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MATERIALS MANAGEMENT REVIEW

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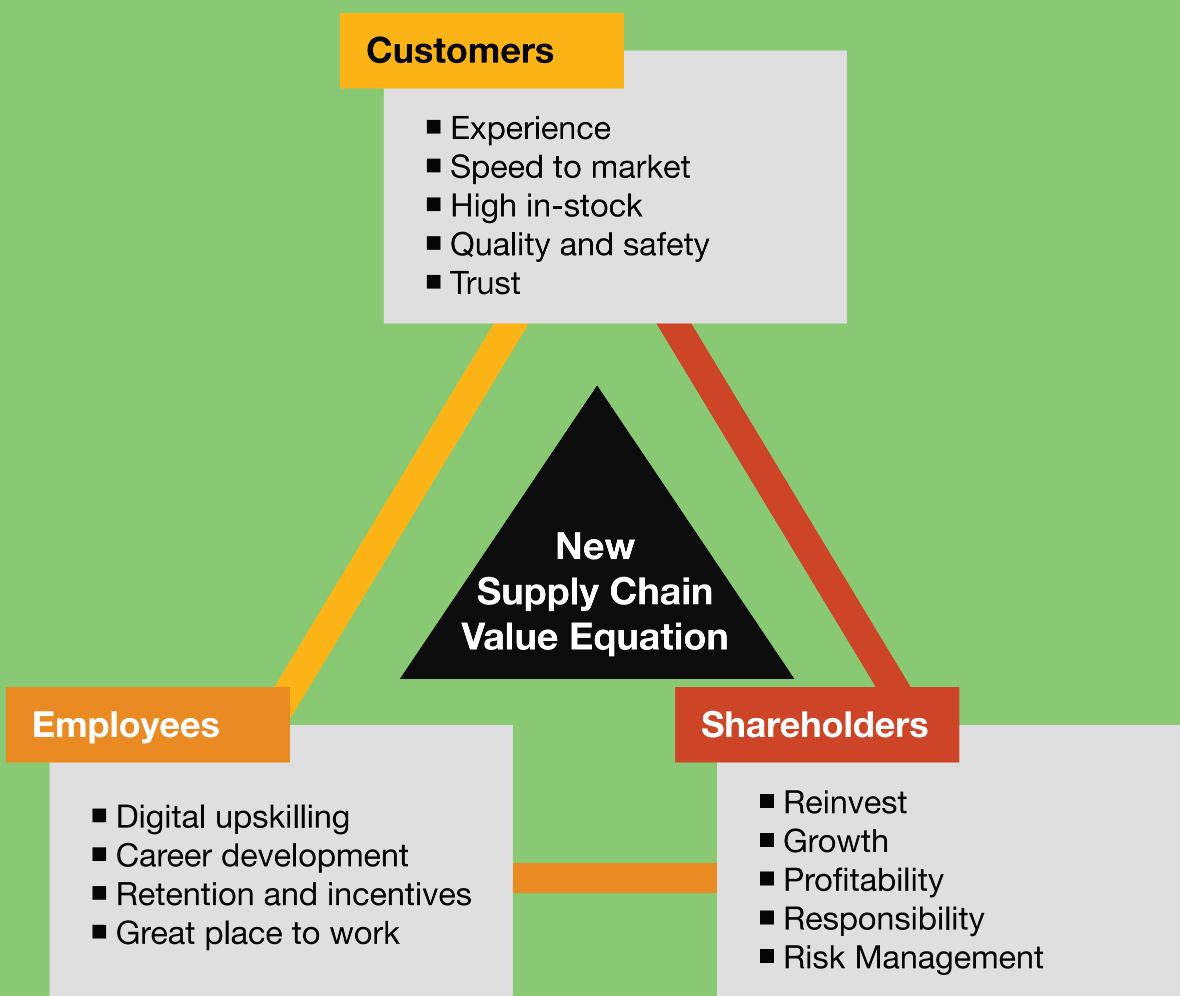
NEW SUPPLY CHAIN VALUE EQUATION



MANAGEMENT QUOTES

“A team is successful only when they have a common goal. Not only does this goal need to be set, but it also has to be communicated to each team member.” – *Laura Noodapera*

“You're either remarkable or invisible. Make a choice.” — *Seth Godin*

“Leadership is the art of getting someone else to do something you want done because he wants to do it.”– *Dwight D. Eisenhower*

“There's nothing greater in the world than when somebody on the team does something good, and everybody gathers around to pat him on the back.” -- *Billy Martin*

“Plans are worthless. Planning is essential.” – *Dwight D. Eisenhower*

“No one can whistle a symphony. it takes an Orchestra to play it.” – *H. E. Luccock*

“Great things in business are never done by one person they're done by a team of people” – *Steve Jobs*

“If everyone is moving forward together, then success takes care of itself.” – *Henry Ford*

“Ordinary people with commitment can make an extraordinary impact on the their world.” – *John C. Maxwell*

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.” – *Margaret Mead.*

“Teamwork divides the task and multiplies the success.” – *Unknown*

“Vision without action is a dream. Action without vision is simply passing the time. Action with Vision is making a positive difference.” – *Joel Barker*

“People buy into the leader before they buy into the vision.” – *John C. Maxwell*

“TEAM - Together Everyone Achieves More” – *Unknown*

From the Desk of Chief Editor & National President

It is when global economies have just breathed a sigh of relief from Covid 19 pandemic and Russia – Ukraine war and have started recalibrating & realigning their supply chains, one more war at global front is simply uncalled for. Various global industries are still reeling under the heat of Russia – Ukraine war in terms of increased rate of inflation, shrinking energy and food grain supplies, particularly European countries, another war, is not a wise option.

The war between Hamas and Israel may bring in sequence of activities leading to regional war between Iran and Israel as a result of which, there will be more expensive oil, higher inflation, distorted supply chains and slower growth (but the magnitude of sluggish growth may vary from country to country). As per, IMF, the pace of the global economic recovery is already slowing, and a new war in the Middle East will definitely topple a world economy already reeling from several years of overlapping crises.

Geopolitical tensions have led nations to become skeptical about cooperation and interdependence and rightly so, as if, tension escalates, essential material would be inaccessible and major trade routes could be closed. Therefore, Govts. & Industry leaders are exploring self-sufficiency in materials supply and manufacturing. Further, any other natural calamity or pandemic, which is not expected but can be realised in future (as in case of Covid 19), the industries may experience limited or no excess to critical material inputs for manufacturing. Even, planned **India-Middle East-Europe trade corridor will take a hit.**

In its latest World Economic Outlook, IMF's chief economist, stated that, if the rise in oil prices sustained for long, would lower down the growth rate of global economy, reducing global output by 0.15% and increasing inflation by 0.4% next year. This is what a potential Middle East war scenario can result in. It is needless to mention, that escalations of war between Israel and Hamaswill have a wide range of destabilizing effects, both directly and indirectly. Geo-economics, geopolitics, and markets could all experience far more extreme bifurcation, polarization, and violent volatility.

The global economy has become more integrated over the past few decades and International supply chains have grown multi-fold on account of advancements in technology, thereby, boosting the free flow of trade, capital and information globally.Though, supply chains, post pandemic, have changed forever and have become more resilient, agile and flexible to combat future disruptions and adapt to new changes quickly. Nearshoring, automation, supplier diversification and sustainability have led companies to reshape the logistics part of entire supply chain but even narrow chain of cause and effect, will get amplified during this war period.

H. K. SHARMA
mmr@iimm.org

IFPSM

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Correspondence :
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Indian Institute of Materials Management
4598/12 B, Ist Floor, Ansari Road,
Darya Ganj, New Delhi - 110 002.
Phones : 011-43615373
Fax: 91-11-43575373
E-mail: mmr@iimm.org
Website : www.iimm.org

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CONTENTS

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4598/12 B, Ist Floor, Ansari Road, Darya Ganj, New Delhi - 110 002.
Phones : 011-43615373 Fax: 91-11-43575373
E-mail: mmr@iimm.org
Website : www.iimm.org

FORMS OF SECURITIES, PAYMENT TERMS AND PRICE VARIATIONS

This is the SIXTH article in the series of articles for Public Procurement. This is in continuation of fifth article in the August 2023 issue from pages 47 to 54 titled "PREPARING BID DOCUMENTS, PUBLICATION, RECEIPT AND OPENING OF BIDS".

Forms of Security

Bid Security (Rule 170 of GFR 2017)

To safe guard against a bidder's with drawing or altering its/ his bid during the bid validity period in the case of advertised (OTE and GTE tenders) or limited tender enquiry Bid Security [also known as Earnest Money Deposit (EMD)] is to be obtained from the bidders along with their bids except Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organisation or the concerned Ministry of Department or Startups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT). The bidders should be asked to furnish bid security along with their bids[67]..Amount of bid security should ordinarily range between two to five per cent of the estimated value of the goods to be procured. The amount of bid security, rounded off to the nearest thousands of Rupees, as determined by the Procuring Entity, is to be indicated in the bidding documents. The bid security may be obtained in the form of Insurance Surety Bonds[68],account payee demand draft, fixed deposit receipt, or banker's cheque or Bank Guarantee from any of the Commercial Banks or payment online in an acceptable form, safeguarding the purchaser's interest in all respects. . In case the bid security is more than a threshold (Rupees five lakh) and in case of foreign bidders in GTE tenders it may be in the form of a bank guarantee (in equivalent Foreign Exchange amount, in case of GTE) issued/confirmed from any of the scheduled commercial bank in India in an acceptable form, and so on.. The bid security is normally to remain valid for a period of 45(forty-five) days beyond the final bid validity period.

In exceptional cases, in place of a Bid security, Procuring Entities after seeking approval of the competent authority may consider asking Bidders to sign a Bid securing declaration accepting that if they withdraw or modify their Bids during the period of validity, or if they are awarded the contract and they fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids/request for proposals document, they will be suspended for the period of time specified in the request for bids/request for proposals document from being eligible to submit Bids/Proposals for contracts with the procuring entity.

In appropriate cases, Submission of the bid security may be waived with the Competent Authority's (CA's) approval, especially in the case of indigenisation/ development tenders, limited tenders and procurements directly from the manufacturer or authorised agents.

Tenderers that are currently registered will also continue to remain registered during the tender validity period with the Procuring Entity or MSEs (please refer to para 1.10.4 of Chapter 1) are exempt from payment of EMD. In case the tenderer falls in these categories, the bidder should furnish a certified copy of its valid registration details. Except for MSEs, this exemption is valid for the trade group and monetary value of registration only.

A bidder's bid security will be forfeited if the bidder withdraws or amends its/his tender or impairs or derogates from the tender in any respect within the period of validity of the tender or if the successful bidder fails to furnish the required performance security within the specified period.

Bid securities of the unsuccessful bidders should be returned to them at the earliest after expiry of the final bid validity period and latest by the 30th day after the award of the contract. Bid security should be refunded to the successful bidder on receipt of a performance security. However, in case of two packet or two stage bidding, Bid securities of unsuccessful bidders during first stage i.e. technical evaluation etc. should be returned within 30 days of declaration of result of first stage i.e. technical evaluation etc.[69]

Performance Security (Rule 171 of GFR 2017)

i) To ensure due performance of the contract, performance security [or Performance Bank Guarantee (PBG) or Security Deposit (SD)] is to be obtained from the successful bidder awarded the contract. Unlike contracts of Works and Plants, in case of contracts for goods, the need for the Performance Security depends on the market conditions and commercial practice for the particular kind of goods. Performance security should be for an amount of five (5) to ten (10) per cent of the value of the contract as specified in the bid documents [The value has been reduced to three (3) percent till 31.03.2023. Refer to para 6.1.2 (iv) below]. Performance security may be furnished in the form of Insurance Surety Bond[70], account payee demand draft, fixed deposit receipt from a commercial bank, bank guarantee issued/ confirmed from any of the commercial bank in India, or online payment in an acceptable form, safeguarding the purchaser's interest in all respects. In case of GTE tenders, the performance security should be in the same currency as the contract and must conform to Uniform Rules for Demand Guarantees (URDG 758) – an international convention regulating international securities[71].Unlike, procurement of Works, in procurement of Goods, the concept of taking part of Performance Guarantee as money retained from first or progressive bills of the supplier is not acceptable. Submission of Performance Security is not necessary for a contract value uptoRupees1 (one)lakh.

ii) Performance Security is to be furnished by a specified date (generally 14(fourteen) days after notification of the award) and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the supplier, including warranty obligations.

iii) The performance security will be forfeited and credited to the procuring entity's account in the event of a breach of contract by the contractor. It should be refunded to the contractor without interest, after he duly performs and completes the contract in all respects but not later than 60(sixty) days of completion of all such obligations including the warranty under the contract. Return of Bid/ Performance Securities should be monitored by the senior officers and delays should be avoided. If feasible, the details of these securities may be listed in the e-Procurement Portal, so make the process transparent and visible.

iv) On account of the COVID-19 pandemic, that caused slowdown in economy, it is decided to reduce Performance Security from existing five to ten percent to three (3) percent of the value of the contract for all existing contracts till 31.03.2023. However, the benefit of the reduced Performance Security will not be given in the contracts under dispute wherein arbitration/ court proceedings have been already started or are contemplated. All tenders/ contracts issued/ concluded till 31.03.2023 should also have the provision of reduced Performance Security. In all contracts, where Performance Security has been reduced to three percent, the reduced percentage shall continue for the entire duration of the contract and there should be no subsequent increase of Performance Security even beyond 31.03.2023. Similarly, in all contracts entered into with the reduced percentage of Performance Security of three percent, there will be no subsequent increase in Performance Security even beyond 31.03.2023. Where, there is compelling circumstances to ask for Performance Security in excess of three percent as stipulated above, the same should be done only with the approval of the next higher authority to the authority competent to finalise the particular tender, or the Secretary of the Ministry/ Department, whichever is lower. Specific reasons justifying the exception shall be recorded[72].

Warranty Bank Guarantee : In case of works and capital equipment, there is usually a defect liability/ warranty clause against defects arising from design, material, workmanship or any omission on part of the vendor/ contractor during a specified period of months from the date of commissioning or from the date of dispatch in case of goods – whichever is earlier. In such cases, the performance guarantee is to be valid upto 60 (sixty) days beyond the warranty period. It is normally permissible in such a situation to allow Performance guarantee to be valid upto 60 (sixty) days beyond delivery/ commissioning period and the contractor may be allowed to submit a fresh Warranty Bank Guarantee of 10 (ten) per cent of the value of the goods in the currency of the contract valid upto 60 (sixty) days beyond the Warranty period. In such cases, the performance guarantee is to be returned only after satisfactory delivery/ commissioning and receipt of such a warranty bank guarantee. In procurement of other than Capital Equipment Goods (and in case of low value Capital Goods – say upto Rupees one Lakh), Warranty Clause is not called for.

Verification of Bank Guarantees : Bank guarantees submitted by the tenderers/suppliers as EMD/ performance securities need to be immediately verified from the issuing bank before acceptance. There may not be any need to get the Bank Guarantee vetted from legal/ finance authority if it is in the specified format. Guidelines for verification of BGs submitted by the bidders/ contractors against EMD/ performance security/ advance payments and for various other purposes are as follows:

v) BG shall be as per the prescribed formats

vi) The BG contains the name, designation and code number of the Bank officer(s) signing the guarantee(s);

vii) The address and other details (including telephone no.) of the controlling officer of the bank are obtained from the branch of the bank issuing the BG (this should be included in all BGs);

viii) The confirmation from the issuing branch of the bank is obtained in writing through registered post/speed post/courier. The bank should be advised to confirm the issuance of the BGs specifically quoting the letter of Procurement Entity on the printed official letterhead of the bank indicating address and other details (including telephone nos.) of the bank and the name, designation and code number of the officer(s) confirming the issuance of the BG;

ix) Pending receipt of confirmation as above, confirmation can also be obtained with the help of responsible officer at the field office, which is close to the issuing branch of the bank, who should personally obtain the confirmation from issuing branch of the bank and forward the confirmation report to the concerned procurement entity.

Bank guarantees, either received in physical form or electronic form, should be verified for its genuineness following prescribed method for the same and the Organisations should do due diligence on genuineness of the Bank Guarantees before acceptance of the same.

Safe Custody and Monitoring of EMDs, Performance Securities and Other Instruments : A suitable mechanism for safe custody and monitoring of EMDs and performance securities and other instruments should be evolved and implemented by each ministry/ Department. The Ministries/ Departments shall also make institutional arrangements for taking all necessary actions on time for extension or encashment or refund of EMDs and performance securities, as the case may be. Monitoring should also include a monthly review of all bank guarantees and other instruments expiring in next three months, along with a review of the progress of the corresponding contracts. Extension of bank guarantees and other instruments, where warranted, should be sought immediately and implemented within their validity period. Bank Guarantee should never be handed over to the supplier for propose of extension of validity. Such a system of monitoring of securities and other instruments may be considered to be computerised with automatic alerts about lapse of validity etc.

Payment Clause : The elements of price included in the quotation of a tenderer depend on the nature of the goods to be supplied and the allied services to be performed, location of the supplier, location of the user, terms of delivery, extant rules and regulations about taxes, duties, and so on, of the seller's country and the buyer's country.

In case of indigenous goods, the main elements of price may include raw material, production cost, overhead, packing and forwarding charges, margin of profit, transit insurance, excise duty and other taxes and duties as applicable. In case of imported goods, in addition to similar elements of price as above (other than excise duty and taxes), there may be elements of custom duty, import duty, landing and clearing charges and commission to Indian agents. Further, depending on the nature of the goods (whether domestic or imported), there may be cost elements towards installation and commissioning, operator's training, and so on.

It is, therefore, necessary that, to enable the tenderers to frame their quotations properly in a meaningful manner, the tender documents should clearly specify the desired terms of delivery and also the duties and responsibilities to be performed by the supplier in addition to supply of goods.

While claiming the payment, the supplier should also certify in the bill that the payment being claimed is strictly in terms of the contract and all obligations on the part of the supplier for claiming this payment have been fulfilled as required under the contract. There should also be a suitable provision for verification of the authenticity of the person signing the invoice, and so on, to claim the payment.

i) **Elements of Price:** Where the price has several components such as the price of the goods, cost of installation and commissioning, operators' training, and so on, bidders should be asked to furnish a cost break-up indicating the applicable prices and taxes for each of such components along with the overall price. The payment schedule and terms will be linked to this cost break-up; and

ii) **Currency:** The tender documents are to specify the currency (currencies) in which the tenders are to be priced. As a general rule, domestic tenderers are to quote and accept their payment in Indian currency; Indian agents of foreign suppliers are to receive their agency commission in Indian currency; costs of imported goods, which are directly imported against the contract, may be quoted in foreign currency (currencies) and paid accordingly in that currency; and the portion of the allied work and services, which are to be undertaken in India (like installation and commissioning of equipment) are to be quoted and paid in Indian currency.

iii) **Payment to Suppliers:** In a supply contract, delivery of goods is the essence of the contract for the purchaser. Similarly, receiving timely payment for the supplies is the essence of the contract for the seller. A healthy buyer-supplier relationship is based on the twin foundation of timely and quality supply, on the one hand, and prompt and full payment to the supplier, on the other. It should be ensured that all payments due to the firm, including release of the performance security, are made on a priority basis without avoidable delay as per the tender/contract conditions. :

a) As far as possible, the payment terms and time schedule should be given in the contract and must be adhered to. Any foreseeable payment delays should be communicated to the suppliers in advance;

b) Prompt and timely provision of statutory certificates to the seller for taxes deducted at source, are as much a part of payment as the amount actually released. A detailed payment advice showing the calculations and reasons for the amounts disallowed and taxes deducted must be issued to the supplier along with payment. As soon as possible, but not later than the date of submission of Tax returns, the procuring entity must provide the statutory certificates for the taxes deducted to the Supplier, so that he is able to claim set-offs and refunds from the concerned authorities.

c) Release of payment and settlement of the final bill should be processed through the Associated/ integrated Finance as per the terms and conditions of the contract;

d) No payments to contractors by way of compensation or otherwise outside the strict terms of the contract or in excess of the contract rates should be allowed;

iv) Before the payment is made, the invoice should be cross-checked with the actual receipt of material/assets/services to ensure that the payment matches the actual performance;

v) While claiming the payment, the contractor must certify on the bill that the payment being claimed is strictly within terms of the contract and all the obligations on his part for claiming this payment have been fulfilled as required under the contract. There should also be a suitable provision for verification of the authenticity of the person signing the invoice, and so on, to claim the payment;

Terms of Payment for Domestic Goods : Where the terms of delivery are FOR Dispatching Station, the payment terms, depending on the value and nature of the goods, mode of transportation, and so on, maybe60 to 90 (sixty to ninety) per cent on proof of dispatch and other related documents and balance on receipt at site and acceptance by the consignee.

Where the terms of delivery is FOR destination/delivery at site, the usual payment term is 100 (hundred) per cent on receipt and acceptance of goods by the consignee and on production of all required documents by the supplier.

Where goods to be supplied also need installation and commissioning by the supplier, the payment terms are generally:

i) For a contract with terms of delivery as FOR dispatching station — 60 (sixty) per cent on proof of dispatch along with other specified documents, 30 (thirty) per cent on receipt of the goods at site by the consignee and balance 10 (ten) per cent on successful installation and commissioning and acceptance by the consignee; and

ii) For a contract with terms of delivery as FOR destination/delivery at site — 90 (ninety) per cent on receipt and acceptance of goods by the consignee at destination and on production of all required documents by the supplier and balance 10 (ten) per cent on successful installation and commissioning and acceptance by the consignee.

Note: Generally (especially for goods requiring installation and commissioning at site by the supplier), the desirable terms of delivery are FOR destination/ delivery at site, so that the supplier remains responsible for safe arrival of the ordered goods at the site. Therefore, unless otherwise decided ex-works or FOR dispatching station terms should be avoided.

Modes of Payment for Domestic Goods : Payments to domestic suppliers are usually made by cheque/demand draft drawn on a Government treasury or branch of RBI or any Scheduled Commercial Bank authorised by RBI for transacting Government business. Such payment can also be made to the supplier's bank, if the bills are endorsed in favour of the bank with a pre-receipt embossed on the bills with the words, "received payment" and both the endorsement and pre-receipt are authenticated by the supplier. In addition, an irrevocable power of attorney is to be granted by the supplier in favour of the bank. In such of those cases where there has been global tendering, in order to have uniform payment clauses, if domestic suppliers, especially against high value contracts for sophisticated equipment/machinery, desire payment through LC, depending on the merits of the case, this may be agreed to. However procuring entities should switch over to more transparent electronic payment systems like Electronic Clearance System (ECS), Real-time gross settlement systems (RTGS) National Electronic Funds Transfer (NEFT) or Electronic Payment Gateways.

Documents for Payment for Domestic Goods

x) Supplier's Invoice indicating, inter alia description and specification of the goods, quantity, unit price, total value;

xi) Packing list;

xii) Insurance certificate;

xiii) Railway receipt/consignment note;

xiv) Manufacturer's guarantee certificate and in-house inspection certificate;

xv) Inspection certificate issued by purchaser's inspector; and

xvi) Any other document(s) as and if required in terms of the contract.

Terms of Payment for Imported Goods

Usual payment terms, unless otherwise directed by CA, are indicated below:

xvii) Cases where installation, erection and commissioning (if applicable) are not the **responsibility of the supplier** — 100 (hundred) per cent net FOB/FAS/CFR/CIF/CIP price is to be paid against invoice, shipping documents, inspection certificate (where applicable), manufacturers' test certificate, and so on;

xviii) Cases where installation, erection and commissioning are the responsibility of the supplier — 80 - 90 (eighty to ninety) per cent net FOB/FAS/CFR/CIF/CIP price will be paid against the invoice, inspection certificate (where applicable), shipping documents, and so on, and balance within 21-30 (twenty-one to thirty) days of successful installation and commissioning at the consignee's premises and acceptance by the consignee; and

xix) Payment of agency commission, if payable, against FOB/FAS/CFR/CIF/CIP contract – the entire 100 (hundred) per cent agency commission is generally paid (in non- convertible Indian Rupees on the basis of BC selling rate of exchange) after all other payments have been made to the supplier in terms of the contract.

Modes of Payment for Imported Goods : It should be ensured that the imports into India are in conformity with the export-import policy in force: FEMA; FEMA (Current Account Transactions) Rules, 2000 framed by Procuring Entity; and directions issued by RBI under FEMA from time to time.

For imported goods, payment usually happens through the LC opened by the State Bank of India or any other scheduled/authorised bank as decided by the procuring entity. The amount of LC should be equal to the total payable amount, and be released as per the clauses mentioned above. Provisions of Uniform Customs and Practices for Documentary Credits[73] should be adhered to while opening the LC for import into India. If the LC is not opened, payment can also be made to the seller through a direct bank transfer for which the buyer has to ensure that payment is released only after the receipt of prescribed documents.

Documents for Payment for Imported Goods : The documents, which are needed from the supplier for release of payment, are to be clearly specified in the contract. The paying authority is also to verify the documents received from the supplier with corresponding stipulations made in the contract before releasing the payment. Documents, which the supplier is to furnish while claiming payment, are specified in the Letter of Credit, but usually are:

xx) Supplier's original invoice giving full details of the goods including quantity, value, and so on;

xxi) Packing list;

xxii) Certificate of country of origin of the goods to be given by the seller or a recognised chamber of commerce or another agency designated by the local Government for this purpose;

xxiii) Certificate of pre-dispatch inspection by the purchaser's representative;

xxiv) Manufacturer's test certificate and guarantee;

xxv) Certificate of insurance;

xxvi) Bill of lading/airway bill/rail receipt or any other dispatch document, issued by a Government agency (like the Department of Posts) or an agency duly authorised by the concerned ministry/Department, indicating:

a) Name of the vessel/carrier;

b) Bill of lading/airway bill;

c) Port of loading;

d) Date of shipment;

e) Port of discharge and expected date of arrival of goods; and Any other document(s) as and if required in terms of the contract.

Air Freight Charges : Goods that are required to be airlifted are to be dispatched on a 'charge forward basis'. All air freight charges, which are shown on the relevant consignment note as chargeable to the consignee, are to be paid to the Airline in Rupees. Some organizations need to import sophisticated instruments, tools and kindred goods. These are usually small in size and very delicate/fragile in nature. Such goods, invariably, need to be airlifted. But, quite naturally, form a small part of the Air Cargo carried by an Aircraft. For such imports, procuring entities may engage Air Freight Consolidators who consolidate the small Air Cargos of different customers, to be airlifted from one Airport to another. Hiring of services of Airfreight Consolidators should be done in a transparent manner, following standard principles of Public Procurement.

Letter of Credit : Two banks are involved in payment to the supplier by LC: – the purchaser's bank and supplier's bank. The purchaser is to forward the request to its bank in the prescribed format as formulated by the Bank, along with all relevant details including an authenticated copy of the contract. Based on this, the purchaser's bank opens the LC on behalf of the purchaser for transacting payment to the supplier through the supplier's bank. Care should be taken to ensure that the payment terms and documents to be produced for receiving payments through LC are identical with those shown in the contract. Generally, the irrevocable LC is opened so that the supplier is fully assured of his payment on fulfilling his obligations in terms of the contract. In case the delivery date of the contract is extended to take care of delay in supply, for which the supplier is responsible, the tenure of the LC is also to be extended, but the expense incurred for such an extension (of LC) is to be borne by the supplier. Provisions of Uniform Customs and Practices for Documentary Credits (UCP 600)[74] should be adhered to the while opening the LC for import into India.

Advance Payment : Ordinarily, payments for services rendered or supplies made should be released only after the services have been rendered or supplies made. However, it may become necessary to make advance payments in the following types of cases:

xxvii) Advance payment demanded by firms holding maintenance contracts for servicing of air-conditioners, computers, other costly equipment, etc.;

xxviii) Advance payment demanded by firms against fabrication contracts, turn-key contracts; and so on;

Such advance payments should not exceed the following limits except in case of procurement of arms and ammunitions from ordinance factories:

a) Thirty per cent of the contract value to private firms;

b) Forty per cent of the contract value to a state or central Government agency or PSU; or

c) In case of the maintenance contract, the amount should not exceed the amount payable for six months under the contract.

d) In exceptional cases, the Administrative Department may relax the ceilings mentioned above with prior concurrence of the Associated/integrated Finance. While making any advance payment as above, adequate safeguards in the form of a bank guarantee, and so on, should be obtained from the firm. However, the bank guarantee need not be insisted upon in case of procurement of arms and ammunitions from ordinance factories. Further, such advance payments should be generally interest bearing, suitable percentages for which are to be decided on a case to case basis.

Documents for Advance Payments : Documents, needed from the supplier for release of payment, are to be clearly specified in the contract. The paying authority should also verify the documents received from the supplier with corresponding stipulations made in the contract before releasing the payment.

Insurance : In every case where advance payment or payment against dispatch documents is to be made or LC is to be opened, the condition of insurance should invariably be incorporated in the terms and conditions. Wherever necessary, the goods supplied under the contract, shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the contract. If considered necessary, insurance may cover "all risks" including war risks and strike clauses. The amount to be covered under insurance should be sufficient to take care of the overall expenditure to be incurred by the procuring entity for receiving the goods at the destination. Where delivery of imported goods is required by the purchaser on CIF/CIP basis, the supplier shall arrange and pay for marine/air insurance, making the purchaser the beneficiary. Where delivery is on FOB/ FAS basis, marine/air insurance shall be the responsibility of the purchaser.

(Rule 172 of GFR 2017)

Firm Price vis-à-vis Variable Price : Short-term contracts where the delivery period does not extend beyond 18 (eighteen) months should normally be concluded with a firm and price fixed by inviting tenders accordingly. However, even for shorter deliveries, the PVC may be stipulated for items with inputs (raw material, labour, etc.), prone to short-term price volatility - especially for critical or high value items – otherwise there is a possibility of the contract failing or the purchaser having to pay a higher price if prices fall. For high value (more than Rupees three crore) tenders with deliveries longer than 18 (eighteen) months, PVC may be provided to protect the purchaser's interests also.

Where it is decided to conclude the contract with a variable price, an appropriate clause incorporating, inter-alia, a suitable price variation formula should also be provided in the tender documents, to calculate the price variation between the base level and scheduled delivery date. It is best to proactively provide our own PVC in the tender document to discourage different bidders quoting different formulae and different base dates, which may lead to problems on bringing their prices on a common comparable footing.

The variations are to be calculated periodically by using indices published by Governments/ chambers of commerce/London Metal Exchange / any other neutral and fair source of indices. Suitable weights are to be assigned to the applicable elements, that is, fixed overheads and profits, material and labour in the price variation formula. If the production of goods needs more than one raw material, the input cost of material may be further sub- divided for different categories of material, for which cost indices are published.

The following are important elements of PVC:

i) The price agreed upon should specify the base date, that is, the month and year to which the price is linked to enable variations being calculated with reference to the price indices prevailing in that month and year. The raw materials used in manufacture are procured some weeks before the goods' submission for inspection. This period is called the time lag for price variation. It applies both for base date and date of supply. This time lag at both ends must be specified;

ii) The price variation formula must also stipulate a minimum percentage of variation of the contract price, only above which the price variation will be admissible (for example, where the resultant increase is lower than, say, two per cent of the contract price, no price adjustment will be made in favour of the supplier);

iii) The price variation clause should provide for a ceiling on price variations, particularly where escalations are involved. It could be a percentage per annum or an overall ceiling or both;

iv) Where advance or stage payments are made there should be a further stipulation that no price variations will be admissible on such portions of the price, after the dates of such payment;

v) Where deliveries are accepted beyond the scheduled delivery date subject to levy of liquidated damages as provided in the contract. The LD (if a percentage of the price) will be applicable on the price as varied by the operation of the PVC;

vi) No upward price variation will be admissible beyond the original scheduled delivery date for defaults on the part of the supplier. However, a downward price variation would be availed by the purchaser as per the denial clause in the letter of extension of the delivery period;

vii) Price variation may be allowed beyond the original scheduled delivery date, by specific alteration of that date through an amendment to the contract in cases of force majeure or defaults by Government;

viii) Where contracts are for supply of equipment, goods, and so on, imported (subject to customs duty and foreign exchange fluctuations) and/or locally manufactured (subject to excise duty and other duties and taxes), the percentage and element of duties and taxes included in the price should be specifically stated, along with the selling rate of foreign exchange element taken into account in the calculation of the price of the imported item;

ix) The clause should also contain the mode and terms of payment of the price variation admissible; and

x) The buyer should ensure a provision in the contract for the benefit of any reduction in the price in terms of the PVC being passed on to him.

xi) An illustrative PVC clause is available in Annexure 15.

xii) Care should be exercised in contracts providing for price variation to finalise the price before final payment is made, after obtaining data and documents in support of claims for escalation, if any. Where no such claims are submitted by the suppliers, an examination of whether there has been a downward trend in the cost, which the contractor may not bring out, is required. At any rate, an undertaking should be obtained from the contractor to the following effect in case it becomes necessary to make the final payment before he has submitted the required data/ documents related to the PVC: "It is certified that there has been no decrease in the price of price variation indices and, in the event of any decrease of such indices during the currency of this contract, we shall promptly notify this to the purchaser and offer the requisite reduction in the contract rate."

xiii) Notwithstanding the above formalities, it should be appreciated that it is in the interest of the purchaser to be vigilant about downward variation and it is, therefore, the basic responsibility of the purchase officers to make sure that the benefits of downward variation, wherever it occurs, are fully availed of.

Exchange Rate Variation : In case of a contract involving substantial import content(s) and having a long delivery period (exceeding one year from the date of contract), an appropriate Foreign Exchange Variation clause may be formulated by the procuring entity in consultation with its Associated/ integrated Finance, as needed, and incorporated in the tender enquiry document. In that clause, the tenderers are to be asked to indicate import content(s) and the currency (ies) used for calculating the value of import content(s) in their total quoted price, which (that is, the total quoted price) will be in Indian Rupees. The tenderers may be asked to indicate the Base Exchange rate for each such foreign currency used for converting the foreign exchange content into Indian Rupees and the extent of foreign Exchange Rate Variation (ERV) risk they are willing to bear.

To work out the variation due to changes (if any) in the exchange rate(s), the base date for this purpose will be the due date of opening of tenders/seven days prior to the due date of opening of tenders (the purchase organisation is to decide and adopt a suitable date). The variation may be allowed between the above base date and date of remittance to the foreign principal/mid-point of manufacture of the foreign component (the purchase organization is to choose the appropriate date). The applicable exchange rates as above will be according to the TT selling rates of exchange as quoted by authorised exchange bankers approved by RBI on the dates in question. No variation in price in this regard will be allowed if the variation in the rate of exchange remains within the limit of plus/minus per cent (the purchase organisation is to decide the limit, say plus/ minus band of 2.5% (Two point Five percent)).

Any increase or decrease in the customs duty by reason of the variation in the rate of exchange in terms of the contract will be to the buyer's account. In case the delivery period is revised/extended, ERV will not be admissible, if this is due to the supplier's default; however, ERV benefits arising out of downward trends should be passed on to Procuring Entity. The procuring entity may formulate an appropriate ERV clause on similar lines as above in consultation with their Finance Wing.

Documents for Claiming ERV

xxix) A bill of ERV claim enclosing the working sheet;

xxx) Banker's certificate/debit advice detailing the foreign exchange paid and exchange rate;

xxxi) Copies of the import order placed on the supplier; and

xxxii) Supplier's invoice for the relevant import order.

Taxes, Duties and Levies

Statutory Duties and Taxes on Domestic Goods

The duties and taxes including excise duty and VAT levied by the Government on domestic goods vary from product to product. Unless a different intention appears from the terms of the contract, statutory variation in duties or taxes are to be borne by the buyer (procuring entity) as per the section 64A of the Sales of Goods Act, 1930. As a general policy, the statutory variations in such duties and taxes are to be allowed during the period from the date of the tender to the date of acceptance of the tender (that is, placement of the contract) and during the original/re-fixed delivery period of the contract so that both the supplier and purchaser are equally compensated for rise or fall in the price of the goods on account of such statutory variations.

(Note: Re-fixed delivery period means the fresh delivery period which is arrived at by recasting the original contractual delivery period after taking care of the lost period, for which the supplier was not responsible.)

In the tender enquiry conditions, the tenderers, wherever applicable, should be asked to specifically state in their offer whether they intend to ask for the duties and taxes as extra over and above the prices being quoted. In the absence of any indication to this effect by the tenderers, it is to be assumed that the prices quoted include these elements and no claim for the taxes or duties or statutory variations thereon should be entertained after opening of tenders and during the currency of the resultant contract. If a tenderer chooses to quote price inclusive of excise duty/ Sales Tax/ VAT, it should be presumed that the duties/ taxes so included is firm unless he has clearly indicated the rate of duties/ taxes included in his price and also sought adjustment on account of statutory variation thereon. If a tenderer is exempted from payment of excise duty upto a certain value of turnover, he should clearly state that no excise duty will be charged by him upto the limit of exemption enjoyed by him. If any concession is available in regard to rate/quantum of Central Excise Duty, it should be brought out clearly. It should also be clearly indicated whether increase in rate of excise duty due to increase in turn over will be borne by the tenderer. Stipulation like, "excise duty is presently not applicable but the same will be charged if it becomes leviable later on", should not be accepted unless in such cases it is clearly stated by the tenderer that excise duty will not be charged by him even if the same becomes applicable later on due to increase in turnover. If a tenderer fails to comply with this requirement, his quoted price shall be loaded with the quantum of maximum excise duty which is normally applicable on the item in question for the purpose of comparison with the prices of other tenderers. The tenderers should indicate in their offer whether they are availing VAT/ Tax credits or not. If they are availing VAT/ Tax credits, they should take into account the entire credit on inputs available under such Schemes while quoting the price and furnish a declaration to this effect along with a confirmation that any further benefit available in future on account of such schemes would be passed on to the purchaser.

Note: Sales tax/ VAT are not levied on transactions of sale in the course of import. Categories of cases constituting sale in course of import are:

xxxiii) Where the movement of goods from the foreign country to India is occasioned directly as a result of the sale;

xxxiv) Where the Indian supplier acts as the agent of the foreign manufacturer in the agreement of the sale.

Octroi and Local Taxes

In case the goods supplied against contracts placed by Procuring Entity are exempted from levy of town duty, Octroi duty, terminal tax and other levies of local bodies, the suppliers should be informed accordingly by incorporating suitable instructions in the tender enquiry document and in the resultant contract. Wherever required, the supplier should obtain the exemption certificate from the Purchasing Department to avoid payment of such levies and taxes.

In case such payments are not exempted (or are demanded in spite of the exemption certificate), the supplier should make the payment to avoid delay in supplies and forward the receipt to the Purchasing Department for reimbursement and for further necessary action.

Customs Duty on Imported Goods

On imported goods, the tenderers shall also specify separately the total amount of custom duty included in the quoted price. The tenderers should also indicate correctly the rate of custom duty applicable for the goods in question and the corresponding Indian customs tariff number. Where customs duty is payable, the contract should clearly stipulate the quantum of duty payable, and so on, in unambiguous terms. The standard clauses to be utilised for this purpose are to be incorporated in the tender enquiry documents. Any import of materials directly from the supplier or manufacturer should be in the name of Procuring Entity. In this regard, all formalities will be completed by Procuring Entity engaging a Custom House Agent (CHA) and payment in this regard will be borne by Procuring Entity.

The Government has allowed exemption from payment of customs duty on certain types of goods for use by the following organisations:

xxxv) Scientific and technical instruments imported by research institutes;

xxxvi) Hospital equipment imported by Government hospitals; and

xxxvii) Consumable goods imported by a public-funded research institution or a university. However, to avail of such exemptions, the organisations are required to produce a "Custom Duty Exemption" certificate and "Not Manufactured in India" certificate at the appropriate time.

The relevant contemporary instructions covering these aspects should be incorporated in the tender enquiry document and in the resultant contract.

Duties/Taxes on Raw Materials

Procuring Entity is not liable for any claim from the supplier on account of fresh imposition and/or increase (including statutory increase) in excise duty, custom duty, sales tax, and so on, on raw materials and/or components used directly in the manufacture of the contracted goods taking place during the pendency of the contract, unless such liability is specifically agreed to in terms of the contract. A clause to this effect should also form part of the tender documents

Incoterms Terms of Delivery

Table 1: Incoterms and their applications

INCOTERMS Options	Applicable to
Ex-Group of Terms	Buyer takes full responsibility from point of departure
EXW – Ex-Works	Any mode of transport
Free Group of Terms	freight is not paid by the seller
FCA – Free Carrier	Any mode of transport
FAS – Free Alongside Ship	Sea and inland waterway
FOB – Free On Board	transport only
C Group of Terms	Freight is paid by the seller
CPT – Carriage Paid To	Any mode of transport
CIP – Carriage and Insurance Paid to	Any mode of transport
CFR – Cost and Freight	Sea and inland waterway transport only
CIF – Cost, Insurance and Freight	
Delivered Group of Terms	Seller takes responsibility froman intermediate point onwards
DAT – Delivered At Terminal	Any mode of transport
DAP – Delivered At Place	Any mode of transport
DDP – Delivered Duty Paid	Any mode of transport

Incoterms rules mainly describe the tasks, costs and risks involved in the delivery of goods from the seller to the buyer. The risk to goods (damage, loss, shortage, and so on) is the responsibility of the person who holds the 'title of goods' at that point of time.

This may be different from actual physical possession of such goods. Normally, unless otherwise defined, the title of goods passes from the supplier to the purchaser in accordance with the terms of delivery (FOR, CFR, among others). The terms of delivery, therefore, specify when the ownership and title of goods pass from the seller to buyer, along with the associated risks.

Incoterms as described by the International Chamber of Commerce are an internationally accepted interpretation of the terms of delivery. These terms of delivery allocate responsibilities to the buyer and seller, with respect to:

i) Control and care of the goods while in transit;

ii) Carrier selection, transfers and related issues;

iii) Costs of freight, insurance, taxes, duties and forwarding fees; and

iv) Documentation, problem resolution and other related issues.

In use since 1936, Incoterms have been revised in 2010. Out of the 11 Incoterms options, seven apply to all modes of transportation whereas four apply only to water transportation.

The options range from one extreme – the buyer takes full responsibility from point of departure – to the other extreme: the seller is responsible all the way through delivery to the buyer's location. It is easiest to understand terms as per their nomenclature groupings: 'ex' group of terms where the buyer takes full responsibility from point of departure; 'free' group of terms in which the freight is not paid by the seller; 'C' group of terms in which the freight is paid by the seller; and 'delivered' group of terms where the seller takes full responsibility from an intermediate point to an arrival point (Annexure 16).

Within national transportation, certain terms have assumed acceptance due to usage. FOR has two versions: FOR/dispatching and FOR/destination (the buyer is responsible from the nominated point mentioned till arrival point, as in Delivery at Terminal). Infrequently, it is also used in road transport as FOT.

e-Payment

e -Banking and e-payments are now used by various banks by adopting Electronic Clearing System (ECS) and Electronic Fund Transfer (NEFT/ RTGS) procedure. Payments to suppliers may be made through such mechanism where such facilities are available. As per RBI guidelines, ECS mandate in RBI's format may be obtained at the time of registration of suppliers and in the bid document. The Format is available with all Banks.

Deduction of Income Tax, Service Tax, and so on, at Source from Payments to Suppliers

This will be done as per the existing law in force during the currency of the contract.

Recovery of Public Money from Supplier's Bill

Sometimes, requests are received from a different ministry/Department for withholding some payment of a supplier out of the payment due to it against a contract. Such requests are to be examined by the ministry/Department (which has received the request) on the merits of the case for further action. It will, however, be the responsibility of the ministry/ Department asking for withholding of payment to defend the Government against any legal procedure arising out of such withholding as also for payment of any interest thereof.

Refund from Supplier

Sometimes, the supplier, after claiming and receiving reimbursements for sales tax, excise duty, custom duty, and so on, from the purchaser, applies to the concerned authorities for refunds, on genuine grounds, of certain portions of such duties and taxes paid by it and receives the allowable refunds. Such refunds contain the purchaser's share also (out of the payments already made by the purchaser to that supplier). The tender enquiry document and the contract are to contain suitable provisions for obtaining such refunds from the supplier.

Payment against Time Barred Claims

Ordinarily, all claims against the Government are time barred after a period of three years calculated from the date when the payment falls due unless the payment claim has been under correspondence. However, the limitation is saved if there is an admission of liability to pay, and fresh period of limitation starts from the time such admission is made. The drill to be followed while dealing with time barred claims will be decided by the ministry/Department concerned in consultation with the paying authority. The paying authority is to ensure that no payment against such time barred claim is made till a decision has been taken in this regard by the CA.

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14 PRINCIPLES OF PROCUREMENT SUSTAINABILITY©

SN PANIGRAHI, PMP®, ATP (PMI - USA), FIE, C.ENG
GST & INTERNATIONAL BUSINESS & PROJECTS CONSULTANT, CORPORATE TRAINER, MENTOR & AUTHOR, NC MEMBER, IIMM
snpanigrahi1963@gmail.com

Introduction : Sustainability is a Societal Goal with three dimensions: the Social, Economic and Environmental Dimensions. This concept can be used to guide all the procurement-related decisions and processes and gain benefits for long term on sustainable basis.

Sustainable procurement refers to how businesses can integrate principles of sustainability into the company's procurement policy & processes by identifying and reducing the environmental impacts of their procurements and taking decisions in a socially responsible manner while ensuring value for money on a life-cycle basis. Sustainable procurement means making sure that the products and services we buy are as sustainable as possible, with the lowest environmental impact and most positive social results.

In this article, let's Discuss about **The 14 Principles of Procurement Sustainability©.**

Key Words: Sustainability, Three Pillars of Sustainability, social, economic and Environmental dimensions, Sustainable Procurement.

Sustainability: A Long-Term Vision : Sustainability is the ability of something to Last for Long. Sustainability is Important because we live on a Planet of **Finite Resources -** though these Resources are Naturally Available in very very Large Volumes - of course has **Some Limitations**. Often **we Treat and taking for granted that these Resources are Infinite and Abundantly Available for Ever**. These Mis-Conceived Notions and Perceptions proved us wrong very lately to realize and recognize that, there is Limitations to Everything. Earth's resources are not unlimited and that humans must use and conserve resources in a manner that allows their continued use in the future.

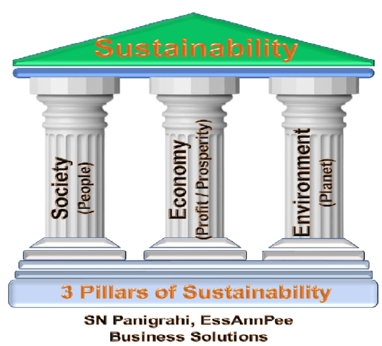
Therefore, we need to Conserve the Natural Resources, for not only meeting the **Requirements of Present Generations**, but also need to **Preserve for Future Generations**.

Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. In addition to Natural Resources, we also need Social Well being and Comfort of Living, Wealth and Economic Growth. So Sustainability add ups two more Dimensions : **Social and Economic Factors in addition to Environmental Factors**.

Three Pillars of Sustainability : Embedding all three aspects sustainability, refers to concerns for Community Comfort of Living and Equity – Human Factor (**Social**) and Wealth Generation, Progress & Development (**Economic**) and Conserving & Preserving of Natural Resources (**Environment**). These are also known as "**Triple Bottom Line**" – Called **3P**'s (**People** (Social); **Profit** or **Prosperity** (Economic) and **Planet** (Environment). These forms Three Pillars of Sustainability. Adopting sustainable practices, whether large or small, can have significant impacts in the long run.

Sustainability is a societal goal with three dimensions: the Social, Economic and Environmental. This concept can be used to guide decisions at the global, national and at the individual consumer level.

Therefore, sustainability is made up of Three Pillars: **Society, Economy, and the Environment.** These principles are also informally used as **People, Profit, and Planet**.



Sustainability is a holistic approach that considers **Social, Economic & Environmental** Dimensions, recognizing that all must be considered together to find a balanced co-existing of all **Humans**, **Flora (plant life); Fauna (refers to animals)** and others, Living for Today & Tomorrow.

The 14 Principles of Procurement Sustainability©: The 14 Principles of Procurement Sustainability©, developed by the Author for guiding to development of Procurement Sustainability Policy for **making sure that the products and services we buy are as sustainable as possible.**

Let's now Discuss these **14 Principles of Procurement Sustainability©:**

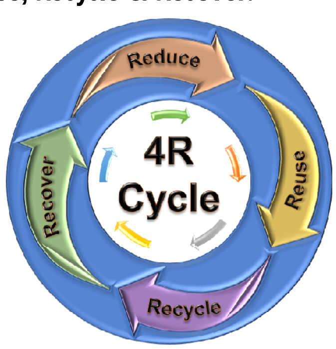
SN Panigrahi,
EssAnnPee Business Solutions, India

These **14 Principles of Procurement Sustainability** are **set of value based Principles that establishes a framework for expected Procurement Behavior, Decision-making & Practice, guiding organization throughout it life in all circumstances, it's** Consistency and Discipline, Respect for the Society, Concern for the Environment and all out wealth & Economic Growth.

1st Principle : Policy Alignment : Procurement Policy shall be Aligned with Corporate Sustainability Policy and ensure **Commitment by Top Management**.

Set Organizational Vision & Mission with Sustainability Goals and **Align Procurement Policy** with overall Organizational Mission with Holistic Approach to Sustainability. Ensure the policy reflects the organization's values and includes commitment to continual improvement. Management's commitment to Sustainability is very important because they provide the Right Direction, Drive Change, Propel the Momentum, Provide Resources for implementation, maintenance and improvement of the Sustainability Practices.

2ndPrinciple : Product Responsibility, Green & Circular Procurement : It is Commitment of the organization for development and production of Goods or Services to the highest possible standards in order to minimize the impact on Society, Economy and the Environment. It also involves Green & Circular Procurement.Green Procurement means purchasing products and services that cause minimal adverse environmental impacts.Circular procurement is a term relating to purchases that support the principles of the circular economy, a system that seeks to limit the waste of resources and reduce environmental impact within the context of sustainability. It is aligned to **4R Cycle – Reduce, Reuse, Recycle & Recover**.



SN Panigrahi, EssAnnPee Business Solutions

3rd Principle : Continuity & Consistency; Efficiency & Effectiveness : Continuity in Procurement refers to the capability of ensuring uninterrupted flow of products and services from suppliers to customers within an acceptable level and time frame so as to safeguard the prioritized activities of the organization and interested parties. Consistency Refers to Uniformity of Procurement Policy, it's implementation and practices across all the units.

Efficient Procurement is defined as: "capability of procuring required goods or services without wasting or sacrificing material characteristics, quality, time, or energy. Effectiveness on the other hand is doing the right thing."Efficiency is how the procurement process is handled, while effectiveness focuses on attaining the end result. In procurement, efficiency is often put to the side while the focus is on effective results for the organization as a whole for attaining sustainable goals.

4th Principle : Assure Quality at the Source; First Time Right – Adoption of Lean

"**Assure Quality at the Source**" is a principle in the Continuous Improvement dimension of the Shingo Model. Perfect quality can only be achieved when every element of work is done **right the first time**. If an error should occur, it must be **detected and corrected at the point and time of its creation**. Therefore, Establishing environmental and social performance standards apart from economic factors for the suppliers are essential to ensure **preventing mistakes** and defects in supply which in turn minimises wastage, reducing pollution and it's associated use of resources and resource preservation & environmental impact. Lean Procurement refer to the use of systematic methods to **Improve the procurement process and workflows, reducing time and** reduce costs by eliminating wastes and non-value-added activities while delivering quality products at lowest cost with greater efficiency. With these concepts in mind, **lean procurement is a inherently linked to Sustainability**.

5thPrinciple : Economic Sustainability – Value for Money - Competitive Supply - Life Cycle Cost.

Economic Sustainability that is Value for Money **with the lowest environmental impact and most positive social results is an essential Sustainability Principle.** The procurement processes should be carried out to achieve the most advantageous combination of cost, delivery, quality and sustainability over the life cycle of the procurement. Value from the Customers Perspective;Predictability that is the ability to plan and deliver;Productivity meaning Getting more done in the same time or with the same resources and Growth of the organization are the key Considerations.

Competitiveness is **the capability of procuring that influence timing, cost, quality and delivery of a product** to derive Competitive advantage for the organization. While making Procurement Decisions, **Life cycle cost (LCC)** approach may be adopted that assesses the total cost of an asset over its life cycle including initial capital costs, maintenance costs, operating costs and the asset's residual value at the end of its life.

6th Principle : Local Supplier Development, CSR & Social Accountability. : Local Supplier Development (LSD) as part of Sustainable Procurement is about Engaging and Assisting Local Suppliers in enhancing their Skills and Capabilities to meet supply requirements and consistently supply quality products at competitive prices. Local procurement can contribute to the implementation of the sustainability concept in the business in many ways – Developing the Local Entrepreneurs, Creating Job Opportunities for Locals, Economic Wealth Creation, Minimize Pollution due Less Transportation etc.

Corporate Social Responsibility (CSR) is about corporate behaviour, governance and transparency in key social, environmental and business areas. Integrating CSR into Procurement Policy enhances the Sustainability Efforts.

7th Principle : Assessing & Building Capacity; Benchmarking & Risk Appraisal.: Assessing &Building Sustainability Capacity refers to **structures and processes that allow the Procurement Processes to leverage resources to effectively implement and maintain evidence-based Policies and Activities**. Capacity Development comprising three interconnected levels of capacity: **Individual, Institutional and Enabling Policy**. It is a **Measurable Improvement** in an organization's ability to fulfill its sustainability mission through a blend of sound management, strong governance, and dedication to **assessing and achieving sustainable results**.

Benchmarking is a common practice that helps to establish baselines, define industry best practices, identify risks and opportunities, and create a competitive environment within a company or organization. Sustainability benchmarks are **a way of systematically evaluating the sustainability performance against Standards & Best Practices of other Entities.** Sustainability benchmarking provides many benefits, including a way to gather comparable information relative to other benchmarked entities, evaluate the sustainability performance of voluntary or mandatory standards, forecast potential business **risks** and **opportunities** and **demonstrate** the positive impacts of the organizational sustainability programs.

Sustainability Risk Appraisal identifies Potential Hazards and Sustainability Challenges that could expose to practices that negatively impact the environment and the people or the society involved in the Procurement Processes. Climate change, water scarcity, disease, and poor labor conditions are some key factors that increase sustainability risk and may decrease Procurement Efficiency and Success.

8th Principle : Fair Dealings-Integrity & Ethical Procurement : Ethical Procurement Policy sets Ethical Practices like Fair Dealings-Integrity and Social Principles first, in order to ensure fair purchase dealings in socially and environmentally responsible way, ensuring income generation and development for local communities and avoid unethical practices such as engaging child labours, discrimination or favouritism or exploitation.

Value for Values; Inclusiveness without any Discrimination : Procurement Ethics are based on Certain Organizational Values. Values are a set of beliefs or opinions that influence, characterize and reflects the ethical behaviour, the vision and outlook of how organizations lead the business. Value for Values refers to Value Propositions an Organization Commits to, take **Responsibility& Initiates Transformative and Ethical Leadership that Reflects Sustainability.**

Having access to a wealth of natural resources, as well as ensuring general well-being for all, is a moral right of everyone. The term sustainability more broadly **refers to moral obligations** and include anything that helps protect an organization's ability to operate responsibly towards the world socially, environmentally, and financially. The aim is to establish policies and practices that enhance the role of human capital development in sustainability and social inclusion, emphasizing its civic, social, and equity dimensions without any Discrimination, create a better work culture and work-life balance while keeping in mind Economic & Environmental Factors.

9th Principle : Good Governance Compliance with Regulations : Good governance **promotes accountability, transparency, efficiency and rule of law** at all levels and allows efficient management of human, natural, economic and financial resources for equitable and sustainable development. Sustainable Compliance program **improves the risk profile** through a more effective and efficient compliance function focused on the most important procurement regulatory risks and eliminates inefficient activities.

10th Principle : Visibility, Transparency, Accountability & Responsiveness : Transparency and accountability are generally part of Good governance, characterized by **a feeling of trust at all levels** includes visibility i.e. the ability to track and provide information about its activities related to sustainability and governance to concerned stakeholders that is accurate, complete and made available in a timely way.

Responsiveness is the ability of an organization to promptly adjust to changes and respond in its internal and external factors like Economical, Social & Environmental impacts. **Responsive sustainability** refers to timely and controllable interventions that improve sustainable outcomes.

11th Principle : Stronger Partnerships; Collaborative Procurement : Stronger Partnerships will contribute to environmental protection and sustainable development by mobilizing resources, sharing knowledge, promoting the creation and transfer of environmentally sound technologies, and building capacity. A strong partnership can add value to the business, with the true measure being the creation of sustainable value for customers and the society at large.

Voluntary Commitments and Multi-stakeholder Partnerships, facilitating varied engagements of all the stakeholders in support of the implementation of the Sustainable Development Goals, shall strengthens the cause in right direction.

Collaborative procurement is the **practice of multiple organizations coming together** by Pooling Resources for establishing Common Facilities or Consolidating Procurements or Jointly availing Services from various Procurement partners and other stakeholders. Collaborative procurement delivers greater efficiencies through **economies of scale**, **combined purchasing or collective efforts** to minimize environmental & social impacts**.** Collaboration enhances sustainable benefits by creating legitimacy of sustainable technologies, reducing waste and improving economical, environmental and social performance of firms.

12th Principle : Create Value for the Customer & Business Partners

Embrace sustainability as a driver of value creation; Take a holistic perspective, but act on what matters to the business. Engaging customers and business partners in the sustainability efforts, naturally creates mutually beneficial business value to all the business partners for long term. Keeping promises and delivering consistent results is a key to proving the reliability of the company, product or service, and this is a major intangible business value. Business Partner integration into the value chain with clear plan for each partner's responsibility and accountability can be a key to success and essential to empowering each company to leverage their core strengths. A sustainable partnership mindset is a vehicle for operational and organizational growth ultimately driving long term creation of Sustainable Value.

13thPrinciple: Sustainability Innovations & Continuous Improvements

Businesses are facing growing competition due to globalization and new technologies, however by harnessing technological innovations for sustainable development can create win-win situations for the organizations - leverage business advantages, may drive higher profitability, efficiency, and competitiveness, product differentiation, a growing customer base, and improved market and brand positioning etc. Also it may contribute towards societal & environmental changes like wealth creation with optimal use of resources, social well being & reducing business carbon footprint.

Sustainability Measurement and Controls are also very important considerations for Continuous Improvements.Measurements are fundamental to Sustainability which include setting Standards & Benchmarking Performances, tracking and assessing progress, improvement in the operations, evaluating process, evaluating sustainability tradeoffs, meeting or anticipating new requirements, finding & addressing barriers, rewarding excellence, and communicating benefits and goals among others.

Though difficult to quantify, sustainability can be measured through certain indicators, benchmarks, audits, sustainability standards and certification systems like Fairtrade and Organic, indexes and accounting, as well as assessment, appraisal and other reporting systems.

You can **measure the carbon footprint of your business using the business carbon footprint calculator** here. Economic metrics: Include specific economic indicators that track the creation of wealth or value and report its distribution and reinvestment for future growth.

The proposed framework for social sustainability measurement incudes six dimensions: **employee participation, employee cooperation, equal opportunities, employee development, health and safety, and external partnership**.

14th Principle : Sustainable Inclusive Growth

Inclusive Sustainability warrants Economical Growth alongside Environmental Sustainability and Social Justice. As per OECD (Organisation for Economic Co-operation and Development), inclusive growth is economic growth that is distributed fairly across society and creates opportunities for all.

It explicitly targets "decent" employment generation and help in reducing poverty, develop local community, raise standards of livings of larger populace, environmentally sustainable productivity growth, provide the technological solutions to environmentally sound Goods or Services and which is consistent with trade, financial, industrial, rural development, and social policies.

It also means having access to essential services in health and education by the poor. It includes providing equality of opportunity, empowering people through education and skill development. It encompasses a growth process that is environment friendly growth, aims for good governance and helps in creation of a gender sensitive society.

Organizations may responsibly be engaged to commit and contribute in all its best for sustainability.

For more details, please visit to my YouTube @ https://youtu.be/227J8JAyFns

Conclusions

These key considerations provide a starting point for companies to create more sustainable Procurement. By integrating these practices into their operations, businesses can reduce their environmental footprint, enhance their brand reputation, and contribute to a more socially responsible and environmentally conscious future.

Sustainable Procurement is the Integration of Sustainable Principles into the company's Procurement policy &Processes to Reduce the Socio-Environmental Adverse Impacts due to their Procurement & other Related Activities and still ensuring that they meet the Economic Objectives of the Organization and the Requirements of the Stakeholders by balancing the Sustainability.

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IN CONTRACT MANAGEMENT – AN OVERVIEW

PREM NARAYAN, IRSS LIFE FELLOW,
IIMM LIFE MEMBER, IRILMM
premn2011@gmail.com

1.0 Introduction : Ministries / Departments / State Governments/ Central Public Undertakings etc. award large value contracts for supply of Goods and Services and hence contracts management become very important for smooth functioning of the organization

Considering that huge public money involved and large number of stakeholders' e.g. political executives, bureaucracy, public and private firms, public at large with varying and at times conflicting interests; it is worthwhile to examine ethical issues in contract management. Ethical aspects of contract management are similar in all central government departments / State Governments/ Central Public Undertakings too.

2.0 Legal Aspects of Purchase and Contract : Purchasing constitutes a legal contract between the buyer and the seller. Such contracts are governed by Indian Contract Act – IX of 1872. As per this act, for an agreement to become a legal contract there must be: -

1) **Free consent of parties :** Consent of a person is said to be free when it is not obtained by Coercion, Undue influence, Fraud, Misrepresentation of facts or Mistakes.

2) **Between Parties competent to enter into contract**

2.1 Rights of Equal Opportunities : According to rulings of Supreme Court, in view of rights of equality before law (Art. 14) and of carrying out a profession (Art. 19 (1) g), every citizen of India has a right to get equal opportunity to bid for a government contract. Extending these rights, courts expect that decision making in Government, including in purchasing should not be discriminatory or arbitrary. This of course also follows from the canons of financial propriety.

However, it also allows a reasonable criterion for eligibility of tenderers to be laid down.

The specifications and conditions of tender should therefore be carefully framed so as not to violate these rights while ensuring supply of material from only a right source.

2.2 Objects of Contract : Object of a contract in purchasing is receipt of material or services by the Purchaser. Consideration (payment in most cases) is what the supplier gets for fulfilling the object of the contract. A contract without any consideration is not a legal contract. Such consideration and also the object of contract to be lawful these must not be forbidden or expressly declared void by law and of such nature that if permitted, it would defeat the provision of any law is fraudulent. Any contract which involves or implies injuries to the person or property of another is immoral or opposed to public policy;

Broadly speaking, a contract is an agreement between two parties enforceable by law, which confers personal rights and imposes personal obligations, which the law protects and enforces against the parties to the agreement. Accordingly, a general law ofcontract has been conceptualized. It has been influenced over a period of time, by a number of factors, amongst which

(a) The moral factor and

(b) Economic/business factor, are ofgreater importance than all others.

Squandering of public money in contracts has become an all-pervasive problem in India. Hence the moral factor of a contract assumes greater significance than the business factor and due importance needs to be given on transparency, systematic methods, clarity in perception, commitment to conform and finally, emphasis on good governance.

2.2.1 The Why of It : Although law and morality are distinct, yet, the law reflects, to a considerable extent, the moral standards ofthe community in which it operates. Two reasons have driven ethics to the foreground in the law ofcontracts –

(1) The increasing demand for transfer ofproperty from one to another and for the performance ofservices by one for another, both carried out through the law ofcontract

(2) The growth ofthe institution of credit that has led to greater reliance than before on promises and agreements.

One of the most fundamental features ofthe law ofcontract is that the test to an agreement is objective and not subjective. The sanctity ofcontractual agreements is driven by a moral principle that one should not take advantage of an unfair contract, which one has persuaded another party to make under any kind of pressure. To this extent, it becomes incumbent on both parties to ensure that they contract in a most trustworthy and amicable manner so as to promote the 'free consent' concept of the Law. Such 'free consent', occurs when it is not caused by coercion, undue influence, fraud, misrepresentation or mistake.

"Ethical contracts, therefore, are the harbingers of good corporate governance and promoters of stakeholders' interest besides ensuring successful completion of projects, supplies, operations and services etc."

2.3 Government Contracts : What often distinguishes Government contracts from private contracts are the methodologies adopted in selecting the vendor, justifying the rate awarded and choosing the nature/ quality ofworkmanship or supplies. There often tends to be a conservative approach in the Governmental procedures in all these methodologies, largely driven by a need for equality and the fact that the opportunity to serve an organization funded by the public must be open to all competent bidders to the contract provided they are able to supply /perform the contract at the least cost to the public and the requirements of the supply or the work are not extravagantly luxurious. These considerations bring out the ethical aspects of Governmental contracts sharply, in contrast to those executed for private parties where there is little or lesser emphasis on the ethical aspects of the exercise.

3.0 Ethics in Buying : The following code of ethics for buyers has been drawn by the Indian Association of Materials Management.

- o To consider first the total interest of the organization, in all transactions.
- o To be receptive to competent counsel and to be guided by such Counsel without impairing the dignity and responsibility of his office.
- o To buy without prejudice, seeking to obtain the maximum ultimate value for each rupee of expenditure.
- o To strive consistently for knowledge of the materials and process of manufacture and to establish practical methods for the conduct of office.
- o To abstain from malpractices.
- o To eschew anti-social practices.
- o To accord prompt and courteous reception, so far as conditions will permit, to all who call upon him, on a legitimate business mission.
- o To respect his obligations and to require that obligation to him and his concern are respected, consistent with good business practice.

3.1 Ethics of Tendering : Every contracting agency must have a lawfully evolved Vision and Mission statement, wherein there is an explicit commitment to uphold ethical values of the business. Then and then only, can there be a likelihood of contracts and supplies getting executed in time and as per requirements originally estimated. Going by the essential traits of an executable contract, it becomes necessary for the party inviting tenders and, finalizing them to follow certain rules, regulations, assumptions and transparency in evaluation and awarding methodologies. These come into sharp focus when any vendor is denied an opportunity to quote for a work being executed and funded through funds raised through public taxation.

These rules and regulations must generally be evolved in a transparent manner, must be tested in law, executable in action and logical in content. They must be evenly biased towards both parties in the event of a need for interpretation and must also be free from ambiguity. Such being the case, tendering as a form of contract enabling mechanism, has all the characteristics of an ethical exercise which not only ensures right quality and quantity at the right price but also enable selection of the right vendor. Contract management becomes less complex and more goals oriented if the relationship between both parties are based on ethical principles.

4.0 Unethical Practices in Contract Management

4.1 Vendor Driven Contracts : Squandering of public money in contracts is not normally difficult to identify because, when either the rates are very high or the quality of work is poor, one is able to easily conclude that there is wastage of valuable taxpayers' money. What about works/supplies, which are not required at all in the first place? There is a carefully nurtured nexus between the supplier and a certain category of the buyer (more pronounced in the Government organization) which thrives on the projection of a false requirement of whatever supplies of material or type of work, which the vendor wishes to execute / supply (for reasons ranging from outdated models/versions, other cancelled orders, rejected stocks, or simply items of works / supplies where margins are relatively higher than other items).

A slightly varied version of this sort of unnecessary procurement or procurement in excess of requirement, driven by the vendor, is the ploy to indent and procure material of a specification which is much higher or superior to that actually required, merely because the margins in such items are higher.

4.2 Estimations : Very often, pressurized by the urgency to float tenders, the estimation wing of the buyer, finds if convenient to include clauses like "actual design and execution standards will be finalized as approved by the engineer at site, whose decision shall be final". This is no doubt, a careful strategy to save time but what is actually happening is that the ambiguity could cost the seller a fortune in reality, later on. He is however, helpless and plays along in order to get the order, thus promoting the indecisiveness, lethargy or even the mischievous intent of the buyer who has legally safeguarded his interests through a clause, which supposedly has the mutual consent of both parties - a legally acceptable stand but one which smacks of unethical standards.

4.3 Tender Opening : Elaborate procedures exist for revealing to one and all, the comparative quotes of all bidders - usually, this is done in the presence of representatives of all bidders. What goes unnoticed is the fact that while all quoted rates is read out; special terms or counter offers are not - items, which have financial implications.

It is also necessary that when bidders try to coerce or prevent other competitors from bidding, arrangements are made to enable fair and open competition and participation through different strategies including making available the tender boxes at different locations / cities which are safely guarded and the much more recently introduced e-tendering system. Such measures instill all round confidence and enhance the ethics of the contracting efforts.

4.4 Evaluations : In many organizations, evaluation of offers is done by a team of officials who compose a tender committee and whose main role is to -evaluate the offers, recommend a suitable vendor and justify the rates at which the recommendation is being made including suggestion whether there is a need for negotiations in the event of the rates being higher.

The committee relies largely on a tender evaluation brief prepared with background information of the tender. The ethical issues in the briefing note centre around the need to be totally unbiased in the presentation of the details relating to the tenderer and the past rates. Ethics demand that a dispassionate view be taken both at the time of collecting data as well as analyzing it for making recommendations. Yet another ethical irregularity is committed when opportunity is denied to new vendors on grounds of inexperience or to existing working contractors on grounds of them being already overloaded

4.5 Unworkable /Low Rates : When quoted rates are far lower than estimated, there is hardly any attempt to ascertain from the vendors as to why they do so. Ethically and more so from the financial view point, it is necessary that the buyer benefits from the assessment of a seller quoting lower before condemning the low rate as unworkable. Denial of competition by this costly lapse actually is triggered by a preconceived notion that estimates are sacrosanct. New technologies, better financing means and other business strategies would often encourage vendors to quote low, especially in a cut throat competitive environment.

4.6 Negotiations : When it comes to quoted rates being higher than estimated, however, negotiations in some organizations become the rule and are done in almost a very routine manner. When the first recommendation is invariably made for going in for a round of negotiations (even in cases where the rates are reasonable) for obtaining a further reduction, there is an inflationary tendency by even reasonable bidder to quote high at the first instance. Ethics demand that such tendencies are curbed and efforts made by both parties to be true to their conscience – vendors would quote realistically and buyers would evaluate reasonably.

The unethical angle in negotiations wherein the lower suitable offer(s) is/are overlooked and higher (perhaps unsuitable) offers are recommended for negotiations has led to the CVC (Central Vigilance Commission) banning negotiations except where absolutely essential and that too only with the lowest. This cardinal rule has some exceptions and may not be suitable in all cases, but at least, it has helped curb certain unethical practices of "somehow, anyhow" placing orders on suppliers / sellers who do not deserve, both on the legal and contractual basis, any consideration, much less, an order.

CVC has issued guidelines on negotiation only with L1 due to incorrect practices in some of the central govt. depts., it was a system that if there are several manufacturers participating in open tender, counter offer would be given and the quantity would be rationalized over several vendors in proportion to the competitiveness of their bid. This rationalizing method adopted by govt. dept. was defective, as L1 would not get everything, which is due to him.Effective implementation of the policy to negotiate only with L1 ensured no hanky panky and brought transparency in procurement process.

5.0 Role of Technology in Improving Transparency : Unethical practices can be curbed to a large extent by bringingg in more transparency and better security (lesser chances of corrupt practices) in the system of procurement through electronic tendering (e-tender) and electronic auctioning (e-auction). Electronic auctions (or reverse auctions) are conducted using internet-based software. 'Reverse auctions' are auctions where sellers bid to provide specified goods or services to a buyer. At core, the system provides the means for buyers to issue pre qualification questionnaires and invitations to tender by e-mail. Suppliers then respond via an internet-based interface to the system. The system can ensure that suppliers' electronic responses are held securely until a particular time (the equivalent of "tender opening time") when they are made available to the buying organisation.

While the system also offers additional functionality (such as document management and evaluation tools), organisations can choose the extent to which they make use of the system beyond its core functionality. The e-tender and e-auction system is fully password-protected- buyers and suppliers can only access it with a valid account name, user name and password. Suppliers are only able to access the system in respect of tender exercises in which they have been invited to participate- they cannot "browse" tender activity. Materials Management Deptt. on Indian Railways has fully switched over to e-tendering and integrated Materials Management System has been adopted to ensure better transparency, uniformity, speed and paperless working.

6.0 Ethics in Purchase Practices at International Level: Government procurement guidelines of World Bank basically sum up the approaches in public procurement by various governments. The same has been adopted in WTO as guide line for government procurement. It mentions three types of tendering:

a) Open tendering procedures are those procedures under which all interested suppliers may submit a tender.

(b) Selective tendering procedures are those procedures under which, those suppliers invited to do so by the entity may submit a tender. This deals with short listing or registration of suppliers.

(c) Limited tendering procedures are those procedures where the entity contacts suppliers individually, only under exceptional circumstances in view of urgency etc.

To ensure fairness, stress has also been placed on transparency aspect which includes publishing of contract award details etc.

7.0 Analysis of Contract Management in the Framework of Ethical Theories : The traditional approach to procurement is transactional approach. Indian railways also follow this approach. This approach can be categorized under Deontological approach to social contract theories. As per this theory an action is right if it conforms to the terms agreed upon, or rules for social well being negotiated by competent parties. Here competent authority enters into the contract by mutual consent in three steps:

1) A proposal (a tender notice) - This lays down the object of the contract and conditions relating to it.

2) An offer in response – This brings out considerations and conditions relating to it for performing the object of the tender

3) Acceptance of the offer – This completes the contract. In case acceptance is not exactly as per offer, it will become a counter offer – which needs to be accepted by the tenderer to become a contract.

However, this approach has its limitation because it is based on short term goal, exploiting competition, knowledge and expertise of supplier is not utilized to the fullest extent etc. This approach although is best suited for obtaining most favorable price but it does not exploit the capabilities of supplier. The relational approach adopted by private companies/ organizations to buying which exploits the potential of cooperation, stresses upon collaboration and "team effects", combine resources and knowledge between both supplier and purchaser. It results in more openness between supplier and purchaser as supplier is required to reveal his costing etc. and then only purchaser agrees for increase in cost.

Several developed countries especially Australia, UK and New Zealand etc. have started adopting approaches, which even go beyond the relational approach. Following conditions are being added in government procurement documents:

✓ Contract with tenderer who treat their employees in ethical employment standard.

✓ Assess a tenderer ethical employment behavior while maintaining fair opportunity for the market to compete.

✓ Influence cultural change in way contractors treat their employees.

✓ Reward competitive businesses that satisfy the ethical employment standard with government business.

Ethical theory applicable in above context is Extra-Organizational Ethics under System Development Ethics theories, which holds that an action is good if it promotes or tends to promote the improvement of collaborative partnership and collective global justice, creativity in the human and natural environments.

In future this will have impact on procurement done by railways because the advantages of relational approach far out weighs its disadvantage in obtaining lower price.

8.0 Conclusions : The ethical framework behind the existing procedure obviously has a strong deontological ethics – that uses rules to distinguish right from wrong. This is, although, very important in view of preventing fund leakages and optimum utilization of the public money in the process of purchase and contract, yet, it often makes the system too rigid and the greater objective of 'ultimate good' for the organization is missed. In order to take care of such greater goal, the procurement and contract procedure should have a strong element of teleological concepts in it and this may be possible by a gradual shift from the existing rule based contract to relation based contract with built in checks and balances and surveillance mechanism in it to guard against possible frauds. Design of such a system may be made practically feasible through involvement of all the stakeholders and sharing of risk and responsibility equally amongst them. The ethical framework based on stakeholder concept has a great potential in curbing the problem of ethical egoism of an individual in the process of procurement and contract.

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OPTIMISATION OF PRICES OF SELLING AND PURCHASING THROUGH E-AUCTIONS

DR. S. B. SARASWAT
MD - GLOBAL E AUCTIONS
md@global-eauction.com

E-Auction is proven tool, used world over, for optimising the price of goods and services of sale and purchase through online bidding process where bidders compete with each other in specified slot of time. The bidder who bids highest/ lowest price for sale and purchase respectively, is declared winner. In this bidding process real market prices are discovered. E-auction also can be termed as an on line continuous negotiations for awarding the sale/ purchase contract All items are not amenable for e-auctions, therefore, e-auctions should not be used blindly for all selling/purchasing activities.

E-auction is also known as electronics auction. In other words, an e-auction is an activity of on line bidding for sale and purchase between clients and bidders, taking place on an electronic market place where everybody wants to be winner. This psychology of winning in bidding brings a very fierce competition among the bidders resulting, sometimes, unrealistic prices in comparison to market prices. The e-auctions can occur business to business, business to consumer, or consumer to consumer.

E-auctions play a vital role in achieving cost optimization in the areas of sale, purchase & finalization of contracts for industrial goods and services. More and more commercial organisations, Government entities, PSUs are making use of this user friendly tool. The spread of internet has transferred e-auction into truly open process in which thousands of goods, services are being offered for bidding by anyone from anywhere on either on their own websites or portals of e-auction service providers.

In our country the concept of e-auctions was only limited to some companies, but then it spread rapidly in early 2000 onwards to all government and public sector undertakings(PSUs) due to its many advantages including the transparency which is prime for these organisations. Now the use of e-auction is spreading fast to all type of small and large industries for sale, purchase and finalization of all kind contracts including transportation. Looking back in initial phase of e-auctions' acceptance and implementation, there was huge resistance due to many reasons but majorly one as being the loss of importance and delegated power of commercial decision.

Presently, there is wide spread awareness and knowledge of advantages of e-auctions, therefore, all kind of industries and commercial organisations wish to take advantages of e-auction. They want to know more and more about e-auctions, its processes, benefits, how to and when to start it.

E-auctions target optimising the selling/purchasing costs in auto mode with total transparency. A typical E-auction process will covers all practical aspects of e-auctions including types, advantages/limitations, requirements for e-auctions, bidding process, e-auction portal and terms and conditions of e-auction, results achieved, Bidder behaviour and strategies, success stories of e-auction based on real data of conducting e-auctions etc.

In fact e-auctions are integral part of e-commerce, a large picture covering the e-selling and e-purchase, which has been covered here through companies' web solutions or hired web services through service providers. Therefore, e-commerce, e-commerce websites, selection, role of web service providers are also covered through separate chapters to give overall and integrated view of e-auctions and e-commerce.

The agency or organisation which organises the e-auction is known e-auctioneer. This e-auctioneer can be clients as well as third party like service provider whose e-auction website is used for e-auctioning .The auctioneer offers his goods and services for e-auction either on their own auction site or of service providers. The interested parties submit their online bids in specified periods as per e-auctioning procedure as per detailed terms and conditions. E-auctions are classified in different categories, for example: e-auctions used for purchase are known as Reverse Auctions (RA) while e-auctions used for sale are known as Forward Auctions (FA).

Whether the sales/purchase take place between individuals, between consumers and sellers, e-auctions have enjoyed a rapid increase in popularity and acceptability. Even some business analysists claim that online auctions give access both buyers and sellers to a vast global market place which has resulted into a whole new way to doing business.

With the popularity and acceptance of e-auctions, used for sale and purchase of goods and services, use of e-auctions have increased Multifood.

E-auctioning is a fundamental process change of doing business based on technology. This is in general, can encompass following activities:

a. Reverse auction for purchasing and contracting.

b. Forward auction for selling

These days many business sectors are making use of e-auctions. E-auctions offer benefits to all types of business. Many companies wonder when and why they should use e-auctions as their business strategy. Companies of any size where sale and purchase are part of the transactions, e-auctions can be suitably used to drive the benefits. In spite of having said the above, there are many organisation who are not adopting the e-auctions for doing the business which can be due to the possible reasons:

- The individuals who are occupying positions either they are not adopting best business policies as they are under fear to lose the importance of their position and delegated commercial authority. Presently they decide the price through physical negotiations but e-auctions decide the price in auto with no human interventions.
- E-auctions are very transparent and does not allow

malpractices in determining the prices but which may not be aim of individuals.

- Hiding the true prices of sale and purchase.
- Corruption is mind-set

E-auctions is best example of doing online negotiation where all bidders compete with each other bringing the best price which is lowest in case of purchase and highest in case of sale.

- **Challenge of e-auctioning:** It is a challenge for companies to prepare themselves and meet new initiatives of business of e-auctions like Reverse Auctions (RA) and Forward Auctions (FA) so that these do not lose their margins in present and future sale and purchase business.

§ **Comparison between manual negotiation and reverse auction (RA) and forward auction (FA):** Following picture displays Comparison between manual negotiation and reverse auction in a simple way and forward auction (FA).

§ **Difference between auction and e-auction:** Following points explains the difference between auction and e-auction:

I. In physical auctions bidders have to be present in person for bidding in the auction room, while in e-auction, a bidders have to log-in to computer to register his presence on Screen.

II. In physical auction, the locational boundaries of bidders are limited due to their logistics reasons while e-auctions have no boundaries as bidders can participate from any locations in world provided he has necessary infrastructure for online participation including participating through mobile phone.

III. In physical auction anti-social elements or pressure groups can physically create the problems at auction site and can stop the participation of bidders coming from other locations and distant places, this results bidding under pressure and not bidding optimum prices but in e-auction bidders cannot be stopped from participation as they do not come physically and ante-social elements and local bidders do not know about other participating bidders, which brings best bids potentially.

IV. In physical auction it is possible to form cartelization out of present bidders, but this possibility is reduced to a great extent as the bidder identity is hidden in e-auctions and they do not come across each other in e-auction. E-auction is faceless transactions not having the identities known to competing bidders therefore cartelisations are exceptions

V. Cost of conducting e-auction is much less than compared to physical auction both for the client and bidders.

VI. Bidding is much more in e-auctions than physical auctions as number of bidders increase in e-auction by virtue of no limitations of physical boundaries and hassle free participation in e-auctions.

VII. E-auction bidding is more comfortable and convenient than participation in physical auction.

§ **Benefits of e-auctions:** "The results speak for themselves: Businesses that competitively sourced service contracts saved an average of about 22 percent. Even more impressive - nearly every e-auction delivered cost savings." -Brian Miller

E-auctions have become significantly popular for commercial transactions of some categories of goods and services of all kind industries due to a number of benefits including as per below:

I. **Convenience:** Bidders are able to participate in an e-auction from anywhere.

II. **Rich information:** All information of each product is in one central space, the e-auction catalogue on website. It is quite convenient and quick and can be seen any time.

III. **Time and money saving:** E-auction saves time and money for both buyers and sellers. Buyers do not need to travel to participate in the e-auction while seller does not need to set up live event. There are many other factors like reduction inventory level, reduction in staff and many more.

IV. **Compare prices**: The main advantage of bidding online in e-auction is that it provides opportunity to compare prices at a glance for quick decision for bidding. Past prices are also there.

V. **Avoid transportation cost:** There is no need to move the materials to an auction yard for e-auction.

VI. **Remove human face from price negotiations:** In e-auction negotiations are done online and mostly eliminate one to one negotiations. Not all the sellers and buyers are good negotiators.

VII. **Discovery of best total cost:** E-auctions assists in identification of the best total cost as one can track bids on delivery terms and conditions.

VIII. **Increased transparency:** E-auction prices are totally transparent, as all bidders gets equal opportunity. This is the reason why PSUs and Government departments are using e-auctions as mode of purchase and sale. Coal blocks, tele-services and mines e-auctions are very famous in India.

IX. **Paperless and reduced costs:** As the e-auction process is very simple and quick. It helps in reducing overall cost and paperless activity.

X. **Best price discovery:** Reverse auctions can be used by buyers to discover the best market price of the product that they are interested in procuring and hence find the cheapest supplier offer. Likewise, in case of sale through forward auction, the bidder who quotes the highest price is declared the winner of the FA. This is the best discovered price for sale for the offered goods and services.

XI. **Increases buying and selling reach:** Since e-auctions do not have boundaries and display of requirements on e-auctions website is visible in any place throughout the world, therefore, new bidders also come forward to participate in the e-auctions which increases the competition and best market prices are achieved .One can locate additional new buyers and sellers for the goods and services by conducting e-auctions.

Dr. S. B. Saraswat

Formerly-

- **MD / Danieli Corus India Private Limited**
- **Director / SCM & Projects, Global Steel, Europe**
- **Joint Director (MM), / Steel Authority of India Ltd.**

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INFO AGE
- ARE WE HEADING TOWARDS OVERDOSE ERA -

RAJIVE GOEL, VICE PRESIDENT HINDUSTAN COMPOSITS LTD.
goel@hindcompo.com

We live in an Info Age. It has multiple building blocks like :

1) Information
2) Knowledge
3) Intelligence
4) Web or Google
5) Internet of Things - IoT
6) Artificial Intelligence – AI
7) ChatGPT

Let us explore this journey of the Info Age.

Information was and has been essential for the running of any business and economic activity. In the early days, information was shared verbally and through physical presence.

With advent of paper and language, the information was shared through paper, documents, contracts, etc. With the advent of this phase, verbal communication and personal relationships became less significant. This was followed by a phase, when 3rd parties and entities started playing a role in business transactions between two parties. This is the phase when legal documents, courts papers, stamp papers, agreements, notary, advocate, etc. became prominent.

The present phase is of the electronic age. The present businesses involve usage of emails, WhatsApp, scanned documents, chats, messages, screenshots, voice message, video message, video grabs, and many more other forms. Thus, the information has been changing its form from Verbal to Written to Electronic and to Intelligent now. And this may turn into something else in future.

Information Replacing Material : Let us go into history to see the evolution of Information.

Initially the Materials Flow was substituted/replaced/reinforced with Information. Availability of information made the material management easier. Companies started maintaining lower inventory levels and companies also reduced their supply lead times by having better coordination among various stack holders.

Information replaces Materials

Lot many companies brought down their inventory levels and also supply lead times to "zero level", by going for JIT models. This was the era, when MRP-I and MRP-II came into play.

Information Replacing Money : The later phase was characterized by Information substituting/replacing/reinforcing money and other resources.

Here ERP packages came into function. Once the companies started interlinking suppliers to their own manufacturing and finally to their customers; there was end-to-end visibility in the entire value chain of a company.

This drastically reduced the need for companies to maintain high inventories at their own end or at their customers' end or even at their suppliers' end. Companies also learnt to manufacture only what is sold or required at their customers' end. The chances of having slow-moving or dead inventory became less.

All these resulted in companies savings money and resources. And all these was enabled by information playing its role.

Information replaces Money

Information Era : And, then came the Information Era.

We realized the importance and value of Information. We started developing new forms and types of Information and also new devices to transmit the information.

The various forms of information are :

1) Verbal
2) Letter
3) Fax
4) Email
5) Chat
6) WhatsApp
7) ERP
8) Web
9) Google
10) Twitter or 'X'
11) Facebook
12) Snapchat
13) LinkedIn
14) ChatGPT
15) ... and so many more ...

Multiplicity of Information : Along with various forms of

Information, also came the multiplicity of Information.

Now, the same information was being transmitted and shared in multiple and different forms and formats.

And here we have started entering into an "overdose" phase.

Office Working : Just visualize our average and daily office routine.

I am sure all of us shall be having WhatsApp groups within our respective companies, offices, factories, entities, etc.

WhatsApp is there to disseminate the required information among the required people. Our typical day starts with scanning our official WhatsApp groups. Now, in the WhatsApp group, the information being propagated may be useful for a few people only, nevertheless it shall be sent to large number of people in the said WhatsApp group. And, we are duty bound to read all the messages, whether it is urgent or required by us or now. And, along with that we also go through other WhatsApp groups which are more of social, family, friends related. So, our day has started with information bombardment.

You may say that we do the same with morning newspaper reading too. However, in the case of newspapers, we go as per headlines and choose what to read. While, in case of WhatsApp, we must read all the chats compulsorily (since chats are in series and there are no headlines mentioned).

Now, when we reach the office or when we are on the way to the office, we are required to access all our emails. Let's talk only about office related emails. Almost all the office emails shall be repeat/duplication of what has been already shared on WhatsApp group and which you have already read (and few responded too). Still, you shall be expected to go through and read all the emails and respond to them too. The response shall be repeat/duplication of what you have already responded on WhatsApp group in morning. And you shall dutifully do the same.

After reaching the office and settling down, you shall be probably calling and speaking to the concerned person, where "direct response" was expected from you. So, you shall be talking about the same issue, which you have already seen on WhatsApp in morning and on email while on way to office. And, so response and action plan shall also be same as what you have already shared on WhatsApp and the emails.

During the course of the day, you may have few meetings. And again, the minutes or the briefs of the said meeting shall be posted on WhatsApp and emails both. And probably you shall also be required to update about the same in-person to your superiors, or to the people who could not attend.

And, again in the evening when you leave the office, you shall be required to regularly check and respond on various WhatsApp groups and emails.

And modern gadgets have made life even "simpler" by popping up notifications/messages from WhatsApp and email, even if you do not want them.

And you shall be repeating this routine even before going to sleep on bed.

And I forgot to mention the role played by humble and friendly mobile SMS.

Non-Office and Personal Working

A similar thing happens during our Personal and Family life routine too.

We start the day with WhatsApp groups. Here in place of emails, we shall have Twitter (or X), Facebook, LinkedIn, snapchat, Google, and so many more.

Here, we have the choice of responding or not responding, participating, or not participating. Or just remaining silent or sleeping members.

But then we have to be ready to face backlash from

1) family members,
2) extended family members,
3) relatives,
4) friends,
5) society members,
6) school mates,
7) college mates,
8) professional friends,
9) ex-work colleagues,
10) residential society members,
11) ... and so many others

There shall be end-numbers of video clips to view and read, social messages to view and read, attached documents to view and read, photos to view and show thumbs. The list is endless.

And we shall end our day by "marking our presence" on all these social platforms and groups.

Unwanted & Un-Solicitated Information

There is also another life facet.

Here we must face and deal with Unwanted and Un-Solicitated information bombardment. This information comes via emails, WhatsApp, phone calls, SMS, recorded messages, google Ads, electronic prints, etc.

Most of our time, we spend considerable amount of our valuable time to identify, delete and un-subscribe, them.

This happens right from morning till we go to sleep.

Cost of Information

We can co-relate this with the classic cost cycle.

Whatever is cheap or low cost, becomes available easily and in plenty. And we do not value it also.

This happened with gas/petrol availability in USA during 80' era; when USA had large number of "gas guzzler" vehicles; only because gas/petrol was cheaper. And, to some extent this is still happening in present-day gulf countries.

Now, a similar thing is happening with information too.

As the information itself and its mode of delivery becomes low cost, the quantum and flow of information increases in same ratio.

Imagine, if WhatsApp becomes chargeable; shall we still be subscribing to so many WhatsApp groups or posting or forwarding so many messages carelessly and blindly day and night.

If the emails become chargeable on a per user basis, will we be creating email id for any or all of the people. Or if email becomes chargeable as per each email sent basis; will we be so carelessly sending so many emails at just drop of a hat. Or even further if emails become chargeable on the basis of per IDs to whom the email is being sent to; will we still be sending emails with cc to end number of people within the organization or outside the organization.

Similar is with MS Teams or Zoom, since both these platforms are almost free or very low price, we continue to hold virtual meetings for very long durations.

End-Note

So, what are the ways out.

A back to past.

No. Never.

Maybe we have to identify and establish a new balance between our daily life and information usage.

We as human beings are intelligent and known to adapt and change as per evolving environment. And that is the reason we have survived as human beings for so long, and still retain our dominance.

We must slowly start rationing the usage of information as per actual needs and wants. This shall help us that our daily life does not become overstuffed with unnecessary and unwanted information.

And we live a happier and cheerful life.

The End

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EXPLAINED: INDIA'S BID TO BECOME THE GLOBAL SUPPLY CHAIN GURU

India is charting its way to be more involved in the global supply chains as it seeks to become the third largest economy by the end of this decade.

India News Edited by Chandrajit Mitra

The world is eyeing solutions to its supply chain concerns caused by health crises, disasters, and geopolitical events. The coronavirus crisis and the Ukraine war are among the recent events that disrupted the global supply chain, resulting in steep price rises across the world.

At this juncture, India is charting its way to be more involved in the global supply chains as an alternative to China as it seeks to become the third largest economy by the end of this decade.

A supply chain refers to every step involved in delivering a finished product or service to customers. A disruption at any level leads to delays, unavailability or even rise in prices, affecting the markets at large.

Where is the solution?

India has emerged as a trustworthy nation during the Covid pandemic, highlighted Prime Minister Narendra Modi on Sunday, questioning the efficiency of the global supply chain that ceased to exist when the world required it the most.

India, which has been an ideal market for the global sellers, is now emerging as a manufacturing hub with an immense potential. Several top companies like Apple have already started production in India while the country aims to begin domestic microchips production by the end of 2024.

"The demand for Indian goods has increased at the global stage," the Prime Minister said, citing his 'Vocal for Local' mantra that seeks to boost domestic production in a more globalized world.

He said supply chain resilience and sustainability must now be the focus to take businesses beyond the bottomline.

Finance Minister Nirmala Sitharaman too asserted that India is eyeing a key role in the supply chain through its output-incentive plans and the growth of its domestic consumer market.

Ms Sitharaman said the production-linked incentive schemes are bringing global value chains to India which will help the country become a bulk producer of manufactured goods.

India is also eyeing a key space in the electronics sector with 'Made in India' laptops and computers. It has already become the second largest producer of mobile phones.

The western world is shifting its supply chains from China in view of the geopolitical situation and India seeks to make most of this opportunity. The government has set an ambitious target of reaching $2 trillion in overall exports every year by 2030.

Source:NDTV

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JIT QUIZ

1. A vendor in a JIT system is considered as a
   a) Worker
   b) Intruder
   c) Opportunity seeker
   d) Partner

2. POK in the pull production system stands for
   a) Product ordering kanban
   b) Process oriented kanban
   c) Production ordering kanban
   d) Part offering kanban

3. A criteria NOT related to JIT purchasing is
   a) Reduced inspection of incoming materials
   b) Increased vendor base for obtaining competitive prices
   c) More frequent deliveries from vendors
   d) Vendor certification and education on quality requirements

4. The term more closely related to identifying and correcting problems as they occur is
   a) Kaizen
   b) Kanban
   c) Andon
   d) Jidoka

5. The technique that exposes waste and makes abnormalities visible is
   a) Kaizen
   b) PDCA
   c) 3M
   d) 5S

6. Which of the following represents control points?
   a) Process oriented criteria
   b) Product oriented criteria
   c) Procedure oriented criteria
   d) Result oriented criteria

7. The tool that prioritizes problems for action is
   a) Pareto diagram
   b) Fish-bone diagram
   c) Histogram
   d) Flow diagram

8. The term that refers to things that are not really problems but are somehow not quite right and can become a problem in future is
   a) Jishu Kanri
   b) Warusa-Kagen
   c) Andon
   d) Asaichi

9. The term Gembutsu means
   a) Place of value addition
   b) Morning markets
   c) Tangible objects in Gemba
   d) Abnormal processes

10. The term used to denote the criteria for productivity improvement and cost reduction is
    a) Kosu
    b) Kiken
    c) Kitnai
    d) Hiyari

ANSWERS TO DATA ANALYTICS QUIZ

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

CHARTING INDIA'S PATH TO SUPPLY CHAIN EXCELLENCE: CHALLENGES, OPPORTUNITIES, AND STRATEGIES

CXO has engaged in an exclusive interview with Nick Vyas, Executive Director of the USC Marshall Center for Global Supply Chain Management

Q1. What is India's current standing in global trade growth, and how can it capitalize on its strengths, particularly by actively involving the MSME (Micro, Small & Medium Enterprises) sector?

India has surpassed China as the world's most populous country and its growth is critical for the global economy.

For the next several decades, India will be a substantial contributor to the global workforce. By 2030, its GDP is predicted to reach 7.3 trillion USD. With this rate of economic growth, India's GDP will surpass that of Japan by 2030, making India the Asia-Pacific region's second-largest economy. Over the past ten years, India has demonstrated impressive growth in global trade, particularly in sectors like information technology, pharmaceuticals, textiles, chemicals, and automotive. The steady rise of foreign direct investment inflows into India during the last decade underlines the Indian economy's high long-term growth prospects.

But challenges like regulatory constraints, infrastructural inadequacies, and market access issues have limited the overall potential.

To overcome these hurdles, the MSME sector, which contributes to 45% of total industrial employment, 50% of exports, and 95% of all industrial units, could play a pivotal role.

Implementing these strategies effectively can unlock a new growth phase for India in global trade:

- Encourage MSMEs to embrace digitization and technology upgrades. This can increase productivity, lower operational costs, and improve quality, allowing them to compete more successfully on a global scale.
- Reduce regulatory barriers, simplify the tax system, and streamline import and export procedures to create a favourable business environment.
- Improve MSMEs' access to financial services. Collaboration between the government and financial organizations could help to solve the credit availability problem.
- Provide skill development programs and training to improve the capabilities of the workers in the MSME sector.
- Encourage innovation by encouraging and motivating MSMEs to create one-of-a-kind products and services.
- Ensure improved market access through favourable trade agreements with other countries and assist MSMEs in establishing connections with foreign customers and investors.

Q2.What are the key strategies and policies that India can implement to effectively maximize its position in the global supply chain, with a specific emphasis on empowering and integrating MSMEs?

To strengthen India's position in the global supply chain and empower the MSME sector even more, the country should consider pursuing the following initiatives and policies:

- Strengthening Infrastructure: Infrastructure is the foundation of a well-functioning supply chain. Increased investments in road, rail, port, and digital infrastructure can boost India's desirability as a supply chain partner. For MSMEs to participate in the global digital economy, a strong digital infrastructure is essential. Infrastructure development can enhance India's Logistics Performance Index (LPI), a benchmarking tool created by the World Bank for identifying trade logistics obstacles and opportunities.
- Enhancing Regulatory Framework: Easing regulatory complexities, streamlining bureaucratic processes, and improving the overall business environment can help Indian and international enterprises run more smoothly. This is important for MSMEs that are having difficulty navigating the regulatory landscape. With an enhanced regulatory environment, the international community will experience a more inviting business climate.
- Promoting Digital Transformation: Encouraging digital transformation within the MSME sector can be transformative. Providing technical training, access to digital tools and technologies, and fostering digital literacy and innovation can equip these small and medium enterprises for participation in global supply chains.

- Developing Human Capital: Investing in supply chain management education and training might result in a more competitive workforce. This investment is particularly important for the MSME sector. Partnerships with academic institutions, both domestically and globally, could be beneficial in this effort. High-level programs, like USC's M.S. in GSCM, serve as a good model for such initiatives. Furthermore, beyond focusing on higher education, some of the ongoing initiatives from the Ministry of Skill Development and Entrepreneurship can synergize with USC Kendrick Global Supply Chain Institute to offer certifications for life-long learning and professional development opportunities.

- Fostering Innovation and Entrepreneurship: Encouraging innovation and entrepreneurship, particularly within the MSME sector, can lead to unique solutions for supply chain challenges. This could involve funding support, facilitating incubation programs, and creating a supportive regulatory environment for startups.

- Improving Access to Finance: Streamlining access to finance for MSMEs can significantly aid their growth. This could involve simplifying lending norms, encouraging venture capital investments, and offering financial incentives for businesses that successfully integrate into global supply chains. Building Resilience: Given recent global supply chain disruptions, building resilience is a strategic goal. This process can be supported by promoting supply chain risk management strategies, encouraging diversification, and building crisis management capabilities.

- Promoting Sustainability: With global supply chains increasingly focusing on sustainability, India must ensure the sustainability of its supply chains. This includes supporting ecologically beneficial behaviours, encouraging the use of renewable energy, and enforcing stringent environmental regulations.

When implemented effectively, these strategies could help India boost its standing on global indices such as the LPI and the World Bank's Doing Business ranking; not only would this signal a more attractive and conducive business environment, but it would also enable India's MSMEs to effectively integrate into global supply chains, thereby driving India's growth and prominence in the global supply chain ecosystem.

Q3. How has the post-pandemic supply chain crisis reshaped the priorities and strategies of industries in terms of supply chain management?

Businesses all throughout the world have encountered significant challenges because of the post-pandemic supply chain crisis. Lockdowns, transit restrictions, labour shortages, and increased demand for specific goods and services, among other issues, have created economic interruptions. These difficulties have had a significant impact on the supply chain management priorities and strategies of various sectors. The global shift in supply chain strategy because of the post-pandemic crisis presents numerous opportunities for India. Now, let us concentrate on growth enablers, which would have a a significant impact on all economic sectors and help fuel the growth engine.

- Foreign Investment Attraction: India, with its sizable labour pool and expanding economy, might provide an attractive option to other manufacturing hubs as businesses diversify their supplier bases to lower risk, particularly for sectors like textiles, pharmaceuticals, auto components, and electronics.

- Regionalization and Nearshoring Opportunities: Regionalization trends may prompt more South Asian and Middle Eastern companies to consider India a closer and more viable supply source. Additionally, this could stimulate intra-regional trade and strengthen regional supply chains.

- Digital Adoption and Innovation: India's IT sector is renowned worldwide. As global supply chains become more digital, India can provide innovative AI, blockchain, and IoT solutions. This could increase service exports and position India as a leader in digital supply chain management.

- Sustainable and Ethical Practices: With the increasing global emphasis on sustainability, India's traditional and environmentally friendly practices in textiles and handicrafts can gain more value. Moreover, it compels Indian industries to adopt more sustainable and ethical business practices, enhancing global competitiveness.

- Inventory Management: Indian companies can take advantage of the shift away from lean inventory models. By offering reliable and flexible production capabilities, they can support global companies looking to maintain safety stocks or buffer inventories.

- Collaboration Opportunities: Increased collaboration in global supply chains could allow Indian businesses to form strategic partnerships with foreign companies, opening new markets and gaining access to advanced technologies and practices. Again, to fully capitalize on these opportunities, India must continue to strengthen its infrastructure and business climate, cut down on red tape, invest in talent development, and guarantee ease of doing business. Supporting digital transformation and sustainability practices in the MSME sector may also be essential for taking advantage of these shifting dynamics in the global supply chain.

Q4. How does the MSME sector contribute to India's

supply chain, and what potential does it hold for fostering inclusive growth and driving innovation within the industry?

Removing friction from various segments of the supply chain is critical to redefining post-pandemic supply chain management techniques. Here is how addressing these frictions can benefit industries:

- Regulatory Burdens: The flow of products and services might be hampered by complex and restrictive restrictions. To enable better trade and supply chain operations, industries and governments may collaborate to reduce rules, eliminate needless bureaucracy, and adopt harmonized standards.
- Corruption Mitigation: Corruption in the supply chain can result in inefficiencies, higher costs, and lower quality. Transparency and accountability measures, as well as anti-corruption regulations, can help to mitigate these risks.
- Information Sharing and Visibility: Improved information exchange and data transparency can help organizations predict interruptions, enhance inventory management, and make informed decisions. Technologies such as IA, ML, IoT, and blockchain can be used to secure and communicate data among supply chain partners.
- Compliance and Quality Assurance: Ensuring compliance with regulations and maintaining high-quality standards is critical. Industries may invest in rigorous quality control processes, certifications, and auditing to enhance product integrity and consumer confidence.
- Digital Transformation: Embracing digitalization can help remove friction from manual processes and improve supply chain efficiency. Automated workflows, real-time tracking, and digital documentation can minimize delays and errors.
- Supplier Collaboration: Collaborative relationships with suppliers can foster open communication and trust, reducing the likelihood of disruptions caused by non-compliant or unreliable partners.
- Risk Management and Contingency Planning: Industries can develop comprehensive risk management strategies that address potential issues arising from regulatory changes, compliance failures, or quality-related challenges. Contingency plans can help businesses respond quickly to unforeseen events.
- Training and Education: Industries may invest in training programs for their supply chain workforce to improve knowledge and understanding of compliance requirements, quality standards, and ethical practices.
- Sustainable and Ethical Sourcing: Addressing regulatory and compliance issues can contribute to more sustainable and ethical sourcing practices, promoting social responsibility and environmental stewardship throughout the supply chain. By resolving these frictions, industries may build more efficient, transparent, and resilient supply chains that are better prepared to face future difficulties. Furthermore, concentrating on reducing barriers and boosting compliance and quality can improve industries' overall reputation and reliability in the eyes of consumers and stakeholders.

Q5. What factors are driving the inspiring trend of Indian students embracing globalization in their pursuit of supply chain studies? How does the exposure to diverse supply chain ecosystems through international education contribute to India's readiness to actively participate in the global supply chain?

The University of Southern California's (USC) Master of Science in Global Supply Chain Management (MS GSCM) program has made significant contributions to the field of global supply chains. The program, which has been ranked number one by U.S. News & World Report for the last five years, has been shaping the future leaders of supply chain management, including many students from India.

The USC MS GSCM program offers a comprehensive, end-to-end curriculum that covers all aspects of supply chain management. The curriculum is aimed to provide a thorough understanding of the intricacies and problems of global supply chains through a combination of theoretical knowledge and practical experience.

One of the program's distinguishing characteristics is its focus on spearheading live projects with top industry partners. This helps students to apply what they have learned in the classroom to real-world business operations, honing their critical thinking abilities and comprehension of practical challenges. Our MS GSCM program is categorized as a STEM degree. This is a significant benefit for international students, particularly those from India because it allows them to work in the United States for up to three years after graduation under the Optional Practical Training (OPT) extension. This extended term allows for a more in-depth immersion in the US supply chain ecosystem, allowing students to gain significant professional experience and in-depth knowledge of the operations, challenges, and innovations prevalent in one of the world's most advanced supply chain settings.

Given the fast-paced nature of supply chain management, which is fueled by variables such as technology, data analytics, and globalization, this practical job experience is priceless. It provides students with firsthand experience with cutting-edge technologies, best practices, and the skills to handle large-scale supply chains and their complexities. They will also get the opportunity to engage with various teams, learn the complexities of cross-cultural communication, and develop global professional networks, all of which are critical skills in today's interconnected business world.

When these students return to India, they bring with them a wealth of information, advanced skill sets, and global perspectives gained throughout their studies and professional experience in the United States. They may use this knowledge to capitalize on opportunities in India's expanding supply chain sector, dramatically shortening the industry's learning curve.

By efficiently sharing acquired best practices, innovative methodologies, and practical experiences within India's local supply chain landscape, these students improve India's supply chain competitiveness. They operate as a vital link between India's regional supply chain initiatives and global best practices, actively contributing to India's readiness to succeed in the global supply chain ecosystem.

Another unique value of the USC MS GSCM program is the Industry Network Connect event (INC). INC supports students to engage and learn from industry professionals, gaining valuable insights, understanding trends, and developing key relationships that can lead to exciting career opportunities.

Finally, the program involves experiential trips to global trading hotspots such as Singapore and Vietnam. Students' perspectives on international trade and supply chains are broadened by these educational travels, which expose them to a variety of corporate environments, methods, and cultures. They also offer a thorough awareness of these countries' position in the global supply chain, as well as their unique challenges and innovative solutions.

Q6. Could you provide insights into the USC Marshall GSCM (Global Supply Chain Management) program? How does it stay at the forefront of the industry, offering the latest trends and best practices in global supply chain management?

Certainly! As the Founding Executive Director of USC Marshall's MS Global Supply Chain Management (GSCM) program and the Kendrick GSCM Institute, I am excited to share insights on how we have developed and continue to sustain our industry leadership. Through Networks, Education, and Advanced Research (NEAR), we hoped to connect the world.

When we launched the MS GSCM program, we understood the critical importance of combining academic instruction with real-world experience. While our top research institution can provide challenging classroom instruction, we believe that a strong industry connection that provides practical experience for the remainder of the week is essential. This conviction has influenced our program to emphasize academic knowledge while also providing our students with an industry-oriented learning experience.

The generous endowment that enabled the establishment of the Kendrick GSCM Institute solidified our commitment to providing industry-relevant education. The Institute is a strong platform for research, innovation, and global outreach. Our professors are recognized experts in their domains, and they interact with industry partners and deliver world-class research to keep up with the latest trends and best practices in global supply chain management. These findings are integrated into our curriculum, ensuring that students acquire the most current and relevant information.

Our vision has been a significant aspect in driving the success of our program. We recognize the value of worldwide exposure in today's interconnected world, particularly in supply chain management. We have been working hard to broaden our global influence, particularly in emerging markets such as India.

These factors contribute to the ability of USC Marshall's GSCM program to keep ahead of industry trends. We are deeply committed to preserving this momentum by assessing and upgrading our curriculum on a regular basis, developing our industry partnerships, and expanding our global reach. I am glad that our students have the knowledge and abilities needed to navigate and lead in the complicated world of global supply chain management.

Q7.Could you provide some insights into the upcoming Global Supply Chain Summit at USC Marshall and its significance in fostering dialogue and collaboration among industry leaders, academics, and students? How does this summit contribute to shaping the future of global supply chain management and addressing the challenges of today's interconnected business landscape?

This year's Annual Global Supply Chain Excellence Summit theme, "Reprogramming Global Supply Chain DNA: Driving Strategies, Technologies, and Human Capital in a New World Disorder", is both timely and significant. Over five hundred industry professionals gather to discuss best practices and micro/macro trends in global commerce and supply chains. It represents the tremendous transformations and uncertainties that are transforming the global supply chain landscape and highlights the importance of new strategies, technology, and human capital development.

I have written about "The New World Disorder," which implies that global supply systems are becoming more complicated and unpredictable. From the COVID-19 pandemic to geopolitical conflicts and the ramifications of climate change, these complexities necessitate rethinking and reprogramming existing supply chain tactics. At the 11th Summit, top industry executives and academics will explore novel solutions to improve supply chain resilience, agility, and sustainability. Attendees learn strategic initiatives, exchange perspectives, and help shape the future of global supply chains.

The technology's fast development is significantly impacting supply chains. AI, blockchain, and IoT are revolutionizing supply chain operations, providing more efficiency, transparency, and flexibility. The 11th Summit will delve into these technological developments, investigating how a triple-bottom-line mindset may be used to reprogram the global supply chain DNA and navigate the new world disorder.

The 11th Summit will yet again emphasize the importance of supply chain management education and skill development in nurturing a capable workforce. This year's powerhouse panel sessions will help students understand the growing demands of the industry, encourage them to innovate, and become well-equipped future leaders in the global supply chain sector.

Finally, our incoming cohort of 130+ students from around the world will engage in intellectually stimulating conversations and network with industry experts throughout their first week of orientation.

Q8. Lastly, what are some of the key challenges and opportunities that lie ahead for India as it continues its journey toward becoming a key player in the supply chain industry?

With the wind in its sails, India continues its journey toward becoming a prominent player in the global supply chain industry. In less than a decade, the country is becoming the world's third-largest economy, a tribute to its tremendous economic growth and vast potential. Global trust in India's potential to play a key role in the global supply chain ecosystem is at an all-time high.

However, some of the following issues must be addressed:

- Infrastructure: Despite considerable progress, the need for additional logistics and transportation infrastructure development remains difficult. Investing in road, rail, and port infrastructure, as well as modernizing customs and import-export procedures, are crucial if India is to fully realize its potential.
- Regulatory Environment: The complexity of regulations and bureaucratic hurdles can still slow progress. Continued reforms to simplify business regulations and create a more conducive environment are essential to attract domestic and international businesses.
- Technology Adoption: While India has a burgeoning tech industry, applying advanced technologies like AI, IoT, and blockchain in supply chain operations remains limited, especially in the MSME sector. Enhancing technical skills and infrastructure is crucial.
- Sustainability and Ethical Challenges: In an era where businesses worldwide are prioritizing sustainability and ethical practices, Indian companies need to ensure their supply chains are compliant with these standards, which may require concerted efforts and investments. While I discussed the challenges, let us highlight some of the opportunities:
- Diversification of Supply Chains: As global businesses seek to diversify their supply chains following the disruptions caused by the pandemic, India is positioned as a compelling alternative. Its burgeoning workforce, fast-growing economy, and strategic geographic location make it an attractive hub for businesses looking to mitigate supply chain risks.
- Digital Transformation: With its robust IT and digital services sector, India is well-placed to drive the digital transformation of supply chains, providing innovative solutions using AI, IoT, blockchain, and more.
- Rising Domestic Consumption: With its rapidly growing middle class and increased consumption levels, India is evolving into a significant end market in global supply chains. This trend extends beyond the traditional view of India as merely a source of inexpensive labour or raw materials.
- Government Initiatives: Government initiatives, such as 'Make in India' and 'Atmanirbhar Bharat' (Self-Reliant India), can bolster India's position in global supply chains, highlighting the country's manufacturing capabilities and fostering self-sufficiency.
- Robust Economic Growth: India's projected ascendance to the position of the third-largest economy increases global confidence and optimism.

This economic momentum is a huge opportunity for India to assert its role in the global supply chain landscape.

While there are limitations, India has numerous opportunities to play a key role in global supply chains. India is well-positioned to become a strong player in the global supply chain industry with strategic planning, ongoing investment, and a focus on maximizing its capabilities.

I believe that with sustained growth, strong global confidence, and continued focus on major initiatives, India is poised to become the world's third-largest economy in the coming decades and establish itself as a significant global power beyond the service sector.

Source: www.cxotoday.com

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FUTURE OF INDIAN SUPPLY CHAIN AND EFFECTIVE LOGISTICS: HERE'S A LOOK AT 2023 TRENDS AND BEYOND

SAILESH KUMAR
FOUNDER AT CABT LOGISTICS

India, with its huge scale, varied market, purchase patterns, and industries, offers massive opportunities for companies to expand and experiment in online commerce. The growth of e-commerce and the demand for seamless customer experiences have led to many changes in supply chain management and effective logistics. The development of an omni-channel presence requires evolved logistics strategies. Retailers are integrating online and offline channels, offering options like buy-online-pick-up-in-store (BOPIS) and same-day delivery.

Logistics providers will need to continuously adapt to meet the changing demands of these evolving sales channels. The future of the supply chain and effective logistics is expected to undergo significant transformations in the coming years. These will be driven by technological advancements, changing consumer demands, and global trends. Here are some key trends to consider for 2023 and beyond.

Rise in E-commerce, Q-Commerce, and Social Commerce : India, with its huge scale, varied market, purchase patterns, and industries, offers massive opportunities for companies to expand and experiment in online commerce. The consumer today expects swift and convenient deliveries. Used to rapid doorstep deliveries at the time of their choosing and, more often than not, in the shortest period possible, consumers are now accustomed to seamless logistics. In light of this, the supply chain and logistics sectors will need to adapt and evolve.

Sustainability : Accelerated growth in logistics is a direct result of the boom in Q-commerce and E-commerce. While digitisation has evolved how the industry works and opened new avenues and markets for retail, it has also increased the use of non-renewable sources of energy, which can lead to climate degradation. With thousands of vehicles in use for logistics, the industry needs to figure out sustainable solutions and a greener approach to reduce its carbon footprint. Reducing carbon emissions is not an option anymore but rather a crucial step to ensure our planet's survival. Working towards sustainable solutions will not only help the planet but also create opportunities for exciting partnerships. Besides this, adopting an eco-friendly approach builds rapport with consumers, who are now more appreciative of sustainable practises. This includes EV adoption for fleets. EVs allow for connectivity and end-to-end visibility. The electrification of fleets will help businesses reduce global greenhouse gas emissions.

Technological advancement: One of the major bottlenecks in logistics today is route optimisation which often leads to excessive use of resources. As of now, once an order is placed and the customer enters their address, there is no technology in place to help the rider figure out the shortest route for delivery. This gap is leading to energy waste and delayed deliveries. Technology can optimise delivery routes and save energy. Currently, there is no algorithm to decipher the shortest route for delivery. Technological advancements in route optimisation will be one of the biggest trends in supply chain management.

Blockchain : A Blockchain is like a digital ledger. Every transaction via blockchain is recorded on a block and across multiple copies of the ledger that are distributed over many nodes. Managing today's Logistics operations is extraordinarily complex. IT involves multiple stakeholders, spans hundreds of steps, multiple verification processes, a multitude of locations, both domestic and international, and is often extended over months of time. Blockchain helps find order in this chaos with improved visibility, traceability, increased security, reduced costs, and preventive measures. Blockchain is a boon for the logistics industry. It can assist businesses in supply chain management by increasing efficiency and security and reducing costs and inconveniences. By playing a crucial role in collaboration and optimisation, blockchain will further increase the efficiency of transactions.

Robotics and Drone Deliveries : The logistics industry is witnessing an influx in robotics. Companies will continue to experiment with drone deliveries. The increased use of robotics and drones will advance hyperlocal delivery, especially for rapid deliveries without putting the riders' lives at risk.

Data Analytics : The availability of large volumes of data combined with advanced analytics tools allows for better demand forecasting, inventory management, and risk mitigation. Predictive analytics can help identify potential disruptions and bottlenecks, enabling proactive decision-making to optimize the supply chain. The evolving supply chain landscape will require innovative solutions to leverage emerging technologies and manage complex logistics operations.

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Source: ABP News Bureau

CLIMATE CHANGE IS DISRUPTING THE GLOBAL SUPPLY CHAIN TOO

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Source:: www.wired.com

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GLOBAL STEEL DEMAND LIKELY TO RISE 1.8% IN 2023, 1.9% IN 2024: WORLD STEEL

Indian steel offtake expected to continue its high growth momentum

ACHUTH VINAY

The demand for steel worldwide will witness a 1.8 per cent growth in 2023 and 1.9 per cent in 2024, the World Steel Association (worldsteel), a body which has a membership of every steel producing country, said.

In its short-range outlook, worldsteel said the demand will increase to 1,814.5 million tonnes (mt) in 2023 and 1,849.1 mt in 2024. The association had pegged 2022 crude steel at 1,831.5 mt, down 4.3 per cent compared with 2021.

Situation better in developing economies : Worldsteel said demand recovery would be slow in developed economies while it sounded upbeat about the prospects of developing nations. "Steel demand has been feeling the impact of the high inflation and interest rate environment. Since the second half of 2022, the activities of steel-using sectors have been cooling sharply both for most sectors and regions as both investment and consumption weakened. The situation continued into 2023, particularly affecting the EU and the US. Considering the delayed effect of the tightening monetary policy, we expect steel demand recovery in 2024 to be slow in the advanced economies. Emerging economies are expected to grow faster than developed economies, but the performance of emerging economies continues to diverge, with emerging Asia maintaining resilience," the organisation said.

India growth story to continue: The Indian economy remains stable against the pressure of the high interest rate environment, and India's steel demand is expected to continue its high growth momentum. Growth in India's construction sector is driven by government spending on infrastructure and recovery in private investment. Infrastructure investment will also support the capital goods sector growth. Healthy growth momentum will continue in the automotive sector as well. After growth of 9.3 per cent in 2022, steel demand is expected to show healthy growth of 8.6 per cent in 2023 and 7.7 per cent in 2024.

China may see slightly positive growth

The outlook said Chinese steel demand contracted in 2021 and 2022 as its economy decelerated sharply due to unexpected lockdowns that extended across the country. The depression in the property market that continued into 2023 is weighing on the economy, leading to an unexpected slowing of the Chinese economy.

Almost all steel-using sectors have shown signs of weakening since the second quarter. The government may kick off some additional infrastructure projects. As a result, infrastructure investment in both 2023 and 2024 is expected to remain moderately positive.

Source: www.thehindubusinessline.com

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IS PRIVATE INVESTMENT IN THE ECONOMY ON REVIVAL PATH?

Private investment nosedived from 16.8% of the GDP in FY08 to 10% in FY22 (latest available data).

PRASANNA MOHANTY

Exactly a year ago, Finance Minister Nirmala Sitharaman was disheartened that despite the corporate tax cut (2019) and the PLIs (from 2020) private investment wasn't picking up and told them the story of Hanuman to inspire. Now, the minister is optimistic and so are FinMin's monthly economic reports (MERs) and the RBI's bulletins.

What is the basis for such optimism?

Is private investment reviving?

The MERs claim "green shoots" in private investment which higher government capex is "crowding in". This assessment is based on various factors: (i) Crisil data showing CAGR of 7% in private industrial investment during FY18-FY22 (ii) CMIE data showing new investment announcements 11.6% higher in Q1 of FY24 – highest in 14 years (iii) private GFCF rising from ₹ 17.4 lakh crore in FY18 to ₹ 23.7 lakh crore in FY22 (current prices) (iv) capacity utilisation (CU) up by 76.3% in Q4 of FY23 (v) IIP up by 4.5% in Q1 of FY24, notably in capital goods and infrastructure/construction goods (vi) imports of capital goods up by 20.3% in FY23 and 4.2% in Q1 of FY24 (vii) bank credit non-food bank growing in double digit since April 2022, notably to infrastructure sector and (viii) "going forward", the PLIs and new-age sectors (green hydrogen, semiconductors, wearables and solar modules) are "expected to account for" 17% of the capex between FY13 and FY27.

The RBI's assessment is based on (a) credit growth and (b) new private projects sanctioned ("envisaged") reaching "a new peak" in FY23 since FY15.

The claims on "envisaged" projects (by the MER and RBI) mean nothing because the same RBI report also says only 15% of such projects translate into "actual" private GFCF. The conversion rate has "declined significantly" – from 40.5% during 1971-72 to 2010-11 to 15.5% during 2011-12 to 2021-22. Going by this conversion rate, projects announced in Q1 of FY24 would mean actual private GFCF of ₹ 41,314 crore over several years – just 1.75% of ₹ 23.7 lakh crore of private GFCF in FY22 (the last fiscal for which this data is available).

The claims of private investment growing at 7% or rising from ₹ 17.4 lakh crore to ₹ 23.7 lakh crore in FY22 are without context. Here is the right way to look at these data.

The National Accounts Statistics (MoSPI) shows, private GFCF during the five fiscals of FY18-FY22 averaged 10.3% of the GDP. This is a significant fall from 11.5% in the previous fiscals of FY13-FY17. In fact, for the first time in the 2011-12 GDP series, private GFCF slipped below 11% in FY18 and continues to do so – ending at 10% in both FY21 and FY22.

If the back series of 2011-12 GDP is looked at, private GFCF has collapsed from a high of 16.8% in FY08. (All at current prices to match with the MER data.)

Why did this collapse from FY08 happen?

Three factors are at play:

- FY08 was the beginning of the Great Recession of 2007-09.
- Credit outflow to banks "slowed down" and banks "started facing" NPA problems from FY08 (says FinMin think tank NIPFP's study "Reviving Private Investment in India: Determinants and Policy Levers" published in November 2016).
- Economic slowdown began towards the end of the UPA years – but was first masked by 2.5-3.7 percentage points of "overestimation" of GDP growth during FY12-FY17 in the new 2011-12 GDP series (ii) twin shocks of demonetisation, GST and (iii) the pandemic of 2020 and 2021.

Coming back to the present, the MER of August 2023 actually shows a falling graph of private GFCF (as percentage of GDP) in Q1 of FY24.

The RBI's September 2023 bulletin shows growth in overall GFCF (government plus private) was 8% in Q1 of FY24 – lower than the previous nine quarters. The MoSPI data shows, growth in overall GFCF falling from 25.6% in FY22 and 17% in FY23. Its growth averaged 9.5% during FY13-FY23 (current prices).

Thus, not just private GFCF, the overall capex (government and private) is losing steam. Incidentally, the Centre's capex in Q1 of FY24 grew at 59% - much lower than states' capex growth of 74.3% (MER, Aug 2023).

Do CU, IIP data point to need for capacity creation?

The RBI's latest report on capacity utilisation of manufacturing units shows it averaged 74.3% in FY23 – after languishing at 65% in FY21 and FY22 (pandemic hit). This is an improvement but doesn't necessarily point to the "need for additional capacity creation" for many reasons. One, a capacity utilisation of about 75-76% still mean 24-25% of idle/unutilised/surplus manufacturing capacity. During FY10-FY12, it was close to or above 80%.

On the other hand, the IIP numbers (manufacturing) actually paint a depressing picture.

The latest data (MoSPI) released on September 12, 2023, shows:

- Of the six use-based IIP indices, growth in four fell sharply during April-Jul 2023, compared to the corresponding period of FY23 – primary goods fell from 11% to 4.5%, capital goods from 22.4% to 4.8%, intermediate goods from 9.5% to 2.8%) and consumer durables from 19.7% to -2.7%.
- Only two indices registered higher growth – infrastructure/construction goods rising from 8.8% to 12.2% and consumer non-durables from 0.1% to 6.8%.
- Of three sectoral IIP indices, growth in two slipped sharply – manufacturing fell from 10.2% to 4.8% and electricity from 13.2% to 2.9%. The third, mining IIP, saw a moderate growth from 6.1% to 7.3%.
- Overall IIP (general IIP) growth slipped sharply from 10% to 4.8%.

Taken together, the CU and IIPs numbers don't point to revival of private investment.

The rise in imports of capital goods (MER's claim) is contra-intuitive because its production (IIP) is falling sharply. Is it because of (a) over-invoicing for money laundering or (b) misclassification for evading tax? Investigations would clear the picture.

Double inversion in credit outflow

Credit growth has inverted in FY20. It is no longer driven by 'large industry' or 'industry' – which invest in manufacturing or infrastructure. It is driven by "personal loan" – for consumption expenditure, not produce goods and services. Personal loans overtook 'large industry' in FY20 and 'industry' and services in FY22. This trend continued in FY23 and also in Q1 of FY24.

There is a second inversion: Services overtook 'large industry' in FY20 and 'industry' in FY23 – which continues in Q1 of FY24.

As for the MER's claim that credit flow to infrastructure has improved, this rise is very marginal – just 1.5% in one year between June 2022-June 2023 – its own data shows. The MER's last point is "going forward" PLIs and new-age sectors would bright higher private investment. This is for the future.

Other bad signs for private investment

Consider the following facts:

(a) Growth in manufacturing GVA is falling from 6.1% in Q1 of FY23 to 4.7% in Q1 of FY24 – both lower than overall GVA growth of 11.9% and 7.8% in the respective quarters. In fact, manufacturing GVA grew at 1.3% in FY23 when the overall GVA grew at 7% (all constant prices).

(b) Growth in consumption demand (PFCE) is going down from 20% in Q1 of FY23 to 6% in Q1 of FY24 – which are also below the respective quarters' overall GDP growth of 11.9% and 7.8%. The quarterly growth in PFCE is also below their annual growth of 11.2% in FY22 and 7.5% in FY23 (all constant prices). This is a very worrying sign (red-flag).

(c) Growth in government expenditure (GFCE) is going down from 1.8% in Q1 of FY23 to -0.7% in Q1 of FY24. These are also below their annual growth rate of 6.5% in FY22 and 0.13% in FY23 (all constant prices).

(d) The RBI's estimate shows the GDP would sequentially slowing down from 7.8% in Q1 to 5.7% in Q4 of FY24.

(e) Here is another bad news: Growth in FDI inflows is consistently slowing down from 25% in FY15 to 3% in FY23 and (-)16% in FY24 (up to June 2023) – as per the DPIIT (Department for Promotion of Industry and Internal Trade). A recent Nikkei Asia report explains that this is because MNCs are finding Vietnam and other competitors more attractive.

To sum up, the proverbial 'Hanuman' is still not flying but still grounded for the past 15 years (after reaching 16.8% of the GDP in FY08).

It's time for the Centre and the RBI to carry out comprehensive studies, consult experts, debate and devise plans and strategies to improve private investment.

Source: FORTUNE INDIA

MAKE SUPPLY CHAIN RESILIENCY THE CORNERSTONE OF YOUR RISK PREPARATION PROGRAM

Keep your company one step ahead by optimizing your supply chain to mitigate unexpected challenges or disasters.

ANNA SMITH

Barely owned for a year and already a pile of ashes — 230,000 square feet of finished-goods warehouse space for custom fabrication company Morgan Li is decimated by a massive fire.

"A good portion of that was stuff we brought in from China for one of our biggest clients," says Morgan Li CEO Andy Rosenband.

In a matter of hours, the Chicago Heights, Illinois-based manufacturer of fixtures, furniture and graphics lost one of its five domestic facilities. However, just seven months after this immense blow, the third-generation family business is on a path of rebuilding and growth, including new projects and clients.

How did the company do it? A few key supply chain strategies.

"In our business, there are people who only import and who only do domestic. We have bridged the gap. We have full redundancy; everything we can do in China, we can do here, and vice versa. That was even before COVID. That was just a strategic plan that we put in place," Rosenband says.

Morgan Li's blended onshore/offshore manufacturing process allowed it to preemptively prepare for changing market conditions by leaning on a flexible supply chain.

By combining domestic and international manufacturing, "there are cost efficiencies in terms of shipping, bringing in parts raw, that we then marry up with parts we're making here," he says. "Then we can use our in-house capabilities, our manufacturing, our welding ... and ship that out to our client at much more competitive costs. So again, it's just offering our clients a menu of fabricating options. It really has helped us gain market share and increase customer base."

The stuff that burned up in the fire? Those items became the No. 1 priority for Morgan Li's U.S. facilities where workers moved fast to beat shipping deadlines.

"Whatever it cost, we got it done to make sure that our clients weren't impacted," the CEO says.

It wasn't cheap or easy, but the company survived the crisis without losing critical customers.

"Obviously, losing 230,000 square feet overnight is a really big challenge. And we're still sort of managing that today, but we're savvy ... we've been incredibly responsive to the needs of the business," he says.

Not only has the company's recovery been good for business, but it empowered Morgan Li to take care of its 67 warehouse employees.

"We were able to disperse them into our other facilities," all located within an eight-mile radius, Rosenband says.

A smoking hole where a warehouse once stood is an extreme example of supply chain disasters, but Morgan Li's ability to overcome the disaster is a great example of preparation and execution. Two experts shared long- and short-term tips that businesses can also take to be ready for the worst.

Do Your Homework

Morgan Li's actions pre- and post-fire prevented the disruption from becoming a complete catastrophe. What lessons can other companies learn from this event about creating supply chain resiliency to avoid or mitigate potential challenges?

According to Paul Stepanek, president of **Complete Manufacturing and Distribution**, no one-size-fits-all solution works for all companies, but the ones that do their homework upfront to build strong foundations tend to stay a step ahead.

"Let's just say you had an event that forced you to rethink your supply chain. If you're waiting until that event happens ... that whole process could be six to 12 months," he says. If you are proactive instead of reactive, "you're six months to a year ahead of where you would be if you were waiting on your heels."

To create resilient supply chain contingency plans, companies should decide which ideas fit best for their industry.

Having diversified suppliers gives you more backup options if you have a fail point, Stepanek says. "Once you get into that space of having enough volume, having more than one location, especially for components that are either long lead time or that might be more critical to the overall product, it's important to have a diverse supply chain, and it could be within one country, or it could be multiple countries."

In addition, having good relationships with these suppliers can offer more security to your supply chain.

For example, if a supplier suddenly becomes inundated, it may not have the capacity to make your parts, Stepanek says. "But if you're already a part of them, and you've been working with them for months or years ... you pay on time, and you work through problems together, that's a very powerful thing over the long term."

Location can also be a big factor in creating a robust supply chain.

One point to consider for manufacturers is localizing on the component level. "So, in China as an example, if you're manufacturing an assembled product and you have a bill of materials of hundreds of parts, you don't try to localize in that new country, say Vietnam, you don't try to localize hundreds of different manufacturing process parts all in one go, you go after big bulky parts that aren't very shippable," he says.

Also, Stepanek says manufacturing closer to the market is a viable option for some brand owners. "As long as those places where you're manufacturing are efficient, not only from a manufacturing perspective, but also getting the goods then distributing the products to the end user."

Although strategies will differ from company to company, there is one constant theme: Be proactive. Building out a supply chain is a process that takes time, so companies that are practical in calculating possible risks will have established building blocks to react properly.

"Some companies have taken the approach of 'When it happens, we'll be in the same boat with everybody else, so we'll just wait until we have to,'" Stepanek says. "And there are other companies that are doing it very proactively ... 'We're going to have options that we can play off of each other. And we can toggle volumes between different suppliers. But we're going to have them both running production simultaneously. So that if either one of them is not able to supply, we always have that backup in place.'"

"The companies that do that work create a lot more resiliency ... and the companies that don't, their hair is on fire, and they're running from firefighting to firefighting," he says. Although the riskiness of not adequately preparing for disruptions can vary depending on the product you produce, Stepanek says erosion of the brand can occur if resilience is not built in.

"The kiss of death for a brand owner is they have the demand, but they're not able to meet the demand. And today is a world where the consumer is so fickle, that 'If I can't buy it here in the next five minutes, I'm going to go buy it there.'"

End-to-End Awareness

"Managing day-to-day as well as looking out for things that could happen five or 10 years from now, that's key," says Adhish Luitel, senior analyst that leads the Supply Chain Management & Logistics Research practice at ABI Research. A company supply chain "needs to evolve over time, improve over time to meet ever changing conditions" to minimize disruptions due to disruptive events.

Luitel says that a reliable disaster recovery plan is important for any business with a dedicated supply chain. "Without that, you can fall under any type of risk, like data loss, reduced productivity, out of budget expenses, reputational damage, that just impacts your bottom line."

Luitel emphasizes that while developing these business continuity plans, companies should not only look at macro trends but also vulnerabilities that are within their control. In this way, they are able to take actionable steps to prepare for the unknown.

"[Increase] supply chain visibility," he says. "What I mean by that is making sure you're tracking your containers, you're tracking your pallets, you're tracking your crates. Now, technology has reached to the level where you can even attach IoT solutions onto individual items ... Does that make sense for every company? Probably not. But reaching that level of granular visibility is very key."

Luitel says COVID made some things clear about inventory levels. "Making sure they're avoiding running out of stock, having a safety stock," and fostering flexible production are aspects that have been highlighted by the pandemic, he says.

Taking advantage of data and digitalization will also help in creating contingency plans, he says. "Forecasting demand, for example, promoting agility, trying to be more flexible during unexpected events by looking at the best-case scenarios, looking at the worst-case scenarios, really taking scenario planning to the next level using data analytics."

Building off this idea, Luitel suggests conducting a supply chain vulnerability audit. "Looking at all the risks that you might potentially come across and developing this plan to mitigate the impact of any kind of disruption speaks to scenario planning as well, just to identify all the potential risks."

On the supplier side, Luitel echoes Stepanek, noting that augmenting procurement and sourcing, identifying backup suppliers and improving supplier relations are recommended strategies.

Luitel's strategies on optimizing your supply chain to create contingency plans:

- Increase supply chain visibility
- Increase inventory levels
- Create flexible production and automation
- Diversify suppliers
- Use data analytics
- Conduct supply chain audit
- Improve supplier relations
- Keep an eye on market trends

Despite the emphasized importance of being cautious, proper preparation does not always lead to immediate value.

"With risk mitigation, you can't see the benefits right away. And a lot of companies are very demanding of their investments ... and unless they see a very clear ROI from the get-go, a lot of companies don't even think about investing in those," Luitel says. "I think it's a matter of just looking at this from a different lens ... having that level of cushion where companies can work their way around different kinds of disruptions that might occur, that's super important."

Despite this, Luitel has seen a rise in the adoption of risk management platforms, and he believes supply chain strategies will continue to be a growing focal point for companies.

"The last decade really was a redefining era for global supply chain in terms of how we're looking at nearshoring, how we're looking at manufacturing, how we're looking at end-to-end visibility ... the acceleration of ecommerce, for example, click and collect, that's a trend that's really growing, 'Amazonification' of things, so to speak," he says. "That has really put a priority on supply chain resilience, and risk mitigation for supply chain."

Source: www.industryweek.com

OPTIMIZING SUPPLY CHAIN RESILIENCE FOR SUSTAINABLE FUTURE SUCCESS

Data collection, collaboration and change management are keys to building resiliency says SAP executive

BRIAN STRAIGHT

Disruptions are the new normal for the supply chain, but for organizations that still want to build resiliency that minimizes disruptions such as climate change and geopolitical events, the opportunity is there. And it doesn't have to be a cost center.

"Now everybody understands it's not all about cost and efficiency in your supply chain," explained Darcy MacClaren, chief revenue officer of SAP Digital Supply Chain. "You have to, what we call, future-proof it and reduce the risk."

In an interview with Supply Chain Management Review, MacClaren said that building resiliency doesn't have to be a money-losing proposition for businesses, pointing to the issue when there is a disruption in an area.

"If you have to react, or you lose that contract manufacturer in that region, or you have to find on short notice another logistics service provider, ultimately that's going to cost you more," she said. "So it's looking at it a little bit differently. What risk-proofing is really making sure that you're not putting your company at risk and maybe even shutting it all down. I actually say I don't think it's costing customer companies more. It's actually costing them less, and the ability to set their organizations up with their ability to sense, recognize more quickly, react and then ultimately meet their customers' needs. But now they're doing it in a different way."

Technology makes the job easier : MacClaren said that adding technology to the equation is making this an easier process for many companies. The use of historical data points, Industry 4.0 technology, and even artificial intelligence is helping company better understand the risks and how to navigate them proactively.

SAP itself recently introduced a natural language processing tool, Joule, designed to provide contextual insights and help drive better business outcomes. Joule is being embedded in the SAP cloud enterprise portfolio.

"Where technology is becoming more and more important, it's not only in robotics and Industry 4.0, it's actually in the data analysis, making recommendations in your business," MacClaren said.

MacClaren said the introduction of technology is helping organizations better manage these disruptions.

"The disruptions are becoming more severe. The geopolitical ones we've always had. [But] I would say the ones that are coming more frequently happen to do more with environmental disruptions," she said. "If you look at what's happening, you have a lot of the waterways in the U.S. are drying up. That's causing huge problems. We have shortages of rice in India because it's too dry. We have fires in California. We have all these environmental disruptions coming and I think what we recognize now is even if they're in a different region of the world, they impact everything."

Targeted approaches : Unfortunately, MacClaren said the variety of disruptions make it virtually impossible to create a standardized approach to future-proofing your supply chain. SAP offers "integrated business planning," which MacClaren said is an approach where risk is assessed throughout the organization and its supply chain so more effective decisions can be made. This model can also incorporate customer sentiment, climate change, raw material shortages and more.

"So when ... if they do happen, when you're in a shorter time horizon, you have the ability to rapidly react and and it's in a much more efficient way," she said. "But the bringing in of information - market information, forecasting information, information on what trends we think are happening across the board - from these services are becoming almost a necessity if you're going to have a risk proof your supply chain."

Much of future-proofing supply chains comes down to probabilities, MacClaren added. It is impossible to predict a hurricane a year in advance, for instance, but by looking at probabilities, an organization can better position its supply chain to adapt should one occur.

MacClaren noted that successfully future-proofing involves three approaches: connectivity of the technology (manufacturing to sales to operations, etc.), contextual (does the data matter, is it relevant), and data (do you have the data you need).

"You have to be able to collaborate with all your partners," she said, noting that includes both internal and external partners.

And in the end, the success of any program comes down to change-management and getting that collaboration between silos.

"Because until you do that, you know if you're going to measure people and I only get measured on my transportation spend and I get measured on the inventory levels and I get measured on this, it's very difficult to tell people to get out of your silo, look at the bigger picture for what's right for the customer, the company and our environment," MacClaren summed up.

Source: www.supplychain247.com

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AI TOOLS FOR MANUFACTURING OFFERS FIVE USE CASES IN MANUFACTURING FOR GENERATIVE AI

Artificial Intelligence (AI) and related Machine Learning (ML) are of course all the rage these days, with technology heavyweights such as Microsoft, Google, Oracle, SAP, Amazon and many others developing AI-based tools and solutions.

Google Cloud made news last week by announcing a suite of AI-based tools that it says will drive efficiencies in manufacturing operations. The new tools are based on what is called generative artificial intelligence (GenAI), which in great summary means AI that can produce content.

The tech giant made a similar announcement relative to AI solutions for the healthcare sector.

For manufacturers, Google detailed a series of AI use cases, as summarized below:

Machine-generated events monitoring: The Google Cloud **blog post** announcing the new products noted that "Gen AI can play a key role in transforming maintenance workflows and staying one step ahead with predictive maintenance. It helps manufacturers optimize operations by interpreting telemetry from equipment and machines to reduce unplanned downtime, gain operating efficiencies, and maximize utilization. If a problem is identified, gen AI can also recommend potential solutions and a service plan to help maintenance teams rectify the issue."

Customer-service automation: Google Cloud says that manufacturers are finding that GenAI "provides a helpful, value-added customer service experience that automates and accelerates time-to-resolution for common interactions like product troubleshooting, ordering replacement parts, scheduling service, product information, and product operation."

Document search and synthesis: Here, Google says that "Gen AI can quickly sift through generations of documents throughout the product lifecycle, extracting and summarizing the information needed by sales teams and technicians." It can also synthesize purchase orders and quickly provide customers a quote, eliminating the need for sales teams to manually cross-reference emails with inventory availability.

Product/content catalog discovery: Here, the blog says that "Using gen AI, manufacturers gain an efficient method to match requirements to the specifications of products they buy, and provide the same service to their customers." It adds that "Gen AI-enabled sales applications can provide sales recommendations based on historical sales data, in-stock data, master data, and more, adding that results could be combined with more descriptive statistics on sales data joined with meta-information that is uploaded by sales agents, giving a clear visibility into the buying process."

Supply chain advisor: Interestingly, Google states that "Gen AI can act as a supply chain advisor, providing greater visibility across complex networks and delivering recommendations for best-suited suppliers based on relevant criteria — such as bill of materials specifications, raw material availability and delivery schedules, or sustainability metrics." Google adds that GenAI is adept at extracting provisions using natural-language processing from legal and contractual documents, and can deliver real-time insights into supply chain performance to help improve decision-making.

While not particularly well explained as to how this really works, it still seems like a lot of potential applications. Google in the blog does note the availability of an "executive's guide to generative AI" to help with understanding the basics.

The blog notes that supply chain disruptions have often negatively hit that bottom line, with 45% of the average company's yearly earnings expected to be lost over the next decade.

Closer to home, companies are struggling to fill critical labor gaps, with over half (54%) of manufacturers facing worker shortages. It is not clear where these numbers came from.

"Challenges like these demand new solutions. And gen AI has the potential to deliver them," Google argues.

Source: www.scdigest.com

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

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

Artificial intelligence has permeated into most industries globally, and logistics is not behind! With the development of AI capabilities, supply chain systems have benefited greatly. Modern innovation has led to warehouse automation, predictive analytics, smart roads, automated vehicles, and much more. These technological advancements have no signs of stopping. In fact, the MHI annual report states that by 2026, businesses will adopt AI-powered warehouse solutions by more than 60%, as compared to 2020.

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

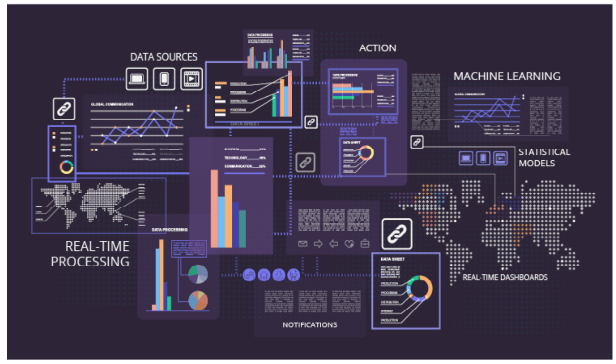
AI in logistics is still a developing field, so there are several new and future opportunities to explore globally. Let's discuss some of them here.

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

Big Data Analytics

AI doesn't just mean robots and smart speakers. Its core lies in data-driven analytics. In logistics, big data analytics can help predict risks, bad weather, optimal routes, and much more.

You can use its highly accurate insights to improve the future performance of several facets of the supply chain, as several logistics giants are already doing.



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

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

Autonomous Vehicles: The logistics industry already uses high-tech driving assistance for better safety. This trend is only set to soar higher, with features like highway autopilot, assisted braking, platooning, electric semi-trucks, etc., set to enter the market in the near future. Companies like Google, Tesla, Volkswagen, and Einride are developing fully autonomous vehicles. Autonomous options save fuel and transportation costs, improve customer experience, and optimize shipment fulfilment. Autonomous drones can conduct last-mile delivery without human assistance, and AI-powered vehicles use sensors and route mapping techniques to deal with obstacles on the road.

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

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

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

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

Smart Warehouses : Smart warehouses can recognize patterns and dependencies based on unstructured data from IoT, AI, and cloud computing. This data can then be applied to find solutions to new hurdles in logistics. This improves operational efficiency and reduces manual load. Alibaba's logistics department, Cainiao, has a smart warehouse in Huiyang with more than 100 self-charging automated guided vehicles (AGVs) equipped with Wi-Fi to oversee transportation. It has proven to increase productivity and is expected to be adopted more commercially in the near future.

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

UPS's ORION uses advanced AI, algorithms, and ML to offer delivery estimates and ensure dependency. Through this route planning solution, it has saved more than 100 million miles and 10 million gallons of gasoline since 2012. Automated route planning is the norm for the future. More and more logistics giants are putting their stakes in it to improve customer experience and reduce delivery failures.

Conversational AI : We generally associate conversational AI with sales and customer service. However, chatbots and virtual assistants can also work wonders for logistics. By analysing large volumes of data and human interactions, conversational AI can provide regular updates about route delays and other roadblocks. It ensures comprehensive visibility of the shipment and can keep users updated about the delivery status on any other information they might require. Salesforce Service Cloud resolves customer requests through conversation AI for faster resolutions and a seamless support experience.

Robotics: Robotics is already used within the supply chain for locating, tracking, and transporting inventory. They can also sort oversized packages at ground distribution centers. The Dutch company Fizyr uses robots to automate logistics through deep learning algorithms.

Through robotics, you can automate decision-making and also count, pick, process, analyze, and manipulate goods. A **logistics management platform** can also be integrated with robotics for the physical moving of goods in seconds without human involvement. All these AI developments are already present in the logistics industry to some extent. But what does the future entail?

What Does the Future Hold for AI In Logistics?

The current developments in AI logistics are just the beginning. The future looks much more technologically advanced, with a holistic collaboration of logistics companies with tech solutions. Deep learning algorithms will find wider use, ML and NLP models will take over communication systems, and companies will be able to process big data for more accurate decisions.

We can also expect more advanced AI-based applications focusing on fleet management and **logistics data security**. AI can help in logistics planning, develop smart roads and vehicles, ensure logistics security (both physical and digital), and boost productivity. You also get real-time visibility into your entire supply chain. This way, you can foresee damages and delays and work towards improving the overall customer experience.

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

Citations:
https://www.mhi.org/publications/report
https://www.scnsoft.com/blog/real-time-big-data-analytics-comprehensive-guide
https://about.ups.com/us/en/newsroom/press-releases/innovation-driven/ups-to-enhance-orion-with-continuous-delivery-route-optimization.html#:~:text=ORION%20is%20a%20proprietary%20technology,significantly%20improve%20upon%20those%20results.
Source: www.logisticsandscm.com

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'INDIA SOLUTION TO SUPPLY CHAIN WORRIES': PM MODI

RAJEEV JAYASWAL

Prime minister Narendra Modi addresses the B20 Summit India 2023, in New Delhi. PM Modi said that India emerged as a trustworthy nation even during the time of grave crisis like the Covid-19 pandemic.

Prime Minister Narendra Modi on Sunday called upon global chief executives to take businesses beyond bottom-lines by adopting an inclusive, consumer-centric approach while focusing on sustainability, and invited them to invest in India as the country is significantly positioned to create an "efficient and trusted" global supply chain.

Addressing the B20 Summit India 2023 in New Delhi, the Prime Minister also alluded to the theme of the event: "R.A.I.S.E: Responsible, Accelerated, Innovative, Sustainable, Equitable Businesses". B20, or Business 20, is the official G20 dialogue forum with the global business community.

Modi said that the partnership of global businesses with India is significant because of a strong trust factor. India emerged as a trustworthy nation even during the time of grave crisis like the Covid-19 pandemic which devastated the global economy, he said.

The pandemic taught a lesson to all, Modi said. "The lesson is that we now have to invest most on the mutual trust" taking cue from the pandemic that shattered the edifice of mutual trust among many nations, globally. "Even, in this environment of distrust, the country that stands in front of you as flagbearer of trust — with all sensitivities and humility — is India."

Irreversible changes have taken place in many spheres globally after the pandemic, including in the global supply chain, Modi stressed. "Earlier, it was said that nothing to worry till the time the global supply chain was efficient," he said, asking the audience if such supply chains could be called efficient which would get disrupted at a time when it was required the most. "When the world is struggling with this question, friends, I assure you, the solution to this problem is India."

The Prime Minister told businesses to focus on sustainability.

"Sustainability must not be confined to rules and regulations, it should be the part of day-to-day life. Sustainability in itself is an opportunity as well as a business model," the Prime Minister said, giving the example of millets which is an environment-friendly superfood that also supports small farmers besides providing additional opportunities to the food-processing sector.

Again alluding to the impact of the pandemic, Modi said people are now more conscious than before about their health, and this is visible in day-to-day activities. "Health-consciousness is immediately visible on the dining table... When we buy something, eat something... in everything we definitely assess how it would impact our health... we are not just concerned about today, but we also evaluate how it would impact in the long-run. It is my belief that businesses must have the same thinking about society and planet," he said.

"Before taking every decision, it must be assessed, how the decision would impact the earth. This is the objective of Mission LiFE, or lifestyle for environment," he said, calling for a movement of "pro-planet people". Many problems will be automatically resolved when life-style and businesses both become pro-planet, he said, pointing out that India is preparing a framework that looks beyond "carbon credit" at "green credit".

Besides providing environment of trust in the time of the Industry 4.0, India is the face of digital revolution, Modi said. "The more your friendship deepens with India, the more prosperous both would be... You all know, business can transform potential into prosperity, obstacles into opportunities, aspirations into achievements. Whether they are small or big, global or local, business can ensure progress for everyone. Therefore, the future of global growth is dependent on the future of business."

The PM, therefore, asked businesses to think beyond brands and sales, and create an ecosystem for long-term gains. "Now, due to the policies implemented by India in the past few years, 13.5 crore people have come out of poverty in just five years. These people are the new consumers. This neo middle-class is also giving momentum to India's growth," he said.

Modi told global businesses to focus on inclusive growth; on improving the purchasing power of more and more people as a "self-centric approach will eventually harm everyone". In this vein, he cautioned against the uneven availability of critical materials such as rare earth metals. "If those who have them do not see it as a global responsibility, then it will promote a new model of colonialism," Modi said.

Emphasising on inclusive growth, he said a profitable market can be sustained when there is a balance in the interests of both producers and consumers. "This also applies to nations. Treating other countries only as a market will never work. It will harm even the producing countries sooner or later. Making everyone equal partners in progress is the way forward," he said.

"There are many global business leaders here. Can we all give more thought to how to make businesses more consumer-centric? These consumers could be individuals or countries. Their interests need to be taken care of as well. Can we think of some sort of a yearly campaign for this? Every year, can global businesses come together to pledge themselves for the good of the consumers and their markets?" he said, giving a call for celebrating an international consumer care day.

Speaking about India's successful lunar mission — the landing of Chandrayaan-3 on August 23 — he said it was also an accomplishment of the industry as many of its components were supplied by private sector and micro, small and medium enterprises (MSMEs). "This is a success of both science and industry. This is the celebration of running a responsible space programme," he said adding that it signifies innovation, sustainability and equality and it augurs well with the theme of B20 — R.A.I.S.E.

PM emphasised that the letter "I" in the middle of "RAISE" could also represent "inclusiveness" along with "innovative", and this reflected in India's approach when it invited the African Union as a permanent member of the G20.

B20 has placed 54 policy suggestions and 172 specific recommendations before the G20, which were "built on a consensus process" with more than 1,500 chief executives and experts from 55 countries attending more than 100 events in the last seven months since the first conference was held in January this year in Gandhinagar, N Chandrasekaran, chair of the B20 India and executive chairman, Tata Sons, said.

Summarising the achievements of B20, Chandrasekaran said B20 has a four-pronged approach — Global B20 Institute based out of India, action plans for decarbonisation, creation of a private-sector fund for SDG goals especially focused on developing economies, and a global compendium of technical case studies that can be replicated by all other nations.

Source: Hindustan Times

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Indian Institute of Materials Management

MISSION

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

OBJECTIVE

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

CODE OF ETHICS

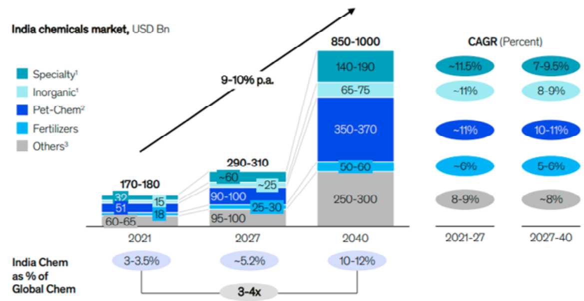
- To consider first the total interest of one's organisation in all transactions without impairing the dignity and responsibility of one's office :
- To buy without prejudice, seeking to obtain the maximum ultimate value for each rupee of expenditure.
- To subscribe and work for honesty and truth in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

INDIA: THE NEXT CHEMICALS MANUFACTURING HUB

India is the 6th largest producer of chemicals in the world and 3rd in Asia, contributing 7% to India's GDP. The chemicals industry in India covers more than 80,000 commercial products. India accounts for 2.5% of the world's global chemical sales, exporting to more than 175 countries. The industry is expected to reach US$ 304 billion by 2025 at a CAGR of 9.3%, driven by rising demand in the end-user segments for speciality chemicals and petrochemicals segment. Over the last few years, the Indian chemicals sector has outperformed all shareholder expectations, surpassing not only the entire equities market but even the majority of its upstream and downstream industries. India's chemical sector is currently estimated to be worth US$ 220 billion in 2022 and is anticipated to grow to US$ 300 billion by 2025 and US$ 1 trillion by 2040. During the global pandemic, the chemical industry was one of the few sectors that not only survived but also grew by leaps and bounds.

The general global dynamics have prompted major multinational corporations to shift their focus to downstream chemical potential, resulting in a greater emphasis on petrochemicals and speciality chemicals in India to increase self-sufficiency. India's desirability as a manufacturing destination has grown as a result of competitive labour prices, the capacity to establish manufacturing units at a lower cost than in the developed countries, and recent adjustments to corporation tax rates that have moulded a more friendly ecosystem.

Chemical Industry in India : The chemical industry is a knowledge intensive as well as capital-intensive industry. It is an essential component of the expanding Indian industry. It covers basic chemicals and their derivatives, petrochemicals, fertilizers, paints, varnishes, gases, soaps, fragrances, toiletries, and pharmaceuticals. Over eighty thousand commercial goods are included in the chemical industry's extensive diversification. This industry plays a critical role in satisfying fundamental requirements and increasing quality of life. The industry is the country's mainstay of industrial and agricultural development, providing building blocks for a variety of downstream sectors such as textiles, papers, paints, varnishes, soaps, detergents, pharmaceuticals, etc.



Growth Factors

- **Rising domestic consumption :** Over the next two decades, India is predicted to account for more than 20% of the increase in world chemical consumption. Domestic demand and consumption are anticipated to increase, going from US$ 170-180 billion in 2021 to US$ 850-1000 billion in 2040.
- **Changing consumer preferences :** The growing global demand for bio-friendly products may help India, as it is a major producer of many chemicals used in such products.
- **Shifting supply chains :** Firms are attempting to make their supply chains more resilient in response to the shifting geopolitical landscape and the drive to diversify away from the old core manufacturing markets. India could be a desirable destination because of its great value proposition.

Production of Chemicals

- In February 2023, major chemical production was 874.30 million metric tonnes (MMT), while petrochemical production was 1,773.74 MMT.
- In February 2023, production levels of various chemicals were as follows:
  - o Soda Ash: 250.87 MMT
  - o Caustic Soda: 269.17 MMT

- o Liquid Chlorine: 201.48 MMT
- o Formaldehyde: 19.13 MMT
- o Pesticides and Insecticides: 17.01 MMT

Exports

- From April 2022-March 2023, exports of organic (US$ 9.64 billion) & inorganic (US$ 2.17 billion) chemicals were estimated at US$ 17.19 billion.
- Imports of organic (US$ 18.3 billion) and inorganic (US$ 9.34 billion) chemicals totalled US$ 29.58 billion from April 2022 to March 2023.
- From April 2022-December 2022, imports of petroleum, crude and products stood at US$ 163.78 billion.
- Exports of petroleum products are 73.63 billion during April-December 2022.
- From April-March 2022, the export of agro-chemical was US$ 5.37 billion, dyes were US$ 2.04 billion and the other dye intermediates were US$ 183.49 million.
- The import of agro-chemical was US$ 1.79 billion, dyes were US$ 0.31 billion and the other dye intermediates were US$ 1.22 billion during April-March 2023.
- India exports to more than 175 countries in 2022. The major export destinations are USA, China and new destinations viz. Turkey, Russia and Northeast Asian Countries (China, Hongkong, Japan, Korea RP, Taiwan, Macao, Mongolia)

Petroleum, Chemical and Petrochemical Investment Regions (PCPIRS)

Under the PCPIR Policy, 2007, four Petroleum, Chemical, and Petrochemical Investment Regions (PCPIRs) are being implemented in the states of Andhra Pradesh (Vishakhapatnam), Gujarat (Dahej), Odisha (Paradeep), and Tamil Nadu (Cuddalore and Nagapanam) to promote investment and industrial development in these sectors. The PCPIR policy is being extensively revamped. The new PCPIR Policy 2020-35 aims to attract a total investment of US$ 142 billion (Rs. 10 lakh crore) by 2025, US$ 213 billion (Rs. 15 lakh crore) by 2030, and US$ 284 billion (Rs. 20 lakh crore) by 2035 in all PCPIRs across the country. The PCPIRs are designed in a cluster strategy to boost the petroleum, chemical, and petrochemical sectors on a big scale in an integrated and environmentally beneficial manner. The four PCPIRs are estimated to create jobs for around 33.83 lakh people. Around 4.21 lakh people have been employed in direct and indirect PCPIR-related activities. The Petroleum, Chemicals, and Petrochemicals Investment Regions (PCPIR) initiative will also attract an estimated US$ 276.46 billion (Rs. 20 lakh crore) investment by 2035.

Opportunities In India's Chemical Sector : With a net trade surplus, the Specialty category is the most important pillar of India's chemicals business. The Specialty Chemicals segment is expected to be a main driver of this growth. Net exports are predicted to more than tenfold by 2040, from roughly US$ 2 billion in 2021 to US$ 21 billion. Almost 80% of the segment's exports would originate from four sub-sectors: agrochemicals, dyes and pigments, cosmetics and personal care, and food additive chemicals. It has the potential to contribute more than ten times the present figure of US$ 2 billion. In total, 16 speciality chemicals sub-segments perform well in terms of cost competitiveness and market attractiveness. These are two of these sub-segments:

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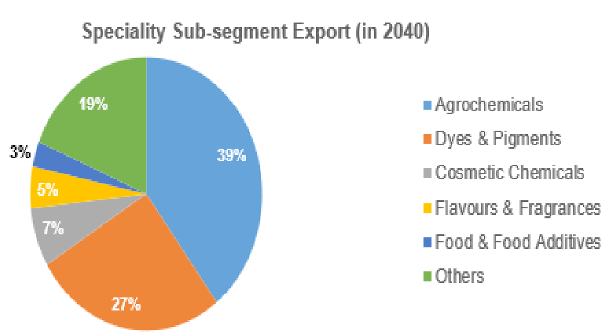
- o **Agrochemicals: Agrochemicals are currently a US$ 5.5 billion market in India, expanding at an 8.3% CAGR. By 2040, it is predicted to account for about 40% of India's total chemical exports and nearly 13% of the worldwide ag-chem industry. Indian agrochemical businesses have a significant cost advantage over their worldwide rivals, owing to low raw material and manpower costs.**
- o **Food and Feed Ingredient Chemicals: The market for this sub-segment, which consists of nutraceuticals, food and feed additives, and flavours and fragrances, is worth US$ 3 billion in India and is expanding at a CAGR of 7-9%.**

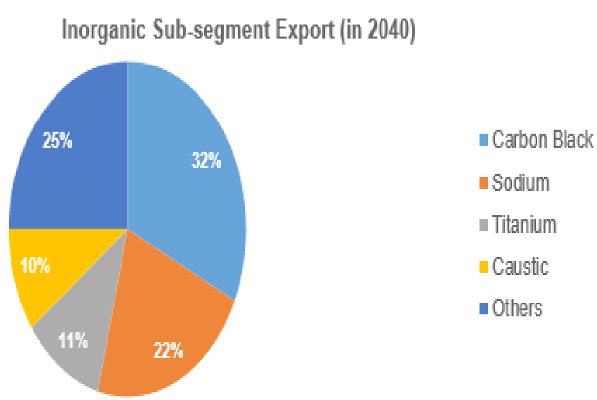


Source: Mckinsey

· **Inorganic chemicals :** The availability of feedstock is the segment's main determinant of production because inorganic chemicals require less processing than other products. However, it has a strong demand for several inorganic compounds, making it an appealing market. Six sub-segments appear as opportunities for creating an at-scale firm in the segment, underpinned by high growth rates of end-use industries and natural feedstock advantages. Exports in the inorganic sector will be propelled by carbon black, sodium, and titanium. Two of these are:

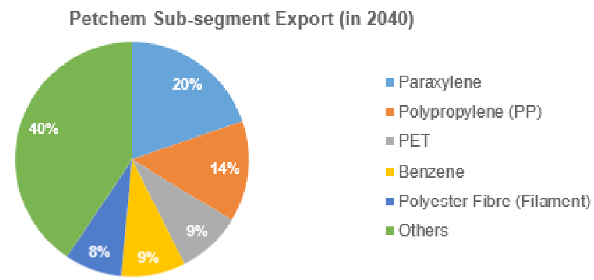
o **Fluorine: Fluorine is predicted to be a US$ 4.2 billion market by 2040, growing at a CAGR of more than 10%. Its expansion will be fuelled by increased demand from two of its primary end-use industries: pharma and ag-chem.**

o **Sodium and Caustic: The CAGR for this sub-segment is predicted to be close to 10%. By 2040, sodium and caustic might be worth US$ 13 billion and US$ 11.5 billion, respectively.**



Source: Mckinsey

· **Petchem :** Opportunities in petrochemicals are highly dependent on the scale and vertical integration capabilities of chemical businesses. For instance, bulk polymers (Polyethylene, Polypropylene, PVC, etc.) score highly on the market attractiveness and cost competitiveness indices thanks to backward integration at the cracker level. However, other businesses are better suited to concentrate on goods whose feedstock are freely accessible on the merchant market, such as C4, C6, and C8 derivatives. Exports in the segment will be led by C8 (Paraxylene) and C6 (Benzene) building blocks, as well as bulk polymers PP,LLDPE, and HDPE. In the Petchem industry, India has an abundance of feedstock for higher carbon building blocks (C4, C6, and C8). As a result, its combined surplus production of Butadiene (C4), Benzene (C6), Paraxylene (C8), and Orthoxylene (C8) is much larger than that of its competitors.



Source: Mckinsey

Government Initiatives

· **National Policy on Petrochemicals**

o **Setting up of Plastic Parks :** The programme intends to establish need-based plastic parks, an ecosystem with cutting-edge infrastructure, and common amenities through a cluster development model, in order to consolidate and synergize the capacities of the domestic downstream Plastic Processing Industry. The scheme's overarching goal is to support the economy by boosting sectoral investment, production, and exports while also creating jobs. Ten Plastic Parks have been authorised under the Scheme in the States of Madhya Pradesh (two), Odisha, Jharkhand, Tamil Nadu, Uttarakhand, Chhattisgarh, Assam, Uttar Pradesh, and Karnataka.

o **Setting up of Centres of Excellence in Polymer Technology :** The scheme's goal is to improve the country's existing petrochemical technology and research, as well as to encourage the development of new polymer and plastic applications. In phase-I of the Scheme, which was in place from 2013 to 2017, the Government of India provided financial support up to a maximum of 50% of the project's overall cost, subject to a cap of US$ 7,25,448 (Rs. 6 crore) over a period of three years. The Scheme was extended until 2020 with updated parameters in 2016-17, with the goal of fostering applied research and technology transfer from lab to industry. So far, 13 Centres of Excellence (CoE) have been approved and built within the facilities of prestigious educational/research institutes.

o **Petrochemicals Research & Innovation Commendation Scheme 2023 :** The scheme for establishing Plastic Parks, the scheme for establishing Centres of Excellence, and the National Petrochemicals Awards Scheme have been reviewed/revised and renamed the Petrochemicals Research & Innovation Commendation Scheme with effect from January 2023. The Department's vision is to be realised through the promotion of R&D and human resource planning and development. The policy intends to institutionalise the Petrochemicals Research & Innovation Commendation Scheme in order to achieve this goal.

· **Chemical Promotion & Development Schemes**

(CPDS) : Chemical Promotion Development Scheme (CPDS) has been implemented in DCPC's Chemical Division since 1997 under Plan Head of Account. The goal of CPDS is to facilitate the growth and development of the Chemicals and Petrochemicals industries through the creation of knowledge products such as studies, surveys, data banks, promotional material, and so on, as well as the dissemination of knowledge through seminars, conferences, and exhibitions. The Scheme also intends to encourage research and innovation by honouring excellent achievements in the field of chemicals and petrochemicals. The Scheme's goal is to provide financial assistance in the form of Grants-in-Aid (General) to various organizations/industry associations, etc. to conduct workshops, seminars, studies, and other activities that will allow the Department to form firm opinions on various policy issues affecting the Chemical and Petrochemical sectors.

The funds utilized under CPDS since 2018-19 are as follows:

Year	Fund Utilized (Rs. in crore)
2018-19	2.38
2019-20	2.93
2020-21	2.80
2021-22	3.59
2022-23*	1.25

Road Ahead : The future of the Indian chemical business appears bright, and the country might become a driving force in the global chemical market's demand and supply. The chemical industry in India continues to be a desirable hub of opportunity and a steady value creator. With the stocks of several specialised companies expanding dramatically, the industry has historically generated great riches for investors. Strong demand across end-user sectors, driven by expanding domestic consumption, strong export growth, and increased import replacements, are likely to be the key growth drivers for the chemical sector. Growing local demand and expanded exports will drive the growth of the Indian speciality chemicals industry. Many Indian speciality chemical firms have developed specific competencies and built supply partnerships with worldwide networks. Due to the sector's strong performance, speciality chemical firms are increasing production capacity to satisfy rising demand for their goods.

Source: ibef.org

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INDIA'S WAREHOUSING BOOM: A GAME CHANGER FOR BUSINESSES GLOBALLY

MANIKANDAN RAMACHANDRAN

Over the years, India's warehousing sector has undergone a significant transformation, evolving from unorganized godown structures to becoming a recognized asset class. While the sector has been witnessing domestic growth due to the country's expanding consumer market and the rise of organized retail, the pandemic led to a surge in demand globally. According to Research and Markets, the warehousing market is expected to reach INR 2,872.10 bn by 2027, expanding at a CAGR of ~15.64 percent during 2022-2027.

As the e-commerce sector experiences a slowdown, the demand for modern and technologically advanced warehousing space in India remains resilient. While the boom in warehousing space was initially driven by e-commerce, the focus has shifted to existing manufacturing units. Many of these units are now in an expansion phase, aiming to optimize their supply chain by shifting nonproductive material storage areas out of their factory premises. Embracing Just-in-Time (JIT) techniques for inventory management, these manufacturing units continue to drive the demand for efficient warehousing solutions to enhance their operational efficiency and overall productivity.

As the manufacturing industry evolves, new-age manufacturers are also looking towards third-party logistics providers (3PLs) for warehousing facilities. Further FMCG and FMCD who are moving from Grade B warehousing to Grade A warehousing in order to improve their efficiency, compliances, etc. In such situations the state-of-the-art warehousing solutions can help these companies optimize their supply chain operations, reduce operational costs, and improve overall efficiency.

Similarly, India's Grade-A warehousing sector is poised to show a growth of 15 per cent by 2025, according to the India Warehousing Report by CREDAI and Anarock. This would create the opportunity for India to become a global leader in the warehousing sector by 2027. Hence, India must capitalize on the opportunity by enabling ease of business for both domestic and global companies seeking to make fresh investments, large labor pool, and government support for boosting industry and exports, among other factors.

Here's an in-depth overview of the factors aiding warehousing solutions in India: Government initiatives Indian government has taken several initiatives to promote the growth of the logistics and warehousing industry. The National Logistics Policy, Gati Shakti, and other measures announced in the Union Budget 2023 are expected to provide a much-needed boost to the sector.

Additionally, the development of dedicated freight corridors and tax cuts to support this industry are part of the government's efforts to promote the growth of the logistics and warehousing industry. These initiatives are expected to bring about positive changes in the industry, create new opportunities, and improve the overall operating environment.

With the government's support, the logistics and warehousing industry in India is set to become a key driver of the country's economic growth. Government policies like production-linked incentive (PLI) have been specifically designed to boost domestic manufacturing in strategic sectors, curb imports, and enhance domestic capacity and exports.

Subsequently, the government has also approved 'The Integrated Multi-Modal Logistics Hub' which is being developed in an area of over 900 acres as the largest Integrated Logistics Hub. Rise of Tier II, Tier III Cities Although Tier 1 cities remain the key focus investment hubs for investors, the growing expansion needs driven by 3PL players have led to the development of Grade A warehouses in Tier 2 and 3 cities. In addition, the cost of setting up warehouses in Tier 2 and 3 cities is relatively lower than that of Tier 1 cities.

Another reason would be top warehousing companies in India follow international standards of designing to match customer expectations. With a focus on modern and technologically advanced warehouses, the industry has been able to provide efficient and effective solutions to customers. Additionally, warehouses follow local statutory compliance in nature to ensure that they comply with local regulations, further enhancing the quality of their services.

Strategic location India's positioning at the crossroads of major international trade routes makes it an ideal location for warehousing solutions. It provides easy access to markets in Asia, the Middle East, and Africa, making it an attractive destination for companies looking to expand their global footprint. Moreover, with the ongoing development of advanced warehousing facilities in the country,

businesses can leverage India's strategic location to enhance their supply chain efficiency and reduce costs.

Large consumer base India has surpassed China to become world's most populous nation with around 142.86 crore people, according to UN world population dashboard. By establishing warehousing solutions in India, companies can effectively cater to this enormous market, reduce transportation costs, and improve their supply chain efficiency. Additionally,

India's rapidly expanding middle class, increasing disposable incomes, and changing consumer preferences offer further growth prospects for businesses in the warehousing sector. Subsequently, it is imperative to take note of hyper-customizable warehouses, designed to cater to specific client requirements such as temperature-controlled storage, flexible storage units, and specialized handling equipment, among others. Growing demand Additionally, companies are customizing their warehouses as per their clients' needs to provide better services and meet their specific requirements.

This customization can range from modifying the layout of the warehouse to accommodate specific products to adopting advanced technologies such as automation-enabled Building Management System which leads to reduced wastage of electricity and water. Moreover, the trend towards green practices is on the rise in the country, with many companies adopting sustainable practices such as solar panels, rainwater harvesting, and other practices. These eco-friendly initiatives not only reduce the environmental impact but also increase operational efficiency and reduce costs in the long run. Furthermore, as the focus on environmental, social, and governance (ESG) factors increases globally, the adoption of ESG policies in Indian warehouses have made them more attractive to global investors. Overall, the warehousing sector in India has emerged as a crucial component of the country's growing economy.

With a favourable business environment, increasing adoption of technology and sustainable practices, and a vast pool of skilled labor, India has become an attractive destination for global companies looking to establish their supply chain networks. As a result, businesses across the world are opting for Indian warehouses to take advantage of the growing market potential and cost-effective operations. With continuous improvements in infrastructure, logistics, and regulatory frameworks, the warehousing industry in India is poised for significant growth in the coming years.

The views and opinions expressed in this article are those of the author and do not necessarily reflect the views of Indian Transport & Logistics News.

Source: www.itln.in

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SUPPLIER DIVERSITY AND DEI PROGRAMS ARE UNDER PRESSURE

RICH WEISSMAN, CONTRIBUTOR

Procurement professionals need to continue their momentum to build sourcing strategies that incorporate a full range of suppliers.

Supplier diversity and DEI programs are facing heightened scrutiny and resolve as political pressures cause businesses to rethink their diverse sourcing strategies. Supply chain managers should think again before letting ongoing political shifts impact their company operations and procurement strategies. Successfully navigating this dynamic landscape is essential for businesses, affecting not only their social responsibility but also their supply chain resilience and competitiveness.

In the past decade or longer, there has been a significant increase in corporate and societal emphasis on diversity, equity and inclusion, driven in part by social movements and heightened awareness of racial and social justice issues. Procurement has often led the way.

How procurement has led the way in the past

The history of using HUB suppliers in procurement reflects a commitment to addressing historical disparities, promoting economic opportunities for underrepresented groups, and fostering a more inclusive and equitable business environment. Doing business with HUB suppliers is not only a socially responsible practice but also a strategic decision with multiple economic benefits. It stimulates job creation, promotes innovation, bolsters local economies, and contributes to overall economic stability and resilience.

Companies, both public and private, often have robust supplier diversity and DEI programs in place, with the aim of promoting fairness, representation and ethical and equitable business practices within their supply chains. The focus on supplier diversity expanded beyond racial and ethnic minorities to include women-owned, veteran-owned, LGBTQ+-owned, and disability-owned businesses, reflecting a broader commitment to diversity, equity and inclusion in procurement.

DEI in procurement is seen as an essential component of a company's broader commitment to social responsibility and ethical business practices. It continues to evolve as organizations recognize that promoting diversity and inclusion in their supply chains not only aligns with their values but also contributes to innovation, competitiveness and long-term sustainability.

For procurement professionals, this had been a long haul. The uphill battle to incorporate HUB and diverse suppliers into the active supply base has been tough, fighting through ingrained biases and pushback on adding new suppliers and perceived, but unrealized, risk. Advancements in technology, such as e-procurement platforms and data analytics, have enabled organizations to better track and measure their DEI efforts within procurement processes.

The intent of these programs is to promote fairness, representation and ethical practices within an organization's extended supply chain. However, in today's politically charged climate, the dynamics of supplier diversity and DEI in procurement have become increasingly complex and significant.

Moving ahead with increased complexity

During this time of increased sensitivity and real-time social media impact, a company's commitment to supplier diversity and DEI can be under constant public scrutiny.

Stakeholders, including customers, investors and advocacy groups, closely monitor an organization's actions in these areas. Any misstep such as a perceived lack of commitment, or even overcommitment, can result in reputational damage, customer backlash and financial repercussions.

And this is not limited to companies primarily dealing with consumers. Industrial suppliers are also under the microscope in how they operate, including their labor practices, extended supply chain relationships, and shifting geopolitical alliances that seem to change by the hour.

Sure, there may be some buyers who willingly will hide behind this smokescreen to eliminate a sometimes-complicated corporate initiative, but forward-thinking procurement and supply chain professionals need to continue their momentum to build sourcing strategies that incorporate a full range of suppliers, including those that need some help in establishing their presence in mainstream supply chain.

It's just the right thing to do.

Source: Supply Chain Dive

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BANGALORE BRANCH

7th October 2023 :Golden Jubilee award Competitions:Quiz Competitions: As a part of Golden Jubilee celebrations 2023,IIMM Bangalore Branch had organised a Quiz competition on 7th October 2023 at IIMM Office Premises. About 20 Participants (10 Teams) from various organisations and Institutions Participated in the Competition.

EC Members at Saraswathi Pooja Celebration-min

Quiz Topic: Supply Chain Management, Imports & Exports and General Management

Competition Winners: Conducted for Management Institutions: Students :

1st Prize won by Hemanth. R & Adarsh, from (Acharya Bangalore B School)

SCM Professionals :
1st Prize: Mr.Rajesh. Y & Mr. Anjana Reji (Titan Company Ltd),
2ndPrize : Mr. Sathish. S & Mr. Deebac. P (Titan company Ltd)

Organisers & Juries: Mr. Achyutha Rao. M.R, Mr. Subash. C.S, Mr. P.M. Biddappa, Mr. Karunakar Shettar, Mr. Sham Sundar. A.V, Mr. Viswanathan, Mr. Akash Kumar Gupta and Mr. Lakshmaiah. D

14th October 2023: Young Achievers Award Competition:

IIMM Bangalore Branch as a part of Golden Jubilee had organised a Young Achievers Award Competition on 14th October 20213 at IIMM Office Premises. About 6 Participants from various Organisations participated in the Competition.

Achievements: Innovative approaches in development and implementation of sourcing / supply management initiatives, Innovative approaches in cost reduction, Effective utilization of resources like People, Technology etc., Management or business successes with special reference to sourcing or supply management and contribution to the growth of the profession.

Competition Winners

1st Prize won by Mr. Abishek. K.S (Titan Company Ltd), 2nd Prize won by Mr. Babu. A (SEG Automotive Ltd)

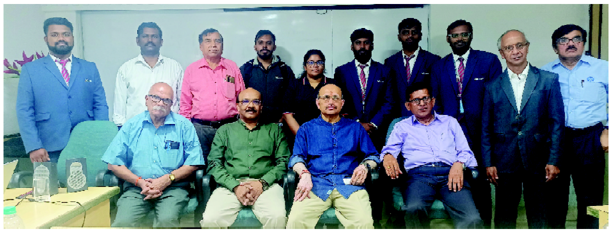
Organisers & Juries: Mr. Achyutha Rao, Vice Chairman, Mr. Balasubramanian G. Course Co-ordinator CSCM Course, Mr. Karunakar Shettar, E.C Member and Mr. Balachandran T.S, NC. Member and Senior Faculty.

16th October 2023 :SCM& Logistics Innovation Award Competition

IIMM Bangalore Branch had organised SCM & Logistics Innovation Award competition through Online. About 9 Participants from Various Organisations Participated in the Competition.

Organisers & Juries: Mr. K.C. Harsha (Chairman SCALE-2023), Prof. Rajendra Todalbagi and Dr. P. Balasubramanian

Quiz Competition Professionals a Group of Participants with Juries-min



QUIZ COMPETITION Students A Group of Participants with Juries-min

Young Achievers Award Competition, a Group of Participants with Juries-min

SCM Innovation Award Competition Winner:/ Titan Company Ltd.

Titan's e-Warranty Card project is both a category/ and industry leading initiative. Apart from process simplification and material cost savings it has/ the potential to provide anywhere, anytime warranty services. Many white goods manufacturers can emulate this practice. Their innovation in Import Substitution with respect to the Brass plates/ is worthy of appreciation as it includes an operational flow/ process change accomplished with cost savings. We find that the culture of innovation is widespread/ in the organization. Hence, they deserve this award.

17th October 2023 SCM & Logistics Best Practice Award Competition

IIMM Bangalore Branch had organised SCM & Logistics Best Practice Award competition on 17th October 2023 through Online. About 6 Participants from Various Organisations Participated in the Competition.

Organisers & Juries: Mr. K.C. Harsha (Chairman SCALE-2023), Prof. Rajendra Todalbagi and Dr.Parasuram Balasubramanian

SCM Best Practices Award Competition Winner:/ Bosch Ltd. NASHIK/

Bosch's focus and commitment to implement the Best Practices is well spread across the entire organization and supported by strong processes. It is comprehensive across/ many impact dimensions such as cost, quality, environmental care etc. Continuous improvement as a key objective of best practices is well entrenched. Use of returnable packages in place of corrugated boxes, Reuse of incoming packages, Camera based recognition for pallet picking, introduction of digital technology to reduce paper usage and holistic approach to talent nurturing and HR motivation are some of the examples that support the above assertions. Hence this selection of Bosch for this award.

17th October 2023 SCM & Logistics Essay Competition

IIMM Bangalore Branch had organised SCM & Logistics Essay competition on 17th October 2023 about 8 Participants from Various Organisations Participated in the Competition.

Topic:

1. "Sustainable Supply Chain Through Integrated Logistics & Digitization""

2. "Digital Supply Chain Management for collaboration among the stake holders"

3. "Impact of National Logistics Policy 2022 on Indian Economy"

Essay Competition Winners :
1st Prize: Mr. Somanathan (Titan Company Ltd),
2nd Prize: Mr. Deebac. P (Titan Company Ltd)
Juries: Mr. G. Balasubramanian Senior Faculty Team

The Prizes for all the above competitions will be given to the winners on the occasion of Golden Jubilee Celebrations on 28th October 2023 (Saturday) at Woodlands Hotel, Bangalore.

10th October 2023 Industry Visit : IIMM Team Mr. Karunakar Shettar, Mr. Balasubramanian. G and Mr. Nagaraj. S.M Visited to Valco Melton Engg. India Pvt Ltd, GCE Gas Control Equipment and Spohn & Burkhardt India Electrotechnical Pvt Ltd. Met Various heads of SCM & discussed regarding signature Event SCALE 2023 & Golden Jubilee, Membership drive, and Educational Activities of IIMM Bangalore Branch.

18th October 2023 Industry Visit : IIMM Team Mr. Jayakumar. M (Branch Chairman) Mr. P.M. Biddappa (N.C. Member Convener SCALE 2023), Mr. Balachandran T.S (NC Member), Mr. Jayaraman & Mr. Nagaraj. S.M Visited to Bosch Limited, met different heads of Procurement & discussed regarding signature Event SCALE 2023 & Golden Jubilee, Membership drive, and Educational Activities of IIMM Bangalore Branch.

21st October 2023 Saraswathi Pooja Celebration : IIMM Bangalore Branch had organised Saraswathi Pooja Celebration on 21st October 2023 at IIMM conference Hall. EC Members and SCALE 2023 Committee members attended the Program. Dr. C. Subbakrishna, Past National President performed the Pooja Function.

MUMBAI BRANCH

Mumbai Branchs National Summit on Public Procurement (Seventh Edition) held on 15th September 2023 at Hotel Courtyard by Marriot, Mumbai

IIMM Mumbai Branch organized the prestigious National Summit on Public Procurement (Seventh Edition) on 15th September at Hotel Courtyard by Marriot, Mumbai. The Theme for the event was "Institutional Mechanism, Challenges & Reforms "

The event was a resounding success with more than 100 nos "Paid Delegates who attended from various CPSUs /Government Organisations/Indian Navy / Railways etc. The Hotel Conference Hall was fully packed throughout the day. The Chief Guest for the event was Mr Biju George, Director (Shipbuilding) of Mazagon Docks Shipbuilders Ltd. In his Key Note address, Mr Biju George spoke on following aspects:

Commended IIMM Mumbai Branch for an apt and timely theme of Institutional Mechanism, Challenges & Reforms a Robust Supply Chain is crucial for Industrial Growth of any Nation Public Procurement has to happen Publicly

- Public procurement is watched by several "EYES "like CVO, CVC,CCI, CAG and CBI
- The National Summit will give significant "Take Aways' and knowledge to all the delegates

IIMM Mumbai Branch Chairman Mr Animesh Shah gave brief details about the activities of IIMM Mumbai Branch Galaxy of Speakers who graced the occasion at the Technical Session included ;

1) Mr Atul Gupta Ex Additional Member (Railway Stores), New Delhi who was the First Speaker on Topic " Procurement Reforms being planned in the Railways " Mr Atul Gupta covered Reforms already implemented like Warranty Management System , Third Part Inspection

Agencies, User Department Module, Unified Vendor Approval Model, E- Billing etc, Review of List of Approved Items

Further, he mentioned about Procurement Reforms in the Pipeline like 3 PL, Auto DRR, Auto Bill, NG cadre Realignment, Auto -assignment of Tender.

2) The second Speaker at the Technical Session was Mr Sandeep Gupta, Executive Director - Chief MM Services, ONGC Corporate Materials, New Delhi.

He covered a Session on "Procurement under PPP-MII Order & Global Tender Enquiries(GTEs) —An ONGC Experience "

Sandeep Gupta session in brief covered Purchase Preference Policy (PPP-MII) for CPSEs under Ministry of Petroleum & Natural Gas (MOP & NG) wherein Class I Local Supplier, Class II Local Suppliers are defined and margin of Purchase Preference.

L-1 + 20%, Minimum Local content required 20&, 50% etc

Special Provision under PPP -MII for LSTK/EPC projects issued by MOP&NG in July 2023, based on ONGCs suggestion

Out ofONGCs Annual average Procurement Value of approx. Rs 35,000 crores, Indigenous Tenders was for 40% and GTEs was 60%

GTEs were done only for Procurement Value greater than Rs 200 crores as per Govt Guidelines, and these were for specialized requirements in Upstream Oil & Gas.

3) The next Topic on the Agenda was on " QCBS in Procurement - A case study of Works Contract using QCBS in a leading CPSU ". This new Procurement Reform was covered by Mr Arun Meha, Controller of Stores, Konkan Railway

4) The Fourth Speaker was Mr Ajit B. Chavan Addl CEO GeM New Delhi. He covered a general Overview of GeM portal giving some Key Statistics like

a)Buyers : 70,000 b) Sellers & Service Providers : 67 lakhs c) Products : 35 Lakhs d) Total No of orders : 165 Lakhs e) Gross Merchandising Value : Rs 4,81,354 Ajit B.Chavan also covered some latest

Functionalities available on GeM portal and also informed details about 300 Nos Services available on GeM

5) The Next Speaker was MrNeetesh Agarwal , SMM , NE Railway who gave Perspective from one of the biggest Users of GeM portal viz Railways . He shared details of Cost Savings achieved by the Railways while using GeM portal . MrNeetesh Agarwal also covered Buyer Focussed Functionalities and Seller Focussed Functionalities available on GeM portal

6) Post Lunch , the Sixth Speaker was Mr Sanjay Aggarwal , Advisor , Procurement Policy , Department of Expenditure , Ministry of Finance , New Delhi .

He spoke on " Recent Instructions on Public Procurement " The Main points he covered were a) General Instructions on Procurement & Project Management b) Concurrent application of MSE & PPP- MII c) Debarment Guidelines d) Vivad Se Vishwas - Contractual Disputes e) Restrictions on Procurement from Countries sharing Land Border

Mr Sanjay Aggarwal also answered queries raised by delegates

7) The Seventh Speaker was Mr Amit Kumar Tamaria , Joint Director , Development Commissioners office , Ministry of MSME , New Delhi . He spoke in detail on the Topic" Latest Developments in Procurement from MSME " and covered areas like a) New Definition of MSMEs based on investment in Plant & Machinery b) Details of Udyam Registration and recent initiatives like Samadhan Portal for ease of filing grievances of delayed payments to MSME and start of Grievance Cell " Champion"

MSME Ministry organized Vendor Development Program and MSME Conclaves . FAQ on various MSME matters were circulated in March 2022. Mr Tamaria also answered a host of questions related to Purchase Preference Policy for MSEs

8) The Next Speaker wasMr Rajinder Kumar , Director and Head of Western Regional Office , Competition Commission of India(CCI) . The Topic covered by him was " Public Procurement and Competition Law : : Issues & Challenges ". He spoke on a) Brief Overview of Competition act b) Introduction to Public Procurement and relevant provisions of Competition Act c) Case Laws pertaining to Public Procurement and d) Recommended Best practices . He also stated that the most direct way for CCI to promote competition is to identify and correct Bid rigging , Bid Rotation etc

9) The Ninth and Final speaker was Ms Archana Mittal , Director , WomeNNovator(WE) , an NGO promoting and nurturing women entrepreneurs . Her Topic was " Gender Responsive Procurement She stated that Womennovator has covered 500 + Women Vendor Development workshops with CPSU such as GAIL & Indian Oil and 1000 + women on awareness of GeM portal .

However , there is lot of work to be done as there is no such Portal where Companies and Organisations provide their Procurement list in Advance plus there is no Built up Infrastructure to provide entrepreneurship support or training

10) The Final Agenda item was a Panel Discussion Session on Topic " Best Practices on Contract Management " The Panel Discussion Speakers were a) MrSanjeeb Pal , Executive Director (Engineering & Projects) BPCL b) Mr Nuhu Kurne , Executive Director Commercial RCF c) Mr TL Sharnagat , Vice President Contracts , Mahanagar Gas Limited

Moderator for the Session was Mr Alok Ranjan Sarkar - Advisor , IIMM Mumbai Branch & Former G.M - Materials & G.M (Engineering & Projects) BPCL

Apart from this , one of the innovative ways used to enliven the National Summit was the conduct of a On line Quiz on Public Procurement on " Kahoot Platform " . The Quiz Master for the day was Mr Sushanta Roy

The Master of Ceremonies /Compere for the event was Mr Surendra Deodhar IIMM National Secretary & Treasurer , who performed the role very well

The event was Sponsored by BPCL and TJSB bank

The National Summit on Public Procurement (Seventh Edition) was Co- ordinated by Mr Alok Ranjan Sarkar ,Advisor , IIMM Mumbai Branch and he was supported ably by Dy Director IIMM Mumbai Branch Mr. R. B Menon and his staff

Feedback from the Delegates:

Ø New and updated content. Distinguished speakers from different CPSEs. LOVELY QUIZ PROGRAM.

Ø (MSME, CCI) Very well-structured program. Speakers from concerned industries only. Excellent speakers from MSME, CCI, GeM, DoE Railways. Very good panel discussion.

Ø Absolutely wonderful program. The depth of understanding by the speakers was superb. All the speakers were simply fabulous. Quiz was again very nice.

Post the conference queries from delegates were taken up with the concerned speakers and replies from the speakers were communicated to the delegates.

EXECUTIVE HEALTH
HOW LIVER HELPS TO REDUCE CHOLESTEROL

Many people I know who have high cholesterol get very careful about the amount of fat they are eating and in many cases they almost go on a fat free diet to get their LDL(bad cholesterol) under control, but yet after doing several such things they are not able to get their unbalanced cholesterol readings under control. A course of action which we all take is that if the cholesterol is high In the blood we stop eating foods containing fats or oils, if the sugar is high we replace sugar with an artificial sugar substitute . All these actions only help in managing the problem 50% and not more!

The reason is that we need to understand the body function and work along with it because all said and done body is not a box where you put in calories and remove substances and calories .

Liver has been given a lot of importance in all alternative system of medicines due to its vast range of functions which include maintaining the glow and complexion of your face , the hormones in the body , ensuring that the body throws out excess cholesterol , sugar etc from its system.

Since in this column we shall look at the how liver helps the cholesterol come down , we need to know how the cholesterol goes up and the role of liver in it.

Liver is the seat of digestion and all food after partial digestion from the intestine comes to the liver for further metabolism and assimilation .If the liver is good one has the digestive power to digest any food , but if the liver becomes weak then even the slightest of extra eating gives rise to many problems .There has been researches where the they have studied populations in Africa who have red meat everyday , with no problems with their cholesterol and the African-Americans living in cities getting high cholesterol just eating red meat few days a week. The difference is due to the fact , that the liver of the second group faces a onslaught of food containing chemicals and pesticides , large quantities of alcohol, lack of healthy exercise and stress of living in a metro.

Now that we have figured that just by eating a low cholesterol diet it may not be the cure for reducing cholesterol in the blood, the next step is to detoxify and strengthen the liver .

There are two aspects to liver health – the first is not eating or eating less of substances which have the potential to harm the liver, which may include alcohol, too many pain killers, or medications without the doctors knowledge or supervision, foods containing too many chemicals and junk foods .the second is giving those foods and tonics to the liver which will lead to liver health , such substances are ———

- Aloe vera juice 2 tablespoons daily
- Amla juice , one amla a day
- Vegetable juice containing seasonal vegetables
- Fresh leafy vegetables soup like spinach soup etc
- Citrus fruits like oranges , sweet lime , lemons
- Barley water
- Brown rice
- Coconut water

These are only few of the things which impact the liver, there are several more things which one can do to improve the liver functioning and also manage several liver problems.

How to maintain weight and health during the festive season : During the festive season, the time begins for merriment, fun and rich food. This is the time when most people begin the period of indulgences which lasts almost till the New Year.The result of the indulgences is a rise in weight and a fall in health, though one can not avoid the festive binge, but if one can keep few aspects in mind then a lot of festive indulgences can be made enjoyable without compromising on health

Tips for the festive season

1. Increase the intake of water ——Water is one of the best detoxifiers and surprisingly in our normal course we do not drink enough water. If we keep a bottle of water by our table side and make it a point to finish at least 2-3 bottles of water a day, it will be a great help to the system. Water flushes our intestines, liver and kidney, in almost all the Naturopathy or Ayurvedic treatments water is given in large quantities to cleanse and balance the system. Many people are not aware that water has many minerals which make it an important part of the diet. In fact many diseases including heart disease is due to mineral deficiency in the system.
2. Increase the intake of fiber — fiber both soluble and insoluble is one of the most important aspects of cleansing, detoxifying and weight management strategies. If we have enough fiber in our diet we can control our weight, control serious diseases like cancers and chronic diseases like arthritis, colonic diseases. In almost all diseases, the nutrition therapy includes fibers as part of treatment. The kind of fibers one can take are wheat bran(1 Tsp a day), oat bran(1 teaspoon a day), plant fiber(4 cups of vegetables a day) fruit fiber(3 fruits a day)
3. Take 2 glasses of vegetable juices to fulfill the antioxidant, enzyme and vitamin requirement for the day. vegetable juices are actually medicinal in nature and they are capable of several cures besides detoxifying in nature. Vegetables like, bottle guard, pumpkin, tomato, cucumber, amla, aloe veraetc are wonderful as cleansers
4. For acidity take cabbage juice, 2 tablespoons daily. Its is rich in several elements which protect the intestinal lining and promote healing of gastric ulcers
5. Stretch the muscles, through Yoga, pilates, or any form of isotonic exercises
6. For women post 35 and men who consume alcohol regularly, Take vitamin B1 and B12 along with Vitamin C, regularly during the festive season to protect the nerves and the liver
7. Make 35% of the diet full of raw and fresh foods, for example in this season one can have fresh water chestnuts(singhara), barley grass, wheat grass juice, spirulina juice mxed with, curry patta, rose petals, tulsi leaves
8. Keep one day of the week for naturals oils rather refined oils. Natural oils are found in nuts, peanuts, olives. so one can have salads like boiled potato and corn salad with nuts, boiled white channa salad with olives, steamed sprout chat with anar and almonds. Potato and walnuts salads.

This is one of the best seasons to enjoy good food and Good health, provided one is aware and conscious, an aware living and being in present consciousness can be truly liberating .

Source: www.drshikha.com

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Cell: 91-9909996711
iimmahmedabad@gmail.com

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Indian Institute of Materials Management
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Alwar - 301001 (Rajasthan)
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Email: iimmalw@gmail.com

AURANGABAD BRANCH
Indian Institute of Materials Management
Third Floor, T-01, Khivansara, August high
Street, Ulka Nagari, Aurangabad - 431005.
Mob: 09423455983/9765402066
E-mail : iimmau@rediffmail.com

ANKLESHWAR BRANCH
Indian Institute of Materials Management
C/o Arvind Patel, Chairman -IIMM,
Ankleshwar "Skau Chemicals Plot No.7405,
G.I.D.C. Ankleshwar, 393002, Gujarat.
Mobile : 9824179390 / 9714759799
Email : adm@skauchem.com

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

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

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

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

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

BOKARO BRANCH
Indian Institute of Materials Management
Purchase Dept., Ispat Bhawan, Bokaro
Steel City - 827001
Mob: 08986873175/8986874786
E-mail : iimmbokarobranch@gmail.com

BURNPUR BRANCH
Indian Institute of Materials Management
New Materials Bldg. Ground Floor, Near
CRS Store, SAIL-IISCO Steel Plant
Burnpur - 713325 (West Bengal)
Mob: 9434776532/9434777365

CHANDIGARH BRANCH
Indian Institute of Materials Management
SCO 19-B, Swatik Vihar, Mansa Devi
Complex, Sector - 5, Panchkula - 134114
Ph. : 0172-2556646/4654205
E-mail : iimmchandigarh2@gmail.com

CHENNAI BRANCH
Indian Institute of Materials Management
4th Floor, Chateau D'Ampa, 110
(New # 37), Nelson Manickam Road
Aminjikarai, Chennai - 600029
Ph.: 044-23742195/23742750
E-mail : chn.iimm@gmail.com
iimmchennai@gmail.com

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

DEHRADUN BRANCH
Indian Institute of Materials Management
C/o. 30, Kalindi Enclave, Balliwala Chowk,
Lane No. 2, Dehradun - 248001 (U.K)
Ph.: 0135-2795486/9410397734

DHANBAD BRANCH
Indian Institute of Materials Management
O/o. GM (MM), B C C L, Koyla Bhawan
Koyla Nagar, Dhanbad - 826005
(Jharkhand) Cell # 09470595238
E-mail : iimmdhanbad@gmail.com

DURGAPUR BRANCH
Indian Institute of Materials Management
Office of ED (MM) 3rd Floor
Ispat Bhawan, SAIL, Durgapur Steel Plant
Durgapur - 713203 Tel: 0343-2574303

GANDHIDHAM BRANCH
Indian Institute of Materials Management
1,2,3, Plot # 356, Ward-12B, Tagore Road
Gandhidham -370201 (Kutch) Gujarat
Tel: 02836-231711/231745
E-mail : iimm_gim@rediffmail.com

GOA BRANCH
Indian Institute of Materials Management
124/8, UMASHRIPAD, behind NSD
Near Vishal Megamart, Anand Estate
Dabolim Vasco-da-Gama, Goa - 403801
Mob: 09923425037

GREATER NOIDA BRANCH
Indian Institute of Materials Management
B-193, Swam Nagri, Opp: J P Golf Course
Greater Noida - 201308
E-mail : iimmgreno@gmail.com

HARIDWAR BRANCH
Indian Institute of Materials Management
C/o. 97-B, Vigyan Kunj, Indian Institute of
Technology, Roorkee, Haridwar - 247667
E-mail : iimmharidwar@gmail.com

HOSUR BRANCH
Indian Institute of Materials Management
Opp: Hosur Bus Stand, By Pass Road
Above Axis Bank, Palaniyappa Building
Hosur - 635109 (TN)

HUBLI BRANCH
Indian Institute of Materials Management
Karnataka Chamber of Commerce of
Industry Building, 1st Floor, Jayachamaraj
Nagar, Nr. Nehru Ground, Hubli - 580020

HYDERABAD BRANCH
Indian Institute of Materials Management
Building no. 6-3-347/9/4/C, First Floor, Union
Bank Building, B/H Model House, Dwarkapuri
Colony, Punjagutta Hyderabad-500082.
Email: iimm.hyd1719@gmail.com,
Mob.: 9949872010

INDORE BRANCH
Indian Institute of Materials Management
03, Rajmahal Colony, Ext Manik Bag Road,
Indore - 452007 (M.P), Mob: 9826625417,
Email: dr.stmgmt@gmail.com

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

JAMSHEDPUR BRANCH
Indian Institute of Materials Management
Room # 6, Russi Modi Centgre for
Excellence Jubilee Road,
Jamshedpur - 831001
Ph.: 0657-2224670/2223530
E-mail : iimm_jsr@yahoo.co.in

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

KANPUR BRANCH
Indian Institute of Materials Management
C/o. Kailash Nath, 58, New Defence
Colony, Opp. Krishna Nager Telephone
Exchange, G.T.Road, Kanpur-208007 UP
Mob.: 7897000150, 9935032495
kailashnath119@gmail.com
agnihotri.hal@gmail.com

K G F BRANCH
Indian Institute of Materials Management
C/O Santosh Kumar, Manager Materials,
EM Division, BEML Limited, KGF-563115,
Mob: 09743977684,
Email: emvh@beml.co.in

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

LUCKNOW BRANCH
Mr. P.K.Bajpai
Indian Institute of Materials Management
86/106, Kurmi Tola, Maqboolganj,
Lal Kuan, Lucknow - 226018
Ph.: 9415752999, Res. 6307080159

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

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

MUNDRA BRANCH
Indian Institute of Materials Management
C/o Paresh Satasiya
DURLABH SINGH KHALSA
No. B/04/03, Sanudra Township, Old Port
Road, Distt. Kutch, Mundra - 370421
(KUTCHH). paresh.satasiya@adani.com

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

MANAGALORE BRANCH
Indian Institute of Materials Management
C/o. Exclusive Shipping & Exports, IV
floor, Ashirwad Building, GHS Road,
Mangalore - 5750001, Tel: 0824-2440913,
Mob: 9845080613, Email:
phillipcc13@hotmail.com

NAGPUR BRANCH
Indian Institute of Materials Management
404, Suryakiran Complex-1, Bajaj Nagar,
Nr. VNIT Gate, Nagpur - 440010
Ph.: 0712-2229446
E-mail : iimmnagpur@gmail.com

NALCO NAGAR BRANCH
Indian Institute of Materials Management
C/O Mr. S N Baghar, H.No. A-04, Shree
Ganesh Villa, Bikash Nagar, PO-Turanga,
Distt: Angul - 759123 (Orissa)
Cell: 09437081126
Email: snbaghar@nalcoindia.co.in

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

NEW DELHI BRANCH
Indian Institute of Materials Management
U-135, Vikash Marg, Shakrapur
Near Laxmi Nagar Metro Stn,
Delhi - 110092
011-41354969
E-mail:admin@iimmdelhi.org
Mob: 098 18 66 42 67 www.iimmdelhi.org

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

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

RANCHI BRANCH
Indian Institute of Materials Management
Gen Manager (MM) Office, Central
Coalfields Ltd.,Darbhanga House,
Ranchi - 834001, Tel.: 08987784115
E-mail : abinashkthakur@gmail.com

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

SAMBALPUR BRANCH
Indian Institute of Materials Management
C/o GM, MM HOD Deptt. Mahanadi Coal
Fields Ltd., Jagruti Vihar, Burla Distt.
Sambalpur, Orissa – 768020.
Email: rkhansacl@gmail.com

SINGRAULI BRANCH
Indian Institute of Materials Management
C/o Office of GM(MM), MM Deptt.
Northern Coalfields Ltd., P.O. Singrauli
Colliery, Dist. Singruali – 486889.
Madhya Pradesh
Email: sainins@gmail.com

SURAT BRANCH
Indian Institute of Materials Management
C/o. Genral Manager, Krishak Bharati Co
L d, PO: Kribhaco Nagar, Nr. Kawas
Village, Surat – 394515, Tel: 0261-2802032
E-mail : pravendrasingh@kribhco.net

TRIVANDRUM BRANCH
Indian Institute of Materials Management
TC-22/1820, 2nd Floor,Future House
Temple Road, Sasthamangalam
Thiruvanathapuram - 695010
Ph. : 7994512438
E-mail : iimmtvpm@gmail.com

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

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

VAPI BRANCH
Indian Institute of Materials Management
Chip & Bytes Fortune mall, Above Jade
Blue Via Road, GIDC Vapi - 396195
Ph.: 9724214353
E-mail : iimmvapi@gmail.com

VISAKHAPATNAM BRANCH
Indian Institute of Materials Management
C/o. CMA Bhawan, Akkayyapalem JN.
Akkayyapalem Highway, Visakhapatnam -
530016, Ph.: 9885310934/7093802468
E-mail : iimmvizag@gmail.com

V V NAGAR BRANCH
Indian Institute of Materials Management
Champs Engineering, 1-52, GIDC Estate
Vitthal Udyognagar - 388121
Tel: 02692-230440/ 09825028050
Email: harshad.champs@gmail.com

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