

MANIFEST

**“Celebrate endings—for they precede new beginnings.” —
Jonathan Lockwood Huie**

2022 has ended on a positive note with life returning to normal after 2 years of Pandemic, although towards the end, there were talks of new strain of Covid 19 virus becoming active in some parts of the world. The year continued to see supply chain turbulence with Russia Ukraine War making access to commodities difficult, train strike in US leading to slow freight movement and China shutting down again. It is time to rethink and re-plan supply chain strategies and realign logistics.

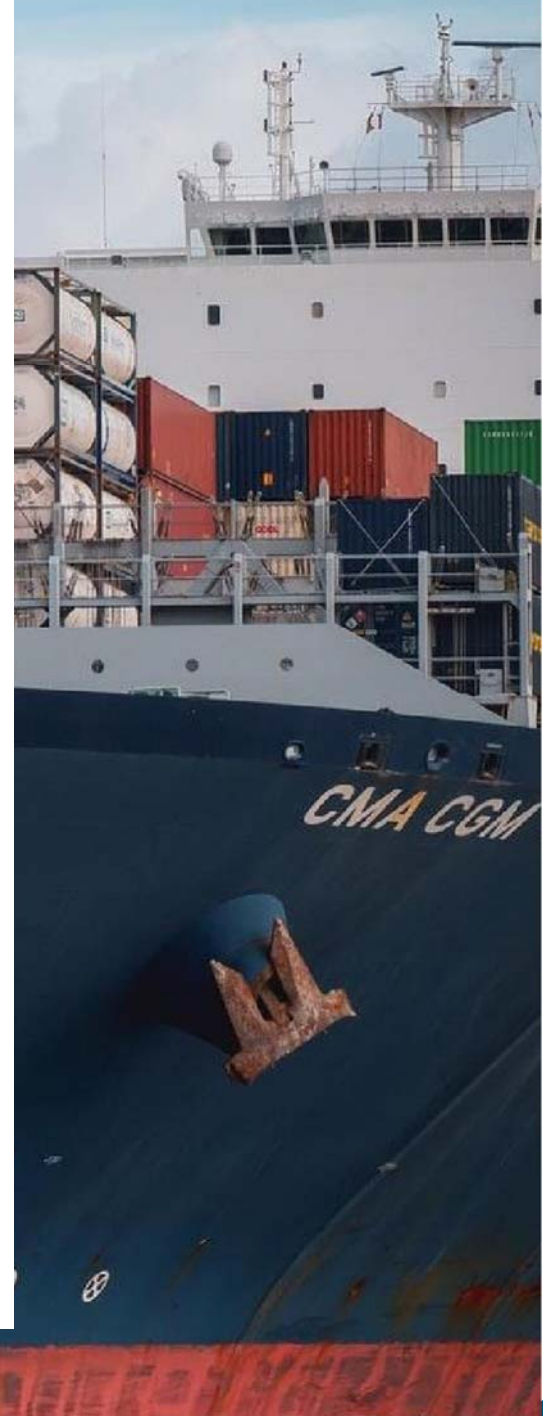
Our December issue covers salient features of Express logistics- a sector that is booming in India on the strength of Ecommerce industry. This sector also has seemed emergence of many unicorns such a Delhivery, Ecom Express and Xpressbees Smart and sustainable business requires the skills of logistics experts who are not only able to think ahead but move ahead at the speed of light. In addition to rapid transport of goods, express logistics requires distribution platform, fleet management, warehousing, and digital connectivity to goods transportation marketplace. "Speed" is the most critical component of express logistics as delivery times are important not only to buyers, but also to sellers. Searching, analysing, and visualising millions of data points collected daily from the network are important to quickly identify and mitigate network bottlenecks, maintain high levels of transportation efficiency, and improve delivery speed.

We continue with our placement journey with 75% of the batch get selected in good companies. We hope to secure 100% placements in the New Year as per our tradition. I am also happy to note that more students are contributing to Manifest. Please do encourage them by sharing your feedback on their articles.

Finally, I would like to wish everyone a Very Happy, Healthy and Prosperous 2023.

Happy Reading!

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Events at CII School of logistics, Noida

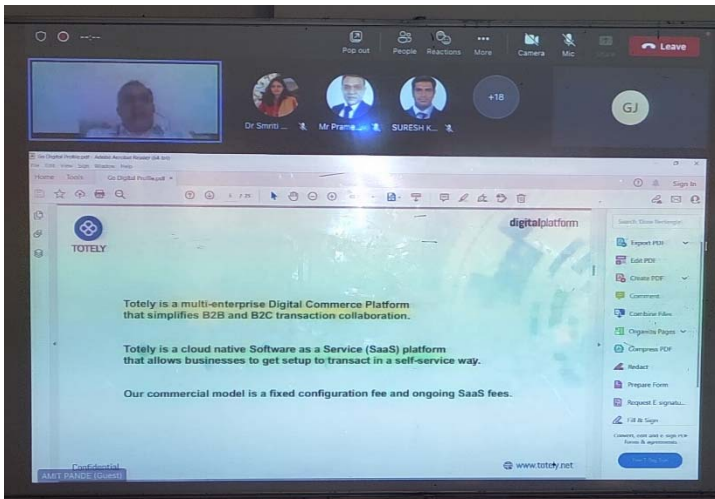
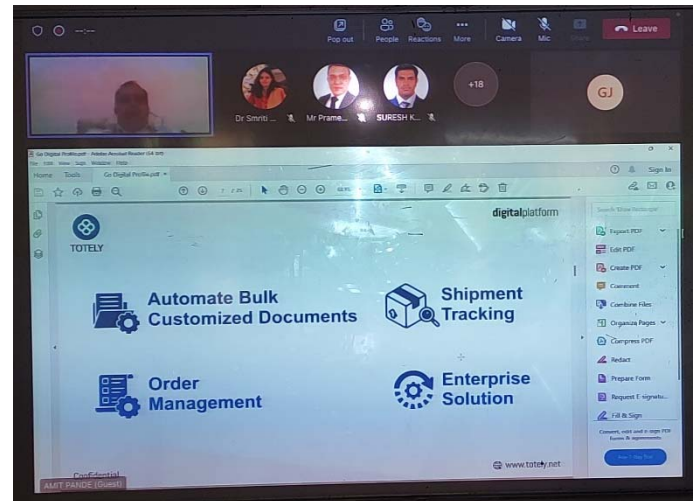
AUTOMATION IN LOGISTICS

BY AMIT PANDE



We got the opportunity to interact with Mr. Amit Pande. He talked about the platform named “Totely” a digital platform which gives real time updates of shipment transit &

tracking of drivers and trucks and gives access to the customer to see all the real time updates of their consignment. With this platform companies and customers both have benefited like



- 1) customers have ease in downloading documents of their shipment and tracking it.
- 2) Reduces the query like “where is my shipment” by keeping the customer in a loop.
- 3) Sellers can provide various levels of order tracking updates like in bound shipment received, ready to ship in transit and delivered.
- 4) Improving efficiency across the internal teams by allowing collaboration around the company

CHALLENGES AND OPPORTUNITIES

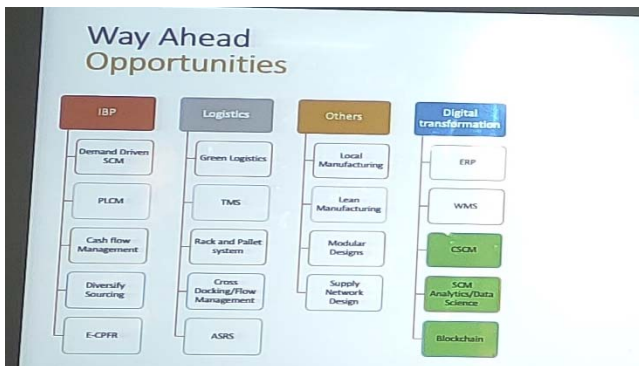
BY RAHUL THURAL



CHALLENGES FACED

1. Material Scarcity

Material shortages can also result from external factors that are well beyond the control of both your organization and its partners. These include geopolitical instability and unexpected increases in demand.



2. Rising Input Cost

While CPI inflation often follows increases in the producer price index (PPI), the correlation is far from absolute. However, it is interesting to break down the PPI into its components to see where producers of consumer goods will be paying more for their production input

3. Fulfillment Days

Inventory management is central to efficient order fulfillment, but if one has frequent stockouts—particularly on items with high turnover—you're likely to lose customers.

Keeping enough items in stock to meet demand is key.

OPPORTUNITIES

1. Demand driven

one method of supply-chain management which involves building supply chains in response to demand signals. The main force of DDSN is that it is driven by customer's demand. In comparison with the traditional supply chain, DDSN uses the pull technique.

2. Diversifying

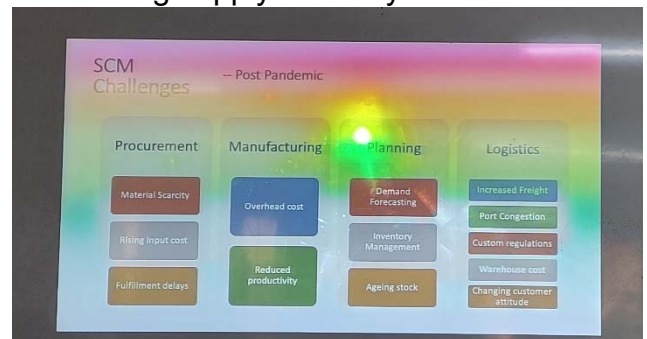
De-risking the supply strategy by having multiple suppliers in different regions.

Supply base in the same time zone

Reduced Leadtime's

Reduced Order Liability

Increasing supply flexibility



3. Planning Forecasting Replenishment

An approach which aims to enhance supply chain integration by supporting and assisting joint practices. CPFR seeks cooperative management of inventory through joint visibility and replenishment of products throughout the supply chain.

POSSIBLE OUTCOMES

Better customer experience

Reduced time to market

Improved Productivity and utilization

Inventory optimization

Improved Profitability

Reduced Carbon footprints.

EXPRESS LOGISTICS



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Express logistics is a service which is used to deliver goods from one place to another within a short period of time. Further, express logistics sector is primarily categorized into four segments that include surface express, air express, rail parcel and Indian postal services.

Surface express logistics contributes the maximum market share followed by air express and rail parcels. However, Indian postal services are now growing fast due to their presence across country; they have good reach in rural areas covering maximum villages in all the 29 states. Express logistics firms offer value-added services like same-day delivery, next-day delivery, etc. in addition to door-to-door delivery services, which is assisting them in drawing in new clients from various industries including retail, food & beverage, etc. Businesses use logistics services to reach out to clients and deliver goods within constrained time frames.

The express sector fills the requirement for time-sensitive logistics service by developing and integrating door-to-door linkages across domestic and international regions along with cargo tracking capabilities. In India, air express is the second most popular means of transportation after surface express logistics. The express logistics industry has undergone upheaval because of government measures to build infrastructure and establish the GST tax system. With the introduction of GST, interstate transportation has become more efficient due to removing multiple taxes in state and central. The logistics sector is likely to increase in upcoming years.

Express Logistics companies in India are moving

from traditional set ups towards integration of IT and technology and this is expected to reduce the costs incurred and meet services demands. Governments initiative Make in India is expected to boost the manufacturing sector to 10% growth. The growth of logistics infrastructure has also been instrumental in driving the growth of e-commerce. Logistics infrastructure refers to the roads, railways, and ports that enable the efficient movement of goods throughout the country. It includes rail networks such as the Dedicated Freight Corridor (DFC) project which consists of two corridors connecting Delhi with Mumbai via Vadodara and Ahmedabad, and Mumbai with Chennai via Bangalore and Kolkata respectively. The government has been working towards developing an efficient infrastructure for logistics service providers by improving the road infrastructure, building new highways, etc. According to India Express Logistics Market Outlook, 2022-28, the market is projected to grow with more than 15% CAGR for 2022-2028.

The growth of e-commerce, the government's emphasis on the manufacturing industry, demand from Micro, Small and Medium Enterprises (MSME), regulatory reforms like the Goods and Services Tax (GST), and the expanding strategic importance of logistics for the industry are all contributing to the rapid transformation of the Indian express industry. The advancement of enablers like technology and the infrastructure for the air and road transportation is helping the participants meet the expanding demand. A strong bullish feeling for investment has emerged among domestic and foreign businesses because of improved tax policy and infrastructure development.

EXPRESS LOGISTICS



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Businesses must improve their logistics management and offer clients effective solutions considering the e-commerce sector's rapid development. Adopting quick logistics solutions is one of the most important methods to grow your business and enhance customer service. Express logistics refers to quick and safe delivery of goods to consumers within a stipulated time limit. The three main pillars of this service are: safety, accuracy, and responsiveness. Safety refers to the safe handling of packages; accuracy is on-time and correct delivery; and lastly there is an excellent customer support system 24*7.

The top businesses in the world know how important supply chain management is to their success. The difficulty is in developing flexibility while simultaneously achieving profitability. India's logistics business has been expanding quickly, and in any market-driven economy, understanding client wants is crucial. Businesses must improve their logistics and delivery capabilities to support the e-commerce sector as more and more customers shift to online shopping. Express logistics services make sure that you always have satisfied clients and a competitive advantage over your rivals by ensuring prompt pick-up and delivery, safe handling of items, customized solutions, and of course round-the-clock customer assistance.

Express logistics solutions make sure that your goods and services get to the people quickly, you want them to reach.

Express logistics solutions can help you win your customers' trust for a lasting relationship in addition to making your company a lean and efficient corporate organization.

Getting the logistics correctly is essential for every organization, as the pandemic has dramatically increased online sales. According to recent Accenture research, the express courier market will be worth USD 343 billion by 2020. And in the upcoming years, things will only get worse. There is no shortage of logistics services in India, but the industry is beset by a host of problems with service quality, including subpar management practices, inadequate product handling and storage facilities, and a lack of efficient tracking systems, among others. However, the modern client wants more than simply an effective supply chain—they also want customized solutions that are supported by predictive analytics. Therefore, you require a tech-enabled eco-system that increases productivity and profitability. Time-sensitive logistics solutions are predominantly express solutions. Utilizing AI and machine learning can assist operations become more flexible and responsive to the increasing demand.

Additionally, it is crucial that the service provider has access to rail freight, a lot of transportation options, as well as air freight possibilities when it comes to express delivery solutions. Service providers must be skilled at managing several operations at once.

PLACED
(2021-2023)



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FRIEND'S CORNER

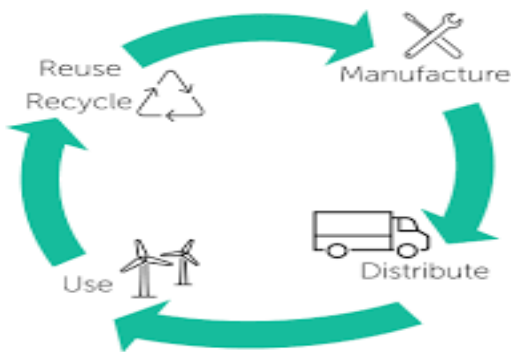
Future development in Supply Chain Industry



SHAURYA RAJ

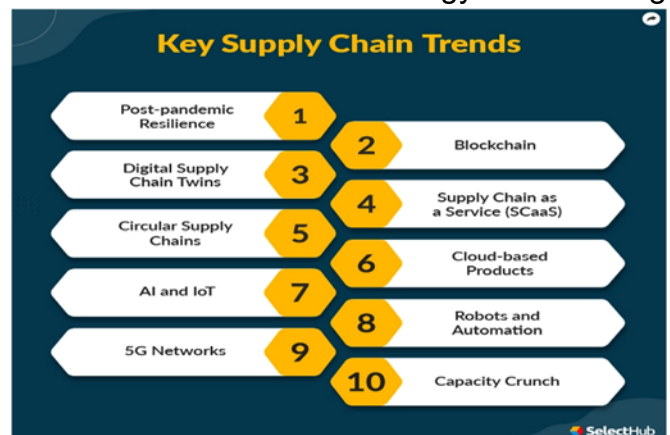
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Army aspirant

The word 'pandemic' is again coming into our lives. But in the past, we prepared ourselves to put forward our shields to counter past situations which exposed weakness in their supply chain. To strengthen it automation is coming up as a key player. As pandemic affected the labor supply, some companies have started implementing automation in warehouses, back office and transportation area which makes task more effective and efficient. As many of these tasks are repetitive, time consuming, and prone to errors,



implementing technology has become important. Using AI and Optical Character Recognition (OCR) can achieve nearly end-to-end document automation. According to a

survey done on organizations around the world, 44% of the participants expect Robotics Process Automation (RPA) to have a significant or moderate on supply chain by 2023. One form of technology that's being



increasingly used by the freight and logistics Industries is Unmanned Aerial Vehicles (UAV) or drones. Drones can be used at various points in the supply chain, assisting both land and air portions of delivery. Increasingly they are being used for warehouse operations (inventory management and searching for lost goods), shuttling goods between distribution centers and last mile delivery, often a very expensive part of a trip. They will constantly grow and so will the supply chain industry, to serve the people with much higher efficiency and effectiveness.

Air cargo logistics



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The demand for air cargo transportation has increased significantly over the last few years because product life cycles have shortened and demand for rapid delivery has increased. Changing business models such as Just-in-Time Manufacturing and Global outsourcing models have contributed to the rapid growth of air cargo logistics business. Evidence from the 2007 and 2010 logistics performance index (LPI) indicates that, for countries at same level of per capita income, those with the best logistics performance experience an additional growth of 1% in Gross Domestic Product and 2% in trade. Air cargo represents about 10%



of the airline industry's revenues. As 35% of the value of goods traded internationally is transported by air, air cargo is a barometer of global economic health. Keeping such

parameters in mind the new National Logistics Policy comes up with various logistics gateway. Noida airport which is Rs 29,560 crore located 70 km from Delhi is one such project. The PM described it as the logistics gateway of northern India, which will employ to tens of thousands of people. The airport will open new avenues of export because it will avoid the supply chain leakage since transit time and distance will decrease. Also, it will have better connectivity with two major corridors -the Delhi-Mumbai Industrial Corridor and the Dedicated Freight Corridor. To keep up with the international market such ventures are much needed. Cargo transport will be made seamless and simplified by progressively replacing paper interaction with digital transactions that ensure automatic, timely and reliable exchange of information across all stakeholders. India's geographical location to be leveraged for making India as a transit hub between Europe and Southeast Asia and a gateway to the South Asian region. So, to become the one of best in logistics and Supply Chain Industries, India constantly needs to work on the area of Air cargo Logistics and making of new Logistics gateways to have great connectivity and faster service

D A T A B Y T E S



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TOOLS FOR DATA ANALYTICS

The study of examining unprocessed data to draw inferences about such information is known as data analytics. A company can increase productivity, maximize profit, or make more strategically sound decisions with the use of data analytics.

Data analytics methods and tools have been mechanized into mechanical procedures and algorithms that operate on unprocessed data for human consumption.

Various approaches to data analytics include looking at what happened (descriptive analytics), why something happened (diagnostic analytics), what is going to happen (predictive analytics), or what should be done next (prescriptive analytics).

First, keep in mind that no single data analytics solution can solve every data analytics problem you might encounter. You might choose one tool from this list to meet most of your demands, but lesser tasks may call for the usage of a different tool. Second, determine precisely who will need to use the data analysis tools by considering the organizational demands from a business standpoint. Will they be predominantly used by other data scientists or analysts, non-technical consumers who need an interactive interface, or both? Many of the tools in this list can be used by either kind of user. Third, consider the tool's capacity for data modelling.

Does the tool include these features, or will you need to undertake data modelling before analysis using SQL or another tool? Finally, consider the practical implications of price and licensing. Some of the options are completely free or have some features that are free to use (but will require licensing for the full product). There are certain data analysis tools that are available through subscription or licensing.

Various Data Analytics Tools-

MICROSOFT EXCEL

Type of tool: Spreadsheet software.

Availability: Commercial.

Mostly used for: Data wrangling and reporting.

Pros: Widely used, with lots of useful functions and plug-ins.

Cons: Cost, calculation errors, poor at handling big data.

The most well-known spreadsheet program is Excel. It also has computation and graphing features that are excellent for data analysis. No matter your area of expertise or additional software you might want, Excel is a standard in the industry. Pivot tables, which are useful for sorting or tallying data, and form-building tools are among its in-built capabilities. It has limitations though. For instance, it runs very slowly with big datasets and tends to approximate large numbers, leading to inaccuracies.

PYTHON

Type of tool: Programming language.

Availability: Open source, with thousands of free libraries.

Used for: Everything from data scraping to analysis and reporting.

Pros: Easy to learn, highly versatile, widely used.

Cons: Memory intensive—doesn't execute as fast as some other languages

Python is a must-have for any data analyst. Unlike more complex languages, it focuses on readability, and its general popularity in the tech field means many programmers are already familiar with it. Python is also extremely versatile; it has a huge range of resource libraries suited to a variety of different data analytics tasks. For example, the NumPy and pandas' libraries are great for streamlining highly computational tasks. Libraries like Beautiful Soup and Scrapy are used to scrape data from the web, while Matplotlib is excellent for data visualization and reporting. Python's main drawback is its speed—it is memory intensive and slower than many languages.

R

Type of tool: Programming language.

Availability: Open source.

Mostly used for: Statistical analysis and data mining.

Pros: Platform independent, highly compatible, lots of packages.

Cons: Slower, less secure, and more complex to learn than Python.

R is a well-known open-source programming language, much like Python. Software for statistical and data analysis is frequently made with it. Python's syntax is simpler than R's, but R's learning curve is more challenging. However, it is widely used for data visualization and was created expressly to handle complex statistical computing tasks. It can make use of code written in languages like C, C++, and FORTRAN and integrates well with other systems and languages (including big data software).

MICROSOFT POWER BI

Type of tool: Business analytics suite.

Availability: Commercial software (with a free version available).

Mostly used for: Everything from data visualization to predictive analytics.

Pros: Great data connectivity, regular updates, good visualizations.

Cons: Clunky user interface, rigid formulas,

data limits (in the free version).

In terms of data analytics tools, Power BI is a relative newbie. It was first developed as an Excel plug-in but was later updated as a standalone suite of corporate data analysis tools in the early 2010s. With a short learning curve, Power BI users can easily build interactive visual reports and dashboards. Its strong data connectivity is its key selling point; it works well with Excel as well as text files, SQL servers, and cloud sources.

TABLEAU

Type of tool: Data visualization tool.

Availability: Commercial.

Mostly used for: Creating data dashboards and worksheets.

Pros: Great visualization, speed, interactivity, mobile support.

Cons: Poor version control, no data pre-processing.

One of the greatest commercial data analysis tools on the market, Tableau enables users to build interactive dashboards and visualizations without extensive coding knowledge. The suite is incredibly user-friendly and handles massive volumes of data better than many other BI tools. It offers a drag and drop interface that is visual (another definite advantage over many other data analysis tools). Its visualization is of a very high caliber.

APACHE SPARK

Type of tool: Data processing framework.

Availability: Open source.

Mostly used for: big data processing, machine learning.

Pros: Fast, dynamic, easy to use.

Cons: No file management system, rigid user interface.

With the use of the software architecture Apache Spark, data scientists and analysts can quickly analyze enormous data volumes. Spark is a distributed analytics framework designed to distribute computationally intensive analytics jobs over many computers.



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Extended Reality (XR) is the combination of human & computer-generated graphics interaction, which is as well as the virtual environment. In basic terms, Extended Reality is a superset of Augmented Reality (AR), Virtual Reality (VR) & Mixed Reality (MR).

The concept of Extended Reality (XR) came into the picture when technologies like Augmented & Virtual reality were being used by developers and tech companies across the globe. Many Sci-fiction movies have used the concept of Extended Reality (XR) but operating it in the real world is very different from in the real world. To understand the technical aspect of Extended Reality (XR), we need to understand the technologies which are used to create Extended Reality (XR):

1. Augmented Reality (AR): The concept of augmented reality is that virtual objects and imaginations are put up in the real world. The most common example is Pokémon-GO which used augmented reality so that the users can interact with the real as well as a virtual world with the help of digital gadgets.

2. Virtual Reality (VR): In virtual reality, the users are put into a fully virtual environment,

where they can interact only in the virtual world.

Special VR devices are needed to put users into this environment which gives them a 360-degree view of the virtual world.

3. Mixed Reality (MR): Mixed reality is a combination of both AR & VR, where one can interact with the digital as well as the real world simultaneously.

In a nutshell, using Extended Reality (XR), people can visit places virtually, feel the same as they are present at that place, and interact with other individuals on XR. Thus, it is a combination of all three AR, VR & MR.

Applications of Extended Reality in Corporate Training

Onboarding —using AR to train them on how to operate complex machinery.

Diversity And Inclusion— Simulate real-life situations and test learners' responses to microaggressions with 360° VR.

Sales Training — Use AR plane detection to place a simulated cash register in front of learners and test their customer service skills.

Technical Training — Place learners in a simulated warehouse environment through full VR where they practice stacking boxes with the correct weight and orientation.

Leadership Training — Use 360° VR to allow learners to practice having difficult conversations with their team members.



ABHAY YADAV

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THE ROLE OF BIG DATA ANALYTICS IN INDUSTRY 4.0

What is big data analytics?

Big data analytics is the often-complex process of examining big data to uncover information -- such as hidden patterns, correlations, market trends and customer preferences -- that can help organizations make informed business decisions. It is a form of advanced analytics, which involve complex applications with elements such as predictive models, statistical algorithms and what-if analysis powered by analytics systems .

How is big data analytics used in Industry 4.0?

The amount of information produced by IoT, and today's manufacturing systems must be translated into actionable ideas. That's why Big Data classifies the information collected and draws relevant conclusions that help improve companies' operations in the following ways:

Elimination of bottlenecks: Big Data identifies variables that can affect performance, at no extra cost, guiding manufacturers in identifying the problem.

Predictive demand: More accurate and meaningful predictions thanks to the visualization of activity through internal analysis (customer preferences) and external analysis (trends and external events) beyond historical data. This allows the company to modify/optimize its product portfolio.

Predictive maintenance: Data fed sensors identify possible failures in the operation of machinery before it becomes a breakdown, by identifying breakdowns in patterns. The system sends an alert to the equipment so that it can react in time.

These are just some of the benefits of Big Data analysis in production systems, but there are many more; improved security, load optimization, supply chain management, non-conformity analysis etc

STUDENT'S CRITIC

The November manifest was quite engaging to read as it claimed plethora of information about career opportunities, in logistics and various scopes in supply chain management. Coming to most important part of the manifest of November the visit to Om logistics was informative as it posed the knowledge about warehouse and inventory management, all in all it was an interesting and informative read.



Ashwamegh
Sharma

It was overwhelming to come across manifest in its unique presentation style. Particularly the recent edition conveys a lot of information and literary knowledge to the readers. It was interesting to read the articles on DATA BYTES, Scopes, and Career opportunities in SCM which are wonderfully presented by our classmates. Their sincere efforts and hard work are highly appreciated.



Kajol Kumari

This month Manifest was very fascinating as it has covered "Building Warehousing Competitiveness" which was organized by CII. It's also good to see different events and visits that are being held on regular basis. Data bytes segment gave insights on how Data Analytics is making its appearance rapidly. Also, Happy to see our seniors getting placed.



Prakash Jha

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For article postings mail us at manifestradenews@gmail.com

GEAR UP!!

1. **The Kings Coup**

By: Narsee Monjee College of Commerce and Economics, Mumbai

Registration Link: <https://unstop.com/competition/the-kings-coup-arithmos-the-management-and-strategy-festival-of-narsee-monjee-college-of-commerce-and-econom-584156>

2. **Startup Garage '23**

By: Mudra Institute of Communications Ahmedabad (MICA), Ahmedabad

Registration Link: <https://unstop.com/competition/startup-garage-23-e-summit-23-transcend-push-your-limits-micaedc-mica-ahmedabad-584420>

3. **BSE Finathlon Season 6**

By: Indian Institute of Management (IIM), Lucknow

Registration Link: <https://unstop.com/competition/bse-finathlon-season-6-virtual-trading-competition-iim-lucknows-manfest-varchasva-2022-23-indian-institute-o-584591>

4. **E-Pic: The Elevator Pitch**

By: Indian Institute of Technology (IIT), Hyderabad

Registration Link: <https://unstop.com/competition/e-pic-the-elevator-pitch-indian-institute-of-technology-iit-hyderabad-573648>

IKIGAI

A Japanese word which means ‘a reason of living!’

(By- 2022-24 Batch)



LOGITOONS



ILLUSTRATION BY CHARAK EPSA SINGH, CIISOL, NOIDA: BATCH (2022-2024)

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