



EXECUTIVE OVERVIEW

PREVIEW

# 2017 Trends in Mobile Telecom

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Mobile operators are facing a time of massive change - from new services such as multi-play video, the Internet of Things and telecom data as a service to the dawn of new fifth-generation networks. This report explores which opportunities will hit first, and how savvy mobile network operators should take advantage of them.



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Rich Karpinski is a Principal Analyst - Mobile Operator Strategies working as part of 451 Research's Mobile Telecom team. In this role, he focuses heavily on mobile operator business models, service delivery strategies and the overall dynamics of the mobile ecosystem, working closely with 451 Research's operator customers to help them understand market trends and plot future strategies. His recent focus has included new service delivery strategies, including telecom data as a service (TDaaS), offer-driven business models and digital service strategies, including coverage of vendors enabling the carrier evolution from communications to full-scale digital service providers.

# Key Findings

Telecom operator opportunities in the Internet of Things (IoT) start with wholesale and managed IoT and connectivity. Beyond that, operators are beginning to invest in IoT solutions led by fleet telematics, connected cars, connected healthcare, retail, security and surveillance, connected homes and smart cities. 451 Research forecasts the market for active machine-to-machine (M2M) or cellular-connected IoT devices to reach more than 1.2 billion lines by 2020, which will equate to 15% of all mobile subscriptions globally.

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As traditional connectivity revenues approach saturation, telecom operators will extend their fixed-mobile convergence (FMC) strategies and launch multi-play landline/mobile/TV/video services. Whereas telcos' efforts in the content/TV space have in the past not amounted to very much, the shift to multi-play is one of the few genuine growth paths open to operators, and will have a transformative effect on their businesses, affecting propositions, network strategy, pricing, branding, commercial initiatives and financial performance. According to 451 Research surveys, 62% of users cite discounts as the main reason they bundle multiple services.

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Over the next 12-18 months, we expect the 5G conversation to move further into the territory of economic justification, business benefits for specific industry verticals, network funding options, and related regulatory policies. As we get closer to commercial 5G launches, telecom operators will need to develop their own business cases based on thorough assessments of total 5G costs and potential revenue uplift.

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Telco and vendor bets on big-data-driven telecom data as a service (TDaaS) monetization are growing, with several categories seeing real commercial payoffs. The TDaaS market – a nearly \$80bn market opportunity by 2020, according to 451 Research forecasts – continues to evolve, with several use cases breaking out, including mobile advertising, population insights and location-data-enabled fraud detection.

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Mobile network operators are beginning to more aggressively manage their networks, delivering a more 'optimized' service experience to customers. What does that mean? Lower prices, typically, in exchange for down-encoded high-bandwidth services in areas such as video, music and gaming. The trade-off: Operators compete on price while better managing network capacity, while customers cut costs while receiving a 'good enough' mobile experience – with the ability to pay more for access to higher bandwidth.

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# Executive Summary

## INTRODUCTION

What a difference a year makes. A year ago we were detailing operator challenges from over-the-top (OTT) providers, the slow-move response to deliver competitive offerings and the imminent move to '4.5G' networks enabled by carrier aggregation and other LTE-Advanced technologies. A year later, it feels like all those predictions have come true – and if anything, accelerated.

Looking ahead to 2017, then, we see 5G technologies and services suddenly front and center on the carrier roadmap. Commercial deployments may still be a few years away, but we have clearly moved from envisioning 5G to building the business case for the new technology. That includes the economic rationale for 5G, investment funding options, the business case for specific industry verticals, and, in some cases, new regulatory policies and frameworks.

Meanwhile, new network use cases are emerging and getting deployed today – ahead of true 5G but on a path to take advantage of tomorrow's networks when they arrive. At the top of the list is the Internet of Things (IoT). Today, 41.1% of enterprises we surveyed are using IoT in some capacity in their networks, growing to 50% in the next 12 months. For operators, network choices abound – including fixed, personal area network (PAN), LAN and WAN options – in both licensed (especially LTE) and unlicensed flavors. That activity is expected to drive more than 1.2 billion machine-to-machine (M2M) or cellular-connected IoT lines by 2020.

More bandwidth-rich networks are driving more and more video usage as well. For some operators, the path forward is focused on so-called multi-play networks offering bundles of fixed broadband, TV and wireless services. That opportunity has driven significant M&A, from telco-cable deals in Europe to AT&T's big DirecTV and Time Warner bets in the US. Meanwhile, mobile-first video is also surging, with operators like T-Mobile and Sprint experimenting with new unlimited data plans that deliver smartphone-ready 480p video at low prices – with upsell offers to customers to move up to higher-bandwidth HD video. It's one of the first implementations of 'smart pipe' managed services we've seen – with more likely to follow. Not to be outdone, operator big data – so-called telecom data as a service (TDaaS) – offers are flourishing as well, led by opportunities in mobile advertising, population insights and fraud detection. Such services make use of operator assets in an entirely new and profitable way.

In this report, we assess the impact of these changes on the mobile operator landscape in the coming year, recommend best paths forward and pick the likely winners and losers as the market finds itself facing yet another seismic shift.

## 451 Research's 2017 Mobile Telecom Trends

Source: 451 Research, 2016

	WINNERS	LOSERS
Telecom Operators Will Concentrate End-to-End IoT efforts on Two to Three Primary Application Categories	Telcos that offer a focused suite of IoT solutions beyond basic connectivity	Telcos that fail to develop new partnership strategies, internal skills and go-to-market capabilities
Multi-Play Will Dominate Telco Strategies in Advanced Markets	Telcos that lead the shift to multi-play	Latecomers to multi-play
5G Economics and Business Cases Will Take Center Stage	MNOs and 5G infrastructure vendors	Countries late to 5G
Mobile Advertising, Population Insights and Fraud Protection Will Drive Leading TDaaS Use Cases	Operators willing to invest ahead of the market – both in infrastructure and early market tests	Operators unwilling – or fearful – to see the monetization opportunities in big data
Mobile Operators Will Combat the 'Dumb Pipe' Threat With a Move to 'Managed Pipes'	Operators willing to innovate on services while walking a fine line on regulation	Carriers unwilling to manage their mobile networks – or tying their futures to single service profiles

## METHODOLOGY

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

Emerging technologies and markets are covered in 451 Research channels including Business Applications; Cloud Transformation; Data Platforms and Analytics; Datacenter Technologies; Development, DevOps and IT Ops; Enterprise Mobility; European Services; Information Security; Internet of Things; Mobile Telecom; Multi-Tenant Datacenters; Networking; Service Providers; Storage; and Systems and Software Infrastructure.

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

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

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