



WHITEPAPER



# Supply Chain – The way forward in unpredictable times



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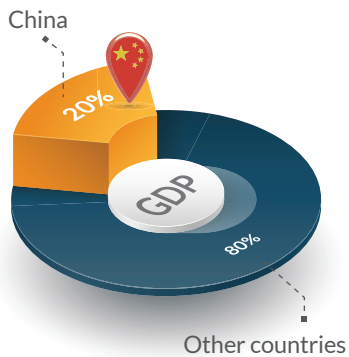
## Introduction

The Spread of the new virus COVID-19 has caught the business off-guard and has shut down markets, affecting day-to-day operations. The outbreak has changed the buying behaviour of consumers, dropping demand substantially for consumer durable and industrial products while at the same time there is a surge in demand of essential consumer products due to hoarding. Supply has also been impacted due to country wide lockdowns, transportation constraints, market slowdowns as well as shortage of labour due to health concerns. The virus has spread globally, across geographies and continents affecting more than 175 countries and territories. Some regions that have been affected have been the crux of global supply chain that have been catering to the entire world right from the era of globalisation. Organizations are concerned about the depleting inventory levels, inevitable price hikes and the inability to meet the contractual obligations.

UN has predicted that the global economy could shrink by almost one percent this year due to the COVID-19 pandemic.



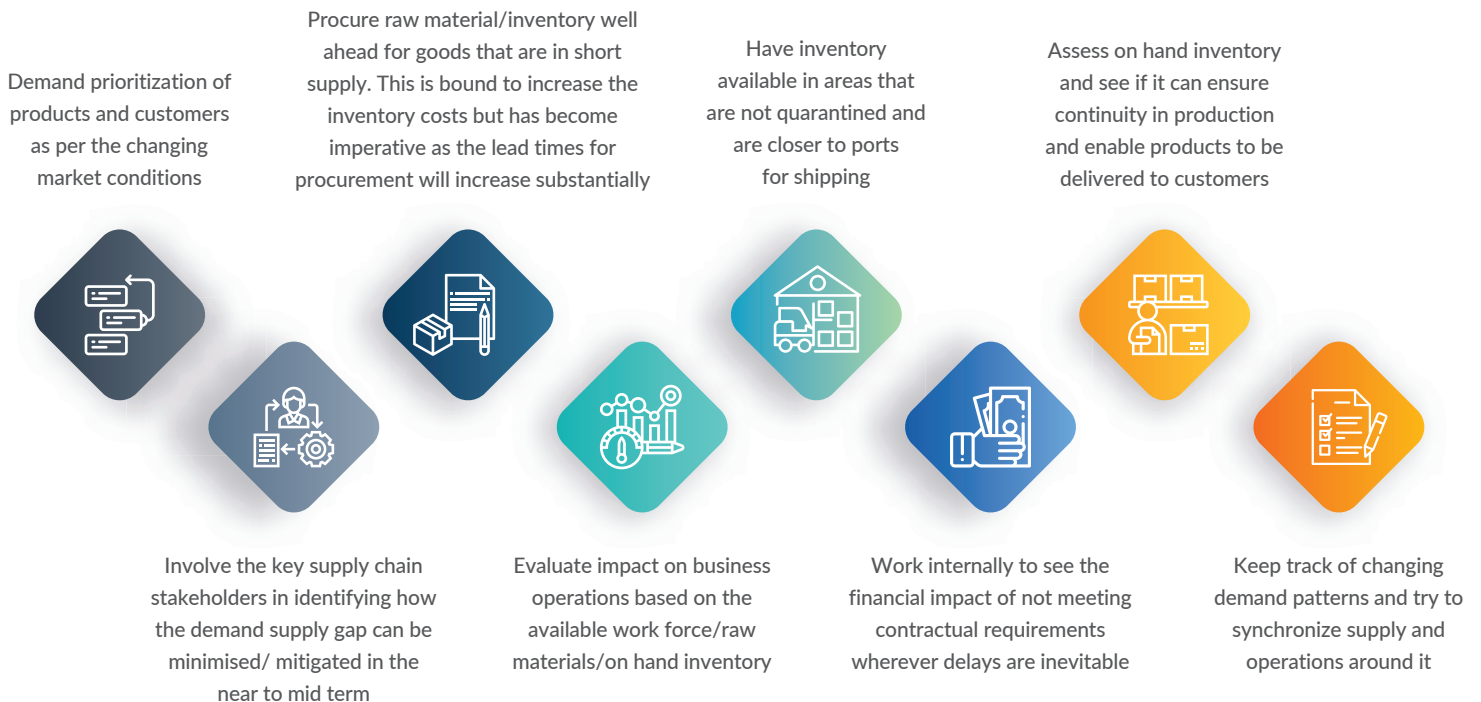
## The China Conundrum



For the last decade or so, the world has been dependent on China for manufacturing. **China is one of the world's largest exporter (exporting \$1.9 trillion of its production) with significant exports to United States (in 2018, China shipped 18% of its export to United States).** Most of the parts/ components / electronic chips that go into the making of some of the world-famous brands have been coming from China. China now contributes almost 20% to world GDP, with much of the growth coming from foreign investment. When the virus was reported first in China, business went into a lockdown to minimize the impact and this has had a cascading effect on supply chains throughout the world. With china showing a decreasing trend in virus towards the ends on March 2020, the manufacturing industry there has started resuming business operations. The lack of any major activity in virus hit regions will likely increase the supply cost, at least in the near to midterm.

## Reacting to Crisis

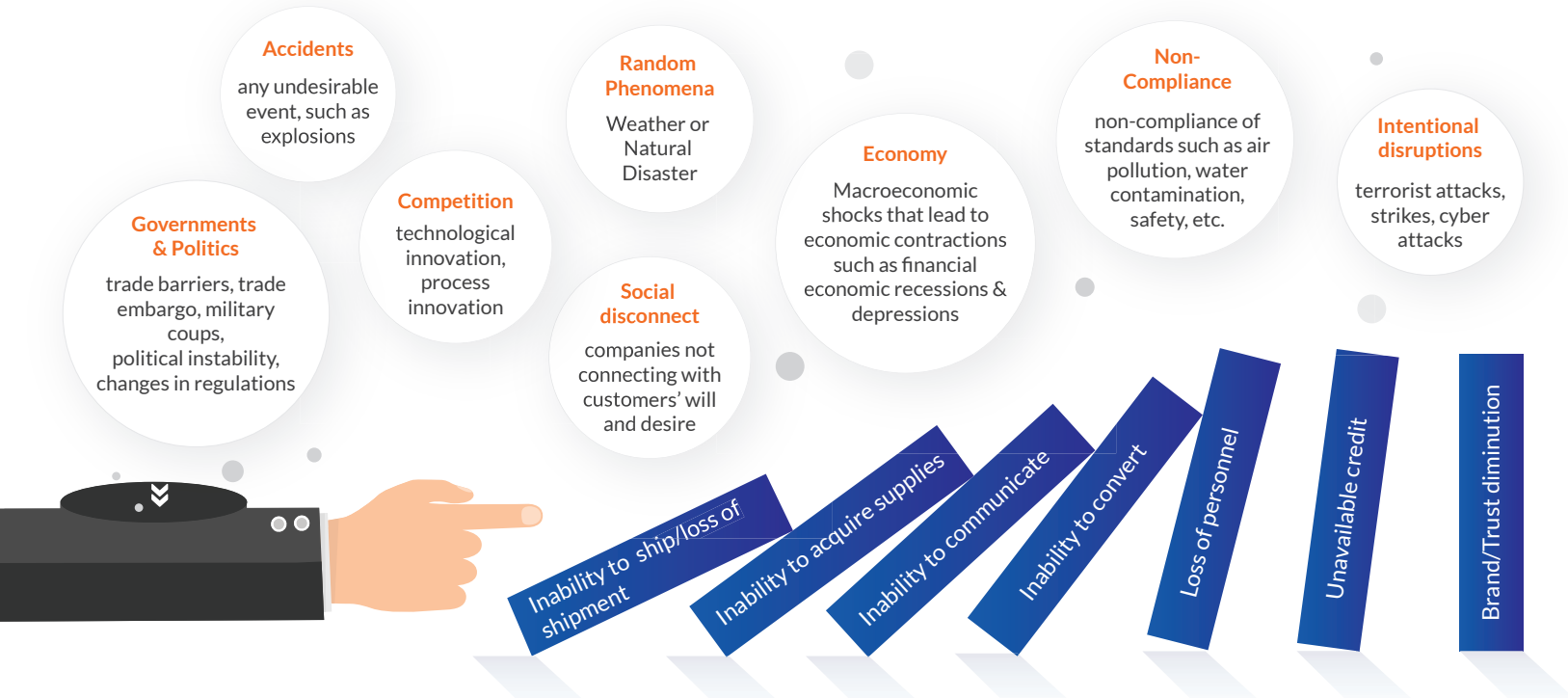
As of April 2020, the virus has shown no signs of abating and has started spreading to other parts of the world. In this scenario, it has become imperative for companies to mitigate supply risk to ensure there is little/minimal impact to their business operations. Organizations are looking at short term/as well as long term initiatives to mitigate risks and protect the supply chain. Some short-term initiatives that the companies are looking at include:



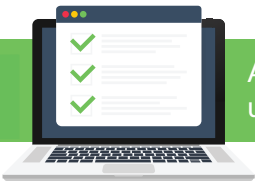


# Supply Chain Risks & Disruptions

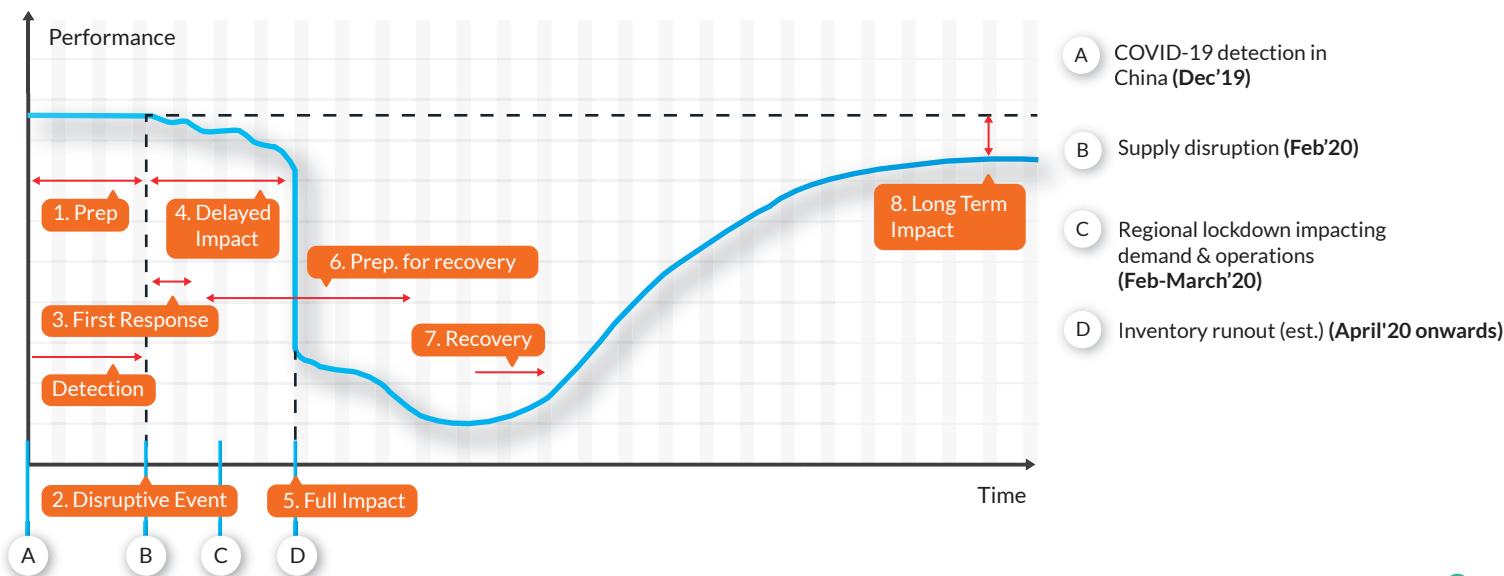
Most organizations would not be prepared for the impact created by COVID-19 or any other unforeseen pandemic, but Risks & Disruptions are nothing new for supply chains. Causes of disruption are many with varied impact on different aspects of the chain. Before the pandemic hit us, trade war between the US and China (2019) forced American companies to rethink their sourcing strategies with many of them moving production away from China. Similarly supply chains have battled weather, earthquakes, political turmoil, economic shocks, etc. on a frequent basis.



If we further analyze disruption profile of events, it follows a familiar pattern provided below with organizations relying on time between detection and impact to chalk out the plan. Organizations which have robust risk management practices in place are most equipped to properly utilize preparation time and take appropriate measures. Sadly, most organizations work on reactive mode.



As per a McKinsey report, for many non-financial corporates, risk management remains an underdeveloped and siloed capability, receiving limited attention from most senior leaders.



## The future ahead

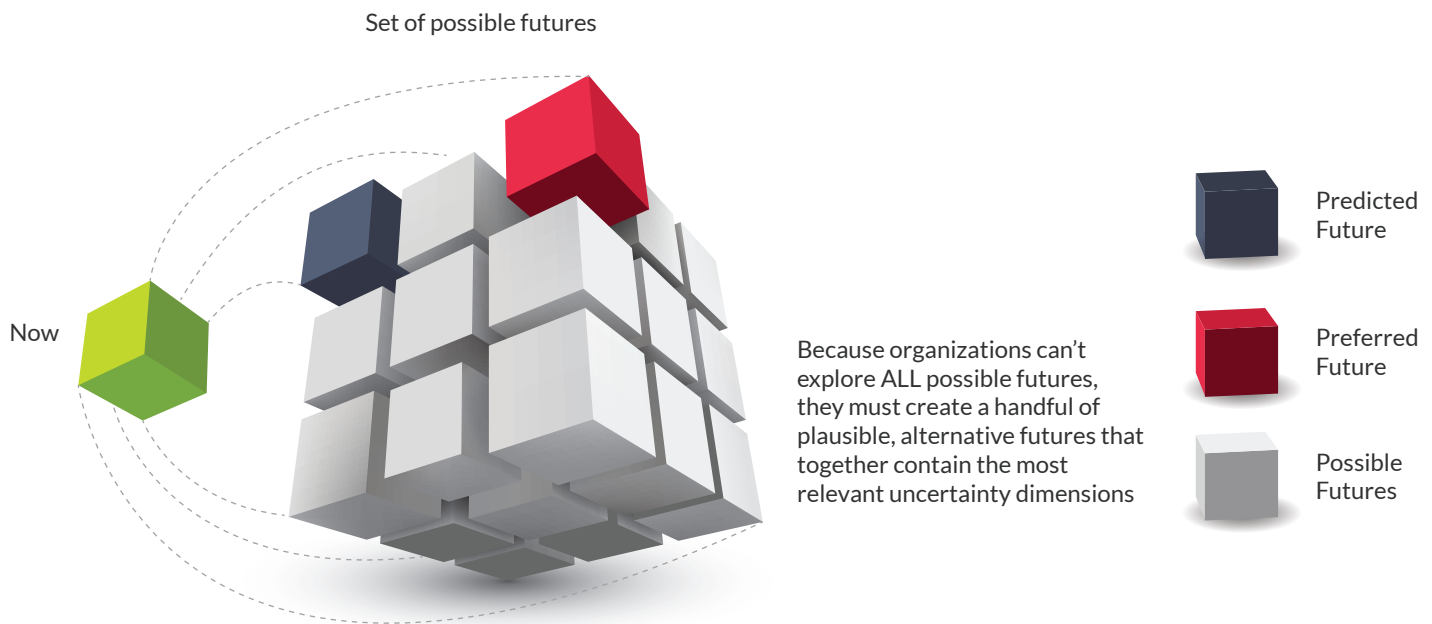
The pandemic has had a detrimental effect to business operations worldwide and has forced businesses to think on building resilient supply chains. Supply chain resiliency is a continuous process that keeps evolving as organizations keep identifying risks and build repository of mitigation strategies to deploy. Following are some key factors that can be considered to build a resilient supply chain:

### Scenario Planning

Anticipating future supply chain needs is a challenge, which is identified in a short time frame using forecasting techniques. However, for a longer time period, organizations should use scenario planning technique, as it shifts from predicting events to preparing for multiple potential futures allowing organizations to deal with uncertain future and outcomes.

As we can see from the current COVID-19 pandemic, it has made strategies prepared pre-crisis irrelevant for most organizations. This has created a whiff of uncertainty to what the business outlook is going to look like in the next 2-5 years. Hence, organizations should use the structured scenario planning to build up short- and medium-term actions for various scenarios which would help them bounce back in business.

At the same time, organizations also encounter risk events on a regular basis. Organizations need supply chain disruption drills just like firefighting drills where they create disruption scenarios, understand its impact on the entire supply chain and highlight weak nodes and links of the chain. This would make the supply chains more agile, as well as put them on a continuous improvement programme, arming them with ammunition before the next disruption unfolds.

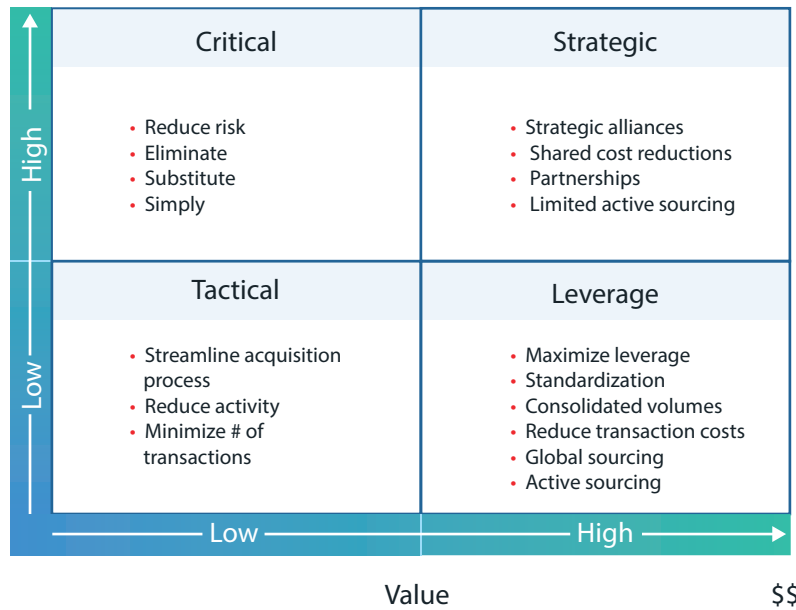


### Procurement Strategies

Given the trade tensions between USA and China in 2019, many of the companies were already looking for alternate suppliers outside China. Moving forward, global businesses will look at diversifying their supplier network with a mix of global and local suppliers. Companies will look at evaluating low cost sourcing strategies, though it would not be as easy as said, considering the complete ecosystem which China has, providing economies of scale. The companies have to transition from **'One size fits all' approach to appropriate sourcing strategy for driving positive outcomes**. One approach which organizations can follow is to have value risk mapping with items categorized as Strategic, Leverage, Critical and Tactical.



## Risk/Impact

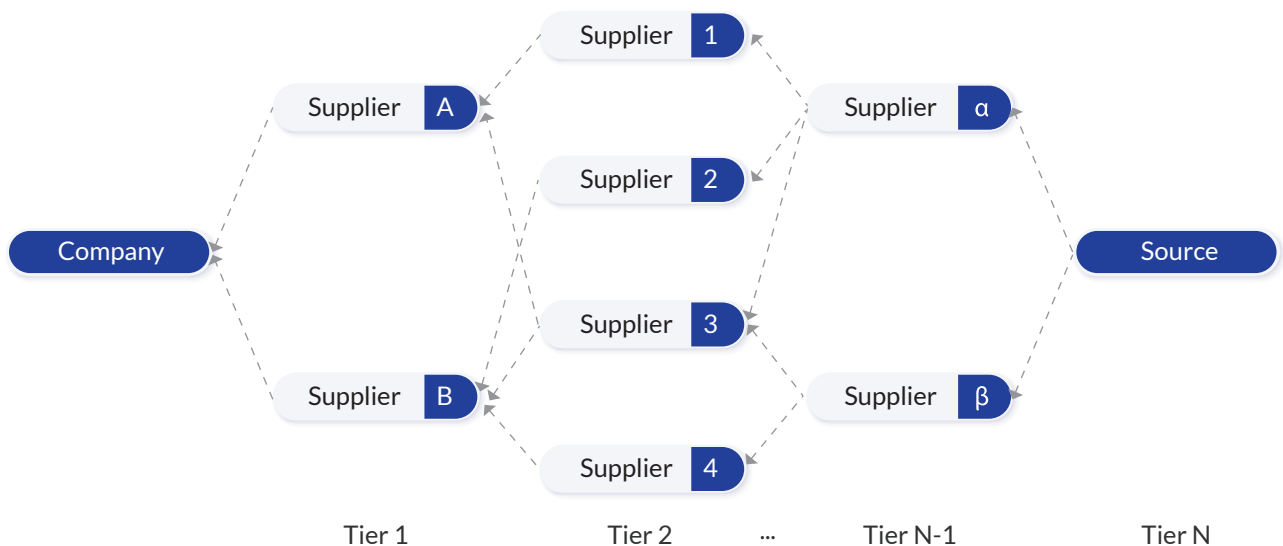


For Strategic items, companies should look for strategic alliances with shared cost reduction rendering complete visibility into each other's operations. Dual sourcing for strategic parts might reduce commitment from vendor to share risks and rewards. On the other hand, organizations should actively try to eliminate risks arising out of Critical items and look at the possibility of eliminating or substituting the same. Global & active sourcing should be carried out for Leverage items which deploy the maximum spend. Organizations should minimize total landed cost and should try consolidating volumes across geographies. For Tactical Items, organizations should look at reducing the number of transactions through bulk buying, thereby minimizing efforts.

Organizations generally rely on ERP/Procurement systems to get data on 'Value' axis but getting information on 'Risk/Impact' axis can become tricky. Many of them rely on transactional data for this too and exclude a larger set of external risks which can distort the analysis. As mentioned earlier, all relevant risks need to be re-evaluated on a regular basis to future proof supply chains to help make appropriate strategic procurement decisions.

## Supply Chain Visibility

Traditional approach to getting a supply chain view beyond tier 1 has been a challenge. Many organizations are unknowingly dependent on a single or very few niche suppliers at tier 3 or tier 4 levels. They have diamond shaped supply chain schema which is buried down in siloed organizational structures.



Organizations need to map down these supply chain structures beyond tier 1 (and not limited to corporate HQ's in ERP's). This can be facilitated by specialized products and services or by simply enhancing collaboration with suppliers (maybe through proper incentives).

## Digital Twin of Supply Chains

As supply chains evolve from siloed physical distribution management to experiential-based management, their reliance on technology and advanced mathematical modelling & optimization has increased. Organizations have started to embrace the Industry 4.0 wave and are on the way to create integrated enterprise supply networks.



As per a Gartner report, “By 2023, at least 50% of the large global companies will be using AI, advanced analytics and IoT in supply chain operations.”

Organizations today aim to create digital models of their physical supply chains (going across organizations) which helps visualize, synchronize, predict and automate business processes. It is not difficult to envision digital models ingesting data from IoT-based sensors, synchronizing decisions through API-based modular architecture, with prediction & automation carried out by leveraging AI/ML & RPA. All of this happening in real-time will help in reducing the supply chain time-to-market.

Having such a digital twin model would simplify simulating various scenarios while providing business impact across the chain, from sourcing till deliveries. All risk events can be simulated on the digital model with impact modelled beyond tier-1 supply chain and customers. This digital twin would automate manual repetitive tasks to start with, adding in more complexity through adaptive learning.

**Digital Supply Chain Twins are the future in the backdrop of Industry 4.0, and rightly so, as there is an over increasing need to take data-driven decisions, in real-time, which if misjudged could cause ripple effects across the supply chains.**

## Conclusion

Business intelligence cannot accurately predict a pandemic of the scale of COVID-19 but can help in finding risks/opportunities in the geopolitical/macroeconomic environment. The underlying supply chains which are the key to business operations needs to be looked in-depth for other dimensions or parameters that are worth considering. And with Digital Twins approaching mainstream adoption, the possibility of unveiling additional parameters/dimensions is bound to increase. The unveiled dimensions will help in reconfiguring the supply chains for future and will help in building resiliency for any events that are beyond control.

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## About Hexaware

Hexaware is the fastest growing next-generation provider of IT, BPO and consulting services. Our focus lies on taking a leadership position in helping our clients attain customer intimacy as their competitive advantage. Our digital offerings have helped our clients achieve operational excellence and customer delight by 'Powering Man Machine Collaboration.' We are now on a journey of metamorphosing the experiences of our customer's customers by leveraging our industry-leading delivery and execution model, built around the strategy— 'Automate Everything™', Cloudify Everything™, Transform Customer Experiences™.'

We serve customers in Banking, Financial Services, Capital Markets, Healthcare, Insurance, Manufacturing, Retail, Education, Telecom, Professional Services (Tax, Audit, Accounting and Legal), Travel, Transportation and Logistics. We deliver highly evolved services in Rapid Application prototyping, development and deployment; Build, Migrate and Run cloud solutions; Automation-based Application support; Enterprise Solutions for digitizing the back-office; Customer Experience Transformation; Business Intelligence & Analytics; Digital Assurance (Testing); Infrastructure Management Services; and Business Process Services.

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