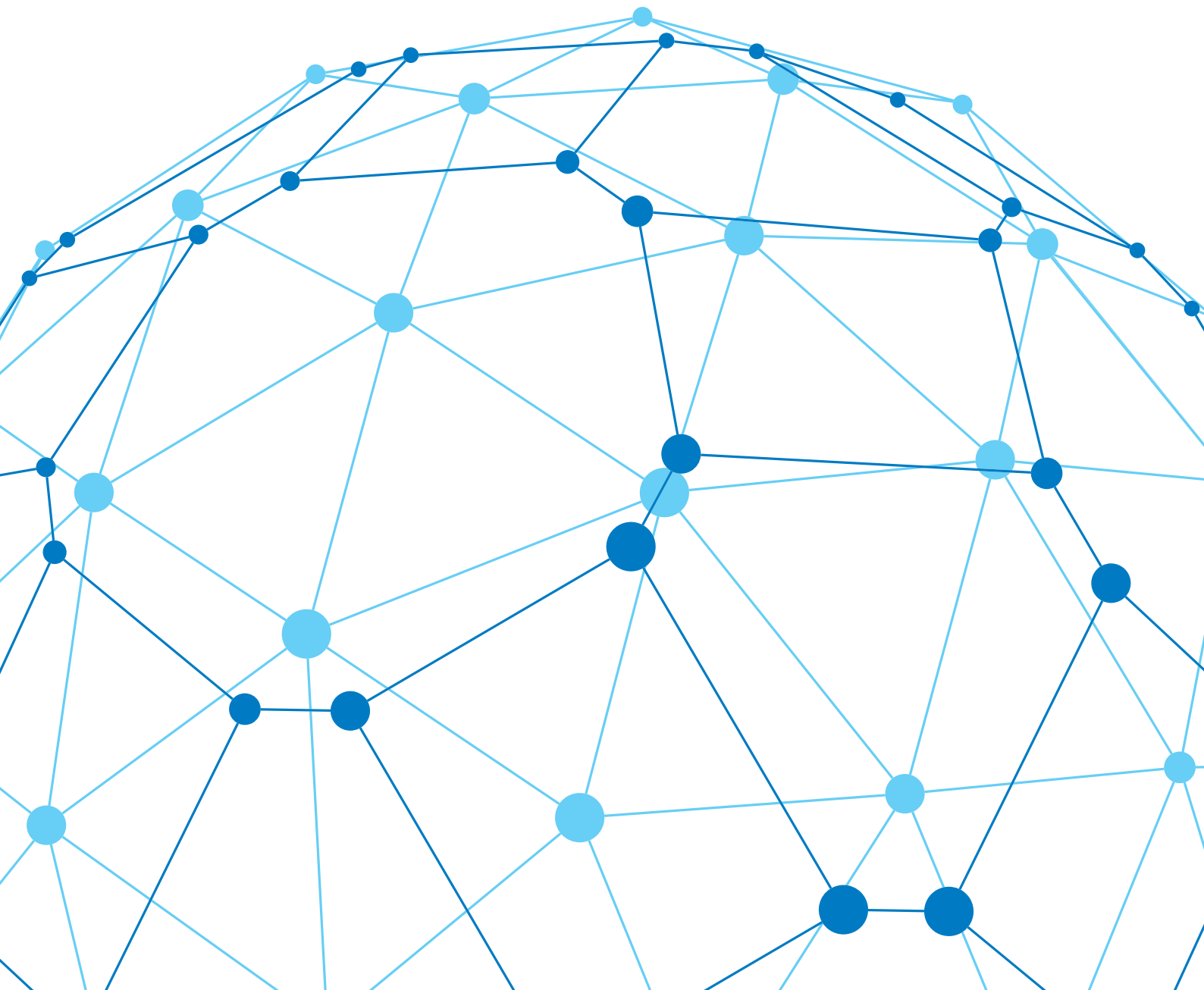




Top 10 predictions for the telecoms media and digital services sectors in 2018



Analysys Mason reveals which trends will
make an impact in the next 12 months



Introduction



Digital transformation still key in 2018

Digital transformation will continue to be of central importance for the telecoms industry in 2018. It can enable telecoms operators to achieve their aspiration to retain a highly visible role in the digital economy. However, Analysys Mason sees a definite shift in approach from the realm of 'what could be' to the realm of the achievable. We see pragmatic efforts to win new revenue, create a truly digital customer experience and an endeavour to achieve the operational efficiencies found in web-scale businesses.

Network operators' efforts in the area of new services have shifted heavily towards digital economy partnerships and customer engagement. They are embracing OTT video, working with partners to keep up with shifting video consumption behavior. Likewise, network operators are offering digital enterprise services and working with IoT MVNO partners.

Consumer expectations of a digital, largely self-service, experience are leading operators to invest in digital methods to acquire and support customers. This leads to more use of smartphone apps and web self-service, but also the use of indirect methods to reach customers through social media and integration with smart home devices. Artificial intelligence, though presently overhyped, is a long-term, high impact factor in the provision of this digital experience.

Underlying all the directly customer-facing factors in digital transformation is the fact that, at their core, network operators are, well, network operators. They are transforming their networks with virtualised infrastructure to prepare for 5G. While 5G New Radio deployment is a long way off for most operators, they are laying the foundations for fully converged 5G networks with virtual networking, edge computing, cell densification, network slicing and an ongoing fibre buildout.

In these predictions for the new year, I hope that you will see the types of insight that we provide for our customers in the hundreds of carefully researched reports that we publish throughout the year.



Fiona Glennon
Managing Director,
Analysys Mason Research

Predictions



Network operators and their suppliers must pay close attention to these trends for their decision making in 2018.

Here are Analysys Mason's top 10 predictions for 2018:

1. Specialist mobile virtual network operators (MVNOs) will continue to surprise the IoT market by signing major deals. Page 4
2. Revenue growth from new enterprise services will offset losses in traditional enterprise revenue. Page 5
3. Digital transformation will shift from offering new digital services to transforming labour costs in established networks. Page 6
4. Operators that provide digital methods for customer acquisition and support will win market share from those that lag. Page 7
5. Service-specific and unlimited data tariffs will win out over volume-based pricing as the foundation for consumer mobile services. Page 8
6. Growth in consumer spending on OTT video services will outpace traditional pay-TV spending in 2018. Page 9
7. Operators will deploy Alexa-like AI techniques to engage customers in a more-digital manner. Page 10
8. A small number of 5G New Radio (NR) trials will start in 2018, but 90% of operators will wait until after 2020. Page 11
9. The mainstream telecoms market is embracing virtual networks. By 2018, more than USD6 billion in capex will have shifted to virtualised and cloud-based networks; this shift will grow to more than USD50 billion in 2022. Page 12
10. Operators will begin to deploy NGPON-2 as a converged infrastructure to support 5G, FTTP and enterprise services. Page 13

1. Specialist mobile virtual network operators (MVNOs) will continue to surprise the IoT market by signing major deals.



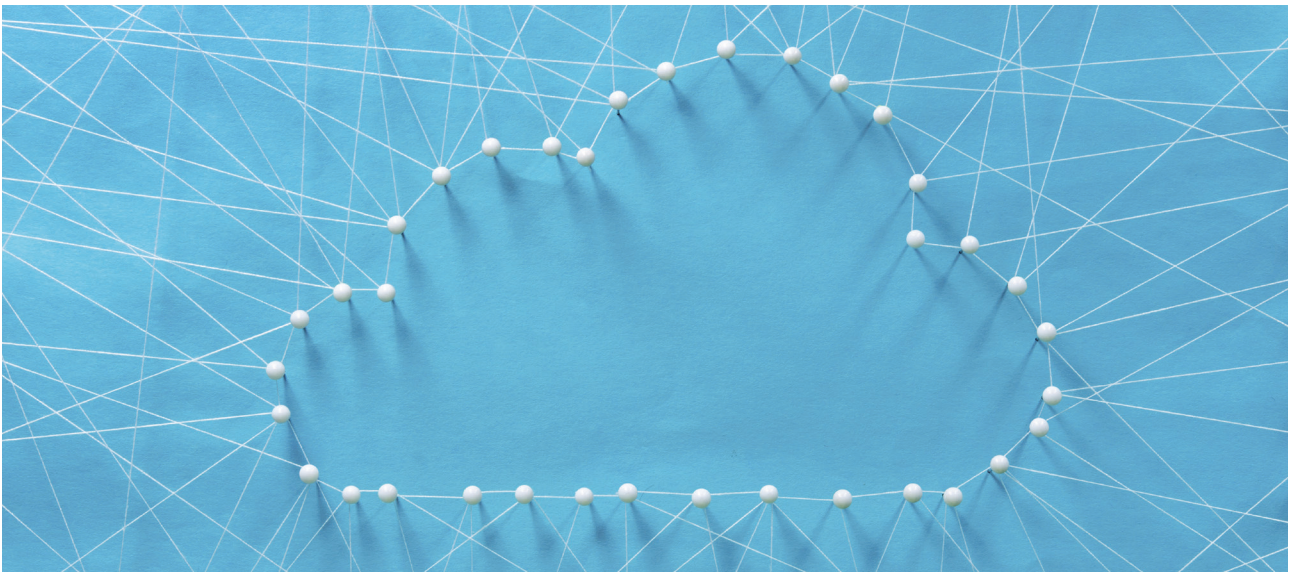
- In 2017, some relatively small IoT MVNOs won notable contracts with large automobile manufacturers to provide in-car connectivity (for example, Globetouch's partnership with GM; Truphone's affiliation with Kia, as well as the continuing relationship between Cubic and Audi).
- Analysys Mason expects more of these types of contracts to be awarded in 2018, and for this trend to increasingly become a concern of larger MNOs.
- M&A deals are possible, either between smaller MVNOs or with MNOs buying up their smaller rivals; with more than 20 firms offering global IoT connectivity, the market is ripe for consolidation.

2. Revenue growth from new enterprise services will help to offset losses in traditional enterprise revenue.



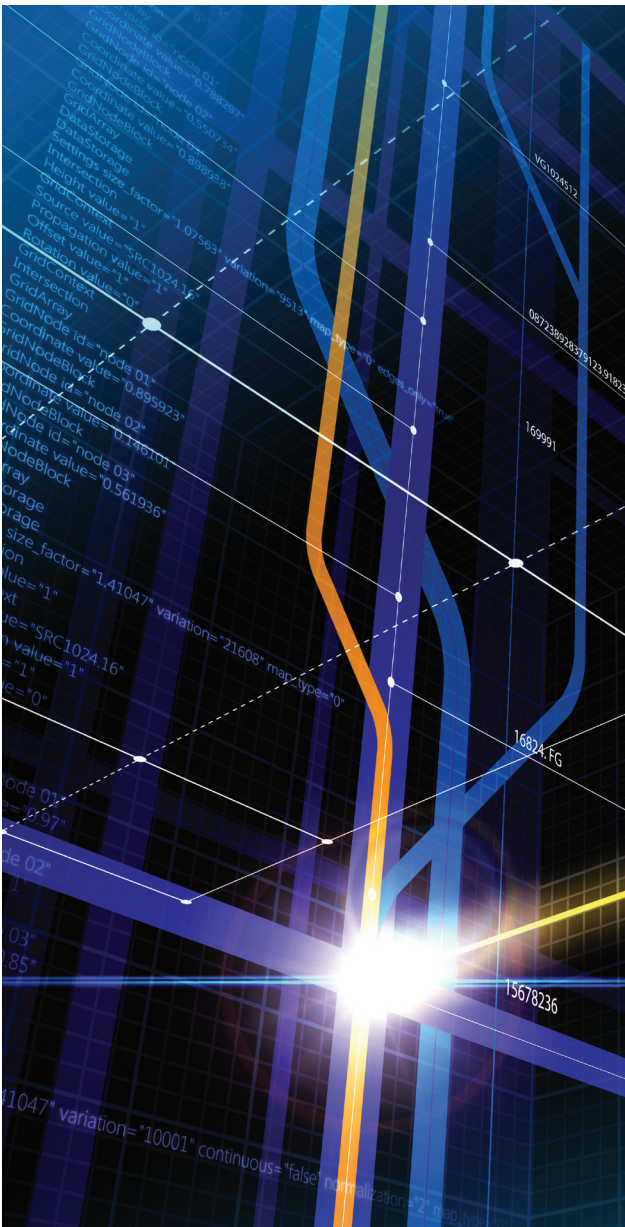
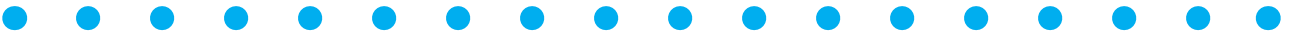
- Any growth in spending by large enterprises will depend on the success of new services.
 - In 2018, growth in this segment is likely to come from newer services such as SD-WAN, sophisticated collaboration tools and more-advanced cyber security solutions rather than established services such as high bandwidth connectivity or unified communications.
- Adoption of cloud services, in particular SaaS, IaaS and SECaaS, will increase significantly in medium-sized companies.
- Micro and small enterprises will adopt or upgrade basic services.
 - There is considerable scope for increasing the penetration of mobile handset data and fixed broadband services.
 - Some medium-sized enterprises in middle-income countries will also invest in new or upgraded services.

3. Digital transformation will shift from offering new digital services to transforming labour costs in established networks.



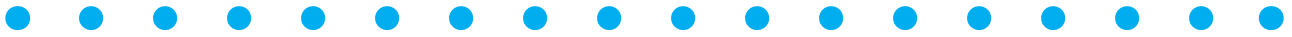
- Every major telecoms vendor will announce a roadmap for the migration of their products to new cloud-native software architecture.
 - Cloud-native software – deployed successfully by web-scale companies already – represents the next phase of standard software architecture.
- Any software system that a vendor wants to sell in 2018 will need to be cloud-native, or plans must be made to make this transition possible. Cloud-native software will become an RFP requirement.
- Operators will deploy new DevOps processes of continuous integration and/or continuous delivery to speed up the introduction of new software in the network.
 - These new approaches will swiftly find their way into the software development and deployment processes of operators.

4. Operators that provide digital methods for customer acquisition and support will win market share from those that lag.



- The number of customer service representatives (CSRs) will begin to decrease worldwide in 2018 as subscriber growth slows and new digital engagement channels mature.
 - Increasing functionality and usability of direct digital engagement channels will reverse the recent growth trend in the number of CSRs.
 - This trend will be driven by subscribers that prefer non-assisted channels.
 - The introduction of chatbots and AI-based automated attendants will further accelerate this downward trend.
- Every operator will plan to move at least 20% of its customer interactions to digital channels.
 - Some operators have already reduced the number of customer interactions via CSRs by 20% and are working on reducing these interactions by a further 20%. Most operators are focusing on the first 20%.

5. Service-specific and unlimited data tariffs will win out over volume-based pricing as the foundation for consumer mobile services.



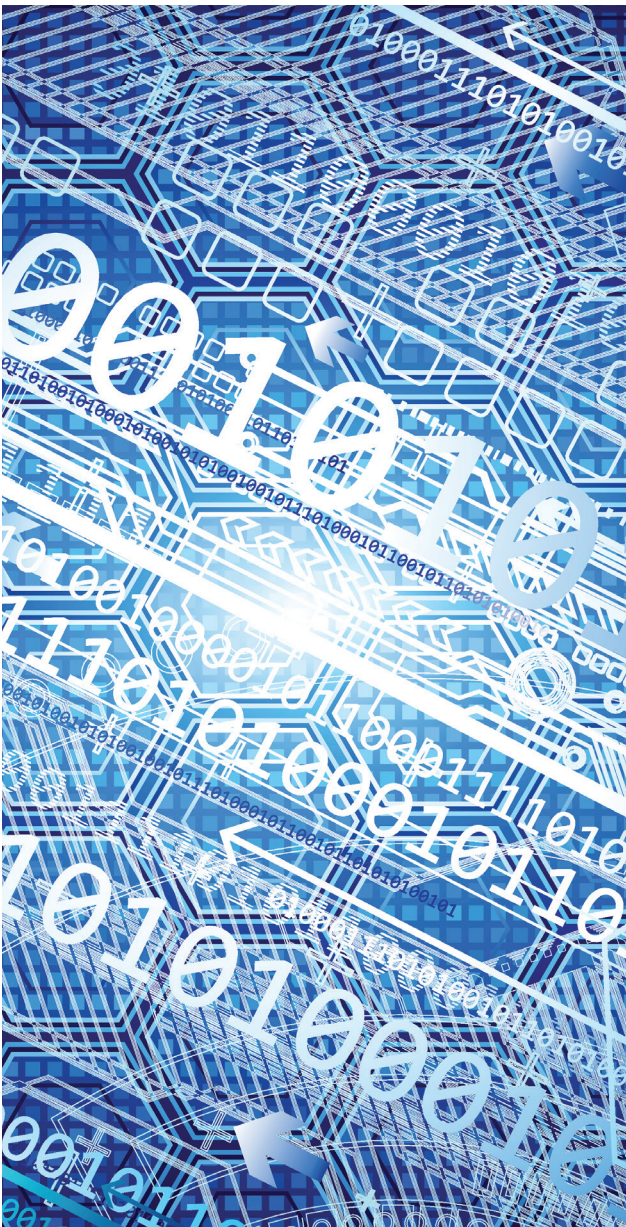
- Unlimited data tariffs and the increase in service-specific pricing (for example, zero-rating) will put more pressure on volume-based pricing.
- Alternative approaches to pricing include an increased focus on services and/or content, a move to multiple accesses/convergence, and competition around quality of experience.
- Pricing activity will go increasingly below-the-line as the use of analytics and AI improve segmentation and support the ability to discriminate/personalise in pricing.

6. Growth in consumer spending on OTT video services will outpace traditional pay-TV spending in 2018.



- Operators' programming investment will start to shift from sports towards drama 'originals'.
 - Multi-national operators will lead this move (for example, both Orange and Sky have committed to heavier spend on drama and have not pursued specific sports rights).
 - Co-investment models are maturing and production joint ventures are becoming more common.
 - Piracy of live sports content is increasing and this will start to have a greater effect on the sports investment case.
- Major pay-TV providers will begin to embrace full pay-TV services OTT as a primary delivery mechanism in 2018.
 - European satellite player Sky plans to launch its Sky Q service OTT in early 2018; US operator DirecTV is also preparing to launch Android-based OTT hardware in 2018.
 - In many emerging markets, particularly in emerging Asia-Pacific, such live OTT services will be tightly integrated with operators' telecoms services.
- Consumer spend on OTT video services will reach USD51 billion worldwide in 2018.
 - Subscription VoD services will account for 74% of OTT video spend in 2018.
 - The overall value of paid-for OTT video will have grown five-fold in the 5 years to 2018.

7. Operators will deploy Alexa-like AI techniques to engage customers in a more-digital manner.



- Operators will introduce AI techniques to optimise current processes through partnerships with software vendors.
- Inbound marketing insights will shift from manually generated segmentation and event triggers to insights derived from subscriber analysis performed by AI technology.
- AI will be implemented in all new chatbots within major operators, learning from customer interactions and outcomes to optimise customer experience, reduce calls to service representatives and to ensure the most-efficient resolutions to customer requests.
- The proliferation of smart speakers and voice assistants will start to change the way users discover and consume services.
 - New interfaces are being established to support relatively simple interactions (for instance, playing music or ordering repeat purchases), but the industry is experimenting with more-complex scenarios.

8. A small number of 5G New Radio (NR) trials will start in 2018, but 90% of operators will wait until after 2020.



- Leading operators will begin to conduct commercial non-FWA (fixed-wireless access) 5G NR trials in late 2018.
 - Only 8% of MNOs worldwide will deploy 5G NR networks before 2020.
- Competitive pressure to offer unlimited data plans will put MNOs' networks under stress, leading to the need for improved capacity in very dense areas by using 4x4 MIMO antennas and small cells.
 - Capacity bottlenecks are in specific, limited areas. There will be no need for across-the-board capacity increases.
- Major operators will increase their efforts in 2018 to bring open-source technologies into the physical network to improve multi-vendor interoperability.
 - Virtualised RAN supports operators' goals of increasing network innovation, reducing deployment costs and enabling 'true 5G' capabilities (especially network slicing). Operators can use open-source technologies in a virtualised RAN.

9. The mainstream telecoms market is embracing virtual networks. By 2018, more than USD6 billion in capex will have shifted to virtualised and cloud-based networks; this shift will grow to more than USD50 billion in 2022.



- Network function virtualisation (NFV) software, hardware and professional services spending will nearly double in 2018 to over USD5.1 billion (USD13.0 billion in 2021) as the mainstream telecoms market embraces virtualisation.
 - Deployment is still proceeding primarily in use case-based silos; operators are virtualising already-understood deployment scenarios.
 - Professional services will account for nearly 25% of all software controlled networking (NFV, SDN and cloud computing) spend in 2018, but over 30% of NFV spend. CSPs will tap suppliers' expertise to develop, implement, integrate, test, onboard, support and upgrade hardware and software in multi-year network transformations.
- Investment by communications service providers in software-defined networking (SDN) (WAN automation) will intensify in 2018, with software, hardware and professional services spending growing by over 50% to USD2.2 billion, reaching USD5.0 billion in 2021.
 - Spending growth will be driven by competition in the B2B market and the need to demonstrate enterprise revenue growth.
- By 2022, all RAN build-out will be cloud RAN. USD30 billion in operator capex will shift from traditional hardware to software, services and IT systems.
 - 5G networks will be built on cloud and virtualisation technologies.

10. Operators will begin to deploy NGPON-2 as a converged infrastructure to support 5G, FTTP and enterprise services.



- 5G readiness will drive investment in a denser, more-efficient fibre infrastructure. This core will support all future services.
 - Several operators will start to strategically invest in xPON in 2018. Dense fibre infrastructure build will be one of the main drivers of a turnaround in operator capex worldwide in 2018 after 3 years of post-4G decline.
- We will see a resurgence of LTE-based home broadband in 2018.
 - We already see early signals that mobile-centric operators are ready to use abundant LTE capacity to challenge the view of limited wireless capacity; this trend will, in turn, drive retail fibre prices down, and accelerate fibre construction to extend mobile reach.
- The first commercial '5G' mmWave FWA services will be launched in 2018 in the USA.
 - We expect more trials in 2018, with further launches in 2019. Analysys Mason believes that mmWave will constitute 15–20% of next-generation access connections by 2027.




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