



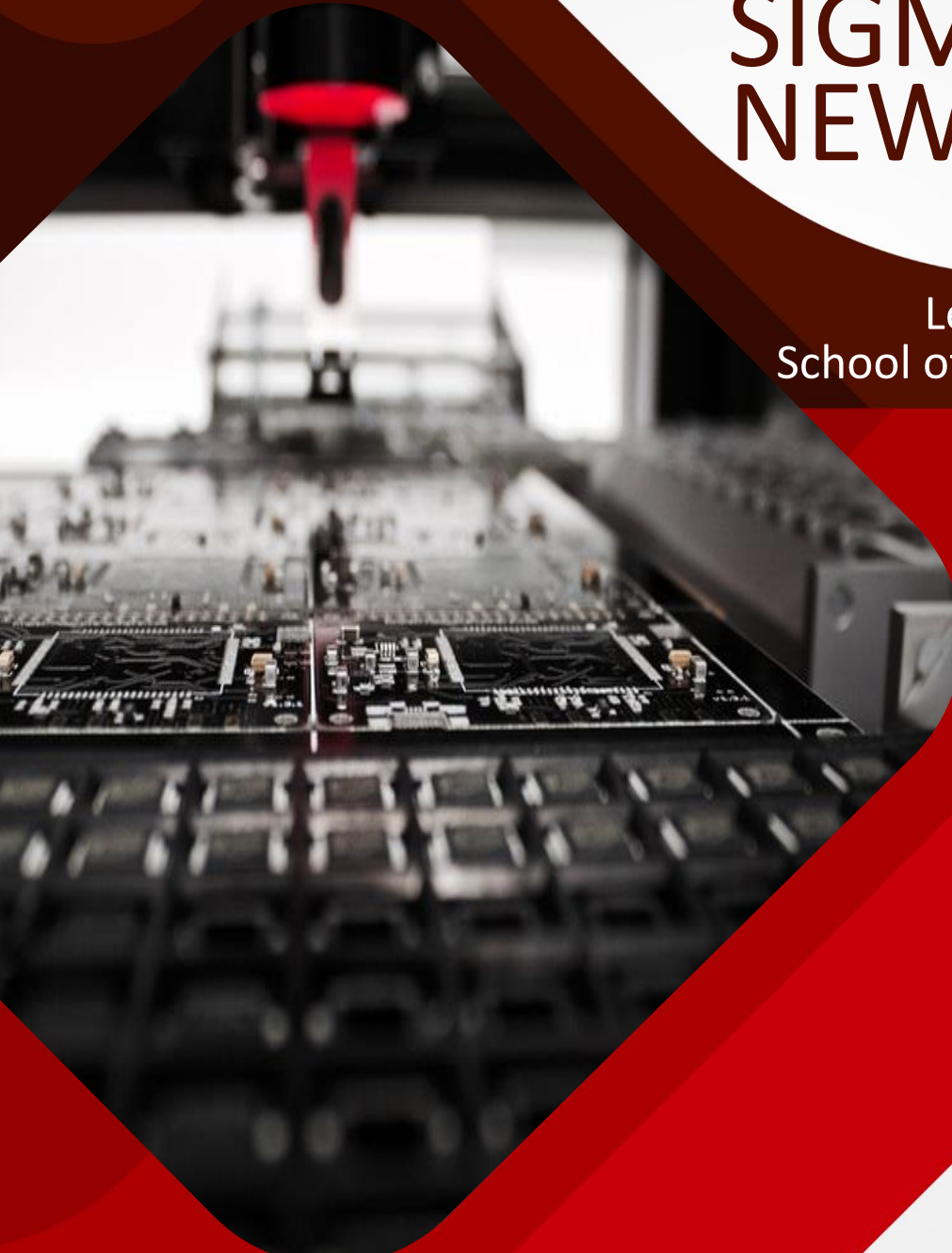
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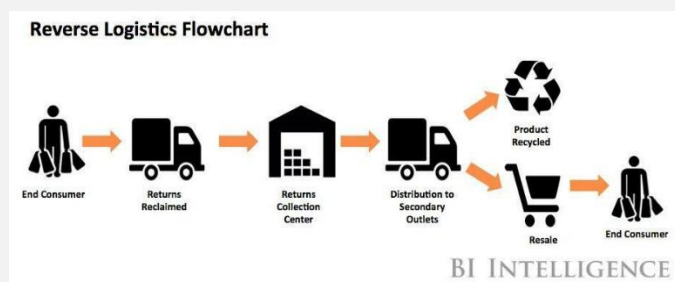


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REVERSE LOGISTICS

Reverse logistics plays a crucial role in an era where sustainability is a buzzword. Reverse logistics has become more significant as organizations aim to maximize the value addition for their customers and try to fulfil their ever-changing needs. National Retail Federation's 2019 report says that customers across the country return about 260 billion rupees worth goods per year. Approximately 8% of goods purchased through e-commerce are returned which clearly shows the importance of reverse logistics. There are several other reasons why reverse logistics is becoming vital.

Reverse logistics helps in extracting maximum value from the products. This includes recycling, repairing of the products which extend the product life cycle. It helps in asset recovery by reducing the expenses on the returned products. These expenses mainly include warranty and shipping expenses for the returned product. Reverse logistics becomes relevant as it decreases disposal costs of obsolete products. Products can be returned to the manufacturer so that maximum value can be extracted before its disposal.



In this competent world, it is difficult for an organization to differentiate themselves from their competitors. Reverse logistics is a way by which the organizations can increase customer loyalty and their competency. More than anything else, it helps in creating a sustainable environment. Dynamic changes in customer preferences and voluntary product recalls is also boosting the interest in reverse logistics. While some companies neglect the necessity of reverse logistics, other well-managed firms are boosting their top and bottom lines. They

find value in the returned products, recycle, or reuse those products and resell again.

Major Challenges in Reverse Logistics

Since reverse logistics deals with the distribution from many to one point, it faces many challenges. Forecasting is one of the major challenges in reverse logistics compared to forward logistics. Usually, forward logistics is demand-driven but in the case of reverse logistics it is different, making the forecasting difficult. Sorting defectives, building efficient reverse supply chains and proper warehouse facilities are other challenges while dealing with reverse logistics.

Role of Technology in Overcoming Challenges

Technology can be a major driver to solve the challenges faced in reverse logistics. It could boost the customer experience as well as increase efficiency. Technology could help in streamlining the processes by real-time information flow, product tracking and updating the same to the database. Database creation would help in the reduction of manual errors.

How to Overcome Challenges

- Frequent tracking and follow-ups
- Lead time should be calculated and reduced by designing an efficient reverse supply chain
- Packaging should be standardized and improved to reduce the loss due to damage
- Efficient time management
- Binning each item using a locator in the warehouse would help in finding the parts easier

Recent Trends in Reverse Logistics

1. Streamlining with the help of big data. Big data is becoming an integral part of businesses day by day. Tools like smart labels help in estimating the demand for the

returned goods and help in predictive analytics. This helps in increasing the overall efficiency and ROI. Big data also helps in identifying the patterns of returned products and help in developing the predictive model which makes the forecasting easier.

2. Reduction of waste through closed supply chain.

This system incorporates both forward and reverse supply chains to create a closed loop. To some extent this is a solution to reduce wastes produced.

3. Self-Driving trucks

Fully automated vehicles are the future, and this has become a trend in both forward and reverse supply chains. This technology is predicted as the future of logistics.

4. Smart Planning

This includes smart analytics, Internet of things (IoT), machine learning, robotics process automation, artificial intelligence, and metrics to help in better planning and reverse logistics.

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A PEEK INTO INDUSTRY 5.0

With most of the companies still figuring out the definition and realization of Industry 4.0, knock-knock!! Industry 5.0 is already at our doorstep.

Industry 5.0 is all about humans working side by side with smart machines and robots, leveraging the advanced technologies such as the Internet of Things (IoT), Cognitive Computing and Big Data. This collaborative effort is widely predicted to bring about the value-added tasks in production activities enhancing mass customization and personal customization for the customers. The bottom line is Industry 5.0 would be taking the concept of customer personalization to a whole new dimension.

In the coming era where the “Artificial Intelligence is the New Electricity”, industrial experts reiterate three basic facts that need to be understood to reap the benefits of this revolution. Firstly, Industry 5.0 is aimed at supporting the humans and not eliminating them. Secondly, this evolution is focused on striking a balance between efficiency and productivity and lastly, the transition from Industry 4.0 to Industry 5.0 is unavoidable to keep up the pace with the technological environment.

The following context shall illustrate the level of customization that Industry 5.0 brings along. With researchers using the 3D printing technology, to construct chip-enabled human organs with biocompatible plastics, the onset of Industry 5.0 shall leverage the real-time data collected and deploy the artificial intelligence techniques to study how the body has reacted to the constructed human organ. This information shall be fed into the manufacturing process enabling them to construct the best possible artificial organ for an individual.

The return of Human touch would be another defining trait of this revolution. With consumers already looking at increased value for the products offered, they shall pay up the most for the products that bear the unique mark of craftsmanship. Industry 5.0 wouldn't be better suited to deliver products that are manufactured incorporating extensive human involvement and engagement. Personalization shall

be the future luxury. Irrespective of the degree of automation or the type of manufacturing process used, coming are the days where consumers shall seek a personal imprint of craftspeople who shall leverage their personalized effort. So, the major question now stands: How would humans be able to translate their expertise. Enter Cobots.

Cobots or Collaborative Robots shall work side by side with the humans in the design loop. They are essentially superpower tools that offer speed, accuracy and precision that helps what it takes to manufacture “human touched products”. When Cobots shall take care of the entire process of automation humans would be freed up to innovate and express their skills without having the worry of the production constraints.

Recent studies also indicate that the workspace in terms of the manufacturing cell doesn't become smaller, instead it becomes bigger and lighter. This is because humans shall be entrusted with larger responsibilities. Inclusion of Cobots shall come with increased sustainability by eliminating waste and overproduction. Extensive and exhaustive use of digital twins shall be another notable characteristic of this revolution. Digital twins shall enable the easy understanding through visual models of the products and processes.

Contrary to the widespread assumption that humans would lose their jobs in the manufacturing sectors due to the penetration of the Artificial Intelligence and Cobots, studies from Gartner now predict an expansion of the global manufacturing workforce by about 5%. In short, in Industry 5.0 the human intervention shall be more intellectual rather than physical. Technologies arising from Industry 5.0 shall bridge the gap between the Cobots and highly skilled robots to deliver the best-individualized product experience.

To conclude, Industry 5.0 shall provide workers with a more meaningful job rather than repetitive factory jobs.

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Global Supply Chain: Post Pandemic World

COVID-19 pandemic has affected every industry irrespective of its domain. Manufacturing industries worldwide are going to be under greater political and competitive pressure to increase their domestic production and reduce their dependence on critical sources from other countries. But customers still want the product at lower price and companies cannot charge more just because their manufacturer in higher cost home markets.

The test for organizations will be to make their supply chains stronger without weakening their competitiveness. To address that difficulty, managers should initially understand their vulnerabilities.

Communicate the Hidden Risk

You are left vulnerable when you depend on a single supplier somewhere deep in your network for crucial items or material. The risk is more for the supplier than that component only in one plant.

Identify Vulnerabilities:

It requires a lot of digging to understand the risk in the company. Process mapping should be done to separate suppliers as High, Medium, Low risk. If we are depending on a single critical component from a single supplier then it's a risk if the company faces disruption. They should always have alternative sources and think how quickly they can be replaced by alternate sources. Once the risk is found in the chain, we can either diversify our sources or stockpile key components using the information.

Diversify – Supply Chain

Because of the US - China trade war and COVID-19, many organizations started to look for “china + one” Strategy. Reducing the dependency on China can be easier for some products but not all. Things like household goods and furniture are easy to get because of easy availability of simple inputs – plastics and lumber, but it's difficult to find replacement for machinery, complex circuit boards and electronic components. Building a new supplier network or infrastructure will take reasonable time and money. When China opened its economic zone

in the 1980's, it had no native supplier and they had to rely on other countries who procure materials from other countries and assemble them in china. Even for China it took 20 years to build the large base for local suppliers to contribute in electronic components and auto parts. It's the right time to invest and build supplier infrastructure for manufacturing.

Holding Intermediate Inventory/Safety Stock

If the alternate supplier for critical components is not available, the firm should hold some stock. The company should know how much extra stock to hold in the inventory. Though keeping inventory eats up our cash, it will be helpful when suppliers face disruption, higher amounts for components that are short in supply etc.

Process Innovation

When the company relocates its supply chain to its own backyard, they should take this opportunity to make process improvement. Implementing newer technologies will reduce their cost in the longer run and make it more sustainable. They can consider the following:

- Industrial Internet of things
- Additive Manufacturing
- AI support

Reshoring

Bringing the Supply Chain Back Home - Moving production back into its home country. It reduces countries' dependency during global crisis situations. Complete shifting may not be possible but ensuring the supply of critical goods does not necessarily rely on other countries.

Supply Chain Automation

As the industry looks to restart, businesses can use robotics or automation to help frontline workers pivot to produce new products and cope with the production challenges associated with COVID-19 crisis.

Globalization to Regionalization:

Logistics hubs must work at a regional level. Though expecting high quantity of complex parts from

regional suppliers is practically difficult, in the long run they will be able to meet the needs and specifications.

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IS COVID-19 A BLESSING IN DISGUISE?

Oops...I know the global COVID-19 pandemic is nowhere near the word blessing. But we are humans. We make the best out of the worst. We make opportunities out of nothing. It is true that COVID-19 has given a heavy blow to an already struggling economy of India and it is taking away valuable lives while we are reading this. But as we say, "every cloud has a silver lining", every crisis brings its set of chances which lead to better days. So, let's peep into some opportunities that could take colour during the pandemic period.

The Coronavirus crisis has led us to a realisation that China was the monopoly of the supply of raw materials and manufactured products all over the world and we are overly reliant on China for it. The major advantage China had, and still have, above most of the other countries is their lower labour cost. Since their business was global, they have higher production capacity and more diversification opportunities. The COVID-19 crisis has created a widespread notion against China which led to the banning of Chinese products globally.

At present, we are all looking forward to stabilising our economy by some means and foreign investments will be a major priority for achieving it. So, this is the time we should act wisely to grab the opportunity to stand on the podium where China stood for so long. The Trump government banned Chinese companies from raising funds for investors in America. India can attract more investments and alliances making use of this current situation.

How do we do that is the question, but the opportunity lies in our failure itself. Cutting down of employees happened globally. Several Indian migrants have come back to their home country jobless. They get added to the already existing high number of unemployed people in India. So, in this situation, people will prioritise a job above the salary of the job. As mentioned above the major advantage of China was their lower labour cost. India can also play that card to achieve the underlying opportunity by utilising unemployed mass to the best benefit. The deal of \$5.7 billion with Facebook by Indian company Reliance Jio is an example of this scope

utilisation. The availability of skilled workers who have experience working in different parts of the world can be utilised to stabilise the economy and bent the growth curve up.

Another area which has improved or got a new light is the agriculture sector. The traditional channel of the supply chain is disrupted and a new trend of excluding the intermediates is getting attention. The lockdown and quarantine made people think better utilisation of the resources to make more profit. The use of social media for direct marketing of vegetables and essentials in nearby localities has got popularity. The extra time from lockdown and the fear to buy from outside has encouraged more people to grow vegetables at home. WhatsApp groups for small localities were made to sell fresh homemade vegetables online without losing any commission to intermediates in the vegetable supply chain.

It is not just agriculture, a DIY (Do It Yourself) culture paved the way for more entrepreneurs. Many hidden talents took colour during the lockdown period. Baking, painting, crafts work, stitching and many more are in the list. Social media has become a marketing place for the outcomes of such talents.

The high dependency on the online system has given us a realisation that most of the work can be done online. It can be further taken forward considering the user's interest which will be a green initiative as well. The online structure has shown new opportunities in Artificial Intelligence and Virtual Reality to conduct exhibitions. By combining all possibilities in AR, VR and many other technologies, the international exhibition Kochi-Muziris-Biennale, is in its working stage for a virtual exhibition. The unexplored opportunities in virtual reality can be brought up in this online system.

The changing world demands a lot. It is of no question that Coronavirus has disrupted the whole world. But to grab the underlying opportunities is the only way to rise again. A strategic and systematic approach to react to the demand is the key to overcome the situation and to get sustained economic growth.

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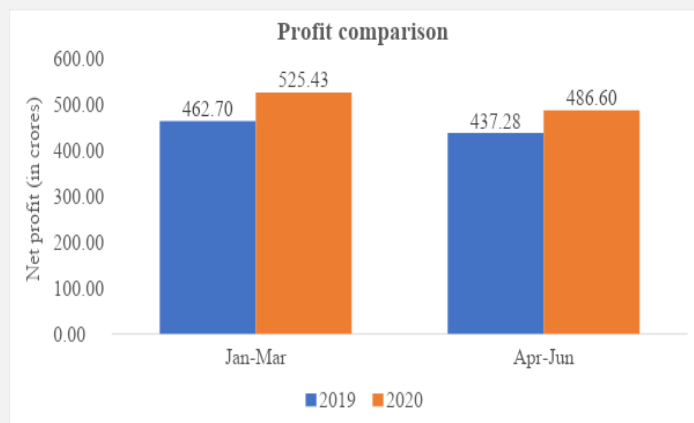
AGILE SUPPLY CHAIN MANAGEMENT

Agile Supply Chain Management

In the current world, competition is no more between companies, it is between their supply chains. It is more relatable in the current pandemic where supply chain is the need of an hour. It is the supply chain practices which brings the products or services much closer to the customer. The term 'agile' refers to the ability of the supply chain management to meet the dynamic customer requirements. During the COVID situation, the need for Personal Protective Equipment's (PPEs), hygiene food products, medicines, technology and online services has increased rapidly. To meet such requirements, organizations with the capabilities to produce the products alone are not sufficient, organizations should have capable supply chain practices to deliver those requirements. It is evident that the organization's competitive strategy should align with the supply chain strategy.

Let's look at some of the organizations that performed well irrespective of the pandemic situations by adapting agile SCM practices and Sales and Operations planning.

1. Nestle India



From the chart, it is seen that Nestle has reported an increase in the net profit of 13.5 % and 11.14 % in their March and June quarters respectively. Amidst the pandemic, the company can deliver better results, because the company follows resilient supply chain

practices that promise the delivery schedules and offer varieties in their products to attract more consumers. Because of the lockdown of operations and shut down of small-scale companies in the food industry owing to the situation, there is a supply gap created. Nestle offers more products and services to match the gap created in the market. Even Nestle went for scaling down its operations and distribution centres in some of the regions as an effect of lockdown. Due to the situation, customers are sceptical to come out of their house and walk in the stores to buy products. Hence for the customer convenience Nestle provided to engage themselves more in online shopping platforms. Even at tough times, the company ensures that the products are available to the society and the changing customer needs are met.

2. Wildcraft

Wildcraft is an Indian manufacturing company who primarily manufactures clothing, footwears, rainwear etc. During COVID there is a demand for PPEs and the company makes use of the opportunity available. The company shifted their focus to the manufacturing of facemasks which showcase their agile nature. The company has started producing a highly protective W95 mask which is reusable and has 95 % filtration efficiency. The company distributed its products through Myntra and online retailers Flipkart and Amazon. By delivering the products which are demanded in the market for the current pandemic situation, the company generated more sales.

3. Apple

This lockdown generated the need for virtual connection between students and professors and in the working environment. As a result, there is a steep increase in the laptops, mobiles, and iPads. Apple has sold more than 3 million iPads in 80 days in the USA during its initial launch. It shows the power and flexibility of the supply chain that Apple possesses. There is no wonder the market capitalization of Apple rose to \$2 trillion which is more than the GDP of countries like Italy, Brazil, and Russia. As most of the stores of Apple were forced to close because of

the pandemic, Apple managed to have robust sales in online mode. The company introduced new iPhone

models iMac and iMac air which helps them expand their customer base.

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The Agile Way of Working

The discussion on this topic starts with a very simple question: **WHAT IS THE MEANING OF AGILE?**

Agile is the ability to make rapid changes or to create something out of request, in a highly dynamic environment. The main motive of agile is to provide satisfaction to the customers, by providing continuous delivery of products or services required.

To achieve the required objective, Agile operations counts on the following principles:

- Customer collaboration.

- Responding to changes based on a plan.
- Interactivity of individuals over tools.

To achieve zealous results, more rapidly, the stress is given upon communication, flexibility, planning and correct documentation.

Agile depends on the methodology of different organizations, as there is no such thing as “One Type Fits all”. Although, most follow a similar life cycle with an iterative flow.

There are mostly six stages in an agile lifecycle.



Figure 1: Life Cycle of Agile

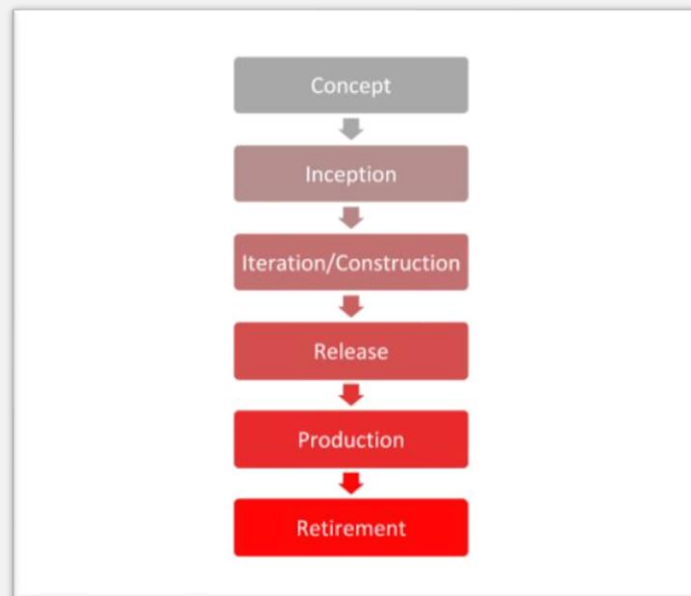


Figure 2: Stages of an Agile Lifecycle

In the first phase that is in the Concept phase the project is visualized and prioritized. The project takes shape in the second phase that is the inception phase, where the project members are decided, budgets and timelines are set, and requirements are finalized. The third phase of iteration or construction, as the name suggests starts moulding the project, the people start working and regular feedbacks from customers are taken and documented. This document is again presented to the customer and they can change as per desire or if they are not satisfied with the details in the documents. In the release phase the modules are tested for quality and training is provided to the users. Then the iteration is released for production. In the production phase the project is deployed, and assistance is provided for maintenance and support. When in the last phase and retirement, the feature is retired and then the customers are notified for the same.

In Agile Operations there will be multiple iterations during the entire course of process, they are called

Sprints. This sprint will follow some processes, typically:

1. Requirements
2. Development
3. Testing
4. Delivery
5. Feedback

The agile builds on previous iterations and adaption is done based on customer feedback.

Operations which follow agile methodology must have the ability to continuously adapt to any sort of dynamic environment.

There is a huge difference in the traditional or waterfall environment and the new agile environment. In the traditional environment all the requirements related to design, all documents, everything needs to be decided in the beginning itself. Whereas in the agile environment there is continuous development and changes are made as per emerging requirements.

Where to use the waterfall model and where to use the agile model?

The Stacey Matrix- This matrix explains in what requirements and under which technology Know-how we can use either waterfall or Scrum model.

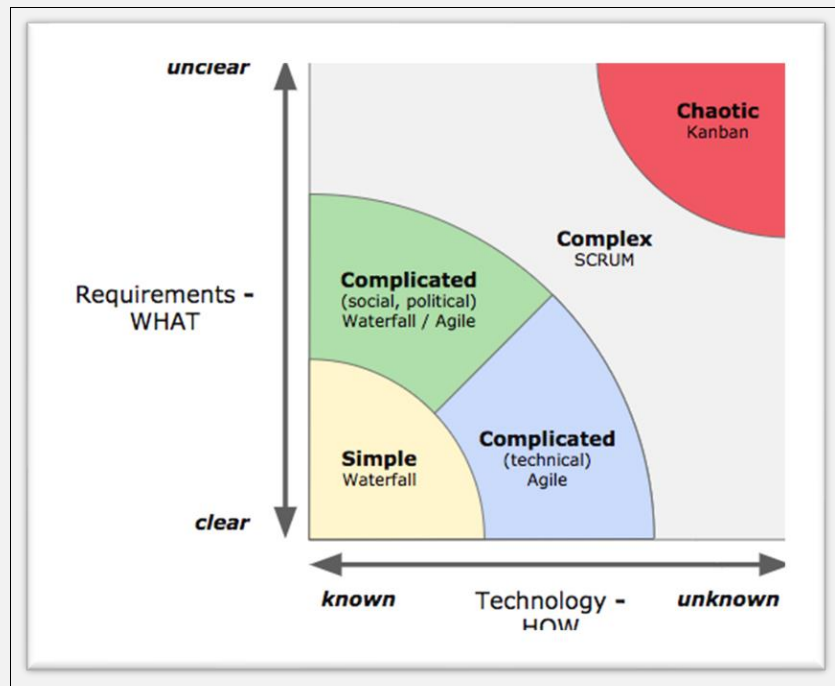


Figure 3: The Stacey Matrix- Source- Secondary: agile-minds.com

The agile way of working gives an answer to a customer- driven and a highly globalized marketplace. So, it gives a solution to many decision-making problems faced by many manufacturers. Some of the real-life examples of companies using agile to compete with other firms, thus earning a **competitive advantage** are:

- An Australian soft-drink company used agile technology to connect to its customers, which improved their response time and improved quality in the customer complaint department.

- Dell harnessed ERP to achieve a level of agile by using its IT and communication infrastructure that facilitated collaboration of its seven manufacturing facilities which at the end turned the system into a much-standardized solution.

Thus, Agile can provide various benefits to a firm in terms of providing better customer satisfaction, increased control over projects and faster ROI etc. But for achieving all this there must be some values and mindsets that need to be followed.

These mindsets/values are explained in the below diagram:



Figure 4: Mindset: Agile Values

Only with the right planning and a correct mind-set can one achieve the right level of agile. As if you want to grow in a dynamic environment then this agile is the correct place to be. Agile is the new way of working as it helps teams to fill the gaps between the requirements by stakeholders and reduce cost occurred due to rework. Thus, working in a more collaborative fashion to promote faster delivery and even quicker feedback systems. This methodology has continued to evolve and has proven itself to be the future, and the future is “**The agile way of working**”.

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FOOD SUPPLY CHAIN AND ITS CHALLENGES

In the global context of sustainability, organizations are facing major issues in their supply chain. The Supply chain management is gaining major attention as sustainability has become the key aspect to optimize it. Every organization strives for success, and uninterrupted operations are the key factors achieving a goal, which cannot be achieved without incorporating sustainability. There are various issues at the upstream and downstream of the supply chain. Food is an essential commodity and with increasing population, the demand has increased extensively. According to the Food and Agriculture Organization (FAO), one third of the food produced for human consumption is lost or wasted at some layer of the supply chain, thus causing environmental, economic, and social impacts.

Food security and safety is a major concern in the value chain. As per the international significance, the food commodities should be of good quality and safe for consumption. According to the recent survey conducted, around 1/3 of the total food across the globe is being wasted and is not recycled which has an environmental and business aspect.

There is a need to develop resilient supply chains that can respond to disruptions and that are capable of quickly and efficiently returning supply chain operations to their original or an even better state. Hence there is research undergoing which is majorly focusing on the Food supply chain and is addressing issues impacting performance, knowledge, and sustainability. The major problems in India are with Perishable FSC, especially Fruits and Vegetables. This includes key challenges like Lack of Infrastructure Facilities, Low Processing and Value Addition, Low farmer income, Supply Chain inefficiency, large number of intermediaries/fragmented supply chain, Poor Quality & Safety standards. In a country like India, overcoming these issues will benefit the farmers, state government, transporters and food processing unit in the form of reduced losses and wastage, increase in the price share of the farmer, provides employment opportunities to the local people. When producing perishable products, various stages of the

supply chain are subjected to higher uncertainty in case of durable products, which directly leads to higher risks. The various phases of inventory control, lead time control, and demand forecasting for perishable products have a critical role in the overall effectiveness of the supply chain.

Supply chain planning of fruits and vegetables in agri-food supply chain is characterized by poor collaboration among the supply chain partners which is due to lack of communication and transparency between traders, retailers and farmers, huge post-harvest losses due to lack of proper infrastructure and cold chain facilities. This is due to open blocks of traders.

Few issues and how they have an impact on the food supply chain have been discussed

Infrastructure Issues

In Supply chain, issues like poor infrastructure is a major concern. Proper and adequate infrastructure allows farmers and businessmen to run their business successfully to deliver the produce at the right time with right conditions. This is the main impediment in the infrastructure in the supply chain of the agricultural produce which causes a lot of wastage and high amount of losses.

Fragmented Issues

The main issues in the supply chain in India are the large numbers of traders and commissioning agents along-with other intermediaries who will take on the margins of the farmers. The whole distribution of the produce is dependent mostly on local traders across the geography of Bangalore. In other places in the mandis, the direct method of distribution where buyers go to the market is also dominated by the local traders in local markets where cooperatives are not available.

Packaging Issues

The packaging plays the most important role in the logistics and distribution of fresh fruits and vegetables. Fresh perishables are highly prone to damages and wastage and it needs proper packaging

for the handling of these fresh produce to increase the shelf life of the produce. Cost is the factor which affects the packaging of fresh perishables. High cost of packaging material makes difficult for the farmers to do proper packaging of their good

Technological Issues

The fresh produce distribution is surrounded by many technical problems, which include advancement troubles, inefficient technology,

obsolete techniques, and old machineries. Due to those issues it has come to be hard for the farmers and Agri businessmen to use proper technologies and techniques to reduce the post-harvest losses and time in operational activities.

Hence addressing these issues on primary basis is important as they directly affect the operations and profitability of the business

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SUPPLY CHAIN OF D-MART –THE MOST SUCCESSFUL SUPERMARKET

D-mart is a one-stop chain of Indian supermarkets and hypermarkets, started in 2000 by R K Damani in Powai, Mumbai. The head office is in Mumbai. D-Mart offers a variety of personal and basic household items under one roof. Each D-Mart supermarket store has home utility products such as toys, games, stationery, beauty products, food, toiletries, bed and bath linen, clothes, kitchen utensils, appliances, and footwear.

Brands such as D-Mart Premia, D-Mart, Dutch Harbor, D-Mart Minimax and D-Homes are brands owned by ASL. D-Mart's main purpose is to provide superior products to customers with excellent value. Today D-Mart has a well-established presence in Andhra Pradesh, Maharashtra, Karnataka, Telangana, Gujarat, Madhya Pradesh, Tamil Nadu, Punjab, Chhattisgarh, NCR, and Rajasthan.

Supermarkets and hypermarkets have more than 196 locations nationwide. The D-Mart store supermarket chain is owned and operated by Avenue Super-marts Ltd. (ASL). D-mart's success focuses on three things: employees, vendors, and customers.

Working of the Firm

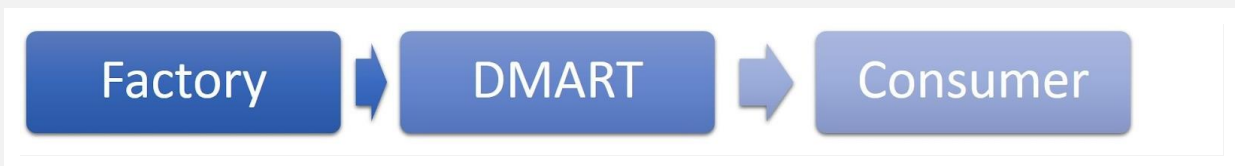
Firstly, looking at how FMCG manufacturers distribute their products in India, this can be explained by considering the example of a soap manufacturer that sells their range of products.

The factory produces soap in batches. Then the buyers assemble them into dozens, the wholesalers and retailers divide them into packets, and finally the consumers buy 2-3 packs. Stockists buy in large quantities and therefore have more bargaining power.



Example: Soap with a price of Rs.40 is sold to Stockist for Rs.35. Stockist then sells it for Rs.37 to wholesalers. It will be sold at MRP 40 or Rs. 39.50 by the time it reaches the consumer. This is how the general FMCG manufacturers supply chain looks, now let's look at D-Mart.

D-Mart has 110 stores throughout the Indian city, and D-Mart purchases products from all its 110 stores. The sales channel is almost direct. D-Mart doesn't need many warehouses. The inventory is in store and the consumer receives it. Optimal inventory turnover reduces storage costs.



With direct bulk purchase, D-Mart eliminates the intermediary and the commission is given to the consumer as a discount. Well, if you think all products are cheap at D-Mart, that's a mistake. FMCG products are used as anchors to sell profitable products such as toys, fruits and vegetables, groceries and staples, dishes, and plastic containers. In addition, D-mart offers its own branded products

in the groceries, home & personal care section, which has a high profit margin.

Recently, there was a protest by wholesalers about retailers choosing products from D-mart. Currently, D-Mart has introduced maximum purchase quantity limits in its stores to discourage retailers and allow only end users to purchase products from retailers.

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TRENDS THAT TRANSFORM THE RETAIL SUPPLY CHAINS

The rise of e-commerce and order fulfilment has shaped the retail supply chain landscape dramatically. The downside was that the traditional surveillance supply chain, relying on offline levels of responsibility, had problems and many went bankrupt.

A few trends which indicate the changes will redefine the current landscape and will have an impact on the current retail supply chains.

Integration of Online and Offline Combinations

While the e-commerce industry is booming and developing rapidly, there are some companies that are taking the largest market share. Large retail companies recognize that success will go hand in hand with a balanced mix of online and offline shops.

Amazon has now grown into a full-fledged online store with a range of products including electronics, clothing, software, pet puppies and of course books. On the other hand, Amazon Go explores the path of offline retail. The stores are partly automated, with customers being able to purchase products using a self-checkout station.

Sustainability is Becoming Essential

Sustainability has become one of the most important global trends in the supply chain. Customers demand environmentally friendly products and sustainable practices. The NYU Stern Centre for Sustainable Business reports that products marketed as sustainable grew 5.6 times faster than those that didn't. For some companies the sustainable brands were responsible for 70% of sales growth. These trends highlight the importance of environmentally conscious supply chain practices such as moving from plastic packaging to cardboard packaging and using smaller packaging. Companies also need to be aware of their carbon footprint, take steps to become carbon neutral, and incorporate sustainability into their supply chain planning.

Banning of High Return Costs

For many e-commerce retailers, one of the unique selling points was the ability to return goods freely if they did not meet expectations. This on one hand is driven by the customer rights legislation, on the other hand to balance a great advantage of the offline shop; the feeling and touch element. But the costs became outrageous, with a return percentage over 40%. These associated costs have reduced margins.

Many companies have adopted a change in their customer approach. Zalando uses large labels to prevent clothing from being used once and then being returned. IKEA follows an approach where the customer's ID information is stored in a company-wide database and is only used to authorize returns. And because of the high rate of product destruction, high yields are not a sustainable solution anyway. The main solution should be to provide an excellent sales service when customers buy.

Integration of Big Data Analytics and Supply Chain Logistics

The digitization of the supply chain is not new but will take place on a larger scale in 2020 and it is also extremely important in the current pandemic situation. There has been a rapid growth in Big data, IoT and greater availability of customer data. Organizations today have access to large amounts of data and can extract business insights from it, ranging from understanding past performance to predicting future trends. Big data can help identify customer preferences and market trends and redefine the supply chain.

Retail Made Faster and More Connected with 5G

5G technology promises wireless speeds that can keep up with a wired connection, with more capacity and greater responsiveness (lower latency). 5G offers maximum speeds of 10 to 20 gigabits per second, a latency (the time between command and associated action) of less than 1 millisecond and the ability to connect one million devices per square kilometre

will have a significant impact on retail, improving and expanding existing applications, and creating new use cases. Applying the technology to retail stores is expected to generate additional revenue, especially in the e-commerce business, where the improved connectivity will make online shopping trips easier, along with the use of more extensive and efficient in-store technology.

In summary, the future retailers will have an operation that combines offline and online shopping. When the online model dominates, the emphasis is on convenience shopping as the main part of the design of the retail supply chain with a wide range of products. With a dominant offline model, the focus is on low costs (discount) or product / brand specialization. Efficiency and cost returns will also be achieved soon by minimizing returns.

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SHOULD THE HEALTHCARE INDUSTRY UNDERGO DIGITAL TRANSFORMATION?

Effect of COVID-19 on Healthcare industry and Digital Transformation in Healthcare Industry

COVID-19 pandemic has affected all industries, businesses, and organizations. However, the crisis has damaged the health sector to the greatest extent. Because of this, it is also pushing frontline medical workers to respond to previously unknown viruses, thus depleting all possibilities and resources in the industry. Many healthcare systems are turning to virtual healthcare functions to somehow stop the spread of deadly viruses and survive.

Analysis of the Healthcare Industry in India

Digital transformation is an ongoing topic for conventional media and professional media worldwide. It has also entered the field of healthcare. The Healthcare Industry needs to undergo a digital transformation that facilitates different technical tools and solutions will be used to improve patient experience, provide services, create new business models to work virtually, and increase communication efficiency. The digital transformation of healthcare will enable the company to automate processes, improve management, diagnosis, and treatment, which will be an exciting step for the country.

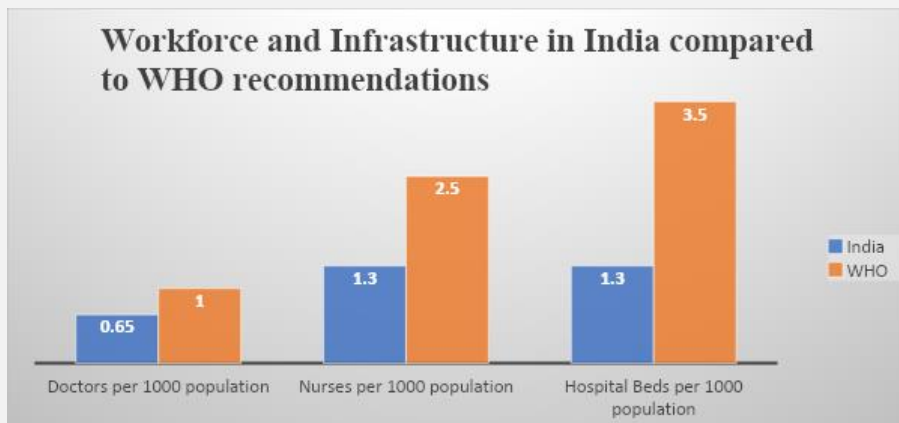


Figure 1: Workforce and Infrastructure in India compared to WHO recommendations

Source: IBEF. (2019). Healthcare Industry in India. (Retrieved from <https://www.ibef.org/industry/healthcare-presentation>)

Sl. No	Urban	Rural
Doctors	80%	20%
Location of hospitals	68.5%	31.5%
Population	33%	67%

Table 1: Comparison of the Urban and rural distribution of Doctors and hospitals by Population Size

Source: HETIC and PwC analysis (Retrieved from <https://www.pwc.in/assets/pdfs/publications/2016/indian-healthcare-on-the-cusp-of-a-digital-transformation.pdf>)

According to IBEF 2019 healthcare reports and findings of Philips’ 2019 Future Health Index India report, India only spends 4.7% of its GDP on healthcare cumulatively, with just 1.4% from the public sector, which is among the lowest in the world. India does not meet minimum WHO recommendations for the healthcare workforce and infrastructure (Figure 1). As per WHO recommendations, availability of Doctors per 1000 population should be

1 but India just has 0.65, same in case of availability of nurses and hospital beds. As seen in Table 1, there is an uneven distribution of doctors' hospitals according to population size. Though the population in urban areas is less compared to the rural areas, hospitals and doctors are more occupied in urban areas than rural areas, which says India has less resources and uneven distribution of resources. There is a need to utilize the manpower effectively and improvise the operations in hospitals which enhances its performance while ensuring the patients are satisfied with the service. There is also a need to study the adaptability readiness of hospitals in undergoing Digital Transformation for better implementation.

Benefits of digital transformation in the Healthcare Industry:

Provide better services to patients: Like any other industry engaged in digital transformation, healthcare is also patient centric. The one-to-one approach is always better than following common advice that usually doesn't work in certain situations.

Better analysis: The use of technologies such as Artificial Intelligence or Machine Learning makes it possible to analyse data efficiently and quickly. And it minimizes errors, thereby increasing employee productivity.

Efficient maintenance and monitoring of Manpower and infrastructure which leads to better Time Management: As we saw India has less availability of resources such as Doctors, Nurses, and Hospital beds. Digital transformation makes efficient usage of doctors from urban and rural equally to provide service.

Better organization: With digital tools, data can be digitized and stored in the cloud. It allows quick access to medical records, thereby allowing doctors to make effective decisions and provide more in-depth treatment to patients. Also, Applications help to track ambulances to reach out to patients at the right time and to alert patients and doctors in emergencies.

A better environment for doctors: Technology allows access to large amounts of patient data to doctors; they can communicate better and can provide important research information. More research doctors can bring better treatment results and enable us to get the first benefit from the list and provide better services to patients.

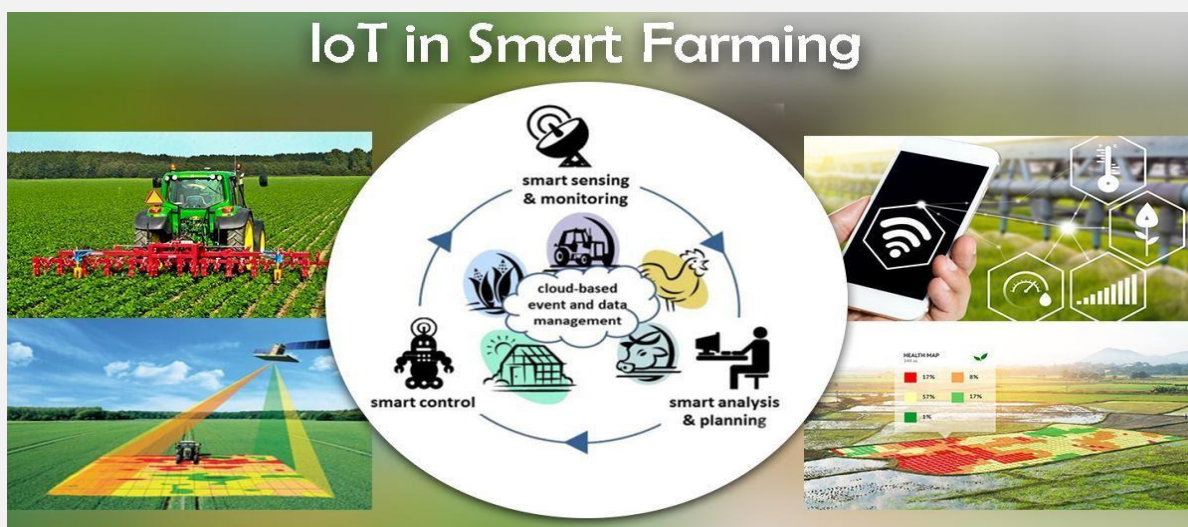


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IoT IN AGRICULTURE

Introduction

The world's population is growing at a rapid rate and by 2050 it would be more than 9.6 billion. This increase in population indicates the need for a rise in the agriculture industry to meet the demand, regardless of environmental challenges like unfavourable weather conditions, climate change, pollution etc. And to meet the demands and needs of the populations, the agriculture industry must adopt new technologies to gain a much-needed edge. The new agriculture applications involved through IoT which would enable the industry to increase operational efficiency with less cost, reduce waste and improve the quality of the yield.



The digital transformation and use of IoT technologies in agriculture is called 'smart farming'. This is capital intensive and hi-tech systems in agriculture to grow food in a clean and sustainable manner. The IoT smart farming majorly helps farmers for monitoring the crops in their farming field with help of sensors for maintaining the optimum light, temperature, humidity, moisture, soil and to automate the irrigation systems. Smart farming can also provide large benefits including efficient water usage, soil checking etc. The sensors are connected to the cloud via cellular network or satellites. Real-time data from the sensors are collected and analysed for ease of decision making. IoT has come up with new hope for the farmer as a second green revolution. IoT solutions help farmers close the supply demand gap by ensuring them low cost, high profitability, large efficiency in the yield and protection of the environment.

The Several Applications of IoT are:

Greenhouse Automation

IoT has made the greenhouse smart and enabled weather stations to automatically adjust the temperature, climate conditions, soil erosions, humidity etc. The connected technology, sensors to monitor CO₂ level, humidity, LED light, plant health and data analytics to maintain the sustainable environmental conditions in the greenhouse. The IoT

sensors enable the farmers to get accurate and real-time information so that they can use these parameters to increase the production and efficiency of the yield.

Monitoring the Climate Conditions

For monitoring climate conditions of region smart agriculture gadgets, the weather stations which combine various smart farming sensors, which are

located across the farming fields to collect data of the climate conditions and send them to the cloud. This information helps farmers to forecast the weather and avoid crop loss.

Cattle Monitoring

Just like Crop, IoT would also monitor the cattle or livestock so that they could check their health conditions. This would help the farmers to check the health of their cattle and give a good treatment at the right time. The sensors are attached to the body of the cattle and track the health conditions. This would help farmers to prevent the spread and detect of disease and lower the labour cost.

Crop Management

The other sensors are used for managing and monitoring the crops, as they are placed in the fields to collect the data or information specific to the crop farming from different parameters like temperature, precipitations, humidity, and crop health. The devices help farmers to determine when to plant the crop and harvest them.

Agriculture Drones

Both grounded and aerial drones are used in farming which is a better option than satellites to data. They are also used for sprinkling pesticides, insecticides in the farming land. They can also stream the video so that farmers can remotely monitor the condition of the crop.

Precision Farming

This makes the farming practice more controlled and efficient by taking accurate data driven

decisions. This approach helps farmers to generate data with the help of sensors, control systems, robotics, autonomous vehicles, automated hardware, etc. There are many techniques involved in precision farming such as irrigation management, vehicle tracking, and livestock management to increase the efficiency and productivity of the farming.

Predictive Analytics

Data Analytics helps farmers to predict and decide the future regarding the production of the crops, its storage, marketing, and risk. The data are analyzed and transformed to meaningful information using different analytical tools. The predictive analysis may help farmers to increase the crop performance, save up to 50% irrigation water and reduce the loss of fertilizers. The farmers can also predict the production rate of the crop which can help them to meet the market demand.

Challenges with IoT in Agriculture

The Connectivity issue is one of the major problems faced by the farmers in the remote areas. The data need to be transmitted between many agriculture facilities for adoption of smart farming. The second issue could be the infrastructure, the internal infrastructure should be good enough to secure the data from the external environment. The third issue is related to the mobility of the device where each device must be interconnected with others and have enough wireless range to communicate with the other devices. The fourth issue could be maintenance of the hardware and software so that it can be used for prolonged time.



Conclusion

Food is the most and basic need of every living organism. Food and agriculture will always be the priority of the world any day. Therefore, the production rate is very much important to meet the demand of the people. The use of IoT helps the agriculture sector to increase the production rate and efficiency of the farmer. IoT in agriculture has a promising future as a driving force of efficiency, sustainability, and productivity. Different agriculture problems can also be solved in the real-time basis and help the farmers meet their requirements.

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RISE OF SMART FACTORIES IN TEXTILE INDUSTRIES

Recent technological advancement has opened the way for the realization of smart factory vision of Industry 4.0 as the next Industrial Revolution. Industry 4.0 has the potential to transform whole production processes and business models for labour-intensive textile and apparel factories. The textile and apparel industries therefore need to invest in Industry 4.0 and its enabler technologies to begin the transition from ordinary plants to the smart factory to gain competitive advantage.

By integrating the requisite technology to be more efficient and sustain in the global supply chain, businesses need to be smarter so that processes can be better controlled and automated wherever possible. Many businesses struggle because of poor technology incorporation into their supply chain. It is critical for businesses to be smarter to work hard to cut costs, enhance customer satisfaction and increase investment returns in the supply chain. Although few industries make a huge leap, it is crucial for other companies to adopt industry 4.0, using the Internet of Things (IoT) to embrace the growing complexity of digital supply chains.

Industry 4.0 in various operations of textile industries

Product Design in 3D (Additive Manufacturing)- With the ability to view garments in 3D using virtual reality technology, the preliminary prototype design can be viewed in the virtual world, and the consumer can receive and print the sample from a 3D printer. This will reduce the amount of human errors and the consumer acceptance period is shortened.

Production - Sewing Training with (Augmented Reality) - With the new technology of Augmented Reality, the factory workers will gain experience on the sewing machines by learning in the digital world. Thus, profitability and performance can be improved.

Packaging (RFID and Cloud)- RFID tags should be included in the products or their packaging. Various elements can be used for this as containers, bobbins, and hangers for clothing. RFID tags embedded in products can store a lot of product-related details,

manufacturing processes and logistics operations and store it in the cloud. Thus, computers can automatically perform the functions required of them.

Human-Robot Technology Collaboration in Warehouse Management (Advanced Robotics and Cyber Security) - When required, the fabric and materials can be automatically retrieved using RFID tags, through robots and/or cyber-physical systems without human intervention. Thus, the manufacturing and inventory costs can be minimized while increasing the production pace.

Real-Time Supplier Performance Management (Industrial Internet, Big Data and Analytics) - The application of IoT and Big Data systems can be used to evaluate data on requests from vendors, production dates and outcomes from quality control to increase the decision-making capacity for managing materials and suppliers.

Robotic Quality Control (Advanced Robotics) - Computer-aided quality management systems can be developed to meet quality requirements to speed up the quality assurance process, improve its efficiency, and continuously collect data relating to production. Advanced methods of image processing and machine learning techniques can monitor the final product's quality issues easily.

Impact of Smart Factories

Smart textile factories can allow optimum use of available sources to satisfy customer demands. They will reconfigure their production processes according to the latest paradigms of the Fourth Industrial Revolution. Primarily, modern textile production systems should be more versatile, and material flow variations should be produced based on the product variety.

Smart production systems will lead to the emergence of optimal systems for movement of material. Apart from that, self-configuration of the production process is possible under variable conditions. It will become almost impossible to carry out effective and efficient production and logistics activities without advanced production technologies. Since it is

possible to automatically obtain the self-optimization of the material flow systems generated by advanced digital technology, the usage of resources may be reduced. In this way, companies can create efficient production processes and enforce them effectively.

Competitive advantages can be achieved depending on the intelligent production systems in the textile market. Soon, communication between machines will be the core element of the development and logistics operations. The textile industry can

overcome its systemic problems caused by intensive labour use, energy costs, and market uncertainties.

Thus, it is crucial that the companies restructure their IT environment to integrate technology to maintain business in the digital era and industry 4.0. It is important to compete with the major players in the market by providing their customers with the best services and improving consumer shopping experience to suit the digital era.

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BUSINESS AGILITY DURING THE TIMES OF UNCERTAINTY

In these unprecedented times, the IMF has said COVID-19's economic effect is unlike anything we've seen since the 1930's Great Depression. The International Labour Organization expected a loss of about 195 million jobs worldwide, while the National Bureau of Economic Research estimated that more than 100,000 small businesses have already closed permanently in the US in May 2020.

What is gratifying during this turmoil is that several companies in the healthcare, Retail, consultancy, and logistics sectors have responded well. They rethought their business strategies, processes, tooling, security, business continuity plans and remote approaches to work. Their competitive advantage was *Business Agility* allowing them to pivot as soon as they required.

Agility helps companies adapt rapidly to opportunities and risks internal as declining business processes, and external as patterns changing, or competitive markets. Authentic business agility includes the distribution and operations departments of the company, and supports roles such as marketing, legal, HR, infrastructure, and security.

Here's few examples of how companies are reacting innovatively during the uncertain times:

- Creating new business partnerships. Dominos has a large supply network in India and has partnered with a big grocery firm to deliver essentials.
- Online retailers such as Amazon and Flipkart, whose distribution networks had been halted, started to create and curate online entertainment content for their customers.
- Hospitals like Apollo and Fortis ramped up digital programs and prepared for online consultations with their doctors and specialists.
- Automotive manufacturers such as Volkswagen are reusing the technologies used to produce ventilators to meet the growing demand.

Solutions such as the above were not a part of the strategic development or expansion plans of these businesses. Being versatile and sensitive, however,

helped them continue to provide their services despite tough times.

Business Agility focuses on three cores

Companies that respond to the urgent demand for more agility will gain from concentrating efforts on these three areas-

1. Customer Centricity

Most customer-focused developments and innovations, whose attitudes and expectations can influence how business develops after the current crisis. According to a McKinsey report, 25 to 63 per cent of global consumers expect their household income to continue to decline due to COVID-19 over time. Over 75 percent of customers expect COVID-19 to affect their habits and finances for months to come, while over a third of the year 50 percent expect the effect to continue. EY's Price Index shows 35 per cent of customers are going to stockpile, while 28 per cent are going to slash spending.

These studies are evidence of evolving patterns of consumption which position in uncharted territory both consumer habits and the responses of companies. Some companies respond with digital solutions while others shift services to be free-to maintain their hard-won base of customers.

For those organizations still trying to find out next steps, here are a few ways that companies can better comply with the shifting needs, attitudes, and preferences of customers-

Amplify Digital Listening: Choices vary from 1:1 tele conversations or video interviews to mailing lists or web and social campaigns depending on the type of company. Sifting through the data from these channels to uncover even the smallest trends will enrich digital platforms for current and new customers with essential content and services.

Rewire - This is not the time for traditional multi-quarter sessions on budgeting and planning. Although strategic roadmaps are expected for a Post-COVID environment, the current prerogative is to leverage existing resources and products to meet immediate consumer needs. These needs are defined

through continuous market analysis of demand trends which internal response teams regularly review.

Connect with Customers: As we enter the COVID-19 recovery process, it will be necessary to deepen relationships with new and existing customers. It will help to accomplish this by involving clients (including suppliers and partners) in efforts to tackle the pandemic. It can be impactful simply to ask for feedback from customers on how to benefit impacted individuals, or to promote the activities of the company, or to encourage customers to donate to the cause.

2. Business Continuity

COVID-19 has significantly affected company activities and worldwide sales. Company resilience is not a magic recipe that can transform fortunes from sectors such as travel and tourism that are adversely affected. It can also allow organizations to respond rapidly and efficiently and adjust to crisis situations.

Suggestions through the lens of Business agility

Innovative Business Solutions: demonstrated by COVID-19 that continuity of business can not be limited to alternative methods of continuing business services. Agile companies understand this and churn out creative and applicable business models or products in a short period of time. Uber, for example, has deployed a fleet of vehicles in India to facilitate the movement of healthcare workers. And, though rivalry including Swiggy and Zomato announce layoffs and Amazon India has entered the food delivery business.

Re-Examine Disaster: Disasters may not always be the result of an earthquake, a fire, or a flood. The detailed plans of most organizations involving the establishment and testing of costly distributed data centres did not meet the unique needs of a pandemic such as COVID-19. Businesses must upgrade their plans via distributed data centres to speed up remote work connectivity. Connect to this load test, extend supply chains with alternate sources, and contract labour from various locations.

Flexible Operating Models: operating models need to easily embrace different business processes. In such instances, hierarchical models perform worse.

However, product-based companies are performing exceptionally well equipped with lean processes which are oriented on result.

3. Employee Engagement

Employee wellbeing, above all else, is becoming an organizational concern during a pandemic. In addition, in an age in which work is socially distant and remote, but is often more collaborative, networked, diverse and multidisciplinary-a new approach is required to ensure efficiency. Empathy becomes a guiding principle for organisations looking to empower and encourage workers. The goal to achieve becomes cultivating a culture of imagination and emotional intelligence while encouraging life fulfillment.

These ideas would help companies who are still figuring out their workforce facing strategies-

Physical and Emotional Well-Being: Companies ought to help the wellbeing of workers both in remote work and not in the short and long term (such as shipping, manufacturing). The physical aspect (to some extent) is taken care of by hand sanitizers, social distancing, and masks. Organizations also need to be more vigilant when it comes to the mental health of their employees.

Talent Management: Soon, unavailability of people across sectors such as construction, manufacturing and logistics will make it difficult to engage a sufficient and large enough workforce. Additionally, organizations with remote job openings can first go Talent vs. Office, so office facilities won't decide where one is hired from. This opens the doors for companies to obtain talent from cities or towns in tier 2 and 3 that do not need to move to office locations.

Training Needs: Engaging workers in discussions on business stability and development, particularly in times of uncertainty, would promote constructive participation across the board, in organisations. More informed identification of skill shortages and related preparation needs will be given that will raise morale and help workers prepare for an unpredictable market.

When incidents unfold, new steps will be taken by organisations to fix them, bypassing obsolete

regulations and operations. As companies accept the unpredictable future, they need to adapt quickly, re-wire in the short to medium term and develop mid-to

long-term resilience. This is achievable by embracing strategic creativity that can help companies plan for the unexpected.

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CONNECTED WORKER PLATFORM: A NEW WAY OF WORKING

With a sudden change in the environment due to the COVID-19 pandemic, the way of working has also undergone a tremendous change. Connected worker platforms have been existing in the market for quite a while, but there was a steep hype after the pandemic. One of the major questions that prevailed among the organizations was how the workers can continue to work while ensuring their safety and health. A connected worker platform is a possible solution to the problem. Connected workers are workers whose tasks are monitored and supported through digital networks. This platform is helping in achieving a better environment, safer workplace for the workers, better and clear visibility for the frontline workers with real-time data and more efficient manufacturing systems. This is achieved using its platform, which basically adds all the digital technologies such as cloud, drones, AI/ML, smartphones, etc. to empower the frontline workers to become intelligent, context-aware workforce and efficient.

In the current COVID-19 situation, what happens is by using this platform the frontline employee first has a health assessment and gives the risk analysis. If the worker is healthy, he/she will be provided with a barcode, using which the worker will be allowed into the site. The barcode of the employee is scanned by the mobile which then transmits the information about the workers' health into the enterprise's health team.

After entering the workplace, the workers operate hands-free with voice commands. With the visual representation and maps the workers can know where everyone is located and easily communicate and maintain social distancing. Especially manufacturing sectors where communication with other operators and sharing data are important, this platform helps a lot. It not only helps in

communicating with the on-site workers but also with the remote team. It helps in retooling and achieving safety standards. It also helps the decision-makers to view the information of the project on a real-time basis and helps in documenting the incidents, formulating action plans, issue orders for the problems, and also track the progress of the project making sure there is maximum performance with safety ensured.

IIoT, cloud, platform-as-a-service have made the frontline workers more empowered, but with a connected worker platform, it takes a step ahead. In the current situation, we have clearly found out how important it is to have an agile system that will help mitigate any risks or uncertainties in the manufacturing process. The connected work platform helps in doing so. The work done by frontline workers that were difficult during the pandemic situation can be solved by implementing the connected worker platform and the companies who implemented it are reaping from its benefits.

We can clearly understand that using the connected worker platform helps the frontline workers to understand, control, adapt and handle unexpected situations in work life. If we consider manufacturing, the sector will be successful only if the people are connected which is ensured using the connected worker platform. The connected worker platform thus helps in having a proper plan, schedule, and monitor the supply chain actions and manufacturing activities. The platform eventually helps in having a proper collaboration between employees and remote workers which is one of the crucial tasks during the pandemic situation.

With the problems arising because of the pandemic, connected worker platforms are going to be a solution leading to a new reality for a new normal world!

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COVID IMPACT ON SUPPLY CHAIN

The top priority of a supply chain is providing uninterrupted service to your customer. Since the coronavirus breakout there has been a tremendous disruption in the supply chain because of the changing government conditions and policies. Some of the biggest challenges faced in supply chain would be-

1. **Shortages of transportation facilities-** Truck drivers are denying transporting materials across states as many of the state borders are closed and getting clearance at borders is a difficult task. So, the drivers must wait for a very long time at borders and sometimes they are even sent back to the source destination due to lack of paperwork.
2. **Shortage of raw material-** There are thousands of products whose raw material for manufacturing was imported from the international market. Since the closure of international borders, there has been acute shortage of raw material for many products due to which the entire chain is disturbed.

Need of The Hour

The best way to address these problems can only be achieved using robotics, AI, IOT, etc. But India is still not developed enough to adapt to these technologies as 60% of India still lacks a stable internet connection. So, some feasible solutions that can be used in India are:

1. **Cold Storage Trains for Goods Transport-** As India's railway system is ranked 4th in the world and it covers almost 90% of India. Cold storage trains can be one likely solution for the transportation of perishable food items
2. **Contactless Loading and Unloading Systems-** The need of contactless loading and unloading systems is of paramount importance as in India maximum loading and unloading work is done by humans in many small and medium scale industries.
3. **Mobile Stores-** In most metropolitan cities majority of colonies have been declared as containment zone due to which the residents of those areas are not allowed to move to the nearby areas for purchasing non-essential items, due to which many small business like bakeries, mobile service, clothes and utensils are bearing heavy losses. In future many places will face similar situations. So, mobile stores can be used for normal business operations and it can help to reduce the exposure of people to market.
4. **Make in India-** Before the breakout most of the medical equipment like masks were imported from China. That is the only reason when the borders were closed, India faced a severe shortage of medical equipment. So, a country should not be completely dependent on other countries for any product. Make in India is one solution to overcome this problem but has its own limitations. Rules and regulations for setting up manufacturing units are very stringent in India and shortage of power supply, labours and resources like water are some other limitations. Government and citizens should work together to overcome these problems to enhance in-house manufacturing in India.

REFERENCES

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QUIZ

1. Which Indian company is set to acquire Mumbai based private sector general insurer Raheja QBE General Insurance Company Limited in a deal worth around \$76 million?
2. Recently, RBI selects this company for developing mobile app for visually impaired.
3. With which company, CBSE have partnered to build AI learning for schools?
4. Which company will acquire Zoox, a self-driving startup founded in 2014?
5. Which company will close its physical store locations permanently?
6. X is a British manufacturing company found in 1906. X also made customized engines for Airbus A- 380. Name X.
7. BSNL has partnered with _____ to let users connect to nearby Wi-Fi hotspots.
8. What was name of the series of mobile showrooms set by Reliance Communications?
9. Which company had the biggest product recall of all the time?
10. Which company did Niti Aayog to set up India's first Digital Capability Centre?

1. Paytm
2. Daffodil Software
3. Microsoft India
4. Amazon
5. Microsoft
6. Rolls Royce
7. Paytm
8. Web World
9. Takata Air Bag Recall
10. McKinsey & Company

ANSWERS

THE TEAM

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