



2020 Vision: The Heavy Reading Perspective

EXECUTIVE SUMMARY

As part of Light Reading's 2020 Vision Executive Summit held in Reykjavik, Iceland, in December 2014, Heavy Reading conducted a worldwide survey of telecom industry professionals to find out which business and technology issues are most widely perceived to have the greatest impact on the telecom industry's development in the run-up to year 2020.

Along with polling industry professionals, Heavy Reading analysts have weighed in with their own views on the key enablers that will shape the telecom landscape over the next five years. This report collects those analyst views, providing in effect a concise synopsis of Heavy Reading's current thinking regarding the impacts that various developments will have on network operators, business planners, and technology providers.

For the survey, Heavy Reading identified the following 10 areas as having the potential to shape the telecom industry's business and technology development between today and 2020:

- Virtualization (a.k.a. The New IP)
- Next-generation cloud services
- The Internet of Things (IoT)
- Telecom analytics
- 5G mobile networks
- OTT service delivery
- Distributed data centers
- Network security
- Gigabit cities
- Communications drones

While some of these areas are driven primarily by technology concerns, all of them can be viewed as having a potentially significant impact on telecom industry business models, particularly on network operator businesses. The transition from technology focus to a business-first mindset remains a work in progress, but that change is clearly occurring.

More than 400 telecom professionals took part in the 2020 Vision survey; the majority of those respondents said the biggest changes in the telecom ecosystem over the next five years will involve

telecom business models and network services, rather than technology. Among network operator respondents, nearly six in 10 respondents said business models and network services will be bigger change agents than technology over the next five years.

That's not to say that technology is becoming irrelevant to the telecom business – more than 60 percent of all respondents worldwide also said they expect the pace of technology innovation to accelerate over the next five years. But it's becoming increasingly clear that network operators and service providers are evaluating new technology options based on how those options affect their business and service models, rather than rushing to deploy new products based solely on performance metrics.

2020 Vision: The Heavy Reading Perspective delivers Heavy Reading's current thinking regarding the top potential change agents identified as part of the 2020 Vision project. Each section in this report focuses on a specific area and is written by the Heavy Reading analyst who is leading the coverage in that area.

Each section of this report addresses the four questions that formed the basis of the 2020 Vision survey:

- How important will this area be to the telecom industry over the next five years?
- When will this area begin to have a significant impact on revenues and business models?
- What type of impact (positive or negative) will this area have on operators in terms of network technology?
- What type of impact (positive or negative) will this area have on operators from a business standpoint?

Example findings from the report include:

Network security is viewed almost universally as the most critical issue facing the telecom industry over the next five years. More than 95 percent of 2020 Vision survey respondents said network security was essential (75.9 percent) or important (20.2 percent) to the telecom industry over the next five years. While virtualization and next-generation cloud services also rated highly in criticality, security drew the highest "essential" rating across all respondent groups.

Network functions virtualization (NFV) and the New IP will be essential to the telecom industry over the next five years, as operators look to expand network capacity sustainably, contain operational costs and generate new revenues. Since NFV addresses these challenges, operators that master it will gain considerable competitive advantage. However, NFV is still in the very early stages of development and is unlikely to reach any sort of industry scale before 2016 at the earliest.

The Internet of Things (IoT) sector is poised for tremendous growth toward the end of this decade, driven largely by increasingly robust mobile networks. The intersection of mobility, cloud and IoT provides a potentially transformative revenue opportunity for operators in the enterprise and public sectors. Everyone is talking about how connecting things together and to the cloud can unleash new possibilities, be it industrial IoT, smart homes, smart cars or smart cities. A significant number of alliances and consortia among chipset vendors, software companies, industrial giants and telecom players are forming to shape standards and accelerate adoption across multiple industries.

Although 5G is at least five years away from commercial reality, it will directly affect mobile network strategies in the next two years, especially for technology suppliers. 5G R&D initiatives are already underway, and standards bodies are likely to make some key decisions in 2015-16. Pressure is already starting to build to have 5G in place by 2020, especially in some Asian markets.

Report Scope & Structure

Section I is an introduction to the report, with complete report key findings.

Section II of this report focuses on network security and was written by Heavy Reading Chief Analyst Patrick Donegan.

Section III covers virtualization and was written by Caroline Chappell, Heavy Reading's Principal Analyst for NFV and Cloud.

Section IV, also written by Caroline Chappell, addresses next-generation cloud services.

Section V covers telecom analytics and was prepared by Ari Banerjee, Heavy Reading's Principal Analyst for Service Provider IT.

Section VI addresses distributed data centers and was written by Senior Analyst Roz Roseboro.

Section VII focuses on OTT service delivery and was prepared by Alan Breznick, Cable/Video Practice Leader.

Section VIII looks at the IoT sector and was written by Senior Analyst Steve Bell.

Section IX examines carrier SDN and was prepared by Senior Analyst Sterling Perrin.

Section X covers 5G mobile networks and was created by Senior Analyst Gabriel Brown.

Section XI explores the Gigabit Cities trend and was written by Contributing Analyst Jason Meyers.

Section XII addresses drone-based communications and was prepared by Jason Meyers and Light Reading Mobile Editor Dan Jones.

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