

# Ensuring Supply Chain Resilience in 2020 and Beyond

## White Paper



## Introduction

Global supply chains aren't what they used to be, and the world of trade is a very different place than it was in the first quarter of the year. Ensuring increasing degrees of resilience is no longer a matter of competitiveness; it is a matter of survival.

Will your company continue to exist after this historical black swan event has passed? And what are the possibilities that your company might come out stronger, having survived what many believe will be the most significant, global economic downturn since the Great Depression of 1929?

## Summary

The unprecedented economic disruption wrought by the worldwide spread of COVID-19 has tested global supply chains to their very limits already, and all indications are that the new barriers to business-as-usual will continue well through the third quarter of the year.

As customers increasingly demand more from their supply chains, they become more dependent on them. When disruptions strike, they tend to have an outsized financial impact.

Through our research, we have learned that those companies which have invested in the requisite assessment and preparation phases of supply chain risk mitigation have been best able to respond to meet the challenges presented thus far, but likely also those of the near term. Many companies have found competitive advantage through their supply chains' resilience.

We found that companies with resilient supply chains realise greater success based on their:

- approach to supply chain resilience;
- investment in leading-edge technologies;
- creation and maintenance of a risk management culture;
- willingness to invest in scenario modelling;
- ability to gather, analyse, and act on data; and
- exploitation of external perspective and related best-practice processes and methodologies.



## About Our Research

During the months of April and May 2020, we conducted extensive telephone and video call interviews with supply chain experts from within the Middle East region and around the world. Their combined supply chain management experience represents managerial efforts undertaken on nearly every continent over the last three decades and across a wide range of industries. Our research questions focused on the organisational strategies and tactics tested and shown to be robust in the face of the COVID-19 pandemic which began in early 2020. We wanted to learn the extent to which the experts believe that supply chain resilience is determined by a company's approach to resilience; investment in leading-edge technologies; creation and maintenance of a risk management culture; willingness to invest in scenario modelling; ability to gather, analyse, and act on data; and exploitation of external perspective and related best-practice processes and methodologies.

## Resilience – The Need for Speed

A company’s approach to resilience is as much about the speed of a response to a supply chain challenge as it is about the mitigation of problematic issues, particularly given the complexities inherent in the current trade environment.

Thus, the world’s most resilient supply chains today are the ones which possess a facility for rapid and predictable recovery from setbacks, more so than the ones which seek to prevent any possibility of setbacks. Ensuring proper supply chain resilience is, essentially, about the pace of recovery rather than the mistaken belief that all risk can be prevented entirely.

But, because every company will determine risk differently, ensuring supply chain resilience comes down to making certain that the company’s chain can absorb a defined level of shock for a certain length of time and at a predictable cost. That is the critical calculation that is being made (or not being made) by companies around the world right now. After all, there is no value in a super-resilient supply chain that is too expensive to operate.

It must be said at the outset that what defines global supply chain resilience varies widely by industry. For example, a supply chain in the chemicals industry will be far different from, say, an apparel industry supply chain because of the costs of production, inventory, shipping and a host of other factors. And there is a big difference between customer demand being destroyed, as is the case with the airline industry, and customer demand being delayed, as is most likely the case with the auto industry.

Many of our interviewees spoke of “time-to-recovery” – the time it takes for a supply chain node to fully recover after a disruption – as the key metric determinant in a supply chain’s resilience, adding that resilience begins with an identification of vulnerabilities but must also include a criticality rating against each potential critical point of failure.

Our respondents told us that the true measure of supply chain resilience can be taken by assessing a company’s flexibility, the extent to which it is able to maintain an agile operational posture. Being able to pivot in hours, rather than in days or weeks, is viewed as absolutely vital to the success of any supply chain operating in the current climate.

But flexing business models is easier said than done. After all, most supply chains are long established, deeply entrenched, geographically expansive, and highly interconnected. We learned that resilient supply chains are those which can quickly react to actual demand, rather than forecasted demand.

Respondents told us that they increasingly value an agile supply chain model over a lean one, which often involves connecting and speeding up parts or components of the chain and potentially holding less, or more select, inventory. Securing strategic inventory based on criticality, and the impact and likelihood of disruption, has been one of the key take-aways for all supply chain managers operating in the COVID-19 era.

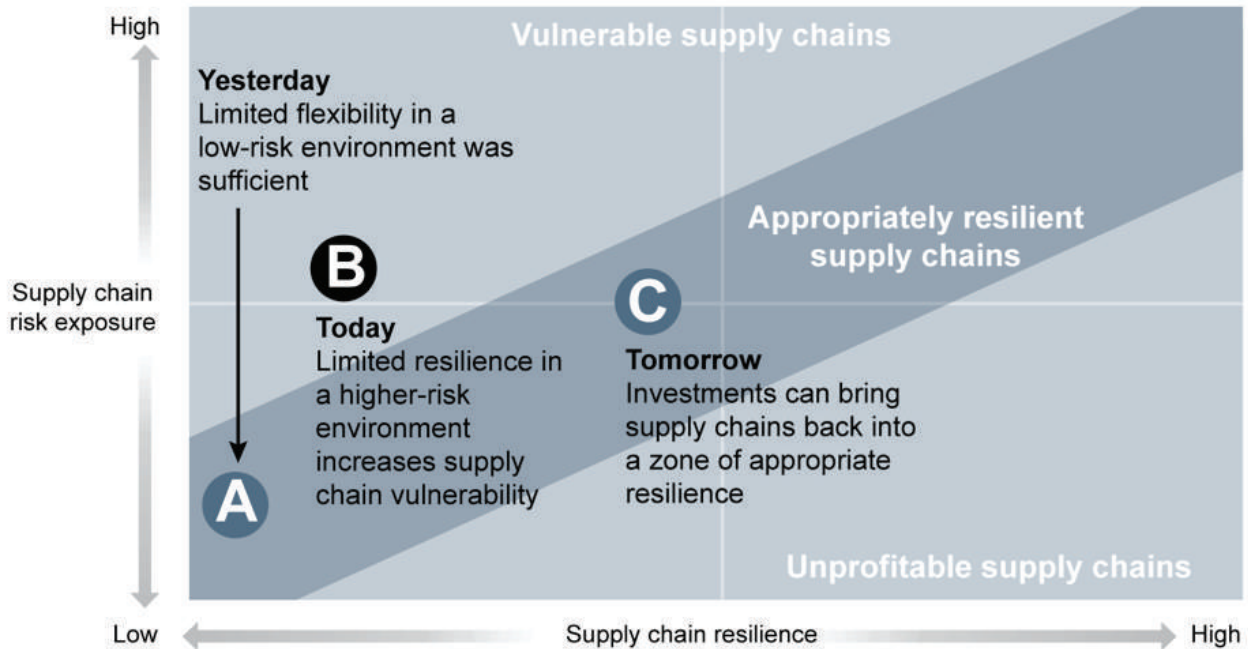
Balancing the dynamic between risk exposure and resilience has been the one central goal of all supply chain managers operating in the current climate. The way to achieve this balance, say experts, is to “make sure the supply chain allows the company to execute on its strategy, and then identify and prioritise levers that enable balance at the lowest possible cost”.

In an agile approach to supply chain resilience, connectivity and visibility along the entire length of the supply chain are imperative. This approach requires a combination of instrumentation, integration, and intelligence gained through technology. It equally involves multiple stakeholders sharing and collaborating along the supply chain. Of course, this agile approach also involves spreading risk through the deployment of multiple suppliers for each component, multiple production facilities, and multiple supply chain channels.

Companies with superior resilience tend to not only defend and maintain their business during a crisis but also benefit from the opportunities that may emerge. In fact, several of our respondents told us that they believe the COVID-19 event has presented their companies with opportunities to “double down” – strengthening one’s commitment to a particular strategy or course of action, typically one that is particularly risky – on those elements of supply chain management that have brought proven successful. Those supply chains supporting the sale of groceries and personal hygiene, for example, have had tremendous opportunity to double down, benefitting from the related efficiency gains that come with bold action.

Interestingly, we recorded varied views on whether the current climate was likely to encourage or hinder risk taking in the supply chain. A few respondents believe that commercial pressures will encourage further, riskier decision making, as cost becomes an increasingly critical consideration.

In the final analysis, the majority of our supply chain expert survey respondents believe that COVID-19 presents as much an opportunity as it does a threat, provided sufficient investment in resilience is made.



Source: Bain & Company

## Technology – The Great Enabler

Perhaps the single most important investment that can be made in a global supply chain is in technology, its greatest enabler.

No other element can deliver the same operational impact because no other component is so central to a supply chain’s resilience, and thus profitability. Technology enables the digitisation that brings the speed, accuracy, predictability, and transparency necessary to best manage today’s complex supply chains.

Our respondents told us they are most likely to see gains from three specific technologies: artificial intelligence (AI), blockchain, and robotics.

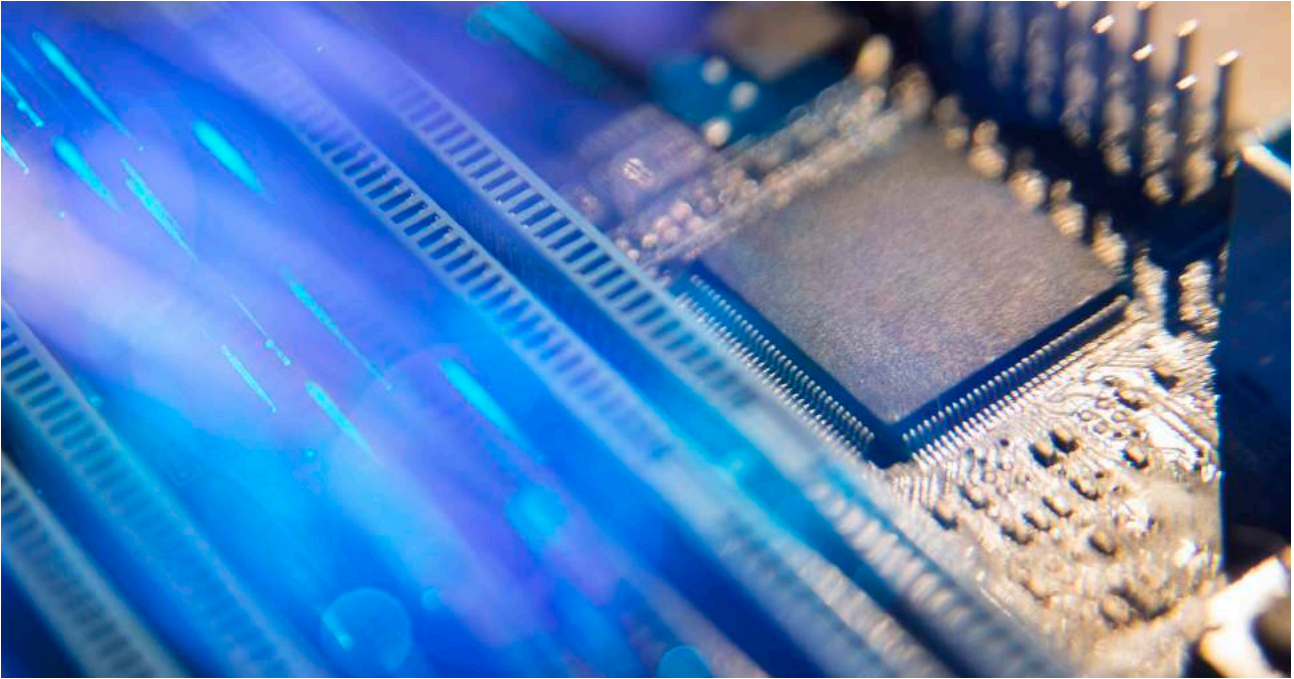
AI, or machine learning, is already enabling next-level problem solving in the supply chain. The most obvious area where AI adds benefit is in data analytics where there is so much opportunity for humans to introduce error through bias, in a way that machines do not.

The more that humans are involved in supply chain management, we learned, the better the likelihood of mistakes and the greater the possibility for “wasted time” which equates to reduced profitability.

Blockchain, in its simplest terms, is about security and transparency in the supply chain process. Real-time visibility in trade is seen as transformational, understandably enough. But how can companies benefit from its introduction? “Blockchain delivers trust, and trust brings speed and reliability to relationships across procurement, manufacturing, logistics, and digital payments”, we were told.

Our supply chain expert respondents told us that they are excited about the potential for robotics to “revolutionise their operations”, particularly as it relates to staff safety and labour relations. We learned that most distribution centre operations, for example, are still performed manually, and that,





while robotics has become somewhat commonplace in production, it has not in areas like warehouse distribution.

Finally, we often heard about the urgent need to speed the digital transformation journeys of regional companies large and small; respondents told us that they wanted to “see the world of trade become paperless as soon as possible”.

(That is good news for Abu Dhabi Ports’ partners with the launch of our Advanced Trade and Logistics Platform which will serve as Abu Dhabi’s single window trade platform for all economic operators via sea, land, air, industrial and free zones, in addition to enhancing customer experience within the trade and logistics sectors.)

## Culture – Why Red is Good

The culture of any organisation remains the greatest influence on its success or failure, say management consultants, and nowhere else is this axiom more apt than in the management of complex supply chains.

We learned quickly that ensuring supply chain resilience begins with a shared mindset, shared values, and always starts at the top of an organisation, usually with a C-suite which empowers innovation at every level. Contrary to common belief, entire companies manage risks, not supply chain managers or specialised teams. And, conversely, those companies which seek to outsource or segregate the risk-management function suffer the longest times-to-recovery, as they tend to assume diminished agility during crises.

Most companies have a performance scorecard approach to managing risk, but few have the positive culture necessary to support its value to the organisation. We learned that the best performing companies take a “red is good” approach to managing risk. If green colour codes define that processes are on-track and goals being met, then red scores indicate that processes are not being followed as required.

But often there is a cultural bias toward not scoring, or colour-coding, any risk elements as red, so as to avoid potentially awkward conversations with executives that no one wants to have. Sadly, the effect of this practice is to reinforce negative behavior, to actually encourage the introduction of greater risk in the management of supply chains.

What is needed, say our experts, is “more frankness, more open conversations, more decentralised decision-making, and a problem-solving mindset that does not suppress individuals in the company from speaking out truthfully”. What is needed are more red scores to drive candid and timely dialogue.

Those companies with a strong culture of risk-management have a few cultural characteristics in common. They begin by taking a holistic view to risk; they focus on resource and succession planning; and they ensure that standard operating procedures (SOPs) are given proper attention. In short, these companies share a culture of awareness about risk, and then they build business continuity plans around them.

Proper business continuity planning results in plans, not forecasts. It begins with awareness, seeks prevention, and then lays out clearly what actions will be taken to enable ongoing operations, even in a time of recognised disruption.

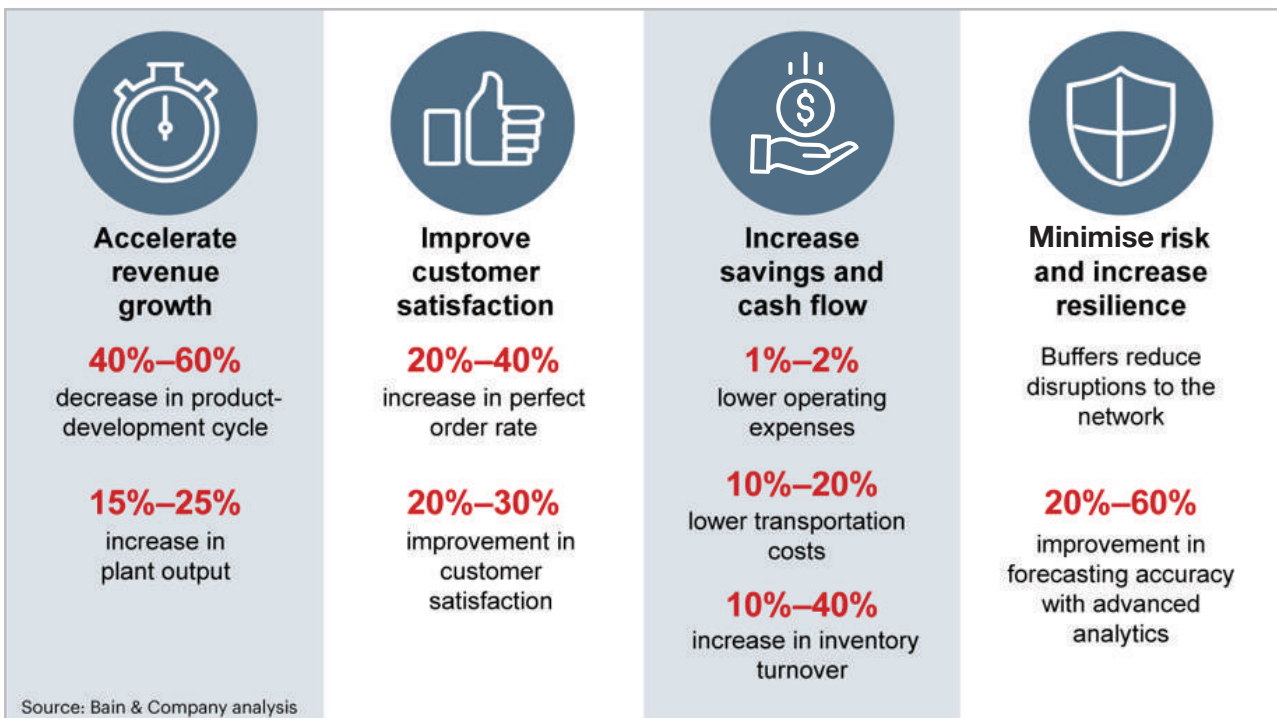
Training was a recurring theme in all our discussions, the need for company staff at every level to constantly be improving and skilling-up, mastering SOPs whenever possible.

Not just preparatory work for likely disruption, but genuine, value-adding development that ensures the robustness of any organisation. Companies which invest in their employees as much as their other assets tend to perform better over the long term, and they almost always outpace competitors in times of disruption. When a black swan event occurs, these same companies stand to realise step-change increases in competitive advantage.

In nearly every conversation taken, our expert respondents highlighted the criticality of trust as a shared value between and among all participants in a supply chain. Without trust, they said, “even the smallest transactions can become complex, leading to time delays, cost increases, and unmet expectations”. Many of our respondents emphasised the need for the creation and maintenance of personal relationships among supply chain actors, the need for customers to be heard and heard often.

Finally, we learned that companies with a strong culture of supply chain risk management enjoy competitive advantage.

Bain & Company: resilient supply chains build competitive advantage



## Scenario Modelling – Signposting the Way to Better Decision Making

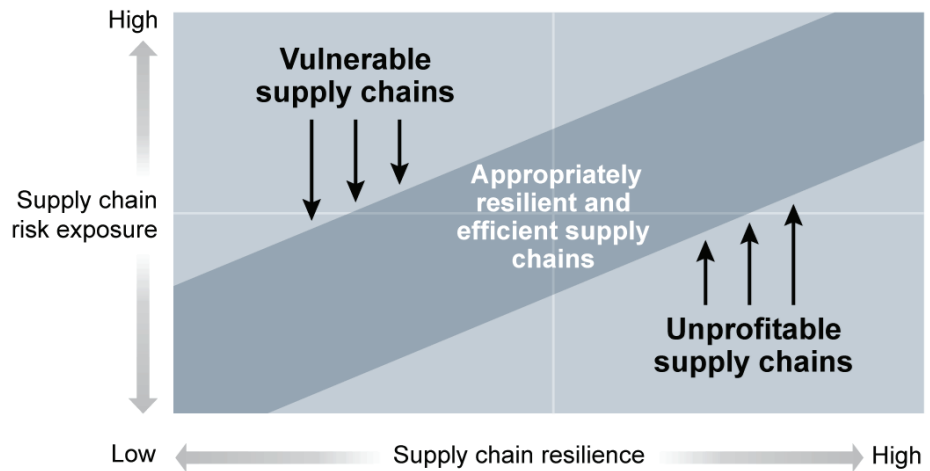
Everyone knows that it is impossible to model for every possible scenario, particularly black swan events that put the most pressure, the most quickly, on global supply chains. But we found that all companies can benefit from select scenario modelling, and many believe that it is critical, paying dividends particularly in times of less severe disruption.

Scenario planning allows executives to interplay dependent and non-dependent variables, the outcomes of which help companies define the full set of actions that they can be prepared to take depending on how situations unfold. Respondents agreed that there are two scenario analysis outcomes that are important. One is to agree the “signposts” which indicate an action may need to be taken, and the other is advanced agreement about the right level of dialogue required within the company to act with conviction if certain scenario milestones are reached.

Overall, the vast majority of our respondents believe that scenario planning greatly contributes to a company’s supply chain resilience because it regularly forces the organisation to put its customers at the centre of all decision making, and then agree a formalised process by which the company is able to assign times and costs to the delivery of goods to those different customers. The resulting metrics determine the commercial viability, and thus resilience, of the supply chain.

### Risk factors

- ▶ Geographic diversity
- ▶ Number of supply chain partners
- ▶ Length of supply chain
- ▶ Dependencies
- ▶ Degree/timeliness of data
- ▶ Exposure to trade risks
- ▶ Manufacturing complexity
- ▶ Stability of supply and customer bases
- ▶ Stability of labour pools



### Factors requiring investment

- ▶ Supplier alternatives
- ▶ Inventory buffer
- ▶ Agile training
- ▶ Security
- ▶ AI/predictive capabilities
- ▶ Real-time visibility across entire supply chain

Source: Bain & Company

## Data – Quality is Important, Sharing is Vital

Supply chain managers swim in lakes of data already, products of data-driven modern companies. Still all our experts agreed that data is paramount and continues to be critical in understanding the magnitude of risk and assigning ratings to the most exposed parts of the supply chain.

One must think of data as “relating to the whole chain, from origination of the data to delivering insights, and companies which fail to fully harness the power of their data are losing out on their ability to develop the sources of their competitive advantage”.

We learned that obtaining “enhanced visibility” is considered key to optimising supply chain efficiency and agility during normal business operations. When critical supply chain disruptions hit, this visibility becomes crucial to understanding the impact of the disruption on the rest of the chain, so that planners in the supply chain eco-system can take action decisively, such as quickly developing routes to alternative suppliers.

Nearly all our respondents made the point that “not all data is of equal quality” and that one of the greatest challenges in fully leveraging data is that it is often not shared widely enough throughout a company. The effect of investing in data gathering and analysis, only to provide its findings to a select group of senior executives who may or may not fully appreciate its worth, is of no demonstrable value to any company.

Data must be viewed as confidential but accessible by as wide a group of company managers as is practical, we learned.

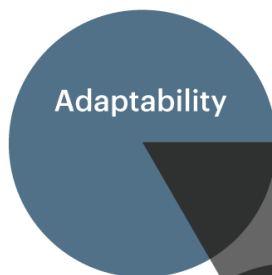
In “democratising” data, it is vital that data be shared with frontline actors in the supply chain, say our experts, or there will be a great deal of poor decision making taking place, in spite of the tremendous volumes of quality data which a company might have gathered, likely at great expense, and properly analysed.

Advanced analytics makes sense of real-time data, predicting future scenarios in the event of these disruptions and prescribing complex, profitable decisions on the spot. Some companies have built strong relationships with key suppliers and have put systems in place to provide data visibility across the extended supply network to better understand their risks and drive specific actions based on their priorities.

They developed agility within their production and distribution networks to quickly reconfigure supply to global demand, and they invested in supply chain planning and control tower solutions to better sense and respond, and predict, supply chain issues – from business challenge to black swan events.

**Are you agile enough to adapt to changes?**

From top-down strategic planning to distributed responsiveness



**Are you resilient enough to withstand unforeseen shocks?**

From a focus on short-term efficiency to a focus on long-term resilience

**Are you good enough at anticipating the future?**

From periodic point-forecasts to continuous monitoring of signposts and trigger events



Source: Bain & Company



## External Consultants – Solving First for Company Success

Supply chains certainly do not rely upon the best-practice recommendations of external consultants, but they are far more resilient for their involvement. In speaking with industry experts from around the world, we learned that what matters most in any company's relationship with its consultants is how they are used, how they are engaged.

Most organisations know their businesses better than an outside consultant, so if they are assessing internal or localised risk, they can most likely do so without the involvement of external consultants. The further upstream or downstream the risk assessment goes, the more likely it would be that consultants would add value, believe many of our respondents.

We learned that consultants work best when clients are open to the possibility that consultants are going to add value way beyond the scope-of-work that was asked for, when companies allow consultants to have an unconstrained view of the situation.

The best company value is realised when consultants are allowed to “solve root causes of problems and are granted the freedom to search and discover those problems”.

It is also quite important that consultants be encouraged to speak the truth, to share honestly how they believe they can drive value to the organisation. To do so, consultants should be encouraged to work closely with a company's most senior management, co-creating with the goal of value creation for the company, as well as the company's customers.

We heard that external consultants can quickly enable companies to reduce supply chain complexity, up operational cadence, and bring specific industry expertise to the table.





## Final Thoughts – Company Survival and the Role of Global Ports and Industrial Zones

COVID-19 has shone a spotlight on the need for global supply chains to be as robust as their profitability models will allow. Transitioning into the second half of the year, it is critical that companies rethink risk mitigation strategies to reduce the enormous impact of supply challenges on their operations and related costs. Central to the survival of any company operating in the COVID-19 era is an understanding of the critical role played by the world's ports and industrial zones in the global supply chain.

Global seaport and logistics facility development not only accelerates the rate of global trade, driving national GDP ever higher, it makes international trade less expensive and more predictable. Strong ports and industrial zones operators can evolve from static asset managers into active and invaluable global trade enablers to companies of all sizes.

By focusing on speed, scale, cost, and connectivity, the world's ports and industrial zones can provide reliable import and export capabilities to companies on every continent and across every vertical sector, from food and plastics to automotive, metals, and energy.

The world's leading trade partners will provide seamless service offerings across ports, marine services, industrial zones, logistics, and digitalisation, and they will also enable multimodal, combined transport, connectivity options, to include air and rail.

Finally, the world's best trade partners add to supply chain resilience by taking a long term, stability-focused approach to partnership which is best measured in decades rather than years, and supporting companies through government-to-government agreements as much as via private sector contracts.