

**Ofcom Call for Inputs:
Designing the broadband universal service obligation**

Response from Cisco

Network Use and the Digital Value at Stake

- It is clear that digitisation is now at the heart of both economic growth and the development and delivery of new public services.
- The latest version of Cisco's [Visual Networking Index](#) (VNI) was released in June 2016 and sets out a credible, five-year forecast for network usage across the world. The VNI forecasts that IP traffic in the UK would increase by a compound annual growth rate (CAGR) of 21% between 2015 and 2020 (from 2.9 to 7.6 exabytes per month).
- The average internet user in the UK will generate 93.9 gigabytes of internet traffic per month in 2020, up from 40 gigabytes per month in 2015, a CAGR of 19%. And in terms of households, the average household will generate 202.1 gigabytes of traffic per month in 2020, up from 84.5 gigabytes per month in 2015.
- In terms of mobile data, the VNI forecasts that UK mobile data usage will increase at a 47% CAGR between 2015 and 2020 (from 0.1 exabytes to 0.6 exabytes per month).
- Cisco's [Value at Stake](#) analysis identifies the value that digitisation adds to the private sector. In the UK, the analysis showed that there was nearly \$1tn digital value at stake over the decade from 2015. This analysis also shows that digitisation is accelerating across different economic sectors and that digital value is increasingly coming from consumers (eg consumer-focused digital solutions such as telehealth, wearables etc).
- In terms of the role of digitisation in the delivery of public services, the UK government is a global leader through the work of the Government Digital Service and the Digital by Default principle. This approach was boosted in the 2015 Autumn Statement which outlined a near doubling of the annual budget for the [Government Digital Service](#).
- Taken together, these three factors show the central role the internet is playing in new private sector growth and the delivery of public services.

Universal Coverage

- Central to facilitating this economic growth and delivery of digital public services in the future will be ensuring we have the right digital networks across the United Kingdom. Without adequate internet coverage, we will be denying opportunities for economic growth and denying people access to valuable public services.
- Cisco is therefore strongly supportive of the objective of delivering superfast connectivity across the United Kingdom.
- There are a range of technologies that can deliver these services and we support technology-neutral policies in this respect. Wherever possible, we would encourage fixed and mobile technologies being deployed in parallel. From the huge demand for wireless

devices and their usage, it is clear that the edge of the Internet will be predominantly wireless, whether that edge device is held in someone's hand or is a sensor or machine-based transmitter. But to deliver connectivity to a cellular transmitter or Wi-Fi transmitter, robust fixed networks are needed.

Universal Service Obligation

- We would like to encourage Ofcom to maintain its focus on delivering this universal coverage through creating the right market and regulatory conditions for private sector investment in broadband networks.
- A number of changes to the regulatory framework for broadband delivery are currently being introduced. Ofcom's recent Digital Communications Review, the forthcoming revision of the Electronic Communications Code and the transposition of the EU Broadband Cost Reduction Directive are all designed to incentivise investment in broadband in some form. We see a strong case for allowing these initiatives to bed down before introducing further measures to address barriers to achieving universal coverage.
- Once these measures have been introduced and their impact seen, there may be a case for a mechanism such as a USO to address any specific cases where commercial investment is not viable due to issues such as a very challenging geography or a lack of population density.

USO Technical Requirements

- In terms of specifying the minimum technical performance of the USO, the Prime Minister has already set out the headline 10Mbit/second download speed. In contrast, the [US FCC](#) has set a goal of 25 Mbps download and 3 Mbps upload, stating that 90% of the US population has access to broadband networks that support these speeds today. We encourage Ofcom to be ambitious in articulating its goals, while being realistic about establishing *minimum* technical performance required for universal service.
- It will be important that Ofcom recommends further minimum technical specifications beyond the headline download speed to ensure that internet provided through the USO allow users to enjoy a reasonable range of services. This means, for example, agreeing that 10Mbits/second should be available for a minimum percentage of time and agreeing on a minimum upload speed to allow reliable bidirectional video conferencing, something that will become increasingly important for delivering health, education and other public services as well as flexible working.
- Also important here will be a mechanism to evaluate quality of the high speed connections, such as latency and packet loss, etc. It is difficult to set minimum standards for these measurements as these are influenced by network handoffs that make end device measurements inaccurate in that some portion of the transmission is outside of the operator's control. The US FCC has been wrestling with these issues for some time, and could perhaps serve as a [starting point](#) for further examination of quality issues.
- Any further technical specifications should be set out in a simple, transparent way so that the user understands easily what they are receiving and can compare offerings.

- In this context, Cisco would also like to encourage Ofcom to continue its work on quality of experience of internet services in general. The current focus on increasing headline download speeds needs to be matched with a drive to improve upload speeds, latency and other factors that are critical to allowing cloud, IoT and many other internet-based services to be developed and introduced to the market.

Funding

- If, in the context of the existing and planned regulatory changes mentioned above, a USO is still deemed necessary to deliver a minimum universal broadband offer we think it would make most sense for the funding for this to be split between the person requesting the service and the public purse. This funding mechanism would reflect the economic and societal goals of the USO and ensure the USO is affordable. This funding system would also avoid a situation whereby a private sector-funded scheme simply diverts much-needed investment from elsewhere or leads to higher prices for consumers across the country as telecoms companies aim to recover USO-related costs.
- Ofcom should examine what sort of funding intervention is required. There may be geographies, for example, where the market barrier is the initial investment in connectivity (eg a rural town that lacks fibre connectivity, but that has a concentration of business and residential users that could support an operator's recurring cost if support were available for an initial capital investment). This would suggest a one-time infusion of capital to jump start broadband availability. Other geographies, such as less-densely populated areas, might need support both for the initial capital demands and recurring costs.

Review and wider considerations

- Any USO should be reviewed every three to five years to ensure the services being offered over the USO offer broadly keep in line with those available to other users in the country. It will be important to establish clear criteria against which reviews are carried out and both download and upload speeds should be included here.
- In terms of judging the success of the USO, Ofcom should take into account the number of requests that have been made and what proportion of those have been fulfilled and ensure these figures are complimented with an understanding of any further barriers to take up and delivery.

Matt Houlihan

Head of Government Affairs

Cisco UK and Ireland

mahoulih@cisco.com

+ 44 (0) 7482 372 582