A while back I was having a nice cup of tea in the office kitchenette. The statistics manager and marketing manager were sitting on the table next to mine having a very interesting conversation about how artificial intelligence technology is “en route” to changing the way supply chain management is done.

And indeed, I thought to myself, supply chain analytics is reshaping the cost reduction techniques of multiple organisations and it is simplifying process transactions.

**SUPPLY CHAIN ANALYTICS: WHY IT MATTERS?**

The coordination and integration of the flow of information, raw materials and finances from the supplier to manufacturer to wholesaler to retailer to customer have always been of major importance to businesses.

This is mainly because of how supply chain management can affect the cost structure of an organisation. Supply chains are under scrutiny like never before due to its complexity and the competitive advantage that companies can reap from them.

With the power of analytics and artificial intelligence, companies can now fine tune their supply chain management systems in ways that weren’t possible before.

Supply chains have for a long time been driven by statistics and quantifiable performance indicators. Nevertheless, the sort of analytics which are revolutionising the industry today - real time analytics - were largely absent at the time.

As the whole world became more technologically inclined, this was also bound to change. Companies started acknowledging that many factors ranging from the weather to the condition of vehicles and machinery could clearly impact supply chain management.

Executives in the field have therefore thought long and hard about these data that could be harnessed to drive efficiencies.

It is becoming increasingly difficult and troublesome for companies to rely on traditional supply chain systems especially with the mix of global operating systems, pricing pressures and constantly changing customer expectations.

Furthermore, many companies are facing rising competition from low-cost outsourcers. Even organisations with leading managed supply chains in the world have faced stock-outs during periods of unanticipated demand in the past few years.

One of the reasons for this is the lack of visibility with traditional supply chain systems and the fact that they are grounded in hindsight.

Decisions are taken based on what happened in the past and not what is expected to happen in the future. Traditional supply chain systems no longer provide the competitive advantage they used to.
All of these challenges eventually create waste in your supply chain. That’s where data analytics comes in handy. M Nazri, CEO of MyFinB Group believes: “The day for real-time supply chain practices has come and is on the verge of becoming more mainstream due to the multitude of cloud management tools and increased adoption of new supply chain software platforms. However, supply chain analytics is very much at the beginning stages of development and many companies will take time to adopt them efficiently.”

**INSIGHTS THAT MAKE A DIFFERENCE**

First and foremost, the integration of analytics and artificial intelligence in supply chain management systems will enable companies to use historical enterprise data to feed predictive models.

This will in turn lead to better and more informed decisions concerning customer expectations or demand for the product during a specific period of time.

Moreover, the use of supply chain analytics would provide companies with the opportunity to identify hidden inefficiencies to capture greater cost savings and use risk modelling to conduct “pre-mortems” around investment and purchase decisions.

More value will be added, if the company is able to link the supply chain models to customers and pricing analytics to gain insight on future profitability.

MyFinB Holdings, for example, is on its way to launch a RoboMarketeer in the ASEAN market. This is MyFinB’s latest B2B2C cognitive analytics technology.

The product being launched has the ability to data mine millions of transactions and customer data. In doing so, the RoboMarketeer will be able to provide deeper insights into users’ purchase habits and behaviours.

With the use of Artificial Intelligence and Analytics, MyFinB’s goal is set to disrupt the e-commerce markets and logistics industry particularly in fast moving customer goods.

The application of analytics in supply chain is taken to the next level as product owners are able to have in-depth analysis of customers as well as make predictions about spending habits, such as likely purchase amounts and top-selling products across various target markets.

The system will allow supply chain managers to have a more accurate and timely indication of which products to offer to end users.

Nazri states: “What we are trying to do is derive insights which are both more predictive – they allow us to see what is going to happen, going forward – and prescriptive – now we know something, what should we do about it?”

At this point, no retailer can afford to delay innovation. More and more categories are moving into the digital battleground, competing with the endless aisle and two-day promise offered by Amazon.

Applying predictive analytics to its book searches, Amazon has certain books readily available in its warehouses basing itself on the preferences of customers in that particular area.

In such a way, it is able to deliver its books within two days only. The strategy used is supply chain optimisation: creating an “omni-channel supply chain that not only optimises fulfilment of current inventory but predicts and responds to trends that shape and localise future demand.”

At the same time Amazon is looking at using drones to deliver products. Although expensive, it will increase the company’s profitability. By lowering the rate of return of products, due to lowered delivery time, the company will experience higher sales and higher profits.

Another company, Adidas has had

<p>| Application of Supply Chain Analytics |</p>
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<tr>
<th>Company</th>
<th>Product/Service</th>
<th>Benefits Derived</th>
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<tr>
<td>MyFinB</td>
<td>RoboMarketeer:</td>
<td>1. Ability to data mine millions of transactions and customer data.</td>
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<td></td>
<td>2. Ability to link the supply chain models to customers and pricing analytics to gain insight on future profitability.</td>
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<tr>
<td>Amazon</td>
<td>2-Day Delivery Promise:</td>
<td>1. Shape and localize future demand.</td>
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<td></td>
<td>1. Use predictive analytics to analyse preferences of readers in a certain area.</td>
<td>2. Increase the company’s profitability.</td>
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<td>2. Omni-channel supply chain that not only optimizes fulfilment of current inventory but predicts and responds to trends</td>
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<td>Use of Drones for delivery</td>
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<tr>
<td>Adidas</td>
<td>RFID Tracking</td>
<td>1. Omni-channel strategy.</td>
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<td></td>
<td>1. Rigorous Inventory Management.</td>
<td>2. Allows customers to buy online but only.</td>
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<td>&quot;Click and collect&quot;</td>
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considerable success implementing supply chain digitisation to improve sales.

In Russia, the company has started its omni-channel strategy through three main strategies: RFID tracking, which has laid the foundation for rigorous inventory management; “Click and Collect”, allowing customers to buy online but only pick up their products from the stores; and “Ship from Store”, enabling faster delivery of products from warehouse shipping without having to go through the trouble of taking a trip to the store.

Furthermore, global trade software company Haven has just launched a new product called Provider Performance Analytics. The tool allows Haven’s customers to make better decisions using descriptive and prescriptive analytics.

According to the CEO, Matthew Tillman, the biggest obstacle faced by supply chain managers is that they require lots of employees working in different locations.

With the lack of supply chain analytics, much of the important data gets lost in email. This leads to a lack of visibility on the part of management who miss the information necessary to make the most out of their suppliers.

Firms with the appropriate supply chain systems succeed in capturing this information and thus, save more in terms of costs and tend to be more profitable.

Supply chain planning is driven by forecasting, which implies that managers need to ensure that the right products are in the right place at the right time. Therefore, it is of tremendous help if managers have the ability to predict demand more or less accurately.

Multiple organisations around the world are trying to apply analytics to their supply chain systems. Moreover, additional data elements, which have never been used before are now driving forecasting in the supply chain industry.

Companies are using social media to do customer profiling in order to see what people are saying about their product and get a feel of what customers are expecting from the organisation, in order to anticipate future demand.

**CHALLENGES WITH SUPPLY CHAIN ANALYTICS**

Nazri says: “In order to gain competitive advantage from supply chain analytics, companies need to reduce the time it takes to act on insights those analytics generate.”

A commitment to supply chain improvement using analytics is easy to make - but not so easy to execute. Even the most passionate companies sometimes end up making a whole range of excuses to delay, defer and deny.

However, they could easily be undermined by a competitor who is leveraging on an analytics-improved supply chain system to achieve cost leadership. Managers usually use “treasure hunts” to mine data for hidden opportunities.

However, before they start doing so, they need to do a bit of data silo busting; which implies that they need to make sure that they have the required information to drive analytics insights.

Furthermore, some companies tend on analytics to improve their supply chain systems. At this point, companies might need to re-combine and re-think how supply chain management works.

The key is to generate and capture value in the whole chain. And it looks very different from the past. Many companies are combining technology usually associated with Industry 4.0 with supply chain to improve their efficiencies.

All in all, the digital revolution is causing a huge paradigm shift for what used to be supply chain management.

The latter was once about delivering the right quality at the lowest cost; now, it is about generating more sales, creating more value and capturing it.