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MATERIALS MANAGEMENT REVIEW

IFPSM

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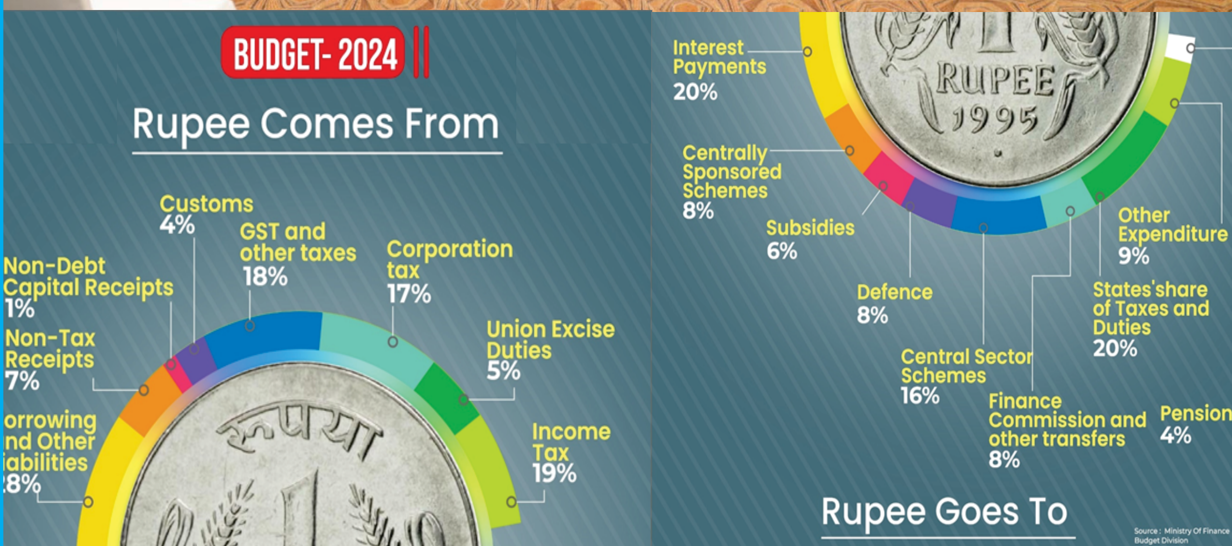
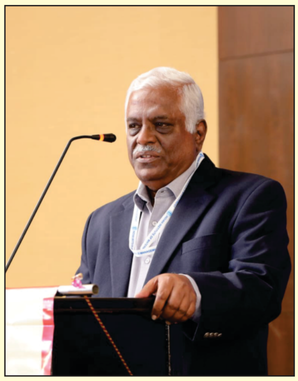
Inaugural Ceremony of Spectrum 2024, IIMM Chennai Branch



SPECTRUM 2024

on 23rd Feb, 2024 at IIMM CHENNAI



From the Desk of
National President and Chief Editor

Dear Readers,

Greetings from Your National President!!!

Govt. of India Presented budget that focuses on the objective of ensuring that India becomes a 5 trillion-dollar economy by 2025 and a developed nation by 2047. The Government has focused on infrastructure, rail corridors, research and development and the start-ups sector which is a very significant move.

Quality of expenditure stands out as a unique feature of the Budget. Capital expenditure of 11.11 lakh crore provided for FY2025 with an increase of nearly 17% over the revised estimates of the previous fiscal, is a testimony of the government's determination to invest heavily in infrastructure build-up for sustaining economic growth. Trimming the fiscal deficit for this financial year to 5.8%, from the budgeted 5.9% of GDP, and further lowering it to 5.1% in the next fiscal.

India's Budget 2024 is an example of hope for future growth, projecting a course for economic resilience, social progress and gives a definite boost for improvement of Supply Chain in the country. Industry should also adopt the changes in the supply chain management to have efficient, agile and resilient supply chain.

Coming back to IIMM Front, We have apprised the National Council Meeting about recently concluded targets for next two years.

We have submitted the details to AICTE for seeking approval for the next academic year i.e. 2024-25.

I have participated in the IIMM Chennai Branch annual flagship event – Spectrum on 23rd February on the Theme "Accelerating Supply Chain Success with Artificial Intelligence & Gen AI in SCM". It was really an excellent program and all the speakers were admirable who kept participants till the end of the program. This was the first time that Spectrum was also organised for online participation for all over India IIMM Branches.

Admissions for PGDMM and PGDSCM&L are still on and I request all the Branch Chairmen, Course Coordinators to approach as many industries and organisations for enrolling maximum number of students.

I wish happy Holi to all the readers.

Best regards,

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ARTIFICIAL INTELLIGENCE (AI) AND GENERATIVE AI FOR IMPROVING SUPPLY CHAIN EFFICIENCY

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Abstract : The aim of this paper is to examine the Artificial Intelligence (AI) and Generative AI tools used for improving the supply chain efficiency. The growth of AI and Gen AI (ChatGPT) tools are highlighted. The author has introduced a bundle AI benefits to business. The evolution, capabilities of GenAI, job threats and areas of usefulness in supply chain management are discussed. The author has also mentioned few areas in the SCM like production planning, demand planning, maintenance management, collaborative planning, forecasting and logistics management. The supply chain efficiency & responsiveness and its relevance are discussed. The key metrics that are used to measure the supply chain efficiency also highlighted. The supply chain efficiency curve has been included in this paper. Supply chain efficiency curve (Abby Jenkin's, 2024) indicates that less cost means less supply chain efficiency and vice versa. But, theses AI and GenAI tools are used for achieving high level of efficiency with reasonable cost.

Keywords: Artificial Intelligence, GenAI, supply chain responsiveness, efficiency

Introduction : Artificial Intelligence (AI) can accurately predict future demand by analyzing data, allowing companies to optimize inventory levels, streamline supply chain processes, and reduce the risk of stock outs or overstocking. AI revolutionizes supply chain management is through predictive analytics. AI's role in supply chain management is transformative, offering unparalleled benefits in predictive analytics, inventory management, logistics optimization, and supply chain visibility. Its integration fosters greater efficiency and competitiveness in today's dynamic business landscape.

According to Gartner, supply chain organizations expect the level of machine automation in their supply chain processes to double in the next five years. At the same time, global spending on IIoT Platforms is predicted to grow from $1.67 Billion in 2018 to $12.44 Billion in 2024, attaining a 40% compound annual growth rate (CAGR) in seven years.

In today's connected digital world, maximizing productivity by reducing uncertainties is the top priority across industries. Plus, mounting expectations of supersonic speed and operational efficiencies further underscore the need to leverage the prowess of Artificial Intelligence (AI) in supply chains and logistics. AI in supply chains can deliver the powerful optimization capabilities required for more accurate capacity planning, improved demand forecasting, enhanced productivity, lower supply chain costs, and greater output, all while fostering safer working conditions. The pandemic and the subsequent disruptions has demonstrated the dramatic impact of uncertainties on supply chains and has established the need for smart contingency plans to help companies deal with these uncertainties in the right way.

AI in supply chain and logistics provides real-time tracking mechanisms to gain timely insights including the optimal times by where, when, and how deliveries must and should be made. For example, in the supply chain sector, generative AI can simulate complex logistics networks to predict the outcomes of various strategies under different conditions.

Generative AI for supply chains can generate demand forecasts, optimize routing, and automate inventory management. Generative AI focuses on creating new and original content, chat responses, designs, synthetic data or even deep fakes. It's particularly valuable in creative fields and for novel problem-solving, as it can autonomously generate many types of new outputs. Figure 1 describes the benefits of Generative AI in Business.

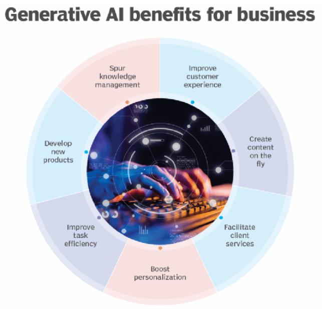

Figure 1: Benefits of Generative AI in Business

Some of the AI systems are so advanced that they can even predict and discover new consumer habits and forecast seasonal demand. This level of AI application can help anticipate future customer demand trends while minimizing the costs of overstocking unwanted inventory.

Evolution of Generative AI : Joseph Weizenbaum created the first generative AI in the 1960s as part of the Eliza chatbot. Ian Goodfellow demonstrated generative adversarial networks for generating realistic-looking and -sounding people in 2014. Subsequent research into LLMs from Open AI and Google ignited the recent enthusiasm that has evolved into tools like ChatGPT, Google Bard and Dall-E.

Capabilities of Generative AI : Generative AI has the potential to replace a variety of jobs, including the following:

- Writing product descriptions.
- Creating marketing copy.
- Generating basic web content.
- Initiating interactive sales outreach.
- Answering customer questions.
- Making graphics for WebPages.

Some companies will look for opportunities to replace humans where possible, while others will use generative AI to augment and enhance their existing workforce. In the future, generative AI models will be extended to support 3D modeling, product design, drug development, digital twins, supply chains and business processes. This will make it easier to generate new product ideas, experiment with different organizational models and explore various business ideas.

An efficient warehouse is an integral part of the supply chain. AI-based automation can assist in the timely retrieval of an item from a warehouse and ensure a smooth journey to the customer. According to McKinsey, 61% of manufacturing executives report decreased costs, and 53% report increased revenues as a direct result of introducing AI in the supply chain.

Gartner predicts that "The rise of IIoT will allow supply chains to provide more differentiated services to customers, more efficiently". According to PWC AI applications have the power to transform the way business is done and contribute up to $15.7 trillion to the global economy by 2030.

Cognizant's research shows that over the next 10 years, 90 percent of jobs will experience some degree of disruption. New York, New World, analyzed economic impact of GenAI in the US and found that by 2032, this technology could add USD 1 trillion to the GDP , boost worker productivity by 10 percent and total factor productivity by 3.5 percent.

Supply chain readiness for AI. : Figure 2 depicts the key steps involved to get ready for AI, i.e setting realistic expectations, how companies use technology and drive into the company data. .

Applications of AL-ML Tools in SCM : AI-ML tools are used in production planning, inventory management, predicting demand trends, customers buying intentions, lead scoring, and re-purchase tracking on real time basis etc., Table 1 shows the applications of AI-ML tools in supply chain management.

Figure 2: Key steps involved to get ready for AI.

Table 1: Applications of AI-ML tools in supply chain management

Sl. No	Functional Areas	Tools used	Details
1	Production planning and Inventory management	AI-ML AI-ML enabled optimizer	Predicting the supply of critical components, its variants etc.
2	Demand planning	AI-ML	Predicting demand trends and patterns.
3	Maintenance management	AI-ML	Spare parts management, predicting the demand of spare parts and maintenance schedule.
4	Collaborative planning	AI-ML	Operational, tactical and strategic decisions.
5	Forecasting	AI-ML forecasting algorithms	Analyzing historical data, market trends, socio-economic factors to predict demand in the industry.
6	Logistics management	Data analytics	Tracking the in-bound and out-bound logistics on real time basis.

Supply Chain Efficiency : Supply chain efficiency is about how effectively a company gets its products to the right place at the right time and at the lowest possible cost and how well it uses resources to produce and deliver goods. Improving supply chain efficiency is a key part of any business' overall supply chain management objective. An efficient supply chain means shorter order processing times, better inventory management and faster delivery. It also often means higher profits.

Supply chain **efficiency** focuses on delivering quality products to customers at the lowest possible cost by maximizing such resources as materials and labor.

Supply chain **responsiveness** focuses on customers' expectations and strives to provide a quality product faster. There can be tension between the two goals. For example, at times, higher supply chain efficiency will mean lower supply chain responsiveness. Figure 3 depicts the supply chain efficiency curve.

Measuring supply chain efficiency : Supply chain metrics are ratios, reports or other metrics that help a company understand the performance of its supply chain. Many companies review a variety of supply chain metrics to identify improvement opportunities or increase customer satisfaction. The important metrics used to measure supply chain efficiency are:

- Perfect order Index
- Service rate or on-time deliveries
- Inventory turnover ratio
- Order accuracy
- Average Logistics Index
- Cash-to cash cycle time
- Supply chain cycle time

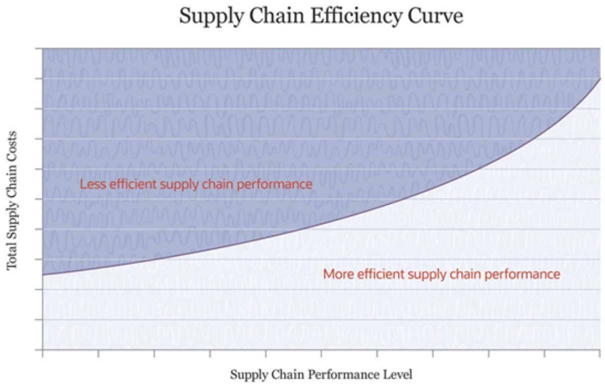

Figure 3: Supply chain efficiency curve (Abby Jenkin's, 2024)

Many companies they give important to responsiveness rather the efficiency. Higher the costs spend higher responsiveness. Less cost means less responsiveness. So, it is a trade-off between the responsiveness and efficiency. Supply chain metrics are an important tool for measuring progress against goals, and benchmarking is an excellent way to establish the goals for improvement programs. As an example, the Supply Chain Leverage of several world-class companies has set the bar quite high.

Conclusion : Managing supply chain responsiveness versus efficiency is a trade-off and gives lot of challenges to the supply chain managers. Technology tools like AI and GenAI improves the supply chain efficiency without adding much cost to it. But the companies to get ready to adopt and implement AI, ML/DL, GenAI tools etc as part of their strategies. Measurement plays an important role to improve the supply chain efficiency. The key metrics that are used to improve the supply chain efficiency are: Perfect order Index, Service rate or on-time deliveries, Inventory turnover ratio, Order accuracy, Average Logistics Index, Cash-to cash cycle time and Supply chain cycle time. AI-ML tools are already used in the areas: production planning, demand planning, maintenance management, collaborative planning, forecasting and logistics management.

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1. Abby Jenkin's (2024). Supply Chain Efficiency: Definitions, Metrics and Steps to Improve retrieved from www.netsuite.com on 5th February, 2024.

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Indian Institute of Materials Management

MISSION

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

OBJECTIVE

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

CODE OF ETHICS

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

MOTIVATING MASLOW'S WAY: ALIGNING PROJECT GOALS WITH TEAM NEEDS FOR SUCCES: OPTIMIZING PROJECT TEAM MOTIVATION THROUGH NEEDS-BASED LEADERSHIP

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Introduction : Maslow's Hierarchy of Needs is a widely recognized psychological theory that outlines the fundamental needs that drive human behavior. Maslow's Hierarchy of Needs, a well-established theory of human motivation, offers valuable insights into the factors that drive individuals to perform and achieve their full potential.

It proposes a five-tier pyramid, with basic physiological needs like food and shelter at the foundation, gradually ascending to higher-level needs such as safety, belonging, esteem, and ultimately, self-actualization. Once basic needs are met, human beings are driven by an innate desire to pursue higher-level aspirations. This inherent motivation to fulfill progressively higher-level needs fuels individual performance and achievement.

The hierarchy suggests that there are five basic levels of needs that must be met before higher levels can be reached. The levels are : **Physiological Needs; Safety needs; Love and belonging needs; Esteem needs; and Self-actualization needs.**

SN Panigrahi; EssAnnPee Business Solutions

This theory suggests that individuals are primarily motivated to fulfill lower-level needs before pursuing higher-level ones, influencing our understanding of human motivation and behavior in various aspects of life, including personal development, education, and management.

Application Beyond Individuals: Maslow's Hierarchy is not limited to personal development; it can be applied to various fields, including psychology, education, and management. In a professional context, it's often used to understand and address the needs of employees, enhancing motivation and job satisfaction.

Applying Maslow's Hierarchy of Needs to Project Management : By understanding and applying this framework to project management, leaders can effectively motivate their teams, fostering a more engaged, productive, and successful work environment.

1. Physiological Needs: The Foundation of Performance

The foundational level focuses on basic human requirements for survival, such as food, water, air, and shelter. Project managers can address physiological needs by ensuring a safe, comfortable, and well-equipped work environment. This includes providing adequate lighting, ventilation, and ergonomic workstations, as well as breaks and access to essential amenities. By addressing these basic needs, project managers lay the groundwork for optimal performance and well-being.

Relevance to Projects:

- ➢ Providing a comfortable and safe work environment with adequate resources like equipment, tools, and technology.
- ➢ Ensuring fair compensation and timely payment of wages.
- ➢ Offering flexible work arrangements and breaks to promote work-life balance.

Examples:

- ❖ Providing tea & snacks to maintain energy levels throughout the workday.

- ❖ Implementing flexible work arrangements and remote work options to promote work-life balance.
- ❖ Offering on-site childcare or transportation assistance to reduce stress and enhance employee well-being.
- ❖ Implementing a recognition and rewards program to acknowledge and appreciate team members' contributions.

2. Safety and Security Needs: Fostering Trust and Psychological Safety

Creating a sense of safety and security within the project team is crucial for fostering trust and psychological safety. This involves establishing clear expectations, providing regular feedback, and recognizing individual contributions. By creating an environment where team members feel valued, supported, and free from fear of failure, project managers encourage them to take risks, innovate, and contribute their best ideas.

Relevance to Projects:

- ➢ Implementing clear policies and procedures to ensure project safety and minimize risks.
- ➢ Providing training and opportunities for professional development to enhance skills and employability.
- ➢ Fostering a culture of trust and respect where individuals feel comfortable expressing concerns and asking for help.

Examples:

- ❖ Conducting regular safety audits and training sessions to ensure team members are aware of and follow safety protocols.
- ❖ Providing opportunities for team members to participate in decision-making processes and feel valued for their input.
- ❖ Implementing clear communication channels and procedures to ensure everyone is kept informed and involved.
- ❖ Encouraging open communication and providing a safe space for team members to express concerns and ask questions.
- ❖ Celebrating successes and acknowledging individual contributions to foster a sense of accomplishment and belonging.

3. Belongingness and Love Needs: Cultivating a Collaborative Culture

Project managers can cultivate a sense of belongingness and love within the team by promoting teamwork, collaboration, and social interaction. This can be achieved through team-building activities, social events, and opportunities for mentorship and knowledge sharing. By fostering a sense of camaraderie and shared purpose, project managers strengthen team cohesion, boost morale, and increase engagement.

These needs involve the desire to feel connected, loved, and accepted.

Relevance to Projects:

- ➢ Encouraging teamwork and collaboration through team-building activities and social events.
- ➢ Providing opportunities for recognition and appreciation for individual and team contributions.
- ➢ Fostering open communication and transparency to build trust and psychological safety.

Examples:

- ❖ Organizing regular team lunches or social gatherings to encourage informal interactions and bonding.
- ❖ Implementing peer mentoring programs to foster knowledge sharing and support among team members.
- ❖ Recognizing and rewarding team achievements to celebrate collective successes and strengthen team spirit.

4. Esteem Needs: Nurturing Intrinsic Motivation

Esteem needs, such as the desire for recognition, achievement, and respect, play a significant role in motivating individuals. Project managers can nurture intrinsic motivation by providing opportunities for personal growth, skill development, and leadership roles. By recognizing individual contributions, encouraging autonomy, and providing opportunities for professional development, project managers empower team members to feel valued, competent, and capable.

These needs involve the desire for self-esteem, self-respect, and recognition.

Relevance to Projects:

- ➢ Delegating challenging and meaningful tasks that promote individual growth and learning.
- ➢ Providing opportunities for leadership roles and decision-making responsibilities.
- ➢ Offering recognition and praise for individual achievements and exceeding expectations.

Examples:

- ❖ Assigning team members to projects that align with their interests and skills, allowing them to showcase their expertise.
- ❖ Empowering team members to take ownership of their tasks and make decisions within their scope of responsibility.
- ❖ Providing regular feedback and recognizing team members' achievements, both publicly and privately. Recognizing individual achievements through promotions, or awards.
- ❖ Encouraging team members to take on challenging tasks and stretch assignments to enhance their skills and expertise.
- ❖ Providing opportunities for team members to present their work and share their knowledge with others.

5. Self-Actualization Needs: Unleashing Full Potential

Self-actualization, the highest level of Maslow's hierarchy, represents the desire to fulfill one's potential and make a meaningful contribution. Project managers can support self-actualization by providing opportunities for creativity, innovation, and contribution to a larger cause. By aligning individual goals with project objectives and encouraging creative problem-solving, project managers help team members feel a sense of purpose and accomplishment.

This is the highest level of need, involving the desire to reach one's full potential and make a meaningful contribution.

Relevance to Projects:

- ➢ Encouraging creativity and innovation by allowing individuals to explore new ideas and approaches.
- ➢ Providing opportunities for professional development and growth to reach full potential.
- ➢ Creating a challenging and stimulating work environment that fosters personal and professional fulfillment.

Examples:

- ❖ Encouraging team members to explore new ideas and approaches to problem-solving.
- ❖ Providing opportunities for team members to participate in decision-making processes and contribute their expertise.
- ❖ Aligning project goals with broader organizational objectives to foster a sense of purpose and impact.
- ❖ Supporting team members' participation in conferences, workshops, and training programs to enhance their skills and knowledge.
- ❖ Encouraging team members to propose and implement innovative solutions to project challenges.
- ❖ Providing opportunities for team members to mentor or coach junior colleagues, fostering a culture of continuous learning and growth.

How Project Managers Can Use Maslow's Hierarchy of Needs to Motivate Teams:

By understanding and addressing the needs at each level of Maslow's hierarchy, project managers can create a more positive and rewarding work environment that motivates individuals to contribute their best efforts and achieve project goals. This leads to higher levels of employee satisfaction, increased team cohesion, and ultimately, a more successful project outcome.

Here are some additional tips for project managers to use Maslow's hierarchy effectively:

- ➢ Tailor your approach to individual needs: Recognize that different individuals have different needs and motivations.
- ➢ Be consistent and transparent: Communicate project goals and expectations clearly, and provide regular feedback and recognition.
- ➢ Create a sense of ownership: Empower team members to take ownership of their tasks and make decisions within their scope of responsibility.
- ➢ Celebrate successes: Recognize and celebrate team achievements, both big and small.
- ➢ Continuously improve: Regularly evaluate your approach to team motivation and make adjustments as needed.

Conclusion: Motivating for Success

By understanding and applying Maslow's Hierarchy of Needs to project management, leaders can create a work environment that addresses the fundamental needs of their team members, fostering motivation, engagement, and ultimately, project success. By addressing physiological, safety, belongingness, esteem, and self-actualization needs, project managers can empower their teams to reach their full potential and achieve remarkable results.

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CAN SCO CREATE A TRUSTWORTHY SUPPLY CHAIN NETWORK FOR THE REGION, ESPECIALLY FOR INDIA? WHAT LIES AHEAD

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DR JITENDER BHANDARI, ASSOC. PROF (ECONOMICS) CHRIST UNIVERSITY
AMBIKA KHURANA, PHD SCHOLAR, SHARDA UNIVERSITY

However, cliché it may sound, supply chain management is understood as activities between companies, suppliers and customers to integrate and add value to the end customers by effectively delivering products and services. This definition in different versions is mostly what we know in the commercial and academic domains. Understanding the realms of supply chains between Nations for boosting economic growth and regional stability is a different area for many readers. Shanghai Corporation Organisation (SCO) is an organisation which works with international and regional organisations with a focus on cooperation amongst countries and trading nations with many international agencies like *UN, ASEAN, CSTO, CIS, ECO, CICA and ICRC to stabilize trade, open new corridors and cooperate with other countries to promote peace and military stability in the areas. The SCO gained prominence when on 2nd December 2004, the 59th plenary session of the UN General Assembly adopted Resolution À/RES/59/48 (agenda item 151) entitled "Observer status for the Shanghai Cooperation Organisation in the General Assembly." The resolution provided the SCO with the right to participate in the sessions and work of the General Assembly as an observer.

To understand the SCO, let us know its structure of it.

As it is known, the Shanghai Corporation Organisation (SCO) was in the news when the SCO Summit was held in Samarkand on 17th September 2022. It was first held in Shanghai in June 2002 with six founding members and eight members, who joined as full members in 2017.

The tense situation between India and China due to border conflict and Russia in war with Ukraine for more than 100 days makes it a very strategic international event for both Nations. Indian PM, while meeting participating Nation Heads in Samarkhand, said that the Shanghai Cooperation Organisation (SCO) should create trusted and resilient supply chains to bolster economic recovery and overcome impediments created by the Covid-19 pandemic and the Ukraine crisis. It was also emphasized that the world's largest regional grouping should give each other transit rights to help forge better regional connectivity.

The current members of the SCO Summit 2022 are

- China
- Kazakhstan
- Kyrgyzstan
- Russia
- Tajikistan
- Uzbekistan
- India
- Pakistan

Samarkand, a central Asia city, which hosted the 22nd Summit of the Shanghai Cooperation Organization, is famous for its cultural significance and is located in the Zarafshan River valley in the Southeastern Region of Uzbekistan. Samarkand is a central point for trade due to its strategic location and connection with many bordering countries.

Due to the Covid-19 pandemic, the SCO Summit was cancelled in the last two years.

Scope and Impact of SCO in Global Supply Chain Management

The main emphasis of SCO is to create a trusted, resilient and diversified supply chain through increased cooperation and mutual trust between the SCO member states. The need for enhanced cooperation to fight terrorism across the region through its Regional Anti-Terrorist Structure (RATS) is also a primary agenda. The SCO agreed to work on a unified list of extremist, separatist and terrorist organisations banned by the member states, and all members were "apparent in recognising the threat that this challenge poses to our region".

Transit rights are vital to creating a better supply chain. Many countries suffer because transit rights are either delayed or not provided for the transportation of goods and other materials. There is a lot of focus on proper use of technology and creating a people-centric development model. All this has been discussed because there was tension on the borders between

India and China had a conflict in the eastern Ladakh areas. Both countries suffered human loss for the first time after an official war around 60 years back when India was a relatively young country that gained independence from the British only 13 years before. The diplomatic line was busy post the conflict, and both countries are engaged to de-escalate the tension. The truth is that there are still some issues of land acquisition and infrastructure development in areas under conflict.

At the heart of SCO discussions are topical, regional and international issues like peace and security, trade, culture and tourism. The expansion of SCO is based on mutually beneficial cooperation within the organisation. Since China is growing faster and has become a hub of manufacturing, neighbouring countries need to have a peaceful bilateral agreement with the countries, and India's soft power in recent years and its growing relations with developed countries cannot be ignored. A standoff between two powerful nations is in no way a boost to the world economy and a deterrent to other Asian countries that can progress and outperform in manufacturing and services compared to other countries.

Recent events in the international domain are essential for India's current ruling party as they balance their aggressive/assertive diplomatic stand with countries like China, Russia and US. As India takes a leadership position in G20 and SCO, which are two different groups with divergent goals, it is to be seen whether India can maintain a dialogue to retain other countries' trust and clear the path for development projects which are stagnated because of the ongoing conflicts.

Global actions are always evolutionary, so India must take countries like Indonesia, Brazil and South Africa together to create a better G20 structure. On the same lines, India's leadership position has to be carried out through its bold, aggressive and clear diplomatic policy because the raging war between Ukraine and Russia, China over strong and dominant position and Europe's internal disturbances are creating an uncomfortable situation for other members countries who wish to steer clear from these conflicts yet maintain a principled stand to enhance peace and stability in this region. As a nation of 1.40 billion people, we have our challenges and inclusive development along with Pakistan and China is needed for trade; decreasing terrorism and growth is essential for geo-political stability. However, to India's dismay, China and Pakistan are seen as hand-holding each other behind the back and offering resistance to India's efforts to maintain a progressive state of affairs.

The need of the time is that India must first exhaust its diplomatic policy of tolerating no nonsense from its neighbouring countries when it comes to dealing with cross-border terrorism or border area conflicts or its purchase policy of buying petroleum from Russia or some other countries without getting bogged down with sides taking issue or voting for a specific problem in UN. So a clear focus on larger goals and by seeking cooperation from countries like Brazil, Indonesia, Russia as well as China and Pakistan, India can establish a legacy of a positive atmosphere not only in G20 but also in SCO.

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EMERGENCE OF A NEW ERA IN STRATEGIC SUPPLY CHAIN DESIGN IN 2024

From 2020 to 2022, businesses did not consider **supply chain management system** or design at all. Everyone switched to short-term thinking and with 2023, businesses began carefully lifting their heads to assess the situation and plan ahead. The time for pandemic-era thinking has passed. 2024 is believed to be the year of the strategic supply chain management system, but organizations must be cautious in their technology and vendor choices. However, with this year, we will witness the start of a new age in strategic **supply chain management process** and planning, a considerable departure from the short-term mentality that characterized the epidemic period. AWL India believes that after years of neglect, businesses are now recognizing the crucial role of **technology in logistics and supply chain management** along with proven efficiency, and competitiveness. As organizations negotiate this new terrain with caution, they are rethinking their technology and vendor options to optimize their supply chains.

The Shift from Short-Term to Long-Term Supply Chain Planning in 2023

Transitioning towards strategic thinking signifies a pivotal shift from reactive to proactive supply chain management. In 2023, as logistical challenges eased, businesses cautiously began looking ahead, conducting strategic reviews to bolster long-term resilience and efficiency. This resulted in a transition from the traditional short-term to strategic thinking. However, in 2024, firms are able to get their heads above water logistically and begin to look ahead warily. They are now able to conduct strategic reviews aimed at improving long-term supply chain resilience and efficiency. According to a poll, **"41% of supply chain organizations are presently using advanced analytics in the form of end-to-end network modeling, with another 48% aiming to do so in the next two years."**

End of an Era: Rethinking Supply Chain Sourcing

Strategies Amidst Global Uncertainty

The era of endless low-cost suppliers is coming to an end. Companies are seeing the need to diversify and reevaluate their sourcing strategy. Deteriorating US-China relations, along with a failing Chinese economy, are forcing supply chain managers to reevaluate their dependence on China as the major industrial link in their supply chains. According to an analysis, **"52% of industrials with operations in China are moving some sourcing or production away from the country to other cost-competitive locations in the attempt to de-risk their supply chains."** These changes force businesses to weigh the cost, service, and risk of doing business in China and reconsider their near-shoring strategy. Sophisticated risk assessment algorithms assist them in understanding possible weaknesses before selecting providers in order to protect against interruptions and improve stability and resilience.

Emphasising Transparency and Traditional Evaluation Methods in Vendor Selection Amidst AI Fatigue

Customers are becoming more picky, seeking transparency that extends beyond product functioning. They are growing increasingly interested in the teams behind the technology, and their decisions are based on the company's mission and culture, as well as the skills of the individuals involved. Choosing a suitable companion requires thorough research. We at AWL believe that you can't trust a vendor if it won't divulge its investors, partners, or how and where its solutions are developed. Therefore, prospective partners need to communicate with you and involve you in their journey. Moreover, rather than just claiming to be AI-enabled, organizations should be expected to demonstrate their capabilities, back up their claims with proof, and provide real grounds for believing, signaling a return to a more traditional approach to purchasing decisions.

Furthermore, when interacting with suppliers, avoid utilizing unfamiliar lingo, ambiguous and confusing terminology, and unqualified assertions. We also believe that in 2024, the most popular AI applications will be short-term planning decisions and projections, such as monitoring and adjusting inventory reorder points and replenishment amounts.

Debunking the Hype Surrounding Supply Chain Digital Twins

In the complex world of **logistics and supply chain management**, the majority of companies want to tell you about their digital twin capabilities, but the term **"Digital Twin"** is a marketing trick that does not live up to its lofty label. **Supply chain logistics companies in India** do not always have all of the data (or quality data) linked to supplier orders and timelines, inventory levels, and manufacturing activities in one area, much alone across many operational systems. More discerning firms understand that a digital twin is a database-accessible picture of a segment of their supply chain. Whereas, supply chain digital twins are not identical! In the logistics industry, firms are creating new supply chain management system for the future. To do this, they create **"Digital twins"** of each future-state supply chain option and assess them to choose which one to implement.

Navigating Uncertain Waters

The market being uncertain as usual has combined with the rise of new leaders. However, the industry peaked in 2021, with large venture capital investments in monitoring, visibility, and execution technologies. However, the flood of financial engineering concepts has now hit hazardous waters. According to **AWL India Pvt Ltd**, this year is projected to bring downturns, financial instability, and a reconsideration of strategies. As a part of the process, many technological vendors will fail, and new leaders will emerge. As the new normal for enterprises becomes a constant state of supply chain disruption, businesses must consider how to deal with these uncertain times and ongoing challenges. Leaders may get more visibility into the whole supply chain by developing agile and resistant supply networks, proactively minimizing potential risks, and recognizing and rectifying potential deviations in real-time.

Conclusion

In summary, the emergence of a new era in strategic supply chain design in 2024 signifies a significant shift towards long-term planning and resilience. As businesses navigate market volatility, leverage technological advancements, and respond to evolving customer needs, they must prioritize transparency, rethink sourcing tactics, and capitalize on emerging technologies. By doing so, organizations can not only survive in the face of unpredictability but also lay the foundation for long-term success and sustainable growth in the dynamic landscape of the future.

Source: www.awlindia.com

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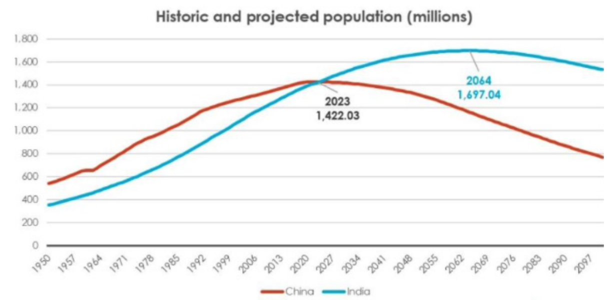
INDIA: A RISING GIANT IN THE WORLD OF SUPPLY CHAIN MANAGEMENT!!

STEFAN REIDY-CEO AND ENTREPRENEUR-WBAIF

India is one of the fastest-growing economies in the world. The growth in real GDP during 2022-23 is estimated at 7.2 percent compared to 9.1 percent in 2021-22, according to data released by India's Central Statistics Office (CSO). Boasting a robust economy and favorable demographics, it's no wonder many international companies are eyeing India as a prime location to set up their manufacturing facilities and supply chains. As this trend continues, the demand for supply chain management in India is expected to soar.

The thriving economy and burgeoning consumer market have created a wealth of new growth opportunities, but they also present unique challenges for companies operating in India. To succeed in this dynamic market, it's essential to understand these challenges and how to overcome them. By doing so, businesses can position themselves for success and tap into India's immense potential.



According to official estimates, India's population is set to reach a staggering 1.6 billion by 2030 and 1.8 billion by 2050. With such a massive population, India's demographic profile is a crucial advantage. Its young people, with a working age group of 15-64 years constituting 63 percent of its total population, gives India a significant edge over other emerging economies like China, where the working age group stands at 54 percent.

According to many economists, these two trends (economy and young population) have the potential to make India one of the world's largest economies in the next few decades. With such promising prospects, India is becoming an attractive destination for businesses looking to expand their operations and tap into this immense potential.

The dynamic factors at play in India's economy and demographics are sure to profoundly impact the future of supply chain management, both within the region and on a global scale. As India continues to grow and evolve, how businesses manage their supply chains will undoubtedly shift and adapt to meet the demands of this changing landscape. The future of supply chain management in India is full of exciting possibilities.

The dynamic factors at play in India's economy and demographics are sure to profoundly impact the future of supply chain management.

The Indian government is leaving no stone unturned in its efforts to create a world-class supply chain ecosystem. To achieve this, the government has been taking bold steps, such as improving transportation infrastructure, including roads and ports, to make the movement of goods and services more efficient. They are also creating an enabling environment for companies to invest in technology and innovation to build their own logistics network or partner with third parties who can provide value-added services like supply chain consulting and inventory management solutions.

In addition to these measures, the government is also focusing on improving the ease of doing business in India, which will help attract more foreign investment and create a more conducive environment for businesses to thrive. They are also investing in initiatives like Skill India and Make in India to improve the skills of the Indian workforce and create a highly skilled workforce that can support Indian businesses and their global supply chain operations. With these measures in place, India is poised to become a global leader in supply chain management, and those who recognize the potential of this burgeoning market now will be the ones to reap the rewards in the years to come.

Attention all supply chain managers: Are you looking to stay ahead of the game and drive innovation within your organization?

- India's large base of **tech-savvy** young people is well-versed in the latest technology and data trends and has been utilizing smartphones and digital services for years. The country's solid infrastructure, including banking systems, e-commerce platforms, and payment gateways, offers a strong foundation that can easily be harnessed for supply chain management.

- But that's not all. India also boasts a massive pool of **highly skilled** personnel, from computer scientists and engineers to mathematicians and finance experts. This means that organizations can foster innovation from within without looking beyond India's borders for top talent.
- With these advantages, organizations can **quickly adopt** cutting-edge technologies such as blockchain, business intelligence, and artificial intelligence (AI).
- And with India's young, enthusiastic population and supportive democracy, the **pace of growth** and change in supply chain management has never been more dynamic.

However, like everywhere else, there are two sides to the coin in India. Economic and political risks could hinder, slow down or even reverse the current course and upswing:

- Slowdown in Economic Growth: if the economy continues to grow slower, it could affect job creation, income levels, and overall economic stability.
- Inflation: Inflation, if unchecked, can lead to a rise in interest rates, making borrowing more expensive for businesses and individuals and ultimately slowing down the economy.
- Trade Wars: As global trade is disrupted due to trade wars, it could lead to slower economic growth, reduced foreign investments, and fewer job opportunities.
- Geopolitical Challenges: India faces several geopolitical challenges that could impact its political stability and economic growth.
- Uncertain Government Decision-making: India's complex political structure and the presence of multiple political parties can sometimes lead to uncertain decision-making processes.
- Policy Changes: Abrupt policy changes by the government can impact industries, sectors, and businesses, leading to uncertainties and potential disruptions to investment plans.

In a rapidly evolving global business landscape, supply chain managers must stay ahead of the curve.

To conclude - embrace the potential of India and drive your supply chain management to new heights today! As supply chain managers look for opportunities to optimize their operations, here are 5 thoughts to explore:

- **Invest in technology**: With India's expertise in computer science and data analytics, supply chain managers can invest in technology solutions that can improve the efficiency and transparency of their supply chain operations. This may include implementing warehouse and transportation management systems and predictive analytics tools.
- **Explore outsourcing opportunities**: India's large pool of technically proficient workforce can be leveraged by supply chain managers to outsource specific tasks, such as data entry, data analysis, and customer service. This can help reduce costs and improve operational efficiency.
- **Collaborate with local partners**: Supply chain managers can collaborate with local partners in India to gain access to their expertise and knowledge of the local market. This can help improve supply chain visibility and reduce lead times.
- **Develop a talent pipeline**: With India's large pool of technically talented human resources, supply chain managers can develop a talent pipeline by partnering with local universities and training institutions. This can help ensure a steady supply of skilled workers for their supply chain operations.
- **Stay up-to-date on regulatory changes**: As India's economy grows, regulatory changes will likely occur. Supply chain managers should stay up-to-date on these changes to ensure compliance and avoid disruptions to their operations.

In a rapidly evolving global business landscape, supply chain managers must stay ahead of the curve. And when it comes to unlocking untapped potential and driving growth, India is where it's at.

With a burgeoning economy, a tech-savvy, English-speaking population, and various demographic advantages, India is a prime destination for companies looking to expand their regional operations. Plus, with a rapidly growing middle class, India is set to become one of the largest consumer markets in the world.

Supply chain managers can capitalize on new opportunities to cement their company's position as a global leader.

But seizing these opportunities requires more than good intentions - it demands strategic, forward-thinking supply chain management. By harnessing the potential of India's strengths and identifying innovative solutions for business growth, supply chain managers can stay current and capitalize on new opportunities to cement their company's position as a global leader.

Source: www.linkedin.com

2024 HAS MOUNTING SUPPLY CHAIN ISSUES. HERE ARE NEW WAYS TO HANDLE THEM.

YIKUN SHAO, HEAD OF SUPPLY CHAIN FOR NORTH AMERICA AT INTERNATIONAL MARKETPLACE ALIBABA.COM.

As supply chain and logistics trends continue to evolve amid new challenges, digital tools make a big difference in the ability of companies to source products and ensure deliveries to customers, writes Yikun Shao, the head of supply chain for North America at Alibaba.com.

Businesses have been carefully watching the state of global supply chains as they have had to maneuver around obstacle after obstacle to ensure they meet the increasing demands of customers. In 2024, businesses will continue to feel the brunt of existing challenges, as well as meet new ones, and it will be critical to anticipate and find new ways to manage these issues while living up to customer expectations.

Crowdsourced delivery allows businesses to scale their shipment operations and achieve delivery timeliness and efficiency.

Of note, nearly four in ten (38%) small businesses think the global supply chain outlook will have a negative impact on their business, according to an Alibaba.com survey, so it will be important to watch for changes throughout the year and monitor for potential concerns.

One of the most pressing challenges the industry faces is a shift of issues from the supply to the demand side. On the supply side, more raw materials are available, and there are fewer transportation obstacles.

However, on the demand side, there has been rising inflation globally, and backlogged inventory, especially in the U.S. and E.U., has led to a decrease in demand, compounded by decreased demand for certain products. While the U.S. saw a return to pre-pandemic consumer holiday season spending in 2023, businesses may still want a more conservative approach and order products in smaller quantities, meaning that meeting shipping requirements may become more difficult. Demand is not able to meet the products that the supply side is able to provide.

On top of this, recovery from the COVID-19 pandemic is ongoing as supply chains are still readjusting from related interruptions. There is more stability, but recovery takes time, especially as new challenges arise.

Mounting Concerns Businesses Should Monitor

Businesses are also facing a number of additional issues that could spell trouble for them throughout the year that they should be watching carefully:

§ **Cyber attacks:** Threats from bad actors continue to be a growing issue. Small businesses are three times more likely to be targeted by cybercriminals, and the cost of cybercrimes to small businesses reached $2.4 billion in 2021.

§ **Labor and government shutdowns:** 70% of small business owners say a government shutdown would negatively impact their business, and 93% say it would hurt their revenue. Additionally, labor strikes can also impact small businesses by disrupting vendors or shipping partners.

§ **Natural disaster events:** With 2023 on track to be the hottest year on record and extreme weather events increasing, supply chains could be increasingly disrupted by natural disasters and unworkable conditions.

§ **Panama Canal disruptions:** The drought in Panama, largely caused by the El Niño climate phenomenon, has caused major delays and bottlenecks for those in the logistics industry. Scientists believe climate change may be prolonging dry spells and increasing temperatures in Panama. As such, the situation has become dire and expected to continue into at least mid-2024, as the number of ships allowed through the canal will decrease into February.

§ **The state of the U.S. economy:** 47% of small business owners feel the economy will get worse in the next 12 months, and 58% said their business is being impacted by higher interest rates.

It will be crucial for businesses to monitor these and other issues and adapt as necessary by tapping into innovative industry tools and resources.

Digital Tools Address the Changing Supply Chain Landscape

As supply chain and logistics trends continue to evolve, digital tools can make it easier to manage operations to ensure on-time deliveries. There are a variety of tools on the market that can help businesses stay up-to-date on shipping and inventory processes. Companies can also invest in data analytics programs to assess patterns in inventory management and customer demands. There are even technology offerings that can help model and then execute on needs as supply chains come under greater stress. The goal in utilizing digital solutions like these is to predict trends, streamline processes and increase efficiency no matter the current supply chain landscape.

To make the biggest impact, specifically engineered intelligent tools, like Alibaba.com's Smart Assistant, are also available, and they can provide better insight into the sourcing process. They can include features surrounding supplier transparency, direct communication with translation, shipment tracking, protections for wrong or delayed orders, and digital inventory awareness. These functions allow businesses to keep tabs on their orders and adjust to changes to time orders accordingly and, most of all, have peace of mind when sourcing their products.

However, employing digital tools is just one avenue businesses can take for upping their supply chain game.

Alternative Shipping and Warehousing Methods

Thinking outside the box when updating your shipping practices can also help to increase efficiencies, meet the growing demand for faster deliveries and stay resilient during supply chain setbacks.

There is a newer phenomenon in the form of crowdsourced delivery. This allows businesses to scale their shipment operations and work with other businesses to achieve timeliness and efficiency in deliveries. This communal form of shipping will continue to grow and become highly utilized in the coming years as technology becomes more widely adopted.

Beyond crowdsourced delivery, the localization of supply chains is also helping keep things closer to home, reduce logistics costs and cut order fulfillment time for small businesses. Localization may take the form of strategically built warehousing networks to maintain inventory closer to major customer bases. Some businesses are also using third-party warehouses, but these can have numerous and complex restrictions, which are constantly evolving. With that in mind, regional warehousing could be a viable alternative.

The world of ecommerce logistics and supply chain is constantly changing, but digitization, localization and omni-channel distribution are the three areas of innovation that businesses should consider taking advantage of. New technologies are bringing more transparency to the process than ever before. While these trends are growing, it will be critical for businesses to stay vigilant and monitor for new innovations and supply chain developments in order to be ready to tackle future challenges and seize new opportunities to evolve and improve their supply chains.

Source:www.digitalcommerce360.com

GDP TO GROW 7%-PLUS, TOUCH $5 TN IN 3 YEARS: MOF SAYS IN REVIEW

AANCHAL MAGAZINE, SENIOR ASSISTANT EDITOR THE INDIAN EXPRESS

Highlights 3 trends: end of hypergolobalisation in global manufacturing, energy transition challenge, advent of artificial intelligence.

The Indian economy is likely to grow at over 7 per cent in the coming years and is expected to become the third-largest economy in the world in the next three years, with a GDP of $5 trillion, driven by domestic demand along with supply-side measures such as investment in infrastructure and measures to boost manufacturing, the Ministry of Finance said in a report titled 'The Indian economy — A review' prepared by Office of Chief Economic Adviser.

"It now appears very likely that the Indian economy will achieve a growth rate at or above 7% for FY24, and some predict it will achieve another year of 7% real growth in FY25 as well. If the prognosis for FY25 turns out to be right, that will mark the fourth year post-pandemic that the Indian economy will have grown at or over 7 per cent. That would be an impressive achievement, testifying to the resilience and potential of the Indian economy. It augurs well for the future," Chief Economic Adviser V Anantha Nageswaran said in the preface of 'The Indian Economy — A review'.

He, however, clarified that this is not the Economic Survey of India prepared by the Department of Economic Affairs and that it will come before the full budget after the general elections. Usually, the Economic Survey for the ongoing financial year is presented in Parliament a day before the presentation of the Budget for the next financial year on February 1.

Only the elevated risk of geopolitical conflicts is an area of concern, the review said. Noting that the global economy is struggling to maintain its recovery post-Covid because successive shocks have buffeted it, the review said some of these shocks, such as supply chain disruptions, have returned in 2024. "If they persist, they will impact trade flows, transportation costs, economic output and inflation worldwide," it said.

Nageswaran listed three trends for the coming years — the end of the era of hyper-globalisation in global manufacturing, the advent of Artificial Intelligence, and the energy transition challenge.

Challenges ahead : While flagging the three future trends — end of hyperglobalisation in global manufacturing, energy transition challenge, and advent of Artificial Intelligence — the Finance Ministry has said the Indian economy is better placed to take on these challenges because of the policies adopted over the last decade.

There is a need to lower logistics costs and invest in product quality to hold on to and expand market share in areas where India has an advantage, he said. "The era of hyper-globalisation in global manufacturing is over. It does not mean that de-globalisation will be upon us any time soon, as countries are only now discovering the enormous integration of global supply chains that have taken place in the last few decades. So, an alternative to the globalisation of supply chains will take much longer to emerge if it ever does. However, that will not deter governments from pursuing onshoring and friend-shoring of production with a consequent impact on transportation, logistics costs, and, hence, the final prices of products," he said.

With the emerging use of Artificial Intelligence, it poses profound and troubling questions for growth in services trade and employment since technology might remove the advantage of cost competitiveness that countries exporting digital services enjoy, he said.

For energy transition challenge, he said concerns over rising temperatures have led to a single-minded focus on reducing carbon emissions, which has led to persistent demands from international organisations and advanced nations on developing nations to wean themselves off fossil fuels and switch to greener energy even as technological and resource obstacles remain and are not on offer from developed countries. "It is a reality that, in the short run, there is a trade-off between economic growth and energy transition. In a growth-challenged post-Covid global economy, countries can ill afford to sacrifice the former for the latter. India is walking the fine line between the two more skilfully than other nations, with installed non-fossil fuel-based power generation capacity running ahead of targets," he said.

With the policies adopted and implemented in the last decade, the Indian economy is better placed than ever to take on these three key challenges, he said. "The Union government has built infrastructure at a historically unprecedented rate, and it has taken the overall public sector capital investment from Rs 5.6 lakh crore in FY15 to Rs 18.6 lakh crore in FY24, as per budget estimates. That is a rise of 3.3X. Whether the total length of highways, freight corridors, number of airports, metro rail networks or the trans-sea link, the ramp-up of physical and digital infrastructure in the last ten years is real, tangible and transformative," he said.

The financial sector is healthy. Its balance sheet is stronger, he said, adding that it is willing to lend and is lending. Non-food credit growth, excluding personal loans, is growing at double-digit rates.

The pursuit of inclusive development finds Indian households in good financial health. "Fifty-one crore bank accounts under Jan Dhan Yojana now have total deposits of over [1] 2.1 lakh crore. Over 55 per cent of them are women. In Dec 2019, household financial assets were 86.2 per cent of GDP; liabilities were 33.4 per cent of GDP. In March 2023, these numbers were 103.1 per cent and 37.6 per cent, respectively. So, Net Financial Assets of households were 52.8 per cent of GDP in Dec 2019, and by March 2023, it had improved to 65.5 per cent of GDP," he said.

He singled out two things — the government's COVID management and the vaccination record — for being instrumental in the quick recovery by the economy. "Similarly, the deft management of the crude oil supply at reasonable prices in the last two years is noteworthy. Humans are not capable of appreciating the unseen – the mistakes not made and the risks avoided – but the counterfactuals are all around us. They cannot be missed," he said.

As the government resolves longstanding problems such as deficient infrastructure and financial exclusion, aspirations rise, and expectations shift higher, he said. "Today, many young Indians not only aspire to a better life but are also confident that it will happen in their lifetime. They feel that they have a better life than their previous generations and that succeeding generations will do better than them. Nations and people have to believe in themselves for important changes to happen. Now, India does, and Indians do," he said.

Source:indianexpress.com

DPIIT HOLDS 9TH SERVICES IMPROVEMENT GROUP MEETING TO REVIEW EXIM LOGISTICS AND HIGHLIGHT STRIDES IN INFRASTRUCTURE AND INNOVATION

Bulk filing of shipping bills streamlined to ease EXIM logistics. Wider adoption of E-Logs platform empowers SIG to improve logistics performance.

The 9th Services Improvement Group (SIG) meeting, focusing on issues related to EXIM logistics and infrastructure, was held on 31st January 2024 under the chairpersonship of Ms. Sumita Dawra, Special Secretary, Logistics Division, Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry.

The 9th SIG meeting witnessed the showcasing of various initiatives undertaken by the Ministries to facilitate EXIM-related issues faced by the industry. The Department of Revenue shared information related to the integration of a new system to facilitate bulk filing of shipping bills, a move expected to streamline processes significantly. The highlight of the meeting was the recognition and success of the Electronic Logs (E-Logs) platform, a pivotal tool to empower the SIG in swiftly addressing and resolving challenges faced by stakeholders in the logistics sector.

Key features of the E-Logs platform include real-time issue tracking, secure data sharing, and streamlined communication channels, resulting in significant reductions in the time taken to resolve logistical challenges for businesses and trade. This has led to enhanced operational efficiency and an overall improvement in logistics performance.

One of the significant achievements of SIG Interventio00000000 ns is the resolution of a long pending staff-related issue at Air Freight Station. In this context, Department of Revenue apprised the SIG Members that deployment of custom staff at the Air Freight Station, Kapashera is resolved through swift actions undertaken by the Department with support from Logistics Division, DPIIT.

Industry associations also acknowledged that the Open Network for Digital Commerce (ONDC) has invited comments on the B-2-B draft policy, showcasing a collaborative approach between the government and industry stakeholders.

Representation from e-commerce giant Amazon shared that notification of the Joint Parcel Policy has tremendously benefitted the e-commerce industry and parcel freight movement on railways is also expected to benefit the industry further.

Addressing concerns related to transportation of rubber products from the North-Eastern region, the Ministry of Ports, Shipping and Waterways shared ongoing initiatives, including awarding of dredging contract for waterway routes connecting Tripura and Kolkata port. Usage of alternative routes such as the Sonamura Inland Waterway Terminal, Sabroom land port, and the India-Bangladesh Protocol Route were also flagged. Additionally, efforts to facilitate 24x7 operations, including night navigation systems by the Inland Waterways Authority of India, were discussed.

The meeting brought together a diverse group of over 40 participants, including officials from the Ministry of Finance, Ministry of Port, Shipping and Waterways, Ministry of Health and Family Welfare, and Ministry of Railways; and 9 industry representatives including Federation of Freight Forwarders' Associations in India (FFFAI), Federation of Indian Chambers of Commerce & Industry (FICCI), and Container Shipping Lines Association (CSLA), Associated Chambers of Commerce and Industry of India (ASSOCHAM), Warehousing Association of India (WAI) amongst others.

At the forefront of the National Logistics Policy (NLP), the Service Improvement Group (SIG) serves as an inter-ministerial institutional mechanism, engaging with over 30 business associations in the logistics sector.

The 9th SIG meeting stands as a testament to the outcomes of collaborative efforts between the government and industry associations to drive innovation, streamline processes, and foster growth in the EXIM logistics sector.

Source: PIB

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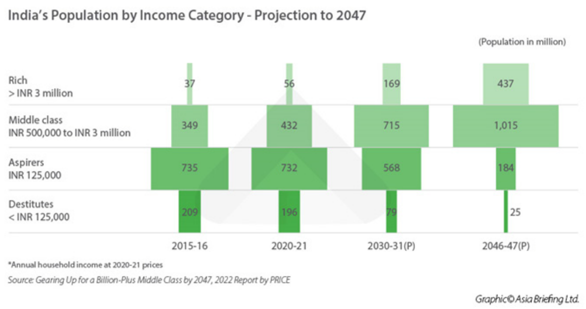
EMERGING TECHNOLOGIES SUPPORTING YOUR INDIA RETAIL STRATEGY: LOCATION ANALYTICS

ABHISHEK DEY

We discuss how technology-enabled tools are allowing retailers to optimize their India market strategy using location analytics. This becomes more important as India's spending power is spread differently across the country and consumer preferences for offline and online shopping are becoming more dynamic, supported by increasingly robust last mile logistics.

India's retail sector is experiencing a period of **robust growth** driven by various factors, such as rising national wages, rapid urbanization, and the emergence of the digital economy. This growth is not limited to metropolitan areas but is extending to lower-tier cities as well, thanks to an expanding network of last-mile logistics suppliers facilitating access to online platforms. The retail landscape in India is diverse, offering choices ranging from global e-commerce platforms to single-brand shopping websites and social media sellers. This diversification aligns with the rising discretionary spending power of consumers, with per capita income projected to **exceed** US$12,000 by 2047.



Several key growth drivers are fueling investments in India's retail industry. India ranks as the fourth largest retail destination globally, with significant expansion seen in the number of retail precincts and in **leasing and supply addition**. The country's online retail market is also poised for substantial growth, projected to reach **US$325 billion by 2030**, offering businesses opportunities to tap into a burgeoning digital economy.

The attractiveness of the Indian market has increased amid a deceleration in prominent developing markets such as China, which is grappling with an economic downturn. Meanwhile, other developed markets like the United Kingdom and the United States are either experiencing a slowdown or are **forecast to enter one**.

Given the favorable circumstances, a significant number of foreign retailers are rushing to establish their presence in the Indian market. A considerable portion of these newcomers have forged alliances with established retail giants like Aditya Birla Fashion and Retail (ABFRL), Reliance Retail, Tata Trent, and others, capitalizing on their deep market insights and adeptness in navigating regulatory landscapes. These partnerships are also essential because although the Indian retail sector permits 100 percent foreign investment, companies with foreign direct investment (FDI) exceeding 51 percent are mandated to procure at least 30 percent of the value of goods from India, to open their own retail outlet. The application of FDI rules also depend on whether the company is engaging in single brand or multi-brand retail in India and whether sales are being made via online, offline, or omnichannel routes.

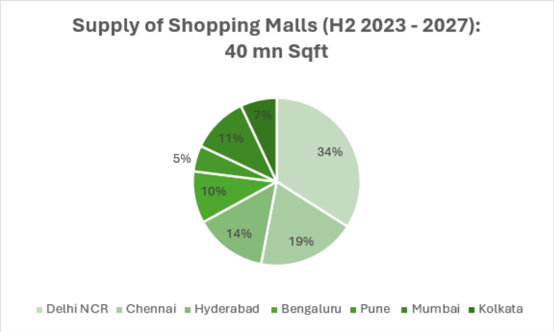
Choosing the right location: India market entry for retailers

When a company decides to venture into the Indian retail market, it encounters various challenges ranging from regulatory hurdles to building or expanding supply chains and understanding consumer preferences. However, a primary challenge it faces is conducting location analysis for opening a new retail outlet. This task can be particularly daunting in India due to its extensive population spread across over 8000 cities, and the steady transformation of many neighborhood markets into high streets across these cities.

A comprehensive evaluation of the potential benefits and limitations of a specific location is crucial for fostering sustainable growth and success in the retail sector. Research conducted by Knight Frank India indicates that the growth of the retail industry heavily relies on the location and convenience factor, such as the availability of parking, visibility, and ease of access.

A retail business's presence is more noticeable to customers, guests, and bystanders when services and infrastructure surround it. In well planned retail locations, good connection, parking options, and public transit may also improve consumer convenience and encourage repeat business, which raises the likelihood that customers will recognize and remember the brand.

Given the anticipated increase in the inventory of retail precincts—projected to reach 40 million square feet of just shopping mall space across India's top seven cities by the end of 2027—it is imperative to conduct comprehensive research to pinpoint the ideal location that corresponds with the target demographic and maximizes growth opportunity.



Source: JLL Research & REIS

Today, whether they are grocery, food and beverage (F&B), or fashion brands, most rely on a combination of multiple channels like e-commerce and brick & mortar (omnichannel strategy) business models. Consequently, the significance of mapping areas where businesses can draw customers from has never been greater when choosing retail outlets and warehousing.

Read: Key Considerations Before Selling Foreign Products in India

How technology supports data challenged markets like India. Establishing or expanding physical stores requires significant capital investment, making location and network analysis (network of stores) a continuous exercise. In contrast to other nations where companies can readily access data for making business decisions, obtaining such data can be challenging or unavailable in India.

To aid businesses in this effort, numerous location intelligence firms have emerged, providing access to geospatial data essential for network analysis. This is particularly beneficial in countries like India, as such information is indispensable for informed decision-making. Various technology-enabled tools, such as cloud-based mapping platform models, are dominating the delivery of geospatial data. This refers to data describing objects, events, or other features with a location on or near the surface of the earth and functions. The tools are easy to use, allow for faster decision-making, and are cost-effective for running sophisticated data analyses.

One of the biggest benefits of cloud-based, location intelligence software is that it enables brands that have physical stores in multiple countries to have one log-in to manage all their locations. Customers can also create their own large data set and visualize it through thematic layers and show comparisons with the available data on the platform.

What is location analytics?

Location analytics integrates geographical data pertaining to assets, infrastructure, transportation, and the environment with an organization's operational and customer data to unveil robust solutions for any business obstacle, subsequently disseminating these insights across the entire organization.

What type of insights can be provided by location analytics?

Leveraging location analytics is pivotal for addressing critical business inquiries within the retail sector. These inquiries encompass:

- Identifying the most promising regions and cities for brand expansion and quantifying their potential using comprehensive metrics.
- Understanding the optimal number of stores to add at both national and regional levels, as well as gauging the capacity of cities across different tiers, forms a foundational aspect of strategic expansion planning.
- By delving into the economic prosperity of cities, businesses can formulate tailored metrics to guide targeted store expansions, thus maximizing growth opportunities.
- Analyzing competitor presence across India, aiding in benchmarking market share and pinpointing areas for enhancement.
- Evaluating existing store performance through the lens of location-specific factors empowering businesses to fine-tune their strategies. Moreover, pinpointing high-potential catchment areas for new store openings and assessing their value equips decision-makers with valuable insights for informed expansion decisions.
- Balancing priorities between mall, high street, and neighborhood stores.

Key takeaways : The expansion of retail stores in India using location analytics will introduce key efficiencies for businesses aiming to tap the growing spending power in the country's burgeoning market. This is essential for foreign retailers in particular as India's vast population is spread across a wide geography, with diverse socioeconomic and cultural factors shaping consumption patterns.

Nevertheless, rising urban incomes and the fast rate of digital adoption offers huge prospects to the retail sector for investment and expansion.

Location analytics can aid retail investors with tools and data insights that can enable optimal decision-making—location of the store, parking access and space, surrounding connectivity and commercial infrastructure, consumer behavior in that area, competitor presence, etc. Such information will be key to the retail outlet's performance and thereby brand power, impacting the company's long-term success in the Indian market.

As India's shopping real estate continues to expand, conducting thorough research and utilizing location analytics tools will be imperative for retailers to pinpoint ideal locations and capitalize on growth potential. By balancing priorities between different types of retail spaces and adapting to evolving consumer preferences, businesses can position themselves for sustainable success in India's dynamic retail landscape.

Source: www.india-briefing.com

HOW END-TO-END INTEGRATED SUPPLY CHAIN IS EVOLVING IN 2024?

As we have entered 2024, businesses are evolving in various aspects. Every other factor has the touch of technology that enhances its efficiency and effectiveness. The supply chain is no exception to this, as it is evolving by incorporating various newest trends in the market. Integrated fulfilment in the supply chain is undergoing a transformation as there is a change in global trade, technological advancements, and a shift in consumer expectations that are newly shaping the industry. We at RK Foodland, providing end-to-end fulfilment to our valuable clients experience the numerous changes in the industry with the time. Considering 2024, we have seen the shift and thus have shared about the evolving end-to-end integrated supply chain. Let us start the journey by understanding the aspects responsible for the advancement in the supply chain so that you can update your supply chain in the year ahead.

What is End-to-end Integration in Supply Chain?

End-to-end integration in the supply chain is a comprehensive approach. In this, all the aspects of the supply chain are connected to each other and managed as a unified system. It involves procedures right from procuring raw materials and designing products to scheduling production and delivering the finished product to the customer. Depending on the business or industry type, integrated fulfilment also involves after-sales services and reverse logistics.

How is End-to-end Integrated Supply Chain Evolving in 2024?

Digital Transformation : The introduction of the digital twins is transforming the supply chain in 2024. Implementing automation, AI, and ML contributes to streamlining the processes from start to end, offering more transparency and visibility. Integrating these advanced technological models in the supply chain provides businesses with real-time data, analytics, and forecasting, which results in better decision-making and improves flexibility.

Sustainability and Resilience : As environmental concerns rise, their reflection can be seen in supply chain management. Sustainability is gaining the utmost importance in supply chain practices. Today, customers are aware of the environmental impact of different activities; hence, implementing eco-friendly strategies not only makes your customers happier but also helps you to adhere to environmental standards and regulations. Businesses are incorporating environment-friendly practices in the supply chains, such as green logistics and circular economy principles in integrated fulfilment. It results in reduced carbon footprints that contribute to creating a long-term impact on the environment. Similarly, businesses earn a reputation in the market as well as customer loyalty in the long run.

Advancement in E-commerce : E-commerce is setting the highest levels in 2024, and ultimately, it is reshaping the supply chain. Businesses are focusing on fastening the delivery time and meeting customer demand quickly. To reliably deliver the products to the end user and within the committed time, various practices and innovations are carried out to level up the last but essential part of the supply chain.

Implementation of AI, ML, and IoT : 2024 is driving the supply chain with the implementation of Artificial Intelligence (AI), Machine Learning (ML), and the Internet of Things (IoT). Incorporation of these technologies for integrated fulfilment in the supply chain benefits businesses in the dynamically changing global trade. It provides real-time data, analytics, demand sensing and predictions. Advanced AI-driven algorithms efficiently analyse vast amounts of data such as market trends, historical data, and customer behaviour. This helps businesses to optimise inventory smartly, reduce stockout situations, and make data-driven decisions. Machine learning constantly adapts to the changing process and provides future predictions. With its uniqueness, IoT connects devices effortlessly to enable real-time monitoring in the supply chain.

Data Security and Cyber Security : As end-to-end fulfilment is equipped with technological models, data security and cyber security have become a major concern in 2024 for supply chain management. Ensuring that the data, communication channels, and sensitive information are secured maintains the integrity of the supply chain and stakeholders.

Automation and Robotics in Integrated Fulfilment : In 2024, most of the components in the end-to-end fulfilment process rely on automation and robotics. Automation and robotics can be found in automated order processing, robotic arm picking and packing products, and autonomous delivery vehicles. Implementation of these technologies not only accelerates the integrated fulfilment procedure and reduces human errors and labour costs

Blockchain Integration : Integrating blockchain in the supply chain has enhanced the transparency and traceability among the stakeholders. Blockchain allows us to securely record and verify every transaction, right from the raw material to the delivery of the finished products. It develops trust and mitigates the risk of fraud and errors in the supply chain. With the emergence of these aspects, the supply chain is undergoing a remarkable transformation in 2024. If you are looking to incorporate your supply chain with these transformative practices, choose RK Foodland. Established in 1987, we serve our clients with top-notch supply chain management solutions and outsourcing services that meet evolving needs. Our services include integrated planning, sourcing, warehouse management, cold chain logistics, transportation services, order management, and integrated fulfilment. Understanding the evolving trends and technologies, our experts provide smart solutions to streamline your supply chain and improve its effectiveness.

Source: www.rkfoodland.com

DECOUPLING IN LOGISTIC AND SUPPLY CHAIN:

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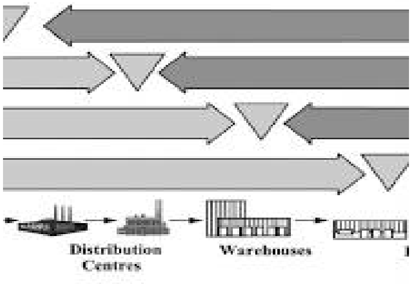
Process of setting aside, any addition materials, goods, to ensure that there are not delays, disruption, risks, in production of finished in the event of supply shortage, requirement of spare parts during breakdown of machinery is disillusioned as decoupling in logistic, supply chain. Inventory management reserves a portion of the stock holding in decoupling for each stages of production, for building up inventory, setting aside, as safety stock, as per the operation modes, by setting aside a portion of the parts, components, materials, when needed in logistic, supply chain.

Warehouse operation needs decoupling of stocks, materials, components, to be stocked in their own sections, so as to not be confused among other stock items, so as not to be correlated with other materials, so as to no-longer to move in accordance with logistic, supply chain. Uncertainties being a part of logistic, supply chain, operations, managing, a better part of the organisation, during the period of disruption, risk, in logistic, supply chain, on the various challenges, highlighting, the shortage of materials, components, raw-materials, are some of envisaged shortages, to maintain the functional production, operation, as operations, forecasting are the needs of decoupling inventory to be implemented to prevent stock-out in logistic, supply chain.

Value chain is to be maintained for materials, components, on the basis of customer orders, de-coupling are some of the situations, maintained to make-to-stock, made-to-order, as this likely to bring the stages of operations, on to forecast the required necessary components, materials, including raw-materials, as per customers orders, to hold proper inventory, also requirements in logistic, supply chain.



ra and Romme, 1992

DECOUPLING OF MANUFACTURING: Lead time for production is the time of receipt of materials, checking, quality assurance, on to the time of converting raw materials, components, raw-materials into finished products, which also constitutes the delivery period of the product, from the then manufacturing stage, finally to the end-consumer, customer, as this viewed as an internal performance in logistic, supply chain, as this monitors the measurement of performance, efficiency, control systems, in production, customer delivery, as an external performance, customer satisfaction, as a commitment, as this value chain requires components, raw-materials, parts, from different sources of suppliers, as this becomes a part of complication, so the network should be extended for de-coupling of components, raw-materials, parts from multiple channels of suppliers in logistic, supply chain.

Manufacturing, procurement, sourcing follows the push type system based on demand, forecast, on the basis of strength, weakness, opportunities, threats, as De-coupling determines whether to produce larger quantities, in order to lower production activities, cost, as this requires proper planning, in order to satisfy the consumer demands, from the perceptive of availability of stock, entailing large storage cost, loss of sales in supply chain.

Over production is thus avoided in pull system, with limited quantity, thus reducing costs, by De-coupling production, as this requires procurement, sourcing, according the demand of the consumer, customer's requirement, having potential shortage of stock, which is liable for turnover loss, caused due to unexpected growth, being not anticipated, thus enabling procurement sourcing until there is demand from the consumer, customer in supply chain.

Inventory management associated with maintenance, repair, overhaul, operations, is necessarily to be accurately forecasted, for preventive maintenance, that is to be scheduled for advanced preventive maintenance, contributing towards efficiency, on the operation, as De-coupling on preventive spares, parts, components, is to b accelerated by the demand, also based on the available data, quantifiable, with accurate forecasting, during the peak periods, along with reduced demand of availability in supply chain.

Customer's orders De-coupling with supply chain, is considered as strategic, for manufacturing, operations, on the proper flow of materials, spares, parts, being the basic requirement of made-to-stock, assemble-to-order, make-to-order, buy-or-make, as this coincides with availability of stock, on the orders processed, of the customers, manufacturing, operations, on the positioning of the suppliers, on the downstream, upstream availability of raw-materials, components, spare parts in supply chain.

Allowing multinational organisation, to diversify, in procurement, sourcing, manufacturing in various locations, to reduce the reliance on a single market, thus enhancing the resilience, on also transforming the organisations, in order to implement digital strategies, leveraging to Internet of Things, Artificial Intelligence, Data analytics, collectively contributing to contribution to the De-coupling of products, materials, components, associated with complexities, risk, also associated with the current status in global supply chain.

Lean supply chain is in order to reduce, eliminate, waste, in the flow of products, materials, spare parts, in supply chain is also given to reduce having additional inventory, cycle time, alertness', as most common sourcing of waste, excess supply, inventory movement, is on the basis of processing, as this is to avoid the strategies, strong competitions, on De-coupling products, just-in-time, production adopted systems, both being lean, agile, as an approach on the focus, of eliminating waste, excess on a planned product, in supply chain.

Framework in supply chain is based on the empirical evidence on the basis of operation, of De-coupling the products, spare parts, materials, related to market conditions of the products, characterised by supply chain performances effects, on the differences of upstream, downstream, closely related to the demand, volume, uncertainty, influenced by production, lead-time, forecasting, accuracy in supply chain.

Forward technology on the trends like Outer web, 5G, wireless technology, artificial intelligence, Internet of Things, Block Chain will not only improve customer service, from a predictive route optimizing to demand forecasting, in transportation, Decoupled with anticipatory shipping, logistic organisation will now aim to be connected empowered by visibility, efficiency, mainly on the crisis prevailing to show how delicate will be supply chain.

Digital transformation is much more than simply adopting new technology in supply chain, as this requires comprehensive strategy, that encompass the entire organisation, as it is to be De-coupled to the changes in culture, process, also mindset, proper leadership, which envisages the future state of the organisation, as it articulates digital vision, where encouragement is adapted to change in supply chain.

Artificial Intelligence will enhance efficiency, forecasting, while Internet of Things, will provide real-time tracking, monitoring capabilities, while Block chain technology will ensure unparalleled transparency, traceability, while predictive analytics, will help to anticipate demand, reduce costs, with De-coupling of robotics bringing in automation in warehouse, with fulfilment of digitalisation, enabling, monitoring in supply chain.

Reliability of the supply chain remains a primary concern, over the entire supply of the products to the customers, that must be guaranteed to avoid delays or disruption, alongside De-coupling with reliability, efficiency, which becomes a great concern, additionally understanding of the constant working to reduce cost becomes a leading area in supply chain.

It is very vital for every organisation, to ensure that everyone concerned in supply chain, to reduce costs, storage times, allowing Just-in-Time inventory management is to be bought in to minimize cost, reducing capital investment, De-coupling with procurement of inventory on a perfect solution, to improving the working performances, also the responsiveness', within the organisation to understand the needs, importance of the wider consumers in supply chain.

Part Truck Loads will be the best option to ship goods, on surface mode, for a volume which may vary for a few kilograms, to a weight age in tons, but due to De-coupling of shipping constraints of smaller quantity, engaging becomes a costly affair, but is recommended over courier or express organisations, due to limitation in information technology infrastructure, handling facilities in supply chain.

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UNION BUDGET 2024 FOR LOGISTICS SECTOR

The logistics sector, which is one of the key players in the Indian economy, has some key expectations from the Union Budget 2024. Among these are infrastructure funding, digitisation of processes, changes in taxes and rules for e-commerce, etc.

Finance Minister Nirmala Sitharaman has completed her sixth budget presentation. During her address, she deliberated on the capital expenditure dedicated to infrastructure, highlighting that the capex outlay for the upcoming year has witnessed an 11.1% increase, reaching Rs. 11,11,111 crore. This elevated allocation represents 3.4% of the Gross Domestic Product (GDP).

Introduction of Economic Railway Corridor Programs

- Nirmala Sitharaman announced the initiation of three significant economic railway corridor programs, including energy, mineral, and cement corridors, port connectivity corridors, and high-traffic density corridors.
- These corridors were identified under the PM Gati Shakti initiative to facilitate multi-modal connectivity, with the aim of enhancing logistics efficiency and reducing overall costs.
- Alleviating congestion in high-traffic corridors is expected to enhance the operations of passenger trains, ensuring safety and increasing travel speeds for passengers.
- These economic corridor programs, in conjunction with dedicated freight corridors, are poised to drive GDP growth and reduce logistic costs.

Upgradation of Normal Railway Carriages to Vande Bharat Standards

- The Finance Minister highlighted the plan to upgrade normal railway carriages to adhere to Vande Bharat standards, ensuring enhanced safety, convenience, and comfort for passengers.
- Approximately forty thousand regular rail carriages will undergo conversion to meet these standards, aiming to improve the overall passenger experience.

Logistics Sector Key Expectations from the Union Budget 2024-25

- **Prioritise Transparency and Traceability**:
- In preparation for Budget 2024-25, there is a pressing need to prioritise transparency and traceability in the logistics sector.
- One key aspect is the implementation of open data platforms and real-time cargo tracking systems, particularly in sensitive regions like the Red Sea.
- These technologies will not only improve transparency but also build trust among stakeholders by providing accurate and timely information.
- Another crucial step is to advocate for standardised data formats and protocols across the logistics industry to facilitate seamless information exchange and enhance international collaboration.
- Encouraging the adoption of uniform standards will streamline communication and boost overall efficiency.
- Lastly, it is essential to push for mandatory risk assessments and reporting protocols for high-risk routes, including those in the Red Sea.
- This proactive approach ensures that logistics operations in geopolitical hotspots are well-prepared with necessary measures, promoting a secure and resilient global supply chain.
- **Encouraging Technology Adoption and Innovation:**
- The Budget should introduce strategic incentives aimed at encouraging logistics companies to adopt advanced technologies. These incentives may include tax benefits or financial support to incentivise the integration of cutting-edge technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), and automation within logistics operations.
- To propel India towards global logistics leadership, there should be a focused effort on developing a national platform for logistics innovation and knowledge sharing. This platform would serve as a hub for collaboration, facilitating the exchange of ideas and best practices among domestic and international stakeholders.
- **Prioritising Regulatory Harmonisation and Simplification**:
- Union Budget 2024-25 should prioritise regulatory harmonisation and simplification to achieve efficient and globally competitive logistics. This involves streamlining logistics regulations and aligning them with international standards to mitigate delays and reduce costs.
- The Budget should advocate for the establishment of single-window clearance systems to ease cross-border trade and logistics operations. Additionally, measures should be proposed to enhance communication and coordination among diverse government agencies overseeing logistics regulation, fostering a more cohesive and responsive regulatory framework.
- This strategic approach aims to enhance the ease of doing business and promote a seamless and agile logistics environment in line with international best practices, ultimately paving the way for a robust and competitive logistics sector in the years to come.

Source: www.bankbazaar.com

BUDGET 2024: KEY HIGHLIGHTS FOR RELOCATING SUPPLY CHAINS TO INDIA

INDUSLAW

INTRODUCTION : On February 01, 2024, Union Minister for Finance and Corporate Affairs, Smt. Nirmala Sitharaman (the "**Finance Minister**"), tabled the interim Union Budget for the fiscal year ("**FY**") 2024-25 (the "**Budget 2024**"). The Budget 2024 will be an interim budget which will be effective until the new government is elected, and thereupon the full budget will be tabled in July 2024.

The Budget 2024 reflects the changing economy of India and focuses on boosting the economic growth of the nation by investing in infrastructural development and bolstering its supply chains. The reduced food and fertilizer subsidies, coupled with other budgetary allocations towards infrastructure development demonstrate the continued direction of the government's focus on manufacturing sector.

This Infoalert is in part of the series titled 'Relocating Supply Chains to India: Navigating the Indian Landscape' which can be accessed here.

2.KEY HIGHLIGHTS

2.1Encouraging foreign investment through bilateral investment treaties: The Finance Minister stated that the government is negotiating bilateral investment treaties (the "**BITs**") with the nation's foreign partners, to encourage sustained foreign investment in India.1 The statement is well timed with the ongoing negotiations of India for BITs with nations such as United Kingdom, European Union, and United Arab Emirates, which will help in encouraging domestic manufacturing, reducing import dependence, and increasing exports.2

2.2Implementation of railway corridor programs under PM Gati Shakti: The government has promised the implementation of 3 major economic railway corridor programs, namely: (i) energy, mineral, and cement corridors; (ii) port connectivity corridors; and (iii) high traffic density corridors. These corridors come as a part of 'PM Gati Shakti' program, which is aimed at building multi-modal connectivity, improving logistics efficiency, and thereby reducing costs, which would benefit the supply chains by providing better logistics and connectivity at lower costs.

2.3Bolstering the airport infrastructure under UDAN scheme: While there has been widespread development of airports and development of new routes to, inter alia, enable connectivity in tier two and tier three cities, the Finance Minister has hinted towards the expansion of existing airports and development of new airports in an expeditious manner, as a part of the existing UDAN scheme. Increased air-connectivity will enhance the efficiency of logistics across the nation, especially for time-sensitive shipments containing goods such as perishable commodities and prescription drugs.

2.4 Building the green energy and electric vehicle ecosystem: The government has announced a slew of measures in pursuit of its commitment to meet 'net zero' by the year 2070, such as harnessing the offshore wind energy by viability gap funding, setting up of coal gasification and liquefaction capacity of 100 MT by the year 2030, and providing financial assistance for procurement of biomass aggregation machinery to support collection. All such measures highlight India's initiative to support green energy for its industries, which ensures responsible manufacturing from an ecological and sustainable development perspective, in line with the growing environmental, social and governance ("ESG") commitments from all global players. Such measures aid businesses in achieving sustainability in the pursuit of the net zero target, and place India at par with the global standards of implementing robust ESG measures.

The government has also proposed to expand and strengthen the manufacturing and charging infrastructure and has also promised to launch a new scheme of bio-manufacturing and bio-foundry. The aim is to provide environmentally friendly alternatives such as biodegradable polymers, bioplastics, biopharmaceuticals, and bioagri-inputs. In light of the highlighted measures, India will inevitably prove to be a lucrative destination for global players to invest in its green energy and electric vehicle ecosystem, given that under the extant Foreign Direct Investment ("**FDI**") policy of India, FDI in manufacturing (barring few items in defense, atomic energy, etc.) including in renewable energy sector is permitted up to 100% under the automatic route.3

3.ALLOCATION TO CAPITAL EXPENDITUE AND SUPPLY CHAIN ORIENTED SCHEMES

3.1 Continued increase in capital expenditure: The total expenditure reflected in the Budget Estimates ("**BE**") shared by the Ministry of Finance in 2024-25, is estimated at USD 574 Billion, out of which the total capital expenditure is estimated at USD 133 Billion. The steer towards boosting the economic growth of the nation by investing in infrastructural development, is evidenced by the increase of 17.7% in the BE of FY 2024-25 in the effective capital expenditure at USD 180 Billion, over the revised estimates ("**RE**") of FY 2023-24.4

3.2 Notable allocations to existing supply-chain oriented schemes:

Schemes / Projects	**RE in FY 2023-24** *(in INR Crores)*	**BE in FY 2024-25** *(in INR Crores)*	**Percentage Increase** (*approx.*)
Modified Programme for Development of Semiconductors and Display Manufacturing Ecosystem in India	1,503	6,903	359%
Production Linked Incentive ("**PLI**") Scheme (Electronics and Information Technology)	4,560	6,200	35%
PLI Scheme (Automobiles and Auto Components)	484	3,500	623%
PLI Scheme (Pharmaceutical)	1,696	2,143	26%
PLI Scheme (Food Processing)	1,150	1,444	26%
Development of Industry (Pharmaceutical)	265	1,300	390%
Domestic Industry Incentivization Scheme	515	1,911	271%
Research and Development in IT/Electronics	1,000	1,148	15%
Metro Projects	19,508	21,336	9%
Green Energy Corridor	434	600	38%

4 CONCLUSION

The Budget 2024 is another step in India's ongoing journey for being a lucrative destination for hosting the supply chains and the manufacturing hubs of global players. Lenovo, India's second largest computer manufacturer, is now a part of the PLI Scheme for IT hardware, committing to local production of personal computers. Ola Electric, on the other hand, has secured its second product certification under the PLI Scheme for automobiles, making it eligible for incentives for up to 5 years. These measures have put India on track for localizing the supply chains and promoting investments in domestic manufacturing.

Based on recent surveys, many multinationals have indicated pursuing a policy of 'China Plus One' strategy with Vietnam and Thailand being the primary options for their expansion plans. However, India has also stood out as a frequently mentioned option on account of its workforce meeting the appropriate skillset requirements. The Finance Minister has also recognized the importance of the Skill India Mission and its achievements in the Budget 2024. The Indian government introduced the Modified Programme for Development of Semiconductors and Display Manufacturing in the year 2021, with an outlay of USD 9 Billion, pursuant to which, global chipmaking giant, Micron Technology Inc. has decided to set up its manufacturing facilities for semiconductors in India. India has also partnered with Japan, which has companies that excel at front-end processes and have requisite chipmaking equipment, by signing a memorandum of understanding (MoU) in July 2023 for cooperation in semiconductor supply chain.

The Indian government's economic reforms, like the consolidation of the tax regime into the Goods and Services Tax (GST), have streamlined and optimized supply chains and improved the business environment. According to the January 2024 World Economic Outlook by the International Monetary Fund (IMF), India's growth projection for FY 2023-24 has been revised upward from 6.3% to 6.7%, while the global growth projection remained unchanged at 3%. The effective implementation of the measures taken by the government over the years will help drive foreign investments and promote economic growth. Towards these efforts, it's crucial to prioritize aligning BITs with global standards to prevent treaty cancellations and lengthy negotiations.

With India's impressive growth rates, skilled workforce, and ongoing regulatory incentives, global players are increasingly considering India as a key production and sourcing hub. It remains to be seen whether India will introduce enhanced policies and incentives in this regard in its upcoming full budget following the Lok Sabha elections.

To view all formatting for this article (eg, tables, footnotes), please access the original here.

INDUSLAW - Akhoury Winnie Shekhar, Anantha Krishnan Iyer, Tushar Gogoi and Divisha Sharma

Source: www.lexology.com

WTO UPDATE : AID-FOR-TRADE GLOBAL REVIEW 2024 TO LOOK AT MAINSTREAMING TRADE INTO DEVELOPMENT STRATEGIES

The next Global Review of Aid for Trade will take place from 26 to 28 June at the WTO under the theme "Mainstreaming Trade", it was announced on 1 February at a meeting of the Committee on Trade and Development. Proposals to organize sessions at the event may be submitted up to 31 March 2024.

The biennial Global Review serves as a global platform to highlight areas where developing economies and least developed countries (LDCs) need support to overcome supply-side constraints limiting their participation in global trade. It helps galvanize support for tackling these issues so that these countries derive the maximum economic benefits from trade. Proposals to organize sessions at this year's edition can be submitted here.

At the meeting, members were also updated on initiatives by partner organizations to further the integration of developing economies and LDCs into the global economy.

Mainstreaming trade : Zambia said that the development of standards to support industrial and trade growth and increase the participation of micro, small and medium-sized enterprises (MSMEs) in the economy are high on its agenda. Trade will play an essential role in supporting Zambia's future graduation from LDC status as well as its efforts to mitigate the effects ofclimate change.

The Economic Community of West African States (ECOWAS) shared an overview of its "E-Commerce Strategy and Implementation Plan 2023-2027" launched in July 2023, under which measures related to e-commerce will be adopted at the regional level to create jobs and help diversify economies.

As outlined in its International Development White Paper released in November 2023, the United Kingdom underlined the importance of tackling climate change and biodiversity loss and eliminating extreme poverty in developing economies in order to accelerate progress on meeting the United Nations Sustainable Development Goals. The UK emphasized how trade in goods and services can serve as an engine of economic transformation in these countries.

Reports by international financial institutions

Three international financial institutions updated the Committee on current projects.

The African Development Bank said that USD 2 billion has been mobilized for a period of three years under the Sustainable Bond programme, through which the Bank is financing projects to support climate change and inclusive growth in Africa. A total of USD 1.5 billion has also been invested in the African Emergency Food Production Facility to build the resilience of Africa's food systems by boosting the production of cereals and oil grains.

The Asian Development Bank noted that it has supported 47.5 billion MSMEs — of which 46.1 million are owned or led by women — in boosting their participation in global supply chains and international trade. Projects have focused on infrastructure capacity-building, access to finance, digital connectivity and policy reform.

The European Bank for Reconstruction and Development highlighted current projects relating to digital connectivity, food security, trade facilitation and increasing the participation of MSMEs in world trade. The Bank has disbursed EUR 13 billion across the economies where it operates in 2023 and EUR 2 billion in Ukraine since the outbreak of the war.

Aid for Trade activities

The United Nations Conference on Trade and Development drew attention to the "Shaping the Future of the Digital Economy" conference to be held from 6 to 8 May in Geneva, which will look at how to enhance developing economies' participation in e-commerce. This follows on from the eWeek organized in December in Geneva, which brought together over 3,500 participants from 159 countries.

The United Nations Industrial Development Organization noted that USD 3 billion has been allocated through the "Alliance for Special Agro-Industrial Processing Zones" to build agro-industrial capacities in African underdeveloped rural areas. The "Africa Food Regulatory Agencies Forum", held in Egypt in October, focused on current food safety capacity-building initiatives and identified countries' needs to operationalize the African Continental Free Trade Area.

China provided an update on its Aid-for-Trade activities in 2023, including support for investment in production and manufacturing equipment in agriculture, development of trade-related transportation infrastructure, and organizing seminars on trade facilitation and e-commerce.

The United States discussed the U.S.-Africa Leaders' Summit that took place in December 2022, highlighting initiatives on supply chain issues, digital payments, e-commerce, and skills training in Africa.

WTO members' trade policy reviews

With reference to its latest Trade Policy Review that took place in November, Chinese Taipei said that it provided USD 432 million in official development assistance in 2022. This is outlined in its "International Cooperation and Development Policy White Paper" issued in December 2023.

Türkiye said it has recently introduced a "Far Countries Strategy" in an effort to ramp up its exports of goods and services. Türkiye's Trade Policy Review was completed in November.

Other trade- and development-related projects

The Enhanced Integrated Framework (EIF) said that over half of its projects seek to boost agriculture capacities in LDCs and referred to 100 ongoing initiatives on e-commerce. The EIF announced the establishment of an Interim Facility to continue its operations in 2024 following the upcoming conclusion of Phase 2 of the EIF and until a new multilateral support mechanism for LDCs becomes operational.

The Standards and Trade Development Facility outlined its support to over 80 developing economies and LDCs since 2015. This includes a project to mix bio- and conventional pesticides to limit residues and to increase agri-food exports. Other projects include developing the electronic exchange of phytosanitary certificates used in trading plants and plant products and scaling up the ePhyto Solution in Africa.

The WTO's Trade Facilitation Assistance Facility gave an update on progress in members' implementation of the WTO Trade Facilitation Agreement. A total of 156 WTO members have ratified the Agreement, representing 95.1 per cent of the total WTO membership. The WTO Secretariat also noted that the Fisheries Funding Mechanism Trust Fund — which held its first Steering Committee meeting on 31 January — has received over CHF 8 million from 14 WTO members and commitments of over CHF 3 million.

The International Trade Centre (ITC) explained how it is supporting developing economies and LDCs in negotiating and implementing trade agreements as well as developing economies currently negotiating their accession to the WTO. Bringing the voices of small businesses from developing economies into WTO decision-making fora also features highly on ITC's agenda.

Source: WTO Website

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CLIMATE CHANGE IS DISRUPTING THE GLOBAL SUPPLY CHAIN TOO

Extreme weather, from floods to wildfires, is increasingly hammering ports, highways, and factories. It's expected to get worse.

The Covid pandemic has rightly received most of the blame for global supply chain upheavals in the past two years. But the less publicized impact of climate change on supply chains poses a far more serious threat and is already being felt, scholars and experts say.

The pandemic is "a temporary problem," while climate change is "long-term dire," said Austin Becker, a maritime infrastructure resilience scholar at the University of Rhode Island. "Climate change is a slow-moving crisis that is going to last a very, very long time, and it's going to require some fundamental changes," said Becker. "Every coastal community, every coastal transportation network is going to face some risks from this, and we're not going to have nearly enough resources to make all the investments that are required."

Of all of climate change's threats to supply chains, sea level rise lurks as potentially the biggest. But even now, years before sea level rise begins inundating ports and other coastal infrastructure, supply chain disruptions caused by hurricanes, floods, wildfires, and other forms of increasingly extreme weather are jolting the global economy. A sampling of these disruptions from just last year suggests the variety and magnitude of climate change's threats:

- The Texas freeze last February caused the worst involuntary energy blackout' in US history. That forced three major semiconductor plants to close', exacerbating a global pandemic-triggered semiconductor shortage and further slowing production of microchip-dependent cars. The outages also forced railroad closures, severing heavily used supply chain links between Texas and the Pacific Northwest for three days.'

- Heavy rainfall and snowmelt last February caused some banks of the Rhine River, Europe's most important commercial waterway, to begin to burst, triggering a halt in river shipping for several days. Then, in April, water levels on the Rhine, which was facing a long-term drought, dropped so low that cargo ships were forced to load no more than half their usual capacity to avoid running aground. In recent years, manufacturers relying on the Rhine "have increasingly faced shipping capacity reductions that disrupted both inbound raw material and outbound product delivery flows" as a result of drought, according to a May 2021 report by Everstream Analytics, which tracks supply chain trends.

- Flooding in central China in late July disrupted supply chains for commodities such as coal, pigs, and peanuts and forced the closure of a Nissan automobile plant. SAIC Motor, the country's largest automaker, announced that these disruptions caused what Reuters called a "short-term impact on logistics" at its giant plant in Zhengzhou, capable of producing 600,000 cars a year.

- Hurricane Ida, the fifth-costliest hurricane in US history, struck the Gulf of Mexico coast in late August, damaging vital industrial installations that generate an array of products, including plastics and pharmaceuticals, and forcing a diversion of trucks, already in short supply across the country, for use in relief aid.

- Fires in British Columbia from late June through early October triggered by an unprecedented heat wave comprised the third-worst wildfire season in the province's history and closed a transportation choke point at Fraser Canyon that idled thousands of rail cars and stranded their contents. Then, in November, an atmospheric river, delivering what officials called "once-in-a-century" rainfall, caused severe flooding in the province. The floods severed crucial railroad and highway links to Canada's largest port and forced a regional oil pipeline to close. The loss of the rail network forced provincial lumber companies to scale back production, causing price increases and shortages of lumber, paper pulp, and other wood products in the United States.

- In December, a typhoon caused what TechWireAsia called "arguably the worst flooding in history in various parts" of Malaysia, and severely damaged Klang, Southeast Asia's second-largest port. That created a break in the semiconductor supply chain, since semiconductors from Taiwan, by far the world's largest manufacturer of advanced microchips, are routinely shipped to Klang for packaging at Malaysian factories before being transported to US companies and consumers. The packaging breakdown contributed to global semiconductor shortages and caused some US automobile manufacturers to suspend operations.

"The Malaysia node in the global supply chain that hardly anyone was aware of turned out to be critical," Christopher Mims, a Wall Street Journal technology columnist and author of Arriving Today: From Factory to Front Door—Why Everything Has Changed About How and What We Buy, said in an interview. "It illustrates how a bottleneck anywhere in the supply chain can interfere with the availability of critical goods."

Scientists say that such climate-related disruptions are bound to intensify in coming years as the world warms. In addition, ports, rail lines, highways, and other transportation and supply infrastructure will be threatened by increases in sea level of an estimated 2 to 6 feet—and perhaps more—by 2100. Around 90 percent of the world's freight moves by ship, and, according to Becker, inundations eventually will threaten most of the world's 2,738 coastal ports, whose wharves generally lie just a few feet to 15 feet above sea level. But to most port managers, the threat still feels remote. The rate of future sea level rise is so uncertain and solutions so elusive that only a few port managers have taken action to counter the threat, and only a fraction have tried to assess it.

As the ripple effects of what are likely to be ever increasing and intensifying climate-related disruptions spread through the global economy, price increases and shortages of all kinds of goods—from agricultural commodities to cutting-edge electronics—are probable consequences, Mims said. The leap in the cost of shipping a container across the Pacific Ocean as a result of the pandemic—from $2,000 to $15,000 or $20,000—may suggest what's in store.

A 2020 paper in Maritime Policy and Management even asserted that if current climate science is correct, "global supply chains will be massively disrupted, beyond what can be adapted to while maintaining current systems." The paper argues that supply chain managers should accept the inevitability of economic upheaval by the end of this century and embrace practices that support rebuilding afterwards.

To be sure, not all experts believe supply chains are highly vulnerable to climate change. "I don't lie awake at night thinking about what will happen to supply chains because of climate," said Yossi Sheffi, director of the Massachusetts Institute of Technology's Center for Transportation and Logistics and the author of numerous books about supply chains. "I think supply chain disruption is usually local and limited in time, and supply chains are so redundant that there are many ways to get around problems."

SUPPLY CHAINS ARE, in essence, strings of potential bottlenecks. Each stopping point is a node in a tree-like system that conveys raw materials from the system's farthest tendrils to sub-assemblers along its roots to manufacturers, who are the system's trunk. Products like smartphones possess hundreds of components whose raw materials are transported from all over the world; the cumulative mileage traveled by all those parts would "probably reach to the moon," Mims said. These supply chains are so complicated and opaque that smartphone manufacturers don't even know the identity of all their suppliers—getting all of them to adapt to climate change would mark a colossal achievement. Yet each node is a point of vulnerability whose breakdown could send damaging ripples up and down the chain and beyond it.

Seaports are particularly vulnerable. Port authorities have three ways to cope with sea level rise, and all are inadequate, experts say. They can retreat to inland locations with river links to oceans, but available sites with requisite conditions are few and expensive. They can build costly sea dikes around the ports, but even if the dikes are strong enough to resist the rising ocean, they must continually be raised to keep up with sea level rise, and they only buy time until eventually being overtopped. They also divert floodwater to nearby coastal areas unprotected by the dikes.

Finally, port officials can raise by at least a couple of meters all port infrastructure so that the port can continue to function as sea level rise proceeds. But the rate of the rise is so uncertain that choosing a cost-effective height for the increase is problematic, Becker said. And raising wharves and other port infrastructure would still leave ports' vital ground transportation links—railroads and highways—and, for that matter, the residents of adjoining cities, unprotected.

In a 2016 paper in Global Environmental Change, Becker and four colleagues concluded that raising 221 of the world's most active seaports by 2 meters (6.5 feet) would require 436 million cubic meters of construction materials, an amount large enough to create global shortages of some commodities. The estimated amount of cement—49 million metric tons—alone would cost $60 billion in 2022 dollars. Another study that Becker coauthored in 2017 found that elevating the infrastructure of the 100 biggest US seaports by 2 meters would cost $57 billion to $78 billion in 2012 dollars (equivalent to $69 billion to $103 billion in current dollars), and would require "704 million cubic meters of dredged fill … four times more than all material dredged by the Army Corps of Engineers in 2012."

"We're a rich country," Becker said, "and we're not going to have nearly enough resources to make all the required investments. So among ports there's going to be winners and losers. I don't know that we're well equipped for that."

The long-term nature of sea level rise, combined with the deficiencies and expense of the proposed solutions, have largely prevented seaport managers from addressing the threat. A 2020 study in the Journal of Waterway, Port, Coastal, and Ocean Engineering that Becker coauthored found that of 85 US maritime infrastructure engineers who responded to a survey, only 29 percent said their organizations had a policy or planning document for sea level rise, let alone had acted on one. In addition, the federal government offers no guidance on incorporating sea level projections into port design. "This leaves engineers to make subjective decisions based on inconsistent guidance and information," the study said, and "leads to engineers and their clients disregarding [sea level change] more frequently."

In response to the threat of increasing supply chain disruption, manufacturers are considering enlarging their inventories or developing "dual supply chains"—supply chains that deliver the same goods via two different routes, so that if one breaks down, the other will prevent shortages. But both solutions would increase production costs, and would contradict the still-predominant "just in time" manufacturing approach, which relies on robust supply chains to eliminate the need for companies to keep extensive parts inventories in stock. American companies could shorten their supply chains, shifting production facilities back to the US or a nearby country, but in many cases they would be removing their factories from the constellation of suppliers that grew up around them in countries such as China and Vietnam.

On top of all this, there's a built-in inertia in supply chain management. "[Long-term] strategy and logistics are opposite things," Dale Rogers, a business professor at Arizona State University, said in an interview. "Logisticians are always trying to execute the strategy but not necessarily develop it. They're trying to figure out how to make something happen now, and climate change is a long-term problem."

THIS STORY ORIGINALLY appeared on Yale Environment 360 and is part of the Climate Desk collaboration.

Source: www.wired.com

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SIX E-COMMERCE SUPPLY CHAIN TRENDS TO WATCH OUT FOR IN 2024

RAHUL GARG-FOUNDER AND CEO OF B2B E-COMMERCE AND DIGITAL SUPPLY CHAIN SOLUTIONS PROVIDER MOGLIX

E-commerce is booming like never before, with sales growing at nearly 10% year-on-year and expected to reach a mammoth $6.3 trillion by 2024. The world of online shopping, however, hides a symphony of complex logistics. Millions of clicks translate to meticulously choreographed journeys for products, hurtling from warehouses to doorsteps at breakneck speed. But this intricate ballet isn't performed on a static stage. The e-commerce landscape is a veritable quicks and, constantly shifting beneath the feet of businesses. In 2024, staying ahead of the curve requires understanding the transformative trends shaping e-commerce supply chains.

1. Advanced technologies orchestrate the flow Gone are the days of relying solely on intuition and spreadsheets. Artificial intelligence (AI) and machine learning (ML) are changing the game, conducting predictive analytics that optimize inventory management, anticipate demand surges, and automate rote tasks. These technologies are no longer futuristic fantasies; they're essential tools for maximizing efficiency and minimizing friction in the supply chain. One of the industry leaders for leveraging new-age tech, Amazon, already uses AI-powered robots to identify inventory and transport it to employees for delivery. Their system reduces workplace injuries and improves order fulfillment up 53%, net profit at Rs 138cr

2. Data whispers, companies listen Modern supply chains are a treasure trove of data. However, raw data without interpretation is just white noise. The key lies in extracting actionable insights. Companies are using data analytics to shed light on hidden patterns, enabling them to forecast demand with laser precision, streamline routes for delivery trucks, and even personalize promotions based on a customer's online footprints. For example, brick-and-mortar giant Walmart has embraced e-commerce with gusto, and data analytics plays a key role in its success. It uses customer data analytics to seamlessly integrate online and offline channels, thereby providing a consistent and convenient shopping experience for customers.

3. The final lap gets a tech boost The last mile has always been the Achilles' heel of e-commerce. But 2024 promises exciting innovations. Various e-com companies and food delivery operators such as Domino's are extensively experimenting with drone delivery. Self-driving delivery vehicles are also gaining larger acceptance, quietly dropping off groceries and other purchases right at your door. These futuristic visions are rapidly becoming reality, transforming the final leg of the delivery journey from a frustrating slog to a seamless sprint.

4. Sustainability takes center stage. The e-commerce boom comes at a cost to the planet. But in 2024, the narrative is changing. Green packaging, carbon-neutral shipping options, and ethical sourcing practices are no longer niche trends; they're becoming mainstream must-haves. Companies are realizing that eco-conscious consumers reward sustainable supply chains with their loyalty, creating a win-win scenario for both the planet and their bottom line. IKEA is leading the charge in this domain with a commitment to fully replace polystyrene in its packaging with natural alternatives such as 'mushroom packaging'.

5. The cybersecurity fort gets reinforced As supply chains become increasingly digital, they become magnets for cyberattacks. 2024 will see a heightened focus on cybersecurity, with companies building impregnable fortresses around their data. Think multi-factor authentication, intrusion detection systems, and even blockchain technology to secure every link in the chain. It's a constant battle against malicious actors, but one that every e-commerce business must fight to ensure the integrity and trust of their operations.

6. Adaptability: The true superpower The one constant in the e-commerce universe is change. Unforeseen events, shifting consumer preferences, and global disruptions can throw even the best-laid plans into disarray. The ability to adapt to unexpected challenges, whether they be natural disasters, geopolitical events, or global pandemics, will be crucial for maintaining uninterrupted operations. Companies must implement strategies such as dual-sourcing, multi-sourcing, and dynamic inventory management to create agile supply chains. Companies that can pivot quickly, diversify their supply chains, and embrace innovation will be the ones who weather the storms and emerge stronger.

The e-commerce supply chain landscape in 2024 is marked by a convergence of advanced technologies, data-driven decision-making, sustainable practices, and a focus on resilience. Navigating the complexities of this evolving environment demands a mindset of constant innovation and adaptability. E-commerce companies that successfully integrate these trends into their supply chain strategies will not only meet the current challenges but also position themselves for sustained growth. Those who leverage new-age tech in their online selling journey are certain to find themselves not just surviving, but thriving in the ever-evolving world of e-commerce.

Source: www.itln.in

BAR CODE INDIA UNVEILS BCI 2.0: A BOLD STEP TOWARDS THE FUTURE OF INDIAN SUPPLY CHAIN AND MANUFACTURING

Bar Code India Unveils BCI 2.0: A Bold Step Towards the Future of Indian Supply Chain and Manufacturing

Bar Code India (BCI), a leading provider of supply chain solutions, proudly announces BCI 2.0 - a strategic vision to redefine the landscape of Indian supply chain and manufacturing processes.

As part of this vision, Bar Code India (BCI) has undertaken an end-to-end transformation focused on creating an ecosystem of best-in-class solutions that unlock unprecedented levels of efficiency, quality, and sustainability for its customers. This encompasses new product introductions, including IoT products, integrated software and hardware solutions, and a brand transformation for the entity. This strategic pivot reinforces BCI's unwavering commitment to anticipating and meeting the evolving needs of its customers in the dynamic realm of digital manufacturing and supply chains.

"BCI 2.0 marks a new chapter with a more targeted and laser-focused strategy, highlighting our commitment to customer-centricity and our role in advancing Indian manufacturing to the next level of Industry 4.0. Our dedication to the 'Make in India' initiative is not just a principle; it's woven into the fabric of BCI 2.0 with the launch of new IoT products and software solutions," said Ajay Bhutani, CEO at Bar Code India (BCI).

In addition to its technological advancements, BCI 2.0 encompasses a comprehensive overhaul of BCI's visual identity, logo, website, and messaging - meticulously crafted to encapsulate the essence of its core values, vision, and mission. The new logo represents a fusion of innovation and expertise, showcasing BCI's DNA and its consistent dedication to staying as industry leaders.

Ram Bhutani, Senior Vice President of Business Operations at BCI, underscored the core principles of BCI's new vision, explaining, "With a legacy spanning over two decades, BCI 2.0 represents a bold leap towards the future. At the heart of BCI 2.0 is our commitment to a progressive, customer-centric, and forward-thinking approach. This reflects our dedication to elevating customer experience through advanced solutions and ensuring the delivery of high-quality products and services. We are excited to share this transformative journey with our valued customers and partners."

Established in 1995, Bar Code India (BCI) has proudly led the charge in revolutionising supply chain technologies across India for over two decades.

BCI provides comprehensive intelligent supply chain solutions, including IoT, RFID, Automation, Software, and Barcoding for leading enterprises across India. With a team of 250 people across 8 offices in India, BCI is united in reimagining the Indian supply chain solution industry.

New Logo: The simpler triangular geometric shapes, like arrows, symbolise the progress, forward-thinking and innovation that the brand helps others achieve in moving beyond. Taking a creative approach influenced by the structure of a QR code, our logo cleverly encapsulates the essence of fuelling transformation. Notably, the upward-pointing arrow within the logo is a powerful symbol, embodying our commitment to continuous improvement and the relentless drive to move forward. It signifies our dedication to pushing boundaries and creating a better world through our innovative solutions.

New Brand Colours: The deep-sea green colour symbolises the brand's commitment to efficiency and adds a contemporary touch. It also represents sustainability and environmental consciousness and a commitment to fostering increasing sustainability across our customer operations. It retains the original 'orange', paying homage to positivity and maintaining a connection to one of the primary colours from the brand's previous logo. This combination of deep-sea green and orange signifies the brand's dedication to modernisation while staying rooted in its positive heritage.

New Tagline: 'Fuelling the Transformation' implies actively and effectively supporting or propelling a change, evolution or improvement process. A change that BCI is committed to make. It communicates that the brand goes beyond mundane operations and is a catalyst for substantial positive change for others. Renewed Mission: Unlocking excellence by driving efficiency, ensuring quality, and fostering sustainability across manufacturing and supply chains through visibility and intelligence.

Vision Statement: Deliver mission-critical products to the core of global manufacturing and supply chain operations. We are dedicated to redefining industry standards and empowering businesses with transformative solutions. We prioritise trust and transparency through unwavering ethics and respond swiftly to challenges with agility. We collaborate closely with our clients for shared success and constantly push the boundaries of what's possible in our industry through innovation.

Disclaimer: No Business Standard Journalist was involved in creation of this content.

Source : Business Standard

GREEN LOGISTICS: PAVING THE WAY FOR SUSTAINABLE SUPPLY CHAINS

NISHITH RASTOGI, FOUNDER AND CEO, LOCUS

The major goal of green logistics is to move and deliver raw materials and finished goods at the lowest possible cost while maintaining the highest standards and minimising environmental effects in the process.

Environmental consciousness is at the forefront of global discussions today. Though almost all industries need to switch to sustainable operations, one industry, in particular, can have the biggest impact out of all, i.e. logistics and supply chain.

Logistics, while considered the backbone of both domestic and global commerce, also is a major source of carbon emissions. According to the World Bank, transport-related emissions currently account for nearly 20% of global energy-related CO2 emissions, a figure projected to rise by 60% by 2050if left unaddressed.

Enter green logistics, born out of the necessity to align supply chain operations with environmental stewardship. This approach integrates sustainability principles into the fabric of supply chain management, offering alternatives for reducing carbon footprints while optimising operational efficiency.

The need for green logistics : As of 2024, sustainability has emerged as a top priority worldwide, echoing the sentiments of a 2022 McKinsey report which revealed that 90% of supply chain executives consider sustainability extremely important for their business. Against the backdrop of global energy transition goals outlined in the 2023 Global Energy Perspective report, the logistics industry faces mounting pressure to adopt eco-friendly practices that mitigate climate impacts and uphold commitments to the Paris Agreement.

Traditional logistics practices have long been associated with environmental harm, stemming from reliance on fossil fuels, inefficient routing, and excessive packaging. The urgency to address these issues has led to the rise of green logistics, a holistic approach that seeks to minimise environmental impact while optimising the efficiency of supply chain operations.

Top factors that influence green logistics : Logistics is the sum of a multitude of little but significant tasks that occur throughout the supply chain process. The major goal of green logistics is to move and deliver raw materials and finished goods at the lowest possible cost while maintaining the highest standards and minimising environmental effects in the process.

So, let's understand some pertinent factors that organisations can consider to make "green logistics" a reality:

Optimised logistics operations : Innovations in supply chain digitisation and automation are enabling major efficiency gains. As per the World Economic Forum, comprehensive digitalisation in logistics can reduce carbon emissions by 20%.

Data analytics helps plan optimal transport routes, loading, warehouse locations and more to minimise mileage. Machine learning improves demand forecasting and inventory management. Autonomous vehicles automate haulage and transfer jobs efficiently. Drones and robots enable faster last-mile deliveries with fewer emissions. Big data and real-time visibility across end-to-end supply chains also aid smarter carbon accounting. Accurately quantifying emissions is the first step to managing and reducing them. For instance, SAP Logistics Business Network launched by DHL provides shippers with analytics like carbon footprint dashboards for informed decision-making.

Eco-friendly packaging solutions : Excessive packaging has long been a concern in logistics, contributing to both waste and increased carbon emissions. Green Logistics emphasises the use of eco-friendly packaging materials and the adoption of sustainable packaging practices. Even the end consumers are demanding companies opt for recyclable and biodegradable packaging materials, reflecting a growing commitment in society to reduce the environmental impact of packaging.

Focus on circular logistics : Transitioning to a circular economy model holds promise for further reducing carbon emissions and waste within logistics operations. Circular strategies, grounded in principles of resource efficiency and waste minimisation, offer a pathway towards sustainable practices. Though specific projections for India aren't available yet, it is deduced that carbon emissions can go down as much as 50% if circular strategies are implemented in logistics operations across Europe.

Initiatives such as Loop, a circular shopping platform operating across multiple countries, exemplify the potential for circular logistics to redefine consumption patterns and minimize environmental harm. Likewise, reverse logistics optimised through IoT and RFID technologies enable efficient collection and recycling of goods, reducing the need for long-distance transport and minimising carbon footprint.

Collaborative efforts and industry initiatives : The shift towards green logistics necessitates collaboration across industries and stakeholders. Large-scale projects such as the Green Corridor initiative (to fund the electric transmission system in India) and the adoption of eco-friendly warehouses and electric vehicles underscore the collective effort required to drive sustainable change.

The future of green logistics as a business imperative

Embracing green logistics is not merely a moral imperative but a strategic business decision. As consumers increasingly prioritise sustainability, companies that lead the charge towards eco-friendly supply chain practices stand to gain a competitive edge.

In conclusion, the journey towards net-zero logistics presents challenges and opportunities alike. Sustainability-focused logistics could unlock significant opportunities, almost $50 billion in new revenues by 2030. By embracing sustainability principles and fostering collaboration across supply networks, the logistics industry can pave the way for a more environmentally conscious and resilient future.

(Nishith Rastogi, Founder and CEO at Locus, is responsible for business expansion across geographies and heads product globally.) Edited by Kanishk 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.com

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FIVE STEPS TO IMPROVE SUPPLIER RELATIONSHIPS AND REDUCE OPERATING COSTS

ANIK JAIN IS SENIOR PRODUCT MARKETING MANAGER, MINERALTREE.

Three years after the height of the pandemic, dependable supplier relationships remain a key priority for businesses. While there are many factors impacting the health of these relationships, the speed and efficiency with which suppliers get paid continues to play a leading role.

In a recent survey of North American finance leaders, 66% of the respondents agreed or strongly agreed that their supplier relationships had grown in importance. In the same survey, suppliers ranked speed of payment as their top priority in the payment experience, followed closely by accurate payment, and, to a lesser degree, payment acceptance costs.

While the need here is clearly defined, responding to it is less straightforward for over-burdened finance and accounts payable (AP) teams. Already weighed down by manual AP processes and vendor payment inquiries, these teams are also being asked by senior management to prioritize cash flow, reduce AP processing costs, and navigate hybrid staffing arrangements and lingering hiring challenges.

Despite these challenges, there are practical steps finance teams can take to streamline their payment processes and meet suppliers' desire for faster, more accurate payments while also reducing their own operational costs and gaining greater control over cash flow.

Expand the Use of Digital Payments

With paper-based checks, it is difficult for AP to know exactly when payments will clear, not only impeding cash flow planning but also leading to late payments and associated fees. Conversely, direct-debit digital payments give finance leaders greater predictability over cash flow. AP teams can time the withdrawal of funds for payment within 24-48 hours, depending on the method used, and have access to their cash until that time — an important advantage, especially in times of economic uncertainty. The great majority of suppliers also want to receive digital payments, including wire, ACH, and virtual cards. One key reason is they believe they are more likely to get paid on time.

Adopt Automation More Broadly Across AP

AP automation has become the norm, and will continue to expand as lean teams struggle to process growing volumes of invoices and payments with limited resources. When companies automate AP, it is easier for them to pay digitally, and the synergies they achieve across the entire invoice-to-pay process compound the benefits they receive — the ability to do more with less; faster, more timely payments; greater visibility and control over cash flow; reduced costs; and better protection against fraud.

Opportunities abound here for most finance teams. Very few teams have fully automated their AP processes.

Put Virtual Cards to Use

Virtual cards are attractive to finance leaders because they provide cash-back rebates with every purchase. Additionally, they give suppliers almost immediate access to funds after the payment is processed, which is faster than ACH. When implemented alongside automation software with segregation of duties and proper controls, virtual cards also offer greater protection against fraud. The 2023 AFP Payments Fraud and Control Report found that attempted or actual fraud was committed against 65% of companies over the past year, with checks the leading payment method impacted (66%). By contrast, only 9% of fraud was associated with virtual cards.

Take Advantage of White-Glove Payment Services

Nearly half of AP teams report spending more than six hours per month following up on vendor inquiries. Suppliers are also unhappy with the time it takes to follow up on invoice status, and it remains their top pain point in the customer payment process. Other key concerns include reconciling payments and cash application.

AP automation, coupled with white-glove payment services, can remove the burden of contacting and enrolling vendors for virtual card payments while maximizing the number of suppliers accepting virtual card payments through ongoing outreach, proxy payments via phone/online portal, and continuous enrollment campaigns. White-glove payment services also improve supplier relationships by addressing their payment inquiries quickly and effectively — and providing the human touch they are looking for.

Embrace AP Analytics

AP automation provides a wealth of data and analytics to help AP teams gain greater control over spend by analyzing invoice and payment data. These analytics provide easy-to-digest insights into important metrics such as typical payment times, days payable outstanding (DPO), and spend-per-supplier. By tracking these metrics, AP teams can determine which suppliers are most strategic for their business, uncover ways to reduce spend by consolidating suppliers, take better advantage of volume or early payment discounts, and time payments to maximize cash flow.

Some AP automation solutions have built-in analytics capabilities with convenient dashboards to provide critical information at a glance. This approach eliminates the need for AP team members to run time-consuming reports and stare at spreadsheets, leaving them free to focus on less tedious, more strategic tasks.

The last few years have continued to reinforce the value of dependable supplier relationships, and timely payments are an important ingredient to the success of those relationships. By automating their AP processes and embracing digital payments, businesses can significantly increase their control over supplier payments while reducing operating costs and gaining valuable insights to make their finance function more effective.

Source; SCB

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7 SUPPLY CHAIN TRENDS TO LOOK OUT FOR IN 2024

KUMAR SIDDHANT

Key Takeaways : As the world grappled with the profound impacts of the pandemic, it became evident that relying on a single nation for manufacturing posed significant risks to global economies. The disruptions in worldwide logistics served as a wake-up call for major powers, prompting the necessity for a 'China +1' strategy. India, with its combination of cost-effective labor, abundant raw materials, robust technological and scientific infrastructure, a thriving entrepreneurial spirit, and a rapidly expanding economy, emerges as a promising candidate for this crucial 'plus one' role.

Despite these strengths, one formidable challenge looms on the horizon: India's logistics infrastructure. However, encouragingly, government initiatives such as MUDRA (Micro Units Development & Refinance Agency Ltd.) Yojana, SFURTI (Scheme of Fund for Regeneration of Traditional Industries), ULIP (Unified Logistics Interface Platform), PM Gati Shakti, Production Linked Incentive (PLI), and more, signal a clear commitment to establishing India as a formidable player in the global supply chain. With such significant brushstrokes in the logistics landscape, shippers, transporters, and manufacturers alike need to brace themselves for the upcoming supply chain trends in 2024.

Despite these strengths, one formidable : Despite these strengths, one formidable challenge looms on the horizon: India's logistics infrastructure. However, encouragingly, government initiatives such as MUDRA (Micro Units Development & Refinance Agency Ltd.) Yojana, SFURTI (Scheme of Fund for Regeneration of Traditional Industries), ULIP (Unified Logistics Interface Platform), PM Gati Shakti, Production Linked Incentive (PLI), and more, signal a clear commitment to establishing India as a formidable player in the global supply chain. With such significant brushstrokes in the logistics landscape, shippers, transporters, and manufacturers alike need to brace themselves for the upcoming supply chain trends in 2024.

'Go Green' for Overall Supply Chains : Sustainability is no longer a buzzword but a business imperative. With new ESG (Environmental, Social, Governance) reporting requirements circulated by SEBI (Securities and Exchange Board of India) in 2021, the top 1000 listed companies in India (by market capitalization) now need to mandatorily disclose their ESG parameters and share their sustainability goals in the BRSR (Business Responsibility and Sustainability Report).[Source]

More than reporting data, the new BRSR format drives companies to work towards sustainability, all while maintaining transparency with investors. Simply put, investors can now assess and compare companies' sustainability risks, analyze their strategies for achieving carbon neutrality, and invest accordingly.

Thus, in 2024, expect companies to channel funds and efforts toward carbon emission calculators and other infrastructure that allows them to measure and bolster ESG parameters (like resource usage, air pollutant emissions, GHG (Greenhouse gas) emissions, waste generation, and more).

Having said that, E-commerce giants like Flipkart have already taken up a pioneering role in this matter. Flipkart has pledged to ensure net-zero carbon emissions in its operations by 2030. The plan is to increase energy efficiency in their corporate offices, warehouses, and other supply chain nodes by relying on renewable sources like solar.

What's more, understanding that a major chunk of their emissions comes from their network of suppliers and logistic requirements, Flipkart aims at ensuring net-zero carbon emissions across their value chain by 2040.[Source]. However, it will be interesting to see how they pull it off, considering the adoption of commercial EV vehicles in India is expected to be merely 20-25% by 2030.

From Linear to Circular Supply Chain Models : Have you ever played with Legos? Why do I ask? Manufacturers are drawing inspiration from these when shaping future trends in supply chain management.

That's right! Supply chains will soon transition from linear models to circular models. This entails designing products for longevity such that they can be dismantled into raw materials post-usage and refurbished as new products. It involves creating closed-loop systems where materials are continuously repurposed, minimizing the need for virgin resources.

And guess what, you have most likely indulged with one such brand that has excessively adopted a circular strategy - it's IKEA! IKEA's take-back programs that allow customers to return used furniture for recycling and refurbishing purposes is one such initiative. Other initiatives like allowing the purchase of refurbished furniture, renting furniture (to promote the sentiment of 'reuse'), and their suit of FSC-certified wood products are other cogs that reduce their impact on the environment.

Tech-Powering Operations with AI : ChatGPT took the world by storm! It was the start of an AI revolution that aims to increase efficiency and reduce manual efforts on a massive scale. Well, the future of supply chains is also AI.

Be it predictive analytics, demand forecasting, or automated decision-making capabilities; AI is set to dictate prominent supply chain trends in the near future. Generative AI's self-teaching attributes are another advantage across industries.

Did you know that Amazon has been embracing AI in multiple supply chain functions for a while now?

Right from predictive AI models that analyze customer purchase patterns to predictive analysis for inventory management and restocking, Amazon leverages AI across supply chain touchpoints to ensure optimum customer experience!

Well, this brings us to the next most important supply chain trend you need to look out for in 2024 - an increase in infrastructure to capture and analyze DATA!

Data is the New King : Data is a gold mine for companies looking to scale up operational efficiency. Advanced analytics tools and real-time data streams will enable companies to gain deeper insights into their operations (like route analysis to figure out the safest/quickest passage, gauging demand-supply patterns for different demographics, datasets to train predictive and Gen AI models, and more).

However, the supply chain industry has had a long-standing challenge in this regard. Lakhs of data sets are generated in the industry each day, even more so after the advent of online marketplaces and, with them, digital infrastructures like integrated devices, IoT systems, tracking devices, and more.

The challenge is siloed data sets from the aforementioned touchpoints, which are difficult to track due to their diverse origins. Thus, solutions like control towers and unified tracking/visibility dashboards will be even more crucial for organizing and analyzing actionable data points in 2024.

Transparency and Visibility On Priority : Real-time supply chain visibility will be crucial for companies to amass actionable data points. Companies will invest in infrastructures that help them capture data regarding product flows in the supply chain ecosystem, visibility on ESG parameters (like Scope 1, 2, and 3 emissions), and real-time updates on in-transit assets to mitigate supply chain disruptions.

This visibility facilitates the optimization of supply chain operations, for example, reducing TAT (Turnaround Time), preventing stock-outs, alleviating the need for buffer inventories, and more.

Having said that, blockchain technology, GPS, GSM, and SIM-based tracking solutions are some ways companies can ensure end-to-end visibility across their supply chain operations.

SCaaS (Supply Chain as a Service) is the Newest Talk in Town : The growth of SCaaS providers is one of the most recent trends in supply chain management as opposed to traditional models.

SCaaS providers offer end-to-end solutions, including logistics, warehousing, and fulfillment, on a subscription or pay-per-use basis. This flexible and scalable approach allows companies to adapt quickly to changing market conditions and customer demands.

Moreover, as global economies are pushed towards recessions and investors are skeptical about their spending, SCaaS, with its tech-bolstered cost-effectiveness, will soon become the next best alternative for manufacturers and shippers.

Bolstering India's Waterway Infrastructure : One of the most recent and emerging trends in the supply chain landscape is the penetration of logistics in terms of navigating inland waterways.

As the global supply chain seeks diversification and resilience, India's waterway infrastructure is gaining attention as a strategic asset. Initiatives like the Jal Marg Vikas (JMV) project have started being implemented to enhance the capacity and efficiency of India's inland waterways, offering a cost-effective and environmentally friendly alternative for freight transportation.

The JMV aims to build a 1380 km-long fairway covering the states of Uttar Pradesh, Jharkhand, Bihar, and West Bengal that will facilitate the navigation of 1500-tonne vessels along the Ganga-Bhagirathi-Hoogly river.

Additionally, the National Waterway -1 is another initiative that will connect east and southeast Asian countries, namely Bangladesh, Myanmar, Thailand, Nepal, and others via the Kolkata Port and Indo-Bangladesh Protocol Route.[Source]

Key Takeaways : As we navigate 2024, several pivotal supply chain trends are reshaping the global industrial landscape. India's ascent as a key manufacturing hub and the emphasis on sustainability underscore the shifting paradigms in the industry. With AI's transformative potential, challenges in data management are also coming to the fore, necessitating innovative solutions.

Transparent operations, evolving sustainability metrics, and the emergence of SCaaS highlight the industry's adaptability and resilience. Furthermore, investments in waterway infrastructure signify a broader commitment to sustainable and efficient transportation. In essence, 2024 promises to be a transformative year for supply chains, driven by innovation, sustainability, and strategic diversification.

Source: www.intugine.com

AI'S TRANSFORMATIVE ROLE IN EMPOWERING COMPANIES TO OPTIMIZE PROCUREMENT

SHAZ KHAN
CEO AND CO-FOUNDER PROCUREMENT PLATFORM- VROOZI.

Here's a look at how the technology is making waves in supplier management, predictive analytics and more, from Vroozi's Shaz Khan.

Artificial intelligence is a transformative force, reshaping the procurement landscape and offering companies an unprecedented opportunity to revolutionize their supply chain operations. This powerful tool accelerates problem-solving, data analysis, customer service and product innovation, making it a game-changer in the world of procurement.

Procurement processes are replete with repetitive tasks, transactional documents and vast historical data — the perfect breeding ground for the introduction of AI solutions. These technologies bring compliance, control and speed to the supply chain, enabling organizations to measure supplier risk, streamline onboarding and offboarding processes, automate purchase order deliveries and monitor tax compliance across different countries.

Procurement, in the age of AI, is on the cusp of becoming the digital showroom that defines organizational efficiency. The integration of AI promises to automate and digitize many laborious processes in sourcing and procure-to-pay cycles, resulting in remarkable gains in productivity, significant cost savings and enhanced operational efficiency.

How AI is currently reshaping the procurement landscape

AI is a tool that is accelerating the way companies attack solutions to complex problems, analyze and crunch large amounts of data, deliver exceptional customer service and innovate new products for the market. Procurement and sourcing have clearly defined and repetitive processes, transactional documents, large amounts of historical data and a list of clearly defined business outcomes from cost savings to document processing costs.

Because of these characteristics, procurement has the opportunity to become the leading AI digital showroom for organizations. Many repetitive and time-intensive processes in the sourcing and procure-to-pay cycle can be automated and digitized with AI, leading to immense productivity gains, incredible margins and substantial operational cost savings.

While the introduction of AI solutions is still in the early stages for procurement and sourcing organizations, we are seeing incredible use cases in the market.

For example, with intake, a new employee can interact with a chatbot integrated into their existing messaging platform to request a PC laptop and AI can orchestrate the entire approval and ordering process for the user without the user having to log into any formal user interface or application. Similarly, in accounts payable, AI can extract and analyze any type of incoming supplier invoice data, process the invoice, and send approved invoices for payment and other invoices to a quarantine queue where they can be reviewed by a manager to resolve issues.

I would categorize the areas AI is making an immediate impact on procurement into four broad buckets:

- **Document orchestration** - Initiating and processing purchase orders and invoices with pre-approved supplier pricing, identifying reliable and cost-effective suppliers and automating business workflows.
- **Supplier management** - Automating the identification and management of new suppliers; tracking supplier compliance, updating supplier data and detecting any early warnings or risks with suppliers.
- **Contract and tax compliance** - Process invoices with the jurisdictional tax and in-country compliance requirements; ensure incoming invoices align with contract pricing and terms; ensure employees are purchasing from electronic marketplaces aligned with corporate goals around CSR, sustainability and small business and diversity goals.
- **Predictive analytics** - AI can analyze spending patterns and historical data to provide insights into organizational spend data such as spend by category, location and provide alternate sources of supply. In addition, AI can be used to provide insights into potential fraud or supplier risk.

These capabilities share a theme of increasing supply chain velocity, enhancing buyer-supplier collaboration, reducing order costs and boosting company profitability and customer satisfaction.

All opinions are the author's own.

Source: www.supplychaindive.com

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PM ADDRESSES BHARAT MOBILITY GLOBAL EXPO 2024 "INDIA IS ON THE MOVE AND IS MOVING FAST"

The numbers of growing economy and the growing income are bound to infuse new confidence in the mobility sector"

"The speed and scale of our government has changed the very definition of mobility in India"

"India is now on the threshold of becoming a global economic powerhouse, with the auto and automotive component industry playing a significant role"

"The Government understands the concern of truck drivers and their families"

"1000 modern buildings with facilities for food, clean drinking water, toilets, parking and rest for drivers on all national highways are being constructed in the first phase of a new scheme"

The Prime Minister, Shri Narendra Modi addressed a program at India's largest and first-of-its-kind mobility exhibition - Bharat Mobility Global Expo 2024 at Bharat Mandapam, New Delhi today. He also took a walkthrough of the Expo. Bharat Mobility Global Expo 2024 showcases India's capabilities across mobility and automotive value chains and will feature exhibitions, conferences, buyer-seller meets, state sessions, road safety pavilion, and public-centric attractions like go-karting.

Addressing the gathering, the Prime Minister congratulated the automotive industry of India for the grand event and praised the efforts of the exhibitors who showcased their products in the Expo. The Prime Minister said that the organization of an event of such grandeur and scale in the country fills him with delight and confidence. Recommending the people of Delhi to come and witness the Bharat Mobility Global Expo 2024, the Prime Minister said that it brings the entire mobility and supply chain community on a single platform.

The Prime Minister recalled a mobility related conference from his first term and remembered his focus on battery and electric vehicles and expressed satisfaction that he could see significant progress during his second term and said that in the third term mobility will see new heights.

Reiterating the goal of Viksit Bharat by 2047, the Prime Minister underlined the pivotal role of the mobility sector. He repeated his call that he gave from the rampart of the Red Fort that 'Yeh Hi Samay Hai, Sahi Samay Hai'- this is the right time. "India is on the move and is moving fast", the Prime Minister said, highlighting that the present era is the beginning of the golden period for the mobility sector. He underlined that the economy of India is expanding at a fast pace and India is set to become the third-largest economy in the world during the present government's third term. Throwing light on the efforts of the government in the last 10 years, the prime Minister informed that approximately 25 crore people have risen out of poverty. He emphasized that when a citizen breaks out of poverty, the means of transportation be it a cycle, two-wheeler or a four-wheeler, becomes their first requirement. Touching upon the emergence of a neo-middle class, PM Modi underscored the need to fulfill the aspirations found in such economic strata which is equal to none. The Prime Minister stressed that the expanding spheres and growing income of the middle class of the country will give strength to the mobility sector of India. "The numbers of growing economy and the growing income are bound to infuse new confidence in the mobility sector", Shri Modi said, pointing out that the number of cars sold in India rose from 12 crores to more than 21 crores from the 10 years before 2014 to after 2014, while the number of electric cars sold in India rose from 2 thousand per year 10 years ago to 12 lakh per year today. He further added that in the last 10 years, the number of passenger vehicles saw an increase of 60 percent while two-wheelers increased by 70 percent. According to the latest statistics, the Prime Minister informed that car sales in January have broken all previous records. "Mobility sector is witnessing an unprecedented atmosphere in the country and you must capitalize on it", PM Modi urged the industry leaders present on the occasion.

The Prime Minister said that today's India's making new policies keeping in mind the needs of the future. Referring to the Union Budget that was presented yesterday, PM Modi informed that in 2014 India's capital expenditure was less than 2 lakh crore and has risen to more than 11 lakh crore today. This has brought many opportunities for India's Mobility sector, he said. This unprecedented expenditure is transforming rail, road, airport, waterway transport and all other sorts of transport. He also talked about completion of engineering marvels like Atal Tunnel to Atal Setu in a record timeframe. 75 new airport has come up in India in the last 10 years, about 4 lakh kilometer rural roads have been laid, 90,000 km national highways have been constructed, 3500 km of high-speed corridors have been developed, 15 new cities got Metro and 25,000 rail routes have been constructed. Conversion of 40,000 rail coaches into modern Vande Bharat type bogies was announced in the Budget. These coaches when fitted in the ordinary trains will transform the Indian Railways.

The Prime Minister said that "the speed and scale of our government has changed the very definition of mobility in India". He talked about systematic and timely completion of jobs and highlighted the steps for removing logistics bottlenecks. PM National Gati Shakti Masterplan is promoting integrated transport in the country. GIFT City regulatory framework has been worked out for aircraft and ship leasing. National Logistics policy is addressing the problems of logistics, he said. Dedicated freight corridors are bringing the costs down. Three Railway Economic corridors announced in the Union Budget will also increase the ease of transportation in the country.

The Prime Minister also highlighted the transformative impact of the Goods and Services Tax (GST) in accelerating trade and abolishing check posts at state borders. Furthermore, Prime Minister Modi underscored the role of Fast-Tag technology in saving both fuel and time in the industry. "Fast-Tag technology is facilitating savings in fuel and time in the industry," he affirmed. Citing a recent study, the Prime Minister noted that Fast-Tag technology is contributing to an annual benefit of ₹ 40,000 crores to the economy.

"India is now on the threshold of becoming a global economic powerhouse, with the auto and automotive component industry playing a significant role," PM Modi stated. Highlighting India's stature in the global automotive market, Prime Minister Modi remarked, "Today, India is the world's third-largest market for passenger vehicles and among the top three countries globally manufacturing commercial vehicles." Moreover, Prime Minister Modi reiterated the government's commitment to supporting various sectors through initiatives such as the Production Linked Incentive (PLI) Scheme. "For the industry, the government has introduced a Production Linked Incentive Scheme of more than ₹ 25,000 crores," he said.

The Prime Minister said that the National Electric Mobility Mission is pushing manufacturing of Electric Vehicles. The Government has invested 10 thousand crore rupees for creating demand for electric vehicles. FAME scheme has led to electric buses in the capital as well as in many other cities, he said.

Prime Minister Modi informed that a fund allocation of Rs 1 lakh crore has been made in this year's budget to encourage research and innovation and also mentioned the decision to further expand the tax exemptions given to startups. "These decisions will create new opportunities in the mobility sector", PM Modi said. Touching upon the most significant challenges of cost and battery in the EV industry, the Prime Minister recommended using these funds in its research.

Prime Minister Modi encouraged the industry to explore research avenues that utilize India's abundant raw materials for battery manufacturing and delve into areas such as green hydrogen and ethanol. He said, "Why not conduct research to manufacture batteries using raw materials available in India? The auto sector should also explore research in green hydrogen and ethanol."

The Prime Minister emphasized the importance of leveraging indigenous technology for developing hybrid vessels in the shipping industry. "India's Shipping Ministry is advancing towards making hybrid vessels using indigenous technology," he remarked. Shri Modi also mentioned the drone sector in India getting a new flight due to startups and recommended using funds for research related to drones. He also noted the emergence of cost-effective means of transport via waterways and informed about the push by the Ministry of Shipping towards making hybrid vessels using indigenous technology.

PM Modi also drew attention towards the humane aspect of drivers in the mobility industry. And highlighted the hardships faced by truck drivers. "The Government understands the concern of truck drivers and their families", the Prime Minister said informing about a new scheme on the works to develop modern buildings with facilities for food, clean drinking water, toilets, parking and rest for drivers on all national highways. He further added that the government is preparing to build 1,000 such buildings across the country in the first phase of this scheme. He said that it will give a boost to both the ease of living and ease of traveling for truck and taxi drivers, thereby improving their health and also help in preventing accidents.

Highlighting the immense possibilities in the mobility sector in the next 25 years, PM Modi urged the industry to transform itself rapidly to fully utilize these possibilities. Addressing the need for technical workforce and trained drivers in the mobility Sector needs, the Prime Minister mentioned more than 15 thousand ITIs in the country providing manpower to this industry today. He also urged the industry leaders to collaborate with ITIs to make the courses more relevant according to the needs of the industry. He also touched upon the scrappage policy by the government where exemption in road tax is provided on new vehicles in exchange for scrapping of old vehicles.

The Prime Minister referred to the tagline of the expo – Beyond Boundaries and said that it showcases the spirit of India. "Today we want to break old barriers and bring the whole world together. We want to expand India's role in the global supply chain. There is a sky of possibilities in front of the Indian Auto Industry.", the Prime Minister asserted as he urged to move forward with the vision of Amritkaal and make India a global leader. The Prime Minister asked the tyre industry to reduce import dependence for rubber with the cooperation of farmers. Stressing his confidence in the farmers of India, the Prime Minister advocated an integrated and holistic approach. He asked the gathering to think out of the box and think in collaboration. Mentioning the presence of all the major designing players in India, the Prime Minister called upon the industry to promote indigenous designing capabilities.

Giving example of the global embrace of yoga, the Prime Minister said 'when you believe in yourself, the world believes in you. Where your gaze falls, you should see vehicles from you, he concluded.

Union Minister for Commerce and Industry, Shri Piyush Goyal, Union Minister for Road, Transport and Highways, Shri Nitin Gadkari, Union Minister for Micro, Small and Medium Enterprises, Shri Narayan Rane, Union Minister for Petroleum & Natural Gas, Shri Hardeep Singh Puri and Union Minister for Heavy Industries, Shri Mahendra Nath Pandey were present on the occasion among others.

Background : With over 800 exhibitors from 50+ countries, the Expo highlights cutting-edge technologies, sustainable solutions and breakthroughs in mobility. The Expo features the participation of over 28 vehicle manufacturers, in addition to the presence of more than 600 auto component manufacturers. Over 1000 brands from over 13 global markets will showcase their products, technologies, and services at the event.

Along with the exhibition and conferences, the event also features state sessions for states to showcase regional contributions and initiatives to enable collaboration at both national and regional levels, promoting a holistic approach to mobility solutions.

Source: PIB

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HOW AI MAY IMPACT THE LOGISTICS INDUSTRY? – TRENDS & PREDICTIONS

ITP EDITOR

Artificial intelligence has permeated into most industries globally, and logistics is not behind! With the development of AI capabilities, supply chain systems have benefited greatly.

Artificial intelligence has permeated into most industries globally, and logistics is not behind! With the development of AI capabilities, supply chain systems have benefited greatly. Modern innovation has led to warehouse automation, predictive analytics, smart roads, automated vehicles, and much more.

These technological advancements have no signs of stopping. In fact, the MHI annual report states that by 2026, businesses will adopt AI-powered warehouse solutions by more than 60%, as compared to 2020.

Industry giants have also started investing actively in AI. Hence, new trends are emerging that can transform how the logistics industry operates.

AI in logistics is still a developing field, so there are several new and future opportunities to explore globally. Let's discuss some of them here.

Application of AI In Logistics: Current Trends : A modern **logistics management system** uses the capabilities of artificial intelligence to improve inventory accuracy, fulfil orders efficiently, decrease delivery times and also for efficient fleet management.

Here are some of the recent AI trends in the logistics industry to watch out for.

Big Data Analytics : AI doesn't just mean robots and smart speakers. Its core lies in data-driven analytics. In logistics, big data analytics can help predict risks, bad weather, optimal routes, and much more. You can use its highly accurate insights to improve the future performance of several facets of the supply chain, as several logistics giants are already doing.

Industry experts believe that big data usage will continue to improve supply chain competency in organizations. This is more so because logistics involves several moving parts, which are easier to track through AI.

Artificial intelligence in logistics also provides much-needed transparency in supply chain operations through real-time tracking, last-mile delivery optimizations, and general compliance.

Autonomous Vehicles : The logistics industry already uses high-tech driving assistance for better safety. This trend is only set to soar higher, with features like highway autopilot, assisted braking, platooning, electric semi-trucks, etc., set to enter the market in the near future.

Companies like Google, Tesla, Volkswagen, and Einride are developing fully autonomous vehicles. Autonomous options save fuel and transportation costs, improve customer experience, and optimize shipment fulfilment.

Autonomous drones can conduct last-mile delivery without human assistance, and AI-powered vehicles use sensors and route mapping techniques to deal with obstacles on the road.

While most countries now have regulations against driverless vehicles on the road, things are expected to change soon, with more advanced autonomous shipments coming to the market.

Predictive Analytics and Maintenance : AI provides accurate tools for forecasting and capacity planning. Through predictive analytics in **logistics management platforms**, you can regulate the number of vehicles, demand and supply, and operational costs. It also helps avoid risks and create solutions.

AI can analyse devices to recognize possible faults and reduce downtime. Its algorithms can also alert companies of impending issues. This helps save money and prevent hazardous situations in many instances. Predictive maintenance is now used on equipment, warehouses, and transport units.

Computer Vision : Computer vision in logistics gives complete visibility into the entire supply chain. It can identify damage, suggest corrective actions, and help in resolving issues through state-of-the-art technology. IBM Watson is an AI vision program that can identify what damaged train wagons originally looked like through cameras installed along train tracks. Its robotic visual recognition capabilities gave 90% accurate results.

Smart Warehouses : Smart warehouses can recognize patterns and dependencies based on unstructured data from IoT, AI, and cloud computing. This data can then be applied to find solutions to new hurdles in logistics. This improves operational efficiency and reduces manual load.

Alibaba's logistics department, Cainiao, has a smart warehouse in Huiyang with more than 100 self-charging automated guided vehicles (AGVs) equipped with Wi-Fi to oversee transportation. It has proven to increase productivity and is expected to be adopted more commercially in the near future.

Intelligent Route Planning : AI in logistics operating systems can integrate data from various sources to identify the most efficient routes. These intelligent insights can help optimize travel and ensure the safety and security of the shipment.

UPS's ORION uses advanced AI, algorithms, and ML to offer delivery estimates and ensure dependency. Through this route planning solution, it has saved more than 100 million miles and 10 million gallons of gasoline since 2012.

Automated route planning is the norm for the future. More and more logistics giants are putting their stakes in it to improve customer experience and reduce delivery failures.

Conversational AI : We generally associate conversational AI with sales and customer service. However, chatbots and virtual assistants can also work wonders for logistics. By analysing large volumes of data and human interactions, conversational AI can provide regular updates about route delays and other roadblocks.

It ensures comprehensive visibility of the shipment and can keep users updated about the delivery status on any other information they might require. Salesforce Service Cloud resolves customer requests through conversation AI for faster resolutions and a seamless support experience.

Robotics : Robotics is already used within the supply chain for locating, tracking, and transporting inventory. They can also sort oversized packages at ground distribution centers.

The Dutch company Fizyr uses robots to automate logistics through deep learning algorithms.

Through robotics, you can automate decision-making and also count, pick, process, analyze, and manipulate goods. A **logistics management platform** can also be integrated with robotics for the physical moving of goods in seconds without human involvement.

All these AI developments are already present in the logistics industry to some extent. But what does the future entail?

What Does the Future Hold for AI In Logistics?

The current developments in AI logistics are just the beginning. The future looks much more technologically advanced, with a holistic collaboration of logistics companies with tech solutions.

Deep learning algorithms will find wider use, ML and NLP models will take over communication systems, and companies will be able to process big data for more accurate decisions.

We can also expect more advanced AI-based applications focusing on fleet management and **logistics data security**.

AI can help in logistics planning, develop smart roads and vehicles, ensure logistics security (both physical and digital), and boost productivity. You also get real-time visibility into your entire supply chain. This way, you can foresee damages and delays and work towards improving the overall customer experience.

Platforms like Bosch L.OS are a step towards the future, enabling solutions and players with AI capabilities to scale operations, integrate business solutions, optimize costs, and generate actionable insights for better fleet management. Bosch L.OS aims to transform the transportation and logistics industry into a digital and data-driven future state.

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Source: www.logisticsandscm.com

BIG CHALLENGES GLOBAL SUPPLY CHAINS ARE FACING IN 2024

MICHELLE ADAMS

A new wave of challenges are materializing for global supply chains, from shipping lane issues to increasing market regulations. We take a look at some of the biggest challenges buyers are facing in 2024.

While COVID-19 wasn't the first challenge to global supply chains, it's been the kickstarter to an ongoing (and increasing) array of snarls that continue to threaten supply chain continuity. Sudden labor shortages, low inventories, fluctuations in demand, constricting chokepoints, and the headline-grabbing quagmires at shipping container ports have all contributed to a tumultuous, hazard-riddled environment for manufacturers, shipping lines, and production buyers.

While many of the logistical complexities roiling supply chains in 2021 and 2022 have gradually resolved themselves, a new wave of challenges is materializing for production buyers—a group that was almost certainly hoping for a stretch of relative calm and predictability in their respective supply chains. And while the new year might not necessarily present quite the same slew of intractable, existential threats posed by COVID-19, it's still poised to present a formidable landscape of geopolitical, environmental, and regulatory obstacles supply chain professionals need to be sufficiently prepared for.

1. Pirates of the Red Sea : The brutal and highly polarizing conflict in Gaza between Israel and Hamas has reverberated across much of the world in a range of complex, turbulent ways. The October 7 massacre and subsequent military campaign has incited a barrage of cross-border strikes in the region; embroiled the U.S. and the Biden Administration in growing allegations of complicity in the escalating Palestinian death toll; and even spurred the South African government to bring charges of genocide against Israel at The Hague's International Court of Justice. But few, if any, of these ripple effects were as unforeseeable and utterly singular as the violent and abrupt emergence of Houthi rebels onto the world stage.

The Houthis, a religious movement whose armed insurgency toppled Yemen's government in 2014 and subsequently triggered a long and bloody civil war in the nation, began carrying out attacks on cargo ships traveling through the Red Sea and the Suez Canal in November. The Houthis are using drones, airstrikes, and speedboats to shell, ambush, and hijack ships in what the Yemeni faction is framing as a campaign of revenge against Israel and its supporters for the military offensive in Gaza. While the group has been staging these destructive incursions nearly every day since early December, the repercussions are extending far beyond the two dozen or so ships that have fallen victim to the organization's sophisticated piracy.

The Red Sea is a major maritime gateway to the Western Hemisphere—around a quarter of all global container ships pass through the Suez Canal, often traveling from Asia to Europe. That makes the narrow, 120-mile stretch a critical chokepoint for global trade, and the Houthis and their patrons—namely Iran and Hezbollah—are exploiting it to sabotage cargo flow and strike back at the West and its perceived unconditional support for Israel. So far, the unconventional, "asymmetric" warfare has been working. As of late January, the volume of container ships traveling through the Red Sea has all but collapsed, dropping by 75 percent, and most of the world's largest shipping lines—including Maersk, CMA-CGM, and Evergreen—have stopped transporting cargo through the increasingly dangerous route.

Such significant, protracted disruptions present serious challenges to production buyers dependent on established supply chains that run through the Suez Canal. For now, shipping companies are redirecting their vessels south, around South Africa's Cape of Good Hope. The longer route adds around two weeks to a container ship's journey, pushing up the cost of everything from fuel to insurance premiums for the voyages. Buyers operating in this fractured supply chain environment must entertain contingency plans and maintain flexibility as they navigate higher costs, longer transportation times, and a higher degree of logistical volatility. Looming over a myriad of difficult decisions is the question of whether and how much to pass these increased costs to consumers, who've already had to grapple with two long years of sticky, sprawling inflation.

2. Generational Drought in the Panama Canal : Although not nearly as vital as the Red Sea to maritime trade flow and the innumerable industries that depend on it, the Panama Canal is another key chokepoint in the global supply chain. Around 2.5 percent of all seaborne cargo travels through the Central American canal, and 2023 saw roughly 14,000 passages through the waterway. What's happening in the Panama Canal is far more straightforward than the proxy-war morass playing out in the Red Sea, though. The canal depends on freshwater from the nearby Gatun Lake, and a severe drought in the region has decreased the lake's water levels to the lowest on record. As a result, the Panama Canal Authority (ACP) is being forced to restrict daily usage of the route by about 40 percent compared with 2023 figures. The decision, which is costing the ACP an estimated $100 million per month in lost toll revenue, has major shipping lines rerouting their container ships and even incorporating rail transport into their logistics.

As with the embattled Red Sea, the shrinking access to the Panama Canal is forcing production buyers to accept more expensive shipping routes and transportation costs or else rethink their existing supply chains altogether. Because around 14 percent of all maritime cargo coming to and from the United States passes through the manmade corridor, the ramifications of the canal's constriction are going to be disproportionately felt by American companies and their buyers. The narrow period for these stakeholders to make critical adjustments is right now, and the window is rapidly closing. Key players must weigh decisions regarding alternative routes and changes in purchasing patterns while working up speculative assessments on when the canal will resume preexisting trade capacity.

3. Clamping Down on Forced Labor : Twenty twenty-three represented a landmark year for regulations protecting human rights in supply chains. Germany entered into force the first phase of its Supply Chain Due Diligence Act (SCDDA), while the EU made substantive progress on its Corporate Sustainability Due Diligence Directive (CS3D). This year looks to continue the trend of governments increasing regulatory pressure on businesses to root out forced labor and other human rights abuses in their supply chains.

The initial phase of Germany's SCDDA, rolled out in January 2023, required all companies that were based in Germany and had at least 3,000 employees to comply with the new regulations. Beginning on January 1 of this year, the directive's scope expanded significantly, and now applies to all businesses with at least 1,000 employees. (For perspective, this year's expansion increased the number of companies under the directive's remit by around 500 percent.) While we covered the SCDDA in detail in December, the act requires companies to protect 11 internationally recognized human rights conventions by implementing eight distinct measures, including creating a risk management system and establishing a human rights officer within the company.

In addition to the second phase of Germany's human rights directive, this year Canada's own legislation aimed at combating forced labor practices comes into effect. The Forced and Child Labour in Supply Chains Act will require covered organizations to submit annual reports to the Minister of Public Safety outlining their efforts to reduce and mitigate forced and child labor within their supply chains. According to the Canadian government, entities under the law's purview include "any corporation, trust, partnership or other unincorporated organization whose activities include producing, selling or distributing goods in Canada or elsewhere importing goods into Canada, or controlling an entity engaged in any of these activities." Further inclusion criteria include thresholds for assets, revenue, and total employees.

Organizations complying with the Forced and Child Labour in Supply Chains Act must cover several specific areas in their annual reports, including due diligence processes, measures to assess forced and child labor risks in their supply chains, and concrete steps taken to mitigate such risks. The first reports to the government are due on May 31, 2024.

Production buyers based in the US and doing business in Canada will need to be aware of the newly enforced reporting requirements and comply with their business's corresponding policies and due diligence measures. Adhering to their new obligations may require buyers to deepen and enhance visibility into their supply chain and learn to recognize signs of forced and child labor risks. In the event that labor exploitation is discovered, organizations will need to develop and deploy contingency measures—including implementing modifications to their supplier networks and utilizing dual sourcing—that eliminate labor abuses from their procurement processes.

4. EU Embraces ESG : ESG is a framework for analyzing and evaluating a corporation's performance in fulfilling three central pillars: environmental, social, and governance. The environmental pillar refers to a company's efforts to reduce its negative impacts on the environment, including through shrinking its carbon footprint, implementing a viable climate change strategy into its operations, and embracing waste-reduction processes that promote circularity. The social pillar focuses on how a corporation treats human beings, emphasizing ethical practices like fair pay, equal opportunities for employment, and responsible supply chains free of exploitation and other labor abuses. Finally, governance encompasses the ways in which a corporation holds itself accountable to external regulations and internal policies, including compliance, best practices, and guardrails for potential conflicts of interest.

The concept of ESG and the ideals it espouses have gained considerable traction over the past half-decade or so. Over that time, investors, governments, and the wider public have increasingly trained their attention on the extent to which organizations are acting with integrity and making a good-faith shift toward more ethical, sustainable business models that don't focus exclusively on profits. The European Union's Corporate Sustainability Reporting Directive (CSRD), which entered into force in January 2023, is intended to codify these new principles into legally binding regulations that obligate companies in the EU to meet unprecedented levels of transparency with respect to ESG.

The EU is using a phased approach in its rollout of CSRD. Beginning this year, organizations with at least 500 employees operating in an EU market must start adhering to the directive. CSRD encompasses a comprehensive breadth of disclosure and reporting requirements related to ESG and its pillars, which have been established in the form of the European Sustainability Reporting Standards (ESRS). The ESRS are broken up into 12 ESG-related categories, including—but not limited to—climate change, pollution, biodiversity and ecosystems, and workers in the value chain. All disclosures must be made publicly available, typically through a company's website, and organizations must submit to third-party auditing to verify the accuracy of the information being disclosed.

One final note on CSRD and the nature of its requirements. In-scope businesses must collect and submit information that reflects the idea of "double materiality." Briefly, this means that disclosures should account for both the organization's impact on human beings and the environment (referred to as either "impact materiality" or the "inside-out" perspective), and how the organization's goals for reducing that impact and achieving sustainability objectives will affect their own financial health ("financial materiality" or the "outside-in" perspective).

Disruptions and Directives for Production Buyers in 2024

Buyers moving into 2024 are being confronted with two primary themes challenging their sourcing and procurement efforts. First, there are the escalating disruptions that are squeezing international trade routes and complicating logistics for companies worldwide. Notably, the implications of these issues for the global supply chain are not abstract potentialities but concrete realities happening right now, with tangible negative impacts on costs and transit times for industry professionals. As with most abrupt, turbulent events along the supply chain, the prevailing hope is that these crises will eventually resolve themselves and recede from view, restoring stability and continuity to these two longstanding corridors so firmly embedded in seaborne trade flows.

The second theme, the expanding regulations in Europe and North America, possesses no such ephemerality. It is in some ways the precise opposite of the maritime supply chain disruptions currently wreaking havoc along the Red Sea and the Panama Canal. Instead of sudden, unanticipated events, the new compliance directives approach at a slow, steady, and eminently predictable place–providing businesses and their procurement professionals with the time and bandwidth to respond and adjust accordingly. Once these labor and ESG regulations are in place, however, they are not fleeting interruptions that temporarily thwart the status quo. Instead, they're positioned to transform the dynamics and responsibilities of professionals operating along the global supply chain for good, compelling them to embrace transparency, visibility, and due diligence in a deeper, more granular way than they ever have before.

The result—or at least the scenario the governing bodies enacting these regulations are aspiring to—is that businesses and buyers are more ethically engaged with the dense network of human beings and natural environments that are directly affected by the work that they do.

Source: www.z2data.com

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SUPPLY CHAINS ARE UNDERPREPARED FOR THE NEXT BIG DISRUPTION

AMY WUNDERLIN

Large businesses are more likely to make strengthening their supply chains a priority

Small- and mid-sized companies are underprepared for the next supply chain disruption, according to a report from Dun & Bradstreet. The firm's Global Business Optimism Insights (GBOI) found that while all businesses in advanced economies identify business continuity, operational resilience, and crisis management as a top risk for 2024, only large businesses are paying attention to strengthening their supply chains as a priority. For small businesses, growth in customer base tops all other priorities, with strengthening of supply chains not even among their top five.

As supply chain continues to grow more complex, however, it will be imperative for businesses of all sizes to address their supply chain challenges. This starts with improving communication among suppliers or even diversifying their supply chains. Those who ignore the warnings are leaving their businesses vulnerable to reputational risk and lost profits.

"Buyers are accepting a disproportionate amount of risk by not doing some of these simple things," said Steve Yurko, CEO at apexanalytix, a provider of supplier management solutions. "It really is accepting more risk than they should."

For those focused on supply chain resilience, the GBOI report found that 1 in 3 firms are considering diversifying their supply chains to multiple sources and regions as their top priority, while 1 in 4 are considering improving supplier communication and consolidation. Companies are also focused on localization or nearshoring initiatives, adopting more resilient supply chain models, and incorporating ESG into sourcing decisions.

Understanding your suppliers is key to supply chain resilience

According to Yurko, improved supplier communication is an important first step in prepping your supply chain for disruption. "Just like when you learn algebra, you first need to learn arithmetic, and so the first thing that really is critically important…is really getting a relationship established with suppliers so that you know who they are," he said.

"Buyers are accepting a disproportionate amount of risk by not doing some of these simple things. It really is accepting more risk than they should."

Understanding something as basic as where a supplier is located can make a huge difference when geopolitical tensions unexpectedly arise, or a climate disaster threatens a certain part of the world.

Once that relationship is formed between the supplier and the buyer, Yurko said the buyer has an opportunity to help those suppliers identify and mitigate the risks they may have in their business. While he said many see this an obligation, the opportunity lies in ultimately eliminating that same risk in your own supply chain.

"It's also to help them understand other risk categories that that may exist within that supplier," said Yurko. "For example, it could be an insurance requirement that the supplier has not fulfilled or met, or there's a sustainability risk that a supplier is burning too much carbon."

Better supplier relationships can lead to greater profitability

The benefit of establishing and maintaining these supplier relationships is gaining more information about your supply chain down through multiple tiers, and the outcome of that, Yurko said, is ultimately profit.

"Part of the beauty of our business is the ability to go tell that story with real customers that are actually experiencing that benefit—a profit objective—and that always gets everyone's attention on both sides of the transaction," he added.

It's important to note though, that without advanced technology like artificial intelligence (AI), establishing these types of supplier relationships can be challenging. This is likely the biggest obstacle for small- to mid-sized companies that don't have the resources to focus on their supply chain at a multi-tier level.

Source: www.supplychain247.com

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OPPORTUNITY OF BOOSTING EXPORTS IN 2024 FOR INDIAN MSMES

FAIZ ASKARI

Export boost has become a top priority for Modi Government. And Indian MSMEs are the focal point for this priority. In this article we have illustrated top opportunities to chase in 2024 by Indian MSMEs.

Exports hold significant potential for Micro, Small, and Medium Enterprises (MSMEs) in India as a key avenue for business growth and sustainability. This statement is all the more important connsidering the fact that export boost has become a top priority for Modi Government. And Indian MSMEs are the focal point for this priority.

Engaging in international trade allows MSMEs to access a broader customer base, diversify revenue streams, and reduce dependency on local markets. With the advent of digital technologies and e-commerce platforms, MSMEs can overcome traditional barriers to entry in global markets, reaching consumers and business partners worldwide. Exporting also provides opportunities for economies of scale, enabling MSMEs to optimize production and operational efficiency. Moreover, exposure to diverse markets fosters innovation and adaptability, as MSMEs learn to tailor products and services to meet the specific needs and preferences of international customers. Collaborating with foreign partners and navigating different regulatory environments enhances the resilience and competitiveness of MSMEs. Governments often offer support and incentives for businesses venturing into exports, further facilitating the global expansion of MSMEs. Embracing the potential of exports allows these enterprises to contribute not only to their own growth but also to the overall economic development of their regions and countries.

MSMEs can leverage various opportunities in the modern age exports business. The global marketplace has become more interconnected, and technological advancements have opened up new avenues for smaller businesses to engage in international trade. Here are some opportunities for MSMEs in the modern age exports business:

1. **E-commerce Platforms:** MSMEs can tap into global markets through popular e-commerce platforms. These platforms provide a convenient and cost-effective way to reach international customers without the need for a physical presence in foreign markets.

2. **Digital Marketing :** Leveraging digital marketing strategies can help MSMEs establish a global online presence. Social media, search engine optimization (SEO), and online advertising can be powerful tools for promoting products and services to a worldwide audience.

3. **Blockchain Technology:** Blockchain can enhance transparency and security in international trade. MSMEs can use blockchain for supply chain management, ensuring the authenticity of products, and facilitating secure cross-border transactions.

4. **Customized Products for Niche Markets:** MSMEs can focus on creating unique and customized products to cater to niche markets. This approach allows them to stand out in a crowded global marketplace and build a loyal customer base.

5. **Collaboration and Networking:** Collaborating with other businesses, both domestically and internationally, can open up new opportunities for MSMEs. Networking and forming strategic partnerships can provide access to new markets, distribution channels, and resources.

6. **Government Initiatives and Support:** Many governments offer support and incentives for MSMEs involved in export activities. MSMEs should explore government programs, subsidies, and trade agreements that can facilitate and encourage international trade.

7. **Adoption of Technology:** Embracing technology such as cloud computing, data analytics, and automation can enhance efficiency in production, logistics, and overall business operations, making MSMEs more competitive in the global market.

8. **Focus on Sustainability:** Many consumers worldwide are increasingly conscious of sustainability. MSMEs can differentiate themselves by adopting eco-friendly practices and offering sustainable products, appealing to environmentally conscious consumers in various markets.

9. **Economic and Market Research:** MSMEs should invest in thorough market research to identify trends, demand patterns, and potential competitors in target markets. This information can guide strategic decision-making and help businesses tailor their offerings to meet specific market needs.

10. **Easier Access to Finance:** Financial barriers for MSMEs have decreased with the rise of alternative financing options, including online lending platforms and crowdfunding. These avenues can provide the necessary capital for MSMEs to expand their international operations.

11. **Compliance with International Standards:** Adhering to international quality and safety standards is crucial for successful exports. MSMEs should invest in obtaining necessary certifications to build trust with international customers.

By capitalizing on these opportunities and staying adaptable to changing market dynamics, MSMEs can successfully navigate the complexities of the modern age exports business and expand their footprint in the global marketplace.

Source: smestreet.in

REPORT ON SPECTRUM 2024 ON 23 FEB 2024 AT CHENNAI

Spectrum 2024, a day's event was conducted at Hotel Radisson Blu by IIMM Chennai. It carried the theme "Accelerating supply chain success with Artificial Intelligence & Gen AI in SCM"

The inaugural ceremony started with Mr.N.S.Sivaraman,the master of ceremony welcoming the participants, office bearers of IIMM Chennai branch, National President Mr Lalit Raj Meena, Mr.Rastogi National Secretary and treasurer and Mr Bidappa, Sr. Vice president, IIMM and Mr Roby VP-South. Inauguration was completed with the lighting of kuthuvillakku and followed by an invocation song, rendered by Ms. Aiswariya and Ms. Bhavani

Chairman of branch Mr.K.Nagappan welcomed the participants while thanking the entire Chennai branch team under the chairmanship of the event under Mr.T.Sornakumar. Mr Balakrishnan treasurer on behalf of content committee chairman, Mr Subbu Subramanian briefly presented the flow of programme.

The National President in his introductory address, narrated the historical journey of IIMM at the national level. He highlighted the tremendous growth Chennai branch has contributed in several activities and what IIMM can do to its members in terms of professional development. A short video on GenAI was shown. It showed how GenAI based on previous experience does a predictive solutionand apply to a problem.

On the dais, souvenir compiled by Mr.Balachandran with support from Mr.N.Govindarajan -in charge of certification programmes was released. This was released by National President Mr.Meena.

The Chief Guest Giridhara Gopal Gajendran Director and Chief Executive of Addison&Co and Director of LM Vanmoppes Diamond Tools India, delivered a brief speech. He added that AI model learns from data gains and insights and creatively develop models The final result is closer to real data. He stressed that GenAI will reshape business economics. He said that it will also depend on Govt initiative and research institutions have role to play. On the negative side, it will displace jobs. It will affect ethics. Advanced predictive analysis and blockchain use will increase with sharper forecasting of business.

The keynote speaker Mr Ananth Krishnan, retd CTO of TCS spoke on Impact of GenAI on SCM processes

In his narrative, he traced the development of AI from 1956. Development of deep learning in 2008 led to Gen AI. The technology is yet to mature and the tools are in the market for more than 5 years, which will impact ethics, governance, and risk. He summarized in 4 quadrants, the uses of GenAI.

1. Incremental improvements in current process, such as demand forecasting, task automation
2. Radical improvements to current process, quantum improvements advanced robotics.
3. Address known future opportunities such as new markets, next gen healthcare
4. Address radical future opportunities package return and recovery

The inaugural function closed with handing over contribution of branch to NHQ from branch education activities. This was received by National President and treasurer Mr. R K Rastogi. The function closed with vote of thanks by Mr B.Sampath Hony. Secretary, IIMM Chennai

Technical Session Use of Generative AI in manufacturing Mr.Rastogi Session Chairman

Mr.Balaji Senior VP and Head of Data analytics Korcomptenz

The session was chaired by Mr. R K Rastogi, National Secretary & Treasurer

While demonstrating a computer vision for getting AI powered insights for design, product concepts, productive efficiency, product life cycle concept that are focused on. Information retrieval is an important advantage of using AI tools and it leads to predictive and generative analysis. He elaborated that predictive one is like demand forecasting and the generative ones are text, images, messages etc. The next in importance are critical customer issues are in supply chain, such as make or buy or material combinations. All these were illustrated with different case studies from auto component manufacturer, aircraft manufacturing etc .

Technical session Reinventing multimodal logistics through GenAi

Session Chairman Dr.B.Ramesh

Dr.Arvind Kumar Supply Chain Analytics manager Ford (Six sigma and lean manufacturing)

He began with the development of GenAI and LLM and GPTs. A typical automobile scenario was taken up for illustration. The supply chain in multimodal logistics it is very complicated. The complexity in supply chain across the countries have different modes of transport Major disruption issues like container non availability, port congestions, need inclusion in forecasting. Control tower model evolution has been the development so far. One of the difficulties is the presence of data that we do not need and sometimes not in the usable format. You need to build your own insights along way. Dynamic routine for multimodal logistics was also illustrated. In supplier sourcing GenAI runs through all communication and extract relevant selection parameters such as sustoms -HS code classification incorporating amendments and changes. Container optimization selection of containers, copilot for inventory reduction, warehouse management and layout optimization.

Post lunch, the session began with a panel discussion on topic “Will Generative AI, be a friend or foe” and was chaired by Mr. Sunil Kumar Prasad Data Scientist CISCO. The summary points observed by the panelists can be summarized as

Mr. Naresh Rajendran Head Human Resources Grundfos : Digital transformation hits every value chain in business, by creating a customer experience or an internal employee experience. Transparency and communication are the key aspects that organizations need to take care. GenAI provides the trends within organization and gets you the piloting tools. It identifies operational tasks within HR and enhance the employee experience. This resolves the customer issue and offers a better experience. GenAI is only a tool and human touch element is necessary.

Dr.Srithika Head Learning and Development Mind Sprint : Lots of skills will move away. In learning and development privacy is not an issue. GenAI may put a boundary on individual learning. Intelligence from human however will not go away. It will only release them to do more intelligent tasks.

Mr. Venkat CEO Medway hospital : He stressed specific issues in healthcare, as it deals with precious human life. GenAI will help all 5 stakeholders patients, hospitals, physicians, other medical staff and pharmacy Post surgery/discharge prediction of ailments can alert hospital to touch base. For the physicians and technicians studying the patients parameters and get warning and prior advice. The physicians can be given the alert to use. It can help doctors and planners to plan and avoid contingencies. Data privacy and ethical consideration in reducing are also vital. Skillsets cannot be overlooked. In some cases where a release of patient early based on data analysis patient can be discharged little before saving hospitalization costs. Globally AI can predict consumption pattern and accordingly supply such as in the case of vegetables can be controlled. AI also can create new demand for products like dragon fruit. AI is not a substitute human intelligence or a replacement of skill. GenAI will like robotic assisted surgery will ensure a more precise surgery. The technology is driven by human intelligence which cannot be replaced.

Technical session on “ Exploring the potential of Generative AI in Healthcare and Lifesciences” was conducted by Mr. Antony Prashant Partner Deloitte Touche Tohmatsu India LLP. : The session was chaired by Mr N.Swayambhu past branch chairman and VP South.

Speaker stressed that focus will shift from reactive to preventive care. He highlighted how MRI scan data is leveraged by surgeon with AI. The involvement of insurance in reducing fee for compliant cases based on embedded device. There will be need to develop integrated interactive models in using data. Outpatient care will change and inpatient admission will come down. A short video on the emergencies in a hospital were highlighted. He demonstrated the citizen centric future of health.

Technical session on “GenAI on Fintech” was carried out by Mr. Parthasarathy Subburaj Machine learning scientist, Paypal and session was chaired by Mr. Roby VP-South : Speaker narrated the role of fintech companies as service providers in ensuring digital payments. Data science acts as the backbone in any Fintech’s risk. The two types of risk, fraud risk and credit risk are covered, in the product design. True name fraud, account takeover,first party fraud, seller fraud, consumer fraud areas with specific cases were illustrated. Comparison of patterns, transactions, behaviour are studied to trigger action and also verified with agents investigation reports. The investigation reports are processed with GenAI. W+hen incidences of loss are reported then processing methods are changed

The closing ceremony began with announcement that the next Spectrum will be in Feb 2025. Mr. N S Sivaraman, Advisor Spectrum 2024 summarized the whole event. Mr. J Ravishankar rendered vote of thanks.

Report complied by Mr. V Ramachandran, IIMM Chennai

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10. PickFab
11. Sri Moogambigai precision products
12. Karthi Fab
13. KM Enterprises
14. ITC – international trading corporation
15. Heidenhain Optic and electronic India Pvt ltd

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BRANCH NEWS

BANGALORE BRANCH

29th January 2024 – Free Webinar/ Lecture Program : IIMM Bangalore Branch in association with Seshadripuram College has organized a Free Webinar **on "NAVIGATING FOR A SUCCESSFUL CAREER IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT"** (Hybrid mode)" on 29th January 2024 at Seshadripuram College, Bangalore. Speaker **Mr. Karthi Baskar,** Managing Director & CEO India, FFAF Logistics India Pvt Ltd, From IIMM Bangalore Mr. M.R. Achyutha Rao Vice Chairman, Mr. B. Jayaraman Senior Faculty, Mr. Balachandran. T.S N.C. Member, including Members from Various Sectors/ Organisations attended the Program, The interactive Seminar has received a Very good Feedback.

Seminar on Navigating for a Successful Career in Logistics & SCM 29th January 2024 Honoured to Speaker by Mr. Achyutha Rao Vice Chairman

Seminar on Navigating for a Successful Career in Logistics & SCM a view of Participants

5th February 2024 – Collaborative Management Development Programs with ISME : Indian Institute of Materials Management, (IIMM) Bangalore Branch and International School of Management Excellence (ISME) had a meeting on 5th February 2024 regarding Possible collaboration for offering Management Development Programmes (MDPs) and to re-launch the previously conducted MDPs in Supply Chain Analytics with customized focus on Procurement Analytics, Inventory Optimization and Warehouse & Logistics. From IIMM Bangalore Mr. B. Jayaraman, Mr. Balachandran and Mr. Satish. T, from ISME Dr. Nitin Garg, Prof. Rajendra Desai, Prof. Tilak Thomas, Mr. Sudipto Das, Mr. Akshay Kumar, Ms. Jinsy had the discussion.

Meeting on Possible Collaborative MDPs, IIMM Bangalore Branch and ISME 5th February 2024.

A view of Meeting Participants on Collaborative MDPs IMM Bangalore Branch and ISME

10th February 2024 Workshop : IIMM Bangalore Branch had organised One day Workshop on on "**NEGOTIATION SKILLS & CONTRACT MANAGEMENT**'' on 10th February 2024 at Paraag Hotel, Raj Bhavan Road, Bangalore - 560 001." The speaker Mr. K.P. Rajendran senior Faculty of IIMM handled the sessions. About 27 Participants including Members from various sectors/organisations attended the workshop. The Interactive workshop has received Very good feedback.

Workshop on Negotiation Skills a session handling by K.P. Rajendran

Workshop on Negotiation Skills A view of participants with Speakers

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KOLKATA BRANCH

Report on Annual Picnic 2024 organised by Kolkata Branch : Like every year, IIMM, Kolkata branch organised an annual picnic at the suburbs of Kolkata on 4th February. Debolina Garden with its lush green lawn, greenery all around enthralled the 120 guests who assembled from different parts of Kolkata. Most of the participants were students of GDMM. Some of the faculty members with their families, the staff of IMMM and institute members also participated. Meticulous arrangement was made to involve all the participants in various fun-filled activities, sports, light music and dance. Mr. Prasun Ganguly, one of the veteran members of Kolkata Branch, undertook the responsibility to mastermind the entire event. The staff and students of the institute supported him wholeheartedly to make the event a grand success. The young kids who accompanied their parents enjoyed the whole day in one of the most sprawling and pollution free environment away from the hustle and bustle of a metro city. A delectable menu to satisfy the gastronomy of all the enthusiasts was truly an icing on the cake. Chairman, Mr. Koushik Roy was present throughout the event and was seen quite often engrossed in discussing the more serious issues on education with the students.

The day ended with a prize distribution to the winners amidst cheers and thunderous applause from the onlookers. The strong group of 120 came home rejuvenated, refreshed - the fun & frolic etched in their memory lane……

Induction programme of the 71st batch of GDMM in Kolkata Branch : The induction programme of the 71st batch of GDMM students was organized by IIMM, Kolkata on 11th February, 2024. Sixteen students were admitted. The students were handed over the study material and welcome kit. Mr. Debasis Mallick, course coordinator, while addressing the students explained the importance of materials management in view of the fast-changing supply dynamics across the globe. He emphasized the need to acquire professional qualification as Supply MM has become a specialized branch of management. Mr. Rudranil Choudhury, senior faculty of IIMM informed the students about the course curriculum of GDMM and stressed on the need to attend class regularly. The students introduced themselves. It was observed that out of 16 students, 3 students are engineering graduates, 5 were diploma holders in engineering, two have done graduation in pharmacy and the rest were either science or commerce graduates. Among the staff, Mr. Tapas Chakraborty, R K Parui and Sudip Sengupta were also present. The classes for the 71st batch commenced after the induction programme.

Kolkata Branch organised a Plant Visit for students at Coco Cola diamond Beverages Ltd Plant.

MUMBAI BRANCH

Indian Institute of Materials Management. Mumbai Branch organised a one day in house training program at Mirage Hotel for Cipla Limited on 14th of January 2024 on the topic "Pharmacy Management (Medicine) in Hospital ". The training covered the following topics like problem solving in day-to-day functioning, good pharmacy practices, role plays and conflict management with stakeholders.

The faculty was Dr. Neil Sequeira - Chief Operating Officer (COO) (Head & Neck Cancer Institute of India). The program was highly interactive, and the feedback obtained at the end of the program was very encouraging.

The Program was co-ordinated by Dy. Director IIMM Mumbai Branch, Mr. R. B . Menon and ably supported by his team at Branch Office.

In House Training Program for Mahanadi Coalfields Ltd (MCL) on 29th January & 30th January 2024 Held at Management Training Centre , Burla , Sambalpur (Orissa). IIMM Mumbai Branch were invited by Management Training Centre (MTI) of Mahanadi Coalfields Ltd (A subsidiary of Coal India Ltd vide their letter dated 12th January 2024 to conduct a Two day In House Training Program on Public Procurement. Suggested Topics for in House Training Program for Indian Institute of Material Managements:

1. Legal Aspects, Sale of Goods Act, Company Act and Provisions from Buyers Perspective
2. Public Procurement Policy for Micro and Small enterprises
3. Make in India Order 2017 and its Subsequent Orders
4. Litigation in Tendering / Pre-Cautions at Tender Stage
5. Placement of order when Single offer is received/ Steps to be taken to increase Competition
6. Treatment of High and Freak Low-Priced Bids
7. Strategic Procurement/ Best Practices of Supply Chain Managers
8. Case Studies in Procurement
9. Risk Management and Mitigation in Procurement
10. Managing the Contract dealing with:
    a) Schedule Risks
    b) Cost Risks
    c) Quality Risks
    d) Commercial & other Risks
11. Procurement Guidance by CVC & Procurement policy Division (PPD) Department of Expenditure, Ministry of Finance, Govt of India
12. Contract Monitoring & Evaluation
13. Latest Developments in Procurement through GeM portal
14. Concept of Project/ Contract Risk Register
    a) Types of Contracts
    b) Prequalification/ Eligibility Criterion for Works Contract
    c) Drafting of Commercial Contracts
    d) Contract Administration and Associated areas —— Hindrance Register
    e) Managing Change Orders & Contractor Claims
    f) Time Extensions & Liquidated Damages
    g) Closure of Contracts
    h) Dispute Resolution
    i) case Studies & MCQ Quiz

The Faculty for the Training Program for this Outstation Training Program were Mr Arun Mehta, Principal Chief Materials Manager, Konkan Railway and Mr Alok Ranjan Sarkar, Advisor-IIMM Mumbai Branch & former G.M-Materials & G.M (Engineering & Projects) BPCL.

Mr Arun Mehta covered topics no 1, 2 , 3 ,4 ,5 ,8 and 11 of the List above and the Balance Topics were taken by Mr Alok Ranjan Sarkar.

During the Inauguration Session, GM (Contract Cell) Mr RK Jha of Mahanadi Coalfields wanted IIMM Mumbai Branch Faculty to cover additional Topics like Contract Closure and Changes in Arbitration Act made by Amendments in 2015 and 2019.

These additional topics were also covered by Mr Alok Ranjan Sarkar.

The Training Program was highly interactive and total 31nos participated in the Training from various Departments

IIMM Certificates were handed over at the end of Day 2 of the Training Program and PPTs of both Faculty were also forwarded to General Manager, MTI, Mr Satyajeet Kumar.

The Feedback to the Training Program was very encouraging as most participants wanted this Training Program to be Repeated after 6 – 8 Months

This Outstation Training Program was obtained by IIMM Mumbai Branch due to favorable recommendation by CVO, Mahanadi Coalfields ltd Mr PK Patel to the CMD of Coal India Ltd. The CVO, Mahanadi Coalfields Ltd, Mr PK Patel attended IIMM Mumbai's National Summit on Public Procurement (Seventh Edition) held on September 15th at Hotel Courtyard Marriot, Mumbai and was highly impressed by the Speakers and the contents.

This Training Program was coordinated by Mr Alok Ranjan Sarkar, Advisor IIMM Mumbai Branch and was assisted by IIMM Mumbai Branch Office Dy Director Mr RB Menon and his team.

Two day Inhouse Training Program on "Warehouse Management" for Numaligarh Refinery Ltd (NRL), Golaghat Dist Assam.

Numaligarh Refinery Ltd (NRL) gave IIMM Mumbai Branch an assignment of conducting an In House Training Program on "Warehouse Management" on 12th February and 13th February 2024 at NRL Premises

The Contents of the Module for the subject Training Program was developed by Mr Alok Ranjan Sarkar, Advisor -IIMM Mumbai Branch & former G.M - Materials & G.M (Engineering & Projects) BPCL and it was prepared to " Customise " the same to the Training Needs of NRL

The Broad Contents of the Training Module were :

1) Objectives of Warehouse Management
1.1 Warehouse Design Parameters
1.2 Warehouse Lay Outs
1.3 Slow Moving /Medium Rate Moving Items / Fast Movement Items
2) Fixed Stock Location System - Advantages
2.1 Random Stock Location System — Advantages
2.2 Principles of Efficient Materials Handling
2.3 Impact of Type of Material Handling on Lay outs
3.0 Warehouse Operations
3.1 Receiving
3.2 Warehouse Control
4 .0 Lay Out Options
5.0 Design Of Stock yards
6.0 Stock Checking
7.0 Audit of Stores
7.1 Best Practices in Warehouse Management
7.2 Scrap Disposal
7.3 Methods to reduce Warehouse Cost
8.0 Managing Inventory
8.1 Inventory Analysis ABC, FSN, XYZ, VED
8.2 Safety Stock
9.0 Performance Management in Warehouse Operations

The Faculty for the Program was Mr. Prabhakar Sawant former Senior Manager Bharat Petroleum Corporation Ltd, Mumbai Refinery and Mr. Alok Ranjan Sarkar Former G.M - Materials & G.M (Engineering & Projects) BPCL and presently Advisor IIMM Mumbai Branch.

The Training Program was very interactive and many practical queries of NRL Staff were answered by the Faculty. Total 11 no's Warehouse Officers & Staff attended the Two-Day Training Program

A MCQ Quiz regarding Post Training assessment was administered at the end of Day 2 and all the participants were happy to participate in the same.

The feedback from the Participants was very encouraging. IIMM Certificates were handed over to all participants in the presence of DGM (Learning & Development) NRL, Mr. Asish Baruah. PPT s/ Course Material of both Faculty were also shared with all the Participants.

This Training Program was initiated by DGM In Charge Warehouse, of NRL who attended IIMM Mumbai's National Summit on Public Procurement held on September 15th at Mumbai along with GM (Commercial) of NRL. After attending IIMM Mumbai Conference, DGM In Charge Warehouse, NRL Mr. Gaurav Borgohain wrote to IIMM Mumbai Branch asking IIMM Mumbai Branch to prepare a suitable Training Module and then conduct the In House Training Program on a suitable date.

This Out Station Training Program was co -ordinated by Mr. Alok Ranjan Sarkar, Advisor IIMM Mumbai Branch and Former G.M - Materials & G.M (Engineering & Projects) BPCL with assistance from IIMM Mumbai Branch Dy Director, Mr. R. B. Menon and his team.

GREATER NOIDA BRANCH

Honorable MSME minister Sh. Narian Rane for different industries inaugurated Tool Room in Ecotech VIII of Greater Noida, along with the event industries and institutions were provided stalls to display their products and services they provide. Even though there were only limited stalls but IIMM Greater Noida branch managed to get one.

It was a rare opportunity to introduce IIMM to entrepreneurs and students at the same place. Our stall was visited by different industrial associations who will help us to enroll in more members about five life members getting registered. It was the first program of the new committee. we are thankful to our former national President Dr. Suresh Sharma ji and National council Sh. Ajeet Kumar ji for their valuable guidance. Our senior EC member Sh. Anuj Bhargav ji explained all about IIMM to the Visitors.

PUNE BRANCH

On 24th February Mr. Om Vijayvargiya head supply chain at Schaeffler India Pvt Ltd delivered the second knowledge sharing session for the year 2024. Mr. Mohan Nair, National Councillor, IIMM, led the discussion through very thought-provoking questions. The meeting started with Mr. Arjunsingh Rajput, Hon. Secretary IIMM-Pune, welcoming the guest and the participants to the knowledge sharing program. The hall was filled with about 35 participants from various small, medium and large organizations.

Answering to the questions Mr. Om gave us a short introduction of Schaeffler and their operations in India. Schaeffler is a German company manufacturing ball bearings for almost everything that moves. They provide ball bearings to automobiles, trains and also to the windmills. To make the supply chain smooth they have recently restructured their warehousing. They have two in Gujarat, one in Mumbai and one in Hosur Karnataka. This they did to ensure faster delivery of service as most of their customers are located in these regions. He was very candid in admitting that one need to change in order to grow. To accept change one need to have the right attitude towards the world. To accept and embrace change individuals and organizations need to continuously break the comfort zones where they are in.

While answering to the question on **digitization** he began his answer by discussion three trends in the industry.

1. Digitization (digital enablement)
2. Localization (Procure from within your own country) and
3. Nearshoring (procure from countries that are near to your country)

Digitization helps in improving the visibility. One can easily track the shipment and ensure that one receives. Digitization also helps in inventory verification. Many companies use OCR in this process. (Optical character recognition an AI technology)

Some of the challenges to digitization are:

1. Lack of a clear strategy. (often the identification ofpain points do not happen)
2. Resistance to change
3. Data security– this is a major concern and there are stand alone system available today that enables digitization without compromising the data security.
4. Integration with other ERP tools (SAP allows the integration much easier)
5. Initial high cost/investment (it is a must to invest initially. The returns in the long term is huge)
6. Scalability (Digitization enables companies to scale up the operations and streamline the process.
7. Geopolitical situation (this has created a major road block in the recent times. The red sea crisis and the Ukraine War has majorly affected the supply chain process)
8. Sustainability concerns (Digitization has reduced the pressure on environment)

The audience also asked very relevant questions. : Mr. Narahari Wagh asked whether Indian geopolitical environment helped business or hampered it? Answering to this he said today India is a considered a favorite location for Schaeffler. Almost 40% of operations are happening in India and they are planning to increase this in the near future. Mr. Ravinder Lamba from Praj industries asked on the digitization of inventory verification and data security. Answering to this Mr. Om narrated their experiment. They realized if they use the SAP system for inventory verification this can lead to data security issues. Hence, they employed a local made scanning system to which all the SAP data on inventory can be transferred. Once the verification is completed you can transfer all the data back to SAP.

ESG compliance is another thing that has prompted Schaeffler for digitalization. This creates a transparency of the entire life cycle of product to ensure at each stage there is no environmental and social harm is done. Digitization can help optimize resource usage, energy consumption and minimize wastage. This will also enable better supplier. Digitization also can help in better reporting for various compliances. The talk also briefly discussed over digitization, electronic data integration and the need to build trust through data.

Mr. Prasad Rao, Vice Chairman, IIMM-Pune, concluded the session by expressing gratitude to the guest speaker and all the attendees for their participation. He emphasized that the Interactive Knowledge Sharing session provided a valuable platform for exchanging ideas, gaining industry insights, and fostering a collaborative learning environment.

ANKLESHWAR BRANCH

Ankleshwar branch organised an presentation by a renowned Import- export consultant - Shri B B Purohit.

COCHIN BRANCH

WORKSHOP ON ADVANCED INVENTORY PRACTICES CONDUCTED BY COCHIN BRANCH AT GRAND HOTEL on 15th February 2024 for Indian Navy officials

WORKSHOP ON ADVANCED STORES MANAGEMENT CONDUCTED BY COCHIN BRANCH AT GRAND HOTEL, Cochin on 16th February 2024 was inaugurated by IIMM South VP, Adv Roby T.A.

VISHAKHAPATNAM BRANCH

IIMM Vishakhapatnam Branch organised a Knowledge Conclave-2024 in association with USSC, NTPC-SIMHADRI on 21st Feb 2024 on the theme 'Way Forward Supply Chain Management 4.0"

VADADORA BRANCH

Dr Prashant Gupta,Sr VP, Arti Industries & Member of Vadodara IIMM EC, received the "CPO of the year 2024" award in Procurement Excellence Summit & award 2024 in ITC Maratha, at Mumbai.

EXECUTIVE HEALTH

TOP 10 CURRENT TRENDS EXPECTED TO TRANSFORM HEALTHCARE IN 2024

RACHEL MARLEY

Quick Takes

- As groundbreaking technologies reshape health systems, healthcare leaders must strategize on integrating these innovations within their organizations
- Technologies expected to see strong growth in 2024 include generative artificial intelligence and mass spectrometry applications within clinical laboratories
- Strategic investments in solutions targeting women's health, data monetization, and population health can serve as key differentiators for leaders in the competitive landscape

Recent advancements in technology are promising automated and cost-effective healthcare solutions that could reshape the ways in which research, diagnostics, and treatment pathways are determined and delivered.

We have compiled a list of 10 pivotal trends anticipated to play a crucial role in the healthcare sector in 2024. Find out what we think healthcare leaders should be focusing on as they seek to remain at the forefront of innovation in terms of services provided and healthcare delivered.

1. Moving care into homes : The COVID-19 pandemic changed the way health systems provided care to patients. Today, patients are increasingly open to receiving medical care in their homes rather than in the clinic. From online pharmacies to telehealth to wearable devices, it is becoming ever easier for patients to access diagnostics and therapies outside the traditional medical office and hospital setting.

Advanced technologies and mobile apps are revolutionizing the industry with services that remotely monitor symptoms, like heart rate, temperature, or blood glucose levels. This tech can also connect patients quickly and directly to specialized providers that can help with a variety of needs, including mental health support. Studies show that shifting care into homes can potentially reduce staff burden, decrease savings, and simultaneously improve clinical outcomes.[1,2]

By 2030, current trends predict the home healthcare market is expected to grow to almost US$ 670 billion, compared with the current estimate of US$ 362.1 billion in 2022.[3] Healthcare leaders need to evaluate home care's impact on their organizations.

2. Integrating generative artificial intelligence (AI) and large language models (LLMs) in healthcare : LLMs are a type of AI that leverage large data sets to understand, summarize, and generate new content, typically in conversational form. One such example is ChatGPT, which was launched in 2022 and is being evaluated for applicability in healthcare. While AI has become an integral part of medicine, especially for diagnostics, stakeholders can leverage simplified machine learning tools without the need for specialists. This could impact the care patients receive. For example, LLMs could help manage diseases and provide daily recommendations for heart disease or diabetes.[4] Additionally, other areas where LLMs can be used include:[5]

- Patient education
- Patient triage
- Reimbursement claims
- Appointment scheduling
- Care recommendations
- Medical translation

Since LLMs are just starting to gain ground in medicine, it is crucial that healthcare leaders critically evaluate how to safely and effectively incorporate this technology into their organizations. Priority areas should be patient safety, ensuring data privacy, and generating accurate information.

3. Streamlining clinical trials : Tapping into digital technologies and adapting them to streamline clinical trials could transform the research of new medicines this year. Conventionally, patients often need to travel a significant distance to participate in a trial. The pharmaceutical industry is therefore shifting towards decentralized clinical trials to enhance clinical research. Offering participation options for subjects at local facilities or remotely can improve accessibility to groundbreaking science.

Technologies that streamline clinical trials include LLMs, which could help with screening subjects, patient engagement, and study design, or wearable technologies that can continuously monitor symptoms and capture a broad range of real-world data.

4. Identifying digital biomarkers to improve diagnostics: Digital biomarkers are digital signatures correlated to specific conditions.[6] They are becoming more widely recognized as potentially enabling more accurate and reliable disease diagnosis.

Stakeholders are developing digital biomarkers by using machine learning and AI with novel algorithms trained on data from wearable devices or medical imaging to identify patterns that may indicate disease. This expansion of digital biomarkers and its rapid adoption is evident in healthcare, with current trends estimating that the global digital biomarkers market is expected to increase with a compound annual growth rate (CAGR) of 22.3% in the next decade.[7]

In rare diseases specifically, digital biomarkers have a notable opportunity to pioneer how we treat conditions only found in a handful of patients. Since differential diagnosis is difficult and access to specialists can be limited, using digital biomarkers could strengthen and improve the care patients receive.

5. Supporting the smart lab for faster and more accurate clinical tests : Clinical labs deliver vital diagnostic and screening services to healthcare providers and patients. Approximately 70% of diagnoses are achieved with the help of lab tests.[8] However, over the last several years, health systems have struggled to keep up with the demand due to staff shortages, and decreased access to funding, resources, real estate, and automated equipment.[9-11]

Lab managers can address these challenges by streamlining processes through greater automation and wider use of digital technologies. Some examples that lab leaders are already utilizing include improved workspace design, quality management systems to ensure better utilization of resources, robotics and automated systems, and cloud-based technologies.[12-14]

This year, we believe that more labs will consider how to scale their clinical lab procedures, especially as the workforce in the space continues to see a steady decline, to improve turnaround times, decrease costs, and expand access.

6. Increasing adoption of mass spec in the clinical lab : Within clinical labs, lab personnel traditionally employ immunoassays to help diagnose disease and pinpoint the presence or absence of compounds, such as peptides and proteins. However, challenges with immunoassays like cross-reactivity issues or a lack of available reagents have led to the need for better solutions. For decades, researchers worldwide, especially in academia, have utilized mass spectrometry (mass spec) as a basic research tool. Over the last 10 years, mass spec has become a popular technique in the clinical lab setting for routine diagnostic testing and drug monitoring.[15]

Mass spec, an analytical technique that measures molecules' mass-to-charge ratio (m/z) within samples, is increasingly accessible in the clinical space due to increased molecular detection sensitivity and specificity.[15] From better screening of protein pathogens to improved therapeutic drug monitoring, mass spec can reshape healthcare. Improving automated workflows and standardizing protocols to accelerate turnaround times with higher throughput will allow results to be scaled accurately and reliably. This will enable healthcare providers to leverage the results from mass spec and customize treatment strategies.

7. Using clinical decision support systems for value-based healthcare : Physicians now have more novel computational technologies, known as clinical decision support systems (CDSS), available to help manage the vast amounts of patient data, thus improving their critical decision-making and increasing value-based healthcare. These tools tap into AI and can dramatically impact patient engagement and their experience with healthcare organizations. Types of CDSS include:[16, 17]

- Medication and drug interaction alerts
- Best practice notifications
- Health maintenance reminders
- Differential diagnosis

Machine learning and AI are critical components of CDSS and promise to help sift through and integrate different healthcare data available throughout a patient's journey, from physician visits to information from wearable devices and participation in clinical trials.

8. Elevating population health management: With the evident challenges seen during the COVID-19 pandemic, healthcare leaders must remain steadfast in boosting population health. Today, results from physician visits and lab tests, genomic data, and information from wearable devices all play an essential role in how stakeholders respond to public health crises. By having widely available data collected with population health in mind, leaders can pinpoint areas that need the most attention and devise plans to anticipate problems before they occur.

Health systems are now building collaborations with companies that can monitor infectious diseases or identify patients with cancer or cardiovascular issues on a large scale. Identifying health risks among populations and intervening and taking preventative approaches will be a crucial part of boosting responses to acute epidemics and chronic disease management. Benefits of population health include:[18-19]

- Better clinical results
- Advancing patient engagement and advocation of their care
- Efficient spending
- Improvement in patient triage
- Reduction in hospital admissions
- Decrease in readmission and hospital stays

9. Investing in women's health: The industry needs to be inclusive of all populations, especially women who have been underserved in many aspects of healthcare, including the funding of conditions that mainly affect women, representation in clinical trials, and higher rates of misdiagnosis in the clinical setting. Investments in the women's healthcare ecosystem have skyrocketed in the past few years, with current trends predicting the market to grow to almost US$ 18 billion by next year.[20] Healthcare leaders can participate in this growing market by increasing awareness, education, and accessibility to preventive services.

10. Leveraging data monetization in healthcare : With electronic health records available to patients in most healthcare organizations, the data available for monetization is increasing exponentially.[21] In brief, data monetization is data that can be used to obtain quantifiable economic benefits, typically done by providing data access to third parties. For example, this approach allows health systems to negotiate benefit terms from health insurers or share data with pharmaceutical companies for better insights into personalized medicines or diagnostics.[21]

Beyond data collected in clinics, remote digital technologies, like wearable devices and mobile applications, enable rapid data creation.[1] The wealth of information available can offer valuable insights across various domains, including strategies for growing revenues in health systems and the development of health products and services to enhance patient outcomes. However, it is essential to note that when implementing data monetization, leaders consider data security, privacy, and accessibility when determining the best strategy. As for current trends, the global healthcare data monetization market is expected to grow by over 18% in the next five years, so healthcare leaders need to evaluate how this approach can benefit their respective companies and, most importantly, patients.[22]

A new era in healthcare : The healthcare landscape is transforming profoundly and swiftly, marked by various emerging trends. From mass spec and digital biomarkers to population health and data monetization, these trends encompass innovative methodologies geared toward delivering results to patients with heightened efficiency and reliability. The urgency to adapt and respond to these trends is evident as they collectively redefine the landscape of healthcare delivery. As the industry navigates through this rapidly changing landscape, it becomes increasingly vital for stakeholders to remain current with these changes. By doing so, they can ensure optimal patient outcomes and the overall advancement of healthcare practices within their organizations.

Source: healthcaretransformers.com

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