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# MATERIALS MANAGEMENT REVIEW



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*Theme : Customer Engagement-  
Technology Aspirations for  
NextGen Supply Chain and Manufacturing*



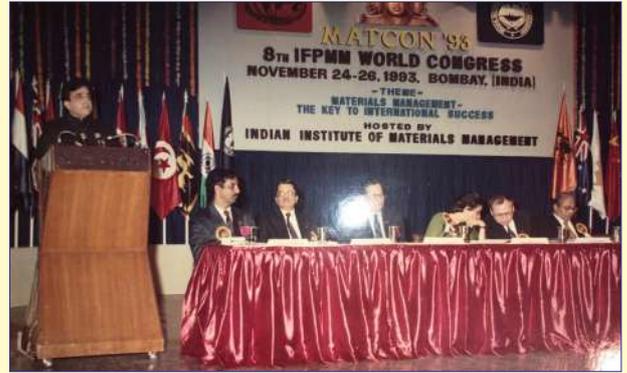
**Inauguration of NATCOM-2018 by Lighting of Lamp.**



## Silver Jubilee of 8th IFPMM World Congress hosted by IIMM, November, 1993 at Mumbai



HE Pranab Mukherjee, the then Union Commerce Minister lighting the traditional lamp to inaugurate the Congress.



8th World Congress: Ashok Sharma on podium, Sitting L to R M/s: Richard Moras, CL Kapoor, Madhav Kapoor, Ms Bakul Patel, Sr VP IFPMM, Director World Bank, HE Pranab Mukherjee



Mr. Pranab Mukherjee releases the World Congress Souvenir



Mr Anand Mahindra, MD, M & M receiving an Award



World President IFPMM Ashok Sharma briefs the Chief Guest about IFPMM & IIMM



Senior office bearers of IFPMM on the head table



A section of foreign delegates



Dr S Ramani, Mr UV Rao, Mr Anand Mahindra, Mr MM Raji in the invitees' section

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*From the Desk of The National President*



Dear Professionals,

Season's Greetings from National President!!!

We are about to complete wonderful 2018 and I wish you and your family a very happy Christmas and joyful New Year.

It has been a great year for IIMM, wherein, AICTE have recognised our one course i.e. PGDMM and approved new course i.e. PGDSCM&L for the academic year 2018-19.

We have signed MoUs with SAIL and CIL for conducting specialised Contract Management program for their officials. This will help in financial consolidation of IIMM.

I am also happy to tell you that various IIMM Branches have conducted very lively and enthusiastic Regional Conferences/Seminars/Signature Events/In-house Training programs etc. which will help us in Brand Building of IIMM.

IIMM Aurangabad has conducted a grand and successful NATCOM 2018 in a very vibrant, professional & befitting manner and has set anew Benchmark in organizing this Event. Speakers were selected carefully and received well by the delegates through futuristic presentations. Hospitality and personal touch were an exquisite feature of the event. I would like to place my appreciation for Chairman – Aurangabad Branch, VP (W), and Convenor NATCOM & his team for this memorable event.

Next MMR will be a special issue on NATCOM 2018 – a Super Event. The NATCOM 2019 will be hosted by Kolkata Branch jointly with Jamshedpur and Ranchi Branch. All are requested to support NATCOM 2019 and Kolkata Branch whole heartedly to make it a grand success.

I request all members of the Institute to participate actively in the growth of IIMM by enrolling maximum no. of students in the PGDMM and PGDSCM&L Courses.

A handwritten signature in black ink, appearing to read 'G. K. Singh', written in a cursive style.

**G. K. SINGH**

National President - IIMM

e.mail : s\_gksingh@yahoo.co.in

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## *From the Desk of Chief Editor*



Dear Members,

India has emerged as the fastest growing major economy at 8.2% in April - July Quarter of 2018-19 and is estimated to grow at 7.3% for Fiscal Year 2018-19. India is expected to be one of the top three economic powers of the world over the next 10-15 years, backed by its strong domestic consumption, increasing per capita income, increasing rural participation in economic activities and structural & policy reforms including Insolvency and Bankruptcy Code, Smoother Implementation of GST and better infrastructure.

India is expected to be the third largest consumer economy as its consumption may triple to US\$ 4 trillion by 2025, owing to shift in consumer behaviour and expenditure pattern and is estimated to surpass USA to become the second largest economy in terms of purchasing power parity (PPP) by the year 2040, according to a report by PricewaterhouseCoopers.

India has recently been moved to 77<sup>th</sup> Rank (up by 53 ranks) in "Ease of Doing Business" Index of World Bank, amongst 190 countries. World Bank has also stated that private investment in India is expected to grow by 8.8% in 2018-19 and thereby drive the growth in India's GDP. It is a good sign that the country's economic environment and position is getting credence globally and is being recognised by international bodies like the IMF, World Economic Forum and UNCTAD.

With the improvement in the economic scenario, there have been various investments in various sectors of the economy. The M&A activity in India increased 53.3% to US\$ 77.6 billion in 2017. Numerous foreign companies are setting up their facilities in India on account of various government initiatives like Make in India and Digital India.

However, the journey to become a USD 5 Trillion economy from current USD 2.8 Trillion, will not be smooth as IMF's latest review about the global economy is not encouraging. The global economy is expected to clock 3.7 percent growth in 2018 and 2019, which itself is little lower than the IMF's April assessment. Rising trade tensions, reversal of capital flows from emerging markets and tightening financial conditions are key risks.

Indian Govt. has already started addressing these issues. The domestic orientation is one buffer which allows Indian Economy to tackle global challenges. Another important thing is Private Consumption, which led Indian Economy to grow at 8.2% in 1<sup>st</sup> Quarter. Private consumption is being supported by the 7th Pay Commission driven salary increases by state governments, robust personal loan growth and fillip to rural incomes from record foodgrain production, farm loan waivers and now higher MSPs. Public spending by Centre and states is yet another key driver of both consumption and investment showing significant improvement.

We may have to take care, especially on the policy front, to ensure that if the global environment takes a turn for the worse, the Indian economy can withstand that shock without a significant growth slowdown and large capital outflows.

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

**(DR. M.K. BHARDWAJ)**



# MATERIALS MANAGEMENT REVIEW

Volume 15 - Issue 2

(December 2018)



*IIMM is a charter member of International Federation of Purchasing & Supply Management*

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**Correspondence :**

**MATERIALS MANAGEMENT REVIEW**

**Indian Institute of Materials Management**

4598/12 B, 1st Floor, Ansari Road, Darya Ganj, New Delhi - 110 002.

Phones : 011-43615373

Fax: 91-11-43575373

E-mail: iimmdelhimmr@gmail.com & iimm2delhi@gmail.com

Website : www.iimm.org

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**INDIAN INSTITUTE OF MATERIALS MANAGEMENT**

4598/12 B, 1st Floor, Ansari Road, Darya Ganj, New Delhi - 110 002.

Phones : 011-43615373 Fax: 91-11-43575373

E-mail: iimmdelhimmr@gmail.com & iimm2delhi@gmail.com

Website : www.iimm.org

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## SUPPLIER ENGAGEMENT FOR IMPROVED VALUE PERFORMANCE : TECHNOLOGY FOSTERING FURTHER BOND

**SN PANIGRAHI**  
**GST CONSULTANT & CORPORATE TRAINER**  
**snpanigrahi1963@gmail.com**

**M**oving beyond the transactional dimensions of supply chain management into a deeper understanding of supplier relationships is critical. Effective supply chain management requires more than improving supplier performance and reducing costs. Good supplier engagement can help your organization meet their business objectives and improve performance.

Developing collaborative and mutually beneficial engagement with existing and potential supply partners delivers greater levels of innovation and competitive advantage than could be achieved through a traditional, transactional purchasing arrangement. It requires a major evolution in how companies approach taking insights of Technological Advancements. Strong performance is needed on both sides for the partnership to be successful and drive mutual benefits.

Supplier Engagement is recognized as a key factor in managing corporate risk, and companies must manage it positively and proactively, with an eye toward becoming a supplier's customer of choice. The supplier-customer Engagement drive a mutually beneficial relationship that creates value for both parties.

**Supplier Engagement Relationships Develops Over a Time :**

- Benefits of doing business together arise from ideas

of sharing as well as exchanging

- Buying organisation seeks to develop a long-term relationship with supplier
- Both organisations share common interests, both benefit from adding value in the supply chain
- Supplier participates with buyer looking for improvements and innovations
- Both parties jointly set targets for improvements in cost and quality
- Meet regularly to discuss progress
- Proactive relationship looking for improvements
- Growing trust, length of relationship provides reassurance
- Customer Reducing the number of suppliers it deals with
- Supplier Assigning Specific Assets to the exclusive use of working on orders for that customer

**Mutual Benefits of Supplier Engagement**

- Ø Improved Planning
- Ø Focus on Quality
- Ø Improved Product Development
- Ø Greater Supplier Support & Value
- Ø Lower Costs
- Ø Continuous Improvement

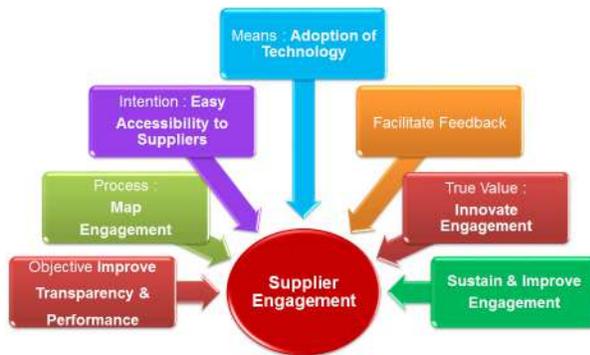
**Benefits of Supplier Engagement**

<b>To the Supplier</b>	<b>To the Buying Organization</b>
The buyer will appoint a vendor manager to develop the relationship. The supplier will always know who to deal with in the buyer organisation.	The buyer focuses attention on improving the relationship with key suppliers.
The vendor manager will introduce the supplier to the managers in the organisation responsible for buying decisions.	The supplier's awareness of the buyer's requirements will mean that the supplier is more likely to be successful in meeting them.
The supplier will be kept informed of the buyer's forward plans.	The supplier will be actively involved with the buyer in the quality improvement process.
The supplier will gain a much better understanding of the buyer organisation and its needs.	The supplier should develop a high level of trust and confidence in the buyer.
The buyer and supplier will set up joint quality-improvement teams, that both parties will benefit from	The supplier is likely to get more business from the buyer, as a preferred supplier

## Collaborative v Competitive Relationships

- Competitive approach squeezes the profit margins of the supplier, and by doing so the buying organisation obtains some of the value that the supplier would otherwise keep for himself
- Developing collaborative relationships takes time and effort – unrealistic to try creating more of these relationships than a buyer can effectively manage
- Where a failure in supply would not be damaging it is not worth the time and effort to create a collaborative relationship

**Objectives of Supplier Engagement :** Supplier engagement is an ongoing function of an organization subject to regular evaluation and review. It is important to define supplier engagement objectives so that you can measure the success of your activities afterwards.



**Developing a Supplier Engagement Plan**  
Developing your supplier engagement plan includes the following stages:

- **Stage 1:** Develop and document your supplier engagement processes and systems;
- **Stage 2:** Implement processes and systems; and
- **Stage 3:** Communicate processes and systems with suppliers.

**Technology Transformation :** Technology is quickly reshaping just about every aspect of the way business is done. It is a catalyst for change as well as an enabler across industries, and the procurement industry is no exception. Advanced Technology is being adopted in Supplier Engagement.

Technology has provided the ability to deploy Advanced Technological Platforms that will help in automating or enable technology linked procurement activities and due to it, procurement organizations will find mundane supplier activities waning. This will provide procurement professionals with extra hands-on time to focus on higher value-add from suppliers. New technology provides opportunities for procurement to boost market coordination, introduce new suppliers, enable better compliance, increase capacity and speed, minimize risk and increase trust

by removing human error. These advancements not only enhance the performance of the buyer's organization, but also enhance the performance of the suppliers—helping improve the buyer-supplier relationship, collaboration and innovation.

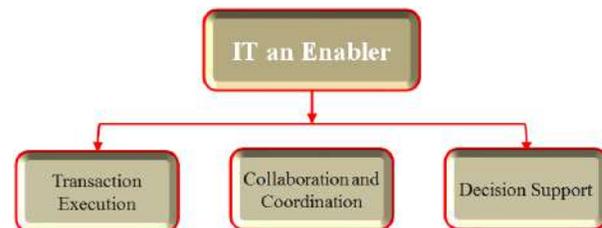
## Steps to Successful Technology Adoption



## The Pervasive Power of Digital Transformation

Information Technology as an Enabler of Supplier Engagement

- ∅ providing information availability and visibility;
- ∅ enabling a single point of contact for data;
- ∅ allowing decisions based on total supply chain information; and
- ∅ enabling collaboration with partners



Existing Information Technology Tools and Applications in Supplier Engagement

- ∅ Electronic Data Interchange (EDI)
- ∅ Enterprise Resource Planning (ERP) Systems
- ∅ Warehouse Management Systems
- ∅ Inventory Management Systems
- ∅ Transportation Management Systems
- ∅ Radio Frequency Identification (RFID)
- ∅ Cloud Computing System
- ∅ Web Services
- ∅ Decision Support Systems (DSS)

Procurement decision-makers feel that automation is the future for the function. Process enhancement, automation and talent development are the biggest investment priorities for procurement professionals to better engage with Suppliers.

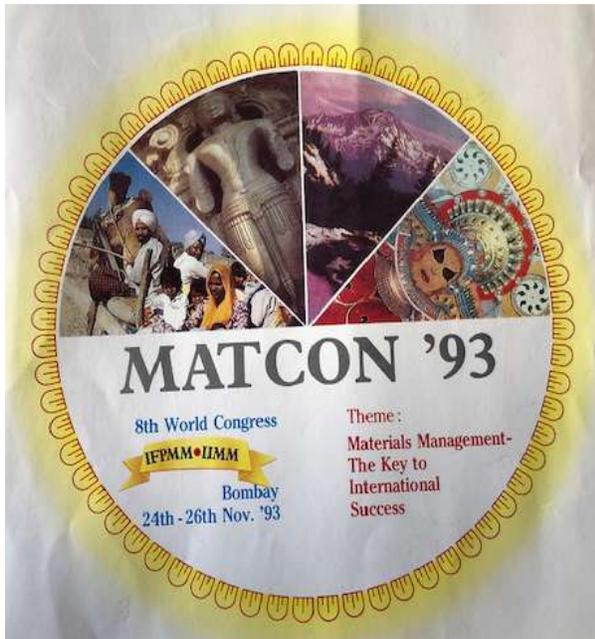




## SILVER JUBILEE OF 8<sup>TH</sup> IFPMM WORLD CONGRESS

Hosted by IIMM 24<sup>th</sup> to 26<sup>th</sup> Nov'93 at Bombay (Mumbai)

**ASHOK SHARMA, WORLD PRESIDENT  
IFPMM '91-93 (now IFPSM)  
ashok.siloni@gmail.com**



24<sup>th</sup> to 26<sup>th</sup> November have gone down as red-letter days in the history of IIMM. We hosted an International Buyers' Sellers' Meet on 24th November, 1993. This was inaugurated by HE Dr PC Alexander, the then Governor of Maharashtra. Several Indian companies put up stalls in the Regal Room of Hotel Oberoi Towers and a large number of foreign buyers visited the same. A special First Day Cover on the occasion was released by India Post at the hands of Dr Alexander through the good offices of Shri VH Iyer & Mr MM Rajji.

The same evening the 8<sup>th</sup> World Congress was inaugurated by Mr Pranab Mukherji, the then Union Minister of Commerce. Over 850 delegates from 30-35 countries participated. The keynote address was delivered by Mr Raghavan Srinivasan, Chief Procurement, World Bank. The speakers included Prof Don Dobler, CPM, Well-known author, NAPM, Mr Peter Thomson, DG, CIPS and Mr Clive Mason, Director, British Airways, UK, Alain Chevallar, Chief ITC, Geneva and several other

distinguished people from 15 countries.

Messages for souvenir were received from the then President of India, Shri Shanker Dayal Sharma, Prime Minister Mr PV Narasimha Rao, Mr Manmohan Singh, Union Finance Minister, Mr Arjun Singh, Minister, HRD & other dignitaries.

Besides technical sessions, we also organised an evening of Indian classical music at Hotel Oberoi, a Fashion Show at Taj, Indian dances' show at Nehru Centre and a sit-down dinner at the Hotel Oberoi as grand finale. The Indian and foreign delegates were enthralled with these exclusive events.

The first Indian to become World President, IFPMM Mr M L Capoor chaired the inaugural session, Mr Ashok Sharma, the then IFPMM President, conducted and coordinated the entire World Congress. Mr Richard Moras, who later became the third Indian to become IFPMM President contributed as the Secretary General. Lt Gen DV Kalra, PVSM, AVSM (Retd.) provided great help and guidance.

A few months before the World Congress, Dr MK Bhardwaj arranged an interview of the World President on Doordarshan. Mr Pawan Duggal, Supreme Court Lawyer and Cyber Specialist acted as the anchor/ moderator of the show. Since Doordarshan was the only channel at that time, the show provided substantial publicity to the World Congress in particular and IIMM & IFPMM in general.

It was a world class event and declared as "The Best World Congress" by the former IFPMM Presidents present. Efforts to organise were put in by several members and volunteers, who deserve our grateful thanks. Photographs on the back-cover page present some glimpses of the grand event.





सत्यमेव जयते  
 राष्ट्रपति  
 भारत गणराज्य  
 PRESIDENT  
 REPUBLIC OF INDIA

MESSAGE

I am glad to learn that the International Federation of Purchasing and Materials Management is organising the 8th World Congress on the theme "Materials Management- The Key to International Success" in November, 1993 at Bombay.

I hope that the deliberations of the Congress will help in increasing awareness with respect to efficient utilization of resources, especially in the context of emerging trends in international trade and industry.

I send my good wishes for the success of the Congress.

*S. D. Sharma*  
 (SHANKER DAYAL SHARMA)



PRIME MINISTER

MESSAGE

Purchasing and Materials Management functions are becoming increasingly important in the wake of internationalisation and globalisation of our trade and economy. I am happy to learn that the 8th World Congress of the International Federation of Purchasing and Materials Management will be held in India from November 24 to 26, 1993. I compliment the Indian Institute of Materials Management on organising this event and hope that it will contribute to its expertise in the efficient and productive utilisation of resources.

My best wishes for the success of the Congress.

*P. V. Narasimha Rao*  
 (P.V. Narasimha Rao)

New Delhi  
 October 12, 1993



वित्त मंत्री  
 भारत  
 नई दिल्ली-110001  
 FINANCE MINISTER  
 INDIA  
 NEW DELHI-110001

18 OCT 1993

MESSAGE

*In the highly competitive and quality conscious global environment, Purchasing and Materials Management will have an increasingly important role to play in the future. Specialists in these fields of management should bring to bear their expertise on the over all performance of trade and industry to make them progressive and profitable in the international arena.*

*It is a welcome development for India to have been chosen as the venue for the 8th World Congress of the International Federation of Purchasing and Materials Management and I am sure that the deliberations of the assembled experts will be most fruitful.*

*I wish the Congress great success.*

*Manmohan Singh*  
 (MANMOHAN SINGH)



वणिज्य  
 भारत  
 नई दिल्ली-110001  
 MINISTER OF COMMERCE  
 INDIA  
 NEW DELHI-110001

MESSAGE

Internationalisation of our Trade and Industry has resulted in greater focus on Industrial Logistics. Purchasing and Materials Management have thereby emerged as areas of considerable interest to the Indian Industry. It is, therefore, appropriate that we should be hosting the 8th World Congress of the International Federation of Purchasing and Materials Management in India.

I have no doubt that the deliberations of the Congress will promote interest in these fields of specialisation and contribute to strengthening our position in the international markets.

I wish the World Congress success.

*Pranab Mukherjee*  
 (PRANAB MUKHERJEE)



## AREN'T COMMUNICATION SKILLS 'MORE IMPORTANT THAN EVER TODAY' IN PROCUREMENT?

MS SUVARNA SUDAGONI

LIFE MEMBER & EC MEMBER, IIMM HYDERABAD BRANCH

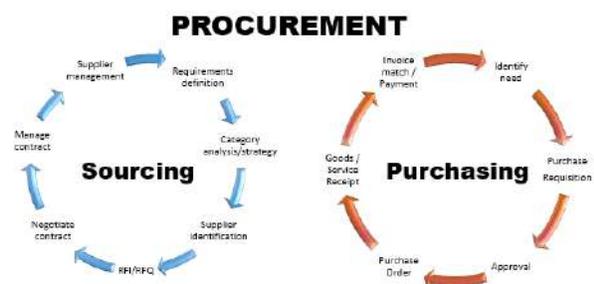
ssuvarna08@gmail.com

With years of procurement training and experience undergone, most of the procurement personnel still conclude below-average deals. Top procurement achievers achieve their successes not only through strict application of procurement policies and methods, but only because they have realised that people are at the heart of procurement. It is people that give better deals to other people – communication is the main contributor to procurement success and yet it is surprisingly one of the biggest areas in need of improvement, even today!!



When it comes to cooperating with staff in other departments, many procurement professionals admit that it is very difficult. And when it comes to communicating with those outside the organisation, i.e. the suppliers, communications can become even further strained.

It all boils down to the simple fact that with proper communication between stakeholders and external suppliers, more creative ideas can be brought to the table, thus improving the process. If people from different points of the process are able to give ideas for improvements based on first-hand experience, it stands to a reason that this will made for a much better managed process. If communication is limited, so is the ability of the procurement department to influence the end to end procurement process.



The large corporations try to make themselves more attractive to the next generation of procurement executives. What they really care about is their working environment and the support, they will get to develop their careers. Key to that is clear and concise communication from the top down.

The communication is one skill that has been neglected by leadership teams for some time, which added to the pace of change in technology, is hindering procurement.

### Steps To Improving Procurement Communications:

If we are to tackle this communication issue in procurement, there are some steps that procurement professionals need to consider:

- Prioritise stakeholders/suppliers. Assess how supportive your stakeholders are and their importance to the organisation. Suppliers consider the impact it would have on your business if they stopped supplying and how strategic they are.
- Regularly meet with stakeholders and suppliers. By getting together with them on a regular basis (as frequently as one's company may need) you can highlight and tackle their concerns and worries as they occur. Don't be scared to over-communicate, make sure they are regularly updated even if it's just a quick summary email. With suppliers, it's also important to regularly assess how you can improve your relationship from both sides, and offer constructive feedback to the supplier as well as asking for it yourself.
- Always offer options to the stakeholders. After negotiations, produce a list of options and relevant cases that back up each. This way, you are giving the stakeholders some influence and aren't taking the decision out of their hands, making them feel they have status.

When it comes to the communication method itself, you should assess which method best suits the situation and will deliver the optimum results. There are also some basic principles to consider when it comes how you communicate with stakeholders and suppliers:

- **Be clear.** This may sound like an obvious basic principle, but it's vital to make sure the 'narrative' of the proposal comes across so stakeholders understand and are excited by what you are

---

proposing. Use a brief headline to sum up the proposal and focus on the benefits the project will deliver as well as how they will be achieved.

- **Tailor it.** When getting across the key benefits of the project, don't just focus on general benefits and costs. Consider the stakeholders you are addressing and compiled it to show how you will tackle their own individual concerns.
- **Be personal and pragmatic.** Often with stakeholders, it's more beneficial to give them a call or pay a quick visit than to send less direct communication such as emails. A personal and pragmatic approach will get faster and better results when aiming to implement change.

The importance of communication both with internal stakeholders and external suppliers cannot be overlooked. With the right steps taken and changes applied you can turn around poor communication and improve the procurement process.

The two most difficult obstacles for procurement professionals are internal and external communication. These two are - lack of focus on cost control and lack of a solid procurement process.

**Enabling agility :** Actually, efficient communication and the facilitation of it within organisations have always been and still is what drives agility and ultimately business success, especially today. Enabling collaboration and multiple-party communication in real time, with internal and external parties, from anywhere and everywhere is what success will really look like. This is what is sought as an employee.

In any case, the times of overflowing email accounts are over. The next challenge for business leaders is to manage the various channels and tools of communication efficiently. A unified communication strategy is needed so that information is not lost and critical information is shared in the right way through the right channels.

"If things go wrong, which they often will, you have a relationship in which you work together to come up with the best solution."

The key to communicating for influence was to prepare thoroughly before any meeting. "Before heading in, identify the type of personality that will also be in the meeting." "Set your outcome and be prepared to adapt and present in a way that they want to be presented to."

"People become inspired and unified behind a vision that the team has bought into. Be clear about what you want."

The procurement professionals to think in terms of "useful belief" over positive thinking. "Positive thinking doesn't work," always. "It isn't sustainable. Useful belief and useful actions are practical and pragmatic. The question to ask one's self is: 'What is the most useful

action that one could take right now?' That will guide the behaviour."

The enterprise agreements are the future of procurement, they are "really driving to innovation." This allows for numerous applications to be accomplished with solutions that are already in place, rather than going through a big RFP process every time a need arises.

The future of agile procurement is a way to get more done more quickly, operating in terms of many small purchases rather than a few large ones.

### Communication Essentials

**Never discount the importance of relationships.:** Building great relationships, both internal and external, will help you facilitate successful negotiations. Take the time to understand the needs of your organization, whether it is those of your operations group, new product development team, accounting team, or logistics organization. All have different needs that you will have to consider when evaluating suppliers. Don't wait until problems occur, have an on-going dialog with all internal groups so that you are providing the best products and services to them. These internal relationships will give you more leverage as you build your external supplier relationships. You will be viewed as a more credible and creative negotiator.

**Saving money should not always be the top priority :** Pricing, quality requirements, delivery requirements, backup planning, volume management, packaging, financial stability and R&D capabilities are among the many aspects that make a viable supplier. If your focus is only on saving money, you may be missing out on making your company more profitable. Understand how each product is used and where costs and profits lie within the operational chain of your organization. You may find that paying a higher purchase price for an item that is customized to meet the needs of your operational chain can generate a lower cost product and higher profits for your company.

**Understand current product and service rates. :** Having the ability to go to a supplier and say this is what we need and what we will pay for it, will give you an advantage only if you have a good understanding of the competitive rates in the market. You should understand regional and industry wide rates for all aspects of your procurement needs.

**Know your suppliers, not just their sales agents. :** Make it a point to make regular visits to your suppliers, understand their capabilities, and know the people within their organization that can make decisions. It is also a good idea to bring your quality personnel with you to conduct regular audits of their operations. The more integrated you become with your suppliers, the more demanding you can be with them.

**Building consensus can be challenging but rewarding :**



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# CROSS DOCKING IN SUPPLY CHAINS: SCOPE, POTENTIAL & EFFECTIVE MANAGEMENT

DR. B. V. CADAMBI  
MANAGEMENT CONSULTANT & LIFE MEMBER – IIMM  
bvcadambi@yahoo.com

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**Introduction :** Supply Chain Management (SCM) has witnessed considerable developments over the years. This has contributed to growth and even reengineered businesses extensively. Two major forces that led to developments are competitive pressures (especially globalization of businesses) and growth in Information Technology. Developments are expected to continue with scope for promise but not without challenges.

There is extensive scope to capitalize from further SCM interventions in India. Some factors that motivate and drive SCM interventions in India are the following. These factors are interrelated:

- **The current thrust on Make in India:** The Prime Minister announced the 'Make in India' campaign in 2014 to encourage multinational and domestic companies to commence manufacturing activities in India. The intent is to make India a manufacturing hub for key sectors to produce world class products, both for the domestic and the export market. [Mukherjee (2017)].
- **Pressure to upgrade logistics systems and practices** as the logistics costs in India as a percentage of GDP is high when compared to several developed economies. The government has initiated steps to address the concern by upgrading infrastructure. The Shipping, Road Transportation and Highways ministry has launched the ambitious Sagarmala (String of Ports) Programme to modernize and even develop new ports for enhancement of port connectivity, port linked industrialization and coastal community development. In respect of road transport, two major mega- scale projects are Dedicated Freight Corridors (DFC) and Delhi Mumbai Industrial Corridor (DMIC). Further, owing to the infrastructure status accorded to the logistics sector, interest on loans offered to firms that build warehouses and cold chains lowered by 2%. As a result, rents for warehouse space and cold chains has lowered which is a boon to third party logistics (3PL) players. [Chowdhury, (2017)]
- **The introduction of Goods and Service Taxes (GST):** With GST, businesses would focus on supply chain efficiency rather than on cutting sales tax while organizing distribution. Also, there will be a shift from predominantly unorganized players in the

logistics sector to more organized players. Manufacturers will draw on the services of fewer but larger warehouses. [Sinha, (2017)]

Benchmarking with players in the same and other businesses and imbibing proven practices would help during SCM intervention. In fact, Anshuman Singh of Stellar Value Solutions highlighted a need to adopt global benchmarks in warehousing. [Warehousing Survey (2016)]

In this context, Cross Docking, a strategy pioneered by Wal Mart and replicated by several other firms in different industries, could be explored by others too. It is also vital to capitalize on developments in information technology. In the current era of Big Data and Business Analytics, Cross Docking offers scope for easier adaptability and hence a lot of promise. These aspects are detailed in this paper.

**Cross Docking: A Brief Overview:** Shipments from suppliers to customers are sent either directly or through certain intermediate facilities. Direct shipments are usually used when distances involved are short, time restrictions are stringent or when shipment sizes are large so that the entire/ almost entire vehicle capacity is used. At other times however, shipments are routed through intermediate facilities to enable consolidation of goods during transportation to capitalize on economies of scale. Cost savings that accrue from consolidation outweigh the extra cost incurred from increase in transportation times and distances. [Guastaroba; Speranza and Vigo (2016)]

Intermediate facilities could be operated in three ways which are as follows: [Guastaroba; Speranza and Vigo (2016)]

- a) The first, the traditional approach in which goods are stocked at intermediate facilities or warehouses as inventories in anticipation of demands from customers. Later, on receipt of orders, goods are transported to customers.
- b) Intermediate facilities operate as in-transit merge centres when orders from a customer comprises of several components which are combined to obtain an assembled product to be supplied to a customer as completed output. In such cases, consolidation cannot commence until all components of the order

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reach the facility. For example, M. K. Jokai Agri Plantations (P) Limited, located at Assam is an exporter of premium quality tea. Jokai operates a wholly owned subsidiary, J.C. Classic which is a packaging plant located in Russia. There, tea from several countries besides Jokai's own plantations are blended, packaged, branded and distributed in Russia. Jokai also plans to invest a 10-crore packaging unit in Kolkatta to promote sales in India. Clearly, these packaging units are in-transit merge centres where packaging cannot commence until both tea and packing material are available. [Bose (2017)]

- c) Intermediate facilities may also serve exclusively as transfer locations where products received from each supplier in segregated into several orders, one for each destination. Requirements of each destination may consist of orders from several suppliers and these are transported together. Such facilities are referred to as cross docks where little or no inventory is held. This strategy is referred to as cross docking.

The strategy "Cross Docking" was pioneered by Wal Mart. Crossdocking is the process of consolidation of products from several incoming shipments that arrive from a number of sources so that they can be easily sorted at a distribution centre or cross dock for outgoing shipments. Incoming shipments spend less than 24 hours at the cross dock, sometimes less than an hour. This strategy offers advantages over traditional warehousing as lesser inventories necessitate less storage facilities, material handling and quicker throughput. [Apte and Viswanathan (2000); Wen et al. (2009)].

From the cross dock, products are moved either to users like manufacturers, retailers or other warehouses, possibly cross docks. Thus, intermediate stages in a supply chain could comprise of a mix of traditional warehouses and cross docks. [Li et.al. (2004)]

Wal Mart routes about 85% of its goods using the cross-docking strategy. This reduced cost of sales by 2 to 3% as compared to the industry average which in turn has helped to reduce promotional expenses and keep prices more stable. This led to more predictable demand so that inventory levels could be kept low without risk of stockouts. Finally, everyday low prices bring in the customers translating into higher sales per retail square foot. [Stalk et.al (1993)].

Cross docking is useful in transporting perishables, frozen food and refrigerated products, products with short lifecycles [Boysen (2010)] and when product demand is stable and unit stock out cost is low. [Lee, Jung & Lee (2006)]. Several firms in diverse businesses have capitalized on this strategy. However, the benefits of cross docking would accrue only when the warehouses and their operations are effectively

organized. These aspects are detailed in the next section.

### **Effective Management of Cross Docking Operations**

Cross docking systems need to be effectively managed. Specifically, decisions on size, site location, layout, equipment and transportation schedules need to be scientifically determined. For this, data on volumes to be handled and economic and other considerations should be incorporated. Effective use of data is commonly referred to as analytics.

Davenport and Harris (2007) define analytics as "the effective use of data, statistical and quantitative analysis, exploratory and predictive models and fact-based management to drive decisions and actions." The authors refer to business intelligence as a "set of technologies and processes that use data to understand and analyse business performance" and the two together constitute business analytics, whose power has been recognized in today's business operations.

Extensive research has led to the development of analytic approaches to managing cross docking systems. Some examples are discussed in detail while others are briefly cited. Together, the examples illustrate the potential of analytics in this context.

**(i) Layout Planning of Cross Docks :** Bartholdi and Gue (2000) developed a methodology to determine a cost-effective layout for terminals or cross docks that serve Less Than Truckload (LTL) carriers. The methodology was applied to nine terminals owned by four LTL carriers. The researchers reported their experiences at a terminal 'Stockton' of 'Viking Freight System', one of the largest regional carriers in the Western Region of the United States. The study is briefly detailed below.

Carriers need to control costs as manufacturing and distribution companies expect control over logistics costs. Handling freight in an LTL terminal is labour intensive and therefore expensive as workers need to sort a variety of freight quickly. Effective layouts enable cost control.

Most terminals are laid out as long, narrow warehouses with doors along the perimeter. Several material handling equipment like forklifts, pallet jacks, carts and draglines are operated to move freight within the terminal. The appropriate equipment varies for different tasks.

Terminals consist of strip doors and stack doors. At the former, filled in trailers are parked and workers unload the incoming freight. At the latter, empty trailers are placed to upload freight that are transported to appropriate destinations. Each stack door is assigned to trailers that transport exclusively to preassigned destinations. However, strip doors may be occupied by incoming trailers from any of the sources of supply. Incoming trucks with freight are moved to an unoccupied door if available. Otherwise they are placed in a queue and they wait till a strip door is made available for

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service. At the strip door, freight is unloaded onto a cart which is moved by a worker manually or using a dragline to a destination trailer where the freight is placed. Once freight is unloaded from a trailer, the trailer is replaced by another filled in trailer from the queue. Similarly, once an outgoing trailer is filled in, another empty trailer is assigned to that strip door. Such a trailer however, as stated earlier handles freight for the same set of destinations.

A layout is identified, so as to minimize the total handling costs, i.e., the cost of moving freight from strip doors to stack doors, subject to constraints on floor space congestion. The total cost is the sum of the cost incurred owing to worker travel times and waiting time due to congestion. The travel costs depend on the weight of the freight that is moved between strip doors and stack doors, the distances traversed, and the material handling equipment used. Congestion arises when forklifts and draglines wait due to blocks on the path. The resulting cost is termed waiting costs. Using data on arrival rates, service rates and queueing theory cost expressions are obtained.

An initial layout is obtained by assigning doors based on travel distances. Several other layouts are obtained using a popular technique called “simulated annealing” in which the doors of pairs of destination trailers are interchanged repeatedly and each time the total cost is computed. The procedure is continued till a good solution is obtained.

Authors observed that the proposed layouts are better than those currently operational. Specifically, the Stockton terminal recorded a 11.7% increase in labour productivity which resulted in savings of \$67,000. It was also observed that the time to process freight reduced and thereby led to better service to other terminals. Further, the improved layout led to better supervision and this enhanced safety and reduced damage claims.

The requirement that incoming freight should be transferred directly to outbound vehicles without being held in inventory at the terminal is relaxed in some environments. The duration for which freight is held in inventory however, is required to be short. Vis and Roodbergen [2008] propose a methodology to identify appropriate locations for stocking freight so that the distances traversed by forklift trucks that handle freight within the cross dock are minimized.

**(ii) Size and Shape of a Cross Dock :** Bartholdi and Gue (2004) studied the impact of the shape of a cross dock on operational efficiency in respect of labour costs associated with material handling in a variety of operating environments.

The authors observed that shapes of various cross docks differed. Most LTL cross docks are 60-120 feet wide and doors in the dock are equispaced with a 12-foot offset. The sizes of cross docks are specified by the

sum of the numbers of strip and stack doors. Sometimes, both the strip and stack doors are set equal to the number of destinations, and a door is assigned to a destination. However, when the flow of freight is large, the number of stack doors are set at a larger value. In some retail cross docks, a side is assigned to receiving while the opposite side is assigned to shipping. Equal numbers of receiving and shipping doors are used, and the configuration supports orderly staging of pallets and value-added processing such as packaging, pricing and labelling. For LTL cross docks where usually no value-added processing occurs, Little’s law provides a simple way to estimate the number of doors by multiplying the required throughput of trailers by the average time to unload a trailer.

Commonly used shapes are I (long narrow rectangles); L, U, T, H and E. The authors decided to consider the X shape too. Different shapes are appropriate in varied situations. For instance, I shaped cross docks enable movement of freight directly across the dock from the receiving door to the shipping door. Doors at the dock are positioned at the centre to reduce handling. This is cost effective when cross docks are small.

To ascertain appropriate shapes for varied situations, a computational experimental study was conducted for each type of layout stated above. To incorporate different operating conditions observed in practice, authors considered several dock sizes (number of doors), several values of the fraction of doors assigned to receiving inbound freight and two patterns of freight flow: whether freight from all receiving doors flow to all shipping doors (uniform flow) or whether freight from all receiving doors flow predominantly to a select few shipping doors (exponential flow).

In each case, all shapes were evaluated using the metric average travel distance which was a measure that reflected handling costs. The average travel distance is defined as the total distance travelled between receiving and shipping doors weighted by freight flow, divided by the total freight flow. Since the layout of the cross dock impacts the distances traversed, a cost-effective layout was identified in each case, by the methodology proposed by the authors detailed earlier. For this layout, the value of the metric was computed. Based on the large number of experimental trials, it was observed that:

- As the size increases, the most labour efficient shapes are I, T and X successively. By and large, the I shape is the most efficient when the number of doors is fewer than 150. X shape is better when the size exceeds 200. For the intermediate range, T-shape is preferred.
- The better performing shapes however, also depends on the number of receiving doors and concentration of flows. The T and the X shape are more attractive when the flow is uniform. The T shape is preferred over a smaller range of doors when the fraction of

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doors assigned to receiving incoming freight is higher. Moreover, this effect is pronounced when freight flow is exponential.

The authors reported that firms sometimes cannot select the shape as they lease or convert an existing facility into a cross dock. Even when firms design new facilities, they are guided by lead designers who are naïve of efficiency aspects in material handling. The findings reported in this study could be useful in selecting and designing facilities.

**(iii) Scheduling Transportation :** For effective crossdocking, coordination and synchronization of inbound and outbound shipments are important. Analytic approaches play a vital role in this context. Two examples are cited below:

- a. Wen et al. (2009) develop an analytical approach for cost effective transportation of materials from several suppliers to different customers using homogeneous fleet vehicles through a cross dock. Materials are held in pallets. Empty vehicles positioned at the cross dock pick up pallets from one or more suppliers and return to the cross dock. At the cross dock, material is unloaded from a vehicle if another vehicle is assigned for delivery of that material to customers, otherwise it is retained in that vehicle. All unloaded materials are loaded on to predetermined vehicles. On completion of loading, a vehicle leaves the cross dock and delivers the materials to one or more customers and finally returns to the cross dock.

The allocation of materials to vehicles and the vehicle routes, both for pickup from suppliers and delivery to customers are determined by the analytical approach developed. The approach uses the following data:

- Capacity of a vehicle stated in terms of number of pallets (identical for all vehicles).
- Quantity requirements of each customer (number of pallets)
- Distances between all pairs of supplier locations
- Distances between each supplier location and the cross dock
- Distances between the cross dock and each customer location
- Distances between all pairs of customer locations
- Fixed time for unloading and reloading of a supplier's material at the cross dock, independent of the number of pallets
- Unit loading and unloading time of a pallet at the cross dock
- Time intervals within which each lot of material should be collected at the supplier location.

- Time intervals within which each lot of material should be delivered at the customer locations

The time intervals are also referred to as time windows.

The analytical approach offers solutions that minimize the total distance travelled. The approach incorporates the following restrictions:

- The load on a vehicle at any point in time cannot exceed its capacity both during pickup and delivery.
- Material from a supplier should be loaded on to exactly one vehicle for transportation to the cross dock. Similarly, material to be delivered to a customer should be loaded on to exactly one vehicle at the cross dock.
- The start time for transportation from a supplier/ customer location cannot be earlier than the time needed to reach that location from its immediate predecessor after leaving that location. (The predecessor is sometimes the cross dock also).
- Time for pick up from supplier locations/ deliveries to customer locations should be within the specified time windows.
- A vehicle cannot simultaneously load and unload material from a specific supplier at the cross dock. In other words, when a vehicle that picks up material from a supplier also delivers that material to a customer, no handling occurs at the cross dock.
- The time required to unload materials at the cross dock is the sum of the fixed and variable unloading times. The variable time is the product of the unit time for unloading a pallet and the number of pallets unloaded.
- Materials cannot be reloaded onto a vehicle at a cross dock until unloading of materials from that vehicle is complete. Also, all materials for reloading on that vehicle must be ready before reloading commences. Further, material for reloading is ready only after it is unloaded from the vehicle that picked it up.

The approach was tested using live data drawn from a Danish Logistics consultancy firm. It was found that the procedure provides quality solutions. In addition, solutions could be obtained quickly even when the number of suppliers and customers are as large as 200.

- b. TNT Express, a logistics service provider with headquarters in Netherlands transports 47 million parcels, documents and pieces of freight every week. It operates in 200 countries using a large workforce and deploys trailers, road vehicles and aircraft. Packages collected from customers are transported to depots which serve as local sorting centres where they are consolidated and moved to hubs which are large sorting centres. Packages at hubs are

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moved to depots directly or through other hubs. Packages received at depots which also serve as destination centres are finally delivered to customers.

Over the years TNT developed several analytical approaches to address complex decision-making problems. For example, several vehicles at each depot are used to pick up and deliver packages to customers and a vehicle serves several customers. The allocation of vehicles to customers and the sequence of visits are determined analytically to optimize pickup and delivery costs. Use of analytical approaches resulted in better customer service and a reduction in carbon dioxide emission besides reduced costs. Similarly, analytical approaches offered promise to redesign the supply chains that include air transportation. TNT found that 12 out of 59 airports could be decommissioned and one new airport added to the network to reduce costs with minimal impact on customer service. This also enabled TNT to survive during a slowdown period when there was a drop in the demand for material transportation. [Fleuren et. al. (2013)]

- c. Albert Heijn, B. V. is a leading supermarket chain in Netherlands. Its distribution network consists of one national distribution center (DC) and four regional DCs which supply merchandise to 1187 stores. Each store is assigned to a DC for replenishment of stocks and at least one delivery occurs each day. Replenishments were frequent owing to the perishable nature of merchandise, limited stocking space but large sales volumes at the stores.

For each store, a weekly delivery schedule that specifies the daily delivery timings is determined and this is identical in every week. However, the timings and number of deliveries in a day could differ during different days of the week. While hourly demand is random and varies over the day, the total weekly demand is less erratic. Hence the delivery schedules are based on forecasts while shipments are based on firm orders from the stores. Routes are assigned to a heterogeneous fleet of vehicles with different fixed and variable costs and varied loading and unloading times. Albert Heijn owns only a few trucks and therefore leases others from truck owners. Leasing requirements are estimated based on the delivery schedules. Fleet sizes are constraints. The departure timings for different trucks from a DC are staggered to ensure uniform loading requirements throughout the day.

Delivery scheduling therefore needs to incorporate variable transportation costs, randomness in demand, fixed truck rental costs, fleet size constraints and workload capacity at the DCs.

Deployment of such a periodic delivery schedule offers operational convenience owing to the following:

- Simplifies workforce scheduling at the DCs for

loading trucks and at the stores for unloading from the trucks and loading the shelves.

- Stores personnel know when to place orders in advance and suppliers synchronize their deliveries to DCs accordingly. This in turn facilitates crossdocking from suppliers' trucks to the stores' trucks.
- Albert Heijn can enter into long term contracts for leasing trucks from owners at economical rates.

A vehicle routing and delivery scheduling system was developed for the supermarket chain. The new system on implementation resulted in 4% savings in one year's time. About 12-20% savings were expected in the future. Sensitivity analysis helped to identify where forecast inaccuracy retarded development of quality schedules. Such stores were provided feedback with directives to improve functioning.

The system also led to increased delivery frequency and reduced replenishment lead time. As a result, stores stocked more fresh products and greater variety within the same shelf space. Albert Heijn could therefore differentiate itself from competitors in the supermarket industry despite the high price competition and branded commodity products. [Gaur and Fisher (2004)]

**Examples of other aspects addressed by analytical approaches are:**

- a) Number of Cross Docks and their Location:** Bhaskaran (1992) proposed a methodology to determine the appropriate number of cross docks and their location for an automobile company. The procedure provides for an approach to add Cross Docks sequentially as the distribution network evolves.
- b) Situations where Cross Docking is Preferable to Direct Distribution:** Nikolopoulou et. al. (2017) conducted computational experiments to compare cross docking and direct distribution. During experimentation, the degree to which customers/suppliers are geographically dispersed, proximity of pairs of pickup/ delivery points, positioning of the cross dock and time required to handle operations at the cross dock were assigned several different values. The results indicated that cross docking is a powerful strategy when distances between customers and their suppliers is large, suppliers/customers are geographically dispersed but could be grouped into clusters.
- c) Integration of Cross Docking With Reverse Logistics Strategy:** Reverse logistics is a powerful strategy when product returns; repairs and unsold products are involved. Unsold products are often commercialized through secondary channels such as outlet stores. Integration of forward and reverse flows with cross docking offers scope for reduction in costs and time. [Zuluaga et. al. (2017)].

Analytical approaches incorporate data on transportation and handling times which are estimates. In such situations, dynamic scheduling methodologies that use real time information could enhance the quality of solutions. Schittekat and Sorensen (2009) for example, developed an approach to select suitable third-party logistics players to manage distribution for automobile players. The approach was applied at Toyota to handle distribution of spares to car dealers in Germany. Besides providing good quality solutions, the approach enabled Toyota to switch between different networks when unexpected events occur.

With 'Big Data' developments, there is greater scope to use real time systems in managing operations. Specifically, big data refers to large volumes of a variety of data that come at an astronomical speed. Today's I.T. systems are capable of handling big data.

**Discussion :** Cross Docking, a powerful strategy has been adopted by several businesses in the manufacturing and retail sectors and by third-party logistics service providers. Its adoption has led to several benefits. In India too, the strategy is used by logistics players like Mahindra Logistics and Container Corporation of India. With further growth in manufacturing activity, warehouse space could be a constraint. For example, Patanjali already experiences shortage of warehouse space in non-metros. [Warehousing Survey (2016)] While increase in warehouse space is also to be expected, there is a possibility of demand exceeding supply. Cross Docking could help cope with this situation while offering other benefits too.

For effective cross docking however, it is important to use analytic approaches to manage and integrate operations along the entire supply chain that spans procurement, manufacturing and distribution. Consultants with expertise in I.T. and analytics could offer their services to enable businesses to draw on the power of analytics.

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## CURRENCY DEVALUATION & DEPRECIATION, INFLATION & DEFLATION AND ECONOMIC GROWTH

M SAMBHUDEVAN NAIR  
VICE CHAIRMAN, VADODARA BRANCH  
msdevan.nair@yahoo.co.in

In Economics, different terms are used in relation to currency's position. Let us find out what are they and the results in the economy.

**"Currency devaluation"** is a phrase that no one wants to see in the headlines. It usually becomes a topic of conversation when financial institutions worry about the health of the economy. However, the devaluation of currency is often confused with currency depreciation. Both tend to have similar outcomes but stem from different sources.

**Devaluation of Currency Versus Currency Depreciation:** Someone or some entity must intentionally cause devaluation, meaning that it is often a choice made by centralized governments. Depreciation occurs based on the actions of many people and entities, not just a few.

A country must have a fixed exchange rate system in place in order to experience the devaluation of the currency. The government's central bank often has the intention of making the local currency – and thus local goods – more attractive to foreign buyers via devaluation, meaning increased exports. The foreign currency can buy a lot more than the devalued local currency.

The flip side of this situation is that domestic goods become more expensive for locals. Their money also becomes less valuable in the foreign market after devaluation, meaning foreign goods are nearly impossible to purchase due to the increased expense.

Currency depreciation, on the other hand, is determined by the ebb and flow of the open market. Based on how stocks are traded and investments are handled, the exchange rate between the domestic currency and foreign currency will change over time.

**Devaluation** is the reduction in the official value of a currency in relation to other currencies.

**Inflation** is the increase in the prices. Think of a basket of goods that costs 100 rupees today, a year after if the inflation rate is 10%, you would buy the same exact basket for 110 rupees.

At this point it is worth mentioning that devaluation may be a cause of inflation but they are clearly different things. People sometimes get puzzled.

**Deflation** is like the opposite of inflation. You can think of it as negative inflation. So imagine of our basket of goods in the example of inflation above and let's say inflation rate is -5%. Then a year after you would buy your exact same basket for 95 rupees.

**Depreciation :** Depreciation happens in countries with a floating exchange rate. A floating exchange rate means that the global investment market determines the value of a country's currency. The exchange rate among various currencies changes every day as investors re-evaluate new information. While a country's government and central bank can try to influence its exchange rate relative to other currencies, in the end it is the free market that determines the exchange rate. All major economies use a floating exchange rate. Depreciation occurs when a country's exchange rate goes down in the market. The country's money has less purchasing power in other countries because of the depreciation.

**3 Reasons why Countries devalue their currency:** With a potential outbreak of a trade war between China and the US, talks of the Chinese using currency devaluation as a strategy have been rumbling. However, the volatility and risk involved may not make it worth it this time, as China has made recent efforts to stabilize and globalize the Yuan. In the past, the Chinese denied it, but the second largest economy in the world has time and again been accused of devaluing its currency in order to advantage its own economy, especially by Donald Trump. The ironic thing is that for many years, the United States government had been pressuring the Chinese to devalue the Yuan, arguing that it gave them an unfair advantage in international trade and kept their prices for capital and labour artificially low.

Ever since world currencies abandoned the gold standard and allowed their exchange rates to float freely against each other, there have been many currency devaluation events that have hurt not only the citizens of the country involved but have also rippled across the globe. If the fallout can be so widespread, why do countries devalue their currency?

**To Boost Exports :** On a world market, goods from one country must compete with those from all other countries. If the value of the euro decreases against the dollar, the price of the cars sold by European manufacturers in America, in dollars, will be effectively less expensive than they were before. On the other hand, a more valuable currency make exports relatively more

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expensive for purchase in foreign markets.

In other words, exporters become more competitive in a global market. Exports are encouraged while imports are discouraged. There should be some caution, however, for two reasons. First, as the demand for a country's exported goods increases worldwide, the price will begin to rise, normalizing the initial effect of the devaluation. The second is that as other countries see this effect at work, they will be incentivized to devalue their own currencies in kind in a so-called "race to the bottom." This can lead to tit for tat currency wars and lead to unchecked inflation.

**To Shrink Trade Deficits:** Exports will increase and imports will decrease due to exports becoming cheaper and imports more expensive. This favours an improved balance of payments as exports increase and imports decrease, shrinking trade deficits. Persistent deficits are not uncommon today, with the United States and many other nations running persistent imbalances year after year. Economic theory, however, states that ongoing deficits are unsustainable in the long run and can lead to dangerous levels of debt which can cripple an economy. Devaluing the home currency can help correct balance of payments and reduce these deficits. There is a potential downside to this rationale, however. Devaluation also increases the debt burden of foreign-denominated loans when priced in the home currency. This is a big problem for a developing country like India or Argentina which hold lots of dollar- and euro-denominated debt. These foreign debts become more difficult to service, reducing confidence among the people in their domestic currency.

**To Reduce Sovereign Debt Burdens :** A government may be incentivized to encourage a weak currency policy if it has a lot of government-issued sovereign debt to service on a regular basis. If debt payments are fixed, a weaker currency makes these payments effectively less expensive over time. Take for example a government who has to pay \$1 million each month in interest payments on its outstanding debts. But if that same \$1 million of notional payments becomes less valuable, it will be easier to cover that interest. In our example, if the domestic currency is devalued to half of its initial value, the \$1 million debt payment will only be worth \$500,000 now.

Again, this tactic should be used with caution. As most countries around the globe have some debt outstanding in one form or another, a race to the bottom currency war could be initiated. This tactic will also fail if the country in question holds a large number of foreign bonds since it will make those interest payments relatively more costly.

**The Bottom Line :** Currency devaluations can be used by countries to achieve economic policy. Having a weaker currency relative to the rest of the world can help boost exports, shrink trade deficits and reduce the cost of interest payments on its outstanding government debts. There are, however, some negative effects of devaluations. They create uncertainty in global markets

that can cause asset markets to fall or spur recessions. Countries might be tempted to enter a tit for tat currency war, devaluing their own currency back and forth in a race to the bottom. This can be a very dangerous and vicious cycle leading to much more harm than good.

**Economic effect of a devaluation of the currency:** A devaluation means there is a fall in the value of a currency.

1. **Exports cheaper.** A devaluation of the exchange rate will make exports more competitive and appear cheaper to foreigners. This will increase demand for exports. Also, after a devaluation, UK assets become more attractive; for example, a devaluation in the Pound can make UK property appear cheaper to foreigners.
2. **Imports more expensive.** A devaluation means imports, such as petrol, food and raw materials will become more expensive. This will reduce demand for imports. It may also encourage British tourists to take a holiday in the UK, rather than US – which now appears more expensive.
3. **Increased aggregate demand (AD).** A devaluation could cause higher economic growth. Therefore higher exports and lower imports should increase AD (assuming demand is relatively elastic). In normal circumstances, higher AD is likely to cause higher real GDP and inflation.
4. **Inflation** is likely to occur following a devaluation because:
  - Imports are more expensive – causing cost push inflation.
  - Aggregate Demand is increasing causing demand pull inflation
  - With exports becoming cheaper, manufacturers may have less incentive to cut costs and become more efficient. Therefore over time, costs may increase.
5. **Improvement in the current account.** With exports more competitive and imports more expensive, we should see higher exports and lower imports, which will reduce the current account deficit. In 2016, the UK had a near record current account deficit, so a devaluation is necessary to reduce the size of the deficit.
6. **Wages.** A devaluation in the Pound makes the UK less attractive for foreign workers. For example, with fall in the value of the Pound, migrant workers from Eastern Europe may prefer to work in Germany than the UK. In the UK food manufacturing industry, more than 30% of workers are from the EU. UK firms may have to push up wages to keep foreign labour. Similarly, it becomes more attractive for British workers to get a job in the US because a dollar wage will go further. ( migrants become more picky about UK jobs)

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7. **Falling real wages.** In a period of stagnant wage growth, devaluation can cause a fall in real wages. This is because devaluation causes inflation, but if the inflation rate is higher than wage increases, then real wages will fall.

**Evaluation of a devaluation:** The effect of a devaluation depends on -

1. **Elasticity of demand for exports and imports.** If demand is price inelastic, then a fall in the price of exports will lead to only a small rise in quantity. Therefore, the value of exports may actually fall. An improvement in the current account on the balance of payments depends upon the Marshall Lerner condition (The Marshall Lerner Condition shows the conditions under which a change in the exchange rate of a country's currency leads to an improvement or worsening of a country's balance of payments ) and the elasticity of demand for exports and imports.

The impact of a devaluation may take time to influence the economy. In the short term, demand may be inelastic, but over time demand may become more price elastic and have a bigger effect.

2. **State of the global economy.** If the global economy is in recession, then a devaluation may be insufficient to boost export demand. If growth is strong, then there will be a greater increase in demand. However, in a boom, a devaluation is likely to exacerbate inflation.
3. **Inflation.** The effect on inflation will depend on other factors such as:
- a) Spare capacity in the economy. E.g. in a recession, a devaluation is unlikely to cause inflation.
  - b) Do firms pass increased import costs onto consumers? Firms may reduce their profit margins, at least in the short run.
  - c) Import prices are not the only determinant of inflation. Other factors affecting inflation such as wage increases may be important.
4. **It depends on why the currency is being devalued.** If it is due to a loss of competitiveness, then a devaluation can help to restore competitiveness and economic growth. If the devaluation is aiming to meet a certain exchange rate target, it may be inappropriate for the economy.

#### **Winners and losers from Devaluation:**

**Winners: Exporters, domestic tourist industry, workers gaining jobs in export industry, economic growth might increase, Current Account Deficit should improve.**

**Losers: Consumers who imports, residents who holiday abroad, Firms who buy imported raw materials, those on fixed income/wages who see inflation rise faster, foreign exporters /tourist industry.**

#### **Historical Perspective:**

1. Indian rupee has an unparallel history since the ancient times to the present rough-and tumble of a globalised economy, with each era's coinage and worth, broadly imitating the current political, social and economic environment. The history of rupee had started right from 6th and 7th centuries when for the first time punch marked coins were used as Indian currency. The 'rupiya' that has transformed into the modern day rupee, was first introduced by emperor Sher Shah Suri-the modern rupee's precursor-as a silver coin in the 16th Century. The same remained largely unchanged till the early part of 20th Century. In 1947 when India got independence, one could exchange a rupee –worth a US \$ then –into 16 annas, but in terms of value, this was no loose change. At that times, for an anna one could buy a kilo of ghee, now priced any where between Rs. 300 and Rs. 400 which means about 2000 times increase. Indian rupee exchange rate evolved in terms of fixed regime wherein both Government and Central Bank of the Country (Reserve Bank of India) determined the exchange rate of its currency into another currency. Similarly, China also determined its Yuan exchange rate in terms of market ruled system. From the year 1947 to 1971, India had followed a "par value" system wherein the exchange rate of Indian rupee was fixed at 4.15 grains of fine gold. But unfortunately, the devaluation of Indian rupee in 1966 resulted into the reduction in the "par value" of Indian rupee to a lowest level of 1.83 grains of fine gold.

**Devaluation of 1966:** In the monetary history of India, for the first time, Indian Government had announced the devaluation of Indian rupee through intervention in the forex market with devaluation of 37.5 per cent and the result was that US dollar was become more expensive from Rs. 4.75 to Rs. 7.50. This was not done as a matter of choice but as a matter of compulsion, in order to increase Indian exports to bring more foreign exchange to the exchequer so that development needs could be met. For every dollar, a devalued currency (rupee) gives them more in terms of rupees. This step encourages them to slash unit value for their respective products in the global market so that these will remain competitive. This devaluation was inevitable as India faced two external aggressions one with China in 1962 and the other one in 1965 with Pakistan and these two wars had ruined Indian economy. Hence, there was no option before the managers of the Indian economy just to get for devaluation so that country should increase exports, liberalize imports and enhance country's chances for receiving more foreign aid to finance its developmental needs on the other and also to show the world the devaluation as policy tool for effective currency administration.

Devaluation was not an aid in itself. It was an instrument; it was essential if freeing the market was to work. Whether formally or de facto, it had to come sooner or later; and was in purely economic terms and spirit, it made sense to get it. After the elapse of 25 years, Indian economy confronted with precarious

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balance of payment crisis, the then Finance Minister, took another major step in the form of devaluation of Indian rupee in 1992 and 1996 in order to increase exports and earn precious foreign exchange in US dollars. Accordingly, Indian rupee's value went down from Rs. 25 a dollar to Rs. 32 to a dollar. That was the last time India used devaluation as an economic policy instrument. Thereafter the most significant thing happened was transformation from fixed – regime to fully market determined exchange rate regime

2. How Rupee has moved against dollar? Since independence of India, rupee has been on the fall against dollar . From an exchange rate of 1 rupee is equal to US 1 dollar in 1947 the exchange rate has touched a value of rupees 74.34 equal to 1 US dollar in October 9, 2018. Over the last few weeks, the Indian Government and RBI has initiated a lot of steps to boost the currency value as well as easing out Foreign Direct Investment (FDI) rules, hence, making funds costlier for banks and also slapping foreign exchange controls on the individuals and firms. Indian companies are facing a grim situation now with free-falling rupee forcing consumers to check their spending. The currency blow is landing just as a consumer firms look toward a boost from their strongest annual sales period (September to December). Indian firms can not plan more than a couple of months out as a fast falling rupee value drives up the cost of imports, forcing them to raise prices even as consumer spending crumbles. India's consumers, whose spending helped the Indian economy passing through the global financial crisis in 2008, are now closing their wallets, squeezing firms from car makers to shampoo manufacturers. Indian firms that import finished products or raw materials are the worst hit as these are crumbling to hold into margins while balancing the need to raise prices with out deterring buyers.

Total consumption expenditure as a relative share of India's Gross Domestic Product (GDP) gone down to 65.9 per cent in the IV quarter of 2012-13 from 72.1 per cent in the I quarter of the same fiscal year. Indian firms were not only cutting back on big –ticket purchases namely- refrigerators, TVs or expensive branded apparel but even staples including soaps, ketchup and cosmetics. According to a Survey, monthly bills for the middle class (driven force of the Indian economy) went up by 15 to 20 per cent in a month across major cities as the falling rupee drove up prices of petroleum goods and edible oil . Another publication has opined that even deep-pocketed consumers were cutting back, with five –star hotels and fine dining restaurants witnessing decrease of 20 per cent in sales in the last three months of 2013 after unit value of imported food ingredients and sprits rose.

3. Causes for Depreciation of Rupee There are as many reasons for currency sinking. Some of them are more important to be mentioned below:

Continuous increasing Current Account Deficit (CAD). Gap between what Indian economy earns from the rest of the globe and what Indian economy has to pay to the

rest of the world is pushing up demand for the dollar. India's large fiscal deficit and current account deficit have impacted market confidence. The current situation presents a challenge, obviously, to the Indian Government, but also opportunity for the Government to continue with its policy efforts on a variety of fronts. The Indian economy is battling depreciating rupee and low investors confidence.

4. Falling foreign exchange reserves: India's forex reserves are enough to cover imports of seven months only and thereafter it will become difficult for Indian Government to finance its imports which are on the rise.

5. Economic recession: India's GDP growth came down to a decade low figure of 5 per cent in 2012-13 and 4.5 per cent in January-March quarter of 2013-14, resulting into outflow of funds from the country as the foreign investors are losing confidence in Indian economy for further investment. During the last four months, the net FII inflows have turned negative .The recent out flows of FII was triggered by the global bond sell-off on US Federal signals that raised the prospects of interest rates hardening in the US. The rise in bond yields in the US lead to a withdrawal of capital from emerging markets economies. The US Federal Reserve has hinted at winding down the program to pump in billions of dollars amid recovery signs in the US economy. Part of this money may come to into Indian equities.

6. Dependence on foreign money: CAD was financed by foreign money for many years. Withdrawal of money by overseas investors is leading to weakness in rupee.

7. Recovery in the US: Recovery in the US economy is making the greenback stronger against other currencies of the globe.

8. Stimulus withdrawal: Indications are there that the US economy may withdraw or ease fiscal stimulus package could tighten liquidity in global markets;

9. Capital controls: The decision of Indian Government to impose restrictions on capital flows has not gone down well with markets and as a result the markets did not response on expected lines.

10. Global trends: Rupee is following the trend seen in the currencies of other major emerging economies.

11. Speculative trading: Speculative trading in the currency markets is putting further onus on Indian rupee.

12. Portfolio investors are now withdrawing money from emerging markets causing demand for dollars to rise pulling down local currencies.

### **How depreciating rupee does affect people?**

The following are the major affects of rupee falling: A falling rupee means that India needs to shell out more cash to import fuel, and this raises the prices of transporting products; resulting into higher inflation; Higher rate of inflation means RBI will hesitate to cut

interest rates; Hence, consumers required to keep paying bigger chunk of their income every month towards repaying house loans, even as the cost of food and petrol rises and the prospect of salary hikes recede.

**Effects on ECB:** The significance of External Commercial Borrowings has been on the rise over the years. This testified from that fact the share of this segment in India's total external debt in 1990-91 when India had faced a crisis and transformed its economy into globalized economy by announcing the New Economic Policy (NEP), the relative share of this segment was just 12.1 per cent. In 2012-13, the relative share has increased enormously and touched a figure of 31.0 per cent of India's total external debt, hence, reflecting a greater reliance on private funding by Indian companies. However, the recent increasing rupee depreciation might discourage companies to continue with this route as the debt service commitment in terms of rupee would rise sharply. This would erode the potential savings expected while availing the ECB avenue.

Devaluation of Indian Rupee taken place 3 times since 1947. In 1947 the exchange rate was 1 USD to 1 INR but today we have to spend 73 INR to buy a USD. Devaluation means reduction in the external value of the domestic currency while internal value of the domestic currency remains constant. A country goes for devaluation of its currency to correct its adverse Balance of Payment (BOP). If a country is experiencing an adverse Balance of Payment (BOP) situation then it has to devalue its currency so that its export gets cheaper and import became costlier.

**Meaning of Exchange Rate:** Exchange rate means the price of a nation's currency in terms of another currency. The market in which the currencies of various countries are exchanged, traded or converted is called the foreign exchange market.

**Exchange rate can be of three types:**

1. Floating exchange rate
2. Fixed exchange rate
3. Managed exchange rate

**Floating Exchange Rate:** The system of exchange rate in which the value of a currency is allowed to adjust freely or to float as determined by demand for and supply of foreign exchange.

**Fixed Exchange Rate:** If the exchange rate is being determined by the government not by the demand and supply forces, it is called fixed exchange rate.

**Managed Exchange Rate:** In this kind of system exchange rate is partially allowed to fluctuate, government don't allow fluctuation more than 1 to 3 percent. So in this system exchange rate is neither fixed nor free.

**Par Value System:** Under this system (1947-1971), each member of IMF undertook to maintain the par value of its currency in terms of gold or the U.S. dollar. After

gaining independence, India followed the par value system of the IMF. On 15th August 1947 the exchange rate between Indian rupee and US Dollar was equal to one (i.e., 1 \$= 1 Indian Rupee).

**Why value of Indian currency declined against US dollar:**

At the time of independence, there were no outside loans on the balance sheet of India. But when British departed from India, Indian economy paralyzed absence of capital formation and proper planning.

**1. Lack of Fund in the hands of the Government:** In the situation of wealth crunch, Prime Minister Nehru adopted model of five year plans from Russia. Between 1950s to 1960s, Indian government continuously borrowed foreign money in the form of loan. Now the exchange rate became 1\$= Rs.4.75

**2. War with China and Pakistan:** Indian government was facing budget deficit and was in a state that it could not borrow more additional loan from outside due to negative rate of savings. India-China war of 1962, Indo-Pakistan war of 1965 and huge drought in 1966, crippled the production capacity of the Indian economy so inflation increased in the economy.

To increase the domestic production scenario, Indian government needed technology, to have technology and to tackle higher inflation and to open the Indian economy for foreign trade, government devalued external value of rupee and now exchange rate became 1 \$- Rs. 7.

**3. Political Instability and Oil Shock of 1973:** Oil shock of 1973 caused when the Organization of Arab Petroleum Exporting Countries (OAPEC) decided to cut the crude oil production which further increased the oil import bill. So to pay this import bill India borrowed foreign currency which reduced the value of Indian currency. Assassination of P.M. Indira Gandhi also reduced the confidence of foreigners in the Indian economy. Hence, all these cases bring the exchange rate at USD = 12.34 INR in 1985 and in the 1990 it became to 1 USD = 17.50 INR.

**4. Economic Crisis of 1991:** It is claimed as the toughest time for Indian economy. During this phase fiscal deficit was 7.8 % of GDP, interest payment was eating 39% of the total revenue collection of the government, Current Account Deficit (CAD) was 3.69% of GDP and WPI inflation was hovering around 14%, India was about to be declared defaulter by the international community. So to tackle all these problems government devalued Indian currency again and the exchange rate became 1 USD = 24.58 INR

Indian currency history tells that devaluation of Indian Rupee helped Indian economy in every crisis. Devaluation of currency makes export cheaper and import costlier which ultimately improves the Balance of Payment of the domestic country.

**The effects of devaluation and depreciation of a currency:** Depreciation and devaluation are two

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economic events that deal with the value of our country's currency. Both of these situations cause the value of the currency to drop versus the rest of the world. However, they have two different causes and long-term effects on any country's economy. Understanding the difference between these two events will help us better plan our portfolio for the future.

**Depreciation :** Depreciation happens in countries with a floating exchange rate. A floating exchange rate means that the global investment market determines the value of a country's currency. The exchange rate among various currencies changes every day as investors re-evaluate new information. While a country's government and central bank can try to influence its exchange rate relative to other currencies, in the end it is the free market that determines the exchange rate. All major economies use a floating exchange rate. Depreciation occurs when a country's exchange rate goes down in the market. The country's money has less purchasing power in other countries because of the depreciation. For India the impact of higher oil prices and depreciating rupee has damped consumption demand. The liquidity crunch in the system is putting further pressure on growth. Liquidity crunch could soon take a toll on economy, too.

**Devaluation :** Devaluation happens in countries with a fixed exchange rate. In a fixed-rate economy, the government decides what its currency should be worth compared with that of other countries. The government pledges to buy and sell as much of its currency as needed to keep its exchange rate the same. The exchange rate can change only when the government decides to change it. If a government decides to make its currency less valuable, the change is called devaluation. Fixed exchange rates were popular before the Great Depression but have largely been abandoned for the more flexible floating rates. China was the last major economy to openly use a fixed exchange rate. It switched to a floating system in 2005.

**Impact on Property :** The immediate impact of depreciation and devaluation on property is pretty similar. Most of your property, like your home and your car, won't change in value as they are based only on your country's currency. However, if you are planning to sell your assets and move out of the country, you are in a bad spot. The drop in your currency's value means you will get less money abroad than you would have before the drop. This change will also make your housing market more attractive to foreigners. Depreciation and devaluation make it cheaper for foreigners to buy your local real estate. You should see an increase in foreign buyers after this currency change.

**Impact on Investments :** The short-term impact on devaluation and depreciation on your investments will also be pretty similar. These events are good for companies that sell domestically and export to other countries, so their share prices should increase. A drop in your exchange rate makes it more expensive for people to buy goods from other countries, however. They will end up buying more from domestic companies. On

the flip side, the drop in your currency's value makes it cheaper for other countries to buy goods from your country. Depreciation and devaluation are bad for companies that buy goods or raw materials from abroad. The drop in your currency will make it more expensive for imports. These companies will see a loss in income and a drop in their share prices.

**Long-Term Effects :** While depreciation and devaluation have the same immediate impact, they have different long-term effects. A drop in your currency's value generally improves your country's economy as people spend more domestically and countries buy more of your exports. In a floating economy that faces depreciation, this spending boost will make the country look better for investors. They will want to buy more of the currency and push its value back up, canceling out some if not all the depreciation. This can't happen in a fixed-rate economy as only the government can change rates. While this can keep a boom going longer, it also increases the risk of inflation as the government must keep printing money to keep its exchange rate from rising.

**Consumer inflation:** High fuel prices have a role in consumer inflation even though these items are still a small component of consumer price inflation. In many parts public transport is not affected to that extent because they run on CNG. On growth, the impact would depend on how industry responds to the weaker rupee and fuel price hike. Since crude oil is the biggest import item for India, its rising price has been impacting inflation as well as the country's current account, which is also increasing. This, along with a rising interest rate scenario in the US because of a growing economy, is leading to the weakness in the rupee, which in turn is prompting foreign funds to take money out of India, analysts said. But, if most currencies are depreciating there is nothing to worry. The Monetary Policy Committee is mandated to take these into account only via their impact on inflation.

Currencies can go down when the economy is growing; when the rupee goes down it also means that we are going to export more. A panel of experts has suggested one single database for inflation, industrial output and employment to give credibility to India's growth numbers and improve the consistency of key statistics.

**India Economic Outlook:** The economy had a mixed second quarter this fiscal year, which runs from April 2018 to March 2019, after GDP accelerated at the fastest pace in over two years in the first. On the plus side, business activity in the private sector increased in Q2 at a faster rate than in Q1. However, given that India purchases about 80% of the oil it consumes from abroad, recent increases in oil prices caused the merchandise trade deficit to widen through to August and further. To help, reduce the growing external sector imbalance, the government raised import tariffs on USD 12 billion worth of imports on 26 September. In addition, excise duties on gasoline and diesel were cut on 4th October to lessen the impact of higher fuel prices on consumers.

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**Currency Swap and India Economic Growth:** In recent visit of our Prime Minister to Japan, India and Japan agreed to enter into a bilateral swap arrangement of \$75 billion which would be 50% higher than our last swap arrangement which will boost liquidity. Currency swap is – one country exchanges its national currency for that of another or even a third one. India can acquire yen or dollars from Japan up to \$ 75 billion in exchange for rupees. The facility is entered into between central banks of two countries. The terms of the swap and its cost are also included. The exchange rate is typically fixed for a transaction. The borrowing bank pays interest for use of funds. It helps RBI \$393 billion chest gets a one-shot \$ 75 billion boost. There is no immediate cost; only when an amount is drawn. Short term liquidity mismatches can be met quickly. It improves market sentiments, curbs speculative pressure on the rupee and foreign investors will draw comfort from the arrangement.

The arrangements will be used only when required, and will help meeting short-term. India has taken several steps to contain in Current Account Deficit, which could swell to an estimated 2.8% of GDP and is seen as the root cause of rupee volatility.

Economic growth should accelerate in FY 2018, due to fading disruptions from the demonetization of November 2016 and the launch of Goods and Service Tax in July 2017. However, recent signs of fiscal slippage in the run-up to next year's general elections, escalating global trade protectionism and higher oil prices weigh on the outlook. Our panel expects GDP growth of 7.4% in FY 2018, which is unchanged from last month's estimate, and 7.4% again in FY 2019.

India's economy is gaining momentum, thanks to the implementation of several recent noteworthy policies— such as the enactment of the long-awaited Goods and Services Tax, and the country opening up more to foreign investors. Therefore, we expect economic growth to pick up to about 7.3 percent for fiscal year 2018-19, meaning the year that runs from April of 2018 through March 2019. Meanwhile, inflation has edged higher, in part due to a reduction of economic slack. To sustain and build on these policies and to harness the demographic dividend associated with a growing working-age population (which constitutes about two-thirds of the total population), India needs to reinvigorate reform efforts to keep the growth and jobs engine running. This is critical in a country where per capita income is about \$2,000 U.S dollars, still well below that of other large emerging economies.

The above all affects Supply Chain directly or indirectly. Hence, supply chain officials should be vigilant on the happenings of the above points on economy and take actions in time to have sustainable and smooth positive results in the functions.

Sources: TOI and ET



## NEW TECHNOLOGY REVOLUTIONISING SUPPLY CHAIN MANAGEMENT

CH R S SARMAT

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Supply chain management holds the key to improving the manufacturing sector in the country and SCM is getting revolutionised with the introduction of new, disruptive technologies, according to P. Ray Chaudhury, in-charge Chairman and Managing Director of Visakhapatnam Steel Plant.

He was speaking as chief guest at the inaugural of a one-day seminar on supply chain management organised by the local chapter of the Indian Institute of Materials Management (IIMM) here on Friday. He said digitisation of processes would revolutionise supply chain management, and “Indian industry captains must be nimble-footed to embrace the changes and face up to the challenges ahead.” Industry 4.0 in the area of manufacturing would lead to setting up of smart factories and “India's first smart factory is coming up in Bengaluru.”

Chaudhury said the focus should shift from services to manufacturing and “we should focus on high-end, technology-driven capital goods. We should aggressively promote Brand India and an efficient supply chain is the most vital aspect of the coming revolution.” Logistics optimisation, inventory optimisation and management of complex, non-linear supply chain networks would become critical, he added.

G.K. Singh, the national president of the IIMM, said the new, disruptive technologies would be unsettling in the short-run, but they would be rewarding in the long-run. “We must gear up to make use of these technologies - artificial intelligence, Internet of Things, machine learning, and 3-D printing. We have no choice but to digitise, but there is no need to be unduly apprehensive of new technologies. We must make the best use of them, especially block-chain technology,” he added.

K.R Mandal, General Manager, NTPC, said an “inefficient supply chain would have an impact on all aspects of manufacturing and, therefore, nothing can be more important than redesigning the supply chain to make industry competitive and to meet the requirements of customers.”

N. Udayabhanu, president of the Vizag chapter, and several others spoke on the occasion.

Source: Business Line, 27<sup>th</sup> July, 2018



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# FUTURE OF INDIAN LOGISTICS MARKET

**PRAVEEN VASHISTHA,  
DIRECTOR, GXPRESS**

Indian logistics companies are creating opportunities for other countries sellers to sell their products in India by providing seamless custom clearance and distribution across the country

Logistics has been the holding beam for almost every business structure across the world since the rise of the economy. The towering needs of businesses to transport goods and services must be addressed by the logistics sector with best-in-class infrastructure and effective logistics management system. The economic survey of India for 2017-18 has projected the logistics sector to rise from the current worth of \$160 billion to Rs 215 billion by 2020. In a PPP (Public Private Partnership) model, the government of India efforts to improve India's ranking in World Bank LPI (Logistics Performance Index) from 35 to 15 in the coming years.

**The New Horizons in Indian logistics Market :** The development in technology and the birth of new industry verticals have created high demands for logistics and delivery of products/services. Not just this but the new set of requirements arisen from the people with busy lifestyles have also added to the increase in logistics demand. Today, if you have done a lot of shopping and still have other plans before heading home, logistics services provider home delivery of your shopped products at your ease of time.

What can be better than having hassle-free timely delivery of the products and services right at the doorstep anywhere in the world? The growing market with the help of technology and developing infrastructure have made it possible. Developed countries have strengthened their infrastructure and transport system to their full potential in facilitating seamless logistics services in both domestic and cross-border territories. The globalization at the fastest pace ever has taken industries with a storm and the movement of goods from the origin point to delivery station has been made effectively fast and secure. Whether it is a small courier or a complete cargo, logistics has made it easier for people to transport their products on time. The rise of e-commerce on the global platform in the recent times has made logistics a major player in the world economy.

**The efforts to organize the unorganized logistics sector:** The government of India has established a separate logistics division in the department of commerce to work for the integrated development of the industry both in the domestic and the international domain. In fact, the Ministry of Commerce and Industry (MoCI) has proposed framing of a unique dedicated online portal to accentuate logistics services in the country and bringing together the buyers, logistics service providers, and the related government agencies. The Ministry of Transport is also playing a key role in upbringing the

logistics sectors by strengthening the land connectivity through various programs like 'Sagarmala' project.

The economic survey 2017-18 presented in the parliament has speculated the Indian logistics industry to grow at a CAGR of 10.5% crossing the 200 billion USD mark in coming time. With currently 22 million people employed in the industry, logistics is expected to extend employment to over 40 million people by 2020. With such a promising future, the Indian logistics sector has become the new sensation encouraging GoI to frame a dedicated IT backbone for this industry. Even the import-export system has been upgraded reducing the cargo release time to only 2 or 3 days.

The Goods and Service Tax (GST) framed under the center and state list has paved the path for a better logistics sector. The Central Board of Indirect Taxes and Customs (CBIC) under the Ministry of Finance also has brought new provision under CSB IV and CSB V to the Courier Imports and Exports (Electronic Declaration and Processing) Regulations, 2010 providing people 100% GST refunds in the logistics services. Customers can easily move their shipments with minimal paperwork and faster delivery and customs clearances with the new policy change by the GoI. Apart from this, to foster the growth of logistics sectors many start-ups and established enterprises have entered the market equipped with the latest technology, quality warehousing, and functional transport facility to provide world-class services in the Indian market. The recent entry of international logistics players has also ensured the boost of the Indian logistics industry. This will be a sight to behold the glorious rising of logistics industry in coming years, especially marking 2020.

Indian Companies is also supporting customers by offering Return Management, Fulfillment, Warehousing and 3PL services in all major ecommerce markets like USA, Europe, Australia and Middle East countries through their worldwide network. Which is creating a larger scope for Indian sellers to sell their products globally with a competitive edge. Also now Indian logistics companies are creating opportunities for other countries sellers to sell their products in India by providing seamless custom clearance and distribution across the country. Therefore Indian logistic industry is having more opportunities in the future time.

Disclaimer: The views expressed in the article above are those of the authors' and do not necessarily represent or reflect the views of this publishing house. Unless otherwise noted, the author is writing in his/her personal capacity. They are not intended and should not be thought to represent official ideas, attitudes, or policies of any agency or institution.

Source: BW BUSINESS WORLD, 30th Sept.2018

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# TOWARDS A THEORY OF SERVICE SUPPLY CHAIN MANAGEMENT:

P. VISWANATHAN,  
E.C. MEMBER OF BANGALORE BR. IIMM  
vid\_shy@yahoo.com

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Service industries and service operations of manufacturing are restructuring their delivery systems, self service are replacing many traditional channels dominated by corporate sales and service personnel. New type of channels for delivering financial logistics and others services are created for faster service. Automation is a way to cut costs, and provide quick response for large service market.

Perish ability is that service process is unable to produce inventory, and it is understood that inventory of items for production, are available before it is needed, cannot be produced before demand is due reliance of customer inputs, but however there are bound to be delays if customer requirement and excess of available capacity, in such cases customer requirement are to have sufficient inventory and capacity, becomes available until the customer tries to withdraw from the process.

Logistic for manufacturing industry involve literally moving objects from one place to another, and of course taking into consideration the cost base on size and weight. In the service industry this will not have any consequence at all since it does not concern itself with moving objects around but rather information. This will not require the same needs as moving parts or products, but instead finding the best channel to distribute the information. The manufacturer will be essential to find the best rates for shipping container warehouse so to reduce cost, while serve the industry to find ways to so as to upgrade the services, and upgrade investment in lab our and reduce cost.

**Service frame work** : The key frame work that have developed in service operations management, is understanding of services, and service operations management concept: The service concept dictates, and is defined by the service delivery system performance characteristic of materials, and the facilities available, and the employees of the organization. These are used to create service levels communicated to determine consumed service levels.

The frame work, developed in manufacture is highlighted because of its strength, and the impact on several service frameworks. The frame work determines product mix volume member of products, standardization, which determines the process choice in service supply chain.

**The theory of customer contact:** is the degree of customer contact and the services: 1. pure service with high contact. 2. Mixed service with medium contact. 3. Quasi service manufacturing with low contact. Customer is direct, and it is high the potentials to achieve high level of efficiencies is reduced, but however the contact period by self does not capture the challenges of the service sector in supply chain.

In the low contact the customer environments service may be designed with manufacturing process and the process should take into account the advantage of standardization, and automation to enhance, efficiency, and the effectiveness of operation in service industry supply chain. The concept is also to investigate, the activities, and bring in improved in the service delivery.

In service supply customer getting the right product, in the right condition, to the right place at the right price, at right time, seems to be well entrenched principle of supply chain management.

One of the core competencies is to provide time, and place utility to goods which move through supply chain. Customers also calculate how well these logistic operations deliver their services, logistic service, quality indicates that customer care more about product availability and condition and timeliness, and quality order related to information, communication, and discrepancies in handling products. Customer cares about the things because right products are available when needed, not only satisfies their needs but also on the precondition that service the customer further.

Managing flows up and down in supply chain service they get immersed in relationship management, information technology, finance, operational process forecasting, and activities close to customers, and also the proper packaging, customer management, and the presentation of the product in service supply chain management.

Customer service strategy has reviewed approaches to strategy development: 1. Customer reaction to product or service failure. 2. Cost or revenue. 3. ABC analysis of the customer service for profitability. 4. Internal and external audits of customer service. 5. A competitive matrix position to help and establish appropriately customer service strategies.

The theory of customer service suggests that the supplier to reduce the probability of idle capacity through choice, and allocation, so that the performance of supply chain can be through strategic audit frame work. The customer service can be improved 1. The performance of supply chain can be improved through strategic audit framework 2. Inter-action with the customer regarding the service requirement of products. 3. Efficient distribution. 4. Demand driven sales planning. 5. Lean manufacturing to improve consumer service.

Integration of supply chain management in customer service: 1. Technology capability. 2. Integration of information system. 3. Integration of information system. 4. Operational. 5. Customer enhances the competition advantage of global supply chain management to improve customer service in supply chain management.

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It is important to look into the determinants that will improve organization performance, and of the various practices that have been viewed as the vital determinant to improve organizational performance. The supply chain management practices are viewed to be related to supply chain responsiveness, which will increase competitive advantage, and that lead to organization performance in service industry in supply chain.

The effective supply chain through service management will reduce cost, boost revenue, increase customer satisfaction, and also improve service delivery.

Service Supply chain management concept is required to minimize cost incurred in providing services, and organization have taken up cost effective supply chain, as purchase or procurement of goods, and services is a matter of survival, as they account for eighty percent of sales in any service organization, and there is demand for savings in procurement process. The evidence of using supply chain management in manufacturing is with limited to the scale services as beneficiaries are not seeing full benefit because of lack of efficient service delivery, involving a set of activities undertaken in organization to promote effective supply chain.

The short term objective is to enhance productivity, reduce inventory, and lead time. The long term objective in supply chain is to increase market share, in service and integration of supply chain.

Service Supply chain theory and practice can be defined as practice, including supply relationship, outsourcing, cycle time, as practices include relationship with supplier, outsourcing cycle time, and continuous process of flow, and information technology.

Services supply chain and service activities that organization, undertake to promote effective management of the supply chain management, and services practices in terms of reducing duplication effects, by focusing on core-competencies, and using inter-organization standards such as activity based costing, electronic data interchange, and thus estimating un-necessary inventory, and promoting customization, toward an end-supply chain management, and services. Supply chain and services are necessary to have practices from the following aspects, close relation with suppliers, customers, just-in-time, service supply strategic planning supply chain, and services subcontracting, procurement outsourcing with suppliers and process of service supply chain, which include information flow, skills management in service, demand management, customer relationship management, supplier management, service delivery management, and cash flow, which is highly important in service supply chain.

General categories that are important in service management is the theory in to which they are important is demand management, customer relationship, management capacity, and resource management, service performance, information technology, service supply chain finance, and order process management service in theory of goods, making up a little of production cost, in manufacturing.

Service supply chain management theoretically is a combined service of different service providers which may be located in many multiple locations, to minimize cost structure, who work under network, to meet the variable demand.

Service supply chain management has come to the conclusion, and has suggested that the total cost of ownership could be reduced by early supply chain management, and supplier involvement through better product design, bringing down the acquisition cost, processing costs, administrative quality costs, down time costs, risk cost, cycle time cost, conversion cost, non-value added cost, and supply chain costs, can further reduce cost associated with ownership, and bring better utilization of products, assets, and collaborative alliance between buyer, and seller in service supply chain management.

**Collaborative relationship:** in service supply chain management, where management focuses on interdependence, and cooperation among supply chain organization, and ensures profitability, for the organization, concerned with supply chain. Management of supply chain and service organization ensured that the supply chain end products, are cost competitive, continuous improvement, and it becomes easier to avail overall cost is reduced, quality of the product is improved for better supply chain management.

Service supply chain coordination relies on the availability of prompt and accurate information, in supply chain. The new demand on the supply chain system requires change to information flow. Service supply chain that face such demand in service, result in the introduction of an order driven supply chain strategy, and thus can be evaluated, theoretically on multifaceted interaction between information physical flow and driving supply chain service evolution on the basis of resource based view with the concept of theory of complex adaptive system (modes of complex system are used to understand, predict and prevent most complex problems face today in service supply chain management) and adaptive Structuration theory (focus on social structure rules, and resources provided by technology on the basis of human activity) in service supply chain system.

**Service Delivery:** exchange of information in supply chain which entails development, and management of supplier relationship. It can be improved in the organization through integration of service supply chain which may lead to improve service delivery, and productivity. Productivity in theory service is a process of efficiency and service quality. Service delivery is services to meet specific business needs of an organization, and involves the interaction between providers and clients, where provider's offers service, and in which client does not benefit by loss of value or finds value in the organization in service supply chain. The service providers in supply chain act as prospective mediators in the provision of service by taking customer perspective of supply network. The design and implementation of service delivery process play unimportant role in service competitiveness, in organization.

Service supply chain organizations are required to theoretically, and effectively plan and schedule their resources offer efficient service to customer, and the main focus is on services, and people, and assets of supply chain, rather than material management planning and control.





# REDEFINING THE BUSINESS MODEL WITH DIGITALIZATION

**DR. RAVI PRAKASH MATHUR**  
**SENIOR DIRECTOR OF SUPPLY CHAIN MANAGEMENT (SCM)**  
**DR. REDDY'S LABORATORIES LTD.**

A business model needs to consider three features – first, the target customers of the business, second, the value proposition for those customers, and third, the value chain architecture. Innovations in technology, and specifically digital technology, are allowing organizations to redefine and recreate their business models. This is because digitalization is giving organizations the flexibility to redraw their value chain architecture, which not only creates new value propositions for existing customers but can also change the customer set. (See also “Ten Rules for Strategic Innovators: From Idea to Execution” by Vijay Govindarajan and Chris Trimble.)

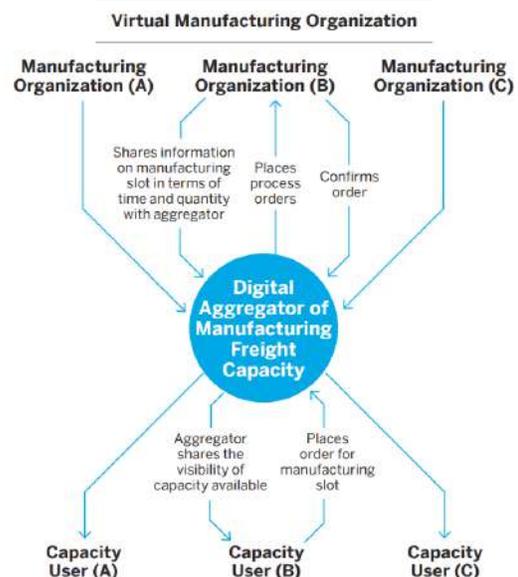
**Redrawing the architecture :** Redrawing the architecture can be done in two ways. One is by changing the sequencing of the value chain. Activities placed at conventional points in the supply chain are being moved to new positions. Online sale of furniture, for example, has moved assembly of furniture downstream in the supply chain right up to the customer’s door. If supply chains can be defined as a network of supply chain nodes and their connecting flows, digitalization is enabling redefinition of the positions of these nodes. Inventory in transit, under production, or under any other work in progress can be considered a connecting flow since there is a lead time associated with it.

Supply chain nodes, such as warehouses, on the other hand, are buffer zones. From the standpoint of supply chain modeling, these nodes serve two basic purposes. One is to decouple two connecting flows that are functioning at two different rates of operation. Whenever the two flows cannot be balanced, an area is needed to hold the inventory – or the information – for a time period. Another way of looking at it: whenever there is a difference between the end time of one process and the start time of its connecting process, a supply chain node is required. This need could arise due to a difference in frequencies of the two processes or because the process calendars have been defined that way. The other function that these nodes serve is to act as points of aggregation or disaggregation of information or inventory.

Digitalization is enabling supply chain nodes to be redefined. Take the case of e-commerce sites or cab services. They have redefined how demand information can be aggregated and disaggregated on digital platforms and have created new customer value. App-based car-hire services have created a new customer

order-acceptance process, doing away with the need to hold a fleet of inventory at any point of consolidation. This helps the system better utilize available capacity. The idea of a better order-acceptance and fulfillment process is being extended to the logistics industry, as well, to achieve better capacity utilization.

**Where digitalization would help :** An incoming aircraft circling the destination airport waiting for a signal from the air traffic controller advising it about its landing slot; a manufacturing order waiting to be scheduled at the shop floor by the plant scheduler; a passenger waiting for a confirmation on his smartphone for the cab he has booked; a customer waiting to be served at a restaurant or a takeaway counter – all these are examples of supply chain problems where the process order waits for capacity to be allocated. The other side of the coin is that many a capacity lies idle when there is no process order to be served – for example, movie theaters on weekdays. If digitalization can help, as it has already done in many cases, it is worth extending to these and other scenarios as well.

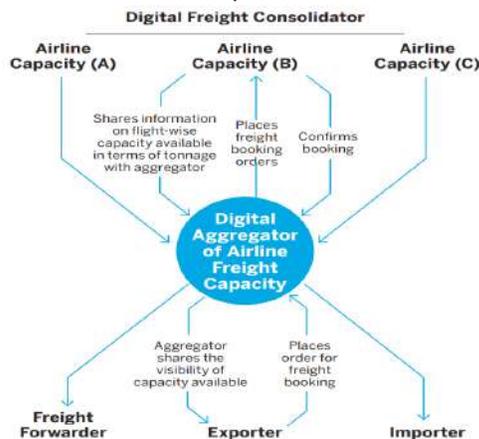


Take the air freight cargo industry. Yield management in the freight industry is a big problem. Overbooked aircraft and flights not flying to their full capacity are often two sides of the same coin. The reason is that freight capacity is not only hardcoded within the airline system and among airline operators but is also sold through dedicated sales channels as long-term capacity

agreements or spot rates. Perhaps the time is right for a digital freight capacity management service? A digital aggregator of freight can potentially unlock capacity and make it available to customers, thereby driving overall efficiencies.

Let us extend this idea to manufacturing. Currently, organizations consider capacity management a core operations-management issue. The standard sales and operations planning (S&OP) process decides how orders are to be prioritized and capacity allocated to the orders. Whether supply chains are configured to operate on forecasting or on replenishment, short-term capacity management is controlled by the manufacturing organizations. Release of surplus capacity to the external world or purchase of manufacturing capacity from external partners is done on long-term contracts and driven through manual processes, right from seeking of information to commercial negotiations.

**Looking into the future :** Imagine a futuristic scenario where organizations make their available capacity publicly known on a digital platform and wait for business partners to place orders. Or think of customers placing their production orders on a digital platform and waiting for manufacturers to accept them. Of course, the assumption is that the system has a very high degree of sophistication in manufacturing excellence, and quality systems are part of the basic hygiene. If the above seems too outlandish, imagine a future where organizations transparently share their production plans with their customers through digital interfaces, and the customers then decide whether to place their orders or to go to a competitor. Such ideas might appear sacrilegious at this point, especially for industries that require intellectual property to be transferred and validated to a new site before manufacturing can begin. But where processes can be customized quickly and product standardization exists, digital capacity exchanges would drive better capacity utilization for the entire system.



In electronic media, specifically TV, the era of mass distribution of sequenced content through conventional channels such as satellite TV is approaching its end. Internet entertainment sites enable viewers to select

the content they want to see at the time they want to see it. The days of families sitting around a TV set watching common content are over. Thanks to technology, that value chain has been redefined. Maybe the day is not far away when the manufacturing value chain also gets redefined. It has already evolved from the linear, vertically integrated value chains of the past to more complex value networks. Digital exchanges of manufacturing capacity will bring to the surface hidden and underutilized capacities, thereby driving efficiency in the overall system.

The idea of a central, external digital exchange for manufacturing capacity might sound farfetched, but it is not a very big leap from the standpoint of technology. Existing enterprise resource planning (ERP) systems have capacity data for both short-term and long-term planning purposes. It is just a question of leveraging this data in a different way. In any value chain, it is accepted practice to place an asset at that precise point in the chain or with that particular partner where its value is maximized. If this information is placed at such a point where its valuation is the highest, it can unlock hidden value for all the partners. Both customers and planners will have visibility of external, multitiered production systems, and decisions will get made in real time. It will be another instance when a change in the supply chain architecture creates a new value proposition.

**Shift in the fulcrum :** The question is whether the industry is ready for this disruption in the value chain. If it happens, it would imply a shift in the fulcrum, or the point of control, of the value chain. Years ago, the fulcrum of the value chain for personal computers shifted from the machine to the operating system and the core processor. The shift in the fulcrum also shifted the leadership position to outside the organization for PC manufacturers. (See also “Clockspeed: Winning Industry Control in the Age of Temporary Advantage” by Charles F. Fine, M.I.T. Sloan School of Management.) Will a disruption in manufacturing lead to another such change? There will, of course, be challenges to the model.

Digitalization in itself cannot be seen as a complete solution for all business processes. It will have to be supported by due diligence of suppliers and customers that would still need to be done offline. Contracts for protection of confidentiality and proprietary information would still need to be executed. Financial flows would need to be clearly defined. But if one can envision a robust, scalable network of validated customers and suppliers of capacity, can the model offer soft acquisition of manufacturing capacity as a value proposition? A virtual manufacturing organization is food for thought.

Learn more about how Intelligent Networks Are Holding Supply Chains To A Higher Standard.

Source: Digitalist Magazine



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# LOGISTICS SECTOR: FLAG BEAREAR OF NEXT GEN SUPPLY CHAIN MANAGEMENT

R NAVEEN KUMAR, Engineer (Stores)-SED, Koraput, HAL  
RAJYALAKSHMI NARAYANA CHILUVER,  
Dy. Manager (Stores)-ED, Koraput, HAL

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Logistics support is one of the major pillars in supply chain industry. Changes taking place in this sector in the last few years is profound and vibrant. Customers' demands are changing with the increase in the e-commerce business. With the reach of internet to small villages where in it was dreadful to find signals to make a call has attracted new base of customers due to upraised awareness among the consumers about the products through advertisements in social media platforms like Facebook, Whatsapp and in app advertisements in android applications.

This has thrown a challenge to not only e-commerce industry but also to the Indian manufacturing sectors in a puzzled race against time to full fill the demands in TIME. It takes about half a minute for a person to place an order in any of the website. The item in the order takes days / months for being manufactured for availability of item in shopping cart and about a week's time to be delivered from the date of order. The cut throat competition in today's market is fierce as demands are customized and volatile. For example, there are a Varity of mobile phones available in the market with different price tags. Mr X from class A City has ordered a mobile on "buy.com" website with delivery of 02 days. Within half an hour he talks about his purchase to Mr B. Mr B suggests that another new mobile brand with a small upward increase in price is available and delivery overnight at "buyl.com". Mr X immediately cancels the order and gets the new mobile the next day©. Like that pizza delivery in 30 minutes else the pizza has to be delivered for free. Even business logistics supporting automobile or other manufacturing industries working on JIT principle requires deliveries at stipulated time and optimized transportation cost without which the production chain and delivery schedule gets disturbed heavily.

The cited examples shows the increased stress in logistics sector to meet the supply chain goals. The goal of fulfilling SUPPLY and DEMAND. During the course of study stress will be on what are the important parameters involved in logistics support systems in India

along with suggestions for future logistics support with respect to Indian Sub-continent requirement.

The logistics costs accounts for about 10-12% of the GDP of the Indian Economy. If we see the study the developments and pull towards the logistics support required this industry is about to grow at a rate of 5-8% p.a in size of total turnover.

While studying the share of market shared by different modes of transport in INDIA it can be seen that 60%-65% of load in transportation of cargo is taken care by road transport. Next is Railways, airways and other modes of transports.

It can be observed that movement of cargo by air caters to about 1% to 3% of total cargo movement. The nature of business has already started taking the shape of B2C which was B2B involving middlemen, retailers and wholesalers. And accordingly, if we see how Road carriers evolve over a period of time, long back it was purely LORRY Service -> then came Goods Carriers -> Transporters Logistics Support NOW IT HAS TAKEN THE SHAPE OF LOGISTICS ASSOCIATES. The industry has changes its shape from haulers / forwards to "on-contract logistics providers or say 3PL \*famous terminology buzzing the marker". Things are moving forward to very fragmented 4PL also as because majority of industries are outsourcing the logistics and allied activities on contract and concentrating mainly on core business.

There are a number of distinct business models in the industry. The different models who are operating under flag ship of logistics service providers, carriers (trucking, rail freight etc.) and Courier / express / parcel companies. Now a days postal services also playing a major role in Courier / express / parcel business with the boom in e-commerce business due to assured, reliable and cost effective deliveries for low volume business. It may be noted that about 1/3<sup>rd</sup> of business provided to courier services is from B2C. As discussed earlier also there is boom in e-commerce model involving supply of wide range of products covering

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from FMCG products to furniture's to fashion to retail and now even automobiles also. The consumer base is not only class A/ tier-1 cities but also penetrated deep down to tier-2 and tier 3 cities also.

Considering the change in pattern and customers requirement **TIME** has become a major measuring parameter. What is the average response time from the time an order arrives and product or service is reached to customers Zone.

**The logistics industry is morphing itself in lap of Knowledge sharing and integration of data.**

The growth of collaborative working based on data sharing from Cloud computing and internet is pushing the industry towards standardization. The transportation sector is unorganised and lacks standardization other than some Courier / express / parcel services. The role played by carrier's esp. trucking who rely on verbal business and are very localized has to be made organized in line with Ola / Uber business model. Adaptation to new technology by service providers is a must which involves an initial investment. The same is must so as to break the fundamental barrier of transport and Carriers who are very unorganized and localized. This transformation to incorporate agility by making them flexible is required to make them ready to share the load on the Courier / express / parcel business increasing drastically.

Today the world is making fast advances in the fields of internet of things, automated transportation, use of drone's, automation of ware houses, GPS location based order processing etc... which are very promising and showing a Rosy picture of how transportation of goods look like. For example, Mr X booked a product through buy2.com. Within a scheduled period the automated ware house loads all the parcels to a designated area nearby the final delivery locations in a self-driving car and then a drone flies from the car and lands in the balconies to complete the last mile delivery of the parcels. All these activities are coordinated by the pre-fed GPS locations. This seems so exciting and reflects the exact customer requirement as on date. **This is probably the future but long away from becoming serious reality considering the economic viability of the operations cost involved as well as lack of proper trust, public policies and other reliable infrastructure in place.**

Considering Indian market scenario, the technological advancements indicated above will prove to be operational wastage rather than an asset in most of

the situations. We will further be outlining about a new way forward, major challenges involved and other related aspects in building up a strong logistics sector to face the upcoming challenge "To meet the exponentially growing low cost personalised services required by the customers at Low product costs and Free Shipping". Today most of the manufacturing or process or other industries also want to cut down there logistics time and cost so as to reduce their supply chain cost effected by

- a) Transportation & warehousing,
- b) Altered final delivery schedule due to non-availability / delayed arrival of items at production site
- c) Blockage of funds due to additional inventory there by reducing the inventory turnover ratio.
- d) Devaluation of company's reputation due to increased average response time, etc..

At this juncture we may think that the problem will be taken by efficient logistic team of the company. It is a point to think and retrospect that in India we are lacking certified Logistics managers. There are many logistics managers who are very efficient, knowledgeable as well as read the industry very well. It is well understood by everyone that this service sector is the back bone of any other sector / Industry / day today life but lacks enthusiasm as a career. The logistics managers involved in this field gain the required knowledge by day today activities and tips from the seniors in the organisation.

In the past few years it has become a reality that there are institutions who give diplomas and degrees in the field of logistics which has to be done long before. Just like we have Carter accountants or Charter engineers who are treated as specialized in their fields, we need to have Carter supply chain mangers in the very near future. The same is required in order to have a better Knowledge sharing on the day today know how's, increasing the research in this field about how to move forward in designing and standardising sub optimal supply chain. Today in this world of internet ideas spread fast. Knowledge sharing platforms are on an increase. We need certified and experienced managers to share their best available knowledge and encourage the next generation to take up logistics / supply chain as challenging career option.

Given the scope of growth in the logistics industries there are many new start-ups are venturing into this field. These start-ups are acting as technology providers

to leverage IT platforms as major service - Selling points. We are moving towards interacting with technology or a service provider on applications. Whether it be booking, pickup, tracking everything is going on internet and data is available on the GO.

The best example of digitisation in INDIA in logistics sectors can be taken of INDIAN CUSTOMS who have taken majority of their operations **on line** like sharing of data among all the users and allied agencies, approvals and related activities. This has reduced the correspondences amongst the organisations also there by reducing the number of days required for customs clearance drastically. We can easily say this catch phrase:

“TECHNOLOGY IS ONLY COMMUNICATING WITH OTHER TECHNOLOGY”

The best example of technology communication is the virtual assistants involved in the web sites of many shipping companies and ecommerce companies who resolve the basic and recurring issues. (What can we address virtual assistant “WHO as a person” or “which as a non-living object”)

This reduces the time lag due to human intervention and routine jobs are processed faster keeping a huge data as backup for analysis and research leaving scope for market analysts to plan in an appropriate way towards future reducing operational wastages.

Today time has come when we move towards the “**WILD**” logistics management to fulfil the two demanding major attributes “**HOWFAST**” and “**HOWBEST**” in SCM.



This concept is being recently followed by many ecommerce giants around the globe. Today the customers’ requirements are too much customized and they take caution about minute detailing also. Many companies are trying to customize some additional accessories but what is required now a days is complete product customization as per the customer.

Another big question comes how we achieve a responsible role of logistics last mile delivery profitably

beating the time deadlines in an efficient manner in Indian Scenario where in driverless transportation and GPS mapping are still a long way ahead in realization.

The answer is provided by developing “**VIRTUAL LOGISTICS TEAM**”. In this era, significant technological developments are taking place in Data sharing through cloud solutions with integration of related services and technical support at a single place is playing a key role. It is time we put effort to stream line and lay effort in this direction for development of Virtual Logistics team by way integrating all the transporters, courier service providers and the related customers/service providers enabling them to:

- a) Use of utilized space in the vehicle
- b) Sharing data about sub optional route, load patterns
- c) Real time tracking of goods movement not hub based but location based
- d) App based logistics solutions for freight , ware house and last mile delivery matching solutions
- e) Immediate attention to breakdowns of vehicles and service provisions
- f) Reduction in deviations in routes and misplaced consignments
- g) Increased usage of underutilized assets and reduction in operational wastages.

Many companies are now centralizing their planning and coordination teams, which clearly indicates that local resources taking the roles of planners for scheduling day to day works are reducing. The centralized team is managing and coordinating majority of the activities. It is evident that for sustaining given the increase in fierce completion and fluctuating fuel prices road transport logistics companies need to bring down the operating costs, free up resources for increasing productivity by supporting innovation and value propositions.

**VIRTUAL World of Logistics (Road freight, Air freight, last mile delivery) and Strategic Warehousing Service with Full Technical Support and Monitoring App based system** (referred as **application** in further usage)

In India today also there are many transporters / Road carriers who don’t even have a proper website and online tracking facility. We have abundant workforce

also who are being underutilized as housewives and unemployed youth having sound technical knowledge. The above topic is intended to put forward a theory wherein we propose an application based fully monitored logistics support system with last mile deliveries which works on the principle of load sharing and availability of goods carriage space up to the last Cu<sup>3</sup>. The basic flow chart is detailed and fully explained below:

The above flow chat and ideas are explained in details with additional support system further.

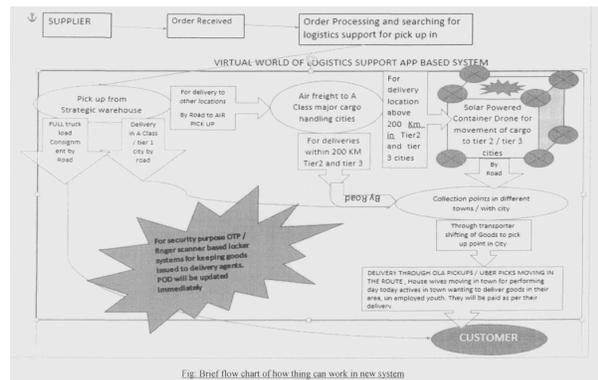


Fig: Brief flow chart of how thing can work in new system

In the assumed system we will be mainly concentrating on the logistics part it is presumed that the delay in product availability with the supplier or his ancillary / outsourced vendor is 100%. The proposed system will be working based on the delivery between pin codes. As soon as an order is received at the suppliers end, the order will be processed and searched for availability of the product / service nearest warehouse / ancillary / outsourced vendor from the ordered pin code. Considering that customer requirements are highly customized, an assembly request is being sent to nearest warehouse / ancillary / outsourced vendor along with an intimation to the logistics partner for pick up request.

The responsibility now shifts to the centralized logistics associate working on **application**. If consignment is full truck load / part truck load for point to point pick up then logistics service providers, carriers (trucking, rail freight etc.) will be engaged for delivery to the particular location and the truck no will be mapped to the docket number enabling real time positioning of the consignment.

All the trucks / logistics associates registered with the **application** are presumed to be GPS enabled / will be made GPS enabled.

The Team assisted by IT platform programme now matches the availability of latest scheduled delivery vehicle from the registered list of logistics service providers, carriers (trucking, rail freight etc.) and Courier / express / parcel companies WRT to the volume and weight of consignments. A pick up request will be lodged on the available service for moving the consignment to A Class / tier -1 cities by air freight. The motto is increasing the AIR FREIGHT in Indian Territory as it is very low as on date. Air freight can be made cheaper if volume of cargo to be carried increases inviting more number of players to venture in to the territory. Here we are achieving the time benefit which is the most important aspect to be fulfilled. As soon as the cargo is collected it is mapped to the cargo collection centre. Assuming the cargo needs to travel to further to tier -2 / tier -3 city, we can move by two possible ways.

- If the distance is <200 Kms then the consignment will be mapped to logistics service providers, carriers (trucking, rail freight etc.) and Courier/ express / parcel companies for pick up further and proceed for last mile delivery.
- If the consignment needs to travel as distance of more than 200 Kms, we may be using new solar powered, point to point satellite controlled GPS mapped CONTAINER DRONES. Through which cargo will be moved. The consignment will be mapped based on the container Number and the same will be monitored by the remote team.
- If the consignment delivery is in the same City tier 1 cargo collection centre where the

Air cargo will be landing, we will proceed for last mile delivery.

As soon as the container lands in the designated position the cargo will be collected and allocation to complete the last mile delivery will be done in the form of "CROWD AGENTS".

These "CROWD AGENTS" are no one but the OLA / UBER / AUTO / Registered local representatives like house wives / unemployed etc., who can be used for the lose mile delivery. The agents register their movement details in the application, there by mapping their route. Centralized logistics associate assisted by IT platform programme will map the consignments for pick up against each one enabling them to deliver to respective end customer. The final delivery of the consignments will be made in Security boxes which will

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be only opened up on entering OTP / fingerprint entered by the customers. Hence, the same can be treated as POD and issue will be closed.

After certain period of time the ware houses of logistics associates can also be used as company's strategic ware houses for keeping their product in delivery range after thorough study of load and ordering pattern. The logistics associate can further act as a sourcing partner by making small contracts with local suppliers with the agreement of parent company so that as soon as an order is received the associate and pick up from local supplier and deliver the product under parent company through "CROWD AGENTS".

Apart from the above the major help that has to be provided to the road transport industry for two thing:

- a) Immediate support during breakdown / accidents
- b) Determination of sub optional viable route before starting journey.

These issues can be solved by our application based on the GPS data collected during the movement of vehicles as well as inputs received from registered list of logistics service providers, carriers (trucking, rail freight etc.) and Courier / express / parcel companies so that the person before starting the journey knows the sub optional route, list of emergency places etc. With the incorporation of GPS based trucking system and encouraging the same (which will be costly initially) but the same will help in many ways to the trucking fleet owner by way of detection of exact vehicle position during emergencies and engaging part load also during movement of vehicles if full truck load is not there by searching for **mapping of load availability in the indicated route.**

Apart from the above we can incorporate break down maintenance service associates in the application. The nearest registered associate will be informed automatically with exact coordinates of the vehicle under breakdown through application. Apart from that, the payment will be done based on the prepaid application card on the spot for the quantum of work done so that bills will be settled on the spot and vehicle operator needn't carry much of cash with him / worry for payments during breakdowns. There will be no physical money transfer through pre-paid card but transfer of credits which will later be reimbursed as money there by reducing the misuse of the amount.

These are certain small milestones which needs to address to resolve the immediate problems faced by

logistics sector.

## CONCLUSION

Without any ambiguity it can be stated that logistics sector is budding and will grow at a much faster pace. With the kind the customer requirements and unstable market a major challenge is awaited for the industry in terms of making profits and generating revenues. The logistics partner will not only play the role of a carrier but also will act as a partner by sharing some of the on-contract parent companies operations in the field of strategic ware housing, advertising on the vehicles, collection of ground level feedback and many other allied activities.

**Technology advancements** in the field of information sharing, data mining, coordination without compromising the security and safety of the cargo handled by the logistics team has to be speeded up. New opportunities need to be projected in a very attractive way so that new generation people take up logistics a subject of interest, research and career. The responsibility lies with us who are working in this industry to project the striking challenges that will be faced and the delight available in resolving the issues and seeing smiles on the customers.

In the years to come customer will be interacting with only virtual assistants and whom we physically see is the last mile delivery persons. He will be the **avatar** of the company whose product he is delivering. In this arena of competitive environment success lies in embracing agile and flexible cultures towards the smart future.

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# PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA) ORDER 2018 FOR CYBER SECURITY PRODUCTS

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**Reference: Department of Industrial Policy & Promotion (DIPP) Notification No. P- 45021/2/2017-B.E.-II dated 15.06.2017 and revised notification P- 45021/2/2017-PP(BE-II) dated 28.05.2018**

The Government has issued Public Procurement (Preference to Make in India) Order 2017 vide the Department of Industrial Policy and Promotion (DIPP) Notification No. P- 45021/2/2017-B.E.-II dated 15.06.2017 and partially modified order no No.P-45021/2/2017- PP(BE-II) was issued on 28.05.2018, to encourage 'Make in India' and to promote manufacturing and production of goods and services in India with a view to enhancing income and employment.

2. In furtherance of the Public Procurement (Preference to Make in India) Order 2017 notified vide reference cited above, the Ministry of Electronics and Information Technology (MeitY) hereby notifies that Cyber Security being a strategic sector, preference shall be provided by all procuring entities to domestically manufactured/produced Cyber Security Products as per the aforesaid Order.

**3. Definition of Cyber Security Product:** For the purpose of this Notification, Cyber Security Product means a product or appliance or software manufactured/produced for the purpose of protecting, information, equipment, devices computer, computer resource, communication device and information stored therein from unauthorized access, use, disclosure, disruption, modification or destruction.

**4. Definition of 'local supplier' of domestically manufactured/ produced Cyber Security Products :** For the purpose of this Notification, the 'local supplier' is defined as follows:

(A) A company incorporated and registered in India as governed by the applicable Act (Companies Act, LLP Act, Partnership Act etc.) or startup that meet the definition as prescribed by DIPP, Ministry of Commerce and Industry Government of India under the notification G.S.R. 364 (E) dated 11<sup>th</sup> April 2018 and recognized under Startup India initiative of DIPP.

#### AND

(B) Revenue from the product(s) in the India and revenue from Intellectual Property (IP) licensing should accrue to the aforesaid company/Startup in India. The entity claiming benefits under the Public Procurement Order 2017 in addition to being an Indian registered/incorporated entity, and supplying products should satisfy the conditions of IP ownership as under:

(B)(i) Domestically manufactured/produced Cyber Security product means a product, whose intellectual property is owned by the Indian Company/Startup (as defined above) such that it has rights to:

- (a) Use and commercialize without third party consents; and
- (b) Distribute; and
- (c) Modify

#### AND

The Indian Company/Startup should demonstrate ownership of intellectual property associated with the product, in addition to trademarks applicable, if any.

(B)(ii) Even in case of open source products, all the three IP ownership rights as outlined in paragraph B(i) above should rest with the Indian entity.

(B)(iii) IP ownership rights would need to be substantiated by adequate proof, such as

(a) adequate documentation evidencing ownership (evidenced by supporting proof such as documentation related to development but not limited to IP assignments, shrink wraps, license agreements, click wraps); **OR** (b) IP registrations. It may be noted that IP registrations is not a compulsory criteria as it is not necessary to register to exercise copyright in India.

#### Exclusion:

(a) Resellers, Dealers, Distributors, implementation/support services agencies of products, who may have limited rights to IP to enable transfer of rights to use, distribute and modify.

(b) Digital content is not considered a product e.g. videos, e-books, etc.

Definition of domestically manufactured/produced Cyber Security product and Indian Company should be applied in conjunction with conditions 4.1 (A) and 4.2 (B) outlined above and read along with the aforesaid exclusion criteria, to suppliers of products to identify Indian Product Company/Startup.

**5. Product List :** A committee headed by Additional Secretary MeitY and comprising of Group Coordinator (R & D in Electronics) MeitY, DG CERT-In, DG STQC, CEO DSCI, Additional Chief Secretary to Government of Karnataka Department of Personnel and Administrative Reforms (e-Governance), representative of Ministry of Defence and Group Coordinator (Cyber Security) MeitY as convener will be constituted to define and review framework for the evaluation of the products and will be empowered to approve the products to be included

in the list of products eligible for benefit under this notification. The committee may co-opt domain specific official members for evaluation. The committee, inter-alia, is to assess capacity and capability and recommend following :

- i. The product is secure to use and its performance.
- ii. Adequate support infrastructure is available in country.
- iii. Meeting international standards/best practices wherever available.
- iv. The committee while making recommendations bear in mind the need to promote development of indigenous 'Make in India' capabilities in cyber security sector.
- v. Products with multiple sub-components can be covered under this notification. Total licensing/ Royalty fee going out in any such product should not exceed 50% of the total cost of the product.

**6. Verification of 'local supplier' of domestically manufactured/ produced Cyber Security Products**

- a. The local supplier at the time of tender, bidding or solicitation shall provide self- certification that the item offered meets the definition of 'local supplier' of domestically manufactured/produced Cyber Security Products, as per Para 4 above.
- b. In cases of procurement for a value in excess of Rs. 10 crores, the local supplier shall provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) that the item offered meets the definition of 'local supplier' of domestically manufactured/ produced Cyber Security Products, as per Para 4 above.
- c. In case a complaint is received by the procuring agency or the concerned Ministry/ Department against the claim of a bidder regarding supply of domestically manufactured/ produced Cyber Security Product, the same shall be referred to STQC, an attached office of MeitY.
- d. Any complaint referred to STQC shall be disposed off within 4 weeks. The bidder shall be required to furnish the necessary documentation in support of the domestically manufactured/ produced Cyber Security product to STQC. If no information is furnished by the bidder, STQC may take further necessary action, to establish the bonafides of the claim.
- e. In order to avoid frivolous complaint designed to overreach the preference given to local supplier, it is proposed to strengthen and make accountable the entire complaint process. Accordingly, a complaint fee of Rs.2 Lakh or 1% of the value of the domestically manufactured/produced Cyber Security Product being procured (subject to a maximum of Rs. 5 Lakh), whichever is higher, shall be paid by Demand Draft to be deposited with STQC. In case, the complaint is found to be incorrect, the

complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.

- f. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.
7. For reasons to be recorded in writing, a procuring entity may choose to procure a higher percentage of domestically manufactured electronic products than specified in the Public Procurement (Preference to Make in India), Order 2017. This would enable the procuring entities to meet their special requirements or wherever a special policy provision exists/decision is taken by the Government to meet the demand from domestic manufacturers.
8. The Notification comes into effect immediately and shall remain valid till the revised Notification is issued.
9. The Cyber Security Products notification shall also be applicable to the domestically manufactured/ produced Cyber Security products covered in turnkey/system integration projects. In such cases the preference to domestically manufactured/ produced Cyber Security products would be applicable only for the value of Cyber Security product forming part of the turnkey/ system-integration projects and not on the value of whole project.
10. MeitY shall be the nodal Ministry to monitor the implementation of the Cyber Security Products Notification.
11. In case of a question whether an item being procured is a Cyber Security Product to be covered under the Public Procurement (Preference to Make in India) Order 2018 for Cyber Security Products, the matter would be referred to the Ministry of Electronics and Information Technology for clarification.

Copy to:

1. All Ministries/Departments of Government of India
2. Cabinet Secretariat
3. PMO
4. NITIAayog
5. Joint Secretary (DIPP), Member-Convener of Standing Committee of Public Procurement Order 2017
6. Controller and Auditor General of India
7. AS&FA, Ministry of Electronics and Information Technology
8. Internal Distribution

(Rakesh Maheshwari)  
Senior Director & Group Co-ordinator  
(Cyber Laws & E-Security)

Source : meity.gov.in

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# INTERNATIONAL NEWS

IFPSM World Summit 2018 Procurement in 2020's  
Discover the new Role of Procurement.

L.P.PATEL  
PAST NATIONAL PRESIDENT - IIMM  
lppatel09@gmail.com

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The IFPSM World Summit 2018 was held at Helsinki (Finland) from 26<sup>th</sup>, to 29<sup>th</sup>, Sept.2018. The theme of the summit was “**Procurement in 2020's Discover the new Role of Procurement**”.

From IIMM, National President, Sr Delegate and Alternate Delegate had the privilege of attending the World Summit 2018. The summit agenda also included the meeting of the Board and Council meeting, which was also attended by us. Delegates from over 25 member countries attended the summit. The deliberations during the summit were of high calibre and relevant to the trends and developments in the field of Supply Chain Management globally. The enthusiasm, excitement of the delegates at the summit was remarkable and appreciated by all present. There was a marked focus towards growth and development of SCM professionals all over the world in line with the theme of the summit.

We took an active part in the deliberations of the summit, council meeting and board meetings. The views expressed by us were noted and appreciated. Our discussions were also on possibility of joint programs with other member countries, which could be of mutual benefit.

**President's Address:** Mr Hi-Liming gave first introduction of International Federation of Purchasing and Supply

Management. He mentioned that IFPSM is a Non-Political, independent, Non-Profit oriented International organization and most authoritative International organization in Government Procurement, Logistics and Supply Chain Management. Having 45 Countries and more than 2 lakhs 50 Thousand practioners across the Globe. He spoken in brief about our Vision and Mission he mentioned in his address on the important work being carried out such as:

- Build International Purchasing Federation.
- Communication platform.
- Europe, Americas, Asia, Africa regional seminars, forams and other activities.
- Setup a series of awards in professional fields.
- Promote the cultivation and exchange of profession of Procurement.
- Global Standard Certification System (GS).
- At present associations and organizations from 18 countries and regions joined in the Global Standard Certification system.

Mr Hi-Liming also published the first Academic Journal

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of IFPSM which is called “Modern Supply Chain Research and Application” (MSCRA).

He explained that the word Summit is the main brand conference sponsored by the International Purchasing Federation which held every two years around the world and it has been hold 19 times successfully since the first conference held at Venice, Italy in 1997.

Mr Hi-Liming also expressed his views on the theme “ Procurement in 2020’s - Discover the new Role of Procurement” and covered various topics during his address.

**IFPSM Board Meeting /Council Meeting :** After the Welcome by President, Maria Lindia – ZNS, presented her slides to show profit/loss on various activities of IFPSM. She also discussed the budget for 2019-21 and interacted on IFPSM Membership Subscription. It was also discussed that next World Summit in did not have a negative impact on IFPSM. Major discussion taken are moving the administration from UK to Finland to reduce the cost. When asked about profit IFPSM could expect from LOGY for 2018 World Summit, Markku mentioned that World Summit was not what had been budgeted due to lack of international Sponsors and also the European Delegates were very low. China, Africa and Indonesia deputed maximum delegate. However, it was appreciated the amazing work Markku had done to bring the world Summit to this level.

Mr Sean O’Dwyer IIPMM was elected as President Elect and would be assuming his presidency at the end of 2019. Mr Markku - CEO of LOGY will be taking the charge from Malcom Youngson from Middle of the next year 2019 in addition to his existing role as CEO of Logy.

**Technical Sessions :** The World Summit Conference was held at the Finlandia Hall in Helsinki on 27<sup>th</sup> and 28<sup>th</sup> September 2018. More than 20 speakers arrived from various Countries participated during two days conference and gave the wonderful presentations to the delegates. They all were very prominent Industrialists, SCM Professionals and Academicians came particularly to convey their strong feeling, suggestions to the SCM Professionals so that they can contribute not only to their own industries where they are working but also to the society as well as their Country. It was convinced that SCM community would be much helpful for uplifting the standard of every citizen by using best practises being developed across the Globe.

The following topics were covered during the two days conference.

- Latest Development in Global Economy
- Impact of Megatrends on Procurement in the 2020s,
- Panel Discussion: Discover the New Role of Procurement
- Globalization & new routes within European

market

- Impact of disruptive trends on technology for procurement
- How do Global Megatrends effect Supply Chain Sustainability?
- Managing cybersecurity of the supply chain
- Driving Sustainable top line and bottom line value
- Reinventing procurement with state of art digital technology (AI)
- Transformation of Procurement in challenging environment.
- Modern Supply Chain Research and Applications,
- Case: Haier & IOT Platform Practice
- **Towards Next Generation Procurement,**
- **Industry & its impact on competences in Procurement 2022**
- Digitalization of Public Procurement – Best Practices
- What will be P&SM look like tomorrow? What competences are required to succeed?
- Strategic Procurement - SMEs in Public Procurement and Value-for-Money
- **The Procurement Value Proposition to Business**
- Procurement, the Catalyst for Innovative Solutions
- Introduction of the new IFPSM Journal for Procurement Professional.
- The future of Procurement Profession.

For 2019, the World Summit is already finalized at Mombasa, Kenya Africa. For 2020, the world Summit is soon going to be finalized at Indonesia. For 2021 they have received the offer from 4 to 5 countries. We have also thought that IIMM should ask for World Summit at India and can be held along with NATCOM 2021 during September/November 2019. We had informal discussion with all the concerned and we are also going to send formal request in prescribed form in next one week’s time. Let us see if we can get the opportunity.

It was wonderful experience and opportunity to interact with the best SCM Professionals in the industry together from the world during the two days event at the Finlandia Hall. All the delegates have heard what the world talks about and how to take advantage of new trends and tools in procurement in your own work.

Mr G K Singh - National President  
Mr Lalbhai Patel - Senior Delegate  
Mr S K Sharma - Alternate Delegate



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## GST: INDIA MUST BET BIG ON LOGISTICS

India's logistics sector is coming of age. With its new found infrastructure status and the GST giving tailwinds, it is all set for transformation. In addition, there is a lot happening in favour of this sector, which has resulted in it being deemed a sunshine industry. During the last two years, India's position has progressed in the World Bank Logistics Performance Index (LPI), in terms of overall logistics performance from 54 in 2014 to 35 in 2016. The 2017-2018 Economic Survey also paints a promising future for the sector. Industry analysts also endorse such growth trends for logistics—e.g., a recent report by real estate consultancy CBRE predicts a stronger growth for logistics in 2018, owing to leasing activity shooting up to 70%, to reach 17 million sq. ft. It also forecast that demand for warehousing space will reach 20 million sq. ft. in 2018, with both new and existing occupiers expanding their operations. GST, in particular, has given a major fillip to the sector and will expedite faster conversion of informal logistics setups to formal ones. It will also speed up freight movement at interstate borders due to dismantling of check-posts. With the GST e-bill being rolled out from April 1, 2018, the sector will witness further improvements.

The government is committing a whopping Rs 6 lakh crore towards infrastructure this financial year. More than 50% of this investment will be routed to the creation and upgradation of roads, railways and ports, and forms one of the primary drivers of transformational growth for the logistics sector in India. The large-scale investments are aimed at bringing down the cost of logistics from a staggering 14.4% of GDP to about a 10% level over next three-four years, which will make the sector competitive. All this augurs well for the industry. It will not only stimulate job creation—a critical need for the nation—but also bring to the forefront the talent requirement of the industry in the coming years. As a result of all the investment-led transformation, the logistics sector in India is expected to provide employment to 13.9 million people, up from the current 10.9 million, over the next four years (2018-2022), making it the largest job-creator in the infrastructure space.

According to our research, 3 million incremental jobs will get created across seven sub-sectors within the logistics sector. Road freight, a Rs 9.6-lakh-crore market growing at 16.5% CAGR, will account for 1.89 million new logistics jobs (63% of all potential jobs in the sector), while rail freight (40,000 incremental jobs), waterways (450,000 incremental jobs), air freight (400,000 incremental jobs) and warehousing (120,000 incremental jobs) will contribute a million more jobs over the next four years. Courier services, a Rs 28,000-crore sub-sector and the second-fastest (at 17.3% CAGR) growing, will create 60,000 incremental jobs and packaging, a 24,000-crore sub-sector, will create 40,000 incremental jobs over 2018-2022. The bulk of these new jobs, amounting to 1.74 million incremental jobs (58% of all potential logistics jobs) across the sector between 2018 and 2022, will get created in four cities—Delhi-NCR, Mumbai, Chennai, Bangalore.

Now, while it is good news to see demand for additional man-power in this industry, there exist challenges on the supply-side. In the recent years, technology has changed the way the industry works—as a result, certain skills have become redundant and certain job profiles have been eliminated. Newer technologies such as IoT, Big Data Analytics, AI are having a profound impact on employment already, and are resulting in demand for newer skills. Similarly, the emergence of newer third party and fourth party logistics players are also leading to demand for new skills. Now, the industry, which hitherto banked on unskilled and semi-skilled workforce, is facing a talent crunch. Logistics service providers now realise that their pace of growth, profitability and ability to deliver superior quality services and achieving continuous improvements will demand a rapid development of capabilities across several areas. A key capability that would require focus is that of skills development. With the business rapidly formalising, logistics player are waking up to the reality of talent management, and are faced with an immediate imperative to embrace technology, acquire new and relevant skills, and invest in continuous learning for business growth. They are also facing challenges in attracting and retaining talent, including battling perception of logistics as a low-skills sector.

This can be a major growth impediment, and, therefore, this makes it imperative for the government, training institutions, logistics companies and sectoral skill council to build training capacity and offer industry-relevant skills to candidates. Apprenticeship is one of the proven models of training that ensures skilled workforce as per the demands of the industry and emerging job roles. A notable step in this direction was the launch of the 'First Apprentice' programme under the National Apprenticeship Promotion Scheme (NAPS) by the Logistics Skill Council in 2017 to boost apprenticeships in the logistics sector; this aims to train 3 lakh youths by 2020. Similarly, at the industry level, CII has also set up a Centre of Excellence in logistics and supply chain management, with enhancing the competitiveness of the Indian Industry through supply-chain and logistics excellence being the objective. While all these initiatives are steps in the right direction, more concerted effort is required of industry, academia, policy-makers and trade-bodies if the supply of skilled logistics resources is to be enhanced. Collaborative efforts by all stakeholders and interested parties would enable the development of a sustainable and thriving logistics sector that not just serves the nation's needs, but also will make India a global hub for logistics services.

If India needs to reap the benefits of the logistics revolution, it is has to undertake strategic investment, intervention and initiatives to build this sector and make it the largest infrastructure jobs engine for India. The day of reckoning for logistics is here, and betting big on this sector will surely translate into a large number of jobs for India.

Source- [www.gststation.com](http://www.gststation.com)

## INDUSTRY 4.0: UPSKILLING, CROSS-SKILLING WOULD BE IMPORTANT FACTOR IN ALL SECTORS, SAY EXPERTS

The Fourth Industrial Revolution is replacing the “inefficiencies” of traditional businesses with disruptive technologies and thus upskilling and cross-skilling of employees would be an important component in all sectors, according to experts.

Industry 4.0 and its impact took centre stage at a management summit held Saturday at the Indian Institute of Management (IIM), Rohtak where experts from the core industry and other sectors discussed and deliberated on the subject. Emphasising on the changing business landscape, Dheeraj Sharma, the director of IIM Rohtak said, “In view of the increased use of cyber systems, it is important that we develop a strong culture of cyber security and cyber-immersion in our institutions.”

“In order to do so, we need to develop a stronger campaign to echo the significance of security training, safety of online transactions, responsible social networking and ethical data mining,” he said. Industry 4.0 refers to various digital technologies, automation and data exchange techniques, which can contribute to creating cyber-physical systems thus revolutionising the process of industrial production.

The experts also discussed how businesses are approaching their inefficiencies with disruptive technologies like IoT (Internet of Things) and big data. The Internet of Things (IoT) is an ecosystem of connected physical objects that are accessible through the Internet.

“The Fourth Industrial Revolution is replacing the inefficiencies of traditional businesses with disruptive technologies like IoT, cloud computing and big data to name a few. The digital wave has its impact on every sector of the economy and promises to revolutionise manufacturing, supply chain, distribution, and retail,” IIM-Rohtak said in a statement. The pace of change today is immense and to stay relevant businesses are required to make information and data an integral part of their business model, it said.

Arvind Bali, CEO, Videocon (Telecom) said, “The things we see today will vanish in a couple of years. The pace of change is much higher today as compared to what it was yesterday; this pace is an essential NCR-IIM-SKILLING part of Industry 4.0.”

Akhil Prasad, Member, Board of Directors, Boeing India also participated in the summit and spoke about Industry 4.0 from the aviation sector perspective.

“In Industry 4.0, we are moving towards a phase in manufacturing where it is imperative to reduce wastage. We at Boeing are exploring smart technologies on a regular basis to make better and smaller aircraft,” he was quoted as saying in the statement.

The leaders from different sectors agreed that data today is indeed a “strategic asset” and stressed on the increasing need for skilled personnel”. Upskilling and cross-skilling of employees thus will be an essential function in every sector, be it logistics, manufacturing, real estate or services, the experts said.

Source : Economic Times, Oct 28, 2018



### CUSTOM EXCHANGE RATES

(All rates per unit) w.e.f. 16th November, 2018

CURRENCY	IMPORT	EXPORT
Australian Dollar	53.60	51.30
Bahraini Dinar	197.40	185.20
Canadian Dollar	55.50	53.45
Chinese Yuan	10.55	10.20
Danish Kroner	11.15	10.75
Euro	83.15	80.15
Hong Kong Dollar	9.35	9.05
Kuwait Dinar	244.75	229.25
Newzealand Dollar	50.35	48.10
Norwegian Kroner	8.65	8.35
Pound Sterling	95.40	92.10
Qatari Riyal	20.45	19.20
South Arabian Riyal	19.85	18.60
Singapore Dollar	53.25	51.45
South African Rand	5.20	4.85
Swedish Kroner	8.10	7.80
Swiss Franc	73.15	70.20
UAE Dirham	20.25	19.00
US Dollar	72.95	71.25
Japanese Yen (100)	64.65	62.35

Source : [www.dailyshippingtimes.com/custom-exchange-rates.php](http://www.dailyshippingtimes.com/custom-exchange-rates.php)

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## LOGISTICS SECTOR COULD BE GOLDMINE OF JOBS IN INDIA SAYS REPORT

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Infrastructure investment and GST implementation will help Logistics industry grow at 10.5% CAGR states TeamLease report titled 'Indian Logistics Revolution - Big Bets, Big Jobs'. According to the report, public investment coupled with consumption and industry evolution will drive the growth of the INR 14,19,000 crore Logistics sector. The impact of each of these factors on the seven sub-sectors 1) Road Freight 2) Rail Freight 3) Warehousing 4) Waterways 5) Air Freight 6) Packaging and 7) Courier Services is likely to result in 3 million new jobs, upping the employment numbers in the sector from 10.9 million (current) to 13.9 million by 2022.

As per the 2018 budget, public investment of INR 6 Lakh crore has been promised to infrastructure, of which 50%, i.e. INR 3 Lakh crore will be go into building world-class road, rail freight, waterways infrastructure, and state-of-the-art multi-modal logistics parks. This large scale investment is aimed at bringing down the logistics costs from 14.4% of GDP by about 2% over the next 4 years, hence, stimulating the creation of more jobs in logistics sector.

Economic growth, evolving regulation, rising outsourcing and high infrastructure investment are expected to create 1.89 million incremental jobs in the Road Freight whereas the Rail Freight sub-sectors will create 40K incremental jobs, over the next 4 years (2018 through 2022). The report also highlighted the fact that Air Freight will create 400K incremental jobs, and Waterways will create 450K incremental jobs due to growth of cargo in ports and ease of doing business which is making India a leading emerging market.

IT adoption coupled with packaging innovation, urbanization, multimode transportation model and a fast growing customer segments and incomes will change the Packaging, Warehousing and Courier subsector. The Warehousing sub-sector will create 120K incremental jobs while the Packaging sub-sector is set to create 40K incremental jobs. The Courier Services sub-sector will see a growth of 60K incremental jobs over the next 4 years (2018 through 2022)

### KEY FINDINGS OF THE SURVEY

- The INR 14,19,000 crore Logistics sector in India is set to create 3 million new jobs, over the next 4 years (2018 – 2022)
- Public investment of INR 6 lac crore is the primary factor driving job growth
- The second most important growth driver is the Infrastructure status accorded to the Logistics sector in 2017. This will improve access to low cost, long term credit
- GST implementation would formalize the sector and bring in operational efficiency

- Introduction of new players is upping the ease of doing business bringing the sector to a more formalized and organized structure with investments in technology
- Macro-economic and regulatory factors will transform the Logistics sector and improve its global competitiveness, thereby reducing logistics costs from 14.4% of GDP by about 2%
- Public investments and private investments targeted at reducing logistics costs
- India's ranking on the Logistics Performance Index (LPI) has risen to 35 (up from 54 in 2014)
- Each of the seven large, fast growing, logistics sub-sectors will create significant number of jobs over the next 4 years
- Road Freight will account for 1.89 million new, potential, logistics jobs (63% of all potential jobs in the sector)
- Rail Freight (40K incremental jobs), Waterways (450K incremental jobs), Air Freight (400K incremental jobs) and Warehousing (120K incremental jobs) will contribute a million more jobs over the next 4 years
- Courier Services will create 60K incremental jobs and Packaging will create 40K incremental jobs, over 2018 – 2022
- Developing and optimizing logistics infrastructure across the country will result in a pan-India distribution of the 3 million new, incremental, jobs
- Government initiatives are focused on better utilizing waterways, creating freight corridors, logistics hubs, multimodal logistics parks and logistics clusters
- Delhi-NCR, Mumbai, Chennai and Bangalore will generate 1.74 million incremental and Kolkata, Hyderabad and Pune, together, will contribute 682K incremental jobs
- Technology is having a profound impact on the logistics sector making certain skills redundant, forcing the aggregation of some other skills and eliminating certain jobs at the lower end of the hierarchy
- The impact of technology on jobs and skills will vary, primarily, by hierarchy and depending upon the specific nature of disruption there could be skill redundancies or skill deficits and requirements for skill aggregation and re-skilling
- Mumbai, Chennai, Delhi, Hyderabad and Pune have the largest skill gaps (greater than 100K people).

Commenting on the report, Ms. Rituparna Chakraborty, Co-founder & EVP, TeamLease Services, said, "Logistics

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sector is going through an exciting phase with a number of public investments in line. There will be an enormous shift in demand management between transportation modes – the overburdened road network is set to share significant oncoming demand with dedicated railway freight corridors that have superior freight handling capacity. New national waterways being built, a plethora of sophisticated 3PL and 4PL players revolutionizing the warehousing sub-sector, increasing consumption and consumer maturity is providing a big fillip to the packaging sub-sector. All of these changes alongside the interplay of sector demand – from Manufacturing, FMCG / FMCD Retail and Ecommerce – and technology will not only create innumerable jobs but also metamorphose the skills landscape for logistics.”

Mr. Pranay Prakash, Senior Director, Human Resources, Delhivery elaborated “It is exciting times ahead for the logistics industry. With the policy initiatives that the Government is driving, including according Infrastructure status to the industry, implementation of GST and E Waybills etc, it has opened up the entire sector – both from and investment as well as job creation perspective. While this provides for an immense business potential, it also poses the challenge of availability of skilled manpower across warehousing, trucking and allied service. A PPP model on creating the required infrastructure, the State’s investment on upskilling people and the private sector’s investment on Technology are going to be the key drivers of this growth story.”

Key government initiatives like BharatmalaPariyojana and National Highway development Project (NHDP) will not only focus on optimizing efficiency of freight across the country but it prove to be the catalyst in creating the maximum number of jobs across road freight. Initiatives like SagarmalaPariyojna and New National Waterways conceptualized by the government of India aims to promote port-led development in the country will be the key factors in creating jobs in water freight. Multi-modal logistics park, Logistics clusters DMIC and DFC are other initiatives taken by the government to create incremental job growth across the seven sub-sectors in logistics. In fact, e-commerce which is not being awarded the infrastructure status is also aiding in the formalization of logistics sector.

Mumbai, Delhi- NCR, Pune, and Ahmedabad are a few regions that will be benefited the maximum through these initiatives thereby creating the maximum number of jobs in Road freight, while Allahabad, Ahmadabad, Chennai and Guwahati will create the maximum jobs in water ways.

“E-commerce B2C has been a sunshine segment for India for over 5 years. With GST taking shape and some large consolidation, the e-commerce industry is poised for new matured growth by 35%-40% year on year from here on. Opportunities in tier 3 tier 4 cities would out beat the growth in tier 1 and tier 2 cities basis the smartphone and data leverage. Grocery, B2B, e-commerce is the next big thing ahead & would drive the markets ahead creating bundles of opportunities on new employment & logistics players” added Mr. Dilip Sharma, Sr. Vice President & Country Head- Operations, Ecom Express

Commenting on the potential of the sector Mr. M A J Jeyaseelan, Advisor, Infrastructure Industry and Logistics Federation of India said, “Everyone knows that successful logistics management is all about having the right product in the right place at the right time. However, doing all these at the right cost is the most critical challenge not only for logistic managers but also for the economic policymakers. Logistics management is being transformed from a cost centre into a profit centre. Cost of logistics is also proving to be a decisive factor in determining the competitiveness of economies. While most businesses are still grappling with third and fourth party logistics, technology infusions and particularly the application of artificial intelligence are changing the logistics value chain far beyond one’s imagination. The driving force for this rapid transformation is the need to do logistics management at the right cost.”

Another interesting finding of the survey is the challenges in sourcing the right talent for the right job. Challenges in attracting and retaining talent include perception of Logistics as a low-skilled sector, availability of formally trained talent and outdated work processes in the sector. While hazardous and high-stress working conditions, low compensation levels and inadequate benefits, lack of learning and development initiatives make employees leave the sector prematurely.

The study further delves deep into the skill requirements in the Logistics sector. Technology and the industry knowledge will transform potentially every role in a logistics organization. According to the survey there is a dearth of 950K jobs across 8 primary logistics sub sectors. The survey indicates severe short supply and lack of junior level talent in the sector. While in Ahmedabad, Kolkata and Chennai junior levels comprise 50% or less of the total skill gap, Bangalore, Delhi and Hyderabad have surplus senior talent. With the creation on 3 million jobs spread across the country, this demand-supply ratio is likely to be met.

Interestingly enough, the proportion of women employees in this sector has risen to 21% (current) from 5% in 2010. It is expected to more upwards to 26% by 2021. Employers are reorienting themselves for a relatively more egalitarian talent management era, encouraging gender diversity and embracing new technologies. While unhygienic working conditions, incompatible life balance, harassment, bullying and violence were some of the workplace inhibitors, preference for male candidates, biased selection criteria in job role descriptions and entrenched gender norms were a few barriers that held active women participation in this sector. However, the sector now shows promising numbers for women participation and gender diversity.

Indian Logistics Revolution - Big Bets, Big Jobs is a comprehensive analysis that brings forth the areas that will contribute to job creation. The analysis covers the 7 sub-sectors in the logistics industry, the job profiles that will be created, the supply-demand deficit and the regions that will create these potential jobs.

**Source: BW Online Bureau , 24th May, 2018**



## WAREHOUSING INDUSTRY MAY GROW AT 13-15% IN MEDIUM TERM: REPORT

The warehousing industry in the country is expected to grow at 13-15 per cent in the medium term, driven by the growth in manufacturing, retail, FMCG and e-commerce sectors, a report said. Growth in overall production and consumption, organised retail, logistics outsourcing and regulatory interventions such as WRDA Act and GST have improved prospects of the organised professional warehousing segment, Care Ratings said in its report.

Private investments in logistics and other infrastructure developments such as dedicated freight corridor (DFC) will also aid the segment growth, it added. "The domestic warehousing industry grew from Rs 56,000 crore in 2013 to Rs 77,000 crore in 2017, and is expected to grow at a rate of 13-15 per cent in the medium term," the report said.

However, it added that the overall growth potential is limited by challenges like limitations in infrastructure connectivity, need for large capital and issues related to land acquisition.

The country's warehousing market is highly fragmented, with most warehouses having an area of less than 10,000 square feet, it said, adding about 90 per cent of the warehousing space is controlled by unorganised players.

The report said nearly 60 per cent of the modern warehousing capacity is concentrated in the country's top six cities namely Ahmedabad, Bangalore, Chennai,

Mumbai, NCR and Pune, with Hyderabad and Kolkata being the other big markets.

"Going forward, due to factors like quality of infrastructure and availability of labour, these advantages are likely to remain with these cities," it added.

Care Ratings pointed out that the domestic industrial warehousing segment is expected to grow due to anticipated increase in global demand, growth in organised retail and increasing manufacturing activities, expansion of e-commerce options and growth in international trade.

It is also expected to witness significant activity as the presence of the unorganised segment is expected to reduce and the companies would be rationalising and consolidating their space requirements based on time to serve the market and not taxation, the report said.

The demand for agriculture warehousing is expected to grow moderately, according to the report, on account of high base and expected normal monsoons.

Integrated models, diversification across end-user industries are expected to drive growth of cold chain segment. Significant demand is also seen coming from storage of fruits and vegetables, and pharmaceutical segments, it said.

Source: dailyhunt



## COMMODITY INDEX

Commodities	Days's Index	Prev. Index	Week Ago	Month Ago
Index	2701.2	2706.3	2715.5	2770.0
Bullion	4612.7	4602.6	4579.4	4767.6
Cement	2048.0	2048.0	2014.8	2021.5
Chemicals	2327.9	2327.9	2327.9	2391.0
Edible Oil	1706.7	1701.9	1692.1	1698.5
Foodgrains	2375.5	2372.3	2390.4	2348.6
Fuel	2797.7	2812.3	2843.6	2963.5
Indl Metals	2093.3	2127.3	2127.3	2135.9
Other Agricom	2171.2	2171.2	2217.3	2354.0
Plastics	1940.5	1940.5	1945.6	1932.0

Source: ETIG Database dated 22nd November, 2018



## MDP Training Calendar 2018-2019

# Indian Institute of Materials Management

102 &104, Institutional Area, Sector 15, CBD Belapur, Navi Mumbai – 400 614  
(Ph: 022: 27565592/ 2757 1022,) Telefax: 27565741,

E-mail: iimnhq55@gmail.com, iimmedu@iimm.co.in Website: www.iimm.org



**For Practicing Managers, Professionals, Executives and Administrators**

Sl. N.	Courses	Duration (days)	Starting Date	Course Coordinator	Course Fees per Participant (Rs.)
1	International logistics & Inventory Management	2	12-10-18 to 13-10-18	L S Bisht	12000.00
2	E-Procurement in Government and Private Organizations	2	26-10-18 to 27-10-18	L S Bisht	12000.00
3	Cost Price Analysis - A System Rationale for Procurement	2	07-12-18 to 08-12-18	L S Bisht	12000.00
	Logistics & Distribution Management	2	28-12-18 to 29-12-18	L S Bisht	12000.00
5	Introduction to Materials & Supply Chain Managements (A Foundation Course).	5	08-01-19 to 12-01-19	L S Bisht	25000.00
6	Operations Strategy for Effective SCM	2	24-01-19 to 25-01-19	L S Bisht	12000.00
7	ERP & Impact of ERP Implementation in Supply Chains	2	08-02-19 to 09-02-19	L S Bisht	12000.00
8	Stress Management	3	14-02-19 to 16-02-19	L S Bisht	18000.00
9	Contract Management	2	22-02-19 to 23-02-19	L S Bisht	12000.00
10	Negotiation Skills	2	01-03-19 to 02-03-19	L S Bisht	12000.00
11	Personality Development & Communication Skills	3	14-03-19 to 16-03-19	L S Bisht	18000.00

(Details about final Training Schedules & Faculty will be emailed to the participants on receipt of the applications.)

**Venue** :-Conference Hall, IIMM National Headquarter, Belapur, Navi Mumbai.

**Course Fee** :- Rs. 5000/- per day for Fundamental Course & Rs.6000/- per day for other courses+ 18% GST, as applicable - Includes Tuition Fee, Course Material, Participation Certificate, Break Fast, Working Lunch & Tea/Coffee.

**Boarding & Lodging Charges (Optional)** :- Rs.3000/- per day per participants + 18% GST (AC Twin Occupancy. Single Occupancy may be made available on request)

**Discounts:-**

- 10% to IIMM members
- 5% for early birds (to individual participants, on receipt of nomination, before 20 days of the commencement of course)

**Group Discounts:-**

- 10% for 4 to 10 participants from the same organization
- 15% for more than 10 participants from the same organization

**Refund Rules:-**

- Fees once paid can be adjusted towards future nominations up to 2 years
- In case of cancellation of course, due to inadequate participation or for any other unforeseeable reasons, the participants will be informed by e-mail or fax and the fee will be refunded.

**Enrolment** :- Personal details: Name, Designation, Mobile No & E-mail id, Age, Qualification, Experience, functions & Present Organization of the participants along with the fee through ECS/NEFT ( BOIA/C No-011610100005741 & IFSC code :BKID000116) or by Demand Draft drawn in favor of "Indian Institute of Materials Management" payable at Mumbai, may be sent to : Mr. Laxman Singh Bisht, Senior Faculty, (MM), IIMM National Head Quarters, Sector-15, Institutional Area, CBD Belapur, Navi Mumbai -400614. (E-mail – [iimmslb@gmail.com](mailto:iimmslb@gmail.com) Mobile No- 9769197851)

**Faculty**: Trainers are highly qualified professors/ Senior Practicing Managers/ SCM Professionals with over 15 years of rich industry experience in the relevant field.

**Pedagogy**: Presentations, Discussions, Audiovisuals, Case Studies, Role Play

# BRANCH NEWS

- BANGALORE BRANCH
- HYDERABAD BRANCH
- LUCKNOW BRANCH

- MUMBAI BRANCH
- ROURKELA BRANCH

## BANGALORE BRANCH

**15<sup>th</sup> and 16<sup>th</sup> November 2018 –Two Days Workshop :** IIMM – Bangalore branch was organized two days workshop on “Improving Stores / Warehouse Efficiency and Increasing Productivity” on 15<sup>th</sup> and 16<sup>th</sup> November 2018 at Hotel Ramanashree Bronton, Bangalore. Fifteen participants were attended from Various reputed organization. Sessions handled by Senior Faculty Mr. V. Gururuprasad, Mr. T.K. Ramasubbu, Mr. K.S. Mohan Kumar, and Dr. Chandra Shekar, also involved participants with Role play and Case Studies. Mr. Paul George, CPO, Shenker India and Past Chairman and NC Member of IIMM Bangalore Branch handed over Certificate of participation. The Workshops was very interesting with good interaction from the participants and speakers. Very good feed back was received from the participants.



*Mr. T.K. Ramasubbu, Sr. Faculty Handling the session on 15<sup>th</sup> & 16<sup>th</sup> Nov. 2018*



*Mr. Paul George, CPO, Shenker India and NC Member addressing the participants of Workshop, Dr. Chandra Shekar was the Session Speaker on 16<sup>th</sup> November 2018.*



*A view of participants workshop on 16<sup>th</sup> Nov. at IIMM Conference Hall*



*Mr.V.Guruprasad, Chartered Accountant is handling the session on 15<sup>th</sup> Nov. 2018*



*Mr. C.S. Subash, EC Member and MC Welcoming gathering on 16<sup>th</sup> November 2018*

**16<sup>th</sup> November 2018 – Evening Lecture Program:** Indian Institute of Materials Management, Bangalore was organised monthly lecture program on “Sustainability of Supply Chain”: Does it make Business Sense for

Corporates? " on 16.11.2018 at Woodlands Hotel, Bangalore By Professor Shekhar Choudary, From Christ University. This was one of the excellent lecture program that Professor Shekhar Choudary had delivered on the subject "Sustainability of Supply Chain" and was an excellent one with participation from the audience too. Srinivas V. Rao, Branch Chairman welcomed the dignitaries and gathering. Mr. C.S. Subash, MC, Introduced Speaker to the gathering. Lecture was very interesting and Members more interacted with the speaker and exchange their Views.



Chandra Shekar and Mr. Paul George, NC Member and CPO of Shenkar India



Mr. H.R.T. Chari, Sr. Faculty welcoming Speaker, Prof. Shekhar Chowdhury - Lecture on 16th Nov. 2018



On the Dais L to R : Mr. Srinivas V. Rao, Branch Chairman, Prof. Shekhar Chowdhury, Speaker and Mr. A.V. Shamsundar, Hon. Treasurer - Lecture program on 16-11-2018



Dr. Shekhar Chowdhury, Speaker Addressing lecture program on 16-11-2018



A view of members present on 16-11-2018



Mr. Paul George, NC Member and CPO, Shenkar India issuing participation certification Certificate to the Delegates.

## HYDERABAD BRANCH

At NATCOM 2018, in Aurangabad, on 22.11.18, IIMM Hyderabad branch receiving "National President-Special Award -for IIMM Hyderabad branch getting International Connect" {this is with reference to IIMM Hyderabad branch providing one week training to Hydropower plants engineers from Royal Bhutan. It's first in IIMM giving training to other Nation team by a IIMM branch. Award given by National President to team IIMM Hyderabad branch.



**IIMM HYDERABAD – GOING FORWARD CONTINUOUSLY:**  
We the IIMM Hyderabad Branch place on record, about the positive support being extended by our Chief Editor and Publisher (including MMR Team at New Delhi) in publishing our Branch News in MMRs and convey thanks to all.

**Corporate Social Responsibility (For Kerala Relief Fund):**  
As per the excellent and timely initiative by NHQ IIMM, for collecting donations for Kerala Relief Fund, IIMM Hyderabad Branch had also taken steps and contributed amounts besides personal contributions from Shri. P. Mahender Kumar, VP South, Shri. A. Preetam Kumar, Chairman and Shri. Md. Ziauddin, Hony. Secretery. In addition, a major contribution from other organization, as monitored by our NC Member Shri. DD Reddy. As required by NHQ, our NC Member Shri. DD Reddy, has gone to Kerala and handed over IIMM “Kerala Relief Fund Cheque” to Honble. CM, Kerala (from NHQ Cheque the major contribution is from IIMM Hyderabad Branch).

**Faculty Development Program (FDP) at Vizag on 31-10-2018 and 01-11-2018:** In compliance to circular from NHQ, Shri. Md. Ziauddin, Hony. Secretary & Course Coordinator and Shri AVN Naidu, Life Member, have attended the program (by meeting the fees and other expenditure on their own) (The program certificates were given at NHQ on 26-10-2018, as mentioned in Para 5 below).



*Presentation by Shri. Shailesh Deshmukh,  
Director - Honeywell*

**Conference - Technovations 2018 and Beyond (Latest Technological Innovations and Supply Chain Logistics and**

**Management):** This conference was organized on 13-10-18, in association with Honeywell. This has happened with good efforts of our NC Member Shri. DD Reddy, with **HONEYWELL**, for whom full opportunity was given in the session to showcase their products of: **Honeywell Safety and Productivity Solution India** and how their products will help to enhance productivity and build a more profitable and sustainable business. The team from Honeywell was headed by Shri. Shailesh Deshmukh, Director Sales (SPS), who have given professionally built presentation on their products.



*Honeywell Team who gave presentation on their products*

Before the presentation by Honeywell, Shri. DD Reddy, NC Member, has given welcome address. The program was monitored by Shri. A. Preetam Kumar, Chairman. Shri. P. Mahender Kumar, VP South has addressed the gathering by briefing about IIMM.

The presentation on the theme of the conference - **TECHNOVATIONS 2018 AND BEYOND** was done by Shri. A. Preetam Kumar, Chairman, who has taken all the august gathering to the grip of various new technologies of Supply Chain Logistics.



*Welcome by Shri. DD Reddy*



*Theme presentation by Shri. A. Preetam Kumar*



*Address by Shri. P. Mahender Kumar*

More than 50 delegates/ special guests have attended the conference, from different organizations/ Industry viz: Pharma Sector, Aurobindo Pharma, Mylan laboratories, Dr. Reddys Labs, L & T Metro, NMDC, NTPC, Tata Projects, IICT, Cement Industries, Gubba Cold Storage, Super Gas, Care Hospital, EUGEN Labs, etc.



*The Honeywell team being prime associates, were honoured with gifts.*



**Vote of Thanks:** The conference has come to an end with Vote of Thanks by Shri. Md. Ziauddin, Hony. Secretary, followed by Dinner.





Conference Group Photo:



**Course Coordinators Meet organized by NHQ at NHQ on 26-10-2018:** As per the timely initiative by NHQ this meet was held to know the various aspects linked to the great achievement of getting two PGDMM Courses, with 2 years duration with AICTE Approval by Chairman Board of Studies, Dr. M. K. Bharadwaj and NEC IIMM. The meet was attended by Shri Md. Ziauddin, Hony. Secretary & Course Coordinator, IIMM Hyderabad Branch.



*(Hony. Secretary & Course Coordinator, IIMM Hyderabad Branch – Shri. Md. Ziauddin with Chairman Board of Studies, Education NHQ team and other participants)*

In the meeting all Course Coordinators was allowed to express their views, suggestions, steps to be taken to improve the Education a main stream of IIMM. During the meet National President, Chairman Board of Studies,

National Secretary and Treasurer have provided lot of inputs. Course coordinators have requested to increase the Education input share to branches. National President informs the gathering points put forth will be examined for decision. IIMM Hyderabad branch thank the NHQ for making very good arrangements and for extending good hospitality to all.

During the course of Course Coordinators Meet, Our National President, Chairman Board of Studies, National Secretary & Treasurer joined by Dr. C. Subbakrishna have presented Faculty Development Program Certificate to Mr. Md. Ziauddin, Hony. Secretary & Course Coordinator IIMM Hyderabad Branch (FDP was NHQ program piloted by Dr. C. Subbakrishna, organized at IIMM Vizag) (The certificate of Mr. AVN Naidu, Life Member IIMM Hyderabad Branch who had also attended FDP was received by Mr. Md. Ziauddin).



**Seminar organized by Expeditors on 25-10-2018 at Novotel Hotel - Hyderabad:** As a matter of promotion of Supply Chain way forward topics and under the Knowledge share concepts, on invitation from organizers, IIMM Hyderabad Branch Chairman Mr. A. Preetam Kumar and NC Member Mr. DD Reddy have attended/ Participated in seminar (Focus Group – Pharma Industry), covering the topics - Changing Indirect Tax Landscape, GDP & Infrastructure Challenges, AEO & Customs Compliance, Ocean Market Dynamics, Choosing the Right Partner etc.

**Vijayadashami Puja at Institute on 18-10-2018:**



On the auspicious Festival of Vijayadashami, Puja was performed at Institute to take the blessings of Goddess Durga Maatha for the good of IIMMians. The Puja was done by our Senior Life Member and EC Member Mr. P. Somayajulu. **Contribution to MMR:** On this platform, we congratulate our active EC member Ms. S. Suvarna for her continuous contribution of articles to MMR and

for the article (Black Chain Technology) in November 2018 MMR.

**PHARMA CONNECT 2019:** We are proud to mention here that our NC Member Mr. DD Reddy has been nominated as one of the Panel member for the forthcoming Asia's biggest event for Pharma Supply Chain Professionals, i.e. PHARMA CONNECT 2019 – Pharma Supply Chain Conference, Powered by CARGO CONNECT, to be held on 17-01-2019 at Mumbai.

**Exemplary Golden Award:** Our Chairman, Shri. A. Preetam kumar, who is General Manager (Materials Management) NMDC, was honoured on 15-11-2018 by NMDC - Chairman & Managing Director and other Directors with Gold medal for his exemplary services in Materials Management.



*(Shri. A. Preetam Kumar Receiving the Award from CMD and Directors of NMDC)*

We continue to have our EC Monthly Meetings and other programs/ meetings, to focus on the development of Education Front, Executive Development Programs and Membership Drive to improve the performance of our Branch.

IIMM Hyderabad Branch would like to congratulate in advance the IIMM Aurangabad Branch for going ahead in a vibrant way proactively in all areas to organize NATCOM 2018 in an excellent way on 22<sup>nd</sup> and 23<sup>rd</sup> November 2018.

## LUCKNOW BRANCH



ON 13<sup>th</sup> November 2018 IIMM Lucknow Branch conducted evening lecture in our Conference Hall at

Lekhral Dollar Indira Nagar. Mr. Saud Usmanj, Dy. General Manager, CSR Tata Motors, Lucknow gave a power point presentation; topic of the lecture was personality development.



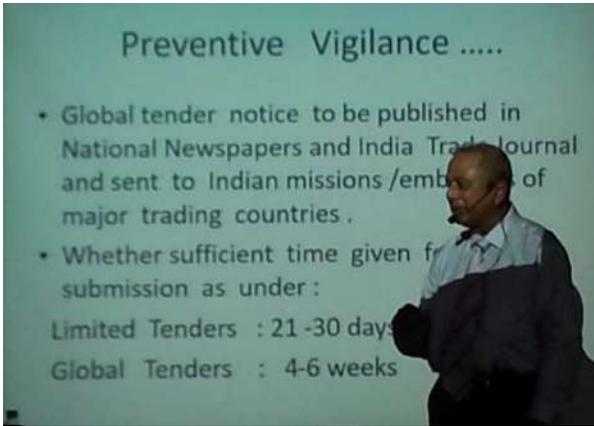
Above lecture was attended by Mr C K Vishwakarma, Executive Director (Retd.) Mr S K Jha former MD HAL Dr. JV Vaishampayan, Newly appointed by Governor of UP as Vice Chancellor, Bundelkand University Jhansi, Dr KK Mishra Director Sherwood College of Management Lucknow, Dr CM Mishra Prof.IIMM LKO for supply chain management and life member and other member of IIMM Lucknow Branch.

After the lecture vote of thanks was given by Mr Brijesh Singh DYGM Tata Motors and Secretary of IIMM Lucknow Branch.

## MUMBAI BRANCH



**GAME THEORY FOR NEGOTIATION :** A lecture by Mr. Swapnil Dubey- Vice President (SCM), Tata Communication Ltd. **On Game theory for Negotiation** was held on 20th October 2018 at IIMM, Goregaon branch and again on 2nd November 2018 at our Thane Campus for our GDMM students and IIMM members for free. Around 40 participant's attended. The lecture was very well received by the participants and the feedback was very good.



**PREVENTIVE VIGILANCE AS A TOOL OF GOOD GOVERNANCE** : A one day workshop was conducted by Mr A.R.Sarkar – Ex. General Manager Materials & General Manager ( Engineering and Projects) BPL on **Preventive Vigilance as a tool of Good Governance** on 2<sup>nd</sup> November 2018 at JNPT, Mumbai.



## ROURKELA BRANCH

Indian Institute of Materials Management Rourkela Branch organized a seminar on "Supply Chain Integration In Steel Industry" on 22nd Oct 2018 at Indo German Club Rourkela. Shri V.K Mathur (GM, MM & Marketing) was Chief Guest of the occasion. Shri Suneet Mathur, faculty of Supply Chain & International Business of R.I.M.S and BPUT, was Chief Speaker of the seminar. members of IIMM, Rourkela Branch, MM professional of Rourkela Steel Plant and other industries attained the program.



### 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.

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- To consider first the total interest of one's organisation in all transactions without impairing the dignity and responsibility of one's office :
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- 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.
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# EXECUTIVE HEALTH

## PHYSICAL ACTIVITY

DR. ARUNA RASTOGI

**Physical activity** is an important and essential aspect of our life to achieve optimum health and wellbeing now days. Physical activity simply means movement of the body that consumes energy. According to World Health Organization (WHO) physical activity is defined as 'any bodily movement produced by skeletal muscles that requires energy expenditure' (such as activities undertaken while working, playing, carrying out household chores, travelling, and engaging in recreational actions -dance, yoga, tai chi).

It's not only any particular type of physical activity which results in health benefits, but all forms of physical activity can provide health benefits if undertaken regularly and of sufficient duration and intensity. At all ages advantages of being physically active outweigh potential harm such as accidents.

The term physical activity should not be confused with exercise, which is the subgroup of physical activity. Exercise is planned, organized, repetitive movements carried out to sustain or improve health and fitness. Apart from exercise, any other physical activity that is done during leisure time, for getting transport to and from places, doing (paid or unpaid) domestic tasks or as part of a person's work (lifting, carrying or other active tasks), and recreation has a health benefit. By becoming some active throughout the day in relatively simple ways is more beneficial than doing none. Some small changes in daily routine can make a difference. Taking stairs instead of elevators, walking or using bicycle instead of driving to neighborhood grocery shop, milk booth; such types of changes in everyday life can keep us healthy. Moreover, the health benefits of physical activity are maintained only with regular practice.

Regular physical activity is beneficial in many ways as it reduces the risk of non-communicable diseases- ischaemic heart disease, hypertension, stroke, diabetes, breast and colon cancer, depression. Additionally, it also prevents, overweight and obesity, and can improve mental health, musculoskeletal problems (osteoarthritis, osteoporosis), and balance and coordination in elderly population. Yet much of the population is becoming less active.

Physical activity has multiplicative health, social and economic benefits. Actions to promote physical activity will directly contribute to achieving the target of 15% relative reduction in the global prevalence of physical inactivity in adults and in adolescents by 2030 and achieving many of the 2030 Sustainable Development Goals (SDGs).

**Physical inactivity (or insufficient physical activity)** : Physical inactivity (or insufficient physical activity) is one of the leading risk factors for various non-communicable diseases (NCDs), injuries and premature deaths worldwide. To individuals who are not sufficiently physical active risk of having cardiovascular diseases, diabetes, cancer is 20-30% more compared to people who are sufficiently active. Physical inactivity also shortens the life span by 3-4 years.

Physical inactivity also burdens the society in the form of increased economic expenditure on medical care, loss of productivity and social dependence.

Globally, about 23% of adults and more than 80% of adolescents were insufficiently physical active in 2010. Physical inactivity is more common among wealthier countries and among women and elderly individuals.

### Factors discouraging physical activity among people:

- sedentary behaviour on the job and at home and inaction during leisure time;

- social recognition of the health benefits of a physically active lifestyle are not enough to change people's behaviour;
- several environmental factors which are linked to urbanization, changing pattern of transportation, increased use of technology can discourage people from becoming more active, such as: fear of violence and crime in outdoor areas, high density traffic, air pollution/ poor air quality, and absence of parks or sidewalks;
- some cultural values influencing the physical activity levels among certain groups such as girls, women, older adults, underprivileged groups, and people with disabilities and chronic diseases, as they have fewer opportunities to access safe, affordable and appropriate programmes and places in which to be physically active.

### Benefits of regular and sufficient levels of physical activity:

- reduces the risk of hypertension, coronary heart disease, stroke, diabetes, various types of cancer (including breast cancer and colon cancer);
- improves cardiorespiratory fitness;
- strengthens bones and joints hence slows the progress of osteoporosis, osteoarthritis, and reduces the chances of fracture as age advances;
- helps keep thinking, learning, and judgment skills sharp as age advances. It can also reduce risk of depression and may help for better sleep;
- improves functional ability to do everyday activities;
- improves body balance and muscular coordination thereby reducing risk of falling;
- helps in maintaining weight control and a healthier body mass.

**Physical activity recommended by WHO for different age groups:** WHO recommends the minimum amount of physical activity for all age group for good health. It is advised that inactive people should start with small amounts of physical activity as part of their daily routine and then gradually increase duration, frequency and intensity over time. It is better to do some physical activity than none. The intensity of different forms of physical activity varies between people.

### For children and adolescents ages 5-17 years-

1. Children and youth aged 5-17 years should do at least 60 minutes of moderate to vigorous-intensity physical activity daily.
2. Physical activity includes play, games, sports, transportation, recreation, physical education, or planned exercise, in the context of family, school and community activities.
3. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week

### For adults aged 18-64 years-

These physical activities are relevant to all adults aged 18-64 years, however individual adjustments are needed according to specific exercise capacity and specific health needs of an individual. Pregnant, postpartum women and persons with cardiac problems should seek medical advice before starting physical activity for this age group.

1. Adults aged 18-64 years should do at least 150 minutes of moderate-intensity physical activity throughout the week, or do at least 75 minutes of vigorous-intensity physical activity throughout the

- week, or an equivalent combination of moderate- and vigorous-intensity activity.
- 2. Physical activity includes leisure time physical activity (walking, dancing, gardening, hiking, swimming), transportation (e.g. walking or cycling), occupational (work), household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities.
- 3. For additional health benefits, adults should increase their moderate-intensity physical activity to 300 minutes per week, or at least 75 minutes of vigorous-intensity physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity.
- 4. Muscle-strengthening activities should be done involving major muscle groups on 2 or more days a week.
- 5. Aerobic activity should be performed in bouts of at least 10 minutes duration.

**For adults aged 65 years and above-**

- 1. Adults aged 65 years and above should do at least 150 minutes of moderate-intensity physical activity throughout the week, or at least 75 minutes of vigorous-intensity physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity.
- 2. Physical activity includes leisure time physical activity, transportation, occupational (if the individual is still engaged in work), household

- chores, play, games, sports or planned exercise, in the context of daily, family and community activities.
- 3. For additional health benefits, they should increase moderate-intensity physical activity to 300 minutes per week, or engage in 150 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination of moderate- and vigorous-intensity activity.
- 4. Individuals with poor mobility should perform physical activity to enhance balance and prevent falls on 3 or more days per week.
- 5. Muscle-strengthening activities, involving major muscle groups, should be done on 2 or more days a week.
- 6. Aerobic activity should be performed in bouts of at least 10 minutes duration.
- 7. When adults of this age group cannot do the recommended amounts of physical activity due to health conditions, they should be as physically active as their abilities and conditions allow.

**Types of physical activities:** Activities classified as moderate-intensity or vigorous-intensity based upon the amount of energy used by the body while doing the activity. The intensity of different forms of physical activity varies between people. The intensity of physical activity depends on an individual's previous exercise experience and their relative level of fitness. Therefore, the examples given below are provided as a guide only and will vary between individuals.

**Moderate- intensity physical activity Requires a moderate amount of efforts and accelerates the heart rate.**

- Brisk walking
- Dancing
- Gardening
- House work and domestic chores
- Water aerobics
- Bicycling slower than 10 miles per hour
- General building tasks (roofing, thatching, painting)
- Traditional hunting and gathering
- Active involvement in games/ sports with children/ walking domestic animals
- Carrying/ moving moderate loads (<20kg)

**Vigorous-intensity Physical activity Requires a large amount of efforts with rapid breathing and substantial increase in heart rate.**

- Race walking, jogging, or running
- Fast swimming
- Aerobics
- Fast Bicycling
- Walking/ climbing briskly up a hill
- Jumping rope
- Heavy gardening (continuous digging)
- Hiking uphill or with a heavy backpack
- Competitive sports and games (traditional games, football, volleyball, hockey, basketball)
- Digging ditches
- Carrying /shifting heavy loads (>20 kg)

**Myths about physical activity**

**It is very expensive to be physical active as it needs equipment, special shoes, clothes and even you have to pay for sport facilities.**

Physical activity can be done almost anywhere. Walking is highly recommended physical activity and it is absolutely free. Urban parks, or other pedestrian areas can be used for walking, running or playing.

**I'm very busy. Physical activity takes too much time!**

No. Physical activities can be incorporated into your daily routine such as at work, school, home or play. Simple things like taking the stairs, riding a bike to work or getting off the bus two stops before your final destination and then walking the rest of the way can form part of your regular daily activities. Even if you are very busy, you can still fit 30 minutes of physical activity into your daily routine in the form of 10 minutes' brisk walk, three times a day; or 20 minutes in the morning and 10 minutes later that day to improve your health.

**Children are already so active, hence there's no need to teach them about physical activity.**

Children also need recommended physical activity in their daily routine. There is decline in physical activity among children these days. It may be due to increasing

sedentary ways of life, spending more time on watching television, playing computer games, using computers, and fewer children walk or cycle to school, and insufficient physical education and other school-based physical activities.

More importantly, patterns of physical activity and healthy lifestyles acquired during childhood and adolescence are more likely to be maintained throughout the life-span. Consequently, improving physical activity levels in young people is imperative for the future health of all populations.

**"Let's be active everyone, everywhere, every day"**

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Source: National Health Portal



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IIMM NHQ : Plot No. 102 & 104, Sector-15, Instl. Area, CBD Belapur, Navi Mumbai-400614. Tel.: 27561754 / 2756 5831, Fax : 022-27571022  
E-mail NHQ : iimnhq55@gmail.com, members@iimm.co.in E-mail Edu. Wing : iimmedu@iimm.co.in, Website : www.iimm.org

## ALWAR BRANCH

Indian Institute of Materials Management  
15, Shopping Centre, Shanti Kunj,  
Alwar - 301001 (Rajasthan)  
Ph.: 09731245655/ 07877745655  
Email: iimmalw@gmail.com

## AHMEDABAD BRANCH

Indian Institute of Materials Management  
C/o Indian Infotech  
10, 1st Floor, Vishwas City Complex  
Part-1, Opp: Shayona City, RC Tech Road  
Ghatlodia, Ahmedabad, Gujarat  
Cell: 9374012684 / 9909996711  
pankajpanchbhai@yahoo.co.uk

## AURANGABAD BRANCH

Indian Institute of Materials Management  
C/o. Training & Placement Cell  
GF-19, JNEC Campus, CIDCO, N-6  
Aurangabad - 431001. Ph : 0240-2473339  
E-mail : iimmau@rediffmail.com

## BANGALORE BRANCH

Indian Institute of Materials Management  
# 304, A-Wing, III Floor, Mittal Tower # 6  
M G Road, Bangalore - 560001  
Ph.: 080-25327251/52  
E-mail : iimmbg@airtelmail.in

## BHARUCH BRANCH

Indian Institute of Materials Management  
303, Vinay Complex, Near Dudhdhara  
Dairy, Old NH Highway # 8, Bhaurch  
Ph.: 02642-283223  
E-mail : iimmbhaurch@gmail.com

## BHILAI BRANCH

Indian Institute of Materials Management  
Room No. 326, 3rd Floor, Ispat Bhawan,  
Bhilai Steel Plant, Bhilai - 490001  
Ph.: 0788-2892948/2222170

## BHOPAL BRANCH

Indian Institute of Materials Management  
4/9-B, Saket Nagar, Bhopal - 462024

## BILASPUR BRANCH

Indian Institute of Materials Management  
C/o. Gen. Manager (MM)  
South Eastern Coalfields Ltd.,  
Seepat Road, Bilaspur - 495006 (CG)  
Ph.: 07752-241087/75014  
E-mail : iimmbilaspur2015@gmail.com

## BOKARO BRANCH

Indian Institute of Materials Management  
Room No. B-237, Purchase Dept.,  
Ispat Bhawan, Bokaro Steel City - 827001  
Ph.: 06542-240263/280768  
E-mail : iimmbokarobranh@gmail.com

## BURNPUR BRANCH

Indian Institute of Materials Management  
Matts. Dept. New Matts. Bldg.  
IISCO, Burnpur Works  
Burnpur - 713325 (West Bengal)  
Tel: 0341-2240523/09434777116

## CHANDIGARH BRANCH

Indian Institute of Materials Management  
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Ph. : 0172-2556646/4654205  
E-mail : iimmchandigarh2@gmail.com

## CHENNAI BRANCH

Indian Institute of Materials Management  
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37), Nelson Manickam Road  
Aminikaral, Chennai - 600029  
Ph.: 044-23742195/23742750  
E-mail : chn.iimm@gmail.com  
iimmchennai@gmail.com

## COCHIN BRANCH

Indian Institute of Materials Management  
GDA Shopping Complex, Kadavanthra  
PO, Kochi - 682020 (Kerala)  
Ph.: 0484-2203487/9400261874  
E-mail : iimmkochi@bsnl.in

## DEHRADUN BRANCH

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(Jharkhand) Cell # 09470595238  
E-mail : iimmdhanbad@gmail.com

## DURGAPUR BRANCH

Indian Institute of Materials Management  
Office of ED (MM) 3rd Floor  
Ispat Bhawan, SAIL, Durgapur Steel Plant  
Durgapur - 713203  
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## GANDHIDHAM BRANCH

Indian Institute of Materials Management  
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Gandhidham -370201 (Kutch) Gujarat  
Tel: 02836-231711/231745  
E-mail : iimm\_gim@rediffmail.com

## GOA BRANCH

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## GREATER NOIDA BRANCH

Indian Institute of Materials Management  
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## HARIDWAR BRANCH

Indian Institute of Materials Management  
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Technology, Roorkee, Haridwar - 247667  
E-mail : iimmharidwar@gmail.com

## HOSUR BRANCH

Indian Institute of Materials Management  
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E-mail : iimmhosur1@gmail.com

## HUBLI BRANCH

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Industry Building, 1st Floor, Jayachamaraj  
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## HYDERABAD BRANCH

Indian Institute of Materials Management  
4-8-68/A/21, G.D Enclave, 3rd Floor, Rang  
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500095. Email: iimmhyd1719@gmail.com,  
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Off: Timing: 4:30 pm to 8:30 pm)

## INDORE BRANCH

Indian Institute of Materials Management  
03, Rajmahal Colony, Ext Manik Bag Road,  
Indore - 452007 (M.P)

## JABALPUR BRANCH

Indian Institute of Materials Management  
Jabalpur  
Email: iimmjabalpur2@gmail.com

## JAIPUR BRANCH

Indian Institute of Materials Management  
C/o. Mr. Purushottam Khandelwal  
48, Mohan Nagar, Gopalpur Bypass,  
Jaipur - 302018 Cell: 09799299157  
E-mail : iimmjaipur1@gmail.com

## JAMSHEDPUR BRANCH

Indian Institute of Materials Management  
Room # 6, Russi Modi Centre for  
Excellence Jubilee Road,  
Jamshedpur - 831001  
Ph.: 0657-2224670/2223530  
E-mail : iimm\_jsr@yahoo.co.in

## JAMNAGAR BRANCH

Indian Institute of Materials Management  
C/o. Mr. Jayesh Joshi  
Riddhi Engineering Works  
111, Madhav Complex,  
Opp: DKV Collage, Jamnagar - 361008  
0288-2750171 / 9824263869  
riddhieng@yahoo.com

## KANPUR BRANCH

Indian Institute of Materials Management  
C/o. IGM Computer Academy  
Mallick Complex, Nr. Rama Devi  
Chauraha, G T Road, Kanpur - 208007  
Ph.: 0512-2401291  
iimmkanpurbranch@gmail.com

## K G F BRANCH

Indian Institute of Materials Management

## KOLKATA BRANCH

Indian Institute of Materials Management  
8/B, Short Street, Kolkata - 700017  
Ph.: 033-22876971/22834963  
E-mail : iimmcal17@gmail.com

## LUCKNOW BRANCH

Mr. P.K.Bajpai  
Indian Institute of Materials Management  
2nd Floor, Mishra Bhawan, Jurian Tola,  
Lal Kuan, Lucknow - 226018  
Ph.: 9415752999, Res. 05222638264

## LUDHIANA BRANCH

Indian Institute of Materials Management  
C/o. Guru Nanak Industrial Corporation  
Adj. Hero Cycle Ltd.,  
G T Road, Ludhiana - 141010 (Punjab)  
Ph.: 0161-5212268  
E-mail : iimmludhr@gmail.com

## MUMBAI BRANCH

Indian Institute of Materials Management  
2-A, Arihant Bldg, Above Bhandari Co-op  
Bank Ltd., Goregaon (E) Mumbai - 400063  
Ph.: 022-26863376/26864528/26855645-46  
E-mail : iimmbom@gmail.com

## MUNDRRA BRANCH

Indian Institute of Materials Management  
Adani Power (Mundra) Ltd.  
Village- Siracha & Tunda, Taluka- Mundra  
Dist- Kutch, PIN-370435, Gujarat  
Mobile: 9979847753 (Paresh Satasiya)  
Paresh.Satasiya@adani.com

## MYSORE BRANCH

Indian Institute of Materials Management  
Anubhav Udyog, K-64, Hootagalli Ind.  
Area, Mysore - 570018 (Karnataka)  
Ph.: 0821-4282124  
E-mail : mysoreiimm@gmail.com

## MANGALORE BRANCH

Indian Institute of Materials Management  
C/o. B Sandeep Nail, GM (Matts.)  
MRPL, Materials Dept., PO: Kuthethur  
Via: Katipalla, Mangalore - 575030. DK  
Tel # 0824-2882203  
Email: bsnaik@mrpl.co.in

## NAGPUR BRANCH

Indian Institute of Materials Management  
404, Suryakiran Complex-1, Bajaj Nagar,  
Nr. VNIT Gate, Nagpur - 440010  
Cell: 09437081126  
E-mail : iimmnagpur@gmail.com

## NAICO BRANCH

Indian Institute of Materials Management  
Qtr. # C-352, Nalco Township, Nalco Nagar  
- 759145 Dist: Angul, Orissa  
Cell: 09437081126  
Email: snbaghar@nalcoindia.co.in

## NASIK BRANCH

Indian Institute of Materials Management  
1, Parag Bldg, Patel Lane # 4  
College Road, Nasik - 422005  
Ph.: 0253-2314206  
E-mail : iim\_nsk@bsnl.in

## NEW DELHI BRANCH

Indian Institute of Materials Management  
U-135, Vikash Marg, Shakrapur  
Near Laxmi Nagar Metro Stn, Delhi - 110092  
011-22464969/ 22466089/ 9818664267  
E-mail : iimm1delhi@gmail.com

## PUNE BRANCH

Indian Institute of Materials Management  
Pratibha Towers, Plot # 22, Old Pune  
Mumbai Road, CTS # 15/2, Above TVS  
Showroom, Wakdedwadi, Pune - 411003  
Ph.: 7276010854  
E-mail : iimmpune1@gmail.com

## RAE BARELI BRANCH

Indian Institute of Materials Management  
497, Near CMO Office, Jail Road,  
Rae Bareli - 229001  
iimrbl@yahoo.com, iimrbl@gmail.com

## RANCHI BRANCH

Indian Institute of Materials Management  
Gen Manager (MM) Office, Central  
Coalfields Ltd., Darbhanga House,  
Ranchi - 834001  
Tel.: 0651-2360716/2360198  
E-mail : rajesh0021@yahoo.com

## ROURKELA BRANCH

Indian Institute of Materials Management  
TH-01(West) Sector - 4, Near Mahila Thana  
Dist: Sundergarh, Rourkela-769002  
(Odisha)  
Cell: 08260711943/08895501056  
Email: iimm.rourkela@gmail.com

## SURAT BRANCH

Indian Institute of Materials Management  
C/o. Mr. Dilip Dhabarde, Hony Secy.  
Manager Matts, Krishak Bharati Co Ltd  
PO: Kribhaco Nagar, Nr. Kawas Village  
Suresh-394515, Tel: 0261-2802682  
E-mail : dilipdhabarde@kribhaco.net

## TRIVANDRUM BRANCH

Indian Institute of Materials Management  
TC-9/1447, 2nd Floor, Future House  
Temple Road, Sasthamangalam  
Thiruvananthapuram - 695010  
Ph. : 0471-2724952  
E-mail : iimmtvpm@gmail.com

## UDAIPUR BRANCH

Indian Institute of Materials Management  
2nd Floor, Above Manohar Furniture  
Ashwini Marg, Udaipur - 313001  
Ph.: 0294-2411969/2421530  
E-mail : iimmudpr@sancharnet.in  
iimmudpr@gmail.com

## VADODARA BRANCH

Indian Institute of Materials Management  
2nd Floor, Vishal Chambers, 34, Vishwas  
Colony, B/h Alkapuri Shopping Centre,  
Alkapuri, Vadodara - 390007  
Ph.: 0265-2359060/2353410/M: 7043959060  
E-mail : iimmvdrd@yahoo.co.in,  
iimmvadodara@gmail.com,  
iimmbaroda@gmail.com,  
www.iimmvadodara.org

## VAPI BRANCH

Indian Institute of Materials Management  
301, Fortune Mall, Above Vishal Mega  
Mart,  
VIA Road, GIDC, Vapi - 396195  
Ph.: 09825119364 / 08758294011  
E-mail : iimmedu.vapi@gmail.com

## VISAKHAPATNAM BRANCH

Indian Institute of Materials Management  
C/o. A V Rajendra Kumar  
Droo No. 39-8-34/4 & 5, Sector - 8,  
Muralinagar, Visakhapatnam - 530007  
Ph.: 0891-2704757 / 9701347694  
E-mail : iimmvizag@gmail.com

## V U NAGAR BRANCH

Indian Institute of Materials Management  
Champs Engineering, 1-52, GIDC Estate  
Vithal Udyog Nagar - 388121  
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