and institutionalizing project management policies, processes, and methods. Over time, a PMO can become the source for guidance, documentation, and metrics related to the best practices involved in consistently managing and executing high quality projects (Figure 49).

Figure 49: Project Management Office Functions, Improvements & Benefits



Source: SPI Research, February 2018

The Project Management Institute (PMI) defines PMO maturity levels as follows:

- **Level 1 – Reactive (Initiated).** Project methods are not documented, few or no standards for controlling project delivery, communication, budgets or schedules exist. At this basic level the goal of establishing a PMO is to start codifying methods and tools while getting a handle on project schedules, budget to actual costs and time. A good first step is to develop a consistent project dashboard with defined criteria for "Red, Amber and Green" project status.
- **Level 2 – Repeatable (Piloted).** At this stage, organizations start adopting repeatable methods, tools and processes. The first step to move to level two is to consistently document the core project lifecycle methodology by defining levels, steps, tasks, methods and deliverables. By Level 2 organizations have established consistent processes for estimating, communication, requirements and risk and issue tracking. Level 2 organizations typically have started to implement a PSA (Professional Service Automation) solution to keep track of projects and resources.
- **Level 3 – Proactive (Deployed).** At this stage, organizations have moved from reactive project management and project oversight to proactive project governance. A standardized methodology is used for the majority of projects accompanied by regular project reviews. Standard escalation procedures are in place for over budget projects to ensure they get back

and stay on track. At this stage, a PMO (Project Management Office) is firmly established to provide oversight and guidance. Project and program managers may report directly or indirectly to the PMO, but they rely on it to help them solve complex project issues. At this stage a defined process exists for Knowledge Management and Collaboration to ensure project artifacts are centrally managed and continually refreshed to support continuous improvement.

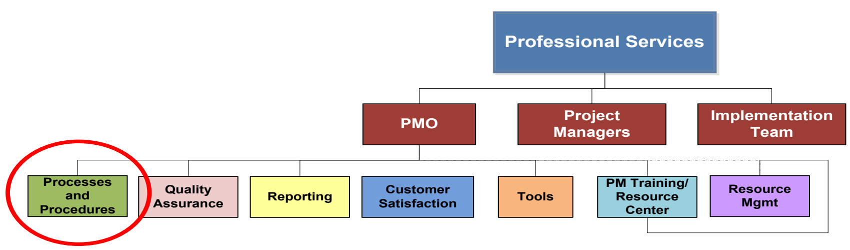
- ∆ **Level 4 – Measured and Innovative (Institutionalized).** At this stage, standard reporting and compliance has become innate throughout the organization. The quality and governance role of the PMO has expanded to become a "Center of Excellence" to codify and promote new innovations and capture and curate knowledge and intellectual property.
- ∆ **Level 5 – Optimized.** Characterized by continual improvement and collaboration. The PMO has moved beyond being the keeper of standards, quality and governance and has become a dynamic and intrinsic part of the way the business operates. Level 5 PMO organizations are constantly developing new tools and experimenting with ways to reduce cost while improving communication and consistency. The PMO has become a source of innovation and collaboration.

According to SPI Research, organizations who institute a PMO experience significant improvements in customer satisfaction, repeatability and margins. Instituting a PMO requires an investment in developing a consistent methodology and appropriate project governance to ensure projects stay on time and budget.

Establishing the Project Management Office Charter

Project Management Offices typically focus on improving project management quality through methodology development, project quality oversight and project manager training and certification. The PMO can also provide oversight for and the measurement of project and overall customer satisfaction. The PMO is the creator and keeper of the standard project delivery methodology and supporting forms, templates and standards. Figure 50 illustrates typical PMO charters including:

Figure 50: Typical PMO Charter



Establish Standard Processes and Procedures: *Develop and document standard processes and procedures for project implementation and communication . Support and maintain new and refined repeatable project processes.*

Source: SPI Research, February 2018

- ∆ Quality Assurance
- ∆ Project Reporting and score-carding
- ∆ Customer and project engagement satisfaction
- ∆ Methodology and tool development and standardization
- ∆ PM training and certification
- ∆ Knowledge Management repository and project artifacts

Service Execution Business Processes

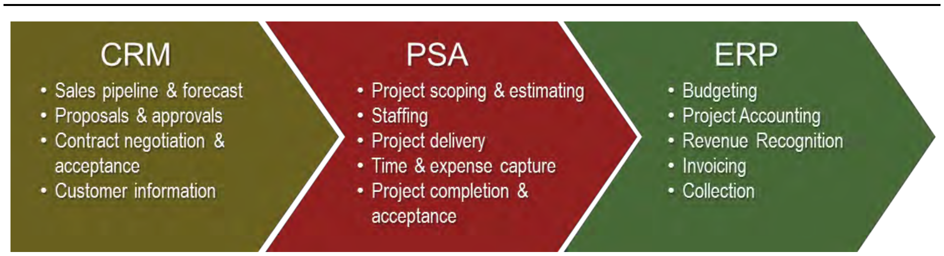
In today's economy, cash flow rules. Every organization must focus on cash flow to maintain a solid financial position and maximize profitability and liquidity. In service-oriented organizations this process begins with a client quote and ends once payment is received and the money is in the bank. This macro process of converting sales opportunities into paying customers is often referred to as "quote-to-cash," and its optimization is essential for financial well-being. The power of modern business applications is that they provide workflow, rules, alerts and reporting that mimic best practices in business management. Decades ago services businesses had few viable options as they were forced to build their own, or substantially customize manufacturing-oriented applications, to handle projects and resources. Now, PSA solutions provide modules that support essential business processes, including the critical "quote-to-cash" process (Figure 51).

Figure 51: Primary business processes cross multiple departments

Source: SPI Research, February 2018

PSA solutions are designed to integrate core business processes across the organization so that each department has a clear understanding of their roles and measurements and how they impact the organization's ability to succeed. Success can be defined in many terms, such as growth, profit, quality, streamlined operations or reduced administration and rework. Regardless, when everyone works with the same set of information and is focused on the critical path to quality completion of project-based work, results tend to improve.

Figure 52: Quote-to-cash process



Source: SPI Research, February 2018

Figure 52 shows quote-to-cash is a series of interrelated processes supported by client relationship management (CRM), PSA and enterprise resource planning (ERP) modules. To optimize these fundamental business processes, executives rely on the integration of essential business applications to provide visibility, transparency and control. Although each of these applications are offered on a stand-alone basis, the true power of managing the complete quote-to-profit business cycle is best accomplished by integrating best of breed applications together or purchasing an integrated suite of applications.

Survey Results

The following section reviews and analyzes 2018 PS Maturity™ benchmark results from 456 professional services organizations. In this section, SPI Research analyzes 19 Service Execution KPIs that are critical to attaining superior service delivery performance. In this year's study SPI Research included project metrics and margins in this pillar, we also added a question on the number of projects completed over the course of the year.

Table 121: Service Execution Pillar 5-year trend

Key Performance Indicator (KPI)	2013	2014	2015	2016	2017
Project staffing time (days)	9.48	9.41	10.40	8.68	8.94
Number of projects delivered per year	NA	NA	NA	372	398
Average revenue per project (k)	$189	$189	$225	$163	$171
Concurrent projects managed by PM	5.16	4.23	5.77	5.56	6.18
Project staff size (people)	3.76	4.85	4.70	4.17	4.45
Project duration (months)	5.15	5.57	6.21	5.44	6.37
Projects delivered on-time	77.3%	78.3%	76.1%	78.1%	79.8%
Projects canceled	1.9%	1.7%	2.6%	2.0%	2.0%
Project overrun	8.5%	8.9%	10.0%	8.4%	8.3%
Use a standardized delivery methodology	65.1%	66.2%	64.6%	71.2%	69.7%
Project margin for time & materials projects	36.3%	36.3%	33.7%	35.5%	31.7%
Project margin for fixed price projects	37.6%	35.8%	33.0%	34.9%	31.6%
Project margin — subcontractors, offshore	28.8%	28.4%	26.2%	28.3%	23.0%
Effectiveness of resource management process	3.47	3.59	3.60	3.59	3.50
Effectiveness of estimating processes and reviews	3.49	3.37	3.55	3.56	3.55
Effectiveness of change control processes	3.36	3.26	3.44	3.45	3.38
Effectiveness of project quality processes	3.38	3.36	3.58	3.61	3.62
Effectiveness of knowledge management processes	3.04	3.01	3.36	3.23	3.31

Source: SPI Research, February 2018

While year-over-year improvements are important, it is useful to see the subtle changes in service execution by examining trends over the past five years (Table 121). Several positive trends are shown:

faster project staffing times; more concurrent projects per project manager; larger project staffs and duration; more projects delivered on-time and fewer project overruns. On the negative side, project margins declined this year. The greatest decline was shown in subcontractor margin. Fortunately, in this year's study the average price per project improved from $163,000 in 2016 to $171,000 in 2017. Average project duration grew to 28.34 man-months, up from 22.68 man-months last year.

Much of the improvements are due to the increased use of Professional Services Automation (PSA) solutions, which enable PSOs to incorporate best practices and quality into the work they do.

Table 122: Service Execution KPIs by Organization Type and Geographic Region

Key Performance Indicator (KPI)	2016	2017	ESO	PSO	Amer.	EMEA	APac
Number of projects delivered per year	372	398	480	371	437	131	225
Average project staffing time (days)	8.68	8.94	10.44	8.44	9.00	8.36	9.00
Number of projects delivered per year	372	398	480	371	437	131	225
Revenue per project (k)	$163	$171	$274	$137	$178	$123	$135
Concurrent projects managed by PM	5.56	6.18	6.90	5.95	6.50	4.04	4.68
Average project staff (people)	4.17	4.45	4.82	4.33	4.52	4.15	3.73
Average project duration (months)	5.44	6.37	6.53	6.32	6.73	4.36	3.75
Projects delivered on-time	78.1%	79.8%	79.0%	80.0%	80.0%	75.9%	83.9%
Projects canceled	2.0%	2.0%	1.8%	2.1%	2.1%	1.6%	1.1%
Average project overrun	8.4%	8.3%	8.3%	8.2%	8.4%	8.3%	4.7%
Use of a standardized delivery meth.	71.2%	69.7%	68.8%	70.0%	69.7%	64.7%	79.5%
Project margin for T&M projects	35.5%	31.7%	31.9%	31.6%	31.0%	35.5%	37.0%
Project margin for fixed price projects	34.9%	31.6%	32.2%	31.5%	30.9%	35.4%	38.4%
Project margin — subs, offshore	28.3%	23.0%	26.4%	21.9%	22.0%	28.2%	28.4%
Effect. of resource management	3.59	3.50	3.40	3.54	3.49	3.62	3.55
Effect. of estimating and reviews	3.56	3.55	3.53	3.56	3.53	3.61	3.75
Effect. of change control	3.45	3.38	3.43	3.36	3.34	3.62	3.60
Effect. of project quality	3.61	3.62	3.48	3.67	3.64	3.46	3.60
Effect. of knowledge management	3.23	3.31	3.13	3.37	3.32	3.32	3.15

Source: SPI Research, February 2018

Project staffing times have decreased over the past five years by over 30%. It also shows independents staff faster than embedded service organizations, which makes sense due to the complexities of hardware and software installation that the embedded service organizations must contend with. North American-based firms deliver almost three times as many projects as EMEA-based firms and twice as many as APAC headquarters firms. Projects are larger in the Americas, averaging 30.4 man-months compared to 18 man-months in EMEA 13.98 man-months in APAC.

Commensurately, Americas-headquartered PSOs (374 PS employees) are 2 times larger than those headquartered in EMEA (181 PS employees) and almost 3 times larger than those headquartered in Asia-Pacific (139 PS employees) so it makes sense that they deliver more projects. Asia-Pacific headquartered firms delivered smaller projects with fewer employees, causing more resource churn.

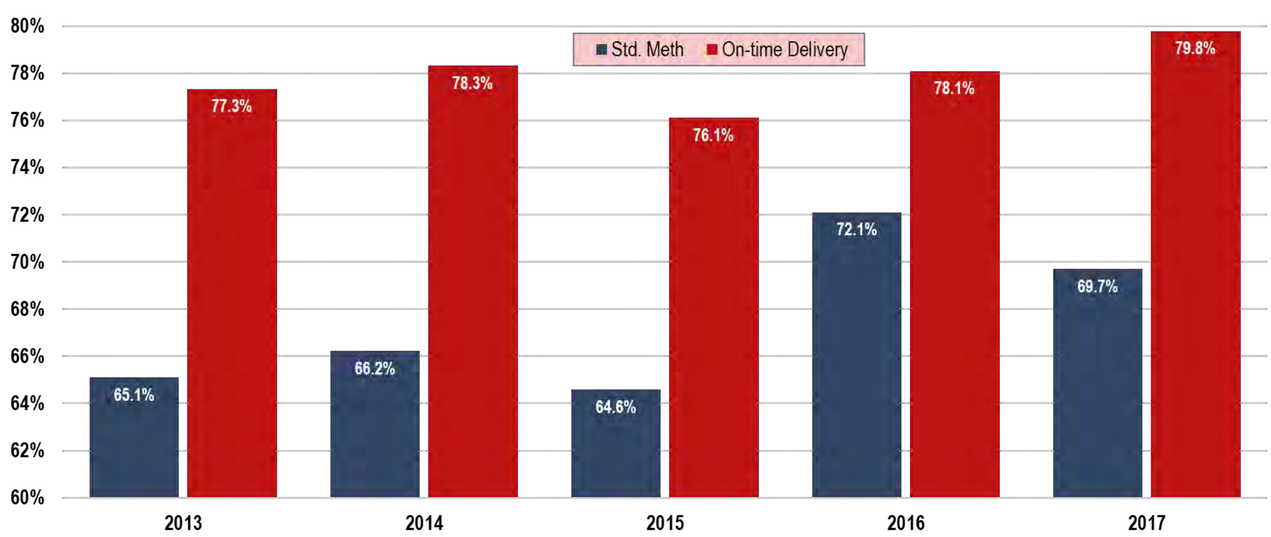
Project cancellation rates have dropped over the past five years. Today, PSOs rarely have projects cancelled, but when they do, they throw a monkey wrench into overall operations. Resources must be reallocated, and costs may be absorbed by the PSO. APAC led the way with the fewest projects canceled (1.1%) while the Americas experienced almost twice the number of cancellations (2.1%).

This benchmark highlights services-driven organizations have become more focused on efficiency than they were five years ago. Project overruns have gone down as the use of standardized delivery methodologies has increased. Project margins have decreased slightly over the past five years, however, not significantly. APAC delivers the best project margins and the Americas delivers the worst.

Today's project managers receive more training and PMI/PMP certification than ever before. At the same time, the nature of projects is shifting towards more configuration, workflow analysis, user interfaces and report design away from the complex, custom mega projects of the past making them somewhat easier to manage and keep within scope. A host of accelerators, configuration, project and knowledge management tools have come to market to enhance knowledge sharing and collaboration while facilitating more natural oversight, guidance and real-time quality reviews to mitigate risks.

Figure 53 shows the strong correlation between using standardized delivery methods and tools with on-time project delivery. The good news is that PSOs are doing a better and better job of using standardized delivery methods and PSA leading to improvements in on-time delivery.

Figure 53: Standardized Delivery Methodology use mapped against On-time Delivery 5-year trend



Source: SPI Research, February 2018

Table 123 shows the differences in service execution metrics by size of organization. As one might expect, the smallest organizations staff faster than larger organizations, and do a good job of delivering projects on-time. As one might also expect, the number and size of projects increases proportionately to organization size with the largest organizations delivering projects which average 59-man months (almost 5 years). Given the size, scope and complexity of these mega projects, the largest firms average project margins of less than 30%. With the exception of subcontractor margin, project margins for the smallest organizations were very respectable.

Table 123: Service Execution KPIs by Organization Size

Key Performance Indicator (KPI)	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Average project staffing time (days)	6.89	9.10	7.20	10.47	11.18	12.20
Number of projects delivered per year	82	133	253	458	1,596	988
Revenue per project (k)	$48	$121	$142	$211	$339	$332
Concurrent projects managed by PM	6.29	6.34	6.30	6.05	6.16	5.33
Average project staff (people)	2.99	3.35	4.26	5.23	5.51	7.77
Average project duration (months)	5.29	5.89	6.63	6.20	7.31	7.64
Projects delivered on-time	81.1%	81.9%	76.7%	81.0%	79.9%	81.8%
Projects canceled	3.0%	2.0%	1.9%	1.8%	1.5%	2.4%
Average project overrun	7.6%	8.3%	8.6%	8.4%	6.1%	9.4%
Use of a standardized delivery meth.	61.7%	72.5%	69.5%	67.4%	75.5%	71.5%
Project margin for T&M projects	33.1%	31.3%	31.4%	33.0%	32.3%	27.4%
Project margin for fixed price projects	34.3%	31.4%	32.3%	30.6%	31.6%	29.4%
Project margin — subs, offshore	24.2%	20.1%	24.1%	23.5%	23.3%	23.7%
Effect. of resource management	3.64	3.36	3.50	3.52	3.75	3.50
Effect. of estimating and reviews	3.71	3.60	3.47	3.50	3.72	3.52
Effect. of change control	3.39	3.40	3.27	3.36	3.59	3.62
Effect. of project quality	3.50	3.58	3.75	3.56	3.44	3.66
Effect. of knowledge management	3.40	3.30	3.36	3.22	3.28	3.31

Source: SPI Research, February 2018

SPI Research found it interesting that smaller organizations also gave themselves higher marks for overall project management delivery, in terms of the effectiveness of resource management, estimating, change control, project management and knowledge management. While not the highest marks in all of these areas, they still felt as though they could deliver projects more efficiently and effectively than their larger peers.

Tables 124 - 125 show service execution metrics by vertical market. Remarkably, many service execution metrics are very similar across markets. Because SPI Research added the number of projects delivered each year, it is interesting to see how many fewer projects were delivered by accountancies than in other PS segments. Government Contractors do the best job of on-time project delivery. Accountancies and SaaS PSOs reported the worst on-time project delivery at 69.2% and 73% respectively.

Marketing and advertising agencies deliver hundreds, if not thousands, of small projects per year. Because of the creative nature of their work their use of standardized methods and tools is very low (60%). The whole field of marketing and advertising is changing dramatically with the rich brand-building agency retainers of the past giving way to sophisticated multi-media campaigns which combine search engine optimization with social media. Marketing and advertising agencies are finding they must do a better job of resource management.

Table 124: Service Execution KPIs by Vertical Market

Key Performance Indicator (KPI)	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Surveys	153	103	45	45	29
Average project staffing time (days)	8.38	9.60	5.94	11.38	7.59
No. of projects delivered per year	447	151	156	559	204
Revenue per project (k)	$118	$159	$168	$177	$83
Concurrent projects managed by PM	7.47	4.53	3.98	6.98	8.05
Project staff size (people)	4.43	4.58	3.17	3.94	3.64
Project duration (months)	7.98	5.38	4.49	5.14	4.70
Projects delivered on-time	79.0%	81.2%	84.5%	76.5%	73.0%
Projects canceled	2.4%	1.5%	1.9%	2.0%	1.8%
Project overrun	9.0%	7.2%	7.3%	9.3%	9.2%
Use a std. delivery methodology	72.1%	69.6%	65.4%	63.8%	68.6%
Project margin for T&M projects	25.3%	36.5%	37.9%	33.7%	33.4%
Project margin for fixed price projects	25.4%	35.8%	41.4%	34.0%	35.0%
Project margin — subs, offshore	14.7%	27.9%	24.8%	28.5%	35.2%
Resource management	3.35	3.68	3.62	3.49	3.31
Estimating and reviews	3.47	3.65	3.55	3.34	3.65
Change control	3.13	3.50	3.58	3.56	3.15
Project quality	3.69	3.61	3.74	3.56	3.27
Knowledge management	3.48	3.20	3.37	2.98	3.15

Source: SPI Research, February 2018

Software, hardware and networking providers and government contractors complete more projects than their peers. Accountancies, Marketing and Advertising, and SaaS PSOs deliver the smallest projects. Government contractors and architects and engineers derive the least profit from their projects and the lowest margin on their subcontractors. Hardware and networking providers and accountancies reported the lowest use of standardized methods.

Table 125: Service Execution KPIs by Vertical Market

Key Performance Indicator (KPI)	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Surveys	18	8	8	6	41
Average project staffing time (days)	16.96	7.08	5.94	7.50	8.88
No. of projects delivered per year	887	56	3,440	488	461
Revenue per project (k)	$1,010	$75	$66	$141	$161
Concurrent projects managed by PM	6.17	4.58	6.50	8.00	6.04
Project staff size (people)	9.87	3.58	6.75	4.88	4.16
Project duration (months)	13.30	4.92	5.13	4.63	5.51
Projects delivered on-time	93.0%	69.2%	74.3%	82.5%	79.0%
Projects canceled	0.8%	2.2%	2.1%	0.8%	2.7%
Project overrun	3.8%	10.0%	10.7%	8.1%	8.6%
Use a std. delivery methodology	80.8%	56.7%	60.0%	55.0%	75.3%
Project margin for T&M projects	21.4%	29.2%	37.9%	31.3%	36.6%
Project margin for fixed price projects	21.5%	20.8%	30.7%	28.8%	35.3%
Project margin — subs, offshore	11.4%	17.5%	32.5%	26.3%	22.0%
Resource management	3.18	3.33	3.25	3.25	3.79
Estimating and reviews	3.50	3.33	3.63	3.25	3.79
Change control	3.33	3.33	3.50	4.25	3.53
Project quality	3.50	3.33	3.50	3.75	3.71
Knowledge management	3.58	3.00	3.25	3.25	3.48

Source: SPI Research, February 2018

Project Staffing Time

Table 126: Impact – Project staffing time (days)

Average project staffing time (days)	Survey %	Project overrun	Real-time visibility	Project margin	EBITDA
Under 5 days	41.5%	8.1%	3.85	33.0%	18.0%
5 - 10 days	26.6%	8.1%	3.65	32.6%	16.2%
10 - 15 days	12.3%	6.7%	3.42	29.7%	16.0%
15 - 20 days	7.0%	8.0%	3.46	31.5%	17.2%
Over 20 days	12.6%	10.2%	3.44	28.9%	14.4%
Total/Average	100.0%	8.2%	3.66	31.9%	16.8%

Source: SPI Research, February 2018

Average project staffing time in 2017 is 8.9 days, approximately 20% lower than the 10.4 days two years ago. ESOs reported longer staffing times (10.44 days) than their independent counterparts (8.44 days). This key performance indicator is important because it is an early warning sign of too much demand when it takes longer and longer to assemble the right team. It is a leading indicator of tightening resource availability and can be a signal to start recruiting and hiring. Rapid resource deployment can only be attained with accurate visibility to current and future demand along with the right mix of required resource skills, schedules and preferences.

Number of Projects Delivered Per Year

In this year's benchmark SPI Research added the total number of projects delivered each year. This key performance indicator shows the variety of projects delivered. Many firms deliver a wide range of projects including short, introductory assessments which may lead to large, complex, multi-year projects spanning multiple geographies.

Many cloud PSOs remotely deliver a host of small, fast projects often with resources juggling multiple projects and clients at the same time. Technology oriented firms are improving their use of structured delivery methodologies, that are repeatable, to maximize margins and shorten delivery time. However, many clients require more complicated and longer duration projects, which helps maximize billable utilization, but creates a whole host of other issues associated with risk, on-time delivery, cost overruns and reduced client satisfaction.

Organizations in North America complete significantly more projects than their peers in the European and Asia-Pacific markets.

Table 127: Number of Projects Completed Annually

Parameter	Projects Completed
Survey Average	398
ESO	480
PSO	371
America	437
EMEA	131
APAC	225
Under 10	82
10 -30	133
31 - 100	253
101 - 300	458
301 - 700	1,596
Over 700	1,208

Source: SPI Research, February 2018

Revenue per Project

The average revenue per project is calculated by dividing the total revenue of the service organization by the total number of projects delivered. This KPI provides insight into the size, scope, and duration of projects. Many PSOs complete many small projects along with a few larger ones, which may skew revenue per project. Wide variability in project size stresses resource management predictability.

Project size has varied greatly over the past five years. In 2017 it is $173,000 with a wide variance in project size reported by ESOs ($274K) compared to PSOs ($137K). Line of business buyers tend to prefer smaller projects, which are faster in duration, complexity and cost. Software PSOs led the way this year with the largest projects at $193K. Marketing and advertising firms had the smallest projects, averaging $66K. Accountancies also delivered small projects averaging $75K.

Although net profit margin is not directly related to project size it is generally harder to make money on small projects. Small projects can strain utilization levels and cause resource churn, meaning effective resource management and service packaging are critical. If the majority of projects are small, PSOs must focus on efficiency and repeatability and strive to reduce cost and churn.

The worst possible scenario is a series of short projects requiring unique skills with little potential for repeat or referral business. The trend toward shorter, faster, more iterative projects bodes well for project success and client satisfaction, but adds additional business development costs and resource scheduling strain to quickly staff projects and dynamically reassign resources.

Table 128: Impact – Revenue per project

Average revenue per project (k)	Survey %	Sales pipeline	Billable util.	% of annual revenue target	% of annual margin target
Under $25k	18.8%	140%	67.7%	91.4%	85.7%
$25k - $50k	19.8%	161%	69.8%	92.9%	89.5%
$50k - $100k	22.7%	172%	71.6%	94.5%	90.1%
$100k - $250k	20.0%	166%	71.2%	91.5%	88.2%
$250k - $500k	11.7%	218%	76.7%	93.3%	90.8%
$500k - $1mm	3.9%	213%	75.7%	94.2%	90.0%
Over $1mm	3.2%	321%	80.4%	96.3%	94.4%
Total/Average	100.0%	174%	71.5%	92.9%	89.0%

Source: SPI Research, February 2018

Table 128 correlates revenue per project with other key metrics to show the impact of project size. All metrics improve with larger projects including the size of the sales pipeline; billable utilization and percentage achievement of annual revenue and margin targets. If not carefully managed, mega-projects can deliver big losses and unwarranted levels of risk. It is important to note that the use of standard project methodologies and project management governance practices must increase with project size and complexity. The good news is that the project management discipline has improved significantly over the past 20 years with many organizations investing in PMI training and certification along with project governance tools.

Concurrent Projects Managed per Project Manager

The number of concurrent projects managed by a project manager is a measurement of project management efficiency and effectiveness. It is also a good indicator of project complexity and risk. Larger more complex projects require more skilled, dedicated project or program managers, while multiple, smaller concurrent projects tax the scheduling and multi-tasking ability of even the most skilled project managers. Typically, firms use a 20-20 rule for project management, 20% of the overall cost of the project is allocated to project management and a project manager is usually assigned at least 20% of his/her time to a given project. Project management effort is most intense at the beginning and end of the project.

Over the past five years project managers have taken on more and more concurrent projects with the average number of concurrent projects now standing at 6.18. ESO project managers manage more projects than independents at approximate 7 while independents manage 6. The highest project load by vertical is for cloud PSOs who ask their PMs to concurrently manage 8 projects. European project managers are tasked with the fewest concurrent projects at only 4.

Table 129 shows the best results for PMs who manage over 11 projects which is really a ridiculously high number. These numbers are achieved because many providers do not use project managers at all for projects that are less than $50K. For these smaller projects, project team members are tasked with delivery and project management. One cannot underestimate the importance of structured service delivery methodologies, which make it much easier to manage multiple projects. The greater the number of projects managed shows a higher net profit, meaning less overhead on a per project basis. The percentage of the workforce in dedicated project management roles is declining in favor of tasking either business consultants and/or technical consultants to perform this role in addition to their own billability.

Table 129: Impact – Concurrent projects per project manager

Concurrent projects per PM	Survey %	On-time project delivery	Std. del. meth. used	Quarter. Backlog	EBITDA
1 - 2	18.0%	79.3%	68.6%	43.1%	14.9%
3 - 5	37.7%	80.9%	69.5%	45.2%	14.5%
6 - 8	20.2%	77.2%	71.5%	46.5%	17.8%
9 - 11	8.5%	76.5%	73.4%	47.9%	17.5%
Over 11	15.6%	81.6%	65.7%	50.8%	22.6%
Total/Average	100.0%	79.6%	69.5%	46.2%	16.8%

Source: SPI Research, February 2018

Project Staff Size

Since 2014 average project staff size has hovered around 5 however each year we have seen the duration of projects increase from an average of 5 months to now almost 6.5 months. With economic recovery, projects are enlarging, helping PSOs improve billable utilization. The trend toward fixed-price, fixed-time engagements forces PSOs to complete work on-budget, as well as on-time to maximize profits.

Shorter, more iterative, "agile" projects usually result in improved project value and ROI plus clients can cancel projects that fail to meet objectives. But smaller, faster projects make it more difficult to plan and schedule resources, increasing resource management complexity and bench time, which reduces overall profitability. This situation creates more resource churn, and must be accounted for in terms of higher bill rates or better efficiency and lower overhead.

Table 130 shows that 78% of projects have five or fewer people. It also shows an increase in billable utilization as the project team size gets larger. However, only 5.7% of projects have more than nine people on them. Overall firm profitability increases with project team size because firms have greater visibility and lower resource churn with large project

Table 130: Impact – Average project staff size

Average project staff (people)	Survey %	Org. Size (emp.)	% of emp. Billable	Ann. rev./ consult (k)	Project margin
1 - 2	22.2%	101	75.4%	$208	36.5%
3 - 5	55.8%	201	75.6%	$197	30.4%
6 - 8	16.2%	736	76.4%	$175	30.2%
9 - 11	1.4%	913	75.0%	$160	33.3%
Over 11	4.3%	1,566	77.5%	$200	25.4%
Total/Average	100.0%	335	75.7%	$195	31.6%

Source: SPI Research, February 2018

teams. Today's PSOs must learn to effectively manage a project portfolio of both short and long projects. Effective resource management, use of standard methods, tools and templates and high-quality project management are best practices regardless of project size.

Project Duration

The average project duration, expressed in months, depicts the effectiveness, or lack thereof, of selling longer term projects. The average project duration, like average project staff size, is important in that it shows the average length and scale of today's projects. Longer projects are easier to staff but are not necessarily more profitable because longer and larger projects may involve significantly more risk and complexity.

Table 131 shows almost two-thirds of the projects are six months or less in duration while the other third are longer. It also shows billable utilization increases as the project duration increases. Longer projects enable organizations to keep people working on the same project without bouncing around. This increase in billable utilization also shows up in higher revenue per billable consultant, as well as per employee. The largest projects produced the best metrics across the board.

Table 131: Impact – Project Duration

Project Duration (months)	Survey %	Billable Utilization	On-time project delivery	Revenue per billable consult. (k)
Under 1	3.6%	70.7%	80.4%	$185
1 - 3	21.2%	69.4%	79.7%	$200
3 - 6	35.1%	70.8%	78.7%	$191
6 - 9	16.5%	72.2%	77.9%	$204
9 - 12	9.5%	74.5%	82.3%	$172
Over 12	14.1%	74.8%	82.4%	$207
Total/Average	100.0%	71.6%	79.7%	$196

Source: SPI Research, February 2018

On-time Project Delivery

The percentage of projects delivered on time is a measurement that divides the number of projects completed on-time by the total number of projects. This KPI is critical for billable service organizations, because when it decreases, both profitability and client satisfaction decline (Table 132). Unfortunately, on-time project delivery rates tend to be less than 80% on average for PSOs. APAC-based firms do the best job of on-time delivery

Table 132: Impact – Projects delivered on-time

Projects delivered on-time	Survey %	Project overrun	Std. del. meth. used	Real-time visibility	Project margin
Under 40%	2.4%	21.3%	54.0%	3.00	25.8%
40% - 60%	6.0%	18.6%	58.8%	3.16	31.2%
60% - 70%	11.6%	12.2%	63.8%	3.41	32.0%
70% - 80%	21.7%	8.6%	66.7%	3.72	31.5%
80% - 90%	29.0%	6.4%	72.4%	3.75	31.5%
Over 90%	29.2%	4.9%	74.4%	3.80	32.7%
Total/Average	100.0%	8.2%	69.5%	3.67	31.7%

Source: SPI Research, February 2018

(83.9%) while EMEA-based firms do the worst (75.9%). The table clearly shows the impact of poor on-time project delivery as every aspect of service execution worsens. The root cause of poor project execution is a lack of visibility and taking on projects without adequate preparation, skills or repeatable frameworks. On-time delivery is an extremely important key performance indicator because it impacts both client satisfaction and the ability to take on new projects plus it takes a heavy toll on profitability.

Project Cancellation

The project cancellation rate represents the number of projects canceled divided by total projects. In billable professional services organizations, the project cancellation rate is typically quite low when compared to internal IT organizations. However, it is important because if projects are canceled the organization must scramble to reallocate resources to keep utilization rates high, not to mention strive to improve the damaged client relationship.

Table 133: Impact – Projects cancelled

Projects canceled	Survey %	Bid-to-win ratio	Billable util.	Project overrun	Project margin
None	15.0%	5.04	72.8%	6.3%	32.0%
0% - 1%	32.8%	4.90	72.4%	7.1%	31.1%
1% - 2%	23.0%	4.77	70.1%	9.0%	32.2%
2% - 5%	20.7%	4.67	72.6%	9.2%	32.7%
5% - 7%	3.3%	5.11	71.9%	9.3%	34.6%
7% - 10%	3.8%	4.25	69.7%	11.2%	27.7%
Over 10%	1.4%	3.75	58.3%	20.0%	13.9%
Total/Average	100.0%	4.81	71.7%	8.3%	31.6%

Source: SPI Research, February 2018

As SPI Research has shown, project cancellation rates have varied for the past five years, from a low in 2014 of 1.7%, to a high of 3.7% in 2012. The average project cancellation rate in 2017 is 2%. ESOs reported lower cancellation rates (1.8%) compared to independents (2.1%). Table 133 shows the correlation between project cancellation rates and win ratios, utilization, project overruns and project margin. While it is fairly obvious that having low to no projects cancelled is good, it does reflect the importance of proper planning and execution as well as great client relationships to ensure a good project fit from the start.

Table 134: Impact – Average project overrun

Average project overrun	Survey %	% of emp. Billable	On-time project delivery	% of annual revenue target	% of annual margin target
Never	5.4%	78.6%	91.4%	95.3%	93.9%
0% - 5%	41.8%	76.6%	85.1%	93.6%	90.2%
5% - 10%	28.7%	75.4%	79.3%	92.8%	89.1%
10% - 20%	14.6%	75.3%	70.7%	92.3%	87.3%
20% - 30%	6.2%	72.9%	67.8%	91.1%	82.4%
Over 30%	3.2%	70.8%	55.8%	82.7%	78.2%
Total/Average	100.0%	75.8%	79.7%	92.8%	88.8%

Source: SPI Research, February 2018

Project Overrun

Project overrun is the percentage of actual to budgeted cost or actual to budgeted time. Project overruns may be expressed in actual time/cost versus plan. This KPI is important because anytime a project goes over budget in either time or cost; it cuts directly into the PSO's profitability. Project overruns, like projects not delivered on time, limit future work and client satisfaction. In many instances project overruns indicate a lack of project governance, which negatively impacts bottom-line results. Table 134 highlights how project overruns significantly impact billable utilization, on-time project completion and achievement of revenue and margin targets. And as one might expect, overbudget projects usually mean project durations increase as well. Employee morale is also negatively impacted when projects go awry as evidenced by higher levels of voluntary attrition.

Standardized Delivery Methodology

SPI Research asked PSOs what percentage of the time they use a standard (or structured) delivery methodology to manage projects. Mature firms invest significant time and attention into methodology development as a means to standardize project processes; define expectations and institutionalize quality. Using a standardized delivery methodology is a critical component of a services productization strategy. It helps improve project forecasting, resource management, cost and profitability. PSOs who can accurately plan and execute services in a structured way, are not only more productive but also more likely to deliver quality results. There is significant effort involved in developing, implementing and adhering to standardized delivery methodologies, but the net impact for PSOs is beneficial. In 2017 the use of standardized delivery methodologies declined from 71.2% in 2016 to 69.7%, however this is still much higher than the five-year average of 66.4%. Independents had a slightly higher use of standardized methodologies than ESOs, 70.0% versus 68.8%, while organizations with between 300 and 700 people showed the highest level at 75.5%. By vertical market, value-added resellers (VARs) and Research and Development organizations averaged over 90%.

Table 135 compares the percentage of time a standardized delivery methodology is used to other key performance indicators. The table shows that PSOs using a standardized delivery methodology have more people in billable roles, are better places to work, and deliver more revenue per consultant and employee. They are also much more likely to deliver projects on-time. The importance of using a standardized delivery methodology to improve project execution cannot be understated. Leading firms incorporate quality control and knowledge into every step taken, to ensure their consultants understand their responsibilities and the appropriate tasks leading to success.

Table 135: Impact – Standard delivery methodology

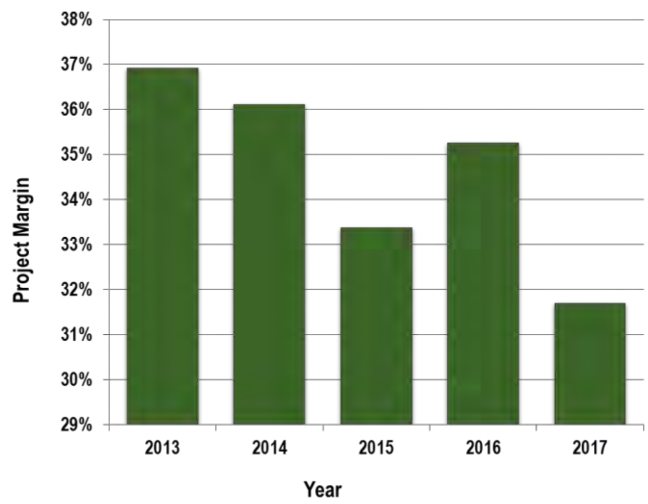
Std. delivery method. Is used	Survey %	% of emp. Billable	Rec. to family/friends	Ann. rev./ consult (k)	Annual rev./ emp. (k)
Under 20%	9.8%	73.0%	4.23	$173	$144
20% - 40%	5.7%	75.0%	4.26	$156	$134
40% - 60%	12.8%	73.1%	4.29	$188	$144
60% - 80%	19.7%	74.3%	4.40	$205	$167
Over 80%	52.1%	77.2%	4.41	$201	$163
Total/Average	100.0%	75.5%	4.37	$195	$158

Source: SPI Research, February 2018

Project Margin Trends

Project margin is the percentage of revenue which remains after accounting for the direct costs of project delivery. Projects can be fixed-price, milestone-based, "not to exceed" or time and materials, where the PSO essentially charges by the hour with additional payment for any materials used during the engagement. Typically, time and materials-based projects produce the best profitability as long as bill rates are set appropriately. "Not to exceed" projects should be avoided as they provide none of the benefits of fixed price projects but carry all of the risks. Cost-plus contracts are also undesirable; they are most prevalent in government work which tends to be penny-wise and pound-foolish. Clients and service providers alike should be focused on paying fairly for work that delivers promised results. If the project benefit is substantial, then assuring successful delivery should be the primary focus.

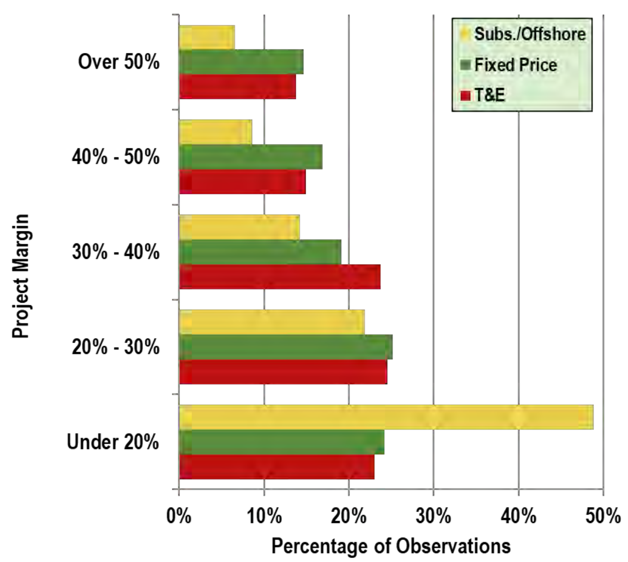
Figure 54: Project Margin Five-year Trend



Source: SPI Research, February 2018

Figure 54 shows average project margins have been steadily declining over the past five years and now sit at the lowest levels we have seen of 31.5%. A key contributor to this decline is that this year's survey included a significant increase in architects, engineers and government contractors who all reported extremely low project margins. This metric underscores the importance of a holistic view of PS, as one important metric like project profit can cause a ripple effect leading to lower overall net profit.

Figure 55: Project Margin



Source: SPI Research, February 2018

Leading professional services organizations strive to achieve project margins over 35% but as Figure 55 shows, less than one third of the organizations surveyed consistently achieve project margins greater than 40%. Low margin projects are caused by a variety of issues including poor estimates, significant scope change, lack of a clear project charter, poor project management, poor execution and poor communication. Organizations with lower project margins struggle to meet annual margin targets.

Advertising agencies and management consultancies had the highest project margins in this year's survey, at 37.9%, whereas architects had the lowest at 25.3%. More traditional PS organizations such as accountancies and architects and engineers are not able to charge the high bill rates seen in technology consulting.

Project Margin: Time and Materials Projects

In 2017 the average project margin for time and expense-based work (31.7%) declined precipitously from 2016 (35.5%). Behind the decline, project margins decreased significantly across the Americas with average project margin shrinking to 31% in 2017 compared to 36.1% in 2016. This is a very ominous trend. By vertical the decline was most pronounced in architecture and engineering firms who reported average project margins of 25.3%. Since the 2018 benchmark contains a much higher proportion of architects and engineers their low margins weighed down the entire benchmark. Other major verticals including IT and management consulting reported robust margins of 36.5% and 37.9% respectively, on par with previous years. R&D, Staffing and VARS reported the best project margins, architects and engineers the worst. Organizations with between 100 and 300 employees had project margins for time and materials-based projects of 37.3%, the highest in the survey. The largest organizations, with over 700 employees, had the lowest average project margin at 30.6%.

Table 136 compares the average project margin on time and expense projects to other key performance indicators. SPI Research found similar results when compared to fixed price projects. Most of the key performance indicators improve as project margins rise. Real-time visibility and a strong project management discipline are key ingredients of driving project success. Every PSO should maintain and review a real-time project dashboard showing the health of projects including budget to actual performance.

Table 136: Impact – Project margin for time & materials projects

Project margin for T&M projects	Survey %	Ann. rev/ consult (k)	Ann. rev/ emp. (k)	Quarter. backlog	EBITDA
Under 20%	23.0%	$181	$144	41.4%	12.7%
20% - 30%	24.5%	$175	$143	43.0%	18.4%
30% - 40%	23.8%	$201	$158	46.6%	18.5%
40% - 50%	15.0%	$210	$176	49.4%	15.1%
Over 50%	13.7%	$225	$190	53.3%	16.9%
Total/Average	100.0%	$195	$158	45.9%	16.4%

Source: SPI Research, February 2018

Project Margin: Fixed Price Projects

In 2017 the project margin for fixed price projects declined to 31.6%, significantly below the five-year average of 34.9%. Similar to time and expense-based projects, accountancies and engineering and architecture firms weighed down the average with the fixed price margins of 20.8% and 25.4%

respectively. The largest organizations (with over 700 employees) had the lowest project margins at 29.4% while the smallest had the best at 34.3%.

Table 137 compares the average project margin on fixed price projects to other key performance indicators. Revenue per consultant and per employee both rise with higher fixed price margins as does achievement of profit targets and overall net profit.

Table 137: Impact – Project margin for fixed price projects

Project margin for fixed price projects	Survey %	Ann. rev./ consult (k)	Ann. rev./ emp. (k)	% of annual margin target	EBITDA
Under 20%	24.2%	$175	$134	85.6%	11.0%
20% - 30%	25.2%	$180	$143	88.0%	16.8%
30% - 40%	19.1%	$196	$165	88.7%	17.2%
40% - 50%	16.9%	$202	$167	90.8%	16.8%
Over 50%	14.6%	$235	$196	93.2%	21.0%
Total/Average	100.0%	$194	$157	88.8%	16.1%

Source: SPI Research, February 2018

Project Margin: Subcontractors

The margin derived from subcontractors and offshore resources is an extremely important key performance indicator and should be managed very closely, as it can significantly impact net profit.

Typically, the goal for subcontractor margin is at least 30%. Unfortunately, the average subcontractor margin typically falls far short of this target, currently standing at only 23% which is far short of last year's average of 28.3%. Once again accountancies and architects and engineers dragged down the subcontractor margin with margins of 17.5% and 14.7% respectively. These more traditional professional services organizations are just not able to charge the $200 per hour and above rates seen in the technology sector. Low subcontractor margins take a big bite out of overall PS profitability as 11.5% of total top-line PS revenue comes from the use of subcontractors. If firms cannot maintain or improve margins by using subcontractors, they will move to a richer mix of direct labor. Although seasoned consultants may enjoy a role as independent contractors because they have more control over the type of work and work hours, service providers will only use a variable workforce if it gives them greater flexibility at the same or higher margins. This is an important metric to watch and measure as it can have a dramatic effect on bottom-line profit. The use of subcontractors declines as PS growth slows.

Table 138: Impact – Project margin for subs, offshore

Average project margin — subs, offshore	Survey %	New clients	% of annual revenue target	% of annual margin target	EBITDA
Under 20%	48.8%	20.6%	93.4%	89.6%	16.7%
20% - 30%	21.9%	26.0%	93.7%	87.0%	15.0%
30% - 40%	14.2%	30.3%	92.8%	88.5%	17.2%
40% - 50%	8.6%	34.8%	91.6%	90.9%	12.0%
Over 50%	6.5%	32.9%	91.9%	92.8%	20.6%
Total/Average	100.0%	25.2%	93.1%	89.2%	16.2%

Source: SPI Research, February 2018

Effectiveness of Service Execution Processes

SPI Research asks respondents a series of subjective questions, rating the effectiveness of their core service execution processes on a scale from 1 to 5 with 5 representing "very effective". Tables 139 through 142 show overall service execution effectiveness ratings by type of PSO, geography, organization size and vertical. Project quality received the highest marks and knowledge management received the lowest.

Table 139: Effectiveness of Service Execution Processes by Organization Type and Region

Key Performance Indicator (KPI)	2016	2017	ESO	PSO	Amer.	EMEA	APac
Resource management	3.59	3.50	3.40	3.54	3.49	3.62	3.55
Estimating and reviews	3.56	3.55	3.53	3.56	3.53	3.61	3.75
Change control	3.45	3.38	3.43	3.36	3.34	3.62	3.60
Project quality	3.61	3.62	3.48	3.67	3.64	3.46	3.60
Knowledge management	3.23	3.31	3.13	3.37	3.32	3.32	3.15

Source: SPI Research, February 2018

The highest marks for resource management, estimating and change control were reported by organizations with 300 to 700 PS employees.

Table 140: Effectiveness of Service Execution Processes by Organization Size

Key Performance Indicator (KPI)	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Resource management	3.64	3.36	3.50	3.52	3.75	3.50
Estimating and reviews	3.71	3.60	3.47	3.50	3.72	3.52
Change control	3.39	3.40	3.27	3.36	3.59	3.62
Project quality	3.50	3.58	3.75	3.56	3.44	3.66
Knowledge management	3.40	3.30	3.36	3.22	3.28	3.31

Source: SPI Research, February 2018

On the good news front, project quality processes have steadily improved over the last five years. Not only have firms given higher marks for their project quality processes but also their on-time, on-budget project delivery performance has improved as a result and so has overall customer satisfaction. Management consultancies are least satisfied with their knowledge management processes. Knowledge management is increasingly important as a source of differentiation and quality.

Table 141: Effectiveness of Service Execution Processes by Vertical Market

Key Performance Indicator (KPI)	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Resource management	3.35	3.68	3.49	3.62	3.31
Estimating and reviews	3.47	3.65	3.34	3.55	3.65
Change control	3.13	3.50	3.56	3.58	3.15

Key Performance Indicator (KPI)	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Project quality	3.69	3.61	3.56	3.74	3.27
Knowledge management	3.48	3.20	2.98	3.37	3.15

Source: SPI Research, February 2018

Table 142: Effectiveness of Service Execution Processes by Vertical Market

Key Performance Indicator (KPI)	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Resource management	3.18	3.33	3.25	3.25	3.79
Estimating and reviews	3.50	3.33	3.63	3.25	3.79
Change control	3.33	3.33	3.50	4.25	3.53
Project quality	3.50	3.33	3.50	3.75	3.71
Knowledge management	3.58	3.00	3.25	3.25	3.48

Source: SPI Research, February 2018

Effectiveness of the Resource Management Process

SPI Research asked survey respondents to rate the effectiveness of their resource management process with 1 = poor and 5 = great. Resource management is critical to project planning and execution. PSOs who effectively and efficiently manage resources show much higher utilization rates, more projects delivered on-time and higher project margins and overall profitability.

Table 143 compares the effectiveness of resource management processes to other key performance indicators. The table shows a strong correlation between resource management effectiveness, on-time project delivery, minimal project overruns and achievement of annual revenue and margin targets. Clearly resource management effectiveness improves directly with the use of PSA solutions.

Table 143: Impact – Effectiveness of resource management

Effectiveness of resource management process	Survey %	On-time project delivery	Project overrun	% of annual revenue target	% of annual margin target
1	1.8%	69.3%	14.6%	78.3%	80.8%
2	10.6%	73.0%	12.3%	90.3%	84.1%
3	31.9%	77.4%	9.1%	92.4%	88.7%
4	46.5%	81.6%	7.0%	93.9%	90.1%
5	9.1%	89.0%	4.6%	94.2%	91.1%
Total/Average	100.0%	79.8%	8.1%	92.8%	88.9%

Source: SPI Research, February 2018

Effectiveness of Estimating Processes

SPI Research asked survey respondent to rate the effectiveness of their estimating processes and estimate reviews, with a rating of 5 for excellent to one for poor. This key performance indicator is important as accurate estimates hold the key to all other service delivery metrics. Inaccurate estimates lead to miss-set client expectations; project overruns and poor client satisfaction. While this subjective KPI might be hard to fathom, its results show how some of the most important KPIs improve as the organization becomes more effective in their estimating processes. On-time project completion improves; PSOs experience fewer overruns, are more likely to use standard delivery methods and have larger backlogs. Estimating requires significant investment in methodology development and scoping projects to the task level, but obviously from this table it is well worth the effort to ensure accuracy and thoroughness.

Table 144: Impact – Effectiveness of estimating processes and reviews

Effectiveness	Survey %	On-time project delivery	Project overrun	Std. del. meth. used	Qtr. Backlog
1 – Not effective	1.0%	76.3%	15.6%	65.0%	33.8%
2	9.9%	67.8%	14.3%	64.2%	36.9%
3	30.6%	76.5%	8.9%	64.9%	46.3%
4	49.9%	82.8%	7.0%	72.2%	47.3%
5 – Very effective	8.6%	88.0%	4.2%	81.5%	51.1%
Total/Average	100.0%	79.8%	8.2%	69.9%	46.2%

Source: SPI Research, February 2018

Effectiveness of Change Control Processes

SPI Research asked executives their opinion of the effectiveness of their change control processes, with a rating of 1 for poor to 5 for excellent. All projects involve risk and scope changes. The important question is how these variables are managed. Mature PSOs invest in developing change and risk management policies along with PM training and PMO oversight and guidance. They must also consider the impact of changes and how it will affect subsequent projects. A critical component of change control is to ensure project margins do not suffer. Ideally, project changes are clearly outlined; client perception is appropriately managed and change orders are put in place. Too many change orders not only impact the budget and schedule but are signs of scope creep as well as inadequate executive sponsorship and poor communication.

Table 145 compares the effectiveness of change control processes to other key performance indicators. Again, like the organizations with high levels of resource management and estimating effectiveness, those organizations that manage change the best demonstrate significantly higher KPIs in both the service execution and finance and

Table 145: Impact – Effectiveness of change control processes

Effectiveness	Survey %	On-time project delivery	Project overrun	Std. del. meth. used	EBITDA
1 – Not effective	2.4%	60.0%	25.6%	52.2%	16.5%
2	11.8%	74.6%	11.2%	65.5%	15.8%
3	38.5%	79.1%	7.8%	69.0%	16.6%
4	40.1%	82.4%	6.8%	72.0%	16.4%
5 – Very effective	7.3%	84.5%	6.2%	75.7%	20.3%
Total/Average	100.0%	79.8%	8.1%	69.9%	16.7%

Source: SPI Research, February 2018

operations pillars. These key performance indicators demonstrate that the devil is in the details. Organizations that focus on basic execution issues such as resource management, estimating and change control drive superior results compared to those organizations that place less emphasis on these critical business processes.

Effectiveness of Project Quality Processes

SPI Research asked executives their opinion of the effectiveness of their project quality processes, with a rating of one for poor to five for excellent. Quality must be a core organizational attribute that is built into the culture and management practices. Most leading professional services organizations build in quality checks and balances to assure the work is done correctly.

Table 146: Impact – Effectiveness of project quality processes

Effectiveness	Survey %	On-time project delivery	Project overrun	Std. del. meth. used	EBITDA
1 – Not effective	0.8%	73.3%	14.2%	50.0%	NA
2	8.3%	67.3%	12.5%	61.3%	13.2%
3	29.5%	78.5%	10.0%	67.1%	15.6%
4	51.0%	82.1%	7.0%	70.7%	16.7%
5 – Very effective	10.4%	84.8%	4.4%	82.3%	21.8%
Total/Average	100.0%	80.0%	8.1%	69.9%	16.7%

Source: SPI Research, February 2018

As more PSOs work to productize their services offerings, they must incorporate quality processes and procedures, as well as metrics. High quality service delivery underlies client satisfaction and drives referrals and repeat business. Table 146 shows results improve across the board as quality processes are implemented.

Effectiveness of Knowledge Management Processes

Few organizations do a really good job of knowledge management. Top-performing organizations understand their differentiation comes from their unique knowledge and their ability to create, harvest and repurpose industry-leading intellectual property. Although a plethora of powerful and inexpensive knowledge management tools exist, they lose their effectiveness without a centrally managed and empowered knowledge management function. The key to knowledge management is not only capturing it and codifying it but

Table 147: Impact – Effectiveness of knowledge mgmt. processes

Effectiveness	Survey %	Billable util.	On-time project delivery	Project overrun	EBITDA
1 – Not effective	2.1%	66.9%	67.1%	17.5%	11.9%
2	15.8%	68.6%	74.9%	11.6%	13.3%
3	37.1%	71.6%	78.5%	8.6%	15.9%
4	38.7%	71.9%	82.8%	6.5%	18.6%
5 – Very effective	6.2%	72.5%	85.0%	5.0%	21.9%
Total/Average	100.0%	71.2%	79.8%	8.3%	16.8%

Source: SPI Research, February 2018

also continually pruning it and improving it. In today's world of social media overload, great search capability is a must to surface the best knowledge when it is needed.

SPI Research asked benchmark respondents their opinion of the effectiveness of their knowledge management processes, with a rating of one for poor to five for excellent (Table 147). Knowledge management has become a critical component of service execution. Best practices and other quality-driven initiatives are built-in into project delivery. Assuring the right information is available to all those who need it is paramount to success. Over the past five years' knowledge management, especially using social media and collaboration tools, has moved to the forefront of service execution. Team members now work more collaboratively to achieve project objectives. The table shows that effectiveness of Knowledge Management processes has a positive impact on both service delivery and financial results.

11. Finance and Operations Pillar.

The Finance and Operations pillar represents the realm of the CFO for large PS organizations and is an intrinsic part of the role of the chief service executive for all PS organizations, regardless of size. In this service performance pillar SPI Research examines 27 key performance measurements for revenue, margin and operating expense. We include detailed profit and loss statements and expense ratios by organization size, geography and vertical. Table 148 highlights attributes of the Finance and Operations pillar as the organization matures.

Table 148: Finance and Operations Performance Pillar Maturity

	Level 1 Initiated	Level 2 Piloted	Level 3 Deployed	Level 4 Institutionalized	Level 5 Optimized
Finance and Operations	The PSO has been created but is not yet profitable. Rudimentary time & expense capture. Limited financial visibility and control. Unpredictable financial performance. Rudimentary contract management. Manual systems and processes.	5 to 20% margin. PS becoming a profit center but still immature finance and operating processes. Investment in CFM and PSA to provide financial visibility. May not have real-time visibility or BI. Standard Library of Contracts and Statements of Work.	20 to 30% margin. PS operates as a tightly managed P&L. Standard methods for resource mgmt., time & expense mgmt., cost control & billing. In depth knowledge of all costs at the employee, sub-contractor & project level. Processes in place for contract management, legal and pricing decisions.	PS generates > 20% of overall company revenue & contributes > 30% margin. Well-developed finance and operations processes and controls. Systems have been implemented for CRM, PSA, CFM and BI. IT integration and real-time visibility. Systems have been implemented for contract management, legal and pricing decisions.	> 30% margin. Continuous improvement and enhancement. High profit. Integrated systems. Real-time visibility. Global with disciplined process controls and optimization. Completely integrated financial, CRM, resource management, contracts and pricing systems, processes and controls.

Source: SPI Research, February 2018

As shown in Table 149, in 2017 we see a mixed bag of financial metric improvement and decline. Most importantly, overall net profit improved from 14.2% to 16.8%, the highest net profit we have seen since 2012! Backlog and achievement of revenue targets also improved.

Financial metrics declined in several important areas, particularly, revenue per consultant and per employee. Other declining KPIs included project margins for both time and materials and fixed price contracts as well as subcontractor margins. These project margins are shown in the Service Execution chapter.

Rising leading indicators portend solid performance again in 2018. Project backlog improved significantly from 45.6% in 2016 to 46.2% in 2017. Another harbinger of revenue growth in 2018 is the fact that a record number (93%) of PSOs achieved their annual revenue targets in 2017. A third growth indicator is the fact that globally the 456 PSOs represented in this benchmark expanded their headcount by 9.3%; this is the strongest surge in additional permanent headcount we have seen since 2011, coming out of the recession. The PS industry as a whole closely mirrors the improvement in global GDP and growth.

Another source of optimism is the fact that reported earnings before income tax increased in 2017. Embedded service organizations (ESOs) had a particularly good year as they saw their net profit soar from 20.1% to 23.4%! This is the highest overall sector net profit we have seen in 12 years of benchmarking! Independents experienced a commensurate rise as they saw their net profits grow from 11.5% in 2016 to 15.1% in 2017. By vertical, the most profitable segments are accountancies (22.1%); and embedded software and SaaS ESOs who reported net profits of 23.6% and 26.2% respectively. By geography, firms headquartered in the Americas were the most profitable, averaging 17.2% EBITDA. EMEA headquartered firms reported 14.3% and Asia Pacific headquartered firms reported 14.7% EBITDA.

Table 149: Finance and Operations Pillar 5-year trend

Key Performance Indicator (KPI)	2013	2014	2015	2016	2017
Annual revenue per billable consultant (k)	$193	$197	$198	$205	$196
Annual revenue per employee (k)	$155	$167	$157	$163	$159
Quarterly revenue target in backlog	45.0%	48.4%	40.4%	45.6%	46.2%
Percent of annual revenue target achieved	89.9%	90.5%	91.4%	92.1%	93.0%
Percent of annual margin target achieved	88.2%	87.0%	89.4%	90.1%	89.1%
Revenue leakage	4.17%	4.05%	4.20%	4.30%	4.39%
% of invoices redone due to error/client rejections	2.1%	2.3%	2.6%	2.2%	2.2%
Days sales outstanding (DSO)	44.1	43.4	43.8	44.6	48.2
Quarterly non-billable expense per employee	$1,392	$1,443	$1,908	$1,579	$1,615
% of billable work is written off	3.00%	3.10%	3.00%	2.60%	2.76%
Executive real-time wide visibility	3.57	3.58	3.32	3.51	3.66
Profit (EBITDA)	11.4%	13.2%	15.5%	14.2%	16.8%

Source: SPI Research, February 2018

The impact of effective planning and budgeting

An effective planning and budgeting process that enlists and enfranchises the collective intelligence and vision of the firm is one of the most powerful tools in the executive handbook. The best performing organizations have moved from reactive to proactive planning. Real-time visibility and analysis have transformed decision-making from tactical to strategic. With the assistance of powerful planning and analysis tools, planning does not have to be a dreaded once-a-year, laborious process. It can become a fluid, collaborative, all-year-long process that facilitates input and cooperation across all functions and levels. With the right tools, managers at all levels are empowered to analyze business performance, conduct their own root cause analysis and take immediate action before it is too late.

Each year organizations should devote time to reenergizing their vision and strategies as they plan the upcoming year's business. The business planning process can be a valuable catalyst for growth and profit. Enlightened firms use the planning process to sharpen vision; align leadership; reevaluate and improve go to market and sales strategies; discuss new and better ways to motivate the workforce and streamline processes and systems.

For many people-based organizations, annual planning has become an empty ritual. Firms often waste too much time and energy reliving past failures instead of exploring new avenues for growth. Done right, instead of a necessary evil, business planning can open up fresh new ideas and facilitate playing to strengths rather than shoring up weaknesses. The best-of-the-best project and service-focused organizations each year find new and better ways to do the things they love to do – and are especially good at – while minimizing the hassles and tedium of repeating the things that hold them back or waste precious time and resources.

Before embarking on a planning and budgeting exercise, SPI Research has explored some of the reasons why organizations fail to deliver their desired results. Our experience has shown that when things go wrong, it most often starts at the top and then cascades downward throughout the organization, showing up in lackluster financial performance with poor predictability. Eliminating the root causes of dysfunction and inefficiency goes a long way toward driving organizational success. Common issues:

The Planning and Budgeting Maturity Model

SPI Research has extended its industry-leading Professional Service Maturity Model™ to focus on advancing maturity in planning and budgeting. The Planning and Budgeting Maturity Model™ provides a view of the transformational power of shifting planning from reactive, heroic and painful to become a core competence leading to renewal and growth (Table 150). In this maturity model planning and budgeting moves from ad hoc, reactive and opportunistic to visionary, agile and innovative. Effective planning processes can serve as a catalyst for leadership alignment with a focus on priority improvement areas to bring the business forward.

Table 150: Planning and Budgeting Maturity Model™

	Level 1	Level 2	Level 3	Level 4	Level 5
	Ad Hoc, Opportunistic, Heroic and Reactive	Piloted, Experimental, Pockets of Excellence	Deployed, Basics in Place for All Key Elements	Institutionalized, in the Company DNA / Fabric	Visionary, Agile, Innovative, Continuous Renewal and Improvement
People	Budgeting and planning is considered a necessary evil. Tops down, reactive, silo'ed. Business ignores targets, no feedback processes or ability to modify based on changes. Limited commitment and accountability.	Starting to see the need to incorporate business units in planning and budgeting. Finance-driven. Discrete functions starting to collaborate, participate and take accountability for planning.	Starting to align corporate vision and strategy to business planning. Goals and measurements in alignment. Real-time measurements and controls. Business is accountable for planning, goal setting and achievement.	Budgeting and planning becomes a core competence – driving critical business decisions, goals and growth. Collaborative, business-driven. Business is committed to planning and achievement.	Budgeting and planning is fully automated & reflects & capitalizes on changing market dynamics. Fluid, flexible, collaborative based on fact-based decisions. Able to spot trends in real-time. Business is enfranchised.

	Level 1	Level 2	Level 3	Level 4	Level 5
Processes	Planning is a painful nuisance. No consistent budgeting and planning processes. Ad hoc, reactive.	Planning is reactive but tolerated. Starting to align business processes, systems, measurements and controls. Piloting streamlined processes. Pockets of excellence	Planning has become a powerful catalyst to drive alignment and growth. Proactive, integrated planning process incorporates & consolidates real-time information.	Planning process has become core to driving strategy, alignment and collaboration across the business. Optimized systems, tools, processes.	Fully automated global planning and budgeting process, systems and tools continually monitor, measure and take advantage of shifting business priorities.
Systems	Budgeting and planning by spreadsheet. Manual, inconsistent, error prone. Limited investment in systems and tools. Reactive, rearview mirror.	Starting to invest in systems for major processes – CFM, CRM and PSA. Piloting CPM applications. IT and Finance-centric.	Fully integrated information infrastructure including CPM applications for budgeting, planning and performance management. Business centric.	Fully integrated and optimized information infrastructure with powerful, easy-to-use management tools. Mobile, agile.	Global, integrated, optimized information infrastructure provides high levels of management visibility and control. Able to capitalize on emerging trends. Optimized.

Source: SPI Research, February 2018

Survey Results

The following section reviews and analyzes 2018 PS Maturity™ benchmark results from 456 participating professional services organizations. In this section SPI Research analyzes 39 finance and operations key performance measurements that are critical to attaining superior financial performance.

Table 151: Finance & Operations KPIs by Organization Type and Geographic Region

Key Performance Indicator	2016	2017	ESO	PSO	Amer.	EMEA	APac
Surveys	416	456	117	339	396	40	20
Ann. revenue per billable consult. (k)	$205	$196	$207	$192	$197	$168	$221
Annual revenue per employee (k)	$163	$159	$168	$156	$160	$128	$193
Quarterly revenue target in backlog	45.6%	46.2%	53.1%	43.9%	46.6%	43.3%	45.0%
% of annual revenue target achieved	92.1%	93.0%	94.2%	92.6%	93.1%	92.4%	93.3%
% of annual margin target achieved	90.1%	89.1%	90.8%	88.5%	89.1%	90.0%	87.0%
Revenue leakage	4.30%	4.39%	4.14%	4.47%	4.44%	4.17%	4.05%
% of inv. redone (error/client reject.)	2.2%	2.2%	2.1%	2.2%	2.1%	2.4%	2.6%
Days sales outstanding (DSO)	44.6	48.2	46.1	48.8	50.3	37.5	35.8
Employee Qtr. non-billable expense	$1,579	$1,615	$1,578	$1,627	$1,587	$1,493	$2,288
% of billable work is written off	2.60%	2.76%	2.58%	2.82%	2.83%	2.14%	2.73%
Executive real-time wide visibility	3.51	3.66	3.44	3.74	3.65	3.76	3.65
EBITDA (Net Profit)	14.2%	16.8%	23.4%	15.1%	17.2%	14.3%	14.8%

Source: SPI Research, February 2018

Table 151 compares the finance and operations key performance indicators by the type of organization and by region. This year, embedded service organizations (ESOs) reported substantially more revenue per consultant and employee than independents. Embedded service organizations outperformed independents across almost all financial metrics. Across the board, Asia Pacific reported the most significant improvement in major financial metrics, but continues to trail the Americas in net profit.

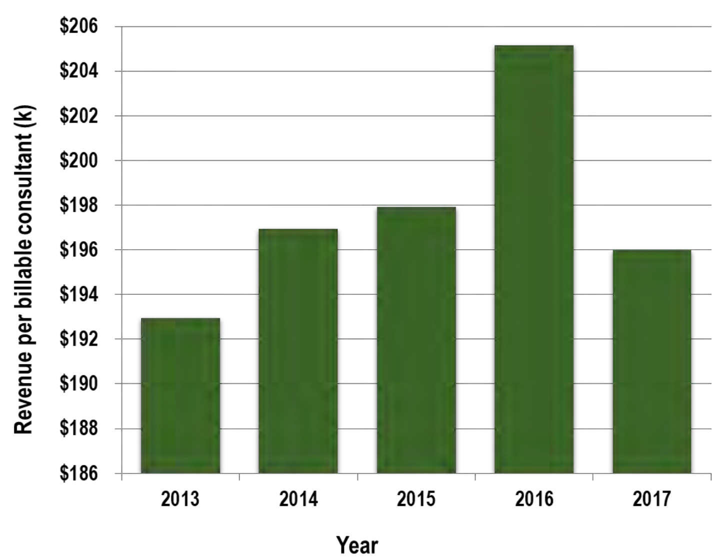
Across the benchmark, average net profit (Earnings before Interest, Taxes, Depreciation and Amortization) increased from 14.2% to 16.8%. Embedded PSOs saw net profit increase from 20.1% 23.4%. Independents increased EBITDA from 11.5% to 15.1%. By geography, profit was up in all territories. In the Americas net profit moved up from 14.5% to 17.2%; APAC moved up from 11.8% to 14.8% and EMEA moved up from 13.6% to 14.3%. Global economic recovery has spurred PS growth and profit.

One worrying factor is that employee productivity declined in 2017. Revenue per consultant decreased from $205,000 to $196,000 while revenue per employee declined from $163,000 to $159,000. A contributing factor to the decline in per employee revenue production is the fact that most organizations considerably increased new employee hiring which takes a toll on employee revenue production (Figure 56). Year over year employee headcount increased by 9.3%, the largest increase we have seen since 2012 when organizations started hiring again after 4 years of recession.

Backlog is always a very important KPI. Backlog increased slightly from 45.6% to 46.2%; signaling continuing PS sector prosperity. The Americas reported the strongest backlog at 46.6%. Backlog increased significantly in APac from 38.8% in 2016 to 45% in 2017. Only EMEA reported a decline in backlog from 44.6% to 43.3%.

Non-billable expense per employee increased in 2017. Excessive non-billable expense is a danger signal directly related to poor cost management and ineffective business development processes. Embedded PSOs decreased non-billable expense per employee; they spent $1,710 per consultant per quarter in 2016 compared to $1,578 in 2017. Independents increased discretionary spending as they grew non-billable quarterly employee expense from $1,511 in 2016 to $1,627 in 2017. Discretionary spending directly impacts bottom-line net profit.

Figure 56: Revenue per Billable Consultant Five-year Trend



Source: SPI Research, February 2018

Table 152 compares finance and operations KPI's by organization size. Organizations with more than 700 consultants reported the strongest backlog at 53.8%. Organizations with 300 to 700 employees did the best job of curtailing write-offs. Organizations with 30 to 100 employees reported the highest non-billable expense for their employees. The smallest organizations were the most profitable.

Table 152: Finance & Operations KPIs by Organization Size

Key Performance Indicator (KPI)	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Surveys	41	107	140	96	37	35
Annual revenue / billable consultant (k)	$183	$194	$202	$201	$175	$197
Annual revenue per employee (k)	$162	$163	$156	$160	$144	$172
Quarterly revenue target in backlog	42.1%	40.7%	48.4%	48.5%	45.8%	53.8%
% of annual revenue target achieved	91.8%	91.2%	92.7%	93.9%	93.7%	99.0%
% of annual margin target achieved	86.7%	88.3%	88.4%	90.0%	90.3%	94.6%
Revenue leakage	5.09%	4.47%	4.68%	4.42%	2.76%	3.79%
% of invoices redone	1.5%	1.8%	2.2%	3.0%	2.5%	1.9%
Days sales outstanding (DSO)	37.4	45.0	50.1	51.0	58.3	45.9
Qtr. non-billable expense per employee	$1,008	$1,420	$2,053	$1,490	$1,595	$1,452
% of billable work written off	2.51%	3.11%	3.03%	2.81%	1.55%	1.85%
Executive real-time wide visibility	3.97	3.70	3.71	3.53	3.48	3.57
EBITDA (Net Profit)	19.4%	18.7%	17.0%	15.4%	12.3%	13.5%

Source: SPI Research, February 2018

Table 153: Finance & Operations KPIs by Vertical Market

Key Performance Indicator (KPI)	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Surveys	153	103	45	45	29
Annual revenue / billable consultant (k)	$175	$200	$205	$232	$196
Annual revenue per employee (k)	$146	$155	$175	$197	$157
Quarterly revenue target in backlog	43.7%	46.9%	54.5%	40.3%	49.1%
% of annual revenue target achieved	93.8%	93.4%	94.2%	89.6%	94.3%
% of annual margin target achieved	88.3%	89.1%	89.1%	90.3%	93.6%
Revenue leakage	5.13%	4.07%	3.87%	3.01%	4.70%
% of invoices redone	2.5%	2.1%	1.6%	2.4%	1.8%
Days sales outstanding (DSO)	60.9	40.0	45.0	37.8	45.9
Quarterly non-billable expense per employee	$1,823	$1,422	$1,855	$1,243	$1,490
% of billable work written off	3.67%	1.99%	2.93%	1.71%	2.71%
Executive real-time wide visibility	3.79	3.72	3.38	3.58	3.68
EBITDA (Net Profit)	17.7%	12.9%	13.5%	23.6%	26.2%

Source: SPI Research, February 2018

Tables 153 and 154 show financial results by vertical market. Of the five largest vertical segments represented in this benchmark, embedded SaaS ESOs reported the highest net profit of 26.2%. Best performance is highlighted in green and worst performance is highlighted in red.

As Table 153 clearly shows, embedded software and SaaS organizations produced the best financial results. This is somewhat misleading because ESOs do not pay the full burden for sales, marketing IT, G&A and facility expense. SaaS ESOs have experienced wild fluctuations in net profit as their charters swing from PS as a customer adoption engine to PS as a profit center. No doubt cloud service providers, both embedded and independent, are by far the most profitable consultancies because they are able to charge the highest bill rates and deliver the majority of their services virtually. SaaS ESOs saw profit decline from 25.9% in 2012 to 4.3% in 2013; a slight improvement was shown in 2014 to 7.8%; significant improvement in 2015 to 25.7%: OK performance in 2016 at 19.4% and superlative performance in 2017 at 26.2%. This is an important KPI to watch, as many organizations are turning to the cloud for their information infrastructure.

Table 154 compares performance for five additional PS verticals. Hardware and networking ESOs, just like their software counterparts, reported the best financial metrics. Embedded service organizations are benefiting from the strong growth in the technology sector.

Table 154: Finance & Operations KPIs by Vertical Market

Key Performance Indicator (KPI)	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Surveys	18	8	8	6	41
Annual revenue / billable consultant (k)	$210	$150	$182	$256	$206
Annual revenue per employee (k)	$150	$133	$158	$200	$162
Quarterly revenue target in backlog	57.5%	42.5%	50.7%	63.8%	41.7%
% of annual revenue target achieved	95.5%	89.2%	88.1%	98.8%	91.1%
% of annual margin target achieved	95.5%	81.7%	89.4%	100.0%	85.8%
Revenue leakage	2.65%	6.33%	4.50%	4.00%	4.84%
% of invoices redone	2.1%	1.4%	1.1%	2.8%	2.4%
Days sales outstanding (DSO)	41.0	45.0	51.4	38.3	45.9
Quarterly non-billable expense per employee	$1,091	$1,250	$1,607	$1,063	$1,950
% of billable work written off	0.18%	2.58%	5.43%	3.00%	3.11%
Executive real-time wide visibility	3.82	3.33	4.25	3.00	3.44
EBITDA (Net Profit)	14.1%	22.1%	16.9%	20.3%	8.4%

Source: SPI Research, February 2018

Steps Taken to Improve Profitability

Table 155: Steps Taken to Improve Profitability Comparison: 2016-2017

Key Performance Indicator (KPI)	2017	2016	▲
Improve marketing effectiveness	3.87	3.79	2%
Improve sales effectiveness	3.82	3.76	2%
Improve utilization	3.76	4.04	-7%
Improve methods and tools	3.71	4.04	-8%
Improve hiring and ramping	3.68	4.11	-10%
Improve solution portfolio	3.58	4.14	-14%
Reduce non-billable time	3.50	4.08	-14%
Increases rates	3.25	4.01	-19%

Source: SPI Research, February 2018

Each year SPI Research asks "What steps will your organization take to improve profitability?" This year "improving our marketing effectiveness" rose to the top of the list. PSOs are becoming keenly aware of the need to constantly evaluate and anticipate shifting market dynamics. The Best-of-the-Best have invested in "Chief Marketing Officers" as a key member of the executive team. They constantly conduct market research and stay abreast of shifting technology trends, investing not in where the ball currently is but on where they think it is going to be. This constant attention to portfolio expansion into hot new growth areas manifests in "first mover advantages" and allows them to develop skills and references in anticipation of where the market is going. A critical component of market expansion is not only anticipating where the market is going but having the courage to hire and develop solutions in advance of demand. "Improving sales effectiveness" is the second-most chosen improvement priority. "Improving billable utilization" and "Improving methods and tools" are also improvement priorities.

SPI Research demonstrates the powerful impact integrated business solutions can have on productivity and profit. It is remarkable that 33% of surveyed organizations still have not invested in Professional Service Automation. 45% have not yet invested in Human Capital Management applications. Both application areas should make the short list for improving profitability. Business applications should be a component of any plan to reduce non-billable administrative time. It is shocking how many PSOs still rely primarily on spreadsheets for resource management, project accounting, forecasting and analysis.

Annual Revenue per Billable Consultant

Annual revenue per billable consultant depicts the service organization's total revenue divided by the number of billable consultants. Alternatively, this metric is derived by multiplying the consultant's average bill rate times billable hours. Revenue per consultant provides an indication of consultant productivity; the likelihood the firm will be profitable is foretold by the labor multiplier. SPI Research considers revenue per billable consultant to be one of the most important KPIs, but it must be viewed in conjunction with labor cost. Revenue per billable consultant should minimally equal 1.5 times the fully loaded cost of the consultant.

Revenue multipliers of three and higher are typical for engineering and architecture firms while a labor multiplier greater than three is standard in management consulting and legal professional services.

Billable consultant revenue yield is a strong predictor of PS profit. Average consultant revenue production hit its zenith in 2012 at $206K, now after four years of lackluster performance it has fallen to $196K. Simple math shows a $1,000 increase in revenue produced by each of the 200,000 consultants represented in this benchmark means overall revenue could have increased by $200 million for the 456 firms in this study.

Table 156: Impact – Revenue per Billable Consultant

Revenue per Billable Consultant	Survey %	Revenue Growth	Pipeline	% of Ann. Rev. Target
Under $100k	8.3%	3.8%	125%	84.7%
$100k - $150k	18.5%	6.6%	158%	91.5%
$150k - $200k	28.2%	8.7%	175%	92.2%
$200k - $250k	22.3%	9.4%	184%	93.1%
$250k - $300k	14.7%	11.2%	207%	96.6%
Over $300k	8.0%	13.4%	213%	97.0%
Total/Average	100.0%	8.8%	177%	92.7%

Source: SPI Research, February 2018

Annual Revenue per Employee

This calculation looks at the overall revenue yield for all PS employees – both billable and non-billable. Annual revenue per employee is similar to annual revenue per billable consultant; it divides total PS revenue by the total number of employees. It includes both billable and non-billable headcount. Revenue per employee is a powerful indicator of the overall profitability of the firm. If the average cost per employee is known, profit can be estimated by comparing cost per employee to revenue per employee. Also, like revenue per consultant, this KPI is highly correlated with profitability, utilization and bill rates.

Table 157: Impact – Annual Revenue per Employee

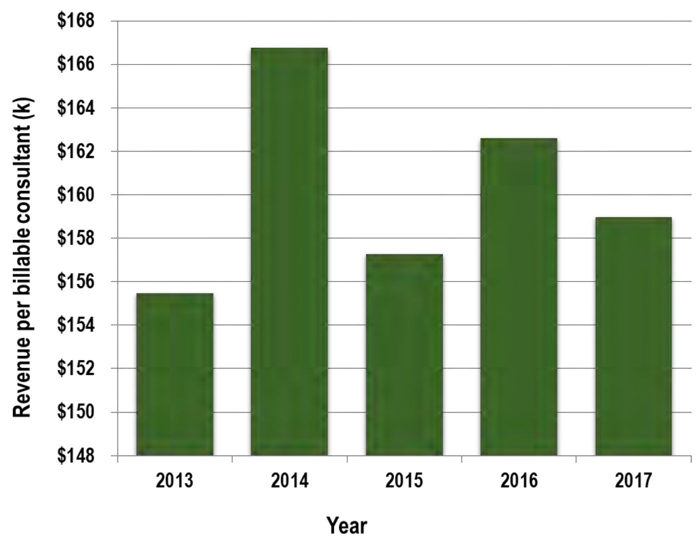
Revenue per Employee	Survey %	Revenue backlog	Revenue/ Consultant	EBITDA
Under $100k	16.3%	35.9%	$101	7.7%
$100k - $150k	27.7%	43.6%	$160	17.4%
$150k - $200k	31.5%	47.8%	$211	16.5%
$200k - $250k	16.3%	52.7%	$261	20.7%
$250k - $300k	6.0%	54.5%	$311	22.2%
Over $300k	2.2%	57.5%	$350	23.5%
Total/Average	100.0%	46.1%	$196	16.5%

Source: SPI Research, February 2018

PSOs with a high percentage of non-billable employees have lower annual revenues per employee. Revenue per employee is very important in determining the appropriate size and financial health of the organization. Based on the high cost of talented consulting staff, SPI Research believes this figure should be 1.5 times the fully loaded cost per person to maintain strong financial viability.

If the organization achieves an acceptable revenue yield per billable consultant but is below the benchmark for revenue per employee, this is an indication of excessive non-billable overhead. Figure 57 shows revenue per employee declined in 2017. The percentage of non-billable headcount declined from 30% in 2015 to 24.5% in 2017, which should contribute to higher per person revenue yields but at the same time organizations significantly increased their hiring. A higher percentage of new hires puts strain on existing employees as they must spend time interviewing and mentoring, not billing.

Figure 57: Revenue per Employee Five-year Trend



Source: SPI Research, February 2018

Backlog

Quarterly revenue backlog is the amount of already sold (booked) business in backlog (ready to execute) divided by forecasted quarterly revenue. Backlog represents “fuel in the tank”; it improves an organization’s ability to grow and increases the accuracy of financial forecasts. Some organizations measure backlog as the amount of already sold work plus the amount of work from a factored sales forecast. ***Increasing backlog levels are a clear indication of future growth.*** Backlog is one of the most powerful leading indicators. Product-focused organizations have more problems with backlog as they frequently sell a “bank of hours” with the product sale which may never be consumed. It is a good idea to frequently “scrub” backlog to determine whether booked deals can be delivered in the current quarter. If they cannot, this “shadow” backlog should not be counted. Typically, if backlog is not consumed (delivered) within a year it should be written off or removed from the revenue forecast as it is unlikely the client will use the consulting time they have been sold.

Table 158: Impact – Quarterly Revenue Target in Backlog

Quarterly Revenue Target in Backlog	Survey %	Annual Revenue Growth	Rev. Per Consultant (k)	Sales Pipeline
Under 20%	18.8%	6.7%	$158	136%
20% - 40%	21.9%	7.0%	$184	175%
40% - 50%	14.3%	12.6%	$209	173%
50% - 60%	11.2%	6.9%	$201	168%
60% - 70%	12.4%	8.9%	$238	218%
Over 70%	21.3%	12.1%	$210	202%
Total/Average	100.0%	9.1%	$197	178%

Source: SPI Research, February 2018

This year the quarterly revenue target in backlog was 46.2%; 14% higher than the 40.4% reported in 2015. Both independents and embedded PS organizations reported bigger backlogs this year. Larger backlogs were also reported by all geographies. Organizations from the Americas had the highest (46.7%) quarterly revenue target in backlog, while EMEA had the lowest (38.8%). Backlog increased for all size organizations.

Table 158 compares the quarterly revenue target in backlog to other key performance indicators. As one might expect higher backlog is an indication of future demand and produces better financial metrics. This table shows that backlog and the size of the sales pipeline are highly correlated. PSOs with backlog of greater than 60% showed the most impressive results.

Annual Revenue Target Achieved

The annual revenue target achieved is the percentage of the annual revenue goal that is attained. PSOs create detailed annual business plans; this figure shows how accurate they are in business planning and execution. If the organization does not meet its annual revenue target it is a sure bet that the annual margin or profit target will be missed as well as most organizations plan expenses from their revenue projections. On the other hand, if the organization exceeds its revenue projections by a wide margin this may result in quality issues, staff burnout and potentially client satisfaction issues because the organization is understaffed to meet demand.

This year the percentage of annual revenue target achieved was the highest ever reported in this benchmark at 93%. The five-year average is 91.2%. Independents achieved 92.6% of their target revenue, ESOs achieved 94.2%. This is the best on target performance we have seen since the recession hit the PS sector in 2008. For the second year in a row, APAC organizations had the highest (93.3%) percent of annual revenue target attainment, while those from EMEA had the lowest (92.2%). The largest organizations with more than 700 employees had the highest (99%) percent of annual revenue target attainment, while those with between 10 and 30 employees had the lowest (91.2%). SPI Research found hardware ESOs showed the highest percent of annual revenue target attainment (98.8%), while marketing and advertising agencies showed the worst (88.1%).

As Table 159 shows there is a direct correlation between achieving revenue targets, revenue growth and on-time delivery. PSOs that exceeded their revenue goals produced higher margins, higher revenue growth and superior billable utilization. There is also a strong positive correlation between meeting annual revenue targets and profitability, assuming revenue and profit targets are set

Table 159: Impact – Percentage of annual revenue target achieved

Percentage of annual target revenue achieved	Survey %	Revenue Growth	Bid-to-win ratio	Deal pipeline
Under 80%	12.2%	0.9%	4.49	137%
80% - 90%	24.9%	5.7%	4.61	160%
90% - 100%	37.8%	8.5%	4.77	181%
100% - 110%	18.4%	14.2%	5.11	203%
Over 110%	6.8%	24.0%	6.34	215%
Total/Average	100.0%	9.0%	4.87	177%

Source: SPI Research, February 2018

appropriately. SPI Research also found organizations who achieved their revenue targets had lower attrition rates, reflecting financial stability and the organization's ability to reward performance and reinvest in the business. Complex revenue accounting rules have negatively impacted revenue forecasting.

Annual Margin Target Achieved

The annual margin target achieved, similar to the annual revenue target achieved, is the percentage of the annual profit goal which was attained. SPI Research measures revenue and margin target attainment to calibrate the accuracy of annual business plans. Even if PSOs don't accurately measure other benchmark metrics, they usually do know if they achieved their targets or not. Target attainment is important from a planning and investment perspective. If the organization does not meet its margin goals it might have to scale back future spending, potentially limiting growth. The percentage of annual margin target achieved was slightly lower (89.1% vs 90.1%) in 2017. Independent service providers ESOs had values 2% higher than independents (90.8% vs. 88.5%). SPI Research found organizations from EMEA had the highest (90%) percent of annual margin target achieved, while those from APAC had the lowest (87.0%). Organizations with over 700 employees had the highest (94.6%) percent of annual margin target achieved, while those with under 10 employees had the lowest (86.7%). SPI Research found hardware and networking showed the highest percent of annual margin target achieved (100%), while managed service providers showed the least (77.5%).

Perhaps one of the most important gauges of financial maturity is the ability to consistently achieve annual margin targets. Consistently the percentage of firms who can achieve their margin targets is less than the percentage of firms who are able to achieve their revenue targets. Only 17.6% of survey respondents achieved 100% or more of their annual margin target! Table 160 compares the percentage of annual target margin achieved to other key performance indicators. This KPI shows the fastest growing organizations are the most likely to achieve their margin targets.

Table 160: Impact – Percentage of Annual Target Margin Achieved

Percentage of annual target margin achieved	Survey %	Revenue growth	Headcount growth	Project Margin
Under 80%	23.0%	3.9%	8.6%	29.4%
80% - 90%	25.8%	7.8%	9.0%	30.3%
90% - 100%	33.7%	10.1%	11.3%	33.7%
100% - 110%	13.2%	13.0%	11.9%	36.8%
Over 110%	4.4%	21.7%	15.8%	39.6%
Total/Average	100.0%	9.0%	10.4%	32.5%

Source: SPI Research, February 2018

Revenue Leakage

Revenue leakage refers to revenue that has been earned but is lost before it can be realized. Causes of revenue leakage include billing errors, time the firm is unable to bill for product or project delivery issues and incorrect statements of work or misquotes. Revenue leakage is difficult to determine in many cases, making it a "silent killer" of profitability. In many instances organizations don't even realize revenue has not been billed, making it a very difficult figure to calculate. It is also a barometer for overall operational efficiency, as PSOs with higher levels of revenue leakage reported lower utilization, lower EBITDA and poorer on-time project delivery than organizations that better managed contracts, capturing hours and expenses and billing. Average reported revenue leakage this year was 4.39% in 2017 compared to 4.3% in 2016. Independent service providers had more revenue leakage than embedded service organizations.

Table 161: Impact – Revenue Leakage

Revenue Leakage	Survey %	Avg. project overrun	Project Margin	EBITDA
Under 2%	38.0%	7.4%	34.4%	18.4%
2% - 5%	30.9%	5.6%	31.9%	16.9%
5% - 10%	23.2%	9.1%	32.4%	15.3%
Over 10%	7.9%	8.3%	31.7%	16.8%
Total/Average	38.0%	7.3%	32.9%	34.4%

Source: SPI Research, February 2018

Invoices Redone due to Errors or Client Rejections

Invoices rejected for whatever reason dip into profit, as the PSO must finance the debt incurred while still delivering the service. Some PSOs do not consider invoices that have to be redone due to inaccuracies or client rejections in their DSO calculation – they probably should.

If expectations are properly set and time and expense accurately reported, ideally no invoice should be rejected. Invoicing problems tend to be systemic and emanate from the inaccurate capture of time and expense information; unclear statements of work; lack of approved change orders; inaccurate billing and exceeding pre-determined spending limits.

Table 162: Invoices Redone due to Errors or Client Rejections

Invoices Redone due to Errors or Client Rejections	Survey %	On-time project delivery	% of Ann. Margin Target	EBITDA
None	7.7%	81.6%	93.4%	23.3%
Under 1%	41.6%	81.9%	89.8%	15.5%
1% - 3%	28.3%	78.2%	86.3%	18.8%
3% - 5%	12.0%	79.1%	91.3%	14.6%
5% - 10%	8.3%	78.4%	89.1%	14.4%
Over 10%	2.1%	75.0%	83.8%	9.2%
Total/Average	100.0%	80.1%	89.1%	16.7%

Source: SPI Research, February 2018

Days Sales Outstanding (DSO)

Days Sales Outstanding (DSO) is still one of the most important KPIs for financial executives. It reflects the importance of accurately producing invoices and efficiently collecting payment. DSO is also a powerful measurement of client satisfaction, strong operating controls and client credit-worthiness.

This year the average DSO was 48.2 days, higher than 44.6 days in 2016, higher than the 43.8 days reported in 2015 and much higher the five-year average of 44.1%. With the return to economic prosperity, clients are taking their sweet time to pay their bills. Across the technology sector, committed DSO has shifted from 30 to 45 days. Cash collection is extremely important for independents as they must fund operations in constant dollars.

Table 163: Days Sales Outstanding (DSO)

Days Sales Outstanding (DSO)	Survey %	New clients	Bid-to-win ratio	Ann. Rev./ consult. (k)
Under 30 days	16.9%	27.4%	5.21	$196
30 - 50 days	44.7%	27.2%	4.85	$199
50 - 70 days	24.2%	24.1%	4.79	$198
70 - 100 days	10.6%	16.4%	4.51	$181
Over 100 days	3.6%	18.3%	4.54	$192
Total/Average	100.0%	25.0%	4.85	$196

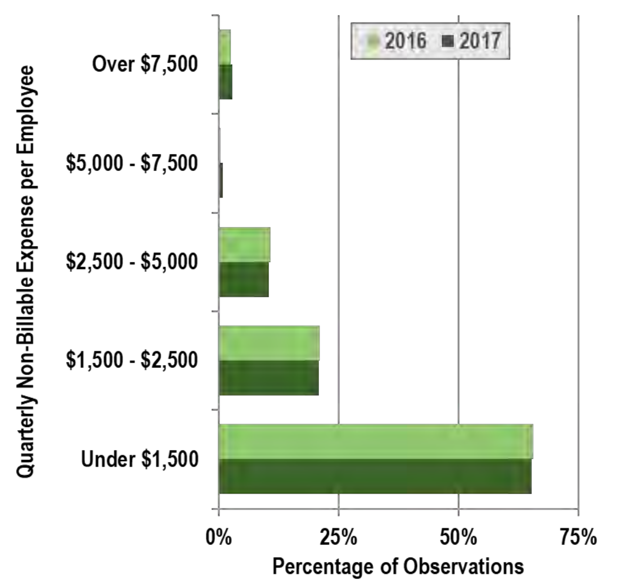
Source: SPI Research, February 2018

Quarterly Non-Billable Expense per Employee

Quarterly non-billable expense per employee shows how well PSOs manage employee expenses not related to billable work. Ideally, this metric is minimized, but there are always expenses due to travel, training, IT and business development that cannot be billed.

The quarterly non-billable expense per employee increased significantly in 2017 to $1,615 but it is still down considerably from the high-water mark in 2015 of $1,908 (Figure 58). The five-year average is $1,586. Excessive non-billable employee expense is usually a symptom of poor or ineffective business expense policies. It may also be a symptom of runaway business development expenses with non-essential personnel wasting valuable time and money chasing non-qualified opportunities. These figures are still below pre-recession discretionary spending of more than $3,000 per employee. Common causes of high non-billable discretionary spending are high business development and training expenses or employee expense misuse.

Figure 58: Quarterly Non-Billable Expense per Employee



Source: SPI Research, February 2018

Percentage of Billable Work Written-Off

Inaccurate invoicing, improperly accounting for time, project overruns and other project-related issues force many PSOs to write-off billable work, which naturally hurts profits. The formula is simple. The more work written off, the lower the firm's profit. The differential is significant. Obviously, no firm wants to write-off billable hours as doing so implies clients were not satisfied with some aspect of the work. However, to accomplish this feat requires significant effort to clearly define requirements and deliverables; assure work is scoped correctly; projects are delivered on-time and within budget; and invoices are accurate. SPI Research believes this initiative is well worth the effort.

The percentage of billable work that was written off in 2017 was 2.76%, lower than the 3% reported in 2016. Table 164 shows a clear correlation between increased levels of work being written off and lower performance in terms of revenue growth, billable utilization and on-time delivery. For those organizations who wrote off more than 10% of their work, billable utilization, on-time delivery and net profit were compromised.

Table 164: Percentage of Billable Work Written-Off

Percentage of Billable Work Written-Off	Survey %	Revenue growth	Billable Util.	On-time project delivery
None	10.8%	10.6%	73.3%	87.8%
Under 1%	30.5%	10.0%	73.5%	83.9%
1% - 3%	29.2%	10.0%	71.4%	78.9%
3% - 5%	14.6%	7.7%	71.3%	74.8%
5% - 10%	10.5%	6.0%	65.1%	75.0%
Over 10%	4.3%	0.6%	66.9%	69.7%
Total/Average	100.0%	8.9%	71.4%	80.0%

Source: SPI Research, February 2018

Real-Time Visibility

Real-time information visibility is one of the most important management tools. SPI Research asked survey respondents whether their executives had real-time visibility into all business activities (sales, service, marketing, finance, etc.). The rewards are significant for organizations who have integrated systems and management dashboards that allow them to pinpoint issues and spot trends in real-time. Executives who have real-time visibility run companies that are much more profitable than those that are not as they are able to take advantage of changing market conditions.

The good news is with the growing usage of integrated business applications, real-time visibility has consistently improved each year. Over the past five years, visibility has improved from 2.33 in 2014 to 3.66 in 2017. Real-time visibility is a very important key performance indicator. As Table 165 shows, organizations that have comprehensive visibility can make the decisions necessary to grow and achieve high levels of profitability. And it is not for just those KPI's listed in this table, it is for a majority of the other metrics tracked by SPI Research as well.

Table 165: Impact – Real-Time Visibility

Real-Time Visibility	Survey %	Revenue Growth	On-time project delivery	Std. del. Method. Used	% of Ann. Margin Target	EBITDA
1 - None	2.3%	2.8%	75.0%	52.2%	81.7%	11.9%
2 - Minimal	9.4%	8.7%	74.0%	61.2%	84.4%	17.3%
3 - Some	30.4%	8.7%	77.7%	66.3%	88.9%	15.5%
4 - Substantial	35.3%	7.9%	80.7%	72.4%	89.9%	17.2%
5 - Comprehensive	22.6%	10.8%	84.2%	73.8%	90.8%	17.8%
Total/Average	100.0%	8.8%	79.8%	69.3%	89.1%	16.7%

Source: SPI Research, February 2018

Extended real-time visibility is only attained through application integration. "Extended" means information that flows across departments and functions, so that employees have a more complete picture of operations, and can make quick, fact-based decisions. Without real-time visibility, decision-making can be subjective and reactive which hurts business performance. SPI Research believes these results help organizations justify expenditures in IT to provide the systems and tools they need to visualize, monitor and control the business.

Income Statements

In this section SPI Research analyzes income statements by organizational type and size. Inputs were:

Revenue

- ***Direct gross PS revenue***: Directly delivered PS revenue (not including re-billable travel)
- ***Indirect gross revenue***: (revenue from subcontractors, outside resources)
- ***Pass-thru revenue***: (revenue from hardware, software, materials, etc.)
- ***Reimbursable travel and expense revenue***: (includes re-billable travel and expense revenue)

Expense

- ***Direct Labor expense***: (does not include fringe benefits, vacation, sick time or overhead)
- ***Fringe benefit expense***: as a percentage of direct labor (for healthcare, pensions, vacation and sick pay)
- ***Subcontractor/outside consultant expense***: cost of subcontractors and outside consultants
- ***Pass-thru expense***: (expense for hardware, software, materials, etc. that can be billed)
- ***Billable travel and business expense***: business expenses that can be billed to clients
- ***Non-billable travel and business expense***: business expenses that cannot be billed to clients
- ***Recruiting expense***: (includes recruiting headcount, fees and signing bonuses)
- ***Sales expense***: (includes sales headcount, bonus and non-reimbursable sales expense)

- Δ ***Marketing expense***: (includes marketing headcount, bonus and marketing program expense)
- Δ ***Education, training and certification expense***: (includes the cost of training and certification)
- Δ ***PS IT expense***: supporting the IT infrastructure (personnel, applications, networking, etc.)
- Δ ***General and Administrative***: non-billable headcount, general and administration costs, facilities, headcount and overhead

Profits increased substantially in 2017 when compared to 2016 (Table 166). The primary catalyst for higher PS sector profit came from a significantly lower percentage of pass through hardware, software and other materials. Pass-through revenue generates substantially lower margins than direct and subcontractor labor. Firms also did a much better job of reducing both billable and non-billable travel expense. Re-billable travel expense has a negative impact on bottom-line margin because those expenses are typically rebilled at cost, diluting margin. Other improvements were reported in reigning in direct labor costs although the cost of fringe benefits increased, particularly for healthcare. Year over year firms reduced their spending on recruiting, sales, marketing and training. The reduction in recruiting expense is especially interesting because 2017 saw ebullient hiring across the entire PS industry which should have caused recruiting expense to increase. It appears that firms across the world did a good job of managing costs, navigating to best-ever profits in many sectors.

Table 166: Income Statement Comparison

Income Statement Revenue & Expense	2016	2017	Delta
Benchmark Surveys	416	456	
REVENUE			
Direct gross PS revenue	80.0%	82.1%	2.6%
Indirect gross revenue (subcontractor)	10.7%	11.5%	7.1%
Pass-thru rev. (hardware, software, mat.)	6.4%	3.9%	-39.8%
Reimbursable Travel & Expense revenue	3.0%	2.6%	-13.0%
Total Revenue	100.0%	100.0%	
EXPENSES			
Direct labor expense	41.1%	38.8%	-5.5%
Fringe benefit percentage of direct labor	6.1%	6.3%	3.3%
Subcontractor/outside consultant expense	8.7%	10.2%	17.1%
Pass-thru equipment expense	4.0%	2.5%	-36.3%
Billable travel and business expense	3.3%	2.3%	-29.0%
Non-billable travel expense	2.1%	1.6%	-24.4%
Total recruiting expense	0.8%	0.7%	-10.1%
Sales expense	5.1%	4.5%	-11.8%
Marketing expense	2.1%	1.9%	-9.7%
Education/training/certification expense	1.1%	1.0%	-11.0%
PS IT expense	1.8%	1.7%	-4.8%
All other G&A expense	9.8%	11.6%	18.0%
Total Expense	85.8%	83.2%	-3.0%
EBITDA	14.2%	16.8%	18.4%

Source: SPI Research, February 2018

Table 167 provides income statement comparison for embedded versus independents as well as by geography. Sources of revenue for independents and ESOs was very similar this year but independents spend more on subcontractors, pass-through equipment, marketing, training, IT and G&A. Of course, this makes sense as independents must manage a fully loaded profit and loss statement whereas embedded organizations do not typically pay for corporate G&A, marketing and IT. APAC firms pay substantially less for fringe benefits, particularly healthcare than their counterparts in the Americas and Europe. Curiously, recruiting expense was kept below 1% for all groups. APAC firms spent more than twice as much for sales compared to the Americas and Europe.

Table 167: Income Statement by Organization Type and Embedded Service Type

Key performance indicator (KPI)	Survey	ESO	PSO	Americas	EMEA	APac
Surveys	456	117	339	396	40	20
REVENUE						
Direct gross PS revenue	82.1%	81.7%	82.2%	82.3%	84.1%	76.1%
Indirect gross revenue (subcontractor)	11.5%	11.6%	11.4%	11.4%	10.9%	13.4%
Pass-thru rev. (hardware, software, mat.)	3.9%	3.0%	4.1%	3.6%	2.2%	9.4%
Reimbursable Travel & Expense revenue	2.6%	3.7%	2.3%	2.7%	2.8%	1.0%
Total Revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
EXPENSES						
Direct labor expense	38.8%	41.0%	38.3%	38.4%	43.4%	38.0%
Fringe benefit percentage of direct labor	6.3%	7.0%	6.1%	6.6%	6.2%	2.4%
Subcontractor/outside consultant expense	10.2%	8.3%	10.7%	10.3%	7.3%	13.2%
Pass-thru equipment expense	2.5%	1.0%	3.0%	2.3%	1.8%	6.4%
Billable travel and business expense	2.3%	2.7%	2.2%	2.2%	3.2%	2.4%
Non-billable travel expense	1.6%	1.5%	1.6%	1.6%	1.6%	1.1%
Total recruiting expense	0.7%	0.7%	0.7%	0.7%	0.9%	0.8%
Sales expense	4.5%	5.1%	4.3%	4.0%	5.3%	10.3%
Marketing expense	1.9%	1.2%	2.1%	1.9%	1.8%	1.9%
Education/training/certification expense	1.0%	0.9%	1.0%	0.9%	1.6%	0.7%
PS IT expense	1.7%	1.4%	1.8%	1.7%	1.6%	1.8%
All other G&A expense	11.6%	5.8%	13.1%	12.1%	10.9%	6.2%
Total Expenses	83.2%	76.6%	84.9%	82.8%	85.7%	85.2%
2017 EBITDA	16.8%	23.4%	15.1%	17.5%	14.3%	14.8%
2016 EBITDA Comparison	14.2%	20.1%	11.5%	14.5%	13.6%	11.8%

Source: SPI Research, February 2018

When comparing year over year profit, every sector generated substantially more profit in 2017 compared to 2016. All in all, 2017 was a very good year for Professional Services!

Table 168 provides analysis of income statements by organization size. Every size organization except those with 300 to 700 PS employees generated more profit in 2017 compared to 2016. Interestingly the smallest organizations were the most profitable. In fact, in 2017 profit declined linearly with size.

Table 168: Income Statement by Organization Size

Key performance indicator (KPI)	Under 10	10 - 30	31 – 100	101 - 300	301 - 700	Over 700
Surveys	41	107	140	96	37	35
REVENUE						
Direct gross PS revenue	85.9%	83.9%	81.9%	81.4%	83.1%	69.7%
Indirect gross revenue (subs.)	6.3%	10.8%	12.2%	10.3%	11.3%	23.8%
Pass-thru rev. (hw, sw, mat.)	5.6%	3.0%	3.6%	4.9%	3.4%	2.6%
Reimbursable Travel & Expense	2.2%	2.4%	2.3%	3.4%	2.2%	4.0%
Total Revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
EXPENSES						
Direct labor expense	46.1%	39.6%	36.9%	37.0%	48.5%	35.5%
Fringe benefit % of direct labor	4.0%	6.0%	6.2%	6.9%	7.7%	8.6%
Subcontractor/outside consultant	6.0%	9.0%	10.4%	11.1%	12.0%	15.9%
Pass-thru equipment expense	4.9%	1.7%	1.9%	3.7%	3.6%	1.0%
Billable travel and business	3.3%	1.7%	2.2%	2.9%	2.9%	1.8%
Non-billable travel expense	1.8%	1.6%	1.5%	1.6%	1.5%	1.5%
Total recruiting expense	0.6%	0.5%	0.7%	0.9%	0.8%	1.0%
Sales expense	5.1%	3.3%	5.1%	5.1%	2.8%	3.7%
Marketing expense	2.1%	2.0%	2.1%	1.5%	0.7%	2.2%
Education/training/certification	1.2%	1.0%	0.9%	1.1%	0.4%	1.1%
PS IT expense	1.4%	1.4%	1.8%	1.6%	2.2%	3.1%
All other G&A expense	4.0%	13.6%	13.2%	11.1%	4.6%	11.7%
Total Expenses	80.6%	81.3%	83.0%	84.6%	87.7%	87.0%
2017 EBITDA	19.4%	18.7%	17.0%	15.4%	12.3%	13.5%
2016 EBITDA Comparison	12.8%	12.8%	17.1%	14.5%	13.6%	11.8%

Source: SPI Research, February 2018

The smallest organizations typically report the best profitability primarily because many of them operate as virtual businesses, with limited G&A spending on facilities and management. They also do not report significant recruiting expense as their overall hiring is fairly limited. They cannot afford to invest in junior personnel or interns, preferring to make senior hires who can be immediately billable.

In this year's survey, SPI Research received profitability metrics from most of the vertical markets (*Only markets with sufficient income statement data are shown*). This year we received significantly more completed surveys from architects and engineers. With economic improvement, this sector has seen profit improvement year over year as well as revenue growth however architects reported the highest level of G&A overhead in the benchmark at 17.1%.

Table 169: Income Statement by PS Market Vertical

Key performance indicator (KPI)	Arch./ Engr.	IT Consult.	Mgmt. Consult.	Software PS	SaaS PS
Surveys	153	103	45	45	29
REVENUE					
Direct gross PS revenue	81.2%	78.9%	83.8%	91.9%	83.1%
Indirect gross revenue (subs.)	13.0%	12.7%	8.4%	5.1%	12.8%
Pass-thru rev. (hw, sw, mat.)	2.9%	6.4%	2.2%	0.9%	2.1%
Reimbursable Travel & Expense	2.9%	1.9%	5.6%	2.1%	1.9%
Total Revenue	100.0%	100.0%	100.0%	100.0%	100.0%
EXPENSES					
Direct labor expense	32.4%	41.0%	41.0%	48.9%	41.3%
Fringe benefit % of direct labor	6.9%	5.5%	8.3%	6.2%	5.1%
Subcontractor/outside consultant	11.7%	11.1%	5.7%	6.0%	8.3%
Pass-thru equipment expense	2.7%	4.4%	1.2%	0.5%	0.2%
Billable travel and business	2.1%	2.4%	4.1%	2.5%	1.2%
Non-billable travel expense	1.6%	1.8%	1.9%	1.6%	1.4%
Total recruiting expense	0.5%	1.0%	0.7%	0.5%	0.5%
Sales expense	2.3%	6.4%	4.7%	4.7%	6.7%
Marketing expense	2.1%	2.0%	0.9%	2.4%	2.0%
Education/training/certification	1.0%	1.2%	1.0%	0.5%	1.2%
PS IT expense	2.1%	1.5%	1.8%	2.2%	0.5%
All other G&A expense	17.0%	8.8%	5.0%	10.4%	5.3%
Total Expenses	82.3%	87.1%	76.4%	86.5%	73.8%
2017 EBITDA	17.7%	12.9%	23.6%	13.5%	26.2%
2016 EBITDA Comparison	13.3%	10.4%	23.6%	11.5%	19.4%

Source: SPI Research, February 2018

Table 169 shows income statement comparison for the five primary verticals represented in this benchmark. As stated throughout this report, the cloud ESOs had a banner year – generating an all-time high percentage of profit at 26.2%! The cloud is here to stay and as these organizations mature, they are leading the charge in investing in tools and technology to streamline their PS operations. The large cloud PSOs have large development centers throughout India, Asia and Eastern Europe, allowing them to take advantage of strong technical talent at substantially lower costs. Management consultancies and enterprise software ESOs have the highest direct labor costs as they must pay a premium for the unique skills their clients require. Software ESOs and Architects and Engineers spend the most on IT. Architects and engineers have the highest G&A cost which dilutes their margins.

Table 170 shows income statements for government contractors, accountancies, advertising and marketing agencies, hardware and networking ESOs and other PS. Accountancies and hardware and networking organizations generated substantial profit. Government contractors spend the least on their direct labor and the most on their indirect (subcontractor) labor. Accountancies spend more than any other vertical on IT and marketing and the least on recruiting.

Table 170: Income Statement by PS Market Vertical

Key performance indicator (KPI)	Govt. Contract.	Acct.	Advertise / Mktg / PR	Hardware / Net. PS	Other PS
Surveys	18	8	8	6	41
REVENUE					
Direct gross PS revenue	59.6%	92.4%	74.3%	56.4%	89.8%
Indirect gross revenue (subs.)	31.7%	7.6%	16.3%	30.3%	4.5%
Pass-thru rev. (hw, sw, mat.)	7.2%	0.0%	7.5%	11.2%	3.8%
Reimbursable Travel & Expense	1.4%	0.0%	2.0%	2.0%	1.9%
Total Revenue	100.0%	100.0%	100.0%	100.0%	100.0%
EXPENSES					
Direct labor expense	29.3%	37.3%	40.1%	43.7%	40.7%
Fringe benefit % of direct labor	10.3%	1.9%	5.8%	9.7%	4.7%
Subcontractor/outside consultant	23.5%	8.8%	13.8%	21.9%	9.3%
Pass-thru equipment expense	3.1%	0.0%	4.9%	1.6%	1.0%
Billable travel and business	1.9%	0.0%	2.0%	1.1%	2.2%
Non-billable travel expense	0.1%	1.0%	0.3%	0.4%	1.1%
Total recruiting expense	1.1%	0.0%	0.3%	0.0%	1.1%
Sales expense	6.1%	2.6%	3.9%	0.1%	6.2%
Marketing expense	1.1%	2.3%	0.8%	0.1%	1.8%
Education/training/certification	0.7%	1.4%	0.4%	0.3%	0.6%
PS IT expense	1.0%	1.9%	1.3%	0.3%	1.7%
All other G&A expense	7.6%	20.7%	9.5%	0.6%	15.9%
Total Expenses	85.9%	77.9%	83.1%	79.7%	86.1%
2017 EBITDA	14.1%	22.1%	16.9%	20.3%	13.9%
2016 EBITDA Comparison	N/A	20.6%	13.0%	30.7%	11.5%

Source: SPI Research, February 2018

As usual, embedded services organizations showed higher levels of profitability as they typically have a lower cost structure than independents because they do not pay the full burden for corporate sales, marketing, IT and G&A expense. Although 2017 showed solid revenue growth combined with solid profitability, global economic uncertainties and geopolitical tensions continue to abound. Now is the time for PS executives to carefully revisit their 2018 business plans to ensure sales pipelines are robust enough to support growth forecasts. A careful eye must be turned to scrubbing backlog and reviewing overhead and discretionary spending. 2018 looks like it will be a fantastic year, but we may also see big surprises, particularly on the political front.

12. 2018 Professional Services Maturity™ Model Results

SPI Research has spent over a decade developing and improving the Professional Services Maturity™ Model. Over 20,000 billable professional services organizations use the model to benchmark and improve organizational performance. With nearly 3,000 billable services organizations (1,800 over the past five years) participating over the past eleven years, SPI Research has further refined the model to improve its accuracy.

456 firms participated from September through November of 2017 representing over 158,000 consultants worldwide, continuing to make this the most comprehensive study of the global PS industry. While most the participating organizations are headquartered in North America, the firms surveyed have employees distributed globally, and SPI Research believes it to be an accurate representation of the global PS industry. SPI Research clients continue to use the model to develop, prioritize and implement performance gains.

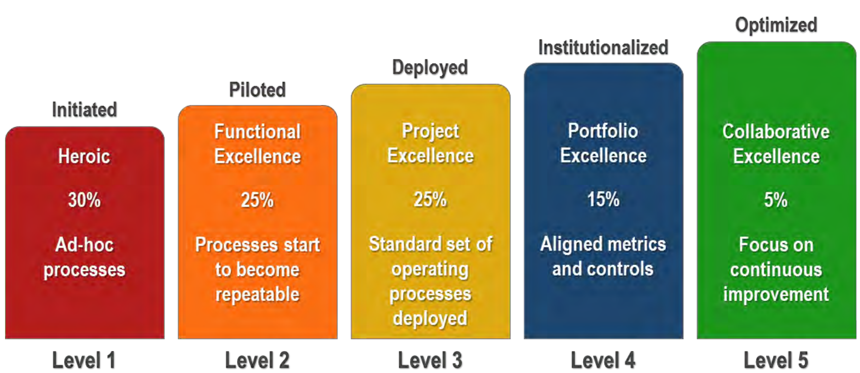
In this chapter, SPI Research reveals the analytic basis of the model and gives insight into our survey techniques. For this year's model, SPI Research used the current database of 456 firms surveyed over in 2017.

Maturity Levels

The maturity rating for each Service Performance Pillar varies based on the performance of the organization. In each of the five performance pillars, every firm operates at one of the five maturity levels (Figure 59):

- ∆ **Level 1 (Initiated – 30% of the respondents)**: In the initial stages, the focus of the organization is primarily on client acquisition and building a reference base. To accomplish this core mission, the organization must recruit and hire excellent staff. Therefore, at Maturity Level 1 the priority focus areas are Customer Relationships and Human Capital Management.
- ∆ **Level 2 (Piloted – 25% of the respondents)**: The organization is becoming a profit center so focus is still on client relationships, but human capital and

Figure 59: Professional Services Maturity Model™ Levels



Source: SPI Research, February 2018

finance and operations have become more important as the organization moves from a cost center to a profit center.

- Δ Level 3 **(Deployed – 25% of the respondents)**: The organization has now deployed core operating processes in all five service performance pillars. At this point, the organization must continue to accentuate Human Capital Alignment, but the key focus has shifted to Finance and Operations and Service Execution. The organization must start to consider strategy and vision to ensure the focus is on the right clients, markets and competition. At this level, the organization must have deployed standard business processes across all dimensions.
- Δ Level 4 **(Institutionalized – 15% of the respondents)**: At this level, the organization must start optimizing across all dimensions. However, maintaining and growing service revenue and margin is of paramount importance. The organization must start developing a differentiated approach to clients with vertical and horizontal market segments and geographies so a focus on the Client Relationship pillar is critical.
- Δ Level 5 **(Optimized – 5% of the respondents)**: The organization has achieved "black belt" status in all functional areas. Processes are fully developed, deployed and institutionalized. The organization is now developing comprehensive measurement, monitoring, and optimization processes across all pillars.

While every organization should strive to attain Maturity Level 5 in each of the five service performance pillars, some areas are more important than others depending on the overall maturity of the company or its market. For instance, early in the life of a professional services organization client relationships are far more important than profitability because without clients there can be no future. Over time, client relationships always remain important, but the organization must equally focus efforts on other Pillars. To be a truly optimized organization, the firm must aspire to reach Level 5 in all dimensions.

Model Improvements

Each year SPI Research makes modifications to improve the model based on additional surveys, its own analysis, and feedback from PSOs that use the model. This year, there are several changes to the model that should improve its accuracy and validity. These changes include:

- Δ Subscription services were added. This type of solution sales is becoming increasingly important in Professional Services.
- Δ The group responsible for new solution development was removed. SPI Research didn't find any strong correlation to performance.
- Δ Managed services were added to the type of work sold.

As is the case each year, not every question is included in the PS Maturity™ model. Demographic information is not part of the PS Maturity™ model but helps PS executives better compare their organizations to the benchmark.

Model Inputs

SPI Research conducts correlation analysis between the questions to determine what, if any, impact each of the key performance indicators (KPIs) have on each other. The questions were then rated by relative importance from 0.0 (unimportant) to 1.0 (very important) for each of the KPIs. Each question was assigned a maximum value based on the answer given and the weight of the question. At the bottom of each of the following tables is the total maximum value possible in each maturity rating. Here is a synopsis of the SPI Research methodology:

- ∆ ***Factor***: Respondent's unique answers to the given question. Some questions are answered within a range to reduce the time to complete the survey.
- ∆ ***Weight***: The relative value of the question as compared to others. Questions were weighted from 0.0 to 1.0 depending on the overall importance of the question. Questions with a weight of 1.0 are the most important in determining organizational maturity.
- ∆ ***Pillar Correlation***: SPI Research incorporates a correlation coefficient for each question to all pillars, reflecting the inter-relationship that exists between different functions and key performance metrics within PSOs. Correlations range from -1.0 to 1.0 depending on the KPI's negative or positive impact on performance.
- ∆ ***Maximum Score***: The maximum score for each question is determined by multiplying the normalized value of the question by its weight. Scores are normalized on a scale from 1 to 100 and then assigned a Maturity Level based on a score from 1 to 5.

The minimum scores for each Pillar are summarized in Table 171. The maximum value is 100, which means the organization is at the "Optimized" level. By design, maturity scores are relative to the size of the survey with approximately 5% of organizations designated at Level 5 (Optimized) in any given pillar.

Table 171: Minimum Normalized Performance Pillar Scores

Pillar	Level 1	Level 2	Level 3	Level 4	Level 5	Maximum
Leadership (LE)	0.0	66.1	72.7	80.0	87.2	100.0
Client Relationships (CR)	0.0	44.9	51.2	58.2	65.3	100.0
Human Capital (HC)	0.0	55.4	62.6	69.7	75.2	100.0
Service Execution (SE)	0.0	43.5	55.0	69.7	81.6	100.0
Finance & Operations (FO)	0.0	37.5	48.7	61.2	71.8	100.0

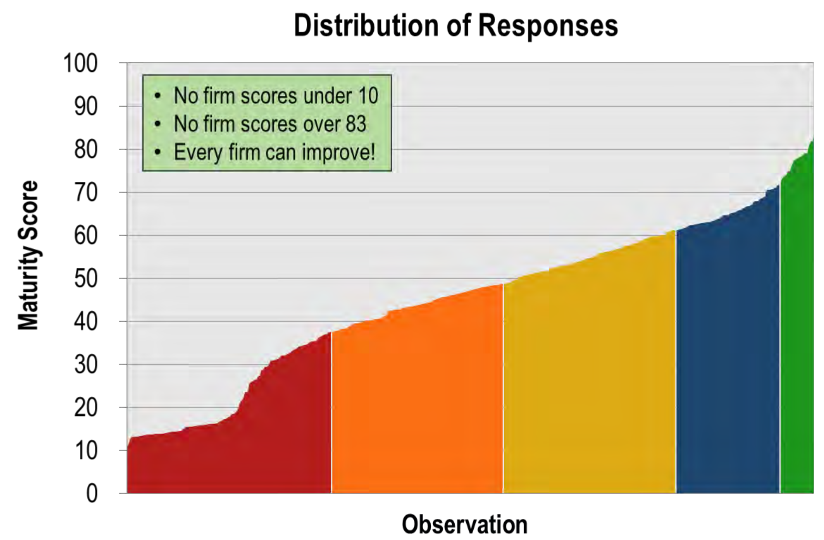
Source: SPI Research, February 2018

Moreover, SPI Research assumes 15% perform at Level 4; 25% perform at Level 3; 25% perform at Level 2 and the other 30% perform at Level 1. These scores are slightly different from the 2017 report in most pillars as SPI Research annually adjusts scores based on economic conditions and the feedback received over the past year.

What might be interesting to readers of this report is that when analyzing the normalized scores (1 to 100) in each Pillar it shows that no firm scores a "0", meaning the lowest level of performance, nor does any firm score a "100", meaning the highest level. Figure 60 highlights the scores for the Finance and

Operations Pillar. It shows that no firm scored over 83 (which was much higher than the 73 in last year's survey), meaning there is always room for improvement, regardless of how well the organization runs!

Figure 60: Normalized Finance & Operations Pillar Scores



Source: SPI Research, February 2018

SPI Research works with services organizations to improve performance in each Pillar. The analysis highlights how the firm scored relative to its peers (for example, management consultancies with between 100 and 300 employees) and the overall survey. This graphical display highlights areas where the organization performs poorly and where additional attention should be paid to produce improvements. After over five-years of engagements using the Professional Services Maturity Model™ SPI Research recommend firms look first at the areas performing poorly (**red**), as opposed to further improving areas where it already does well (**green**). Figure 61 highlights one such example.

Figure 61: Increase performance by focusing on low-performing KPIs

Finance & Operations Performance Indicator	Consulting Rus	Peer Average	Survey Average	Level 1	Level 2	Level 3	Level 4	Level 5
Annual revenue per billable consultant (k)	$150k - $200k	$200	$196					
Annual revenue per employee (k)	$100k - $150k	$155	$159					
Quarterly revenue target in backlog	Under 20%	46.9%	46.2%					
Percent of annual revenue target achieved	80% - 90%	93.4%	93.0%					
Percent of annual margin target achieved	Under 80%	89.1%	89.1%					
Revenue leakage	2% - 5%	4.1%	4.4%					
% of inv. redone due to error/client rejections	5% - 10%	2.1%	2.2%					
Days sales outstanding (DSO)	30 - 50 days	40	48					
Quarterly non-billable expense per employee	Under $1,500	$1,422	$1,615					
% of billable work is written off	None	2.0%	2.8%					
Executive real-time wide visibility	3 - Some	3.72	3.66					

Source: SPI Research, February 2018

Model Results

SPI Research analyzed each of the 456 participating firms to minimize any bias when comparing PSOs of different sizes. Table 172 shows most organizations in each size category have similar averages for each pillar.

Table 172: Average Service Maturity by PSO Size (People)

		Average Maturity Level				
Organization Size (people)	Count	LE	CR	HC	SE	FO
Under 10	41	2.63	2.56	2.37	2.54	2.39
10 – 30	107	2.37	2.50	2.38	2.37	2.43
31 – 100	140	2.43	2.56	2.37	2.43	2.59
101 – 300	96	2.39	2.24	2.40	2.43	2.35
301 – 700	37	2.19	2.19	2.65	2.43	2.11
Over 700	35	2.54	2.11	2.54	2.29	2.20
Total	456	2.41	2.41	2.41	2.41	2.41

Source: SPI Research, February 2018

As one might expect, the smallest firms scored highest in the Leadership pillar, as they have the ability to communicate much more efficiently than larger, global organizations. SPI Research did find it interesting that the largest organizations actually scored the second highest in this year survey, reflecting a strong commitment to better leadership. Smaller firms also scored higher in the Client Relationships pillar, fueling strong growth along the way. However, in Human Capital Alignment, smaller firms scored lower, as many lack the training, compensation and internal growth potential that tend to keep attrition low and employees happy.

SPI Research found it interesting that the smallest firms scored the highest level of maturity in delivering services. This result is atypical, as larger firms have more tools and methodologies in place to perform efficiently and effectively. However, sometimes larger firms have very bureaucratic processes, which slow the ability to deliver services, and potential profit, down. Overall, midsize firms will show the greatest Finance & Operations maturity, primarily due to not being so small as to worry about profit, but not so large, as to worry about corporate bureaucracy.

Table 173: Average Service Maturity by PSO Type

		Average Maturity Level				
Organization Size (people)	Count	LE	CR	HC	SE	FO
Embedded	117	2.32	2.50	2.09	2.40	2.51
Independent	339	2.45	2.39	2.53	2.42	2.38
Total	456	2.41	2.41	2.41	2.41	2.41

Source: SPI Research, February 2018

SPI Research analyzed the maturity of PSOs by type (embedded vs. independent), and the results are summarized in Table 173. This year's results show that embedded service organizations scored better in only two of the five performance pillars, which was also the case in last year's survey. In the past embedded organizations exhibited greater maturity in all five dimensions. Embedded PSOs are typically early adopters of business applications as they receive the benefit of sophisticated IT investments while independents tend to forego solution acquisition in favor of business development and marketing expenditures. Just like in 2016, This year independents were superior in leadership, talent management and service delivery.

Table 174 shows the average level of maturity for each of the performance pillars by select vertical markets. IT consultancies, management consultancies and SaaS of PS scored the highest on two levels, although SaaS PS also scored the lowest on one (Human Capital Alignment). Several of the markets where SPI Research did not have enough quantitative data showed lower results. However, it is difficult to analyze those markets when there are less than 20 surveys.

Table 174: Average Service Maturity by Vertical Market

		Average Maturity Level				
Market	Count	LE	CR	HC	SE	FO
Architecture/Engineering	153	2.27	2.03	2.48	1.92	2.17
IT Consulting	103	2.61	2.82	2.65	2.95	2.66
Software PS	45	2.33	2.49	2.11	2.53	2.71
Management Consulting	45	2.69	2.93	2.49	2.93	2.69
SaaS PS	29	2.66	3.07	1.83	2.66	2.69
Government Contracting	18	2.22	2.17	2.83	1.94	1.94
Accounting	8	1.75	1.38	2.00	1.63	2.00
MarCom / Advertising	8	2.50	2.25	2.50	2.50	2.38
Hardware PS	6	1.67	2.17	2.00	2.17	2.67
All Others	41	2.39	2.10	2.20	2.44	2.15
Total	456	2.41	2.41	2.41	2.41	2.41

Source: SPI Research, February 2018

The Financial Benefits of Moving Up Levels

The PS Maturity Model™ was developed to demonstrate the importance of organizational improvement through the use of benchmarking. SPI Research believes that the importance of the maturity model is to help organizations improve ***balanced performance across the entire organization***, not just in terms of financial performance. However, if the organization is profit-motivated (which most are), increasing maturity levels do show up in significant bottom-line profit. Table 175 highlights some of the key performance indicators by maturity level and should alone be an important reason why PS executives should looker deeper into using it to accelerate both productivity and profit.

Table 175: Key Performance Indicators (KPIs) by Maturity Levels

Key performance indicator (KPI)	Level 1	Level 2	Level 3	Level 4	Level 5
Year-over-year change in PS revenue	3.0%	5.7%	9.7%	13.8%	22.2%
Year-over-year change in PS headcount	7.0%	8.0%	9.6%	11.7%	18.8%
Well understood vision, mission and strategy	2.81	3.82	4.11	4.70	5.00
Confidence in PS leadership	3.28	3.98	4.31	4.83	5.00
Bid-to-win ratio (per 10 bids)	3.40	4.11	5.21	6.39	7.58
Deal pipeline relative to qtr. bookings forecast	125%	147%	182%	243%	275%
Employee billable utilization	60.3%	69.2%	74.8%	81.4%	84.6%
Projects delivered on-time	72.7%	78.1%	83.3%	82.7%	90.8%
A standardized delivery methodology is used	65.5%	68.4%	70.9%	72.1%	80.0%
Annual revenue per billable employee (k)	$104	$169	$215	$247	$291
Annual revenue per employee (k)	$77	$130	$175	$208	$253
Project margin	23.9%	28.2%	32.4%	42.0%	46.9%
Percent of annual revenue target achieved	87.8%	90.9%	93.0%	98.3%	100.0%
Percent of annual margin target achieved	82.4%	86.3%	89.5%	94.2%	100.2%
EBITDA (Profit) %	4.7%	7.8%	15.2%	22.6%	35.2%

Source: SPI Research, February 2018

This table shows some of the benefits in moving up levels. Virtually every one of the 158 KPIs improve as firms move up from one level to the next. Most organizations SPI Research has worked with find that improving by one maturity level annually is about all they can do. While moving up even one level can be difficult, the model shows the investment is well worth it.

The Inter-relationship of Pillars

Process improvement can both positively and negatively impact other Key Performance Indicators (KPIs) in the same Service Performance Pillar as well as the other four. Some examples include:

- Δ Bid-to-Win (*Client Relationships*) impacts margins and revenue growth (*Finance and Operations*). Winning bids might improve a PSO's sales effectiveness, but might worsen its Finance and Operations pillar due to lower profit margins if heavy discounting is required to win the bids.
- Δ Leadership issues (communication, well understood vision, mission and strategy,) can impact the ability to grow (*Finance and Operations*), staffing levels (*Human Capital*) and the ability to effectively deliver projects (*Service Execution*).
- Δ If a project is delivered late (*Service Execution*) it can negatively impact relations with the client and future sales effectiveness (*Client Relationships*), revenue growth and project profitability (*Finance and Operations*).

SPI Research took these interrelationships into account when building the Professional Services Maturity Model™ (Figure 62). It adds complexity to the model, but SPI Research believes it provides a real-world balanced view that improves PSOs ability to positively enact change.

Figure 62: Key Performance Indicators (KPIs) are Correlated

Source: SPI Research, February 2018

Model Conclusions

In 11 years of building the Professional Services Maturity Model™ SPI Research has seen the correlation of KPIs vary from year-to-year, as the economy and competitive environment dictate how PS organizations operate. The model is an aggregate built for PSOs (both embedded and independent), different size organizations, as well as for the different vertical markets surveyed. Therefore, the results will have some type of "generic bias." PS executives who wish to have their organization compared directly to their peer group (i.e., IT Consultants with 100 to 300 employees) should contact SPI Research.

As organizations grow, they will gain greater operational efficiency and other advantages, while losing intimacy and ease of communication. Every vertical market has its own constraints, particularly in pricing strategies, in many cases limiting the ability for high levels of profitability. The key to this maturity model is for executives to hone in on their own vertical market, as well as organization size, to better determine relative performance. SPI Research can further segment this information to help PS executives specifically analyze performance relative to their exact peer group. Contact SPI Research for more information on the Professional Services Maturity Model™.

13. Conclusions and Recommendations

2017 was a year for the record books! For the first time since the recession of 2008, 15 of the world's major economies reported GDP growth. Stocks are riding the second longest bull market in history with the MSCI Global stock index delivering record-breaking appreciation of 22.4%! The last two weeks have seen wild swings in stock market performance as volatility has once again reared its ugly head.

Among the major world economies, the fastest growing is still China, but the Asian giant keeps slowing down its pace, with a predicted 6.6% growth for 2017. India, on the other hand, is expected to improve its growth rate to 7.2%. Importantly for the Professional Services industry, which relies on developed nation growth, Eurozone growth (2.5%) surpassed that of the U.S (2.3%), with both major economies delivering their best performance in three years. Based on 11 years of surveying for the Professional Services Maturity™ Benchmark report, SPI Research has seen the economy go through many cycles, both good and bad, but through it all the PS industry keeps expanding. Professional Services growth continues to outpace that of other industries, with IT services at the top of the list.

This year's benchmark showed that there are definitely "Haves" and "Have-nots". The Haves are expanding rapidly and are very profitable. The future looks bright for them. The Have-nots are either in a commoditizing market or have not found a way to differentiate themselves. Quite often lackluster performance emanates from management failure and inability to measure and improve performance. The professional services maturity benchmark is a good start. It shows organizations where they are deficient and where they should invest their improvement dollars.

In the U.S., wage growth appreciated 2.9% based on the lowest unemployment (4.1%) in 17 years. This year's benchmark showed professional services organizations have increased hiring more than any other time in the past half-decade. It will not be easy, but having the right talent on board is the key to success.

The Professional Services Maturity Model™ has shown effective leadership is a critical component of organizational success. As the economy changes, the makeup of the professional workforce changes, and geopolitics change, leadership is now more important than ever. Hiring and developing future leaders is critical, as a lack of leadership in the Have-nots has become apparent.

2018 Should be Strong

While no one has a crystal ball, it appears the economy is growing at a level not seen in years. This growth bodes well for professional services, as they will be needed to help steer their clients through market shifts. In the US, an infrastructure deal in Washington DC could spark PS growth for architects and engineers and other ranks of consultants who help manage large projects. With new volatility creeping into world markets we could see commensurate swings in PS revenues and hiring but overall 2018 should be a strong year.

Stick with the Facts

The Professional Services Maturity™ Benchmark provides clear metrics and guidance on over 160 key performance measurements. SPI Research likes to say, "Running a service organization is a game of singles and doubles." Small percentage improvements in just a few key performance areas can have dramatic bottom-line results. PS executives often feel isolated and have a limited support base within their companies to rely on for advice. The Professional Services Maturity™ Benchmark and score-carding process takes the guesswork out of metrics. Completing the PS Maturity™ survey can highlight many open areas and enable PSOs to conduct their own self-assessment.

Most PSOs that consider themselves leaders in the market and they probably are in one or more areas. Each of them has unique and specific capabilities that set them apart. However, there may be areas where they are in fact relatively immature compared to their competition. It is these specific areas where PS executives can improve their organization and prepare it for the new challenges that lie ahead. By developing a measurable annual improvement plan and backing it up with clear improvement initiatives and goals the organization can create and institutionalize a continuous cycle of improvement and renewal.

Take advantage of technology and the analytics it provides

Knowledge is power, and data fuels knowledge. Analytics have enabled firms to better prepare and operate in a changing economy. And this is one area that tends to hinder PS executives – a lack of actionable information. SPI Research believes that executives should consider their IT infrastructure in any type of business transformation. Many of the firms that SPI Research has met with just do not have the information they need to make real-time decisions.

The Professional Services Maturity Model™ does not work without accurate and timely information. Needless to say, it is also difficult to believe PS executives can run their firms optimally without accurate and timely information either. Scrimping on systems costs more in the long run. All organizations should consider targeted projects to improve information transparency, accuracy and timeliness. Investments in IT will pay off.

SPI Research has seen dramatic improvements when PSOs implement new information technologies, but only when executives understand how to use their applications and reinforce and embrace their use. Analytic dashboards have become increasingly important at the executive level. They provide the necessary information required to make informed decisions in real time. SPI Research believes they should be driven down to the billable consultant level, albeit with different performance metrics. With dashboards, consultants can better understand their own performance and consider ways in which they can execute better, leading to higher job satisfaction and better compensation. An informed organization armed with the skills and tools they need will be better prepared to compete in the new decade.

Prepare Now!

Concentrate on your organization's weakest link, but continue to improve in each of SPI Research's five core pillars:

1. ***Leadership***: build leaders for the future. As organizations expand, it is imperative they have strong leadership around the world. Especially as economic volatility exists, strong leaders can show the way.
2. ***Client Relationships***: selling professional services has become increasingly difficult, as client organizations look for demonstrable value. Initiate marketing and sales campaigns with value in mind. As delivered value increases, so do references and growth.
3. ***Human Capital Alignment***: your talent pool is your most critical asset, and continued understanding of how the workforce changes, and how they wish to be treated, from training to compensation to social programs, is critical to understand and cultivate a high-quality workforce.
4. ***Service Execution***: delivering services on time and on budget with sufficient margins fosters growth and profitability. Always keep an eye on project budgets to actuals, eliminating overruns before they spiral out of control. You can't have your best people on every project, there must be a mix between higher-level skills and lower level and lower cost talent. Implementing standardized business processes helps you better understand and track time for the services delivered.
5. ***Finance & Operations***: keep an eye on the bottom-line! Cash flow is critical, and it is imperative for your organization to track costs and expenses to determine where improvement is needed. Predictable financial performance provides the breathing room to make investments into new growth areas.

SPI Research believes benchmarking is an activity that should be conducted continuously, as the insights it delivers enable PSOs to make changes in real time that are necessary for growth and prosperity. Continue to compare your organization to the Best-of-the-Best organizations. This information will shed light on areas of improvement and help galvanize your organization to improve performance.

Best of luck for a prosperous and profitable 2018!

Jeanne Urich and Dave Hofferberth

14. Appendices

Appendix A: Acronyms Used in This Report

Table 176: Lexicon of Acronyms and Abbreviations

Acronym	Meaning
AI	Artificial Intelligence
APac	Asia-Pacific
BI	Business Intelligence
BPM	Business Process Management
BPO	Business Process Outsourcing
CEO	Chief Executive Officer
CFM	Core/Corporate Financial Management
CFO	Chief Financial Officer
CIO	Chief Information Officer
CRM	Client Relationship Management
DSO	Days Sales Outstanding
EMEA	Europe, Middle East, Africa
ERP	Enterprise Resource Planning
ESO	Embedded Service Organization
EVM	Earned Value Management
HCM	Human Capital Management
HR	Human Resources
IaaS	Infrastructure as a Service
IoT	Internet of Things
ISV	Independent Software Vendor
IT	Information Technology
KPI	Key Performance Indicator
MarCom	Marketing Communication / Advertising
NAICS	North American Industry Classification System

Acronym	Meaning
PA	Project Accounting
PaaS	Platform as a Service
PMI	Project Management Institute
PMO	Project Management Office
PMP	Project Management Professional
PPM	Project Portfolio Management
PS	Professional Services
PSA	Professional Services Automation
PSO	Professional Services Organization
ROI	Return on Investment
RSD	Remote Service Delivery and Collaboration
SaaS	Software as a Service
SCM	Supply Chain Management
SM	Social Media
SMAC	Social, Mobile, Analytics, Cloud
SRP	Service Resource Planning
SLA	Service Level Agreement
SLM	Service Lifecycle Management
STEM	Science, technology, math and engineering
SVC	Service Value Chain
VSOE	Vendor-Specific Objective Evidence
WBS	Work Breakdown Structure
YoY	Year-over-year

Source: SPI Research, February 2018

Appendix B: Financial Terminology

The following table contains a list of standard key performance measurement terms and definitions used in the benchmark report. The terms and definitions have been compiled from our knowledge and experience and a variety of sources including www.wikipedia.org http://www.investopedia.com and Morris, Manning and Martin, LLP. SPI Research is interested in expanding and evolving common key performance measurements, standards and definitions for Professional services organizations. If you would like to add terms or suggest changes, your comments and suggestions will be appreciated.

Table 177: Standard Key Performance Indicator (KPI) Definitions

Term	Definition
70% utilization	~ 1,400 billable hours/year or 350 hours/quarter
Allocations	Corporate allocations refer to a company's policy of distributing the cost of shared resources, for example, facilities, healthcare, IT and Sales, General and Administrative (SG&A) costs to specific functions or departments.
Annual Billable Utilization %	Annual Billable Hours/(2080 hours – vacation and holidays) or Billable days/(260 days – 10 vacation – 10 holidays ~ 240 days)
Attrition %	Attrition % = (Voluntary + involuntary) / Total Beginning Employees
Backlog	Backlog = Bookings - Billings The total value of contract commitments yet to be executed: Total Backlog = Previous fiscal year's contracts not yet billed + Latest fiscal year's sales - Latest fiscal year's revenue
Bid Win Ratio	The ratio of successful bids (resulting in signed contracts) divided by the total number of bids or proposals issued. Bid Win ratio is a good measure of sales and marketing effectiveness because it demonstrates the organization is pursuing appropriate types of business and is able to beat its competitors.
Billings	Completed, accepted work that can been billed (T&M, Work in process, Milestone, Deliverables)
Bookings	Signed Contracts (signed PS Agreement + signed SOW + PO)
Burdened Cost	Typically employee burdened costs are the costs per employee for benefits (Healthcare, Pensions, 401K) and an apportioned cost for the employee's facility and IT usage + all discretionary expense. The difference between burdened cost and fully burdened cost is that fully burdened cost includes an allocation for corporate SG&A costs.
Capitalization	Expensed computing equipment: expenses (typically less than $100k) vs. capitalized (paid for over a time period). Servers for example, are typically capitalized and depreciated over a 3 year period. Capital expenditures usually refer to expenses a company makes for property, buildings or equipment. Capitalized items typically have a useful life of several years.
Cash	The value of the most liquid assets within the balance sheet. Cash equivalents are assets such as money market accounts that can be accessed quickly and are not subject to significant change. Does not include the value of accounts receivable.
Cash flow	Is the balance of the amounts of cash being received and paid by a business during a defined period of time, sometimes tied to a specific project. The timing of cash flows into and out of projects is used as input to financial models such as internal rate of return, and net present value.
Cost per person	Cost Per person = Base + Fringe (~25%) + Bonus

Term	Definition
Days Sales Outstanding (DSO)	A measure of the average number of days that it takes a company to collect revenue after a sale has been made and a bill has been issued. A low DSO means that it takes a company fewer days to collect its accounts receivable. A high DSO means that a company is selling its product to slow-paying customers and it is taking longer to collect money. Days sales outstanding is calculated as: $= \frac{\text{Accounts Receivable}}{\text{Total Credit Sales}} \times \text{Number of Days}$ OR $= \left[\frac{\text{Accounts Receivable}}{\left(\frac{\text{Total Credit Sales}}{\text{Number of Days}} \right)} \right]$ DSO is a key performance measurement of the credit-worthiness of a company's clients; a general indicator for client satisfaction and the effectiveness of the billing and collection process. DSO is reported either quarterly or annually.
Depreciation	An expense recorded to allocate a tangible asset's cost over its useful life. Because depreciation is a non-cash expense, it increases free cash flow while decreasing reported earnings.
Direct Costs	Cost incurred as a direct consequence of producing a good or service, as opposed to overhead or indirect costs.
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization. $\text{EBITDA} = \text{Revenue} - \text{Expenses (excluding tax, interest, depreciation and amortization)}$ EBITDA is essentially net Income with interest, taxes, depreciation, and amortization added back to it. EBITDA can be used to analyze and compare profitability between companies and industries because it eliminates the effects of financing and accounting decisions. However, this is a non-GAAP measure that allows a greater amount of discretion as to what is (and is not) included in the calculation. This also means that companies often change the items included in their EBITDA calculation from one reporting period to the next.
EITF	An organization formed in 1984 by the Financial Accounting Standards Board (FASB) to provide assistance with timely financial reporting. The EITF holds public meetings in order to identify and resolve accounting issues occurring in the financial world. EITF 08-01 and EITF 09-03 are scheduled to go into effect in June, 2010. These new rulings provide revenue recognition guidelines around the value of multi-element contracts which include products and services. These new rulings will allow companies to more accurately recognize revenue as services are delivered for complex multi-element contracts. They create a hierarchy of evidence to support revenue recognition including VSOE (Vendor Specific Objective Evidence), TPE (Third Party Evidence) and ESP (Estimated Selling Price).
FASB	A seven-member independent board consisting of accounting professionals who establish and communicate standards of financial accounting and reporting in the United States. FASB standards, known as generally accepted accounting principles (GAAP), govern the preparation of corporate financial reports and are recognized as authoritative by the Securities and Exchange Commission.
Fixed Costs	Fixed costs are costs that remain the same regardless of changes in the business. For example, facility lease costs remain the same for the life of the lease, regardless of the level of occupancy. If the business is expanding, the percentage of fixed costs may decrease whereas if the business is contracting, the percentage of fixed costs may increase.
Fringe Benefits	A collection of various benefits provided by an employer, which are exempt from taxation as long as certain conditions are met. Fringe benefits commonly include health insurance, group term life coverage, education reimbursement, childcare and assistance reimbursement, cafeteria plans, employee discounts, personal use of a company owned vehicle and other similar benefits.
Gross Margin	Gross Margin = (Total Services Revenue **–** Expense or Cost to Deliver the Services) The gross profit generated per dollar of services delivered. A company's total sales revenue minus its cost of goods or services sold. This dollar amount represents the gross amount of money the company generated over the cost of producing its goods or services.
Gross Margin Percentage	Gross Margin % = (Total Services Revenue – Expense or Cost of Services Delivered) / Total Services Revenue Gross Margin %= Gross Margin / Revenue
Gross Profit Percentage	A company's total sales or service revenue minus cost of goods or services sold, divided by the total sales revenue, expressed as a percentage. Gross profit and gross margin are used interchangeably.

Term	Definition
Income Statement or Profit and Loss Statement	A financial statement that summarizes the revenues, costs and expenses incurred during a specific period of time - usually a fiscal quarter or year. The statement of profit and loss follows a general format that begins with an entry for revenue and subtracts from revenue the costs of running the business, including cost of goods sold, operating expenses, tax expense and interest expense. The bottom line is net income (profit).
Labor Burdened Cost	Labor Burdened Cost per Productive Hour (or Fully-burdened Cost) (Labor Burdened Cost + gross payroll labor cost) ÷ the number of actual work (productive) hours Number of actual productive hours ÷ the total additional cost of the employee = Employee labor burden cost per productive hour
Labor Multiplier	Labor multiplier = total $ amount of labor hours billed / fully loaded (burdened) labor cost Note: a labor multiplier of 1.0 indicates a breakeven point. Any usability cost-benefit analysis should value people's time based on their fully loaded cost and not simply on their take-home salary. The cost to a company of having a staff member work for an hour is not that person's hourly rate but also includes the cost of benefits, bonuses, vacation time, facility costs (office space, heating and cleaning, computers etc.), and the many other costs associated with having that person employed. The simplest way to derive the average loaded cost of an employee is to add up all corporate or division expenses and divide by the total number of productive hours worked. Commonly, the fully loaded cost of an employee is at least twice his or her salary. This is why consultants charge so much more than regular employees: their billable hours have to cover the many overhead costs that are implicit for full-time employees. In fact, looking at common consulting rates for the kind of staff you are dealing with is a shortcut for estimating the fully loaded value of your employees' time. EXAMPLE: base rate/hour (BR)= dollar per hour pay for the staff category OH multiplier (OHM) = firm's overhead (OH) percentage + 100% Profit multiplier (PM)= profit percentage + 100% "loaded" rate/hour = BR X OHM X PM Base rate/hour= $45.00 per hour overhead multiplier = 135% overhead + 100% = 235% = 2.35 Profit multiplier = 10% profit + 100% = 110% = 1.1 "loaded" rate/hour = $45.00 X 2.35 X 1.1
Lagging Indicators	Investopedia explains LAGGING INDICATORS Lagging indicators confirm long-term trends, but they do not predict them. Some examples are unemployment, corporate profits and labor cost per unit of output. Interest rates are another good lagging indicator as interest rates change after severe market changes. In services, billable utilization, revenue per person and net profits are lagging indicators because they reflect changes in market conditions after the change has already occurred.

Term	Definition
Leading Indicators	A measurable economic factor that changes before the economy starts to follow a particular pattern or trend. Leading indicators are used to predict changes in the economy, but are not always accurate. In services, leading indicators are backlog and sales pipeline because they are predictors of future revenue. What Does the COMPOSITE INDEX OF LEADING INDICATORS Mean? An index published monthly by the Conference Board used to predict the direction of the economy's movements in the months to come. The index is made up of 10 economic components, whose changes tend to precede changes in the overall economy. These 10 components include: 1. The average weekly hours worked by manufacturing workers 2. The average number of initial applications for unemployment insurance 3. The amount of manufacturers' new orders for consumer goods and materials 4. The speed of delivery of new merchandise to vendors from suppliers 5. The amount of new orders for capital goods unrelated to defense 6. The amount of new building permits for residential buildings 7. The S&P 500 stock index 8. The inflation-adjusted monetary supply (M2) 9. The spread between long and short interest rates 10.Consumer sentiment
Loaded Cost per Person	Base + Fringe Benefits (~25%) + Target Variable Compensation + % Corporate and Practice Overhead allocation per person. Non-billable time (bench time) must be added to calculate the actual cost per hour of productive time.
Margin %	Margin % = (Revenue - Cost)/Revenue
Markup %	Markup % = (Revenue-Cost)/Cost For example, 60% markup = 40% margin
Measurement Utilization %	Billable Hours + Approved non-billable hours (pre-sales, Customer Satisfaction, Special Projects)/(2080 hours or 260 days - vacation and holidays)
Measurement Utilization	Measurement Utilization = (Billable Hours + Approved non-billable hours)/ (2080 hours – Vacations – Holidays) Approved non-billable hours are usually associated with presales, overtime not billed to clients, customer satisfaction resolution time, internal projects or skills training.
Net Income	A company's total earnings (or profit). Net income is calculated by taking revenues and adjusting for the cost of doing business, depreciation, interest, taxes and other expenses. This number is found on a company's income statement and is an important measure of how profitable the company is over a period of time. The measure is also used to calculate earnings per share. Often referred to as "the bottom line" since net income is listed at the bottom of the income statement. Net income is calculated by starting with a company's total revenue. From this, the cost of sales, along with any other expenses that the company incurred during the period, is removed to reach earnings before tax. Tax is deducted from this amount to reach the net income number.
Non-billable Travel	Non-billable travel expense represents travel expense which cannot be re-billed to a client. Typically consulting non-billable travel is associated with business development or training activities.
On-Target Earnings (OTE)	The typical pay structure for a salesperson is composed of a fairly low basic salary with an additional amount of commission. The package will usually be called OTE or on-target earnings, meaning that if a salesperson hits the specified target, they will be guaranteed that amount of money. A higher commission can be paid if the person performs beyond this target.
Operating Income	Operating income would not include items such as investments in other firms, taxes or interest. In addition, nonrecurring items such as cash paid for a lawsuit settlement are often not included. Operating income is required to calculate operating margin, which describes a company's operating efficiency. Operating Income = Gross Income – Operating Expenses – Depreciation
Operating Margin	Operating margin is a measurement of what proportion of a company's revenue is left over after paying for variable costs of service delivery such as wages and benefits. Operating Margin = Operating Income / Net Sales Operating Profit = (Total Service Revenue – Total cost of service delivery – Total Operating Expense)/ Total Service Revenue
Operating Profit / Margin	The amount of profit realized from a business's own operations. A ratio used to measure a company's pricing strategy and operating efficiency.

Term	Definition
Overhead Costs	Usually, fixed costs - a business cost that is not directly accountable to a particular function or product; a fixed cost such as facilities. Costs incurred that cannot be attributed to the production of any particular unit of output. The general, fixed cost of running a business such as rent, lighting, and heating expenses, which cannot be charged or attributed to a specific product or part of the work operation.
Profit Margin = Return on Sales (ROS)	The percentage of every dollar of sales that makes it to the bottom line. Profit Margin is Net Income after Tax divided by Net Sales. A ratio of profitability calculated as net income divided by revenues, or net profits divided by sales. It measures how much out of every dollar of sales a company actually keeps in earnings.
Project Margin £$€	Project Revenue – Direct Cost of project service delivery
Revenue Estimate	Revenue Estimate = Billable headcount X Billable hours X Average Bill rate X Average Utilization Rate
Revenue	Revenue = Billings that can be recognized within the time period + Re-billable travel and expense The amount of money that a company actually bills during a specific period, including sales discounts.
Revenue per person	Actual Bill Rate * Billable Hours + re-billable travel and expense
Recurring Revenue	The best revenues are those that continue year in and year out, they are often referred to as “recurring” revenue. Examples of recurring revenues are multi-year maintenance contracts and multi-year Software as Service (SaaS) subscription revenues. Temporary revenue increases, such as those that might result from a short-term promotion, are less valuable and garner a lower price-to-earnings multiple for a company.
Run Rate	How the financial performance of a company would look if you were to extrapolate current results out over a specified period of time.

Term	Definition
Revenue Recognition	http://www.mmmlaw.com/publications/article_detail.asp?articleid=103 (Selected excerpts from the article) Any business generating revenue from licensing, selling, leasing or otherwise marketing software will experience serious problems from failure to recognize the significance of the New SOP. This section summarizes the importance of revenue recognition. Revenue recognition is a fundamental component of generally accepted accounting principles (GAAP) and is a key consideration in maintaining the integrity of financial statements. The central issue is one of timing and amount : When should revenue generated in a software transaction be recognized in a software company's income statement, and in what amounts? In most cases, companies strive to recognize revenue as quickly as possible, thereby improving their financial performance. Even private software companies generally try to improve financial performance by accelerating revenues whenever possible. Before issuance of SOP 91-1 in December 1991, there was no specific guidance for recognizing revenue in software transactions. The ensuing lack of uniformity among software companies in their revenue recognition policies led to the inability of third parties to make meaningful comparisons among companies. Similarly, the New SOP is designed to provide even greater uniformity by addressing inconsistent applications of SOP 91-1 in software transactions. Basic Revenue Recognition Criteria. SOP 91-1 and the New SOP each define basic criteria that must be satisfied before revenue can be recognized. Under the New SOP if an arrangement to deliver software does not require significant production, modification, or customization of the software, then the New SOP specifies four criteria which must be met prior to recognizing revenue from a single-element arrangement or for individual elements in a multiple-element arrangement.1 These four criteria are: 1. persuasive evidence of an arrangement exists; 2. delivery has occurred; 3. the software vendor's fee is fixed or determinable; and 4. Collectability is probable. Although these basic revenue recognition criteria are substantially the same as those contained in SOP 91-1, the New SOP takes a fundamentally different approach in certain areas such as: (1) providing detailed guidelines for recognition of revenue in "multiple-element arrangements," and (2) eliminating the concept of remaining "significant vendor obligations" under SOP 91-1. Changing Sales Behavior. A software company's sales force will be critical to implementation of the New SOP. As a general rule, software companies tend to bundle software and services together in order to offer a turn-key software solution to the buyer. Additionally, the description of and the fees for the software and services being offered are typically combined. This bundling makes the sale easier for a sales representative because it makes the offering easier for the buyer to understand and it prevents the buyer from removing elements of the transaction that the buyer might not otherwise pay for if they knew the individual price for the element. However, the result of this bundling could be a deferral of revenue recognition. Therefore, many software companies will have to change the manner in which their sales personnel work in order to achieve their revenue recognition goals. Sales Force Compensation. From an internal perspective, many companies base compensation and bonus arrangements, at least in part, on recognized revenue within a specified time period. If revenue recognition policies are changed, bonus plans may be affected. With the adoption of the New SOP, benefit plans will require further examination to verify the suitability of these plans in achieving a company's objectives and motivating employees to complete all the requirements for revenue recognition as a basis for earning a bonus.
Subcontractor Margin	Subcontractor Margin = (Total subcontractor generated revenue – total subcontractor cost)/ Total subcontractor generated revenue
Variable Costs	Variable costs are costs that vary based upon usage. Training, travel and business expenses are variable, whereas costs for facilities are treated as a "fixed" cost because they do not vary based on use. Commonly variable costs may also be termed "discretionary" because management can make decisions to make or not make the expenditure.

Term	Definition
VSOE	VSOE = Vendor-Specific Objective Evidence (accounting/contracting) VSOE is the price established by management having relevant authority. Once a firm has established the VSOE price and officially acknowledged it as such, that price must not be expected to change prior to the introduction of that element into the marketplace. The introduction of that deliverable into the marketplace on a separate basis ought to be within a very short period of time after the VSOE price is set. Accounting firms have differing opinions on how long is too long, so make certain you are aware of your accounting firm's guidelines. Vendor Specific Objective Evidence (VSOE) is an agreed-upon value for goods and services. For service organizations, VSOE is usually established by the company's auditors based on historical bill rates or actual realized revenues from service packages. When VSOE service prices are set the effect can be very painful because the firm's auditors review past engagements to set current VSOE rates. This means if a firm's services were significantly discounted in the past the service organization will be penalized with "Past sins" when auditors calculate current VSOE rates. With software companies the accepted practice is to amortize each sale across the contract's lifetime and to apply all labor hours whether billable or not.

Source: Investopedia, Wikipedia, Morris, Manning and Martin, LLP, and SPI Research, February 2018

Appendix C: Professional Services Maturity™ Benchmark Survey Tool

Service Performance Insight

Accelerate Service Productivity & Profit

The information you supply will be kept strictly confidential

Thank-you for your time and participation, please email back to:
david.hofferberth@spiresearch.com

Section 1 — Survey Respondent

1	Name	
2	Title	
3	Company	
4	Email	
5	Telephone	

Section 2 — Firm Demographics — Fiscal Year 2017

6	Headquarters location	
7	Professional Services (PS) sub-vertical	
8	Size of Professional Services Organization (total employees)	
9	Annual company revenue (for the entire company, not just PS)	
10	Total annual Professional Services revenue	
11	Year-over-year change in Professional Services revenue	
12	Year-over-year change in Professional Services employee headcount	
13	Percentage of Professional Services employees billable or chargeable	
14	Percentage of PS revenue delivered by third-parties (subcontractors, offshore)	
15	Number of mergers and acquisitions your organization has been involved in over the past three years	

What percentage of your PS revenue comes from the following:

16	Business / Management Consulting	
17	Technology or IT Consulting	
18	Subscription Services (Services sold on a subscription basis)	
19	Managed services	
20	Staff augmentation	
21	Hardware, software or other equipment resale	
22	Other	
	Total — Error - total must add up to 100%	0%

Information Technology

	Business Solutions	Solution Used	Satisfaction Level	Is it Integrated w/Financials
23 - 24	Accounting / Financial Management Solution (ERP)			
25 - 27	Client Relationship Management (CRM)			
28 - 30	Professional Services Automation (PSA or Proj. Mgmt.)			
31 - 33	Human Capital Management (HCM)			
34 - 36	Business Intelligence (BI)			
37 - 38	Knowledge Management (KM)			
39 - 40	Work Mgmt. (proj. mgmt/remote service delivery/collaboration)			
41 - 42	Primary Social Networking Tool			
43	Is CRM integrated with PSA?			

Section 3 — Performance Pillars - PS Organization only

Leadership

44	Which of the following terms best describes your organization's culture?	

Rate the following aspects of your organization in terms of how well they operate (1: very ineffective - 5: very effective)

45	The vision, mission and strategy of the PSO is well understood and clearly communicated	
46	Employees have confidence in PS Leadership	
47	It is easy to get things done w/in the PS organization	
48	Goals and measurements are in alignment for the service organization	
49	Employees have confidence in the future of the PS organization	
50	PS effectively communicates with employees	
51	PS embraces change, we are nimble and flexible	
52	PS focuses on innovation and is able to rapidly take advantage of changing market conditions	

Rate the following challenges facing your business. (1: not important - 5: very important)

53	Clarity - Vision and strategy	
54	Communication - Clear, consistent across organization	
55	Growth - ability to support rapid growth and expansion	
56	Sales and Marketing - improving sales and marketing effectiveness and collaboration	
57	Solution portfolio - focus on improving/expanding our portfolio and markets	
58	Alignment - between functions or groups	
59	Quality - focus on improving quality and consistency	
60	Talent - attracting, retaining and energizing high-quality staff	
61	Financial performance - achieving revenue and margin targets, cutting costs, IT investments	

For the coming year, please rate the following steps you will take to improve profitability (1: very unlikely – 5: extremely likely)

62	Improve solution portfolio - service packaging, new offers	
63	Improve marketing effectiveness - brand awareness, lead generation, events	
64	Improve sales effectiveness - higher close ratio, on-target performance, training	
65	Rate increases - increase bill rates	
66	Improve hiring, ramping, skill-building, training	
67	Improve methods and tools for reuse, consistency, quality	
68	Improve billable utilization - increase billable utilization	
69	Reduce non-billable time - presales, write-offs, admins	

Client Relationships

70	Total annual number of active clients	

71 - 72
73 - 74
Service revenue breakdown by new vs. existing clients and new vs. existing services

	Existing Services	New Services	Total
Current Clients			0%
New Logo Clients			0%
Total	0%	0%	0%

Error - total must add up to 100%

75	Service Sales people are primarily measured on	
76	Primary target buyer for your services	
77	Win-to-Bid ratio (per 10 bids)	
78	Size of deal pipeline in comparison to your quarterly bookings forecast	
79	Length of sales cycle from qualified lead to contract signing	
80	Average service discount given clients	
81	Rate the effectiveness of your solution development process (1 poor - 5 great)	
82	Rate your service sales effectiveness (1 poor - 5 great)	
83	Rate your service marketing effectiveness (1 poor - 5 great)	
84	Percent of referenceable clients	

What is the percentage of work sold in the following categories?

85	Time & Materials	
86	Fixed time / fixed fee	
87	Shared risk / performance-based	
88	Managed Services	
89	Other	
	Total — Error - total must add up to 100%	0%

Human Capital Alignment

What is the percentage of your PS workforce is in the following age categories?

90	Under 30	
91	30 - 40	
92	40 - 50	
93	Over 50	
	Total — Error - total must add up to 100%	0%

94	Percentage of your workforce that is male?	
95	Please describe your primary organization structure	
96	The primary reason employees leave	
97	Professional Services employee *voluntary* annual attrition	
98	Professional Services employee *involuntary* annual attrition	
99	How strongly would you recommend your company as a great place to work (1=not at all – 5=very)	
100	Approximate management-to-employee ratio	
101	Length of time to recruit and hire for standard positions	
102	Once hired, how long until fully billable?	
103	Annual number of training days per employee	
104	There is a well-understood career path for all employees (1-strongly disagree, 5-strongly agree)	
105	What is your average annual consultant billable utilization percentage (2,000 hr. base)?	
106	What is your average annual fully loaded cost per consultant (salary, bonus, fringe benefits)	

How many annual hours are spent in the following categories for your average billable employee?

107	Vacation/personal/holiday	
108	Education/training	
109	Administrative	
110	Non-billable business development/sales support	
111	Non-billable project hours	
112	Billable hours on-site	
113	Billable hours off-site	
	(Hours do not have to add up to 2,080) Total annual hours per consultant	0

Where are your PS employees located? Service organization employee count by location

114	Headquarters	
115	Branch offices	
116	Home based	
117	Offshore / nearshore	
	(Should be in the range answered in question 8) Total PS Employees	0

Service Execution

118	Describe your resource management process	
119	Length of time to staff projects (in days)	
120	Number of projects delivered per year	
121	Average revenue per project	
122	Average number of projects a project manager (PM) manages at one time	
123	Average number of people working on a project	
124	Average project duration (in months)	
125	Percentage of projects delivered on-time, on budget	
126	Percentage of projects canceled	
127	Average project overrun	
128	Percentage of projects where a standard delivery methodology is used	
129	Project margin for time and materials projects	
130	Project margin for fixed price projects	
131	Margin for subcontractors and/or offshore resources	
132	Effectiveness of resource management process (1 very ineffective - 5 very effective)	
133	Effectiveness of estimating processes & estimate reviews (1 very ineffective - 5 very effective)	
134	Effectiveness of change control processes (1 very ineffective - 5 very effective)	
135	Effectiveness of project quality processes (1 very ineffective - 5 very effective)	
136	Effectiveness of knowledge management processes (1 very ineffective - 5 very effective)	

Finance and Operations

137	Annual revenue per billable employee	
138	Annual overall revenue/person yield (for the entire PS organization)	
139	Percentage of the quarterly revenue target in backlog at the beginning of the quarter	
140	Percentage of annual revenue target achieved	
141	Percentage of annual margin target achieved	
142	Percentage of overall revenue unable to bill (Revenue Leakage)	
143	Percentage of invoices that must be redone due to error or client rejections	
144	Days Sales Outstanding (DSO)	
145	Quarterly non-billable discretionary expense per employee (cell phones, non-billable travel, training)	
146	Percentage of billable work written off	
147	Do PS execs. have real-time visibility into all business activities (sales, service, marketing, finance, etc.)?	

2017 Professional Services Income Statement (in $Millions)

		($millions)
148	Direct gross PS revenue	
149	Indirect gross PS revenue (revenue delivered by subcontractors, outside resources etc.)	
150	Pass-thru PS revenue (hardware, software, materials, etc.)	
151	Revenue from reimbursable PS travel and business expense	
	Annual Gross PS Revenue (Should be in the range answered in question 10)	$0.00
		($millions)
152	Total direct billable labor expense for billable PS headcount (does not include fringe benefits, vacation, sick time or overhead)	
153	Total fringe benefit expense as a % of direct labor (for healthcare, pensions, vacation and sick pay)	
154	Total subcontractor/outside consultant expense (compare to question 147)	
155	Pass-thru equipment cost (hardware, software, materials, etc.) (compare to question 148)	
156	Total billable travel and business expense (compare to question 149)	
157	Total non-billable travel and business expense	
158	Total Recruiting expense (recruiters, fees, signing bonus, referrals, etc.)	
159	Total Sales expense (includes fully loaded headcount expense, bonus and non-reimbursable sales expense)	
160	Total Marketing expense (includes all headcount, bonus and marketing program expense)	
161	Total education, training and certification expense for the entire PS organization	
162	Professional Services IT expense (fully loaded IT headcount, capital, depreciation, IT-specific facility exp.)	
163	All other G&A expense - fully loaded non-billable headcount, general and administrative, facilities, legal, etc.	
	Annual PS Expenses	$0.00
	Earnings before Interest, Taxes, Depreciation, Amortization (EBITDA)	$0.00
	Earnings before Interest, Taxes, Depreciation, Amortization Percentage (EBITDA%)	#DIV/0!

Please check your EBITDA

Thank-you for your time and participation, please email back to:

david.hofferberth@spiresearch.com

The information you supply will be kept strictly confidential

Appendix D: Related SPI Research

SPI Research has produced several publications for services-driven organizations that include:

- **2017 Professional Services Automation End-user Survey** (September 2017): *For the first time in over a decade, during the second quarter of 2017, SPI Research conducted a Professional Services Automation (PSA) end-user survey. This examination of 68 billable organizations using PSA is truly an independent research study – the PSA solution providers had no input or control over the survey or respondents. The survey asked both quantitative and qualitative questions regarding why firms selected PSA, which attributes were most important, and how buyers perceived their benefits. Most importantly, this study looked at both pre- and post-PSA deployment. The report contains: PSA definition and core modules, why PSA was purchased, how PSA is used, user satisfaction with various components and aspects of PSA, pre- and post-PSA deployment benchmarks, and participant interviews, and long with 36 insightful figures and tables.*
- **2017 Professional Services Automation Buyers Guide** (July 2017): *The growth engine of the world's economy has shifted from manufacturing to project-based, people-centric services businesses. These businesses rely on Professional Services Automation (PSA) solutions. PSA automates core business processes such as quote-to-cash, resource management, project management, time capture and billing. It provides the real-time visibility necessary to improve organizational efficiency and effectiveness. This PSA Buyer's Guide provides an overview of important trends, business processes and selection criteria to help project- and services-based businesses evaluate and choose PSA applications, which will provide the level of insight, management and control needed to improve productivity and profitability.*
- **2015 Professional Services Global Pricing Report** (October 2015): *The 2015 Professional Services Global Pricing Report is the largest and most comprehensive PS pricing study ever published based on pricing information provided by 140 PS organizations representing almost 12,000 consultants worldwide. The study provides analysis of list price and realized bill rates across a broad range of professional service verticals, geographies and job levels around the globe.*
- **2013 Professional Services Sales and Marketing Maturity™ Benchmark** (October 2013): *Most professional services organizations are dissatisfied with their sales, marketing (and packaging) effectiveness. For the past eight years, over 1,500 PS organizations that have completed SPI Research's benchmark surveys have consistently given their sales and marketing efforts failing marks. The results for the very few firms that have successfully implemented PS sales, marketing and packaging disciplines, and made these activities central to their value proposition are extraordinary with 47 percent of all services sold as packaged solutions, 28.6 percent net profit and $255,000 annual revenue yield per consultant.*

Information on these and any other SPI Research publications can be found at www.spiresearch.com or by e-mail at info@spiresearch.com.

Appendix E: About SPI Research

R. David Hofferberth, PE, SPI Research founder, managing director and licensed professional engineer has served as an industry analyst, market consultant and product director. He is focused on the services economy, especially productivity and technologies that help organizations perform at their highest capacity.

Dave's background includes application and analytical tool development to support business decision-making processes. He has more than 30 years of domestic and international information technology experience with firms including the Aberdeen Group and Oracle.   Contact Hofferberth at david.hofferberth@spiresearch.com or 513-759-5443.

Jeanne Urich, SPI Research managing director, is a management consultant specializing in improvement and transformation for project- and service-oriented organizations. She has been a corporate officer and leader of the worldwide service organizations of Vignette, Blue Martini and Clarify, responsible for leading the growth of their professional services, education, account management and alliances organizations.

Jeanne is a world-renowned thought-leader, speaker and author on all aspects of Professional Services. Contact Urich at jeanne.urich@spiresearch.com or 650-342-4690.

Service Performance Insight (SPI Research) is a global research, consulting and training organization dedicated to helping professional service organizations (PSOs) make quantum improvements in productivity and profit. In 2007, SPI developed the PS Maturity Model™ as a strategic planning and management framework. It is now the industry-leading performance improvement tool used by over 20,000 service and project-oriented organizations to chart their course to service excellence.

SPI provides a unique depth of operating experience combined with unsurpassed analytic capability. We not only diagnose areas for improvement but also provide the business value of change. We then work collaboratively with our clients to create new management processes to transform and ignite performance. Visit www.SPIresearch.com for more information on SPI Research, LLC.