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2018 CIO Agenda: CSP Industry Insights

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Many CSP CIOs are still struggling with the nontechnical aspects of digital transformation relating to people, attitudes and processes. Breaking through these barriers demands strong communication and leadership to balance the short-term tactical investments with the long-term strategy.

Key Findings

- Digital business is the top growth priority for communications service providers (CSPs), with CIOs increasingly playing a key strategic role in the transformation initiatives required.
- Top focus areas for technology investment are consistent with recent years, and include analytics, network virtualization and digital engagement capabilities.
- Technology change, although complex, is seen as relatively straightforward and manageable, compared to negotiating change to legacy processes and culture, and cultivating an agile mindset.

Recommendations

For CSP CIOs operating digital delivery platforms:

- Transform IT capabilities as an integral part of your digital business strategy through strong collaboration with the product development, innovation and customer experience teams.
- Balance IT infrastructure investment capabilities with those that focus on solution-enabling platforms, as well as those that aide in exploring new revenue opportunities.
- Select partners with cultural alignment (i.e., co-creation, co-innovation, DevOps) and source for outcome-based delivery, rather than task-driven measures.

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Survey Objective

The purpose of the 2018 Gartner CIO Agenda is to help CIOs and other IT leaders set and validate their management agendas for the coming year. To achieve this, the CIO Survey gathered data from 3,160 CIO respondents in 98 countries and across major industries, representing $13.0 trillion in revenue and public-sector budgets and $277 billion in IT spending. Respondents came from a range of industries, including manufacturing, government, professional services, banking, energy/utilities, education, insurance, retail, healthcare, transportation, communications and media.

This report focuses on the answers from 62 CSP CIO respondents and compares them with the total sample.

This report focuses on the following key questions:

1. What is the top strategic business priority for the organization over the next two years?
2. Which technology areas will help the business to differentiate from rivals and win?
3. Which technology areas will receive the highest amount of new or additional funding in 2018?
4. What do you think is your organization's biggest barrier to moving from the initial phases of digital business transformation to scale?

Together, the answers to these questions offer some revealing insights into how CSP CIOs are planning to transform themselves and transform both their businesses and the IT that supports those businesses. This data, together with Gartner's interaction with clients and coverage of the industries, is the basis for the analysis and recommendations within this document. This is linked to the Key Initiative that guides CSP CIOs on how they can operate their digital delivery platform (see "Operating the CSP Digital Delivery Platform Primer for 2017").

The full survey, covering more than 50 questions, was designed to prove or disprove a series of hypotheses devised by a core team of Gartner research analysts and Executive Programs representatives. The key findings from the total dataset are published in their entirety as "The 2018 CIO Agenda: Mastering the New Job of the CIO."

Data Insights

CSPs are now actively pursuing growth opportunities in digital business. Digital transformation is seen as a top priority as it affords CSPs the ability to engage with the broader ecosystem and compete successfully using digital business models. This relies heavily on software capabilities and assets. Therefore, the CIO is now becoming one of the most important stakeholders in the CSP organization, with the opportunity to be a transformational agent of strategic change.

CSPs are focusing on developing the core digital capabilities they need — such as in analytics, virtualization and customer experience. In order for them to become digitally "fit," they are also actively looking to simplify and modernize their legacy architecture. This includes spending less on what were previously viewed as core solutions and offerings such as data centers and infrastructure hosting. They continue to invest, however, in these technologies and cloud infrastructures for operational needs. A key aspect and approach of the journey and transformation is the adoption of enabling platforms and platform strategies for digital business (see Definitions section). Platform business models cast the participants (providers and consumers alike) into huge, highly interconnected sets of ecosystems across different industries and impact how the participants interact with each other.

CSPs are also increasingly adapting to a fast-paced digital market, with the ability to add and drop new services in near real time according to business demands. To do this successfully, CSPs are modernizing their customer and network-facing IT. This means establishing a more dynamic, customer-oriented IT environment.

However, while technology modernization can be complex and costly, CSP CIOs consider technology change as relatively straightforward and manageable, compared to negotiating barriers such as legacy processes, culture and mindset (see "2017 CIO Agenda: A CSP Perspective").

Top Business Priorities

Q: "Thinking about your organization as a whole, what would you say are its top business objectives for the next two years (2017/2018)?" (See Figure 1.)

Figure 1. Strategic Business Priorities

Rank	Communications Service Providers (n = 45)	Percentage of Respondents	Rank	Total Sample (n = 2,615)	Percentage of Respondents
1	Digital business/digital transformation	24%	1	Growth/market share	26%
2	Growth/market share	22%	2	Digital business/digital transformation	17%
3	Profit improvement/profitability/asset monetization	18%	3	Profit improvement/profitability/asset monetization	10%
4	Customer focus	18%	4	Innovation, R&D, new products/services	10%
5	Innovation, R&D, new products/services	18%	5	Customer focus	9%
6	Cost optimization/management/reduction	9%	6	Corporate/M&A/new business/consolidation	7%
7	Process improvement/optimization/automation	9%	7	Technology initiatives/improvements	7%
8	New customers/retention/sales	7%	8	Cost optimization/management/reduction	6%
9	Productivity/optimization/efficiency	4%	9	New customers/retention/sales	6%
10	Corporate/M&A/new business/consolidation	4%	10	Operations improvement/efficiency/excellence	6%

Base: All answering, excludes DK; n varies by segment.
Q. Thinking about your organization as a whole, what would you say are its top business objectives for the next two years (2017/2018)?

Source: Gartner (October 2017)

CSPs' top-ranked business strategic priorities are aligned with the overall respondents, namely digital business growth and profitability. However, CSP CIOs emphasize more strongly the need to focus on improving customer engagement, innovation and new product development. This demonstrates that most CSPs are struggling to generate revenue beyond connectivity by increasingly aligning their business growth opportunities to digital initiatives. Key to this is improving customer engagement and optimizing operations.

Further, the stronger focus on business priorities, which requires CIOs to act as trusted business partners with business leaders — while still running the technology infrastructure — points to a continuing and sustained challenge for CIOs. A successful transformation journey for CIOs demands a balancing act to manage two distinct sets of goals and outcomes — business and operational. Traditionally focused CSP CIOs often struggle with these challenges, as they require realigning leadership competencies, skills, mindset and governance to be able to drive business outcomes, in addition to operational excellence.

Recommendations for CIOs:

- While digital transformation does require technology change, focus your efforts on talent, behaviors, processes and governance as the most critical elements to address to achieve meaningful outcomes (see "Operating the CSP Digital Delivery Platform Primer for 2017").
- Expose your IT spending portfolios to your business stakeholders to enable transparency, while clearly demonstrating the alignment of IT to business outcomes. IT is no longer just a cost center.
- Invest in strategic initiatives such as the Internet of Things (IoT), security, data and analytics as enabling platforms, and look to continually optimize operations by automating processes and adopting lean methods.

Top Technology to Win

Q: Which technology area do you think is most important to helping your organization differentiate and win (achieve your mission)?

Figure 2. Top Technology to Win

Rank	Communications Service Providers (n = 57)	Percentage of Respondents	Rank	Total Sample (n = 2,834)	Percentage of Respondents
1	BI/analytics	28%	1	BI/analytics	26%
2	Digitalization/digital marketing	14%	2	Digitalization/digital marketing	14%
3	Cloud services/solutions	12%	3	Cloud services/solutions	10%
4	Internet of Things	9%	4	Mobility/mobile applications	6%
5	Artificial intelligence	9%	5	Internet of Things	6%
6	Networking, voice/data communications	9%	6	Customer relationship management	5%
7	Virtualization	7%	7	Artificial intelligence	5%
8	Automation	5%	8	Enterprise resource planning	5%
9	Software/application updates	5%	9	Infrastructure/data center	5%
10	Over-the-top (OTT) technologies	4%	10	Automation	4%

Base: All answering, excludes DK; n varies by segment.
Q. Which technology area do you think is most important to helping your business differentiate and win/is most crucial to achieving your organization's mission?

Source: Gartner (October 2017)

Successful digital service and solution providers know more about their customers, especially their context and intention at any given moment and in real time, and deliver unique solutions for what they most need. Reliant mature analytics capabilities enable CSPs to optimize internal processes and operate with the pace and agility required to be relevant in the broader ecosystem of the digital solutions and services value chain.

For the past few years, analytics, cloud and digitalization have been the primary focus areas for technology investment, intended to help CSPs understand their customers better and improve their operational excellence by virtualizing their IT and network functions. In order to realize a dynamic, digital IT architecture that provides the level of adaptability, resiliency and agility needed, the fundamentals must be addressed first. This includes core network and internal data center virtualization, rationalizing legacy IT applications and moving to cloud-based services where possible. Doing this first for internal systems allows the business to become familiar with on-demand characteristics, to figure out how business cases need to be constructed and to embed new commissioning processes.

IoT is a top priority for CSP CIOs, who are generally keen to look beyond the provision of connectivity as the revenue opportunity. This includes the development of IT platforms for IoT and end-user applications (with a broader set of ecosystem partners) to provide direct-to-user services and solutions. The IoT market is highly diverse, and most CSPs cannot hope to develop applications in more than a handful of areas or vertical industries. It is important to filter the opportunities to identify the applications that can be best addressed by the CSP, and those that require strong ecosystem collaboration.

Recommendation for CIOs:

- Align technology modernization efforts to objectives to digitalize interactions (improve customer focus) and simplify ways of working.
- Deliver a comprehensive set of IoT capabilities and IoT-related platforms, aligned to the areas and industries you plan to focus on, by leveraging virtualization, cloud computing, security, data analytics and application enablement/development.

Top New Tech Spending

Q: What are the technology areas where your organization will be spending the highest amount of new or additional funding in 2018?

Figure 3. Top Technology Areas for New Spending

Rank	Communications Service Providers (n = 53)	Percentage of Respondents	Rank	Total Sample (n = 2,847)	Percentage of Respondents
1	Networking, voice/data communications	23%	1	BI/analytics	19%
2	Cloud services/solution	15%	2	Cloud services/solution	13%
3	BI/analytics	13%	3	Digitalization/digital marketing	12%
4	Digitalization/digital marketing	13%	4	Cyber/information security	12%
5	Internet of Things	11%	5	Enterprise resource planning	10%
6	Customer relationship management	8%	6	Infrastructure/data center	8%
7	Infrastructure/data center	8%	7	Customer relationship management	6%
8	Communication/connectivity	8%	8	Mobility/mobile applications	6%
9	Optimizing operations — BSS/OSS	8%	9	Networking, voice/data communications	5%
10	Over-the-top (OTT) technologies	6%	10	Artificial intelligence/machine learning	4%

Base: All answering, excludes DK; n varies by segment.
Q. What are the technology areas where your organization will be spending the highest amount of new or additional funding in 2018?

Source: Gartner (October 2017)

There is currently a strong focus on core network and data center virtualization in CSPs. This requires significant forward-looking investment, as the architectural changes required for network function virtualization (NFV) and software-defined network (SDN) implementation will conflict with short-term cost optimization programs in many CSPs. Even though a significant number of CSPs have begun virtualizing their infrastructures, achieving adequate infrastructural maturity demands long-term, multiphase planning. The complexity of these programs means that inadequate readiness will not only affect return on investment and timelines, but it can embed long-term structural complexity into operations (see "The Gartner Maturity Model for NFV and SDN Implementation in CSPs").

Evolving the network infrastructure into a programmable software environment has investment implications for other IT domains (see "Nine Technology Strategy Practices to Develop the Foundation for Programmable Networks in CSPs"). Marketing and sales will look for insights they can derive from greater understanding of a network, for example, for better campaign planning and customer experience management. Finance will value greater visibility of return on investment from network and IT resources. It is for these reasons that CSPs emphasize the need to keep spending on the network, cloud, BI/analytics and digitalization as a means to ensure their operating environment is up-to-date in order to enable the digital solutions and service.

While "Top Tech to Win" is focused on improving the customer's experience and growth of market share and revenue, "Top New Tech Spending" is focused on enabling the fundamental infrastructure and cloud capabilities to make underlying operations agile and flexible.

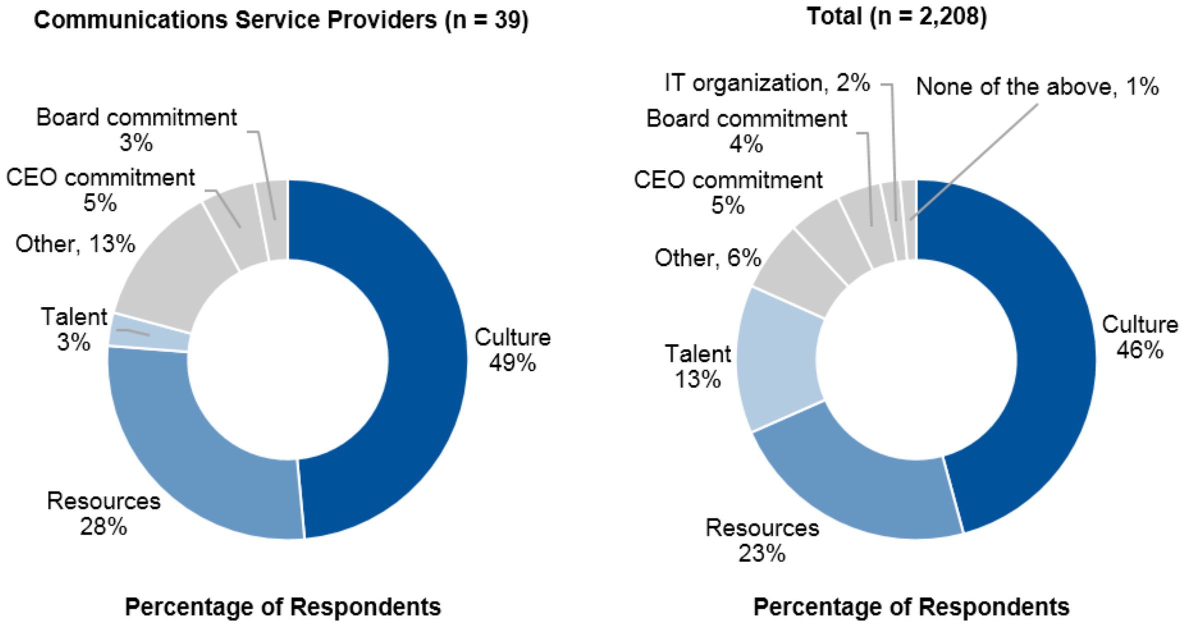
Recommendation for CIOs:

- Develop a clear set of objectives for NFV and SDN implementation in a phased, yet comprehensive, IT transformation roadmap in alignment with intended short-term and long-term business strategy (see "SDN/NFV Requires a New IT Architecture in CSPs").
- Increase your network and IT virtualization efforts at scale to enable the shift to a platform business. This requires full automation, continuous deployment and delivery, simplified partner participation through APIs, robust partner management, and security by design.

Barriers to Digital Transformation for Scale

Q: "What do you think is your organization's biggest barrier to moving from the initial phases of digital business transformation to scale?" (See Figure 4.)

Figure 4. Barriers to Scaling Digital Business Transformation



Base: Stage of organization's digital initiative is desire, design, or deliver; excludes DK; n varies by segment.
Q. What do you think is your organization's biggest barrier to move from the initial phases of digital business transformation to scale?

Source: Gartner (October 2017)

In alignment with the overall respondents, CSPs' top barriers to digital transformation for scale are culture, resources, CEO and board commitments, and talent (or lack of skills). Interestingly, CSP CIOs are less concerned about having the right talent than their peers from other industries (3% versus 13%) and see resourcing as a more pressing issue. This may be due to CSPs traditionally being quite dependent on vendors and service providers for skills. In many cases, their existing partners are also transforming and often don't have adequate skills or competencies. Further, many CSPs have been working on addressing the talent gap for the past three to four years. They've been finding that acquiring the specific skills is less of a challenge than finding individuals with the right mindset and willingness for constant change.

The cultural mismatch between traditional IT delivery practices and IT aligned with business outcomes contributes the most inertia in CSPs, an impact that is repeatedly raised as a challenge by CIOs. Moving from being primarily waterfall-based cost center operations to agile-centric at scale is fundamentally about culture and people, and establishing processes to enable agile operations, rather than technology. It takes time to learn, develop and absorb the cultural norms and behaviors, and to build the buy-in and trust that is required at all levels in the organization. Culture is complex — contingent on the interconnection of values, attitudes, customs, beliefs, behaviors, roles, incentives and goals. The problem is compounded by the reliance of CSPs on third-party suppliers, many of whom still operate with a traditional culture, mindset and engagement style.

Recommendation for CIOs:

- Cultivate an agile mindset by increasing empathy for customers and addressing the cadence mismatch between teams using different methodologies.
- Select partners with cultural alignment (i.e., outcome-focused, rather than task-driven) and resources for outcome-based delivery (such as filtering work assigned to outsourcers and internal developers).
- Proactively collaborate with the HR organization to drive talent, mindset and workplace transformation initiatives that are aligned to your business outcomes (see "Orange Business Services Drives Digital Business Through People and Workplace Transformation" and "How AT&T Is Building Its Talent for the Digital Age").

Methodology

The 2018 Gartner CIO Survey was conducted via an online survey from 20 April to 26 June 2017 among Gartner Executive Programs members and other CIOs. Qualified respondents were the most senior IT leader (CIO) for their overall organization or a part of their organization (e.g., a business unit or region). The total sample is 3,160, with representation from all geographies and industry sectors (public and private).

The survey was developed collaboratively by a team of Gartner analysts and was reviewed, tested and administered by Gartner's Research Data and Analytics team.

Definitions

- **Platform Business:** an enterprise that enables value-creating interactions among people, businesses and things.
- **Platform Business Model:** a design that consummates matches among providers and consumers, and/or facilitates the creation and/or exchange of goods, services and social currency, so that all participants are able to capture value.
- **Digital Platform Operating Model:** a practice that enables shared value creation through business ecosystems that are able to collaborate, orchestrate, create and match providers and consumers.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Operating the CSP Digital Delivery Platform Primer for 2017"

"Reshaping the CSP Information and Technology Operating Model for Platform Business"

"Case Study: AT&T Takes Practical Steps to Transform Its Culture and Behavior for Digital Business"

"Use CSP Scenarios to Create Value in the Platform Era"

"CSP Market Scenarios in 2022: Divergence — Investing in the Core, While Managing Future Technical Debt"

"CSP Market Scenarios in 2022: Persistence — Focusing on Operational Efficiency for Success"

"CSP Market Scenarios in 2022: Insurgence — Building an Innovation Culture During Incumbent Disruption"

"CSP Market Scenarios in 2022: Allegiance — Extending Boundaries to Foster Growth"

"Hints and Tips on Using Gartner Numbers When Reviewing IT Spending Plans"

Evidence

This report is based on Gartner's annual survey of CIOs (see Survey Objective and Methodology sections for details), which was conducted between 20 April and 26 June 2017. A total of 3,160 respondents participated, including 62 from the CSP industry. The respondents were members of Gartner Executive Programs and other IT leaders.

More on This Topic

This is part of an in-depth collection of research. See the collection:

- 2018 CIO Agenda: Industry Insights Overview

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