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<table>
<thead>
<tr>
<th>S No.</th>
<th>Programmes</th>
<th>Approved By</th>
<th>Eligibility</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Post Graduate Diploma in Materials Management</td>
<td>AICTE</td>
<td>Graduate in any discipline from any Recognized University</td>
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<td>2</td>
<td>Post Graduate Diploma in SCM &amp; Logistics</td>
<td>AICTE</td>
<td>Graduate in any discipline from any Recognized University</td>
<td>2 Years</td>
</tr>
</tbody>
</table>

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From the Desk of Chief Editor & National President

For any economy to prosper and grow inclusively, the logistics arm encompassing transportation, warehousing, distribution, cargo consolidation and border clearances should be sufficiently strong to support its trade and associated economic activities. The logistics component or cost is a key parameter in arriving upon the final product price. The logistics cost in India is around 14-15% of GDP, which is significantly higher as compared to China (8-10%) and Europe & USA (9-10%).

Fast changing consumer environment especially after Covid pandemic has triggered companies to re-engineer their logistics network with application of latest technologies like Artificial Intelligence, Block Chain, Internet of things to challenge its logistics capacity in terms of fleet management, real time supply chain visibility, last mile delivery, border clearances etc. To keep moving products down the supply chain, an efficient logistics system is required to keep logistics costs at bay, thereby, providing a competitive edge and propelling economic activity.

As per reports in various newspapers/journals, India’s logistics market is expected to grow at a CAGR of 10.5% on account of new age logistics players like Delhivery, Ecom Express and ExpressBees, faster adoption of modern technology by start-ups and Govt. push to logistics sector. Moreover, increased visibility, enhanced connectivity, streamlined data storage and assured safety at each step make it much more efficient for Brands to get closer to their customers and reduce the overall delivery time, thereby harnessing the growth of micro-warehousing centers.

With an aim to hasten up the completion of infrastructural projects, Govt. launched Gati Shakti Mission in October 2021 to assess the critical infrastructural projects and identify the gaps and address the issues. As of now, over 850 projects have been mapped to Gati Shakti National Master Plan and there are around 130 projects which need immediate attention from other ministries like Ministry of Road Transport & Highways and NHAI to provide Port-Road linkages. Similarly, there are 38 projects which need attention of Railway Ministry to link iron mines to coastal areas and ports.

While above developments seems fascinating, positive and promising but there is still a long road ahead. Logistics in India is still not at an advance stage. The established logistics players have all the resources and capacity to absorb the risks associated with the trade, however, small startups have to step up their capabilities to survive in the market. Other factors like rising fuel costs, unskilled or semi-skilled workforce and poor last mile infrastructure poses serious concerns while bringing down the logistics cost to compete at global level. It is hoped that Indian Logistics industry will face the current challenges successfully and the reduction in logistics costs to the level of 8-9% will lead to creation of enormous new opportunities in this sector.

Materials Management day (23rd April 2022) has been celebrated with great enthusiasm all over the country and the celebrations continue. This will bring more awareness in industry about SCM and will help enhance the brand IIMM.

H. K. SHARMA
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### CONTENTS

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTELLECTUAL PROPERTY RIGHTS – AN OVERVIEW</td>
<td>5</td>
</tr>
<tr>
<td>LOGISTICS 10 RS² MODEL</td>
<td>8</td>
</tr>
<tr>
<td>BUILDING MANUFACTURING AND LOGISTICS RESILIENCE THROUGH VIDEO ANALYTICS</td>
<td>12</td>
</tr>
<tr>
<td>LOGISTICS QUIZ</td>
<td>15</td>
</tr>
<tr>
<td>FIVE TRENDS TO SHAPE LOGISTICS IN 2022</td>
<td>16</td>
</tr>
<tr>
<td>THE ROAD AHEAD FOR THE INDIAN LOGISTICS SECTOR IN 2022</td>
<td>17</td>
</tr>
<tr>
<td>CAPACITY PLANNING – KEEPS YOUR PRODUCTS STOCKED AND CUSTOMERS HAPPY</td>
<td>18</td>
</tr>
<tr>
<td>FIVE WAYS TECHNOLOGY IMPACTING THE INDIAN LOGISTICS INDUSTRY</td>
<td>20</td>
</tr>
<tr>
<td>FOUR WAYS ORGANISATIONS CAN MODERNISE THEIR PROCUREMENT</td>
<td>21</td>
</tr>
<tr>
<td>IMPACT OF INFLATION ON LOGISTICS REMAINS PROBLEMATIC AND REQUIRES PLANNING AND PATIENCE</td>
<td>22</td>
</tr>
<tr>
<td>OPTIMIZING INBOUND AND OUTBOUND LOGISTICS: KEY STRATEGIES</td>
<td>24</td>
</tr>
<tr>
<td>PITFALLS OF LOGISTIC OUTSOURCING</td>
<td>29</td>
</tr>
<tr>
<td>THE BIG CHALLENGES FOR SUPPLY CHAINS IN 2022</td>
<td>30</td>
</tr>
<tr>
<td>WHAT ARE THE OFFERINGS OF LOGISTICS COMPANIES FOR E-COMMERCE BUSINESSES?</td>
<td>32</td>
</tr>
<tr>
<td>GATI SHAKTI: A ROAD MAP FOR REALISING INDIA’S LOGISTICS POTENTIAL</td>
<td>33</td>
</tr>
<tr>
<td>HOW MOBILE TECHNOLOGY IS HELPING LOGISTICS AND SUPPLY CHAIN SECTOR TO EVOLVE?</td>
<td>35</td>
</tr>
<tr>
<td>LOGISTICS FUTURE POWERED BY TECHNOLOGY: WIN-WIN FOR CLIENTS</td>
<td>37</td>
</tr>
<tr>
<td>LOGISTICS OPTIMIZATION FOR COST REDUCTION</td>
<td>38</td>
</tr>
<tr>
<td>LOGISTICS TERMINOLOGY</td>
<td>39</td>
</tr>
<tr>
<td>6 POINTS E-COMMERCE FIRMS SHOULD CONSIDER WHILE SELECTING THEIR LOGISTICS PARTNER</td>
<td>41</td>
</tr>
<tr>
<td>THE DIGITAL TRANSFORMATION OF LOGISTICS: THREAT AND OPPORTUNITY</td>
<td>43</td>
</tr>
<tr>
<td>TRANSFORMATION OF LOGISTICS SECTOR WITH AI AND OTHER MODERN TECHNOLOGIES</td>
<td>44</td>
</tr>
<tr>
<td>WHAT ROLE INTELLIGENT AUTOMATION CAN PLAY FOR MSMES TO WITHSTAND SUPPLY CHAIN VOLATILITIES</td>
<td>45</td>
</tr>
<tr>
<td>BRANCH NEWS</td>
<td>46</td>
</tr>
<tr>
<td>EXECUTIVE HEALTH</td>
<td>57</td>
</tr>
</tbody>
</table>

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**Materials Management Review**

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1.0 Introduction: The importance of intellectual property in India is well established at all levels—statutory, administrative and judicial. The importance of intellectual property in Indian Railways can be realized from the fact that all types of intellectual property rights e.g. copy rights, trade mark, industrial designs and patents have been in force in one or the other areas of Railways working. It is well known fact that most of the drawings and designs of coaches, wagons, locomotives and their spare parts, passenger reservation system allowing ticket booking on internet, e-procurement employing electronic Reverse auction and SkyBus related patents of Konkan Railway Corporation fall under the ambit of intellectual property rights.

Indian Railways, the prime movers of the nation, have the distinction of being one of the largest railway systems in the world under a single management. Over two decades or so, after computerization of passenger reservation system all over Indian Railways followed by computerization of Materials management activities by introduction of Materials management information system in five modules viz. Purchase, Warehousing, Scrap Disposal, Inventory Control and Uniform Supply; there has been consistent efforts for having secured information system that should make information available to all authorized users.

The most talked about procurement system world over as well as in India is e-procurement while adopting online Reverse auction. Accordingly Indian Railways gone ahead in implementing (MMIS), thereby computerizing entire database and procurement activities on all zonal Railways and Production units. The online passenger reservation system (PRS) has been graded as one of the robust, efficient and best computerized network in the country. It was developed in association with M/s CMC Ltd., and the contract was concluded by Railways with a condition that no copy right of software developed is violated. M/s CMC was invited for development of MMIS in Materials Management department on Indian Railways.

All zonal Railways and Production Units have computerized their purchase function by introducing Materials management information system (MMIS). This has really brought transparency and efficiency in the purchase activities. The inventory management activities in the depot are also being done on MMIS. The data transfer between purchase office and depot is on real time basis.

2.0 Reverse Auction – Online e-procurement: Reverse Auction is a tool used for efficient online procurement for goods and services in more transparent manner while using internet.

A fundamental equation on Reverse Auctions is as under: 1 Buyer + Many Suppliers + Interactive Bidding = Reduced Purchasing Costs and Streamlined Procurement

Over a decade or so, online reverse auction have gained lot of importance in the area of e-procurement more so due to faster internet services available across the globe. Different new concepts and software solutions in the fields of e-sourcing do promise extensive cost saving opportunities. The decision to use this tool has to be taken in concurrence with the sourcing strategy, because these tools support the procurement process in different stages of market transactions and change the traditional way of doing business. Electronic reverse auctions is such sourcing tool.

An auction is a market institution determining resource allocation and prices on the basis of bids from the market participants. Traditionally the seller initiates an auction to allow the interested buyers to bid for item for sale. In a Reverse Auction, however the roles are reversed. Here the buyer initiates the process articulating his demand. Possible suppliers undercut each other trying to get the contract. The success of Reverse Auction is often seen as an increase in productivity within the procurement function. Online reverse auctions are therefore an ideal way for buyers to reduce purchasing costs and streamline procurement when purchasing capital equipment, materials and services from suppliers around the world.

For working of online reverse auctions, the Buying Company initiates the auction by sending out purchasing specifications detail what it wants to buy. Suppliers compete against each other in Web-based, real-time auctions to win the business, driving down the price in the process. Online Reverse Auction is conducted while using internet as media. The most important aspect for successful reverse auction would be to have security of information and relevant intellectual property right on the internet.

2.1 Protective Mechanism in Reverse Auction: Firms considering entering into government contracts are required to keep in mind the following:

I. They have to pay special attention to the Patent Rights Clause in the government contract, and to ensure that there are no special protections or modifications that are especially favorable to the government.

II. They have to engage in thorough record keeping of
III. They should be aware that disclosure obligations apply to all projects funded in any part by government money and also to be careful about accepting government funds.

IV. They have to carefully label all data and ideas protected by pre-existing rights.

V. They have to fully document conception and reduction to practice of inventions.

VI. They should be careful of submitting invoices/bills for materials supplied

For having proper Reverse Auction system, there is a need for proper information security involving confidentiality, integrity, availability, traceability. Continuous security process should be in place to manage information flow. In order to counter information security threats, Railways have effective information security management system based on PDCA (Plan-Do–Check-Act) cycle.

3.0 Global Scenario: Globally, there are over hundred business to business (B2B) exchanges or e-marketplaces for conducting Reverse auctions. Some of these including Covisint (Automotives), Chemwatch (Chemicals), Neoforma (Medical Goods), Ariba Inc., Freemarkets Inc. and iPlanet, are leading vendors in e-Procurement applications. In Australia Freemakes.com is the leading vendor in online auctions and they have started operations in India over since last 4 to 5 years. In India, M/s Wipro Ltd. under 01MARKET is doing e-procurement while employing Reverse Auction system for private and public sector organizations.

Intellectual property rights exist on the Internet. Indian Railways need to protect their intellectual property rights so they do not inadvertently forfeit or otherwise lose any rights in connection with their Internet activities. Conversely, e-procurement and other Internet users need to appreciate the existence of third-party intellectual property rights and possible liability resulting from the infringement, misappropriation or violation of these third-party rights. Intellectual property is the web’s war zone. Whole industries have their futures dependent on the outcomes of these intellectual property battles.

These intellectual property considerations involve copyright, patent, trademark and trade secret law to one extent or another. Probably the most misunderstood intellectual property law risk concerns the copyright laws. Many information products and other materials available from websites are protected by copyright. This is the case irrespective of whether the materials actually bear a copyright notice. Copying is inherent in the nature of the Internet medium and pervades virtually every activity such as browsing, linking, caching, accessing information and operation of an online service. Since copyright vest automatically in the author by operation of law from the moment of creation and fixation in tangible media, the author of the materials has a copyright in and to the materials without regard to whether copyright was sought and irrespective of whether the materials include a copyright notice.

Indian Railways should take advantage of the tools that are available today to mark their proprietary content with electronic fingerprints and monitor cyberspace with software agents and bots to determine whether their intellectual property rights are being infringed or abused.

4.0 Patents: Ideas and knowledge are an increasingly important part of trade. Most of the value of new medicines and other high technology products lies in the amount of invention, innovation, research, design and testing involved.

Creators can be given the right to prevent others from using their inventions, designs or other creations — and to use that right to negotiate payment in return for others using them. These are “intellectual property rights”. They take a number of forms. For example, books, paintings and films come under copyright; inventions can be patented; brand names and product logos can be registered as trademarks; and so on. Governments have given creators these rights as an incentive to produce something tangible that will benefit society as a whole.

The extent of protection and enforcement of these rights varied widely around the world; as intellectual property became more important in trade, these differences became a source of tension in international economic relations. New internationally-agreed trade rules for intellectual property rights were seen as a way to introduce more order and predictability, and for disputes to be settled more systematically.

4.1 Basic Obligations: The basic obligation in the area of patents is that, invention in all branches of technology whether products or processes shall be patentable if they meet the three tests of being new involving an inventive step and being capable of industrial application.

The agreement on patent protection must be available for inventions for at least 20 years. Patent protection must be available for both products and processes, in almost all fields of technology. Governments can refuse to issue a patent for an invention if its commercial exploitation is prohibited for reasons of public order or morality.

If a patent is issued for a production process, then the rights must extend to the product directly obtained from the process. Under certain conditions alleged infringers may be ordered by a court to prove that they have not used the patented process.

4.2 General Guidelines on Patents: Government contractors should take care to note their obligations under the Patent Rights Clause that is included in many government contracts. The disclosure and ownership terms apply in contracts partially or fully funded by the government. The clause defines “subject inventions” as those inventions “conceived or first actually reduced to practice in the performance of work under this contract.” This is a broad definition that potentially covers inventions conceived prior to the contract, but reduced to practice.
during the contract.

It also potentially covers inventions that the inventor would otherwise not patent. The inventor may choose to retain the rights and title to the invention. If the inventor chooses to retain title, the government is entitled to a “nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.” In order to retain this option, however, the contractor must comply with the disclosure requirements. The inventor must disclose the invention to the government agency within 2 months of disclosing the invention to the Contractor personnel responsible for patent matters. The disclosure must be written, and must specify the inventors, the contract under which it was invented, and any publications describing the invention. The disclosure must be “sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention.”

4.3 Patents of Konkan Railway

4.3.1 Skybus Related Patent: Konkan Railway Corporation (KRC) conducted the test-run in March, 2004 on its ambitious Skybus at Goa. The US patents authority has granted two more Skybus related patent applications that were filed in 2001 and 2002 by KRC. The first patent No. 6688235 is for a ‘Suspended Coach Transportation System’ which covers the Skybus structure with its long hollow coach suspended on rails and supported by concrete pillars, to provide high capacity suspended lateral transportation. The second is for the safety mechanism for the Skybus (No. 6679184) and is called a derailment arrester. It covers the method and apparatus needed to clear an immobilized and derailed suspended coach, to improve safety levels in the suspended coach system and to control damage in case of collision to coaches.

The Sky Bus Metro, a unique technology for Urban Mass Transportation, is highly eco-friendly and cost-effective compared to other modes of transport in urban areas. The self-stabilizing track has been hailed as another landmark technology of Konkan Railway. It would make the railway track virtually maintenance-free and lay the foundation for a “faster, safer, economical and smoother rail transport”.

4.3.2 Anti-Collision Device (ACD): Another success of Konkan Railway in the area of product patent has been in the development of Anti-Collision Device (ACD). They have been granted patent No. 198166 with effect from September, 1999 for ACD in South Africa and applications have been filed in US, EU countries and Asian countries for getting patent. Konkan Railway have been awarded contract for installation of network of ACD on Rajdhani route of North east frontier Railway.

In addition to giving protection against collisions at high speeds between two ACD fitted entities, it also provides additional safety features in train operations, such as detection of train parting, train actuated warning to road users at level crossings of the railway track. Indian railways have included the ACD as an accepted safety system.

5.0 Property Marks: Property marks as per the Indian Panel Code Sec 479 is a mark used for denoting that movable property belongs to a particular person/ organization. It means that marking any property or goods, or any case, package or receptacle containing goods, or using any case, package or receptacle with any mark thereon. The marks used by Indian Railways on their goods may be termed as property mark for the purpose of easy identification of the owner. In order to ensure effective security of goods belonging to Railways, each good to be purchased should wear Indian/ Zonal Railway logo and such terms and condition is invariably put in all purchase contracts. Certain Railway goods coming in public contacts are Linen items supplied to passengers traveling in AC classes, crockery and cutlery items, looking mirrors and stationary items etc. These items should be embossed with the property marks so as to avoid pilferage and misuse.

6.0 Industrial Designs: Obligations envisaged in respect of industrial designs are that independently created designs that are new or original shall be protected. Individual governments have been given the option to exclude from protection, designs dictated by technical or functional considerations, as against aesthetic consideration which constitutes the coverage of industrial designs. The right accruing to the right holder is the right to prevent third parties not having his consent from making, selling or importing articles bearing or embodying a design, which is a copy or substantially a copy of the protected design when such acts are undertaken for commercial purposes. The duration of protection is to be not less than 10 years.

As per the policy Indian Railways have been getting imported goods substituted with indigenously developed parts/ components from Indian manufacturers who in fact got such item patented for future purchases by railways from such a sole source. One of such component, “self steering device for Indian Railways ride control wagon bogies” has been developed by M/s Rawats International Pvt. Ltd and patented under patent No. 185343. The major problem with such patented components is that competition is killed and suppliers do take advantage of monopoly of such products.

7.0 Conclusions: E-procurement while employing Reverse Auction is a recent phenomena in India but it is gaining lot of popularity due to cost reduction, shortening of procurement cycle time and the ease of participation by suppliers in bidding from their workplace as well as transparency associated in the system. E-procurement is very popular in several parts of Europe, USA and other advanced countries. However, it has grown tremendously over the past five years despite several hindrances.

In view of large expenditure of the order of Rs. 50,000 crores on annual procurement of materials by Indian Railways; there is huge potential for e-procurement happening in big way while employing Reverse Auction system. Accordingly there would be lot of cost saving in procurement of materials and services, reduction of procurement cycle time and better inventory control for Indian Railways.
Introduction: The term Logistics, originally Conceived in Military in making provisions for supply of Arms, Ammunitions, and Transportation of Military Matériel, Facilities, Signal Communication, Ration, Medical Aid and Movement of Personnel as they moved forward from their Bases to the Battle Field. This Military Operations and the Concept has made a significant contribution towards developing Logistics as a Major Function in other business sectors.

In Business, Logistics as a Subset of Supply Chain is a Process of Acquisition, Storage & Movement of Goods & its Related Service Functions across the Supply Chain.

In this Article, let’s Discuss Logistics – 10 R’s© Model was developed by me considering various functional and transactional aspects of the Logistics for better Conceptual understanding of the subject.

Key Words: Logistics – 10 R’s©, Logistics Management, Modes of Transport.

Logistics Management

Logistics Management© refers to the Integrated Process of Planning, Designing, Co-ordinating, Monitoring, Executing, Optimizing and Managing of all logistics activities like Order Processing, Acquiring Resources & Services, Inventory Management, Materials Planning, Warehousing & Storing, Material Handling, Network Design, Inbound & Outbound Routing & Transportation, Fleet Management, Production & Operations Planning, Packaging and other Associated Functions, Activities & Documentations to provide Timely, Cost-Effectively and Efficiently Customer Services from the Point of Origin to the Point of Consumption by Adoption & Integration of Relevant Activities, Systems, Technologies and Communications in order to meet Customers’ Requirements. (*Definition by the Author)

Logistics Management also involves in identifying prospective Distributors, Suppliers and other Service Providers and Engaging them in Transactions and Tracking of Storage Goods and their Movements, Determining their Efficiency, Effectiveness and Accessibility.

Major Functions of Logistics: Logistics is a process of movement of goods across the supply chain of a company. However, this process consists of various functions that have to be properly managed to bring effectiveness and efficiency to the supply chain of the organization. Some of the Logistics Functions are as Below:

Types of Logistics: Every business in one way or the other dealing with movement of physical goods - both inbound and outbound logistics processes.

Inbound Logistics covers all activities related to bringing Inward Raw Materials and other Inputs from Suppliers to Businesses - to a Plant, Warehouse or Retail Store, for further Processing or Reselling. This process includes the steps to order, receive, store, transport and manage incoming supplies.

Outbound Logistics encompasses the Delivery of Outward Goods and Products to the End Customers, Distribution Centers or Warehouses and then Delivered to its Final Destination. These are things like collection, storage, and distribution & transport systems.

Reverse Logistics involves returning of Goods from the Customer to the Seller, Manufacturer or Distributor as result of Returns, Recalls, Repairs, Repackaging or Recycling.
Logistics – 10 R’s® Model: Logistics management is essentially required in every organization— Small or Large; Manufacturing or Service Industry. The Logistics – 10 R’s® Model developed by the author, depicts the basic conceptual model in logistics management. Let’s discuss the model below.

Right Forecasting & Logistics Planning: Planning is the process of thinking about the future course of action in advance, whereas forecasting is predicting future performance of the organization on the basis of past and present performance and data. Logistics Demand Forecasting is the process of accurately anticipating the demand for products, services, and shipments throughout the supply chain.

Demand Forecasting with relevant Customer Demand and Market Information & Data, can help Plan for various Logistic Activities, Future Buying Patterns, Supply Arrangements even under the Unexpected Events, Flexibility in case of Storage & Movements, Planning Efforts including Inbound & Outbound Distribution, Deliver at Right Time and Place with Optimum Costs etc.

Right Solutions with Simplicity & Flexibility: Logistics is a Very Complex Process and involves a lot of issues and hassles.

A Good Logistics System is Expected to Provide Solutions with Simplicity & Flexibility to Strategic & Operational issues related to various Transactions like Processing Orders, Receiving the Order, Production Planning, Packing the Items, Storage & Inventory, Material Handling, Picking the items, Dispatching or Distributing the items, and so on.

With Technological Adoption, Logistics in recent past is Transforming to new highs. From last-mile delivery robots and sustainability solutions, to warehouse automated picking systems, order fulfillment and delivery to the end customer, predictive optimization software, AI etc are already making a huge difference in logistics. Shippers, carriers, suppliers, and consumers and many other supply partners are all expect to benefit from adoption of logistics technology trends. All the Partners in Logistics Chain are Looking for Right Solutions with Simplicity & Flexibility and this definitely leads to Competitive Advantage.

Right Product and Service Delivery is the ability to make Available & Deliver Right Product Quickly as per Schedule, Consistently that leads to a real Competitive Advantage. Carrier Connectivity that securely and instantly connect with other networks is also need to be Planned & Delivered.

Right Customer Delivery

A Right Customer is someone whose needs are in alignment with the Supply Solution a Company Offers.

Customer Service is all about addressing the concerns and needs of your customers to ensure expectations are met. That is the support business offers to its customers — both before and after they buy and use the products or services.

Good customer service typically means providing timely, attentive, personalized, competent, convenient, and proactive service to a customer, and making sure their needs are met in a manner that reflects positively on the company or business.

The term ‘Customer Service Delivery’ refers to the Methods, Strategies and Procedures a Business Puts in Place to make sure these Customer Commitments happens successfully — that helps Customers have an easy and enjoyable experience.

Just like in any other business, in the Logistics Industry too, it is the customer who determines the reputation and the goodwill of the company. A Good Customer Service Boosts the Brand Image. Customers are the brand makers. A great client support boosts the brand image and makes it appear attractive in the market. Hence customer service in logistics is the key to success.

Right Quality, Quantity & Delivery in Right Condition.

Offering an Excellent Quality Service is what makes the difference from the competition and allows for customer loyalty. Quality Not only mean the Quality of the Product and it’s Characteristics, but also includes a large number of associated activities such as the way the product is being warehoused, handled and packed for a Smooth Shipment & Delivery. The quality of the materials must be maintained till the time it reaches the destination. The supplying procedures related to Transactions & its associated Documentation also must be maintained.

Quality Assurance where a company makes thoughtful
and planned efforts to eliminate the chances of mistakes and overall improve their products and services is an essential Proactive Approach. That means Planning and Complying in terms of Quality in all means of Product Delivery & Services are critical for Success in Logistics.

It is essential that customers must get the product or service they want

On-Time Delivery (OTD) within the promised timeframe;

Delivery–In Full (DIF) without Quantity Variations;

Accuracy of Invoices and Deliveries in relation to the customer’s order;

The Right Quantity is the Exact Quantity that Need to be Delivered as Scheduled – No Less and No More. Excess quantity may Add up Additional Costs of Transportation, Warehousing, Material Handling and other Associated expenses, while Shortage of Materials may Lead Business Loss & Customer Dissatisfaction. So Delivering without oversupplying or under-supplying the product at any given point is Essential.

The Right Condition in logistics is about the Safe and Damage Free Delivery of the customer ordered product without any Deuteriation of any of the Characteristics of the Product. The quality of the materials must be maintained till the time it reaches the destination. The supply& distribution procedures must be such that it is maintain the quality of the material without any additional cost.

Right Time, Place, Cost & Right Competitive Terms

Logistics success depends on Delivering Right in Time, at Right Place at the Right Cost and with Right Competitive Terms. It is important to make a schedule and accordingly deliver Timely to facilitate a smooth and efficient functioning all the Logistic Activities. Moving the Goods to the Right Place and Deliver, even geographically diverse Customers and the Markets, other business segments etc is imperative to keep the Logistic Operations Smooth and for customers satisfaction.

Customers Do not Pay just for Goods or Services they Buy, but for the Value that they perceive Add to the Business and Operations. The cost to a consumer doesn’t just refer to monetary value. Though Customers always weigh product or services compared to other alternatives in terms of monitory costs, they also consider many Tangible and Intangible benefits or services received over what they paid. Therefore, Right Cost doesn’t mean the Price Paid for Goods & Services. The more you appreciate customer value, the better the customer satisfaction and performance will be.

Right Competitive Terms means the best terms reasonably available in the competitive marketplace at a given time giving due consideration to both price and non-price terms such as Quality, Delivery and Reliability. If the business provides the services at the lowest cost with comparable quality, reliability and other services, then that cost shall be considered the “competitive terms.”

Logistics may Prove to be a Differentiating Factor with Value Added Services such as Flexibility, Specialization, Speed, Business Optimization and Sustainability.

Right Responsibility, Responsiveness & Reliability

A logistics function is Responsible for the Storage and Warehousing, Packaging, Material Handling, Inventory Forecasting, Production Planning, Transport & Movement, Distribution of Supplies and Materials. The tasks also include planning routes, analyzing budgets, and planning and arranging shipments.

Responsiveness indicates how fast and efficiently a company responds to customers. Responsiveness means “being Able to React Quickly.

Logistics process responsiveness encompasses the ability of a firm’s Transportation, Distribution and Warehousing System to Quickly Respond within an appropriate timeframe to customer requests or demands, changes in the marketplace or the environment including socio-political, legal and regulatory changes.

Reliability is defined as the probability that a product, system, or service will perform its intended function adequately for a specified period of time, or will operate in a defined environment without failure. It also includes Availability, Durability, Dependability and Adoptability. Logistics Reliability refers to the degree to which a Logistics yields consistent performance to Support the Customers Requirement to ensure that a quality product or services are delivered in a timely and cost-effective manner.

Right Selection & Delivery Mode & Authentic Services

The primary modes of transportation in logistics are shipments by Airways, Waterways, Railways, Roadways, Pipelines & Conveyers. While each of these modes of transportation has unique benefits & advantages, knowing which method is right for your business requires careful consideration of some of the Major Factors like Nature of Cargo (Product); Location; Volume. Also factors like Cost, Speed & Transit Time; Safety, Security & Risk; Suitability, Availability & Capability; Lot Size, Flexibility & Reliability; Traceability & Accessibility are Critical in Selecting the Mode of Transport.
Right Information & Sharing of Updates

Information sharing among partners in Logistics is commonly considered as a key factor to enhance Logistic Performance.

In logistics, a large number of information exchanges takes place between Logistic Partners & Service Providers on Market Information & Updates, Forecasts & Trends, Sales & Order Positions, Contracts and Terms of Delivery, Inventory, Goods Movement & Transport, Invoicing & Documentation as well as various other Transactional related Communication. Availability of Right Information to the Concerned Stakeholders is Critical for Informed Decision Making and Ensuring proper Transactional arrangements.

Right Contractual Agreement

The term contract refers to a Legally Enforceable Agreement between Service Provider and Service Recipient, that creates, defines, and governs mutual rights and obligations among its parties. The main purpose of a contract is to formalize new relationships and outline the various legal obligations each party owes to the other.

Agreement to Terms & Conditions for Logistics Services binds the Parties involved in Contract to Obligate and provide Services as Agreed upon. Contracts should be specific and detailed to ensure that both parties’ interests are protected in the event of a disagreement.

Right Relationships & Sustainability

Building and Maintaining great Relationships is essential to stay Competitive in Logistics.

Establishing a Strong, Mutually Beneficial, Long-term Relationship between Logistic Partners allows for the free-flow of feedback and ideas; Increased Communications Interactions and Connections and Increased Trust. Over a time, this will create a more streamlined, effective Logistic Transactions that could have a positive impact on both costs and customer service. Long term commitment between the Partners is needed to plan for continuous improvement. During this time, trust can also be incorporated in the relationship for Collaborative Engagement and Long-Term Association.

Sustainability means efforts to lower adverse impact on the

Ø Society (to Protect People & Labour Rights; Consumer Awareness; Local Communities),
Ø Economy (to maximise the value-added to the business) &
Ø Environment (Sustainable “Green Logistics” aims to lower the ecological footprint of its tasks, such as CO2 emissions, noise pollution, and accidents).

Sustainable practices support ecological, human, and economic health and vitality.

Conclusion:

Logistics is an essential part of the supply chain and refers to the process involving very Complex Activities & Operations for Movement, Storage, Distribution of both Inbound and Outbound Goods and its associated Processes starting from the manufacturer and moving through various intermediaries and finally to the end user or customer. If logistics operations are Not Streamlined properly and managed, businesses may end up with several loose ends that may adversely impact transactions & hit both profit margins and customer satisfaction.

The Logistics – 10 R’s Model was developed considering various functional and transactional aspects of the Logistics for better Conceptual understanding of the subject.

Also you may Visit Video @ https://www.youtube.com/watch?v=RUQTBOj-OJE
Introduction: Industry 4.0 is the interconnection between machines, AI-backed analyzing/decision making, and computer vision. Video analytics will have a significant role in Industry 4.0. It enables the automation of visual inspections without human intervention. Simply put, visual analytics will be the eyes of AI. Video analytics will play a fundamental role in Industry 4.0 in automating production with less human supervision. However, humans can monitor and control the process from anywhere. Cloud services, Internet of Things, and 5G support will make this possible even faster and more accurately.

Manufacturing analytics: Manufacturing analytics can help improve the quality of a company’s end product. It does this through several processes such as data-driven product optimization, managing defect density levels, and analyzing customer feedback and purchasing trends. Video analytics is a technology that processes videos coming from cameras and by applying specific algorithms it can perform security and safety-related functions. Video analytics determine if any suspicious or unwanted behavior is occurring in the camera’s field of view and the algorithm notifies the operator.

Different types of video analytics: These algorithm analytics are fixed and are designed to perform a specific task in a predetermined manner. Some of the most common types of video analytics:

Fixed algorithm analytics: Fixed algorithm analytics uses an algorithm that is designed to perform a specific task and look for specific behaviors. For example, common behavior’s that fixed algorithm analytics look for include the following: Crossing a line. Moving in the wrong direction down a corridor.

Facial recognition systems: The face scanner is the future generation recognition system that provides an incredibly versatile human verification process. Its application is not restricted to security concerns only but also promptly expands the outreach in a commercial domain. The facial recognition system captures still images or live video images to identify an individual through a certain distance as it does not involve any physical interaction with the person. The images captured will be in the form of nodal points that are compared with the existing nodal points present in the system to identify a pre-registered individual.

Artificial intelligence learning algorithms: Modern manufacturing and logistics systems are supported by increasingly ubiquitous and powerful computing networks. Within these networks, oceans of data are continuously being generated by sensors, machines, systems, smart devices, and people. Together with rising computational capabilities, this Big Data is being analyzed faster, more broadly, and more deeply than ever before. These advances have redefined the value of Artificial Intelligence (AI) technologies and opened a new age known as Industry 4.0 or the Smart Factory.

Advanced cognitive computing and deep learning methods have begun to find application in manufacturing systems for automated visual inspections, fault detection, and maintenance. There are active efforts to apply reinforcement learning methods to material handling systems and production schedules. Industries hoping to convert real-time data into actionable decisions seek opportunities to integrate AI methods with traditional Operational Research approaches, the concepts and technologies of the Internet of Things (IoT), and cyber-physical systems.

Video Surveillance usage in manufacturing: Video surveillance is now part of the Industrial Internet of Things trend. Cameras can help detect certain abnormalities, for example idling machines or workers not wearing safety gear. This then helps improve the security, safety, and efficiency of the production facility.

A lot of this smartness has to do with video analytics. These can be deployed on the server or camera, which now has more processing power to support advanced analytics. New smart camera capabilities have been brought about by the increasing amount of processing power available on cameras, which essentially turns them into IoT multi-sensors capable of analyzing data directly on the device, said Anton Wintersteller.

Uses of video analytics in the manufacturing sector:

Anomaly/abnormal detection and predictive maintenance:
- Detect the signs and symptoms of machine failure before critical damage
- Minimize maintenance cost
- Eliminate excessive regular machine maintenance rounds
- Minimize maintenance cost
- 24-hour machine monitoring
- Reduce or eliminate machine downtime.
- Remote condition monitoring

Product quality control:
- Detect process condition variation from normal operation parameters
- Maintain consistent and best quality of final product
- Increase productivity and reduce man-hours
- Remove man dependent process factors

Visual inspection:
- Decrease miss judgment
- Reduce workers and cost of inspection
- Increase throughput

Supply chain:
- Demand forecasting
- Order management
- Inventory optimization
- Supplier performance
- Transportation analytics
- Early warning system

Video analytics tools:
- Tubebuddy – improves the search engine visibility of the video
- Vidyard – turn viewers into customers
- Viddooly – connecting brands to the right content creators, collaboration with influencers, and subscriber behavior analysis
- Tubular – helps to grow and monetize business
- Vidiq – the capability of automatically analyzing video to detect and determine temporal and spatial events.
- Viralstat – track, compare and analyze social video
- Vidalytics – need to host, stream and analyze videos
- Cincopa – live feed gives detailed information about every user who has watched the video
- Wista – helps in brand awareness and track and marketing performance.
- Media studio – track retention rates, completion rates, total minutes viewed, and call to action clicks.

How do video analytics work?

Video analytic software can be run locally on each camera, centrally on a video server, or in a hybrid model on dedicated equipment located on the edge. Each approach has its benefits and should be examined on a per-application basis. Video analytics use advanced algorithms and machine learning to monitor, analyze and manage large volumes of video. They digitally analyze video inputs and then transform them into intelligent data which helps in decision making. Video analytics can increase operations and management efficiency, which in turn can help increase productivity, reduce downtime and ensure staff health at the manufacturing facility. “Smart cameras equipped with business intelligence applications can reduce downtime by foreseeing potential interruptions or production jams and alerting staff in real-time, allowing them to take action immediately. These same cameras can be equipped with apps that analyze overall production flow to evaluate specific bottlenecks or delays on the manufacturing floor,” Wintersteller said. “Facility staff can also use this information to optimize a manufacturing facility’s layout by analyzing potential obstructions or obstacles that would prohibit efficient production.”

Edge vs Server video analytics:

Edge analytics are often suitable for indoor detection, under controlled lighting conditions, and without environmental interference. Some may even be suitable for simple outdoor detection, over shorter distances. However, most outdoor environments, pose big challenges to these edge device analytics. Poor lighting, camera shake/vibration, adverse weather conditions, the presence of bugs, and vegetation clutter, are all very common factors that may generate false alarms. To overcome these challenges without compromising detection accuracy, it is advisable to rely on the most advanced server-based, detection analytics technologies. For manufacturers it is faster to develop, and easier to deploy improvements to their algorithms in a server-based architecture. And server-based architectures are capable of delivering much more computational power, which enables the use of the latest, most advanced analytics algorithms based on deep learning/artificial intelligence.


“For example, if a smart camera is monitoring a manufacturing facility for potential break-ins and captures unauthorized access by an individual after business hours, that event will be sent to security personnel for further action. All other video monitoring
of employees and visitors entering and exiting throughout the day will not be stored. Not only does this increased privacy, but it requires less bandwidth as well.”

Video analytics and inventory management:

“More goods than ever are being produced, packaged, and shipped each day, and the higher the output, the more complex it becomes to monitor and quality control. Smart cameras equipped with video analytic applications are used to manage large inventories in warehouse facilities, and in instances where cameras are not permanently installed in buildings, they can be located on drones that move autonomously through inventory and capture data by scanning barcodes,” Wintersteller said. “When goods and boxes of different sizes have to be stored with maximum efficiency in mind, analytics can help recognize incoming and outgoing items in real-time, according to size and format – enabling picking machines to sort them appropriately. Ultimately this optimizes storage and efficiency of space.”

Video analytics usage in logistics & supply chain:

The use of video images is becoming vital for the business to ensure better management of its inventory. There are often instances of damage, theft, or pilferage of goods, either when they are in the warehouse or in transit with video analytics being employed, which can efficiently and instantly track and detect any kind of suspicious activity and further sends alerts to the server over the network. The supply chain managers are then able to take prompt action to ensure an uninterrupted supply of the products. Further, during road transport, when goods are transported in bulk from one place to another, the use of video analytics makes it possible for a business to analyze the truck utilization patterns daily and gain a view of loading/unloading activity details, load capacity, etc. This analytics helps the supply chain managers to take the necessary action on their fleet management. Apart from that facial recognition, and driver wellness can be monitored to ensure control and optimization of the supply chain.

Benefits of Machine Learning in manufacturing include:

- Reducing common, painful process-driven losses e.g. yield, waste, quality, and throughput
- Increased capacity by optimizing the production process
- Enabling growth and expansion of product lines at scale due to a more optimized process
- Cost reduction through Predictive Maintenance.it leads to less maintenance activity, which means lower labor costs and reduced inventory and materials wastage.
- Predicting Remaining Useful Life (RUL). Knowing more about the behavior of machines and equipment leads to creating conditions that improve performance while maintaining machine health. Predicting RUL does away with “unpleasant surprises” that cause unplanned downtime.
- Improved supply chain management through efficient inventory management and a well monitored and synchronized production flow.
- Improved Quality Control with actionable insights to constantly raise product quality.
- Improved Human-Robot collaboration improving employee safety conditions and boosting overall efficiency.
- Consumer-focused manufacturing – being able to respond quickly to changes in the market demand.

Conclusion:

As global demand for produced goods continues to increase, new challenges have arisen for manufacturing organizations, as well as security and safety concerns along the supply chain. While security and operational requirements are changing, some ushered in by the COVID-19 pandemic, new technology offered by smart cameras is providing an entirely different way of monitoring and controlling safety measures and optimizing process flow within the manufacturing and logistics operations. Ultimately, making logistics safer, while optimizing operations within manufacturing plants – benefits both businesses and customers. Smart cameras – and the Internet of Things (IoT) – in manufacturing and logistics bring the power of automation to improve processes and safety. This is achieved by equipping cameras with powerful processors and Artificial Intelligence (AI), which already exceed the capabilities of human operators. The technical possibilities of smart cameras can detect issues that often go unseen by the human eye but have a significant impact on the efficiency of operations and overall customer experience.

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(Footnotes)

1. Dean(Examinations),ICFAI Business School,Mumbai,Powai

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LOGISTICS QUIZ

1. All are missions of logistics except
   a) To ensure timely and intact delivery of goods
   b) To offer best possible customer service for competitive advantage
   c) To minimize total logistic cost
   d) To follow up for payment

2. The logistics activity that involves order management is
   a) Transportation
   b) Warehousing
   c) Packaging
   d) Inventory management

3. An activity NOT related to 4PL
   a) Utilizing supply chain consulting skills
   b) Aligning business strategy with supply chain strategy
   c) Utilizing technology to integrate and optimize operations
   d) Creating virtual organization

4. Which is the multimodal transport using rail and road
   a) Piggyback
   b) Fishy back
   c) Tranship
   d) Airtruck

5. House airway bill is issued by
   a) Carrier
   b) Shipper
   c) Freight forwarder
   d) Customs

6. Bharatmala is a flagship scheme of the Government of India for
   a) Linking waterways and sea
   b) Multimodal transportation
   c) Road and highways
   d) Linking airports and sea ports

7. Drop shipment is
   a) Consignor A delivering to consignee B
   b) Carrier delivering to fleet owner
   c) On request of agent B, seller A delivers to Customer C
   d) Vendor delivering consignment to forwarder

8. The person behind the term containerization
   a) Malcolm McLean
   b) Lilian Gilberth
   c) George Raymond
   d) Eli Whitney

9. COBOT is a
   a) Computer controlled robotic apparatus
   b) Collaborative technology
   c) Sensing system
   d) Computer programming technology

10. MAERSK is a
    a) Air cargo company
    b) Third party logistics service provider
    c) Shipping company
    d) Container manufacturing company

Answers to the SCM quiz published in April 2022 issue of MMR“

1. c
2. a
3. c
4. c
5. b
6. d
7. c
8. a
9. a
10. c
An efficient and optimized supply chain is significant for companies to keep face challenges and improve efficiency. New technologies, Hector Patel, Executive Director and Board Member, Jeena & Company, believes will not only make operations smoother but also hassle-free.

Logistics sector is witnessing transformation owing to rapid change in consumer habits and preferences. Businesses are investing in supply chain technologies more than ever as crises like the pandemic have exposed the loopholes, which are yet to be addressed by the logistics industry. According to a recent report, 50 per cent of global product-centric enterprises will have invested in real-time transportation visibility platforms by 2023.

The e-Commerce industry in India is flourishing and much of its success can be attributed to the logistics companies’ ability to keep pace with modern day demands. An efficient and optimized supply chain is the key to success for most businesses and automation is imperative today to combat challenges and increase efficiency. Going forward, new technologies will make supply chain operations smoother and hassle free.

Listed below are a few of the logistics and supply chain trends that highlight the significant areas of change in the sector going forward in the New Year.

**Digitisation will gain more prominence** : Digitization enables supply chains to be faster and granular. There is an increased need for end-to-end transparency throughout the supply chain so that stakeholders can make decisions based on real-time insights. In the coming years, the companies will invest heavily in cloud technology and leverage data to optimize processes and sense disruptions in the supply chain. While until recently data silos were a problem, digitization can eliminate the risks associated with data silos and integrate processes. It keeps things cohesive and connected, aggregating information from across the entire supply chain, improving forecasting accuracy and enhancing cash flow.

**Drone deliveries could be a game changer** : Drone deliveries is a new trend with the potential to change the logistics landscape forever. Drones can escape the traffic menace and reduce carbon emissions, promoting a sustainable transportation practice. The Drone Liberalization Policy introduced this year would be a major catalyst in boosting the drone delivery service, paving the way for innovation and widespread adoption of drones by the logistics companies in the future. In this backdrop, the drone logistics and transportation market is poised to become a US$ 11.20 billion market in 2022. Apart from vaccines and pharma supply chains, in the coming years, drones would be largely used for food, grocery and medicine delivery.

**Last mile services will assume greater importance** : Consumers today want quicker and speedy delivery and the companies are striving to develop new technologies that can help them resolve the last mile delivery problem. Crowdsourced technology is a key trend to watch out for as it facilitates on-demand deliveries. With retail giants such as Amazon catering to customers with their lightning speed delivery, it has raised the benchmark for other companies. Logistics companies that are lagging behind in terms of last mile delivery are at the risk of losing their business to their tech-driven rivals. With the consumer’s reliance on online shopping and want for instant gratification, last mile delivery has become a prerequisite to survive in this competitive market. Drone deliveries are picking up in congested urban areas and the global last mile delivery market is expected to reach US$200.42 billion in 2027.

**Green vehicles will gain more traction** : With rising concerns about carbon emissions owing to increased demand for logistics services on account of expanding ecommerce, there is a shift towards greener transportation alternatives. The global electric truck market is projected to reach $1,893.1 million by 2027 and this growth can be partly attributed to logistics companies replacing their fleet with greener vehicles. Not just trucks, electric two-wheelers, three wheelers and light commercial vehicles are also in demand as adopting such sustainable practices provides with remarkable benefits such as lots of torque, low levels of pollution, reduced maintenance cost among others.

**Reverse logistics operations will become more optimized** : Customer product returns, failed delivery attempts and damaged product returns necessitate optimization of reverse logistics. The return experience matters just as much as the delivery experience and companies are leaving no stone unturned in enhancing customer satisfaction. Companies will invest in big data and blockchain technology to achieve efficient, customer-centric reverse logistics. Companies are focused on reducing fleet costs arising from reverse logistics (both planned and on-demand) with data reporting enabled on every node in the supply chain.

**In a nutshell** : With digitization leading the way and the supply chain companies resorting to automation and new transport concepts for menial and repetitive tasks, it is safe to say that there will be transformation in all facets of the logistics industry in the coming years. The key trends mentioned above will play a pivotal role in addressing new customer requirements and proactively resolve supply chain challenges with advanced forecasting approaches aided by technology.

Source: cargotalk.in

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**FIVE TRENDS TO SHAPE LOGISTICS IN 2022**

HECTOR PATEL, EXECUTIVE DIRECTOR AND BOARD MEMBER, JEENA & COMPANY
THE ROAD AHEAD FOR THE INDIAN LOGISTICS SECTOR IN 2022

KARAN SHAHA

Take a look at the key reasons why the Indian supply chain and logistics ecosystem grew strongly in 2021. How will these developments shape in 2022?

In recent years, the Indian logistics sector has witnessed robust growth. In fact, it steadied post the onset of COVID-19 — courtesy of the rising retail and manufacturing ecosystem in the country. The average middle-class consumer is better informed and capable of spending more money on lifestyle needs. If there has been one drawback that constantly challenged this growth, it is the lack of streamlining and modernisation of operations.

However, in 2021, with a rapid and impactful change, the Indian logistics sector was expected to be worth over $300 billion by the end of 2021. Take a look at the key reasons why the Indian supply chain and logistics ecosystem grew strongly in 2021. How will these developments shape in 2022?

**Better logistics**: This year, we saw great investments made in infrastructure development and the enhancement of operational efficiency in the industry. Modern technology-driven integrated logistics platforms and service providers are spearheading the new normal of transportation. The dilapidated yellow storehouses of the past are now becoming automated IoT-enabled warehouses, saving time and effort and proving to be an enabler of capacity development.

**Better infrastructure**: Recently, there has been an unprecedented push towards infrastructure development in the country.

Roads, warehouses, ports and dedicated transport hubs are being planned and built. With greater export volumes and connectivity between manufacturing centres and markets, the logistics volumes are on the way up.

**Digital operations**: Predominantly, trucking in India is considered a non-tech and manually-run business. The majority of the transport firms are either small or very small units, and most of them own one to five trucks only, directly impacting their ability to streamline and digitise operations.

However, cloud computing has enabled the building of integrated logistics platforms and marketplaces. Tech-driven logistics companies are enabling transporters and shippers to do business online, optimise operations through automated process support, conduct online payments, and document digitally. Cloud technology also enables safe storage and sharing of data and offers anytime anywhere access to users — factors helping speed up deliveries, revenue generation, and customer satisfaction for various stakeholders.

The role of data analytics: The sector is combining Artificial Intelligence (AI), the (Internet of Things) IoT, and data analytics to improve its performance. Today, the logistic sector can help transport companies monitor each vehicle’s performance to figure out potential areas of improvement on different routes by accessing real-time operational data provided by onboard sensors fitted to trucks.

AI helps in superior vehicle-load matching, enabling faster deployment of the right resources to transport the right cargo, and reducing the effort and time spent for the stakeholders. Data analytics proves crucial in monitoring performance, maintenance schedules, and accurately assessing an asset’s operational value throughout its lifecycle.

Notably, even minor tech-driven enhancements that can save even an hour of on-road time per trip can lead to incremental savings in fuel consumption and wages, bringing the operational costs down.

Thanks to the awareness campaigns and initiatives, including ‘Digital India’, about 93 percent of logistics and related companies have either adopted digital tech in operations or are in the process to do so.

**Policy initiatives**: As per the recent announcement on National Logistics Policy, the Government of India has displayed its intention to back the sector, bring down the cost of logistics to single digits, and enable it to become globally competitive.

**Conclusion**: Ecommerce and online D2C retail are ensuring a rapid increase in customer base and consumption. Startups and SMEs are entering the retail and manufacturing sectors at a greater speed.

As we saw in 2021, infrastructure building is a core focus area, and barring the COVID-19 pandemic disruptions, the development of new projects and facilities is going to be expedited in the years ahead.

While the potential for improvement and tapping of resources is humongous, the initiatives and developments in the Indian logistics sector are indicative of an across-the-board commitment to growth. There is no doubt the potential will be converted into results, and India will become one of the leading global logistics powerhouses in the years to come.

Edited by Suman Singh

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the views of YourStory.)

Source: YourStory

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CAPACITY PLANNING – KEEPS YOUR PRODUCTS STOCKED AND CUSTOMERS HAPPY

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This article is originally published on optimoroute.com. We are happy to announce that Sourcing and Supply Chain has extended Content Partnership along with optimoroute.com. OptimoRoute is an online Route Planner for Delivery and Field Service. With OptimoRoute you can plan the most efficient routes and schedules with multiple stops per route.

In an ever-changing world, it might feel like you need a crystal ball to plan for your company’s future. How could you know how much product you’ll need to order in three months, six months, or a year if orders haven’t come in yet? How do you adapt to evolving customer expectations? Or scale your business fast to avoid stock-outs if a surge of orders comes in?

The answers to these questions are simpler than you might think. Successful businesses of all types use capacity planning to answer similar questions every day.

What is Capacity Planning?

Capacity planning is the practice of planning production and workforce needs to make sure your supply chain is equipped to meet demand. Capacity planning lets businesses know how and when to scale, helps identify bottlenecks, and mitigates risk.

The 3 types of Capacity Planning

The three types of capacity planning make sure you have enough, but not too much, of three major resources for both the long- and short-term. You’ll want to plan weeks, months, or even a year in advance.

1. Product capacity planning

Product capacity planning ensures you have enough products or ingredients for your deliverables. For a florist, this would be flowers, vases, and cards. For a pool maintenance company, this would be things like chlorine that are required to do the job.

2. Workforce capacity planning

Workforce capacity planning ensures you have enough team members and work hours available to complete jobs. This type of planning will also show you when you need to hire more employees and help you determine how far in advance you need to start recruiting based on the length of your onboarding process.

3. Tool capacity planning

Tool capacity planning ensures you have enough tools to complete jobs. This includes any trucks, assembly line components, or machinery you need to manufacture and deliver your product.

How to start Capacity Planning

There are three basic steps to capacity planning.

1. Measure: First, you’ll need to measure the capacity of your resources. How many deliveries can each of your drivers make in a given period? How many orders can fit onto each of your trucks? How many hours does it take your fleet manager to plan 50 deliveries? It’s important to answer these types of questions as accurately as possible because the rest of your plan will be based on these numbers.

2. Analyze: Once you have accurate measurements, you can spend time analyzing this information. Making graphs will help you understand the numbers and make demand forecasting easier.

3. Formulate: The final step is taking all of the information you’ve gathered and formulating a plan. You can make calculations to see how much it will cost to fund new projects or hire a full-time employee vs. bringing on seasonal part-time workers. You could also calculate the ROI for upgrading a piece of machinery or adding assembly lines to your production facilities. The formulation stage helps you see what the likely outcomes are for various options, so you can make the best decision.

How is Capacity Planning different from Resource Planning?
Resource and capacity planning sometimes get confused with one another, but they are different things – and you need both. Capacity planning is more high level and helps you determine what and how many resources you need to meet demand. Resource planning takes the number of resources available (as determined by your capacity planning) and allocates them to individual projects.

For example, let’s say you run a flower shop like The Little Posy Co., and Valentine’s Day is your busiest time of the year. You would use capacity planning to determine if you need to hire more employees, bring on seasonal workers, or increase your stock of flowers before February 14. Once you’ve determined how many workers and how much stock you’ll have in February, you would use resource planning to allocate those resources. So, if most of your demand is for vases of red and pink posies, you could allocate the largest portion of your resources to creating those floral arrangements.

The Benefits of Capacity Planning for Modern Business

Capacity planning helps you deliver on the things that are important to your customers. Incorporating this type of strategic planning into your process will help you meet due dates, effectively scale your business, and increase your bottom line.

Reduces stock-outs: Customers don’t like to wait, and if they don’t have to, they won’t. The internet has made it easy for consumers to find products somewhere else if you’re out of stock, so you need to reduce stock-outs if you want to minimize customer churn.

In 2004, the Harvard Business Review published the results of a global study where they assessed the behaviors of more than 71,000 customers faced with stock-outs. Depending on the retail category, 21% to 43% of consumers went to another store to purchase an item if it was out of stock. You could lose a third of your potential sales for an item if it’s out of stock and, worse yet, that customer may never come back.

Capacity planning can help you avoid stock-outs, and the more you do it, the better you will understand your unique demand. The capacity planning process will help you see how demand fluctuates during different seasons (such as holidays) or how it is affected by events (like kids going back to school). You’ll be able to use this insight as a guide for overall decision making and supply chain management.

Increases delivery capacity: McKinsey and Company published a 104-page compendium that illustrates the importance of delivery capacity. Shoppers not only want to be able to have products and food delivered to their door; they want quick turnaround times, which means your delivery process needs to be operating at maximum efficiency. McKinsey’s report explains that e-commerce has made up more than 40% of retail sales growth in the United States since 2016, and it isn’t showing any signs of slowing down.

As online sales grow ever more popular, delivery capacity is becoming an essential component for many businesses. In another global consumer study conducted by Oracle Retail, 92% of retail shoppers said they would like or love “free one-day delivery by whatever means is most expedient.” Capacity planning ensures you have the workers available to deliver products whenever needed, keeping your business competitive.

Identifies process inefficiencies: When you start capacity planning, you have to ask, “what is the maximum capacity of this resource?” Whether you’re looking at people, equipment, or products, you’ll gain insight into what factors limit capacity, and you’ll be able to easily spot bottlenecks that can be fixed or improved.

For example, let’s say you run a delivery business. Capacity planning reveals that the amount of time it takes your fleet manager to plan routes is preventing your business from being able to take on more deliveries. You realize that even though you have the trucks, drivers, and products to deliver more orders, your fleet manager requires a lot of lead time in order to effectively plan routes for new orders. You could use this insight to replace your manual planning system with route optimization software. In fact, one of our clients doubled their scheduling capacity by doing just that.

Southern Star is in charge of transporting natural gas to seven states in the U.S. In a single week, Southern Star’s 250 technicians can perform up to 2,500 maintenance activities on pipelines that span 5,800 miles. Capacity planning helped Southern Star spot inefficiencies in their scheduling process. As a result, they started using Optimoroute, and now they are able to fit 100% more tasks into pipeline maintenance and service schedules.

Facilitates risk management: At its core, capacity planning is a roadmap for your business. Both short- and long-term capacity planning help businesses understand their strengths, weaknesses, and limitations. You’ll be able to make informed decisions about how fast you should scale your business, when is the best time to launch a new product, and when you need to hire new employees.

Capacity planning will better prepare you to overcome obstacles, too. No matter how much planning you do, you’ll still need to be able to respond quickly when unexpected challenges arise. If your supplier suddenly goes out of business or three of your 10 drivers come down with the flu, you’ll need to have high-level plans in place to use as a guide, so you can make smart adjustments quickly.

Optimoroute is providing best solutions in logistics industry and Capacity Building domain.
Technology has enhanced logistics and supply chain processes, enabling better visibility and data-driven decision making. On the automation front we have done, shop floor automation and made the first mile and last mile digitized. We are using barcode for error-free operations. All transshipments are equipped with MHE’s and vehicles are GPS enabled. As a next level move we launching the bespoke ERP based on best of the global platform Oracle, and TMS with Shipex. We have named the new ERP – “Vijayant” – Powering Logistics. All these initiatives help in delivering the best logistics experience for our clients. They get complete visibility, there is mapping of accountabilities in the system, are having secured flow of information and with proper MIS they actionable insights. Booking of consignment, tacking, payment, reports and much more are just a click away with help of technology advancement. Thus, it clearly indicates technology is a preferred medium for the future.

Source: www.itln.in

FIVE WAYS TECHNOLOGY IMPACTING THE INDIAN LOGISTICS INDUSTRY

VIRAL SHAH, EXECUTIVE DIRECTOR
(GROUP IT DIRECTOR), V-TRANS (INDIA)

They have been impacted by communication & information technologies and from manual to automatic transformation. Logistics plays a vital role in the industrial innovation of the country. Technology is widely accepted around the world and India is no different in accepting technological advancements. Various industries are connected with technology and logistics being one of them. Technology plays an important role worldwide. It has both positive and negative effects on the world, and it affects our daily lives.

Technology has brought a pattern change in logistics. Modern business practices and innovations have transformed the flow of goods from the manufacturers, retailers, or wholesalers until it reaches the end-users. The logistics industry has been hugely impacted by advances in communication technology, information technology and the transformation of technology from manual to automatic. Here are some ways in which technology is impacting the logistics industry:

Consumer Expectations In today’s times, customers anticipate receiving their deliveries much earlier, and on time. They want to enjoy more flexible deliveries. This has resulted in increased pressure on those in the logistics field to source ways to lower delays and ensure instantaneous delivery. Thus, technology helps in maintaining efficiency, customer satisfaction, and retention, enhancement of supply chain management, and other related factors.

In addition, there is a requirement to be more flexible with where deliveries can be made and making changes to the delivery location post shipment has left many logistics managers scratching their heads. Technology has enhanced logistics and supply chain processes, which makes it easier for transportation firms and related cargo to carry out deliveries in less time.

Real-Time Tracking One of the most common expectations that a customer has in logistics, is that they can track their product delivery from start to end. Consumers of all types want to be able to track their orders to get an idea of when their delivery will occur or if any issues are in transit.

Today, software advances mean all-day tracking is available and is expected. This change is not just a boon for consumers but logistics firms too, tracking enables cost and time savings and enables better planning. Instead of having to answer endless questions and complaints from consumers about the status, clients can obtain information for themselves online. Also, if there are any changes to deliveries, firms can send automated messages. With the availability of vehicle tracking solutions, there is increased tracking of both parcels and vehicles. Most of the vehicles used for shipment are installed with GPS and other systems to track their real-time location and status. This helps the companies to track and manage shipments. Efficiency is increased with the help of real-time information available at every step of the process involved in managing the supply chain management.

With the help of real-time tracking, identification of bottlenecks has become easier and real-time report is generated. Routing Due to technology another massive transformation in the logistics industry is that routing is improved. With the help of GPS, locating the delivery location of the consumer has become convenient which has enhanced consumers’ experience in getting their products delivered within the estimated time. Technology can be used to improve routing for drivers to take the most efficient paths to reach the places. This can be worked out before they leave a destination and can also be advised of a better way to drive through once, they are on route, based on issues such as traffic accidents, roadblocks/works or other unexpected delays. The ability to enjoy efficient routing helps in saving cost, time, and energy.

The better route planning also enables the clients to better inventory management and optimize the product availability on shelves in a better way. Timely Maintenance Another benefit technology is providing logistics firms is that they can use analytical maintenance tools that investigate the vehicles remotely and indicates the faults.

With the use of advanced sensor-based technology, maintenance reports of the vehicle are generated which helps in the identification of glitches and carrying out necessary maintenance activity to the vehicle. Using the timely maintenance activity vehicles are maintained in good shape and instances of breakdown are reduced and reliability of services is increased. Behaviour In addition to the above factors and with the use of technology, the companies can monitor the speed limits, fuel consumption, average delivery time, observance of regulatory road laws, and, driver approach. With the usage of software, driver behaviour is being tracked by the companies which helps in alerting the employees driving when they are too tired. V-Trans is using various advanced technologies which are powering the operations.

From data analytics of AI & ML, V-Trans is exploring all options to help better visibility and data-driven decision making. On the automation front we have done, shop floor automation and made the first mile and last mile digitized. We are using barcode for error-free operations. All transshipments are equipped with MHE’s and vehicles are GPS enabled. As a next level move we launching the bespoke ERP based on best of the global platform Oracle, and TMS with Shipex. We have named the new ERP – “Vijayant” – Powering Logistics. All these initiatives help in delivering the best logistics experience for our clients. They get complete visibility, there is mapping of accountabilities in the system, are having secured flow of information and with proper MIS they actionable insights. Booking of consignment, tacking, payment, reports and much more are just a click away with help of technology advancement. Thus, it clearly indicates technology is a preferred medium for the future.

Source: www.itln.in
Discover four ways in which organisations can modernise their procurement functions, according to SoftCo, a financial process automation company for P2P

Responsible for purchasing, supplier relationship management, cost control, spend and so much more, Procurement’s reach in an organisation is vast, and continues to grow both in the functions it encompasses and its level of priority. As such, many are seeking new process designs as they strive to tackle the demand challenges and increasing complexities.

“Traditional, manual procurement processes rely heavily on phone, email and paper-based communication for requisitions and order management. Without moving to modern procure-to-pay software, processes are time-consuming, cause errors and offer very little insight into the process [...] Best in class procurement teams overcome these challenges by restructuring the way that they deal with key stakeholders such as suppliers. The key is in automating minimal, time-consuming tasks, and controlling costs,” said SoftCo. Four ways organisations can modernise their procurement

1. **Supplier relationship management**: Interacting with suppliers on a regular basis, procurement teams that are becoming more digital need to ensure that they digitise their most valued relationships. Having manual processes for onboarding and interacting with suppliers is a costly process that can lead to errors.

   “Once procurement teams have identified their preferred suppliers, their objective should be to spend 80% of their total spend with them. Focusing on preferred suppliers allows organisations to unlock a number of benefits including pricing discounts and quicker ordering and invoicing,” commented SoftCo.

   Onboarding can also be done via web forms instead of paper methods and manual data processing. “Interacting with suppliers can and should be done within a single platform where dialogue can be tracked as opposed to a chaotic fashion involving phone calls and email attachments for requisitions,” added SoftCo. Updating procurement processes can save time and reduce the potential for data inaccuracies.

2. **Automation of time-consuming tasks**: It is clear to see the impact that technology has had, not just in procurement but across many business functions.

   According to Levvel Research, 39% of companies are using eProcurement solutions to place orders with suppliers. Leveraging this technology organisations are benefiting from improved control, visibility, and profitability.

   “eProcurement solutions allow non-procurement staff to easily select a product or service, create a requisition, and send it for approval. The process of creating requisitions is made quicker and more efficient,” explained SoftCo.

   The company added: “Easily configurable workflows can be implemented to ensure that any spend is allocated to the correct cost centre, geography, and general ledger. Approval workflows can also be configured to ensure that each requisition is approved by the correct people before a PO is created.”

3. **Compliant purchasing processes**: During the procurement process, it can be all too easy for an employee to accidentally break company buying guidelines without their knowledge. “Best in class organisations have systems in place where a user can choose products and services from only preferred suppliers, automatically create a requisition with the correct product details which allocate costs to the correct cost centre and GL. Approval workflows can be used to ensure that the correct people approve the requisition before a purchase order is created,” explained SoftCo.

4. **Total cost management**: With procurement being responsible for overall company spend, traditional, manual processes makes it difficult to gain visibility into this function. Best in-class procurement teams are investing in procurement processes that improve reporting and analytics. “Procurement teams that have full procurement visibility can pull real-time data on KPIs such as spend per employee, cost centre, or department, as well as time to process POs,” said SoftCo.

   This allows procurement leaders to spot any inefficiencies and identify potential areas for improvement and development. SoftCo also recognised that “organisations that add a formal purchase order process to their non-trade spend typically reduce spend by around 3%.

Source: procurementmag.com
The March inflation figure issued yesterday in the Bureau of Labor Statistics (BLS) Consumer Price Index (CPI) showed yet another new high, rising 8.5% annually, and marking its biggest percentage gain going back to 1981. If this trend had not already been occurring then, yes, it would be surprising or cause some sort of head-fake, but that is not the case, as it is something we have been seeing, and dealing with for a while now. What’s more, the March tally topped February’s 7.9% CPI reading, when excluding food and energy prices. While gains, in most instances, are generally viewed as a good thing, it clearly does not apply in this case.

As has been previously observed by LM, the impact of inflation on supply chain and logistics operations cannot be overstated and has been on full display for several months going back to the middle of 2021, or even sooner. Examples of how inflation has thwarted the sector include factors like: port congestion and import container backlogs; labor availability; and fuel prices, among others.

An LM reader survey of 100 freight transportation, supply chain, and logistics stakeholders continued to reinforce how inflation continues to affect things, from both an operational and business perspective.

Putting the inflationary impact on supply chain and logistics into sharp focus, the LM survey found that 92% of respondents are being affected by the current situation. You can read more about the survey by clicking here.

To say even higher inflation is not welcome news could very well be the understatement of the year, as it impacts, and is related to many issues that we see impacting supply chain, logistics, and freight transportation operations.

As for how and in what ways, there are myriad components such as labor and hiring, port congestion, fuel and energy prices (partially), and several others.

While the Federal Reserve gets set to raise interest rates, in an effort to quell, or slow down, the gains in inflation, it remains to be seen if taking those types of steps are enough.

Dave Ross, Executive Vice President for Roadrunner Freight, a Downers Grove, Ill.-
based, national less-than-truckload (LTL) services provider, with a focus on long-haul metro-to-metro shipping, put the current inflation outlook into perspective, for LM, observing that the things people are buying are more expensive compared to a year ago, with things like rents and gas seeing steep increases.

“The same goes for the costs of goods, partially due to the rise to transport goods over the last 1.5 years [being] up so much that retailers had no choice but to pass things on to the consumer,” he said. “They were up so much that retailers had no choice but to pass them on to the consumer at any level, where they could consider eating them or take the hit themselves.

They had to be passed on and ultimately what that does is if everything costs more money, you ship fewer things, printing more money does not make sense.”

But what does make sense, he said, is that things are not as strong as they used to be or are cooling off a little bit.

“That does not mean people are broke or not spending any money, it is just that spending is not as strong as it used to be and does not buy as many goods as it used to,” said Ross. “The backdrop of all this over the last year or so is we have seen a lot of new companies start up, but you have not felt it as demand has been so strong and supply chains so congested, it tied up a lot of capacity that way. But when things loosen up, you start to see that in the spot rates on the dry van side and we are seeing it...and even with higher fuel prices, we don’t know where fuel surcharges are going to go. High fuel prices, for a while, is obviously going to slow the economy quicker than if it comes back down quickly. From a structural standpoint, the truckload market is more cyclical and more commoditized and has seen more supply come into it than LTL. And it is also the biggest demand risk right now.”

Glenn Koepke, GM, Network Collaboration, for Chicago-based FourKites, observed, that a key way for shippers to attempt to counter, or better deal with, inflation, goes back to planning, thinking weeks, if not months, in advance, and also to minimize any last-minute shipping, whether it is for spot ocean, air, and over-the-road shipments.

Like Ross, he said these rising costs are real and have been evident over the last 1.5 years, and more recently, too, with fuel costs upwards of 30%, going back to the beginning of the Russia-Ukraine conflict.

“Shippers need to plan ahead with their partners,” he said. “One of the silver linings of our industry is the consistency of goods makes life so much easier to plan around. If I know every week that I have five shipments from the Port of Los Angeles to the Chicagoland area in Aurora, Ill., it is a lot easier for the carrier or drayage provider to plan around these types of specific events. Predictability is one of the silver linings we are trying to get to, but a lot of companies cannot predict, or consumer habits or supply habits are changing...these are what we are dealing with. But being able to plan ahead and trying to stick to that plan as much as possible are the top things shippers need to be doing right now.”

Inflation is likely to remain intact over the coming months, to be sure. It is clear it impacts the supply chain on various fronts, as the LM survey data and commentary from Ross and Koepke highlight, too. What is most important for shippers now is to remain calm and take a measured approach to the situation, while making adjustments, as needed. The ability to do that has been clear, given the many obstacles our industry has been up against for more than two years running now.

Source: www.logisticsmgmt.com

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Efficient logistics are essential for smooth supply chain management. For most logistics providers and retailers, logistics operations can be divided into two separate processes – inbound and outbound logistics. When optimized and coordinated in sync, these complementary pieces of the logistics puzzle can boost the strength of a business’ shipping relationships, cost-effectiveness, and profitability along the supply chain.

But attention to these shipping processes doesn’t just clear pathways to upward growth. With well-oiled inbound and outbound logistics models, it’s also easier for companies to respond to changes quickly and overcome obstacles — like those experienced industry-wide during COVID-19.

This article explores the trends creating new challenges for retailers and logistics providers, and how to update your inbound and outbound logistics processes for more efficient and customer-centric logistics.

Why should you optimize your inbound and outbound logistics operations?

Outbound logistics play a notable role in a company’s relationships with its customers. With consumer expectations and delivery volumes continually on the rise, this side of the shipping cycle is gaining more and more attention as businesses aim to boost customer satisfaction and loyalty rates.

However, inbound logistics contribute to the success of these outbound goals as well. For example, a business can spend upwards of 40 percent of its annual freight budget on inbound shipping alone. While companies may rush to focus on outbound logistics processes, they must take a look within to make sure that the inbound logistics process is optimized and efficient. This should be part of every company’s supply chain management strategy.

Understanding the connection between inbound and outbound logistics is what helps ensure smooth operations throughout this network. That’s because inefficiencies on one end of the supply chain can easily trickle into other aspects of your shipping ecosystem — therefore it’s important to recognize how and where these optimization strategies intersect.

With a more strategic approach to inbound and outbound logistics, a business can reduce delays, introduce greater efficiency, and build a better experience for customers.

Research from Deloitte illustrates this competitive advantage. The firm found that 79 percent of organizations experienced above-average revenue growth when optimizing elements in their delivery lifecycle.

In order to understand how and where to optimize your logistics operations, it’s important to first understand the strategic difference between your inbound logistics and outbound logistics processes:

**Inbound logistics**: Any business selling goods to customers relies on a network to source those items — whether they’re raw materials or finished products. While inbound logistics can refer to any inbound truckload, general inbound logistics covers this network and its flow.

Inbound logistics is not just about getting an item from point A to point B. All aspects of this inbound movement need to work in concert to ensure efficient inbound operations.

**Top challenges for effective inbound logistics processes:**
- Hidden costs, lack of visibility and acquiring the best rate per shipment
- Shipment tracking and status notifications
- A lack of data analysis to inform more efficient processes
- Responding to surges in demand

Strategies for optimizing your inbound logistics

Improving your business’s inbound logistics helps to increase cost savings while streamlining your supply chain. Efficiency in these processes also drives easier scalability — whether you’re ramping up production in the short term or looking to permanently expand operations.
Good supplier relationships form the bedrock of optimized inbound logistics. This starts with identifying those partners that can offer the most competitive pricing and quality. You’ll also want to check for things like quality certifications, lead time and on time delivery rates, and a supplier’s capacity to support your business’s growth.

Prioritizing these relationships helps you understand your business and its needs better — while ensuring that the supply chain partners you work with are able to help facilitate your goals. From there, you can integrate inbound logistics processes that leverage these relationships and enhance their value to your operations.

**Inbound freight delivery consolidation**

Less-than-truckload (LTL) freight combines shipments from multiple businesses into one truckload. As you only pay for the space you use, this approach is cheaper if you’re handling small, infrequent shipments.

But as you transport a greater volume of products, unloading multiple LTL shipments grows far less cost efficient than managing a single truckload. Consolidating inbound shipments also improves efficiency at distribution centers by reducing delivery congestion and forming more reliable, predictable timetables.

Of course, there’s a range of logistical considerations at play for effective freight consolidation. Anyone working in supply chain management will need to consider factors like shipment weight, transport timetables, fuel costs, and the availability of trucks and drivers for their supply chain management strategy.

For many businesses, partnering with third party carriers or a 3pl logistics provider makes this process easier and more cost-effective.

**Increase Automation**

Efficient supply chain logistics relies on a range of variables working in harmony. Transportation management systems (TMS) bring all of these pieces together digitally to manage the needs of every stakeholder in the shipping ecosystem — from the suppliers and carriers to warehouse employees and the customer.

For inbound logistics, TMS empowers automated routing guides, shipping processes and reporting. By standardizing these practices, TMS helps to close the door to inefficiencies, keeping operations as smooth as possible throughout the supply chain.

But this technology can also inform better relationship-building. It can provide data-rich insights into details like your suppliers’ cost-effectiveness, inventory carrying costs and storage fees, for example.

**What is the outbound logistics process?**

Outbound logistics commonly refers to a business’s shipping activities after a customer places an order. Outbound logistics can include elements such as:

- order processing
- product picking and packing
- Shipping out finished goods

An outbound logistics example would be an order that comes into a retailer and is fulfilled from a distribution center or wherever the relevant inventory sits. Delivery drivers pick up the order from the distribution center, store, or other location, and deliver it to the end customer.

Customer-centric outbound logistics focuses on making sure that the customer has the ultimate delivery experience — from the moment the order is out for delivery until the moment customers receive their order. This includes inventory management, smart route planning, and more. The end goal is efficiency and customer satisfaction.

Outbound processes are often outsourced to a third party delivery provider, whose outbound logistics often includes inventory management, warehouse operations, managing a freight service to deliver the goods, and other logistics processes.

Outbound logistics is pretty straightforward; however, recent supply chain trends have made the traditional outbound logistics order process redundant.

Online sales and, subsequently, delivery volumes are increasing every year — and customer expectations are growing right alongside them. These primary challenges relate to some key trends happening in outbound logistics:

**Top 4 trends affecting outbound logistics:**

1. Increased Need for Visibility
2. Crowdsourced Delivery
3. Direct to consumer sales
4. Customer experience

**1. Increased need for visibility**

In a recent survey, more than 1 in 4 shippers found themselves challenged by lack of visibility when working with multiple fleets and last mile carriers.

Managing even one freight service without knowing where the truck is, or where the orders are, is hard
enough; having visibility and control over logistics services through multiple delivery providers is almost impossible using traditional logistics management systems.

Besides internal visibility for efficiency and managing performance, there’s also the visibility that consumers now expect. Online retailers and logistics providers interested in providing exceptional delivery experiences have to provide an exceptional level of visibility across every stage of the last mile delivery.

2. Crowdsourced Delivery

Traditional freight companies and post and parcel services are either overwhelmed beyond their capacity right now, or are simply not set up for meeting customer expectations today.

Crowdsourced delivery provides a relatively fast solution to better delivery experiences and can provide much-needed support to an overburdened distribution network.

A crowdsourced fleet can send delivery drivers to fulfill orders from the relevant distribution centers or other locations on demand, which is both cost-effective and ensures coverage during peak seasons. They will usually offer same day delivery, enabling an online retailer or brand to promise fast delivery to consumers and make good on that promise.

However, a crowdsourced delivery fleet brings with it the same problems of fleet management as a traditional third party logistics provider: visibility into performance. Without that visibility, you will not know the reasons for a failed delivery, or whether the delivery experience meets your standards.

These trends are putting a strain on both the inbound and outbound logistics supply chain, and increasing issues around multiple processes:

Accessing delivery networks

One cost-effective way to increase your delivery resources is to use a delivery hub that allows you to identify which fleets or carriers match your business needs, and flexibly engage them as needed.

3. Direct to Consumer Sales

Increasingly, brands that sell consumer products through eCommerce platforms, distributors, or retail chains are looking to increase direct to consumer sales in order to own the customer relationship and customer data. For brands, this isn’t a simple business decision, but a move that demands a restructuring of their entire outbound logistics process.

Brands that choose to move into the D2C space suddenly need a distribution network that can deliver goods all the way to the end customer — which means that suddenly, their outbound logistics process has a direct impact on the customer experience. In many cases this means bringing in additional systems, or working with supply chain partners who already have a transportation management system and other systems in place to ensure that the entire supply chain flows as needed.

4. The customer experience

Example of a convenient customer experience.
Source: Bringg

The last leg of a delivery’s journey contributes to a large part of a business’ shipping costs making efficiency paramount to staying competitive. When it comes to outbound logistics, it’s this last mile that most significantly influences customer satisfaction. That’s because today’s consumers are after fast, free, and flexible delivery options. And thanks to customer demand for increased visibility — 90 percent expect real-time tracking capability — there’s also little room for error.

Businesses must place emphasis on supply chain management as part of the last mile process in order to ensure that their customers are receiving the ultimate experience, boosting brand loyalty and giving them a reason to come back again in the future.

New challenges for outdated inbound and outbound processes

- Processing, planning and routing orders along multiple delivery models
- Keeping track of freight across an increasingly large outbound logistics network
- Capacity issues that result in delayed delivery and missed deliveries
- Stakeholder communication throughout the broadening supply chain
- A surge in returns and delivery rejections (necessitating reverse logistics)

How can you improve the outbound logistics process?

The best way to improve outbound logistics processes is to focus on delivery optimization processes that drive both greater efficiency and stronger relationships with the other stakeholders in the outbound logistics supply chain.

Strong partner relationships: Strong relationships with supply chain partners are as crucial for efficient
outbound logistics as they are for inbound logistics. Reliable partnerships help to keep workflows running smoothly and communication transparent.

This leads not only to better cost-effectiveness in your outbound logistics but it improves customer satisfaction in your brand. If there’s a hiccup in their order, customers more often hold your business accountable — not your contractors or delivery partners.

Inbound logistics focuses on getting raw materials (or finished products) to your business in order to be able to supply them to the end customer. Making sure that your relationships are strong within inbound logistics processes, allows you to have the confidence to know that inventory and costs will remain predictable and consistent.

**Strengthen delivery systems with data**: Transportation management systems (TMS) don’t just help automate and streamline delivery processes. The technology collects data over time that can inform ways to improve operational efficiency, cost-effectiveness, and scalability.

Today’s technology offers businesses insights specific to their workflow. These patterns can reveal opportunities to streamline operations within inbound logistics as well as outbound logistics such as:

- Anticipating shipping patterns
- Ensuring optimal inventory levels at specific warehouses or distribution centers
- Identifying the most efficient delivery routes and shipping carrier or carriers.

This data also feeds into better customer service. By helping your business build more predictable, efficient models, you pass that accuracy onto the end recipient. This means more precise delivery times, fewer failures, and more satisfied customers.

**Negotiate carrier rates**

Prioritizing better partner relationships also opens up opportunities for more flexibility and lower transportation costs.

Reviewing your business’ shipping data helps you to understand the cost breakdowns for deliveries. That way, you can consider where there may be room for cost negotiation. For example, if your business has grown since you last reviewed your carrier contract, you may be able to negotiate volume rates.

Carrier rates are amongst the most important aspects for keeping customer satisfaction high. With free shipping becoming a must in the eCommerce world, you’ll be able to generate a higher bottom line when you lower outbound logistics costs.

**Lower inventory costs**

Warehousing accounts for about 13 percent of supply chain costs, on average. While you need enough stock to satisfy demand, outbound logistics costs start to easily creep up if inventory management slacks.

That’s because the cost of warehouse space itself is just the beginning. Businesses also need to consider cost requirements like staff to inspect and manage inventory and product insurance — and for any time-sensitive goods, over-stocking runs the risk of diminishing product quality.

Inventory management systems help to overcome these obstacles. They work to streamline your warehouse organization and storage for the most optimal, cost-effective capacity. But it does so by taking into account goods across your business’s entire supply chain, mapping the entire journey of a product whether it’s coming from your supplier, on its way to a customer, or returning to a warehouse.

**Build strong customer relationships through last mile delivery**

In B2B deliveries and logistics, relationships usually develop over years of working together. But whether you’re using a courier, contractor, crowdsourced fleet, or your own fleet in your outbound logistics network, there’s far less direct communication with the end customer — and therefore, less opportunity to establish trust.

Technological solutions help bridge this gap, however. Businesses can now connect with their customers across multiple touchpoints after they’ve placed an order. Features like automated notifications, real-time alerts, ratings and feedback systems, and order tracking boost a business’ accountability in the eyes of its customers. This connection drives longer-term relationships that strengthen a brand’s reputation — and ultimately, customer loyalty rates.

**Integrate same day delivery options**

Same day delivery doesn’t just offer companies a competitive advantage — it’s becoming an industry standard. One survey found that 80 percent of consumers want their products delivered within 24 hours of placing an order.

While this service offers a new, valuable revenue stream for businesses, its success relies on smooth logistics throughout the delivery infrastructure. The stakes are high, too. Even one failed delivery can
jeopardize a relationship with a customer.

A centralized order management system can help businesses manage multiple delivery models, including same-day shipping. This requires logistics software that connects multiple systems for full inventory and order visibility from production to delivery — while optimizing the best routes and distribution channels to expedite the outbound logistics process while mitigating extra costs.

Use technology for better outbound logistics processes

From relationship-building to rate negotiation and inventory management, leveraging transportation technology solutions is what greases the wheels toward better supply chain management. Today’s delivery management platforms help to:

- Increase automation across every step of the delivery process, from inbound freight consolidation and routing to outbound customer delivery notifications
- Improve inventory and warehouse management, keeping costs low while ensuring there is enough inventory to meet demand
- Use route optimization software to support route planning for different delivery models
- Future-proof your operations through data insights that help predict inventory needs, and customer feedback
- Provide transparency and visibility across all stakeholders involved in your supply chain, strengthening relationships between your business and its suppliers, carriers and customers alike
- Simplify reverse logistics like processing returns, reloading rejected items, reselling restocked products and managing recycling or reclaiming raw materials

How to improve your inbound and outbound logistics

The best way to optimize your inbound and outbound logistics is by creating smarter, more efficient supply chain logistics that manage the process across every step of a product’s journey, including both inbound and outbound logistics.

Bringg’s delivery and logistics cloud platform offers customized solutions to help businesses rapidly scale up and optimize their last mile logistics operations. Get in touch with our team to see how you can better manage your inbound and outbound logistics operations for your business’s omnichannel needs today — while adapting to new challenges as it grows.

Inbound and Outbound Logistics FAQs:

What are inbound logistics?

Inbound logistics refers to the process of transporting raw materials, supplies, and finished goods from a manufacturer to a warehouse, fulfillment centers, or retail stores. Inbound logistics directly affect outbound logistics processes by making sure that raw materials and goods are always available when necessary.

What are outbound logistics?

Outbound logistics refers to outgoing end products that leave a warehouse, distribution center, or store to the next location in the supply chain. Efficient outbound logistics is critical for ensuring that products make it to the final destination as planned together with satisfied customers.

What is the difference between inbound and outbound logistics processes?

While inbound and outbound logistics both involve the transportation of goods; the main difference is the direction in which goods flow. For a manufacturer, outbound logistics would be sending truckloads to warehouses or distribution centers. For a retailer, that same freight load is inbound logistics, which must then be split up per store in a cross-dock operation, and sent out on numerous truckloads to stores, an outbound logistics operation.

What are some examples of outbound logistics?

Outbound logistics include:

- Packing the order at the warehouse
- Third-party logistics company picking up the order to deliver to the end customer
- Delivering the package to the customer

What are examples of inbound logistics?

Inbound logistics include:

- Sourcing and purchasing raw materials or finished products
- Receiving goods at a warehouse or distribution center
- Managing incoming materials or products and preparing for outbound logistics processes

Source: www.bringg.com
When you consider how popular logistics outsourcing has become over the last few years, you could be forgiven for thinking that success is a foregone conclusion. However, as some companies have found out the hard way, there are certain pitfalls to avoid in logistics outsourcing if your partnership with a 3PL provider is to be successful.

By being aware of these, your supply chain can certainly achieve cost, labor, and efficiency benefits:

**Pitfall #1 – To expect too much**

Rarely does an outsourcing initiative deliver 100% of the savings projected? Don’t be too dismayed by this revelation though. If you achieve 70% of what’s projected, that’s still a big plus for your organization. In fact, you should be very careful about outsourcing logistics with the sole intention of saving costs, period. Unless your current internal operation is truly inefficient, outsourcing may even end up increasing your logistics cost.

Here are nine more pitfalls to be aware of and avoid when planning and executing a transition from in-house to outsourced logistics.

**Pitfall #2: Assuming that anything should go without saying**

Everything you expect from your outsourcing partner should be provided to them in the form of detailed written procedures and actionable form.

**Pitfall #3: Outsourcing too much, too soon**

Make provision for a honeymoon period and start by outsourcing a share of your chosen process. Increase the scale if all goes well.

**Pitfall #4: Going in without an exit plan**

Ensure the contract with your provider includes a procedure for disengagement if the partnership doesn’t deliver on expectations.

**Pitfall #5: Abdicating responsibility**

Remember that your outsourced processes are still your processes. While micromanagement is a bad idea, monitoring and measuring activities are essential.

**Pitfall #6: Treating the process like a purchase**

Remember that you’re entering into a long-term partnership when you outsource logistics processes. Chasing the best price is seldom the wisest way to choose your provider.

**Pitfall #7: Absence of internal buy-in**

Nothing can derail a partnership faster than finger pointing and negativity within your own operation. Every penny invested in change management and securing stakeholder buy in, is money well spent.

**Pitfall #8: Rushing the tender process**

If you harbor expectations that you can select a 3PL partner, finalize an agreement, and commence an outsourced logistics operation in a matter of weeks, you’re very likely to come unstuck at some point. A realistic timeline to get an outsourcing partnership underway is about four to six months—as a minimum.

**Pitfall #9: Outsourcing as a strategy**

An outsourced logistics operation is not suitable for every company. You should be very clear about your objectives for outsourcing; otherwise, you’ll be making the mistake of treating outsourcing itself as a strategy, when it should only ever be considered as a strategic enabler.

**Pitfall #10: Overlooking the importance of communication**

Once you begin working with a 3PL provider, you must resist the temptation to play your cards close to your chest. Logistics outsourcing simply won’t work if you aren’t prepared to share short-term forecasts, long-term plans, and perhaps most importantly, pertinent business data with your partner. Perhaps the points mentioned above sound like simple common sense and really, they are. However, they are all real traps, which have been fallen into by real organizations, sometimes with seriously painful consequences.

When it’s executed correctly, 3PL outsourcing is a proven enabler for service and efficiency gains in the supply chain. Try to avoid the ten pitfalls outlined above, select your 3PL partner wisely and you’ll be creating the best opportunity for your business to enjoy the gain, without the pain.

Source: sourcingandsupplychain.com
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n the run-up to Christmas, there was considerable anxiety about shortages of festive food and gifts. Trade friction was already at the core of the Brexit debate, and supply chain issues have been made much worse by the COVID-19 pandemic.

For example, a computer chip shortage had a knock-on effect across many industries. Concerns have also been raised about everything from lithium supply for electric vehicle batteries to restaurant food supplies to even coffee shortages.

Never has the issue of supply chain management been so prominent. The question now is what challenges supply chains face in the year ahead. So what can we expect?

Complex, fragmented, under pressure

Products reach consumers through a chain of companies involved, which typically includes manufacturers, logistics firms – who provide storage, distribution and transport – and retailers. Not surprisingly, the whole system is highly complex.

There’s a whole philosophy of contemporary supply chain management (SCM) concerned with making supply chains much more integrated than they used to be. Done well, it can significantly improve the overall performance of companies, as well as benefiting the economy and society. Yet this long-term effort to make the whole system more efficient has been set back by a whole host of challenges in global supply chains.

Three big issues became particularly apparent in 2021. First, and probably the most obvious to many of us, was the unprecedented pressures on global supply chains created by the COVID pandemic and the subsequent series of lockdowns and restrictions which varied in their timing and severity from country to country.

This has resulted in significant geographical shifts in supply and demand, which in turn has created problems for finely tuned global supply chains. Trends that were apparent pre-pandemic, such as increases in online shopping and driver and other skill shortages, are now causing real problems.

Second, the economic and business environment became more challenging. For example, in the UK and the rest of Europe, supply chain pressures were caused by Brexit as a result of increases in red tape and cross-border checks. More widely, firms continue to grapple with a range of international business challenges ranging from fluctuating exchange rates to the building of global management teams.

This all matters because business has become increasingly international – often global – in recent years. This is thanks to the reduction of traditional barriers to the cross-border movement of products, services, capital, people and information. The impact of this change on logistics and SCM is the subject of my book Global Logistics: New Directions in Supply Chain Management.

Third, the environmental impact of logistics and supply chain activities is beginning to be more widely understood. If countries around the world are to meet their emissions targets and commitments, it is key that they develop more sustainable supply chain practices.

THE BIG CHALLENGES FOR SUPPLY CHAINS IN 2022

JO ADETUNJI, EDITOR, THE CONVERSATION UK
Glasgow’s COP26 in November had a strong focus on transport including freight and logistics. Business as usual is simply no longer an option if a sustainable future is to be achieved.

But uncertainty is a characteristic of the international business landscape in which supply chains operate. As a result, major companies have become strongly focused on supply chain risk management. This means identifying where risks of any kind exist in the network, assessing the potential impact of these risks, and putting mitigation strategies into place. A range of formal methodologies and tools have been developed to support this process.

The big question is how all this complexity can be handled, particularly in terms of design, planning and execution. These challenges are new in many respects, so past experience cannot be relied upon to generate solutions.

The world’s supply chains are subject to a complex and sometimes volatile range of factors. Axel Wolf/Shutterstock

An unpredicatable world

So what kinds of things are going to affect global supply chains in 2022? As The Economist neatly put it recently, “the era of predictable unpredictability is not going away”.

The arrival of omicron has provided a timely reminder of the unpredictability of the pandemic. The emergence of new variants during 2022 could accentuate some of the current pressures. In this context, China’s continuing zero-COVID strategy with its tight border restrictions could create problems.

Despite some easing in recent months, international shipping costs are likely to remain high in 2022. Closer to home, the arrival of the full post-Brexit customs checks introduced on January 1 has introduced further friction and added costs, with many firms reporting a worrying lack of preparedness.

Above all, freight transportation and supply chain processes will continue to change during 2022 as more environmentally sustainable practices are adopted. These practices affect everything from transport vehicles, such as switching to electric delivery vans, through to changes in the wider supply chain, such as relocating distribution centres to minimise distances travelled.

Industry and academia are collaborating to develop innovative and sustainable practices, as can be seen in the work of the Centre for Sustainable Road Freight, for example. The year ahead will be key in the adoption of these practices, each of which requires change in the operational practices of firms. Such change will inevitably create short-term challenges as the new practices become embedded.

Business has to be resilient and capable of adapting to major disruptions so that it can develop long-term strategies and solutions to these complex challenges. In the meantime, shoppers are likely to see higher prices, with companies passing on increased shipping and other logistics costs to customers. We may continue to notice things missing from our supermarket shelves – new year product shortages are already being reported in some countries. So as consumers, we are going to have to keep being a bit more resilient ourselves.

Before you go ...

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Source: theconversation.com
An efficient e-commerce logistics company can help an e-commerce business stay competitive and succeed online

Covid-19 pandemic has derailed economies and businesses across the world. However, e-commerce which has showed impressive growth trajectory over the past decade, has bucked the trend and thrived through the pandemic. E-commerce sales soared by 160%, six to eight times the rate of growth of traditional retail between 2014 and 2019.

During the pandemic period, e-commerce rose from 13% to 17% of total retail. An IBEF study forecasts that Indian e-commerce will grow at a CAGR of 27% to reach the $99 billion by 2024.

Various supply and demand side factors have facilitated the growth of e-commerce. Increasing online consumer base, changing lifestyle of the Indian consumer seeking convenience, comfort and variety, and increase in internet-enabled devices have been key drivers.

Driving change: The rise of e-commerce and the digital marketplace phenomenon, also known as ‘The Amazon Effect’, has changed the consumer buying behavior and expectations. Consumers now expect fast, free shipping and competitive pricing.

E-commerce logistics refers to the processes involved in storing and shipping inventory for an online store or marketplace, including inventory management and the picking, packing, and shipping of online orders. Having a strong e-commerce logistics partner can maximize efficiency, reduce shipping costs, and provide a great customer experience.

A robust and efficient logistics infrastructure is necessary for the success of e-commerce business. An e-commerce logistics company helps accelerate the speed with which order volumes move both up and down the supply chain. While some businesses might prefer to operate in-house logistics enterprises, the advantages of hiring logistics providers to achieve cost savings and increase efficiencies are higher.

However, this demanding delivery schedule poses several challenges for traditional logistics and supply chain models. Logistics businesses have been forced to develop and deploy advanced solutions with a view to keep up with the increasing demand from e-commerce channels and meet the rising customer expectations.

Innovating for excellence: Logistics companies have evolved from mere last-mile delivery solutions providers to holistic supply chain management partners, especially third-party logistics (3PL) companies. A 3PL partner allows e-commerce businesses to automate order fulfillment, with services including warehousing, inventory management, shipping and receiving, FTL and LTL freight shipping, picking and packing, kitting and customization, and reverse logistics. There are several advantages that logistics companies offer for e-commerce businesses.

Reliable tracking: Tech-enabled logistics companies are equipped with inventory tracking systems that allow businesses to view inventory levels and order status from multiple channels in real-time.

Greater efficiencies: An e-commerce logistics company helps improve efficiencies by transporting packages in the most reliable and cost-effective way possible. Leveraging technology helps e-commerce logistics companies identify the best route for shipping orders which helps reduce shipping costs and transit times.

Use of leading technologies: Leading technologies empower e-commerce logistics companies to automate time-consuming and tedious tasks throughout the supply chain and cut down on manual work. Connected systems enable automated order tracking and real-time analysis of all systems at any time, which reduces unnecessary delays and errors during fulfillment. Information-visibility systems lead to a more fluid inventory pipeline and better customer satisfaction.

Focus on value-added services: Logistics technologies have grown to include a host of value-added services, for instance auditing services, to ensure small business have the tools and resources to grow in an e-commerce-based market.

Offer world-class customer support: Top logistics companies go to great lengths to keep clients in the loop throughout every step of the logistics journey.

The right logistics partner can help e-commerce businesses stay competitive and succeed online. An efficient e-commerce logistics company can help e-commerce platforms meet customers’ expectations and stand out from competition.

Source: www.allcargologistics.com
Gati Shakti will help develop a transport system that optimises cost and fuel efficiency through seamless multi-modal movement transport.

However, this is only a fraction of the actual cost, as there are numerous indirect costs associated with inefficient logistics.

The logistics sector has an important role in the economy, in ensuring efficient movement of goods and services across the country. Thus, it acts as a crucial ‘link’ by connecting the producers and consumers. Due to this, an efficient logistics sector is a pre-requisite for sustained economic growth.

At the outset, inefficient logistics not only entails higher prices for domestic goods but also reduces the competitiveness of exports. Further, these inefficiencies result in greater transportation and turnaround time. This results in increased inventory costs, as the producers are forced to maintain large inventories to meet fluctuations in demand. According to estimates, the logistics cost in India is about 13-14% of the GDP, while its about 7-9% of GDP in advanced economies. This implies India is incurring an additional cost of about $150 billion (~5% of GDP) on logistics than it ideally should. However, this is only a fraction of the actual cost, as there are numerous indirect costs associated with inefficient logistics.

One such effect is reduced investment, both domestic and foreign, due to reduced profitability of firms, which culminates in lower GDP and employment. Further, it is also a factor responsible for a lower share of manufacturing in India, as entrepreneurs/businesses would rather invest in the service sector, which isn’t as constrained by logistical bottlenecks.

There are many reasons for such high logistics costs in India. First, the freight traffic is highly skewed towards road travel (~65% of all freight) despite being expensive. According to World Bank, it costs Rs 2.2 per-tonne-per-km for road freight in India (Rs 1.4 and Rs 0.7 for rail and waterways, respectively). One reason for this is the lack of multi-modal connectivity which prevents seamless connectivity between various modes of transport. As a result, it is easier to transport goods through road, which have greater last-mile connectivity, despite higher costs.

Second, investment in warehousing, freight fleet and technology upgradation has been limited. This is because small enterprises which dominate India’s logistics sector are unable to undertake large investments needed to achieve necessary economies of scale. As a result, not only is the unit cost of logistics high but also the turnaround time for transporting goods (Economic Survey 2019-20). This is further accentuated by the multiplicity of the compliance requirements, from various bodies like MoRTH, GSTN, CBIC, etc.

Any effort to improve the logistics sector in India would invariably have to address these factors. It is in this regard, that the government has made the PM Gati Shakti Scheme a centrepiece of Budget FY23. PM Gati Shakti or
the National Master Plan for Multi-modal Connectivity is aimed at developing an organic and efficient infrastructure system to better transport goods and people across the nation.

Through Gati Shakti, all pre-existing infrastructure projects like Sagarmala, Bharatmala, etc, have been brought together on a single platform to ensure synchronised and integrated planning. This breaks away from the traditional approach wherein, each ministry plans and implements its project in silos. Further, Gati Shakti, through indigenously developed spatial planning tools, integrates more than 200 layers of GIS data. The significance of this data is immense as projects of individual ministries can be examined and approved within the contours of the master plan. This would not only boost complementarity between projects of different ministries (e.g. linking rail line with ports) but also prevent geographically conflicting infrastructure (e.g. planning a road over a proposed reservoir due to poor coordination).

By leveraging these tools, Gati Shakti would help develop a transport system that optimises cost and fuel efficiency by allowing seamless movement of goods between various modes of transport. For example, railways and waterways can be used to transport goods over large distances, while roadways can be used to provide last-mile connectivity. Thus, it could also shift the dependence of freight traffic from roadways to more efficient modes like railways and waterways.

The platform would also allow ministries and departments to visualise, review and monitor projects, thus helping identify specific bottlenecks at the ground level. For example, it could show if the delay is caused due to land acquisition or pending clearance, etc. This would not only ensure that projects are completed in the proposed timeline but also reduce the prevalence of cost overruns.

The Multi-Modal Logistics Parks (MMLPs), which would act as the focal point to link various modes of transport, are at the heart of Gati Shakti. MMLPs would also allow for large scale warehousing, container movement and provide scope for value addition like sorting, grading, etc. These would ensure necessary upgradation and automation of the warehouses, thus reducing turnaround time and the costs incurred.

Complementary to these efforts, the government is also developing the Unified Logistics Interface Platform (ULIP) as the digital backbone of the sector. ULIP, in a secure and decentralised manner, would integrate data from various government bodies like GSTN, Vaahan, Customs, etc. This would not only reduce the compliance burden by doing away with tedious documentation, but also create a uniform regulatory framework for the sector.

ULIP would also allow for tracking of shipments by all the stakeholders. Such monitoring would allow the producers and logistics players to not only better identify hold-ups in supply and delivery but also understand demand trends better. This would reduce the need to hold large inventories by allowing for ‘just-in-time’ inventory management. Finally, ULIP would bring resilience to the supply chain resilience by identifying vulnerabilities in the sector as done with the Logistics Data Bank for container tracking.

Presently, such benefits from digitisation are restricted to select large players and not shared by the entire logistics sector. ULIP, due to its universality, could also offset disadvantages faced by the smaller logistics firms, thus greatly benefitting MSMEs engaged in the sector. Thus, ULIP not only has the potential to reduce the logistics cost and improve supply chain resilience but also promote equity.

Finally, Gati Shakti, with investments of more than Rs 100 trillion, would create large-scale employment while stoking investment from the private sector. This is the same phenomenon which contributed to the rise of Asian Tigers during the 1970-80s and more recently, China.

Source:www.financialexpress.com
HOW MOBILE TECHNOLOGY IS HELPING LOGISTICS AND SUPPLY CHAIN SECTOR TO EVOLVE?

Over the past few years, the transport and logistics industry has adopted mobile technology to improve their processes and operations. This sector is no different from others because now, it is greatly under the influence of digital technologies. From the time digital technology is introduced in the logistics and supply chain industry, the sector has evolved dramatically. By keeping the growing competition, complexities, and ever-changing consumer demands in mind, several user-friendly mobile applications are developed by IT experts and are used by many top companies that are offering transportation services in India.

Logistics companies have already realized that by using mobile technology, their business can achieve greater visibility in their supply chain performance. They are trying to identify different opportunities to gain efficiencies and cut down costs. Logistics and transport agencies work in an environment that calls for improved and more efficient management of the supply chain. Workers in these firms are required to work from onsite as well as off-site locations. So, these companies prefer to use smartphones with some important features such as barcode and label printers, built-in cameras, scanners, GPS, Near Field Communications (NFC), Voice Recognition Software, shared logistics networks RFID tags, etc.

Why transportation service companies should invest in mobile app development for the supply chain?

Mobile app development for the supply chain ensures an integrated mobile fleet solution to have live tracking of goods. It will enable the mobile team to get adequate assistance from IoT to get the right information in multiple transitory touch points.

One of the major benefits of using mobile technology in the supply chain is that it helps in optimizing inventory management system that enables the faster movement of goods and reaches customers’ doors timely. Doorstep delivery mobile applications suggest the best routes for faster movement of goods and also help in locating customers using GPS coordinates. In overall, making it easier for the mobile fleet operator in finding the precise location and deliver the goods on time.

Many logistics companies are realizing the benefits of implementing mobile apps in their supply chain, but still, there are some agencies providing transportation services in India, have a dilemma whether to invest in mobile app development or not. Such companies can compensate for the cost of mobile app development for supply chain management by getting advantage from improved supply chain visibility, mitigating errors, shrinking down the lead time, and optimizing transportation networks resulting in improved inventory management.

The real-time data is fed or updated continuously to the dynamic optimization engines that have the core of supply chain management. Therefore, mobile apps not only suggest optimal routes but also it provides some real-time insights to vehicles and driver performance to the shipper. Furthermore, it aids in measuring the productivity and efficiency of each network involved in the complete supply chain. With mobile technology, logistics companies can create an entirely new standard for vehicle communications, by adding new levels of ease and sophistication. This offers an environment for companies to offer transportation services in India that is going beyond the four walls of the warehouse to deliver.

Mobile technology has changed the dynamics of the logistics and transport sector. Read below to understand how friendly and intuitive mobile apps have helped this sector to evolve. You can also check top trends rule supply chain management in 2020 if you want to deeply understand the role.
of mobile technology in the supply chain industry –

**Helping in managing valuable human resources!**

Workforce plays a crucial role in a company with little to no room for negligence and mismanagement, especially at some crucial touch points. For this, organizations emphasize on right training, communication, and modifying organizational structure as and when needed. Mobile technology allows companies to effectively integrate different human resources in numerous departments to deliver secured information that runs throughout the organization. However, the cost goes a little high to take care of these resources, but it also reduces worker fatigue and hence improving their overall productivity in working hours.

**Shipment tracking systems!**

Earlier, customers used to get an estimated delivery date on booking their shipment and then were left in the dark with no updated information, unless they decided to make a phone call for further inquiry. Today, mobile technology allows the shipper to provide real-time location regarding the shipment to customers and keep them updated about the progress. Customers can also access shipping and tracking features 24/7. Not only this improves the user experience, but also saves time and money for the company as well.

**Eliminating data redundancy!**

When there were no mobile apps for logistics and supply chain, the data redundancy rate was higher as manual entries created a hard time for heads of the respective departments. The data discrepancies due to human error made the whole supply chain system devoid of reliability to an extent that only back-office systems were to be relied on. With mobile app development and its implementation in the logistics sector, the data entered reflects immediately. This reduces the chances of human errors and boosts the entire process with utmost data reliability.

**Quick and flexible delivery process!**

Using mobile solutions, companies involved in supply chain management and transportation service can change delivery schedules as well as routes on the go which means amazing flexibility to the organization. Improving the control of their supply chain operations increases customer retention and provides opportunities for new levels of an alliance between logistics providers and customers. With mobile app solutions, logistics companies can improve their supply chains with real-time data which enables drivers to inform any delay. Companies can improve their dispatch operations, record keeping, inventory management, tracking goods, inspections and more with real-time data. As a result, they can enhance their supply chain operations.

**Time-saving and reduce costs!**

Logistics mobile apps allow you to optimize routes for each driver reducing fuel expenses. These apps can simplify major functions to improve driver efficiency. Weather update and traffic congestion alerts on the driver’s phone can help him to take the best route to reach the destination on-time. This way it helps the organization to operate more efficiently at the same time reducing operational costs.

**Easy and timely dispatch of work orders!**

Companies implementing mobile technology in their business can speed up processes and work orders. Using inventory software, they can optimize dispatches and routes. They can also manage rides, minimize miles driven and increase revenue. Logistics is not only about moving and delivery of the goods, but it is also about effective warehouses management. The software allows you to store all the inventories received at the warehouse and dispatched to the final destination. These apps will make it easier to store goods and locate the inventory easily because all the information will be in a database.

The transportation and logistics industry spend money hugely on auto parts, vehicle insurance, fuel, maintenance, and more. Investing in advanced mobile technology is the key to improve the operation, workflow and productivity of the transportation company and garner other amazing benefits. To empower your business in the transportation industry and take it to next level, implementing mobile technology will be the suitable choice.

**Source: TruckGuru**

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Overall, the advent of technology forces is leading to a culture of decision making based on data and not gut-feel. The gains in both quality and performance as delivered in a technology-powered logistics value chain is realised by both buyers and providers, writes Ruchi Dogra.

Today, it is not one unique identifiable technology that can create a quantum impact on the logistics industry. Combinations of technologies which are at the tipping point of mass adoption by the industry are the key drivers to the change that is happening from within the logistics industry.

Simple automation, which seemed like a panacea for all logistics related issues, is no longer the natural option. The way automation is impacting the logistics industry and its value chain is evident from the emerging new business models which are disrupting the traditional norms.

The empowered executive: Employees of logistics providers and user companies are much more aware, utilising toolsets and systems that enable them to deliver more. Whether it is performing mundane routine tasks or high-value activity of decision making, automation has enabled create both time and decision support systems to prioritise and focus on ensuring the shipments are not just planned but are delivered in planned parameters.

IoT, AI, Data Analytics: Internet of Things (IoT) has the potential to be the greater disrupter, enhance process & efficiency by offering greater visibility and control of the process in the supply chain system. Optimising the cost, reducing cycle times, transparent and efficient documentation — all these are seen as a minimum basic requirement today. The supply value chain is employing IoT to ensure that all relevant data is generated in a uniform and manageable dashboard format. Decision making support from AI algorithms and modelling is a norm for supporting decision making.

Experience, experience, experience: Integration of all areas of business activity is imperative for small or big enterprise. Smart decision making, efficiency gains, timely execution and transparent pricing models that impact profitability are both demanded and delivered by the logistics industry’s new age providers. It all about enabling businesses who use logistics to plan, operate long-term, re-organise their business models, and market acquisition strategies. All of these leading to improved experiences for shippers, carriers and value-added logistics players in the value chain.

Information flow is faster, cheaper and transparent: All participants want to have information for their own use, in their own format, and at no cost. Is this possible? Yes, and it is being delivered using the advancements of artificial intelligence (AI), machine learning, and implementation of business intelligence systems. Sharing of data in a standardised format and making available decision dashboards that can be easily understood are the norms. This development is enabling movement of information at a fast pace as required by the buyer, shipper and other providers within the logistics supply chain. The underlying systems create a level of transparency which is acceptable to all and improving further day-by-day.

Transformation through digitisation: The moving parts of the logistics are not just the goods that flow within but the data that is created, generated and dynamically changes in during the course of logistics operations. Logistics services intermediaries of the new age are adept at using technology to interpret this dynamic data to provide cost-effective methods of shipment. Modelling and machine learning are aiding suppliers to deliver shipments efficiently and inexpensively to their clients. This transformation is self-propelled and unstoppable. The challenges it poses in terms of data magnitude and security are growing but not a hindrance.

The growth in new age logistic intermediaries armed with technology edge is here to stay and provide an edge to their clients. Whether it is ad-hoc, regular or long-term planned shipments, the ability to provide a quote electronically in a standardised format is enabling the logistics players to capture the opportunity with instant price modelling.

Clients of providers and clients of buyers are both relying upon the technology-enabled transparent and standardised data availability. This is creating a unique business model within the industry enabling spot pricing, efficient logistics routing and above all a satisfying experience for all involved in the value chain.

Source: Indian Transport & Logistics News
LOGISTICS OPTIMIZATION FOR COST REDUCTION

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Logistics is an important part of supply chain management and is defined as forward and reverse flows of materials and services from manufacturers to customers or consumers. Logistics cost measured as percentage of GDP needs to be ideally below 10 percent from current level of 13 or 14 percent and these increased costs are adversely impacting all industries and companies.

Several activities as mentioned below need to be performed and optimized to tap the full benefits of logistics and supply chain management and achieve cost savings.

Supply & Materials Planning
Inventory & Materials Planning & Control
Materials Handling & Packaging
Information Technology & Automation
Transporter Selection
Freight Cost Control
Delivery Tracking and Reliability
Safety & Environmental Concerns
Receiving & Warehousing
Heavy Equipment Logistics & Rigging
Outbound Logistics

Supply & Materials Planning: This needs to be done so that there is complete and total clarity on requirement volumes and dates when they are required at project site or factory. Contractual requirements and specifications need to be clear and complete in all respects.

Inventory & Materials Planning & Control: Inventory Turnover ratio is an important aspect in many industries and realistic targets need to be fixed and achieved without compromising customer service and product availability. Demand forecasting efficiency and consistency will help to set realistic inventory targets without compromising business objectives.

Materials Handling & Packaging: This process needs to ensure zero handling and transport damages/deterioration/theft and other associated problems and clear packaging specifications and standard operating procedures for handling and packaging contribute towards this objective.

Information Technology & Automation: Software applications are employed in all areas of supply chain management from forecasting and planning phase to investment recovery and disposals phase. Centralized Information gives us the big picture of the organization and helps to focus better on bottlenecks and problem areas. Process automation helps to achieve better productivities & efficiencies and reduced errors, wastages & delays.

Transporter Selection: A qualified list of transporters and carriers for different modes of transport with contractually agreed freight rates and discounts helps to minimize and optimize transport costs, deliveries and responsiveness efficiencies.

Freight Cost Control: Selection of proper mode of transport based on value to weight ratio and despatch quantity plus avoiding or minimizing premium and urgent freight situations through advanced and timely planning and forecasting techniques contribute towards optimization of costs.

Delivery Tracking & Reliability: This is a must-have feature for transporters to confirm exact current status of shipment, delivery date forecast, delay avoidance and delivery reliability. Proper route selection apart from transport mode selection for each consignment help to achieve this objective.

Safety & Environmental Concerns: Safe handling of hazardous materials and chemicals is required to ensure environmental safety and avoid incidents like oil spills, contaminations and other similar problems. Standard operating procedures for safe handling of materials and following environmental regulations with total compliance guarantee elimination of adverse impacts on climate and environment. Environmental management system certifications are widely used now by companies.

Receiving & Warehousing: Good warehouse management procedures help to improve inventory accuracies, material retrieval and issue times, floor space optimization, layout efficiencies, receiving and inspection times, labour cost controls, equipment costs, investment recoveries and related metrics.

Heavy Equipment Logistics & Rigging: This is a specialized subject and involves movement of heavy equipment used in energy, infrastructure and other industries without damage through long distances. The weights and lifting characteristics of the equipment are studied fully and rigging plans are suitably drawn up and implemented. Road weight capacities and obstructions are evaluated well in advance and incorporated into the plans to facilitate smooth and problem-free heavy equipment movements.

Outbound Logistics: This is an important part of logistics which helps to improve customer service, achieve timely product deliveries, perform reverse logistics and control associated costs. In this era of global procurement and sourcing and consequent longer transport times and costs, getting this right is a compulsory goal and activity for companies.

Since logistics can positively or adversely impact several important business metrics like customer service and profitability, getting the various logistics processes right and efficient helps to improve financial and operational performances of companies, irrespective of their locations and industrial sectors.
LOGISTICS TERMINOLOGY

- **Acquisition** - the process through which resources are obtained to meet determined requirements: methods include purchase, rent, lease, or borrow.

- **Black Box** - any removable and replaceable unit in a system. (Usually refers to an electronic device.)

- **Conservation** - the process through which systems, equipment and resources are maintained, improved, or replaced: conservation encompasses storage, maintenance, salvage, protection, reclamation, and preparation or modification for reuse.

- **Cradle-to-Grave** - logistics planning, design, and support which takes into account logistics support throughout the entire system life cycle.

- **Depot Maintenance** - activities extending beyond the capabilities of the organizational or intermediate levels. Depot maintenance tasks include overhaul, repair, major modification, and technical assistance.

- **Distribution** - the process of moving the people, resources, and services to where they are needed or will be used. Distribution involves transporting, storage, issue, disposal and reuse.

- **Distribution Logistics** - the concept of viewing business processes of sales forecasting, purchasing, manufacturing, inventorying, shipping, and receiving as a single system.

- **Economic Order Quantity (EOQ)** - order placement and quantity based on yearly (D) demand, (S) setup cost, and inventory (H) holding cost. Economic order quantity equals the square root of 2DS divided by H. (M. Cox)

- **Fully Mission Capable (FMC)** - a system in which all supporting subsystems are fully functional. (M. Cox)

- **General Maintenance (GM)** - routine or scheduled maintenance and handling not involving in-depth disassembly or movement.

- **General Systems Theory (GST)** - the shared fundamental characteristics found in all mechanical, biological, and social systems.

- **In-Transit Visibility (ITV)** - an information system which tells shippers, carriers, and consignees at any time where and when shipments are picked up, present location, and where and when shipments will be delivered.

- **Information System (IS)** - a system of hardware, software, people, and policies for the purpose of sharing data and information.

- **Intermediate Maintenance (IM)** - sometimes called “field” maintenance, includes activities requiring the use of specialized equipment or shops and greater specialization of skills. Intermediate maintenance includes inspection, calibration, adjustment, bench testing, and rebuild.

- **Just-in-Time (JIT)** - order placement and delivery that is synchronized with production schedules to reduce or minimize inventory costs. (M. Cox)

- **Lean Logistics (LL, L2)** - logistics systems which use the most direct and efficient means to supply, transport, distribute, maintain, and repair resources. (M. Cox)

- **Life Cycle** - the phases of a product or system: need determination, system planning, research, design, production or construction, system evaluation, use and support, and phase out, disposal, or reuse.

- **Logistics** - Logistics is defined as a business planning framework for the management of material, service, information and capital flows. It includes the increasingly complex information, communication and control systems required in today’s business environment. (Logistix Partners Oy, Helsinki, FI, 1996)

- **Logistics** - (military definition) The science of
planning and carrying out the movement and maintenance of forces.... those aspects of military operations that deal with the design and development, acquisition, storage, movement, distribution, maintenance, evacuation and disposition of material; movement, evacuation, and hospitalization of personnel; acquisition of construction, maintenance, operation and disposition of facilities; and acquisition of furnishing of services. (JCS Pub 1-02 excerpt)

- **Logistics** - The “practical art of moving armies.”
  (General Antoine Henri Jomini)

- **Logistics Functions** - planning, procurement, transportation, supply, and maintenance.

- **Logistics Planning** - the process of evaluating requirements, ensuring adequate logistics support of these requirements, and identifying any limiting factors in logistics support.

- **Logistics Processes** - requirements determination, acquisition, distribution, and conservation.

- **Lust-to-Dust** - similar to “Cradle-to-Grave” but also includes the logistics considerations during the initial planning phase, prior to the acquisition process. Term used in the Canadian Forces.
  (Captain A.T. Bard)

- **Maintenance** - the process of keeping equipment in a useable condition or returning it to that condition when it fails. Maintenance involves either preventive maintenance, corrective maintenance, or modifications.

- **Manufacturing Support** - the process of planning, scheduling and supporting manufacturing operations.

- **Military Logistics** - the system established to create and sustain military capability.

- **Not Mission Capable (NMC)** - a system in which several supporting subsystems are not functioning properly, or a few key systems are not functioning at acceptable levels. Also, a system in which a single critical system is not functioning.
  (M. Cox)

- **Organizational Maintenance (OM)** - generally limited to the routine but vital activities of inspecting, servicing, cleaning, and adjusting. Organizational maintenance activities usually do not require highly specialized skills or equipment.

- **Physical Distribution** - the process of providing logistics services to customers.

- **Price Minimization** - the procurement objective of seeking the lowest possible cost for goods and services.

- **Principles of Logistics** - responsiveness, simplicity, flexibility, economy, attainability, sustainability, and survivability.

- **Procurement** - the process of obtaining goods, services or facilities from suppliers in the correct qualities and quality.
  (M. Cox)

- **Provisioning** - the process of ensuring that the correct materials and equipment are correctly scheduled to be on hand or in place, in the correct quantities when they are needed.
  (M. Cox)

- **Purchasing** - the process of obtaining goods and services from outside sources.

- **Reclamation** - the collection and disposal of excess material.

- **Repair Parts Visibility** - the data made available from information systems designed to provide the status of repair parts while in maintenance, and during transit or storage to and from a repair facility.
  (M. Cox)

- **Requirements Determination** - determining what is needed, when it is needed, where it is needed, how much is needed, of what quality, and obtaining insight into why it is needed and how it will be used.
  (M. Cox)

- **Retail Supply** - (military definition) the immediate support of mission units.

- **Supply** - the collection of resources based upon requirements, storage and protection of the resources, and the issue of resources to users. Supply is either wholesale or retail, and includes the processes of provisioning, retail and distribution.

- **Transportation** - the movement of goods, supplies, equipment or people by road, water, air, rail, or pipeline.

- **Wholesale Supply** - generally refers to mass acquisition and centralized storage.

Source: unigrouplogistics.com
Choosing the right logistics partner is amongst the most important decisions an e-commerce platform will ever make.

Running an e-commerce platform is no easy task. Competition is intense and often cut-throat, and the smallest of complications can rapidly propel a business down a slippery slope. Although this is true the world over, it’s especially apparent in the online Indian marketplace that’s crowded with global behemoths such as Amazon and local unicorns like Flipkart.

In the face of this competition, an e-commerce firm that hopes to survive and thrive must constantly remain in top form. Every aspect of its business must run like clockwork. And while many companies do attain this level of precision, where most stumble is the final stretch, the delivery of an ordered item to the customer.

That’s where a logistics partner comes in. Under their purview is everything that happens from the moment an order is placed to the moment it is delivered safely into the hands of the consumer. In technical terms, the post-purchase experience.

While this may initially seem a simple enough task, give it a little thought and you’ll rapidly realise the scale of the job. A logistics partner is directly responsible for transportation, warehousing, security, and last-mile logistics, to name just a few of their responsibilities.

As such, choosing the right logistics partner is amongst the most important decisions an e-commerce platform will ever make. To help smoothen the process, here are a few things to look for when making the choice:

**1. Serviceability**

A large and growing e-commerce business is likely to have customers from all across India. In order to ensure their deliveries are fulfilled in an efficient and timely manner, it’s vital that the logistics partner you choose have a network that’s just as widespread. It’s especially important to ensure that their core delivery areas overlap with your primary target markets.

For example, if the majority of your orders come from metros, it makes sense to choose a partner that has a strong distribution presence in major cities. Similarly, a platform whose customer base is rural-centric should opt for a logistics service that has a widespread network across the country, with a proven record of efficient operations in smaller cities and towns.

**2. Performance Rate and Efficiency**

While there’s no arguing with the need for a logistics provider, it’s important to remember that a poor performing partner can do your business more harm than not having a partner at all. That’s why the performance rate of a logistics business, i.e. the rate at which...
they’re able to deliver their assigned orders, is one of the most important metrics to take into consideration when making a choice.

The efficiency and speed of logistics service is another key factor, especially in a time when speed delivery has become the norm when shopping online. To satisfy this need for instant gratification, go for a partner with the capability to offer same-day, one-day, and 48-hour delivery options, your customers will thank you for it.

3. Customer Service

A customer is unlikely to differentiate between an e-commerce platform and their logistics partner when tracking their order or speaking to a delivery person. To them, the two are one and the same. A logistics partner is, for all intents and purposes, an extension of your business. As such, it’s vital to ensure that they make the best impression possible.

Choose a partner with a reputation for excellence, and that’s known for its quick responsiveness, fluid communication, and effective solutions to any issues that might arise, at both the business and consumer end. Good customer service is a force multiplier and can help your platform make a name for itself in an overcrowded field with a great post-purchase experience.

4. Technology

Every year brings new advancements in technology and innovation, and this holds true in the field of logistics as well. The integration of the latest technological advancements helps optimise the functioning of the business, enables the company to reduce operating costs, and boosts the efficiency of the delivery process.

While choosing a logistics partner that recognises the importance of staying up-to-date with the latest digital breakthroughs is important, platforms should also examine their ability to integrate their systems with third-party services such as logistics intelligence solutions providers. Through these tie-ups, e-commerce platforms can further streamline their operational flow, proactively communicate with customers through order status notifications, and offer an even smoother experience to the end customer.

5. Pricing

Logistics companies offer a vital service, and it’s only fair that they charge accordingly. While it may be tempting to opt for the lowest price in an attempt to cut costs, that may not always be the best option. A lower price can often be an indicator of overstretched staff, cut corners, and poor service offerings – none of which justify the savings that come with this option. As in so many other cases, you ultimately get what you pay for.

Another key consideration is to ensure that the logistics company provides a full accounting of the services it offers and the costs each incurs. By insisting on transparency, you can safeguard yourself from any hidden charges and avoid a price when you receive your bill. The costing list should always include transportation, receiving, warehousing, pick-and-pack, shipping, account set-up, and monthly minimums. If all of these factors are accounted for upfront, you can be sure that you’re in good hands.

6. Reputation

The field of logistics is vast and complex, and only a select few logistics partners are qualified to handle every aspect of the sector. Some might have a regional specialisation, while others offer a countrywide presence. Certain businesses might have dedicated themselves to the fashion and apparel industry, while others might be better equipped to deliver produce. Whatever the case may be, it is imperative that a platform do their due diligence and select a logistics partner that has the experience and infrastructure that best complements their business.

Source: www.indianretailer.com
Digitalization threatens to fundamentally disrupt logistics but could also help the industry reduce its inefficiencies and shrink its environmental impact.

Over the past two decades, as the Internet revolution swept the world, our day-to-day lives have become increasingly digital. With email eclipsing ‘snail mail’ and digital downloads replacing physical products, this could well have dealt a devastating blow to the logistics industry. But in fact, something remarkable has happened: more packages than ever before are now being shipped. On any single day, a staggering 85 million packages and documents are delivered around the world. Demographic and digital trends are combining to drive growth, but logistics businesses cannot afford to rest easy and enjoy the fruits of this global boom in shipments.

Logistics has introduced digital innovations at a slower pace than some other industries. This slower rate of digital adoption brings enormous risks that, if ignored, could be potentially catastrophic for even the biggest established players in the business. As other industries with close links to logistics, such as retail, are revolutionized by digital technology, the chances of digital disruption engulfing the logistics industry increase – for instance, the rise of e-commerce has led to new digital entrants in the last-mile delivery market.

More significantly, digital platforms will become increasingly important in the logistics industry, allowing small companies to have a global reach and compete with the sector’s established giants. Over the next few years, the race to build a dominant global platform will transform the customer’s experience of logistics and will be the central issue in determining which enterprises will be the winners and losers in a truly digital logistics industry.

With the logistics industry suffering from some very significant inefficiencies – for instance, 50% of trucks travel empty on their return journey after making a delivery – digital transformation can also bring important social and environmental benefits by increasing efficiency and cutting down energy consumption and emissions.

Our analysis indicates that there is $1.5 trillion¹ of value at stake for logistics players and a further $2.4 trillion worth of societal benefits as a result of digital transformation of the industry up until 2025. In other words, industry stakeholders should take notice and come together to prioritize digital transformation initiatives given the potential for significantly higher value to be created for society than for industry.

We have identified five themes that will be central to the digital transformation of the logistics industry over the next decade:

- The time and complexity required for these initiatives to reach scale across the market vary significantly. We have identified certain underlying requirements that are the building blocks for the digital transformation of the logistics industry, which we outline in our recommendations. Two of the most important ‘no regret’ capabilities include: companies should improve their collection of data from all along their value chain; and enterprises should ensure they have the capability to analyze big data streams to derive insights that improve operational efficiency and enable the launch of new services, such as last-mile delivery. We raise three key questions for logistics industry leaders and stakeholders to consider and address:

  - Should the larger industry players continue to invest in scaling their existing closed platforms or should they be adding new business models such as crowdsourced platforms and analytics as a service?”
  - How can logistics stakeholders incentivize faster implementation of shared warehouse and transportation capacity to reap significant societal and customer benefits?
  - Logistics contributes 13% of all emissions globally. In light of the COP21 Agreement in Paris, how can industry stakeholders quickly agree on developing safe and trustworthy approaches to more environmentally friendly technologies such as autonomous trucks and drones?

Footnote: 1. Disclaimer: These calculations are subject to change. Impacts are based on estimates and would vary in range given a change in adoption rates or disruption in any of the initiatives.

Source: reports.weforum.org

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THE DIGITAL TRANSFORMATION OF LOGISTICS:
THREAT AND OPPORTUNITY

Digital transformation is key to

\( \text{Logistics} \)

\( \text{Five key digital themes} \)

- **Information services**
  - Digitally enable information services to unlock the value of the logistics business through initiatives such as logistics control towers and centralized services and tools to monitor, adjust, and optimize end-to-end operations.

- **Logistics services**
  - Digitally enable logistics services to unlock new growth through the creation of digitally enabled, autonomous, and automated platforms. It will also allow logistics players to respond to the growing need of customers for faster, more efficient deliveries and to optimize the logistics and transport chain to operate in “megatrends.”

- **Circular economy**
  - Circular economy will foster a more sustainable path of consumption and production through new business models, waste-to-resources, and environmental footprints by advancing smart circular solutions such as sharing, reusing, and waste materials.

- **Shared logistics capabilities**
  - Shared logistics capabilities, through shared warehouse and transportation capacity, are essential to improve asset utilization in the near future.
TRANSFORMATION OF LOGISTICS SECTOR WITH AI AND OTHER MODERN TECHNOLOGIES

SUMIT SHARMA, CO-FOUNDER, GoBOLT

The challenges in the logistics sector and how artificial intelligence and machine learning could solve them.

Rapid technological development in the fields of big data, algorithmic development, connectivity, cloud computing and processing power have made the performance, accessibility, and costs of AI more favourable than ever before. The emergence of technologies such as AI (AI), machine learning and blockchain has transformed the chaotic and fragmented logistics market. AI is now following a similar path. It has now become an integral part of every future software system. In an increasingly complex and competitive business world, companies that operate global supply chains are under unprecedented pressure to deliver higher service levels at lower costs.

Role of AI in logistics sector: AI play a significant role to save time, reduce costs and increase productivity and accuracy with cognitive automation. AI affects warehousing operations such as collecting and analyzing information or inventory processing. As a result, AI helps in increasing efficiency and getting profit. AI is profitable for transportation. Due to IoT and AI, self-driving vehicles bring changes to the supply chain and help reduce expenses in logistics. The capabilities of AI are seriously ramping up company efficiencies in the areas of predictive demand and network planning. Having a technology for accurate demand forecasting and capacity planning allows companies to be more proactive. Industry to modify how resources are used for maximum benefit and AI can do these equations much faster and more accurate than ever before.

The impact of Big Data is allowing logistics companies to forecast highly accurate outlooks and optimize future performance better than ever before. Providing clean data has become an important step for AI in logistics companies as many simply do not have usable figures to implement. It is very difficult to measure efficiency gains as some companies generate their data from multiple points and multiple people. These data and figures cannot be easily improved at the source, so algorithms are being used to analyze historical data, identify issues and improve data quality to the level where significant transparency on the business is gained.

Factors which affect the logistics industries to use AI: Logistics service provider companies depended on third parties logistics including common carriers, subcontracted staff, charter airlines, and other third-party vendors to operate core functions of their business. This puts an increased burden on logistics accounting teams to process millions of invoices annually from thousands of vendors, partners, or providers. AI technologies can access information such as billing amounts, account information, dates, addresses, and parties involved from the sea of unstructured invoice forms received by the company. Global logistics and supply chain operators manage large fleets of vehicles and networks of facilities worldwide. In the logistics industry, keeping address information complete and current is critical for the successful delivery of shipments.

Often, large teams of data analysts are tasked with CRM cleanup activities, eliminating duplicate entries, standardizing data formats, and removing outdated contacts. AI and machine learning are used by many companies to inform and fine-tune core strategies, such as warehouse locations, as well as to enhance real-time decision-making like availability, costs, inventories, carriers, vehicles and personnel. The main focus are on IoT and myriad other data feeds on achieving greater optimization and responsiveness across the whole of their logistics, supply chain and transportation footprint.

These new technologies bring truckloads of data, the transportation industry has been capturing data for years. A few years ago, trucking, rail and sea cargo began being tracked by satellite via telematics. AI will be able to maintain data platforms and create datasets to regulate patterns and anomalies. The data patterns are based on predictive analysis. Due to rapid growth of digitization more and, more companies are adding AI to their supply chain in order to maximize their resources by reducing the time and money spent on track how, where and when to send a package to a certain place.

The current technologies active in the sector exist in functional silos, having created information and execution troughs. Stand-alone technology solutions have restricted functionality and productivity by being completely human dependent, giving rise to redundant process coordination, increasing the transaction lifecycle itself, ultimately reducing efficiency and increasing costs. As the supply chains become complex supply nets, the variables and number of stakeholders change dynamically. The entire arrangement of transfer of data between systems is managed by technologies.

By the time such technologies are implemented, the set of variables change making the entire implementations redundant. Technologies provide an opportunity for different levels of optimization in manufacturing, logistics, warehousing and last-mile delivery that could become a reality in less than a year with the high set-up costs deterring early adoption in logistics. Demand delivery will help consumers to have their goods delivered where and when they need them by using flexible courier services. These providers experience will help through conversational engagement and even deliver articles before the customer has even ordered them.

Source: https://www.itln.in/
WHAT ROLE INTELLIGENT AUTOMATION CAN PLAY FOR MSMES TO WITHSTAND SUPPLY CHAIN VOLATILITIES

ANIKET DEB, CO-FOUNDER AND CEO AT BIZONGO

**Logistics for MSMEs:** Supply chain automation is going to be vital to ensuring customer satisfaction, optimizing resources, eliminating waste, and building a sustainable business amidst the fast-changing global supply chains.

The application of cloud technologies: Cloud technologies have the ability to process big data and present information to all stakeholders on a common platform. By accessing services such as e-commerce markets, or automating payments, enterprises will gain access to real-time data pertaining to procurement, manufacturing, and payments. This data will help MSMEs discover their customer’s pain points, as well as their preferences. In essence, using cloud-based automation solutions, MSMEs will be able to formulate the right KPIs, and develop a digital transformation strategy aimed at customer convenience.

Automating the inventory and warehouse: Real-time monitoring of inventory and warehouse operations is a crucial component of preventing wastage of resources and preventing loss of revenue. For example, real-time monitoring will enable a manufacturer to automate the replenishment process and accommodate any fluctuations in supply and demand. With the application of Industry 4.0 technologies in factories and warehouses, such as the Internet-of-Things (IoT), manufacturers would be able to oversee each process with accuracy and convenience. This would enable them to make better, faster, and more informed decisions.

Transparency of data – Building visibility: Minor discrepancies in supply chain networks can cascade into confusion for all stakeholders. To prevent this, stakeholders must have real-time visibility over each other’s requirements. Using AI, intelligent tools such as a common dashboard gives vendors access to the consumption patterns of their customers. Depending on a surge or reduction in demand, the entire supply chain can be alerted to modify its supply of materials to the manufacturer. Not only does this remove the hassles of inaccurate forecasts and delays in purchase orders (POs), it also helps in eliminating waste from the entire supply chain.

As we go forward, continued support from the government/along with/technology and automation will help MSMEs revive themselves/and ensure resilience in the post-pandemic world./Additionally, supply chain automation is going to be vital to ensuring customer satisfaction, optimizing resources, eliminating waste, and building a sustainable business amidst the fast-changing global supply chains.

*Source: Newspaper, February 20, 2022*
AURANGABAD BRANCH

IIMM Aurangabad has celebrated MM Week from 20 April to 23rd April 2022. We have organized following Seminar which got overwhelming response by record number of participants.

On 20 April 2022 Mr. Prasad Kokil (President of Sanjay Group) delivered Seminar on “Risk and Resilience Management in Post Pandemic Supply Chain” at Marathwada Auto Cluster, Waluj, Aurangabad.

On 23 April 2022 arranged Student Meet with Executive Committee Member along with Faculty at
Mr. Janardhan Kale, Procure Head CanPack India Pvt. Ltd., was Chief Guest. All PGDMM, PGDSCM & GDMM Students were present and interacted with Executive Committee Members.

Dr. Narendra Joshi gave detailed information about them of 5th Mat Select to present participants. Mr. K. Srihari, Chairman appealed to all participants for support for the 5th Mat Select with huge delegates for Mega Signature program on 18 June 2022.

For 20th Seminar around 150 delegates from different Industries like Endurance Group, Sanjay Group, Bagla Group, Marathwada Auto Componants Ltd., Endress+Hauser, Can Pack, Aurangabad Electrical, Rucha Engineering and their vendors, Garware Polyester, Parason Machinery Pvt. Ltd., Dhananjay Group, Mahaveer Industries, Morgan Crucible, Sangram Auto, SMB Engineers, Madhura Die Cast and other Automobile ancillaries based at Aurangabad along with Engineering Colleges faculties and students also had attended these seminars.

Chairman Mr. K. Srihari, briefed about the branch activities and focus areas of IIMM. He also appealed for becoming IIMM members to delegates, who are not IIMM members.

Introduction to the faculty was done by Executive Committee member Mr. M. Phanikumar and vote of thanks were done by Dr. Vinay Lomte. Along with Chairman Mr. K. Srihari, Vice Chairman Mr. Sushant Patar & Hon. Secretary Mr. Shrikant Muley, National Council Members Mr. Sanjay Sanghai and Dr. Narendra Joshi, Treasurer Mr. Lalit Lohade and EC Members Mr. Yogesh Koshe, Mr. Sunil Ved, Ravi Kathavi, Mr. Paras Mutha, Dr. Vinay Lomte, Mr. Milind Ghogle, Mr. R. D. Jaulkar took efforts to make MM Week Celebration successful.

AHMEDABAD BRANCH

Materials Management Day Celebration “Event Milap” on 23rd April, 2022

Ahmedabad branch celebrated its 50 Yrs Golden Jubilee Year on 23rd April, 2022 - Materials Management Day at Event “Milap”. The institute held a largest consortium of professionals from Supply Chain & Materials management fraternity. Several Eminent Dignitaries, CEO’s, Industry Veterans from Ahmedabad along with Senior Distinguished Members, Hon. Fellow Members and Executive Members of the branch had graced the occasion.
The message from Shri Karan Adani, CEO of Adani Group, was read by Guest of Hon. Of the Day - Dr. Sanjay Gupta. In his message, Shri Karan Adani congratulated the branch for promoting the skill development and education in the field of materials management. Dr. Sanjay Gupta and Mr. Sudhir Agrawal addressed the gathering. Mr. Abhinav Kapadia, Director PDU Innovations and Incubation Centre, was the chief guest on this occasion and he shared his views.

A Souvenir was launched consisting of IIMM Ahmedabad Ratna Awards, IIMM Ahmedabad Contribution Awards, Present & Past batches of Professional Students, Corporate Training cell, Members directory, Events and Webinars conducted by branch. A special tribute was given to Shakti – Women Members of the Ahmedabad branch and Shakti behind the High performing members by creating a Special section in Souvenir.

PGDMM / PGDSCM&L passed out Professionals were recognized with the Momentoes at the hands of Chief Guest.

The distinguished members Mr. Sudhir Shah, Mr. Anil Patil & Mr. DK Goswamy gave their views and encouraged the members for future development of the branch.

Branch presented Special awards to Dr. Praveen Garg and Ms. Meenal Goswamy for their Professional Excellent Performance and contribution towards the society.

High Performance Awards were presented to the following members in lieu of their excellent contribution for exemplary growth of branch at the hands of Guest of Hon. Dr. Sanjay Gupta.

Mr. D. K. Goswamy, Mr. Payank Patel, Mr. Pankaj Panchbhai, Mr. Purvish Patel, Mr. Talpesh Patel, Mr. Dilip Choudhary, Mr. Lomesh Dave, Mr. Jayshil Thaker, Mr. Suresh Kamdar, Mr. Jayanta Chakraborty, Ms. Purvi Kotak, Mr. Vivek Ganatra, Mr. Nilesh Kikani, Mr. Awadhesh Yadav and Mr. Pramodkumar Singh

Mr. Payank Patel, the branch chairman, stated that the Ahmedabad branch is proud to be celebrating this event to present its active existence. Adding to this, the chairman said that a team under the leadership of the past Chairman Mr. Pankaj Panchbhai worked very hard for the success of this event.

Our Past Chairmen Mr. Jaswant Chopra and Mr. H. K. Gupta stated ‘It is a huge moment for our fraternity to celebrate this event this year and it is an honour for us to declare this as a largest meet in the history of IIMM’. A Special blessing from BAPS Swaminarayan sanstha’s Swami Vimalsmarandas were sent to IIMM Members. Prasadam were distributed among the families on occasion of Pramukh Swami Maharaj Shatabdi Mahotsav to be held on 15th Dec., 2022 to 13rd Jan., 2023. Apart from the academic discussions and networking dinner there were entertainment activities in the form of fun games and Various Winners were awarded with the prizes.

**BANGALORE BRANCH**

16.04.2022 – Monthly Lecture / Free Webinar: As a part of MM Day Celebrations, IIMM-Bangalore Branch has organized a Lecture Program for on 16th April 2022 on “Supply Chain and Emerging Technologies Impact” by Mr. Hemanth Gupta, Founder and CEO of Navigdata, and Mr. Vinayak Sastry - Specialized in gamification models and is an IIM and Harvard alumni. Around 68 members and SCM professionals attended lecture program. Webinar was highly informative and interactive. We received very good feedback from the Participants.

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**About IIMM Presented by Mr. A.V. Sham Sundar**

**About MM Day Presented by Mr. T.S. Balachandran**
20.04.2022 - Study Circle Meeting: As a part of MM Day celebrations, IIMM Bangalore Branch has organised Study Circle Meeting / Free webinar on “Packaging and Distribution” (Packaging Design & Development) on 20th April 2022 on online on MS Team Meet by Mr. Hari Narayan, Regional Packaging Engineer, Asia Pacific, Givaudan (India) Pvt. Ltd. Pune. Mr. A.V. Sham Sundar welcomed the gathering. Vote of thanks proposed by Mr. M.R. Achyuth Rao, Honorary Secretary. At the end the Speaker provided detailed clarifications on various queries of the participants. We received very good feedback from the members. Program co-ordinated by Mr. G. Balasubramanian.

23.04.2022 - MM Day Celebration: IIMM Bangalore Branch organized Materials Management Celebration on 23rd April 2022 on line on MS Team Meet. Theme was: “Management of risk and resilience in Post Pandemic Supply Chain”.

Chief Guest was Mr. Swaminathan Aurunachalam, Regional Head, Givaudan (India) Pvt. Ltd., Pune. Guest of Honour – Key Note Speaker was Dr. Bhargavi V.R. Professor and Director, Post Graduate division, Seshadripuram College, Bangalore. Mr. A.V. Shama Sundar, Branch Vice Chairman welcomed the gathering and presented on about IIMM. Mr. T.S. Balachandran, N.C.Member gave presentation on About MM Day and introduced the speakers.

MM Day celebration was organized and executed in a very systematic manner. Dr. Bhargavi V.R. Key note speaker gave presentation on academic and addressed on theme “Management of risk and resilience in Post Pandemic Supply Chain” was very informative and useful to working professionals, members and students.

Chief Guest Mr. Swaminathan Aurunachalam, Regional Head, Givaudan (India) Pvt. Ltd., Pune, his address was very apt in his presentation to the theme. During the MM Day celebration, Autobiography of Capt. LGI Subramanian’s book titled “It is Like This” was released by A.V. Sham Sundar, Vice Chairman of IIMM.

The MC. For the day, Balasubramanian G acknowledged the support provided by Brig ESK Murthy, Mr PV Sundararajan and Mr. Unnikrishnan in making the Book. The formal introduction to the author and the book was given by T.S. Balachandran, N.C. Member, while displaying the slide about Gpt. Capt. L.G.I Subramanian. The book titled “It is Like This” was released by A.V. Sham Sundar, Vice Chairman of IIMM.

After release of book, Mr. A.V. Sham Sundar handed over a copy of book each to Mr. Balasubramanian, Mr. T.S. Balachandran and Mr. M.R. Achyuth Rao, Honorary Secretary. Proposed vote of thanks by Mr. M.R. Achyuth Rao, Honorary Secretary, IIMM Bangalore Branch.
COCHIN BRANCH

IIMM Cochin Branch has conducted a one-day workshop on the subject “Efficient Inventory Management: An Impetus to Increased profitability” on 22nd March 2022 at The Renai, Cochin.

During the workshop, the role of Vendor Managed Inventory & Consignment inventory was also explained. If implemented properly, the same can do wonders in reducing inventory to manageable levels and remove a lot of headaches from the procurement people. Videos, case studies, exercises etc kept the participants to full attention. The reviews received were very encouraging with delegates asking for more such sessions in future.

IIMM Cochin Hon Secretary Mr K S Shaji proposed a vote of thanks.

HYERABAD BRANCH

Hyderabad Branch Conducted Induction Program for Students of New Batch’2022 on the Auspicious day of Ugadi on 2nd Apr’2022. Students Actively Interacted. Hyderabad Branch stood Second in terms of Numbers of Student Admissions.

JAIPUR BRANCH


The workshop was handled by Branch Chairman & SCM Consultant Mr Jacob Mathew.

The meeting was inaugurated by Cochin University Director & IIMM NC member Dr Jagathy Raj. IIMM Cochin Branch Vice Chairman Mr P V Paulson, welcomed the gathering and introduced the Chief Guest and the faculty in a befitting manner.

The classes started focussing on the importance of Working Capital and the role of Inventory in optimising Working Capital. Inventory management techniques discussed were well appreciated by the large number of participants numbering more than 50. Role of various inventory control methods like ABC Analysis, XYZ Analysis etc were explained in detail.
This workshop was planned in Virtual and Physical mode. The inauguration ceremony was done in physical mode and all presentations were made in Virtual Mode. The inauguration ceremony was organized in Poddar Institution’s Auditorium and attended by a large number of participants. Honorable Industry Minister of Rajasthan Government was our chief guest of the ceremony.

We received several research papers and presentation from 23 countries in this conference. The following renowned IIMM speakers also made their presentations for Global participants -

- Mr Sk Sharma - Supply chain and Logistics management and its importance in improving profitability of the organization
- Mr SN Panigrahi - Supplier Quality Management is the base of effective supply chain management
- Mr Jayanta Chakraborty - Lean Manufacturing Process is key success and Solution for Supply Chain Management

The entire programme has received wide publicity in local media and was broadcasted in social media platforms.

KOLKATA BRANCH

National President Visit At IIMM- Kolkata Branch on 12th April 2022: Mr. Koushik Roy, Chairman, IIMM, Kolkata branch welcomed Mr. H K Sharma, National President and Mr. G K Singh, Past President. Bouquets and mementoes were handed over to both the dignitaries on behalf of the staff and executive committee of IIMM, Kolkata.

The following points were discussed/ decisions taken.

1. Digitization of membership records:
2. Physical Mode of Examination:
3. GDMM course by AICTE/IFPSM
4. Commencement of examination of GDMM for the current semester
5. Issue of Pass out certificate: The branch had taken up with NHQ to amend dates of the pass out certificates of two students from June 2021 to December 2020. The project reports submitted by these students were in February 2021 in place of December 2020. The NHQ has declined to make any such amendment, The National President agreed to consider the case favourably in view of covid situation prevailing at that time. He also suggested that such cases needing special consideration could be sent to him directly by the Course Coordinator instead of addressing to the office.
6. Charges for Convocation Certificate: Mr. K Gupta, Administrative Manager felt that the decision of NHQ to charge Rs.1,000 per student to issue pass out certificate was not in order. The National President agreed to review the matter.
7. Property Registration.

Secretary, IIMM, Kolkata branch thanked Mr. H K Sharma, National President and Mr. G K Singh, Past President for their visit to Kolkata branch and taking active interest in matters of education.
REPORT ON CELEBRATION OF “MATERIALS MANAGEMENT DAY” ON SATURDAY, THE 23RD APRIL, 2022 AT IIMM HALL: IIMM Kolkata celebrated Materials Management Day on Saturday, the 23rd April, 2022 in a befitting manner in hybrid mode. The Chairman, Vice Chairman, Hony. Secretary, few members and students members attended the programme physically at IIMM Hall. Besides, many members and students attended the programme through online. Mr. Koushik Roy, Chairman, IIMM Kolkata Branch, graced the occasion and delivered Welcome Address. Mr. Kaushik Mukherjee, Hony. Secretary, in his brief deliberation, highlighted the importance of celebration of MM Day. According to him, MM Day is the most auspicious occasion for the Institute as well as for the SCM fraternity. He invited budding SCM Professionals to come forward to cause of furtherance of the Institute.

Mr. Kallol Ghosh, Vice Chairman, discoursed on the MM Day Theme – “Risk and Resilience Management in Post Pandemic Supply Chain”. Mr. Raj Kumar Mitra, faculty member, attended the programme physically and wished IIMM and the MM Fraternity on this auspicious day. Finally MM Day was celebrated with cutting of a piece of a designer and palatable cake and all attendees joined it and enjoyed the taste. Administrative Manager and staff members were also attended the programme and finally the Mr. K Gupta, Administrative Manager, offered Vote of Thanks to the Chairman, Vice Chairman, Hony. Secretary and all attended the programme. He also placed on record sincere thanks and gratitude to all who participated the programme through online.

NEW DELHI BRANCH

As part of MM day celebrations, meet of Chief Procurement Officers was organised on 22 April 2022 in association with Mumbai and Greater Noida branch. The meet attended by 25 CPOs deliberated upon resilience, sustainability, digitisation and research in supply chain management. The programme was inaugurated by National President Shri H.K. Sharma moderated by Shri Bala Iyer and anchored by Shri Surendra Deodhar.

Mr. Sanjay Shukla, Chairman, Delhi Branch, addressed to CPO’s various industries at Hotel Le-Meridien, New Delhi.
Chairman of the Branch Shri Sanjay Shukla welcomed the gathering. National President Shri H K Sharma speaking on the occasion congratulated the branch for organizing talk on Digital supply chain. He also informed that many improvements are being implemented at the national level to uplift the image of the branch. Shri T G Nandakumar introduced the speaker. The Delhi branch utilized the occasion to facilitate its National President & Past Chairmen Greater Noida Branch. Delhi Branch also felicitated Shri H K Sharma, National President, Co-Chairman Board of Studies Mr. T G Nandakumar & Shri Ageet Kumar, Vice President (North). Shri Sanjeev Bhatia, Hony. Treasurer of the branch proposed the vote of thanks.

### UDAIPUR BRANCH

IIMM Udaipur branch celebrated Materials Management Day: Udaipur, 23 April 2022, Materials Management Day celebration was organized by Indian Institute of Material Management, Udaipur Branch at Udaipur Cement Works Limited, Dabok. Materials Management Day is celebrated every year on 23rd April, when four professional bodies of materials management merged into one national body (Indian Institute of Materials Management) with the aim of securing the widespread recognition of the profession and elevate the status of professionals engaged in the associated material management field. The theme of this year’s Materials Management Day celebration is “Risk and Resilient Management in the Post-Pandemic Supply Chain”.

MM day was celebrated by the branch by organizing on 24th April 2022 an evening talk on Digital Supply Chain. Explaining the topic speaker Shri Surya S Roy explained the digital supply chain as a combination of high performance computing, storage, artificial intelligence, machine learning, robotics, block chain, cloud services, and software services. He explained the use of robotics in order management.

**Left to Right – Sh. Sanjay Shukla, Chairman, Delhi Branch, Sh. Ageet Kumar VP (North) National President Sh H K Sharma, Sh. Sanjeev Kr. Bhatia, Treasurer, Co-Chairman BOS Sh. TG Nandakumar, Sh. Narender Kumar, Secretary IIMM Delhi Branch welcome to speaker Shri Surya S Roy**

**Left to Right – Sh. Sanjay Shukla, Chairman, Delhi Branch felicitating to National President Sh H K Sharma & Dr. Suresh Kumar Sharma, Former Past President.**
To celebrate the Materials Management Day this year, the Udaipur branch of IIMM decided for an industrial visit of Udaipur Cement Works Limited, UCWL (subsidiary unit of JK Lakshmi Cement Limited) along with the tree plantation program and thereafter elicitation program. The whole event was organized by the Chairman, Shri D.C. Jhanwar, National Councillor Smt. Priya Mogra and Secretary Smt. Hasina Chakkiwala along with Executive Committee of Udaipur branch of IIMM.

The program started at 11 am and the former Chairman of IIMM, Shri P.S. Talesara, Shri V.P. Rathi, several senior members Dr. Manisha Agarwal, Mr. R.S. Kabra, Mr. Anupam Luhadia and supply chain professionals from other industries like Wonder Cement, Unitrade, Shilpa Trade Links etc. participated.

A visit to the cement factory was held after the UCWL welcome address. It began with a briefing on essential safety tips and participants were provided with equipment such as PPE and face masks. Looking at the huge machines the feeling was that like explorers walking on a mini cement desert hidden from civilization, aloof from the city lights “and we meant business”. The supervisors gave a detailed description of the cement manufacturing process. During the industrial visit, information was provided about the various elements of the cement factory, the various stages of production and the entire process of manufacturing cement from raw materials like Limestone, clay, clinker and gypsum to the final product and packaging process. It was a great experience for materials management professionals to know how a manufacturing plant works.

The main objective of IIMM is to remain important for the use of 100% green energy. Tree plantation was done in the factory premises by the executive members and senior members of IIMM.

Felicitation program was organized in the auditorium of the cement factory. Secretary Smt. Hasina Chakkiwala informed that IIMM Udaipur organizes various webinars, talks and events. It is a matter of pride to recognize the efforts of the working team and esteemed speakers. Dr. S.K. Saxena, Advocate Mrs. Suchita Nagori, Mrs. Manisha Agarwal etc. were felicitated. Former Chairmen and senior members of IIMM Udaipur branch, Shri P.S. Talesara and Shri V.P. Rathi was designated as the advisor to the branch.

Dr. SK Saxena, Sr. Vice President, JK Laxmi Cement Sirohi spoke about making the supply chain more resilient.

The closing remarks and vote of thanks were presented by National Councillor Smt. Priya Mogra. She mentioned that the main objective of any industrial visit is to provide information about practical working environment, working methods and employment schemes through discussions and we learn about new technologies. He congratulated the entire SCM fraternity for this day and thanked everyone for making this event a success.

She also thanked the Whole Time Director of UWCL, Shri Naveen Sharma, the President of IIMM Udaipur Branch and the Vice President Purchase, UCWL, Shri D.C. Jhanwar and his team for organizing this event and also to the entire IIMM Udaipur branch team.
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Materials Management Review May 2022
EXECUTIVE HEALTH

SALT COULD BE COMPROMISING YOUR IMMUNE SYSTEM

WELLNESS EDITOR

Are you always reaching for the salt shaker at mealtime? Do you eat fast food or processed food? Do you eat out? If you answered yes, then you are likely one of the 90% of Americans who consume too much salt in their diet. 90% of us! So that’s most of us. But at Wellness we’re concerned about this because new research shows that while those delicious crystals might ramp up the flavor, they can have an extremely detrimental effect on the immune system. We’re sharing the truth about salt today to help you stay safe.

How Much Salt is Too Much Salt?

Most of us are overdoing it with salt (sodium chloride). In fact, the American Heart Association (AHA) says that 9 out of 10 Americans consume well over the recommended daily intake almost every single day. The thing is that it seems so innocuous, right? It makes the food taste better and how could something so small have such a big impact? But it really does and the impact is a little shocking.

Salt Intake Recommendations: The Department of Health and Human Services (DHS) puts out dietary guidelines on this very important issue precisely because of the system-wide impact that our salt intake has. They recommend eating no more than 2,300 mg of sodium per day. That’s about the amount of plain salt that fits into a level teaspoon. But most people consume around twice that amount every day. This recommendation is important for a number of reasons. First, there is evidence that excess salt can raise blood pressure. Which most people handily ignore but hypertension directly contributes to our risk for stroke and heart disease.

New Research on Salt and the Immune System: As if that weren’t enough, new research published in Science Translational Medicine also suggests that too much salt can have a harmful effect on the immune system. The research indicates that salt inhibits the body’s ability to destroy bacteria within organs, which could make it harder to fight off infection. Another study from the University Hospital of Bonn in Germany revealed a similar conclusion. Researchers worked with mice who had active E. coli infections of the kidney, feeding them a high-sodium diet. Immune response to the infection was significantly worse in comparison to healthy mice who ate just enough salt.

To find out whether these results were just a local effect on the kidneys, researchers also infected the mice with Listeria. They discovered that the full-body infection also worsened when the animals took in too much salt. Study leaders were surprised since earlier research indicated that excess salt actually resulted in faster healing for laboratory mice infected with skin parasites. Previous studies showed that macrophages (immune cells that attack and eat parasites) were highly active in the presence of salt. This led to the conclusion that salt has an immune-enhancing effect, but this new research calls that broad assumption into question. This is an important finding, but let’s talk a bit about what it means.

Salt Intake and Immune Function in Humans: Researchers at the University of Bonn didn’t just test their theory on mice. They also confirmed their results in a human study. They put volunteers on a diet consisting of 6 g of additional salt on top of their regular daily intake. That’s about the equivalent of giving participants two fast food meals every day. At the end of one week, the volunteers eating the extra salt had increased levels of glucocorticoids. These naturally-occurring steroids have many functions, such as the inhibition of inflammation. They also help our bodies respond to stress, as well as process sugar and fat. Glucocorticoids are also known for their immunosuppressant properties. In fact, a similar substance called cortisone is often used in medicine to treat certain health conditions, such as autoimmune arthritis. In addition to the raised glucocorticoid levels, scientists found something else. They extracted neutrophils from the blood of the participants and found that they were less effective at killing bacteria in the presence of a high salt diet.

While more research is needed to confirm these results, scientists are now speculating that reducing salt in our diets might help to fight bacterial infections. This may be especially important for anyone who is immunocompromised or suffering from chronic kidney infections. Salt intake has been questioned by leading doctors of nutrition for some time. But as the research catches up with observational studies, we’re starting to see more and more that we all need to watch our salt intake more carefully, and for reasons far beyond what we previously believed.

Allergies May Help Us Avoid COVID-19: Allergies can make breathing difficult, so it’s safe to assume they might make upper respiratory infections even more severe. But if that’s the case then why is it that allergy sufferers appear even less likely to experience extreme COVID-19 symptoms? The answer could be as simple as it is surprising.

Effects of Allergies on the Body: Allergies are the result of mistakes the immune system makes, flagging pollen or other particles as invaders and sending histamines
to hold and attack them. According to Mayo Clinic, we can have these responses for several reasons, but the results all lead to increased risks for asthma, sinusitis, ear infections and, in some extreme cases, anaphylaxis.

The Asthma and Allergy Foundation of America adds that people in this risk group are more likely to suffer serious complications with the flu. People who have both allergies and asthma may be at the highest risk. But, and this is the important thing to note: COVID-19 is nothing like the flu.

**Allergies May Provide COVID-19 Protection:** It would be reasonable to assume allergies make people more prone to all respiratory infections, but this may not always be the case. Studies have found that allergies can, for some people, lead to less severe symptoms when exposed to common-cold rhinoviruses. Though experts had struggled to pinpoint the reason. It turns out that rhinoviruses and coronaviruses have something in common: They use the same entry points into the body, and allergies can affect how those work.

**Allergies and COVID-19:** A new article published in The Journal of Allergy and Clinical Immunology, which used the coronavirus that causes COVID-19 in its study, may have finally nailed the specifics. According to the findings, one of the effects of allergies is having reduced numbers of a type of cell receptor called ACE2. This lowered cell count makes the respiratory tract less vulnerable to this viral infection because the viral invaders in COVID-19 use ACE2 like a doorway into cells, so the fewer of these receptors an organ is expressing, the fewer places the virus has to get in.

**Allergies are Not Guaranteed Protection Against COVID-19:** Having allergies may offer some protection against COVID-19 and a few other infections, but it can’t prevent any of them. Having fewer ACE2 receptors isn’t the same as having zero. The doorways are still available, even if there aren’t as many of them—and it really only takes one. No one should assume immunity against this virus. Even those who have already had it.

Allergy sufferers might have some good news, but it’s not time to celebrate quite yet. Until COVID-19 retires to a horse ranch somewhere, none of us can breathe easy. It’s up to each of us to do our part to reduce the spread and save lives. By which we mean, please wear a mask and maintain social distance—let’s all take care of each other.

Source: Wellness.com

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**Letter from Adani:**

Mr. Pankaj Panchbhai
National Councilor
Immediate Past Chairman
Indian Institute of Material Management Ahmedabad Branch

Dear Mr. Pankaj,

At the outset I would like to congratulate Indian Institute of Material Management (IIMM) for being the flag bearer of Material Management education in India. IIMM’s efforts in promoting the profession of Material Management is commendable.

On behalf of Adani Group, we congratulate IIMM Ahmedabad branch on your Golden Jubilee foundation day. I would have loved to join the event personally, however senior leadership representation is being ensured from Adani under able leadership of Dr. Sanjay Kumar Gupta. Adani group has always believed in value being added by such premier institutes, which has exemplary procurement professionals associate with it.

Best wishes to the Institute for all the future endeavors.

Regards

Karan Adani
CEO – Adani Ports & SEZ Limited

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