RESILIENCE360

10 TOP SUPPLY CHAIN RISKS STEMMING FROM THE CORONAVIRUS OUTBREAK

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Resilience360 Special Report

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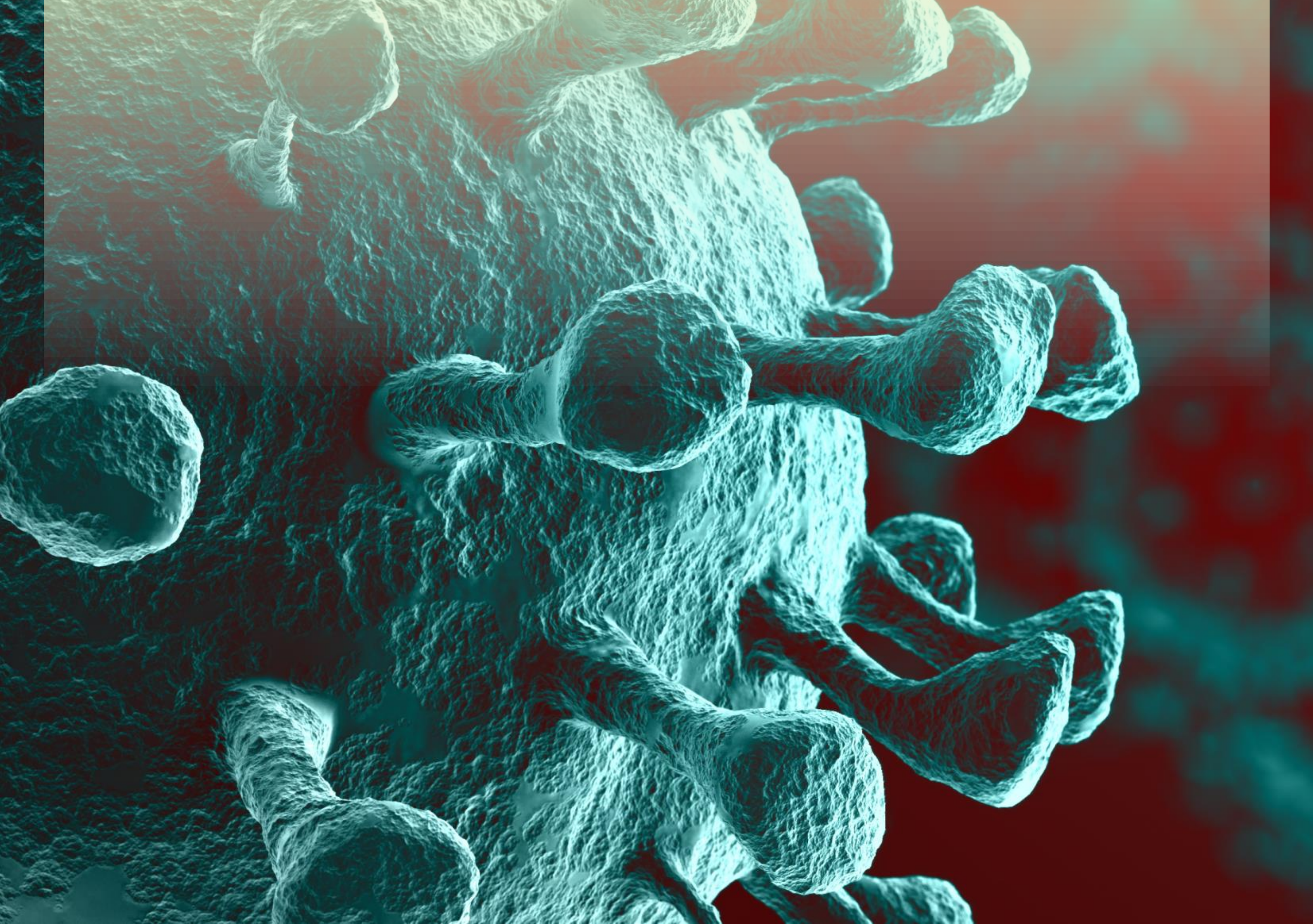


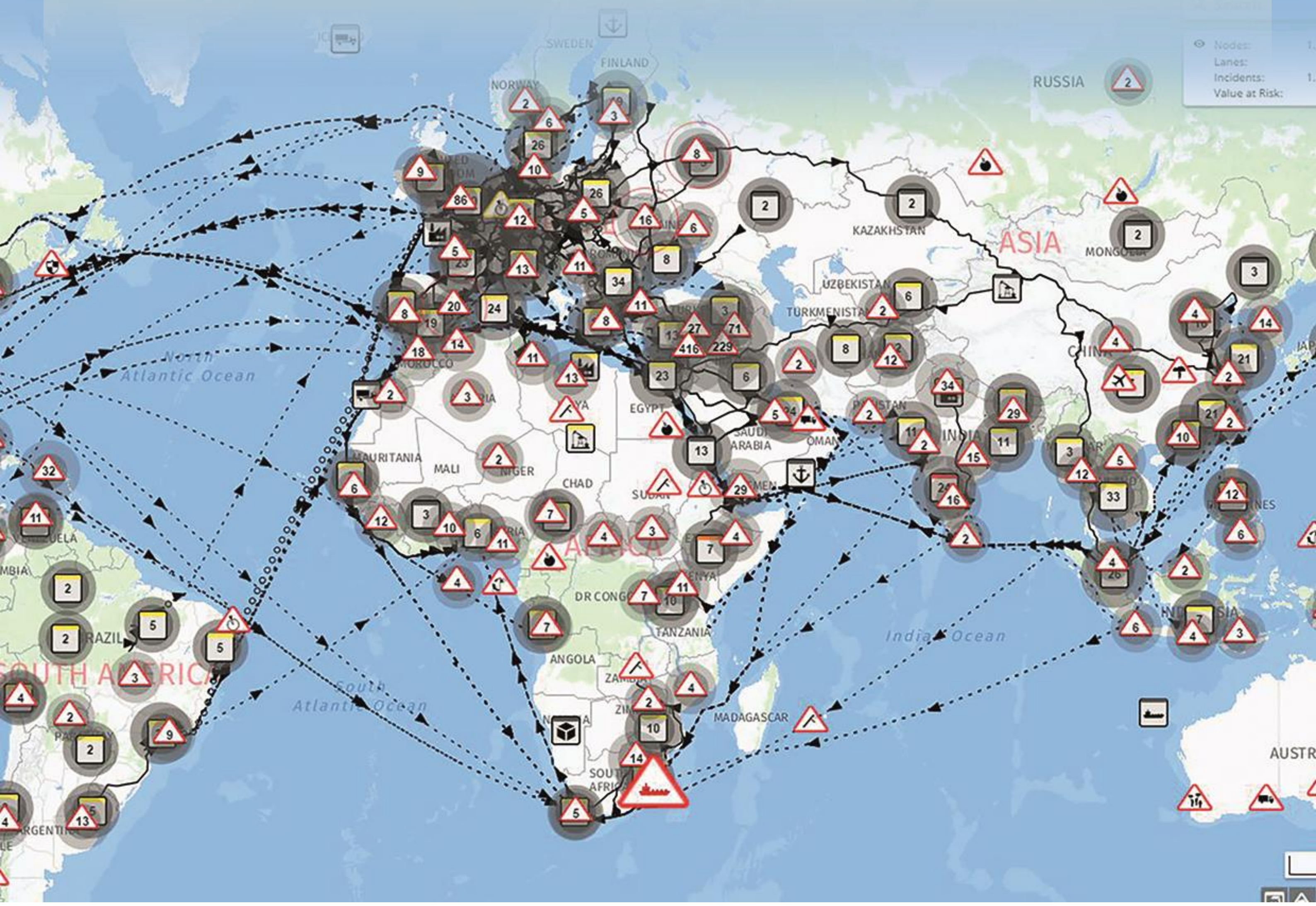
BACKGROUND

Global manufacturing and supply chains are continuing to feel the effect of the novel coronavirus epidemic as factories and logistics providers seeking to resume operations now face labor shortages and regulatory uncertainty. As of February 13, 09:00 GMT, the outbreak has already claimed the lives of 1,368 people, with over 60,000 cases being reported worldwide.

While companies draw up contingency plans for production activities, supply continuation, and logistics services to cope with this complex and fast-changing situation, the crisis now looks to disrupt global supply chains until April and potentially beyond. While production-related challenges may be overcome in the coming weeks, limited inbound and outbound freight capacity could become the biggest obstacle in the months of March and April for supply chains to normalize. Chinese media organizations have put forward March 1 as the date when production schedules could return to near-normal operations; however, this will largely depend on when the outbreak will peak.

To help supply chain managers keep abreast of the situation and initiate risk mitigation plans, Resilience360 has outlined the ten top challenges organizations will need to prepare for in the short and medium term amid the ongoing coronavirus outbreak.

ABOUT RESILIENCE360



Resilience360 is an innovative, cloud-based platform that helps companies to visualize, track and protect their business operations. The solution facilitates intuitive supply chain visualization, tracks shipments and ETAs across different transport modes and enables near real-time monitoring of incidents capable of disrupting supply chains. Resilience360 easily integrates with business systems and helps companies keep track of risk in combination with their business performance indicators. It enables companies to better ensure business continuity, building risk profiles based on over 30 risk databases, and identifying critical hotspots using heat-maps to mitigate risks and to turn potential disruptions into a competitive advantage.

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TOP 10 SUPPLY CHAIN RISKS AMID THE CORONAVIRUS OUTBREAK

1. Lockdowns cause labor and supply shortages in factories

City-wide lockdowns and quarantines have triggered labor and supply shortages as Chinese authorities from different jurisdictional levels seek to contain the coronavirus outbreak. Some of the most notable provinces and cities imposing transport restrictions on the movement of residents and vehicles include the provinces of Guangdong, Jiangxi, and Liaoning as well as the cities of Tangshan (Hebei), Nanjing (Jiangsu), Hangzhou (Zhejiang), Zhengzhou (Henan), and Ningbo (Zhejiang).

Varying degrees of city-wide restrictions like home quarantines, temperature checks, and vehicle checks have hampered the ability of workers to reach factories, thereby creating serious labor shortages. In more severe cases, some cities – most notably Wuhan at the center of the coronavirus epidemic – have imposed “sealed management” initiatives that have resulted in residential compounds being sealed off, thereby limiting the ability of employees to return to work. Major domestic auto, petrochemical, and tech manufacturers have also reconfigured their production lines to produce face masks, disinfectants, and other medical supplies to prevent the coronavirus outbreak from further halting operations.

The travel restrictions and subsequent labor shortages have caused backlogs to build up at many ports as smelters and mines in inland provinces struggle to move key resources - such as zinc, copper, aluminum, and sulphuric acid - from their refineries for raw material deliveries. Copper smelter Guangxi Nanguo was forced to declare force majeure on February 6 on copper concentrate shipments after citing logistical difficulties due to transport restrictions.

2. Regulatory uncertainty slows the restart of factory operations

Another major challenge facing manufacturers based in China is the extent to which they will need to cope with different - and, at times, conflicting - regulatory requirements that can vary at provincial, municipal, and even district level as companies seek to restart industrial operations.

Production has resumed for companies in most provinces across China as of February 10 following a government-mandated delay to restart normal business operations aimed at mitigating the virus outbreak. However, some jurisdictions, predominantly at the municipal and district level, have imposed different production schedules and requirements for resuming normal operations sometime between February 17 and March 1.

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Figure 1: Jurisdictions that have been subject to government-mandated production shutdowns (as of February 13, 09:00 GMT); source: Resilience360

Hubei Province has asked firms not to resume operations before the end of February 20, after previously extending the delay until February 13. Two cities in the eastern coastal province of Zhejiang, Wenzhou and Taizhou have likewise delayed production until February 17, with the exception of essential companies. Zhengzhou in Henan Province, home to a major factory of Taiwanese electronics manufacturer Foxconn, has imposed a staggered production timetable for when factories can reopen from February 10-24.

At a district-level, several local authorities issued notices either "encouraging" or "recommending" all firms to delay the restart of their operations until after March 1, particularly in the southern manufacturing belt of Guangdong province. Baoshan district of Shanghai as well as Shandong and Hebei provinces are also requiring factories to provide prevention measures and apply for verification before opening.

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3. Public health requirements impact industrial operations

In anticipation of firms returning to normal operations, some authorities have also issued additional requirements mandating that factories apply for permission to reopen operations or meet specific coronavirus prevention standards. These list of requirements for local companies to obtain permits to resume production include, but are not limited to, (1) setting up a prevention and control protocol; (2) quarantining non-local and/or migrant workers; (3) supplying protective gear for all workers; (4) conducting routine temperature checks and disinfection; and (5) providing protective gear like masks, gloves, temperature guns, disinfectants, etc. However, it remains unclear how quickly these applications can be processed despite some districts claiming to be able approve them within 24 hours.

The ambiguity surrounding the approval processes has already had a major impact on manufacturers seeking to restart operations. Despite having received approval to resume production in Zhengzhou, Foxconn is still reportedly awaiting approval from Shenzhen authorities to restart its plant operations.

4. Suppliers invoking force majeure clauses on the rise

On top of disruption to production and delays in orders, companies dealing with suppliers in China will be confronted with legal defenses like force majeure clauses being invoked for non-performances, shielding such suppliers from legal and financial liability. Force majeure refers to unexpected external circumstances that prevent a party to a contract from meeting their obligations, typically natural disasters. While force majeure clauses rarely mention diseases, they frequently provide relief in the event of unforeseen acts of government, for which the government-mandated shutdowns may qualify.

A Chinese international trade promotion agency has reportedly started to issue force majeure certificates to more than 100 companies unable to meet contractual obligations amid the coronavirus outbreak. A car parts producer named Huida Manufacturing (Huzhou) Co. that supplies steering-system components to a plant of Peugeot maker PSA Group in Africa became the first company to receive one on February 2. Legal experts stated that although these certificates carry significant weight and are recognized by companies, trade associations, and customs officials in more than 200 places around the world, they do not rule out further negotiation or even litigation.

In the energy sector, China National Offshore Oil Corporation (CNOOC) – China's largest importer of liquefied natural gas (LNG) – reportedly invoked force majeure on February 6 to suspend contracts with at least three unidentified suppliers. French energy giant Total announced a day later that it had rejected a force majeure notice from an unidentified Chinese LNG purchaser.

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5. Provincial border checks exacerbate trucking shortage

Cross-provincial trucking remains challenging throughout China as authorities require drivers to remain 14 days in self-quarantine depending on the license plate of the truck and the registered province of the driver to curb the spread of the coronavirus. In particular, trucks with license plates from Hubei Province where Wuhan is located have been stopped at provincial borders and asked to return to their provinces. Reports of trucks with license plates from other provinces such as Zhejiang and Jiangxi being turned away have also emerged in the past days.

Overall, trucking availability has been reduced to 40 percent within the Shanghai city area, while capacity is been down to 10 percent from Shanghai to other cities as drivers reject trips to inland provinces to maximize the number of runs per day. No drivers from outside Tianjin were reportedly allowed to enter the city, while only 10 percent of the local drivers were able to offer services. These developments have led to delays and a sharp increase in trucking prices.

6. Closed borders delay movement from and to Vietnam and Hong Kong

As of February 11, cross-border traffic between Vietnam and the Chinese provinces of Yunnan and Guangxi remains severely disrupted. In particular, export goods from Vietnam are congesting border points as trucks cannot easily cross into China. The biggest border crossing at Huu Nghi/Pingx Xiang was closed until February 8, but has reopened since. Authorities, however, are only allowing 25 trucks to pass per day if drivers wear protective clothing, with priority being given to medical and perishable cargo. Waiting times for trucks with other cargo has been 4-5 days on average on the Vietnamese side. Authorities in Vietnam reportedly are allowing trucks to pass if drivers wear protective clothing; however, it remains unclear what the requirements are on the Chinese side. Smaller border posts such as Mong Cai near Nanning and Lao Cai near Kunming require almost all cargo to be unloaded on one side of the border and reloaded on the other side for security reasons, significantly slowing down cross-border trade.

In Hong Kong, authorities have started to quarantine for 14 days all Chinese citizens coming into the territory as of February 8 in an effort to drastically reduce the number of travelers into Hong Kong. Cross-border truck drivers have so far remain exempted from the measure, and cross-border deliveries continue to be possible, albeit requiring advanced booking.

Since January 31, Russia's 16 border crossings with China along a 4,000 km border have been closed to prevent the spread of the coronavirus, likely affecting trade volumes. No reopening date has been announced yet, but Russian authorities indicated that the closure may be extended until March 1.

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7. Labor shortage causes congestion at airports and seaports

With limited trucking capacity available, congestion has started to build at air cargo terminals and warehouses. This is due to inbound shipments that have either not been cleared by customs brokers or for which delivery and pick-up services could not be arranged. As a result, cargo operations have slowed down; shipment (including critical medical device shipments) delays and demurrage costs are also starting to materialize.

The situation has been particularly acute at airport warehouses in Shanghai, potentially forcing logistics companies to not accept cargo destined for the area any longer or only against guarantees that the cargo will be picked up immediately. Gateways such as Hong Kong have not reported congestion yet and could serve as an alternative entry point to southern and central provinces in China. Despite limited trucking capacity, shipments have reportedly been trucked from Hong Kong to large cities in Sichuan Province such as Chengdu within 72 hours in recent days.

Yard congestion has also built up at ports across China due to the lack of port workers and truck drivers picking up containers from the ports. In Shanghai, only about half of the staff that usually load and unload cargo was reportedly back to work on February 10.

In particular, yards at terminals in Ningbo, Shanghai, and Tianjin have been congested, with very limited or no reefer plugs available. Reefer cargo is especially important for fresh produce, dairy products, seafood, and medicines. Container lines Maersk, MSC, and ZIM have reportedly applied a surcharge of USD 1,000 for reefer cargo into these ports due to higher costs of re-routing, while not guaranteeing an exact delivery time.

In light of the congestion, most Chinese ports waived additional demurrage and detention fees until February 9, although these have since started to apply. In addition, due to carriers canceling port calls in China, some cargo have been unloaded at ports in South Korea, notably Busan, for later on-carriage once the situation clears up.

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8. Blank sailings reduce ocean freight capacity out of China

With the Lunar New Year period having been extended in most provinces until February 9, shipping lines have announced extensive blank sailing programs for their vessels until the end of February. Blank sailing refers to the situation when a carrier cancels a scheduled stop at a specific port, or an entire route, for a certain vessel, usually due to low demand.

About 82 trans-Pacific sailings have been canceled into March, taking out around 198,500 TEU off the market, while carriers have blanked around 54 sailings in total for trade between Asia and Europe, according to Sea-Intelligence Maritime Consulting. According to some shippers, a delay of three to four weeks for containers to arrive at European destinations can be expected.

9. Limited air and rail cargo capacity to increase prices

Similarly, the large number of cancellations of both passenger and freighter flights combined with factory and logistics operations restarting in the coming weeks are expected to cause an air freight capacity shortage that could last until April. In total, more than 25,000 flights have been canceled per week so far, reducing air freight capacity by approximately 50%. In addition, Emirates Airlines has reportedly canceled freighters from Guangzhou to Dubai until March 27, while Etihad has canceled freighters from Shanghai to Mumbai and Chennai until March 30. The expected capacity crunch could lead to an increase of air freight rates by 300-400 percent, according to The Load Star.

With limited air freight capacity, outbound cargo trains from China to Europe have received increased attention. While this option is generally twice as fast as ocean shipping, capacity challenges also affected this mode of transport due to multiple cancellations of scheduled trains and priority being given to containers remaining from the pre-Lunar New Year period. In addition, the difficulty of trucking cargo across provinces to large railway stations such as Chengdu, Xi’an, and Zhengzhou could lead to schedule adjustments, reducing visibility on potential arrival times in European destinations, including Hamburg, Duisburg and Tilburg.

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10. Ripple effects felt across supply chains overseas

The coronavirus outbreak has also had major implications on industrial production and global supply chains spanning beyond China's borders.

For the automotive sector, a supply shortage of key auto parts due to the outbreak has caused some major auto manufacturers to temporarily halt operations at domestic factories in South Korea (Hyundai Motors, Ssangyong Motors, and Kia Motors) and Japan (Nissan) as they seek supplies either from China or alternative markets. Additionally, Fiat-Chrysler has announced that one of its European plants may halt production within weeks due to issues with a critical component imported from China.

In addition, the coronavirus has had a disruptive impact on global pharmaceutical supply chains. Wuhan itself is host to major domestic Active Pharmaceutical Ingredient (API) makers (such as Wuhan Shiji Pharmaceutical, Chemwerth, Hubei Biocause, and Wuhan Calmland Pharmaceuticals), with most drug makers having around one-to-three months of inventory for drug ingredients. Given the current public health crisis, China may be inclined to hold onto material supplies for certain antibiotics and therefore export less to alternative markets including the U.S and India relying on China for such critical ingredients.

Some companies have also been faced with severe financial stress due to the coronavirus crisis. American medical device maker Valeritas that makes insulin patches filed for Chapter 11 bankruptcy citing the coronavirus as having worsened its supply chain problems. Hong Kong airline Cathay Pacific similarly asked its suppliers for price reductions after being forced to cut flight capacity by 90 percent to Mainland China over the next two months due to the coronavirus.

Latest reports on February 13 also suggested that Vietnamese officials has quarantined the village of Son Loi northwest of the capital Hanoi, forcing its 10,000 residents to remain in isolation for 20 days due to six registered coronavirus cases in recent days. This is likely to have implications on manufacturing and logistics operations in the area, where several automotive and technology suppliers are located.

OUTLOOK

The ten top supply chain risks identified by Resilience360 amid the novel coronavirus crisis is aimed to equip organizations with the tools that they will need to navigate the uncertainty posed by the global health epidemic. While it remains difficult to foresee how the outbreak will continue to unfold, especially when it may peak, authorities have indicated that drastic measures to curb the outbreak should be avoided as much as possible due to their significant economic impacts. Reports suggested that operations in manufacturing and logistics within China could reach some form of normalcy sometime around March 1, with logistics capacity and rates for shipments from and to China unlikely to return to normal before April. Given the fluidity of the situation and the vast operational and financial implications across multiple industries, it may take several months to assess how the event will have impacted an organization's bottom line.