



COVID-19: Bringing Rapid Change to Vertical Markets

RFG Perspective: The coronavirus crisis is forcing sudden, major change that will pull some long-range plans forward – and eliminate others that no longer work in a COVID-19 world. The new parameters of doing business are only beginning to emerge. It is clear now that the pandemic health crisis is accelerating the transformation of business processes – creating a “fierce urgency of now” in the wake of a virus that has no cure – yet. Rapid changes in our work and home environments will force long-term changes in behavior, culture and work processes – affecting a wide range of vertical markets worldwide. Business executives and IT executives will need to accept these new behaviors and trends – and incorporate them into their business plans, if they wish to be leaders in the changed work environment.

This is the second in a series of articles about COVID-19’s impact on business – and its IT presence in the enterprise data center and on the cloud.

“We are now faced with the fact that tomorrow is today. We are confronted with the fierce urgency of now. In this unfolding conundrum of life and history, there “is” such a thing as being too late. This is no time for apathy or complacency. This is a time for vigorous and positive action.”
– **Martin Luther King Jr.**

Business managers must inventory their portfolio of enterprise applications – and quickly decide which ones will stay in-house, and which ones will migrate to the cloud. Many will move to an Adopt-and-Go strategy, because there is little time for the usual multi-phase application development cycles to take place. A combination of on-premises applications, off-premises cloud applications, and SaaS workloads must carry business processes onwards, after the medical crisis is over.

Adopt-and-Go is a proven approach to crisis management, when planning cycles are short – and consequences of bad decisions are long. Adopting technologies – and moving forward with them quickly – is the essence of Adopt-and-Go. The software could be new, or old – but it’s the decision-making in Adopt-and-Go that is central to the process. (Editor’s note: there will be a future article on Adopt-and-Go in this series of articles about COVID-19’s impact.)

Call to Action

Now is the time to re-evaluate where the world is going, to revise strategies as needed and to make mission-critical decisions that will impact your business throughout 2020 and beyond. Those who adapt quickly to the new cultural changes will see their businesses grow, while those who continue with a business-as-usual approach can expect to see impaired revenues and slower paths to profits as the economy begins to rebound.

Here’s how the new world looks, by vertical market segments:



Health Care:

Federal government and insurance companies have recognized that they need to promote and cover tele-health – providing health care at-a-distance. Tele-health has already emerged as a way to provide immediate medical care when in-person office visits are severely restricted.

Doctors and hospitals are using “virtual” meetings, and webcams to support what would have been in-office exams and consultations. Tele-medicine will allow healthcare providers to serve more of their current patients –and it will also enable them to expand their markets to rural, less well-served markets. That will reduce the number of in-person visits, while providing needed services to others who are under-served by traditional medical systems.

Prior to the COVID-19 outbreak, tele-health sessions supported by mobile phones or PCs were not accepted methods of health care delivery. Now, these technologies are gaining acceptance from patients, government agencies, and insurance companies, as the coronavirus crisis is spurring rapid adoption. It is clear that these at-a-distance consultations address a vital need: patients cannot enter health care facilities for doctor visits or travel long distances for diagnosis for fear of contracting the virus. Doctors and hospitals are finding that use of tele-health is a more efficient way of providing services that is enabling them to see more patients per day – reversing the trend of appointment inefficiencies due to no-shows.

Health information exchanges (HIEs) will gain acceptance because they link together patient records within a given geography, even though there are differences in data formats among the healthcare providers. This will reduce healthcare costs and speed patient care.

The relaxation of regulatory requirements will now allow patients to reach out to doctors for treatment earlier in the cycle and reduce hospital emergency room visits. The appeal of tele-health is that it will cut costs for insurance companies and enable them to offer many services that were previously provided only by office visits.

Retail:

Retail businesses were under attack by market forces in recent years. Mindful of the need to compete with online shopping services from Amazon.com and others, retail groups had been building out their own online shopping capabilities. Now, it’s a do-or-die effort to make the move to online and direct-to-consumer services, while fighting a market-share war with online services and retail competitors that are moving quickly to new business models.



Major challenges include: rapid deployment of new online services; reinvention of traditional business models for attracting and maintaining a customer base; and quick methods for product delivery and returns. To reach their rapid-transition goals, many retailers will need to partner with cloud providers that can speed development of online applications and support rapid delivery of merchandise.

This process was already underway – as seen at the National Retail Federation (NRF) conferences in 2019 and 2020 – when it was apparent that retailers facing intense competition from online retailers were already transforming their business processes. Now, new retail business strategies must move into hyperdrive to preserve the retailer’s business in the face of COVID-19.

Macy’s Inc. is a case in point. Using its North Star strategy, Macy’s had already announced it was shuttering 140 unprofitable stores in its 800+-store portfolio – and building up online sales via macys.com. It simply wasn’t moving quickly enough. In March, as state and local governments issued shelter-in-place policies, Macy’s Inc. announced it was furloughing 100,000 of its 130,000 employees and closing all of its remaining retail stores during the crisis. Macys.com will remain online throughout the coronavirus crisis.

The new retail model combining brick-and-mortar stores with online services is now evident. To adapt to new business conditions, more retail companies are looking for instant delivery or pickup from their local stores or warehouses. This can be seen by new patterns of hiring by Amazon, Target, and Walmart for logistics and delivery personnel. For retailers, the appeal of this business model will remain long after the coronavirus has receded. Retailers will need to act now to change their work culture, their staffing, and their supply chains. To support these changes, they must develop new applications, while deploying new databases and systems to support the new hybrid model.

Transportation:

Transportation has been at the heart of the crisis, as passengers on cruise ships and airplanes unwittingly transmitted COVID-19 during their travels abroad and in the U.S. earlier this year. The rapid pace of infection was inextricably linked to the speed and range of modern transportation systems. The infection patterns themselves reveal the need for dramatic changes in transportation safety systems to protect passenger health.

Airlines pared down flights to a minimum, including domestic and international flights, during the COVID-19 crisis. Flights at some airlines have been cut down to just 15-20% of their former schedule. Now, the large carriers must re-imagine transportation, with new procedures and vehicle features to protect passenger safety.



We expect that travel by air and commuter systems (e.g., subways, trains) will be noticeably different post-crisis. Many systems will see drastically reduced ridership until passengers build trust about traveling with large groups of people again. That will take time, after months of isolation and sheltering-in-place.

Check-in and on-vehicle systems must be changed – and there is little time to do it. This will push the process of software development to speed up new applications, using agile development, CI/CD, and AI software to reach development goals faster than would have been otherwise possible. However, managers must take care to ensure that software security and availability will be protected in these new applications, making DevSecOps even more valuable than before. Without security, availability, and safety, confidence in public transportation systems will be compromised, making a return to pre-crisis traffic patterns more drawn-out and difficult.

Manufacturing:

The pressing need to produce more medical supplies is clear. The crisis has exposed shortages in equipment, including ventilators, and medical PPE (personal protection equipment) including gowns, masks and gloves for doctors and nurses.

New approaches will help to replenish supplies – including 3-D printing of face shields, goggles, masks and other products. Reduction of personnel in manufacturing plants is likely to be inevitable in the current crisis, increasing the demand for automation software that drives manufacturing processes. Automated sewing processes will help to address the PPE shortage – but assisting technologies for the personnel still working in factories is also needed.

New processes will need to be developed and expanded, requiring a higher level of productivity – and greater efficiency across the supply chains. Many factory processes will have to be overhauled, due to safety considerations. New processes will protect more workers from viral transmission – with new designs shielding employees’ eyes and hands from touching products that were formerly hands-on.

Speed will be critical to the success of factory operations. But speedups will also require planning for safety, security, availability and reliability in many business processes. New approaches to inventing processes, leveraging Design Thinking, could spur innovation for these manufacturing processes by using iteration of prototypes as a way to reinvent manufacturing processes more quickly.



Distribution/Logistics:

Up to now, retail customers tended to buy in stores and walk out with the goods – or to buy online, with delivery through the mails or delivery vans. Often, the buying patterns were determined by the age of the buyers – or their location. The COVID-19 world is seeing a mixed model emerge – one in which many kinds of customers adopt the new retail models.

Consumers' expectations demand the shift to one-day – or same day – deliveries. Customers will remember any failure of execution of this model by providers who have committed to these delivery times. Due to the high levels of COVID-19 volumes – these failures will impact future buying decisions for years to come. For managers who are planning post-COVID business models, this shift in the business process requires rapid change in distribution centers and advanced logistics. Personnel changes are built into this shift in business model (e.g., eliminating jobs for store “greeters” – and expanding the number and types of jobs for warehouse and logistics workers).

Amazon recently announced it would hire 100,000 workers to support post-COVID-19 deliveries throughout its system. We believe many companies will likely partner with Amazon – or partner with other firms that have already expanded their own distribution services.

Because many companies that ship products are well aware that they should avoid over-dependency on just one supplier, we believe that a new wave of distributors will emerge to compete with Amazon's distribution system. This could be the beginning of a wave of disruption in the distribution/logistics space – which has been dominated by a few very large competitors for many years.

Amazon's distribution system is so large – and its network of warehouses and third-party delivery partners so extensive – that this search for Amazon alternatives may take years to take hold worldwide. But the COVID-19 crisis itself has pointed up the fact that Amazon should not play such a pivotal and central role in providing distribution services. To meet new demand for distribution services, companies like UPS and FedEx could widen their reach. Meanwhile, companies with distribution in their DNA, such as Walmart – could extend their expertise in distribution services to provide those services to other enterprises, over time.

Education:

Education is one of the areas that implemented virtual meetings immediately following the onset of the COVID-19 health crisis. Colleges and universities became virtual campuses – almost



overnight – as students went home but continued learning via virtual links to their courses and instructors.

K-12 classes have already resumed instruction, often leveraging software – such as Google hangouts and Zoom – to link students with instructors. Corporate education and training followed this virtual classroom path, using Cisco WebEx meetings, addition to Google, Microsoft and Zoom links. This approach has had limited success, because there are problems with providing PCs at home for all students – and ensuring security for the network links.

Other challenges include teachers adapting to at-a-distance education technology; government regulations supporting at-home learning -- and ways to update grading policies for students who use distance learning. It's important to note that teachers' unions are not yet on-board with this type of training – another example of the need to change or adapt current K-12 teaching patterns to distance-learning conditions.

But the new model for education is being widely adopted – if only because most K-12 school facilities will be shut down for the balance of this calendar year. In some ways, this is an expansion that was previously damped by traditional school and classroom systems. Now, because its worth and utility have been proven by the COVID-19 crisis, resistance to distance learning will diminish, and the virtual classroom model will be widely adopted on a local, regional and worldwide basis over time.

Education is seeing immediate benefit from using VPN (virtual private network) and virtual meeting software, supported by security software. We expect that this approach will not fade as the crisis abates. Rather, we expect that many companies will adopt virtual meetings and virtual classes as a pragmatic approach to leveraging skills of their central-site instructors, teachers and professors – allowing them to address a much wider audience.

Media/Entertainment:

The success of Netflix, Disney + and other in-home entertainment systems has been growing – but the COVID-19 crisis has amplified that success, because of the shelter-in-place orders across the country. These systems existed before the COVID-19 health crisis – but their current success is likely to fuel alternatives to traditional movie theatres.

Now, first-run movies are showing on these home-directed media/entertainment (M/E) networks even before showing in hometown theatres. They are, in fact, an alternative to brick-and-mortar in-person viewing venues – precisely because they ensure isolation for health purposes. Viewers



can also watch the content again and again, over a given period of time – something not available with the in-theatre viewing experience.

The success of Over the Top (OTT) streaming services will put additional stress on Internet traffic in general – on streaming service providers (e.g., Netflix, Hulu), and on cloud providers in particular. Clearly, the crisis is seeing new implementations of 5G networks – and we can see that the deployment of 5G-based services is already gaining steam. Governments, equipment manufacturers, standards bodies, and network providers must resolve their technology and political differences and work on upgrading these streaming systems as soon as possible.

Summary

COVID-19 is bringing rapid change to business processes across a wide range of vertical markets worldwide. Many of these changes will become permanent, resulting in an acceleration of the slow evolution of business changes and models that were already being adopted pre-COVID-19.

RFG POV: While state-enforced policies of in-home lockdowns may end during the second quarter, the return to full business activity will not happen for many months. The emergence of the “New Normal” for business processes and workplace conditions will likely not happen until next year. Simply staying in business in coming months will require an adjustment to the changing business conditions all around us. Business and IT executives must rapidly develop new strategies – and must execute an agile approach for business processes that will be fully operational and competitive by 2021.

We will be analyzing the impact of the coronavirus pandemic in coming weeks – and expect to publish a series of updated bulletins about the changes taking place and their potential impacts on our businesses, enterprises and organizations.

This article was co-authored by Jean Bozman, Principal at Cloud Architects Advisors, and Cal Braunstein, CEO and Executive Director of Research of RFG. Additional relevant research and consulting services are available. Interested readers should contact Client Services to arrange further discussion or interview with Ms. Jean Bozman or Mr. Cal Braunstein.