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**Innovation That Matters:**  
Smarter Infrastructure for Competitive Advantage

Perspective:

# Understanding Smart Supply Chain



Capt. P. Kohli, Founder, CrossTree Techno-Visors and Senior Vice President, Arshiya International

Another smart way for organizations looking for a holistic approach to optimize and automate the delivery of services to its customers is creating a Smart Supply Chain. With increased exposure to shocks and disruptions, supply chains have grown more global and interconnected. **In dialogue with Capt. P. Kohli to understand what makes a supply chain intelligent.**

**Can you define “smart supply chain”. What business outcomes can one expect of it?**

A smart supply chain is a monitored supply chain that retains the flexibility to adapt and helps clients to streamline their supply chain operations and reduce risks. Smartness primarily comes from understanding the requirements precisely and using technology to enhance the efficacy of intent. Prioritizing on the intent – which varies with product specifics – will allow the supply chain to optimize both costs and profitability.

Optimal utilization of available assets which results in increased revenue, providing the required out-reach to the customer are few of the key business outcomes. In case of time and environment sensitive cargos, a smart supply chain would need to avoid unwarranted downtimes of critical assets. A less than optimal supply chain typically results in an opportunity loss; at times it could result in a total loss as in case of fresh produce or other cold chain cargos.

**What do you think makes an intelligent or smart supply chain?**

Innovation and strategy as offshoots of innovation are two of the critical factors for a company to differentiate itself in the market. But to innovate one must have the basic data or information in place - starting from mapping the dynamics of both the source and the market, vehicular movement, storage capacity - utilization, past trends, demand variations, production centre dynamics etc. Intelligent analysis of this will allow for differential planning and subsequent execution.

In case of cold supply chain, faster reach to the market is even more important, as in this case, the supply chain is not just shipper of static value but one that directly impacts

value realization. Domain expertise clubbed with business intelligence could work wonders. Innovation is not about reengineering the supply chain, it’s about understanding and intervening at right place and opportune time.

To truly innovate, a company must tap into product knowledge, ground realities, see challenges as true opportunity and be dynamic and fleet footed.

**How does IT integrate with supply chain?**

One of the major problems that the nation faces right now is under utilization of available resources. Specifically in the cold supply chain, most of the capacity built was with a specific product in mind (eg. potatoes, apples, grapes, frozen, etc). Yet, through intelligent use, and some design adaptation, the same capacity can be used across multiple products. This would of course require smart collaboration among the existing disparate players. Smart IT implementation can aid this disconnected and remote capacity by mapping a virtual network, which will allow new supply links to take birth, thus leading to new market access and spread.

Thus, IT’s role is very significant in making the supply chain smarter. Domain expertise combined with IT will make the system smarter. For example, IT’s role in monitoring the supply chain is not just attaching GPS to actively monitor location, or just to optimize routing or track billing. Smartly applied technology can tell of impending machine failure, reduce energy waste, make a supply chain operator pre-emptive by nature rather than post-facto in action.

IT helps all the 3 parties involved in the cold supply chain

- Produce owner - track and trace, avoiding wastage
- 3PL (Third Party Logistics) - capacity utilization, fulfill demand, lower costs
- Consumer - product safety, quality and access

**In a study with around 700 Chief Supply Chain Officers, we found their top concern to be “supply chain visibility”. What are your views on improving the visibility and what are the challenges you foresee?**

Visibility is of utmost importance. In specialized supply chain, for example the cold chain, visibility is not just tracing the movement of trucks/products but also visibility of the carriage or storage environment (temperature, air flow, gas levels) plus visibility of the machine parameters



as key assets. This ensures the supply chain delivers as intended and allow corrective action or risk mitigation to be truly effective. Visibility also improves both trust and compliance among the involved stake holders.

Connectivity across information exchange and smart use of available information is the major challenge. Success of social media is a prime example of collaboration. To be effective, the supply chain needs to be collaborative and shared across modes, regions and capacities. This unshackling of the supply chain can only be affected through participative IT interaction. I see the smart supply chain springing from a virtual collaboration platform where various parties have seamless and transparent access on available hard and soft resources. Just as IT has driven sharing across the global social fabric (the internet), I foresee IT driving innovation and sharing across the physical global supply chain. It will of course first stitch companies together, then regions... before the global landscape is conquered.

My top concern for the supply chain is the cost impact to health and the environment. Civilization thrives on logistics; and between the ships, aircraft, trucks and trains this industry is the major contributor to global pollution. A smart supply chain must aim to minimize such damage to the environment.

**India is one of the countries where the logistics cost is around 12-13% of GDP. Can you share your views on improving the efficiency of supply chain?**

One of the immediate areas where I see the cost could be brought down is through improved capacity utilization of the infrastructure. The cost incorporates empty running of vehicles and underutilized space; the asset owner seeking fair return on investment covers the fixed costs by overcharging the capacity user. While supply chain activity is evident almost eternally, the lack of information and transparency of demand – stemming from natural competition in this largely unorganized ecosystem – only adds to this cost. Scaling up capacity of infrastructure, shared utility across users & service providers, government support in streamlining transactional costs and in reducing bottlenecks with clear and steady policy implementation will bring down the expenses.

We see symptoms of rapid change already – the plans for a dedicated freight corridor, the improved road network, development of world class Free Trade and Warehousing Zones, rapid transport systems like the metros, private rail networks, and the policy focus for implementation provided to all these initiatives are clear evidence of change. None of these can be fully effective and fulfill the scale of design, without smart technology in support.

Source: IBM

Interview with Capt. Pawanexh Kohli

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