

Building resilience into the supply chain, to make it more flexible and data-driven

Since last year, the Covid-19 pandemic has caused major hurdles and disruptions for the supply chains around the world. Restrictions on non-essential commodities, additional health and safety checks, and reduced staff levels have led to bottlenecks and shortages of certain goods.



Image source: [Gallo/Getty](#)

In their attempts to adapt to these challenges, businesses are responding with ingenuity and innovation, often facilitated by rapid digitisation.

Given the threat of the pandemic's third wave, companies continue to build resilience against any future shocks into the supply chain. "A seismic shift in economic history, the Covid-19 pandemic accelerated the uptake of the fourth industrial revolution for the supply chain industry," says Sujeet Morar, partner at global management consultancy Kearney.

"Flexibility and fluidity are now more vital than ever and developing an agile supply chain has risen to the top of the agenda for many companies," he explains.

With that in mind, Kearney, for example, developed a new methodology that would provide a roadmap for supply chain businesses. The Sense & Pivot (S&P) model was created to help navigate the transformation towards a more fluid, data-driven operational models. The methodology represents a response to the complex challenges of these times by harnessing the power of data and analytics through sensing platforms like scenario-modelling, correlation analysis and feature extraction.

Disparate data sources

Company data such as sales, customer spend and inventory information are combined with external data, like weather, demographics, and economic trends, along with newsfeeds and social media.

The derived insights are then utilised to identify an optimal strategy and automate decision making accordingly, enabling an agile collaborative operating model for supply chain players.

Morar explains that S&P, for instance, goes beyond mere responsiveness, as it entails constant monitoring of the market environment. This enables real time granular decision-making, and intelligent adaptation to meet demands in the most cost-effective way.

"Supply chain operators can now combine human and artificial intelligence, mapping out and testing various scenarios, and where necessary, tweaking parameters manually based on business knowledge not captured by the sensing engines to determine an optimal strategy. These tools are encompassed in a dedicated software package that makes the process simple and intuitive," says Morar.

Automating business processes

Many nations like South Africa, however, are still in the early stages of digitising and automating business processes. Thus far there have been no large-scale systemic changes to facilitate this shift, says Morar, although measures like the opening of 'green lanes' allowing preapproved and supplied data to speed up the flow, improvement of regulatory authorities, announcements to invest in 4G, 5G and fibre roll-out, and adjustments to subsidisation models have been suggested as possible structural interventions to help further digitise and thus allow players to build resilience into their supply chains.

"Many of S&P's core enablers, such as data and analytics capabilities that allow real-time monitoring of both the market and the company itself, are considered nascent for the majority of SA players," notes Morar.

Localisation may also be a crucial aspect to leveraging the power of strategies like S&P. While this has lent impetus to the push for localised production of goods, we're still heavily reliant on global supply for certain commodities, for example, hi-tech items like microchips.

Unfortunately, South Africa's manufacturing sector is still not as advanced as those of Europe, China, and the USA. Realistically, says Morar. "We lack the economies of scale to produce certain goods at prices that are competitive globally. Localising manufacture in SA would incur the added benefit of creating much-needed employment.

"In many instances, the challenge now is to develop a credible local supply base, by developing credible local supply chain partners, through more effective and targeted local content development programs and the enabling ecosystem to enable the transfer of technology and intellectual property," suggests Morar.

Tiered supplier considerations

"The ability to pivot operational strategy and switch fluidly between a diverse selection of suppliers is vital. A sensing platform with dependable analytics can help you foresee these needs and be prepared to respond swiftly," says Morar.

Morar also emphasizes the importance of a dedicated logistics partner for supply chain players, who could benefit off deeper insight into global trends and quicker reactions to disruptions in the form of creative, cost-effective solutions.

He explains that the Sense and Pivot framework allows market adaptability and seamless orchestration to improve financial

and operational outcomes. Large global players have used learning-enabled transportation and autonomous planning analytics to streamline their operations and have achieved significant savings and cost reductions.

"The aim is to cultivate agile supply chain operators in SA who can withstand market shocks and have an array of contingencies to overcome any shortages that may arise," he concludes.

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