

MANAGING ORGANIZATIONS IN A TIME OF CRISIS

Seizing Opportunity from an Environmental Shock: New Trajectories for Innovation

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Key Takeaways: An environmental shock can help overcome the inertia that holds old processes and norms in place. This disruption creates a window of opportunity during which breakthrough innovation may be more successfully introduced, and in which some technology trajectories will suddenly accelerate. Examples from remote work, telemedicine and online education are provided, followed by strategic implications for managers.

Technological innovation tends to follow sticky, self-reinforcing trajectories. All of the learning you accumulated in a technology in the past, and the assets you invested in that technology, make it vastly more efficient to focus on incrementally improving the products and processes you were already using rather than considering anything fundamentally different (Dosi, 1982; Aharonson & Schilling, 2016). But sometimes a shock from the environment – a new scientific discovery, a major sociopolitical shift, an unexpected crisis – can suddenly change the rules of the game. Those shocks can be costly and painful, but they can also help us see the world differently, challenge assumptions that had calcified our thinking, and help us overcome inertia that had kept us from generating or pursuing big new ideas (Schilling, 2015).

COVID-19 is terrible – I think we are all in agreement on that. But let’s look at a few of the positive innovations that are likely to come out of this shock.

More Flexible Work Arrangements

The relatively standardized work schedule of 40 hours a week, roughly from 8am to 5pm on weekdays with an hour for lunch, is incredibly restrictive. Many people would benefit in myriad ways from having more discretion over their schedules, and eliminating 8am to 5pm norms would reduce traffic congestion, help smooth use of electricity and wireless bandwidth, and free us to make better capacity utilization of offices, equipment, and more. Many of our timing norms came from a period when we required daylight to work because we didn’t have electricity (!), and in many cases those norms are now an impediment. There are also a large number of jobs where coming to an office primarily served as a way of a) enabling employers to provide direct oversight over activities, and b) facilitating communication. Both of those functions now have pretty good technological alternatives. I am not discounting the benefits of proximity – there are many – but those benefits come with costs that should also be considered.

Now that COVID-19 has shown us a glimmer of what remote work could be like, 54% of employees say they want to stay working remotely full time, and 75% say they want to have the option to do remote at least part time, according to [a study by IBM](#). This requires us to rethink how we measure productivity, provide oversight, and how we make sure that knowledge is still

being collaboratively generated and shared, but these all look like surmountable obstacles now rather true advantages of proximity. Remote work won't work for every role in every business, but it will work for a great many more roles and businesses than has traditionally been considered. This, in turn, will make it harder to justify building large corporate office buildings or spending many hours a week commuting. For many people a new normal has arrived – jarringly, and unexpectedly, but not altogether unwelcome.

Better Telemedicine Services

It can be reassuring to visit your doctor in person, but for many common patient needs an in-person visit may not be necessary, and telemedicine solutions can be just as effective while being vastly more convenient, efficient, and lower cost. Furthermore, telemedicine can increase access to basic health services for people who face significant obstacles, such as those living in rural locations, those who are mobility impaired, or those who cannot currently afford healthcare.

Doctors and nurses are already beginning to use video calls and other online tools to help monitor patients with chronic health problems, provide after-treatment follow-up care, and to consult with patients and provide recommendations for non-life-threatening symptoms. Prescriptions are being called in remotely and filled and delivered – sometimes automatically. X-rays are being sent electronically to radiologists who can examine them remotely, enabling faster and cheaper diagnosis.

There is vastly more potential for telemedicine and telehealth than is currently being used. Healthcare is a complex and regulated ecosystem in which it is difficult to get all the stakeholders to cooperate to make large-scale changes. However, a shock such as the one COVID-19 has induced can provide impetus for patients, healthcare providers and insurers to all reconsider their options, and may accelerate the rate at which we develop and deploy these systems.

Advances in Online Education

No one is going to argue that online education is a perfect or complete substitute for in-person education, but it can offer many complementary features to in-person education that could vastly increase the flexibility and personalization of education, while also expanding access to education and reducing its cost.

When students are in a classroom with an instructor, they can get real-time answers to their questions, and the instructor can provide alternative examples and graphics to help students understand a complex topic. The instructor and students can read each other's faces and body language to get a richer sense of what is being communicated and understood. The instructor can also shepherd class discussion and use probing questions to get the students to discover principles themselves – a much more powerful way of learning than being fed information. Students also benefit from hearing how other students think and feel about concepts, and they forge valuable social connections. All of that is extremely important.

There are other aspects of education, however, in which online might be adequate, or even better than, in-person education. Unless an in-person class can be kept extremely small, for example, it can be difficult for the instructor to modify the way they deliver material to meet the different learning styles and objectives of different students. Online education makes it easier to personalize education – letting students have more control over the depth and breadth of what they study, and the number of times or ways the concept is reviewed. Online learning systems can allow students to watch explainer videos at their own pace, for example, pausing and repeating as needed, and according to a schedule that works best for them. This can significantly enhance the palatability of education. It's worth noting here that many of the world's great scientists and innovators such as Albert Einstein and Dean Kamen, struggled in (or resented) the

standardized curricula of formal education systems and resorted to heavy reliance on self-education (Schilling, 2018). There is not a one-size-fits-all educational method that is best for everyone. Online education systems offer the promise of enabling us to customize education better. Furthermore, like telemedicine, online learning systems can help increase access to education for people across a wider range of geographic and economic contexts.

COVID-19 forced many K-12 schools and universities to suddenly move to online learning. It was abrupt, and many instructors did not have materials or class designs that were well-suited to remote learning. But instructors and their institutions are adapting – they are developing materials and expertise that are rapidly improving the quality of education they can provide online. In the process they are discovering and building tools – like online exercises and discussion boards, recordings of material that students can consume asynchronously, and real-time polling to let students assess their understanding – that they will want to keep long after the COVID-19 shock has (hopefully) receded.

Advances were already being made in remote work technologies, telemedicine and telehealth, and online learning, but for many of us it took the disruptive shock of the COVID-19 lockdowns to force us to make the investment in learning to use these new technologies and to change our routines. Now that we are using these technologies, their development will accelerate. They will get better, faster, and cheaper, and soon we will probably wonder why we didn't adopt them earlier.

Implications for Managers

Some of the important implications this raises for managers include:

1. You should not assume that our processes and routines will go back to the previous “normal” after the COVID-19 virus has receded; that normal is gone. Instead you should be looking at what this unusual period has taught us about what might be possible, what people might like better than we had before, and what aspects of our new technology trajectories we should be further developing.
2. When a technology shock overcomes the inertia of long-accepted practices, it can also disrupt the hold that incumbents had over an industry, and enable new competitors to rise more quickly than they otherwise would. It is thus extremely valuable to spend some time thinking about what competencies will be the basis for competitive advantage in the “new normal”, which firms already have these competencies, and how your firm can further develop these competencies.
3. A period of environmental shock is an excellent time to introduce products or processes that had previously been held back because they were unorthodox. A shock creates a window of opportunity during which people may be more receptive to breakthrough ideas (or at least less certain that they are wrong). For firms with breakthrough ideas and products, it is a moment to be seized.

Managing Organizations in a Time of Crisis is a series of research briefs produced by the [Department of Management & Organizations](#) at NYU Stern School of Business.

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