



REPORT EXCERPT

# 2018 Trends in Cloud Transformation

PREVIEW

NOV 2017

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We're entering the era of cloud consumption. The market is transitioning from one that has been defined mostly by building clouds to one in which cloud service acquisition is the primary driver of IT spending. For enterprises seeking to take advantage of cloud, the key question is 'how fast can I go?'

THE FOLLOWING IS AN EXCERPT FROM AN INDEPENDENTLY PUBLISHED 451 RESEARCH REPORT, "2018 TRENDS IN CLOUD TRANSFORMATION" RELEASED IN NOVEMBER 2017.

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William Fellows is a cofounder of The 451 Group. As VP of Research, he is responsible for the Cloud Transformation Channel at 451 Research. This Channel provides a point of intellectual convergence for 451 Research around cloud computing, in much the same way that the industry is converging on cloud from all points. In addition to keeping tabs on players entering the cloud and IT services space with disruptive business models, new technology and innovations in service delivery, William has also created 451 Research's Digital Economics unit. This is currently focused on helping end users, vendors and investors understand complex and confusing pricing mechanisms in order to compare the cost of services (hosted, hybrid and on-premises), the cost of entry and price of participation in new markets.

# Executive Summary

## INTRODUCTION

As the consumption of cloud services accelerates, technology consumers will demand services that 'just work,' without requiring any specific knowledge of the underlying infrastructure. Technology vendors are reinventing themselves as service providers to meet this need, as cloud's consumption-based, service-driven, retail model discipline continues to accelerate and enable these transformations. In the new digital world, even pure product companies can add ongoing services revenue.

Hybrid cloud is the enterprise reality at ground level, and no one will do it alone. Organizations are pursuing more deliberate multi-cloud and hybrid cloud strategies to balance performance and cost while meeting the specific needs of applications and workloads. It is crucial, therefore, to understand the vision and balance between services, providers, channels and infrastructure delivery on the ground to support this trend. In particular, companies must consider the linchpin of digital transformation: the 'last mile' of delivery from cloud service providers to their customers.

Both the IT/managed services and cloud infrastructure markets continue their sustained, strong revenue growth as enterprise appetite for modern infrastructure continues to deepen. The new opportunity for software-based cloud infrastructure services and human-oriented managed and professional IT services is measured in the tens of billions. Providers that can transition from selling point services to 'managing transformation' will be able to take advantage of this. Platform-based services using IaaS, PaaS and SaaS provide a fast, consistent and scalable way to do so.

The building of digital services using platforms, accelerators, agile methods and DevOps is an area where the fiercest competition for control of digital transformation projects will occur. In 2018, we expect to see strong growth in service provider platforms to support these transformations. This is especially important as digital transformation expands to the back office, following an organizational drive for pervasive intelligence to reshape business processes in areas such as production, supply chain, logistics and workforce management, and customer relationship management (CRM).

The change that cloud brings to transformation is profound because of its impact on the operating model – and it is a double impact, serving both as the foundation for digital transformation and as the platform to support innovation. One of the most important changes is in the profit and loss model: Once enterprises are 25% or more deployed in cloud, they tend to charge users on a consumption basis for resources (chargeback), while their IT operates an internal brokering service. Through 2018, public cloud providers will seek to support this new model by driving additional value through improved cost optimization and reducing buyers' bills on their behalf. Private cloud vendors will respond with more transparent, flexible pricing in a bid to be inexpensive and legitimate alternatives.

## 451 Research's 2018 Cloud Transformation Trends

Source: 451 Research, 2017

	WINNERS	LOSERS
Cloud Consumption Will Overtake Cloud Building as the Primary Driver of IT Spending	Service providers that can deliver an 'invisible' experience; providers that focus on industry-specific offerings; vendors that both host solutions and manage tools for enterprise clients	Providers that don't raise their software IQ; companies that attempt to move to the cloud without involving DevOps; organizations that try to operate 'two-speed' IT
IT Service Providers Will Be in the Vanguard of the Platform Revolution	Service providers that are engineering platform services to speed delivery to customers; vendors investing in consulting skills	Those providing highly customized offerings or relying too heavily on one technology vendor for partnerships
Inexpensive Flexibility, the Big Battlefield of the Cloud Price War, Will Expand Into Private Cloud	Providers willing to take a short-term financial hit to satisfy users' desire for flexibility; those with a culture of saving customers money	Hardware vendors stuck in the past; companies that charge high premiums for their brand but deliver little value
The Last Mile Will Take Prominence	IT and managed services providers with defined and executable value propositions around hybrid cloud; service firms with deep roots in automation, standardization and speed of delivery; infrastructure providers with global scale, true IaaS efficiency and the ability to iterate	Resellers that fail to deliver cross-platform integration and cloud service delivery automation; IT services providers that don't continue to build their skills around hybrid cloud; managed infrastructure vendors that compete on price
'Multi-Blockchains' Will Move Beyond Financial Services	Vendors that can clearly explain the benefits of blockchain and unite various potential participants; companies with real-world experience in use cases beyond cryptocurrencies; those that are flexible enough to address specific enterprise requirements	Companies without compelling value propositions and those that fail to build sustainable business models

## METHODOLOGY

Reports such as this one represent a holistic perspective on key emerging markets in the enterprise IT space. These markets evolve quickly, though, so 451 Research offers additional services that provide critical marketplace updates. These updated reports and perspectives are presented on a daily basis via the company's core intelligence service, 451 Research Market Insight. Forward-looking M&A analysis and perspectives on strategic acquisitions and the liquidity environment for technology companies are also updated regularly via Market Insight, which is backed by the industry-leading 451 Research M&A KnowledgeBase.

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Beyond that, 451 Research has a robust set of quantitative insights covered in products such as Voice of the Enterprise, Voice of the Connected User Landscape, Voice of the Service Provider, Cloud Price Index, Market Monitor, the M&A KnowledgeBase and the Datacenter KnowledgeBase.

All of these 451 Research services, which are accessible via the web, provide critical and timely analysis specifically focused on the business of enterprise IT innovation.

For more information about 451 Research, please go to: [www.451research.com](http://www.451research.com).

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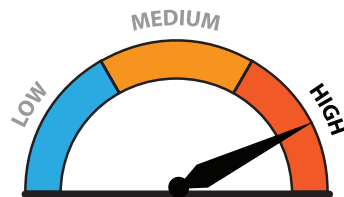
# Trends

## TREND 1: CLOUD CONSUMPTION WILL OVERTAKE CLOUD BUILDING AS THE PRIMARY DRIVER OF IT SPENDING

**Implication:** *The market is transitioning from an era of spending driven by the building of clouds and cloud services to one where the consumption of cloud is the primary driver. As cloud becomes the 'new normal' deployment approach, technology consumers will demand infrastructure that 'just works,' and the infrastructure function will become increasingly invisible to the user.*

Enterprise cloud transformation is accelerating. Within a couple of years, respondents to 451 Research's Voice of The Enterprise (VotE): Cloud Transformation, Workloads and Key Projects 2017 survey expect 60% of enterprise workloads to be running in the cloud, up from 45% today. Businesses competing in the digital economy must transform or die, and cloud supplies the operating and business models for the change: DevOps, consumption-based, service-driven offerings with a retail model discipline.

### Impact to the Market



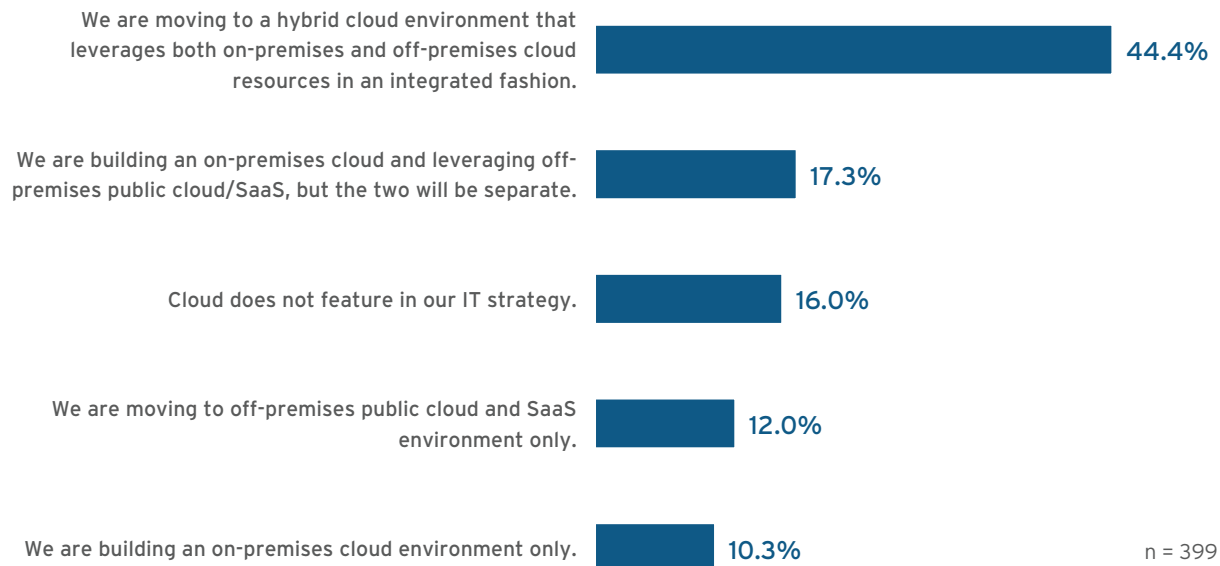
This shift is driving increased spending, as cloud becomes the destination for net new application deployment at most enterprises, as well as for application modernization, re-factoring and lift-and-shift re-platforming. The key question about cloud transformation is the time each business's journey will take. Enterprises should be asking potential providers how fast they can go.

Buyer demand to match applications and workloads to appropriate resources is increasing as a direct consequence. (We've been calling this 'best execution venue' for a decade now.) The result is that organizations are now pursuing more deliberate multi-cloud and hybrid cloud strategies to balance performance and cost and meet the specific needs of applications and workloads. Our VotE: Storage, Organizational Dynamics 2017 survey finds that 44% of enterprises are moving to hybrid cloud environments that leverage both on-premises and off-premises cloud resources in an integrated fashion (see Figure 2).

## Figure 2: Many Companies Are Moving to a Hybrid Cloud Environment

Source: 451 Research's Voice of the Enterprise: Storage, Organizational Dynamics 2017

Q: Which of the following best describes your organization's overall approach and strategy around cloud-based IT?



Almost without exception, every services supplier – barring the hyperscalers themselves – is becoming a broker of cloud services to meet this ‘new normal’ requirement. Telcos, network service providers, systems integrators, outsourcers, distributors, managed hosters, colos, managed service providers and enterprise tech vendors alike are providing access to third-party services as well as to their own as a standard go-to-market model. Cloud providers have significantly invested in datacenters, infrastructure and services to meet this demand, and their commitment is increasing.

At the same time, technology consumers are demanding infrastructure that ‘just works.’ It must be instantly available yet always invisible, operating and scaling regardless of specific requirements, and billed and metered in the manner the customer prescribes. The paradox is that the more important the role infrastructure plays, the more important it becomes to shield users from having to directly interact with (or even consider) it: The infrastructure is quite simply the ‘datacenter air’ customers breathe.

## RECOMMENDATIONS

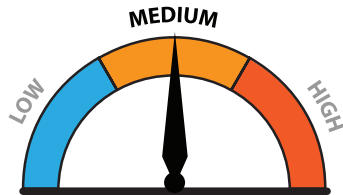
- **Develop a migration approach that can shrink-wrap and de-risk cloud transformation.** Migrations, whether ground-to-cloud or cloud-to-cloud, are complex, expensive and disruptive, and businesses naturally want to avoid all three qualities.
- **Clean up the network.** While VMware and Cisco are helping to address the situation, the network remains the biggest bottleneck to accelerated adoption of the cloud.
- **Partner for success.** Every service provider – from the smallest SMB hoster to the biggest hyperscale player – needs to be part of other providers’ ecosystems and (ideally) have an ecosystem that makes its own products/services/expertise part of other providers’ delivery stacks. Partner ecosystems should deliver business outcomes, integrated packaging, co-development and go-to-market capability.



## TREND 2: IT SERVICE PROVIDERS WILL BE IN THE VANGUARD OF THE PLATFORM REVOLUTION

**Implication:** Providers that can transition from providing point services to 'managing transformation' are well-positioned to gain influence with, and revenue from, customers tackling digital innovation. Platform-based services that take advantage of IaaS, PaaS and SaaS can let vendors do so in a fast, consistent and scalable way. In 2018, we will see strong growth in service provider platforms.

### Impact to the Market



Digital transformation must encompass all parts of a business – middle- and back-office processes as well as customer-facing front-office activity. The resulting requirement for pervasive intelligence and invisible infrastructure makes running a consistent service-delivery platform to support business agility, while simultaneously maintaining self-service requirements in many different areas, a critical component of the new IT service approach.

The building of digital services, using platforms, accelerators, agile methods and DevOps, is an area where the fiercest competition for control of digital transformation projects will occur among IT service providers. All players are converging here, from management consultants to network infrastructure providers, with the system integrators in the middle of the fray. Indeed, several IT service providers have recently launched or are developing integrated stack or platform assets to support digital transformation engagements in many different areas. This will be a growing trend in 2018.

For instance, as cloud becomes the new normal, a performance metric for many enterprises is the number of applications running there. To meet this growing requirement, IT service providers are providing ERP platforms that speed up a customer organization's ability to upgrade existing applications, standardize processes across a business or simply set up an independent business unit quickly to emulate cloud-native models. Many providers are developing these types of services to support SAP customers, so we will see growth in such offerings in 2018.

Customer organizations are also attempting to move to data-driven decision-making. This form of data analytics is not traditional business intelligence, used to confirm decisions in a 'one and done' manner and reliant on enterprise data warehouses. Organizations want an advanced form of data analytics that requires different skills and tools, using diverse data sets, real-time analysis, machine learning and artificial intelligence. Many IT service providers have been investing in the creation of 'data management platforms,' pulling together advanced technologies from which to provide the types of self-service insight that customers require, and this trend will increase in 2018.

Within the business process outsourcing market, the platform approach is creating a radical overhaul of the traditional service delivery methodology. Many service providers have developed a core technology framework to underpin their business-processes-as-a-service offerings, building on a cloud foundation and using advanced analytics capabilities as well as intelligent automation combining robotic process automation and business process management technologies. A growing number of providers are developing such frameworks, taking advantage of cloud foundations from Amazon Web Services (AWS) and/or Microsoft Azure and then building loosely coupled systems of services on top. This gives them the flexibility to pick and mix specific products as customers require, and to take advantage of open source software components where they can.

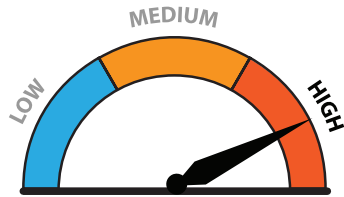
### RECOMMENDATIONS

- **Create an easily identified branded platform portfolio.** As platforms cross traditional service lines and blend a range of technologies, both customers and sales teams need to recognize the applicability of a platform's capabilities in a variety of contexts.
- **Rethink partnership strategies with technology vendors and other service providers** (yes, even traditional competitors) to create an ecosystem around the platform.
- **In the absence of a managed service arm, put time and effort into the unglamorous side of 'product lifecycle management'** for the assets being created, as ongoing continuous management becomes more important for project services.

### TREND 3: INEXPENSIVE FLEXIBILITY, THE BIG BATTLEFRONT OF THE CLOUD PRICE WAR, WILL EXPAND INTO PRIVATE CLOUD

**Implication:** Public cloud providers will get more vocal about their flexibility and its associated costs and benefits. They will show further value through improved cost optimization, reducing buyers' bills on their behalf. Private cloud vendors will fight back with more transparent, flexible pricing, which will increase complexity for buyers in choosing the best models for each use case. New players and existing providers will aim to assist in this decision-making, cost-optimizing consumption, reducing buyers' bills in the process.

#### Impact to the Market



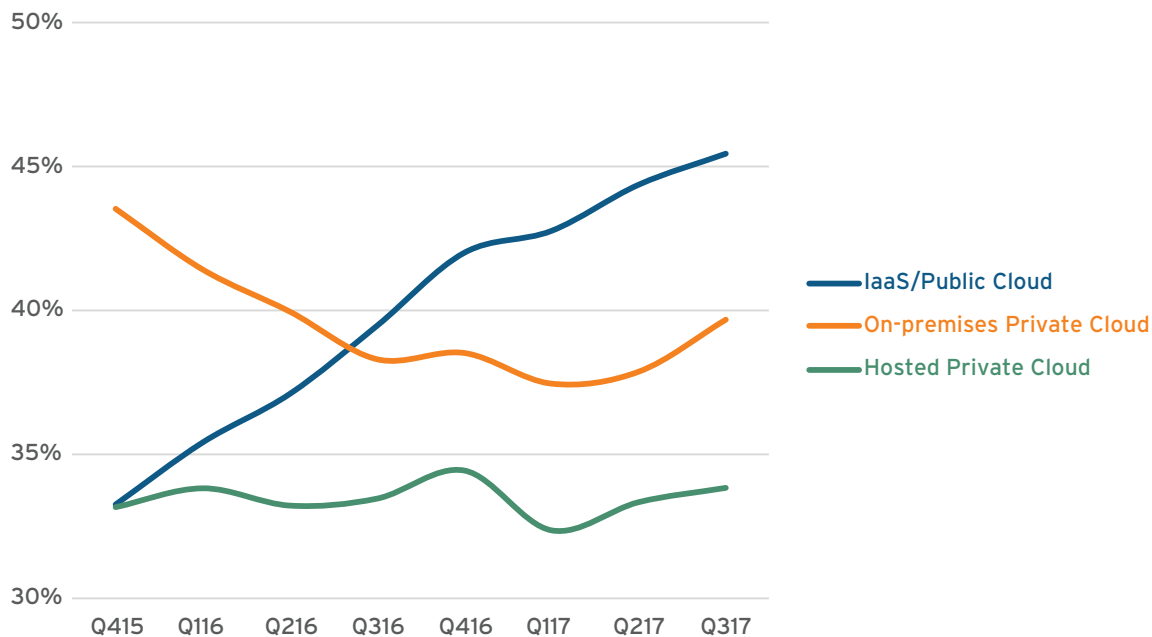
Over the past 12 months, the cloud price war has expanded from virtual machines into object storage and, most recently, flexibility. Just days after AWS announced it was moving to per-second billing, Google followed suit. Microsoft too is increasingly showing its financial credentials, with the launch of reserved instances designed to be more flexible than AWS's by allowing penalty-free cancellation. Microsoft has made great gains on the economic front, with the acquisition of cloud cost-management vendor Cloudyn and the introduction of recommendation tools and spot instances. Even Oracle has joined in, offering cheaper advance purchases through its Universal Credits and a guarantee that its instances will be cheaper than AWS.

Similarly, the world of private cloud has evolved to be more flexible. Public cloud usage has grown rapidly over the past few years at the detriment of private cloud, but the tide is turning, and interest in private cloud has picked up (see Figure 4). Long-term, high-capex investments are being trumped by pay-as-you-go models such as HPE's Flexible Capacity, Microsoft's Azure Stack, Oracle's Cloud @ Customer, Dell EMC's Cloud Flex, Fujitsu's K5 and offerings from HyperGrid, Nutanix and NodeWeaver. The focus is on delivering the benefits of private cloud with the flexibility of public cloud. 451 Research's *Cloud Price Index (CPI)* finds that private cloud can beat public cloud on TCO, but only at high levels of utilization; these new models aim to provide it.

Innovation and flexibility from providers is driving the addition of new products and capabilities, but this brings with it complexity. With AWS offering in excess of 300,000 stock-keeping units (SKUs) for sale, it's clear that buyers need help choosing which products and configurations best meet their changing needs. In November 2017, our CPI detected the addition of more than 50,000 new SKUs to AWS's portfolio; this complexity is only likely to get worse with more flexibility in the market and multi-cloud implementations. A spate of cost-optimization vendors such as Spotinst, ccompute.io, GorillaStack, BidElastic, RightScale and ParkMyCloud aim to give users continued flexibility with the opportunity to save money and resolve complexity. Interest in cost optimization will grow in 2018.

### Figure 4: Public Cloud Gains Traction as Private Alternatives Attempt a Comeback

Source: 451 Research's Voice of the Enterprise: Cloud Transformation, 2015-2017



Through the upcoming year, public cloud vendors will shout about how their flexibility can lead to savings, with a particular focus on attacking market leader AWS. Private cloud providers and enabling vendors are also likely to become more vocal and transparent about their pricing, flexibility and value. Acquisitions of the aforementioned cost-optimization vendors are possible, as providers look to resolve complexity and offer the lowest cost with the most negotiable terms. The cloud price war is likely to expand to other cloud services, with relational databases being a possible first candidate, but flexibility will be at the heart of it all.

## RECOMMENDATIONS

- **Embrace flexibility.** Buyers have better access to pricing data than ever before, and a lack of transparency suggests something to hide. If your solution is better than the alternatives, be up front about the costs, and emphasize the value you offer. Our research continually suggests that buyers are willing to pay more for cloud services if that premium is justified.
- **Emulate and differentiate.** It's important to follow the market. If a competitor offers a feature (such as per-second billing) that you don't, buyers will have questions. This initial doubt could lead to lost sales. Emulate features whenever you can and as quickly as you can. If you think you have a better feature or solution, go bold and shout about why – and justify its value quantitatively.

# The Long View

Cloud and digital transformation are underway, and the opportunity for vendors is accelerating: We are all becoming service providers.

Cloud services will dominate as the era of consumption dawns. As a result, service providers will own a growing share of infrastructure spending, while channels of distribution and partner ecosystems will grow in importance. Blockchain's opportunity, on the other hand, is further out than 2018, but promises to have as much impact as any previous technology cycles.