Supply Chain Lessons Learned from
The Coronavirus and
SARS Outbreaks
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The Specter of the Recent Outbreak

At the beginning of 2020, a viral outbreak of SARS-CoV-2, originally labeled 2019-nCoV, quickly drew attention due to its rapid infection rate. Since that time more information has come out about the deadly pathogen, including its similarities to SARS (Severe Acute Respiratory Syndrome) and the outbreak that hit in 2003.

SARS-CoV-2 a betacoronavirus like MERS (Middle East Respiratory Syndrome) and SARS (Severe Acute Respiratory Syndrome), causes the disease COVID-19. It was first reported on 30th December in the Chinese city of Wuhan, capital of Hubei province. By the 30th of January, when the World Health Organization (WHO) declared the outbreak a “public health emergency of international concern” (PHEIC), the virus had already spread across provincial as well as international borders causing more than 14,000 cases of infection and 300 deaths.\(^1\)

Less than two weeks later, on February 11th, 2020, Tedros Adhanom Ghebreyesus, director-general of the World Health Organization, announced that the death toll has risen to 1,017 with 42,708 diagnosed cases in China alone.

Other nations aren’t immune; the disease has been identified across more than 45 countries, and with estimates putting the possibility of a vaccine out for another 18 months, the total impact is still unknown.\(^2\)
The rapid outbreak of COVID-19 led Chinese health authorities to cordon off various affected cities, quarantining a substantial section of the populace. With widespread travel restrictions, quarantines, and city-wide lockdowns, several sectors are facing a critical shortage of human resources. And as a human-labor intensive sector, the supply chain is expected to sustain considerable damage due to the global outbreak.

This is especially significant considering China’s position in the global market.

**The People’s Republic of China (PRC) is one of the world’s leading economies and a global manufacturing powerhouse, contributing to 13.45% of global export figures.**
The macroeconomic impact of SARS-CoV outbreak was estimated at USD 100 billion.

SARS-CoV, like SARS-CoV-2, was thought to be a zoonotic virus (of animal origin) that spread from an unknown animal reservoir. The outbreak was first reported in the Chinese province of Guangdong in 2002. At first glance, it would be safe to assume that the 2003 SARS-CoV outbreak created an immediate economic depression across sectors like travel, tourism, and retail sales. In fact, the financial losses related to these industries in Asian countries alone were estimated at USD 18 billion. But they were by no means the only sectors affected.
The SARS-CoV outbreak quickly crossed into other Chinese provinces and even crossed international borders, affecting eastern, southeastern, and southern regions of Asia. Other major Asian manufacturing centers like Taiwan, Hong Kong, and Singapore reported shutting down most of their production units as well.

The outbreak, however, was not limited to countries in China’s vicinity. Among the various majorly affected regions, the SARS-CoV proved especially deadly for Europe and Canada. In fact, among the 800 deaths in at least 17 countries, 44 deaths occurred in Toronto alone.
An Impending Sense of Déjà vu - Coronavirus in the Supply Chain

The phantom of the SARS-CoV outbreak is threatening to disrupt the global economy once again in the form of SARS-CoV-2. But the new strain of the coronavirus might have an even bigger impact than the SARS-CoV outbreak. It took the SARS outbreak more than six months to infect 5,000 people in mainland China. SARS-CoV-2 reached that number in less than a month and octupled (8x) it in less than two.

But it’s not just the rate at which COVID-19 is spreading that is concerning for the global economy. A comparison of China’s position as an economic hub between 2003 and the present paints an even grimmer picture. In 2003, when the SARS-CoV broke out, China’s GDP was USD 1.6 trillion. In 2018, China’s GDP stood at USD 13.6 trillion. China’s export volumes have grown as well from USD 438 billion in 2003 to USD 2.5 trillion in 2018.

Coronavirus Timeline: The Beginning

- Dec 8: First patient develops symptoms of Wuhan coronavirus
- Dec 31: China alerts WHO about several pneumonia cases
- Jan 1: Wuhan’s wholesale seafood market shut down
- Jan 7: Identification of new virus COVID-19
- Jan 11: First case outside China reported in Thailand
- Jan 13: First death in China recorded
- Jan 23: Wuhan placed under quarantine, rail and air services suspended
- Jan 29: Death toll climbs to 132, 6000 new cases reported

Fig. 3: Coronavirus - A timeline

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During this period of 17 years, China has grown as a manufacturer and assumed the position as the largest supplier of goods worldwide. Since the early 1980s, many businesses in the US and European region have viewed the PRC as a market where products can be created at a reduced cost and with increased efficiency. With the public health crisis and lockdowns across the country, companies around the world that rely on China’s manufacturing prowess are faced with the need to find alternative ways to meet supply chain demands, such as rerouting their supply chain. Many of these alternatives have been drastic in nature.

For instance, the apparent immediate impact of the COVID-19 outbreak on big-tech giant Apple was primarily assumed to be on their retail sales. However, the company has had to reroute their supply chain as a result of the temporary closure of their China facilities. On February 17, 2020, Apple reported that they will miss March-quarter guidance as a result of the coronavirus disruptions.

Toyota, Ford, and Ikea are among the other major businesses that are either idling their production units or reducing operations. In fact, Fiat Chrysler advised they are now looking into shutting down a European manufacturing plant because supply from Chinese suppliers has all but diminished in the wake of the outbreak.
These stories are not unique. The outbreak is wreaking havoc on manufacturing supply chain visibility. In addition, the coronavirus outbreak also threatens to impact the global pharmaceutical supply chain. Wuhan is home to many drug manufacturers. Though not the largest pharmaceutical manufacturing hub, Wuhan has become a prosperous center for biopharmaceutical research and development. A city-wide lockdown could hamper the global supply of life-saving drugs, ironically during a global disease outbreak.

Another critical concern businesses must consider is the validity of information available about current conditions. With the rapid spread of the disease has also come a rapid spread of disinformation. Fluctuating infection numbers coming from multiple outlets can have businesses questioning the real level of risk. In addition, some outlets doubt whether government officials in affected areas are accurately portraying the disease and the level of care being offered.

All of this clouds visibility for supply chain professionals trying to mitigate the effects of the disaster. The limited knowledge and strong parallels between the COVID-19 and the SARS-CoV outbreak of 2003 have led several businesses to base their precautions on historical evidence and experience. As a result, they will continue to carry out the necessary steps in order to contain the current outbreak and prevent disruption in their supply chain.

It can be safely summarized that factors like China's status as a global manufacturing powerhouse, its position in the global economy, and the rapid spread of the coronavirus have all contributed to a serious setback to the global supply chain. With the world still in the midst of this fallout, the exact damages to global supply chains are yet to be gauged in figures.
While the COVID-19 outbreak has prompted numerous companies to suspend operations in the country, China’s skilled worker base, extensive highway and rail systems, and vast consumer ecosystem make it a tough-to-quit market. Wuhan, the epicenter of the COVID-19 outbreak, is home to more than 300 of the world’s top 500 companies, including Microsoft, Siemens, and PSA.

Amid this turmoil, however, some major logistics companies have decided to mobilize their delivery networks in order to provide aid to affected regions. For instance, FedEx has shipped more than 200,000 surgical masks and personal protective equipment (PPE) to its Asia Pacific Hub in Guangzhou, China. This initiative has helped accelerate the response work of the humanitarian aid organization Direct Relief.

Measures such as these combined with the collective effort from Chinese authorities, the WHO committee, the Ministry of Health Ontario, IMO and many other international and domestic organizations have provided affected people and businesses with the hope of containment and treatment. At the same time, it has also helped organizations to devise plans to mitigate damages that have already been sustained to both the public and the economy.

Hope Amidst the Gloom

Protect yourself and others from getting sick

Wash your hands

- After coughing or sneezing
- When caring for the sick
- Before, during and after you prepare food
- Before eating
- After toilet use
- When hands are visibly dirty
- After handling animals or animal waste
Protect others from getting sick

Avoid close contact when you are experiencing cough and fever
Avoid spitting in public

If you have fever, cough and difficulty breathing, seek medical care early and share previous travel history with your health care provider

Fig. 5: World Health Organization’s (WHO) advice on preventing COVID-19 infection

Despite confirmed cases of the virus in more than 25 countries, the immediate risk of a widespread outbreak is still unknown. The following precautions can help prevent additional potential threats:

- Take everyday precautions to prevent the spread of germs
- Be on the lookout for people with travel history to China
- Take necessary infection control steps when helping a COVID-19 patient
- Seek medical help if you exhibit any symptoms related to COVID-19 infection
Sustaining Businesses During the Fallout

Regardless of whether businesses have operations in affected regions, there are going to be repercussions of the COVID-19 felt across industries. Restrictions on travel and absenteeism within vendors and suppliers could cause massive supply chain disruptions worldwide. That said, companies with significant portions of operations in China are at a particular risk of upheaval.

**Organizations need to take precautionary measures in order to ensure business continuity during the fallout.**

One of the most significant things organizations need to focus on is establishing a comprehensive and conducive business continuity plan (BCP) and determining the degree of organizational preparedness to deal with the global COVID-19 outbreak. This includes reviewing company policies on communicable diseases, monitoring internal and external communication measures, identifying alternative vendors and conducting thorough online and off-line training and simulation drills. As part of this exercise, companies need to keep employees updated on the local scenario and announcements especially from government and/or public health officials.

This is not a one time exercise. Instead businesses should continually analyze and update their business continuity plans in order to avoid delays, as in the case of disasters like the Coronavirus outbreak.

Another essential aspect for businesses is to manage insurance policies of both themselves and their suppliers and vendors. All applicable policies must be reviewed. And subsequent preparation for potential claims needs to be prioritized.
Steps to take globally to contain COVID-19: an EHS perspective

When it comes to the COVID-19 global outbreak, there are no specific international standards at this time. There are, however, certain regulatory guidelines that may help prevent occupational exposure to COVID-19. For instance, the United States Occupational Safety and Health Administration (OSHA) and the UK Health and Safety Executive (HSE) provide standards on the usage of respiratory protection and personal protective equipment (PPE). This could prove useful since it is believed that SARS-CoV-2 is passed through respiratory droplets.

While they do not specifically have provisions for a COVID-19 outbreak, most occupational health and safety regulations have some provision for communicable diseases. Following these standards could help organizations prevent the deadly epidemic from spreading in the workplace.

Best Practices Concerning Ongoing Operations:

- Replace face-to-face meetings with video conferences
- Permit staff to work from home
- Place a hold on travel to and from infected areas
- Implement a 14-day self-quarantine period for employees that have traveled to China
- Apply the same restrictions among suppliers and temporary workers as you do full-time employees
- In China, conduct temperature scans before allowing entry to work. All workers should wear the necessary PPE

If someone on site is suspected to be infected that staff member should leave the office immediately and visit the doctor. Before returning to work they need a "cleared to work" form by a medical professional. Also, please note if someone is showing symptoms they may be detained while crossing borders.
Combatting COVID-19 | What can suppliers do?

The COVID-19 outbreak is affecting businesses and the global economy. Here’s what you can do to minimize damages to your organization.

- Review relevant force majeure provisions
- Review BCP and conduct crisis management tests
- Observe OHS best practices (regulatory standards)
- Monitor travel logs

What must Suppliers do?

With businesses looking to reroute supply chains from China, suppliers both in and outside the affected regions need to be ready for the shift.

- Always protect the workforce
- Assess risks to and identify vulnerabilities in the value chain
- Ensure redundancy with critical vendors
- Keep business continuity plans and protocols up-to-date
- Review hygiene conditions frequently

Learning from the SARS-CoV outbreak of 2003

SARS-CoV claimed 774 lives from 8,098 confirmed cases of infection. It taught us lessons we can use to minimize the impact of the COVID-19 outbreak on businesses.

When affected, here’s what you need to do:

- Risk assessment and preparedness
- Containment of infection and impact
- Measurement of impact
- Creation of buffer time period
- Transitioning back to normalcy

Things you can do to avoid impact:

- Continuous monitoring of affected areas
- Prompt identification of vulnerabilities in supply chain
- Maintaining contingency plans for uninterrupted operations
Understanding force majeure declarations

Considering the COVID-19 outbreak could result in the suspension of operations, businesses that rely on a complex network of suppliers and vendors need to understand the inclusions of a force majeure declaration. Force majeure is a legal doctrine under which a contractor may be relieved from liability for non-performance beyond their control. These provisions vary greatly depending on the way they have been drafted.

While most force majeure declarations do not list disease, outbreaks, and quarantines, they may include general provisions such as “acts of God” or “acts of government.” Situations under which a force majeure declaration is put into effect varies. However, there are a few best practices that companies can follow when they invoke the force majeure provisions of the contract.

- Determine whether the situation falls under the force majeure provision
- Ensure notice requirements under the contract have been met
- Gather as much information on the specific provision as possible
- Consider ramping up an alternate supplier
- Review your suppliers’ and contractors’ supply chain to determine whether they might be impacted by the SARS-CoV-2 virus and prepare for any contingencies
The reward of preparation: Lessons learned from real organizations

“We have to invest in preparedness. (February 11, 2020)
– General Tedros Adhanom Ghebreyesus, World Health Organization Director

For many businesses, the outbreak has significantly slowed operations. In fact, according to a recent independent interview with 20 EHS leaders, more than 40% stated that they have stopped work in the affected area. Further, one respondent noted that with the government introducing a restriction on businesses returning to work after the Lunar New Year, the company’s working timeline becomes murky and uncertain.15

After conducting interviews with Avetta clients, however, we found one organization well prepared for the crisis.

Their response is a stalwart model for how an investment in preparatory measures brings a great reward.

Years prior, following the SARs outbreak, this international leader developed a process to address a wide variety of emergencies. In fact, once a year, they run drills on mock disasters or epidemics. So, when the Coronavirus hit, they knew what to do.

Within a short time, they had a local task force established and monitoring the situation. What’s more, with previous emergency response plans already developed, all they had to do was adapt them for this unique situation, speeding up their reaction to the outbreak.

The task force was able to quickly develop and distribute organizational guidelines surrounding travel, employee and industrial hygiene, alternative working solutions and more. Employees and contractors have been kept well informed and they have seen little negative impact from the virus.
Another crucial component that led to this organization’s successful implementation was a decision they made a year prior. They shifted their focus to bring not only their contractors under their safety programs but also their subcontractors. Through bridging documents and active monitoring, they are able to ensure their safety values are enforced through each tier of their supply chain.

Taking the appropriate measures to minimize supply chain disruptions should begin with a few considerations:

| Protect your most valuable asset - People | Asses your value chain to identify current vulnerabilities and risk |
| Ensure your Business Continuity Plans & Protocols are up to date | Develop redundancy assurance with critical vendors and sole source suppliers |

A Proactive Coronavirus Response with Avetta
Here’s how Avetta helps with this.

Through the Connect Platform, clients are able to electronically track all compliance criteria for their contractors. Additionally, the platform allows clients to segment information by company, skill type, geographical location, sites and more.

In the case of the COVID-19 outbreak, organizations are able to see which contractors are within the affected area and could be a risk. They can then dig deeper into their management programmes including safety and insurance protection. Understanding their management and risk programmes provides greater levels of understanding and visibility around their ability to deal with business interruptions and how they mitigate foreseeable risk. Proactive monitoring before an outbreak hits will help organizations identify areas of vulnerability where back up or alternative sourcing options are needed.

And with worker management monitoring, clients aren’t limited by just vendor data. Instead, they can get clarifying information on the individual workers coming on-site and performing tasks on behalf of the organization.

Since we started working with Avetta, we have a much greater comfort level with our contractors. The Avetta solution is a powerful tool; and, as a leader in our industry, we can use it to make the industry safer.

– Nick Wilkerson, Safety Director, SBA Communications
Conclusion

The COVID-19 outbreak is one of the deadliest epidemics in recent years and, therefore, one of the biggest threats to the global economy. With companies confirming sourcing issues throughout the supply chain, there is a need for businesses to find alternatives to existing supply chain partners. The solution to this issue lies in access to wider supplier networks.

With the help of a contractor and supplier information management services like Avetta, you can gain access to a network of 95,000+ potential suppliers spread across 125 countries. This allows you to reroute your supply chain to a non-affected area and engage with suppliers who are compliant with your safety, sustainability, and quality requirements. The supplier platform helps you ensure there is no gap in skills due to the shift, providing a detailed evaluation profile of individual suppliers which facilitates greater understanding of their capability and capacity.

Before working with Avetta, it could take weeks to find and qualify contractors for projects in new locations. Now, we can identify and approve contractors in less than one week.

– Justin Gillette, Director of Risk Management, Vertical Limits

The COVID-19 outbreak has come as a serious alert for supply chain management across the world to establish alternate sourcing and manufacturing plans in different regions of the world. While natural disasters and events, such as the COVID-19, are unpredictable, organizations need to include contingencies within the scope of their risk management framework. And the time to act is now.
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About Avetta

Avetta connects leading global organizations with more than 85,000 qualified suppliers, contractors, and vendors across 100+ countries. We support the sustainable growth of supply chains through our trusted contractor prequalification, supplier audits, insurance monitoring, robust analytics and more. With real results in helping companies reduce TRIR, our highly configurable solutions elevate safety and sustainability in workplaces around the world—helping workers get home to their families each night.

Let’s connect at avetta.com