



What COVID-19 has Taught Us about Digital Transformation of the Economy

Early Lessons Learned September 2020

The COVID-19 pandemic has highlighted the transformative power of digital technologies. These cutting-edge technologies not only have enabled real-time information exchanges about the virus, but also have facilitated the provision of critical medical services and government financial support for business and individuals as well as provided a means of continuing commercial and economic activity. The ability to connect online has served as a lifeline to literally millions of global citizens anxious for safe, virtual social engagement and a way to continue their children's education, among other societal needs.

Responding quickly to the global crisis, companies across all sectors stepped up to work closely with governments and other stakeholders to deploy and drive digital technology solutions in response to these urgent medical, economic, and social needs. Whether it be via AI-powered applications, enhanced broadband connectivity, cloud computing services, data and cybersecurity or other digital technologies, companies in all sectors have been proving how important digital technology is for the health and well-being of all.

Even more important, digital technologies have the potential to shape a sustainable recovery from the pandemic, including accelerating the digitization of such government services as licensing, permitting, tax collection and procurement. Key to realizing this, however, is a policy framework that creates an enabling environment for investment in technology innovation and deployment. Such policies may address economic, social/cultural, technical, and governance issues, all of which are interlinked and cross-cutting. This *holistic* approach will best enable development of a secure digital infrastructural foundation to realize greater resilience and preparedness in the face of whatever natural or man-made challenge we may face going forward.

As of September 2020, the COVID-19 virus still was far from under control – and was anticipated to remain a challenge well into 2021. U.S. business regards the following issues as ***key early lessons*** from the COVID-19 crisis. These lessons will require the urgent attention of policymakers to address healthcare, employment, education, commercial, and economic development needs in the near-term. Equally important, is imperative that we accelerate policy implementation in order to realize the best chance of a soft landing and solid return to commercial and economic activity when the pandemic eventually has been conquered through rigorous scientific means.

Infrastructure, Connectivity, and Spectrum – Public policies should focus on fostering robust connectivity. The benefits of digital transformation in responding to a global crisis can only be realized if there is adequate broadband infrastructure and spectrum. In addition, the availability of licensed spectrum for exclusive use and shared use as well as unlicensed use has an important and complementary role in promoting the accessibility of the Internet and its developmental potential. There are many important uses of spectrum, including broadcast and mobile broadband as well as for Wi-Fi.

Policy Recommendation – Governments should incentivize investment in broadband technologies and streamline regulatory policies in order to facilitate broadband deployment, focusing on under-served areas. In addition, effective and technologically neutral management of spectrum – and increasingly scarce resource -- must be a priority for policymakers while ensuring the integrity of services offered by existing spectrum license holders.

Capacity Building and Bridging the Digital Divide – The COVID-19 crisis highlighted the gap between the digital “haves” and “have nots,” the latter group suffering most acutely from the virus access to healthcare and medical resources. In a 2017 report, the International Telecommunication Union (ITU) found that while more than 7 billion people now have access to voice services, more than 70 per cent of those living in the least developed countries (LDCs) still cannot afford a basic Internet connection, and less than half the people in the world regularly use the Internet¹.

Policy Recommendation -- In order to proactively safeguard against the devastating effects of future crises, the global community must join in building digital and connectivity capacity in developing countries as well as enabling the necessary digital skills, especially for marginalized communities, to fully utilize internet connectivity.

Closing the E-Government Utilization Gap – Related to the above, the pandemic also exposed significant gaps in the ability of our governments to pivot online quickly to provide services. Government services simply have not digitized fast enough or taken full advantage of the availability of broadband to improve their customer service, capacity, resiliency, adaptability, transparency, and security. Not only is the physical infrastructure lacking, but the rules for provisioning virtual services and teleworking for government employees remain unclear as well. Given the demonstrated capacity and capability of our networks, governments are suffering from a utilization diffusion lag, which particularly harms marginalized and vulnerable communities.

Policy Recommendation – Governments should take aggressive steps to address their technology utilization gaps and leverage the capacity and capability of networks to conduct government business and offer online citizen services. In doing so, governments should ensure data and cybersecurity are prioritized to protect government and citizen information and harness the benefits of cloud computing for operational efficiency. To speed the rebuilding of the economy, governments should prioritize the digitization of the licensing and permitting process, such as in construction, to provide rapid stimulus to a global economy slowed by COVID-19. Governments also should leverage public-private partnerships and invest in the development, deployment, and procurement of digital services for the benefit of their citizens.

Data Flows and Trust – U.S. business embraces the view that the free flow of data and information is critical for economic development and addressing societal needs. The pandemic underscored the imperative for medical professionals around the world to share data in real-time critical to containing and mitigating the virus. That could not happen if a country’s policies hampered data flows. At the same time, however, U.S. business realizes that the medical, economic and other societal benefits enabled by data flows will only be embraced by consumers, businesses, and governments who trust the online environment. Users must feel confident that the privacy of their personal data will be respected and that their online systems are secure.

¹ Maximizing availability of international connectivity in developing countries: Strategies to ensure global digital inclusion, 2017: https://www.itu.int/pub/D-PREF-BB.GDI_01-2017/

Policy Recommendation -- Business believes that trust in the online environment is best achieved through risk-based and globally interoperable approaches to privacy and security protections. These conditions will ensure that data free flows with trust, an approach endorsed by the G20 countries in 2019.

Data and Cybersecurity – The importance of data and cybersecurity to the accelerated digital transformation brought on by the pandemic should not be understated. As business and government networks have become more decentralized with remote work, new data and cybersecurity risks and vulnerabilities have emerged. Organizational leaders have needed to ensure they are extending the same security capabilities and best practices in their enterprise networks to all at-home network environments, leveraging cloud-delivered security technologies to do so rapidly and at scale. The pandemic has reshaped many global governments’ understanding of critical infrastructure and “essential” services, to better recognize the complex and interdependent nature of modern supply chains and that data and cybersecurity are essential to business continuity.

Policy Recommendation - Governments should recognize the criticality of cybersecurity to continuity of essential services across all critical infrastructure sectors; help educate businesses and citizens about data and cybersecurity risk management and their respective responsibilities related to secure remote networking; incentivize the use of cloud-delivered security to enable secure remote workforces and schools at scale; and promote greater voluntary sharing of cyberthreat information and online safety best practices..

E-Commerce and Delivery of Essential Goods and Services – While the COVID-19 crisis accelerated digital transformation in general, the accelerated progress was especially evident with respect to the online sale and provision of goods and services. E-commerce driven by large companies and SMEs alike helped to ensure economic continuity especially during the early stages of the COVID-19 pandemic.²

Policy Recommendation -- Policies should be reviewed and updated, if necessary, to ensure that they do not impede expeditious online provision of goods and services, including public sector services.

Importance of Artificial Intelligence (AI) – The pandemic highlighted how AI could be used to control the impacts of the virus as well as aid mitigation. For example, Amazon Web Services (AWS) launched the [AWS Diagnostic Development Initiative](#), committing \$20 million to accelerate diagnostic research, innovation, and development to speed collective understanding and detection of COVID-19 and other innovate diagnostic solutions to mitigate future infectious disease outbreaks. More broadly, U.S. business recognizes the potential of AI to address economic, societal, and environmental inequalities. AI and other virtual/augmented reality technologies will continue to evolve and develop in ways that will facilitate mitigation of future crises.

Policy Recommendation – Business believes that existing regulations are sufficient for many AI applications and that any new requirements should be carefully considered in consultation with stakeholders to ensure they are narrowly tailored to address specific concerns as they arise. It is essential that all stakeholders work together to shape the development of AI to foster trust and broaden deployment so we are poised to use it effectively in addressing future crises.

²During the January to mid-June 2020 period, , online retail orders had grown +96% in North America, 52% in Europe, 51% in APAC, and 162% elsewhere.. The US growth rate leveled off in July to mid-August period owing to a COVID-19 resurgence in parts of the United States, but e-commerce continues to remain strong in Europe the Americas, and the Asia-Pacific region. See <https://ccinsight.org/trends-by-location/#regional-trends>