

Which verticals drive demand for high capacity and services?



Ovum finds that vertical industries use high-capacity services in different ways. The public sector, healthcare industry, and utilities sector operate more local, regional, and national networks. These networks are kept contained, and prioritize data privacy and security. In contrast, finance and logistics verticals tend to operate far-reaching, highly interconnected global networks. Security is important in these networks, but does not take priority over consistent performance and low latency, which are equally important.

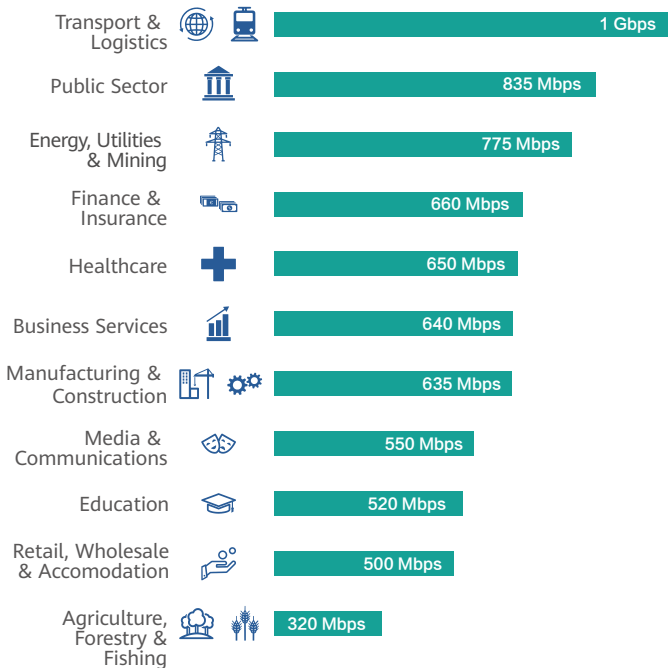
By Brian Washburn, Practice Leader of Ovum

Network transformation requires a more agile network and greater capacity

Enterprises are on a path to transform their networks. For example, most companies have already attached cloud services to their network. When enterprises adopt digital transformation, they build their business on data, which needs higher-speed circuits and larger ports. As shown in Figure 1, Ovum’s enterprise research finds vertical industries that buy the highest-capacity network services on average include logistics and transport (shipping and fulfillment), public sector (large government agencies), and major utilities.

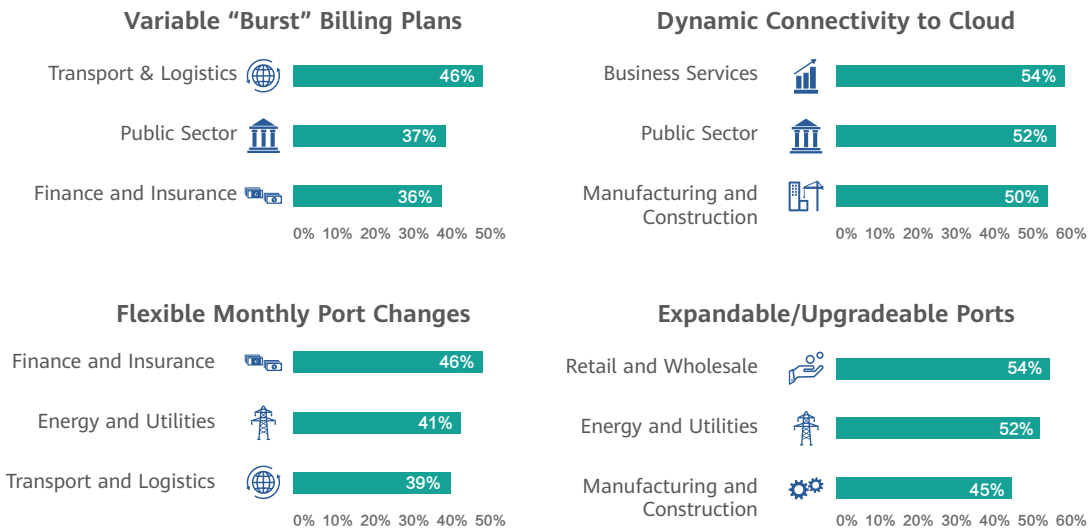
Enterprises also need security and network performance. Ovum enterprise research on service level agreement (SLA) requirements finds that transport & logistics has the most performance

Figure 1 Enterprise verticals and their average highest-speed WAN ports in service



Source: Ovum Enterprise Network Services survey

Figure 2 Lead enterprise verticals that adopt flexible bandwidth billing plans



Source: Ovum Enterprise Network Services survey

demands, followed by finance and business services. Across all verticals, 45 percent of enterprises rank secure data SLA as very important to their business.

Vertical industries use high-capacity services in different ways. Ovum's research finds public sector, healthcare, and utilities operate more local, regional, and national networks. Their networks are kept contained, and place a high priority on data privacy and security. Finance and logistics verticals tend to operate far-reaching, highly interconnected global networks. Security is important, but consistent performance and low latency are just as important.

Demand for flexible capacity services is limited but growing












































While enterprise appetite for capacity and cloud services is growing, Ovum has found that IT executives have been slower to accept flexible network plans. Figure 2 shows some key verticals that lead adoption across a range of dynamic billing plans,

based on Ovum's enterprise survey research. Ovum's survey research shows a near-even split: 52 percent of enterprises still favor static bandwidth contracts over flexible plans; the other 48 percent mix plans or prefer dynamic network pricing.

From its conversations with enterprise IT executives, Ovum found that finance, public sector, and logistics are more likely to use dynamic network services somewhere in the company just because they're large bandwidth consumers. Manufacturing and retail IT executives shared with Ovum that they use open, easily expanded contracts because they need to be flexible to set up new locations and grow capacity. The business services vertical includes software and professional services companies. In its interviews with IT executives Ovum finds that these companies increasingly use cloud for their project-based work. They're more willing to buy dynamic network services for their dynamic cloud workloads.

Applications shape and drive enterprise network plans

Figure 3 Top enterprise applications by vertical

 Transport and Logistics	 IT Operations-83%	 IoT & Digital & Transformation-78%	 Internet & Access-74%
 Public Sector	 Custom Applications-75%	 UC and Collaboration-71%	 Internet & Access-71%
 Energy and Utilities	 Enterprise Software-70%	 Custom & Applications-67%	 Data Storage & Retrieval-63%
 Finance and Insurance	 Custom Applications-83%	 IoT & Digital & Transformation-74%	 Enterprise Software-72%
 Healthcare	 Enterprise Software-81%	 IoT & Digital & Transformation-74%	 Custom & Applications-67%
 Business Services	 Custom Applications-80%	 Applications & Development-80%	 [Multi-way tie: UC, IoT/digital, and storage-62%]
 Manufacturing & Construction	 Enterprise Software-63%	 IoT & Digital & Transformation-60%	 Custom Applications-60%
 Media & Communications	 Enterprise Software-86%	 Internet & Access-81%	 Custom Applications-74%
 Education	 Internet Access-81%	 IT & Operations-69%	 Data Storage & Retrieval-69%
 Retail, Wholesale & Accommodation	 Enterprise Software-77%	 IT & Operations-69%	 Custom Applications-67%
 Agriculture, Forestry & Fishing	 IoT & Digital Transformation-70%	 [Multi-way tie: Internet access, UC, and enterprise software-65%]	

Source: Ovum Enterprise Network Services survey

Enterprises buy private network ports to get capacity services that support their companies' wide range of applications. Figure 3 shows the top applications that influence network purchase decisions across vertical industries. Enterprises most commonly rank the following applications as priorities: Enterprise software such as enterprise resource planning/supply chain management and customer relationship management; in-house, custom-built applications; and new digital applications, including the Internet of Things (IoT).

In its discussions with enterprise IT executives, Ovum found that applications increasingly drive other ICT buying decisions. For example, IoT and digital transformation are built to be cloud-native, one of many factors pushing enterprises to be more cloud-centric. In its survey research, Ovum found that 90 percent of enterprises list cloud-enablement among their network-related IT priorities.

Ovum's interviews with enterprise IT executives found that there are big differences in software and data for each vertical industry. IT managers in manufacturing shared with Ovum that resource planning and supply chain management are critical. Supply chain management is also important in the logistics and transport sector, but logistics and transport companies also have other priorities, such as managing complex IT environments and supporting a large interconnected ecosystem of partners. In contrast, Ovum's discussions with IT executives in healthcare covers electronic health records, digitalizing and automating patient processes, collecting data from medical devices, and tracking the location of on-site equipment. For key applications, types of enterprise software, and digital transformation, Ovum recommends the following for telcos:

Enterprise software: Enterprise software is a wide category that includes very demanding applications.

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Telcos need to show both high performance and a consistent track record. SAP HANA can be very demanding: Data replication requires a 10 Gbps connection and <2ms round-trip latency.

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To sell in this space effectively, telcos need to show both high performance and a consistent track record. SAP HANA can be very demanding: Data replication requires a 10 Gbps connection and <2ms round-trip latency. Enterprise resource planning such as SAP Cloud recommends <100 ms round-trip latency, and <250ms global round-trip latency between client and data center. Microsoft Dynamics 365 for customer relationship management (CRM) recommends <150 ms round-trip latency for a good user experience. Virtual desktop infrastructure (VDI) such as Citrix similarly recommends <150ms round-trip latency. Telcos will need to meet application performance levels to keep customers satisfied.

IoT and digital transformation: New digital applications are deployed cloud-native. Many of these applications are streamlined and latency tolerant. A few areas are under development, such as autonomous cars and augmented/virtual reality, will have extreme performance needs someday. Today, telcos can address most enterprise digital applications by offering secure connectivity to cloud with basic performance and traffic delivery guarantees.

Network providers need to adjust delivery to vertical industry needs

Based on enterprise survey research and IT executive interviews, Ovum has the following observations and recommendations for network providers targeting specific vertical industries.

Transport and logistics: These enterprises tend to be large and decentralized. Telcos targeting this sector need to support far-reaching global or regional networks. These enterprises buy high-capacity services to operate sophisticated networks emphasizing IT operations, mixing private WAN and public Internet. Successful telcos will combine private line needs with secure Internet and with support for IT applications such as cargo tracking, fleet management, and asset management. UAE-based Etisalat is an example of an operator committed to supply chain management across freight, fleet, inventory, warehousing, materials management, and enterprise resource planning. Etisalat capitalizes on the fact that the world's major logistics companies have headquarters or large regional hubs in the Middle East.

Energy and utilities: Energy and utilities companies are mostly national organizations. Most behave like commercial companies. This sector often wrestles with managing large amounts of customer and operations data. Successful telcos in this vertical

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Ovum found that the diverse business services vertical contains many mid-range, regional enterprises. These businesses are often project-based, and therefore likelier to embrace dynamic network connectivity to cloud.

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show how network solutions help address big data challenges.

Finance and insurance: This sector includes the world’s largest, most globally distributed enterprises. The sector also has a diverse collection of companies by size and geographic coverage. Finance is a network-hungry and innovation-hungry business, but it faces strong regulatory and compliance restrictions. Successful telcos build a dedicated practice just for the finance vertical that understands industry compliance. In the past, BT (with Radianz) and CenturyLink (with Savvis) were effective in bundling financial extranet services with network services. Newer operators such as GTT win financial customers because the telco owns key low-latency routes between major global trading exchanges.

Business services: Ovum found that diverse business services vertical contains many mid-range, regional enterprises. These businesses are often project-based, and therefore likelier to embrace dynamic network connectivity to cloud. The vertical sector is diverse and has many different applications priorities. Successful telcos target business services by subtype – such as legal services or software developers – for the right mix of network offers.

Manufacturing and construction: This vertical segment concentrates around mid-range, regional enterprises. Successful telcos in this vertical offer open-ended contracts that let companies add new network sites and more capacity when and where they need it. Successful telcos also support the sector’s commonly used supply chain/ fulfillment applications, and support their new digital applications. Tata Communications is an example of an operator that targets the manufacturing vertical. The operator is tracking the “Industrie 4.0” movement as well as industrial IoT on the factory floor. Tata Communications supports supply chain management, and sells flexible bandwidth plans that let manufacturing companies add new sites and capacity easily.

Retail, wholesale, and accommodation: These companies tend to be smaller, and national or regional. The retail industry is especially cost-sensitive, and is more likely to want flexible contracts that add network sites and bandwidth as they are needed. Successful telcos need to find ways to keep down network prices, and show how they save costs in other ways such as reducing downtime or increasing productivity. They can offer value-adds such as guest Internet and support for e-commerce. [www.owm.com](#)