

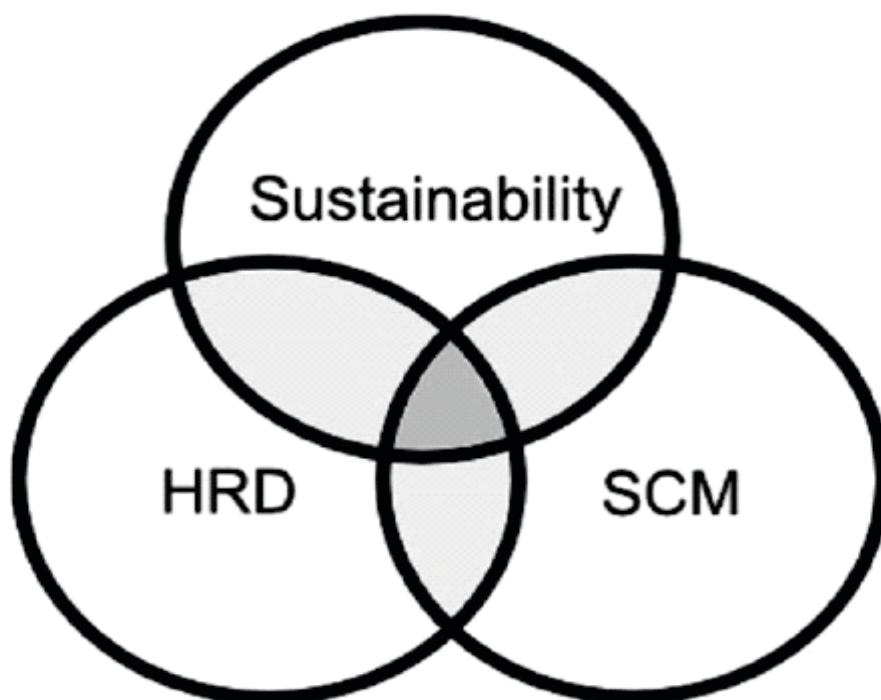
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From the Desk of Chief Editor & National President



Of late, we have come across multiple technological updations, concepts and terms in supply chain that has shaped today's supply chain in a way that it can absorb the unexpected shocks and bounce back in a time bound manner to cater to needs and wants of the end consumer. This characteristic of resilience and agility has earned modern supply chain its share of appreciation amongst other key parameters of successful business entity.

With the improving logistical infrastructure, advent and implementation of new technologies in supply chain domain, vast vendor network and cost effective quality output, India is aspiring to become a global sourcing hub. While, it is true that, we are heading towards becoming a global sourcing hub, at the same time, it is also true that, India is being identified as a high risk country for human rights violations. As per the United Nations Development Program, Indian ranks 132nd out of 191 countries in Human Development index.

An efficient supply chain may not be an ethical supply chain. When we talk about ethical supply chain, we mean, practices employed in meeting the targets during the supply chain take enough care of health and safety conditions of labour, non-exploitation of labour in the name of over time, avoiding using child labour by one or more suppliers during the life cycle of supply chain and so on.

Supply chain professionals work in a culture of overlapping departments within and outside organisation and it is pertinent to build symbiotic & strategic partnership between the suppliers, organization and employees. It all starts with hiring the right talent, who are capable of analyzing a situation and make logical judgments depending on changing situation. Supply chain professionals may also have to take responsibility for each other's action while sorting out the issues.

The present supply chain sector has seen a positive growth post Covid 19 Pandemic especially with the implementation of new and innovative technologies like AI, Block Chain, Big Data Analytics and Cloud Computing etc. however, the question arises is how to sustain this growth without adequate workforce having the on field knowledge and expertise to deal with continuous technological upgradation in the supply chain field besides other supply chain issues. There is need to develop skill sets to manage evolving technologies.

An analysis of the Human Resources issues in the Supply Chain Management reveals that there is a limited stock of skilled employees. We need to get around to educational institutes at different levels and Business Schools to develop supply chain programming that can addresses the sector's growing needs, current and future human resources challenges. These institutions need to assess technologies, innovations and conditions that have the utmost impact on the Logistics & Supply Chain Management sector at the same time develop human resource for industry and academia. The search of right talent at right place & right remuneration, is what required to address this issue.

IIMM has decided to upgrade the Sambalpur Chapter of IIMM in Odisha to the branch of IIMM. This upgradation will give a big boost to SCM knowledge sharing and imparting of training to industries in Sambalpur and will help in development of industries in Odisha.

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SUSTAINABLE PROCUREMENT – A WAY FORWARD

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Abstract: The author has introduced different versions of definitions of ISO, UNEP, ISM and others. Sustainable procurement refers to how business can identify to reduce the environmental impacts of their supply chains. The three important pillars such as economic (profit), environmental (planet) and societal (people) and its key factors are highlighted. The key drivers for sustainable procurement like cost reduction, risk reduction and revenue growth are also discussed. Secondary sources and published papers have reviewed for discussion. The relevance of ISO 20400 and ISO 26000 standards of International Organization for Standardization (ISO) are discussed. The author has also introduced the Government E-Market (GeM) portal and its importance. The sustainable public procurement in India has highlighted with conventional approach and proposed approach with sustainable procurement cycle. Sustainable procurement implementation approaches like corporate social responsibility (CSR), product approach and process approach have also been emphasized.

Keywords: Green procurement, ISO 20400, ISO 26000, sustainable procurement philosophy, practices

1. Introduction : Procurement is the process of acquiring goods or services for the business. These goods or services are vital for the company's operations. These goods or services are acquired from the suppliers or third parties. The procurement process starts from the market exploration, identification & selection of sources, drafting the terms & conditions, placement of orders, receipt of goods or services from the suppliers and supply management. Sourcing and procurement plays as important role in supply chain management. 60-70 percent of product cost constitutes the material cost.

An organization's purchasing decisions don't only affect the organization itself; they affect the economy, environment and society. Procurement generally makes up a substantial part of an organization's budget. In the public sector alone, it accounts for around 12 % of GDP and 29 % of government expenditure in the member countries of the Organization for Economic Co-operation and Development (OECD).

Sustainable procurement is a process whereby public sector meets its needs for goods, services, works and utilities in a way that achieves value for money on a whole life-cycle basis in terms of generating benefits not only to the organization, but also to society, whilst significantly reducing negative impacts on the environment (UNEP, 2015). Sustainable procurement refers to how buyers can identify to reduce the environmental impacts of their supply chains (Batra, 2023). Sustainable procurement involves environmental trends, using recycle paper, reusing packing material and healthy work environment.

Sustainable procurement is the act of adopting social, economic and environmental factors alongside the usual price and quality considerations by the organizations handling the procurement process and procedures (Niti Samani, 2023).

Sustainable procurement is the process of making purchasing decisions that meet an organization's needs for goods and services in a way that benefits not only the organization but society as a whole, while minimizing its impact on the environment. This is achieved by ensuring that the working conditions of its suppliers' employees are decent, the products or services purchased are sustainable, where possible, and that socio-economic issues, such as inequality and poverty are addressed.

Sustainable procurement is a strategic purchasing process that goes beyond economic factors. It considers environmental, social and governance (ESG) principles to ensure that organizations acquire products in a way that minimizes negative environmental impacts, promotes positive social outcomes and complies with regulations (Daryna, 2023).

1.1. Need for Sustainable Procurement

The following aspects are made business firms to adopt sustainable procurement practices:

- i. Climate change
- ii. Carbon emission
- iii. Population change
- iv. Increased risks
- v. Compliances to the regulations

1.2. Objectives of sustainable procurement

The main objectives of sustainable procurement are:

- Reducing greenhouse emissions
- Preserving bio-diversity and resources
- Absorbing child labor and forced labor
- Reducing inequalities
- Supporting local and regional economic development and more.

1.3. Pillars of sustainable procurement

Three pillars of sustainable procurement are: Economic (Profit), Social (People) and Environment (Planet). Informally, these pillars of sustainable procurement are known as profit (= economic), planet (= environmental) and people (= social).

Sustainable procurement hence incorporates sustainability considerations throughout the procurement process, to achieve optimum value for money in delivering the developmental objectives. Sustainable procurement is strategic procurement at its best.

Effective sustainable procurement supports sustainable

development. Sustainable procurement is hence smart procurement as it takes a 3-dimensional life cycle approach against the one-dimensional, economics focused approach. Figure 1 shows three pillars of sustainable procurement



Figure 1: Three pillars of sustainable procurement (Source: Deskera Books)

Table 1 describes the details of three pillars of sustainable procurement.

Table 1: Three pillars of sustainable procurement

Economic Pillar of Sustainable Procurement	Environmental Pillar of Sustainable Procurement	Social Pillar of Sustainable Procurement
Economic regeneration	Environmental resource management	Human rights
Sustainable economic development	Urban planning	Clean drinking water
Emerging markets	CO2 reduction	Food security
Development of SMEs	Alternative energies like solar, windmill	Fair pay and labor law protections
Total cost of ownership and life cycle costing	Water management	Anti-child labor and forced labor laws
Value for money	Sustainable agriculture	Fair trade
Poverty reduction	Marine resources management	Health and safety
	Protection of Ecosystem	Gender Equality including universal education
	Pollution and waste management	Child mortality and maternal health
		Healthy lives and well being for all

1.4. Drivers for sustainable procurement : Important drivers for sustainable procurement are: Cost reduction, Risk reduction and Revenue growth.

Cost reduction : Following sustainable procurement practices and decisions will lead to a reduction in the total cost of ownership. This is through reduced energy costs, reduced over-specification, reduced consumption & social and environmental compliance costs.

Risk reduction : By following sustainable procurement practices and decisions, risks are reduced because the company will no longer face the financial impact on brand value due to bad supplier practices like child labor and local pollution. The firm will also be saved from the economic costs of sustainable procurement disruptions like noncompliance with environmental regulations.

Revenue growth : By following sustainable procurement processes, the firm would be able to earn additional revenue through the innovation of Eco-friendly products & services and price premium or income from recycling programs.

Sustainable procurement practices are:

- i. Adoption of Corporate Social Responsibility (CSR)
- ii. Integration of goods specifications and criteria that are compatible with the protection of the environment and society
- iii. Integration of business core values with supply chain practices
- iv. Creating brand awareness and brand positioning
- v. Adopting life cycle of goods and services

1.5. Benefits of sustainable procurement

The key benefits are:

- i. Reduced risk and brand reputation
- ii. Decreased cost
- iii. Revenue growth
- iv. Future proofing
- v. Positive social and environmental impact
- vi. Increased employee productivity
- vii. Improved reputation among consumers
- viii. Fostered innovation

1.6. Implementation of Sustainable Procurement Philosophy

Implementation of sustainable procurement practices brings lot of challenges to the business firms. The important challenges are grouped under each category:

- i. **Selection of Suppliers** : Generally suppliers are selected based technical capability, financial soundness and clientele feedback. The order / contract award criteria are: price, quality, delivery, customer service, innovation etc. Under sustainable procurement, the suppliers are evaluated & shortlisted based on economic, social and environmental factors. If the suppliers are selected procurement based economic, social and environmental aspects, then, it is known as 'Green Procurement'.
- ii. **Scope of implementation** : Scope also brings lot of challenges while implementing the sustainable procurement practices. The scope varies from main suppliers to tier-1 or tier-2 suppliers. The implementation becomes more complex, when we include more layers i.e tier-1 or tier-2 suppliers etc. So, deciding the appropriate level is important.
- iii. **ISO 20400 and ISO 26000 Standards** : ISO 20400, Sustainable procurement – Guidelines, provides guidance for organizations wanting to integrate sustainability into their pro-curement processes. It is a sector-specific application of ISO 26000, Guidance on social responsibility, which it complements by focusing specifically on the purchasing function.

ISO 20400 : The standard defines the principles of sustainable procurement, including accountability, transparency, respect for human rights and ethical

behavior, and highlights key considerations such as risk management and priority setting. It also covers various stages of the procurement process, outlining the steps required to integrate social responsibility into the purchasing function.

ISO 20400 is a useful tool for boosting productivity, optimizing cost and stimulating innovation in the market. ISO 20400 provides guidelines, not requirements. It is therefore not intended for certification purposes.

ISO 20400 Requirements:

The following have to be considered before getting started:

- i. Examination of 'buying culture'
- ii. Knowing the company's supply chain
- iii. Thinking strategically
- iv. Get buy-in from top management

ISO 26000 : Sustainable procurement is a key aspect of social responsibility. ISO 26000 formed the basis of ISO 20400, drawing on the same principles and core subjects of human rights, labor practices and fair business practices. As such, ISO 20400 will help individuals working in procurement to integrate the principles of social responsibility as described in ISO 26000 within the purchasing process.

1.7. GeM Portal : Government of E-Marketplace (GeM) is an initiative launched by the Government of India to facilitate all buyers and sellers (including MSMEs). The main objective of the GeM is to ensure effectiveness and transparency in public procurement. GeM has crossed the Gross Merchandise Value (GMV) of Rs.2 lakh crore in financial year (2022-23) which is 40 percent of total India's spend.

1.8. Public Procurement: Conventional Approach : A conventional procurement process is a linear process wherein the products or goods are evaluated based on the acquisition cost. Hence all air conditioners that meet the technical specifications would qualify for financial evaluation and the air conditioner which has the lowest initial cost would be selected. This process does not consider the total cost of ownership or environmental impact of the air conditioner through its life cycle. Conventional tendering approach consisting of the following steps:

- i. Procuring agency defines specifications and requirements.
- ii. Tender is floated and bids are received.
- iii. Technical evaluation based on specifications.
- iv. Financial evaluation (selection based on initial cost)

Proposed Sustainable public procurement approach

A green procurement process is a cyclic process wherein environmental aspects are included during all stages of the procurement. Evaluation in this type of procurement is done by giving value to environmental concerns. Ranking of the product will be based on a combination of environmental attributes, quality, and cost. Sustainable criteria have been developed for each of the stages in the procurement cycle. These preliminary criteria would require feedback from all stakeholders to enable formal drafting. The proposed evaluation process considers total cost of operation which considers real costs over the duration of ownership of the air conditioner. Reduced energy costs due to use of energy.

A diagrammatic representation of the Sustainable Public Procurement framework has been outlined in Figure 2.

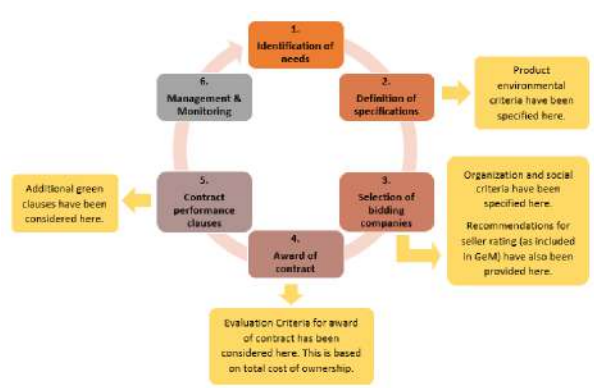


Figure 2: Sustainable Public Procurement Cycle (Source: CII & TERI Report, 2019)

The Sustainable Public Procurement framework proposed further builds on the criteria formulated in the European Union Green Public Procurement (EU GPP) guideline.

- a. **Core criteria** — which are designed to allow for easy application of SPP, focusing on the key area(s) of the environmental performance of a product or service.
 - b. **Comprehensive criteria** — which consider more aspects or higher levels of environmental performance, for use by authorities that want to go further in supporting environmental and innovation goals.
2. **Discussion** : Procurement plays an important role by providing goods or services to business operations. Procurement is not only deals with the enhancement of economic value (profit) to the organizations, but also with the environmental factors (planet) and societal factors (people). While deciding to implement, the scope has to be defined correctly. The important drivers for sustainable procurement like cost reduction, risk reduction and revenue growth have to be identified.

Sustainable procurement is a strategic process, so the roadmap has to drawn properly. Implementation of ISO 20400 and ISO 26000 standards have to be considered for implementation. Buying culture, strategic thinking, knowing the supply chain of the company and involving the top management have to be included.

Vision plus Skills plus Stimuli plus Resources plus Roadmap are needed for adopting sustainable procurement methodologies in the business.

3. Conclusion : The perspectives of sustainable procurement have been introduced. The definitions of UNEP, ISO, ISM and others have also been highlighted. The need for sustainable procurement considering the climate change, carbon emissions, population increase and risks associated with the business are discussed. The important pillars known as economic, social and environmental factors were portrayed. Further, the drivers of sustainable procurement like cost reduction, risk reduction and revenue growth are emphasized. The benefits include risk reduction, brand reputation; decreased cost, revenue growth and future proofing are also highlighted.

The implementation approaches such as corporate social responsibility (CSR), product approach, and process approach are also discussed. Government E-Market (GeM) portal and its importance in public procurement have been discussed. The relevance of ISO 20400 and ISO 26000 standards are also discussed for implementation.

Sustainable public procurement in India has also been discussed with conventional approach and proposed approach with sustainable public procurement cycle. The important ingredients are : vision, skills, stimuli, resources and roadmap to adopt sustainable procurement methodology in business.

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NEW INITIATIVES & APPROACHES

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Foreign Trade Policy – 2023 is a Dynamic and Open-Ended Policy: The Policy is Permanent – but Changes are Continuous

Foreign Trade Policy (FTP) 2023 is a Dynamic and Open-Ended Policy, unlike earlier Policies which were of Five-Year Tenure. The Previous Five-Year Policy, FTP 2015-20, was ended on 31st March'2020, however extended for Multiple times till 31st March'2023. During this Period of Extensions, there was lot of suspension about continuity of the Policy Provisions. To end such dilemma, now the Foreign Trade Policy 2023 is being announced to provide the **Policy Continuity** and a responsive framework. Subsequent revision(s) in the FTP shall be done as and when required and shall not linked to any date. Continuous feedback shall be taken from Trade and Industry to streamline processes and update Policy & procedures.

Foreign Trade Policy (FTP) - 2023



Foreign Trade Policy – 2023 : 11 Chapters

Foreign Trade Policy (FTP) 2023 effective from 01.04.2023, announced recently contain 11 chapters.

The basic Export Promotion Schemes like Duty Exemption / Remission Schemes, Export Promotion Capital Goods (EPCG) Scheme, Export Oriented Units (EOUs), Electronics Hardware Technology Parks (EHTPs), Software Technology Parks (STPs) and Bio-Technology Parks (BTPs), Deemed Exports and Chapter on Quality Complaints and Trade Disputes are Continued.

The Important Highlights of New Foreign Trade Policy is Separate Chapters on Developing Districts as Export Hubs (DEH) (Chapter – 3), Promoting Cross Border Trade in Digital Economy (Chapter – 9), SCOMET: Special Chemicals, Organisms, Materials, Equipment and Technologies (Chapter – 10).

Foreign Trade Policy - 2023		11 Chapters
Chapter - 1	Legal Framework and Trade Facilitation	
Chapter - 2	General Provisions Regarding Imports and Exports	
Chapter - 3	Developing Districts as Export Hubs	
Chapter - 4	Duty Exemption / Remission Schemes	
Chapter - 5	Export Promotion Capital Goods (EPCG) Scheme	
Chapter - 6	Export Oriented Units (EOUs), EHTPs, STPs and BTPs	
Chapter - 7	Deemed Exports	
Chapter - 8	Quality Complaints and Trade Disputes	
Chapter - 9	Promoting Cross Border Trade in Digital Economy	
Chapter - 10	SCOMET: Special Chemicals, Organisms, Materials, Equipment and Technologies	
Chapter - 11	Definitions	

Foreign Trade Policy – 2023 : Targets India's Exports to 2 Trillion Dollars

It is delighted to note that there has been remarkable achievement in India's Merchandise and Services exports which is expected to cross record USD 767 Billion in FY2022-23, despite in these challenging and tough times experiencing across the world, with exports to the tune of \$447 billion in merchandise and \$320 billion in services.

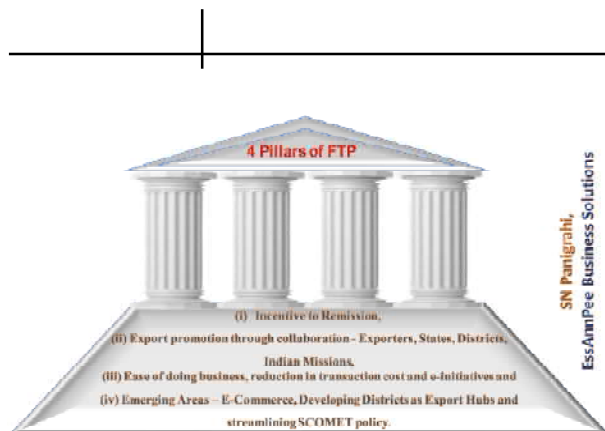
While the services sector exports witnessed a growth of 30 per cent, the merchandise segment registered a growth of 6 per cent.

Foreign Trade Policy (FTP) 2023, seeks to take **India's exports to 2 trillion dollars by 2030.**

Foreign Trade Policy (FTP) – 2023 : New Approach:

The Key Approach to the policy is based on these **4 pillars:**

- (i) **Incentive to Remission,**
- (ii) **Export promotion through collaboration - Exporters, States, Districts, Indian Missions,**
- (iii) **Ease of doing business, reduction in transaction cost and e-initiatives and**
- (iv) **Emerging Areas – E-Commerce, Developing Districts as Export Hubs and streamlining SCOMET policy.**



Following are Some of the Initiates:

Ease of Doing Business, Reduction in Transaction Cost and e-Initiatives

- Ø Online approvals without physical interface
- Ø Reduction in user charges for MSMEs under AA and EPCG
- Ø E-Certificate of Origin
- Ø Paperless filing of export obligation discharge applications

Export Promotion Initiatives

- v Status Holder Export Thresholds Rationalised
- v Merchanting trade reform
- v Rupee payment to be accepted under FTP Schemes
- v Towns of Export Excellence

Districts as Export Hubs Initiative

Hon'ble Prime Minister in his Independence Day speech on 15th August, 2019 highlighted the need to channelize the **Unique Potential of each District of the country and convert them into export hubs.**

Taking his **Vision** forward, Department of Commerce through DGFT launched the **"Districts as Export Hubs"** initiative and since then has been working with the States / UTs and the districts directly to **Create Institutional Mechanisms for Facilitating and Promotion of Exports of Identified Products / Services from the Districts.**

In the New Foreign Trade Policy (FTP) – 2023, a Separate Chapters on Developing Districts as Export Hubs (DEH) (Chapter – 3) is introduced. The initiative is to with following objectives :

- v **Districts as Export Hubs aims to boost India's foreign trade by decentralizing export promotion.**
- v **Bring a greater level of awareness and commitment regarding exports at the district level.**
- v **Identification of products/services in all the districts.**
- v **Create institutional mechanisms at the State and District level to strategize exports (State Export**

Promotion Committee & District Export Promotion Committee).

- v **Preparation of District Export Action Plans (DEAPs) outlining the action plan to promote identified products and services.**
- v **Make States and Districts meaningful stakeholders and active participants.**



Capacity Building at District Level:

- Ø Capacity building to create new exporters and identification of new markets.
- Ø Training, handholding, and outreach programs by DGFT field offices in
- Ø coordination with District Industries Centers.
- Ø Regional Authorities of DGFT working with the States/UTs to prepare
- Ø District specific Export Plans.
- Ø Export promotion outreach programs in districts to focus on branding,
- Ø packaging, design and marketing of identified product & services.

Infrastructure and logistics development intervention

- v To address Infrastructure and Logistics bottlenecks impeding exports.
- v Districts to focus on development of logistics, testing facilities, connectivity
- v for exports and other export-oriented ecosystem.
- v Convergence of ongoing schemes to support these initiatives

Facilitation for E-Commerce Exports

With the objective to provide a framework for cross-border trade of goods and services from India in the digital economy and the promotion of e-Commerce and other emerging channels of exports from India, a New Chapter **"Promoting Cross Border Trade in Digital Economy"** is introduced. Some of the key features of the Chapter are :

- v All FTP benefits to be extended to e-Commerce exports.

- v Necessary enablement of IT systems in Department of Commerce, Post, CBIC
- v to be undertaken in the six months.
- v To streamline e-Commerce export facilitation - Guidelines being formulated
- v in consultation with other ministries to facilitate further exports under
- v e-Commerce.
- v Special outreach and training activities for small e-commerce exporters
- v Handholding through industry and knowledge partners

Continuation of Export Promotion / Remission Schemes: The basic Export Promotion Schemes like Duty Exemption (AA) / Remission Schemes, Export Promotion Capital Goods (EPCG) Scheme, Export Oriented Units (EOUs), Electronics Hardware Technology Parks (EHTPs), Software Technology Parks (STPs) and Bio-Technology Parks (BTPs), Deemed Exports and Chapter on Quality Complaints and Trade Disputes are Continued.

Conclusion : Overall, the FTP 2023 is a dynamic policy plan that seeks to increase India's exports and support its exponential growth in the years to come. The policy is anticipated to assist the expansion of the exports while also establishing a favourable climate for MSMEs and other enterprises to gain export benefits thanks to its emphasis on ease of doing business, technology interface, and collaboration. Specially "**Districts as Export Hubs**" Scheme intended to promote Exports by focusing at State & District level. E-commerce is burgeoning globally, especially in India, it is experiencing a big boom in the recent times. To grab this Opportunity focus is made in the policy to Promoting Cross Border Trade in Digital Economy. The FTP 2023 as a roadmap for India's exports to reach diggy heights to reach Cherished Target of **2 trillion dollars by 2030.**

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CORRIGENDUM

Following mistake and omission have occurred inadvertently in the Ankleshwar Branch news published in April 2023 issue of MMR.

1. **It was wrongly mentioned that Mr. Rahul Pradhan is QCFI Chairman.** Actually Rahul Pradhan is VP Zydus Cadila, whereas QCFI President is Mr. Vijay Asher
2. Shri Bharat Pagare VP-GSFC who conducted the programme of opening of branch and Mrs. Sudha Majumdar-Vice Chairman QCFI was the special guest on the occasion of opening of Ankleshwar Branch.



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.

RESILIENT TECHNOLOGY CREATES A MORE STABLE IT ENVIRONMENT THAT SAVES MONEY, INCREASES CYBERSECURITY AND REQUIRES FEWER RESOURCES TO SUPPORT IT, A NEW REPORT SAYS.

STEPHANIE KANOWITZ, FREELANCE WRITER BASED IN NORTHERN VIRGINIA.

Resilient technology is necessary to all organizations, but for the public sector, it's especially important to building trust, disaster recovery, innovation and increased capacity, an expert says. There are also unique challenges to achieving it. "Resilient technology is critical in maintaining uninterrupted services for customers and servicing them during peak times," Daniel Wallance, an associate partner at McKinsey and Co., and two co-authors wrote in "A technology survival guide for resilience," which McKinsey published March 24. "This requires a resilient infrastructure with heightened visibility and transparency across the technology stack to keep an organization functioning in the event of a cyberattack, data corruption, catastrophic system failure, or other types of incidents."

The organizational structure of state and local governments complicates the ability of achieving resilience, however, Wallance said. To overcome that, the first step is to understand who owns the technology—a central agency or individual functions—where funding comes from and who the decision-makers are. Then, agencies can look at what applications run on the technology in question. Do they affect critical systems or a lunch menu, for instance? "I'm less concerned about the latter," Wallance said. "If it's out for a day, that's not as big a deal as if it contains massive amounts of critical data that I need to operate."

Signs that a government organization may need to increase resilience are an increasing number of data corruption events or outages. "That would be an indicator that there's a ... larger issue," he said.

Another challenge is overcoming a culture of stagnation—the idea that if it ain't broke, don't fix it. That is changing, though, Wallance said. "With the advent of digital or new technologies, new ways of working, remote access, [more agencies are] realizing, 'Hey, these services that I want to provide my constituents, my customer base, I can't provide as effectively or efficiently with the technology stack that I have in place today,'" he said. The report offers three levers to build technology resilience. The first is about prioritizing services based on their criticality. Second, agencies should assess their current level of resilience and how they performed in past crises. It provides four maturity levels against which agencies can measure themselves.

The first is ad hoc resilience, meaning resilience is up to individual users and system owners, and monitoring involves users' reporting of problems. The second is passive resilience, or resilience through manual backups, duplicate systems and data replication. Third is active resilience through failover, which is resilience through active synchronization of systems, applications and databases as well as active monitoring at the application level. The most

mature level is called inherent resilience by design because resilience is architected into the technology stack from the get-go, and the technology is being actively monitored. "It's then possible to identify and ultimately remediate common factors that led to these incidents, which may include the technology environment itself, the architecture of applications, interfaces between systems and third parties, and the way resilience was built into individual applications and systems," the report states.

The third lever of building resilience requires agencies to remediate gaps using a cross-functional approach, increasing resilience of individual applications and groups, strengthening on-premises or cloud-based hosts and implementing regular resilience testing. A benefit of resilient technology is cost savings and increased cybersecurity. By replacing legacy and end-of-life systems with newer ones, the IT environment becomes more stable and requires fewer resources to support it.

Cloud provides a way to take advantage of new technology and increase resilience, Wallance said, adding that applications should not be lifted and shifted "because then a legacy application and assets are in a contemporary environment, [which is] not going to help me as much." Another benefit of resilience is workforce improvement. That's because people who are knowledgeable about these new, resilient technologies must be upskilled or hired. Agencies must create a culture of resilience among employees. The report has three tips for doing that:

- Institute a blame-free culture in which teams and managers focus on problem-solving, not pointing fingers.
- Use metrics to monitor performance and focus on repeat incidents that have the same root cause.
- Do simulations so that teams can "rehearse the outage ... and iteratively build up and train to respond."

The notion of resilient technology is taking root, albeit at varying levels nationwide, Wallance said, based on maturity level and the ability to attract or upskill talent to drive resiliency. But it's crucial because the longer agencies wait to incorporate resilience, the harder it will be to address cyber incidents and outages and the tougher to incorporate into disparate systems. "There's also the security," he said. "Even if I am able to provide digital and contemporary services to my constituents, if it's not secure, they're not going to trust and use those systems."

Source: gcn.com

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BLOCKCHAIN IN SUPPLY CHAIN: BENEFITS AND TOP USE CASES IN 2023

CEMDILMEGANI,
PRINCIPAL ANALYST AT AIMULTIPLE

Today's supply chains are more complex than ever due to the globalization of the market. Nearly half of supply chain leaders say that they only have visibility into their first-tier suppliers but not their upstream supply chain.¹

Any business with a supply chain has to manage all of the multiple suppliers, manufacturers, consumers, logistics, etc. at the same time with precision and swiftness. However, as the complexity increases, transparency and workflow decrease. Since the future scenario of the world market signals more complexity, successfully and efficiently sustaining the functioning of supply chains seems challenging.

Due to this complexity, plus the lack of transparency and rapidness, in current supply chains, the implementation of blockchain for supply chain management is becoming an attractive idea.

In this article, we will investigate how blockchain technology can be used in supply chains, what advantages it brings to the area, and its top use cases in the supply chain.

What advantages blockchain technology offers to supply chains?

A blockchain is a distributed ledger technology. In this ledger, transactions are recorded as a series of code blocks that constitute a chain. When the blockchain changes, each computer that has the same ledger is updated. This means that, since each block only exists in relation to its antecedent and subsequent block, the data within a block can't be changed. Therefore, this makes blockchain a highly verifiable, anti-tampering, transparent technology in business, and especially in supply chain management.

Now we can focus on what kind of advantages this functioning of blockchain brings to supply chains. Here is the overlook of some fundamental ones.

- **Traceability:** Blockchain enables the mapping and visualizing of steps in a supply chain easily because of its interconnected and encompassing bridging of actions. This enhances the traceability of each element constituting a supply chain, such as keeping track of supplier information, procurement, delivery of goods, etc.
- **Transparency:** Another advantage of blockchain is that, it builds trust among the parties included in a supply chain because it provides open access to key data points it captures. Also, its traceability enhances its transparency.

- **Speed:** Blockchain encapsulates smart contracts, i.e., chunks of code within a single block in a blockchain. Smart contracts automatically update actions when predetermined conditions of the actions are met. This feature enables replacing slow and manual processes that require time-consuming confirmations.
- **Immutability:** Since blockchain is a distributed ledger consisting of multiple copies, it is almost impossible to tamper with a specific transaction because one has to alter all the copies simultaneously. This makes blockchain use in the supply chain highly trustworthy and resistant to fraud.
- **Consensus:** For transactions to successfully follow one another within a supply chain, all parties should agree on the actions. Without consensus, work is impossible. Blockchain is also advantageous for ensuring and sustaining consensus over the process because all the parties know that the transactions are automated and valid.

Use Cases of Blockchain Technology in Supply Chain : Although it is still early to say that blockchain technology dominates supply chains, businesses are leveraging it in various areas and steps of their supply chain. We can list some of the use cases of blockchain in the supply chain:

1. Supply Chain Management : With its qualities of transparency, traceability, speed, and consensus, blockchain facilitates the management of supply chains. Blockchain coordinates communication systems of the supply chain with a unified platform on the basis of its abilities for information-sharing and processing.

Also, according to a study, blockchain helps reduce the risk of certain supply chain disruptions deriving from behavioral uncertainties, fraud risks, data loss, manual errors, transactional and operational risks, and informational asymmetries.² Therefore, it can greatly enhance the monitoring and management of the supply chain.

2. Lowering Costs : Blockchain allows cross-border transactions. Thus, businesses can avoid intermediaries. By doing so, they not only save time but also money by cutting unnecessary costs emerging from intermediary steps.

3. Regulating Product Recall : Thanks to its traceability and transparency, blockchain makes it easier for supply chains to regulate product recalls by facilitating the

identification and location of the affected products in the process. Thus, the recalling process becomes less expensive and time efficient.

4. Reducing Counterfeiting

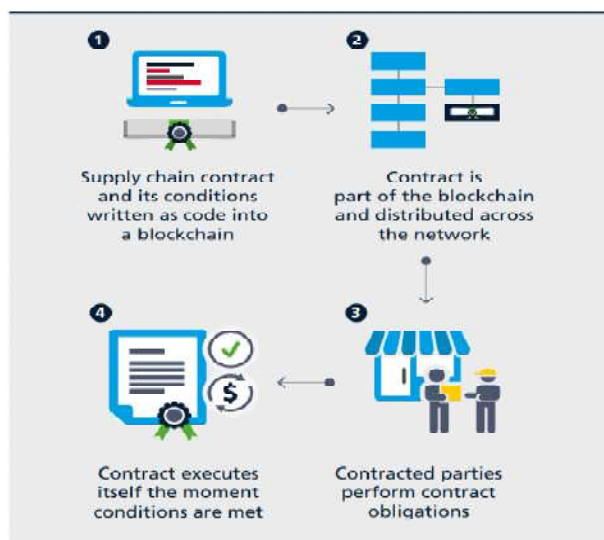
Provenance is important for the quality and reliability checks of products. Since blockchain allows traceability of every step within a supply chain, the provenance of goods can be verified correctly. Thus, it helps reduce counterfeiting by allowing a quick check of the provenance of the suspected goods. According to a study by OECD, counterfeited and pirated products constituted 3.3% of world trade and 6.8% of total EU imports in 2016.³ This indicates that there is an alarming need to combat counterfeiting, which can be succeeded by blockchain technology.

Plus, since every transaction is under the control of authentication, blockchain can also prevent documentation fraud with the ability to verify certifications and official documents.

5. Maintaining Ethical Standards : Today, consumers are more aware of what ethical standards they expect from the businesses they provide their products from. 60% of consumers say they seek brands that reflect their own values of sustainability and purpose and research about the company's environmental, social, and governance (ESG) practices before buying from them.⁴

So, consumers want assurance that the products they are buying are not subjected to unethical production and delivery processes. By blockchain traceability, they can know the provenance of their products and know how the product is manufactured and shipped.

6. Logistics : We mentioned the use of smart contracts in blockchain technology. Via these smart contracts, transactions can be verified, recorded, and coordinated autonomously without third parties. Thus, a complexity element for global supply chains is alleviated. Some logistics companies like DHL are thinking of implementing blockchain use in their business.



How smart contracts could work in logistics. Source: DHL

7. Supplier Payments : As we mentioned, blockchain revolutionizes transaction traceability. Payments are an internal part of this. As blockchain allows automatic control of verified processes with smart contracts, once standards are met, supplier payments are done faster and with less intermediary involvement.

8. Food Safety : Blockchain is under consideration by the food industry for the food supply chain health. For example, Walmart with the collaboration of IBM innovatively uses blockchain technology to track the provenance and condition of its pork supply coming from China. With increased traceability, it is easier for the food supply chains to:

- Avoid tampering with information on the provenance of foods,
- Prevent contamination of the supplied goods with a faster and more regulated process between the processor and the distributor,
- Forestall spoilage of goods in the process between the distributor and the retailer.

9. Post-sale Services : With the digitalization of product information via blockchain, post-sale services such as warranties and maintenance can become more trustworthy and under control. When a buyer verifies the product's digital identity, the warranty period can start automatically. Also, second-hand buyers can confidently investigate the product's unique identity, which makes second-hand trade more trustworthy.

If you have other questions about the use of blockchain technology in supply chains, feel free to ask:

Find the Right Vendors

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SOURCE: aimultiple.com

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CONVERGING BUSINESS AND SOCIETY FOR SUSTAINABLE SUPPLY CHAINS

KESHAV MURUGESH

We have the mandate to make real change and an epochal opportunity to transition to a clean and socially equitable economy. The place is here, and the time is now.

A recent Oxford Economics survey of global supply chain decision-makers revealed an interesting finding. While 88% of them had created a sustainability mission statement, only 52% had actually executed them. Moreover, only 21% seemed to have visibility into their supplier sourcing of sustainable products.

The emergence of supply chains as sustainability's new frontier is rooted in a mutually advantageous paradox. Studies show that not only do supply chains account for more than 90% of an organization's greenhouse gas emissions (GHG), but also 50%-70% of their operating costs. In such a scenario, where bringing down the first can also reduce the second, let us see how organizations can converge the goals of responsibility and profitability.

Visibility – the first imperative for sustainable supply chains

Questions on sustainability bombard organizations from all sides – the consumer, employees and regulators. Visibility through the supply chain cycle is thus a critical priority – evaluate risks or successfully anticipate and prepare for disruptions. More importantly, visibility enables organizations to draw up an effective business case for sustainable supply chains. Nike is an amazing example of a visionary genius far ahead of its time. As early as 2004, it started work with designers, scientists, coders – and even students – to study the long-term sustainability impact of the materials that went into its products. In 2012, the results of this work were consolidated into Nike Materials Sustainability Index (NMSI), an information database. This was followed by the launch of the MAKING app in 2013, which provided information for designers to choose the right sustainable materials for their designs. Today, this app embeds the high-impact elements of chemistry, energy and greenhouse gas, water and land, and waste. Truly the stuff of pioneering legends!

Digital tools, platforms and analytics can help organizations gather data, capture metrics, set performance goals and indicators, provide incisive visibility, and draw up effective governance measures.

Stakeholder collaboration — the key to supply chain transformation

Ikea, which consumes nearly 1% of the world's cotton production, has partnered with Better Cotton to encourage and promote sustainable use of resources in its supply chain network. Today, over 1,10,000 farmers have adopted more sustainable farming practices within IKEA projects.

Supply chain ecosystems are extremely complex, and any change involves transitioning of major business, societal and geographical systems. The truth is that organizations control very little of these systems or the companies that are part of it, and so it can happen only through collaboration. Walmart, for example, has used technology and collaboration with World Wildlife Fund and some NGOs to boost supplier engagement for better collaboration. Project Gigaton, as it is called, is a platform to engage with and help their 4500+ suppliers to decarbonize their chains. The results have been impressive - more than 500 million metric tons of emissions have been reduced through product design innovations.

A portfolio approach to sustainable supply chains

There is significant scope for organizations to act across the entire value lifecycle to create sustainable supply chains. From innovations in product design, creating efficiencies in how operational resources are deployed, optimizing supply chain networks (that looks at enhanced local sourcing) to adopting circular economy models – there is enough and more scope to achieve sustainability. Based on where they rest on the maturity spectrum in each area, organizations will need to take appropriate actions – 'must-do,' incremental or transformative – based on the demands of their business. Nestle has adopted an effective lifecycle approach to building a green supply chain. They assess each product for environmental impact at every stage of their production—educating dairy farmers on best practices for sustainable production, handling and storing manure to cut down GHGs and deploy it as fuel, switching to clean fuels in their manufacturing process, enhancing factory efficiency, labeling all products to enable end-of-life packaging treatment and more.

Return on investment of a business-driven approach to sustainable supply chains will accrue from a healthy combination of cost reduction, revenue growth, risk mitigation, customer loyalty, brand reputation, talent retention, and more. E&Y research has shown that champions of sustainable supply chains have experienced financial benefits even though they had not made cost-saving their primary motive – 25% gained through increased revenue, and 43% anticipated a spurt in their share prices in the next couple of years.

According to a McKinsey research report, the supply chain is a pivotal factor in seven of the nine dimensions of ESG. We have the mandate to make real change and an epochal opportunity to transition to a clean and socially equitable economy. The place is here, and the time is now.

Source: www.sdcexec.com

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HOW GENERATIVE AI CAN DRIVE SUPPLY CHAIN TRANSFORMATION

ChatGPT and other powerful tech tools provide new opportunities to enhance visibility and efficiency.

JAN BURIAN

The welcome screen for the OpenAI “ChatGPT” app is displayed on a laptop screen on February 03, 2023 in London, England. Leon Neal via Getty Images.

Jan Burian is head of Manufacturing Insights Europe, Middle East and Africa at International Data Corporation. Opinions are the author’s own. OpenAI’s release of ChatGPT for public users at the end of November 2022 turned out to be an extraordinary event. For the first time, anybody in the world could experiment with what generative AI makes possible.

Open source generative AI and large language models like ChatGPT have been available for several years from companies including Google, Microsoft, Meta, and others. But the democratization of the technology could unlock new benefits, particularly in the world of supply chain. Expectations related to generative AI are high in the supply chain arena. In a globalized, data-driven business world, AI-powered technology powers efficient and sustainable flow of goods, components, and materials. IDC predicts that in 2026, 55% of the Forbes Global 2000 OEMs will have redesigned service supply chains based on AI. This will ensure that the right parts are available and positioned to solve issues before failure.

Global organizations want more supply chain visibility to tackle issues like cost escalation, and demand volatility, according to IDC surveys. Generative AI has the power to do all that and more, helping businesses improve their transparency, efficiency, and overall resiliency. Here are a couple of roles that generative AI could play in a supply chain organization:

- 1. Data Analyzer:** Technology can analyze data from various sources — including purchase orders, invoices, and shipment tracking information — to identify patterns and potential areas for improvement. It can create unique insights through the contextualization of publicly accessible data and information from enterprise resource planning (ERP) systems, warehouse management systems (WMS), and customer relationship management (CRM) systems.
- 2. Bottleneck-Free Workflow Enabler:** Generative AI, which is quite good at summarization, could be used to review the material/product record and provide a succinct summary relevant to the logistics planner or warehouse operator at the point of use. This enables the reduction of bottlenecks that might hobble process workflows.
- 3. Training assistant:** Technology can generate process guidelines and training material for internal and external use (e.g., supplier management guidelines, including delivery conditions updates or sustainability frameworks). For training manuals and updates, generative AI could identify best practices and create a comprehensive document. However, training materials/guidance must still

be validated and approved by the relevant person/product owner (i.e., there must be a defined approval and editing process).

- 4. Sustainability Tracker:** Technology can assist the creation of sustainability reports by providing data analysis and insights into performance. A new category of report could be created (and its production automated) if the outputs of generative AI-powered technology and intelligent automation technology are combined.

- 5. Provider of Mutual Understanding:** In any multinational/multicultural environment, the way people communicate and share information really matters. Generative AI technology is not just an AI-powered translator — it can enhance text with understandable, information-based insights. This can accelerate information transfer and significantly reduce problems of being “lost in translation.” The result may be improved trust and collaboration, enabling more efficient and effective decision making.

Embedding generative AI into ERP, SCM, supply chain control and planning tools will become standard — but this is not the limit. By combining generative AI with low-code/no-code development tools, for example, deep technical expertise would not be necessary to build new custom applications powered by generative AI.

But to obtain the full benefits of generative AI — or any other new technology, for that matter — organizations must test, develop, deploy, and create focus groups that study the application across processes. Tools like ChatGPT democratize AI in daily operations, though using it for business purposes requires being 100% sure about its accuracy, reliability, and scalability.

Users and developers also cannot forget security. Make sure the technology you are using includes safeguards against bias and “jailbreaking,” or tricking AI chatbots into disregarding filters intended to prevent the generation of dangerous or hateful content.

We are still in the early days of this technology, and don’t expect to get free computing power forever. Monetization and the scale of solutions will evolve, making it essential to consider the ROI parameter when deciding whether to leverage the tech.

For now, though, we are just scratching the surface of what generative AI can do.

Source: supplychaindive.com

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HOW MANUFACTURERS CAN TACKLE SUPPLY CHAIN COSTS IN 2023

With budgets tightening in an uncertain economy, experts weigh in on how companies can plan for the year ahead and stay resilient.

KATE MAGILL, SENIOR EDITOR

Manufacturers faced a variety of financial headwinds in 2022, ranging from elevated logistics costs to production disruptions as COVID-19 swept through China. As companies continue to plan their budgets for the year ahead, many are looking at how to control their supply chain costs.

Resiliency is a common top priority as manufacturers aim to fortify their supply chains in the hopes of never again finding themselves caught off-guard by sudden global shifts. In a year that already includes a volatile economy and geopolitical uncertainties, what supply chain costs should manufacturers be most concerned with and how can they mitigate them?

With prices stubbornly high, planning is a must

Manufacturers across the country are still contending with inflated material and labor costs, said Steve Young, a partner in Bain & Company's advanced manufacturing and services practice.

Attracting and maintaining a quality workforce ranked as the number one primary business challenge among more than 75% of respondents to the National Association of Manufacturers' latest industry outlook survey. Supply chain challenges, increased raw material costs and transportation and logistics costs also ranked as significant issues.

The tension comes after years of push among manufacturers to meet demand spikes throughout the pandemic, regardless of budget, Young said. Now, companies are trying to get those costs back in line and focus on operational efficiency.

"Over the last several years, manufacturers and operations leaders have been under a lot of pressure to get output, and that output is at almost any cost, just to meet demand," Young said. "Places where in the past there were really tight controls on indirect spends, whether that be maintenance, engineering costs, [etc.], we're finding clients increasingly focused on getting control back on all those kinds of spends."

Manufacturers' latest industry outlook survey. Supply chain challenges, increased raw material costs and transportation and logistics costs also ranked as significant issues.

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Supply chain issues top manufacturers' concerns

National Association of Manufacturers members ranked their "primary current business challenges" for the last quarter of 2022.

Attracting and retaining a quality workforce	75.7%
Supply chain challenges	65.7%
Increased raw material costs	60.7%
Transportation and logistics costs	50.0%
Rising health care/insurance costs	47.9%
Weaker domestic economy and sales for our products	47.6%
Unfavorable business climate (e.g., taxes, regulations)	44.1%
Strengthened U.S. dollar relative to other currencies	26.6%
Weaker global growth and slower export sales	24.0%
Trade uncertainties	21.9%
Challenges with access to capital or other forms of financing	8.6%

Having a thorough, up-to-date understanding of their company's demand forecasts is one way a company can drive efficiency, according to Young. Operational and commercial teams should work closely together to understand what demand is coming, and how to align production and inventory accordingly.

"It's really important for the operations and the commercial teams and the strategy teams to work really closely together to get control of the underlying demand forecasts," he said. "We've gotten through periods where the demand trends in many industries have not been normal in a way that they have been in any recent history. Going back to the very basics of understanding the markets, the customers, the competition and where demand truly is going becomes really important." With that, teams should also be in close communication with suppliers, both in a bid to control costs and understand where vulnerabilities in the supply chain lie.

Source: Supply Chain Dive



NEW TECHNOLOGY TRENDS IN 2023

VISWANATH V S

Viswanath is a passionate content writer of Mindmajix. He has expertise in Trending Domains like Data Science, Artificial Intelligence, Machine Learning, Blockchain, etc.

New technologies evolve every day, and new versions of the existing ones get released. Therefore, IT professionals must keep updating their skills per the rising market technology trends. If you are wondering about the new tech trends of the upcoming year, take a look at these top 12 tech trends that matter most for companies.

Technology continues to be a critical force for change in the world. Technology breakthroughs give enterprises more possibilities to lift their productivity and invent offerings. And while it remains difficult to forecast how technology trends will play out, business leaders can plan ahead better by watching the development of new technologies, anticipating how companies could utilize them, and understanding the factors that impact innovation and adoption.

To that end, we have worked with our IT experts to identify and interpret 12 of the most significant technology trends unfolding today.

Listed Below Are the Top New Technology Trends for 2023-2024.



Here Is The List of Top Technology Trends

- Artificial Intelligence
- Metaverse
- Blockchain
- Quantum Computing
- Digital Immune System
- Hyperautomation
- Datafication

- Industry Cloud Platforms
- Wireless Value Realization
- A Digitally Edible World
- The Hyper-Connected, Intelligent World
- Sustainable Tech

Latest Information Technology Trends 2023

Tech Trend #1. Artificial Intelligence



The hype for Artificial Intelligence has been around us for a while. If you are someone who works with technology, you may not relish how ubiquitous Artificial Intelligence has become. AI has already shown its superiority in navigation apps, smartphones, and more to carry out creative and mundane tasks.

This AI hype isn't going to end any time soon. The growing ecosystem of low-code or no-code AI systems and as-a-service platforms will make it more accessible.

Another exciting field to watch out for in AI is synthetic content. It includes harnessing the AI's creative power to generate new images, sounds, or data that never existed before. In 2023, we can expect to witness the growth of the productive form of AI across business and entertainment.

According to Precedence Research, the global AI market is expected to hit US\$ 1,597.1 billion by 2030. With AI spreading its usage in various fields, we can expect new jobs in programming, development, testing, and many more.

On the other hand, AI also offers handsome salaries ranging from \$115,000 for entry-level positions to \$205,000 for experienced professionals - making it the top technology trend you must check out for in 2023!

Top tech giants like Facebook, Google, etc., are putting AI in front of everything. This indicates the future belongs to this technology, and there will be a dire need for talented professionals in this field.

There are many different types of positions within artificial intelligence. Some of the top job titles include:

- AI Engineer
- AI Research scientist
- Machine Learning Engineer
- AI Architect.



Become an Expert in Artificial Intelligence By Enrolling in Artificial Intelligence Course Training

Tech Trend #2. Metaverse



At this stage, Metaverse can be described as “a more digital world.” The experience of immersive online environments and next-level user experiences are expected to witness a massive growth in the next five years.

In simple terms, the word “metaverse” can be described as a profoundly immersive 3D virtual world experience obtained using a combination of AR, VR, and MR technologies. By creating a virtual world where users may play games, interact socially, conduct business, and more. The metaverse platform enhances the experience of the internet.

Mark Zuckerberg believes the growth of this trend might be due to virtual and augmented reality (VR/AR). All sizes of organizations in industries, from banking to fashion, have jumped on board to build metaverse-like experiences.

In 2023, The metaverse has the potential to help unlock access to new creative, social, and economic opportunities. Tech giant Facebook announced the creation of 10,000 new highly skilled positions for the metaverse in the next five years. This means better opportunities for talented metaverse engineers, marketers, architects, and visionaries.

Learning the skills needed for the metaverse is more effortless. If you like becoming an architect of the new digital universe, check out MindMajix courses today!

Tech Trend #3. Blockchain



In the present times, blockchain technology is in demand. The popularity of this technology has grown, and many large organizations are moving in that direction. As a result, the field of blockchain technology requires a large number of developers.

The benefits of blockchain include the network's decentralization, security, and privacy of data. Blockchain applications go well beyond cryptocurrencies like bitcoin. According to Gartner, blockchain's value will increase quickly, hitting \$176 billion by 2025 and \$3.1 trillion by 2030.

Whether startups or large organizations, everyone is looking to tap into the blockchain market. Companies like Infosys, Capgemini, TCS, Accenture, and others are among the leading recruiters of blockchain developers.

If you are interested in making your career out of this popular technology, then this is the right time. To get into the field, you need to have hands-on experience in programming, data structures, and networking.

Upskill Your Career By Registering in Blockchain Online Course

Tech Trend #4. Quantum Computing



There is currently a global race to create quantum computing at scale.

Quantum computing, which uses subatomic particles to develop new ways to process and store data, is expected to make it possible for computers to be a trillion times faster than the fastest regular processors currently available.

The risk of quantum computing is that it could render our present encryption techniques ineffective. As a result, any nation that invests heavily in the development of quantum computing will be able to break the encryption employed by other nations, businesses, security systems, and other organizations. Watch this trend closely in 2023 as countries including the US, UK, China, and Russia make significant investments in the development of quantum computer technology.

Today's quantum computers are many times faster than conventional computers, and major companies are investing in the innovations of this technology. By 2026, it is expected that the global market for quantum computing will generate more than \$1,765 billion in revenue, as per Markets And Markets.

Tech Trend #5. Digital Immune System



The past several years have witnessed an unparalleled focus on risk in both the physical and digital worlds. Cybersecurity concerns are getting more severe

as data breaches and other problems get more sophisticated.

It's good that methods for avoiding internet scams, spam, and other annoyances are getting increasingly complex. An efficient digital immune system may significantly reduce operational and security concerns through monitoring, automation, and the most recent design innovations.

As the value of these tools becomes more widely recognized in the coming year, anticipate receiving a lot more inquiries regarding the condition of your organization's digital immune system and your efforts to fortify and safeguard it.

Tech Trend #6. Hyperautomation



Hyperautomation is one of the trending technologies today.

Hyperautomation enables the automatic completion of repetitive activities without manual or human input. It uses Robotic Process Automation (RPA), machine learning, and artificial intelligence (AI) to alter old and new machinery and processes. An organization can thrive in a more competitive environment by utilizing digital transformation to achieve cost and resource efficiency.

Organizations must boost production, reduce expenses, and operate more efficiently to succeed in the current market. You can advance with the help of hyperautomation services. To learn more about hyperautomation, see the blog that follows this one.

Businesses of all sizes, small, medium-sized, and large, can gain a lot from hyperautomation. It is unquestionably true that many businesses have started deploying hyperautomation technology and enjoying its advantages. According to a Salesforce poll, organizations anticipate having hyperautomation on their technological roadmaps by 2024.

By 2025, it is predicted that global spending on AI will reach \$15 trillion, according to McKinsey. TCS, UiPath, Wipro, Infosys, and Appian, to name a few, are some of the world's most renowned companies operating in the hyperautomation market.

It's time for you to begin your journey because the practice of hyperautomation is rapidly gaining popularity and relevance.

Enhance Your Skills By Enrolling in Robotic Process Automation Training

Tech Trend #7. Datafication



Today's organizations rely heavily on data, transforming industries like accounting and human resources. Datafication is the process of turning all of the objects in our life into digital devices that are powered by data. To summarize, datafication transforms manual, labor-intensive procedures into data-driven technologies.

Longer than we can recall, data will be a part of everything from our cell phones to our industrial equipment, office software, and AI-powered devices. As a result, managing our data securely and safely has turned into a sought-after competence in our industry.

If done right, datafication can transform raw data into knowledge. Numerous firms have already benefited from this.

As a result, companies now more than ever need to rely on data-driven initiatives to build a qualified staff and a solid corporate culture. The greatest choice is typically to delegate this plan to a partner who is an authority in the area.

Tech Trend #8. Industry Cloud Platforms



By utilizing industrial cloud platforms, businesses can improve the agility of their workload management. They can speed up changes to compliance processes, data analysis, and business operations. They mix platforms, software, and infrastructure as a service to maximize adaptability, accelerate time to value, and suit the needs of vertical industrial sectors.

According to Gartner, 40% of respondents have already started using industrial cloud platforms. By 2027, this will have sped up over 50% of organizations' key business initiatives. Industry cloud platforms use integrated data fabrics and business-specific capabilities to adapt applications to market disruptions quickly.

Tech Trend #9. Wireless-value Realization



Next-generation wireless will improve connectivity while also assisting in process optimization for increased reliability, cheaper costs, lower risks, and more productivity. The shift to digital transformation will be more seamless if several wireless technologies are combined onto a single infrastructure and utilized.

If the technical foundation for future wireless is more

accessible, unified, secure, dependable, and scalable, it will require less funding. The new wireless technology will make it easier for the Internet of Things (IoT) trend to collect environmental data. Applications in satellite technology, radar sensing, energy harvesting, location tracking, and other areas are likely.

Enhance Your Career in the Internet of Things By Enrolling in **IoT Certification Training**

Tech Trend #10. A Digitally Editable World



Since we can now change things in the digital world in a way that impacts the physical world, this idea goes beyond merely creating immersive online experiences. As an illustration, think about the employment of digital twins.

The Formula 1 racing teams build digital twins of the race cars and test them in computer simulations and virtual wind tunnels. They can then 3D print the parts for the actual car after digitally modifying them till they are optimized.

We see a comparable ability to change or program materials from the actual world in nanotechnology. By altering their characteristics and compositions at the nanoscale, we may give materials new capabilities, such as water-repellent clothing and self-healing paints, or we can develop whole new material like graphene, the world's thinnest and strongest substance.

The best example of the editable world is the genetic manipulation of living organisms like plants, animals, or people to change the genetic information necessary for their growth and survival. With the aid of cutting-edge methods like the CRISPR Cas9 gene editing method and projects like the Human Genome Project, we can now successfully generate digital representations of complete DNA strands.

With this technology in 2023, it is possible to create endless possibilities, as any characteristic of an inherited living organism can theoretically be changed. It is feasible to create pest- and disease-resistant crops, immunize kids against illnesses their parents are predisposed to, and create treatments specifically suited to each patient's genetic profile.

Tech Trend #11. The Hyper-Connected, Intelligent World



This trend is the one that actually connects all of the others. The data required to build the metaverse, create digital twins, train intelligent machines, and develop new strategies for enabling digital trust is gathered by the interconnected sensors, devices, and infrastructure network. This is referred to as the Internet of Things (IoT), and in 2023, its influence on our lives will remain significant.

More focus will be paid to enabling advanced and more advantageous machine-to-machine interactions. These days, we are used to furnishing both our homes and offices with smart technology. But we commonly encounter problems when gadgets can't interact because of diverse platforms and operating systems. In 2023, research on developing global standards and communication protocols that gadgets can use to connect with one another will continue. As a result, they will operate more effectively and be able to assist us with a larger range of duties.

Another focus will be on IoT security, which will incorporate tools with AI-assisted prediction skills, and companies investing in IoT will prioritize improvements.

Tech Trend #12. Sustainable Tech



Finally, a push toward sustainable Tech will be seen in 2023. We are all dependent on technology, such as smartphones, tablets, and computers, but where do the components required to create these gadgets come from? Where rare earth resources originate and how we use them will be of greater relevance to the general public.

Furthermore, we utilize cloud services like Netflix and Spotify, which are still running in big data centers that consume a lot of electricity.

In 2023, attempts to increase supply chain transparency will likely continue as consumers want energy-efficient products and services backed by more sustainable technologies.

Conclusion

Technology will unavoidably keep advancing at a faster rate. If you want to succeed in your tech career, you need to master new technologies, learn how to deal with constant change, and use it as a competitive advantage.

Source: mindmajix.com

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SKILLS SMES NEED FOR BETTER SUPPLY-CHAIN MANAGEMENT IN 2023

M MUNEEB, MD, CUSTOMER LAB SOLUTIONS

A strong, resilient and competitive supply chain will help SMEs meet the needs of customers and ensure the enterprise's long-term growth and success. In an uncertain economic climate, supply-chain supply chain management is a must-have.

In the last edition of Smart Growth, we discussed the critical challenges in supply-chain management that small and medium enterprises (SMEs) will face in 2023. The question is whether SMEs in India have the skills to manage and overcome such challenges.

Supply-chain management skills can vary widely, depending on a variety of factors, including the sector, location and the size and sophistication of the business. Some general observations, however, can be made about their supply-chain management capabilities. India is home to a large number of SMEs, which account for a significant portion of the country's economic output and employment.

Many of these businesses operate in fragmented and informal markets with limited resources, access to technology and advanced supply chain management tools. As a result, many SMEs in India struggle to manage their supply chains effectively. They lack the knowledge and expertise to optimise procurement, production, and distribution processes, resulting in inefficiency, delays, and higher costs.

Moreover, they face challenges in accessing finance and building partnerships with suppliers, customers and logistics providers, which can limit their supply-chain management capabilities further. However, many SMEs have successfully implemented best practices in supply-chain management such as adopting digital technologies, building collaborative relationships with partners, and investing in training and development programmes.

These businesses have been able to improve operational efficiency, reduce costs, and enhance competitiveness in the marketplace. While SMEs may face challenges in developing adequate supply-chain management skills, there are opportunities for them to improve their capabilities and achieve greater success in the global economy.

Let us look at some of the critical supply-chain skills that SMEs need for better efficiency and to meet critical challenges:

1 Digital literacy: As digital technologies continue to transform supply chain management, SMEs will need to develop a strong understanding of how to leverage technology to improve their operations. This includes skills such as data analysis, inventory management, and process automation.

2 Analytical skills: SME employees will need to possess strong analytical skills to analyse and interpret humongous amounts of data, including sales forecasts, inventory levels, and production schedules. They will also need to be able to identify trends, patterns and opportunities for

improvement in the supply chain.

3 Communication: Effective communication skills will be essential for SME employees to work with suppliers, customers, and internal stakeholders. They will need to be able to communicate clearly, resolve conflicts and build strong relationships with key stakeholders.

4 Collaboration: Effective supply-chain management often involves working closely with suppliers, logistics providers, and other partners.

SMEs in India will need to develop strong negotiation skills, as well as the ability to build and maintain collaborative relationships with key stakeholders.

5 Problem solving and decision-making: SME employees will need to possess strong problem-solving and decision-making skills to respond quickly and effectively to supply-chain disruptions, shortages and other challenges. They will also need to be able to make data-driven decisions, evaluate risks, and prioritise actions to minimise the impact of supply chain disruptions.

6 Adaptability and flexibility: As supply chain management continues to evolve, SME employees will need to be adaptable and flexible to respond to changing market conditions, new technologies, and emerging trends. They will need to be able to quickly learn new skills, adjust to new processes and systems, and embrace change.

7 Strategic planning: Indian SMEs must have a clear understanding of their supply chain goals and objectives, and how to align their strategies with the needs of their customers, suppliers and other stakeholders. This requires skills in areas such as forecasting, risk management and performance measurement.

8 Talent management: A strong supply chain depends on a skilled and motivated workforce. SMEs will need to invest in employee training and development as well as effective recruitment and retention strategies to build a high-performing supply chain team.

In essence, SME owners need to ensure that their employees possess a range of critical supply chain skills in 2023, as enumerated above. They should support the development of these skills through training and development programmes, mentoring and coaching, and providing opportunities for employees to gain hands-on experience in supply chain management.

Developing these skills will enable SMEs to build a strong, resilient, and competitive supply chain that can meet the needs of customers and ensure the enterprise's long-term growth and success.

Source: www.moneycontrol.com

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STRENGTHENING THE SUPPLY CHAIN IN 2023: IS SUSTAINABILITY A SOLUTION TO DISRUPTION?

ANANTHA RAO, CHIEF TECHNOLOGY OFFICER AND
CHIEF OPERATING OFFICER AT NUVIZZ. AND SCB CONTRIBUTOR

Despite extensive evidence that strengthening sustainability efforts brings long-lasting, efficacious results, the corporate community has been hesitant to dive in. Their deep-rooted concern is that changing the way business is done is bound to stunt productivity and reduce profits.

While this belief is ingrained in most industries, the supply chain and transportation sectors seem to have a different view. Practitioners in this field know that operating in a green manner will not only keep the planet sustainable, but also promote the long-term viability of the operation itself. Few industries are in a better position than the supply chain and transportation industry to achieve both goals — improving performance and economic viability while contributing to a healthier planet.

These advantages are enough to persuade most, but for hesitant business owners, the soon-to-be-implemented climate disclosure requirements might be just the nudge they require to take action. The proposed ruling from the Securities and Exchange Emissions (SEC) would oblige every publicly traded company to provide their climate reports from the previous year, including Scope 3 emissions.

While this may seem daunting, it's widely known that practicing mindfulness when it comes to your company's environmental impact makes business sense. This is why the current push for sustainability could not be better aligned with the needs in supply chain and transportation. The proposition is simple: achieve sustainability goals, and you gain a stronger profit.

Consider these five priorities for transportation companies:

1. Reduce Mileage : The environmental imperative is to reduce carbon emissions. But if transport companies can reduce their mileage and improve asset utilization, they can reduce costs by up to a third. Simply achieving more accurate ETAs can reduce miles by eliminating re-deliveries and missed appointments. With the right strategies, knowledge and technology tools, this is absolutely possible in today's industry.

2. Increase Freight Pooling Operations : Hardly a radical concept for LTL carriers, pool distribution combines goods into shipments using larger trucks and trailers. It has been compared to carpooling — but for goods rather than for people. Reduction of carbon emissions is also the environmental imperative here, and estimates are that transport companies can save

10-15% on overall costs by getting the most out of using pool-point operations.

3. Reduce Paperwork : We all understand: The forests will cheer when we use less paper, but so should any company involved in the transport of goods. That's why many have made this a key priority. In recent years we have seen the emergence of excellent technology to not only replace time-consuming paperwork, but to speed up the processes that depend on it. As just one example, many new transportation management systems can automate invoicing, and enable quick, easy digital payments. Not only are you eliminating the use of paper for items like invoices and bills of lading; you're also getting paid faster. So your cash flow gets a boost, just like the one you're giving the forests.

4. Reduce Shrinkage : Mis-laying inventory is a nightmare. It costs carriers money, forces delays on customers, and often requires items to be re-manufactured and re-shipped — often at a loss for the carrier. By taking advantage of technologies like advanced scanning solutions, we are now seeing tools to protect against shrinkage. This not only prevents all the problems described above, but also results in sustainable consumption and production that bolsters the planet.

5. Gain Network Visibility : Enterprises can and should be able to collect information in real time so they can respond to potential supply chain disruptions. This could mean swapping carriers when a first option becomes unavailable, or navigating through a port delay. Both the environment and the company's bottom line take a hit when supply chain disruptions cause delays and rising costs. Network visibility provides for the resilience that fights off these disruptions.

Carriers who have not prioritized sustainability must do so. The planet needs it, shippers will soon be asking about it (if they're not already), and public policy will demand it. Don't fall behind with sustainability, and be caught in the lurch when Scope 3 emissions reporting becomes a requirement. The time to act is now. Putting yourself in a reactive position will only lead to more headaches and potential trouble down the line.

The good news is that all of those goals will make carriers more profitable, efficient, and reliable as a business partner. Ecological concerns may be prompting the effort, but it's an effort any carrier will find well worth making.

Source: www.supplychainbrain.com

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MODES OF PROCUREMENT AND BIDDING SYSTEMS IN PUBLIC PROCUREMENT

This is the fourth article in the series of articles for Public Procurement. This is in continuation of third article in the April 2023 issue from pages 13 to 21 titled "SUPPLIER RELATIONSHIP MANAGEMENT". This article contains general introduction, procurement through open, limited and single tender, procurement on nomination basis and procurement without quotation and direct purchase by purchase committee. Other methods will be covered in next issue of MMR.

Modes of Procurement : Offers from prospective bidders in public procurement must be invited according to a procedure that achieves a balance between the need for the widest competition, on one hand, and complexity of the procedure, on the other hand. Different modes of procurement and bidding systems are used to suit various procurement circumstances to achieve this balance. There are laid down procedures for delegation of powers of procurement to various competent authorities under different modes as shown in DPFR. Each procuring entity may also publish its own Schedule of Procurement Powers (SoPP) delegating such powers within the entity.

However, as mentioned in Para 1.3 (Applicability of this Manual), for procurements financed by Loans/Grants extended by International Agencies, like the World Bank, Asian Development Bank etc., the procurement procedures, as finalized and incorporated in the Articles of Agreements with such agencies for relevant Loans/grants after consideration and approval of the Ministry of Finance are to be followed.

The various modes of procurement that can be used in public procurement are:

- 1) **Open Tenders**
 - a) Open Tender Enquiry (OTE); and
 - b) Global Tender Enquiry (GTE)
- 2) **Procurement through Selected Suppliers**
 - a) Limited Tender Enquiry - LTE (up to Rs. 25 (Rupees twenty-five) lakh); and
 - b) Special Limited Tender Enquiry (SLTE above Rs. 25 (Rupees twenty-five) lakh under special circumstances)
- 3) **Nomination Basis Tenders**
 - a) Proprietary Article Certificate (PAC); and
 - b) Single Tender Enquiry (STE) without PAC
- 4) **Procurements without Calling Tenders**
 - a) Direct Procurement without Quotation;
 - b) Direct Procurement by Purchase Committee;

5) **Mandatory Procurement of Goods and Services for Goods or Services available on GeM**

(Rule 158 of GFR 2017)

Open Tender Enquiry(OTE) : In OTE, an attempt is made to attract the widest possible competition by publishing the NIT simultaneously on the designated websites. This is the default mode of procurement and gives the best value for money but the procedure is relatively complex and prolonged. The systemic cost of this procedure may be high enough to be unviable for smaller value procurements. OTE procedures through e-procurement or through traditional tendering should be adopted in the following situations:

- i) Procurements exceeding the threshold of Rs. 25 lakh (Rupees Twenty Five Lakh);
- ii) All common use requirements with clear technical specifications;
- iii) For requirements that are ordinarily available in the open market but it is necessary to evaluate competitive offers to decide the most suitable and economical option available; and
- iv) When requirements are not available from known sources or sources are presently limited and need to be broad based. In such situations, even for procurements below Rs. 25 (Rupees twenty-five) lakh, OTE mode may be used, if warranted.

(Rule 161 of GFR 2017)

Tems and Conditions

- v) Bidders already registered are also free to participate;
- vi) Advertisement in such cases should be given on Central Public Procurement Portal (CPPP) at www.eprocure.gov.in and on GeM. An organisation having its own web site should also publish all its advertised tender enquiries on the web site. The procuring entity should also post the complete bidding document in its web site and on CPPP to enable prospective bidders to make use of the document by downloading from the web site. The advertisements for invitation of tenders should give the complete web address from where the bidding documents can be downloaded. In order to promote wider participation and ease of bidding, no cost of tender document may be charged for the tender documents downloaded by the

	bidders.; and	
vii)	The sale/ availability for downloading of tender documents against NIT should not be restricted and should be available freely. Tender documents should preferably be sold/ available for download up to the date of opening of tenders.	material called for and delivery requirements. The due date may be subsequently extended with the approval of the CA, only if it is felt necessary to have better competition. The tender documents, shall be priced minimally (if at all priced, refer Para 5.2.1 Cost and Availability of Tender Documents) keeping in view the value of the tender as also the cost of preparation and publicity of the tender documents. EMD should be sufficient to ensure that bidders honour their bids but at the same time should not be large enough to reduce competition.
viii)	The tender documents should be prepared on the basis of the relevant approved SBD for the category of procurement. Further details on preparing tender documents are provided in Chapter 6.	
ix)	The procuring entity shall maintain proper records about the number of tender documents sold, list of parties to whom sold, details of the amount received through sale and, also, the number of unsold tender documents, which are to be cancelled after the opening of the tenders.	

OTE - Risks and Mitigations

Risk

Since the crux of this mode of procurement is attracting bids from all possible prospective bidders. The risk is that this may not be achieved, even after incurring extra cost of open tendering.

This could be due to
· Insufficient publicity;
· Hindrances in availability of bid documents;
· Insufficient time for bid preparation; or
· Due to onerous cost of bid- documents or EMD

Mitigation

It should be ensured that the NIT on the website is easily searchable and visible, not hidden under layers of clicks. The matter should not be left entirely to the website or media publicity alone. Due diligence should be done to locate likely bidders (including past bidders) and their attention should be drawn through SMS/ mail/email. All registered vendors/contractors (in

particular past successful vendors/contractors) should be given intimation about forthcoming tenders via SMS/mail/ email. Further a limited or open tender which results in only one effective offer shall be treated as a single tender enquiry situation, with relevant powers of approval etc. It should be also ensured that there is no impediment to issue/ access of bid documents. The due date fixed for opening of the tender shall be minimum 21 (twenty-one) days from the date of advertisement which may vary, taking into account the nature of

Lack of clarity in description/specification of requirement or undue stringency in qualifying criteria or other conditions

Mitigations of such risks can be addressed at the time of need assessment and procurement planning (please refer to Chapter 2), so as to attract adequate competition.

Global Tender Enquiry (GTE)

GTE is similar to OTE but, through appropriate advertising and provision for payment in Foreign Currencies through Letter of Credit, it is aimed at inviting the participation of inter- alia foreign firms. The point of balance between VfM and cost/ complexity of procedure is further aggravated as compared to OTE. Development of local industry also needs to be kept in mind. Hence, it may be viable only in following situations:

- x) Where Goods of required specifications/quality are not available within the country and alternatives available in the country are not suitable for the purpose;
- xi) Non-existence of a local branch of the global principal of the manufacturer/vendors/ contractors;
- xii) Requirement for compliance to specific international standards in technical specifications; and
- xiii) Absence of a sufficient number of competent domestic bidders likely to comply with the required technical specifications, and in case of suspected cartel formation among indigenous bidders.

(Rule 161 of GFR 2017)

Terms and Conditions

- xiv) Advertisement in such cases should be given on Central Public Procurement Portal (CPPP) at www.eprocure.gov.in and on GeM. An

organisation having its own web site should also publish all its advertised tender enquiries on the web site. The procuring entity should also post the complete bidding document in its web site and on CPPP to enable prospective bidders to make use of the document by downloading from the web site. The advertisements for invitation of tenders should give the complete web address from where the bidding documents can be downloaded. In order to promote wider participation and ease of bidding, no cost of tender document may be charged for the tender documents downloaded by the bidders; and

- xv) The sale/ availability for downloading of tender documents against NIT should not be restricted and should be available freely. Tender documents should preferably be sold/ available for download upto the date of opening of tenders; and
- xvi) The tender documents, shall be priced minimally (if at all priced, refer Para 5.2.1 Cost and Availability of Tender Documents) keeping in view the value of the tender as also the cost of preparation and publicity of the tender documents;
- xvii) GTE tender documents must be in English and the price should be asked in Indian Rupees or US Dollars or Euros or Pound Sterling or Yen or in currencies under the Reserve Bank of India's notified basket of currencies;
- xviii) GTE tender documents must contain technical specifications which are in accordance with national requirements or else based on an international trade standard;
- xix) In such cases e-procurement may not be mandatorily insisted upon.
- xx) The due date fixed for opening of the tender shall be minimum four weeks from the date of advertisement which may vary taking into account the nature of material called for as well as the time required to prepare the bids. The due date may be subsequently extended with the approval of the CA only to promote better competition and also considering account delivery requirement; and
- xxi) Relevant INCOTERMS should be included in the tender.

No Global Tender Enquiry (GTE) up to Rs. 200 crores³⁶ shall be invited or such limit as may be prescribed by the Department of Expenditure from time to time. In exceptional cases where the Ministry or Department feels that there are special reasons for inviting GTE, for tenders below such limit, it may record its detailed justification and seek prior approval for relaxation from the Competent Authority specified by the Department of Expenditure.

- a) The proposal for approval shall be submitted by Administrative Ministry with the concurrence of

Financial Advisor and approval of Secretary concerned. The proposals submitted by individual offices/ organisation (e.g. autonomous bodies, Central Public Sector Undertakings and subordinate offices of Central Government etc.) will not be entertained.

- b) The proposals shall be submitted along with duly filled format³⁷ (placed at Annexure- 2D).

Before sending the proposals for approvals of the Global Tenders, following is to be ensured:-

- a) Domestic open tender must be floated to identify the domestic manufacturers/ service providers for the items/ services for which approval is being sought for issuance of Global Tenders. In case, if the Ministry/ Department has not floated a domestic open tender after 15.05.2020 for the items to be procured through GTE, such proposals will not be entertained. The proposal must contain the details of domestic open tenders, issued after 15.05.2020. These details shall cover tender number, date of opening, number of offers received, details of offers received, reasons why domestic suppliers were not considered etc.
- b) The proposal must contain the details of deliberations with DPIIT/ relevant industrial bodies for identification of domestic manufacturers/ service providers.
- c) The 3/5-year procurement plan as mandated by Public Procurement (Preference to Make in India) (PPP-MII) order issued by DPIIT must be published on website, before forwarding proposals for the purpose of procurement through GTE. Web-link of published procurement plan should be provided in proposal.

Exemptions/ Clarifications

- a) For procurement of specialised equipments required for research purposes, and spares and consumables, for such equipments up to Rs. 200 crore for the use of Educational and Research Institutes, Secretary of Ministry/ Department concerned shall be the competent authority to approve issue of Global Tender Enquiries for such requirements subject to fulfilment of conditions as laid down in para 4.3.6 below. The equipment should be of specialized nature required for research purposes and not the routine equipment used in offices³⁸.
- b) On procurement of spare parts of the equipments/ Plants & Machinery etc. on nomination basis from Original Equipments Manufacturers (OEMs) or Original Equipment Suppliers (OES) or Original Part Manufacturers (OPMs) as no competitive tenders are invited in such cases³⁹.
- c) On procurement of services like Annual Maintenance Contract (AMC) and auxiliary/ add-on components for existing equipments/ Plant

- & Machinery etc. , which are procured from OEM/ OES/ OPM on nomination basis, as no competitive tenders are invited in such cases⁴⁰.
- d) Where procuring entities need to issue GTEs to fulfil contractual commitments/ obligations entered by them before 15.05.2020 i.e. bid has been submitted by them to their clients before 15.05.2020. similarly, where procuring entities need to issue GTEs in view of existing collaboration agreements entered by them with foreign suppliers before 15.05.2020⁴¹.
 - e) Based on the reference received from Ministry of Health & Family Welfare (MoHFW), GTE can be floated for 128 Medical Devices (placed at Annexure-2E). The exemptions is provided for such items till 31.03.2023. MoHFW will review domestic availability of these items at the end of 2022, keeping in view the Production Linked Incentive (PLI) scheme etc. launched by Department of Pharmaceuticals in Medical Devices and other relevant factors, in consultation with Department of Expenditure⁴².
 - f) For projects funded by Multilateral Development Banks (MDBs like The World Bank, Asian Development Bank etc.)/ Bilateral Funding Agencies (BFAs), where the procurement is governed by the conditions negotiated in the loan agreement, and where the project executing agencies from time to time further award works to various Autonomous Bodies (ABs)/ Central Public Sector Enterprises (CPSEs) etc., the Secretary of the Ministry/ Department responsible for execution of such project shall be the Competent Authority for approval for issuance of GTEs by such Autonomous Bodies/ CPSEs etc⁴³.
 - g) Exemption to semiconductor..
Educational, Research institutions and other units will make full efforts towards reducing of imports in following manner. This will result in substantial effects both within the institutions and also through impact on the eco-system:-
 - a) Identification of equipment being procured time and again from abroad, and help developing them in India by identifying potential manufacturers and providing them technical help and expertise for developing the equipment. This programme will be coordinated by the Empowered Technology Group (constituted by Cabinet and chaired by the Principal Scientific Advisor (PSA)).
 - b) Efforts to promote technology transfer through agreements or to encourage technological collaboration with foreign manufacturing in India at the Start-ups set up in Research Parks.
 - c) Sharing and updating of information about the availability of research equipment across various Indian Institutes on a single portal (the I-STEM⁴⁴ portal has been developed for this purpose) so that those can be utilized by the needy institutes.
 - d) Without compromising quality, Institutes should indicate alternative/ equivalent technical specifications that could suit their requirement, so that there are more chances of local manufacturers participate in the tendering process.
 - e) Regular interaction between academia and Indian industry organizations at the level of the institution about the requirement of equipment of foreign origin and for encouraging the domestic manufacturing.
 - f) Regular requirement of proprietary/ non-proprietary research consumables may be assessed and domestic alternatives are explored for use.
 - g) A national level programme for indigenous development of scientific equipment be initiated by the Office of PSA.
 - h) Without compromising quality, institutes should be flexible with specifications so that domestic manufactures are encouraged to meet requirements.
- Guidelines for resorting to GTE**
- i) Market assessment should be done by the concerned institution, as certified by the Head of the Institution. Only after no Indian manufacturer is found, a GTE should be issued.
 - j) In case no Indian manufacturer/ suppliers are found, procurement may be done, through GTE, subject to compliance of provisions of GFR and requirement of procurement through GeM.
 - k) DEAN (R&D) or an appropriate authority within the institute will issue certificates as per para 4.3.6.3 below, before inviting GTE. As a reporting matter in the Board of Governors, such certificates should be tabled, and also shared with Office of the PSA, DPIIT and concerned Administrative Ministry.
 - l) The information about the procurement of equipment should be shared across various Educational and Research Institutes, through the I-STEM portal, already established for this purpose by the PSA's office. This will allow the equipment to be used by other institutions too, for research purposes.
 - m) Analyze the equipment being procured time and again from abroad, and help developing them in India by identifying potential manufacturers and providing them technical assistance and expertise for developing the equipment. Half yearly reports on this action to be shared by the Institutes with the Office of the PSA, DPIIT and concerned Administrative Ministry/ A national level scheme will also be initiated by the Office of PSA for indigenous development of scientific equipment.

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| <p>n) Preference to local suppliers over foreign supplier as per the existing Government of India guidelines, should be observed as applicable.</p> <p>Certificates to be issued</p> <p>o) Confirmation of non-availability in India of particular equipment/ consumables of foreign origin through GeM and other sources.</p> <p>p) Certification that locally available alternatives</p> | <p>with equivalent specifications are not suitable for research purposes.</p> <p>q) The non-availability of such equipment for research purposes with nearby research institutes or within the institute.</p> <p>r) Certification of the requirement of proprietary items of foreign origin for research purposes (where applicable).</p> |
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GTE - Risks and Mitigations

Risks

Risks are same as in OTE

Moreover, publicity may not reach targeted foreign bidders

Involvement of agents of foreign bidders in GTE procurements is also a major risk area

Mitigations

Same mitigation as in case of OTE also applies here.

NIT should also be sent to commercial attachés in foreign embassies in India and to Indian embassies in relevant foreign countries for inviting the attention of likely foreign bidders. The selection of the embassies will depend on the possibility of availability of the required goods in such countries.

Procurements should preferably be made directly from the manufacturers. Either the agent on behalf of the foreign principal or the foreign principal directly could bid in a tender, but not both. Further, in cases where agents participate in a tender on behalf of one manufacturer, they should not be allowed to quote on behalf of another manufacturer along with the first manufacturer. Commissions and scope of services to/by the agents should be explicit and transparent in the bids/contracts

Limited Tender Enquiry(LTE)

LTE is a restricted competition procurement, where a preselected list of vendors is directly approached for bidding; bids from uninvited bidders are treated as unsolicited and are normally not entertained, except in special circumstances. This mode provides a short and simple procedure, but may not provide as good a VfM as in case of open tendering – still a good balance for procurements below a threshold. LTE procedures should be default mode of procurement when the estimated value of procurement is between Rs. 2.5lakh to Rs. 25 lakh (Rupees two and a half Lakh to Twenty-five Lakh). The bidding documents should be simple normally consisting a single page with terms and conditions printed overleaf.

(Rule 162 of GFR 2017)

Terms and Conditions

- xxii) Copies of the bidding documents should be sent free of cost (except in case of priced specifications/ drawings) directly by speed post/courier/e-mail to firms which are registered vendors/ contractors. Further, Procuring Entity should also mandatorily publish its limited tender enquiries on Central Public Procurement Portal (CPPP). Apart from CPPP, the organisations should publish the tender enquiries on the Department's or Ministry's web site.
- xxiii) A simplified single Page Bid Document (Annexure 5) should be used, instead of a detailed Bid Document. The minimum number of bidders to whom LTE should be sent is more than three. In case less than three approved vendors/contractors are available, LTE may be sent to the available approved vendors/ contractors with approval of the CA, duly recording the reasons. The requirement should then be marked for development of more sources by the Supplier Registration section.

LTE - Risks and Mitigations

Risk

Major risk in this mode is that the demand may be artificially split to avoid OTE or higher level approvals

Mitigation

The e-procurement portal maybe programmed to raise an alert if the same item is attempted to be procured through LTE repeatedly. Audit should take up a larger percentage of cases in LTE for review.

There is a risk that LTE may not attract sufficient number of bids and sometimes there may be a single acceptable offer. This may be because of an insufficient database of registered/known vendors. It could also be due to bid documents not reaching the targeted bidders – intentionally or otherwise. It could also be due to bidders not getting adequate time for submission of bids. On the other hand, unsolicited bidders may also quote – causing a transparency dilemma about consideration of such offers.

There is also a risk that the selection of vendors may not be transparent. At the evaluation stage, some invited bidders may be passed over on grounds of being ineligible/unreliable.

Maintenance of list of registered suppliers is a sine-qua-non for LTE. The List of registered vendors needs to be reviewed perpetually to ensure adequate number of qualified suppliers. To ensure sufficient response, in addition to mails/emails to selected vendors, web-based publicity should be given for limited tenders, with suitable clarifications that unsolicited bids shall not be considered. Further a limited or open tender which results in only one effective offer shall be treated as a single tender enquiry situation, with relevant powers of approval etc. Adequate time should be given for submission of quotes, which should not be less than three weeks. A longer period (six weeks) could be given in case of import of the materials and, in complex cases, if justifications are given and allowed.

All major procuring Departments must keep a list of registered bidders for use in restricted bidding. Suppliers or contractors should be selected in a non-discriminatory manner. All past successful vendors/bidders should invariably be invited. In case it is proposed to exclude any registered/approved vendor/contractor from being shortlisted for inviting LTE, detailed reasons, such as failure in supply, should be duly recorded and approval of the CA be taken before exclusion. The selection of bidders should be with due diligence, to ensure that bidders who do not meet eligibility criteria do not get shortlisted. At the evaluation stage, in LTE, passing over of a duly shortlisted bidder on grounds of poor past performance or eligibility may raise questions about transparency.

Special Limited Tender Enquiry for Procurements More than Rs. 25 (Rupees twenty-five) Lakh

LTE mode, even for values higher than Rs. 25lakh (Rupees Twenty-five Lakh) (Rule 162 of GFR 2017), where normally OTE should have been done, is permissible in certain special circumstances as follows. Powers to sanction procurement on LTE basis in such special cases may be laid down in SoPP based on a certificate of urgency signed by the indenter. This mode has the merit of being quicker but VfM obtained may be less than in case of OTE; hence it should be restricted to rare situations:

- xxiv) The competent authority in the Ministry / Department certifies that there is an existing or prospective urgency for operational or technical requirements and any additional expenditure involved by not procuring through advertised tender enquiry is justified in view of urgency. The Ministry/Department should also put on record the nature of the urgency and reasons why the procurement could not be anticipated earlier.
- xxv) There are sufficient reasons, to be recorded in writing by the competent authority, indicating that it will not be in public interest to procure the goods through advertised tender enquiry.
- xxvi) The sources of supply are definitely known and possibility of fresh source(s) beyond those being tapped is remote.
- xxvii) Nature of items to be procured is such that pre-verification of competence of firm is essential, hence requires registration of firms.; and
- xxviii) Government policy designates procurement from specific agencies.

Terms and Conditions

- xxix) The tendering process would be same as in the case of a normal LTE described above. However, the bidding documents are more detailed as in the case of OTE; and
- xxx) The indenter should certify that there is an existing or prospective urgency for operational or technical requirements and any additional expenditure involved by not procuring through an advertised tender enquiry is justified in view of urgency. The indenter should also put on record the nature of the urgency and reasons why the procurement could not be anticipated.

SLTE - Risks and Mitigations

Risk

Risks as applicable in both LTE and OTE are also applicable here. In addition there is a risk that this mode may be used unjustifiably to avoid open tendering (OTE).

Mitigation

All mitigation strategies of LTE and OTE would apply here also. In addition the systems of checks and balances should be tighter by way of enhanced and severely restricted delegation of powers in this regard for certification of urgency and approval of this mode of procurement. A system of reports from the authority signing the urgency certificate and post facto review of utilisation of received goods/works/services to tackle the expressed urgency may be laid down. Audit should take up the bulk of such cases for review to judge the genuineness of urgency certification.

Proprietary Article Certificate

In procurement of goods, certain items are procured only from Original Equipment Manufacturers (OEMs) or manufacturers having proprietary rights (or their authorised dealers/stockists) against a PAC certificate (Annexure 6) signed by the appropriate authority. Once a PAC is signed at the designated level as per SoPP, the powers of procurement are the same as in normal conditions as per the delegation of powers. This mode may be shortest but since it may provide lesser VfM as compared to LTE/OTE and also strains the transparency principle, it should be used only in justifiable situations.

(Rule 166 of GFR 2017)

Terms and Conditions

- xxxi) Users should enclose, with their Indent, a PAC certificate indicating the justification and approval at the appropriate level as per DPFR/ SoPP, for sourcing an item from OEM or PAC firms or their authorised agents;
- xxxii) Proprietary items shall be purchased only from a nominated manufacturer or its authorised dealer as recorded in the PAC certificate;
- xxxiii) In certain unavoidable cases, the procuring authority may have no alternative but to waive payment of EMD/SD for procurement on a proprietary basis;
- xxxiv) To the extent feasible, the firm may be asked to certify that the rates quoted by them are the same and not higher than those quoted with other Government, public sector or private organisations;
- xxxv) In case of PAC/single tender procurements⁴⁵:
 - a) Reports relating to such awards should be submitted to the Ministry every quarter;
 - b) Internal audit may be required to check at least 10 (ten) per cent of such cases; and
 - c) Details of such contracts should be published on the website of the Procuring Entity.

PAC - Risks and Mitigations

Risk

There is a risk that this mode may get used unjustifiably to restrict competition. Such restricted for signing of PAC. Audit may take- risks get aggravated, in case of secrecy about such procedures alternative vendor/contractors may not even come to know about such opportunities

Once approved, there is a risk of a nexus getting developed and the mode may continue to be used for many years, without fresh application of mind

The bidder may charge a price higher than the market

Mitigation

The delegation of powers should be up 10 (ten) per cent of cases of PAC procurements for review. Even in PAC procurements the NIT and the Award of Contract should be put on the website of CPPP and Procuring Entity.

No item should be procured on PAC basis for more than three years, after which a mandatory OTE mode may be used, to test the market

The firm should be asked to accept a "fall clause" undertaking that, in case it supplies or quotes a lower rate to other Governments, public sector or private organisations, it would reimburse the excess. Negotiations may be called for to get prices reduced

Single Tender Enquiry (STE) without a PAC

A tender invitation to one firm only without a PAC certificate is called a single tender. This mode may be shortest but since it may provide lesser VfM as compared to LTE/OTE and may also strain the transparency principle, it should be resorted to only under following conditions:

- xxxvi) In a case of existing or prospective emergency relating to operational or technical requirements to be certified by the indenter, the required goods are necessarily to be purchased from a particular source subject to the reason for such decision being recorded and approval of the competent authority obtained.
- xxxvii) For standardization of machinery or components or spare parts to be compatible to the existing sets of machinery/equipment (on the advice of a competent technical expert and approved by the competent authority), the required goods are to be purchased only from a selected firm.

(Rule 166 of GFR 2017)

Terms and Conditions

- xxxviii) The reasons for a STE and selection of a particular firm must be recorded and approved by the CA as per the delegation of powers laid down at in DPFR/SoPP, prior to single tendering. Unlike in PAC, powers of procurement of STE are more restricted; and
- xxxix) Other terms and conditions of PAC procurement mentioned above would also apply in this case.
- xl) All works/purchase/ consultancy contracts awarded on nomination basis should be brought to the notice of following authorities for information-
 - (a) The Secretary, in case of ministries/ departments.
 - (b) The Board of directors or equivalent managing body, in case of Public Sector Undertakings, Public Sector Banks, Insurance companies, etc;
 - (c) The Chief Executive of the organisation where such a managing body is not in existence.
- 1. The report relating to such awards on nomination basis shall be submitted to the Secretary/Board/Chief Executive /equivalent managing body, every quarter.
- 2. The audit committee or similar unit in the organisation may be required to check at least 10% of such cases.

STE - Risks and Mitigations

Risk : Same but more heightened risks than PAC are present in this mode. Selection of a single vendor may be non-transparent and unjustified

Mitigation : Same mitigation strategies as in the case of PAC should apply. Procurements on a STE basis should

be made from reputed firms after determining reasonableness of rates. Powers of procurement of STE should be severely restricted.

Drawals against Rate Contract (RC)/Framework Contract (FC)

a) RC is essentially a price agreement with the vendors/ contractors at a specified price and terms and conditions during the period covered by the RC. No quantity is mentioned nor is any minimum commitment guaranteed in the RC. RC is most frequently used in procurement of goods, but can as well be used mutadis mutandis in works, services and consultancy – where it is commonly known as a Framework Contract (FC). For appropriate items (please see para 4.8.3 below), drawals against an existing RC exploits the power of collaboration/ clubbing of numerous small and frequent requirements and thus provides best VfM along with a simple and quick procedure. However, entering into a new RC may have the same procedural complexity, prolonged timeframe and systemic cost as in OTE, which may not be viable for low volumes. In view of Government e Marketplace (please see para 4.17 below) coming into operation, Rate Contract is not required to be executed for common use items like computers, printers, photocopiers, paper and stationary, other office items like furniture, bottled water etc., which are being placed on GeM and will now be applicable only for specialized and engineering items which are not available on GeM, and are identified as common use items and are needed on recurring basis by various Central Government Ministries or Departments..

Rate Contracts - Risks and Mitigations

Risk: Rate contract is not a right mode of procurement for critical, strategic and vital requirements, since the buyer – seller relationships is tripartite and the timely supply of requirements and penalties thereof can be so strictly enforced as in other modes of procurements. Moreover the RC holder is more beholden to the Central Purchase Organisation than to end-customer. In situations of items with inadequate annual or seasonal capacities in market, the RC holders may dump material on Procuring entity at wrong seasons and starve them in working seasons. This happens in say Cement, when Government Buyers are likely to be saddled with huge supplies during rainy season, but RC holders may divert bulk of supplies to private market in working season. RC Purchase is not suitable for requirements of dynamic Technological and price changes e.g. PCs, Laptops, Tablets, Servers, Mobile Phones – where the price of older models may crash as soon as a model is announced. RC holders may slow down supplies initially, but dump supplier when prices crash in the market.

Mitigation : RCs may be avoided for critical/ strategic and vital requirements. Central Purchase Organisation may also tighten up enforcement of delivery performance and penalties thereof. For seasonal and short-supply items CPO may monitor and provide clauses to prevent dumping and starving of supplies. In Technologically fast changing products, CPO may keep watch on the market prices and renegotiate prices as soon as market prices fall significantly due to new arrivals.

Risks : The existence of RCs may not be adequately made known to possible users. Moreover, the reverse risk is that many different offices may keep procuring the same item independently, thus missing the potential benefits of bulk prices and simplified processes if such items were brought under an RC

Mitigation : The descriptions, specifications and other salient details of all RC appropriately updated, should be available on the website of DGS&D and Procuring Entity as well as the e-Procurement portal. The e-procurement system should be able to offer alerts about availability of RC, if an attempt is made to float a tender for the same item. To derive benefit from bulk prices in RC, all offices should furnish to the RC agency, their annual requirement of items to enable finalising of RCs after inviting quotations. DGS&D may also extract information from e-procurement portals.

Rate Contracts - Risks and Mitigations

Risk : RC procurements are at risk of being ordered in excess of actual requirements, since the procurement scrutiny may not be as intense as in case of other modes of procurements.

Mitigation : The quantity being ordered should be subject to the same level of scrutiny as in other modes of procurement to ensure that there is no abnormal unexplainable trend in procurement.

Wherever there are parallel RCs for the same item from a number of firms, there may be intense and often unhealthy lobbying (including corrupt practices) from them to seek orders.

Risk : Departments must put in place adequate guidelines to handle RC procurements, including a transparent system of choosing the RC holders by rotation in a transparent manner in case of parallel RCs. The delegation of powers in this regard should also be restricted keeping these risks in view. A suggest guidelines is given below:1 For selecting the DGS&D Rate contract holders for ordering, following factors may be kept in view:(i)

The Rate Contract Price;(ii)

The past performance of firm with reference to their capacity, quality of supplies as well as timely delivery of the goods;(iii)

The delivery date committed by the firm with respect to the delivery requirement of the Procuring Entity;(iv)

The proximity of the rate contract holder wherever the proximity is considered crucial for timely delivery, ease of progressing and from the point of view of logistics and contract management etc.; and(v)

The need for reputed brands in the case of sensitive, critical and selective applications.(vi)

In case of number of firms meeting such criteria, orders may be split or rotated in a transparent manner.2.

The Procuring Entity should maintain suitable records of RC firms for past performance in respect of timely delivery and quality.3.

Wherever, there are failures against the rate contract in terms of timely delivery and quality of goods, such failures should be reported to DGS&D and direct alternate procurement action may be taken in order to ensure timely availability of quality materials to meet the needs of the Procuring Entity.

Direct Procurement without Quotation

Direct procurement of goods without formal quotations is normally done for the smallest value procurements. This is also called petty purchase. It should be used for off-the-shelf goods of simple and standard specifications and when the required goods (of required specification or within required delivery period etc.) are not available on GeM⁴⁶. However, it is mandatory for a buyer to generate a "GeM Availability Report and Past Transaction Summary" (GeMAR&PTS)⁴⁷ with a unique ID on GeM portal using his login credentials on GeM for procurement outside GeM. The procedure is the simplest and quickest but VfM may be poor; hence it is suitable only in very low value, urgent and simple requirements in the following situations:

- xli) Procurements do not exceed the threshold (for each requirement) of Rs. 25,000 (Rupees Twenty-five Thousand) for each case;
- xl ii) The requirement is urgent but was not covered in the procurement plan; and
- xl iii) The requirement is for off-the-shelf goods of simple and standard specifications. Examples of procurement are day-to-day needs of the office and field units, and so on.

(Rule 154 of GFR 2017)

Terms and Conditions

- xl iv) The competent officer of the procuring entity can initiate and complete this purchase after diligent enquiries from the market and filling the certificate prescribed (Annexure 7). Such powers to a limited extent can also be given to various user sections for operational needs.
- xl v) Normally an imprest amount (with facilities for cheque payments) sufficient for two months' estimated procurements can be sanctioned for such officers to handle such procurements. The imprest amount can be recouped on monthly basis by submission of expense vouchers.
- xl vi) In a summary form, records should be kept of the vendors/contractors approached and prices indicated by them.
- xl vii) Selection of seller by diligent market enquiry is of essence of this mode of procurement.
- xl viii) In larger cities, the presence of reputed Shopping Malls may also be included in the market survey. Reputed internet shopping portals may also be explored.

Direct Procurement without Quotations - Risks and Mitigations

The main risk is splitting of demand to avoid higher approvals or higher modes of procurements.

Supervisors should carry out periodic review of such procurements to ensure that the demand is not split into small quantities for the sole purpose of avoiding the necessity of getting an approval from the higher authority required for sanctioning the purchase of the original demand or for avoiding LTE or OTE mode of procurement. An annual review of such procurements

shall be carried out to ensure that future anticipated requirements are clubbed and procured through LTE/OTE/RC. To keep a better control, an annual ceiling may be fixed for each office for such a mode of procurement say Rupees five Lakh for each office per year. Each office should maintain records to monitor such limits.

Over a period of time intentionally or otherwise, the due diligence of enquiries from market may degenerate into a mechanical obtaining of quotations, leading to development of nexus and crony suppliers. Vendor selection may actually be manipulated with fake supporting vouchers. Since such small value materials do not undergo accounting and inventory control, the risk of development of a nexus, leakages and fake procurements and payments are there. The same set of vendors may get patronised repeatedly for a wide variety of requirements. Since only cursory visual inspections are done, quality may be at risk.

Supervisors should cross check a percentage of cases in the market for prices, fake vouchers, and so on. Supervisors should also check that the same vendor(s) is not being patronised repeatedly. For the sake of transparency, payments should be made by cheque or through Electronic Clearance Service except that cash payment may be allowed up to Rs. 5,000 (Rupees Five thousand). Staff involved with such procurements should not continue in the same role for long and should be rotated frequently.

Direct Procurement by Purchase Committee

This mode of procurement is used for procurements valued above Rs. 25,000/- (Rupees Twenty-five Thousand) and upto Rs. 2,50,000 (Rupees Two Lakh Fifty Thousand) only on each occasion. It is made by a local purchase committee constituted by HOD only in

case when a certain item is not available on the GeM portal (of required specification or within required delivery period etc.).⁴⁸ However, it is mandatory for a buyer to generate a "GeM Availability Report and Past Transaction Summary" (GeMAR&PTS)⁴⁹ with a unique ID on GeM portal using his login credentials on GeM for procurement outside GeM. This mode of procurement is described in parlance of procurement of goods; however, in principle, it is equally applicable to contingency expenditure on small works/services also. This procedure is slightly more complex and is likely to provide better VfM than direct procurement without quotation and hence is suitable for marginally higher thresholds.

(Rule 155 of GFR 2017)

Terms and Conditions

- i) The controlling ministry may lay down an annual ceiling value per office/unit for such procurements;
- ii) In case of emergency procurement, facility of withdrawing requisite advance cash amount and its subsequent accountal may also be considered.
- iii) This is intended to be fast track, simple mode of procurement. The committee will survey the market to ascertain the reasonableness of rate, quality and specifications and identify the

appropriate supplier.

- liii) Selection of suitable product and supplier by actual market survey (not by calling of tenders like a mini LTE) is of essence of this mode.
- liv) Before recommending placement of the purchase order, members of the committee will jointly record the certificate prescribed (Annexure 8); and
- lv) In larger cities, the presence of reputed Shopping Malls may also be included in the market survey. Reputed internet shopping portals may also be explored.

Direct Procurement by Purchase Committee - Risks and Mitigations

Risks are the same as in the case of direct procurement without quotation mentioned above, with mitigation due to involvement of three members.

Over a period of time intentionally or otherwise, the due diligence of enquiries from market may degenerate into a system of floating and obtaining of limited tenders, leading to delays, development of nexus and crony suppliers.

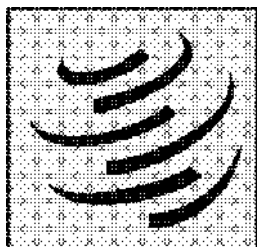
Mitigation strategies are also the same as in direct procurement without quotation.

Departments/ Organisations, who have not built-up their own infrastructure for purchase, may place their indents on its behalf with the approval of its Secretary on other Canalized agencies authorised by the Government or other Government Ministries/ Departments, if mutually agreed. Procurements by such agencies would have to conform to these Procurement Guidelines. Possibilities of other Ministries/ Departments or Sister Organisations having spare-able quantities of required material may be explored. In such cases Indents can be placed on them for supply of requirements, at mutually agreed terms.

Terms and Conditions

- lvi) Usual formalities for Preparation, Budgetary Provisions and approval/ signing of Indents
- lvii) The Indent in such cases, in the format prescribed by such Organisations, should be signed by an officer to whom such powers have been delegated.
- lviii) FA of the Department may sign a declaration about availability and reserving of Budgetary provisions required
- lix) Modalities of Procurement, Inspection, Tracking of Supplies and Payment may be settled with the Organisation

to be continued in next issue....



WTO UPDATE : WTO, WORLD BANK, WEF LAUNCH JOINT EFFORT TO PROVIDE TAILORED TRADE AND CLIMATE ANALYSIS

The World Trade Organization, the World Bank Group and the World Economic Forum on 20 April launched “Action on Climate and Trade” (ACT), a new initiative that aims to help participating developing economies, including least-developed countries, use trade to meet their climate change mitigation and adaptation goals. The new initiative, which starts with a pilot phase, will focus on working with participating developing economies to develop climate-related analysis specific to their trade circumstances.

ACT will provide participating developing economies with tailored insights so that they can plan for the impacts of climate change on trade, leverage opportunities for climate action and trade growth, and define areas of collaboration with trade partners.

Analysis will be adapted to each economy’s specific situation and will explore how trade policy can support the achievement of National Adaptation Plans and Nationally Determined Contributions under the Paris Agreement on climate change. Egypt has taken interest in ACT and is likely to join the pilot phase.

Domestic stakeholders will be involved in ACT’s policy analysis through public-private dialogues, providing participating economies with an opportunity to explore specific ways in which trade can be leveraged to enhance climate change mitigation and adaptation efforts.

In addition, ACT will help policymakers and stakeholders in developing economies engage in international processes where appropriate, such as the WTO’s Committee on Trade and Environment, and the WTO’s Trade and Environmental Sustainability Structured Discussions.

WTO Trade and Environment Division Director Aik Hoe Lim said: “The climate crisis is calling for rapid and effective collective action using every tool in the toolbox. Trade policy offers WTO members, including developing members, a wide variety of options to enhance their climate change adaptation and mitigation strategies. This new pilot initiative by the World Bank Group, the World Economic Forum, and the WTO Secretariat will focus on supporting developing members to leverage trade to improve their climate resilience and decarbonization plans in a way that is aligned with their specific needs and local circumstances.”

Mona Haddad, Global Director for Trade, Investment and Competitiveness of the World Bank Group said: “By prioritizing sustainable practices and harnessing the power of international trade, developing countries can not only mitigate the impacts of climate change but also create new economic opportunities and build a better future for their citizens.”

Sean Doherty, Head, International Trade and Investment, World Economic Forum, said: “Urgent action is needed to meet climate goals. Many companies are undertaking supply chain decarbonization and looking to green trade. Developing economies must be empowered to identify new opportunities and shape a future net-zero global economy.”

As highlighted in the WTO’s World Trade Report 2022, global cooperation on international trade and related investment needs to be mobilized to enhance the mitigation of and adaptation to climate change, support a just low-carbon transition, and minimize trade frictions.

DDG González: To make trade more inclusive, make it easier, faster and less costly

In a keynote address delivered to the “Rethinking World Trade 2023” conference held at Georgetown Law School in Washington D.C. on 13 April, Deputy Director-General Anabel González highlighted the importance of a strong, revitalized and reformed WTO to bring more people, businesses and communities from the margins into the mainstream of the global economy. “More inclusive trade means a world trading system that is more adaptable and resilient, that enjoys broad-based support and that is relevant to the real-life challenges of our time,” she said.

DDG González: To make trade more inclusive, make it easier, faster and less costly

“Making trade more inclusive is not just morally right, it is also in everyone’s economic self-interest,” DDG González said, adding that “WTO members already have a practical, pragmatic and powerful tool to make trade more diversified, markets less concentrated, and economies more resilient — it is called the Trade Facilitation Agreement.”

The Agreement, which entered into force in 2017, contains provisions for expediting the movement, release and clearance of goods, including goods in transit. It also contains provisions for technical assistance and capacity building to assist developing and least developed countries in implementing the Agreement.

Noting that the Trade Facilitation Agreement’s implementation has boosted trade by more than USD 230 billion over the past few years, DDG González said that “accelerating the adoption of trade-facilitative measures, including the digitization of border procedures, will ensure that more small and women-owned businesses in more countries can reap the benefits of trade.”

She added that “this work needs to go hand-in-hand with meaningful steps to narrow the USD 1.7 trillion annual trade financing gap, which remains a major hurdle to achieve inclusive trade.”

DDG González called on governments to work together to bring trade policies, regulations and standards up to speed with the reality of the globalized services and digital economies.

“Rapidly growing services trade, especially services delivered through digital means, is already resulting in major gains for female and young workers and entrepreneurs, as well as small businesses,” she said. “Joining services value chains has huge potential to open up opportunities for scale, innovation and export diversification, especially for poor, vulnerable and landlocked countries,” she added. DDG González said that “there can be no inclusive trade without a fair climate transition and there can be no fair climate transition without globally integrated markets.” She called on WTO members to do more to promote greater coherence across climate standards and to avoid green protectionism. She also called on them to support the capacity of small businesses, women and poor rural communities to meet increasingly stringent climate standards so that they can be part of the clean supply chains of the future.

“In a segmented market, the cost of green technologies increases, the opportunities for green investment dwindle, and the incentives for green innovation weaken,” DDG González said, adding that “this not only hurts developing countries the most, but also slows down the climate transition.”

Noting that WTO members are taking steps to advance trade inclusivity, DDG González said that “the ongoing reform of the WTO provides many additional opportunities to take a big leap forward”.

“In this, I am encouraged by the strong interest in WTO reform shown by so many stakeholders, from business leaders to civil society and especially, the academic community,” she said. “I call on all of you to intensify your efforts to bring about the positive change that people and communities want and need.”

The “Rethinking World Trade 2023” conference was organized by Georgetown University’s Center on Inclusive Trade and Development, co-directed by Professors Jennifer Hillman and Katrin Kuhlmann.

Source: WTO Website

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QUIZ

1. The process used by manufacturers to meet compliance demands is
 - a) Sustainable procurement
 - b) Supply chain visibility
 - c) Supply chain planning
 - d) Supply chain risk management
2. A tool that does NOT help companies in risk management is
 - a) Enterprise risk management system
 - b) Predictive analytics
 - c) Sensors
 - d) Supply chain visibility
3. The software that is widely used for production scheduling, data collection, and product life cycle management is
 - a) ERP
 - b) MRP
 - c) SCP
 - d) CRP
4. Which of the following activity is NOT a contribution of block chain technology
 - a) Enhanced transparency and visibility
 - b) Secure exchange of data
 - c) Smart contracts management
 - d) Increase sales
5. A company engages a carrier to transport its products among its customers. This type of transportation is classified as
 - a) 2PL
 - b) 4PL
 - c) 3PL
 - d) 5PL
6. A characteristic of a successful supply chain is
 - a) Large number of suppliers
 - b) Many short-term contracts
 - c) Trust among partners
 - d) Continuous competitive bidding
7. Who introduced the term Supplier Relationship Management (SRM)
 - a) Keith Oliver
 - b) Peter Kraljic
 - c) Arthur Laffer
 - d) Joseph Orlicky
8. According to Hau Lee, an evolving process and innovative products results in
 - a) Efficient supply chain
 - b) Responsive supply chain
 - c) Risk-hedging supply chain
 - d) Agile supply chain
9. Ford supply chain is characterized by
 - a) Long term relationship with suppliers
 - b) Vertical integration
 - c) Individual customization
 - d) Postponement strategy
10. IaaS stands for
 - a) Information as a Service
 - b) Internet as a Service
 - c) Infrastructure as a Service
 - d) Internet as a Software

Quiz Answers

- | | |
|-----|---|
| 1. | b |
| 2. | c |
| 3. | a |
| 4. | d |
| 5. | c |
| 6. | a |
| 7. | a |
| 8. | c |
| 9. | b |
| 10. | d |

5 THINGS AN HR IN SUPPLY CHAIN MANAGEMENT MUST KNOW TO FIND THE RIGHT TALENT

Supply Chain Management is the whole process that a product or service goes through before reaching the consumer. Depending on the type of business, supply chain management may include planning, sourcing, manufacturing, delivering, and returning goods and services. The primary focus of supply chain management as a whole is to minimize cost and maximize productivity. Sacrificing one for the other isn't considered an optimum solution and can be implemented without any planning.

If you install more machinery and hire more laborers, you can increase productivity. No surprise. But achieving that without investing the presumed resources is the job of supply chain management. An HR professional working in supply chain management, while finding the right talent, must be aware of several facts that contribute to the effectiveness of supply chain management. This list includes the general principles of hiring, supply chain orientation (SCO), and organization-specific guidelines.

We are going to focus on the last two components. As an HR manager in the supply chain, you need to learn and apply these elements in your recruitment process to find the right talent.

1. Creating Strategic Partnership : Working in a supply chain requires individuals to work in various fields that overlap with each other. An HR professional needs to know about the importance of strategic partnership between the suppliers & organization and between employees. When hiring the right talent, you need to verify that the person is capable of analyzing a situation and making logical judgments depending on that. They might also have to take responsibility for each other and solve issues that arise. You may also need to work with workforce retention solutions that hire frontline workers for you. They can hire a talent for the supply chain management through their experience and sources.

As an HR manager in the supply chain, you also need to take into account the long-term organizational goals while choosing the right talent. If a talent isn't capable of respecting and adhering to the organizational goals, they wouldn't be the right choice despite their experience. Traditional relationships in other fields are replaced by strategic partnerships in supply chain management. The right talent for supply chain management needs to look beyond opportunism and embrace a co-dependent, firm-specific approach that focuses on long-term partnerships rather than short-term gains.

2. Building Trust: Just like a strategic partnership, the supply chain employees need to trust each other and the process. This is achieved by making sure that every member of the supply chain works towards a common goal and can fulfill their obligations. Your job as an HR manager in the supply chain is to maintain trustability and hire a talent who is responsible for what they do. Experienced employees are somehow better in this aspect. They know how to gain trust and make others comfortable around them.

A key aspect of hiring the right talent is listening to the employees. HR professionals in supply chains are required to listen to the existing teams and workers to incorporate their feedback into the hiring process. Since supply chains are dependent on coordination between members, it's important to listen to them before making a decision on hiring. To increase trust between parties, you need to know and embrace a philosophy that encourages joint planning, transparent information sharing, and risk reduction activities. When hiring a new talent, you need to consider these elements too. If they aren't a team player and don't value the opinions of others, they aren't the ones for your organization.

3. Protecting Organizational Confidentiality : Supply chain partnership relies on trust and long-term mutual benefits between suppliers and the organization. The supply chain management system predominantly focuses on protecting supply chain partner interests. Protecting specialized assets, proprietary information, and other sensitive assets need to be maintained by your organization.

Since your organization requires confidentiality about the partners, the right talent must have the integrity to not fall prey to external influence and greed. In many cases, businesses have faced huge monetary and reputational losses due to sabotage. Especially if you are hiring talent for a management role, consider background checks. As an HR professional in supply chain, you are responsible to hire a talent who can comply with the organizational requirements and are capable of maintaining confidentiality. They also are expected to share common goals, common norms, and economic integrations.

4. Strength of Dependence : Supply chain management systems strongly depend on various partners and services. For example, if your organization runs on Windows PCs, you are dependent on Microsoft for its services. Your dependence may also extend to particular suppliers that you source your raw materials from. For example, car manufacturing sectors source

their raw materials from metal and electronic industrial partners.

Whatever be the case, you need a talent who can sustain and operate within the bounds of that symbiotic relationship. Especially if you are hiring a talent for management and executive roles. Make sure that the talent has the necessary certification and skill to function properly. You, as an HR manager in supply chain, must know the compliances and the stronger and weaker dependencies to hire the right talent. If your prospect was unable to comply with the norms in their past jobs, consider reviewing their skill levels to understand if they are fit for this job or not.

5. Interdependence Between Departments : Automobile assembly lines are examples of pooled interdependence. As HR professionals in industries with pooled interdependence, you are looking for a talent who functions perfectly without structured coordination and guidance.

Sequential interdependence requires the processes to be done sequentially. In the clothing industry, spinning fibers, knitting, dyeing, cutting, and sewing need to happen sequentially to make a complete product. The right talent needs to work in a dependent environment

and in collaboration with other departments for the best outcome.

The IT industry is the best example of reciprocal interdependence. The teams need to perform in coordination with each other daily and process information that's available through other teams. This kind of complex interdependence is fit for a talent who can communicate and collaborate with different teams on a regular basis.

Depending on the requirement of the interdependence of your organization, you must hire a talent who can embrace the coordination levels and work accordingly.

The Bottom Line : Being an HR professional in supply chain management needs you to be mindful of the organizational goals and partner interests. In addition to adhering to the basic hiring practices, you need to hire a talent who can maintain trust, manage partner information, and nurture synergy. The dependence on partners and interdependence on other teams within the same organization also needs to be considered when hiring the right talent.

Source: www.globaltrademag.com

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CHALLENGES FOR SUPPLY CHAIN HUMAN RESOURCES

JOSHUA STACK

Sourcing and finding talent in the Pandemic era has posed significant challenges in most every industry. Supply chain human resources partners have been tasked with an additional burden of finding top-tier talent that can adapt to a rapidly changing field and work place. What are some of the most common challenges facing supply chain HR partners and how can they overcome them without missing out on the best talent?

Supply Chain Talent Shortage : As the Pandemic settled upon the world, everything came to a halt. We all remember the twilight zone-esque feeling of not knowing what was going to happen next. It seemed that when the NBA canceled basketball season, we were in a world of trouble. But, the supply chain world had been feeling this for longer than the rest of us. Southeast Asia slowed manufacturing and production as the COVID-19 virus started spreading there before anywhere else. But soon enough, the downstream effects hit everyone everywhere.

In the wake of these shutdowns and massive disruptions, the world changed. Employers who are desperate to find and retain the best talent have made almost universal concessions to the global

workforce. Those who can work remotely are doing so now. The shift from tactical to strategic to anticipate and avoid disruptions has also accelerated a need for more managerial and technically specific skill sets. When combined with the aging out of the work force and associated "brain drain," supply chain human resources specialists continue to struggle with hiring and retaining supply chain talent. The supply chain has always been rife with disruptions, given the nature of the beast. However, a talent shortage is just another to add to the pile of interruptions.

Spike in Technology, Automation and Digitization : Supply chain has been a leader in technology innovation and adaption. However, this became more of a priority in a Pandemic world with a shallow talent pool to include front-line workers within distribution and manufacturing facilities. While Warehouse Management Systems (WMS), Transportation Management Systems (TMS) and Enterprise Resource Planning (ERP) software are common to see in most companies, additional platforms are rapidly advancing ranging from inventory tracking to advancing planning & scheduling to robotics, artificial intelligence and machine learning. Even freight

forwarders have been advancing their use of technology, which has optimized efficiencies and streamlined operations. While these technological advancements have helped, they have also reduced the available, qualified talent pool.

This has also led to an exodus in what a lot of employers are calling the “skill-loss cycle.” Key employees who understand and can use advanced systems proficiently have too much on their plates and not enough personnel redundancies exist to spread the work around. This can create burnout, which puts the supply chain human resources staff in more of a bind.

Remote Working Trends : Demands being placed on supply chain HR include the recent uptick in remote workplaces and hybrid/flexible work environments. It’s an adjustment for employers to include these stipulations in compensation packages. It also creates new challenges in management effectiveness and team building when you have some employees onsite and others working from home. Additionally, some positions can’t be remote. Certain onsite requirements demand that supply chain leaders, and especially front line personnel, be present. The spike in desired remote and flexible workplaces has added an additional talent shortage to the already shallow supply chain talent pool.

Interestingly enough, increased technology and automation have allowed for more remote opportunities. But, the highly specialized skill sets required for these positions offers similar challenges to sourcing top tier candidates.

Increasing Competition and Hiring Costs : The competition for top talent has fueled significant spikes in compensation as well. In addition to strong increases to both hourly and salaried wages, we’re seeing increases in short-term and long-term incentives, as well as other forms of bonuses ranging from sign-on bonuses to retention bonuses. Much of this can be attributed to basic supply and demand, as there are more supply chain jobs than candidates to fill them. The most sought after candidates command top dollar, are constantly being recruited, and when they do start entertaining other job opportunities, it’s common for them to receive multiple offers to choose from. They can be picky about which offers they accept and are in the “power position” from a negotiation perspective, which commonly leads to multiple rounds of counter offers and ultimately obtaining above and beyond compensation packages, perks and the like. Obviously, this fluctuates by industry, geography and job function. For instance, strong logistics executive with solid experience in technology and automation will command a higher price tag than someone with a background in manual environments with older technology. The same applies for procurement. Candidates with solid strategic sourcing skills at the global level operating in a digital procurement environment will command higher compensation than those working in a more tactical and manual environment.

Generalist vs. Specialized Supply Chain Recruiters : Another challenge faced by supply chain human resources is settling on the right recruiter or executive search professional. How do you know which firm will best suit your supply chain talent needs?

There are advantages and disadvantages to both large agencies who don’t focus on a specific industry or function versus highly specialized boutique firms, like SCM Talent Group, for example. If you’re trying to fill high-volume roles quickly, then perhaps a generalist search firm works best. However, there are likely more cost effective routes like posting on specialized supply chain job boards which can attract these types of candidates.

Boutique executive search firms typically are better able to leverage their networks, relationships, and subject matter expertise in a highly focused manner. Supply chain recruiters are able to screen candidates in a much more disciplined manner than the generalist firms and can cut through the high level of ambiguity that exists within supply chain. Their in-depth understanding of supply chain helps them to source and present candidates that other firms may not be able to. Additionally, many of these boutique firms are filled with former supply chain practitioners, who worked in various functions on the corporate side, and speak the complex supply chain language that many generalist firms are not fluent in. Additionally, these firms have memberships in supply chain associations such as CSCMP, ISM, MHI and the like, which can be strong sources of candidate referrals.

It is also recommended that human resources personnel utilize specialized job boards over more general ones. Sure, the Indeed.coms of the world will help to get your exposure out there to highly active candidates that work in all professions known to mankind. But, is Indeed going to attract the most talented strategic sourcing professionals that can optimize your procurement teams? Hard to say. But if you know that there’s a supply chain job board, built by supply chain experts for supply chain employers, chances are your applicants will be of a higher and more specialized caliber. Casting a wider net does not always guarantee you get the best fish. Sometimes, it means you only get a lot of what you don’t need.

Conclusion : There is no quick fix to solving the supply chain talent shortage. Human resources personnel in supply chain are faced with unique challenges that run the gamut of a shifting workplace environment to heightened and more complex skill sets to compensation packages that far exceed budgets. The best way to navigate these waters is to find a captain who’s been there before, so to speak. Engaging with specialized supply chain talent professionals can provide you better access to the highly sought after talent pool that your supply chain organization is going to need in order to stay competitive.

Source: scmtalent.com

NOW IS THE TIME TO HIT THE DIGITAL TRUST RESET BUTTON

NAMRATA JOLLY,
ASIA PACIFIC GENERAL MANAGER CALLSIGN

There is a reason digital identity technology is in demand right now, and that's because digital trust is broken. Both trust and identity are easy to establish offline. However, establishing identity and trust is entirely different in the digital world. The fallibility of how we identify individuals online and the lack of digital trust in these methods is being used to swindle, manipulate, corrupt, and defraud enterprises and people at an industrial level.

The current scourge of online scams and fraud is because of unverified identities online, and if we don't know beyond doubt who we are interacting with online, we can't trust that interaction or that person. Even with the arrival and integration of new technologies enabling digital transformation, digital trust is fundamental in ensuring economies can move forward.

Technological advancements have brought a wealth of opportunities that are a stone's throw away. From artificial intelligence to Big Data, cryptocurrency to Blockchain, we're constantly reminded of the imminent technological revolutions, game-changers and disruptive technologies. But, to reap the rewards of these technologies and enable Asia Pacific economies to sprint forward, we must first fix trust. In the physical world, establishing trust with a company is straightforward. We do this by meeting the employees, visiting their offices or shops and seeing how the physical products work before purchasing. All this builds confidence and trust in the company and people before we decide to buy.

Over in the digital world, establishing trust is complex and remains the biggest issue today. Yet despite all the investment, new technologies, and trust mechanisms, we are in a vicious Catch-22 situation, and no one is pressing the reset button. Right from the dawn of the digital world, trust mechanisms used to identify ourselves online were simply duplications of the physical world. We switched from signatures to usernames and passwords as a representation of ourselves online.

This initially worked, and then fraudsters caught on and exploited these trust mechanisms, so companies added another layer of security, such as asking for personal information like pin codes or pets' names. When fraudsters found a way through again, we just added another layer, more recently in the form of SMS OTPs. This pattern has never changed, and this is the root cause of why digital identity (and therefore digital trust) is a challenge today - because a password and username is unable to prove the user's real identity.

The outdated technologies and the process of adding additional layers to authenticate and verify people has been considered normal. It's one reason enterprises have multiple (sometimes hundreds) security tools in their tech stack. Rather than fix the root cause of the issue, we've just treated symptoms, and this makes little sense.

Here's why.

Pressing the reset : In the physical world, to protect our homes, we can install burglar alarms, smoke detectors, door locks, and call for help if there is a burglary or fire. When CCTV cameras became cheaper, homeowners installed them. As home protection technologies improved, old equipment was removed and newer, smarter, and trusted technology replaced

them. Over in the digital world, we are still using technologies designed for the analogue world, and this is a hangover from the Internet's early days when passwords and usernames became digital identities.

A prime example of this is the reliance on SMS one-time passwords delivered by digital providers; this is a well-known vulnerability. Another example is the belief that a mobile phone belonging to a customer is not prone to theft, an SS7 attack, SIM swapping etc. Attacks are further hardened by fraudsters using social engineering techniques to manipulate, trick and fool their victims. What is needed is a fundamental shift away from outdated mechanisms and instead, a focus on building trusted digital technologies, processes, systems, and regulations within the Asia Pacific region. The pattern of fraud has remained unchanged for decades. No one is pressing the reset button. Without dramatic action, the 'fraud, apology, add a security layer, fraud, apology, add a security layer, fraud' pattern will continue.

What will a digital trust reset look like?

A step in the right direction of establishing digital trust was made with the introduction of facial recognition, which has made its way onto millions of digital devices. As an authentication tool to access the device, internet banking, and, increasingly, other apps, facial recognition does offer some protection to consumers and their information. But there is an alternative which prevents fraudsters manipulating liveness tests, circumventing step authentication methods, and which is less privacy intrusive. Behavioural biometrics are passive signals that determine if the genuine user is in control of their phone through the way they hold their device, swipe the screen, and type on the keyboard. All data points are obfuscated, protecting the privacy of the use, and they don't add friction to the use journey as they are collected at specific interaction points. Behavioural biometrics are unique to the user and unable to be replicated by a fraudster.

Introducing behavioural biometrics will help prevent account takeover fraud and authorised fraud through social engineering. They can remove the necessity of sending one-time passwords via SMS to prove the identity of a user because the behavioural signals prove the correct user is using the device.

If the ongoing fraud escalation in the region is anything to go by, we must collectively move away from outdated identity mechanisms to build trust, scrap old technologies and processes and hit the shiny red reset button to rebuild digital trust from the ground up.

Otherwise, we can expect the situation as it stands today to continue with more fraud, more reliance on outdated technology, reputation loss, trust loss, and financial loss. No one wants this. We are way beyond the 'it's not too late for change' stage and, instead, have a golden opportunity to rebuild digital trust by introducing non-evasive technologies such as behavioural biometrics to authenticate and verify identities.

Source: securitybrief.com.au

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TECH TRENDS IN THE LOGISTICS INDUSTRY FOR 2023

From AI to automation– the rise of technology is creating a new era of innovation and progress. No matter what industry you are in, technology is a game-changer that cannot be ignored. So, Hello and welcome to an ultimate blog on **tech trends in the Logistics Industry** for 2023.

Today, let's talk about the most prominent tech trends that can shape the logistics industry in the coming years. Are you excited? Because it's gonna be thrilling, Trust me! In a nutshell, We all know that Logistics is delivering the world to your doorstep with speed and precision. It includes activities such as transportation, warehousing, inventory management, and packaging.

So, without logistics, the global economy would come to a halt. Don't you think? It will result in empty shelves and unhappy customers. The logistics industry's ability to move products from one point to another is the backbone of global trade. Remember, whether you are in B2C or B2B, time is a crucial factor in entrepreneurship because time is money. By the way, Let me ask you something. Do you keep an eye on the front door more often whenever you order something? *Blushes...Because I do.

The logistics industry is undergoing rapid transformation. Artificial intelligence, blockchain, and the Internet of Things (IoT) are changing logistics by increasing efficiency and improving the customer experience. How desirable is that?

Now, are you ready to take your logistics operations to the next level? Then don't delay anymore,

Tech Trends in Logistics for 2023

Logistics, an indispensable part of the global economy, but it is yet to achieve its full potential. Now, let's walk you through the **tech trends in the Logistics Industry**, shall we?

Okay, Drum Rolls!

1. Automation and Robotics

The logistics industry is set to see an increase in the use of automation and robotics in 2023. Automation can streamline and optimize logistics processes by automating repetitive tasks such as data entry and

order processing. On the other hand, Robotics can also help in the movement and handling of goods, especially in large warehouses and distribution centers. Well, this assures us that we are living in the future now!

According to a study by Mordor Intelligence, the global logistics robots market will grow at a CAGR of 29.8% from 2021 to 2026. The growth is an indication of the need for automation and the increasing demand for efficient logistics operations.

So, it is not a far-fetched reality anymore where we can say that Robotics is the future of logistics. right?

One example of automation technology is,

- **Robotic Process Automation (RPA)**, which is a software technology that can automate rule-based tasks such as data entry and order processing. With RPA, logistics carriers like Amazon have improved their accuracy and reduced costs.
- Another example of automation technology is Autonomous Mobile Robots (AMRs) used by Shopify, which can move goods autonomously around a warehouse or a distribution center. AMRs can also help companies optimize their inventory management by reducing the need for manual tracking.

Automation and robotics are not just about replacing human workers – they're about augmenting their capabilities, empowering them to focus on higher-value tasks and enhancing their overall productivity.

Now it's time for you to experience unprecedented efficiency and innovation!

2. AI and Machine Learning

"Revolutionizing Logistics with AI and Machine Learning: Smarter, Faster, Better!"

AI and Machine Learning (ML) are expected to transform the logistics industry in 2023. By analyzing vast amounts of data, these technologies can help logistics companies optimize their operations and make more informed decisions. In this scenario, Stephen Hawking would ask "Is Alexa gonna take over us?"

"AI and ML are the powerhouses that enable the

logistics industry to achieve efficiency, accuracy, and speed,” says Peter, an AI enthusiast.

AI-powered predictive analytics can help companies anticipate demand and optimize their inventory levels accordingly. Predictive maintenance uses data from sensors to detect potential equipment failure before it occurs, reducing downtime and maintenance costs. Route optimization is another application of AI. Confused? No worries! Let me give you a few pointers on how AI helps in Logistics:

1. **Optimization of Route Planning:** You can optimize the routes by analyzing traffic patterns and weather conditions, which ultimately helps in reducing delivery time and fuel costs.
2. **Enhanced Fleet Management:** AI can help you in managing your fleet by providing real-time data on the performance of vehicles, such as fuel efficiency, driver availability, and maintenance needs.
3. **Inventory Management:** AI can help you in inventory management by predicting demand, detecting anomalies, and identifying patterns, which ultimately helps in reducing the risk of stockouts and prevents additional expenses.
4. **Improved Customer Service:** AI can help logistics companies in providing better customer service by providing real-time updates on shipment status, responding to customer queries, and identifying and resolving issues before they become problems.

3. Blockchain

Say goodbye to shipping headaches and hello to Blockchain technology.

It is expected to play an increasingly important role in the logistics industry in 2023. It will provide a secure and transparent way to track the movement of goods and services, blockchain can help to reduce fraud, increase efficiency, and improve supply chain transparency.

According to MarketsandMarkets, The global blockchain in the logistics market is expected to grow at a CAGR of 70.4% from 2020 to 2025,

“Blockchain is a revolutionary technology that enables logistics companies to achieve a higher level of transparency and security,” says Forbes blockchain enthusiasts.

Now you may wonder, why I am so hyped about Blockchain. Well, I can assure you that:

- Blockchain can help reduce fraud by creating a tamper-proof record of all transactions

- It ensures that all parties in the supply chain have access to the same information
- Another benefit is that – it allows companies to track the movement of goods in real-time
- Ensures that everyone involved in the supply chain have access to the same information

By the way, Did I tell you?

- Maersk and IBM introduced an ecosystem in 2018 to track transporters, packages, and freight, as well as supply chain management. The platform captured and consolidated data on freight traffic from partner companies into a single secure blockchain network, allowing all stakeholders secure access to information.
- In addition, **FedEx** also plans to use blockchain technology and smart contracts to track and store information for strategic planning and analysis. It is intended to track and save records for strategic planning and analysis using blockchain technology and smart contracts.

Smart Choice, see?

4. Internet of Things (IoT)

The internet of things, or IoT, is a network of networked computing devices, mechanical and digital machinery, items, animals, or people with unique identities (UIDs). IoT can send data over a network without requiring human-to-human or human-to-computer interaction.

According to International Data Corporation (IDC) specialists, by 2025, there will be 55.7 billion connected devices on the market. I can safely say that IoT is on fleek now!

But how can it help in logistics? Simple. Let me walk you through:

- **Real-time tracking and monitoring:** IoT sensors can be attached to cargo, vehicles, and equipment to provide real-time location and status updates
- **Predictive maintenance:** You can check performance and condition of equipments and vehicles, and detect potential issues before they become serious problems
- **Warehouse optimization:** You will be able to monitor your warehouse conditions, such as temperature, humidity, and lighting
- **Supply chain visibility:** IoT can help you to provide end-to-end visibility of the supply chain
- **Route optimization:** You may track traffic and road conditions, and optimize logistics routes

accordingly

- **Enhanced customer service:** It can help you to improve customer service by providing real-time updates on the status of deliveries and allow tracking of orders in real time.

In conclusion, IoT has the potential to transform the logistics industry by providing real-time tracking and monitoring, predictive maintenance, warehouse optimization, supply chain visibility, route optimization, and enhanced customer service.

So, you see that by leveraging IoT in logistics, you can optimize operations in real-time and enhance your entrepreneurial experience.

5. Development of Autonomous Vehicles

Autonomous vehicles, also known as self-driving vehicles, have the potential to revolutionize the logistics industry by providing a safer and more efficient mode of transportation. Autonomous vehicles can eliminate the need for human drivers, reducing the risk of accidents and improving delivery times.

Well, do you know? Germany has been investing heavily in autonomous vehicles, and several logistics companies are now using autonomous vehicles for deliveries. DHL, one of the largest logistics companies in the world, has been testing autonomous delivery vehicles in Germany since 2016.

Even carriers like UPS, FedEx, and Amazon, are testing autonomous delivery vehicles in various cities across US. The state of Arizona has also become a hub for autonomous vehicle testing, with Waymo (a subsidiary of Alphabet Inc.) testing its autonomous vehicles in the state.

As autonomous vehicle technology continues to evolve, we can expect to see more logistics companies adopting autonomous vehicles in their operations. Here's why:

a) Improved Safety:

One of the primary benefits of autonomous vehicles is improved safety. According to the National Highway Traffic Safety Administration, human error is a factor in 94% of all vehicle crashes. By eliminating the need for human drivers, autonomous vehicles can reduce the risk of accidents caused by human error.

b) Reduced Costs

Autonomous vehicles can also reduce logistics costs by eliminating the need for human drivers. According to a report by McKinsey & Company, autonomous vehicles could reduce delivery costs by up to 40% in the long run.

c) Improved Efficiency

Autonomous vehicles can also improve logistics efficiency by optimizing delivery routes and reducing idle time. With real-time data on traffic conditions and road closures, autonomous vehicles can choose the most efficient route to their destination, reducing delivery times and improving overall efficiency

d) Greater Flexibility

Autonomous vehicles can provide greater flexibility in logistics operations. With autonomous vehicles, logistics companies can operate 24/7, providing faster delivery times and greater flexibility in responding to changing customer needs.

Now you have to remember that Self-driving trucks and vehicles uses AI for autonomous driving and I already told you how AI can help you with fleet management in your logistics. Currently, trucks throughout the globe are driven by humans, and there is very limited technology available to track the safety of the cargo and speed of the delivery.

Now To tackle such problems, vehicle manufacturers and logistic entrepreneurs are adding telematics systems to track shipments and assets.

While there are still some challenges to be overcome, such as regulatory hurdles and technology limitations, the benefits of autonomous vehicles are clear.

By embracing autonomous vehicle technology, logistics companies can improve their operations, reduce costs, and provide a better customer experience in the near future.

Let's Vroom...!

Bottom Line

As we look to the future, it is evident that the adoption of these tech trends will help logistics companies to stay ahead of the curve and remain competitive in the industry. By doing so, You can improve your efficiency, reduce costs, and enhance the customer experience, leading to a more streamlined, efficient, and customer-focused logistics industry in the years to come.

Isn't that cool? Finally, I can greet you with "Welcome to the Future" ***blinks**

Hence, it is crucial for logistics companies to carefully plan and implement these technologies in a way that aligns with their business objectives and goals.

Source: TheCodeWork

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THE IMPACT OF DIGITIZATION ON SUPPLY CHAIN OPERATIONS IN INDIA

Supply chain operations in India are increasingly leveraging digitization to optimize their operations. Digitization tools such as Automated Data Capture with Sensors and RFID tags, Blockchain for tracking, Warehouse and Transportation Management Systems, Electronic Data Interchange (EDI), Enterprise Resource Planning (ERP) tools, and electronic trade and commerce platforms are revolutionizing supply chain operations in India.

- § Automated data capture through sensors and RFID tags eliminates manual effort in large operations.
- § Blockchain provides complete visibility and traceability across the supply chain for very large operations.
- § Warehouse Management Systems (WMS) and Transportation Management Systems (TMS) improve efficiency and visibility for medium-sized operations.
- § WMS optimizes inventory levels and stock movement while TMS optimizes transportation routes and delivery times.
- § Integrating advanced digital technologies with WMS and TMS can create a streamlined and agile supply chain operation that delivers value to customers and enhances the bottom line.

By leveraging these advanced digital technologies, businesses can optimize inventory levels, reduce waste, improve delivery times, and enhance customer trust, creating a competitive advantage in an increasingly digital marketplace.

Advantages of digitization in supply chain operations in India

Digitization has several advantages in supply chain operations in India, including:

- § Improved process efficiency
- § Enhanced visibility
- § Reduced costs
- § Better decision-making
- § Improved customer satisfaction
- § Speed, agility and performance
- § Easy-to-use interfaces
- § Access to real-time data analytics and visualizations

Overall, digitization can help supply chain operations to become more efficient, faster, and more effective, while also providing easy access to critical information and insights. **Digitization of the supply chain also helps in obtaining real-time data that can be used for resource allocation and planning, improving overall efficiencies and tracking performance with dashboards. It greatly helps in analytics and also evolving decision support systems.**



Importance of digital skills in supply chain operations

The benefits of digitization can only be realized if there is a sufficient level of digital literacy in the workforce, especially for those who work on the shop floor. The shop floor workforce needs to be well-equipped with the necessary digital skills such as the ability to read digital information and knowledge to operate digital devices like scanners and others.

While advanced digital skills are essential for developing and implementing digital technologies, basic digital skills are necessary for performing basic operations. For instance, data entry, record-keeping, and data analysis require basic digital skills. Therefore, companies need to invest in training their employees to ensure that they have the necessary digital skills to perform their roles effectively.

In today's digitized supply chain operations in India, there are several basic digital skills that are necessary to perform basic operations efficiently. Some of these skills include:

- § Basic Computer Skills
- § Data Entry and Analysis
- § Email and Online Communication
- § Basic Inventory Management Software
- § Online Research
- § Online Security
- § Basic knowledge of Digital Tools and Technology

Along with basic digital skills, it is essential for the workforce to possess advanced digital skills. Here are a few advanced digital skills for the supply chain sector in India

- § Data Analytics
- § Artificial Intelligence (AI)
- § Machine Learning (ML)
- § Internet of Things (IoT)
- § Robotic Process Automation (RPA)

§ Blockchain

These skills will enable employees to interpret data, develop predictive models, and automate decision-making processes.

In the context of supply chain operations in India, these advanced digital skills can be used to further improve the technologies and processes already in place. By investing in advanced digital skills, companies can unlock new insights, streamline processes, and gain a competitive advantage in the market.

Investing in training and upskilling for successful digitization

Digitization is transforming supply chain operations in India, making them more efficient, transparent, and customer-centric. However, to fully leverage the benefits of digitization, companies need to ensure that their workforce has the necessary digital skills. By investing in training and upskilling, companies can ensure that their employees are equipped to perform basic operations as well as develop and implement advanced digital technologies.

Avaan Intellect's Academic Outsourcing & Knowledge Partnering provides strategic partnerships with Universities/Colleges as knowledge partners, with a focus on providing education and skill-based training in the areas of Logistics, Supply Chain, and Leadership management. The unique programme aims to offer colleges and universities access to the extensive experience of AVAAN's industry veterans. If you wish to know more about the programme, please visit –Academic Outsourcing (gatiintellect.com)

With the right investments and strategies, digitization can become a game-changer for supply chain operations in India, enabling companies to stay competitive, agile, and sustainable in a rapidly evolving business landscape!

Source: www.nationalskillsnetwork.in

BRANCH NEWS

BANGALORE BRANCH

Professor Ravi Ravindran Endowment Lecture – 15th April 2023 : Indian Institute of Materials Management, Bangalore had organized the 7th Edition of Professor Ravi Ravindran Endowment Lecture in Hybrid mode in Honour of Prof. Dr. A. Ravi Ravindran, on Saturday, the 15th April 2023. Topic was: “Future of Mobility”, how is it being shaped by Sustainability, Smart Technologies, and Supply Chains”

Speaker Dr Shankar Venugopal Vice President, Mahindra & Mahindra Research Valley, Chennai, gave an excellent presentation. He narrated that the mobility industry (aka automotive industry) is being disrupted by smart new technologies and business models. The new technologies like electric, connected, shared etc are exponentially growing and covering to create cutting-edge mobility solutions. Sustainability has been the key driver for most of the innovations in this space - EVs that have zero tail pipe emission, autonomous vehicles for zero accidents, smart and connected vehicles for zero traffic design of critical components like batteries and motors for recycling and reuse, Micro factories, Giga plants etc. The talk was highly engaging, connected and electrifying! Dr. Shankar Venugopal has sent the stage for migrating from linear / incremental world to nonlinear/exponential world where India is going to aspire to a global leadership.



Lifetime Achievement Award to Dr. C. Subbakrishna, Former National President

Dr. P. Balasubramanian briefed about Professor Ravi Ravindran Endowment.

Prof. S. Sadagopan, Chairman, BoG, IIITDM-Kancheepuram, Founder Director, IIIT-Bangalore participated and addressed the gathering.

Mr. K.C. Harsha, Head, Symposium organizing committee proposed Vote of Thanks. About 60 members/MM, SCM professionals attended the

program and got benefitted.

Materials Management Day Celebration – 22.04.2023 : Materials Management Day was celebrated in the evening on 22nd April 2023 (Saturday) at Ajantha Hotel, Bangalore. Theme was “Role of Supply Chain in making India beyond 5 trillion Economy by 2025”. Chief Guest was Mr. Kumaralingam, Vice President, Global CPO, Wipro Ltd., Bangalore and Keynote Speaker was Dr. C K Nagendra Gupta, Associate Professor and Head of Department of Industrial Engineering & Management College of Engineering, Bangalore. Mr. Paul George, NC Member was MC presented about MM Day and briefed about IIMM activities. Dr. Sengottaiyan, Branch Chairman welcomed the gathering.

Dr. C K Nagendra Gupta, Keynote Speaker addressed the gathering and gave a presentation on the theme “Role of Supply Chain in making India beyond 5 trillion Economy by 2025. He shared his inspirational thoughts/knowledge and gave very informative presentation on the theme.

Indian Institute of Materials Management, Bangalore Branch felicitated and presented Life Time Achievement award 2023 to Dr. C. Subbakrishna, Former National President, IIMM, in recognition of his outstanding contribution to Professional and Educational development activities of IIMM Bangalore and IIMM NHQ.



Mr. Gavisiddegowda, II Rank holder receiving prize from Chief Guest

On this occasion of MM Day celebration, IIMM Bangalore Branch felicitated all Faculties of IIMM, who rendered outstanding services from 2021 to 2023 by conducting regular Classes for PGDMM/CSCM Courses, Inhouse Training, Workshops and gave support for revising syllabus etc. Mr. G. Balasubramanian, senior

faculty briefed about courses conducted by IIMM Bangalore Branch.

IIMM Bangalore Branch felicitated top three rank holders of each CSCM batch from 14th to 21st and awarded prizes and rank certificates. Convocation Certificates were awarded to the successfully completed candidates of CSCM 2021 Batch.



Ms. Asha Rani, 1 Rank Holder Receiving Prize from Mr. Kumaralingam, Chief Guest



Mr. Praveen Kumar S. 1 Rank Holder Receiving Prize from Chief Guest

Chief Guest Mr. Kumaralingam addressed gathering on digital transformation insights and motivated the outgoing students of CSCM by narrating stories and shared his practical experience on the relevant topics that were more useful to the SCM/MM Professionals participants of MM Day celebrations.

Mr. A.V. Sham Sundar, Branch Vice Chairman administered Oath of IIMM. Mr. M.R. Achyuth Rao, Honorary Secretary proposed formal vote of thanks. About 110 members, students, and MM/SCM professionals were present in MM Day celebrations. MM Day celebrations concluded with a delicious dinner.

UDAIPUR BRANCH

JK Tyre & Industries Ltd. – Factory Visit and Felicitation Program organized by IIMM Udaipur branch to celebrate Materials Management Day

Udaipur, 24 April 2023, Materials Management Day celebration was organized by Indian Institute of Material Management, Udaipur Branch at JK Tyre & Industries Ltd. Kankroli.

Materials Management Day is celebrated every year on 23rd April, when four professional bodies of materials management merged into one national body (Indian institute of Materials Management) with the aim of securing the widespread recognition of the profession and elevate the status of professionals engaged in the associated material management field. The theme of this year's Materials Management Day celebration is **"Role of Supply Chain in making India beyond USD 5 trillion Economy by 2025"**



To celebrate the Materials Management Day this year, the Udaipur branch of IIMM decided for an industrial visit of JK Tyre & Industries Ltd., Kankroli along with a discussion on the theme of this year and thereafter felicitation program. The whole event was organized by the Vice President, J K Tyre Shri R S Kedia and Chief General Manager (Comm), JK Tyre & Executive Member of IIMM Udaipur Shri Anil Mishra, Chairman IIMM Udaipur Shri D C Jhanwar and National Councillor Smt. Priya Mogra and Secretary Smt. Hasina Chakkiwala along with Executive Committee of Udaipur branch of IIMM.

The program started at 4 pm and the former Chairman and advisor of IIMM Udaipur, Shri P.S. Talesara, several senior members Shri Avinash Bhatnagar, Shri Rajesh Jain, Mr. Anupam Luhadia and supply chain professionals from various other industries like Shilpa Trade Links etc. participated.

A visit to the tyre factory was held after the welcome address. It began with a briefing on essential safety tips and participants were provided with equipment such as PPE and face masks. The supervisors gave a detailed description of the tyre manufacturing process. During

the industrial visit, information was provided about the various elements of the tyre factory, the various stages of production and the entire process of manufacturing from raw materials to the final product and packaging process. It was a great experience for materials management professionals to know how a manufacturing plant works and how mobility is being provided.

After the factory tour it was time for discussion, felicitation and presentations. It is very unfortunate that Shri Sumit Lunia, senior member of the branch is no more with us. All the members kept a two min silence and offered prayers for the departed soul. A detailed presentation was given by senior officials of the J K Tyre team where we learnt many facts. JK Tyre is the only organization in this domain to introduce the tyre on rent system. A detailed discussion was done and all the participants expressed their views on the theme of the year. A lot of new ideas were presented on how Supply Chain will contribute towards the desired growth.



Felicitation program was organized in the auditorium of the factory. Secretary Smt. Hasina Chakkiwala informed that IIMM Udaipur organizes various webinars, talks and events. It is a matter of pride to recognize the efforts of the working team and esteemed speakers. Permanent Advisor and Past Chairman of the branch Shri P S Talesara has been conferred with a very prestigious Rajasthan Gaurav Award during a ceremony in Jaipur last month by the Governor of Rajasthan Shri Kalraj Mishra. It is indeed a moment of pride for the whole branch and his felicitation was done.

The closing remarks and vote of thanks were presented by Secretary Ms. Haseena Chakkiwala. She mentioned that the main objective of any industrial visit is to provide information about practical working environment, working methods and employment schemes through discussions and we learn about new technologies. She also thanked the team of J K Tyre for organizing this event and also to the entire IIMM Udaipur branch team. The event was followed by dinner for all the participants and we all enjoyed the sumptuous food. The enthusiasm and sense of personal touch by the JK team was nothing short of overwhelming.

LUCKNOW BRANCH

IIMM DAY PROGRAMME 22/04/2023 : Mr. Mrityunjay Kumar senior manager, Hindustan aeronautics limited Lucknow division (Out Sourcing Department) gave his power point presentation on **Role of Supply Chain Management and Logistic** as HAL whole. After the presentation a memento was given by Prashant Kumar Singh chairmen IIMM Lucknow Branch.

23/04/2023 : Miss. Kanak Lata manager (O/S) gave power point presentation on **Entrepreneurship and Innovations as career Opportunity**. She covering concepts, new technology and electronic mobility etc.

After the presentation memento was given by Brajesh Singh General manager tata motors ltd Lucknow. After that the vote of thanks given by Mr. PK Bajpai secretary Lucknow Branch Lucknow.Both programs followed by high tea.





AURANGABAD BRANCH

Indian Institute of Materials Management (IIMM) and Marathwada Auto Cluster (MAC) on occasion of Materials Management Day on 23rd April, organized a seminar on "Role of Supply Chain in making India beyond USD 5 trillion Economy by 2025".



Mr.K.Srihari Chairman Aurangabad Branch offering Sapling to Mr. Shriram Narayanan during the seminar.



Faculty Mr.S.J.Sanghai and Executive Committee of Aurangabad Branch

The Chief Guest of the Program was Mr.Sriram Narayanan – Managing Director of Endress + Hauser and Speaker was Mr. Sanjay Sanghai - Executive Vice President, Group Purchase of Endurance Technologies Limited. Mr.Sanghai said that SCM professional should focus on Cost optimization, Innovation supply chain strategies, Sustainable supply chain practices, Supplier motivation, Exports in Indians economic growth, World class manufacturing in supply chain to make India will become a \$5 trillion economy by 2025.

Mr. Narayanan said Reliable supply chains are one of

the key drivers of economic growth. From the economic standpoint, for developing countries like India, supply chains create opportunities, augment productivity, improve technology and skills, increase employment, and diversify exports. Long-terms business relations ensure more income and uninterrupted revenue.



Delegates attended Seminar on 20th April 2023 Aurangabad Branch

Mr.K.Srihari (Chairman), Mr.Shrikant Mulay (Secretary), Mr.Sushant Patare (Vice Chairman), Dr.Narendra Joshi , Mr.Ramesh Jaulkar, Mr.Paras Mutha, Mr.Prem Kadam, Mr.Sudarshan Dharurkar, Mr.Lalit Lohade, Mr.Yogesh Koshe, Mr.Ameya Kolte took efforts to make the efforts to make the event successful. Mr.Phanikumar did the proceedings and Mr. Vikas Narwade gave vote of thanks. 250 delegates from Chatrapati Shambhajnagar Industry attended the event. Mr.Jairaj Patil – President and Mr.Rahul Jaju – Secretary of Aurangabad Industrial Supplier Association (AISA) were felicitated on IIMM platform. IIMM has launched a new course – Diploma in Supply chain and Logistics Management.

KOLKATA BRANCH

IIMM Kolkata celebrated Materials Management Day on 23rd April, 2023 in a befitting way on the theme "Role of Supply Chain in Making India a \$ 5 Trillion Economy by 2025". Commemorating the MM Day, a Discourse on the topic was arranged on Tuesday, the 25th April, 2023 at 6.30 p.m. at IIMM Hall in hybrid mode. Mr. Sanjay Gupta, Executive Committee Member, gave an in-depth presentation on the topic with statistical data and with strong expectation for achieving \$ 5 Trillion Economy by 2025 and illustrating the ongoing journey towards the goal.





Mr. D N Chakravarti, Past Chairman of Kolkata Branch & Past National Vice President (East), also made a brief presentation and answered to queries raised from audience. Mr. Koushik Roy, Chairman, Mr. Kaushik Mukherjee, Hony. Secretary and Executive Committee Members and few senior members along with budding professionals attended the programme. Altogether 30 members attended the off-line programme held at IIMM Hall and around 25 members attended the programme online.

Mr. Koushik Roy, Chairman, Kolkata Branch, in his welcome address, highlighted the importance of celebration of MM Day. According to him, MM Day is the most auspicious occasion for the Institute as well as for the SCM fraternity. He wished IIMM and MM fraternity on this auspicious day. Mr. Kaushik Mukherjee, Hony. Secretary, proposed Vote of Thanks. At the end, High Tea was served to all attendees celebrating MM Day 2023.

DELHI BRANCH

23rd April, 2023 : IIMM Delhi Branch celebrated

Materials Management Day on 23rd April, 2023 in a benefitting way on the theme "Role of Supply Chain in Making India a \$ 5 Trillion Economy by 2025" on Sunday at 5.30 p.m. at The Institution of Engineers to celebrate Materials Management Day of the Institute. Shri Sanjay Shukla Welcomes all the participants. Shri H.K. Sharma, National President briefly talked about good and bad indicators of Indian economy, latest trends and challenges and opportunities in reaching \$5 Trillion economy by 2025



Shri Ajay Srivastava, an officer of Indian Trade Service and Former Addl. DGFT, Ministry of Commerce and Industry, co-founder of Global Trade Research Institute, the keynote speaker gave a talk on the topic with statistical data and explaining the recent journey towards the goal and with strong expectation for achieving \$ 5 Trillion Economy by 2025.

Shri Ajay Srivastava mentioned that to achieve its goal of becoming a \$5 trillion economy by 2025, India needs to have a robust and efficient supply chain network in place. Effective supply chain management, may help a business to the better forecasting of demand;

developing strong supply base; vendor development; sourcing at competitive terms; optimization of production; improve efficiency; productivity improvements; efficiently manage logistics & warehousing; optimize inventory; eliminate waste, improve process flow, enhance value; delivery at right time, improve agility, responsiveness; mitigate risks; resilience etc. He gave examples of hydrogen technology, lithium ion battery semiconductor chips etc. and their importance for future supply chain in India. He also emphasized on sustainability while achieving \$5 trillion economy and also learn good and bad aspects from China story.

29th April 2023 : The Chairman and Executive Committee members organized evening lecture in virtual mode on Saturday at 5:00 pm on 29th April 2023 to celebrate Materials Management Day on the topic Gas Sourcing- Challenges and Opportunities. **Shri Sanjeev Kumar Bhatia, Vice President (Business Development and Gas Sourcing, Indraprastha Gas Ltd. and Shri Akshay Modi, Manager-Gas Sourcing, Indraprastha Gas Ltd** made detailed presentations on the subject which were highly appreciated by audience. Shri Sanjay Shukla honoured the past chairman of the branch Shri S. Nanda. Vice Chairman proposed vote of thanks.

VADODARA BRANCH

MM WEEK CELEBRATION - 2023. : IIMM Vadodara celebrated Materials Management Week from 21st April 2023 till 23rd April 2023 with this year Theme "Role of Supply Chain in making India beyond US\$ 5 Trillion economy by 2025".

As part of the weeklong Celebration, IIMM Vadodara organized different programmes on the following days which not only entertained the Members but their families too. The Programmes were organized in a synchronized way so that everyone can be a part of the celebrations, where they all met once again and brushed up their good old past, met new members and shared their thoughts with each other. The following were the itinerary that were planned as three days celebrations:

1. **Evening Talk:** on 21st April 2023, we are organizing an Evening Lecture by Dr. Shailesh Mehta on Topic **"Holistic Living & Total Health"** at IIMM Office 1st Floor Hall from 6.30 pm to 8.15 pm. The programme Schedule was as follow:
 - a) 6.30 PM to 7.00 PM – Snacks & Tea/Coffee.
 - b) 7.00 PM to 7.45 PM – Lecture Session.
 - c) 7.45 PM to 8.00 PM – Ques./Ans. Session.

2. **Musical Night:** On 22nd April 2023, a **Musical Night** by Mr. Priyaansh Shaah was organized at Prof. CC Mehta Auditorium – General Education Centre, The Maharaja Sayajirao University of Vadodara, from 8.30 pm to 11.30 pm.

A talented musician, Mr. Priyaank Shah understands his music theory, and apply that knowledge into making his own songs and takes musical concepts and creates new heights. Mr. Priyaansh Shaah is a key figure of the New Generation of Artists trying to bring the Culture and Music of India to the biggest stages and Widest Reaches. Representing Gujarat at various National Stages. He has represented the Music of India Internationally as well. He has Shared Stages with the finest Music Directors and Singers of the Country. While singing in the Mainstream Film Music Genre, Priyaansh also has been one of the leading singers in the Devotional, Sufi and Folk Genre. Around 500 plus (Members alongwith their family members) enjoyed the fun filled night.

3. **On 23rd April 2023, Core MM Day was Celebrated with Theme "Role of Supply Chain in making India beyond USD 5 Trillion economy by 2025"** at Hotel Surya Palace on 23rd April 2023 from 6pm to 8.30pm. **The Chief Guest for the occasion was Mr. Maulik Mehta, CEO and Executive Director, Deepak Nitrite.**

Mr. Maulik Mehta, a young and energetic business leader, with sharp operational acumen, imbibed over a decade of strategic roles, Maulik Mehta spearheads the Group's next phase of growth. He has been instrumental in institutionalizing & augmenting a triple bottom line focus at Deepak Nitrite Limited.

IIMM, Vadodara Branch conferred a citation and Shawl to Mr. Maulik Mehta on this day towards recognition of his valuable contribution to the industry in general and Chemical Industry in particular. IIMM Vadodara Branch is indebted to him to get continued patronage from Deepak Group which has helped the Branch to remain among the leading branch in the county.

We also had with us Ms. Asmani Surve, founder of M/s. Skynotch Group & Executive Officer of Switchgear Industries as Invited Speaker.

Ms. Asmani Surve, is an TEDx Speaker, ISO Certified Lead Auditor, Design Thinker, Behavioural Scientist, Neurolinguistic Practitioner and Content Writer. Authored book for self-help and management. Human Resources & Business transformation evangelist with expertise in all areas of HR across geographies including India, Europe & North

America. She Spoke on “Role of HR as Capital in Business”.



4. Cash Awards in the name of Late Shri H.M. Bhatt were given to the topper and Runner Up students of PGDMM (Post Graduate Diploma in Materials Management) Vadodara Branch by Chief Guest Mr. Maulik Mehta. Mr. Jivan Singh Shekhawat from Amreli, Gujarat who was 1st Ranker with 74% was awarded Rs.5000 and 2nd Ranker Mr. Subhash Chandra from Assam with 63% was awarded Rs.4000.
5. Felicitation of New life members were done by the Executive Committee Members.
6. This Programme was followed by Dinner.

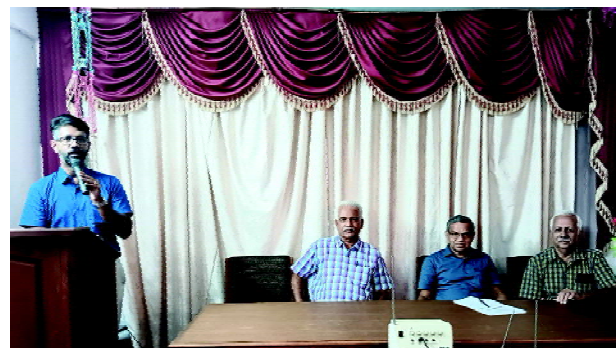
THIRUVANANTHAPURAM BRANCH

IIMM Thiruvananthapuram Branch celebrated Materials Management Day on Saturday 22nd April 2023 at IIMM Hall, Sasthamangalam, Thiruvananthapuram. Mr. Manesh Mohan, Business Facilitator for GeM, Kerala Region (Kerala & Lakshadweep) was the Chief Guest for the function.

The programme started with a silent prayer. Branch Chairman, Dr. Koshy M George welcomed the Chief Guest, members and other invited guests. In his presidential address, Dr. Koshy M George, Chairman of the Branch highlighted the major activities of the branch with special emphasis to Materials Management Day which is being celebrated on 23rd April every year by Indian Institute of Materials Management all over the country. This year 23rd April being Sunday, preponed the celebration to 22nd April.



Dr Koshy M George, Branch Chairman welcoming the Guests And Members



Shri Manesh Mohan making presentation on “Business Opportunities through GeM”

Smt. R Sobha, Senior Purchase Officer, ISRO introduced the Chief Guest to the gathering. Thereafter Mr. Manesh Mohan made an excellent presentation on the topic: “Business Opportunities through GeM”.

GeM (Government e-Marketplace) is the National Public Procurement Portal, an end-to-end online Marketplace for Central and State Government Ministries/Departments, Central and State Public Sector Undertakings. GeM is contactless, paperless and cashless online marketplace that replaced the

Directorate General of Supplies and Disposals (DGS&D) in 2016. Since its inception, GeM has brought in the visibility and transparency in public procurement. GeM's three key pillars – Efficient, Transparent and Inclusiveness – ensure that business in the Government e Marketplace is quick and easy.



Branch Chairman presenting memento to the Chief Guest



A view of the audience

It is inclusive since it allows anyone and everyone to do business on GeM. Efficient for conducting business operations smoothly and Transparent for fair business practices. In addition the platform seeks to improve openness, effectiveness and speed in public procurement. It offers a wide range of procurement methods including direct purchase, electronic bidding, electronic reverse auction and direct reverse auction.

The digital platform enables economies of scale, efficient price discovery and dissemination of best practices. According to rule 149 of General Financial Rules 2017, the procurement of goods and services by ministries, government agencies and Public Sector Enterprises is now mandated to be done through the GeM portal. State Governments are also encouraged to purchase through GeM.

The talk was well received and interacted by the gathering. Sri M.G.Narayanan Nair, Secretary proposed vote of thanks. The meeting ended with dinner. It was a memorable evening for the participants.

CHANDIGARH BRANCH

Indian Institute of Materials Management Chandigarh branch celebrated M. M. Day on 30 th April at IIMM New office at Peer Muchhalla near Panchkula. Mr Rajesh Gupta Chairman Chd branch welcome the members and shared why MM day is celebrated. Mr O. P. Longia Former National President IIMM administer the pledge to members about code of conduct of IIMM. Talk on "How to be relevant n add value in Volatile times" was delivered by Mr V S Maniam former Chairman and senior member of IIMM Chandigarh Branch. Topic was very apt n nicely elaborated by the speaker. How much important it is for one all to adapt n adopt newer ways of doing business and stay ahead by Networking and constantly sharpening the skills. Mr S. K.Sharma Former National President IIMM motivated the members to be proactive and develop the habit of leadership without waiting for any designation or position. Mr T. K Magazine founder and Distinguish member of Chandigarh branch shared his experiences. Mr Dalip Manchanda proposed vote of thanks. Lunch was served to members after the function.





NALCO NAGAR



" Materials Management (MM) Day" was celebrated by IIMM, Nalconagar Branch/ Bhubaneswar Chapter on 23 rd April,2023 from 10 am to 2 pm at Indian Oil Corporation Ltd, Indian Oil Bhawan, Odisha State Office, Bhubaneswar. A Lecture programme was organised on the Theme " Role of Supply chain in making India 5 Trillion USD by 2025". Dr(Er) Dibakar Swain, Chairman of the Branch presided over the programme.

Galaxy of professionals & Members from across the industries and Business School, viz: IOCL, Nalco, OMC, OPGC, IFFCO,AMNS, Neelachal Ispat Tata Steel,Visa Steel,JSW Cement, OCL Dalmia, Jindal Stainless, JSW GBS, Numaligarh Refinery, East Coast Railway, Essel Mining, XIMB etc joined, participated and made the deliberations very interactive and lively.



The august audience including captains of the profession was addressed by two eminent Economists ,Prof(Dr) Keshab Das, Visiting Professor,IHD,New Delhi & former Professor, Gujarat Institute of Development Reasearch, Ahmedabad and Prof(Dr) Amarendra Das, School of Humanities and Social sciences, NISER, Bhubaneswar.

The programme ended with presentation of Mementos to Distinguished Speakers and vote of thanks by Mr Anshuman Dash, Vice- Chairman of the Branch followed by Lunch.

This great programme was sponsored by IOCL, Odisha State Office, Bhubaneswar.

MUMBAI BRANCH

Mumbai Port Authority
Port Management Training Center

PMTCAFO/13

K: PMTC/Review/506

Year 2022-23

Date: 09/02/2023

Review

All concerned departments
and Head of Department

Subject: Three days training on "Orientation programme on Public Procurement".

The above course training was conducted on 02.01.2023, 03.01.2023 and 05.01.2023, the review of which is as follows.

1. **Category and types of trainees attending the course**

The above training course was conducted for Class I officers.

2. **Subjects covered in the syllabus/curriculum**

- i. Regulatory & Statutory Compliance
- ii. General Financial Rules, 2017 in respect of procurement of Goods, Services and Works
- iii. Public Procurement Policies & important element of Public Procurement
- iv. Public Procurement portals
- v. Vigilance perspective on procurement of Goods, Works and Services and MbPA Manuals etc.

3. **Average information given by the participants of the course :-**

(1- OK 2- Fair 3- Good 4- Very good 5- Excellent)

- a) Regarding/ about the subject of the course: 2 to 5 (median 4.11)
- b) Regarding/ About the facilities provided by the training center:
- c) About lecturers:

- | | | |
|-----|----------------------|------------------------|
| (1) | Shri. Alok R. Sarkar | : 3 to 5 (Median 4.37) |
| (2) | Shri . Pankaj Sinha | : 2 to 5 (Median 3.74) |
| (3) | Shri. Vadrinath | : 2 to 5 (Median 3.89) |
| (4) | Mrs. Anjali Hajarnis | : 1 to 5 (Median 4.23) |
| (5) | Shri. Sushil Sharma | : 3 to 5 (Median 4.17) |
| (6) | Shri. P P Rao | : 3 to 5 (Median 4.23) |
| (7) | Shri. Satish Kharche | : 3 to 5 (Median 4.37) |

4. **Suggestions made:-**

- a) More time on gem procurement training is required.
- b) GeM training should be practical
- c) More emphasis should have been given on placing order for Goods on GeM Portal.

5. **Action taken on them:-** Lecturers will be informed.

6. You are requested to send your comments about the impact of this program on the day-to-day working of the students and how their efficiency and knowledge of the subject has benefited the Mumbai Port Authority and the concerned department. You are requested to send your information and suggestions about the course to the training center.



भारतीय सामग्री प्रबंधन संस्थान Indian Institute of Materials Management

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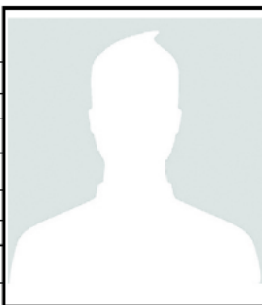
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Applicant's Signature

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BRANCH CHAIRMAN



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Get the Heart Facts : You know that a bad diet and too little exercise can hurt your ticker. But there are lots of sneaky sources of heart disease that you may not be aware of. Here are some you need to know about, and heart-smart steps to help you keep healthy.

Dental problems : Need extra motivation to brush and floss every day? People with gum disease are more likely to have heart disease, too. The connection isn't clear, but some experts think bacteria from your gums may move into your bloodstream, leading to inflammation of the blood vessels and other heart problems. See your dentist every 6 months for checkups. Make an appointment right away if you spot redness or soreness on your gums or changes in your teeth.

Shift Work : Working at night or irregular hours raises your risk of a heart attack, according to a recent study from Western University in Canada. Researchers say shift work has a bad impact on the body's circadian rhythm (a.k.a. your "internal clock"), and they think that harms your heart. So if you don't work regular day hours, take extra steps to lower your risk of heart disease: Get exercise, eat a balanced diet, and see your doctor for regular checkups.

Traffic Delays : Anyone who's ever been stuck in bumper-to-bumper traffic will tell you it's stressful. That may be why research links spending a single hour in traffic to higher odds of having a heart attack. High noise levels — like the kind you hear on a freeway — are also linked to heart disease. If you can't avoid traveling during rush hour, squash stress by listening to relaxing music. Or share the ride and chat with your fellow passenger.

Snoring : If your partner says you regularly snore or you sound like you're gasping for air while sleeping, see your doctor. You might have a serious condition called apnea. It can happen when your airway is partially blocked and it causes you to have pauses in your breathing. The disorder is linked to high blood pressure, an irregular heartbeat, strokes, and heart failure. Treatments can help you breathe easier and lower your risk for heart disease, too.

Hepatitis C : If you have this liver infection, you're more likely to have low cholesterol and low blood pressure than people who don't have the disease. But even so, you still have a higher risk of heart disease. Researchers think hep C may cause inflammation of the body's cells and tissues, including those in the heart. Work closely with your doctor to keep tabs on any heart symptoms.

Not Getting Good Sleep : When you routinely get less than 6 hours of shut-eye a night, you raise your risk of higher blood pressure and cholesterol. It increases the odds you'll become obese and get diabetes, too (both

of which can hurt your heart). That doesn't mean you should sleep your way through the day. When you spend more than 9 hours horizontal on a regular basis, it raises your odds of getting diabetes and having a stroke — major risk factors for heart disease. Baby your brain, body, and heart — aim for 7 to 9 hours of slumber a night.

An Unhappy Marriage: A good match makes your heart happy and healthy. Older adults who are content in their unions have a lower risk of heart disease than those who aren't, according to a recent study from Michigan State University. The likely cause? Stress. When you're stressed, you're more likely to make bad diet choices and do other things that can hurt your ticker, like drink too much alcohol. What's more, stress hormones may have a negative effect on the heart. So consider seeing a couples' therapist or clergy member together if your marriage isn't a happy one. **Loneliness :** When you spend time with loved ones, it thwarts stress and helps you stay active. Lonely folks may be more likely to have heart disease. If you're not near family or close friends, get connected by helping someone in need, or adopt a dog or cat. Volunteers and dog owners might enjoy better heart health and live longer, too.

Belly Fat : Any extra weight is hard on your heart, but the kind around your midsection is especially dangerous. It may trigger your body to make hormones and other chemicals that can raise blood pressure and have a bad effect on your blood vessels and cholesterol levels. If you're a woman and your waist is more than 35 inches around, or 40 inches if you're a man, talk to your doctor about a diet and exercise plan. Research shows that yoga and short bursts of high-intensity exercise are great ways to whittle your middle.

Too Much Tube Time : Couch potatoes, stand up! People who park themselves in front of the television a lot are more likely to get heart problems than those who limit their TV time. Every hour you spend watching TV on a daily basis may increase your risk by almost 20%. Sitting is the most likely culprit; it's linked to problems like high blood pressure. Until researchers know how and why TV and heart trouble are connected, try to limit your time in front of the tube.

Too Much Exercise All at Once : Exercise is great for your heart. But if you're out of shape or only work out occasionally, start slowly and build your endurance. When you exercise too long or too hard, it may put you at risk for heart attack and other problems, research shows. Not sure what's safe for you? Start with a gentle exercise like walking. If you have a high risk of heart disease, talk to your doctor, and consider using a heart monitor while working out.

Source: www.webmd.com

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