INDIA

Deriving real business value with real-time demand sensing

June 17, 2022, 4:38 PM IST / Rakesh Prasad in Voices, India, TOI

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Material shortages and stockouts came to define 2021, hampering organisations' ability to produce and satiate their customers' demands. The lingering effects of pandemic-induced demand-supply imbalances taught industries a critical lesson – planning and forecasting market demands based on historical data is no more a viable option. They need to transgress to more futuristic and practical techniques. As per industry speculators, the world-wide chip shortage problem which started in year 2020 is likely to be stretched into 2023. A recent article hinted that chip shortage will drive 50% of the top Automotive OEMs to design their own chips by 2025.

It has become imperative for organisations to check where the current demand might be headed and implement immediate controls to combat the demand-related disruptions. They need to bring in tested and proven methodology, such as demand sensing, to avoid shortages of critical products and services across the supply chain. Demand sensing is more than studying the patterns in near real-time data – it helps organisations to react and overcome unprecedented demand-supply issues and develop responsive business plans.

The evolving prediction mechanism of demand sensing

Earlier, time-series analysis was considered a near-accurate method for forecasting. But as we progressed towards a more disruption-ridden market, the traditional method were unable to yield correct results. According to a research by Gartner, many companies spend hours each week on sales estimations, yet less than 50% of their sales leaders and sellers have confidence in forecasting accuracy. These forecasts do not provide retailers or businesses with granularity to account for meaningful demand signals and make pragmatic sales decisions.

Demand sensing can make a major difference in such cases. To achieve this, organisations will require more powerful tools and data from varied sources. Collating all the data and leveraging the powers of machine learning, artificial intelligence and big data analytics will improve the estimation of near-future trends and provide real-time insights. In fact, AI-enabled supply chains have the capability to improve inventory levels by 35% and service levels by 65%. Forecasters can use the decision tree models to learn about the supply chain fluctuations and improve accuracy of the near-future demand. The machine learning algorithms in the solution leverage real-time data to generate a far more accurate sense of the short-term future. This approach also enables automation within demand planning, so that organisations gain visibility of potential customer expectations and can plan adjustments faster.

With brand loyalty fluctuating in this vulnerable economic environment, businesses cannot afford to risk losing due to out-of-stock scenarios. In this situation, demand sensing can help create a well-integrated and synchronized supply chain that makes forward planning effortless. Industries are also realizing the critical need to enhance supply chain capabilities by using cognitive demand sensing solutions. A multinational OEM, for instance, acquired a supply chain intelligence company to take advantage of their demand sensing capabilities, so that they can better evaluate the upcoming market requirements.

Demand sensing can bring improvements in inventory cycle-times and transportation costs, lessen the forecast errors and result into higher service-levels as more compared to traditional time-series forecasting techniques. It has the potential to increase revenues, reduce lead times, optimize costs, and achieve greater control over the working capital with efficient inventory management.

Deploying real-time demand sensing solution

While the market offers numerous demand sensing solution options for supply chain management, enterprises have often experienced failure in achieving results initially, due to significant operational hurdles. A major reason is the existence of traditional ERP and legacy systems – businesses using such systems have disparate data silos, which makes it difficult to track every volatile behavior of the varied supply chain data in real time.

Demand sensing solutions also require access to internal data, along with the ability to integrate it with external information from up and downstream sources in the value chain to create better predictions. For this, enterprises will first need to implement a robust data management and processing platform that is integrated with all the IoT devices and smart sensors on factory floors, which are capable of generating more data than ever. Then, they will need to integrate data from systems outside the internal platform.

Organisations seeking to make the most of their demand sensing solutions need to take an integrated approach

across their entire supply chain system. This involves integrating their warehouse management system (WMS) within their supply chain, feeding it real-time data from operational and customer sources, partnering with a vendor and supplier ecosystem that syncs with their demand sensing solution, and collaborating with stakeholders to broaden the data pool for faster, and more efficient product replenishment.
The scale of integrations may seem big, but this will allow greater visibility and interoperability across stakeholders. For creating such a solution, enterprises will need to implement and design the solution extremely carefully. The enormity of the project will require expertise and experience in deploying a business-wide demand sensing solution to ensure vigilant monitoring, data governance, and customisation.

Extracting business value from near-future predictions

As we head toward the future, demand sensing will prove to be a potent weapon to achieve competitive edge. The business value that it can deliver will far compensate the hurdles to implement it. So, organisations seeking to leverage the full benefits of a demand sensing solution should choose a unified platform solution that can help accelerate their data-to-insights-to-business outcome journey.

Such solutions will deliver reliable results when powered by a deep understanding of data analytics, while also incorporating the nuances and custom requirements of various industry verticals, such as logistics and retail. For this, a high quality data pipeline is a must.

Organisations will then be assured of the validity of their insights, which in turn will lead to more accurate projections of customer demand patterns. Thus, faster and optimal decision making.
So, it's time to turn the challenges of the pandemic to new opportunities. With a design thinking approach that aligns with the technology solutions and overall business strategy and goals, enterprises can focus on the future and keep moving forward.

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