



COVID19 Crisis Forcing Executives to Re-Think Business Processes

RFG Perspective: The coronavirus crisis is accelerating the transformation of business processes – creating a “fierce urgency of now” in the wake of an unpredictable wave of infection for a virus that has no cure – yet. We’re seeing a sharp rise in the number of people infected, the number hospitalized and, sadly, the number of deaths. Overnight we are witnessing a new “wave of change.” Business and IT executives need to plan and act quickly so that they can stay ahead of the curve.

“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.

The coronavirus pandemic is forcing employees and employers alike to work from home – and all phases of the business process to go online. The timescale is weeks – not months or years. Almost overnight, many businesses are going “virtual” – with employees using groupware to access teleconferences and enterprise applications from home. Many of these businesses were already online before the pandemic was discovered – but they now realize that they need to add VPN lines to boost the number of end-users supported.

The essential problem for business planners is this: the time horizons are not clear – we don’t know when the rate of infection will crest, or when it will decline. Each day brings a new set of conditions, making it harder to plan for business actions. Many things will be out of our control: Government (federal, state or local) is requiring millions of employees to work-from-home.

Sadly, a growing number of employees will become ill, until the infection rate slows. Finally, in an inexorable move to face the economics of rapidly declining demand for products and services, many businesses are being forced to lay people off – temporarily or permanently – until the economy starts to “wake up” from the government-ordered lockdowns.

The Waves of Change, Applied to Business

What we’re witnessing is an accelerated “wave of change” with things moving a lot faster than previous technology shifts. Two prime examples: the “waves of change” that moved businesses to the Internet in the mid-1990s – and to the Cloud in the late 2000s. Those shifts seemed fast, but adoption took place over years, not weeks.



Innovation and disruption are directly linked to “waves of change” – and the process usually appears at the edges of other trends. But this time the “wave of change” for remote working and virtual offices began rising in February and the uptick in March was seismic. This time, the coronavirus has pushed change and adoption of innovation for business processes in a matter of weeks – and not decades.

Discontinuity – and What It means for Business

We view this rapid change as a discontinuity with the world of work and workflow that had been evolving to online and remote access for many years.

The basic parameters of doing business are changing on a daily basis, as new restrictions on travel and workplace rules are announced. Many of these are work-at-home provisions, supported by fast Internet connections and collaboration platforms (e.g., Cisco Webex, Google Hangouts, and Zoom, among others).

Companies have to provide enough bandwidth to remote workers for easy and reliable access to business applications. This may require swift networking upgrades, and activation of more VPN or VDI links to enterprise systems.

However, security cannot be ignored as it is a highly important issue in this crisis-planning situation. Organizations must protect corporate data, respect the privacy for end-user email, and comply with governmental regulations (e.g., GDPR, the California’s Consumer Privacy Act [CCPA], HIPAA health regulations, and Personally Identifiable Information[PII] – such as Social security numbers and passport numbers that are unique to an individual).

As the coronavirus crisis loomed, and then evolved, the sheer number of remote workers mushroomed. For example, Verizon reported that some of its large customers added thousands of remote workers immediately via high-capacity VPN links.

According to a recent AtlasVPN survey, VPN usage in the U.S. increased by 124% in just the first two weeks of the crisis. Similar results are seen in Europe. Like a holiday usage spike, which only peaks for a short time and then drops to a level that is higher than pre-holiday levels, the business shift to remote work will have a similar long-lasting impact. This paradigm shift is the result of companies realizing that they can adjust to a higher number of remote staff (and consultants) performing tasks that previously were thought to require personnel to be onsite.

Unlike the previous slow-rolling waves, this time the immediate power of Now – was rapidly brought about by the new highly-contagious coronavirus, and humans’ lack of immunity to it worldwide.

Timelines are being compressed and the need for real-time information is demanded. People want to know Now what mitigations and medicines can be used to lessen the impact of COVID-



19. In coming months, therapies will be developed, likely including antibodies-based therapy and vaccines, as they are developed.

This pandemic is forcing businesses to make operational decisions in double-time. Businesses must rapidly determine what applications need to be moved to the cloud using a lift and shift methodology, re-platformed on SaaS, outsourced to a managed service provider, shifted to an in-house cloud, or left untouched or slightly modified to support the new interfaces.

Process changes like this normally take months as a business impact analysis (BIA) is performed, business and technical requirements are reviewed, applications assessed, hardware acquired, new policies and procedures developed, contracts negotiated, and users trained.

Now, instead of doing this in a measured, limited risk environment, businesses are effectively “changing the tires on a bus doing 90 miles per hour down the highway.” Any failures that occur will be major and very visible – and could potentially cost one or more executives their jobs – or drive the enterprise out of business.

Impact on Business Processes

The New Normal

Business processes cannot – and will not – resume as they were before this crisis. Too many things have changed – and will continue to change – throughout the crisis. Remote work-from-home; reduced workforces (e.g., airline and transportation layoffs); and reduced mobility throughout cities and between cities – all will contribute to a need to “Think Different” as Apple co-founder Steve Jobs said.

Our new situation also represents an opportunity to change business processes that have been in place for a long time – but need to be updated to meet the new conditions. Too many established corporations rely upon batch processing. This must rapidly shift to online, real-time updates so that all parties working with the data all have current information from a single source of the truth.

Cloud Migration + Edge

Cloud migration is widely seen as moving the first wave of enterprise applications to the Cloud. We expect that the “new normal” for the virus pandemic will accelerate a new wave of cloud migration and more IoT devices – for business continuity and enterprise resilience. Previously, some migrations had slowed due to lengthy projects to “containerize” aging applications.

We anticipate faster identification of the next set of enterprise applications to be migrated – and expedited development of new cloud-first apps.



However, we have to recognize that the cloud is not necessarily a less expensive solution for some business applications -- and that large-scale data uploads are expensive and time-consuming. More enterprise data will be placed at risk, as line of business executives and development teams rush to deliver new functionality – trading off privacy, security and data integrity for speed to market.

That’s why business managers have to take a full inventory of the applications being considered for migration. At that point, a “triage” should be performed to determine which applications go to the cloud first, which ones can be “containerized”, and which ones will remain where they are.

Data-first thinking will be increasingly important. Right now, with the crisis upon us, enterprising individuals and firms will create many new applications for existing and new IoT devices to help deliver new real-time business functions. This will exacerbate the single-version-of-the-truth quandary.

We expect to see:

- An acceleration of lift-and-shift activity for existing applications migrating to the cloud. We note that most business applications are still on-premises and require large operations staff to maintain them – and that the planned rate of cloud migration is not rapid enough to reduce the need for onsite staff and improve business agility.
- Recognition that Cloud is not necessarily a less expensive solution for some business applications -- and large-scale data uploads are expensive and time-consuming.
- Wider support for Edge computing, as large numbers of IoT applications will be deployed in coming months.
- Creation of new business models, leading to the expansion of “virtual” organizations leveraging all-remote workforces. We have seen this in broadcasting, as national news programs quickly shifted to broadcast-from-home reports from reporters located around the world. The changeover happened within days. But that is only one example: Companies that adjust to these new models will be best-suited for survival.
- More attention will be paid to data architecture: During the 2008-2009 downturn, banks had no idea where each line of business/geo stood on investment. For enterprises, maintaining a single version of the truth is now at great risk – and steps must be taken to improve the situation.

Online Presence/Telecom Support



In the first two weeks of the coronavirus event, many companies asked their telecom partners to provide high-bandwidth, low latency networking, to support hundreds or thousands more remote workers. We expect this trend to continue, as it becomes a needed component of business recovery planning.

Large enterprises will likely add internal capacity for switching and supporting greater access by remote employees. Additionally, cloud providers and third-parties like Equinix, Century Link and other companies providing Internet access will become strategic partners for business agility and expansion.

Key considerations for business planning will include the following:

- A large increase in face-to-face teleconferences, some of which will expand beyond today's a firm's normal or prime business hours
- Use of real-time (not pre-programmed) "chat" for customer service – i.e., employ AI/ML-based chat-bots with a hand-off to knowledgeable people who can supply real-time answers to respond to tough questions from site visitors.
- 5G implementations will be accelerated, even though many of the emerging standards are not yet agreed to.
- Demand for VPN and password support is rising quickly. More software-based automation will be required to support these additional requirements for remote access and communications.

Data Security/Data Protection

Remote work demands improved data security. To address this, customers have added dashboards to collect monitoring information from multiple data-security programs. Often, customers have reported that they feel overwhelmed by the sheer volume of security information that is being generated by disparate security software products. Now, new aggregation solutions will be needed that can net out actions required and thereby minimize security risk exposures.

To improve data protection, enterprises have to quickly review existing data-protection policies, and make changes, where needed. Enterprises will need to implement more and better identification, access and authorization tools designed for the borderless environment. A proper implementation of a DevSecOps methodology should eliminate or mitigate flaws in compliance, privacy and security. These flaws should now be addressed early in the development cycle by the developers.

Two points to keep in mind when deploying to the public cloud:

- Having more data in public clouds means that there will be more risk exposure of Personally Identifiable Information (PII) and HIPAA health-based compliance data.



This data is vital to enterprises and consumers – so it will have to be protected via role-based or activity-based access to data.

- By deploying more in the public cloud, the probability of seeing privacy challenges, lawsuits and ransomware will increase.

Business Continuity and Resilience

When enterprise applications are supported in enterprise data centers, the “fixes” for business continuity (BC) are clear: ensure high availability and review best BC practices. As the pace of cloud migration speeds up, customers must spend the cycles to review current BC policies – to review them and make changes, as needed.

Cloud providers can be partners for BC and high availability. The major cloud service providers (e.g., AWS, Microsoft Azure; Google Cloud Platform; IBM Cloud and Oracle Cloud) can apply AI/ML to find segments of enterprise apps that should be strengthened for purposes of high availability.

Customers should demand meaningful SLA (service license agreement) levels – not ones that have lots of loopholes and sound good but only serve the cloud provider’s interest – in their contracts with cloud providers.

Distributed Business Processes

As in the days following the 9/11/2001 events, the current event gives customers a new reason to distribute business processes and governance locally and across geographic regions. This cannot be done at the expense of compliance, efficiency, resiliency or scalability of application solutions.

If the customer does not have sufficient in-house resources, companies can seek outside consultants for new types of application development that support cloud-enabled distributed operations. The advantage of this approach is clear: reducing operational vulnerabilities due to potential disruption in any given geographic region. It should be noted that potential disruptions include not just natural disasters but also cloud services and networking outages.

Distributed Compute and Distributed Storage

Distributing compute and storage across large scale-out clusters – an approach pioneered in high performance computing and hyperscale organizations (including cloud providers) – can now be applied to enterprise workloads with some of it performed at the edge – and some in the cloud.



Distributed infrastructure principles can be applied to multiple on-premises sites collaborating inside an enterprise – or in cloud deployments spanning geographic regions. As part of the shift to this expanded distributed approach, companies will need to address the challenges of data integrity, data gravity, and synchronization when data is spread across multiple sites. Business executives must ensure that enterprise data is processed in an efficient manner – whether on-prem or off-prem -- and that applications don't become overly dependent on any one site or region.

Summary

The coronavirus crisis is creating a major permanent change in our world – and business managers must transform our working environment. Businesses no longer have as much time to evaluate new technologies as we once would have before adopting them, even as recently as a few months ago, when the Year 2020 began.

RFG POV: Business leaders will be pushed by outside events, and inside decision-making, to adopt-and-go as they support their organizations with a range of technical solutions. Adopt-and-go is a proven approach to crisis management, when planning cycles are short – and consequences of bad decisions are long. Business executives and IT executives should partner to create the new business models and supporting IT operations so that they can drive speed to market -- and eliminate internal roadblocks.

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.