The current coronavirus (COVID-19) outbreak is having a major impact on global business operations, with production stoppages, staff shortages, major event cancelations and concerns about supply chain stability. Many companies are banning travel to high risk countries such as China and requiring employees to work from home during self-quarantine periods.

This is forcing organizations to embrace a new way to work to ensure business continuity and minimize impact on company performance. Examples include empowering the remote worker, leveraging third party infrastructure services, and providing new ways to access and collaborate on information.

This paper will provide an overview of how cloud-based Information Management enables a new way to work during periods of business disruption and global crisis.
The coronavirus is having a major impact on global business operations and is forcing companies across industry sectors to rethink how they operate. Businesses must remain secure, intelligent and connected, even (or perhaps, especially) in times of crisis.

A cloud-based Information Management environment provides the digital foundation required for all employees to have secure access to essential business information and systems, collaborate effectively with dispersed internal and external stakeholders, synthesize data into timely insights and maintain supply chain visibility.

Precautionary periods of quarantine are leading to many employees working from home and needing remote access to business resources and information. As a result, companies need a new way to work that empowers employees to manage and collaborate on information anywhere, anytime and from any device.

This paper discusses practical Information Management solutions that support organizations as they deal with significant disruptions to “business as usual.” Regardless of the crisis, an Information Management environment delivers seamless business continuity to help organizations maintain productivity and weather the storm with agility.

Global/Macroeconomic Impact

Disruption has become the new normal in today’s business landscape, from transformative new technologies to natural disasters such as earthquakes and wildfires. However, certain crises go above and beyond in their potential to disrupt. We are now in the midst of one of these extreme disruptions, as the coronavirus epidemic spreads and brings with it serious implications not just for business operations, but whole countries and even the entire global economy.

The global economy and, in particular, the manufacturing powerhouse of China, has been severely impacted by the coronavirus outbreak. With quarantines in effect and employees not turning up for work, Chinese-based suppliers have had to shut down and logistics carriers have been unable to ship finished goods. Companies are concerned about their brand reputation as lack of product supply to distribution warehouses and retail stores is putting a dent in consumer confidence.

Coronavirus Expected to Put Damper on Global GDPs

Estimated impact of Wuhan coronavirus on the growth of global GDPs (2020 projections)

<table>
<thead>
<tr>
<th>Region</th>
<th>Q1 2020 new estimate</th>
<th>Q1 old estimate</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td></td>
<td></td>
<td>-1.5%</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td>-0.4%</td>
</tr>
<tr>
<td>Other Asia*</td>
<td></td>
<td></td>
<td>-0.4%</td>
</tr>
<tr>
<td>Eurozone</td>
<td></td>
<td></td>
<td>-0.1%</td>
</tr>
<tr>
<td>United States</td>
<td></td>
<td></td>
<td>-0.1%</td>
</tr>
</tbody>
</table>

* emerging market economies other than China
Source: Deutsche Bank

Fig 1. How coronavirus is impacting global GDP*
As of March 1, 2020, the coronavirus has resulted in 86,013 confirmed cases and 2,941 deaths. As this paper is being prepared, the virus is spreading quickly through mainland Europe and the US has identified its first cases. As soon as an outbreak is suspected, employees are being asked to self-quarantine. This is impacting global economies as thousands of workers remain at home for the 14-day quarantine period. As a result, companies are forced to rethink how they not only manage the growing number of remote employees, but how they can provide their IT infrastructure and associated business applications so business operations can continue.

The Business Continuity Manager has never been so important. They perform multiple roles when disaster strikes, but the sheer volume of employees having to work remotely due to the coronavirus outbreak has changed their focus considerably.

China has powered the global economy for many years; now, this outbreak has put a dent in their Global Domestic Product (GDP) and is affecting other countries worldwide. In fact, Oxford Economics estimated that the coronavirus outbreak will cost the global economy $1.1 trillion. As you can see in Figure 1, key manufacturing-based economies around the world are being impacted, taking hits to their GDP and 2020 economic growth potential.

Dun & Bradstreet released a recent study saying that nearly five million businesses could be impacted around the world. But which industries are most vulnerable?

**Business Impact**

The impact of the coronavirus has been felt across many different industry sectors, with the manufacturing sector the first to be affected. China has been described in the past as the factory of the world, housing the bulk of manufacturing centers for goods and parts for the automotive, high tech and consumer goods sub-sectors.

**Automotive Industry**

Nearly every vehicle manufacturer around the world is reliant on parts manufactured by suppliers based in China. Over the last decade, China has become the largest car market in the world, resulting in many western car manufacturers establishing joint venture operations in the country. By law, any car manufacturer looking to set up production operations in China must form a joint venture with a domestic vehicle manufacturer. In addition to establishing vehicle manufacturing plants along mainly the east coast of China, many of the world’s Tier 1 automotive suppliers have created a manufacturing presence in the country. The suppliers are not only supplying parts to the joint venture companies but to car manufacturers in western markets.

Many suppliers have been impacted as their employees, especially in the Wuhan area of China, face a lockdown. Car manufacturers are still struggling with obtaining visibility into what is happening across their supply chain operations, and now coronavirus has made this visibility almost impossible to achieve.

According to reports in Europe, as of the end of February many car manufacturers are confronting parts shortages and may have to shut down plants in early March until parts supplies are restored. Car manufacturers have spent years establishing just-in-time production systems that rely on a steady and predictable flow of parts from suppliers all over the world. They could not predict the impact of coronavirus on their supply networks. In fact, many car manufacturers are now trying to increase their inventory levels for key vehicle parts and sub-systems. This goes against what they have been doing for many years, namely leveraging lean manufacturing principles to reduce costs and drive efficiencies across their operations. In addition, as Chinese consumers are prevented from visiting car dealerships, vehicle sales have dropped 92% in China during the first half of February.

The global manufacturing sector has been impacted by many natural disasters over the years, but the coronavirus has physically stopped production as there are not enough employees to work the production lines.
High Tech Industry

China is also the global manufacturing center for high-tech consumer electronics goods. The high-tech industry, like the automotive industry, is truly global in nature. Many high-tech brands such as Apple have their goods manufactured in China. However, Apple and other high-tech brands do not have their own manufacturing plants, instead leveraging a network of contract manufacturers such as Foxconn to manufacture devices on their behalf.

KGI Securities estimates that production levels at Foxconn will be operating at 30-40% of capacity. Given Foxconn’s Chinese plants produce a high proportion of the world’s iPhones, we can expect imminent supply shortages to Apple’s retail network. This will impact Apple’s quarterly earnings. Other high-tech companies are also expected to see profits decline, such as Dell Technologies, NVIDIA and AMD.

Figure 2 illustrates the coronavirus’ impact on the key sub-sectors in the high-tech industry, demonstrating China’s importance to this particular industry. Many manufacturers were enticed to offshore production to China due to low cost labor.

The high-tech sector also runs more conferences than most other industries, many of which are now being canceled. For example, the Mobile World Conference (MWC) due to start on February 24th in Barcelona was canceled—this is the world’s biggest conference serving the mobile device market. Facebook’s global marketing summit in March and Cisco Live Melbourne have also been canceled. At OpenText, we are taking our annual Enterprise World Europe virtual in lieu of a live event in Prague as originally intended. Other companies are doing the same.

This sector also has a higher proportion of workers that travel for business. Since employee travel is being limited, companies must find different ways to communicate and collaborate with stakeholders across their global business ecosystems.
Consumer Product Goods Industry

The retail sector is supplied with various products from the consumer product goods (CPG) market. Global retailers are dependent on goods manufactured in Asia, and other sectors such as transportation and logistics generate much of their profits from supporting the global retail sector. All of the industries connected with global retail will be impacted by factory shutdowns across China.

A leading CPG manufacturer said that 17,600 products could be affected by coronavirus in China, which highlights the supply chain risk that many retailers are currently grappling with. For example, Home Depot in the US could face product shortages, as it sources 30% of its products from China.

As with the discrete manufacturing sector, some retailers are building up their inventories to try to outlast the coronavirus disruption. Amazon’s business is built from the sale of many goods manufactured in China, and the company fortunately has huge distribution centers to stockpile these Chinese-sourced goods.

Online shopping is seeing significant growth as Chinese consumers have been unable to visit retail stores. For example, online sales of disinfectant produced by the Reckitt Benckiser-owned Dettol rose 643% year-on-year between February 10 and February 13 on the Chinese e-commerce website suning.com.

Even strong US brands such as Starbucks and Coca-Cola have been severely impacted; Starbucks has closed over half of their coffee shops in China and Coca-Cola is experiencing a shortage of the artificial sweetener that goes into many of their drinks.

Other Industries

In addition to manufacturing and retail, travel and tourism have also been hit hard. The International Air Transport Association (IATA) warned that falling passenger demand would cost the airline industry $29.3 billion in lost revenues this year. This has a cascading effect on businesses such as package holiday companies and cruise ships.

In the pharma industry, drug makers that focus on new medications are “unlikely to encounter material global supply disruptions,” because they do not have a heavy manufacturing presence in China. However, a more tangible threat from the coronavirus for innovative drug developers is the potential slowdown in sales in China, which has been repeatedly cited as a major growth driver for foreign pharmas. The aerospace sector has also started to experience a slowdown due to delayed parts supplies. Airbus even went to the extent of closing down their new A320 production line in Tianjin. Finally, in the government sector, certain services are being impacted due to a lack of staff and in the UK some schools are being closed as a matter of precaution.

This is not an exhaustive list, but a taste of the coronavirus outbreak’s widespread repercussions across industries. Secondary to its health ramifications, the disease is acting as a financial economic virus as it infects multiple global sectors.

How can companies be better prepared and how can they leverage their information in a different way to maintain business continuity?
New Ways to Work—Maintain Business Continuity with Information Management Solutions

The coronavirus is different from other business disruptions in recent years. While companies have been impacted by natural disasters, coronavirus is operating on a global scale with unpredictable speed and longevity. The magnitude of the disruption is forcing companies to adopt new ways to work that minimize travel and increase productivity through Information Management and digital technologies. This includes solutions to better support customers, maintain business operations, and enable employees to securely access, retrieve and collaborate on business information remotely.

The coronavirus outbreak is placing cloud-based solutions front and center. CIOs must re-evaluate their IT infrastructure to ensure it can cope with long term disruptions such as coronavirus—now, and in the future. The cloud allows companies to be run from literally anywhere in the world.

Business continuity management has never been so important. It is not just external supply chains that are impacted when disaster strikes. Leveraging cloud-based Information Management technologies empowers the organization to:

- Securely access remote business systems and continue working as normal
- Collaborate and share business documents across a common portal
- Leverage a notification service that determines whether business partners have been impacted, and even assist emergency responders with their work
- Employ external trusted partners to manage the IT infrastructure in the cloud so that you can focus on getting other business operations back online as quickly as possible

During periods of business disruption, an Information Management platform should enable organizations to be connected, intelligent and secure. Three key capabilities, as highlighted below in Figure 3, are essential: 1) Flexibility in terms of how information is accessed and retrieved, 2) Intelligent use of information and visibility of end-to-end information flows, and 3) Secure collaboration between internal, external and remote workers.

Flexibility
- Provide business continuity by ensuring information is accessible from more than one location
- Allow critical business documents to be archived and retrieved from a central repository

Visibility
- Provide a real-time view of information flows and shipment movements through a single unified platform
- Should disruption occur then in-transit shipments can be identified and alternative inventory locations can be quickly identified

Collaboration
- Provides a way to quickly determine post-disruption condition of the business ecosystem
- Offers a way to quickly exchange information between co-workers

Fig 3. Three key capabilities for an Information Management platform during a period of business disruption
1. Resiliency during Economic Turmoil

Organizations with the strongest core fundamentals are best positioned to weather economic storms and emerge unbowed. Cloud-based deployment and storage has become essential to managing costs, resources and risk while not sacrificing competitive advantage, product innovation and customer satisfaction.

Cloud-native information management benefits IT as well as the business. In an economic downturn, it is important to look at how the business can cut costs while also creating opportunity to create new innovative growth areas.

Enter OpenText Cloud. Moving to the cloud can help eliminate capex and shift spend to operating budgets. Outsourcing application management with Managed Services in the cloud means vastly simplified upgrades. Users have access to current technology while IT managers are able to redirect resources to other priorities.

These benefits are measurable and real. OpenText customers see an 18% reduction in support tickets when running in the cloud compared with on-premises deployments. Operational expenses fall an average of 30% in the cloud as compared to on-prem. And with 24x7 support, concrete SLA commitments, and guaranteed disaster recovery, the cloud enables a higher level of accountability back to the business than most customers can deliver themselves from behind the firewall.

2. Quarantines Encouraging Remote Working

A logical first step to curtailing the spread of contagious diseases is limiting the exposure of those who may be infected and those who are at risk. As we have discussed, this means many employees are now working from home—a reality that can make it difficult to collaborate, perform tasks and make informed decisions without a proper framework.

Having secure access to the right information at the right time when and where it is needed is imperative to both business continuity and emergency preparedness. In today's digital world, much of the workforce already consists of a geographically diverse network of users, customers and partners that need timely, secure access to information delivered across regions and time zones.

A new generation of productivity tools, seamlessly accessible though cloud hosting and built on easily adopted content services technology, are empowering workers to be productive in any location. Process and task administration, information access and unstructured collaboration are performed with the same efficiency as office-located staff.

And, just as importantly, content services technology embeds comprehensive governance—ensuring security, compliance and privacy adherence, regardless of where information is accessed or used.

The cloud creates an opportunity for a virtualized approach to Information Management, providing the ability to access and manage content on a global scale. With this approach, customers and businesses can collaborate and innovate—anywhere, anytime. The cloud delivers scalability and elasticity, allowing applications to grow or shift with new business models while minimizing costs. Moving to the cloud creates opportunities to form new alliances with technology partners, customers and suppliers. It enables frictionless collaboration and connection of information flows with ecosystem partners while businesses gain new insight into value chains and ensure faster co-innovation.

Here at OpenText, we are a diverse company that operates in over 40 countries through a combination of global sites and remote workers. The key to business continuity for us during these volatile times has been to enable and encourage flexibility by reinforcing the importance of using digital collaboration tools.
3. New Corporate Policies Related to Travel and Customer Meetings

For much of the world, one of the most noticeable impacts on business has been limits on business travel to certain locations. This is a hinderance to building relationships, progressing initiatives and managing staff. Companies are looking for ways to support virtual internal and customer meetings and keep dispersed teams connected when they cannot physically travel to meetings.

With cloud-native digital collaboration tools like OpenText Core Share, businesses can create a virtual office that is flexible and easy to use, allowing them to securely share and store information assets (from existing on-premises applications or new projects) in the cloud while maintaining the integrity of their content. When employees can easily collaborate both inside and outside the organization, better ideas germinate, and outcomes are more successful. And, with a seamless integration into OpenText ECM solutions such as OpenText Content Suite, OpenText Documentum and OpenText eDOCS, Core Share extends robust content collaboration and information management capabilities outside the firewall to remote colleagues, external partners and other third parties.

Our new Core Signature add-on also accelerates document workflow with integrated digital signature and approval capabilities. There is no need to see anyone in person to get a signature!

4. Marketing and Lead Generation Impacted by Conference Cancelations

Conferences and events are a central pillar of lead generation and nurturing activities for many organizations. They also involve significant investments in terms of content creation and customer communication. When they are canceled, demand generation and customer engagement can be jeopardized.

In these unfortunate scenarios, organizations can turn to the cloud to safely bring the innovations and vision from the canceled event to their customers and partners. Although conferences are a unique way to build momentum and foster relationships in an uplifting context, well-orchestrated digital channels can help overcome the absence of physical meetings and events. This can also be a great opportunity to reach more customers, as these tools are not limited by space or location.

OpenText Customer Experience Management (CEM) solutions help promote and develop engagement via highly personalized content delivered through customers’ preferred digital channels: web, portals, mobile, etc. By using common repositories and generating native omnichannel content and communications, CEM enables business users and marketing teams to react swiftly to changing circumstances.

Companies can also engage with customers through bi-directional online communications. With Voice of the Customer solutions, teams can track customer reactions on all channels (voice, web, mobile, chatbots, etc.) and make data-driven decisions for better follow-up.

These tools help organizations create personalized and compelling digital experiences to build and maintain relationships with customers and partners despite the cancelation of major global tradeshows.

5. Ensuring Access to Information during a Time of Crisis

The sheer sprawl of global organizations cannot help but result in isolated pools of information. Take, for example, regional customer data stored in a field office. Or collaboration on product development siloed in an R&D facility. Or, more pertinently, the personal information for a territory’s entire staff sitting on a server in the local HR department.
What happens when the knowledge workers who provide both the access to and maintenance for this information are forced to work remotely or are in crisis management themselves?

One of the central tenets of modern Information Management is utilizing content services technology to integrate, manage and provide access to previously isolated pools of information. Content services applications such as OpenText Extended ECM connect central content management platforms with the lead applications—think SAP, Oracle, Microsoft and others—that underpin business processes. Silos are bridged, information stored within can be analyzed, classified and made accessible to those who need it.

Productivity-oriented content services applications can also accelerate the distribution of this information by creating and supporting collaborative workspaces focused on individual business objects. Driven by metadata applied automatically to information in connected processes, these workspaces can source and aggregate information housed in remote locations. Instead of head office HR staff struggling to contact, manage and ensure the well-being of staff on the other side of the world, personnel files are readily available to those with permissions, regardless of location. It can even be delivered to them automatically based on contextual analysis of their communication in the workspace.

6. Lack of Visibility into Disrupted Supply Chain Operations

Global supply chains are like finely tuned machines, but when something goes wrong, it can have a severe impact on the end-to-end business ecosystem. For many years, companies, especially those located in Japan, have had to deal with countless natural disasters and interruption of supplies to their production operations. Manufacturers operate complex production processes such as just-in-time and just-in-sequence operations which are dependent on the timely supply of parts from external suppliers. The retail sector operates similarly complex replenishment processes such as Vendor Managed Inventory, whereby the external supplier manages inventory levels on behalf of their customer. Due to the uncertainty of how long the coronavirus will last, companies are beginning to stockpile parts to avoid interruptions to supplies; however, with warehouse space at a premium and inventory costs rising, this will eat into profitability as we go through 2020.

During times of disruption, companies need a flexible and scalable cloud-based integration platform that can connect to suppliers anywhere in the world and support production operations in different locations. OpenText Trading Grid provides a seamless way for companies to integrate between internal business applications and the external digital ecosystem. This “digital backbone” helps connect suppliers around the world and provides the foundation onto which companies can execute their digital transformation strategies. Global Partner Directory can allow a Supply Chain Director to quickly choose second source suppliers based on specific search criteria. Many companies are starting to implement dual sourcing strategies.

Furthermore, when information is flowing electronically, companies can derive powerful insights. OpenText Magellan can provide those critical insights into end-to-end supply chain operations, from analyzing supplier performance to analyzing the effect on suppliers and shipments during a period of disruption. OpenText Magellan in partnership with OpenText Internet of Things (IoT) and other technologies helps enable next generation supply chain control towers that will help Supply Chain Directors and Business Continuity Directors minimize the disruption caused by natural disasters or epidemics.
Conclusion

The coronavirus outbreak is an unprecedented, severe health emergency impacting a huge number of people around the world. It is our sincerest hope that effective treatment and vaccines can be developed to cure those who are ill and stymy the spread of the disease.

As medical science seeks solutions to reduce the implications for human health, we are doing our part to minimize the economic and business impacts. The economic effects of coronavirus will be felt around the world over the next several quarters, and the magnitude of those effects is not yet clear to anyone. There is no silver bullet, but having an Information Management strategy in place will empower organizations to respond with agility and resiliency as we face this crisis together.

OpenText Information Management solutions can provide your business with this new way of working. For more information on any of the solutions referenced in this white paper, please visit www.opentext.com.

For the latest updates on the coronavirus outbreak, visit the OpenText coronavirus tracker, covid19.opentext.com.

Endnotes


