

# What is Supply Chain Management and why is contingency planning important?

The human body has many parts, which work in tandem to allow an individual perform daily tasks. There is however one organ which is most directly responsible for ensuring resources are supplied to all body parts – the heart. If the heart stops beating, the body will not function. A Supply Chain is to a business what the heart is to a body - if the Supply Chain does not 'beat' to the rhythm of customers desires, the organisation will cease to exist.

A supply chain is a network of interconnected nodes from a source point to its intended recipient. A chain, in its pure state, is unbroken hence there is an inherent loop back to source. Supply Chains exist in several forms; PHYSICAL - from the farmer who plants cashew nuts, grows cashew fruits, transports these fruits or nuts to merchants who may sell on to traders in a market and then to you and I, FINANCIAL - to the large establishment relying on paper to print currency notes which get transported from the mint to banking vaults and auto teller machines across the country for you and I, or in a more modern DIGITAL form where 'Social', 'Mobile', lots of 'Analytics' to better transform terabytes of data into business winning strategies and 'Cloud' are the norm.

With that foundation, the concept of supply chain management, the more expanded term for which was historically known as logistics management, has to do with the management of the interfaces and relationships that exist from the raw material stage of a product or upstream component of a service down to the end consumer. Along this chain you may find several nodes in the form of suppliers, transport, process (production or manufacturing), storage and consumers. The saying goes, 'you are only as strong as your weakest link'; if force is applied along the chain greater than the strength of that link in the chain, a break could occur which would cause disruptions along the entire chain. Such disruptions could cause a 'bullwhip' effect (greater disruptions) further upstream. The headache of any Supply Chain Manager is to ensure their supply chain is robust and resilient enough to withstand disruptions that occur (and they will occur) and protect service delivery to their businesses' customers. The concept and importance of contingency planning cannot be touched without first understanding the flows that exist along the supply chain.

There are traditionally four flows that exist along the Supply Chain, they are, Information, Goods/Services or People, Cash and the 'Reverse'. Each of these flows is very crucial to the successful execution of activities along the chain. Similar to body parts, they cannot exist in isolation hence need to work together to ensure there are no bottlenecks along the chain. These flows are vulnerable to external and internal factors which could hinder movement from source to intended recipient. A supply chain professional requires these four flows to move unconstrained in order to build resiliency and conduct contingency planning along his or her supply chain. The relevance of the aforementioned concepts will be broached after an insight into each supply chain flow.

The first of these flows is information. This can come in different forms, text, video, images and audio. Any of these forms can be tampered with making the information corrupted and rendering it unreliable. If a business does not put the appropriate measures in place to safeguard the flow of information it receives to make business decisions, then its customers are in for a lot of

disappointments. To put this differently, if supply chain professionals do not have accurate end to end visibility of their network, the internal chaos this would cause would lead to external chaos and inevitably lost sales. That is certainly a scenario to be avoided.

The second of these flows is that of Goods, Services or People. The flow of goods could come in three different forms, raw material, intermediate or finished state. Services on the other hand ought to come in a 'finished' state. A lot of us have probably been on the receiving end of very poor service and wondered whether it had been delivered in a raw or intermediate state.

The third of these flows is Cash; this moves in two forms, physical or electronic. Like information, electronic movements are subject to cyber-attacks. A recent article in the Guardian reported that Nigeria loses N78Bn annually to cyber-attacks. In the same month, an online website (hackmageddon) provided global cyber-attacks statistics that highlighted that the motivations behind attacks in that month were heavily skewed towards cyber-crime (69.7%) and the majority of the targets were within the Industrial sector. Financial Data security is therefore of paramount importance when engaging in electronic cash movements.

Physical movements of cash have also been subject to one misfortune or the other. As with anything reliant on a manual process, the process can be prone to man-made errors. These could come in the form of 'over or undercounting' of monies to be moved. The process is also more susceptible to pilferage as the vehicle transporting cash becomes a moving target for 'predators'. Business managers are constantly faced with the trouble of having to think of ways of safeguarding their assets, in this case, a high value moving asset.

The last of these flows is the 'Reverse'. The simple thing about the 'reverse' flow is literally thinking about the movement of the good, service, people, information or cash from the recipient back to its original source. The difficulty is in the execution of this flow as there is also a higher probability of having to coordinate a 'many to one' operation as opposed to a 'one to many' which is more characteristic of 'source to recipient' flows. With a bit more clarity on what each supply chain flow is about, we will now explore the relevance of contingency planning in relation to logistics and transportation.

Goods rely heavily on several transport modes for movement from one location to another. The third quarter 2015 Nigerian GDP report by the National Bureau of Statistics provided an insight into the contribution of each of the transport modes, to the share of the transportation and storage sector in the GDP. Over the first three quarters of 2015, rail, the most suitable for movement of heavy goods contributed 0%, road, the most commonly used mode contributed an average of 85%, water contributed an average of 0.66% and air an average of 7% (transport services, post & courier services made up the difference). This heavily skewed distribution already paints a picture of the kinds of challenges faced by logistics managers operating within these shores.

Let us consider a Logistics professional who intends on moving goods from point A to point B. In Nigeria, transporters are heavily reliant on the road network that exists (rail network no longer mature enough to be a suitable alternative) to move loads which are greater than the capacity of the pliable road network. This then leads to traffic congestion and in turn to delays. Any Logistics manager will tell you that the metric 'on-time in full' (OTIF) is one which is of grave importance to them; a clog in the road network (well at least the type you witness on Apapa-Oshodi expressway or the Lagos-Ibadan expressway on the last Friday of the month), would make a mockery of that metric. Whilst still on the road network, security poses to be another challenge for Logistics managers. The transporter moving

alcoholic beverages through some very interesting parts of the continent prays and hopes that his or her goods get to the final destination in the same quantity that left the plant or warehouse.

All over the world the oceans, seas and rivers (waterways) have been a viable outlet for moving goods from one point to another cost effectively. Within our shores and region, this happens as well but not at the same frequency. Constraints such as low water depth, low throughput at ports and security risks owing to militancy to name a few, tend to make this an unattractive option.

Airways are known to be the fastest and most expensive when moving goods, services and people from one point to another (I appreciate that one could challenge that point by saying this is dependent on the value of the goods, services or people being moved or the opportunity cost of not having one of these available immediately when required). Locally, this mode is a distant second in relation to contribution to the sectors share of GDP, however, the cost, relative ease and access to vehicles for road haulage will keep this mode in a non-competitive position for the foreseeable future.

The examples of the three transport modes in relation to the peculiarities of our local environment provided above elucidate into the frustrations and constraints faced by logisticians on a daily basis. As the end goal of every logistician is to ensure goods and services get to customers at the right place, time, price, in the right quantity and quality, relying solely on one plan or transport mode to get products to customers would not be prudent of a logistician. The peculiarities of our local environment screams out for a favourable transportation policy promoting a better distribution of each modes contribution to the sectors share of the GDP.

A recent Gartner article summarised areas of focus to mitigate the impact of Supply Chain disruptions. They include, the ability to make empowered decisions quickly and with transparency, strong lines of communication with customers, suppliers and employees, and scenario planning to assess potential future risk impacts and contingency plans. Businesses today cannot afford to run an operation without taking into consideration 'what-if scenarios' and making adequate accommodation for the impacts these scenarios will have on their internal and external customers. Whilst contingency planning could be an expensive exercise, each business needs to determine their appetite or capacity for having predetermined responses to scenarios that could play out within their value chains (in other words 'resilience to disruptions'); they need to consider the opportunity cost of not having appropriate cover for these scenarios, and whether they could live with that opportunity cost.

Over the years, science has revealed that a heart attack occurs when blood flow to the heart is blocked. As businesses expand more into Omni-channel type offerings, experience has shown that an accurate and unconstrained flow of information, is the key ingredient to aid the mitigation of disruptions and strengthen the resiliency of the businesses network. This key ingredient and how it is used, differentiates the winners from the laggards.

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