RESEARCH AGENDA 2019

SERVICE PROVIDER TECHNOLOGY

Ovum

Service Provider Technology

Daryl Schoolar
Practice Leader

Service Provider Technology

> " Communications service providers are in a state of constant change to deliver new services and to deliver them more efficiently. No network domain remains untouched. And, while CSPs have network vision commonalities many are starting from different places, propelled by different long-term strategies. Working through those dynamics and making the right choices can be the difference between success and failure. "

Network Infrastructure & Software

The Market Challenge

With transformation CSPs must make strategic decisions around investing either in trusted legacy systems or in newer, but nascent, network technologies. Moving too soon on change or betting on the wrong technology can have a drastically negative impact. However, being too slow to adopt new technologies can hinder the launch of new services, making CSPs vulnerable to their competitors. Adding to this uncertainty, network changes can also lead to CSPs making bets on vendors with less established track records.

Transformation can be just as difficult for equipment vendors. They must balance resources between traditional solutions and emerging ones. Miss-timing can leave them either too far ahead of the market or too far behind. Both of which can have devastating consequences.

Daryl Schoolar & Ian Redpath
Practice Leaders

> " Ovum forecasts that by 2023, 68% of optical lineside port volumes will be 400G or greater. "

How Ovum helps you

Provide insight into which network technologies are mostly hype and which ones will have a long and impactful life.

Size different network domains and learn which ones are growing and which ones aren't.

Learn how operators are coping with the introduction of new technologies and network architectures, and what they have gained from these introductions.

Help communication service providers navigate changes in network technologies.

Highlight key differentiating and winning vendor strategies, such as bringing Purpose Built DCI products to market.

Enable data driven decision making – e.g. Ovum delivers market sizing and growth forecasts in concert with vendor by vendor market share, enabling informed market entry-expansion decisions.

Gain a better understanding of vendor product roadmaps.

Key Deliverables

Quarterly equipment market share reports.

Annual equipment forecasts.

Technology trend reports providing market updates and vendor activities.

Thought leadership pieces based on new technology advances.

Industry baseline datasets – vendor contract database and GDCA.

Key conference and event summaries and briefs.

Themes for 2019

FTTx and cable broadband fight for the home
Broadband data consumption continues to grow as consumers use fixed broadband access networks for delivery of high-definition video, online gaming, and home automation applications. Fixed broadband technologies continue to improve to meet those demands. FTTx and cable broadband technologies are key enablers of the home broadband connection and often find themselves pitted against each other as operators look to capture greater market share.

5G network deployments and end-to-end network implications
The first 5G networks will go commercial in late 2018 and early 2019. This is the next major evolution of the mobile network and will not only impact radio access networks, but mobile core, radio front-haul and back-haul (including copper to optics transition), as well as more advanced network technologies around virtualization and edge computing. 5G will eventually lead to massive changes throughout the mobile network.

The role of SDN and NFV in supporting 5G and other cloud services
The move from hardware-centric to software-centric networks using SDN/NFV driven solutions is on every communications service providers and equipment vendors' radar. Major issues remain on how best to implement this transformation, especially when it comes to deploying and managing software as it replaces hardware. Long-term strategic goals, state of legacy solutions, and company resources will all play important roles in this process.

Terabit arms race driving industry consolidation
Optical networks are powered by the coherent transmission Digital Signal Processors (DSPs). DSP development is an expensive proposition and arms race. R&D efforts must be paired effectively with volume performance. The leading vendors see vertical integration as key to maintaining their competitive edge, controlling the pace of innovation, managing their cost structure and maintaining margin.

All the leading vendors are involved and vendors must drive the volumes to continue to fund their R&D efforts. 2019 will be a pivotal year in the winner take all competition. Ovum expects a different vendor landscape by 2020. The race is on for Terabit wavelength transmission.

Cloud adoption and the re-vectoring of data center and network construction roadmaps
ICPs: a heterogeneous group delivering social, search, cloud and e-commerce capabilities. Their business ambition drives their data center construction roadmap. Their core business has largely dictated their data center construction roadmap. Recently, the cloud business ambitions have begun to steer data center expansion efforts. The cloud business is a clear opportunity. ICPs have become highly competitive on this front. AWS and Microsoft lead, while Google, Oracle, and Alibaba are investing to compete.

Cloud service ambitions are fueling the current round of data center investment. Cloud services are optimized for the business market and for business continuity. They require site diversity, low latency and must ensure data sovereignty.

The cloud service business ambition is leading to new data center architectures and construction roadmaps. Networks are also being re-architected and retooled to meet the new requirements. Data center interconnect networks reach up to 100Tbps per link.
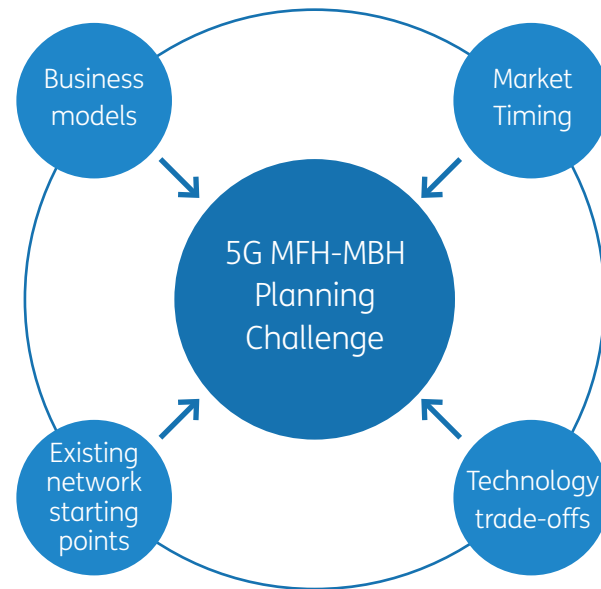
What's new

Coverage of SDN/NFV and network orchestration continues to expand.

Private LTE and 5G networks.

5G MFH – MBH and new services will drive new architectures.

Cloud ambitions drive data center and network roadmap change.

Global 5G MFH – MBH: Significant optics opportunity

Business models

Market Timing

5G MFH-MBH Planning Challenge

Existing network starting points

Technology trade-offs

5G accelerating a copper to optics transition

5G MFH-MBH: classic, large scale, network planning-technology optimization problem

The industry needs to optimize on many dimensions

Ultimate optics choices dependent on architecture decisions

Many technologies possible, a few will achieve scale and volume

Optical Components

The Market Challenge

The optical component market is bifurcated between the Communications Service Providers and the Internet Content Providers. Traditionally, product development has followed the well-defined path of the CSPs. However, with the expansion of the data center market, component vendors now have two markets with differing requirements, cost structures, and time to market timelines. ICPs need more product faster and are constantly looking for the next technology advancements to support build out of the global high capacity data center interconnected optical networks. Supporting both markets has placed onerous demands on the component manufacturers, pressuring component vendors' margins while challenging the vendors to select winning technologies for their splintered client base.

How Ovum helps you

Providing insight into component technologies and platforms' volume, revenue, and market trends.

Sizing different component market segments and guiding towards the high growth segments.

Identifying new disruptive technologies, market opportunities, and threats.

Highlighting key differentiating and winning component technologies and vendor strategies.

Articulating how the CSPs and ICPs are planning for the introduction of new technologies.

Explaining leading CSP and ICP network target architectures.

Enabling data driven decision making on markets, new technologies, product development, and manufacturing needs.

Ian Redpath
Practice Leader

" The Datacom market, which supports the fast paced data center market, is projected to grow at a 24% CAGR by revenue to 2023.

Key Deliverables

Quarterly optical components market share reports.

Annual optical components forecast.

Technology trend reports providing market updates and vendor activities.

Thought leadership pieces based on new technology advances.

Industry baseline datasets – vendor contract database and GDCA.

Key conference and event summaries and briefs.

Themes for 2019

ICPs and the reinvention of the optical data center fabric
Internet Content Providers (ICPs) are a heterogeneous group delivering social, search, cloud, and e-commerce capabilities. The ICPs' applications, business, and territory growth drives an entire optical ecosystem. The ICPs are investing billions in capex, for millions of data center square feet, housing millions of servers and connected with a huge optical infrastructure. In addition, the ICPs rapidly change over to the next generations of data center architectures to take advantage of the increase in server port speeds and server density, resulting in a constant rotation in the intra data center optical fabric.

Vertical integration: hollowing out the merchant market
Optical components play into a larger ecosystem of CSPs, ICPs, and system vendors. The largest system vendors have articulated aggressive vertical integration strategies. The industry consolidation push is placing more of the merchant market at risk. Meanwhile, the ICP community, not content with bypassing system vendors, is looking to bypass module vendors as well.
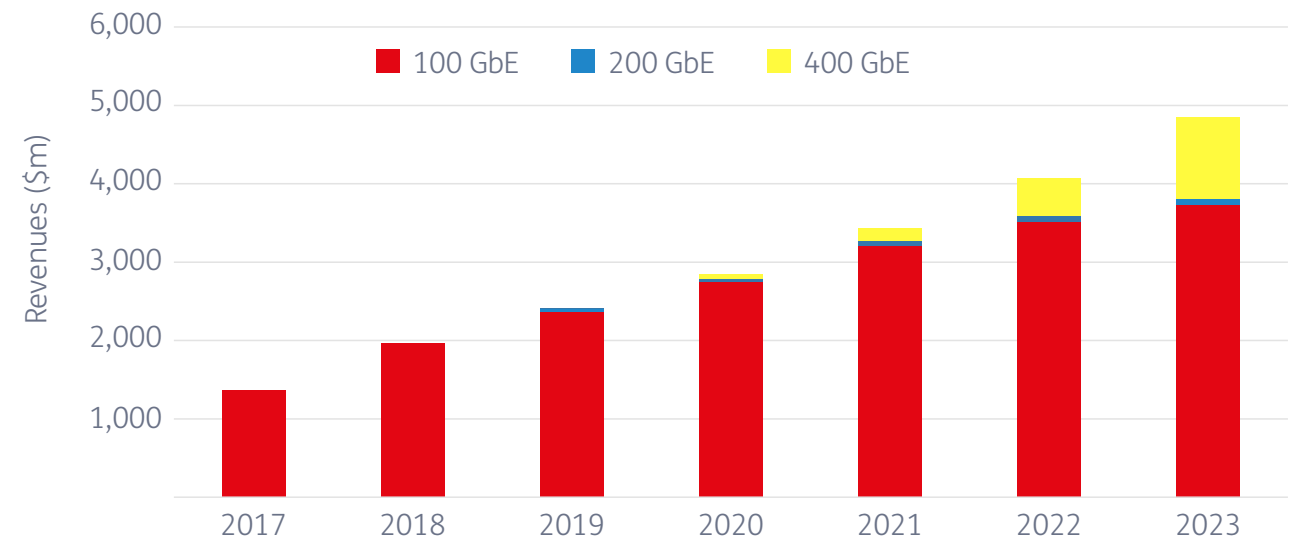
What are the key strategies to negotiate the choppy waters of vertical integration, industry consolidation, and ecosystem bypass?

What's new

Silicon Photonics market updates and the way forward.

Data center evolution drives and optical ecosystem

Datacom Revenue forecast for 100G, 200G and 400G Transceivers for the inside the data center application

Telecom Operations & IT

The Market Challenge

CSPs know that they need to transition to a Digital Service Provider model. However, they are often daunted by the scale of the IT systems, operations and business changes they need to implement.

Transformation needs to span customer and business enablement, service development, automation, and cloud-based delivery models; and it must be underpinned by intelligent operations involving AI and advanced analytics tools. Next-generation networks and the imminent arrival of 5G add urgency to the situation.

To address all of this, CSPs need to understand which technologies and operations changes will work, and vendors need to understand both the capabilities to deliver and the opportunities to target.

How Ovum helps you

Help CSPs understand their business and digital transformation needs, and prioritize the appropriate technology investments.

Support CSPs with their IT investment and buying decisions, including product assessments.

Identify CSPs' decision criteria for selecting platform and service partners to enable digital transformation.

Help CSPs leverage the right vendors to assist with their network analytics and automation needs.

Understand the main growth opportunities across the complex telecom IT landscape.

Evaluate vendor competitive position in key solution areas versus peers from NEP, ISV, and CSI backgrounds.

Identify new product, service, and partnering opportunities in a rapidly changing and increasingly complex ecosystem.

Kris Szaniawski
Practice Leader

> Creating a personalized customer experience is a top business priority for CSPs, with over 90% considering it important

Key Deliverables

A coordinated set of forecasts covering Telecom IT (incl. OSS/BSS) revenues, vendor services revenues in the telecom sector, and Telecom IT spend.

Research on the role of AI, analytics, automation, and blockchain in improving CSP operational efficiency, security, and network monetization.

Strategies for managing and monetizing the growing CSP customer and partnership ecosystem using improved customer engagement and customer journey management tools, and partner management systems.

Ovum Decision Matrices – evaluating leading telecom IT solutions, including customer engagement platforms.

ICT Enterprise Insights in the Telecoms Industry – CIO insights and investment plans in key telecom IT areas.

OSS/BSS contract analytics interactive tool with global coverage as well as an annual analysis of OSS/BSS contract trends.

Themes for 2019

Successful CSP strategies for digital transformation
Digital transformation has become a necessity for CSPs, but many are still uncertain of which enabling technologies and operational changes to prioritize. Through a series of industry case studies and thought leadership pieces we will explore how CSPs can transition to Digital Service Providers. This will include digital transformation research from across Ovum identifying technology and operational priorities spanning customer and business enablement, service delivery, intelligent operations, automation, and cloud-based delivery models.

Intelligent operations as a source of innovation
Intelligence is playing an increasingly important role in automating and transforming CSP operations. We will explore the impact of AI, analytics, and blockchain on customer experience, operational efficiency, and security in the telecom sector, as well as their role in supporting new business models and technologies linked to IoT, 5G, and digital services. We will profile technologies, strategies, and use cases focused on the telecom sector.

Radically improving customer and partner management
CSPs need to improve customer engagement and invest in customer management solutions that deliver a personalized customer experience. CSPs will also need to better manage a rapidly expanding partner ecosystem with partner management systems. We will also explore how CSPs can leverage data from OSS, BSS and other sources such as IoT to better manage and personalize the customer journey and improve engagement with B2C and B2B customers. Ovum will provide thought leadership on strategies, technologies, and the vendor landscape.

Preparing telecom IT for the arrival of 5G and next-generation networks
Next-generation networks and the imminent arrival of 5G add urgency to the need to transform telecom IT and operations. These will have to be capable of supporting dynamic scaling, network slicing and helping to monetize new business models. Topics will include cloud-based delivery models, service management and orchestration, automation, open APIs, and collaborative working, as well as how to coordinate charging, policy, and analytics to better manage and monetize the network. We will explore CSP strategies and the changing role of vendors and services companies in supporting this new environment.

What's new

Digital transformation insights – including research from across Ovum focused on the technology and operations changes CSPs need to make to support their transition to Digital Service Providers.
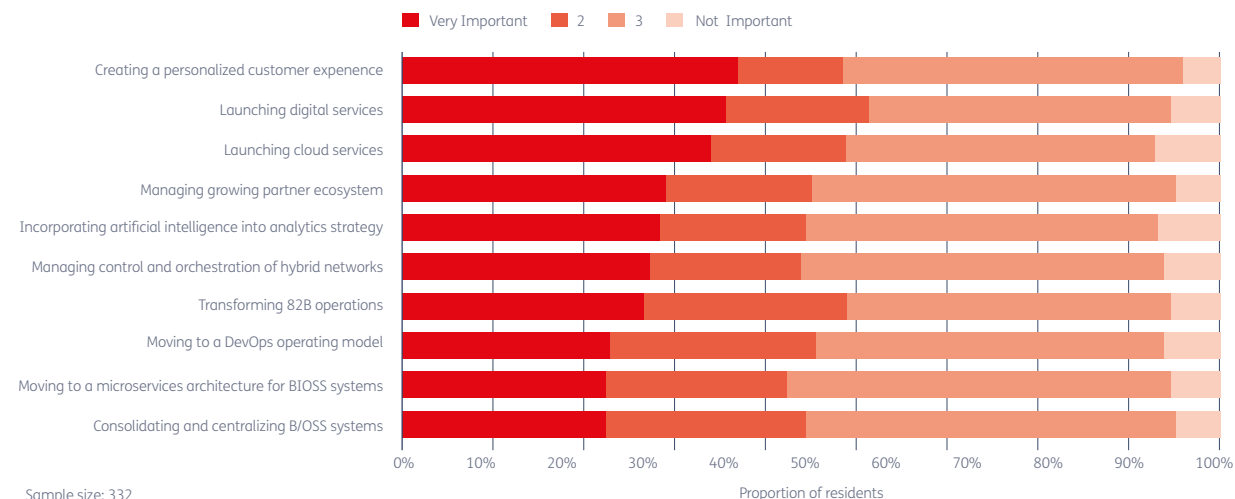
Preparing telecom IT and operations for the arrival of 5G and next-generation networks.

Using AI to streamline and automate BSS systems and revenue management processes.

Telecom IT forecast – increased breadth and granularity, including expanding the OSS/BSS coverage to encompass telecom analytics.

Creating a personalized customer experience and launching digital services are considered to be a top business challenge facing CSPs

Business Challenges

■ Very Important   ■ 2   ■ 3   ■ Not Important

Creating a personalized customer experience
Launching digital services
Launching cloud services
Managing growing partner ecosystem
Incorporating artificial intelligence into analytics strategy
Managing control and orchestration of hybrid networks
Transforming 82B operations
Moving to a DevOps operating model
Moving to a microservices architecture for BIOSS systems
Consolidating and centralizing B/OSS systems

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Proportion of residents

Sample size: 332
Question. How important are the following business challenges', Vertical: Telecom

Media Technology

The Market Challenge

Building cost-effective, personalized lifetime engagement is fast becoming the core business challenge for media enterprises. A second wave of personalization – personalization 2.0 – will require premium content providers to deliver a highly tailored experience at multiple touch points across the customer journey.

Top business priorities include improving operational productivity and streamlined delivery, partly driven by the surge in audience acquisition costs. Unified user experience on multiple devices anywhere and everywhere is also key in today's highly competitive multi-screen video services segment. Last but not least, real-time monitoring, tracking, and protection of digital assets is essential, because the rising cost of premium digital asset acquisition means that media companies need to safeguard content across the content supply chain.
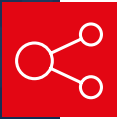
How Ovum helps you

Delivering key insights on media technology adoption trends in order to aid our clients with their investment and development plans.

Helping media companies to leverage the right vendors for their workflow unification, automation, and orchestration needs.

Identifying appropriate user experience and user interface technologies to deliver personalization.

Evaluating partner ecosystems in the personalization 2.0 era.

Assisting media enterprises with business and technology road-maps across the media content supply chain.

Identifying new market opportunities in niche media segments such as travel & tourism, business TV, and theme parks

Identifying strategies to address piracy revenue leakage.

Kedar Mohite
Senior Analyst

"
The global TV and video anti-piracy services segment is already worth $1.1bn, but with strong year-on-year growth it is expected to more than double in size by 2021.
"

Key Deliverables

Innovation case studies across premium media asset segments, including coverage of broadcast TV & video, sports franchises, and digital service providers (cable TV, satellite TV, and telecommunication media services business.)

On the Radar deliverables around TV & video piracy detection and prevention technologies, along with ad fraud.

Media transformation ICT Services forecast - encompassing TV & video broadcasters, sports franchises, and digital service providers, as well as new theme parks and video gaming segments.

Strategic assessment, and SWOT analysis of vendors in the workflow unification and orchestration segments.

Opinion and short research notes on personalized recommendation, content search, syndication, and data discovery vendors in the media & entertainment vertical.

Themes for 2019

Unification of the media content supply chain
Ovum research suggests that one of the top three business challenges facing media enterprises is the creation of a single media content supply chain. The unification of linear and non-linear TV & video workflows is necessary to reduce the inefficiencies stemming from multiple, unstructured approaches. New technologies are required to enable synergy between multiple customer engagement channels.

Change will also be driven by the arrival of 5G which, in order to deliver on its promise of new business models, will require streamlined digital user lifecycle management and well-trusted partner management.

Delivering personalization and a converged user experience
Creating a highly tailored experience at multiple touch points across the customer journey is a complex and capital-intensive process, but it is one capable of delivering clear long-term benefits for premium content owners. Media companies will need to leverage new technologies to support real-time user experience customization for digital users. Delivering a unified user experience across multiple devices will also be essential.

Managed Security as a Service across the value chain
Building a horizontally integrated secured content supply chain will help not only in lowering revenue leakage, but also in improving returns on premium media assets. Ovum estimates that in 2018, digital TV & video piracy losses amounted to over $37bn. Continuous real-time tracking, detection and prevention of security breaches will be crucial if media enterprises are to strengthen their market penetration in the highly competitive multi-screen video services market. Managed security as a service will play a strong role.

What's new

Analysis of personalized recommendation technologies in time-bound areas such as sports and live events.

SWOT analysis of new technology stacks based around the unification and orchestration of linear and non-linear TV & video workflows.

Forecast of global TV & video anti-piracy services – including segments such as video games, film, and sports franchises.

Forecast of global premium media content protection technologies – including technology stacks such as DRM, watermarking, fingerprinting, and paywalls.

Global TV & video anti-piracy services spend (2017-2021) $mn

		CAGR: 40%		
625	1,054	1,579	1,955	2,399
2017	2018	2019	2020	2021
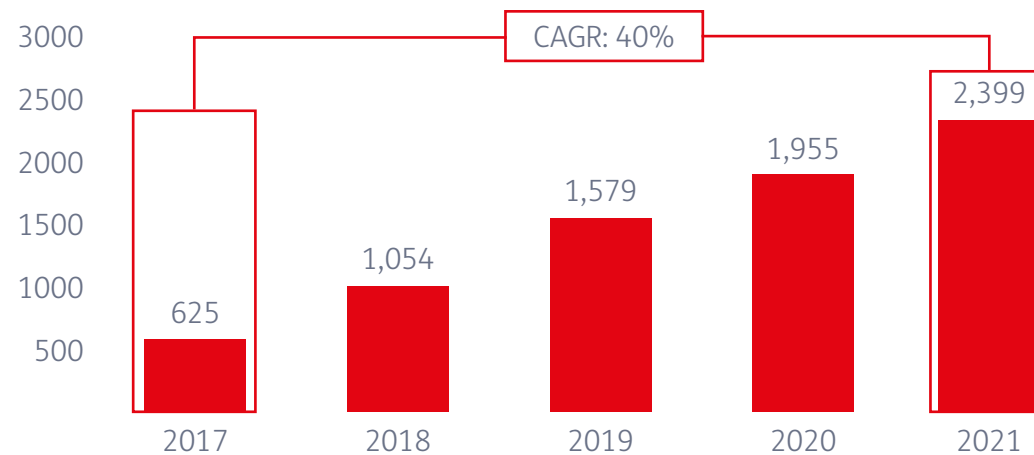
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Want to learn more?
[Click here](#) to request a callback.