

MATERIALS MANAGEMENT REVIEW



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REVOLUTIONARY CHANGES IN LOGISTIC SECTOR IN 2019

BLOCKCHAIN TECHNOLOGY

it will take care of e-sourcing, e-auctions, contract management and more. You can have a real-time update on leads. Security being a major issue in this segment, Blockchain takes care of supplier's bank details and payment process.



CLOUD-BASED COLLABORATION

From WhatsApp, ERP, CRM, etc. businesses will communicate using cloud-based platforms. This will give continuous real-time access to data irrespective of location. Also, this will enable buyers to get a holistic view of product and



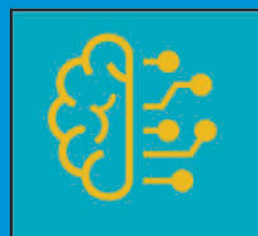
VENDOR CONSOLIDATION

This supplier rationalization will help cut down supply chain costs and improve efficiency. Aggregator with holistic solutions will be preferred for effective supplier relationship management and GST compliance.



ARTIFICIAL INTELLIGENCE

Strategic sourcing through AI is likely to be performed by all. This automation will help in predicting demand, reducing time lost in routine / repetitive tasks, so increasing the overall efficiency.



SCALE 2019 - BANGALORE BRANCH



Inaugural Session of SCALE 2019 - 22.08.2019



Mr. G.K. Singh, National President Lighting the Lamp - SCALE 2019, 22.08.2019



Mr. G.K. Singh, National President - Addressing gathering -22.08.2019



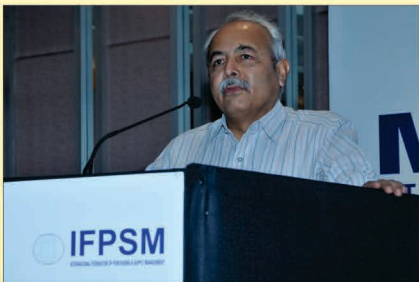
Mr. B. Jayaraman, Branch Chairman Welcoming Gathering -SCALE 2019



Mr. P.M. Biddappa - Chairman -SCALE 2019 briefing about SCALE journey - 22.08.2019



Dr. Allis Abraham, Chairman, Impact Group - Addressing Gathering -SCALE 2019



Dr. S.G. Sreekanteswara Swamy, Speaker Addressing the Gathering



Mr Venkatesan N. -Speaker - SCALE 2019 addressing gathering



Mr. Sudhendra Denkanikote -Key Note Speaker Addressing Gathering - SCALE - 2019, 22.08.2019



Mr. Debojyothi Dey, Dept. Research, Multi Commodity Exchange of India, Addressing Gathering - SCALE 2019



Mr. Pankaj Dayama, Sr. Research Associate, IBM -Speaker - SCALE 2019



Mr. Viswesh Pakare, Chief Guest Addressing the Gathering -SCALE 2019 - 23.08.2019



Mr. Srinivas V. Rao - N.C. Member - Immediate Past Chairman -proposed Vote of Thanks -SCALE 2019



A view of SCALE 2019 Team



Mr. A.V. Shama Sundar - Speaker - addressing the gathering - SCALE 2019

From the Desk of The National President



Dear Professionals,

Greetings from National President!!!

I hope you all would have celebrated Independence Day, Raksha Bandhan and Krishna Janmashtami with love and happiness.

173rd NC meeting has been conducted recently at Bhubaneswar by IIMM Bhubaneswar Branch. The Meeting was very fruitful where deliberations regarding Admission trend, new Initiatives and innovative ideas were held. It is also resolved to have PGDMM Program on the similar lines of PGDSCM&L i.e. through regular contact mode and distance mode to benefit Students and Branches. I extend my congratulations to Chairman, IIMM Bhubaneswar Branch and his team for organising this NC meeting in a very befitting manner.

I also congratulate Chairman, IIMM Bangalore branch and his team for conducting their two days Signature Event i.e. Scale 2019 program, on the theme “Digitalization Strategy for Responsive & Sustainable Global Supply Chain Management”.

As you are aware that, IIMM holds its annual National Mega Event, this year, IIMM Kolkata along with IIMM Jamshedpur branch are organising NATCOM 2019 on 29th& 30th November 2019 on the theme “Transforming Supply Chain through Digitization” at Kolkata. You are requested to make this Mega Event grand success by contributing in the form of Delegates or Sponsorships.

I further request all Members to come forward and take IIMM to further greater heights by bringing in more students, institutional members and advertisements for MMR.

Yours



G. K. SINGH

National President - IIMM

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From the Desk of Chief Editor



Dear Members,

An efficient & effective Logistics Sector plays a key role in the inclusive and rapid economic growth of the country. The market size of the logistics sector is expected to rise to \$215 billion by 2020, @ 10.5 % CAGR over 2017, which was \$160 Billion in 2017. As per the study by India Brand Equity Foundation (IBEF), annual investments in logistics sector will go up to \$500 billion by 2025.

The logistics cost as a percentage of its GDP stands at 14% which is relatively higher as compared to similar cost in US (9.5%), Germany (8%) and Japan (11%), however, country aims to bring down this cost to less than 10% by 2022. Federation of Indian Export Organisations (FIEO) believes a reduction in logistics cost by 10% could increase the country's exports by about 5-8%.

Having been accorded Infrastructure status in 2017, logistics Sector is critical in propelling India's economic aspiration to become 5 trillion economy by 2025. Citing this, Government of India has developed a draft National Logistics Policy 2018 and created a Logistics Wing allocating the task of "Integrated development of Logistics sector" to the Department of Commerce and Industry. It aims to inform, clarify, strengthen and prioritize the key objectives, focus areas and the governance framework for Logistics in India.

Given the huge expanse of the country, a varied and uneven landscape, coupled with the fact that a large number of industrial clusters (MSMEs) are based in tier 2 cities, and not in metros, where the last mile connectivity have been plagued with issues of access and reach and hence the growth of Indian MSMEs. Various studies have shown that Indian logistics landscape comprises of skewed modal mix that depends heavily on Road infrastructure.

As per the Deloitte – Assocham Study, the Indian coastline and river network have remained significantly underused in spite of the fact that such models are more energy-efficient, eco-friendly and comes with reduced logistics costs. The same study notes that the cost for coastal shipping is Rs 0.15-0.2 per tonne-km compared to Rs 1.5 for railways and Rs 2.5 for the road.

Optimizing the current modal mix (road-60%, rail-31%, water-9%) in line with international benchmarks (25-30% share of road, 50-55% share of railways, 20-25% share of waterways) and improving last mile connectivity will definitely help farmers, MSMEs and small businesses to access market at various locations.

Govt. is aiming high to increase the efficiency across the logistics value chain through National Logistics e-marketplace as a one stop marketplace, a single window portal, which will onboard transporters, warehousing providers, shipping lines, 3rd party service providers, freight forwarders, Customs brokers etc. and various government agencies including Customs, Partner Government Agencies etc. involved in regulatory, certification and compliance services. The portal will also involve simplification of documentation for all exports/imports. Information will be captured at one place which will be used by all regulatory agencies, thereby the need for documents to be submitted at multiple places will be discontinued and will enable the entire regulation system to be digitized.

A handwritten signature in black ink, appearing to be 'M.K. Bhardwaj', written in a cursive style.

(DR. M.K. BHARDWAJ)



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SUPPLY CHAIN 4.0

- TRANSFORMING INDIA'S LANDSCAPE

PREM NARAYAN, IRSS DEPUTY DIRECTOR GENERAL
UIDAI LIFE FELLOW, IIMM, premn2011@gmail.com

Introduction : If India to become \$5tn economy, a important steps to need to be taken include exploit the opportunities for global trade and become a preferred sourcing hub for the world. The country needs to make it simpler to manufacture and trade within India and globally, investments in trade infrastructure and adoption of digital supply chain alongwith robust logistics infrastructure are necessary to enable Indian businesses stay competitive at a global stage.

Long before industry 4.0 captured the collective imagination, supply chains have been critical cogs across industrial organizations. In recent times, though supply chains have grown to take increasingly worldly and complex shape on adoption of digital and physical technologies that expand the possibilities of what it can deliver. The advent of these technologies have enhanced the interconnected nature of supply chains and allowed it to evolve into more responsive than ever. With this, the supply chain has become more strategically critical component of the organization delivering greatest insights and enabling leaders to take better informed decisions

India's supply chain landscape stand is on the cusp of a revolution with digital's transformative capabilities pushing it to altogether new heights. Considering the backbone of the economy, india's supply chain ecosystem soars to new heights. The Indian logistics sector is expected to be worth \$215 bn by 2020-21, and given its immense potential, there is a need to understand the challenges faced by the sector and remove bottlenecks to progress. With india moving boldly towards claiming its place in the global polity, we are witnessing a fast changing India. As our supply chain infrastructure improves, better regulatory climate, strong global connect and inexpensive and accessible technology present massive opportunities for SCM practitioners to optimize their supply chains. It is only then that supply chain impact will be truly far-reaching and profound.

2. Importance of Supply chain : Over the last thirty years, logistics has undergone a tremendous change: from a purely operational function that reported to

sales or manufacturing and focused on ensuring the supply of production lines and the delivery to customers, to an independent supply chain management function that in some companies is already being led by a CSO - the Chief Supply Chain Officer. The focus of the supply chain management function has shifted to advanced planning processes, such as analytical demand planning or integrated S&OP, which have become established business processes in many companies, while operational logistics has often been outsourced to third-party LSPs. The supply chain function ensures integrated operations from customers to suppliers.

In the Indian context though, the digitally connected supply chain and its potential to drive innovation has yet to fully catch-on, india's nationwide infrastructure issues have often hamstrung our supply chain network, with challenges coming with the territory, be it transporting goods by road, rail or sea. Delay in movement is often the norm, and multiple tax regimes have been an age-old challenge to surmount.

But introduction of GST has eased things considerably so too can digital supply chains kick off the net major growth wave. Logistics costs currently account for as much as 14 percent of india's Gross Domestic Product (GDP), and smart supply chain solutions can play a major role in keeping there costs in check.

Industries as diverse as automotive, retail and manufacturing are adopting digital technologies to help reinvent their supply chains and increase business efficiencies. To note just two examples, RFID AND iot tools are already making their impact by way of operational efficiencies and cargo safety as well as reducing transport costs by increasing the speed of freight movement.

3. Facets of digital supply chains : The emergence of new digital and analytical capabilities, combined with significant policy changes and rising customer expectations, companies in India need to upgrade their supply chain processes. Advance economies with sophisticated logistics ecosystem have demonstrated the benefits of digital transformation across the

logistics value, including warehousing operations, freight transportation, and last mile delivery. There advances can help improve the performance and efficiency of India's logistics sector. Five important facets of digital supply chain namely internet of things (IOT), automation, blockchain, cloud computing and big data analytics are discussed as under.

- i) **Internet of things (IOT):** it represents a unique technology transition that can enable predictive diagnosis and monitoring performance across the ecosystem. Advanced sensors can be deployed to monitor and detect risks pertaining to breakdowns, helping avoid process delays and fatal accidents. Additionally, global positioning system (GPS) and Radio-frequency identification (RFID) systems, are being used to provide real time visibility. This allows service providers not only accurately predict delivery times and improve asset utilization, but also increases engagement as customers track consignments in real time, reducing friction that used to exist on the customer side.
- ii) **Automation:** from the use of robots to self-driven vehicles and drones, automation is going to be a big part of the supply chain of the future. This will reduce manual intervention for better management of costs. Artificial intelligence (AI) can play a big role in this automation drive and improve the quality and speed of services. It also holds the potential to quicken any inspections, curbing the possibility of handling damage and cutting down on inventory holding time.
- iii) **Block chain:** it may be particularly suited to India given the fragmented nature of India's logistics sector and the lack of any common platforms to share information. The sheer quantum of manual data entry increases the risk of human error, and this would help in creating an end-to-end logistics system that is truly integrated.
- iv) **Cloud Computing:** As logistics become increasingly leaner, optimizing asset utilization will be pivotal to enhancing operational efficiency. Cloud computing can enhance collaboration and increase efficiency by allowing service providers to share fleets and networks effectively. It will allow vast amount of data created across the entire value chain to be easily accessed for round the clock monitoring from anywhere.
- v) **Big Data Analytics:** Practitioners can drive future strategy by identifying improvements, all with the use of data analytics. The possibilities are boundless, including estimating the remaining useful life of assets, identifying any operation

inefficiencies, and slashing redundancies and costs. Digital can pay rich dividends, bringing together disparate stakeholders to deliver richer value than ever.

4. Digital supply chain enablers : The transformation into a digital supply chain requires two key enablers - capabilities and environment. Capabilities regarding digitization need to be built in the organization but typically also require targeted recruitment of specialist profiles. The second key prerequisite is to establish IT landscape, an innovation environment with a start-up culture need to be created. This "incubator" needs to provide a high degree of organizational freedom and flexibility as well as state-of-the-art IT systems to enable rapid cycles of development, testing, and implementation of solutions. Fast realization of pilots is essential to get immediate business feedback on suitability and impact of the solutions, to create excitement and trust in innovations, and to steer next development cycles. The "incubator" is the seed of Supply Chain 4.0 in the organization - fast, flexible, and efficient.

Supply Chain 4.0 encompasses the application of the Internet of Things, the use of advanced robotics, and the application of advanced analytics of big data in supply chain management: place sensors in everything, create networks everywhere, automate anything, and analyze everything to significantly improve performance and customer satisfaction.

5. Way forward : India is prioritizing transformation of the logistics sector which will have direct positive impact on the economic growth. It reduces the cost of goods and services, improves global competitiveness of manufacturers and MSMEs, facilitates trade growth and creates new jobs.

One of the realities of modern day society is that it generates huge amount of data, and this is equally true of modern supply chains. IOT is one definitive technology that will transform India's supply chain through the use of data analytics. It is possible to get real-time data at all points across the supply value chain: inventory levels, point-of-sale information, consumer buying habits, fluctuation in freight costs or raw materials can be adjusted for as needed.

New generation robotics, automated vehicles (AVs) in warehouses, blockchain, IOT sensors are going to permeate India's logistics sector. In the time to come, digital tools will spread across the entire value chain rapidly as organizations start to realize the value of their supply chains with these digital tools.



MULTI MODAL TRANSPORTATION: VISION OF NITI AAYOG

Appropriate policy framework and favourable regulations form the corner stone for the growth of any sector and logistics is no different. At the CEO Conclave, Ravinder Goyal, IRTS, Adviser (Infrastructure Connectivity), NITI Aayog, in conversation with Anil Devli, CEO, INSA, deciphers the role of NitiAayog – a think tank driving policy formulation in India, in promoting multimodal logistics.

Anil Devli: What is your role as Advisor, Infrastructure Connectivity at NITI Aayog and what is the vision of NitiAayog as far as maritime sector is concerned?

Ravinder Goyal: There are a lot of misconceptions about the role of NitiAayog in the transport sector. NitiAayog has evolved from the earlier role of planning commission which was basically appraising the state's plans and the ministries plans and regulating the funding also. Subsequently when NitiAayog was transformed into an organisation, the role given to NitiAayog is that of a think tank and an action tank. The whole idea is that it should be able to drive the policy of India. To this end NitiAayog for the past three years organises workshops, writes policy papers, consults various stakeholders across industries. Focusing particularly on multimodal transport, the mandate for NitiAayog is:

1. As there are sectorial imbalances and modal imbalances in the transport sector, the freight has shifted from rail to road. Earlier the road share used to be much less than 14-15 per cent at the time of independence, now the road's share is almost 67-68 per cent. this has its own drawbacks in the sense railways despite being the economical mode of transport is carrying much less freight than what it should be carrying. The result is congestion on roads, average speed has decreased and cost of logistics has gone up. One mandate for NitiAayog is to correct the imbalances in the modal mix. For instance, coastal shipping is currently playing a very minor role in logistics. The capacity at the ports is growing at the rate of 16 per cent annually, whereas the cargo is only growing at 5 per cent. The port capacity is still underutilised, so there is lot of scope for coastal shipping which can correct these modal imbalances and ultimately cut down the logistics cost.

2. The second mandate is to cut down the logistics cost. The logistics cost in India is almost 14 per cent of the total GDP and in a product the cost of logistics is again 14 per cent. Of this 14 per cent 40 per cent is the transportation cost. Any policy intervention which can cut down this cost will be the focus of attention and mandate of NitiAayog.
3. NitiAayog has been entrusted with the task of making a regulatory reform bill for the infrastructure sector. It is an umbrella bill announced in the last budget, so NitiAayog would be driving the bill for correcting the regulatory framework. For instance, when I was in CONCOR, we were struggling with the formulation of Bill of Lading. In multimodal transport there is only one document that carries the cargo, but unfortunately that is not happening for the past 20 years. Any policy initiative which can correct these aspects would be the mandate of NitiAayog.

Another mandate for NitiAayog is ease of doing business. The study that we had done at JNPT has actually reduced the transit time for export and import of containers and now a similar study is being conducted for Chennai port as well. The focus of attention in multimodal transport will be correcting the regional and modal imbalances, to cut down the cost of logistics, regulatory framework and ease of doing business. We have formed think tanks and also invite suggestions from the industry in this regard.

Anil Devli: In modal shift of cargo has any plan or thought been formulated in NitiAayog to ensure that each mode of logistics is put to optimum use?

Ravinder Goyal: We are trying to study the movement grid of every commodity. Under the Sagarmala project McKinsey has already done a study in this regard. They have studied the movement of every commodity and analysed whether it will be beneficial to transport it by rail or road. The railways is already studying the possibilities for bringing the freight cost down. Till now all the efforts made in this regard are based on market experience, but a concrete study needs to be conducted to understand the flow of every commodity. For instance, Maruti has recently started transporting cars through inland waterways. If this modal shift is based

on some hard facts or studies then it would be more beneficial. One way of doing it is mapping the flow of each commodity and use the insights in policy intervention.

Anil Devli: Getting the study done for each commodity can be very cumbersome. Would NitiAayog be willing to use the case studies already done by others in this regard for the thought process?

Ravinder Goyal: Why not! NitiAayog on its own has not done any study, they are done through consultants or industry. So any study done by industry which is based on their experience is always welcome. Of course, we will get the study vetted by industry experts again and can be used to drive the policy formation from NitiAayog.

Anil Devli: One of the things you touched upon is public consultation and the need for formation of groups. Is it possible that the 8 or 9 associations that represent the interest from road till the sea transport volunteer to form working group to interact with NitiAayog regularly by submitting suggestions?

Ravinder Goyal: Recently NitiAayog has come up with a fifteen years agenda and the action plan for the next three years. So we held wider stakeholder consultation based on which the policy paper is formulated. What you are suggesting is absolutely right. If you can suggest me formation of a group then I am willing to take it up.

Anil Devli: In your short stint have you been able to take a view of Inland Waterways and personally do you have any idea about the direction in which the thought process and policies of the government are proceeding?

Ravinder Goyal: Currently the share of inland waterways is very miniscule, hardly 1 or 2 per cent in the overall cargo movement. Unfortunately there are too many authorities working in the inland waterways sector, so we need to have a sort of convergence among the authorities. The programme of Ministry is in-progress and NitiAayog is helping in that to increase the share of inland waterways.

Anil Devli: Does NitiAayog also involve itself in issues, for example there used to be a specialised financing organisation to support buying of ships, which over the period got lost. We have been looking for specialised financing organisation as well. Is this something NitiAayog would be concerned about?

Ravinder Goyal: All the policies, be it relating to formulation of a particular organisation, come to NitiAayog for approval. We study the policy and if required hold consultation with expert group as well.

Source: www.maritimegateway.com



Indian Institute of Materials Management

MISSION

- To promote professional excellence in Materials Management towards National Prosperity through sustainable development.

OBJECTIVE

- To secure a wider recognition of and promote the importance of efficient materials management in commercial and industrial undertakings.
- To safe guard and elevate the professional status of individuals engaged in materials management faculty.
- To constantly impart advanced professional knowledge and thus improve the skill of the person engaged in the materials management function.
- Propagate and promote among the members strict adherence to IIMM code and ethics.

CODE OF ETHICS

- To consider first the total interest of one's organisation in all transactions without impairing the dignity and responsibility of one's office :
- To buy without prejudice, seeking to obtain the maximum ultimate value for each rupee of expenditure.
- To subscribe and work for honesty and truth in buying and selling; to denounce all forms and manifestations of commercial bribery and to eschew anti-social practices.
- To accord a prompt and courteous reception so far as conditions will permit, to all who call up on legitimate business mission.
- To respect one's obligations and those of one's organisation consistent with good business practices.



JOB CREATION NEEDS TO BE A PRIORITY FOR THE COUNTRY: AM NAIK

RACHITA PRASAD

Job creation needs to be a priority for the government, as skilled people are also finding it hard to get employment. While the government has introduced initiatives for skill development and training, execution is still slow and results are only partially achieved, said AM Naik, group chairman of Larsen & Toubro, who also heads the National Skill Development Corporation. Naik told **Rachita Prasad** that quantity and quality of skilled workforce needed more focus to help make India's products competitive globally. Edited excerpts:

What has your experience been with skill development so far?

NSDC has had success in terms of seeing greater youth participation in technical and vocational training that makes them more employable. But a lot more needs to be done in terms of strengthening industry connect and in capacity building of other bodies and implementation agencies. Our purpose was to prepare people for employment in the country but we are also working on preparing people to work in countries where there is a shortage of workforce. Middle East opportunities are declining; there is some opportunity in Japan and Russia. But unless India creates jobs, the skilling doesn't get utilised.

Of all the people we have trained so far, some of them are idle, they have not got jobs, and in some cases they are not keen to go very far from their villages. The first thing is job creation, for which you need economic growth. This needs to be a priority for the country.

Even with all the constraints, we can still train people but then what? There have been announcements but execution needs to improve. What is said needs to happen, right now it happens only partially. The number of people to be trained and the quality of skilled manpower are lacking and there is no money to create world-class infrastructure.

At a time when the unemployment rate has been high, economic growth has slowed and industry faces underutilised capacities, how can job creation be boosted?

Job creation will happen only with economic development and higher capacity utilisation. Many industries have closed or are partially utilised, or working only on certain days of the week, or just one shift a day. There is gross underutilisation of industry that already exists, let alone any new capacity being created. There is tremendous demand for economic growth, given the sheer size of our 1.3-billion population. But there is no money to invest in industry, or even with people to buy for consumption. We have to build a consumption-driven economy. A significant part of our population is undernourished; if we want to grow we need to feed them well. We need to increase per capita income so that they have money and can increase consumption; they will also evolve into high quality manpower that will help create products that can compete with the world.

The biggest issue is funding the industrial growth so as to accelerate economic development that can lead to more job and demand creation.

There are opportunities for skilled workforce in countries abroad. Will this help when domestic job creation is slow? Indians could go to the Middle East in huge numbers because there was no language barrier. But the economy there is sliding and employability is not high. Instead of more people going, now we have people coming back from the Middle East. But there are language barriers in Japan and Russia. It took three to four years to train 50-100 people for Japan, and it will take the same type of time to train people for Russia. What they want is a workforce that understands their culture, is skilled and comes after a holistic training. A lot of people are making a big deal about it, but these are small numbers; if there were a few thousand people getting opportunities abroad, it would be worth talking. We need to do more, talk less.

There is a view that a significant share of our graduates has degrees but is not 'job-ready'. What is your assessment and how to fix this?

The profile of the workforce has changed a lot in the last 25 years. Since the information technology (IT) industry started in India and started growing, hundreds of colleges came up, with varying competencies, infrastructure and quality of teaching. We were not training for blue-collar jobs anymore but focusing on white-collar jobs.

The migration in this phase has been for these white-collar jobs and that for blue-collar jobs remained restricted to Asian countries. The biggest challenge has been to give them the right training and to find good quality trainers and teachers. Some of the countries that were most devastated in world wars emerged as the most industrialised nations, because most of their people went for skill training; we need good quality skill training. There are many government schools that don't have enough teachers and quality of teaching is a huge problem.

I am building a school in Mumbai and I can tell you, I can ensure the best infrastructure if I spend money but finding the right teaching talent is the biggest challenge. We need institutions to train teachers.

Finance minister Nirmala Sitharaman, in the Union Budget, called for foreign students to study in India. Do you see merit in this?

It is good thinking. But the problem is everybody is going out of the country and nobody is coming in. India has a few good educational institutions but they require a very high cutoff, which a lot of people can't get. We don't have good teachers and the education system itself has been watered down in line with the no-fail policy. The general lack of good infrastructure and good quality of life has made people detached. Anybody who can afford, is going abroad.

Source : The Economic Times



CHALLENGES IN MANAGING EPC PROJECT SUPPLY CHAINS

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Abstract : This study examines the importance of Engineering, Procurement and Construction (EPC) supply chains and its associated issues and challenges. In EPC supply chain management, the contractor designs the installation, procures the necessary materials and builds the project either directly or by subcontracting part of the work. So, many firms are involved since its design to delivery. Inter-functional coordination becomes critical in the EPC supply chain management. The infrastructure projects execution takes longer period, so, keeping the project schedule under control becomes a real challenge to the project managers. In EPC, the time overrun and cost overrun challenges are important role in the accomplishment of the project planned tasks. Project management softwares such as MS Project, Primavera, and Project Libre are generally used to address time and cost overrun issues. This study focuses on Kochi Metro Rail project phase I challenges faced and innovative practices adopted by Kochi Metro Rail Ltd. (KMRL) Kochi. This paper emphasises the qualitative aspect of the study. Secondary data was collected and used in this paper. The key elements of EPC project supply chain such as engineering, procurement, construction and project management are discussed. The scope and importance of Inter Functional Coordination is discussed. The Cost Influence Curve of Construction Industry Institute (CII), USA is also discussed covering Earlier Supplier Engagement / Involvement in the project.

Keywords: EPC supply chains, project coordination, cost influence curve, infrastructure projects

Introduction : Engineering, Procurement and Construction (EPC) is a construction model that integrates the work between Engineering, Procurement and Construction. The EPC project is normally applied in infrastructure development projects like metro rail, airport construction, refineries, gas pipeline, integrated power plant construction and construction of gas grid. The success of these projects is the managing their supply chains. So, managing these supply chains involves high level of complexity of work as well as the coordination of all interconnected functions like project management team, design & engineering, procurement, construction, administration and legal. In traditional supply chains, the products and services flow from upstream to downstream, information flows across, the fund /money flows from downstream to upstream, value flows from upstream to downstream

and risk flows from upstream to downstream supply chains.

It is recognized that business completion has shifted over time from a situation of individual enterprise versus individual enterprise to one of the supply chain versus another supply chain [1]. This is perhaps more relevant for a project-oriented business, whereby large engineering projects have an edge in terms of scale, scope and complexity, especially regarding the involvement of the firms in the completion of project. In fact, large engineering projects are characterised by huge financial and resource efforts as well as high probabilities of failures and once project completed alterations / modifications becomes difficult. Most of the projects may end up with cost overrun or time overrun or both, if their supply chains are not properly managed.

So, competition is now played on the field of the whole supply chains, also for project-oriented business like EPC Projects. Therefore, it becomes important to manage EPC supply chains more effectively. Organizations such as L&T, Engineers India Ltd., Projects and Development of India Ltd., (PDIL), GMR, Gammon India etc. are handling major EPC projects besides some of the foreign players.

Characteristics of EPC Projects : EPC is complex in nature. A project is a large-scale system, constituted by lots of professional activities with different characteristics. The produced by project organizations within the project life cycle will lose when a project closes and organization dissolves. The organization redesigned on EPC is temporary. The participants who are called stakeholders take part in EPC project activities in different stages, associating with each other based on their respective interests. EPC projects are more of capital intensive will have start and end dates with key milestones. Examples, infrastructure projects, integrated power plants, refineries, metro rail projects, chemical plants etc.

Inter Functional Coordination : Inter Functional Coordination can be defined as the cooperation of various internal business functions like project management, engineering, procurement, and construction to achieve the overall goals of the firm and insure its responsiveness to environmental changes. Table 1 shows the key functions and its major responsibilities in an EPC project.

Table 1 Inter Functional Coordination

Key Functions	Major Responsibilities
Project Management	Budgeting, Preparation of Project Schedule (PERT / CPM), Maintaining Code of Account, Trend Analysis, Project Reviews etc.
Engineering	Finalization of specifications, Design drawing, Decision on Quantities, Material Requisitions, Life Plans etc.
Procurement	Sourcing, Placement of POs, Signing of Contracts, Transportation & Logistics, Shop Inspection, Expediting, Receiving and Releasing of Materials, Supply Management etc.
Construction	Resource Planning, Constructability, Construction Planning, Creation of temporary facilities etc.
Administration & Legal	Land Acquisition, project approvals and clearance from various department and agencies, facilitating and monitoring the progress of the project.

Earlier Supplier Engagement / Involvement : Atleast key suppliers should be involved in the early stage of the project. It brings lot of benefits to the EPC Company in terms of cost, quality, and timely completion of the project. The Research Group of Construction Industry Institute (CII), USA has studied number of EPC projects and devised the Cost Influence Curve (CIC). The optimized CIC shown graphically below in Figure 1 below. The CIC illustrates that although the ability to influence the cost of a project is greatest during the early Design & Engineering (D&E) stage of a project (at “E”), materials are procured (at stage “P”), allowing only then for construction (the “C”) to begin. After studying

many project examples, the research group determined Early Supplier Engagement and Commitment on a typical EPC project could produce cost savings of 4% to 8% and time savings of 10-15% across the life of the project by modifying the traditional process. Therefore, moving the “big P” in front the “big E” and adding a “little p” (the balance of the items to be procured), recognizes the traditional EPC project model to PEpC. The research group nicknamed this new configuration the “PEpC” (pronounced Pepsi) process[4].

Therefore, Earlier Supplier Involvement (ESI) brings lot of benefits to the buyer in terms of quality improvement, timely completion of projects, cost control and facilitates long term business relationships / agreements etc.[3].

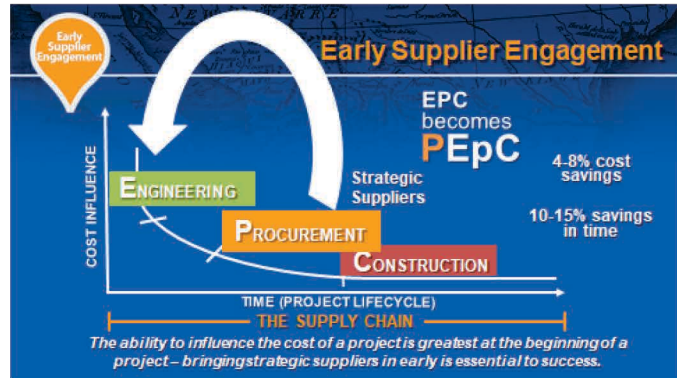


Figure 1: The CII Cost Influence Curve

Success Story of Kochi Metro Rail : Kochi Metro Rail Ltd. (KMRL) is a Special Purpose Vehicle (SPV) formed for the implementation of Kochi Metro Rail Project. KMRL is a JV company with equal equity contribution of Government of India and Government of Kerala. In phase –I, KMRL proposed to have 22 stations covering a distance of 25 km from Aluva to Petta. KMRL now has 16 operational stations covering a distance of 18.5 km from Aluva to Maharaja College and the construction work till Vyttila is in progress. The project will be operated under a Build, Operate and Transfer (BOT) basis over a 30 years concession period. The estimated completion cost is Rs 5182 crs with carrying capacity of 975 passengers (crush load) (seating -136). The EPC supply chain and its major firms are shown table 2 below.

Table 2 EPC Supply Chain Constituent Major Firms of Kochi Metro Rail Project

Major Firms Involved	Key responsibilities
Project Design, Monitoring, Execution and Consultancy	Delhi Metro Rail Ltd., (DMRL) on behalf of KMRL
Construction	L&T, Soma Enterprises Ltd., Era & Ranken (JV), Redstar Constructions
Metro Coaches Supplied	Alstom, France (25 Train sets)
Power supply and Traction	Kerala Electrical Supply Board (KESB), Ardanuy&Ingenieria S.A Spain
Ticketing and Communication	
Infrastructures	Vindhya Telelinks Ltd. (introduction of one ticket system)
Major Funding Agencies	AgenceFrancoise de Development (AFD), France, Canara Bank, India, Komet Project, Japan International Cooperation Agency (JICA), other sources (collection of taxes)
Project completion and operation	DMRL executed the project on behalf of KMRL, Kochi



Figure 2 Panoramic View of KMR Project

Innovative Practices Adopted : KMRL has implemented many innovations like social inclusion (involving/engaging Kumbhashree members in their operations), solar energy (clean energy), and vertical garden and plastic bottle recycling. Sourcing metro coaches and reducing its supply lead time are considered as important milestone in successful completion of KMR project [5].

Major challenges faced by KMRL : KMRL too faced many challenges during execution of its prestigious project. The major challenges are:

- i. Delays in land acquisition.
- ii. Frequent interruption in material supply due to strikes and stoppages by quarry owners / suppliers.
- iii. Slow down due to south west monsoon rain related issues.
- iv. Delays due to solving legal litigations / disputes.
- v. Short supply of materials and construction workmen.
- vi. Time overrun issues.

Major challenges for project management team in any EPC projects are to avoid time overrun and cost overrun. Time overrun attracts penalties / invoking of liquidated damages clause and cost overrun certainly erode the profitability of the company. Though

KMRL doesn't face cost overrun, but, they too faced time overrun in completion of phase I project.

Conclusion : EPC projects generally brings lot challenges to the project management team. Two important challenges are time overrun and cost overrun. Time overrun attracts penalties / LDs to the EPC project company, whereas cost overrun will certainly have impact on profitability of the company. Adoption of technology and frequent reviews will certainly address the time and cost overrun issues. Studies reveal that there is link between project deviations and procurement. The performance can be improved by adopting the right strategies and processes in procurement and project management [2]. So, it essential to look at their EPC supply chains. EPC supply chains are very complex in nature in terms of coordination, sourcing, defining the scale and scope, space for modifications / change in specifications and addressing stakeholders concern.

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COMMODITY INDEX

Commodities	Days's Index	Prev. Index	Week Ago	Month Ago
Index	2762.3	2762.5	2756.5	2692.8
Bullion	5374.0	5378.3	5345.5	4993.4
Cement	2364.7	2364.7	2381.0	2397.3
Chemicals	1941.7	1962.7	1979.9	2022.0
Edible Oil	1598.3	1598.3	1587.0	1509.7
Foodgrains	2440.7	2440.5	2429.6	2367.3
Fuel	2592.3	2592.3	2602.7	2643.4
Indl Metals	1918.9	1918.9	1918.9	1918.9
Other Agricom	2211.8	2211.8	2209.5	2122.3
Plastics	1748.3	1748.3	1748.3	1748.3

Source: ETIG Database dated 23rd August, 2019



‘AUTOMAKERS HAVE DONE EVERYTHING, ONLY GOVT CAN BRING RELIEF,’ SAYS MAHINDRA AND MAHINDRA MD PAWAN GOENKA

PAWAN GOENKA, MD, MAHINDRA AND MAHINDRA

Tumbling sales in auto sector have led to massive job cuts in the industry. Automakers like Mahindra and Mahindra have claimed that they have done enough ‘belt tightening’ and now it is time for the government to provide some relief to the sector

Sahil Joshi

Tumbling sales in auto sector have led to massive job cuts in the industry. Automakers like Mahindra and Mahindra have claimed that they have done enough ‘belt tightening’ and now it is time for the government to provide some relief to the sector. They have also claimed that plants are being shut for 5-7 days every month for the past four months and if the situation worsens, the industry could be staring at more job cuts. Dr Pawan Goenka, Managing Director of Mahindra and Mahindra, spoke to TV Today Executive Editor Sahil Joshi and

Question: This is third consecutive quarter that is eyeing downturn in auto sector. How deep is the crisis?

Answer: It’s actually the fourth consecutive quarter. This time around, the downturn appears to be quite widespread. We have had similar situations in 2008-09 and 2013-14 but this time every segment of the industry — passenger vehicles, SUVs, small and large commercial vehicles, two- and three-wheelers -

- everything is in the de-growth phase. So, I would say it’s a fairly deep downturn. Look at the numbers themselves from last 4 months of this financial year — passenger vehicles industry is down by 22 per cent, two-wheelers about 13 per cent, commercial vehicles around 14 per cent. Now those are fairly significant de-growth numbers and that’s been sustaining for almost 4 months and getting worse every month.

Question: What do you think are the reasons that

led to this situation?

Answer: It’s difficult to point out one particular thing, and these are all guesstimates because nobody really knows, but I would generally put it into two buckets. First is the whole financing including wholesale financing and retail financing. Problem is not so much of liquidity but more of NBFCs which are major financiers of automotives. They tightened credit norms because there was stress on NBFCs, which is reasonable from their view point but has an impact on the growth because 8 to 10 per cent of potential buyers are unable to get finances. Second is interest rates. Policy rates have been reduced by 110 basis points now but have not really been passed on in a major way to the consumer. So these are the two things.

Question: Isn’t it also the overall economy?

Answer: Yes, what I mentioned is only the financing part of it but the second part is that overall transaction cost has gone up substantially in the last 2 to 3 years. It didn’t happen overnight.

which are required but have an impact on vehicle price that includes registration tax which keeps going up, road tax which many states have increased by almost 2 to 3 per cent in the last 2 years. This also includes extra cost of insurance, and TDS that has to be paid on vehicles above Rs 10 lakh. All of these together have made the transaction cost very high.

Also the overall economy. Depreciating rupee also has very strong impact on sentiments. And not only that, people often take money out of investments in share prices to buy a car and now that’s not happening because prices are depressed. The rural spend has also not really picked up. This has an effect on buying. So, overall I think, since GDP numbers being low, every economic news that comes in is creating more of sentiment problem. So in all I would

say financing, transaction cost and overall sentiment of consumers is cumulatively making it hard.

Question: How much will it impact employment?

Answer: Impact on employment is in three parts — first is of OEMs like Mahindra and others, second is of suppliers and third is of dealers. As far as OEMs are concerned they will be careful, a company like Mahindra will not lay off people easily because we know the importance of employees and it's our responsibility but if this situation continues then we will have to do something. Till now around 2,000 people have been laid off. We are closing plants but not reducing capacity. Since last 4 months plants are being closed for 5 to 7 days. If that continues then there will be a huge loss of employment. But the bigger worry is for suppliers and dealers. If they do not have orders they will have to lay off people and ACMA has already said that around 1 million jobs will be lost if slowdown continues. Even dealers will be impacted in a similar way. Auto industry suppliers, mechanics, dealers, OEMs — all together is a big chunk of employers. If their employments go down then it will have cascading effect and will become a viscous cycle, which we need to avoid.

Question: So what do you expect from the government? Are you demanding any stimulus or should the government go slow on regulations that are impacting costs?

Answer: As far as the industry is concerned it's easy for us to say that the government should do something. But the government has to look at many things. So we will have to take a balanced view. First, if we talk about financing, then RBI's policy rate cuts in the last 9 months need to be passed on. How government can intervene and force NBFCs, PSUs and private banks to pass on these rate cuts is important.

Second is about fighting norms. We are not saying that there is anything wrong in that but this has had undesirable effect on economy or say on auto sales. So, one may think that NBFCs can give more loans to at least borderline customers. This will also make a lot of difference. Lots of things can be done as far as the transaction price is concerned. What exactly needs to be done regarding that is difficult to say but we can think of slashing GST rates, registrations prices or road tax. Some non- revenue related items like insurances can also be brought back to one year. It will also have a positive effect. If we abolish TDS,

that will also make a lot of difference.

Also, if government delays or even removes non-essential regulations without compromising on safety or pollution related norms, it will help in bringing down prices.

Questions: How much effect will electric vehicles or BSVI have on the slowdown?

Answer: Electric vehicles' volume right now is very small and government's thrust is mainly on two- and three-wheelers right now and not on four-wheelers. So there is no reason to say that electric vehicles are slowing us down. And when we look at the total volume, we are including electric vehicles in it so there is de-growth in that sector as well. I have also heard that because of BSVI, consumers are postponing buying BSIV, which is not reasonable because usually the reverse happens. Most of the time, when higher emission norms come people realise that prices will go up. Therefore, they tend to buy sooner. In fact this is the best time to buy. People should, in fact, rush to the dealers as everyone is trying to clear their inventory.

Question: As far as big manufacturers are concerned, what is your strategy for now? Are you in wait and watch mode?

Answer: Look, a 12-MONTH slowdown is quite a big slowdown. In the last 6 months we didn't say anything because in previous 6 months the market was good. So we waited from September '18 to February/March '19 thinking things will change but now that this has continued we are facing a lot of problems. And I think whatever belt-tightening was required has been done by every automaker. But it won't change the slowdown. It will only help in bettering your financials. So to counter this slowdown, vehicle prices need to go down and financing availability need to improve. These two things must be done.

OEMs have already given maximum possible incentive they can give. Going beyond that is as good as saying let's not even make vehicles. So, I would have to say that right now if there is any relief - and I hate to say this - but unfortunately it has to come from the government.

Source : *The Economic Times*



SPARE PART AVAILABILITY FOR SUSTAINABLE OVERALL PLANT PERFORMANCE :A CASE STUDY APPROACH

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1 . Introduction : In today's highly competitive global business environment, the primary goal of any manufacturing organization is to make available the Products which are in Demand, in required Quantities at the required Quality Level in the required Location, When needed by customers. And this has to be achieved economically to make products affordable to customers and to generate profit for the very survival and growth. This economical goal can be attained, only when the Production Objectives are met.

And these objectives are to manufacture the Products:

- as per Uninterrupted Production Schedule,
- at the Required Production Speed and
- at the Customer Specified Quality Level.

To compete globally, efficient and effective Production Planning is required. D.H. Stamatis emphasizes that "efficient production planning depends on a process that yields high-grade parts at a specific rate without interruption"

The first objective can be fulfilled when production Equipment are made **available** as per the predetermined schedule. The next aim can be achieved only when the available equipment are **fully functionally capable** during the scheduled period. The last one needs deployment of qualified and experienced Operators for Correct Equipment Operation. This state of the Equipment which is crucial in meeting the organizational goal, is known as the quantitatively measurable Overall Equipment Effectiveness(OEE).

The OEE of an individual unit can be measured as a function of the values of the metrics of the three Effectiveness Factors namely Availability [A], Production Rate [P] and Quality Rate [Q]. OEE thus becomes a Customer Centric metric as the measurement is based on the three factors identified to satisfy Customer's Demand and Requirements.

The OEE metric in universal use is proposed by **Nakajima** (1988) based on the **Period Specific Multiplicative Relationship**:

OEE = Availability [A] x Production Rate [P] x Quality Rate [Q]. All expressed in **percentage** or **fraction**.

In actual production environment, several equipment units are required to produce a product as multiple processes are involved in its making. Equipment Units can be arranged in a Production Line in any

Combinations of various configurations namely Joining, Series, Parallel or Expanding [source: Measuring Global Production Effectiveness]. The Number, Sequence and Configurations of Equipments in a Production Line is determined by Number of Production Processes and their Inter-dependencies of the particular Product being manufactured. Please refer to figure 1.0.a.

In figure: 1.0.a. equipment units are arranged in series configuration only as it is a specimen block diagram. The relationship between OEE, OLE [Overall Line Effectiveness] and OPE [Overall Plant Effectiveness] shown in figure: 1.0.a. clearly establishes the fact that OEE of individual equipment units, is the **Critical Success Factor (CSF)** and the **very foundation stone on which OLE and OPE are built. Hence, higher the OEE, greater the OLE and OPE.** Thus logically the onus rests with the Management to maintain the production equipment with the required level of Functional Availability without any interruption and or malfunction throughout the Planned Production Schedule.

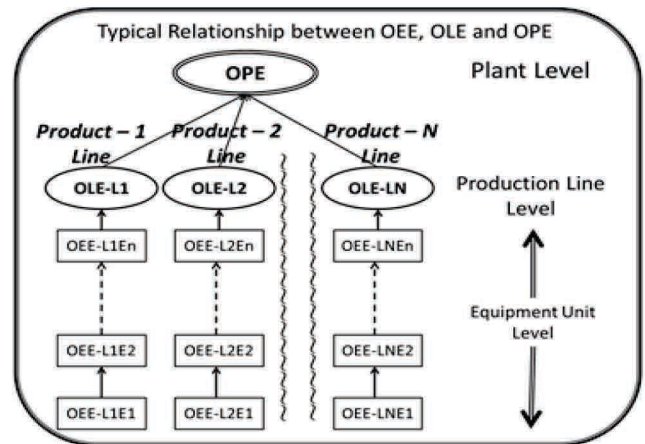


Figure: 1.0.a.

[Legend: OEE-L1E1 to OEE-L1En à OEE of Equipment – 1 of Production Line – 1 to OEE of Equipment – n of Production Line – 1. Similarly for Lines L2 to LN. OLE-L1 to OLE-LN à OLE of Production Line – 1 to OLE of Production Line –N. Machine and Equipment are used interchangeably. Overall Plant Effectiveness (OPE) and Overall Plant Performance (OPP) are used as Synonyms. Line Means Production Line.]

The concept of Spare Part Availability (SPA) is the situation wherein the Genuine Spare Part is readily available on site for replacement in Required Quantity

when Needed. This article analyses the impacts and consequences associated with the non-availability of Genuine Spare Parts in preventing the attainment of the required OEE and Plant Performance, to establish the very significance of Spare Part Availability.

[Spare Part Availability, Quality Spare Part Availability and Right Spare Part Availability mean the same concept as Genuine Spare Part Availability].

At this juncture a realistic definition of Spare Part is required. Spares Management Handbook by Douglas K. Orsburn states: "Support items that are an integral part of an end item or system and are coded as repairable and interchangeable with like items. In equipment, what part can be used to replace items removed during maintenance". In essence, a Spare Part kept in stock, should be fully interchangeable with like item removed from an equipment during maintenance.

2. Observations by Author : The author had the opportunity to have the following observations based on Maintenance Records and discussions with staff. No quantitative analyses could be carried out as the records were incomplete. Moreover it became evident indirectly that the Management was not interested in maintaining accurate records. Hence only Qualitative Research was carried out to identify and establish patterns of interrelationship between Spare Part Availability and OEE. However the author's observations and discussions are quite relevant in data collection in this context. "At any rate, even though some consultants advocate in-depth continuous production analyses for the purpose of improving setup, the truth is that informal observation and discussion with the workers often suffice." (Shingo, 1985). This applies to Author's observations also and hence they are quoted as case studies.

3. Case Studies

3.1. Case Study 1: - Using Inferior Electrode in Spot Welding Machine

This particular Spot Welding Machine is used for fixing Wire handles and Strap handle on the Drum. Also the machine is used for Spot welding the ends of the metal sheet, keeping one on the other [lap joint] along the length of the roll for proper Seam welding along the lap joint.

Resultant Impacts : 1] Reduced Production Rate due to higher Welding Time required.2] Drums rejected during Quality Testing due to unfixed handles and holes were scrapped.3] Drums rejected by Customers due to unfastening of handles were scrapped..

3.2. Case Study 2: - Using Inferior Electrode in Seam Welding Machine

This Welding Machine is used for seam welding the rolled mild steel sheet which is spot welded along the length of the roll to make the shell of the barrel.

Resultant Impacts

1] Reduced Production Rate due to higher Welding

Time required.2] Barrels rejected during Quality Testing due to unsuccessful welding were repaired or scrapped.3] Barrels rejected by Customers due to leakage during usage were scrapped.

3.3. Case Study 3: - Using Inferior Cutting Blade in Shearing Machine

The Shearing Machine is employed for cutting the mild steel coils into sheets of required sizes. The Shearing Machine is installed after the Uncoiling Machine in the Coil Shearing System.

Resultant Impacts

1] Improperly cut sheets became scrap material.
2] Removal of damaged Sheets at random reduced the Quantity Produced.
3] Frequent replacement of Cutting Blade due to shorter life span, reduced equipment Availability.

3.4. Case Study 4: - Using Inferior Fasteners in Hydraulic Press

The Hydraulic Press is employed for forming the Top and Bottom Ends of the Drums and Barrels from MS sheets. Die is the Critical Spare Part of the Hydraulic Press. It is fixed to the Base Plate with eight fasteners. The effect of using inferior fasteners is detailed below:

Resultant Impacts

1] Damaged the Barrel End being formed due to falling of die. 2] The Fasteners got distorted (primary failure) which led the Die to be detached from the base plate causing the die to fall and break into pieces (secondary failure) after just two days of fixing it with ordinary fasteners. The original fasteners needed replacement after two years of operation only.

3.5 Summary of Types of Loss Affecting OEE [3.1 to 3.4]

1] **Production Rate Loss** due to slow Machine Speed (3.1 and 3. 2) and Machine malfunction (3.3 and 3.4).
2] **Quality Rate Loss** due to Machine malfunction (3.1. and 3.2.) 3] **Availability Loss** due to poor quality of Spare Part and its non-availability (3.3 and 3.4)

4. Sources of Losses Diminishing OEE Factors : Analyses of the above Cases clearly establish the fact that non-availability of Genuine Spare Part can affect OEE factors adversely by reducing their values and in turn the value of OEE. In other words, it can be understood beyond doubt that non-availability of Genuine Spare Parts is the major cause of loss in Equipment Time, Production Quantity and Quality Level. Non-availability of a single Genuine Spare Part need not cause all the three types of loss as these are part-specific. Some parts can cause only one type of loss whereas some others can cause multiple types. In short, the sources of losses to reduce the values of OEE Factors are:

1] **Non-stocking** of required Genuine Spare Parts and
2] Use of **inferior** Spare Parts.

5. Recommendations: Generalized Framework for Spare Part Availability

Higher and sustainable OPE can best be accomplished only when Availability of Genuine Spare Parts is ensured because of the very fact that Source of Losses solely depends on non-availability of Genuine Spare Parts, as explained earlier.

The objective of Spare Part Management is to ensure Spare Part Availability. Thus the goal of Spare Part Management should be to minimize the negative impacts on Equipment Availability, Production Rate and Quality Rate, by attaining Spare Part Availability in order to have a higher OEE for all equipment with the aim of achieving a higher OPE / OPP and its sustainability. This section describes and recommends a generalized framework for achieving this goal.

Recommended Generalized Framework

5.1. List Identified Sources of Losses related to Spare Parts:

- 1] Waiting for Spare Parts / Materials during Maintenance Activities. [Identify Logistics Time and Administrative Time].
- 2] Use of Inferior Quality Spare Parts / Materials.

Establish Procedures to prevent Non-conforming, Counterfeit, Fraudulent, Suspect and Substandard Items from entering into stock:

At this juncture a definition of **Item** is quite appropriate. "Generic term used to identify a specific entity under consideration or similar entities. Items can be parts, components, assemblies, subassemblies, accessories, groups, equipments, attachments etc." (Douglas K. Orsburn).

5.2. Incorporate Corrective Measures:

1] Provisioning of Initial Spare Parts: Identification of Required Spare Parts and Preparation of Correct Specification of Spare Parts / Materials in the Project Stage itself. 2] Spare Part Requirement Planning using MRP based on M-BOM for Scheduled Plant Shutdown and Preventive Maintenance Jobs. 3] Spare Part Forecasting based on Demands and their Appropriate Patterns for Corrective Maintenance Jobs emanating from Random Breakdowns and Predictive Maintenance [PdM: Inspection and Testing]. 4] RCA, FMECA and RCM Based Spare Part Planning. 5] Strategic Sourcing of Right Spare Parts. 6] Ensuring the procurement of Genuine Spare Parts / Materials as per Correct Specification with Required Quality and Quantity.

5.2.1. Identify and establish Objectives of Spare Part Management. Some typical ones are given below:

- 1] Stock the Required Spare Parts / Materials to Minimize Waiting Time for Spare Parts / Materials during Maintenance activities.
- 2] Procure only Genuine of Spare Parts / Materials.
- 3] Practise Strategic Sourcing of Spare Parts to prevent

procuring of Counterfeit, Fraudulent and Substandard Spare Parts / Materials.

4] Identify Strategic Locations for Stocking of Spare Parts - Central Stores / Plant Stores / Maintenance Stores etc – to reduce logistics time.

Legend:

MRP -> Materials Requirement Planning. M-BOM -> Maintenance Bill Of Materials. PM -> Preventive Maintenance. PdM -> Predictive Maintenance. CM -> Corrective Maintenance. RCA -> Root Cause Analysis. FMECA - Failure Mode Effect and Criticality Analysis. RCM -> Reliability Centred Maintenance.

6. Conclusions : In fact, the Spare Part non-availability directly affects the Overall Equipment Effectiveness (OEE). Then it is important to note the influence of the interrelationship between OEEs of individual equipment units and Overall (Production) Line Effectiveness (OLE) and in turn its impact on Overall Plant Effectiveness (OPE). And the results of the Case Studies discussed will definitely motivate the MRO (Maintenance, Repair and Operation Items) Inventory Management Professionals to procure only the genuine Spare Parts and other Materials at the Right Time to have Spare Part Availability, so as to achieve and sustain higher Overall Plant Effectiveness (OPE) / Overall Plant Performance (OPP).

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THE RIGHT TO INFORMATION (AMENDMENT) BILL, 2019 – ALL YOU NEED TO KNOW ABOUT THIS BILL.

The Right to Information (Amendment) Bill, 2019 that amends the Right to Information Act, 2005 was introduced in Lok Sabha.

What does the RTI Act do?

Under the Right to Information Act, 2005, Public Authorities are required to make disclosures on various aspects of their structure and functioning. This includes (i) disclosure on their organisation, functions, and structure, (ii) powers and duties of its officers and employees, and (iii) financial information. The intent of such moto disclosures is that the public should need minimum recourse through the Act to obtain such information. If such information is not made available, citizens have the right to request for it from the Authorities. This may include information in the form of documents, files, or electronic records under the control of the Public Authority. The intent behind the enactment of the Act is to promote transparency and accountability in the working of Public Authorities.

Who is included in the ambit of 'Public Authorities'?

'Public Authorities' include bodies of self-government established under the Constitution, or under any law or government notification. For instance, these include Ministries, public sector undertakings, and regulators. It also includes any entities owned, controlled or substantially financed and non-government organizations substantially financed directly or indirectly by funds provided by the government.

How is the right to information enforced under the Act?

The Act has established a three-tier structure for enforcing the right to information guaranteed under the Act.

Public Authorities designate some of their officers as Public Information Officers. The first request for information goes to Central/State Assistant Public Information Officer and Central/State Public Information Officer, designated by the Public Authorities. These Officers are required to provide information to an RTI applicant within 30 days of the request. Appeals from their decisions go to an Appellate Authority. Appeals against the order of the Appellate Authority go to the State Information Commission or the Central Information Commission. These Information Commissions consists of a Chief Information Commissioner and up to 10 Information Commissioners.

What does the Right to Information (Amendment) Bill, 2019 propose?

The Bill changes the terms and conditions of service of the CIC and Information Commissioners at the center and in states. Table 1 below compares the provisions of the Act and the Bill.

Comparison of the provisions of the Right to Information Act, 2005 and the Right to Information (Amendment) Bill, 2019

Term:

§ **RTI Act, 2005** – The Chief Information Commissioner (CIC) and Information Commissioners (ICs) (at the central and state level) will hold office for a term of five years.

§ **RTI (Amendment) Bill, 2019** – The Bill removes this provision and states that the central government will notify the term of office for the CIC and the ICs.

Quantum of Salary:

§ **RTI Act, 2005** – The salary of the CIC and ICs (at the central level) will be equivalent to the salary paid to the Chief Election Commissioner and Election Commissioners, respectively. Similarly, the salary of the CIC and ICs (at the state level) will be equivalent to the salary paid to the Election Commissioners and the Chief Secretary to the state government, respectively.

§ **RTI (Amendment) Bill, 2019** – The Bill removes these provisions and states that the salaries, allowances, and other terms and conditions of service of the central and state CIC and ICs will be determined by the central government.

Deductions in Salary:

§ **RTI Act, 2005** – The Act states that at the time of the appointment of the CIC and ICs (at the central and state level) if they are receiving a pension or any other retirement benefits for previous government service, their salaries will be reduced by an amount equal to the pension. Previous government service includes service under (i) the central government, (ii) state government, (iii) corporation established under a central or state law, and (iv) company-owned or controlled by the central or state government.

§ **RTI (Amendment) Bill, 2019** – The Bill removes these provisions.

Source: updatedyou.com





CAREER BUILDING IN SCM – A GREAT CHOICE!

**MS SUVARNA SUDAGONI, LIFE MEMBER & EC MEMBER
IIMM HYDERABAD BRANCH, ssuvarna08@gmail.com**

At front/ basic level all the Supply Chain Management (SCM) professionals oversee materials, information and finances. The way from supplier to manufacturer to wholesaler to retailer to consumer. But the responsibilities vary based on the industry and the organisation in which we are working.

Before pursuing any SCM career, it is very important to understand what exactly it makes to determine whether this profession takes care of our passions and goals.

A SCM career means working from a basic purchasing function to operating the total network of supply stream. Every company has its own definition of what a supply chain management role involves, which means the day to day work will vary substantially from company to company.

The common objective of all SCM careers is mainly focussed on quantifiable figures. The system of tracking supply and demand has become more and more sophisticated to meet the complex demands of customers, which is increasing day by day. The ability of SCM professional of a company, interpretation of the data is highly valuable to the company.

The SCM career is very competitive one and a small mistake or missed deadline will cost the company very dearly and it opens the opportunity door to the competitor, such a crucial role. The SCM professional should always be asking self on what's next and how to take the company to the next level. The passion works here more perfectly and what we do is very essential to grow and learn with fast pace.

It is all about SCM role importance in a company. For new entrant, this will look like a giant wheel but we should not get scared of thinking on the failing lines. There will be a total team, which helps and supports the new entrants to learn the basic procedures and allow us to grow to finely fit into our roles and sync with company's objectives and goals.

Unlike other profession, the SCM profession will never be a boring one, like doing the same work hours together and wait for lunch bell and finally for home bell... The SCM career is very interesting and challenging

– there will never be the same problem and every work will be so unpredictable for better or for worse. Supply chain is all about a team work and when any team member is busy or not available, the next team member will be stepping into to complete the task, which was never done before by that member – So exciting!!!

The SCM strength is the Team and all the team members work towards a common goal, that is... customer satisfaction. This means we never thought while studying that one day we would work like a team and we will never let our customer down, and it is a new and unaccustomed role. We at SCM team all strive to meet the deadlines and make sure that our company a success and at no cost we will want to see our company in a glooming phase.



The employee's willingness to work is the utmost key for the success of any company. Understanding the team relations; coordination; patience; doing the work as entrusted on time without postponing – these are all on the internal part and when coming to external, taking time to meet suppliers, listen to their new product details; their plans which aligns with the company requirements; their grievances about supply returns; incomplete specifications of products; payments, etc – all these qualities go a long way. Whenever there is a need for any favour or guidance, we will have these relationships to help us to keep us on right track.

Every new entrants in SCM profession should find a mentor, this is very important because the career is just at beginning level and is the right time to mould ourselves. The mentor can be our manager, a colleague or a classmate at the professional training course or someone, we strongly believe or want to follow their

path.

Mentors/ Guides are invaluable sources of knowledge and can help us to develop more expertise than we could earn on our own. This is an our own motivated exercise as no one, however good they are, come to us and teach us and make us expert. It is our own interest to keep in touch with them, watch them, listen to them carefully and with enthusiasm to learn and keep asking questions to get all our doubts clarified whenever the time of both, is convenient. The approach and leaning back on the mentor/ guide should be very polite and requesting manner but not in a disturbing type.

The SCM is an umbrella term, which includes many different positions. The beginning path includes as an expeditor, then advancing to become a buyer and moving upward from there. The other job titles include operations analyst, sales, production manager, logistician, etc.



**The Head is like Zubin Mehta, who conducted the Philharmonic Archestra. So tough is the job for the Head but it is enjoyable to the customers/ audience.

In addition to all the career advancement potential in the industry, the earnings is also very bright. There are good salary structures for SCM professionals in the industry. Nevertheless a good salary makes us personally success but we will also be working to support our company to reach the organisational success in the industry. This is utmost important aspect and every team member must understand and keep in mind always. It is just surrendering to the work of the organisation to meet the organisational goals as well as personal goals. We have to align our goals with the organisation goals to achieve success and happiness. Happiness because, when we are doing our work with utmost passion, we achieve a kind of happiness in doing the work properly and as expected. The happiness is driven by passion for the work.

As we all aware that there are more lines falling in between from the career beginning and upward

growing stage in SCM. There is no doubt that there have been experts in SCM field for years but our experience and our success SCM, has to be determined by us and us alone.

To contribute to our future, the Supply Chain Management Degrees offered by our IIMM all over India since the year 1975, recognised by UGC earlier and now by AICTE help us to acquire the knowledge and skills needed to join this fantastic, fascinating and challenging industry.! As a fresher/ new entrant, we all like all these challenges, isn't it..!!?????. You will not be alone in this endeavour, IIMM will support you with sound knowledge.

IIMM offers a Graduate Diploma in Materials Management (GDMM), which is most suitable for Diploma Holders and PG Diploma in Supply Chain Management & Logistics (PGDSCM&L) PG Diploma in Materials Management (PGDMM) all are a two year Certification programme, both by Distance Mode and Contact mode. IIMM also offers the most prestigious Global certification, IPSCM in association with International Trade Center, Geneva (WTO/UNCTAD) and C.P.S.M., of Institute of Supply Management (ISM) USA for the past 2 decades.

Conclusion: Many of us face skills gaps despite holding many degrees. Sometimes it starts from changes in technology, emerging concepts like the Internet of Things, the Digital and Circular Economy, new personal interests or a long list of other possibilities.

It is always a great choice of having a professional degree, which will enhance the knowledge and fill the skill gap to take our step upward in the successful career ladder.



Ø A request to the readers of this Article: To please forward your valuable views and perceptions to the Author and Editor of MMR, to improve on the future articles.

References: Self Knowledge & Experience; Internet and The Senior Associate's Review.



MOTOR VEHICLE AMENDMENT BILL 2019 PASSED: REVISED LIST OF TRAFFIC VIOLATION FINES

The Lok Sabha on Tuesday passed the **Motor Vehicle Amendment Bill 2019**, to amend the provisions under the Motor Vehicles Act of 1988. Speaker Om Birla passed the Bill on the basis of a voice vote in the Lower House of Parliament. Cleared by the Lok Sabha on Tuesday, the Motor Vehicles Amendment Bill 2019, will be introduced in the Rajya Sabha soon for its approval. Thereafter, the proposed amendments will become a law after the President's consent.

The bill, which will replace the 30-year old law, aims to overhaul the country's transportation laws by addressing crucial issues such as road safety, reducing deaths due to road accidents, imposing stiffer penalties on violation of rules, and weeding out corruption, thereby transforming India's road transport system.

Those who do not give way to an ambulance or fire brigade may soon have to face a hefty fine of as much as ¹ 10,000 or/and imprisonment up to six months. Their driving license could be suspended in case they are caught speeding, racing, or driving under the influence of alcohol, among others. Road safety and reducing the number of accidents are key priorities of the government and imposing stiffer penalties can bring more discipline and force people to adhere to the traffic rules.

The same Bill had earlier been passed by the Lok Sabha in the April of 2017. However, it could not get clearance from the Rajya Sabha and lapsed with the dissolution of the 16th Lok Sabha. The 2019 Bill had been tabled in the Lok Sabha by the Union Minister for Road Transport and Highways, Nitin Gadkari, on Monday. The Bill aims to enforce stricter penalties for road traffic violations.

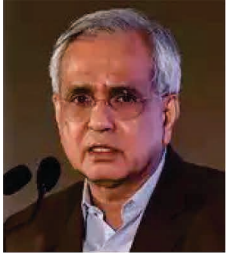
Motor Vehicle Amendment Bill 2019: Proposed Changes and Fines

- § **For General Section (177),**
- § Old Penalty – Rs 100
- § New Penalty – Rs 500 (minimum)
- § **For Rules of road regulation violation (new 177A),**
- § Old Penalty – Rs 100
- § New Penalty – Rs 500 (minimum)
- § **For Travelling without a ticket (178),**
- § Old Penalty – Rs 200
- § New Penalty – Rs 500 (minimum)
- § **For Disobedience of orders of authorities (179),**
- § Old Penalty – Rs 500
- § New Penalty – Rs 2,000 (minimum)
- § **For Unauthorized use of vehicles without a license (180),**
- § Old Penalty – Rs 1,000
- § New Penalty – Rs 5,000 (minimum)
- § **For driving without a license (181),**
- § Old Penalty – Rs 500
- § New Penalty – Rs 5,000 (minimum)
- § **For Driving without qualification (182),**
- § Old Penalty – Rs 500
- § New Penalty – Rs 10,000 (minimum)
- § **For Oversized vehicles (182B),**
- § Old Penalty – New Rule

- § New Penalty – Rs 5,000 (minimum)
- § **For Over speeding (183),**
- § Old Penalty – Rs 1,000
- § New Penalty – Rs 1,000 for LMV, Rs 2,000 for Medium Passenger Vehicle
- § **For Dangerous driving penalty (184),**
- § Old Penalty – Rs 1,000
- § New Penalty – Up to Rs 5,000
- § **For Drunken driving (185),**
- § Old Penalty – Rs 2,000
- § New Penalty – Rs 10,000 (minimum)
- § **For Speeding/ Racing (189),**
- § Old Penalty – Rs 500
- § New Penalty – Rs 5,000 (minimum)
- § **For Vehicle without a permit (192A),**
- § Old Penalty – Up to Rs 5,000
- § New Penalty – Up to Rs 10,000
- § **For Aggregators (violations of licensing conditions) (193),**
- § Old Penalty – New Rule
- § New Penalty – From Rs 25,000 to Rs 1,00,000
- § **For Overloading (194),**
- § Old Penalty – Rs 2,000, and Rs 1,000 per extra tonne
- § New Penalty – Rs 20,000, and Rs 2,000 per extra tonne
- **For Overloading of Passengers (194A),**
- § Old Penalty – NIL
- § New Penalty – Rs 1,000 per extra passenger
- **For Seat Belt (194 B),**
- § Old Penalty – Rs 100
- § New Penalty – Rs 1,000 (minimum)
- **For Overloading of two-wheelers (194 C),**
- § Old Penalty – Rs 100
- § New Penalty – Rs 2,000 and Disqualification of license for 3 months
- **For Not providing a way for emergency vehicles (194E),**
- § Old Penalty – New Rule
- § New Penalty – Rs 10,000 (minimum)
- **For Driving without insurance (196),**
- § Old Penalty – Rs 1,000
- § New Penalty – Rs 2,000 (minimum)
- **For Offences by Juveniles (199),**
- § Old Penalty – New Rule
- § New Penalty – Guardian/ Owner shall be deemed guilty. Rs 25,000 with 3 years imprisonment. Juvenile to be tried under the JJ Act. Registration of Motor Vehicle to be canceled.
- **For Power of officers to impound documents (206),**
- § Old Penalty – NIL
- § New Penalty – Suspension of driving licence under sections 183, 184, 185, 189, 190, 194C, 194D, 194E
- **For Offences committed by enforcing authorities (210B),**
- § Old Penalty – NIL
- § New Penalty – Twice the penalty under the relevant section

Source: updatedyou.com





INDIA WILL ACHIEVE 8% PLUS GROWTH FROM FY 2020-2021 ONWARDS

RAJIV KUMAR, NITI AAYOG VICE CHAIRMAN

NITI Aayog Vice Chairman Rajiv Kumar has voiced confidence that India will achieve economic growth of 8 per cent plus from fiscal year 2020-2021 onwards as structural reforms like the GST are set to produce the benefits. The eminent economist was in the city for the High Level Political Forum Ministerial Meeting on Sustainable Development Goals at the United Nations Headquarters. During his visit, he delivered the keynote address at the 'India Investment Seminar' held at the Consulate General of India, New York.

Big Change: The end of Five-Year Plans: All you need to know : Kumar stressed that in the next five, the Modi government is focussed on accelerating growth from the current about seven per cent to more than eight per cent that will propel the country to easily achieving the target of becoming a five trillion dollar economy. "I personally think that in the fiscal year 2020-2021 onwards, we will achieve higher than 8 per cent growth, (continuing) then for the next many years. It is just a fact of (growth) taking off," Kumar said.

"The foundation has been laid and the transformation has begun with the passing of structural reforms like the Goods and Services Tax, Insolvency and Bankruptcy Code. These have taken their time to settle down and now they'll produce the benefits," Kumar told PTI in an exclusive interview. "We have the potential to grow at double digit growth rates," he said. On the issue of job creation, Kumar emphasised that a very large number of jobs have been generated in the country in the last five years.

"If it was always a jobless growth, then that would have shown up in social strife and social tensions and surely would have meant that this government would not have been re-elected," he said, adding that the re-election of Prime Minister Narendra Modi-led government shows that there is a level of satisfaction with the government's performance. He however acknowledged that the nature and quality of jobs is not meeting the aspirations of the country's young people and they want better quality jobs that will engage them fully. "That has to be ensured by us improving the investment climate for domestic investors as well as foreign direct investors."

Kumar highlighted that the Union Budget, presented earlier this month, has taken big steps forward for facilitating and further improving ease of doing business by liberalising the inflows of FDI. "This budget is a paradigm shift in saying that we will achieve accelerated growth and job generation but with the primacy of private investment. That is what our focus is - that will then generate the jobs." Underscoring the potential in the agriculture sector, which has 43 per cent of the workforce, Kumar said investment in the agro- processing sectors and improvement in

agricultural yields will help exponentially in job creation.

"Our agriculture, when it is transformed and it begins to have much higher volume of agro-processing, growth rates can easily rise from the current two per cent to four per cent," he said adding that similarly there is a lot of potential in other sectors such as manufacturing and services.

"There is a lot of potential, there were constraints which are now being removed," he said, citing the example of Labour Codes introduced in Parliament that will simplify the whole labour compliance situation. He said at the NITI Aayog, the most important focus is on improving private investment by improving the investment climate, accelerating growth, generating jobs, creating policies for that and at the same time ensuring through social programmes that benefits reach the bottom of the pyramid and to the last person standing in the queue.

"The reforms have been done, the network for taking the benefits of growth to the bottom of the pyramid, to the last of the queue has also been laid. The delivery mechanism has been hugely improved," he said. Kumar said that inclusionary aspects of social programmes such as Ayushman Bharat, JAM trinity of Jan Dhan bank account, Aadhaar unique identity number and mobile phone, have been put in place. "When growth accelerates, you will see the benefits at the bottom of the pyramid."

Kumar pointed out that efforts are also being made to promote private investment in the mine, mineral and coal sectors because otherwise the country's import dependence is increasing both for oil and gas as well as for coal even though there are huge reserves in the country. He noted that the SDG principle of "Leaving No One Behind" finds resonance with the Government of India's motto of "Sabka Saath Sabka Vikas [Collective Efforts Inclusive Growth]", which guides all development initiatives. "It is a proud moment to say that India has not only mainstreamed the SDGs (Sustainable Development Goals) and Agenda 2030 but is on the way to achieving some of the targets ahead of time," he said.

Kumar acknowledged that while a lot has been achieved through programmes such as Swachh Bharat Mission and Ayushman Bharat, challenges remain in a country of 1.3 billion people - from a water crisis, shortage of energy in parts of the country, pollution and need to increase female participant rates.

"In the last five years, we have laid the foundation for the benefits of growth to reach the bottom of the pyramid. In the next five years we are focussed on accelerating growth."

Source : PTI

PREDICTIVE ANALYTICS IN SUPPLY CHAIN

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Predictive analytics is the most important and the considered as a horizon point in supply chain, with the after sales service in the supply chain. Predictive analytics is used in supply chain to process accurate, reliable, accurate, reliable, and bring reduction in costs. In supply chain the ability to use data, machine learning, type of artificial intelligence can be provided by the computers the ability to learn through a thorough programming in supply chain.

Data is the most important technology that has to be made available for predictive analytics. In supply chain organization adopts predictive analysis to adapt to change in demands in manufacturing, service, when the impact of machine learning has an impact on the overall experience on predictive analysis. In supply chain internet of things predictive analysis can deliver service to the supply chain.

In predictive analytics demand forecasting which predicts future demand for products based on past events, and the prevailing conditions. In predictive analytics the machine learning cloud based management, eliminates overstocking of products, materials in supply chain. Warehouse maintenance, and filling up of the service parts, product, time, and reducing risk with increased customer service is a part of supply chain.

Pricing which manufacturers contribute to give importance to products, parts, for different prices at different locations, creating better customer service, and better profit opportunities in supply chain, using better methods like algorithms to set better prices, need to have predictive analytic capabilities so that manufacturers, service providers can incorporate better prices with predictive analytics as capabilities in supply chain.

Predictive analytics is being applied in all business operations, and helps to anticipate risks, and create a better position in supply chain. Forecasting future supply logistic events organizations gain competitive advantage prevent monetary loss inaccurate stocking of goods, mis-management of goods, deliveries in supply chain.

Predictive analytics are improving supply chain, logistics by able to collect accurate, analyze data, management decisions. Predictive analysis takes up analysis, takes up issues like inventory excess, short redundant, non-moving, obsolete, stock errors, and supply and demand miscalculations.

Predictive capabilities help to address customer service

traffic situation, labor unrest, and weather incidents for accurate shipping of goods and port behavior in supply chain. In transport management system, supply chain depends upon, lead time; uncertainty factors in shipping with disruptions in supply chain. Procurement can create more value in developing good technology with supplier plan inventory and shipment based on customer based on customer requirement and buying behavior.

B2B service can be improved with important predictive analytics, and ensure correct seasonal products are delivered to customers, based on geographical indications, and are able to detect changes that necessities modification in geographical location. In supply chain logistic organization depends upon accuracy, efficiency, and a good timing, to meet the needs of distribution, and customer needs. Predictive analytics is thus changing the needs to improve small and medium enterprise in supply chain operations. Predictive analytics is used in advanced technique with the use of algorithm to predict future outcomes, based on the data management, the mostly the historical data, and since the theory of probability becomes applicable to derive the future, based on the past experience in supply chains.

The aspects used in supply chain, simultaneously are used in predictive analytics, for planning, inventory management, and forecasting of sales. Predictive analytics can look into finding out the shortest and better routes in considering with conditions such as weather, traffic movements, in supply chain. Supply and demand being an integral part is considered to be core in supply chain, and should ensure the demand cycle is balanced, and moving towards a predictive analytics adjusting the cost strategies in supply chain.

Predictive analytics has an opening for cost control, and is required to be used when needed in supply chain. Predictive analytics has a proactive approach of identifying risk, and opportunities, over-analyzing, the transactional and historical data in supply chain. In supply chain this helps in improving the visibility, of different procurement, and strategic approach with the collection of past data, in order to determine the future. The collection of past data is an insight to what could be predicted in future in supply chain sourcing, and this places the importance for bottle-neck that may occur while dealing with the vendors and suppliers.

In supply chain inventory optimization helps to reduce inventory correction, risks, disruption, and has challenges from stock out, over stock of inventory, and

situations. Traditional methods of optimizing include adjusting inventory in accordance with customer purchasing habits that have been occurring. This method was compounded by the coming of information technology in supply chain, and this has resulted in decentralization, of inventory decisions, and the various updating process which has promulgated in supply chain, as it resulted in a significant issues in supply chain. This recognized the slow moving inventory as the supply chain did not have the insight for predictive analytic to enable a data driven decision in supply chain.

Price optimization in supply chain, changes the variance of demand, with changes in price, which combine with relevant cost, and inventory data, which recommend prices that would bring maximization in revenue, and profit. The application of predictive analytic can be seen in procurement process, manufacturing, routing, optimization, traffic operations, and monitoring and safety management in supply chain. With data in supply chain predictive analytic, the concept of big data has been frequently used in areas that have been emerging in supply chain, have developed, implemented, and administered, as one of the largest predictive analytic in supply chain, with highly skilled data programs, and experiences.

Predictive analytics are increasingly used by maintenance repair operations to prevent components parts, failures, and to the market optimization of the components on the supply chain is all about to help suppliers understand the true market, understand the potential of the data comprising of the product, to create a predictive analytic about market demand using artificial intelligence, machine learning, technology, while also considers the predictions on the product in considering the performance of the suppliers an competition in supply chain.

In an organization the greatest factor is shop floor, where manufacturing is often considered a part of supply chain; in which delays can obviously that have the highest impact on the overall supply chains performance. Predictive analytic is one among the accepted in supply chain, predicated maintenance, Predicative maintenance have now been concluded with the introduction of sensors, on capital intensive equipments to judge, detect, breakdowns, before of any occurrence in supply chain. The most important is the data streamlining, various breakdowns analysis, in which the sensor data are prepared on the basis of predictive analytic, and then the performance is evaluated of the equipment, and the potential of the equipment must be detected for fault, on the messages sent by the operators, maintenance personnel, and necessary action to be taken to avoid any shut down, to the capital asset, and disruption in supply chain.

In supply chain machine translation is becoming more acceptable to predictive analytics; it is quite understandable that there are some reservations for using the service that persist in supply chain. Some of the important and frequent concerns include degree of trust that gives machine to correctly translate the context into the form of text, as the problems faced by the machine have the concept of translating the

language, which the human beings have a should have the clear advantage. It is however going to replace human with machines for supply chain, until the machine translation achieves the ability to correctly analyze, and re-produce and control predictive analytic to depend with the help of human being in supply chain.

Demand forecasting is a concept in supply chain of how much inventory is required to be stocked to meet the need of the current, future, customer demand. It analysis past data, including the future data required to come with predictive analytic that estimates between demand and estimating supply. Predictive analytic uses several techniques, statistics, data mining,(a raw data into useful information), artificial intelligence, with continuous machine learning, to make predictive analytic on data of the current and historical part in supply chain. These factors should be promotional to boost sales, so as to maintain sustainability in supply chain.

A good demand forecast is to improve predictive analytic accuracy, and benefit the demand forecasting: 1. Accurate stock availability: 2.Improve in efficiency for scheduling, warehousing operations.

Inventory costs is an important concern in any organization, and to use the best inventory control procedure, so as to align the inventory control system, of carrying cost, of the stock that is disposed should contribute the total inventory cost during the year: 1. Holding cost: which relates to utility, space requirement utilized to store inventory: 2. Capital cost, availability of capital to operate and build up business.

Predictive analytic can analyze the re-order point, its future business decisions, in supply chain. In supply chain customer demand, is an integral part of customer, service, and the real-time, demand is an integral part of customer services, and the real-time demand, is based on the data that translates lower cost, into inventory level cost, and predictive analytic of customer demand, and its ability to aggregate data from different sources, and bring them together in supply chain.

Predictive analytic is monitoring various events in supply chain accurately; predict the proper plan, the movement of goods .Prescriptive analytic are predictions made to improve supply chain. Supply chain management, use predictive analytic to understand the bottleneck, delays, issues, with good quality requirement, throughout supply chain. Prescriptive analytic goes into the specific changes that will have impact on supply chain, operations, and result in recommending improvements in supply chain.

Predictive and prescriptive analytic delivers several benefits in supply chain: 1. Better supply, demand, planning, with better optimization for manufacturing, distribution, and inventory management. 2. Consumer satisfaction better availability of products. 3. Better understanding of supply chain risks, and contingency planning.3. Reduction in delays, quality, and bring in an incremental change in supply chain, and continual improvement.



THE SMALL & MEDIUM ENTERPRISES (SMES)

R. VISVESVARAN IS A POST GRADUATE IN TRANSPORTATION & LOGISTICS MANAGEMENT FROM IISWBM, KOLKATA

The Small & Medium Enterprises (SMEs) sector has always been considered as a catalyst for economic growth. A thriving SME sector offers a lot of benefits for the economy in terms of employment creation, nurturing entrepreneurship & contribution to GDP. Apart from Quality of the product & services, an efficient Supply Chain Management is equally important for improving the competitiveness of SMEs.

SCM implies efficient management of end-to-end chain of movement of products right from sourcing to delivery comprising of procurement, storage, inventory management, distribution and involves Reverse Logistics i.e. bringing back the goods from market. If each component of SCM is managed cohesively, it will improve the overall competitiveness of the organisation and make the sector globally competitive. SCM has to the potential to help a small organisation in terms of timely availability of raw materials or finished products for selling, cost optimization, improving the Turnaround time (TAT), capturing new markets, and expanding the reach.

Challenges : It has been very often found that SME sector has not accorded much importance to Supply Chain Management, as the investment in SCM has been perceived to be more than the potential benefits, hence traditionally the focus had been more on the 'Front end' part of the business viz Product Development, Marketing etc. instead of the optimizing efficiency of entire value chain. However, over the years the changes in economy & technology have brought many changes and cost-effective innovations in the SCM field, which will benefit SMEs immensely, but increasing operational efficiency and reducing cost.

Road Ahead : The introduction of Goods and Services Tax or GST has made the whole of India come to a common market by removing the differential tax structure prevailing in different states. It has also done away with the need to set up warehouses in different states and regions where an organisation intends to do business. GST has also helped the transportation sector by removing sales tax check post, thereby reducing the queues in the state borders, and improving the delivery time. Earlier a business entity had to set up warehouses in different states and do stock transfer from their main factory or warehouse as such it was not feasible for a small organisation to set up so many warehouses entailing huge investments, handling compliances, manpower and other complexities which was challenging for SMEs because of their inherent constraints of liquidity crisis, lack of managerial skills etc.

However, after the rollout of GST, many organisations are consolidating their warehouses to single location as per their area of operations. Many logistics players are setting up large format state of Art warehouses in centralized location thereby providing economies of scale to the users, The SME sector can hire storage space in such warehouses, which will help them avoid huge CAPEX. They can avail of the logistics services of "3PL logistics players- Third Party Logistics" who can offer those services in various areas like storage, inventory management, visibility of goods movement, billing, documentation etc. A thriving startup environment in the logistics space is bringing lot of cost-effective innovations that will be particularly beneficial for the SME sectors.

Shared Mobility : Just Like Ola and Uber has brought revolution in the public transportation domain, companies like RIVIGO, PORTER, DUNZO are bringing the benefits of technology & shared mobility in the commercial space. The transportation sector has always been marred by poor investments, poor condition of vehicles, & poor working conditions along with lack of transparency in freight rates and Poor Road & Rail connectivity in the country.

This has always discouraged a small organisation from expanding their market. However, over the past few years the transportation segment has seen positive policy intervention from the Government. The pace of Highway construction has improved from 12 km per day to 24 km per day with a target of Reaching 30km per day. The Sagar Mala project envisages connecting National Highways to Major Ports.

PIT STOP : Companies like PORTER, DUNZO etc are aggregators of commercial vehicles of all sizes and booking is done through apps, their pricing and billing are transparent and they provide benefits of GPS tracking, good vehicle condition and trained staff etc. RIVIGO has made truck driving an attractive career option for drivers with the concepts like PIT STOP wherein a driver will work only for normal working hours and drive up to a Pit stop point and he will then be able to come back to his residence on the same day by taking the return vehicle on the same route. This has improved driver's productivity, working condition and has brought positive changes amongst the drivers. Rivigo has also recently launched the National Freight Index to bring transparency in the freight rates; this has been made possible by the use of Algorithms, Machine learning etc. The freight Index can be accessed free of cost by any organisation and it presently shows truck rentals of 1500 origin and destination locations for 30 types of trucks.

The National Waterways 1 (NW1) from Haldia in West Bengal to Prayagraj (Formerly Allahabad) has been made operational, the thrust of the Government is to develop the Inland waterways as an alternative mode of transportation to Road, Rail. This has the potential to reduce the transportation cost to Re 0.50 per kg compared to Rs 1.50 per kg in other modes. This will help SME sector immensely. The Government has also come up with guidelines on usage of Drones; slowly this will also be used commercial for carrying smaller loads for over a particular distance for timely delivery. Also on the anvil is the National Logistics Policy which aims to reduce the overall Logistics cost to 9 % of GDP from 14 % at present.

Apart from the above, the use of modern technology like cloud computing technologies, Software as a Service (SAAS) have minimized the needs for CAPEX investments for ERP, servers etc. Many ERP providers like SAP, RAMCO etc are bringing customized and cost-effective Packages for SME sector. With the use of Artificial Intelligence, 3D Printing technologies and Robotics the future holds immense potential for SMEs, which can lead SMEs towards greater achievements. He is having over 13 years of experience in SCM various sectors like retail, telecom, fashion etc. Presently he is heading the purchase department of Sri Sri Tattva Panchkarma, the hospitality division of Art of Living, Bangalore.



LOK SABHA PASSES CONSUMER PROTECTION BILL, 2019

The Lok Sabha today passed the Consumer Protection Bill 2019 after due consideration and discussion. The Union Minister for Consumer Affairs, Food and Public Distribution Shri Ram Vilas Paswan said that the bill aims at protecting the interests of consumers by establishing authorities for timely and effective administration and settlement of consumers' dispute. Moving the Bill, Minister of State for Consumer Affairs, Food and Public Distribution, Shri Raosaheb Patil Danve said the Bill aims to simplify a number of rules. Shri Danve said consumers do not get quick redressal of their complaints and with the passage of the Bill, consumers will be able to get speedy justice. He said the government aims to simplify the entire process of redressal of consumer grievances.

Under the Bill, there is provision for central government to set up a Central Consumer Protection Authority (CCPA) to promote, protect and enforce the rights of consumers and will be empowered to investigate, recall, refund and impose penalties. It will regulate matters related to violation of consumer rights, unfair trade practices, and misleading advertisements. There is also a provision for class action law suit for ensuring that rights of consumers are not infringed upon. The authority will have power to impose a penalty on a manufacturer or an endorser of up to 10 lakh rupees and imprisonment for up to two years for a false or misleading advertisement.

Salient Features of the Bill

- 1. Central Consumer Protection Authority (CCPA):** Executive Agency to provide relief to a class of consumers. The CCPA will be empowered to:
 - a. Conduct investigations into violations of consumer rights and institute Complaints /Prosecution
 - b. Order recall of unsafe goods and services
 - c. Order discontinuance of Unfair Trade Practices and Misleading Advertisements
 - d. Impose penalties on Manufactures /Endorsers / Publishers of Misleading Advertisements
- 2. Simplified Dispute Resolution process**
 - i) Pecuniary Jurisdiction enhanced to-District Commission –Up to Rs1 crore State Commission-Between Rs1 crore and Rs 10 crore National Commission –Above Rs.10 crore
 - ii) Deemed admissibility after 21days of filing
 - iii) Empowerment of Consumer Commission to enforce their orders

- iv) Appeals only on question of law after second stage
- v) Ease of approaching consumer commission Filing from place of residence E-filing Video conferencing for hearing

3. Mediation

- An Alternate Dispute Resolution (ADR) mechanism
- Reference to Mediation by Consumer Forum wherever scope for early settlement exists and parties agree for it.
- Mediation cells to be attached to Consumer Forum
- No appeal against settlement through mediation

4. Product Liability

- A manufacturer or product service provider or product seller to be responsible to compensate for injury or damage caused by defective product or deficiency in services
- The Basis for product liability action will be:
 - Manufacturing defect Design defect
 - Deviation from manufacturing specifications Not conforming to express warranty
 - Failing to contain adequate instruction for correct use Services provided are faulty, imperfect or deficient

New Bill- Benefit to Consumers

- Presently Consumer only have a single point of access to justice, which is time consuming. Additional swift executive remedies are proposed in the bill through **Central Consumer Protection Authority (CCPA)**
- Deterrent punishment to **check misleading advertisements and adulteration of products**
- **Product liability provision** to deter manufacturers and service providers from delivering defective products or deficient services
- **Ease of approaching** Consumer Commission and Simplification of Adjudication process Scope for early disposal of cases through **mediation**
- Provision for rules for new age consumer issues: **e-commerce & direct selling**

Source : PIB



INTEGRATED AGRICULTURE SUPPLY CHAIN

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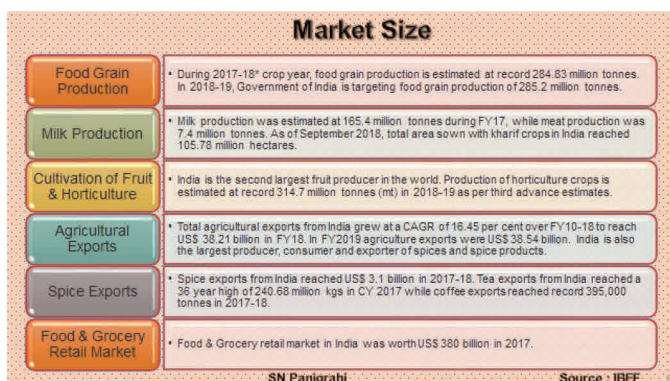
Agriculture is the primary source of livelihood for about 58 per cent of India's population. Gross Value Added by agriculture, forestry and fishing is estimated at Rs 18.53 trillion (US\$ 271.00 billion) in FY18.

The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year due to its immense potential for value addition, particularly within the food processing industry.

India has the **second largest arable land of 161 million hectares and has the highest acreage under irrigation.** Next to China, **India ranks second largest food producer in the world** and has the potential to immerge the biggest with its food and agricultural sector. **India has diverse agro-climatic conditions and has a large and diverse raw material base suitable for food processing companies.** Its strategic geographic location (proximity of India to markets in Europe and Far East, South East and West Asia) provides a lot of inherent advantages to the country.

The **Indian food and grocery market is the world's sixth largest, with retail contributing 70 per cent of the sales.** The Indian food processing industry accounts for 32 per cent of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth.

It contributes around 8.80 and 8.39 per cent of Gross Value Added (GVA) in Manufacturing and Agriculture respectively, 13 per cent of India's exports and six per cent of total industrial investment.



Investments : According to the Department for Promotion of Industry and Internal Trade (DPIIT), the Indian food processing industry has cumulatively **attracted Foreign Direct Investment (FDI) equity inflow of about US\$ 9.08 billion between April 2000**

and March 2019.

Some major investments and developments in agriculture are as follows:

- Investments worth Rs 8,500 crore (US\$ 1.19 billion) have been announced in India for ethanol production.
- In early 2019, India will start exporting sugar to China.
- The first mega food park in Rajasthan was inaugurated in March 2018.
- Agrifood start-ups in India received funding of US\$ 1.66 billion between 2013-17 in 558 deals.
- In 2017, agriculture sector in India witnessed 18 M&A deals worth US\$ 251 million.

Government Initiatives : Some of the recent major government initiatives in the sector are as follows:

- Prime Minister of India, launched the Pradhan Mantri Kisan Samman Nidhi Yojana (PM-Kisan) and transferred Rs 2,021 crore (US\$ 284.48 million) to the bank accounts of more than 10 million beneficiaries on February 24, 2019.
- The Government of India has come out with the Transport and Marketing Assistance (TMA) scheme to provide financial assistance for transport and marketing of agriculture products in order to boost agriculture exports.
- The Agriculture Export Policy, 2018 was approved by Government of India in December 2018. The new policy aims to increase India's agricultural exports to US\$ 60 billion by 2022 and US\$ 100 billion in the next few years with a stable trade policy regime.
- In September 2018, the Government of India announced Rs 15,053 crore (US\$ 2.25 billion) procurement policy named 'Pradhan Mantri Annadata Aay Sanraks Han Abhiyan' (PM-AASHA), under which states can decide the compensation scheme and can also partner with private agencies to ensure fair prices for farmers in the country.
- In September 2018, the Cabinet Committee on Economic Affairs (CCEA) approved a Rs 5,500 crore (US\$ 820.41 million) assistance package for the sugar industry in India.
- The Government of India is going to provide Rs 2,000 crore (US\$ 306.29 million) for

computerization of Primary Agricultural Credit Society (PACS) to ensure cooperatives are benefitted through digital technology.

- With an aim to boost innovation and entrepreneurship in agriculture, the Government of India is introducing a new AGRI-UDAAN program to mentor start-ups and to enable them to connect with potential investors.
- The Government of India has launched the Pradhan Mantri Krishi Sinchai Yojana (PMKSY) with an investment of Rs 50,000 crore (US\$ 7.7 billion) aimed at development of irrigation sources for providing a permanent solution from drought.
- The Government of India plans to triple the capacity of food processing sector in India from the current 10 per cent of agriculture produce and has also committed Rs 6,000 crore (US\$ 936.38 billion) as investments for mega food parks in the country, as a part of the Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters (SAMPADA).
- The Government of India has allowed 100 per cent FDI in marketing of food products and in food product e-commerce under the automatic route.

Achievements in the Sector

- Sugar production in India has reached 27.35 million tonnes (MT) in 2018-19 sugar season, as of March 15 2019, according to the Indian Sugar Mills Association (ISMA).
- The Electronic National Agriculture Market (eNAM) was launched in April 2016 to create a unified national market for agricultural commodities by networking existing APMCs. Up to May 2018, 9.87 million farmers, 109,725 traders were registered on the e-NAM platform. 585 mandis in India have been linked while 415 additional mandis will be linked in 2018-19 and 2019-20.
- Agriculture storage capacity in India increased at 4 per cent CAGR between 2014-17 to reach 131.8 million metric tonnes.
- Coffee exports reached record 395,000 tonnes in 2017-18.
- Between 2014-18, 10,000 clusters were approved under the Paramparagat Krishi Vikas Yojana (PKVY).
- Between 2014-15 and 2017-18 (up to December 2017), capacity of 2.3 million metric tonnes was added in godowns while steel silos with a capacity of 625,000 were also created during the same period.
- Around 100 million Soil Health Cards (SHCs) have been distributed in the country during 2015-17 and a soil health mobile app has been launched to help Indian farmers.

Indian Agriculture : Challenges

In a land where roughly 70% of the population resides in rural areas and half of the nation's population farms

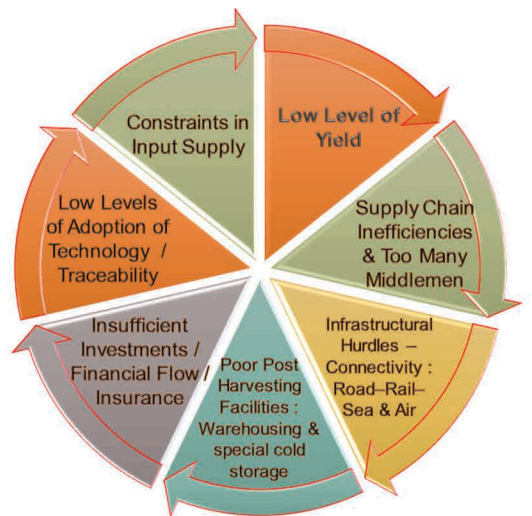
for a living, the importance of India's agricultural sector cannot be overstated. Despite these massive numbers, the country's agricultural output has been unable to keep pace with growing demands and global competition.

According to the World Bank, "India's rice yields are one-third of China's and about half of those in Vietnam and Indonesia. With the exception of sugarcane, potato and tea, the same is true for most other agricultural commodities.

"There are multiple reasons for this productivity gap, but **one significant one is glaring inefficiencies in India's agricultural supply chains**. Logistics play a critical role in any economic sector, but when goods are perishable the supply chain becomes that much more important.

Much of the blame for these inefficiencies has been placed on the government. The NY Times reports that critics accuse policymakers of focusing on "**more glamorous, urban industries like information technology, financial services and construction**" [emphasis added] at the expense of the rural economy.

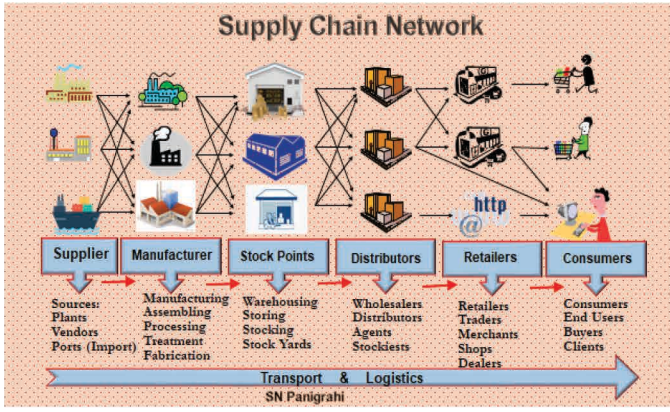
Another factor is the **overall lack of consolidation** that has occurred in the agricultural sector, with the majority of production still operating at the single farmer level.



Supply Chain Basics : Supply Chain Management (SCM) can be defined as **management of the supply chain** as an **integrated process of acquisition and management of flow of supply** of from point of origin to point of consumption and **delivering further value added output to the next level point of consumption** (like from supplier to manufacturer to wholesaler to retailer and to final consumer) by **balancing supply and demand** with **optimal management of resources** with the objective of establishing relationships for **maximising value for mutual benefits** on economically, socially and environmentally sustainable basis. (As defined by the Author in his Article "Value Insights into Supply Chain" Published in Aug'2010 issue of MMR – IIMM)

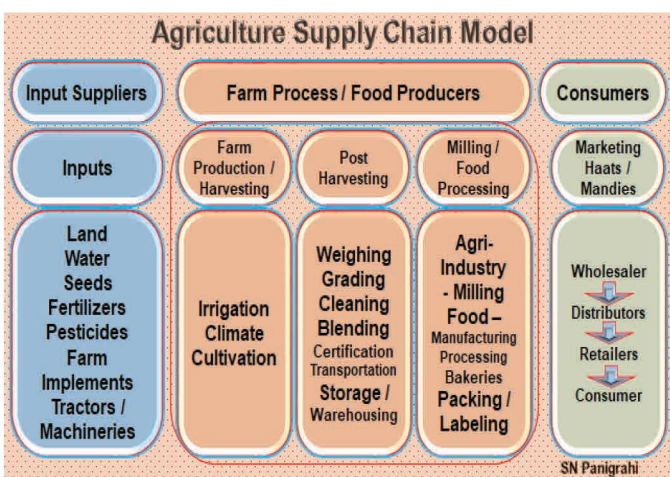
In this definition the focus is on acquisition, management of flow, value addition, integration, balancing supply and demand, optimal management of resources, relationships, maximizing value for mutual

benefits and economical, social and environmental sustainability.

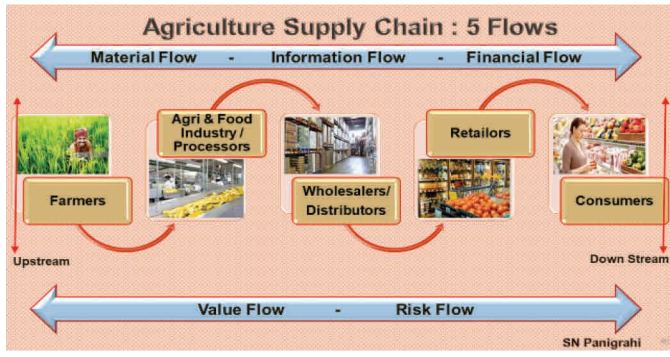


In a supply chain the materials shall flow from point of origin to point of consumption in a series of chains – one being a supplier of input to the next level consumer, he in turn after value addition supply to next downstream consumer - and the chain continues till the ultimate consumer. Associated with material flow, there are information, finance, value and risk also flow. Thus supply chain management is a management of flow of supply.

Agriculture Supply Chain : Definition : Agribusiness, supply chain management (SCM) implies managing the relationships between the businesses responsible for the efficient production and supply of products from the farm level to the consumers to meet consumers' requirements reliably in terms of quantity, quality and price. In practice, this often includes the management of both horizontal and vertical alliances and the relationships and processes between firms. A Model Agriculture Supply Chain is depicted below.

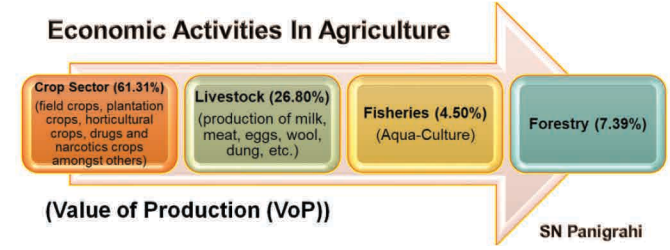


Supply chain is a process of flow – there is supply of input which is processed / converted to add value and delivered as output. The flow may be goods or services; information flow; the flow of financial resources, value flow with value addition at each stage or activity and also flow of risk. A supply chain is a network of activities from supply side to demand fulfillment via various channels till the end customers; it is not an isolated process; it is an integrated system – interlinking various activities interwoven with value chain.

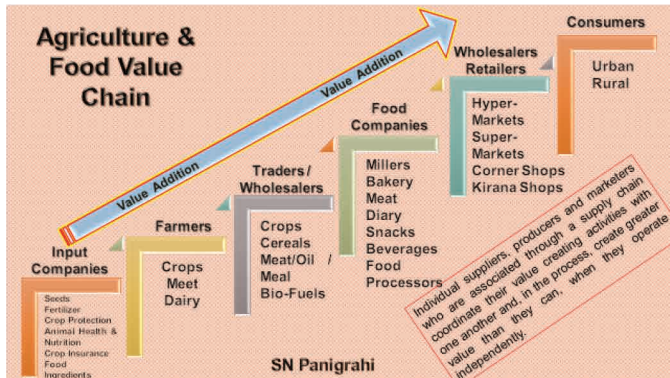
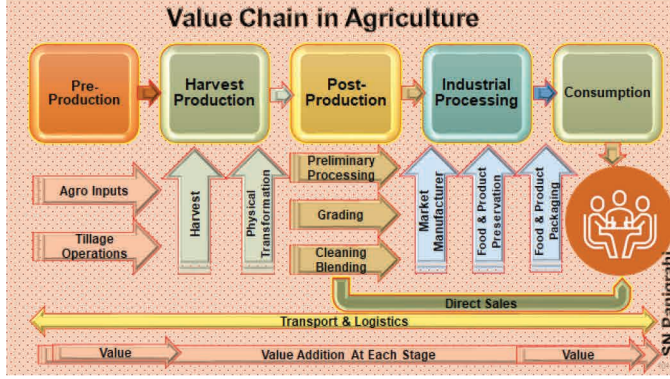


Supply Chain Integration: Traditionally various supply functions have been managed in isolation, often working at cross purposes. However in Supply Chain Management these functions are integrated. There are varying degrees of integration within the company between various activities, processes and functions as well as integration of activities which span the boundaries of organisation. Thus Supply Chain Integration refers to both Internal and External Integration.

Value Chain in Agriculture : A Value Chain in Agriculture describes the Range of Activities and a set of Actors that bring Agricultural Product from Production in the field to Final Consumption, wherein at each Stage Value is Added to the Product.



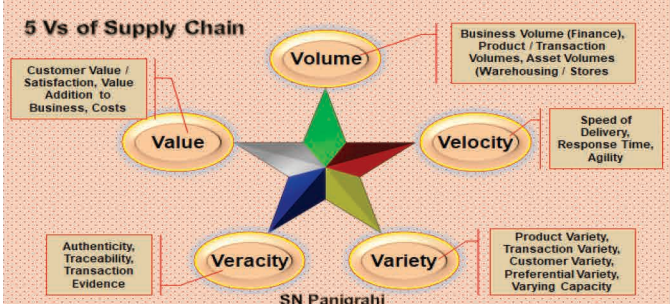
Typical Model of Value Chain in Agriculture from Pre-Production stage to Consumer is shown below



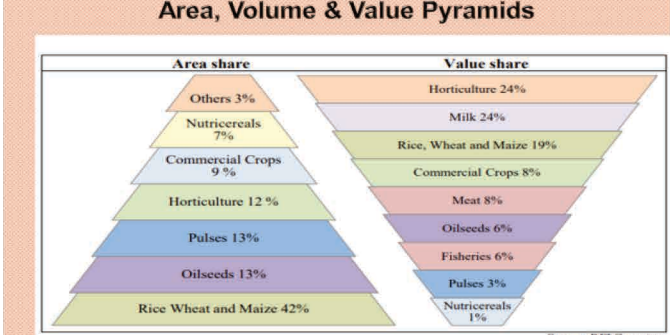
Food Loss and Waste (FLW) In India : According to the FAO estimates nearly 40% of the food produced in India is lost or wasted. Food Corporation of India, report a share of losses ranging from 10 to 15 percent of the total production. As per the Ministry of Food Processing Industries (MFPI) estimate, Losses of 23 million tons of grains, 12 million tons of fruits and 21 million tons of vegetables for a total approximate value of about 4.4 billion USD while total value of food loss and waste generated is supposedly 10.6 billion USD.

In the Report of National Academy of Agricultural Sciences, **Six Critical Stages for Reducing the Food Loss and Waste (FLW) In India** are identified. They are On-Farm Practices; Storage, Packaging & Cold Chain; Transportation; Processing; Retail; Consumer.

The above supply chain challenges may in other words be described with 5Vs – Value (Customer Value / Satisfaction, Value Addition to Business, Costs); Volume (Business Volume (Finance), Product / Transaction Volumes, Asset Volumes (Warehousing / Stores)); Velocity (Speed of Delivery, Response time, agility); Variety (Product Variety, Transaction Variety, Customer Variety, Preferential Variety, Varying Capacity); Veracity (Authenticity, Traceability, Transaction Evidence)



As per Doubling Farm Income Committee report Area, Volume & Value Pyramid is shown for Agriculture in India.



Dalwai Committee Report on Doubling Farmers' Income

- Ø An inter-ministerial panel formed by the Centre on doubling farmers' income by 2022 will submit its final report next month, its Chairman Ashok Dalwai.
- Ø The Dalwai Committee, set up in April 2016, has already written 14 volumes identifying ways to double farmers' 2015-16 income level, in real terms, in seven years.
- Ø The committee has observed that an increase in the Minimum Support Price (MSP) could be one of the instruments for enhancing farmers' income.

However, increasing the MSP may not always have a positive outcome from the macroeconomic point of view.

- Ø "A more straightforward, and potentially more beneficial, means of raising farm incomes could be reforming the marketing system of agricultural produce, while also developing new institutions and reviving existing ones to facilitate linking of the farmer to the markets," it added
- Ø The panel said the average income of an agricultural household during July 2012 to June 2013 was as low as Rs.6,426, as against its average monthly consumption expenditure of Rs.6,223. As many as 22.50% of the farmers live below the official poverty line.

Indian farmers incur Rs 92,651 crore per year in post-harvest losses, the primary causes of which are poor storage and transportation facilities. Ironically, according to the high-level Dalwai committee report ,an investment of Rs 89,375 crore—a figure marginally lower than the annual post-harvest losses—is all it takes to improve the state of storage and transportation facilities for food crops. If these were prevented, over 5 crore people could be fed, for a year, at the rate of Rs 50 per day.

Since a market is the primary medium for farmers to exchange their produce for money, lack of logistics connectivity to ensure that their harvest reaches markets in time results in lowering of the farmers' ability to monetise their produce. This becomes even more critical in case of perishable fruits and vegetables.

Dalwai Committee Recommendations

- Demand Driven Agricultural Logistics System
- Developing Hub and Spoke System
- Marketing Intelligence System
- Agricultural Value System (AVS)
- Farmer-centric National Agricultural Marketing System
- Promoting Sustainable Agriculture
- Effective Input Management
- Enhancing Production through Productivity
- Farm Linked Activities
- Agricultural Risk Assessment and Management
- Empowering Farmers
- Research & Development and ICT
- Structural and Governance Reforms in Agriculture



For More Details SlideShare @ below link may be viewed <https://www.slideshare.net/SNPanigrahiPMP/integrated-agriculture-supply-chain-management-by-sn-panigrahi>



NATIONAL EDUCATION POLICY – 2019 : IMPLICATIONS FOR HIGHER EDUCATION

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1. The topic gives an important lead, as to how, IIMM education will get further boost, once the National Education Policy-2019, come on to the Road of implementation.
2. Hence, as a knowledge sharing approach/ updation approach, this is brought out here under.

Vision The National Education Policy 2019 envisions an India-centred education system that contributes directly to transforming our nation sustainably into an equitable and vibrant knowledge society, by providing high quality education to all.

3. **INTRODUCTION:** The National Education Policy 2019 Drafting Committee led by Committee Chairman Padma Vibhusan Dr. Krishnaswamy Kasturirangan, former Chairman, Indian Space Research Organization (ISRO) has submitted the Draft National Educational Policy 2019 to the Union Human Resource Development Minister, The Government of India had initiated the process of formulating a New Education Policy to meet the changing dynamics of the requirements of the population with regard to quality education, innovation and research, aiming to make India a knowledge superpower by equipping its students with the necessary skills and knowledge and to eliminate the shortage of manpower in science, technology, academics and industry. The extant National Policy on Education, 1986 modified in 1992 required changes to meet the contemporary and futuristic needs of our large youth population.



Drafting Committee submitted its report to SHRI RAMESH POKHRIYAL 'NISHANK' and Minister of State for HRD, Shri Sanjay Shamrao Dhotre in New

Delhi in the presence of Shri R. Subrahmanyam, Secretary, Department of Higher Education and Smt. Rina Ray, Secretary Department of School Education & Literacy and other senior officials of the Ministry.

4. **OVERHAULING OF THE EDUCATION POLICY:** Restructuring of the education policy is the need of the hour. All the Committees like Kothari Committee to the earlier committees have categorically recommended for qualitative education and it sustained for a reasonable time. However the outgrowth of institutions numbering about 40000 colleges and 7000 universities managed by different national bodies like UGC, AICTE, Bar Council and other agencies catering to the requirements made a revision necessary. A large democracy which is proposing to cater the needs of the people with soft skills or skill oriented jobs and other ways of short term courses needs a dynamic policy in tune with the times.

The drafting Committee had been assigned the onerous and time consuming task of analyzing in order to examine a vast and humungous volume of suggestions, inputs, reports and outcome documents that preceded its own efforts. The underlying spirit that dictated the Committee's own course of crafting this significant document was primarily to bring out a vision document which will hold the test of time for at least another 20 years. The Draft National Education Policy, 2019 is built on the foundational pillars of ACCESS, EQUITY, QUALITY, AFFORDABILITY and ACCOUNTABILITY. The Committee has proposed to rename MHRD as MINISTRY OF EDUCATION (MoE).

5. **PEDAGOGICAL STRUCTURE:**
 - A 5+3+3+4 curricular and pedagogical structure based on cognitive and socio-emotional developmental stages of children was proposed.
 - The policy also seeks to reduce content load in school education curriculum.
 - There will be no hard separation of learning areas in terms of curricular, co-curricular or extra-curricular areas.
 - All subjects, including arts, music, crafts, sports, yoga, community service, etc will be part of the curricular.

- Thus, schools will be re-organized into school complexes.
- The policy promotes active pedagogy to focus on the development of core capacities and life skills, including 21st century skills.
- RTE Act - The committee recommends Extension of Right to Education Act 2009 to cover children of ages 3 to 18 (currently, 6-14).

6. RESTRUCTURING OF HIGHER EDUCATION INSTITUTIONS: A restructuring of higher education institutions with three types of higher education institutions is proposed-

Type 1: Focused on world-class research and high quality teaching;

Type 2: Focused on high quality teaching across disciplines with significant contribution to research;

Type 3: High quality teaching focused on undergraduate education.

National Research Foundation Objective: To Catalyse and energise research and innovation across the country in all academic disciplines, with a special focus on seeding and growing research at universities and colleges - create a conducive ecosystem for research through competitive peer-reviewed funding, mentoring, and facilitation.

7. TWO MISSIONS: The National Education Policy will be driven by two Missions -Mission Nalanda & Mission Takshashila. There will be re-structuring of Undergraduate programs (e.g. BSc, BA, BCom, BVoc) of 3 or 4 years duration. They shall have multiple exit and entry options.

8. RASHTRIYA SHIKSHA AYOOG: A new apex body Rashtriya Shiksha Ayog is proposed to enable a holistic and integrated implementation of all educational initiatives and programmatic interventions, and to coordinate efforts between the Centre and States.

9. NATIONAL RESEARCH FOUNDATION: The National Research Foundation, an apex body is proposed for creating a strong research culture and building research capacity across higher education.

10. NATIONAL HIGHER EDUCATION REGULATORY AUTHORITY: The four functions of Standard setting, Funding, Accreditation and Regulation are to be separated and conducted by independent bodies: National Higher Education Regulatory Authority shall be the only regulator for all higher education including professional education. Accreditation eco-system will be led by revamped NAAC.

11. HIGHER EDUCATION GRANTS COMMISSION (HEGC): Professional Standard Setting Bodies for each area of professional education and UGC to

transform to Higher Education Grants Commission (HEGC). The private and public institutions will be treated on par and education will remain a 'not for profit' activity.

12. INTERNATIONALIZATION OF HIGHER EDUCATION: Policy initiatives for promoting internationalization of higher education, strengthening quality open and distance learning, technology integration at all levels of education, adult and lifelong learning and initiatives to enhance participation of under-represented groups, and eliminate gender, social category and regional gaps in education outcomes are recommended.

13. PROMOTION OF INDIA LANGUAGES: Promotion of Indian and Classical Languages and setting up three new National Institutes for Pali, Persian and Prakrit and an Indian Institute of Translation and Interpretation (IITI) has been recommended. The path breaking reforms recommended will bring about a paradigm shift by equipping our students, teachers and educational institutions with the right competencies and capabilities and also create an enabling and reinvigorated educational ecosystem for a vibrant new India.

14. LIGHT BUT TIGHT REGULATION: There shall be a Clamp down on commercialization of education. Regulation will be 'light but tight' substantial investment in public education, coupled with mechanisms of good governance. This will be achieved through separation of functions to eliminate conflicts of interest.



Left: Dr. Ramesh Pokhriyal, Hon. Minister for Human Resource Development, Government of India. Centre: The motif of the Mobius strip used in the National Education Policy symbolizes the perpetual, developing and live nature of knowledge - that which has no beginning and that which has no end. Right: Dr. K. Kasturirangan, Chairman of the Drafting Committee and former Chairman, Indian Space Research Organization (ISRO). This Policy envisages creation, transmission, use and dissemination of knowledge as a part of this continuum.

15. VOCATIONAL EDUCATION: As per the NEP, Vocational education must be an integral part of all education - this Policy aims to provide access to vocational education to at least 50% of all learners by 2025. Capacity and quality of teacher preparation will be addressed. National Committee will be formed for the Integration of Vocational

Education to oversee the effort. National Skills Qualifications Framework will be developed for each of the disciplines / vocations/ professions.

16. OPPORTUNITIES FOR PROFESSIONAL INSTITUTIONS LIKE IIMM: The NEP has provision for Autonomous degree-granting institutions with almost exclusive focus on teaching. It has also provided impetus for vocational education, online and distance learning and teachers training. All these areas are opportunities for IIMM.

17. CONCLUSION - The Ministry of Human Resource Development (MHRD), and Dr. K. Kasturirangan, Chairman, Draft NEP Committee and Former Chairman, ISRO as well as all the other members of the drafting committee deserve congratulations and kudos for proposing this innovative, forward looking, futuristic and progressive education policy under the dynamic leadership of Shri Narendra Damodardas Modi, Hon. Prime Minister. We are confident that all the research institutions, universities, colleges, academic regulators and

educational administrators will extend their utmost cooperation for effective and time bound implementation of this policy.

The National Repository of Educational Data will maintain all records related to institutions, teachers and students in digital form.

REFERENCES –

- The draft policy as circulated by the Ministry of Human Resource Development
- The explanatory note issued by the University Grants Commission
- Press Information Bureau, Government of India
- https://mhrd.gov.in/sites/upload_files/mhrd/files/Draft_NEP_2019_EN.pdf
- https://mhrd.gov.in/sites/upload_files/mhrd/files/Draft_NEP_2019_HI.pdf



GST REFUND IN 30 DAYS: FM PRESS RELEASE

- CSR violations to be treated the civil matter in place of criminal matter
- Issue of IT orders, the summons shall be issued by a central computerised system on or after October. There will be no anomaly on paper and actual as assessee will be able to see it online.
- Unless the notice has a DIN it is not to be taken seriously. All old notices will be cleared upto October 2019. Only the uploaded document will be a notice. No officer will directly issue a notice after October. All notices shall be cleared within three months.
- Relief from an enhanced surcharge on long or short term capital gains arising on transfer of equity & securities. Pre budget.
- Angel tax: to mitigate the difficulty of start-up and investors section 56(2)(b) shall not be applicable to registered (with DPIIT) startups.
- A dedicated cell under a member of CBDT for addressing the problems of start-up.
- Bank, NBFC's and MSME's: 70,000 Crores and additional lending liquidity for PSP's.
- Banks to pass on every MCLR rate cut to the borrowers instantly.
- Banks to launch REPO rate linked debt products.
- Working capital loans to become cheaper.
- Online tracking of loan application for all sectors.
- Credit support for the purchase of houses and vehicles.
- AADHAR based KYC by the bank and no more documentation by NBFC's
- **GST refunds to be time-bound. All pending GST refunds shall be paid within 30 days.**
- **For the future refunds of GST, will be sorted out within 60 days or arising out.**
- Bill can be discounted from the bank where GST is paid.
- MSME to have uniform definition across all Acts.





GST: CHANGE IN INPUT TAX CREDIT ENTITLEMENT UNDER GST & ITS IMPACT ON CASH FLOW

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Input Tax Credit: According to Section 16 (1) of CGST Act, 2017: Every registered person shall, subject to such conditions and restrictions as may be prescribed and in the manner specified in section 49, be entitled to take credit of input tax charged on any supply of goods or services or both to him which are used or intended to be used in the course or furtherance of his business and the said amount shall be credited to the electronic credit ledger of such person.

Goods and services tax involves two equal components on any transaction under intra state supplies, CGST and SGST / UTGST. While inter-state supplies attract integrated goods and services tax (IGST), which is eventually apportioned between the Union and State Governments.

Input Tax Credit entitlement prior to 1st February, 2019 : Section 49 (5) of CGST Act, 2017 had provided manner of utilizing Input Tax Credit (ITC) for payment of GST output tax liability, e.g IGST can be set off against IGST and then CGST and SGST; CGST can be set off against CGST and then against IGST; and SGST can be set off against SGST and then against IGST.

The credit ledger showed the balance of credit lying in CGST, SGST or IGST. The amount under various heads of credit could be utilised in the following order of preference:

- i. IGST ITC can be used :
 - a. For payment of tax as IGST
 - b. For payment of tax as CGST
 - c. For payment of tax as SGST
- ii. CGST ITC can be used:
 - a. For payment of tax as CGST
 - b. For payment of tax as IGST, in case balance is available
- iii. SGST ITC can be used:
 - a. For payment of tax as SGST
 - b. In case balance available, payment of tax as IGST

The following table shows the utilisation of input tax credit prior to 1st February, 2019, i.e. upto 31.01.2019:

Payment for	First set off from	Then set off from
SGST	SGST	IGST
CGST	CGST	IGST
IGST	IGST	CGST and SGST

Input Tax Credit entitlement post 1st February, 2019: CGST (Amendment) Act, 2018 has inserted following new sections 49A & 49B in the GST w.e.f. 01.02.2019.

According to section 49A, Notwithstanding anything contained in section 49, the input tax credit on account of central tax, State tax or Union territory tax shall be utilized towards payment of integrated tax, central tax, State tax or Union territory tax, as the case may be, only after the input tax credit available on account of integrated tax has first been utilized fully towards such payment.

According to section 49B, the Government may, on the recommendations of the Council, prescribe the order and manner of utilization of the input tax credit on account of integrated tax, central tax, State tax or Union territory tax, as the case may be, towards payment of any such tax

The following table shows the utilisation of input credit tax w.e.f. 01.02.2019:

Payment for	First set off from	Then set off from
SGST	IGST	SGST
CGST	IGST	CGST
IGST	IGST	CGST and SGST

Below example shows impact on cash flows due to changes in ITC entitlement

Following figures are for filing monthly return GSTR-3B:

	Tax Liability (INR)	Input Tax Credit (INR)
IGST	10000	20000
SGST	10000	5000
CGST	10000	5000

Till 31.01.2019, the ITC was taken as follows:

	ITC Available INR	IGST INR	CGST INR	SGST INR	To be paid by Cash Ledger
	Tax liability	(20000)	(5000)	(5000)	
IGST	10000	10000			
CGST	10000	5000	5000		
SGST	10000	5000		5000	

There was no impact on Cash flow. Tax liability was set off against Input Tax Credit entitlement.

The ITC shall be utilised w.e.f. 01.02.2019 as follows:

	ITC Available INR	IGST INR	CGST INR	SGST INR	To be paid by Cash Ledger
Tax liability		(20000)	(5000)	(5000)	
IGST	10000	10000			
CGST	10000	10000			
SGST	10000			5000	5000
ITC Balance				5000	

It is observed that the amount is not different in both the cases. But the tax of the SGST should be paid from the cash ledger even when there is credit in the CGST head. Rs.5000 is to be paid in cash. **Impact on cash outflow is Rs.5000/-**

Under the changed Act, IGST credit is to be used against IGST and also IGST first need to be set off against CGST and then only CGST credit can be set off against CGST. Also, the ITC of CGST can't be utilized against the SGST or vice-versa.

Major concern arising out of this amendment is that it restricts the seamless flow of ITC to the taxpayer across the board which will also impact the working capital requirements as well as increase the cost of funds to the taxpayers. Ultimately it will have a negative impact on bottom line of the business

Most of the cases where integrated goods and services credit is used up for paying CGST liability fully, business is forced to pay SGST liability in cashfully or partly. Unlike credits for integrated goods and services, the same for CGST and SGST can't be cross-utilized. This results in tax payment in cash while input tax credits remain on the books of the company adversely impacting working capital of business.

Conclusion:

The new amendment will have heavy impact on cash flow of taxpayers due to less amount of total credit available to the taxpayers in a given period as compared to the pre-amendment period. It will create paradox where on one hand taxpayers have credit available in any of the three types of tax (IGST / CGST / SGST) but on the other hand, they are made liable to discharge GST liability in cash. Needless to say that earlier manner of Input Tax Credit utilisation was tax friendly, more logical and was in line with the principle of seamless credit which is the primary objective of GST.

(Article Published in WIRC Bulletin of Institute of Cost Accountants of India in May 19)



USES OF THE BLOCKCHAIN IN DIFFERENT BUSINESS SECTORS

HARNILOZA, CEO OF HYPERLINK INFOSYSTEM

They can be made without an intermediary and in a secure manner, trusting its data in a distributed network that does not reveal any confidential information about the parties and nature of the transa...

They can be made without an intermediary and in a secure manner, trusting its data in a distributed network that does not reveal any confidential information about the parties and nature of the transaction. This would serve, for example, to make payments, purchases and different types of transactions safely. You can contact blockchain companies that specialize in blockchain development. In this way, there are several cases where Blockchain is already being used or will be used:

1. Cloud storage distributed : Cloud storage services such as Tencent, Dropbox or Google Drive are centralized, and by using them, you are trusting the provider to "respond" to the data you store in the cloud.

Imagine that this service is provided in a distributed way using a network based on Blockchain to increase security and make the service less dependent, its users can also rent the space they do not use to others as Airbnb does with accommodations.

2. Payments, transfers and international remittances : That is to say, an international system based on blockchain for instant transactions of payments, savings, transfer and international remittances, lowering costs.

3. Identity management : The blockchain technology allows users to create their own identity digitally. This ID based on blockchain will soon replace usernames and passwords online. You can use your blockchain identity to access applications and websites, sign digital documents, etc.

4. Patents/Property Registry : One of the first non-financial services that have been given to the blockchain is the inclusion of encrypted information within the transactions. In this way, you can create an impossible to replicate hash that is associated with a single document stored outside the blockchain. An interesting application is the registration of patents or intellectual protection. Any company could prove that it has created a technology on a specific date without having to make a formal application to register the patent before any centralized entity.

5. Registration and verification of data : Just as transactions can be stored immutably under

blockchain, this technology can be used to store any other type of information.

- Its possibilities are enormous both in the business sector and the public. For example:
- In clinics and hospitals: to create a registry with the data and the medical history of the patients.
- In the property registry: to create a record that shows the owner of each property as well as all transactions of sale made. In this way, any fraud or manipulation is avoided.
- For vehicle registration.
- For the protection of intellectual property and the creation of creative digital products, such as music, photos, electronic books, etc. If you have an original work of your creation in digital format, you can encrypt it and store it as a transaction in a block designed for it. As a result, authorship and the date on which it was registered will be registered.
- Record births and deaths, marriages and divorces, etc.

6. Electronic voting

The organization of elections in a manually has a very high cost. It includes the creation of voting cells, the distribution of people in polling places, organization, supervision, and counting itself. Electronic voting systems are subject to attacks. It is difficult to register the vote and that it is in turn not public. You have to meet with top blockchain development companies that specialize in the development of Blockchain.

Blockchain can solve this because it would allow a voting system in which the identities of the voters were protected, unforgeable (a hacker would need much more computing power than computers in a distributed network), at a low cost and that, can be public. This system would provide security and veracity, avoiding all the insights surrounding the elections.

7. Transparent government

With blockchain technology, any organization such as clubs, municipalities, regional governments and central government can present their actions in real time.

These institutions can use digital currencies such as Bitcoin, and in this way, all associates or public can view the financial statements and monitor the income and expenses in real time and at a much lower cost.

8. Automatic execution of contracts

They refer to software programs that collect the terms of a contract between the parties and are stored in the blockchain, with the peculiarity that they are self-executing when a series of conditions specified in the contract itself are met.

In this way, intermediaries are avoided, reducing costs and bureaucratic delays; as well as any interference by a third party.

The possibilities of this functionality combined with other new technologies such as the Internet of Things and financial technologies are enormous.

For example:

- You could connect the information of a sales contract with a GPS so that the intelligent contract automatically issues the payment to the supplier and the carrier as the package arrives at its destination.
- Or make an intelligent contract for the leasing of a vehicle that in case of non-payment of any of the receipts prevents the driver from starting the vehicle or accessing it. And in the future, in case of being a self-contained vehicle, the car could even return alone to the company that owns the vehicle that offers the lease.
- It could also transform the world of music so that musicians can grant licenses to use their music and receive the corresponding payment without the need for lawyers, accountants, and intermediaries. As a result, artists could receive more money for their work (everything that intermediaries now take) and the sharing of benefits among all parties involved would be much more transparent and reliable.

9. Notary services

By allowing you to create immutable records and track a document or chain of events. The blockchain allows you to verify the authenticity of any document that has been registered in it, eliminating the need for a centralized or third authority to certify it.

A document certification service attests to the authorship (who created it), its existence (at what specific moment it was created) and its integrity (which has not been manipulated).

Since the blockchain cannot be altered and can be verified by independent third parties, these services are legally binding.

Among its main advantages:

- It is more certain that, unlike a person who can corrupt, the blockchain cannot be altered.
- It can be cheaper since the functions are automated.
- Thanks to the possibility of registering anything in it anonymously, it guarantees the privacy of the registered document and of those who request notary service.

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“EMERGING MACHINE LEARNING TRANSFORMING LOGISTICS SUPPLY CHAIN IN INDIA”!

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Abstract-Machine Learning (ML) is the scientific study of algorithms and statistical models that computer systems use in order to perform a specific task effectively without using explicit instructions, relying on patterns and inference instead. It is seen as a subset of artificial intelligence (AI). Machine learning algorithms build a mathematical model based on sample data, known as “training data”, in order to make predictions or decisions without being explicitly programmed to perform the task.

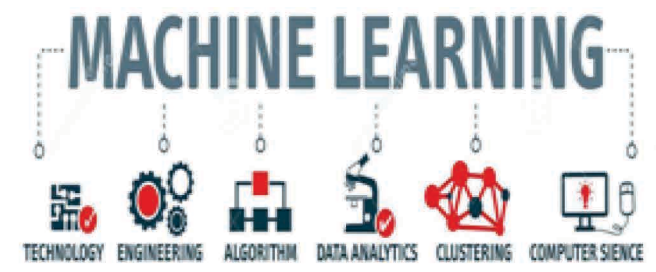
Machine learning algorithms are used in a wide variety of applications, such as email filtering, and computer vision, where it is infeasible to develop an algorithm of specific instructions for performing the task

Artificial Intelligence (AI) is no longer a fictional element or a science of the distant future wherein robots and humanoids rule our world; it is here and enabling revolutionary transformations across industries.

The supply chain industry, experts believe, will benefit massively from this AI-led transformation. The industry is already leveraging AI-enabled technology to drive higher revenues and achieve improved efficiency. In India, it is expected that this transformation will see the industry valuation double in the next decades.

The supply chain, involving a highly interconnected and interdependent set of tasks, is a trade where even minor errors have multiplier effects on costs, revenues and business outcomes. AI, powered with Machine Learning (ML), predictive analytics, automation and so on, has the ability to process the voluminous supply chain data from disparate sources and equip business leaders with actionable insights and forecasts in real-time. Such insights enable quick decision-making and real-time change adaptation to streamline/ reinvent functions and processes, minimize leakages and losses and develop a strong strategic edge. The AI-powered solutions enable organizations to gain exceptional agility, precision, effectiveness, efficiency and end-to-end visibility in the supply chain if the right models and solutions are identified and applied.

Keywords :(Machine Learning , Artificial Intelligence, Automation, Supply Chain)



I. Introduction : The name machine learning was coined in 1959 by Arthur Samuel. Tom M. Mitchell provided a widely quoted, more formal definition of the algorithms studied in the machine learning field:

With upcoming machine learning algorithms natural resources can be managed using earth observation data. As this incredible form of artificial intelligence is already being used in various industries and professions like; **Image and Speech Recognition, Medical Diagnosis, Prediction, Classification, Learning Associations, Statistical Arbitrage, Extraction, Regression.**

Artificial intelligence (AI), propelled by machine learning (ML), computer vision and the Internet of things (IoT), is fast evolving as a significant general purpose technology. It is no longer restricted to technology companies and is currently being pursued widely across all major sectors, such as **manufacturing, agriculture, healthcare, retail, banking and financial services, and public utilities.** AI is even being implemented in the fields of **national defence and security.**

While an increasing number of industries have already embraced AI and started to reap its benefits, many others seem willing to explore the significant business opportunities and societal value offered by AI. Companies that are at a relatively lower maturity level along their digital roadmap need to identify the potential business cases for cautious AI application.

The government's enthusiasm, support and initiatives undertaken for building AI-led solutions have provided a further push to their adoption. This traction has already motivated innovators and early adopters to develop solutions integrating human touch and machine capability. A vast majority of the tech giants and digital natives are currently in the space of augmented and assisted intelligence, wherein they are deploying AI to augment the human ability to perform tasks more efficiently with decision rights either held solely by humans or shared with machines. Chatbots, connected worker spaces, predictive asset maintenance, **smart agriculture** and many other such business cases serve as precedents for successful human-machine interaction models. Given the extensive applicability of AI, it has managed to create both excitement as well as perceived uncertainty regarding future employability and the role of humans and AI collaborative ecosystems. In this report, we lay emphasis on the current state of AI development in India across key sectors. It is further examine the perception of industry professionals regarding the impact of AI on businesses and the risk of job automation across these industries and functional roles. The report also assesses their readiness and requirements in terms of skill sets, infrastructure, etc., to adapt to a post-AI environment.

Artificial Intelligence (AI) is poised to disrupt our world. With intelligent machines enabling high-level cognitive processes like thinking, perceiving, learning, problem solving and decision making, coupled with advances in data collection and aggregation, analytics and computer processing power, AI presents opportunities to complement and supplement human intelligence and enrich the way people live and work. India, being the fastest growing economy with the second largest population in the world, has a significant stake in the AI revolution. Recognising AI's potential to transform economies and the need for India to strategise its approach.



II. What is artificial intelligence?

Artificial intelligence (AI) refers to the ability of a computer or a computer-enabled robotic system to process information and produce outcomes in a manner similar to the thought process of humans in learning, decision making and solving problems.

By extension, the goal of AI systems is to tackle complex problems in ways similar to human logic and reasoning.

III. What does it encompass?

AI is an over-arching concept that encompasses multiple (often overlapping) disciplines. These draw upon knowledge and techniques from mathematics, statistics, computer science and domain-specific expertise to create models, software programs and tools. These software programs and tools can undertake complex tasks with outcomes that are comparable, if not better, to traditional manual approaches.

IV. Global trends

- 1. **Cross-border investments** in AI and robotics have **increased** sharply in recent years. AI has already paved the path towards becoming the backbone of government-sponsored cyber security efforts.
- 2. **Entry barriers** for users and teams new to developing software using AI and ML have **reduced**, with AI products and offerings from

technology giants and start-ups is increasing number of open source libraries, application programming interfaces (APIs), and software development kits (SDKs).

3. AI's **share within the IT spending budget** is expected to keep **increasing** and corporate **mergers and acquisitions** are also on the rise.
4. **AI-focused start-ups** are currently **booming** and investor response towards them has been warm. However, with ML becoming a mainstay and the **novelty factor wearing off**, they will have to **further differentiate their products** from the market on dimensions like ease of use, interoperability, robustness and support to be competitive.



V. AI adoption in India :

1. **Potential for companies to set up AI-focused innovation centres in India** with initiatives such as **Digital India and Make in India** creating a favourable regulatory environment. More than 36% of large financial establishments have already invested in these technologies and around 70% plan to embrace it in the near future.
2. **Financial services**-While AI, ML and robotics have a wide range of use cases in financial services, their potential has not been fully realised in India. Establishing data access frameworks and guidelines for open application interfaces from financial institutions will act as an enabler for increased adoption of AI in the sector.
3. **National security and defence**-AI can be leveraged to protect economic sectors and infrastructure such as **airports and power plants** that are vulnerable to attacks. Anomalous behaviour detection in individuals and infrastructure disruption prediction (natural/man-made causes) powered by the use of distributed sensors and pattern recognition are examples of AI usage potential in the sector. Along with AI applications in defence, **robots can be used to perform jobs which are unsafe for humans**—such as recovering

explosives, detecting mines, space exploration, deep water probes, scouting for hostile territories, etc.

4. **Cybersecurity**-AI-enabled cyber security systems rely on historical data of cyberattacks and apply ML to predict and detect similar threats likely to arise in the future. Having automated systems in place for monitoring and detecting risks helps to free up human agents from the time-consuming tasks of having to continually check and categorise these red flags based on their threat level.
5. **Accessibility technology for the differently abled**-AI-enabled assistive technology for differently abled individuals is an untapped market in India. AI, in combination with other emerging technologies like **3D printing and IoT**, has great potential to fuel widespread availability, affordability and feasibility of innovations in smart prosthetics.
6. **Environment**-AI technologies for environmental sciences have not picked up significantly in India yet. The potential here includes AI optimised **'smart' energy grids** for power generation, precision manufacturing for reduced waste and emissions, disaster management and recovery, conservation of ecological habitats and disease prevention and outbreak control.

VI. ML/AI-enabled supply chain transformation: Where are we?

Globally, there are diverse, cutting-edge innovations in the application of AI in the supply chain. Some of the path-breaking AI-enabled transformations include:

1. **Contextual intelligence** provided by technology such as **Intelligent Robotic Sorting, AI-powered Visual Inspection**, etc. which are **transforming warehouse management, shipping, tracking, logistics, packaging** and so on.
2. **Supervised learning, unsupervised learning and reinforcement learning** technologies are facilitating real-time **decision-making, enhanced fraud detection, predictive insights, etc.**
3. **AI-led automation** in the form of self-driving forklifts, automated sorting, self-managing intelligent inventory systems, autonomous/driverless ground vehicles, etc. are revolutionizing warehousing, logistics, distribution, inventory management, etc.
4. **Intelligent software solutions** are enabling better supplier selection, product design, audits, evaluations, production planning, B2B sourcing, etc.

One of the leading innovators bringing sophistication and next-gen models in the supply chain space at the global level is **Amazon**. This e-commerce giant has revolutionized its business models, transformed customer experiences, forecasted demand with greater precision continuously reduced the delivery time and reigned supreme in e-commerce owing to its extensive use of technology including AI, ML, automation and IoT among others.

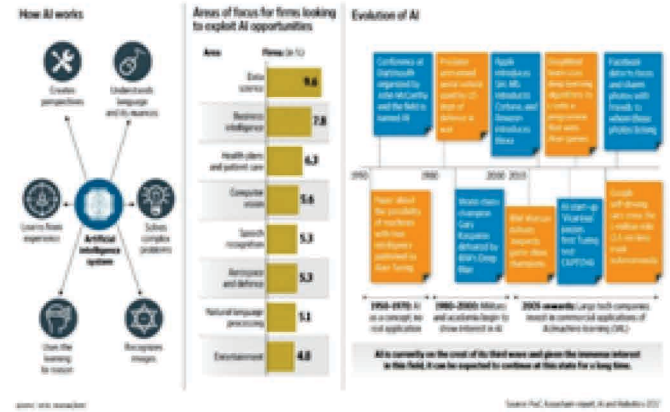
VII. Advance Artificial Intelligence for Growth: Leveraging AI and robotics for India’s economic transformation. Technology undertapped in Financial Services, National Security, Cybersecurity, Environment and in enhancing accessibility for the differently-abled, greater adoption should be incentivised

4. Predictive analytics
5. Robotics
6. Automated research and information aggregation
7. Automated data analyst
8. Automated sales analyst
9. Automated communications
10. Automated operations and efficiency analyst

This section shows the relative degree of importance of the above-mentioned categories in different industries and functions.

X. Impact of artificial intelligence on Society : People want businesses and governments to invest in research and development to provide reasonable transportation and legal and medical services to low-income groups, along with free or affordable education and teaching aids to disadvantaged children. There seem to be diverse opinions in society when it comes to the adoption of AI.

ARTIFICIAL INTELLIGENCE AND OPPORTUNITIES



VIII. What does technology advancement driven by AI imply for businesses?

AI is probably one of, if not, the most significant general purpose technologies of our era. With machine learning, we can now build systems that are capable of improving their own performance by learning from data over time. A continual challenge humans have been facing is identifying ways to perform certain tasks such as recognising images and audio so that we can replicate similar functionalities using software applications. Machine learning systems try to mimic the learning processes of humans—that is, learning at scale from

data and achieving levels of performance comparable to humans in processing it and arriving at certain outcomes.

IX. Impact of artificial intelligence on business

We identified the following categories of usage of AI-powered solutions in organisations:

1. Machine learning
2. Decision support systems
3. Virtual private assistants

While people are eager to use self-driving cars or be picked up by self-driving mass transit vehicles on routes designed by an algorithm, they are averse to the idea of availing annual health check-ups at home with a robotic smartkit or having chatbot assistant teachers in universities/colleges that lower the cost of overall tuition. Overall, people believe that humans are more prone to error than AI systems and that the designers and managers of these systems are at fault when they malfunction or fail.

This is of significance in fully autonomous applications of AI, where speed and response times are critical and that AI systems can only behave as intelligently as they are designed to do. However, the effectiveness of these systems is limited by their current inability to explain their decisions and actions to human users. Responsible AI ensures that its workings are aligned to ethical standards and social norms pertinent within its scope of operations.

Explainable AI ensures that the inner workings of the AI system are transparent to and well understood by the system owners and administrators and its outcomes can be explained beyond reasonable doubt or ambiguity. Explainable AI is responsible for building AI models with accountability and the ability to describe or depict why a certain decision was made by the algorithm. It is essential to build such systems which would enable companies/people to understand, appropriately trust and effectively manage an emerging generation of artificially intelligent machine partners.

XI. Global Trends

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paved the path towards becoming the backbone of government-sponsored cyber security efforts.

2. **Entry barriers** for users and teams new to developing software using AI and ML have **reduced**, with AI products and offerings from technology giants and start-ups is increasing number of open source libraries, application programming interfaces (APIs), and software development kits (SDKs).
3. AI's **share within the IT spending budget** is expected to keep **increasing** and corporate **mergers and acquisitions** are also on the **rise**.
4. **AI-focused start-ups** are currently **booming** and investor response towards them has been warm. However, with ML becoming a mainstay and the **novelty factor wearing off**, they will have to **further differentiate their products** from the market on dimensions like ease of use, interoperability, robustness and support to be competitive.

XIII. Case Study: Airbus – Achieving efficiency in operations: Airbus Defence and Space utilises machine learning in a number of applications. One of these is the detection and correction of satellite images with imperfections such as the presence of clouds. For example, it can be challenging to detect the difference between clouds and snow images by eye. Machine learning techniques allow a previously time consuming task that was prone to human error to be made more efficient and accurate. This allows for analysis of higher quality satellite images and provides information on cloud location so satellite systems can be reprogrammed as needed.

Airbus also uses machine learning to extract information from satellite images for big data-style analysis, for use in other applications, including for agricultural, engineering or environmental purposes. Prior to using machine learning techniques, data scientists had to develop rule-based algorithms to extract information in a geometric way; for example specifying that buildings are likely to be rectangular. By picking up on patterns on their own, machine learning algorithms are an improvement on this, and more accurate. Laurent Gabet, Optical R&D Manager, and Mathias Ortner, Data Analysis and Image Processing Lead, categorise the benefits of machine learning in 3 main areas:

- Achieving things were not previously thought possible
- Developing algorithms where the required technology was not previously available
- Improving existing processes.

“While the first can be considered the most exciting and innovative— for example, cloud versus snow detection in images, the third can be the most important in terms of business operations”, notes Mr Gabet. Airbus expects future applications to continue to achieve improvements. They have already seen a significant reduction in the time to build algorithms, from several years down to a few weeks, and this reduces time to trial so that new applications can be developed.

XIV. Way Forward: What can individuals and businesses expect from AI in the future?

As AI is all set to bring about a revolution in the business landscape, businesses and consumers are bound to be divided on how quickly and eagerly they should adopt and integrate the new applications and workflows arising from it. During the initial phases in particular, businesses will need to identify the requisite data, direct training processes and refine outputs. As manual jobs get automated, businesses and society will need to rethink skill areas and move away from procedural tasks to higher involvement strategic ones with a greater focus on creativity, adaptability and an outcome-oriented mindset. Most importantly, business leaders and government authorities should prioritise areas where AI can bring about widespread visible and quick positive impact. This would require them to decide on whether they should invest in enhancing existing processes and workflows to increase efficiency and/or reduce costs or create alternative business and operating models built around new experiences and modes of interactions with humans.

Areas

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LOK SABHA PASSES CODE OF WAGES BILL, 2019

The Lok Sabha today passed The Code on Wages Bill, 2019. While opening the discussion for consideration and passing of the Bill, Minister of State (I/C) for Labour and Employment Shri Santosh Kumar Gangwar said that it is a historic Bill which aims to transform the old and obsolete labour laws into more accountable and transparent ones which is need of the hour. As many as 17 present labour laws are more than 50 years old and some of them even belong to pre-independence era.

Among the four Acts being subsumed in The Code on Wages Bill, The Payment of Wages Act, 1936 belongs to pre- independence era and The Minimum Wages Act 1948 is also 71 years old. The Payment of Bonus Act, 1965 and The Equal Remuneration Act, 1976 are also being subsumed in the Code.

He further said that wide consultations were held with trade unions, employers and State governments and tripartite consultations were held on 10th March, 2015 and 13th April, 2015. A draft of Wage Code was made available in public domain through Ministry's website. Many persons gave their valuable suggestions. The Bill was introduced in last Lok Sabha on 10 August, 2017 and was referred to Parliamentary Standing Committee which submitted its Report on 18th December 2018. Out of 24 recommendations made by standing committee, 17 were accepted by government.

He further said that the Code ensures minimum wages along with timely payment of wages to all the employees and workers. Many unorganized sector workers like agricultural workers, painters, persons working in restaurants and dhabas, chowkidars etc. who were out of the ambit of minimum wages will get legislative protection of minimum wages after the bill becomes an Act. It has been ensured in the bill that employees getting monthly salary shall get the salary by 7th of next month, those working on weekly basis shall get the salary on last day of the week and daily wagers should get it on the same day.

He expressed hope that The Code on Wages will prove to be a milestone and give respectable life to 50 crore unorganized sector workers. The Minister responded to the debate in detail and thanked all the respected members for cooperation in passing the Bill.

The salient features of the Code are as following:

- The Code on Wage universalizes the provisions of minimum wages and timely payment of wages to all employees irrespective of the sector and wage ceiling. At present, the provisions of both Minimum Wages Act and Payment of Wages Act apply on workers below a particular wage ceiling working in Scheduled Employments only. This would ensure "Right to Sustenance" for every worker and intends to increase the legislative protection of minimum

wage from existing about 40% to 100% workforce. This would ensure that every worker gets minimum wage which will also be accompanied by increase in the purchasing power of the worker thereby giving fillip to growth in the economy. Introduction of statutory Floor Wage to be computed based on minimum living conditions, will extend qualitative living conditions across the country to about 50 crore workers. It is envisaged that the states to notify payment of wages to the workers through digital mode.

- There are 12 definitions of wages in the different Labour Laws leading to litigation besides difficulty in its implementation. The definition has been simplified and is expected to reduce litigation and will entail at lesser cost of compliance for an employer. An establishment will also be benefited as the number of registers, returns, forms etc., not only can be electronically filed and maintained, but it is envisaged that through rules, not more than one template will be prescribed.
- At present, many of the states have multiple minimum wages. Through Code on Wages, the methodology to fix the minimum wages has been simplified and rationalised by doing away with type of employment as one of the criteria for fixation of minimum wage. The minimum wage fixation would primarily based on geography and skills. It will substantially reduce the number of minimum wages in the country from existing more than 2000 rates of minimum wages.
- Many changes have been introduced in the inspection regimes including web based randomised computerised inspection scheme, jurisdiction-free inspections, calling of information electronically for inspection, composition of fines etc. All these changes will be conducive for enforcement of labour laws with transparency and accountability.
- There were instances that due to smaller limitation period, the claims of the workers could not be raised. To protect the interest of the workers, the limitation period has been raised to 3 years and made uniform for filing claims for minimum wages, bonus, equal remuneration etc., as against existing varying period between 6 months to 2 years.
- It can be said that a historical step for ensuring statutory protection for minimum wage and timely payment of wage to 50 crore worker in the country has been taken through the Code on Wages besides promoting ease of living and ease of doing business.

Source : PIB





WTO UPDATE :

COMMERCE MINISTRY TO SOON COME OUT WITH NEW FOREIGN TRADE POLICY

“We have taken views of all stakeholders. The new policy is likely to be announced by September-end or early-October,” an official said.

The commerce ministry will soon come out with a new foreign trade policy, which provides guideline and incentives for increasing exports, for the next five financial years 2020-25, an official said. The ministry is giving final touches to the new policy as the validity for the old one will end on March 31, 2020.

“We have taken views of all stakeholders. The new policy is likely to be announced by September-end or early-Oct .. The new policy would focus on simplifying procedures for exporters and importers besides providing incentives to boost outbound shipments. The ministry’s arm directorate general of foreign trade (DGFT) is formulating the policy.

At present, tax benefits are provided under merchandise export from India scheme (MEIS) for goods and services export from India scheme (SEIS).

In the new policy, changes are expected in the incentives given to goods as the current export promotion schemes are challenged by the US in the dispute resolution mechanism of the World Trade Organisation (WTO).

In this backdrop, the government is recasting the incentives to make them compliant with global trade rules, being formulated by Geneva-based WTO, a 164 member Geneva-based multilateral body.

The commerce ministry has also floated a cabinet note for a new export incentives scheme — Rebate of State and Central Taxes and Levies (RoSCTL) — that would be compliant with the WTO norms.

The RoSCTL scheme is available for exports of garments and made-ups. It would now be proposed to extend it to all exports in a phased manner.

The new scheme would replace the existing MEIS, which

was challenged by the US last year in the WTO. It would ensure refund of all un-rebated central and state levies and taxes imposed on inputs that are consumed in exports of all sectors.

Major un-rebated levies are - state VAT/ central excise duty on fuel used in transportation, captive power, farm sector; mandi tax; duty of electricity; stamp duty on export documents, purchases from unregistered dealers; embedded CGST and compensation cess coal used in the production of electricity.

Exporters are demanding incentives based on research and development, and product-specific clusters under the new policy.

Ludhiana-based Hand Tools Association President S C Ralhan said the new policy should have provisions for refund of indirect taxes like on oil and power, and state levies such as mandi tax.

“Sectors like engineering should be promoted as they create huge number of jobs. There should be relaxation for obtaining licence under Export Promotion Capital Goods for modernisation of industry,” Ralhan said.

Assistant Professor and expert on agriculture economics Chirala Shankar Rao has said the policy should look at ways to promote agri exports as it holds huge opportunities.

During April-July 2019-20, the country’s exports dipped 0.37 per cent to USD 107.41 billion.

Since 2011-12, India’s exports have been hovering at around USD 300 billion. During 2018-19, overseas shipments grew 9 per cent to USD 331 billion.

The government is targeting to increase the exports to USD one trillion in the coming years.

Source: PTI, 22 August 2019



BRANCH NEWS

- ALWAR BRANCH
- BANGALORE BRANCH
- CHENNAI BRANCH
- COCHIN BRANCH
- LUCKNOW BRANCH

- NEW DELHI BRANCH
- PUNE BRANCH
- THIRUVANANTHAPURAM BRANCH
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ALWAR BRANCH

Indian Institute of Materials Management, Alwar branch organized a Two days Training program on "Stores and Inventory Management" during August 12-13, 2019 at Hotel Meenal, Shanti Kunj Alwar. Mr. L R Meena founder Chairman and NST IIMM and Mr. S K Sharma former National President were the speakers for the training program. Delegates from CSIR-Indian Institute of Chemical Technology, Hyderabad, Indian Institute of Technology, Indore, SRF Limited, Jhivana, SRF Industries, Bhiwadi, and local industries attended the training.



Indian Institute of Materials Management, Alwar Branch conducted its annual general meeting at Hotel Meenal, Shanti Kunj Alwar. Thirty Members of the branch attended the AGM. Mr. L R Meena founder Chairman and NC Member briefed the general body members about the activities and achievement of the branch in last one year. Mr. Jayant Jain Hon. Treasurer presented the annual accounts. All the members of the branch appreciated the efforts of Mr. Meena for making the branch as one of the vibrant society branch of IIMM. The visibility of the branch can be seen in the MMR being punished by IIMM NHQ. Finally the accounts were passed by the AGM. It was proposed by Mr. Amit Agarwal and seconded by Mr. Neeraj Jain and Vinit Singhal.

The branch also conducted the election of the new executive committee of the branch for the year 2019-21.

Following office bearers were elected unopposed.

- Mr. Gulab Singh Rathore. Chairman
 - Mr. Chandan Kathuria. Vice Chairman
 - Mr. Lalit Raj Meena National Council Member
 - Dr, S Roy Choudhury National Council Member
 - Mr. Amit Agarwal Hon. Secretary
 - Mr. Sachin Shukla Hon. Treasurer
 - Mr. Rajesh Luthra. EC Member
 - Mr. Babu Lal Kotwal EC Member
 - Mr. Pradeep Sharma EC Member
- Other invitee's to the EC are
- Mr. TC Vishwakarma
 - Mr. Neeraj Jain
 - Mr. B L Meena
 - Mr. Naresh Kumar Meena
 - Mr. Jagmohan Soni



BANGALORE BRANCH

27.07.2019 - Annual General Body Meeting: Annual General Body Meeting of Bangalore Branch was conducted in the evening at Hotel Woodlands. The meeting commenced with a formal invocation

rendered by Mr. Bhaskar and Mrs. Bhaskar. Mr. P Sengottaiyan, Honorary Secretary confirmed the Coram and Mr. Srinivas V. Rao, Branch Chairman welcomed the members and their family. Mr. K.V. Sudheendra gave details of achievement /activities during the tenure 2017-2019 and presentation on future program on SCALE 2019 to be held on 22nd and 23rd August 2019.

Mr. P Sengottaiyan, Hon. Secretary presented the Annual Report for the year 2018-19 the report was proposed for adoption by Mr. Krishna Murthy and seconded by Mr. Mohammed Haroon. The report was unanimously adopted.

Mr. A.V. Shamasundar, Honorary Treasurer presented the Income & Expenditure and Balance Sheet for the year 2018-19 and the accounts was proposed for adoption by Mr. M.K. Arun and Seconded by Mr. Sugurappa.

It was resolved to appoint, Mr. A.N. Sriram, CMA Association, as internal Auditor of IIMM Bangalore Branch and Chandabhoy and Jassoobhoy Chartered Accountants - Mumbai as Statutory Auditors as nominated by National Headquarters for the year 2019-2020.

It was resolved to appoint, Mr. A.N. Sriram, CMA Association, as internal Auditor of IIMM Bangalore Branch and Chandabhoy and Jassoobhoy Chartered Accountants - Mumbai as Statutory Auditors as nominated by National Headquarters for the year 2019-2020.

Branch Chairman Mr. Srinivas V. Rao appealed that to each and every one of members to attend IIMM Bangalore Branch Signature event SCALE 2019 on 22nd and 23rd August 2019 and other forthcoming programs. Requested them to share with others as well and make them a grand success.

Election was conducted for Executive Committee 2019-21 in a smooth and befitting manner by Mr. K.S. Mohan Kumar, Returning Officer and his team. After completion of all Election formalities and counting of votes, Mr. Mohan Kumar, Returning officer announced Elected EC for 2019 & 2020.

Mr. A.V. Sham Sundar, Honorary Secretary, proposed vote of thanks, MC was Mr. C.S. Subash EC Member. The AGM concluded with vote of thanks and dinner for the members present.

9th & 10th August 2019 – In house Training Program: Indian Institute of Materials Management (IIMM), Bangalore Branch conducted In house Training program on “**Contract Management**” for executives of Harita Seating Systems Limited on 9th and 10th August 2019 at their premises. Sr. Faculty handled the sessions.

22nd and 23rd August 2019 – SCALE 2019 : SCALE 2019 IIMM Bangalore Branch signature event conducted 22nd and 23rd August 2019 at Royal Orchid Hotel, Old Airport Road, Bangalore. Mr. G.K. Singh, National President, Mr. Sudhendra Denkanikote, Director & COO, ibTrack Solutions Pvt. Ltd, Key Note Speaker, Mr. P.M. Biddappa,

Chairman SCALE 2019 and Mr. B. Jayaraman, Branch Chairman, inaugurated the SCALE 2019 day 1 program by lighting the lamp on 22nd August 2019. Mr. Vishwesh Pakare, Executive Director, Audex Solutions and Technology Pvt. Ltd. was the Chief Guest and Mr. Devarajan S. Sr. Vice President, Production Engineering and Technology TVS Motors India Ltd. was the Key note speaker on 23rd August 2019.

Mr. Lalit Raj Meena, National Secretary / Treasurer, Mr. Mahender Kumar P, Vice President (South) released the Conference Souvenir. Eminent speakers from various organization from Private and Public Sectors handled Two days technical sessions. Mr. C.L. Kapoor, Mr. J.N. Mallya, and Mr. A. Mathias Past National President and Mr. S.B. Lovekar, Past Vice President (South) attended SCALE 2019. Mr. C. Subash, EC Member was the Master of Ceremony. Participants had an opportunity of interacting directly with Speakers and event was well appreciated by one and all.

About 110 odd members, including the organizers, participated in the event and the feedback received was graded at ‘Excellent to Very Good’ from the delegates.

CHENNAI BRANCH

Report on AGM : AGM of Chennai Branch started with Branch Chairman Mr. N Swayambhu calling the meeting to order, after ascertaining quorum required for conducting AGM.

He highlighted the various activities of Chennai branch during period 2017-19. He stress on the efforts taken in reaching out to various segments, of interest to IIMM Chennai Branch. He particularly highlighted that most of the activities planned during the beginning of the financial year 2018-19 were successfully completed. In particular, he mentioned as an example, the monthly meetings scheduled were conducted by Chennai Branch, month on month without fail, which evoked great appreciation from the members.



IIMM Distinguished Members

Hony. Treasurer, Mr. S Sethu Venkatraman presented the Balance sheet and I&E statement for the financial year 2018-19 to the members. The clarifications sought on the accounts were explained and it was duly accepted. Members wanted to know why the previous office space of Lakshmi bhavan at Mount Road,

Chennai is not yet disposed off. Chairman answered that there were very few takers offering very low prices for the building and it is proposed continue the rental arrangement.



Immd. Past Chairman Addressing in AGM



New Chairman Mr. J Ravishankar addressing



Hony. Secretary Mr. B Ramesh Speaking on IIMM Chennai branch activities



Hony. Treasurer, Mr. S Sethu Venkatraman presenting Financial report



Election announcement by Mr. Kartik D Dore



New committee Members



Best faculty to Mr. V Ramachandran by Mr. V Hariharan, First National president.



The memento presented to outgoing chairman Mr. N Swayabhu by Mr. Krishnaswamy former National President. IIMM

The statement of account for the year 2018 -19 was then, passed to the audience for acceptance. The acceptance by members was formally proposed by Mr. Murugasean, (Membership no. —) and seconded by Mr. Raghavan (membership no. —). Following this, the treasurer Mr. Sethu Venkatraman formally announced the closure of account 2018-19 period. Mr. B Ramesh, Hony. Secretary presented a brief activity

report, covering all activities like, Educational courses, in-house and public training programs, annual Mega event MM day celebrations, Quiz, Monthly meeting and video discussions.



The smooth conduct of election to Mr. Kartik D Dore by IIMM Distinguished Member Mr. N S Sivaraman

With the two year term of the committee coming to the end, the Election officer selected by Executive committee was announced.

Mr. Kartik D Dore, Life member (member no.) was brought to stage to conduct the election for set of new office bearers, and National council members for the period 2019-2021. He formally read out the rules and regulation as applicable for the various posts and election process.



Elected Hony Treasurer Mr. T Sornakumar giving vote of Thanks



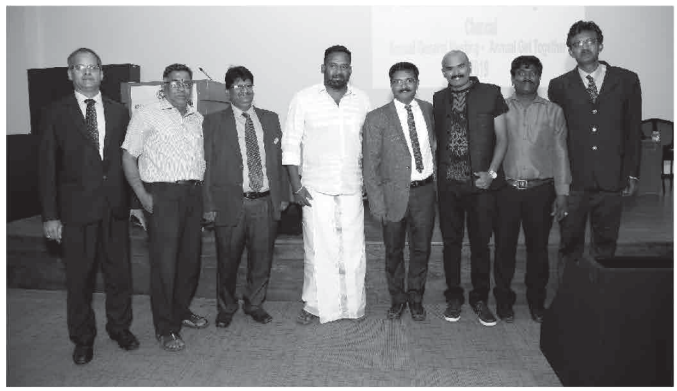
Dr. Ganesan, AGT Guest speaker



Felicitation

He announced that all the nominations received were in order and only one nomination was received for each position(s). Hence, there was no voting and as such the nominees for each of the posts were decaled as elected as there was no contest. He announced the following results.

- | | |
|------------------------|--------------------------|
| Chairman of the branch | Mr. J.Ravishankar |
| Vice Chairman | Mr. B.Ramesh |
| Hon Secretary | Mr. S.Sethu Venkataraman |
| Hon Treasurer | Mr. T Sornakumar |



Entertainment

Executive Members are Mr. S.Kumaarragurubaran, Mr. P.Balaji, Mr. Balakrishnan, Mr.D.Ramesh, and Mr. Ramabathran, while the National Council members are Mr. N Swayambhu (immediate past chairman), Mr. P.Y.Venkateswaran, Mr. T.A.B. Barathi and Mr. K Nagappan. It was announced that the newly elected team can officially take over their respective positions. The new committee formally took stage and thanked all the members seeking their guidance and support.

New Branch Chairman Mr. J Ravishankar, in his acceptance speech, thanked all the seniors, committee members, office staff who have helped in shaping the branch well to meet the challenges and expectation of the outside world.

The following were the formal felicitations made.

The best faculty to Mr. V Ramachandran by Mr. V Hariharan, First National president.

The smooth conduct of election to Mr. Kartik D Dore by Mr. Krishnaswamy former National president. IIMM

The memento was also presented to outgoing chairman Mr. N Swayabhu by IIMM Distiguated Member Mr. N S Sivaraman

Mr. V Ramachandran rendered the service as Master of Ceremony. The AGM event The AGM was called to a close after the elected Treasurer Mr. T Sornakumar providing vote of thanks to formally close the AGM

Report on AGT : On Saturday, 27th July 2019, was a special day for the entire IIMM member's family. The Annual General Meeting was held at Madras management Association auditorium Chennai, between 5 pm and 6 pm and the new office bearers took charge. The annual get together is the first official engagement of the new committee, a brief report on which is given below Mr. J. Ravishankar, as Chairman, Mr. B Ramesh as Vice Chairman, Mr. S. Sethu Venkataraman as Secretary and, Mr. T Sornakumar as Treasurer, of the new governing body of IIMM Chennai Chapter took over the seat formally on the dais.

Annual Get-Together started at 6.30 pm with the usual punctuality. The event began with an invocation song provided by Ms. Sathve, daughter of Mr. S Balaji, EC member of IIMM Chennai. The entire hall was packed with IIMM members and their families. Mr. S Sethu Venkataraman, Hony Secretary briefly introduced the Chief Guest Dr. D Gasnesan, (HR Consultant, Trainer & Public speaker and Former HR head of L&T Valves). Mr. N. Swayambhu, immediate past chairman made a special mention of the speaker's talent and presented a sapling, as a token of appreciation.

Dr. D Ganesan, who had researched in Management process through interpreting of the Holy Hindu Text of Bhagavad Gita. He explained in a very colloquial way his thoughts for the evening reaching out to all participants in AGT, in fluent Tamil. The speech was mainly on "what to speak and what not to speak". The participants' interaction was very good and all our members and their family enjoyed the evening.

As usual, the cultural program was provided by Standup comedy and Cinema Fame Robo Shankar and his team and on stage magic show by "Magic" Raja. The closing session offered buffet dinner served, where members and family interacted with each other. As usual a memento was given to all the members. All the IIMM Chennai office team worked hard to make this event a success.

COCHIN BRANCH

Cochin Branch organized a one day workshop on "Supplier engagement program for profitable procurement "at hotel Renai Cochin on 22nd Aug 2019. The program was inaugurated by Shri. Neelakandhan A N, General Manager (Materials) Cochin Shipyard.



Shri.Neelakandhan A N, General Manager (Materials) Cochin Shipyard, inaugurating the one day workshop "Supplier engagement program for profitable procurement "at hotel Renai Cochin on 22nd Aug 2019. Chairman Mr. Roby TA, Course Coordinator Dr. David Moraise and Hon. Treasurer. Mr. Sahji KS also graced the occasion.

Shri. Roby T A, branch Chairman carried out the workshop presentations and lecture. In the work shop the supplier engagement requirement was well explained with case studies, videos and examples.

During the workshop Mr. Roby explained the importance of supplier engagement in the tough global competition scenario and without understanding and taking care of the supplier, sustainability programs will not work.



Branch Chairman Shri. Roby T A delivering the workshop lecturers

He explained the fact that in any business the supply chain spends takes the largest amount up to 75% of the revenue. One can in the spent on supplier analysis, 20 percent suppliers have the spent of 80 percent. He highlighted the importance of supplier segmentation and devising strategies accordingly for alliance, collaboration, partnership or merger for the mutual interest and market sustainability. He also stressed the point that the strategy should be aligned with the business objectives and futuristic.

The workshop explained the “Supplier Engagement Model, Supplier segmentation principles, and strategy for engagement development to the participant with metrics and measurers. The program was well attended by functional executives from various industries both public and private; Cochin shipyard, Apollo Tyres, TELK, Kannan Devan Tea, AVT natural, Crust n Crump, Agape Diagnostics, Kerala Feeds etc.

LUCKNOW BRANCH

Annual general body meeting held on Sunday the 18th august 2019 at 12 noon in our newly build conference room. 80 members present in placed AGM. At 12:25 request was made to occupy the seats, executive members were requested to occupy their seats on dias, before that snacks were served and people were happy. Sharp 12:30 pm Secretary Mr Brijesh Singh came to podium and welcomed all present members and informed todays agenda points. First of all he read the last minutes in front of AGM held on 8th august 2018 at the same venue above minutes approved unanimously.



Newly Elected Committee for year 2019-21



80 Members attended AGM

Regular EC Meeting are being held with 80% average attendance . As usual we were the first to finalize the account in north . Tax assessment of both building was made. The year went on very well with the cooperation of all the members thanked them and requested treasurer to present the accounts.

Mr PK Bajpai read about the silent features of the accounts and said that the main issue of tax assessment of both the buildings finalized. He requested the august body to adopt the accounts.

Sri Krishna Gopal proposed for adoption and Sri GD Garg and Atul Kumar seconded this that the account were adopted .

After the accounts adoption certain veterans of branch gave their views and ideas for the betterment of the branch . After this chairman in his address said that with the support of you all and especially Mr PK Bajpai and office staff the branch is progressing well.

The chairman hoped that the similar support would continue in the year to come after the above election officer Mr CBS Rathore announce the newly elected committee for year 2019-2021.

Elected committee members are as under -

- Mr ML Mangal -Chairman
- Mr KKM Nambiar-Vice Chairman
- Mr Pramod Ranjan-Treasurer
- Mr Brijesh Singh - NC-1
- Mr Harmesh Sawhney - Secretary
- Mr Saurabh Kumar Garg - NC-2
- Mr Krishna Gopal - NC-3
- Mr PK Bajpai - NC-4

Executive members elected

- Mr Amit Kumar
- Mr DK Dube
- Mr Ranjan Srivastava
- Mr Mohd Amil
- Mr CBS Rathore

Executive member nominated

- Mr Abhishek Kumar
- Mr PSL Srivastava
- Mr GP Srivastava
- Atul Kumar

Advisor

- Sri S KJha
- Sri CK Vishwakarma
- Sri K P Sharma

Vote of thanks given by NC Mr Harmesh Sawhney DGM tata motors and requested members for lunch.

NEW DELHI BRANCH

AGM OF IIMM DELHI BRANCH HELD ON 23.08.2019
Place – Chelmsford Club, New Delhi Time – 6.00 p.m.

THE ANNUAL GENERAL MEETING OF THE DELHI BRANCH WAS HELD ON 23.08.2019 AT THE CHELMSFORD CLUB NEW DELHI.

The, Vice Chairman, Hony. Secretary, Hony. Treasurer Committee Members, NC Members and members were present as per the attendance register of AGM. At the outset, on completion of the corum for the meeting the Secretary requested the Vice Chairman to start the proceedings, as Chairman was not present. Vice Chairman started the proceeding as per the agenda.



The Vice Chairman requested the house to confirm the record notes of last AGM, which were circulated to all.

The minutes were read out also by the Hony Secretary, Mr. Babu PS & the same were confirmed by the members. It was proposed by Mr. Srideb Nanda and seconded by Mr. R.P.Durga.



Hony. Treasurer, Mr. M K Mittal presented the annual audited accounts of the branch for the year 2018-19 and mentioned the important figures of the Balance sheet. He asked the audience for clarifications, if any. No question came up. Then he requested to pass the accounts by raising hands. The accounts were passed unanimously. It was proposed by Mr. Prashant Goel and seconded by Mr. V P Yajurvedi.

As per the agenda, Secretary requested the Vice Chairmanto deliver her welcome speech. Mrs. Deepak S Gulati spoke to the audience present about the activities/programme being held DelhiBranch and the Educational activities being performed at the National level.

The Election Officer Col Gopal Purdhani announced the Elect New Committee for the Term 2019-2021.

The following committee was formed unanimously:

No.	Positions	Name	Mobile	Email
1	Chairperson	Mrs. Deepak S Gulati	9810535755	dgulati1@gmail.com
2	Vice Chairman	Mr. Babu PS	9213421213	mail.psbabu@gmail.com
3	Hony. Secretary	Mr. Srideb Nanda	9868143381	srideb@gmail.com
4	Hony. Treasurer	Mr. Narender Kumar	9811132674	narender38kumar@gmail.com
5	National Councillors	1. Dr. M K Bhardwaj	9868125452	mkbhardwajbos@gmail.com
		2. Mr. H K Sharma	9811295816	hksharma15@gmail.com
		3. Mr. Suresh Kumar	9818464359	iimm4delhi@gmail.com
		4. Mr. Sanjay Shukla	9818317929	sanjaysh006@gmail.com
6	Ex. Committee Members	1. Brig. Ashok Sharma (Retd)	8860031730	ashok_52j@rediffmail.com
		2. Mr. T G Nandakumar	9811799045	tgn1957@gmail.com
		3. Mr. Ved Prakash Yajurvedi	9473763645	vpyajurvedi@gmail.com
		4. Mr. M K Mittal	9999764415	mahender_mittal@yahoo.com
		5. Mr. Prem Narayan	9717647020	premn2011@gmail.com
7	Immediate Chairman	1. Mr. G Ajaykumar	9818415999	ajaykumar.g99@gmail.com
8	Co-opted Com. Members	1. Mr. R K Tandon	9811866691	rktandon28@gmail.com
		2. Mr. Prashant Goel	9818187899	prashantgoel123@rediffmail.com

At the end, the new Elected Chairman, Mrs. Deepak S Gulati thanked the House also on behalf of new elected team for the confidence imposed on them.

PUNE BRANCH

IIMM Pune Branch organized its 6th Annual Awards for Supply Chain Management on Saturday, 3rd August, 2019, at Sheraton Grand, Pune.



Audience at the Event



Hotel Bule Diamond - Excellence in Hospitality



Jehangir Hospital - Outstanding Hospital In SCM Practices

The Awards Function was graced by eminent personalities, Mr. P K Mehta, Distinguished Scientist & Director General (ACE), Mr. Pradeep Bhargava – President MCCIA and many top officials, Decisions makers, CEOs, Directors, VPs, Head of Departments from Supply Chain & Operations, Purchasing & Materials and key people from business and industry sectors across India.



Kool - Ex Cold Chain Ltd Team - Logi. Sector Medium Scale



Mr. Bhimrao Kadam & Team - MBM Automations & Robotics - Mfg. Sector Small Scale



Mr. Hitendra Admuthé Felicitating Special Guest Mr. Atul Kulkarni (Addl. DG of Police, CID, Maharashtra State)



Mr. K R Nair Felicitating Special Guest Mr. Pradeep Bhargava President (MCCIA)

Mr. P.K.Mehta appreciated the efforts of Pune Branch to bring about recognition and felicitate organizations for their SCM Practices.



Mr. Kalyan Nawputa - Man Logistics (I) Pvt. Ltd - Logi. Sector Medium Scale



Mr. Laxmikant Kole & Team - Balaji Enterprises - Mfg. Sector Medium Scale



Mr. Sanjay Kachare & Team - Kimberly Clark India Pvt. Ltd - Mfg. Sector Large Scale



Mr. Shirvardhan Gadgil Felicitating special Guest Mr. Dananjay Sathaye Former President (IRMA)
The program was also graced by IIMM National President Mr. G.K. Singh, NST Mr. L. R. Meena



Mr. Shripad Kadam Felicitating National Vice President Mr. Jitesh Gupta



Mr. Terrence Fernandes Felicitating National Secretary Mr. L R Meena



Mr. Vijay Laghate Felicitating special Guest Mr. S K Jain Past President (MCCIA)



MRC Logistics (I) Pvt Ltd - Logi. Sector Large Scale

President (West), Mr. Jitesh Gupta. Mr. G. K Singh in his address has appreciated the dynamism of Pune branch to bring about the awards program scaling higher & higher each year. He also suggested that the program be taken to National Level.



Pune Branch Chairman Mr. Amit Borkar Addressing the Audience



Pune Branch Chairman Mr. Amit Borkar Felicitating National President Mr. G K Singh



Pune Branch Chairman Mr. Amit Borkar Felicitating Special Guest Mr. P K Mehta



Release of Souviner by the Hands of Chairman, National Councillors & Special Guest



Shreemant Dagdusheth Haiwai Sarvajanik Ganpati Trust Team - Unsung Hero In SCM



SKF India Ltd. Team - Warehouse Excellence Award



Thermax Ltd Team - Lifetime Achievement Award

Branch Chairman Mr. Amit Borkar & Program Convener Mr. K.R.Nair thanked all guest and dignitaries for attending the Awards function & making the evening a grand success.

Awards Winners - 2019

Names

- Kimberly- Clark India Pvt. Ltd
- Balaji Enterprises
- MBM Automation & Robotics
- MRC Logistics (India) Pvt. Ltd.
- MAN Logistics (India) Pvt. Ltd
- Kool-Ex Cold Chain Ltd.
- SKF India Ltd.
- Jehangir Hospital
- Divisional Railway Manager
- Shreemant Dagdusheth Halwai Sarvajani Ganapati Trust
- Blue Diamond
- Thermax Ltd.

Category

- Manufacturing Sector - Large Scale
- Manufacturing Sector - Medium Scale
- Manufacturing Sector - Small Scale
- Logistics Sector - Large Scale
- Logistics Sector - Medium Scale

- Warehouse Excellence Awards
- Best Hospital in SCM Practices
- Best Public Sector Enterprise of The Year
- Unsung Hero of SCM Award
- Excellence in Hospitality
- Lifetime Achievement Award

THIRUVANANTHAPURAM BRANCH

The Annual General Meeting of IIMM Thiruvananthapuram Branch for 2018-19 was held on 17-08-2019 (Saturday) at 6.30 PM at the IIMM office hall. After ascertaining the quorum, Chairman Dr. Koshy M George declared the meeting open. The meeting started with a silent prayer.

Chairman in his presidential address briefed the details of the activities conducted during the report period. The major event organized during the year was the National Seminar on 23rd February 2019 on the topic "Materials Management : National Challenges and Solutions". More than 150 delegates from the Indian Industry, Scientific Establishments, R &D/ Academic Institutions actively participated in the seminar. He also reported that the Chairman and NC Members M/ s.K.G.Nair and M.Janardhanan attended and actively participated in NATCOM-2018 held at Aurangabad on 22nd & 23rd November 2018. Chairman also announced that he together with Shri D.Dasaradha Reddy, NC Member, Hyderabad Branch handed over a cheque for Rupees One Lakh to Kerala Chief Minister Shri Pinarayi Vijayan towards donation to the Kerala Chief Minister's Disaster Relief Fund contributed by the IIMM Branches and NHQ. Chairman also pointed out that we successfully hosted the 172nd NC Meeting in Trivandrum on 10th & 11th May 2019 which was well appreciated by National Leaders and NC Members.

Further, he gave an account of the programmes proposed for the current year including talks by eminent personnel on Materials Management on related subjects, Seminar on a subject of current relevance to materials management, etc. and requested all past Chairmen, NC Members and other members to actively participate in hosting the functions as well as on our plan to enhance membership.

Secretary Shri M.G.Narayanan Nair presented the working report for 2018-19, which was discussed and unanimously approved by the AGM. Treasurer Shri S.Ananda Sivan presented the audited Statement of Accounts 2018-19 of the Branch. After detailed discussion the AGM unanimously approved the accounts. During the discussion Shri D Sreenivasan suggested to have a common software package to be introduced by NHQ for all Branches so as to have uniformity in accounting procedures which will also help in submitting Annual Accounts in time and he requested the NC Members to take up this matter with National Leaders in next NC Meeting.

Since there was no nomination/contestants for the election of Office Bearers for the period 2019-21, the Returning Officer Shri D Sreenivasan presented a panel by general consenses which was unanimously approved by the AGM. The returning Officer declared the election of Dr. Koshy M George as Chairman, Shri K Raveendra prasad as Vice- chairman, Shri M G Narayanan Nair as Hon.Secretary, Shri S Anandasivan as Treasurer, Shri K G Nair and Shri M Janardhanan as NC Members, Shri R Sivanandan, Shri N Jayakumar, Shri N Suresh, Shri P C Sasikumar, Shri P L Jose and Shri V S Mohanachandran

Nair as Executive Committee members and Shri M P Ramachandran as Course- Coordinator. The Chairman and other office bearers thanked the members for their whole hearted co-operation and support in the last term and solicited continued support and co-operation in the coming term also.



Dr.Koshy M George chairing the AGM of Trivandrum Branch



Shri M G Narayanan Nair presenting Annual Report 2018-19



Shri S Anandasivan presenting the Audited Statement of Accounts and Balance Sheet 2018-19



Members attending the AGM

After the proceedings of the AGM, Shri S Laxmanan, one of the senior members of the branch recited a film song which was enjoyed by all the members present. Vice Chairman, Shri K.Raveendraprasad proposed vote of thanks. The meeting was followed by dinner.

VADODARA BRANCH

Annual General Meeting in August 2019 : The **56th AGM** of Vadodara branch was organised on **10th Aug'19** at Hotel Grand Mercure Surya Palace wherein Statement of Accounts to consider Audited Income / Expenditure Account & Balance Sheet for 2018-19 had been presented without any queries received from members. About 100 members attended AGM & Balance Sheet was approved by members present. Also, the Auditors Chandabhoy & Jassoobhoy for ensuing year 2019-20 were finalised. More than **160 persons** comprising of Members & their spouses attended AGM & appreciated the talk on topic 'EV Integration : Futuristic Aspects & Considerations' by **Chief Guest, Mr.Nihar Raj-VP**, Business Head : Power Consulting Asia, ABB India Ltd., Vadodara. Also, **Dr.Shivani Sharma-Principal Technical Consultant** : Power Consulting, ABB India Ltd., Vadodara shared the presentation on above topic. The Programme was followed by Dinner. The Photos shown below depict AGM Highlights –



Mr.Tushar Trivedi-Chairman presenting Statement of Accounts for F.Y.2018-19



The Chief Guest, Mr.Nihar Raj being felicitated with Memento by Mr.Rakesh Desai & Dr.Shivani Sharma being felicitated with Memento by Mr.Manoj Patel

ELECTION Result Declaration of Committee Members for 2019-2021 Tenure

The Nomination Form for Election of Branch Office Bearers & Committee Members sent to All Members alongwith AGM Circular wherein Office Bearers i.e.Chairman, Vice Chairman, Hon.Secretary, Hon. Treasurer and **6 Executive Committee Members** with **5 National Council Members** were Elected Uncontested, as per following details shared by Election Officer, Mr.D.R.Yadav –

New Committee for 2019-21

OFFICE BEARERS

Mr. K. B. Walvekar - Chairman
Mr. Rakesh Desai - Vice Chairman

Mr. Arvind Parmar - Hon. Secretary
Mr. Manojkumar Patel - Hon. Treasurer

EXECUTIVE COMMITTEE MEMBERS

Mr. Ajay Shukla, Mr. S. S. Pandya, Mr. Kishor Patel, Mr. Vasudev Harani, Mr. K. P. Vala, Mr. Surendra Dhumal

NATIONAL COUNCIL MEMBERS

Mr. Lalbhai Patel, Mr. Devanand Trivedi,
Mr. Bharat Sodha, Mr. Malay Mazumdar
Mr. Anand Purohit

IMMEDIATE PAST CHAIRMAN

Mr. Tushar Trivedi



The Election Officer, Mr.D.R.Yadav declaring Election Result during AGM 2019



The Group Photo of New Committee Members for 2019-21 Tenure

EXECUTIVE HEALTH

SIMPLE WAYS TO LIVE A HEALTHY LIFESTYLE

PAIGE WAEHNER

The phrase 'healthy lifestyle' is an abbreviated definition of how you should live if you want to get the healthiest body you can—one that both looks good and feels good. You know the obvious behaviors that describe someone who is healthy and takes care of themselves. A healthy person doesn't smoke, tries to maintain a healthy weight, eats healthy foods with plenty of fruits, vegetables and fiber and, of course, exercises on a regular basis.

Then there are other elements to add to the list. A healthy person also knows how to manage stress, gets good quality sleep each night, doesn't drink too much, doesn't sit too much—basically, does everything in moderation all the time. When you look at everything that could possibly go into a healthy lifestyle, you can see just how hard all of those things are in our current world.

The good news is, you don't have to change everything at the same time. In fact, the trick to healthy living is making small changes—taking more steps each day,¹ adding fruit to your cereal, having an extra glass of water, or saying no to that second helping of buttery mashed potatoes. One thing you can do right now to make your lifestyle healthier is to move more.

Here's Why You Need Move More : You know you need to exercise, but there are many excuses not to do it. You're too busy, don't know where to start, you're not motivated or you're afraid you'll injure yourself. Maybe you think exercise has to be really hard or it isn't good enough.

Whatever definition you have about what exercise is or isn't, the bottom line is that exercise is movement. Whether it's walking around the block or running a marathon, that movement is exercise and every time you move more than you normally do, it counts.

It's great if you can spend time exercising—meaning you're sweating, working in your target heart rate zone, or doing something to strengthen your body. But it doesn't always have to be that way. Moderate activities like chores, gardening and walking can make a difference.

The Benefits of Moving More : The great thing about moving is that just a few minutes a day can have lasting benefits, many of which you may not even be aware of.

Just some of the benefits include:

- Reduces the risk of heart disease, stroke, and diabetes
- Improves joint stability
- Increases and improves range of motion
- Helps maintain flexibility as you age
- Maintains bone mass
- Prevents osteoporosis and fractures
- Improves mood and reduce symptoms of anxiety and depression
- Enhances self-esteem
- Improves memory in elderly people
- Reduces stress

Even if you opt for small changes and a more modest weight loss, you can see the benefits are still pretty amazing. The Centers for Disease Control and Prevention notes that if you are overweight, reduction of 5 to 10 percent of your total body weight can help lower blood pressure, cholesterol, and blood sugar.

In fact, you don't even have to have a goal to lose weight, especially if you have trouble sticking to a program. Why not focus on being healthy to start and worry about the weight loss once you've got some healthy habits under your belt?

Simple Ways to Move Your Body : You can start the process of being healthy and now by adding a little more activity to your life. If you're not ready for a structured program, start small.

Every little bit counts and it all adds up to burning more calories.

- **Turn off the TV and computer.** Once a week, turn off the TV and computer and do something a little more physical with your family. Play games, take a walk, do almost anything that will be more active than sitting on the couch.
- **Walk more.** Look for small ways to walk more. When you get the mail, take a walk around the block, take the dog for an extra outing each day, or walk on your treadmill for five minutes before getting ready for work.
- **Do some chores.** Shoveling snow, working in the garden, raking leaves, sweeping the floor—these kinds of activities may not be vigorous exercise, but they can keep you moving while getting your house in order.
- **Pace while you talk.** When you're on the phone, pace around or even do some cleaning while gabbing. This is a great way to stay moving while doing something you enjoy.
- **Be aware.** Make a list of all the physical activities you do on a typical day. If you find that the bulk of your time is spent sitting, make another list of all the ways you could move more—getting up each hour to stretch or walk, walk the stairs at work, etc.

Eating Well Without Being Miserable : Eating a healthy diet is another part of the healthy lifestyle. Not only can a clean diet help with weight management, it can also improve your health and quality of life as you get older.⁴ You already know about the food groups and the fact that you should eat more fruits and vegetables and less processed foods. You probably have a list of things you know you should do for a healthier diet but, again, making too many changes at once can backfire. Going on a restrictive diet may make you crave the very foods you're trying to avoid.

Another approach is to look for ways to make smaller changes each day. Just a few ideas for changing how you eat include:

- **Eat more fruit.** Add it to your cereal, salads, dinners, or make it a dessert. Fruit is also a great snack after work or school to keep you going for dinner.
- **Sneak in more veggies.** Add them wherever you can—a tomato on your sandwich, peppers on your pizza, or extra veggies in your pasta sauce. Keep pre-cut, canned, or frozen veggies ready for quick snacks.
- **Try a healthy salad dressing.** If you eat full-fat dressing, switch to something lighter and you'll automatically eat fewer calories.
- **Eat low-fat or fat-free dairy.** Switching to skim milk or fat-free yogurt is another simple way to eat fewer calories without having to change too much in your diet.
- **Make some substitutions.** Look through your cabinets or fridge and pick three foods you eat every day. Write down the nutritional content and, the next time you're at the grocery store, find lower-calorie substitutes for just those three items.

A Word From Verywell : Creating a healthy lifestyle doesn't have to mean drastic changes. Making small changes in how you live may seem like a slow process, and it is. You may adapt to change better when it doesn't require you to overhaul your entire life. Just pick one thing and work on that one thing every day, letting the rest of your life and habits stay the same. You may be surprised that those small changes really can make a difference.

Source: www.verywellfit.com



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4	Professional Diploma in Public Procurement	World Bank	Graduate in any discipline or Diploma Holders	6 Months
5	Certified Professional in Supply Management (CPSM)	ISM – USA	4 Years Degree + 3 Years of SCM Experience OR 5 Years Degree + 5 Years of SCM Experience	6 Months
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to help the country overcome
economic challenges; to ensure people
live a good quality of life, uninterrupted.

We believe scale can lead to
goodness, and this is what drives us to
growth. Because, the more we grow,
the more lives we can touch.



adani

Growth
with
Goodness

