The COVID-19 Crisis Will Accelerate Enterprise Automation Plans

by Leslie Joseph
May 5, 2020

Why Read This Report

The COVID-19 health crisis is on everybody's mind. Once it passes — which it eventually will — one of its lasting legacies will be a renewed focus on automation. Application development and delivery (AD&D) professionals should read this report for perspectives on how companies see automation as increasingly urgent in the context of risk mitigation and strategic investment.

Key Takeaways

Recovery From COVID-19 Will Follow Previous Trends

Firms recovering from recent recessions have increased their investments in automation. This has led to jobless recoveries, particularly in cognitive job functions in industries that lend themselves to automation.

Automation Insulates And Lowers The Risks Of Work

The recovery will come. And when it does, the adoption of automation will take on a new urgency in the context of enterprise risk and resilience. Leaders will rethink old ways of tying work to specific locations or types of labor, whether that's human or digital.

Approach Automation With Empathy

Humans remain a vital piece of the automation puzzle. Build empathy and trust into your automation roadmap.

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COVID-19 Is Already Changing The Way We Work

The COVID-19 pandemic is an unprecedented event in every sphere of human life. As the situation evolves, governments and communities draw on their reserves of resolve and resilience to cope with and mitigate the crisis. At the same time, the coronavirus outbreak is causing structural changes within enterprises and in the world of work. The ray of hope is that this too shall pass. When that happens, some behaviors and changes adopted during the pandemic will remain with us and affect both the workforce and work itself. Automation has been a major force reshaping work since long before the pandemic; now, it's taking on a new urgency in the context of business risk and resiliency.

The Pandemic Has Already Reshaped Jobs

Jobless claims in the US rose dramatically starting in mid-March and soared to more than 22 million in just a month's time.[1] As millions across the world retreat indoors in partial to total lockdown, the economic engines of the world lie suspended. This has clear short-term and long-term implications:

- **The way we work will change.** While the trend of remote working was already on the rise, not all jobs can be performed remotely. Only 29% of Americans can work from home.[2] This skews heavily toward information workers and away from service workers. The pandemic is causing firms to look for creative ways — including communication tools, online education, and virtual events — to ensure continuity of work for employees practicing social distancing. These trends will persist after the pandemic, leading to greater acceptance of flexible working arrangements. Companies are already ramping up investments in cloud-based tools to facilitate extended periods of working from home.[3]
- **Global supply chains will move closer to home.** The early stages of the outbreak created supply-side shock, as China — its epicenter — accounted for 24% of the world's industrial value in 2017. Moreover, 22% of all global imports from China were of intermediate products, as opposed to finished goods.[4] This has placed enormous stress on global supply chains.[5] As the world emerges from the grip of the pandemic, business leaders in sectors including manufacturing and retail will look to bring their supply chains closer to key markets.[6] This will cause a move away from just-in-time supply and toward greater global diversification and technology-enabled demand responsiveness using big data, AI, and cloud technologies.

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› **The informal economy will bear the brunt.** The International Labour Organization estimates that the economic and labor crisis created by the COVID-19 pandemic may affect 1.25 billion workers, or 38% of the global workforce.[7] The informal economy ranges from 9% of GDP in North America to 34% in economies in sub-Saharan Africa.[8] The informal sector — traditionally associated with low productivity and high employment variability — has been hit hard by the sudden global shutdown.[9] As economies recover, some governments will focus on reducing the contribution from the informal economy. The gig economy will present itself as an important gateway for jobs in the unorganized sector to transition into the mainstream — but this will require significant cross-economy investments in reskilling.

› **Risk and resilience awareness take on a broader scope.** Enterprise risk assessment and business continuity (BC) planning are established practices at most enterprises. However, in practice, the event horizon for enterprise risk has been more short-term and localized. Business preparedness and contingency planning across many business functions have fallen short. For example, as several Indian IT outsourcers needed to rapidly enable their information workers to work from home, they struggled to equip desktop-bound employees with basic items such as laptops and other collaboration tools.

The Recovery From The Pandemic Will Be Unequal

Enterprises across the world are watching as large segments of their human workforce and human-driven value chains are suspended. As we emerge from the crisis, firms will look to automation as a way to mitigate the risks that future crises pose to the supply and productivity of human workers. They will invest more in cognitive capabilities and applied AI, industrial robotics, service robots, and robotic process automation (RPA).[10] However, these investments will have unequal impacts on the global workforce.

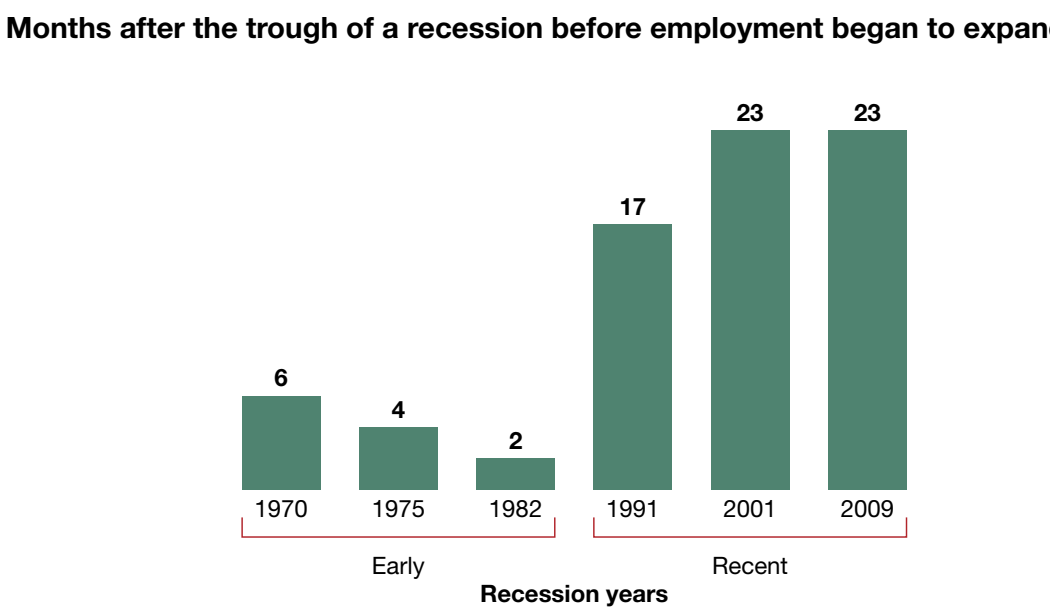
› **COVID-19 is a gray swan — and there will be others.** Futurists, popular culture, and business research have long predicted global pandemics such as COVID-19. Author Nassim Nicholas Taleb calls unpredictable, improbable events with high global impact "black swan" events.[11] COVID-19 is a "gray swan" — unpredictable, but highly probable and with a high global impact. Firms rarely factor the impact of such events into their strategic risk planning — but the current crisis has shown us that such events are not impossible. Indeed, as the effects of climate change, geopolitical risk, and global interdependencies grow, strategic risk planners will extend their domain to strategies to mitigate such events.

› **Automation increases after global shocks.** Recent recessions have often been followed by jobless recoveries.[12] In the aftermath of recessions between 1970 and 1982, it took two to six months for unemployment to begin to recover (see Figure 1). But in the wake of the three recessions between 1991 and 2009, this process took 17 to 23 months. And these jobless recoveries occurred predominantly in middle-skill, routine jobs due to increased effectiveness of and investments in automation technology. For example, in the UK, 25% of supermarket assistant jobs were eliminated due to automation between 2011 and 2017.[13] The aftermath of COVID-19 will be no different.

› **Job polarization will accelerate.** The impact of jobless recoveries via increased automation will deepen the automation trends that were already in progress pre-pandemic.[14] Routine jobs with a cognitive (i.e., nonmanual) aspect will continue to bear the highest risk as the automation water level rises. These include sales, administration, and support jobs that were already under pressure. Meanwhile, increased spending on the research, development, and implementation of technologies such as industrial robotics, drone-based delivery, and AI-controlled service robots will put pressure on the recovery of manual, routine jobs in manufacturing, logistics, and retail. Employment will polarize, with investments going toward digital elites, cross-domain knowledge workers, digital workforces, and technology to automate routine, low-skill jobs such as cubicle workers and coordinators.[15]

› **Technology will narrow the gap.** Technological advancement will be a key driver of the uptake of automation. AI and RPA have already introduced the world to digital workforces that can take on routine back- and front-office functions. In the current crisis, investments in drone-based delivery by Alibaba, Amazon, and JD.com and in robotic telemedicine by companies such as Denmark's UVD Robots and China's Yuoibot have demonstrated viability for larger-scale deployment.[16] The coronavirus pandemic is seeing national governments and institutions commit heavily to investments in AI-centric technologies such as synthetic biology, robotics, and drones. The impact of these investments will continue to show up long after the coronavirus has receded.

FIGURE 1 Job Recovery Trends After Past Recessions



Source: US Bureau of Labor Statistics Current Population Survey

COVID-19 Just Made Automation A Boardroom Imperative

While enterprises have long dealt with strategic risk management and BC planning, few anticipated or planned for the demand-side and supply-side shocks that an event such as a pandemic creates. Other side effects include currency fluctuations, credit squeezes, and impacts on the availability and morale of talent. This crisis is already forcing CEOs to expand the canvas of business risk to include unforeseen global events such as COVID-19. After the storm, risk and resiliency will emerge as key.

- **Automation is a hedge against white swans.** Organizations often make tradeoffs favoring short-term outcomes over long-term resilience. In the aftermath of COVID-19, BC planning will have to extend to account for unknown unknowns and their second- and third-order effects. Much automation has a transactional cost-reduction focus; some, particularly involving AI technologies and insights-driven automation, supports the transformation of parts of the business model. In the aftermath of the coronavirus crisis, CEOs will demand that their business leaders strategically focus on risk mitigation and recovery from global "white swan" events. Investments in automation can remove some risk of dependence on humans and adapt without intervention to demand fluctuations.
- **Intelligent systems will increasingly scrutinize and predict risk.** Analytical approaches to risk management, such as AI-based mining of external signals including unstructured data, will become an integral part of corporate risk management. BlueDot, a Canadian infectious disease surveillance company, predicted the outbreak and spread of the coronavirus as early as December 2019 by mining data from plant and animal disease networks, local-language news sources, and global airline ticketing systems.
- **Digital workforces will take on strategic urgency.** The footprint of intelligent automation has grown with increases in AI capability. Meanwhile, the value of a digital workforce is as compelling for large-scale risk mitigation as it is for cost: Digital labor does not fall ill and can perform repeatable tasks from anywhere with equal efficiency. In some circumstances, humans are riskier than robots; automobile manufacturing plants are shutting down not because of issues with robotic manufacturing lines but out of concern for the humans who work alongside them. However, firms will struggle with technical, structural, cultural, and business process change as they retool to make broader use of a digital workforce.[17]
- **Human labor will become a burstable commodity.** For firms that are advanced in their automation maturity, human labor will serve as a burstable commodity in times of peak demand. For example, in response to the increased demand for online commerce in the wave of the COVID-19 outbreak, Amazon announced that it is hiring 100,000 additional human workers to work in its warehouses and as delivery drivers. However, not every organization will succeed in this approach. Companies and leaders will need to retool the way they bring technology, culture, and organizational design to support the long-term management of an automation-fueled, adaptive workforce.[18]

Recommendations

The Time To Take A Long View Of Automation Is Now

The coronavirus crisis is already a defining event for business and society. Most firms currently have survival and sustenance on their mind. However, as the crisis recedes, expect the pattern of investments along the recovery path to follow past trends. Business and technology leaders will continue to invest in emerging intelligent automation technologies to increase the resiliency and adaptiveness of the business. The right recovery requires that AD&D pros and their companies:

- **Survive the storm.** Prioritize business viability and continuity. This includes improving crisis response protocols; working with supplier and partner networks to manage business impact; focusing on employee health and well-being; embracing digital intelligence channels; exploring new sales channels; and redeploying organizational resources to shore up revenue streams. Give your customers and workforce effective digital tools to engage with you, and work effectively, in these unusual times. Consider tools like RPA and chatbots to automate human-dependent processes that your humans may not be in a position to perform.
- **Build adaptiveness into the recovery plan.** As business recovers, pent-up demand is likely to resurge. Renew and systematically extend investments in emerging tech, modernization, and automation as a way to not just manage demand, but also develop resiliency for future storms. Look to build technology platforms and systems that offer failsafes and support BC. At the same time, this crisis has expanded our event horizon for risk to a global scope. Expand your organizational awareness of the sources and impact of risk and invest in appropriate mitigation strategies.
- **Rescope and retest older automation plans.** COVID-19 has radically altered the business landscape. Pre-coronavirus, 57% of global data and analytics decision makers at enterprises said that their firm had implemented automation technologies or were in the process of doing so.[19] However, many of these automation initiatives suffered from the problem of automation sprawl, ending up as disconnected, localized islands of automation across the enterprise.[20] In the post-pandemic recovery, enterprises must revisit their automation plans. Prioritize the reevaluation and rescoping of existing automation plans to serve the recovery cycle. Assess localized investments in chatbots, AI, or RPA within specific business functions, or catering to certain customer segments, for broad-based applicability and value. Make these evaluations based on the broader impact on revenue, cost, and risk.
- **Automate, but with empathy.** In the long run, the march of automation across the enterprise is inexorable. While this trend is consistent with earlier recessions and recoveries, modern intelligent automation technologies increasingly encroach on cognitive areas of human labor and interaction. Many of these, such as machine learning, are “fuzzy” and can inherit biases in training data or challenge the superiority of humans in the human-machine collaboration equation. Workers and leaders will require new skills, behaviors, and mindsets. The specter of a jobless recovery is

real, and the human impact of the crisis on the workforce will continue into recovery. Avoid the temptation to automate roughshod; instead, approach automation with empathy and trust and invest in increasing your firm's Robotics Quotient.[21]

Endnotes

[1] Source: Katia Dmitrieva, "U.S. Jobless Claims Top 5.2 Million, Erasing Decade of Job Gains," Bloomberg, April 16, 2020 (https://www.bloomberg.com/news/articles/2020-04-16/u-s-jobless-claims-total-5-25-million-in-week-four-of-lockdown).

[2] Source: US Bureau of Labor Statistics (https://www.bls.gov/news.release/flex2.t01.htm).

[3] Source: Leo Sun, "The Coronavirus Crisis Is Lighting a Fire Under Microsoft's Cloud Business," The Motley Fool, April 3, 2020 (https://www.fool.com/investing/2020/04/03/coronavirus-crisis-light-fire-microsoft-cloud-biz.aspx).

Source: Sweta Jaiswal, "ETFs to Gain on Cloud Computing Growth Amid Coronavirus Crisis," Yahoo Finance, April 4, 2020 (https://finance.yahoo.com/news/etfs-gain-cloud-computing-growth-203808551.html).

[4] Source: US Congressional Research Service (https://fas.org/sgp/crs/row/RL33536.pdf).

[5] Source: Joe Miller, Martin Arnold, and Miles Johnson, "European companies face coronavirus hit to supply chains," Financial Times, February 26, 2020 (https://www.ft.com/content/67e2d35c-589b-11ea-a528-dd0f971febbc).

Source: Claire Jiao, Siegfrid Alegado, and Ann Koh, "Ship Crews Stuck in Lockdown Strain Global Supply Chains," BloombergQuint, April 8, 2020 (https://www.bloombergquint.com/global-economics/ship-crews-stuck-in-lockdown-strain-global-supply-chains).

[6] Source: Fred Schmalz, "The coronavirus outbreak is disrupting supply chains around the world — here's how companies can adjust and prepare," Business Insider, March 26, 2020 (https://www.businessinsider.com/covid-19-disrupting-global-supply-chains-how-companies-can-react-2020-3).

[7] Source: International Labour Organization (https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_740877.pdf).

[8] Source: Thomas F. Alexander, "The Global Informal Economy: Large but On The Decline," IMF Blog, October 30, 2019 (https://blogs.imf.org/2019/10/30/the-global-informal-economy-large-but-on-the-decline/).

[9] An informal or gray economy is the part not taxed or monitored by any form of government. A significant proportion of the economies in developing countries, the informal economy differs from the gig economy, which is part of the formal economy. Activities of the informal economy — a gray market of labor — are not included in a country's gross national product or gross domestic product.

[10] See the upcoming Forrester report "COVID-19 Will Change Our Psychology And Roadmap For Automation."

[11] Source: Nassim Nicholas Taleb, The Black Swan: The Impact of the Highly Improbable, Random House, 2007.

[12] Source: Nir Jaimovich and Henry E. Siu, "Job Polarization And Jobless Recoveries," National Bureau of Economic Research, November 2018 (https://www.nber.org/papers/w18334.pdf).

[13] Source: UK Office for National Statistics (https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/theprobabilityofautomationinengland/2011and2017).

[14] See the Forrester report "Future Jobs: Plan Your Workforce For Automation Dividends And Deficits."

[15] See the Forrester report "Future Jobs: Plan Your Workforce For Automation Dividends And Deficits."

[16] Source: Bernard Marr, "Robots And Drones Are Now Used To Fight COVID-19," Forbes, March 18, 2020 (https://www.forbes.com/sites/bernardmarr/2020/03/18/how-robots-and-drones-are-helping-to-fight-coronavirus).

[17] See the Forrester report "The Forrester Tech Tide™: Smart Manufacturing, Q2 2020."

[18] See the Forrester report "The Adaptive Workforce Will Drive The Future Of Work."

[19] Source: Forrester Analytics Global Business Technographics® Data And Analytics Survey, 2019.

[20] For solutions to the islands of automation, see the Forrester report "Architect Your Automation Strike Teams To Accelerate Transformation."

[21] See the Forrester report "RQ 2.0: Assess Your Readiness For Artificial Intelligence, Automation, And Robotics."

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