3 World-Changing Opportunities Emerged While You Were Fighting COVID-19

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By Analyst(s): Jorge Lopez

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While COVID-19 distracted everybody, some revolutionary developments occurred that will create powerful forward momentum for business, the economy and the world. Executive leaders should include three positive impacts of technology innovation in strategic planning.

Overview

Impacts

- Everyone will be connected everywhere in the world.
- Autonomous operations will yield step change productivity increases.
- Companies and governments will compete on the speed of innovation.

Recommendations

Executive leaders who guide digital business in their enterprises:

- Explore new business opportunities by incorporating universal broadband access into strategic planning. Universal access might open new markets, make new customers available, or change the way that the enterprise markets and sells. For example, sales of products and services that depend on broadband connections could be extended to rural areas or developing economies that can't be served today.

- Place specific operations on the path to autonomous operations. Start with a proof of concept. Create a simulated, replicated operating facility at or near headquarters or a major operations center to test and fine-tune the concept before deploying in a new region.
Introduction

The pandemic drove many executive leaders into a temporary defensive crouch — they had to keep their people and their enterprises going under extremely difficult conditions. Most leaders didn’t have time for grand plans. With reopening, leaders are starting to stretch their ambitions again, but they may still be too cautious. While COVID-19 distracted everybody, some revolutionary developments occurred that will create powerful forward momentum for business, the economy and the world.

Three positive impacts of technology innovation will create opportunities for strong business growth that enterprises should exploit as they emerge from the pandemic (see Figure 1). When COVID-19 subsides, leaders should quickly shed caution — that will be the time to think big. Inspired, visionary leadership will win the day.

Figure 1. Technology and Innovation Accelerate Growth

- Increase the rate and focus of innovation by setting ambitious goals for product development teams and giving them the freedom to try new ways of operating. Test the concept with one team first (for an external or internal challenge), and roll it out to other teams when you have established effective practices.
Impacts and Recommendations

Everyone Will Be Connected Everywhere in the World

In June 2021, the president of satellite network Starlink said that it would be able to offer broadband internet access anywhere in the world as early as September 2021. ¹ Starlink already has 1,800 satellites in orbit and has been authorized to launch 12,000. Other active and proposed satellite networks to offer broadband access include China Satellite Network Group, Amazon's Project Kuiper, SES’s O3b mPOWER and OneWeb Satellites.

These satellite networks will bring broadband internet access to the roughly 3 billion people who lack it today. ² These people live primarily in poorer regions. Small communities can share the cost of devices to access the internet until the economics improve. But large numbers of people lack internet access even in developed countries — for example, 19 million Americans lack access, particularly in rural areas. ³

Global access will fuel long-term growth in trade, education, entertainment, banking and medicine. For example, IFC estimates that Africa's internet economy will rise from $115 billion in 2020 to $180 billion in 2025 or over 5% of GDP. ⁴ Moreover, broadband access will become available in remote locations, including the oceans, to improve safety, communications and living conditions.

Reinforcing trends include:

- Expanding broadband access has strong political support globally. ⁵ This must be matched with good public policy to promote trade, education and telemedicine. In some places, internet service providers will lobby the government to resist satellite services.

- The pandemic has given a boost to remote working and e-commerce.

- The technology for internet access via satellites already exists, although prices and latency must improve, as well as governance and ethics.

Recommendations:

- Increase the size of the talent pool that your enterprise draws from by finding and employing people with the right skills anywhere in the world.
Autonomous Operations Will Yield Step Change Productivity Increases

Artificial intelligence (AI) and the Internet of Things enable machines to perform sophisticated work that previously only humans could do in both asset-intensive and asset-light industries. Consequently, productive activities can be set up to operate autonomously, with little human intervention. This will fundamentally change the economics of some industries — for example:

- **Mining**: Resolute operates a fully autonomous or nearly autonomous underground gold mine in Mali. Fully autonomous or semiautonomous operations would require half the time and half the capital expenditure to open a new mine, because they require much less human infrastructure (see Three Steps to Hyperautomation). Previously uneconomic mineral deposits can be exploited, with much less risk to human life.

- **Roboadvisors**: Roboadvisors extend wealth management to customers with much less assets — as little as $50 versus $1 million and up for traditional wealth managers. For instance, roughly half of Americans have investable assets, but only 20% have access to financial advisors. Many banks have roboadvisors in their product portfolios, including BMO, Scotiabank, RBC, UBS, Goldman Sachs, Charles Schwab, BlackRock and E*TRADE. Roboadvisors manage at least $460 billion today, up 30% from the previous year. But they may provide the biggest impact as part of a hybrid model with human advisors (see Enhanced Hybrid Roboadvisor: Meet Wealth Client Segment Needs While Creating a Cyborg Advisor).

Autonomous operations can change the fundamental economics of a range of industries. It can either lower the cost floor significantly, or it can increase the effectiveness of human-led activities. These advantages can mean wider profit margins, greater resilience for the business or bigger customer impact (such as by developing relationships earlier in the customers’ lifetime).

Reinforcing trends include:
The technologies to support autonomous operations already exist and continue to make rapid strides.

Autonomous operations make onshoring of manufacturing feasible for countries that want to shorten supply chains after the disruption caused by the pandemic and trade wars.

Autonomous operations can replace tedious or dangerous human jobs and create higher-value jobs developing and using smart machines (see A Counterintuitive Way to Preempt Resistance to Hyperautomation: Promote the Plans).

**Recommendations:**

Evaluate whether specific operations can be put on the path to autonomous operations. Businesses that are the most likely candidates will have the following characteristics:

- Aspirations to grow and serve multiple global customers.
- An agile business architecture, especially to accommodate more-decentralized operations.
- Standardized products and services that require minimal local or regional customization (for example, user experience can be “localized” with apps).
- Global regulatory compliance and standards (especially for mission-critical software).
- Customers, suppliers and partners that operate across multiple geographies.
- Critical supply chain dependencies in politically troubled or potentially difficult regions.

Start small, with a proof of concept. Create a simulated, replicated operating facility (it could even be a virtual one, like a digital twin) at or near headquarters or a major operations center to test and fine-tune the concept before deploying in a new region. Aim at addressing a part of the supply chain that is dangerous, expensive and not especially complex.
Companies and Governments Will Compete on the Speed of Innovation

Disruptive events of all kinds are occurring with greater frequency — economic crises, digital disruption, epidemics, mergers and acquisitions, cyberattacks, and so on. No business strategy seems durable. But we have seen recent demonstrations of an ability to address disruption through the speed of innovation:

- **COVID-19:** Vaccines can take 10 to 15 years to develop. 9 Multiple COVID-19 vaccines were developed in less than a year by using existing work on a SARS vaccine and messenger RNA. It typically takes up to two years simply to identify antibodies from which a vaccine can be made. COVID-19 antibodies were identified in 24 days using new techniques. 10 Messenger RNA vaccines, monoclonal antibodies and other innovative techniques for treating COVID-19 can be used to treat cancer and other diseases.

- **Fighter jets:** The U.S. Air Force designed, built and flew a prototype of its next-generation fighter in less than a year. 11 (The previous generation fighter, the F-35, took five years to prototype.) The faster development is part of a strategy to counter military threats through innovation by developing and procuring new planes continually rather than in decade-long cycles.

The exponential threat of COVID-19 forced companies and governments to stretch their vision of what is possible — and they succeeded. Enterprises do not need to face an existential threat to do the same. They can design and test new products using innovative technologies in a fraction of the traditional development cycle. The enterprise can not only respond to disruptions; it can also disrupt competitors that still adhere to the old practices.

Reinforcing trends include:

- At many enterprises, the need to react quickly to the pandemic demonstrated an ability to innovate and make decisions quickly.

- Governments may be more open to innovative practices in procurement and in allowing more innovation in regulated industries.

- AI, digital twins, the Internet of Things and other advanced technologies can be applied to speed the development of new products.

*Recommendations:*
Increase the rate and focus of innovation by setting ambitious goals for product development teams and giving them the freedom to try new ways of operating. Test the concept with one team first (for an internal or external challenge), and roll it out to other teams when you have established effective practices.

Adapt venture capital practices for speeding innovation. For example, work on several potential solutions simultaneously, quickly kill ones that fail, and automatically fund the next step for those that prove out.

**Evidence**

We based this document on Gartner’s research into the innovation process and responding to exponential threats, as well as secondary research into recent innovations.

1. SpaceX’s Starlink Expects It Can Provide Global Coverage Around September, Reuters.

2. The world’s population is nearly 8 billion, while less than 5 billion have internet access. See [World Population Clock: 7.9 Billion People (2021)](https://www.worldometers.info/world-population/), Worldometer and [Internet Users in the World 2021](https://www.statista.com/topics/2139/internet-users/), Statista.


7. Syama: The First Fully Automated Mine, AZoMining.

8. Why Robo-Advisors Are Striving Toward a ‘Hybrid Model,’ as the Industry Passes the $460 Billion Mark, CNBC.


10. Military Programs Aiming to End Pandemics Forever — 60 Minutes, CBS.

Recommended by the Author

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