Enterprise Decision-Maker

2017 Research Agenda

Helping organizations thrive in a connected digital economy
Introducing Ovum

Ovum is a market-leading data, research and consulting business focused on helping enterprises and their technology partners thrive in the connected digital economy.

The Digital Economy will be worth $4.8 trillion by 2025
Source: Ovum

Digital transitions

The digital economy is being transformed by a combination of factors including new technologies, increased customer expectations and changing regulatory environments. Enterprises must anticipate, adapt and invest in the solutions that will see them thrive.

The transition to digital services differs in nature and pace by industry. Success requires a deep understanding of vertical-specific market dynamics and technology implementations.
Ovum helps you succeed in a rapidly changing market

Our actionable insight helps decision-makers create IT strategy, architecture and roadmaps, evaluate and select potential solutions and providers, and implement and manage their IT portfolio to realize business benefits.

Approach

We have an in-depth market approach by vertical, technology and country

Why Ovum?

We are uniquely qualified to help

Experience
We have been guiding our clients to growth for more than 30 years

Capability
We survey 7,000 organizations annually to benchmark ICT budgets and staffing

Approach
We have an in-depth market approach by vertical, technology and country

Ovum provides authoritative data, market analysis, and vertical industry expertise to empower your decision-making. We help you profit from new technologies and evolving business models.

Working with Ovum puts at your disposal more than 140 expert analysts based in more than 20 locations across the globe. We place market leading analyst support at the center of all our services.

We are part of Informa Group

FTSE 100 Informa Group is one of the world’s leading providers of business intelligence. Informa has over 6,500 employees and delivers specialized information to companies operating in sectors including agriculture, commodities, energy and utilities, financial services, healthcare and pharmaceuticals, maritime, telecoms, media and IT.
Welcome to Ovum’s 2017 research agenda for enterprise ICT decision-makers

Digital transformation is at the top of the agenda across almost every industry sector. Ovum provides detailed and data-backed research into the development and adoption of new technologies and the trends driving transformation around the world.

For business and IT leaders, Ovum provides insight into major disruptive technology trends, coupled with a deep understanding of industry-specific drivers and business processes, to assist in creating a robust business technology strategy. Our research helps enterprises to design the appropriate architectures and roadmaps to exploit these technologies, and the detailed information required to select the most appropriate solutions, services, and suppliers. Finally, our service helps clients with the deployment of these solutions and the management of their IT portfolio, in order to maximize the business value of their investments.
The way enterprises assess, acquire, deploy and use technology is changing at an ever-accelerating rate. The super themes shaping board-level agendas like big data, customer experience, and digital services are enabled by the technologies this research program is centered on. The Applications program at Ovum encompasses three key research areas, Customer Engagement, Information Management and Enterprise Mobility, and Productivity. Each of these teams provides depth of both enterprise, and market-focused insight; while delivering a breadth of topic coverage through collaborative research.

Use our Applications research to:

→ Assess technology solutions Ovum identifies as market leaders with our Ovum Decision Matrix series of reports
→ Identify and learn from best practices through case studies
→ Launch successful IT projects using our enterprise “How-to” guides
→ Engage our analysts to explore the unique requirements of your organization

Ovum’s approach to software analysis:

What? Use case and deployment scenarios.


When? Vendor solution landscape, spend predictions.

Infrastructure

Cloud native computing enabling innovation, agility, and customer adaptability

“Born in the cloud” organizations with key attributes such as software centricity, customer adaptive and innovative culture are disrupting many markets. The need to remain competitive for market incumbents is driving digital transformation and the move to the cloud which is impacting both enterprise and service providers, instigating significant change to both processes and technologies utilized in the IT environment. The necessity for agility and speed requires the adoption of an agile approach and more collaboration through DevOps within the IT function. The journey to becoming cloud native also requires software development and delivery to become a key competency, along with the availability of open APIs and proactive security, and the implementation of emerging technologies, such as microservices and containers.

Use our Infrastructure research to:

→ Develop an IT transformation strategy
→ Evolve to an end-to-end proactive security architecture
→ Improve speed of service/software delivery through the use of agile and DevOps
→ Understand the impact of digital transformation on the IT function
→ Navigate the increasingly complex IT environment
→ Define the criteria to use when selecting cloud-based solutions
→ Gain insight into emerging technologies, such as microservices and containers
→ Map out the journey to becoming cloud native
→ Make software development a core capability
→ Understand latest integration approaches

Mark Blowers
Head of Infrastructure Research

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Mark Blowers
Head of Infrastructure Research
Use our expert analysts and industry-led research program to deliver the products and services that address the biggest pain points facing your customers

As the pace of technology driven change accelerates in all industries, understanding the business-level issues and challenges that drive investment in software and services has never been more important. The maturity and broad availability of advanced technologies across areas such as artificial intelligence, cloud and the IoT are pointing the way to radical change in the products, services and business models in a number of industries, with payments, insurance and retail among those that will experience the greatest change in the end user experience and competitive landscape over the next 10 years.

The rate and trajectory of these changes, and the subsequent needs of today's enterprise, vary considerably based on the unique dynamics of each industry vertical. Understanding factors such as the business level pain points, end-user needs and regulatory requirements at the industry level has never been more important.

Use our Industries research to:

→ Make the right vendor selection decisions with independent verification of the market leaders, challengers and followers in Ovum's Decision Matrix series

→ Keep your back office and customer enhancements ahead of the competition, by understanding where and how your peers are investing in new products and services

→ Profit from the change facing the industry, by using Ovum's detailed insights and thought leadership to invest and remain at the heart of the value chain

→ Learn from your peers, through detailed case studies that highlight innovative approaches to addressing key challenges in the industry and the lessons learnt

Ovum's approach to industry analysis: context matters

External
→ Economic
→ Demographic

Internal
→ Strategic
→ Tactical

ICT
→ Industry-specific solutions
→ Horizontal solutions
→ Services
Ovum advises enterprises on structuring their IT organizations in response to digital transformation.
Enterprises today face a twin challenge: transitioning both the IT function and the technology environment to an as-a-service model.

Enterprises are continuing their progress towards digital transformation, focusing on digitizing customer processes to enhance customer experience, digitizing business operations to improve efficiency, and where relevant their core value proposition to become a digital service provider.

This journey requires significant changes to the way that IT capabilities are designed, delivered and managed within the organization, including a sustained transition to an as-a-service model, typically using a hybrid of on-premise and cloud provision. It also has a substantial impact on the way that the IT function is organized and run, with an emphasis on the rapid delivery of solutions. At the same time, a flexible digital infrastructure must be built, addressing governance, security, and risk. Business technology expertise has an enterprise-wide remit, but success depends on building a sustainable environment for innovation and delivery, and avoiding the pitfalls of a fragile set of point initiatives.

78% of enterprises rate technology innovation as a key element of their business strategy.

What’s New?

- Enhanced Enterprise ICT Spend and Staffing Metrics tool – with a new interactive dashboard.
- New Maturity Model – with a focus on digital transformation and the transition to becoming a Digital Service Provider.
Shaping IT capabilities for the era of the digital service provider

To meet the needs of a digital business, enterprises must define a set of integrated technology capabilities to deliver new initiatives at speed, taking advantage of approaches such as agile, DevOps, and continuous improvement. They must also shape the skills and resources of the IT organization to take full advantage.

Managing digital risk

Digital services will have a significant impact on the enterprise risk landscape. Whilst many of the individual risks are not new, the adoption of cloud services, open APIs, data exploitation, and omnichannel access, when taken together, will require a fresh approach to risk management and governance.

Themes for 2017

Managing the modern portfolio

Adopting a portfolio management approach is a key discipline across projects, applications, products, and services. Businesses will benefit from a common approach to techniques including portfolio planning, resource management, demand management, and financial management.

Using enterprise architecture to avoid digital chaos

Research shows that as businesses adopt digital strategies, the complexity of the technology landscape can increase significantly, with increased integration points and a proliferation of services. Enterprise architecture can provide a valuable framework in which to set digital initiatives, improving coordination across digital services and core systems.

Key Deliverables

→ Enterprise ICT Spend and Staffing Metrics – offering powerful insights into estimated ICT expenditure and staffing levels.
→ Enterprise Case Studies – recommendations, best practice, and advice from real-world solution deployments.
→ Maturity Models – covering best practices for technology deployment and management.
→ How-to guides – providing practical advice on key enterprise management topics.
Only Ovum combines its Information Management and Customer Engagement teams to explore the nexus of customers and data, and the role they play in a digital future.
As vendors compete for the omnichannel high ground, which tools should be embraced to cultivate strong, profitable customer experiences?

Enterprises are faced with radical shifts in the technologies that underpin their customer communications. What used to be the realm of the contact center is now a multithreaded environment incorporating marketers, IT professionals, back office employees, and customer-facing agents.

The ability to orchestrate and deliver a true omnichannel customer engagement and positive customer experience is an ambition shared by a rapidly growing majority of enterprises, large and mid-market, across all sectors. In commercial environments it holds the promise for competitive differentiation and profitable growth, even as economies remain stagnant. Changing customer expectations, shaped by technology and the direct influence of peers have created the omnichannel imperative for every organization, irrespective of sector.

A slight upward trend in the total number of contact center agent seats is expected through the year 2020, but the +0.5% compound annual growth rate is driven primarily by the Middle East and Africa, Central and South America, and Asia-Pacific regions.

What’s New?

- Contact center-focused end-user survey – highlighting key technology and budget priorities.
- Further focus on customer data and analytics – driving efficient operations and more effective customer interactions.
- “Customer defined” enterprise architecture insights – the implications for organizations looking to invest.
Understanding customer channel preferences as the key to omnichannel success

As the various generations of customers transition through the marketplace, digital service providers must accommodate a variety of styles and expectations. Successfully implementing an omnichannel approach will require the ability to match constantly evolving customer preferences to the right channel, maximizing enterprise performance, profitability, customer satisfaction, and long-term loyalty. This will depend on sound investment in a range of new technical capabilities.

How to orchestrate the omnichannel foundation

The shift from voice-centric customer care to the digital omnichannel era is having a profound effect on contact centers and enterprises, and depends on multiple capabilities across departments. From personnel staffing through platform selection, purchasing, marketing, sales, accounting, and billing, transitioning from a contact center to CX focus requires the broad-based participation of the entire organization.

Themes for 2017

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Customers will begin to define enterprise architecture

Given the intense global competition for customers, external realities, particularly the customer should directly influence enterprise architecture, and yet this is seldom the case. User experience is crucial for customers, but equally important for the employees who define it. Balancing the equation means selecting the technology tools that serve both users’ needs.

Big data, the Internet of Things and automated customer experience

When it comes to customer experience, IoT and Big Data are two sides of the same coin. With IoT comes the opportunity to push customer service interactions into fully automated territory for the first time, but doing so requires immense amounts of data, as well as the insight and knowledge that data brings. Understanding how big data affects analytics, CRM, and other systems is critical to investing in next-gen CX tools.

Key Deliverables

→ Contact center and CX technology market sizing and forecasts – based on Ovum’s proprietary agent positions data.

→ Big Data and IoT analysis – combining Ovum’s customer engagement expertise with horizontal insights.

→ Enterprise how-to guides – on the steps required to make an organization truly customer adaptive.

→ New Ovum Decision Matrices – covering core contact center and customer experience technologies.
Business innovation, growth, and development are powered by engaged employees: they drive the design, delivery, and management of products, services, and rewarding customer experiences.

Every organization has a unique mix of line-of-business solutions, usually an eclectic array of end-user devices, productivity tools, and collaboration platforms. Provisioning, supporting, and integrating these IT systems for employee use in a suitably accessible and secure manner is a costly and complicated task. The advents of BYOD, enterprise mobility, and shadow IT have added extra dimensions to the challenge.

The increased pace of change in the end-user computer market means that CIOs and their teams no longer have the time to conduct detailed studies and product evaluations, nor can they cover every aspect of employee-centric IT strategy, implementation, and operation. The only viable way forward is to partner with technology suppliers, service providers, system integrators, and trusted advisors. In turn, these vendors must focus on helping enterprises discover and implement more profitable ways of working.

Half of your employees aren’t actively engaged at work, and the other half likely access customer data and corporate systems using unmanaged devices.

What’s New?

→ **Enterprise mobility management insights** – helping you understand this fundamental requirement of the modern end-user computing environment.

→ **Employee engagement insights & analysis** – on its importance and how to improve it.

→ **Digital skills report** – on their increasing significance and how to boost them.

→ **Any-device management report** – on why it’s important and how to approach it.
Sustaining new digital workstyles, without compromising IT control and governance

Continued growth in the use of employee-owned devices and self-selected applications is changing the face of the end-user computing environment. However, most employees still expect their employer to provide the tools and technology they require. Employers must empower their people with robust applications that maximize productivity without compromising security, and create environments where new digital workstyles, across multiple devices, are fully accommodated.

Enterprise mobility management for the digital business

Up to now, device management capabilities have largely driven the adoption of enterprise mobility management (EMM) solutions. As enterprise mobility becomes the status quo, new technology solutions must enable employees, secure sensitive data and deliver actionable business insights. Investments in technology to support the new end-user computing environment will only accelerate, and EMM solutions are well positioned to support this evolving demand.

A modern approach to end-user devices and the digital workspace

The power and capabilities of new mobile end-user devices, the applications they run, and the services they connect to, offer significant benefits. The idea of what constitutes a modern digital workspace already extends beyond the PC, and within five years it will extend beyond the smartphone and tablet too. To avoid device lock-in, a new approach must be considered. Devices should be seen as containers for applications, and evolving employee behaviors must be better understood and accommodated.

Assessing the winners and losers in communication and collaboration platform consolidation

The proliferation of communication and collaboration platforms is well documented. We are entering a period of consolidation in a cloud- and mobile-first world, and there will be winners and losers.

Who will they be, what will they offer and how should enterprises learn from their successes and mistakes? Enterprise investment in these technologies should have a long-shelf life, as they represent some of the core capabilities enterprises rely on to conduct their day-to-day business. However, in a constantly changing vendor landscape, blending multiple capabilities to create a communication and collaboration platform presents a substantial challenge.

Themes for 2017

Sustaining new digital workstyles, without compromising IT control and governance

A modern approach to end-user devices and the digital workspace

Assessing the winners and losers in communication and collaboration platform consolidation

Key Deliverables

→ Industry analysis and opinion – on the major transitions and events shaping the future of the industry.
→ Vendor, product, and solutions SWOT analysis and recommendations – evaluating the strengths, weaknesses, opportunities and threats.
→ Product comparison reports and evaluation models – the industry’s most detailed reports and models, helping you make fast, informed business technology decisions.
→ Horizon scanning, trend spotting, and opportunity assessments – helping you to plan for the future and avoid unnecessary obstacles.
Tom M. Pringle – Head of Applications Research

Information Management

Technology evolution and new business imperatives have fundamentally changed information management: organizations must reassess their approach to data and content architecture to remain competitive.

Enterprises face two major challenges in their use of data and content technology: The user profile has changed radically and prior investments look increasingly outdated and unfit for today’s reality. The implications of an expanded range of data and content sources is well understood, but how to weave them into existing data and content architectures has proven harder to grasp.

In reality, many enterprises are unwilling to give-up on their existing investments and need help in building an elastic architecture to accommodate new sources of data and new use cases. One-size-rarely-fits all, and the traditional concentration of analytical expertise has begun to fall apart. Enterprises should welcome the eagerness to infuse more data-driven insight into their processes, but should also focus on how to do it technically, in a way that won’t compromise governance standards.

The information management (IM) market is forecast to be worth $65.6bn by the end of 2016, with a compound annual growth rate (CAGR) in excess of 10% through 2020.

What’s New?

→ End-user focused survey – exploring the priorities and preferences of information management decision-makers.
→ New enterprise-focused ‘hands-on’ reports – highlighting the key considerations when assessing and implementing new investments in technology.
→ Data Management & Big Data research – in-depth examination of data management tools and approaches that can accommodate the new requirements of big data.

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Self service data management and analytics; catalyzing big data democratization

The benefits of using big data to develop big picture insights must be provided across multiple user types – automation and ease of use will define success. It’s assumed that data scientists’ unique needs are not met by off the shelf tools, and that their complex analytics require command line programming. But their time is valuable, and given the growing availability of off-the-shelf ML algorithms there is increasingly less need for them to reinvent the wheel, and more need to share and spread the impact of their work.

Smart Analytics, powered by AI will provide guided analysis for the majority

Simply adding Hadoop connectivity to BI tools doesn’t address the challenge of making Big Data intelligible to the business analyst. It doesn’t indicate which data sets to look for, what signals to identify or where to start asking questions. Just as BI redefined decision support, AI/ML will empower the user with a “guided experience” to cut through the noise of all data.

In a distributed IT landscape, who owns Analytics?

The question of who owns the analytics end user and the query has been an eternal tug of war between line of business applications, analytics providers, database providers, and system integrators. There is no silver bullet, but the vendors that add the most value in enabling change for the customer will win the highest share of mind and wallet.

Content is at the heart of digital transformation

Organizations are digitally transforming themselves in order to support the end to end customer journey. Creating a seamless experience across all channels depends on the effective matching of digital and physical content. Blending new capabilities like geo-location, preference analytics, mobile capture, and greater use of e-forms will help to eliminate the friction between on and offline experiences.

Keeping data governance, privacy and architectural implications front of mind

Analytics is driven by data, and its benefits depend on effective data management. The impact of governance, including data quality, MDM, organizational responsibility, along with privacy management and the impact of existing architecture are all too-often under-funded afterthoughts. A new, expanded approach to effective data management is required to encompass both existing, well-understood needs as well as emergent, rapidly changing enterprise requirements.

Themes for 2017

Key Deliverables

→ Enterprise how-to guides – covering the latest technologies in analytics and content, helping organizations decide where to invest and what to re-assess.
→ Market landscapes – helping you to understand the rapidly expanding self-service and visual analytics markets.
→ Market sizing and forecasting – dedicated to the key technologies that will form the foundation of successful go-to-market strategies.
→ Ongoing comment and opinion – regular updates on this rapidly changing market, from the key vendors’ product releases through to new trends disrupting the industry.
Enterprise Communications

The enterprise ICT opportunity is a priority for most providers, establishing a coherent strategy while building, running, and scaling a profitable B2B business remains a considerable challenge.

Enterprise buyers are more sophisticated and demanding than ever. They want service levels across the network through to applications, reporting, integrated billing, and service management. At the high end, while more deals involve multiple services, ICT buyers are more open than ever to regional expertise and depth, preferring to go for a “best in location” approach to service sourcing.

Between 2010 and 2015, Telcos more than doubled their sales of managed ICT services contracts into large enterprises and multinationals.

What’s New?

→ SME Insights by country – analysis from over 3500 SoHos and SMEs globally, giving unparalleled insight into SME micro-sector demands.
→ Service provider total addressable market forecast – ICT Services focus, split by provider type to enable revenue and investment planning.
→ Ovum Decision Matrix – evaluating telco cloud services.
→ MNC customer experience insights – covering service provider customer experience strengths and weaknesses.
→ Additional Asia and Africa coverage – through increased enterprise services analyst presence in SE Asia and sub-Saharan Africa.
Theme for 2017

Connectivity

The network will increasingly be procured as and when required, as a service. Software-defined wide area networks point to an on-demand networking future. We focus on how telcos are transitioning in this changing space, and how they’re supporting global MNC requirements.

SME and SoHo services

Telcos have an enviable advantage when selling services to SMEs but for the most part haven’t succeeded in selling more than simple voice and data services. We understand SME requirements and provide case studies for success in the sector.

The telco cloud

In public cloud, telcos have struggled to compete with the likes of AWS and IBM. We see a new pattern emerging – one of careful partnership. Telcos are refocusing on the network, with new investments in NFV and SDN, to position themselves as cloud brokers. But will this approach meet with success?

Ovum Decision Matrix: Europe Mobile Workspace, 2016-2017

Note: Bubble size represents market impact.

Key Deliverables

→ Enterprise CIO surveys – of both large enterprises and SMEs in 15 country markets.
→ Forecasts for major enterprise services – from network to voice and data, through to M2M, managed services, and cloud, with granular splits for company size, geography, and industry vertical.
→ Enterprise services case studies – examining real enterprise experience in evaluating, selecting, implementing, and measuring benefits from advanced UC and other services.
→ Ovum’s Service Provider Decision Matrices – informing the selection of services and suppliers.
→ Global services deals analysis and service provider snapshots – deep insight and analysis of the enterprise services strategies, portfolio evolution, and commercial success of the top providers.
→ IoT deals, M2M platforms, workspace and cloud services trackers, keeping you up to date on major market events and developments.
Infrastructure

“Ovum helps organizations select the most appropriate cloud based solutions.”
Market disruption is forcing enterprises to adopt cloud-based technology platforms in order to better support new business models, innovation, and digital transformation.

Becoming cloud-based and platform-centric is now a prerequisite to providing the flexibility and scalability needed to support today’s business models. The IT function must embrace emerging technologies and new ways of working, while investing in security solutions that go beyond fallible preventative measures. The adoption of threat intelligence and analytics to detect and mitigate breaches will form a critical part of this transition.

Enterprises must also find the right balance between ease of use and providing an end-to-end secure IT landscape. The practical reality that most find themselves in today is a complex hybrid environment. The immediate future of IT is a fusion of the various technologies and approaches that have accumulated over the past 20 years.

“29% of enterprises placed transforming the IT capability as the most important IT trend.”

What’s New?

→ Major service provider software stacks analysis
→ Cloud platform maturity and assessment model
→ Next generation endpoint security solutions research
→ Software market forecasts for integration, application lifecycle management, and IT management
Safeguarding an organization’s reputation and trust

Current approaches are designed to mitigate yesterday’s threats, not those faced by organizations transforming into digital service providers. There is an urgent need for more targeted security intelligence and the adoption of new approaches, such as digital identity, security analytics, and behavioral monitoring.

Establishing an API-based architecture to support business transformation

Integration capabilities assume a greater significance during the adoption of cloud-based solutions and digital transformation. APIs play a critical role as flexible interfaces to cloud services and enablers for mobility, IoT, and new applications. The API ecosystem also enables the monetization and development of new API-enabled business models.

Managing the transition from on-premise to the cloud

Cloud computing has up to now been focused on IT change but in future it must be guided by business transformation. The journey to cloud-based platforms needs to address ecosystems, the hybrid environment, integration issues, and IT management challenges. A cloud strategy should also include the adoption of microservices architecture, containers, and serverless computing.

Incorporating automation into IT processes and platforms

Artificial intelligence, machine learning and software robotics are no longer the technologies of tomorrow. The use of the cloud enables automation functionality to be incorporated into platforms and applications. Sophisticated algorithms are being created to augment human decision-making and to improve competitiveness.

Managing the complex hybrid IT environment

One outcome of the IT transformation journey is an increasingly complex hybrid IT landscape. In order to improve visibility and control the IT function and service providers should look to improve visibility and adopt concepts such as virtualization, software-defined environment, performance monitoring, and operational analytics.

Themes for 2017

Key Deliverables

→ Software market forecast – with a five-year view on growth in the infrastructure software markets segmented by vertical, region, and function, and updated annually.

→ Ovum Decision Matrix – providing comparative evaluation of the leading enterprise technology solutions, accompanied by individual SWOT assessments.

→ Market landscape – with solution capability comparisons for emerging technology areas.

→ Case Studies – recommendations, best practice, and advice from real-world solution deployments.

→ On the Radar – brief assessments of emerging vendors in the infrastructure solutions market.

### Microservices architecture

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**Microservice**

- Owns all the business logic of a single function
- Has a gateway and HTTP client
- Has internal repositories
- May use external database but is logically “Internal”
Beyond the hype, the development of the Internet of Things is driving significant disruption and new opportunities for service providers, vendors, and their industry partners.

The Internet of Things is the most disruptive wave of technology-driven change for business and consumer markets in a generation. IoT applications range from increasing efficiency in manufacturing and healthcare, to shifting the way people interact with cities, buildings, cars, and the environment. Many new service areas and use cases will emerge as the IoT spreads, disrupting industries and creating new revenue opportunities. Its impact on sustainability will also be far-reaching.

Service providers and vendors looking to succeed in IoT must navigate a complex and fragmented marketplace. Understanding demand drivers, the specifics of industries and regulation, and partnership models will be just as important as innovative technology development and underlying infrastructure. Leveraging IoT data effectively for analytics and machine learning is key to realizing the IoT’s potential, but will require new tools, skill sets and business models. IoT strategies will not be one-size-fits-all - an agile approach is needed.

Cellular IoT connections will grow by 350% over 2016-2021, driven largely by NB-IoT adoption for low-power, low-cost use cases.

What’s New?

- **IoT Global Market Forecast 2016-2021** – new 5-year outlook for IoT connections, revenue, technologies, vertical applications, and splits by stack layer.
- **IoT Service Provider and Vendor Profiles** – best practice case studies and comparisons of positioning, technology approach, product & service strategies, and innovation.
- **IoT Insights** – multi-country survey of senior enterprise ICT buyers evaluating IoT intentions, implementations, expectations and obstacles, for major verticals.
- **IoT Vertical Strategies** – IoT opportunities and challenges in key verticals, including use cases, vertical IoT ecosystems, key players and partnerships, and disruptive business models.
IoT ecosystems and value chain

As the M2M market evolves into the new connected landscape of the IoT, ecosystems are developing around leading platforms, and verticals such as automotive, healthcare, retail, utilities, and transport. Industry players must consider which ecosystems are critical to be part of, which partnerships will be successful in driving innovation, and where to position in the value chain.

Vertical disruption

Realizing the potential of IoT requires far more than technology development. Understanding the transformative impact of the IoT on different industry verticals is a key challenge for all participants in the market. This includes understanding specific industry challenges IoT can help to address, and the disruptive impact of IoT on traditional business models.

Themes for 2017

IoT technology evolution

The timeline for IoT technology development is constantly evolving, and solutions and services providers need to stay abreast of investments, deployments, standards, and ecosystems in order to ensure investment is going to the right places. The advent of LPWA technologies for both licensed (NB-IoT) and unlicensed spectrum (LoRA, Sigfox) is being closely followed by Ovum’s analyst team, as is the impact of 5G on IoT opportunities.

Horizontal platforms and capabilities

IoT service providers and vendors are keen to develop horizontal solutions and platforms that can be deployed for many types of applications and industries. Best practice providers are building capabilities that extend the value of IoT solutions well beyond connectivity and devices, to gain the maximum value from IoT data. Leveraging assets and capabilities in cloud, analytics, artificial intelligence, and machine learning – whether through own development or through partnering – will be critical.

Key Deliverables

→ Global IoT Forecast 2016-2021 – IoT forecasts for connections and revenue across 10 verticals, 5 key technologies, and 19 countries.


→ IoT Trackers – ongoing tracking of M2M and IoT service provider contracts, platform deployments, and innovation investment.

→ IoT Framework and Trends Report – cutting through the hype, an up-to-date overview of the IoT landscape, value chain, outlook, and opportunities.

→ Regular profiles and case studies - of leading service provider and vendor IoT strategies.
Industries

Only Ovum has a team of analysts in its Industries practice dedicated to serving the payments industry.
In response to growing competition and customer expectations, banks must focus on digitization and new partnerships in order to transform their products, services, and the customer experience.

The importance of digitization and infrastructure modernization in delivering enhanced front office service delivery, as well as operational resilience and sustainable margins, is now well understood in the industry. However, there remain significant barriers to change.

Competitive pressures from new entrants and third party innovators, alongside ongoing regulatory complexity and the need to manage ageing infrastructure must be overcome. Cloud services will grow in importance, as will the use of advanced analytics and AI to deliver personalized and contextually relevant customer experiences. Staying ahead of the curve will require embracing the opportunities from open APIs and banking-as-a-platform models, to deliver innovative services with partners across the FinTech landscape and broader ecosystem.

” Retail bank IT spending globally will reach $150.8bn in 2020. “

What’s New?
- **Retail Banking Software Contracts Analytics** – with expanded scope and coverage in 2017.
- **ICT Enterprise Insights** – including deeper coverage and insights on digital channels, security, and core banking.
Delivering the digital bank: growth through innovation

The pressure to deliver greater operational resilience and security, alongside innovation in the customer experience, will drive investment in modern, flexible, and real-time core systems. Cloud technology will play an increasingly important role in delivering organizational agility, while new entrants and the fintech ecosystem will continue to raise the bar for incumbent providers.

Personalizing the bank: channels and the customer experience

Fully digital and mobile first account servicing and product origination are becoming baseline requirements as part of best in class channel experiences. Developing personalized and contextually relevant experiences is now the focus. Advanced customer analytics, AI, robo-advice, and augmented reality will be key areas of investment for institutions looking to develop their channel propositions.

Embracing the opportunities: the fintech ecosystem and open APIs

Interest in partnering with innovators from across the value chain, and particularly the fintech space, is growing. Open/external APIs will be an important catalyst of change, particularly where mandated by regulation such as PSD2, and will open the door to a range of innovative use cases. On the back of this, the Banking-as-a-Platform model is likely to gain traction, driving further interest in de-coupled offerings and business models.

Managing security in the digital environment

Delivering innovation while ensuring customer protection remains a key challenge; particularly as the nature of the security threat continues to evolve. Big data and AI are becoming more important in delivering enterprise-wide solutions for fraud and financial crime, particularly in the compliance space. At the retail level, the role of biometrics and other identifiers in enhancing the customer experience makes security a key business driver.

Themes for 2017

Key Deliverables

→ ICT Enterprise Insights – global survey of retail bank pain points and IT buying intentions for 2017-18.
→ ICT Spending Forecasts – global 5 year projections for retail bank IT spending, segmented by country, source, and line of business.
→ Banking Software Contracts Analytics – global analysis of packaged software deals, segmented by institution, vendor, and solution area.
→ Ovum Decision Matrix – analyzing the leading vendor solutions in key areas, including digital channel platforms, and financial crime.
Insurance Technology

Technologies such as IoT and advanced analytics are reshaping the insurance industry: in terms of its products and players it will be unrecognizable in 10 years’ time.

The insurance sector has already undergone major changes over the last decade as a result of regulation, radically changing customer expectations, and technology advances. This pace of change is set to accelerate further as developing technologies such as IoT, cloud technology, and cognitive computing begin to impact the industry.

Ovum sees the global insurance industry entering a distinct new phase, characterized by the emergence of very different insurance products and propositions, new ways of interacting with customers, and a host of new entrants. The challenge for insurance industry incumbents is to understand the potential threats and opportunities posed by IoT, cloud, and advanced analytics. They must quickly identify how these technologies can be effectively exploited, and find the most appropriate partners to help them do it.

80% of insurance CIOs expect cloud technology to significantly change or transform both the insurance industry and their organization within five years.

What’s New?

→ IoT Opportunity Focus – in-depth insights and analysis of the technology opportunities presented by the biggest area of change facing the industry.

→ Insurance Software Contracts Analytics – monthly analysis of insurer and vendor partnerships.
80% of insurance CIOs expect cloud technology to significantly change or transform both the insurance industry and their organization within five years.

**IoT and the evolution of the insurance proposition**

Insurers will be compelled to respond as real-time monitoring of insured items, enabled by IoT, undermines today's insurance business model. Utilities, telcos/ISPs, tech giants, auto manufacturers, home security companies, and instech start-ups all threaten to challenge the industry incumbents. Carriers must find ways to counter the host of new entrants.

We believe they must move from a product-focused, retrospective compensation model towards that of a proactive, “risk manager” proposition to remain competitive.

**Delivering the digital insurer: growth through innovation**

Carriers must deliver the change demanded by customers, regulators, competitors, and instech start-ups. To do it they will need to utilize cloud technology at the core of their operations to provide the necessary organizational agility. The growing need for agility also makes the perennial issue of legacy modernization a critical challenge that cannot be avoided.

**Personalizing the insurer: channels and the customer experience**

In an ever more competitive environment, how can the insurance industry deliver a seamless, convenient, and innovative digital customer experience as the number of devices data sources grows exponentially? Critical to doing so will be the role played by advanced analytics including RPA, machine learning, and cognitive computing in delivering highly personalized and contextually relevant propositions. Small and mid-size insurers must find ways to effectively exploit new technology and keep up with both the large well-resourced carriers and agile instech start-ups.

**Drivers for IoT-based initiatives among P&C Insurers**

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<thead>
<tr>
<th></th>
<th>Top priority</th>
<th>Second priority</th>
<th>Third priority</th>
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<tbody>
<tr>
<td>Counter competitive</td>
<td>25%</td>
<td>16%</td>
<td>12%</td>
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<tr>
<td>offerings in the</td>
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<tr>
<td>market</td>
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<tr>
<td>Accurately assess</td>
<td>24%</td>
<td>12%</td>
<td>13%</td>
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<td>individual risk</td>
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<tr>
<td>Meet customer demand</td>
<td>20%</td>
<td>25%</td>
<td>16%</td>
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<td>for these products</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Improve customer</td>
<td>15%</td>
<td>21%</td>
<td>25%</td>
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<td>experience &amp;</td>
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<tr>
<td>satisfaction</td>
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<tr>
<td>Reduce the number</td>
<td>12%</td>
<td>20%</td>
<td>18%</td>
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<tr>
<td>of claims &amp; costs</td>
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<td></td>
</tr>
<tr>
<td>Reduce fraudulent</td>
<td>4%</td>
<td>7%</td>
<td>16%</td>
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<td>claims</td>
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</table>

**Themes for 2017**

**Key Deliverables**

- **ICT Enterprise Insights** – global survey of insurer pain points and IT buying intentions for 2017-18.
- **ICT Spending Forecasts** – global 5 year projections for insurance IT spending, segmented by country, source, and line of business.
- **Ovum Decision Matrix** – analyzing the leading vendors solutions in key areas, including IT Services, and IoT Insurance Service Providers.
- **Insurance Software Contracts Analytics** – global analysis of packaged software deals, segmented by institution, vendor, and solution area.
Payment providers must remain relevant as new technologies, entrants, infrastructure, evolving customer needs, and changing regulatory frameworks disrupt the future value chain.

Any provider offering payment services, whether a bank, processor, scheme, or other third party, will be faced with serious challenges in 2017. Rapidly evolving customer requirements are creating opportunities for new entrants, resulting in new business models. These trends will be accelerated by the regulatory and commercial imperatives for the creation of open APIs.

The need to deliver product and service innovation will drive part of the agenda, but there will also be a strong focus on the need for modern and flexible core systems. This will be particularly important if providers are to deliver on the opportunities afforded by new technologies such as immediate payments, social messaging platforms, and blockchain.

“Spending on Payments IT globally will reach $53.3bn in 2020.”

What’s New?

→ **Payments Market Map** – detailing global market size and forecasts for payment volumes by payment type and tool.

→ **Payments Software Contracts Analytics** – monthly analysis of issuer, acquirer, and processor partnerships with vendors.

→ **ICT Enterprise Insights** – including a new segment on retail.
As the industry ecosystem evolves and value chains fragment, flexibility in service delivery and the ability to easily support the next wave of value propositions will become essential. Open/external APIs will be an important catalyst of change, particularly in the retail payments space, where mandated by regulation such as PSD2. In addition to growth in the fintech space, this will open the door to a range of innovative services.

Growing complexity in the industry will increasingly require modern and flexible systems and architecture to support growth. Major initiatives such as open APIs and immediate payments infrastructure, and new technologies like blockchain will be key drivers of investment in hub and switch platforms as well as customer facing systems. At the retail level, the role of tokenization in particular will be a focus.

The need to balance risk against the user experience in payments remains a key challenge in delivering innovation. The role that biometric and other identifiers play in payment authentication will increasingly turn the security experience into a business driver, while tokenization will increasingly come to define the winners and losers in the digital wallet space. Providers will also begin to explore the opportunity of turning identity management into a service.

Themes for 2017

Ecosystem evolution and emerging payments technology

As the industry ecosystem evolves and value chains fragment, flexibility in service delivery and the ability to easily support the next wave of value propositions will become essential. Open/external APIs will be an important catalyst of change, particularly in the retail payments space, where mandated by regulation such as PSD2. In addition to growth in the fintech space, this will open the door to a range of innovative services.

Investing in the building blocks for future payments innovation

Growing complexity in the industry will increasingly require modern and flexible systems and architecture to support growth. Major initiatives such as open APIs and immediate payments infrastructure, and new technologies like blockchain will be key drivers of investment in hub and switch platforms as well as customer facing systems. At the retail level, the role of tokenization in particular will be a focus.

Omnichannel commerce

The convergence of commerce around the mobile device and blurring of the distinction between physical and digital channels remains one of the biggest drivers of disruption in the payments industry. Merchant demand for contextually relevant customer experiences and greater international reach, alongside other added value services, will drive the agenda for acquirers, gateway, and processor business models. In particular, leveraging transaction data to drive new sources of value will be a critical focus area.

Identity, security and the future of payments: from challenge to opportunity

The need to balance risk against the user experience in payments remains a key challenge in delivering innovation. The role that biometric and other identifiers play in payment authentication will increasingly turn the security experience into a business driver, while tokenization will increasingly come to define the winners and losers in the digital wallet space. Providers will also begin to explore the opportunity of turning identity management into a service.

Key Deliverables

→ ICT Enterprise Insights – global survey covering merchant, issuer and acquirer pain points and IT buying intentions for 2017-18.

→ ICT Spending Forecasts – global 5 year projections for payments IT spending by banks and payment processors, segmented by country, source, and line of business.

→ Ovum Decision Matrix – analyzing the leading vendors’ solutions in key areas, including digital wallets, treasury management systems, and tokenization platforms.

→ Banking Software Contracts Analytics – global analysis of packaged software deals, segmented by institution, vendor and solution area.
Governments will come under increasing pressure to genuinely transform their services, reinvigorate their policies and drive better outcomes.

The sense of urgency for governments to deliver better citizen outcomes will continue to grow, and digital transformation will become an increasingly significant driver for change. Ovum expects CIOs to accelerate the evolution of architecture in support of the adoption of cloud, mobile, social, analytical, IoT, and cyber security tools. As governments strive to be seen as more transparent, responsive and trustworthy, these tools will play an increasingly important role. Traditional thinking about IT teams as simply internal service providers is no longer sufficient. The offloading of commodity functions will continue as internal teams reorientate around the provision of digital tools.

While it’s still early days for the family of services grouped under AI, there is growing recognition of its importance in driving both efficiency and effectiveness across all levels of government. Improving and automating processes will begin to appear on government radars as they start to digitize the back office.

“25% of government agencies worldwide listed ‘transforming IT capability’ as their most important IT trend for the coming year.”

What’s New?

→ **Digital Government Policy Analysis** – detailing how it’s driving national economic development

→ **Government Roles Analysis** – on the four roles of government: purchaser of services, provider of services, regulator, and policy maker.

→ **Digital Service Provider Analysis** – insight into the development of a digital service provider sector in particular geographies and the types of program that are driving innovation.
25% of government agencies worldwide listed ‘transforming IT capability’ as their most important IT trend for the coming year.

The impact of AI on government decision making

Fiscal and resource constraints, increasingly complex interactions between systems, and the growth of data are driving interest in AI among government CIOs and CTOs. The path to adoption for agencies will likely be iterative and evolutionary. The market is set to expand as government agencies turn to AI solutions and seek new technologies to better understand citizens and their interactions.

Codifying the digital transformation of government

Most government agencies are in the early stages of adopting an architecture that is integrated, seamless, intelligent, and increasingly automated. They need help to understand the art of the possible, what this means in terms of organization structure and culture and the barriers to avoid. They will need to develop a robust set of strategies to navigate the transition to digital services.

Managing risk in digital services at the city level

The digital transformation of public services is entering a new phase, enabled by innovations in digital identity assurance and IoT. Cities are using connected devices to manage vital urban infrastructure like transport, traffic signaling, water, and energy. At the same time, they are allowing citizens to access more sensitive services online. The combination of digital transformation and the need for stronger ID management tools requires a new approach to risk management from cities.

Delivering self service analytic tools for government

There is growing demand to enable business leaders and front line staff access to analytic tools that can be used to undertake analysis using predefined queries. The route to adoption and management of data still remains a challenge for agencies, complicated by barriers to the sharing of data. As these barriers are slowly eroded, agencies are seizing the opportunity to review their usage of analytic tools and develop enterprise wide approaches adoption.

Integrating citizen centric services in the city of today

Citizens increasingly expect cities to deliver a more personalized and interactive set of experiences. The fusion of IoT and neighborhood or city level services is gathering pace, increasing the ability of cities to pre-empt issues for citizens and communicate accordingly. For this investment to deliver, cities must consider how it integrates with existing back office processes like the impact on working patterns, procurement, finance, and citizen communications.

Key Deliverables

- **Framework For Leading Digital Transformation** – guidance on getting the balance right between people, process, and technology.
- **Analytics And Visualization Report** – on how they can be employed for better government decision-making.
- **Ovum Decision Matrices** – supporting the procurement of modern solutions in support of delivery of policy.
- **Case Studies And Reports** – demonstrating how government agencies can address and overcome business issues through the implementation of technologies.
- **Quantified Spending Metrics** – for government spend on technologies.
As the market for education services expands and competition increases, universities and colleges must explore new ways to implement IT to differentiate themselves and remain competitive.

The forces of change affecting the higher education industry, from economics through technology, are stronger and faster moving than ever before. Rising costs, declining affordability, disruptive technologies, and other concerns have created growing unease among administrators, trustees, faculty, and staff. Their concerns are not unfounded, and the changes on the horizon are likely to be profound: institutions cannot remain static and expect to survive.

However, times of change are also times of opportunity, and institutions must assess the changing environment and take timely action, with the leveraging of IT playing a central role. The migration of commodity (and increasingly core) IT functions to the cloud is accelerating, which will have an almost immediate impact on IT departments’ ability to go beyond maintenance and support institutional innovation. As a result, institutions will be able to focus on areas that contribute directly to their success and differentiation in the market, such as the student experience.

Over 50% of institutions will increase investment in their student information systems (SIS), a number likely to increase as the next-generation of SIS solutions emerge.

What’s New?

→ New series of higher education case studies – recommendations, best practice, and advice based on the new experiences of institutions.

→ New education ICT market forecast – including all IT and telecoms spending across higher education software, hardware, and service domains.
Making the case for analytics to accelerate institutional adoption

Business intelligence and analytics initiatives must effectively support institutional priorities. The stakes are higher than ever for institutions to prove they can help their students succeed. However, institutions struggle to do more with data and analytics. How can analytics be packaged in a way that encourages adoption, and what is required to move institutions from the sidelines? We outline and assess the approaches institutions may take, from purchasing point solutions to building custom solutions.

Meeting the needs of today’s students

As non-traditional students become the “new traditional”, institutions must reconsider how well they are serving them. Online learning platforms that provide support for a range of pedagogical techniques, including adaptive learning/competency-based education and SIS solutions that are flexible enough to support changing needs, will be highly sought after.

New and improved student information systems (SIS)

As higher education becomes increasingly dynamic, institutions face more challenges to maintaining optimal SIS operations. A significant number of institutions will go to market over the next 18 months as the next generation of SIS solutions emerge. Ovum assesses how nimbly these solutions can respond to unanticipated needs. The model for SIS adoption is likely to be different for each institution as they decide what to keep on premise and what to migrate to the cloud, with new hybrid models likely emerging.

Themes for 2017

Key Deliverables

→ Trends To Watch – highlighting key predictions and trends in higher education for the year ahead.
→ Strategic Focus Reports – comprehensive, business-focused analysis of the critical issues impacting technology development and investment in the sector.
→ Ovum Decision Matrix – detailed and comprehensive benchmarking of the key product and service vendors key areas of the education market. Coverage includes learning management systems, constituent relationship management, and institutional performance management.
→ ICT Enterprise Insights For Higher Education – interactive tool for assessing investment patterns in the education sector globally.
→ Cross-Industry Reports – analysis of solutions and services across a range of industries including higher education.
The drive to integrate underlying clinical, patient and financial data is pushing CIOs to embrace new IT architectures taking into account cloud, mobile, customer engagement and analytical tools.

Changes to working patterns, technology innovation, and the encroaching use of consumer devices by patients will force healthcare providers to evolve. They must replace their current business model, based on volume and economies of scale, with one that puts patients at the center of care and provides greater choice.

The provision of personalized care leads to variance in pathways, which in turn leads to different outcomes for patients. Providers must identify ways to offer personalized care while increasing productivity and driving out waste and duplication. In response, providers are forming partnerships, governments are reforming markets and new providers are entering the market. The drive to integrate primary, secondary and social care, along with clinical, patient and financial data, will continue to accelerate over the next two years. The open-minded early adopters will gain the competitive edge.

Only 8% of providers have met their targets in transforming their IT capability to support digital services.

What’s New?

- New series of healthcare case studies – recommendations, best practice, and advice based on the new experiences of providers.
- Patient centric services framework – helping providers understand the big opportunities and how to capitalize on them.
Personalized care for the masses

Care based on individuals and health data and precision medicines has huge potential to reduce waste and improve outcomes. It requires identification of the right pathways to adopting big data as well as the right collaboration and analytic tools to drive personalized healthcare.

Digitizing healthcare outside hospitals: the horizontal approach

Healthcare provision is on the move, and building on telecare, m-health, and the growing adoption of wearables, connected healthcare is the next big challenge for providers and vendors alike. Joining the dots requires a horizontal approach to services, patient communications, and the remote provision of healthcare.

Building digital communication channels

In many respects, healthcare providers are behind the curve on developing patient centric communication channels. Historically, the ability to simplify complex and disjointed interactions was beyond many providers’ capabilities. With investment into CRM, EPR, hospital information systems, and communications tools, providers are now well positioned to develop omnichannel approaches to patient interactions.

Themes for 2017

Key Deliverables

→ Digital Healthcare Reports – helping providers and vendors understand the dynamics and perspectives of digital healthcare.

→ Market Expenditure By Provider Type And Solution – detailing the the key market opportunities and informing the right investment decisions.

→ Industry Case Studies – exploring the art of the possible in adopting analytics and patient centric solutions.

→ On The Radar Reports And SWOT Assessments – helping providers to assess market supply options.
Broadcasters and digital service providers are embarking on the media transformation journey to accelerate personalized customer engagement.

Media is a highly fragmented industry but overall, one that is embracing digital swiftly. Although the penetration of transformation differs across sub-verticals (e.g. lower in print media and higher for broadcasting and film studios), there is no question that digital will dominate in the next few years. Consequently, as digital-first becomes the core strategic driver, technology will play a pivotal role in delivering core services.

Personalization of content and advertising will be at the center of media enterprises’ business and operational strategies over the next 10 years. This will compel enterprises to invest in technologies that facilitate moving from multi-platform to distribution to more tailored offers or “Our Own Media Enterprises.”

Broadcasters will lead the transformation journey, controlling more than half of total spend across the media transformation services segment by 2022.

What’s New?

- Extended On the Radar library – including newly launched technology vendors around QoS and QoE.
- Media transformation ICT Services tracker (2016-2023) – with new coverage of publishers, sports franchises, and theme parks (encompassing cable TV, satellite TV, telecommunication multimedia services business, and TV & video broadcasters.)
Moving the content supply chain on to IP

According to Ovum’s ICT Enterprise Insights survey for Media, 37% of media enterprises identified operational efficiency as the core business challenge. The emergence of software defined networks, encoding, transcoding, and storage is pushing enterprises to move their content supply chain modules on to IP. Media distribution modules will lead this migration.

VR content: new rights & royalties complexities

In a multi-screen monetization ecosystem, managing complex rights and royalties is one of the pivotal challenges faced by today’s digital content owners. VR content is predicted to become mainstream in the next 4-5 years, and its evolution will contribute to revenue leakage and churn risks. Existing rights & royalties vendors will need to adopt this 360-degree video content format on a real-time basis.

Cloud, security, and network ICT services: accelerating transformation

The media sector has been slow in adopting cloud, security, and network technologies. However, demand will be fuelled as the majority of media enterprises begin to embrace the “digital audience first” growth strategy. Horizontal ICT services such as cloud security and networks that improve single media asset ROI and individual audience ARPU (average revenue per user), will be highly sought after.

Safeguarding video assets through real-time watermarking

In 2016, HBO plans to increase its premium content production budget by 20%. The proliferation of media and non-media devices along with dynamic video consumption patterns will result in media enterprises safeguarding their premium digital assets to accelerate ROI and operating margins. Real-time watermarking paves the way for a cost effective solution.

QoS and QoE will be vital in lowering churn rates

Broadcasters and digital service providers alike must retain audiences and subscribers to improve the profitability of their stand-alone platforms. In order to do this they need to promptly address the challenges presented by a fragmented multiscreen video services segment.

Themes for 2017

Key Deliverables

→ Innovative case studies – on a range of media transformation projects.
→ Research notes on the changing market dynamics – across media delivery and distribution modules, with special emphasis on CDN and network based ICT services demand.
→ Ovum Decision Matrix – on VR rights and royalties processing technologies.

Global Media Transformation Services (2015 -2022)
In order to transform their IT systems, software, and business processes for the digital world, telcos must fundamentally rework their customer engagement and delivery models.

Telcos need to remain competitive and relevant to customers. However, old operating models are broken, and while telcos still control network access, they need to: offer flawless network and service quality; deliver personalized services, rich content, applications on demand; and expand their customer engagement and service delivery capabilities into the digital domain. Greater service agility, OSS automation, and operational agility will all be required by operators if they are to deliver speedier and more flexible services.

Telcos must define and monitor the key business processes that map to the customer lifecycle and manage the quality of the customer experience. Analytics tools need to be applied across the network and IT infrastructure in both physical and virtual domains, and vendor partners can assist with the change across OSS, BSS and CRM, and wider IT products and operations.

75% of telcos are transitioning to a digital operating model in the next 18 months.
Managing & improving CX

Poor network quality, bad service delivery, and ill-defined business processes and dependencies plague telcos as they try to improve their operations. OSS/BSS, CRM, policy software, and BI platforms are all part of the telco toolkit to manage the CE, and remain important drivers for IT spend. Our technical and commercial coverage delivers the directional insights for telcos and the vendor suppliers competing for their business.

Exploiting data assets with analytics

Big Data analytics provides an opportunity for telcos to exploit an existing asset that's increasing in size exponentially. To date, market research has focused on the business case rather than the market opportunity and evaluation of analytics tools. In 2017, we will cover both aspects with a new market forecast on big data and an update to our 2015 decision matrix on analytics tools for customer data.

Themes for 2017

IT service opportunities in telecoms

The telecoms vertical has a specific set of requirements that cannot be served with "drag and drop" solutions from other industries. Telcos' M&A activity, abundant legacy and the need for new operating models means that ICT and professional services companies need a forensic understanding of their strengths and weaknesses before they tackle the rich opportunities offered by the telecoms vertical. Ovum's 'Telecoms Operations & IT Practice' assesses the services portfolio offered by key players, and looks at the value of this opportunity over the next 5 years.

Successful strategies for digital transformation

Telcos need lean, virtualized infrastructure to sustain their business and innovate new services. They must be able to orchestrate hybrid networks and services, use programmable software & analytics to automate and direct business logic, and manage the digital customer engagement end-to-end. Our research assesses how technology developments such as SDN and NFV (which enable private cloud) will shape the telco's IT estate and the responsibilities of the CIO.

Key Deliverables

- Ovum Decision Matrix – comparatively evaluating the leading telco technology solutions, with individual SWOT assessments (inc. integrated Billing and Charging, CRM for Telcos, and Customer Data Analytics.)
- OSS/BSS market forecast – an annually updated interactive tool covering the key categories for OSS and BSS, including market data by product type and region.
- ICT Enterprise Insights in the Telecoms Industry – identifying the business and investment trends for telco IT in key technology areas.
- Telco and vendor Case Studies – recommendations, best practice, and advice based on telco customer experience and big data and analytics strategies, as well as vendor portfolio analysis and recent telco deployments.

How important are the following business challenges to telco CIOs?

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<th>Challenge</th>
<th>Very important</th>
<th>Important</th>
<th>Somewhat important</th>
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<tr>
<td>Adopt cloud delivery model</td>
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<tr>
<td>Centralizing data and data structures</td>
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<td>Applying BDA to BP</td>
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<td>Personalizing marketing and care</td>
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<td>Transitioning to a digital operating model</td>
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<td>Moving to a virtualized environment</td>
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<tr>
<td>Improve service innovation</td>
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<tr>
<td>Develop omnichannel service &amp; support</td>
<td></td>
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<tr>
<td>Move from waterfall to agile decision making</td>
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</table>

Proportion of respondents %
Retail Technology

Retail is an industry undergoing rapid transformation. Growing customer expectations, particularly around the digital experience and its role in-store, is driving rapid change in the products, services, and shopping experience retailers must deliver.

The importance of digitalization and broader infrastructure modernization projects in order to deliver a superior and digital-led customer experience is well understood in the industry. However the challenges many face in delivering this, including complexities around legacy store, inventory, and channel silos – in addition to competitive pressure from new and digital-led entrants – means that the need for digital transformation in order to maintain margin and market share is a key driver of IT investment.

Delivering an enhanced, personalized, and contextually relevant in-store experience is a key focus for many in the industry, particularly in how to drive a seamless integration between the physical and digital channels. Connecting this to broader digitalization in the back office, particularly of inventory and ordering, will be a focus for the more advanced retailers.

By 2018, retailers expect over 50% of their sales to come through mobile and online channels.

What’s New?

- Brand new Retail industry technology coverage for 2017
- ICT Enterprise Insights – new coverage and insights into the Retail vertical, with sub-vertical breakdown
- New industry forecast for Retail technology
Omnichannel in practice – driving transactions online and Instore

The convergence of commerce around the mobile device and blurring of the distinction between physical and digital channels remains one of the biggest drivers of disruption in the retail industry. Payment technology will be an important enabler of change, particularly where emerging solutions and regulatory changes will enable important changes in the customer experience.

Intelligent forecasting – Better business through data

Data analytics will play an increasingly important role in delivering operational efficiency gains in 2017, and will be central to broader digitalization projects. Enhanced inventory, store management, and logistics forecasting will drive clear ROI, particularly where data across all channels, customers, suppliers, and other third parties can be leveraged to bring additional benefits.

A personal shopper for everyone – creating a personalized shopping experience

Customer demand for personalized and contextually relevant experiences will increasingly drive the agenda, particularly for retailers investing in their cross-channel capabilities. The ability to drive deeper customer engagement, through predictive recommendations as well as loyalty and social media will be a competitive differentiator. As a consequence, advanced customer analytics, AI, robo-advice, and augmented reality will be key technologies.

Themes for 2017

Key Deliverables

→ ICT Enterprise Insights
– Global survey of retail challenges and IT buying intentions for 2017-18

→ ICT Spending Forecasts
– Global 5 year projections for retail technology spending, segmented by country and technology type

→ Ovum Decision Matrix
– Analysis of the leading vendor solutions in key areas of retail technology, including payments
IT Services

Ovum provides insight into 22,000 IT services and BPO deals over $1m.
To enable digital transformation among their enterprise customers, providers must leverage the convergence of ICT services in network, infrastructure, applications, and business process.

The market for ICT services is at a peak of accelerated change and hyper-competitiveness. Transformation is at the center of customers’ agendas as they look to capitalize on new trends and services in cloud, mobility, and analytics. Seeking ICT Services providers with the right skills and services to deliver on their business goals, they have more choice than ever before. Providers are being forced to change their portfolios, business and service delivery models to keep pace. In this increasingly cut-throat market, our team’s research and advisory services provide insights on how to successfully market services to customers, compete to win, and partner for success.

“... There is a growing trust in IT services suppliers for digital transformation - fewer than 3% stated they would not engage with such providers, an improvement from 20% in previous years.”

What’s New?

- Enhanced IT Services Contracts Analytics tool - with additional functionality and data.
- Expanded Cloud Services forecasts - providing detailed geographic and vertical industry trends.
- Improved quarterly briefings - on major ICT services trends.
The modern ICT services provider
Digital transformation is forcing providers to shift their business models, go-to-market activities, and competitive positioning. They must move away from a one-dimensional cost arbitrage profile for services delivery, towards a three-dimensional model involving cost-savings, new skills, and innovation.

The partnering imperative
In order to succeed in the current market, ICT Services providers - telcos, network providers, SIs, and India-based firms - will need an effective ecosystem of technology, go-to-market, and innovation partners. Identifying, selecting, engaging, and managing those relationships is a process that is changing almost as quickly as the ICT Services market itself.

Modernization in the age of digital
For many customers, the modernization of infrastructure, applications, and business processes are critical first steps toward digital transformation. IT Services providers are putting modernization at the core of their transformation services for customers, with vertical-aligned paths in industries such as financial services, manufacturing, and public sector.

Automation and the services impact
Automation continues to have an impact on providers’ service delivery and labor arbitrage strategies, and concepts around cognitive automation could potentially reap huge benefits for customers in terms of leveraging data and business processes. The market is waiting for automation to become a core position in customers’ IT strategies.

Key Deliverables
- IT Services Contracts Analytics - tracking every publicly announced outsourcing deal worth over $1m, including more than 23,000 IT services and BPO deals. See page 63.
- IT Services Market Forecasts - a five-year view on growth in the IT services market, segmented by vertical, region, and IT services type.
- Cloud Services Forecast - a detailed look at growth across various cloud services types by geography.

Themes for 2017
Only Ovum offers detailed ICT spend and staff benchmarks based on comparison with 7,000 institutions across the globe.
Data Tools

Ovum’s data tools are underpinned by our primary research and deliver robust market data to support effective decision-making.

Ovum Interactive Decision Matrix

Customise your product comparisons to reflect your organization’s specific requirements.

The Ovum Decision Matrix compares the leading solutions in major enterprise and industry-specific technology categories. It greatly reduces the time and risk involved in product and service procurement. Complementing the research report is the Ovum Interactive Decision Matrix which allows IT decision-makers to create a customized ranking of solutions based on the requirements of their own organizations.

Use this service to:
→ Fine-tune the Ovum Decision Matrix
→ Perform what-if analysis
→ Create an audit trail

Enterprise IT Spend and Staffing Metrics

Benchmark your IT spend and staffing by segment and sub-category.

Ovum’s Enterprise IT Spend & Staffing Metrics tool offers a unique insight into estimated IT expenditure and staffing levels for organizations of all types across the globe.

The tool leverages the wealth of information that Ovum has collected around the IT spending patterns of enterprises and generates an informed picture of demand in the form of IT spend and staffing estimates based on company demographic information.

Use this service to:
→ Benchmark your IT spend by segment and sub-category
→ Benchmark your IT staffing by segment and sub-category
Market Forecasts

The most comprehensive five year forecasts available

The dynamic nature of technology markets makes insightful, robust predictions essential to considered decision-making.

Ovum’s portfolio of enterprise software and services forecasts allows you to size the opportunity across major software and IT services markets and identify current and future trends. Forecasts are available for enterprise mobility, information management, security software, and IT services.

Each facilitates detailed analysis of the predicted change in market size from 2015 to 2020 for multiple categories of software and service by:

→ Region
→ Country
→ Industry segment

An integrated approach to delivering robust results

We believe forecasts should be prepared as part of a collaborative process involving both quantitative and qualitative analysis. Our forecasting methodology has been developed to optimize the inputs from a variety of sources including:

→ software and industry analyst domain experts with deep expertise and experience
→ a centralized, dedicated team of six analysts that specializes in forecasting techniques, business modelling, and financial analysis.
ICT Enterprise Insights

Unrivalled insight into the investment priorities and hot issues for your target buyers and markets

An interactive interface to the largest annual global survey of ICT decision-makers drawing on the opinion of 7,000 respondents from 57 countries in 14 major industries.

ICT Enterprise Insights provides perspectives on critical aspects of ICT decision-making: ICT budgets; business and technology drivers; industry hot topics and investment priorities; SaaS deployment by industry function; investment approach by technology; propensities to outsource and use of advanced analytics.

The data tool enables users to identify variances in demand across market segments and to adjust go-to-market messaging accordingly.

Use ICT Enterprise Insights to:

→ Access a vast annual global survey of ICT decision-makers, drawing on the opinion of 7,000 respondents from 57 countries across 79 lines of business

→ Gain unrivalled insight into the spending intentions for cloud, mobility, analytics, security, and engagement

→ Delve into the hot issues in retail banking, insurance, payments, healthcare, education, and government

→ Assess the role of shadow IT in decision-making by industry and the proportion of budget allocated to running versus changing the business.

ICT Enterprise Insights delivers essential insight into the nature of demand and helps you more effectively target the market.

Contact us to request a demonstration.
Contracts Analytics

IT Services Contracts Analytics

The most comprehensive, up-to-date guide to outsourcing contracts

The most comprehensive, up-to-date guide to outsourcing contracts signed within the global IT services market. The database tracks every publicly announced outsourcing deal worth over $1m signed in the marketplace, and contains over 22,000 IT services and BPO deals.

Use this service to:
→ Identify trends in outsourcing across vertical markets and geographies.
→ Discover which vendors are winning major deals.
→ Plan your sourcing strategy based on accurate information around market activity and industry comparison.

Banking Software Contracts Analytics

Analyze banking industry software contracts by institution, system area, vendor, and region

Understand trends and track latest investment by the banking sector on new industry platforms spanning across the front, middle and back office. Helps institutions to understand peer activity, and relative vendor market presence, providing an invaluable resource for sourcing, benchmarking and competitor intelligence.

Use this service to:
→ Monitor investment activity by region, country, institution, and vendor drilling down into 31 solution areas
→ The database contains over 7,000 deals from 2010 onwards tracking investment from selection to go-live.

Telco OSS/BSS Contracts Analytics

Analyze telecoms industry OSS/BSS contracts by company, system area, vendor, and region

Telco OSS/BSS Contracts Analytics service tracks the global OSS/BSS market by tracking publicly announced contracts by telcos segmented across customer, data, network, revenue, and service management. More than 6,000 contracts are accessible via an interactive dashboard, which highlights latest market activity and allows you to undertake trend analysis or isolate contracts by region, solution type, vendor, or company.

Use this service to:
→ View contract activity by region, type, buyer, and provider
→ Apply the custom features to create your view of market
→ Isolate the most recent activity globally and drill down into contract level summaries
The Complete Solution For Your Business

Only Ovum places analyst interaction at the center of every subscription.
Knowledge Center

Knowledge Center is Ovum’s powerful research portal.

Now with simplified search, a new data and forecast section, and improved navigation aligned to your market, it’s easier than ever to quickly find the insight you require.

The service includes a wealth of time-saving features that help you leverage our findings and connect with our experts:

- Access on the move – optimized for desktop, tablet, and smartphone use
- Comprehensive market data and forecast coverage - interact, analyze, extract
- Ask an Analyst – put your questions to our analyst team
- Create custom research alerts – set up weekly or monthly emails
- Simple navigation, powerful search – find what you need quickly
Deliverables

**Trends to Watch** - Signature reports highlighting the key predictions and trends in business technology for the year ahead, providing invaluable information on the major issues to track.

**Assessments** - Independent assessment of a specific solution or service, examining features and capabilities, SWOT analysis, enterprise deployment considerations, and vendor’s product strategy.

**Ovum Decision Matrix** - Evaluates leading solutions within a horizontal or vertical technology area, assessing technology, execution, and market impact, and provides a comparative analysis and ranking.

**Case studies** - Short case studies with a strong core of information and analysis, highlighting best practices and pitfalls, and providing opinions on provider and solution capabilities.

**On the Radar** - “On the Radar” is part of Ovum’s series of research notes that highlights vendor solutions bringing innovative ideas, products, or business models to their markets.

**Analyst report** - Premium analysis reports providing in-depth analysis of key business technology issues – spanning strategy, technology selection, deployment, and management.

**Surveys** - Expert analysis of both quantitative and qualitative data from surveys undertaken with senior ICT decision-makers.

**Opinion** - Incisive analyst opinion on key market or technology events, providing a concise Ovum view, analysis of the key points, and recommendations for Ovum clients.

**Research Notes** - Insight on the most significant recent market developments. Research Notes provide a concise view of developments in a particular market, the implications, and actionable recommendations.
Enterprises and their advisors need experienced subject matter experts armed with rich data assets and utilizing rigorous, proven methodologies to support a range of business technology initiatives and answer specific questions.

Ovum's consulting methodology enables us to take a modular, systematic approach to bespoke engagements, helping us deliver projects faster, more cost effectively and at higher quality than our peers.

Ovum delivered hundreds of individual projects in 2015 ranging from the largest and most complex strategy definition, vendor selection and due diligence projects down to fast, efficient review of technology roadmaps and RFI s. The common denominator is the way they combine the expertise of our analysts, our data assets, and proven consulting methodologies and experience, to create solutions that consistently meet and exceed client goals.

Fundamentally Ovum Consulting believes in becoming true partners to our clients. Our success is and always will be a function of our clients’ success.

Ovum offers a complete range of services. In collaboration with Ovum's consulting team, you can choose the solution best suited to the needs of your project. Examples include bespoke technology analysis, strategy formulation using a classic strategic consulting toolkit, vendor selection using existing data and tools, architecture reviews, workshops, and cost benchmarking.
Ask our analysts

Our Ask an Analyst service gives you direct contact via telephone, email or face-to-face sessions with our expert analyst team.

A central feature of all our subscription services, it’s invaluable when you need clarification, expert opinion or market context to support your decision making.

Gemma Bunting
Customer Experience Manager

Draw on our expertise to:

→ Gain further insight into our findings
→ Further explore our methodologies
→ Contextualize key market developments

We have engineered our response procedure to be fast, flexible and effective:

→ Each enquiry is prioritized via a senior analyst, dedicated to providing rapid first response
→ We can respond by email, telephone, or face-to-face, whatever your preference.

Consider our analysts an extension of your team, ready to support whenever the need arises.

We have senior analyst resource dedicated to managing our support service

Ovum provides the industry’s leading client support service, both in terms of response quality and timeliness. Direct interactions with our analyst teams are routinely cited by our clients as crucial in shaping and validating their business strategies.
What our customers have to say about us

“Ovum’s assessment really hit the mark” - National Tax Office, Asia-Pacific

“Ovum consultants’ technical expertise, global coverage of our market, and depth of analysis make for recommendations we can action immediately” - European Tier 1 telco

“The speed on this is so greatly appreciated!” - National tax office, MEA

“Thank you, this is impressive. Other firms I contacted were unable to provide any insights at all” - North American tier 1 telco

“We had an absolutely amazing call with your analyst yesterday - we learnt so much!” - Global software vendor

“Ovum is one of the few in their tier who cover SMEs.” - UK leading supplier of voice, data and mobile products and services