Panel 2.1

Improving Networks and Services through Convergence
Objectives

Few sectors have experienced more change in recent years than the communication and digital services industries. The changes have been spurred by growth in fixed and mobile broadband penetration rates (Figure 1) and by ever more innovation in electronics technologies and software. As a result of convergence, operators of once separate infrastructures, and providers without local access infrastructure, are developing the ability to deliver competing services. Services such as voice, video, music and other data-based services are now offered over the Internet. Content, such as music and video, is increasingly integrated with devices or software applications such as search and navigation. These transformations enable innovative service and application offerings, but also pose a range of challenges.

The discussion will focus on how digital convergence is leading policy makers and regulators to examine and consider tools and policies to expand global connectivity and to preserve the Internet as a global platform enabling new and innovative services over interconnected, high-speed networks.

**Figure 1. OECD historical fixed and mobile broadband penetration rates**
Subscriptions per 100 inhabitants

Source: OECD Broadband Portal, October 2015.

Key issues

*To spread and harness the benefits of connectivity as widely as possible, it is essential to ensure continued innovation, investment and competition in a converged communication environment.*

The increasing importance of Internet access for economic and social activities incites policy makers and communication regulators to achieve the widest possible expansion of broadband networks to meet the needs of individuals and businesses, in particular in rural and remote areas. To do so, they can take advantage of new and improved technological capabilities and encourage innovative public and private initiatives.
Policy makers and regulators must also recognise and harness the relationship between investment, competition and innovation. This is a particularly complex task in an increasingly converging market. Competition between communication networks and service providers generally leads to greater consumer choice, better quality communication services and lower prices. However, some argue that over-the-top provision of voice and video services inhibits infrastructure operators from investing in further network expansion and content creation. Others believe that it spurs innovation and competition in communication markets and thus encourages more investment. A dynamic interplay of competition, investment and innovation is essential to create a virtuous circle.

Q1: How can policy makers ensure the widest possible access to high quality competitive broadband networks?
Q2: How can government policy complement market mechanisms to optimise incentives for all market players to innovate, compete and invest along the entire value chain?

Services such as video distribution, shopping, navigation, and voice communication are increasingly offered over broadband networks or bundled on digital services platforms. This trend poses new challenges for policy makers and market participants.

Online video distributors, such as YouTube or Netflix, and Internet on-demand television offer content distribution over broadband networks, beyond traditional cable and broadcasting services. These offers benefit viewers in different ways: increased choice of devices to receive content; availability of different pricing models; broader choice of time and location to consume content; and increased interaction with that content. In telecommunication markets, the changes have been equally profound, with voice (VoIP) and text services such as WhatsApp, Skype or KakaoTalk offered over broadband networks. Similarly, both video and voice services may be bundled on social media digital services platforms such as Facebook. Beyond this, many sectors from accommodation to transport have witnessed new applications and service offerings via converged networks. They have become part of everyday life for many.

All of these over-the-top offerings both supplement and compete with services traditionally provided by telecommunication, cable and broadcasting companies, and are deemed valuable by consumers. However, they have raised the issue of the applicability of traditional communication regulations to these new service providers. The regulations were designed to promote efficient communication markets as well as other public policy goals such as the protection of children, access for the disabled, emergency services and universal service obligations in telephony markets. Today’s greater convergence and integration across multiple services, applications, platforms and devices call for reassessing existing communication and digital services regulations.

Q3: What should be the focus of a reassessment of existing regulation in light of convergence, and are regulators equipped to do so?
Q4: How can the relevant authorities best ensure that owners of communication networks and online platforms do not favour their own or affiliated applications/content over independent rivals in ways that may limit choice and innovation?
Industry consolidation in communication and digital services markets, including mergers between communication, applications and content providers, is raising new challenges for competition.

Recently, an increasing number of mergers have been approved between mobile operators, between fixed communication networks and mobile operators, and between communication networks and content providers and distributors. Many of the mergers point to an effort to ensure sufficient network capacity to offer converged and bundled services and products to meet further customer demand. Compared to standalone services, consumers may benefit from product bundles through emerging services, unified billing and potential discounts. However, bundles and market concentration may reduce competition, especially if some providers cannot replicate the bundles offered by merged companies (for example, a bundle containing premium television content).

**Q5:** How can both competition and innovation be protected in a context of industry consolidation (regarding access obligations, bundles, etc.)?