

# Top 10 risks in telecommunications revisited

Operator risk mitigation strategies in the digital era

The EY logo, consisting of the letters 'EY' in a bold, white, sans-serif font, with a yellow triangle pointing upwards to the right of the 'Y'.

Building a better  
working world

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# Introduction

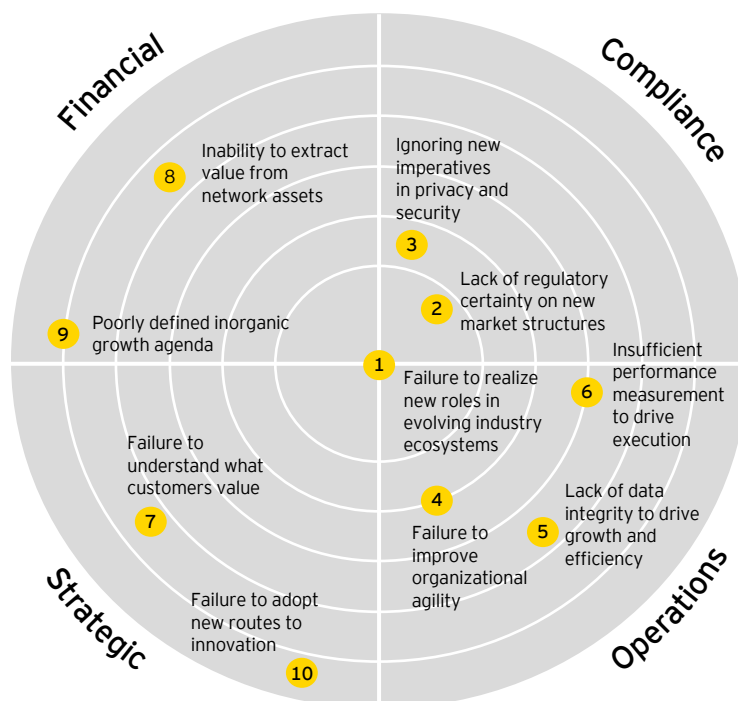
*Top 10 risks in telecommunications 2014* was part of our ongoing series of studies designed to pinpoint the most critical risk issues, analyze the sector's evolving responses and highlight elements of emerging leading practice.

In that report, we outlined obstacles that operators must avoid if they want to capitalize on new opportunities. In an industry environment where stakeholders are more demanding than ever, and where customer expectations continue to evolve, it is imperative for operators to develop specific responses to a range of threats.

Telecommunications faces a series of burgeoning challenges, whether in the form of new waves of disruptive innovation or shifting regulatory demands. Despite this, the prognosis for the industry is improving, as operators widen their solution sets and take aim at a new wave of growth opportunities heralded by the Internet of Things.

In *Top 10 risks in telecommunications revisited: operator risk mitigation strategies*, we delve into the measures that leading operators are adopting in 2016 not only to fend off the many pressures facing their organizations but also to make the most of an ever-widening ecosystem of value creation.

## Top 10 business risks for telecommunications in 2014



### Below the radar

- Failure to price effectively for value
- Failure to connect industry growth with socioeconomic gains
- Poor engagement with suppliers
- Falling short of robust investor relations





## Mitigating business risks

# How are operators faring?

In our conversations with senior management, we have found that a number of operators are already making concerted efforts to tackle their universe of risks. Concerns about customer experience management, business model overhaul and increased organizational agility are, and will remain, leadership priorities.

Yet this does not translate into a lessening of these risks. On the contrary, once responses have been defined and articulated, the challenge shifts in nature. Operators are tasked with ramping up existing efforts and ensuring their approaches prove dynamic and flexible in the long term. For example, while many operators are overhauling their customer value propositions, new approaches to customer segmentation and product simplification are vital as cross-selling capabilities become a unique differentiator in a converging market.




































Meanwhile, mitigation strategies for some risk categories are in a less mature phase, such as “failure to adopt new routes to innovation” and “lack of data integrity to drive growth and efficiency.” In such instances, the challenge becomes to scale up existing initiatives while making them leadership priorities. Only then can management attention ensure that robust strategies become operational and effective.

# Our assessment of operator responses to risks

In figure 1, we highlight how operators are reacting to each of the risks outlined in our top 10. This is derived from our interactions with leading operators, as well as from our understanding of the nature of the risks and how they are likely to evolve in the near term.

We have evaluated risk mitigation strategies by assessing the maturity of current responses and how high they rank as leadership priorities. We also consider whether these risks are becoming more or less pronounced amid external factors such as customer needs, competitor actions and stakeholder demands.

Figure 1: an assessment of operator risk mitigation strategies

		Mitigating strategy maturity	Mitigating strategy as leadership priority	Likelihood of risk increasing in 2016
1	Failure to realize new roles in evolving industry ecosystems			
2	Lack of regulatory certainty on new market structures			
3	Ignoring new imperatives in privacy and security			
4	Failure to improve organizational agility			
5	Lack of data integrity to drive growth and efficiency			
6	Insufficient performance measurement to drive execution			
7	Failure to understand what customers value			
8	Inability to extract value from network assets			
9	Poorly defined inorganic growth agenda			
10	Failure to adopt new routes to innovation			
<div><div>Key</div><div>High</div><div></div><div></div><div></div><div></div><div></div><div>Low</div></div>				

Reading across the three categories of operator mitigation strategy assessment, we can isolate a number of conclusions:

- Established strategies are in place to tackle most sector risks. However, in some areas, operator responses remain embryonic or lack the scope to cater to new scenarios emanating from within categories (“ignoring new imperatives in privacy and security” and “failure to adopt new routes to innovation”).
- Some risks are well-understood and have been acted upon – but may lack leadership backing (“insufficient performance measurement to drive execution” and “poorly defined inorganic growth agenda”).

- The prospect that risks will increase or decrease in magnitude over the next 12 months varies substantially. We see regulatory risks potentially rising as continued consolidation tests regulators and as sector rules are overhauled, particularly in the European Union. Cybersecurity concerns will also escalate as company priorities while the Internet of Things will fuel new partnership considerations.

Even for risks where operators are prioritizing responses – notably “failure to realize new roles in evolving industry ecosystems” and “failure to understand what customers value” – factors that inform the risks are changing continuously, such as competitor actions and disruptive technologies. Operators must continually revisit their strategies and assess whether they are fit for purpose.

# Summary

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## **Failure to realize new roles in evolving industry ecosystems**

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- ▶ Leveraging demand for OTT services in new ways
- ▶ Taking a lead in emerging ecosystems

2

## **Lack of regulatory certainty on new market structures**

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- ▶ Engaging proactively with regulators to help shape the digital society
- ▶ Gaining greater confidence in spectrum release frameworks
- ▶ Prizing a level playing field of regulations

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- ▶ Managing shifting compliance burdens in data protection

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- ▶ Building a holistic picture of the customer
- ▶ Leveraging analytics in networks and operations
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- ▶ Focusing on the right customer metrics
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- ▶ Prizing a new performance management mindset

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- ▶ Simplifying the service portfolio
- ▶ Optimizing customer support
- ▶ Responding to the needs of Generation Z

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- ▶ Increasing the performance and reach of fiber infrastructure
- ▶ Maximizing the benefits of network sharing and outsourcing
- ▶ Choosing new technologies for the Internet of Things

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- ▶ Pursuing in-market economies of scale and scope
- ▶ Sensitizing the inorganic growth agenda to the Internet of Things

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- ▶ Leveraging a more diverse talent pool
- ▶ Making the most of incubator initiatives
- ▶ Shifting the cultural mindset





# Failure to realize new roles in evolving industry ecosystems



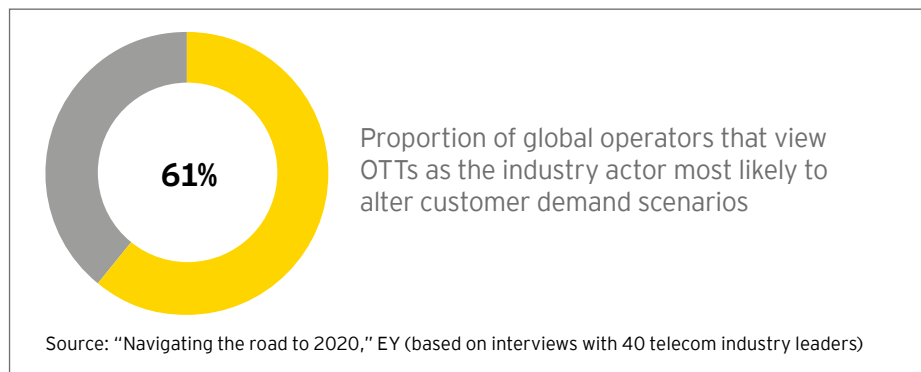
## Operator responses

### ■ Leveraging demand for OTT services in new ways

Operators firmly recognize that OTT-led disruption spells a huge shift for their businesses. In our recent study “Navigating the road to 2020,” 61% of industry leaders saw OTTs as the industry entity most likely to alter customer demand scenarios in the years to come.<sup>1</sup>

While tie-ups with mobile instant messaging and social network platforms are well-established, many players are pursuing a new wave of OTT partnerships. A number of residential operators are pressing ahead with tie-ups with subscription-video-on-demand (SVOD) players, which form part of broader approaches to monetize demand for pay TV in lower-value customer segments.

At the same time, more ambitious service providers are developing OTT-like services in-house, focusing on new user experiences as a route to competitive differentiation. Indeed, strategies predicated on new partnerships and improved in-house capabilities are likely to coexist. Operators must regularly assess their initiatives so that their moves to both compete against and collaborate with OTTs bear fruit in the long term.



### ■ Taking a lead in emerging ecosystems

Innovation in telecommunications is increasingly predicated on shared-value cooperation and cross-industry collaboration. In this environment, the upside is greatest for service providers that can play a leading role in creating new ecosystems. Many carriers are focusing on the Internet of Things (IoT) through a range of partnering scenarios.

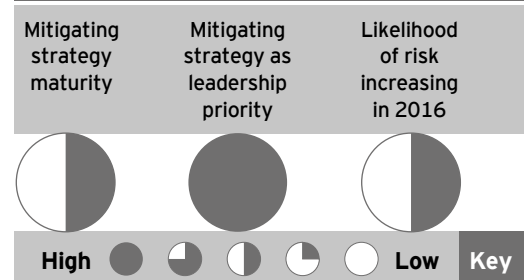
At one end, operators are working more closely with their sector peers as they look to export existing business models in smart home and connected car. At the same time, strategic partnerships with both established IT services players and IoT technology specialists are crucial to gaining traction in a fast-changing market.

Meanwhile, bolt-on acquisitions may prove vital to some, particularly when additional capabilities can help widen operators’ share of wallet. Integration services are likely to make up a substantial share of machine-to-machine (M2M) revenues going forward, while basic connectivity is more prone to commoditization within the overall service mix.

Beyond specific industry subsegments, such as IoT and cloud services for enterprises, operators should also consider wider innovation ecosystems that embrace start-ups, university-led research and national digital policies. Effective positioning in these wider Information and Communications Technology (ICT) ecosystems will be vital if operators are to fulfill their potential as enablers of the digital society in the long term.

## Failure to realize new roles in evolving industry ecosystems

As operators consider new growth opportunities in a widening digital society, they face increasing pressure to occupy new value chain roles that can help them cement customer relationships and drive incremental revenue growth. In a world where disruption is the new normal, operators should consider new ways of emulating the success of over-the-top (OTT) services while also making the most of new ecosystems supporting enterprise customers and Internet of Things services.



<sup>1</sup> “Global telecommunications study: navigating the road to 2020,” EY, 2015 (based on interviews with 40 operators and other industry stakeholders).

## Lack of regulatory certainty on new market structures

The regulatory and compliance burden facing operators is changing rapidly. Regulatory attitudes toward consolidation remain a key factor as operators consider more rational market structures that can support long-term network investment. At the same time, regulatory frameworks themselves are shifting as convergence and disruption undermine traditional market and service provider definitions. Wider policy initiatives in data protection and the digital society contain both opportunities and challenges for operators.

Mitigating strategy maturity



Mitigating strategy as leadership priority



Likelihood of risk increasing in 2016



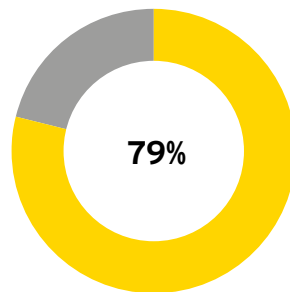
Key High Low

## Operator responses

### ■ Engaging proactively with regulators to help shape the digital society

Many countries now have digital strategies that recognize the importance of ICTs as a catalyst for long-term productivity growth. Yet future market structure remain uncertain: while key in-market mergers have received approval from antitrust regulators, doubts exist as to policy makers' long-term appetite for consolidation. In this light, operators must continue to underline the importance of more efficient market structures that can stimulate the network investment required to support higher-quality services in the long term.

Operators also require greater certainty as new infrastructures take shape. IoT heralds a new wave of efficiency gains across a number of verticals, yet rules and policies regarding national roaming and data security are conspicuous by their absence from many national regulatory agendas. Carriers can drive greater dialogue with their technology partners and policy makers to ensure that IoT ecosystems are in a position to flourish.



Proportion of OECD countries that have a national digital strategy in place

Source: "OECD Digital Economy Outlook 2015," OECD, July 2015

### ■ Gaining greater confidence in spectrum release frameworks

Spectrum is the lifeblood of the mobile industry – rising demand for data and new mobile use cases require robust and far-sighted spectrum release frameworks. While a number of frequency bands are being repurposed for mobile use – witness adoption of the APT 700 MHz band plan in Asia-Pacific and Latin America for example – long-term frameworks must adapt further, catering for access to higher frequency and unlicensed bands, for example.

Looking ahead, operators must advance common positions on the importance of spectrum harmonization so that the mobile broadband ecosystem can take advantage of greater economies of scale. Meanwhile, predictable regulatory approaches to spectrum pricing and trading are vital if release frameworks are to meet the needs of the industry in the long-term.

### ■ Prizing a level playing field of regulations

Many operators are increasingly vocal in their demands that regulators treat OTTs in the same way as infrastructure owners. At the same time, many countries are drafting and enacting their own rules on net neutrality while the emerging debate on zero rated services further signals a fast-changing landscape of industry and customer attitudes.

Going forward, operators should prepare themselves for additional shifts in the debate on net neutrality as policy makers seek to manage the interests of different classes of service providers, alongside end users. More nuanced stances will be vital as obligations are enacted and revised in different ways in different markets.

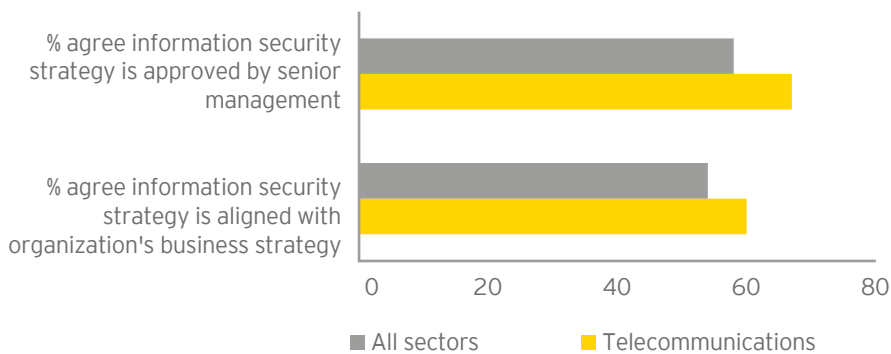


## Operator responses

### ■ Tackling cyber threats head-on

Preserving the integrity and security of customer data is a mainstream issue. Cyber attacks represent a growing threat to all organizations, and a number of telecommunications companies have experienced data breaches that compromised customer information. Operators are responding to a fast-changing cybersecurity landscape in a number of ways. EY's *Global Information Security Survey 2015* highlights that 67% of operators periodically review and update their information strategy, compared with 60% of all organizations.

### Operator attitudes to information security governance



Source: "Global Information Security Survey," EY, November 20

However, some areas need additional improvements. Only 39% of operators keep an accurate inventory of all third-party providers, network connections and data. In an increasingly interdependent ecosystem, operators should place more importance on ensuring that external partners, vendors and contractors are protecting their organization's information.

### ■ Focusing on digital trust as a platform for service creation

Meanwhile, operators realize that trust is an essential building block for strong customer relationships. Many carriers are now providing their enterprise customers with a greater range of cybersecurity and managed security services. More ambitious players are acquiring new capabilities and partnering with security specialists to enable a wider set of capabilities.

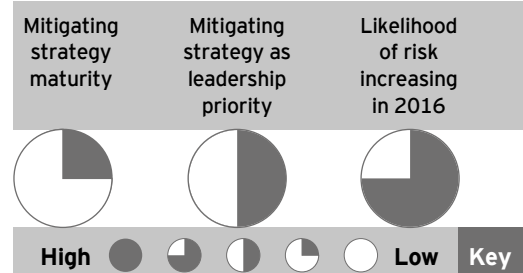
However, consumer concerns about how their data is managed, accessed and reused still need to be addressed. In a survey conducted by Orange, 80% of customers understand that their data has value – which in itself could pave the way for new business models – but only 6% believe that consumers themselves benefit from the sharing of data.<sup>2</sup>

### ■ Managing shifting compliance burdens in data protection

Data protection and retention rules are the scene of flux in many markets, as underlined by changes to the Safe Harbor agreement and the upcoming EU General Data Protection Regulation. Compliance requirements for operators are in flux, particularly as regulators seek to strike a balance between consumer protection and national security needs. In this light, keeping pace with different policy initiatives at a national and international level is more important than ever for operators.

## Ignoring new imperatives in privacy and security

Data privacy and security are now mainstream issues for consumers and businesses the world over. Confidence in telecommunications and technology companies remains under threat, yet operators have long-standing relationships with their customers that provide a solid platform for building higher levels of digital trust. At the same time, shifting compliance burdens on data protection and retention mean operators must have clear viewpoints on their role as custodians of customer data.



<sup>2</sup> GSMA Mobile Connect launched by 17 mobile operators in 13 countries," GSM Association, 2 March 2015.eholders).

## Failure to improve organizational agility

Operators' ability to respond to new customer needs has never been under more scrutiny. In an age when customer demand scenarios are increasingly shaped by over-the-top (OTT) providers and web giants, operators are under pressure to shorten time to market for new services while engaging more proactively with partners and suppliers. Progress demands the transformation of both people and processes, with a focus on improving internal collaboration and overhauling legacy IT systems to create more customer-centric organizations.

Mitigating strategy maturity

Mitigating strategy as leadership priority

Likelihood of risk increasing in 2016



Key High Low

## Operator responses

### Improving internal collaboration

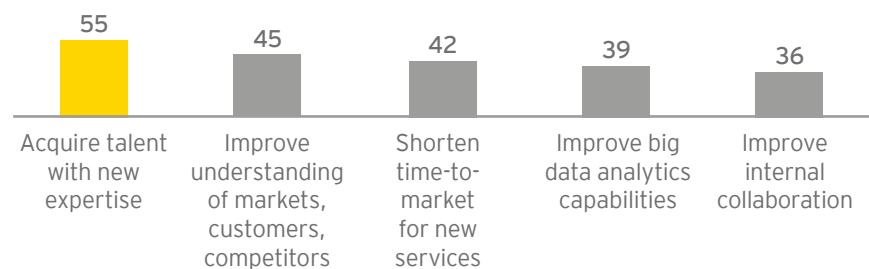
In recent years, operators across a number of geographies have tried to overhaul their organizational structures, with a focus on new business units that can catalyze innovation and house digital capabilities. Such efforts represent a double-edged sword: creating a new part of the business that specializes in innovation offers no guarantee that the legacy parts of the organization can benefit from new capabilities.

In this light, operators are increasingly adapting their strategies to focus on improving collaboration between functional divisions within the organization. In some instances, this involves realigning divisions or combining units when their capabilities overlap, particularly in external-facing activities. Such initiatives may require even greater focus in years to come.

Meanwhile, new leadership roles also have an important role to play as ways of aligning new competencies within broader strategic visions. Carriers are making appointments in areas such as data management, innovation and regulation.

### Operator attitudes toward operating-model improvements

Q. What actions can provide the most positive impact on your operating model? (Please select three)



Source: EY, "Navigating the road to 2020"

### Moving to customer-defined networks and IT systems

As operators look to shorten time to market and focus on the customer experience, overhauling their systems and processes is mission-critical. While many players have already transformed their IT and business support systems, the demands of becoming a digital service provider make further improvements necessary.

Operators need to find new ways to integrate production and distribution layers and must simplify product sets. To thrive amid rising customer expectations and a widening ecosystem, they must emphasize partner enablement processes and omni-channel customer experience management. Furthermore, existing supply chains will require reinvention to ensure they are fit for purpose in the digital age.

Long-term advantages also await players that can inject more software into their network architectures. A paradigm shift toward network virtualization is already underway, promising quicker service development, reduced vendor lock-in and opex efficiencies. Closer collaboration with vendors and open-source groups will play an important role in ensuring that operators meet their multiyear targets to create more user-defined networking capabilities.



## Operator responses

### ■ Building a holistic picture of the customer

Many operators are starting to leverage analytics to minimize customer churn and enable more targeted marketing. Partnerships with specialist vendors have yielded customer analytics solutions, and more holistic strategies are evident, where operators are harnessing predictive analytics with anti-churn initiatives, cross-selling approaches and targeted offers.

This early progress must be maintained, and long-term management support is essential. At the same time, customer analytics strategies require continual appraisal and assessment. The upside represented by deeper analytics should be seen as gradual and incremental, and current customer data sets may gain further relevance with the discovery of additional use cases that can leverage existing information.

### ■ Leveraging analytics in networks and operations

While analytics initiatives focus largely on creating better understanding of and interactions with customers, big data use cases also stretch into the domain of network infrastructure. Network analytics tools have a vital role to play, and existing initiatives will require an overhaul in the age of bundled services to ensure that a single view is available over both fixed and mobile infrastructure.

Some operators are already heeding the challenge in this sphere. Taking an end-to-end view of the network, including OSS platforms, can lead to better fault detection. And understanding areas of congestion can help network design and planning teams, with the goal of improving capex efficiency at a time when expanding capacity is as important as improving overall coverage.

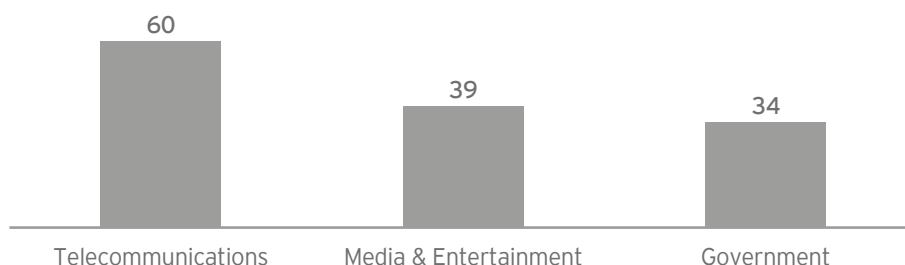
### ■ Aligning internal capabilities to bring big data to the fore

Enhanced network analytics can be allied with service consumption monitoring to bolster efforts to reduce churn and personalize service. The business objectives underpinning the use of analytics must be clearly defined and effectively communicated across different functional domains.

Leaders such as the chief data officer can play a pivotal role in ensuring that the organization repurposes data effectively and that such moves do not comprise risk and compliance activities. Many operators have already recognized this and are ahead of other sectors.

### Chief data officer roles by industry sector

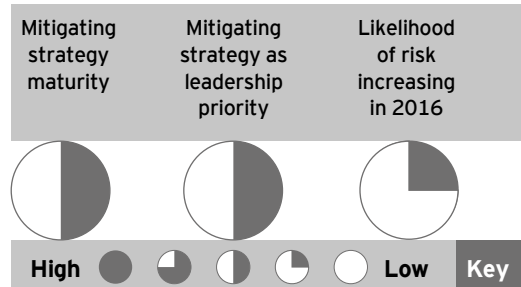
Proportion of companies with data officer roles (%)



Source: Forrester Research

## Lack of data integrity to drive growth and efficiency

Operators have a wealth of customer and network data at their disposal that can drive better internal decision-making while also supporting transformation of the customer experience. However, the fragmentation of data sets, coupled with the multiplicity of use cases for big data analytics, means that many carriers' strategies remain at a nascent stage. To maximize their data assets, operators should consider analytics scenarios well beyond churn reduction while also exploring how third parties can effectively share data.



## Insufficient performance measurement to drive execution

As the digital ecosystem expands in new ways, many operators have strategies in place that are designed to take advantage of growth opportunities while optimizing operational efficiencies. However, successful execution in a fast-changing marketplace requires new concepts of performance measurement that marry appropriate objectives and incentives with better internal and external metrics. In this light, there is plenty of room for improvement if operators are to make the most of their transformation journeys.

Mitigating strategy maturity

Mitigating strategy as leadership priority

Likelihood of risk increasing in 2016



Key High Low

## Operator responses

### Focusing on the right customer metrics

The need to reappraise metrics used by telco management is becoming more pressing. As OTTs redefine customer expectations and operators focus more intently on delivering a best-in-class customer experience, assessing the most appropriate key performance indicators is essential.

Operators are beginning to prioritize the use of net promoter score (NPS) as a leading insight into their relationships with customers. Assessing whether their customers are promoters or detractors allows service providers to rank themselves against their peers, and NPS helps operators understand the impact of their customer support functions and communications strategies.

NPS can also play a central role in aligning employee performance with improvements in customer satisfaction, with responsibility for growing the metric aligned with a number of functions within the organization.



NPS denoting customer loyalty excellence



NPS at which telecommunications customers are past the risk of churning

Source: WDS

### Embracing a wider set of key performance indicators

As innovation capabilities become more important to operators, so does the need to effectively monitor how well their growth agenda is performing. Improving time to market is more critical than ever, simply because OTT product development cycles are measured in weeks and months.

As such, operators are looking more closely at average implementation times, conscious that innovation rates are increasing across the digital ecosystem. Time-to-market metrics help inform whether transformation initiatives such as software-defined networking are delivering business benefits.

Other metrics from beyond the industry can also aid both internal performance measurement and stakeholder communications. Some operators are leveraging revenue generating unit (RGU) per subscriber to highlight their cross-selling performance. Cable players have used this metric to communicate to investors, and it will become more important as convergence strategies mature.

### Prizing a new performance management mindset

While many operators recognize that a new breed of metrics is emerging, substantive change remains the exception rather than the rule. That means the very notion of performance management should be revisited. Traditional business plans with traditional financial metrics such as revenue and EBITDA are less relevant in a world where use cases are blurring and value propositions are continually shifting. A more venture-capital-like approach, where service providers "launch and learn" while revisiting metrics and targets at more frequent intervals, shows a change of mindset.



## Operator responses

### ■ Simplifying the service portfolio

Many established operators have built up a range of offerings over the years, yet a vast array of tariffs and service options has put pressure on billing and customer relationship management (CRM) systems. This in turn has created complexity when customers require simple propositions that speak to their needs.

A number of operators are taking steps to reduce the sheer range of tariffs and offer value through mobile plans that feature tiered data or split out handset costs. These resonate with customers – as borne out by higher NPS – and reduce churn, while lowering the cost burden of handset subsidies. Charging models will have to adapt further to maximize new opportunities as telecom and media markets converge.

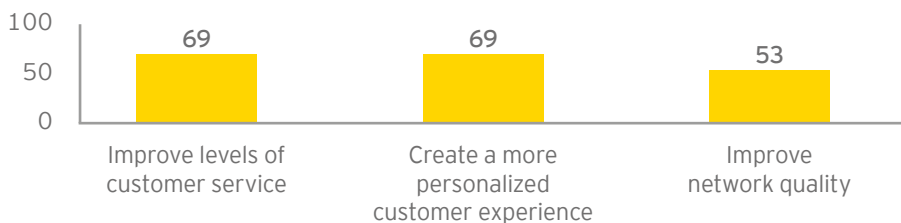
### ■ Optimizing customer support

Operators recognize the importance of providing excellent customer support through a number of channels. However, coming closer to the voice of the customer is essential: many operators can improve at marrying online and social media capabilities with call centers and in-store expertise.

Other industries have already started to differentiate through their customer experience, such as retailers that offer dynamic pricing and innovative delivery methods. For operators to succeed, they must help customers move seamlessly between support channels, with a consistent user experience across each. Consolidating fragmented billing systems and integrating physical and digital support channels are essential, particularly as bundles of access, device and content become more sophisticated.

### Operator attitudes toward customer-centricity drivers

% respondents citing as a top three driver



Source: EY, "Navigating the road to 2020"

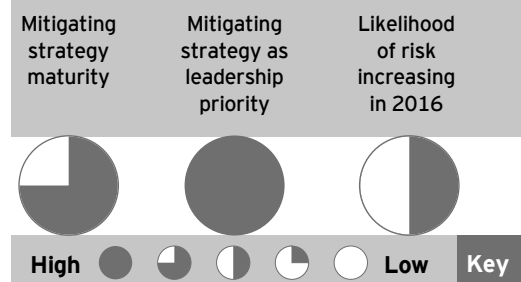
### ■ Responding to the needs of Generation Z

Many operators have taken steps to segment their customer base in ways that allow for greater understanding of end users based on their digital needs. Even as "digital native" customers are increasing, new waves of customer needs are appearing.

Youth customers continue to build a sharing economy, where crowdsourcing and shared rides via taxi apps are the norm. These customers are more comfortable with technology, and operators should reflect this digital self-reliance by packaging their services in ways that promote self-service support.

## Failure to understand what customers value

Customer experience management is the leading strategic priority for senior management in the telecommunications industry. Efforts to personalize services and improve omni-channel customer support are vital to all players, but keeping pace with changing customer attitudes requires a more sophisticated segmentation of user needs backed by simple and well-communicated propositions. While operators are making progress, competition for share of wallet continues to rise.



# Inability to extract value from network assets

Capital expenditure burdens on operators remain pronounced. While rollout of LTE and superfast broadband is well underway, operators continue to widen coverage areas and raise headline data speeds. Adoption of new technologies such as vectoring is helping to extend the life of copper, yet the Internet of Things signals a new mix of infrastructures, forcing carriers to reconsider their technology road maps. In mobile, network-sharing and tower-outsourcing will remain critical at a time when technology cycles are shortening.

Mitigating strategy maturity



Mitigating strategy as leadership priority



Likelihood of risk increasing in 2016



Key High Low

## Operator responses

### Increasing the performance and reach of fiber infrastructure

Operators are turning to new supporting technologies in the fiber environment to boost the headline speeds they offer, at the same time extending the life of their copper infrastructure assets. Vectored VDSL networks are now commonplace while G.fast technology is raising data throughput levels to between 300 and 500 megabits per second (Mbps).

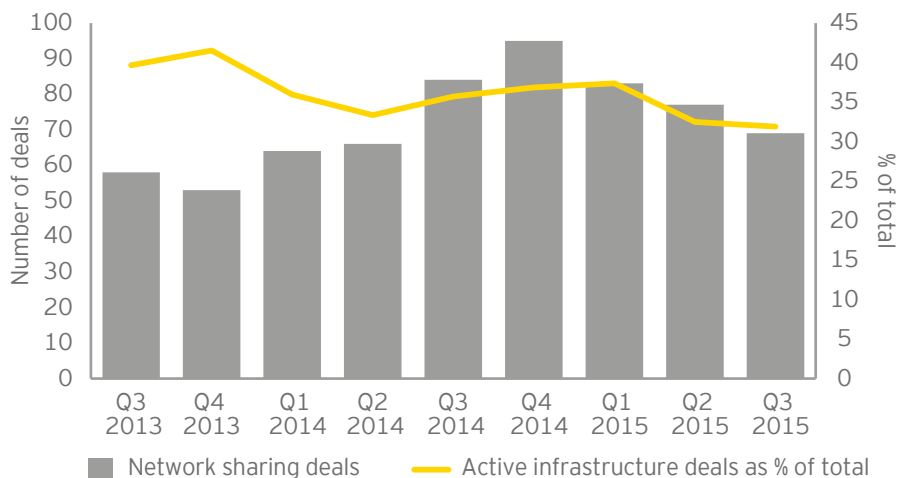
Nevertheless, regulatory broadband targets remain challenging, particularly in Europe, where the European Commission's Digital Agenda demands that 50% of EU households subscribe to 100Mbps services by 2020. Such targets remain highly challenging for incumbents, while many national regulators also remain focused on better broadband performance and availability in hard-to-reach rural areas.

Source: Ovum

### Maximizing the benefits of network sharing and outsourcing

Network-sharing initiatives, which have existed in the industry for over 10 years, are experiencing an uptick. In 2014, some 107 deals were struck worldwide, up 56% year-on-year.<sup>3</sup> Yet there is room for such deals to become more ambitious: active infrastructure-sharing agreements where scope for capex and opex savings is greatest still account for a minority of such deals.

#### Global mobile network sharing deals



Meanwhile, joint ventures and partnerships are becoming more important to alternative network operators (altnets), which are under pressure to scale up their fiber infrastructure capabilities in developed markets.

### Choosing new technologies for Internet of Things

Telecommunications companies are key enablers for the Internet of Things (IoT), where different forms of fixed and mobile connectivity pave the way for new use cases in areas such as smart home and smart city.

A diverse set of network standards that are sensitized to the needs of specific use cases will be crucial. For operators, this means delineating the optimal mix of technologies – for example, low-power, wide-area (LPWA) networks alongside cellular machine-to-machine (M2M) – that can support their burgeoning IoT capabilities. Partnerships with established and specialist network equipment vendors are already starting to play an important role as operators consider long-term network capabilities that can support the rising demand for IoT services.

<sup>3</sup> "Mobile Network Sharing Tracker," Ovum, November 2015.



## Operator responses

### ■ Pursuing in-market economies of scale and scope

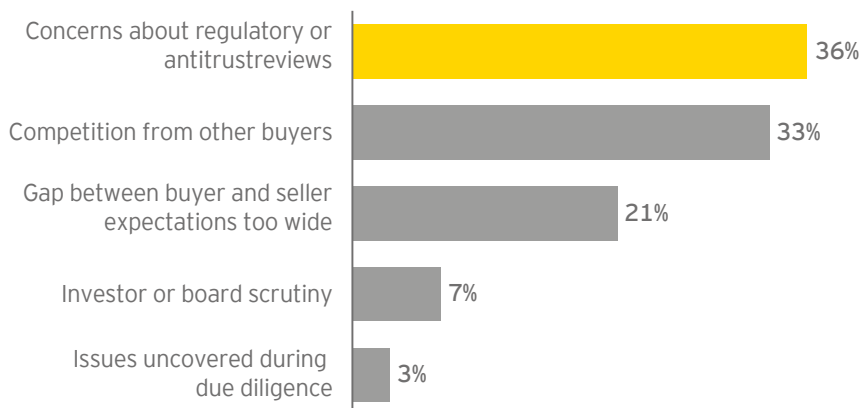
Consolidation has been a defining feature in a number of markets in recent quarters, particularly in Europe, where pricing pressure along with macroeconomic uncertainties has led operators to seek more rational market structures. For some, this means acquiring their peers in specific market segments such as mobile and broadband. For others, divestment of subscale operations is top of mind.

Regulators have proved increasingly receptive to in-market mergers, but such attitudes may change as lawmakers try to preserve competition in retail and wholesale markets. While the merits of consolidation are clear enough in terms of cost synergies, there remain alternative routes to achieving efficiencies. Network sharing has long been a feature of the sector, but more transformational deals predicated on active infrastructure sharing could unlock new benefits. At the same time, tower sale-and-leaseback deals can help operators meet regulatory coverage obligations while allowing them to focus on differentiating their service offerings.

A number of operators are also considering broadening their service offerings as pay-TV services become a critical component of residential bundles. While a number of operators are acquiring TV providers, partnerships with video-streaming OTTs can also yield gains among more price-sensitive TV households.

### Operator views on deal inhibitors

Q. If you have failed to complete or canceled a planned acquisition in the past 12 months, what was the reason?



Source: "Capital Confidence Barometer 13th Edition," EY, October 2015

### ■ Sensitizing the inorganic growth agenda to the Internet of Things

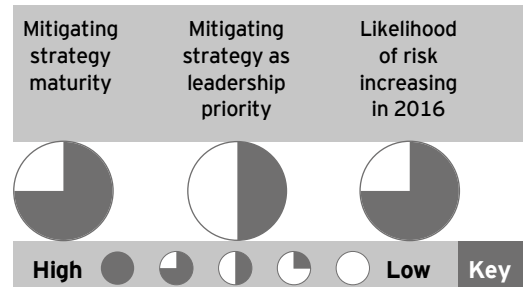
While many operators are leveraging M&A and partnerships to improve their positioning in core market segments, wider growth opportunities heralded by cross-industry convergence mean that inorganic growth is a key means of gaining a foothold in new growth segments.

In recent years, a number of operators have acquired IT service providers to bolster their enterprise service portfolios, for example. However, the Internet of Things is unlocking a range of new business models in both the consumer and enterprise segments.

Horizontal partnerships in the form of carrier alliances are helping operators reduce costs, widen their footprints to offer roaming capabilities and build universal solutions in areas such as embedded SIMs. Partnerships also allow operators to export specific platform capabilities in smart home and connected car to their peers in other geographic markets, for example. At the same time, acquisitions of specific capabilities in verticals such as healthcare and automotive enable greater end-to-end capabilities.

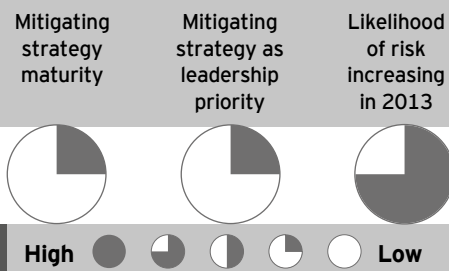
## Poorly defined inorganic growth agenda

The telecommunications industry globally is witnessing elevated levels of M&A activity as operators pursue new economies of scale through in-market consolidation, which is also helping them to broaden their service offerings as bundles of fixed, mobile and TV services become the norm. At the same time, deals to acquire new capabilities in areas such as IT services and the Internet of Things are also becoming more important. Partnerships are also being overhauled as operators seek new ways of working with OTT players while dealing more closely with their operator peers. Striking the right balance between M&A and partnerships has never been more important.



# Failure to adopt new routes to innovation

As operators reposition themselves to new sources of value creation, they must explore new routes to innovation. Open innovation agendas require ever more cooperation with other ecosystem actors, while new innovation capabilities must incorporate greater agility if operators are to remain proactive in the face of continuing disruption. Ultimately, a change in mindset is essential – one that prizes new types of organizational DNA and ecosystem engagement.



## Operator responses

### ■ Leveraging a more diverse talent pool

One of the most pressing issues facing telecommunications companies is the need for new skill sets that can unlock new forms of growth and efficiencies. The quest for talent is not limited to the operator service innovation agenda: engineer skills require an overhaul at a time when software-defined networking (SDN) is transforming the networking landscape, and cybersecurity and big data skills are in high demand.

A number of operators are retraining their workforces and revisiting their incentive programs. Efforts are also underway to build new relationships with universities to ensure that graduates of the future have software-based skills suited to a changing technology environment. For some, this involves launching apprenticeships so that new skills can be nurtured via on-the-job training.

Meanwhile, a new generation of services also requires specific expertise underpinned by experience gained in different industry verticals. Growth segments such as digital media, enterprise cloud and smart city require visionary leadership within organizations, and many carriers are looking for a new breed of manager with experience from beyond the telecommunications domain.

### ■ Making the most of incubator initiatives

Incubator and accelerator programs have become an established feature of the sector in the last two to three years. The rationale is clear: to provide mentoring and operational support to start-ups providing a new wave of digital products and services. This is vital in geographic markets where start-up communities are in their infancy. Operators also retain the option to invest in digital services at a far earlier stage of their growth cycle.

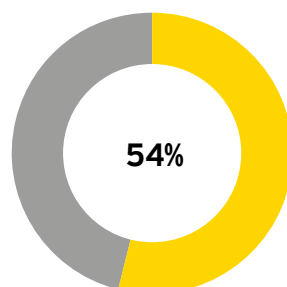
Such programs must be flexible to adapt to a fast-changing start-up landscape and accommodate new partnering scenarios. Already in recent quarters we are seeing operators roll up their incubator programs to provide greater opportunities for start-up innovation to grow at scale while also pooling resources.

A holistic strategy that ensures the right kind of linkages between accelerator programs, venture capital arms and internal R&D is also becoming more important. Open and collaborative innovation is mission-critical, but long-term success will be determined by how tightly it is integrated within the overall strategic agenda.

### ■ Shifting the cultural mindset

Innovation can be interpreted in a number of ways, and there is no one-size-fits-all approach to becoming a more innovative organization. Nevertheless, at their heart, many successful innovation strategies have one thing in common – a change in organizational mindset that welcomes and celebrates the desire to innovate. Many operators have already reflected this through a greater focus on internal collaboration, for example.

However, more fundamental shifts may be needed. A “launch and learn” approach that places a premium on agile product development and a more proactive attitude toward partnerships with other ecosystem entities are just two areas where a new organizational mindset can make all the difference.



Proportion of UK accelerators and incubators that have been established since 2012

Source: O2 UK



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