
HOW DATA ANALYTICS CAN PROVIDE SOLUTIONS TO SOME OF THE BIGGEST SUPPLY CHAIN CHALLENGES

Before the technological advancement and the bursting popularity of all things digital, the information flow from the supply chain was recorded on paper. In today's time, physical documents have become scarce for the technology has made it possible to store structured and unstructured data in digital format – popularly known as Big Data.

This voluminous data isn't just something to store and lock up in a virtual locker. What many supply chain businesses do not understand is that Big Data is extremely significant and can help them with whatever supply chain challenges they are going through at the moment – and there are usually many of them.

While every business struggles with their own set of challenges, supply chain struggles because of the complex nature of the business. The physical flow of products is extensive in the supply chain and is spread out across cities, countries, and even on a global scale.

The bigger a supply chain business becomes, the more complex and challenging its problems to get

Ironically, the solution to supply chain problems is within the supply chain itself. Big Data analytics are the magic words!

Allow us to provide some insight:

Challenge 1: Lack of control over Supply Chain Processes

The growth of a supply chain business means more warehouses, more clients, more specific orders, larger inventory, and more suppliers, etc. As the numbers keep adding on, the risk of losing control over the inventory increases, especially when an integrated system between different locations is not maintained.

Not knowing the exact amount of inventory at every location can lead to time wastage as well as the wastage of resources, Unawareness of inventory can lead to placement of wrong orders, goods getting expired at the warehouses, and not having an adequate amount of goods when a client has already placed orders. The riskiest consequence of lack of control over inventory is that transits disappear into thin air and become untraceable until they reach the buyers.

Solution

Big data and analytics are allowing firms to use quantitative methods to influence the decision-making process across all the operations of the supply chain. [McKinsey](#) points out that there two things that big data and analytics are doing differently in supply chain management.

Firstly, it is increasing the database in Enterprise Resource Planning and Supply Chain Management system of a company, and providing more relevant data for the analytics. Secondly, big data and data analytics are letting go of the traditional analytics methods and using newer, more advanced, and

powerful analytical tools and methods on newer and older data sources to derive intelligence for supply chain management decisions.

These advanced data analytics and the decisions based on it is increasing the efficiency of the front-line operations and leading to wiser and more productive strategic choices of the selection of supply chain operating models.

Technology and robotic process automation are also playing a gigantic role in expanding the database and providing relevant information for advanced data analytics. As [a publication on research gate](#) pointed out, inventory management and warehouse management has been modified greatly with modern systems and creating better data resources and contributing to the database for analytics. An organization who is making the best out of data analytics for their supply chain management are drawing the biggest data from Radio Frequency Identification, automated sensors, connectivity, and intelligence with material handling, and packaging system applications, etc.

These techs keep a minute by minute data of the inventory system, recording every movement and passing it on to the database and upgrading the entire supply chain management system. This leads to a streamlined and efficient order processing and extremely organized management of the inventory in the warehouses all across the globe.

Once data and technology ensure near-perfection in inventory management, it also allows supply chain businesses to reassess their competitive strategies. Leading supply chain firms are using both to gain visibility on their expenditure, to maintain efficient inventory tracking, to recognize the price and performance trends, and to improve their process efforts, etc.

It needs to be remembered that one cannot do without others. All the technology leads to superior data sources, yet without analytics, all that data would just be sitting there.

Organization and their supply chain management need to capitalize on the data via analytics and not only excel with their inventory management but also work towards gaining speed and leading the industry by attaining competitive advantage.

Challenge 2: Slow Reaction Time

In the distribution business, another factor matters almost as much as the cost – quick reaction time. It is also a factor that can give businesses a competitive edge.

Not considering the extremely rare goods, there's hardly ever only one supplier of desired merchandise, and clients wouldn't miss a beat in leaving their suppliers high and dry if they fail to deliver on time.

Yet it is one of the biggest challenges supply chain businesses suffer from and there are many reasons behind it. Slow order processing, products placed in the wrong warehouses, frequently out-of-stock, etc. are some of the common reasons.

The only way supply chains can prosper is when the processes in their warehouses move swiftly and efficiently, but how does one do that?

Solution

Another role played by Big Data is that of expediting the process of order picking and order fulfillment. It does so by tapping into the various data source and drawing results. By accessing the order histories, warehouse layout, previous picking times, and item inventory ensure the order processing goes smoothly and the client gets an update on the order a soon and as accurately as possible.

It doesn't stop there. Big Data and data analytics also streamlines the product and service traceability, picks up on potential problems, and on problematic suppliers to make sure that the client's expectation is not let down in any way.

Defected products and services also do not miss the reach of the Big Data and data analytics and predicted and recognized earlier on –before it is shipped to the clients– via early warnings, and predictive analytics.

All that information at hand results in quick order processing and timely deliveries., and ultimately satisfied customers. By streamlining every minor and major supply chain process, data analytics makes a strong impact on the businesses' revenue. The historical data allows the businesses to make decisions, and the predictive analysis helps them ensure that the decision they are taking has a very high chance of being right.

When strategic decisions are made with data analytics, supply chain businesses not only deal with their current challenges but use this data to grow and expand their business.

Omnisys Solutions also helps companies leverage the data they already have to get tangible dollar benefits. With a focus on business value, Omnisys helps its customers make the most of their technology investments and define the right roadmap for them.