

PREPARING YOUR IT TEAM FOR PRESENT & FUTURE IN A DIGITAL AGE



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what's in store for
IT leaders in 2017
and beyond



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2016 continues to prove that the pace of change is not slowing down.

New sources of data are evolving everywhere, from mobile apps to machine data to artificial intelligence. Data usage is adding to the complexity of the systems that support and analyze it, causing infrastructure to rely on faster computing to keep businesses moving.

Issues of performance rise to the surface alongside storage challenges, total cost of ownership and security. Technology is causing a great divide, defining companies of the future as either nimble and capable or archaic and stagnant. CIOs must think critically about which functions they should invest in with internal talent, and which would be more effectively outsourced, as they juggle performance, cost, security, skill sets and infrastructure composition. As infrastructure becomes a commodity, it is often the first to be outsourced, but it doesn't end there as a strategic initiative.

Shifting to a more agile infrastructure also requires structural and cultural change management to meet the demands of the business. IT leaders, under increasing pressure from their other C-Suite counterparts, perceive innovation on the horizon as both a welcome change and a risky endeavor.

Digital transformation has proven that there are considerable efforts that should be taken to cut costs by driving operational efficiencies while also eliminating wasteful maintenance and hardware expenses that go underutilized. As the cost of upkeep for legacy systems becomes increasingly prohibitive, what will IT do first to advance their organizations within the constraints under which they operate? Prioritization is key to success. Today's CIO understands the very narrow balance between managing for today and preparing for tomorrow. And as technology increasingly blurs the lines between business and IT, savvy CIOs must execute on objectives that drive new revenue and cut costs. A new approach to IT leadership is needed.

WHAT WILL 2017 BRING?

There will certainly be some surprises along the way, but our latest survey shares the present state of operations, biggest changes expected and the greatest needs expressed by more than 200 industry professionals.*

*Research was conducted using Survey Monkey with opt-in responses from customers and targeted to mid- to senior-level IT professionals within TriCore's expanded network. 214 responses were collected in total.

PUBLIC CLOUD CONSIDERATIONS

How is public cloud being used by IT leaders and how will migration play a role in the next year?
Survey findings show:

KEY TAKEAWAYS

- More than **50 percent of respondents are not currently leveraging the public cloud**, but 80 percent plan on migrating more to the public cloud within the next year
- The biggest challenge for public cloud use is **managing associated costs and security**
- More than two thirds have **25 percent or less of their infrastructure in the public cloud**
- More than **60 percent of those surveyed used internal resources** to manage their migration process
- **More than half of those surveyed are planning to migrate web applications** or development systems to the cloud in the next year

Cloud initiatives are underway for many companies in the Fortune 500 on down to the mid-market; and for many, public cloud is synonymous with Amazon Web Services. In fact, nearly half of our survey respondents indicated they are using AWS to host their public cloud. Though Azure came in a relatively close second for hosting environment – 30 percent of respondents – many indicated they used both Azure and AWS together; only a couple mentioned other options outside of these two key players (Of note, Rackspace and Google Cloud). With [63 percent market share](#), it's not surprising that the largest segment of public cloud users surveyed currently run on the AWS platform.

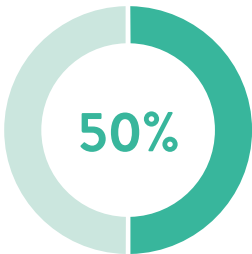
That's not necessarily an indication of future hosting options, however, with Google getting serious about the enterprise. There could be some new entrants to the public cloud mix in 2017. Regardless of how companies decide to host their public cloud environments, the volume of migrations that will happen in the next year will spur increased demand for cloud services.

As public cloud becomes more prevalent – more than 50 percent of survey respondents indicated they are not currently leveraging public cloud, yet, more than 80 percent plan to migrate in the next year – service providers will become a more important resource to help facilitate the process. [Gartner forecast](#) that cloud system infrastructure as a service (IaaS) will be the fastest-growing cloud services segment in 2016. Cloud management,

security services and application platform as a service (PaaS) weren't far behind. Adding public cloud to the mix is only one part of the equation moving forward: On-premise and hosted private cloud environments still offer viable alternatives as IT leaders build their optimal infrastructure composition – a blended hybrid cloud scenario. As companies consider the where, when and how of public cloud migration, what will be prioritized first, and who will be involved? What stays and what goes?

NOT ALL APPLICATIONS ARE CREATED EQUAL FOR PUBLIC CLOUD

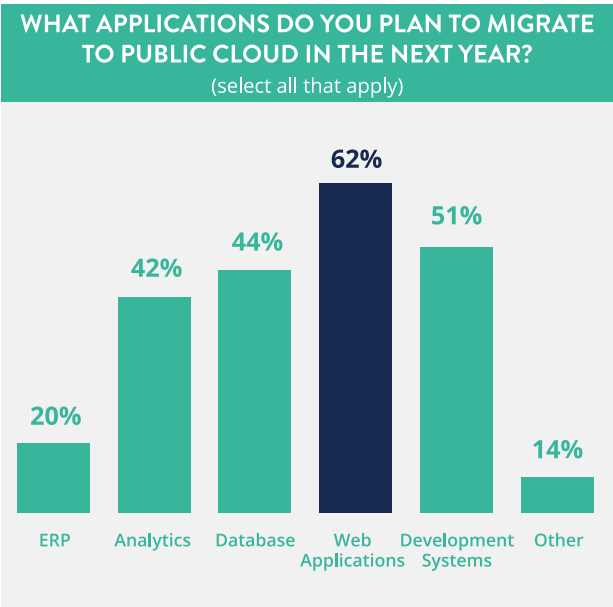
The opportunity is apparent for public cloud: IT leaders already realize the numerous benefits. What they must tackle next is prioritization: How do they develop a roadmap of what to move to the public cloud?



More than half of those surveyed are planning to migrate web applications and/or development systems to the cloud in the next year; **more than 40 percent expect to migrate analytics and database environments.**

Fewer respondents indicated they plan to migrate ERP systems in the next year. What makes them reluctant? For some, cost and control is most important: sensitive and business-critical data is kept closest to the vest, most often via on premise infrastructure and private cloud environments. As real-time analytics derive greater competitive advantage, companies may be more willing to move larger portions of their existing ERP systems onto public cloud.

INTERNAL RESOURCES ARE THE PREVAILING SUPPORT FOR MIGRATION



More than 60 percent of those surveyed used internal resources to manage the migration process to their existing public cloud environment. As more IT functions move to the cloud, will migration processes be streamlined? Outsourcing migration projects help companies swiftly move to the public cloud without the fear of failure, downtime or data loss, this could encourage a larger percentage of overall infrastructure and applications to be managed in the public cloud – **as nearly half of those surveyed have only 10 percent of their current infrastructure residing in public cloud environments.** Because infrastructure consolidation, improved efficiencies and reduced TCO are key priorities for CIOs today, having the right team in place for migrations should be a top priority for IT leaders.

RUNNING SMARTER: WHAT'S IN STORE TO DRIVE GREATER OPERATIONAL EFFICIENCIES

Whether running on Oracle EBS, PeopleSoft or SAP, companies rely heavily on ERP systems to run their businesses. It's a staple that organizations at times take for granted, but there's much to be done to make operations run more smoothly and cost effectively. What will change in the next year?

THE YEAR OF CLOUD-BASED ANALYTICS



We expect to greet 2017 with stronger integration and analytics capabilities, more widely applied across the enterprise and with more prominent collaboration across business networks as companies increasingly adopt the cloud. Having powerful cloud-based platforms allow companies to use predictive analytics and analyze business operations more closely.

Companies are just now skimming the surface of what's possible when aggregating data from the growing number of independent systems that run their enterprises – pooling information from suppliers, for example – to make real-time operational adjustments. This will be an ongoing source of competitive advantage in 2017 and beyond. Previously, these techniques have only been championed predominantly by major B2C brands like Walgreens, Under Armour, and others, but the benefits will be increasingly accessible to small- and especially mid-market B2B companies in the very near future as they make larger investments in data analysis to effectively run their company. **Analytics, in tandem with an increased ability to scale in the cloud, will allow CIOs to own initiatives tied to revenue growth in addition to those that cut costs.**

ADDRESSING THE IT TALENT GAP: 2017 AND BEYOND

With changes in store and public cloud migration ahead, what skills – old or new talent alike – are most needed today and in the future for [enterprise IT teams](#)? Survey findings show:

KEY TAKEAWAYS

- **56 percent of respondents** agree or strongly agree that filling gaps in IT talent is a concern
- **Nearly half agree or strongly agree that acquiring talent for legacy systems is a major need today**; 39 percent think it'll be even more difficult in five years
- **Security experts and solutions architects are the most difficult roles to fill today**
- **Developer roles expected to be in greater demand in five years**
- The demand for business analysts is growing, **nearly equal to expected demand for DBAs in five years**

Database administrators are crucial to IT operations, and they'll continue to be for the foreseeable future. As public cloud demands grow, **developers will play an increasingly large role for IT departments**. Though DBAs were ranked as harder to fill than developers today, demand is expected to shift as more front-end expertise and application infrastructure / platform support is needed.

Specialists such as security experts are most in demand now and will continue to be in the next five years. Interestingly, more functional roles like **business analysts and project managers that bridge the gap between sales are expected to grow in demand**: A sign that analytics will be increasingly operationalized in 2017.

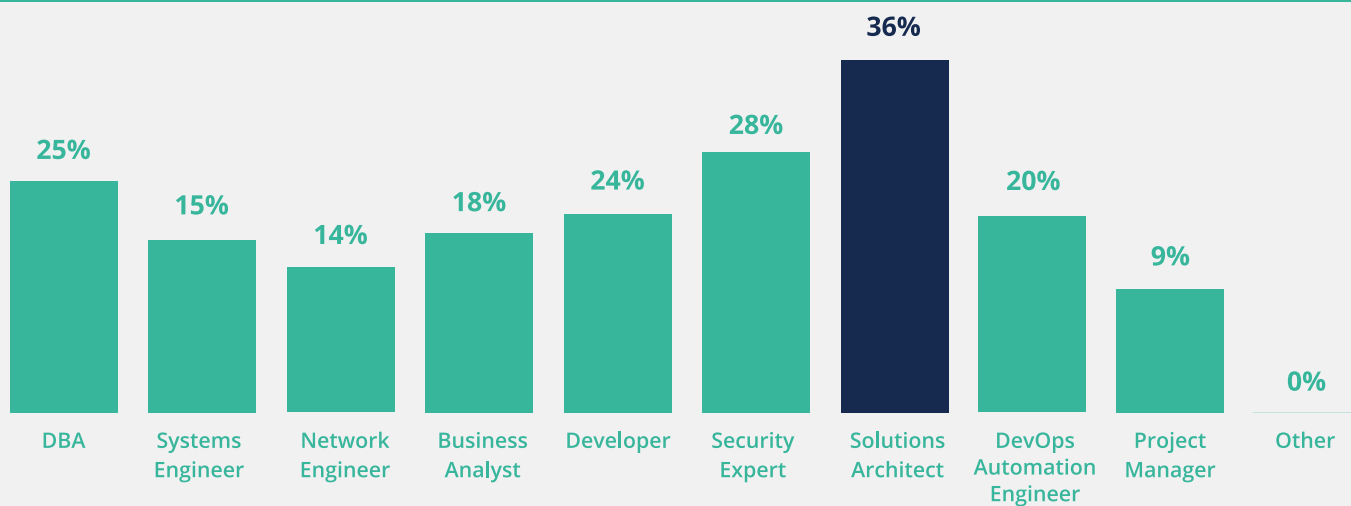
A real team player shines for present and future: the solutions architect. With user experience playing an increasingly large role in technology adoption and innovation, solutions architects will be a critical resource to customize systems and provide the feedback loops necessary for systems to be dynamic.

In the end, CIOs will need to face the skills shortage head on, keeping in mind that as niche roles pop up, partners will become increasingly important to help fill new and shifting positions to sustain operations in a pinch and for minimal disruption.



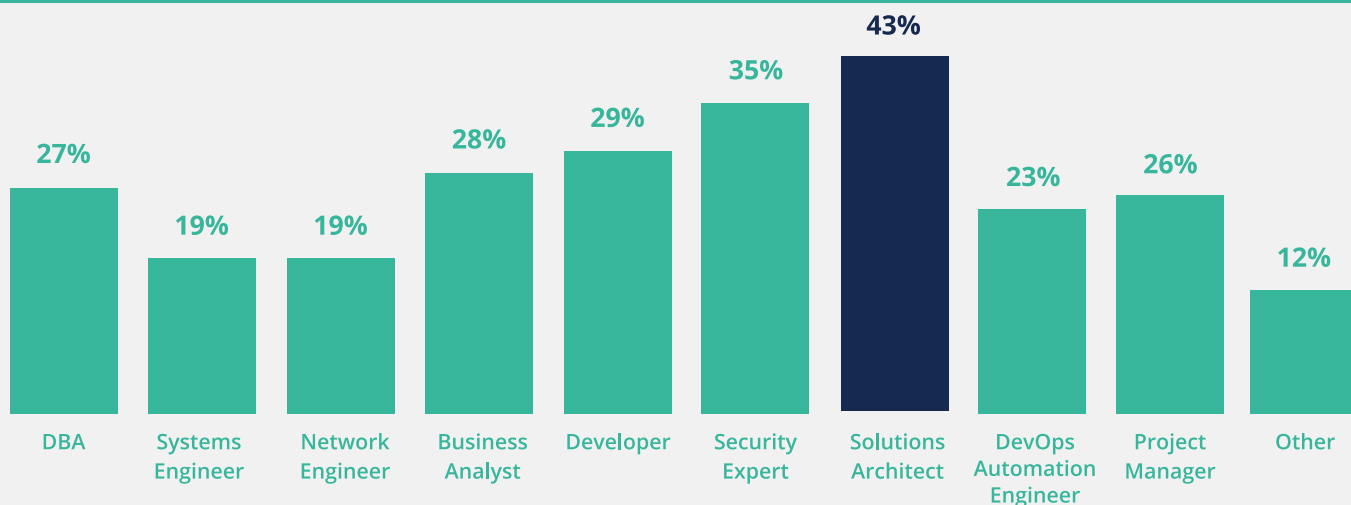
WHAT IT ROLES ARE THE HARDEST FOR YOU TO FIND?

(select all that apply)



WHAT IT ROLES DO YOU EXPECT YOU'LL NEED TO FILL 5 OR MORE YEARS FROM NOW?

(select all that apply)





THE LEGACY OF LEGACY SYSTEMS: FILLING A TALENT VOID

Nearly half of respondents agree or strongly agree that acquiring talent for legacy systems is a major need today. Surprisingly, 10 percent fewer respondents agree or strongly agree that these skills will be a major need in five years.

Perhaps counterintuitively, new roles replacing demand for legacy skill sets may be an indication that IT leaders expect to be shifting from legacy systems onto new platforms in the next five years. In the meantime, however, companies may experience a pinch as supply for legacy roles diminishes. Especially for highly specialized capabilities, companies will need to evaluate the right mix of in-house support for legacy systems in order to effectively manage them without being overwhelmed by finding the right talent that matches their criteria.

ANTICIPATING NEW AND EVOLVING ROLES

Though the change in demand anticipated for DevOps roles between now and five years from now was modest compared to others, positions like these will be important to watch in the future. Understanding shifting skillsets now to train for future shortages will help alleviate some of the pain of IT talent retention and acquisition. A company needs to train ahead of the curve to anticipate what is ahead, focusing on blended business and technical positions as well as the new skills required to master new applications and interfaces driving public cloud – like DevOps. Finding the right mix of talent – and committing to the rigorous, ongoing education needed to keep up with rapidly changing roles – will make partnerships with managed service providers more important than ever in the long term.

PREPPING FOR DIGITAL TRANSFORMATION: THE ROLE OF MANAGED SERVICES

As IT leaders are expected to manage more complex environments and tackle new applications, how will they leverage service providers to help them achieve their goals? Survey findings show:

KEY TAKEAWAYS

- **52.6 percent surveyed plan on outsourcing their IT infrastructure** in the future
- Nearly **20 percent increase in applications being outsourced** in the future
- More than **25 percent increase in outsourcing network infrastructure expected** in the future
- More than **10 percent increase in managed hosting anticipated** in the future
- **70 percent increase in outsourcing entire IT function projected** in the future



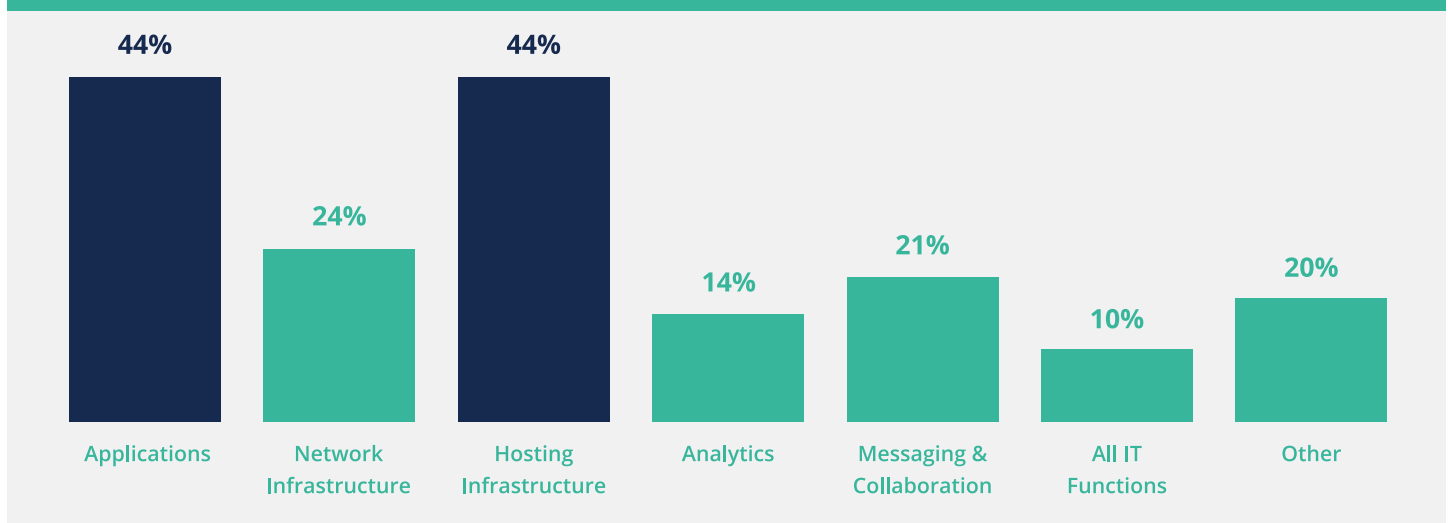
With the increased amount of data in today's IT environment – from machine data to social media data to transactional data and everything in between – the need for managed service providers to make sense of it all has never been more important. Companies must analyze data and automate tasks now more than ever as artificial intelligence is adopted and more routinely applied by the enterprise; and service providers can take on greater responsibility and accountability of both functional support and business trend modeling to ensure these processes work properly and can scale.

Knowing that infrastructure and database support have already become utilities that are frequently outsourced, analytics is next on the horizon. Managed service providers will become a key resource for the modern enterprise to better understand the wealth of data available to them and to identify ways to improve efficiencies, find new markets, create competitive differentiation and drive the business.



WHAT IT SERVICES DO YOU OUTSOURCE NOW?

(select all that apply)



FORGING RELATIONSHIPS FOR A BETTER FUTURE: THE RESPONSIBILITY OF THE CIO & CFO FOR INNOVATION

Despite evolving C-Suite roles, decisions related to data are still owned by the CIO and the CFO, especially when it comes to choices that impact the bottom line. Infrastructure is the backbone to the digital enterprise, and data analytics can only be as powerful as the systems and applications that support it. For business to innovate, CIOs need strategic partners that let them function more efficiently so that they can take on new initiatives that help them collaborate with other players: Chief Data Officers, Chief Digital Officers and Chief Innovation Officers, to name a few. How they manage organizational change will be the legacy they leave, and that increasingly means tapping service providers as well as in-house talent to make things happen.