

# RESEARCH AGENDA 2019

INFORMATION TECHNOLOGY

# Information Technology



**Maxine Holt**

Research Director

*IT*

“

To support the ongoing digitization of both customer-facing and back-office processes, enterprises and their vendor partners must develop and deliver a coherent portfolio of business-aligned IT services. These provide the foundation for intelligent applications, data-driven insights, and digital innovation, whilst maintaining the highest levels of security and reliability.

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# Infrastructure Solutions

## The Market Challenge

Digital transformation is the main driver for technological change, and software has become the universal commodity driving today's enterprise infrastructure; both directly and via service providers. This software must be integrated into how services and systems are managed and delivered; and while it is still maturing, a cloud-centric approach is the future. The adoption of a hybrid and multi-cloud approach to IT service delivery is key, combined with a strong underpinning of security and compliance to ensure that corporate services and assets are not compromised. Organizations that cannot move fast enough to modernize their systems, provide everything on demand, and compete with cloud-native rivals will suffer. Similarly, vendors and service providers that only offer the base product/service without broad recognition of the digital transformation picture will experience difficulties in engaging with these enterprises.



## How Ovum helps you

**Address security complexity** with a platform approach to cybersecurity, embracing automation, and enhancing service provider support.

**Secure and deliver corporate data** in line with confidentiality, integrity, and availability requirements.

**Bring IT services closer** to the business, improving the speed and security of IT delivery.

**Strategize** for and exploit cloud-based integration and APIs for agile digital business integration.

**Consider a strategy** to adopt edge computing as an integrated component of a cloud-centric architecture.

**Identify growth opportunities** to target infrastructure-focused, cloud-centric enterprise products and services.

**Build capabilities to address infrastructure** product and service gaps faced by enterprises.

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**Maxine Holt**  
Research Director



70% of companies with 10,000+ employees are modernizing legacy IT environments



## Key Deliverables



**Ovum Decision Matrix** – comparative evaluation of the leading infrastructure technology products.



**Market Radar** – product capability comparisons for emerging technology areas in infrastructure.



**Case Study** – recommendations, best practice, and advice from real-world product and service deployments.



**Software Market Forecast** – a five-year view on growth in infrastructure software markets, segmented by vertical, region, and function, and updated annually.



**Technology Report:** a technical analysis and evaluation of new leading-edge technologies.

## Themes for 2019

### Cybersecurity complexity demands platform and service provider support

Today's organizations face an ever-evolving cyberthreat landscape, and high-profile security incidents and breaches will remain in the headlines. Driven by compliance demands as well as protecting reputation, significant investment in security products will continue. However, a more holistic view of cybersecurity posture is required, and organizations are evolving to a platform approach to reduce product complexity. Enterprises will continue to shift parts of their security operations to managed service providers.

### Adopting a cloud-centric approach to modernize IT delivery

Cloud-centric has evolved to include microservices and containers, as well as exploiting hybrid and multi-cloud environments. Organizations are adopting a cloud-centric approach to doing business. They are developing strategies for delivering everything-as-a-service and are modernizing corporate IT without ripping out existing investments. Service providers are following suit, developing their capabilities to be more easily consumable by the enterprise. Digital transformation has turned the spotlight on software, edge computing, and integration; all increasingly delivered by service providers.

### Utilizing AI and automation to foster innovation in IT delivery

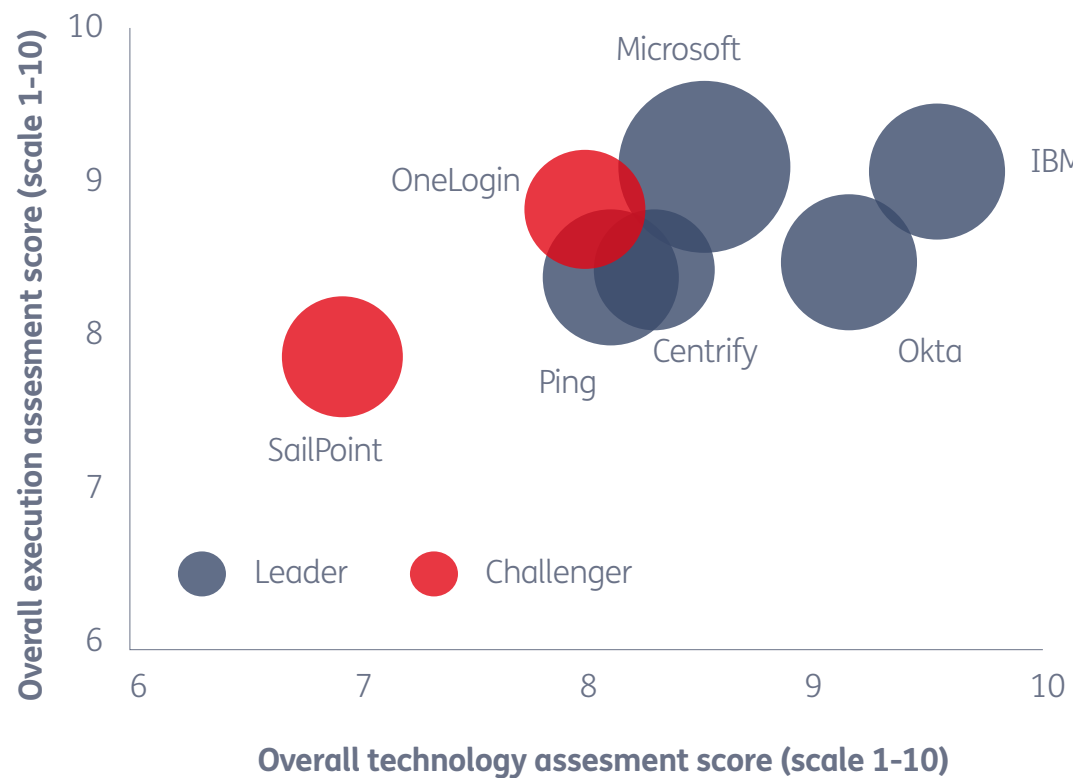
The adoption of artificial intelligence into the delivery of IT for the enterprise continues to grow rapidly. Increasingly autonomous technology for IT and security operations are minimising the need for human intervention. Furthermore, the automation of IT service delivery supports organizations in their digital transformation journey.

### New architectures for edge-computing

The move to edge-computing is changing the architecture of the data center. Combined with 5G, edge-computing will drive fresh expectations for high-performing networks and continuity of service delivery. New hyper-converged and software-defined technologies will be adopted, to deliver platforms and networks that can connect to a cloud-centric core.

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## Ovum Decision Matrix: Selecting an Identity-as-a-Service (IDaaS)

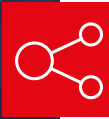




# Customer Engagement

## The Market Challenge

Digital transformation is a journey with no end point, and enterprises are in a state of continuous evolution. Successful competition in this environment is defined by the capability of the enterprise and its ecosystem of partners to sense and anticipate change, adapting at speed to serve current and emerging markets. To meet this challenge, enterprises must create experiences that match customers' constantly changing expectations. Building an integrated and adaptive organization demands that enterprises focus on three areas: developing a unified digital platform that spans operational and customer-facing activities, organizing around the customer, and curating adaptive, customer-focused business models.



## How Ovum helps you

Enterprise senior leaders must take ownership of customer engagement, building a culture of customer empathy and harnessing emerging transformative technologies that will positively define the customer experience. The vendor community must work lockstep with enterprises to conduct these activities:

- Align business practices to customers' operating principles.
- Deliver emerging technologies that are converging to enrich the customer experience beyond satisfaction.
- Introduce new business models that allow real-time adaptation to customers' evolving needs and expectations.
- Identify the critical attributes that effectively enable enterprise-wide continuous digital transformation.
- Share best-in-class examples for maintaining relevant and responsive customer ecosystems.

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**Tom Pringle**  
Research Director

“Creating digital capability’ is the top priority of organizations, yet ‘increasing revenue and budget’ is their top challenge”

## Key Deliverables



**Ovum Decision Matrix assessments:** how enterprises are adapting at pace to deliver end-to-end digital customer engagement supported by customer interaction analytics, processes, and accountability.



**Market Radars:** the convergence of AR, VR, and AI. Analysis of how emerging technologies will work together to further enhance the connected customer experience.



**Analyst Insight:** how transformative operating models and digital technology are helping B2B create B2C-like customer experiences.

## Themes for 2019

### Digital and physical reality converge for advanced customer experience delivery

Integrated digital customer experience is the new business mandate. As digital technologies connect physical objects with data and intelligence, and the physical spaces associated with customers' digital journeys, the lines between these will blur. The "digital first" approach will shift to "data first." From sending location-aware, tailored messaging to customers, to enhancing their brick and mortar experiences, to using augmented reality to influence purchases or enhance service, this convergence of digital and physical will dramatically change how enterprises engage with customers. This new customer engagement dimension will see IoT, wearables, AR, VR, and the data that connects them, meet, powered by a unified platform that will be the foundation of a more converged customer experience.

### Digital transformation will give way to continuous transformation

Digital transformation is a journey with no end. Enterprises must make continuous digital transformation their new objective. This requires the entire enterprise value chain be integrated, connected by real-time information. The front office, back office, and external networks should all work seamlessly toward a common goal – serving the end-to-end customer experience. Enterprises, supported by their vendors and service providers, must cultivate a culture of continuous change, underpinned by an adaptive enterprise architecture which encompasses Agile and DevOps as the methods of choice. Building a standards-based digital platform that enables a consistent and predictive experience which anticipates customers' needs will be the priority.

### New technologies allows B2Bs to embrace direct-to-consumer relationships

Traditional B2B enterprises have been granted new opportunities to connect with their ultimate customers, powered by technology that connects them far closer than ever before. From the merging of virtual and physical identities; network-connected devices generating new streams of data; social platforms for collaboration; and the infusion of AI to transform enormous amounts of information into decisions and future business models – the barrier between B2B and C has eroded. Empowered by these technologies, B2B enterprises will morph into B2C-like businesses. Real-time adaptation to changes that reflect the market and customers' evolving needs will be possible, challenging operating models.

## What's new

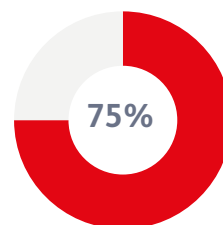
**CIO analysis** – interviews with CIOs, CMOs, CXOs to create an understanding of how emerging technologies like the AR cloud, IOT, and blockchain will effectively augment information and enable multi-user engagement and collaboration.

**“How-To” guide** – an examination of the necessary framework for enabling digital workplace transformation at scale and the emerging technologies and platforms that forge a single digital workstream.

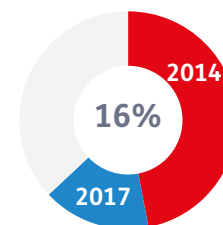
**Practical thought leadership:** A review of how new business models like gig work, peer-to-peer communities, and crowd-sourcing shape B2B customer engagement.

## Consumers Demand Digital

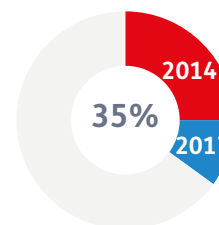
CUSTOMERS THAT ARE  
ALREADY ON THE WEB  
WHEN ENGAGING



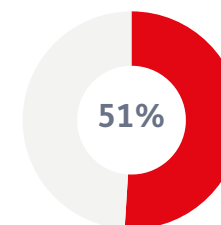
EXPECTED INCREASE IN  
SELF-SERVICE IN 2017



NUMBER OF  
CUSTOMERS THAT  
USE MORE THAN 4  
CHANNELS



STILL, CUSTOMERS  
PREFER VOICE  
FOR MORE COMPLEX  
ISSUES



Customers are multi-modal in nature

The voice channel is becoming a secondary entry point and focuses on more complex queries

Self-service is not about deflecting, but about attracting



# Data & Enterprise Intelligence

## The Market Challenge

Artificial intelligence has been hyped before; however, the convergence of cloud processing power and economics of modern storage have set the stage for transformative enterprise potential. But with this immense potential comes proportionally formidable challenges. Data silos still pose a perennial blockade to comprehensive leverage of big data, but architectural barriers today only tell a portion of the information management story. For the enterprise to operationalize these AI initiatives beyond localized projects and drive true digital transformation while avoiding risk, a vast coordination of people, processes, and technology is required. Governance not only for data itself, but for complex systems and business culture, is required.



## How Ovum helps you

**Understand how governance of process** – not only data – is necessary for digital transformation in an era of constant disruption.

**Learn best practices** for ensuring ethical and accountable implementation of AI to drive optimal business outcomes.

**Evaluate enterprise-wide frameworks** for data analysis which efficiently leverage people, processes, and technology.

**Explore** the capabilities of modern cloud infrastructure to remove the physical and economic barriers of data access and leverage.

**Organize resources and technology** to enable a self-service culture that extends to AI, rather than just visualization.

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**Tom Pringle**  
Research Director



The total cloud BI and analytics software market is forecast to grow with a CAGR of 34.6% from 2017-2022.



# Key Deliverables



**AI governance and transparency for business value** – best practices and hands-on advice for sustainable, repeatable, ethical model development and application.



**Orchestration of human process and operationalization of AI models** – frameworks and blueprints for enterprise-wide, end-to-end management of the human and technical aspects of the AI workflow.



**Cloud compute and storage for the leverage of all data** – market landscapes and vendor assessments of key cloud data and analytics solutions to navigate growing volumes and varieties of data.

# Themes for 2019

## Operationalized AI is defined by governance and transparency

To date, most enterprise AI efforts have been localized on machine learning or deep learning projects. But for organizations to operationalize and scale these initiatives, enterprise-wide, robust data and model governance will be critical. As systems become self-taught, they become opaquer: violating regulatory compliance, jeopardizing result reproducibility, confounding ROI calculation, and raising ethical concerns. Governance is needed on two fronts: to govern the data consumed by models, and to manage the model development process itself. To play a transformative role in business outcomes, transparency and accountability for AI processes is key.

## Data and AI will force enterprises to be data-driven

There is a wealth of data available to enterprises: much of it underutilized due to siloed architecture, time constraints, and the complexity of analysis. The accessibility of new external and internal data resources will enable companies to consume, analyze, and efficiently act upon vast, rapidly-moving data at speeds not possible before. Success with AI requires more than just mastery of algorithms and frameworks; it requires the effective management of people and process so that knowledge is shared. AI must be aligned with business objectives, be adequately documented, and be rigorously tested to ensure the fidelity of models and achievement of goals.

## The cloud removes the barriers to using ALL of the data

The economics of cloud storage and compute remove nearly all the barriers for optimal enterprise leverage of all available data. Cloud economics reduce the cost of storage, and cloud compute allows enterprises to pay only for what they use. Data today is defined by increasing complexity; much of the data available comes from sources outside the enterprise, and the business increasingly utilizes data outside of traditional – usually transaction – systems. Data-driven enterprises remove not only the physical and economical barriers to data utilization, but also change mindsets. The business culture must pivot to encouraging discovery and rigorous experimentation.



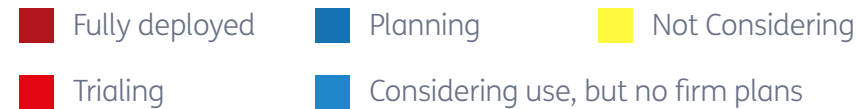
## What's new

**Explore real-world stats in data governance** – New Forecaster “Information Management” drill-down will allow insight into enterprise governance trends and investments.

**Tackle the challenges of AI operationalization** – new topic packs of research will be designed to address the functional process and technical barriers to enterprise-wide AI implementation.

**Understand enterprise leverage of cloud infrastructure** – an expanded ICT Enterprise Insights survey will gather intelligence on cloud use as it relates to the implementation of AI and machine learning.

## Artificial Intelligence

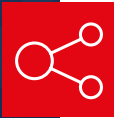




# Enterprise ICT management

## The Market Challenge

Ovum continues to witness the evolution of the CIO's role in terms of delivering IT services at a faster and more flexible pace for business outcomes. Digital transformation is unlike prior technology trends because the need to address it comes from an ongoing evolution in how consumers/clients/citizens engage holistically with organizations. This continues to exert pressure on organizations to adapt and react more quickly to this external shift in business engagement across industries and countries. To be successful in providing digital services IT functions have to address both how they operate internally and how IT services are delivered in support of their organizations digital agenda.



## How Ovum helps you

**Understand** peer-group priorities for, and approaches to, delivering digital services to business functions.

**Discover** new approaches to managing the business of IT, from strategic planning and enterprise architecture through to IT budgeting and finance.

**Learn** how other enterprises are structuring their IT organizations in response to their digital journey.

**Discover** how IT management best practices are being applied to maximize the value of IT-enabled business investments.

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**Tim Jennings**  
Research Director



With an average maturity score for digital strategy of 34% there is clearly significant work still to be done



# Key Deliverables



**Trends to Watch** – reports for major industry and technology domains.



**Enterprise Case Studies** – explain how peers have used technology to solve business challenges.



**ICT Enterprise Insights** – shows key trends based on over 6,000 interviews.



**Ovum Decision Matrices** – provide comparative evaluation of the leading enterprise solutions and services.



**On the Radar** – reports highlight new solutions and providers of emerging technologies.



**How-to-Guides and Maturity Models** – help you to understand best practices for technology deployment and management.

## Themes for 2019

### Evolving the Digital IT Organization

The role of IT organizations is in flux as they seek to meet the challenges of an era of digital disruption, which demands continuous, rapidly delivered cycles of business transformation. More collaborative, agile modes of funding and delivering business change are mainstreaming, and IT organizations are being challenged to become business partners in both strategy development and execution. Those that do not rise to these challenges risk being left behind.

### Managing in a Multicloud World

Enterprise IT functions are challenged in today's multicloud environment by factors including the proliferation of cloud service providers, the difficulty in predicting and managing the cost of cloud usage, a lack of portability of cloud workloads between environments, and commercial terms that reduce the flexibility of cloud service usage. A business-driven cloud migration strategy must marry the transformation of internal IT delivery with the business benefits of external cloud service adoption.

### Adopting Disruptive Technologies

As technologies evolve, the skills required by both the business user and the IT department are also changing. The impact of technologies such as AI/ML, quantum computing, and robotics will change the way organizations operate, the processes they employ, and the alliances they form. Identifying which partners and technologies to adopt and when, is key to making any such transition a success. The wider impact of these new technologies is the change to the socio-economic environment, challenging organizations to remain relevant.



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## What's new

**New tools** to support IT budgeting.

**Updated enterprise** IT spend benchmark.

**New case studies** to highlight best practice in enterprise IT.



# Get in Touch

Want to learn more?

[Click here](#) to request a callback.

