

Executive Summary

The COVID-19 pandemic has amplified all aspects of the digital transformation

Measures to contain the COVID-19 pandemic have profoundly affected OECD countries' relationship with digital technologies. Perhaps never before has our global dependency on digital technology touched all aspects of society – from education to health. Teleworking, distance learning and e-commerce have surged across the OECD, as has uptake of digital tools in businesses. Governments, businesses and academia have been quick to grasp the potential of artificial intelligence (AI) to contribute to the crisis response, as well as the need for timely, secure and reliable access to data within nations and across borders. Global sharing and collaboration in research data have reached unprecedented levels.

However, these Internet-based and bandwidth-intensive activities fuel demand for high-quality connectivity and lay bare existing digital divides, reinforcing the need for a more inclusive approach to digital transformation. With accelerated teleworking and e-commerce, the COVID-19 outbreak also creates a fertile environment for cybercriminals. Digital security agencies in the OECD promptly responded by sounding the alarm and supporting operators of critical activities, particularly in the health sector. Many agencies have issued guidance on the collection, processing and sharing of personal data to support contact tracing and other response measures.

The longer-term effects of the pandemic on digital transformation are only beginning to emerge. This report provides a snapshot of the state of the digital economy and policy environment, as a departure point for policy makers to shape a stronger, more inclusive digital future.

OECD countries are strengthening their strategic approach to policy for the digital transformation

Digital transformation affects economies and societies in complex and interrelated ways, demanding more strategic approaches. Thirty-four OECD countries have a national digital strategy to enhance policy co-ordination at the highest levels of government, most commonly the prime minister or chancellery, or a dedicated ministry or body. This strategic approach is especially apparent in the context of emerging technologies: by mid-2020, 24 OECD countries had a national AI strategy, with strong emphases on adoption and skills. Since 2017, many OECD countries have issued national 5G strategies. Additionally, most have comprehensive digital security strategies, although in many cases these are separate from national digital plans and lack independent budget and evaluation tools.

Connectivity continues to improve in OECD countries

Reliable connectivity is essential for the digital transformation as it facilitates interactions between people, organisations and machines. Communications subscriptions continue to grow rapidly: in the past eight years, the share of high-speed fibre in all fixed broadband subscriptions in the OECD has more than doubled, and has risen to at least 50% in nine OECD countries. Among businesses, the access gap between large and small firms narrowed across the OECD, with 93% of enterprises having a broadband connection in 2019. The average mobile data usage per subscription in the OECD quadrupled in four years. It reached 4.6 GB per month in 2018, while prices for high-usage mobile broadband plans decreased by about 60% between 2013 and 2019. Finally, as of June 2020, 5G commercial services were available in select locations in 22 OECD countries. To further increase affordable access to high-speed broadband, OECD countries are implementing policy and regulatory measures to ensure efficient spectrum management, facilitate deployment and access to backhaul and backbone facilities, and encourage new forms of infrastructure sharing.

Internet use has risen fast, but the digital divide remains

Internet uptake among both individuals and businesses continues to grow although divides remain in capabilities and effective use.

In 2019, 70% to 95% of adults used the Internet in OECD countries and smartphones became the favoured device for Internet access. Individuals also spend more time on line, with daily use in the OECD increasing by 30 minutes on average over 2014-19. Differences in use by age group or education level, however, persist. For example, only 58% of individuals aged 55-74 used the Internet frequently in 2019 – up from 30% in 2010, but still well below the nearly 95% share of daily Internet users aged 16-24. In 2018, only 40% of adults in OECD countries with low or no formal education used the Internet to interact with public authorities compared to 80% of those with tertiary education.

Gaps also persist between large and small firms. For instance, e-commerce accounted for 24% of economic turnover in large firms in 2019, but only 10% in small firms.

Big data create new opportunities for businesses and consumers, and new challenges for security and privacy

The use of data – whether sold to third parties or used by firms to advertise or tailor their own products – has become integral to business models. On average, 12% of businesses in the OECD performed big data analytics in 2017 – and up to 33% among large firms. Social media were the main source with their data used by half of businesses performing big data analytics in the OECD.

Data-intensive technologies such as AI and the Internet of Things (IoT) offer greater consumer choice and personalisation. At the same time, they pose new risks to safety, privacy and security, and may discriminate against disadvantaged groups such as women and ethnic minorities. Already in 2019, over 80% of OECD countries reported AI and big data analytics as the biggest challenges to privacy and personal data protection, followed closely by the IoT and biometrics.

Against this backdrop, governments are implementing policies to raise awareness about privacy and data protection frameworks and strengthen their enforcement, while promoting accountability for data controllers. OECD countries are also seeking policy solutions to address digital security issues and incentivise good practices. These efforts take on additional importance as economies and societies move steadily on line.



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