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MATERIALS MANAGEMENT REVIEW

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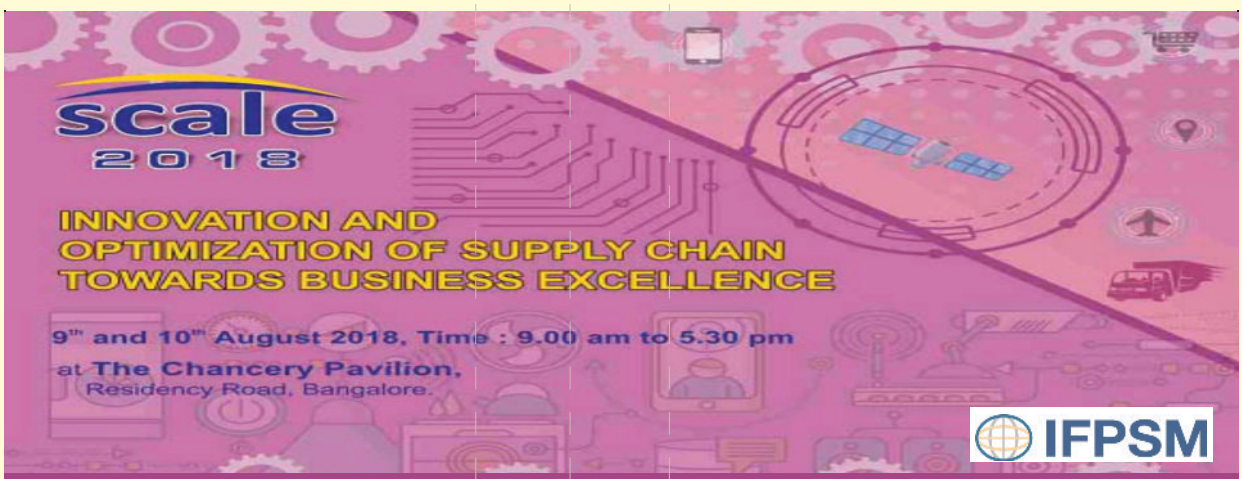
The Cold Chain Logistics Infrastructure

Supply Procurement	Transport	Storage	Transport	End Customer
• Precooling System • Farms (Rural Markets) • Manufacturers	• Refrigerated Trucks • Refrigerated Railway Wagons • Refrigerated Cargo Containers	• Cold Storage • Warehouses	• Refrigerated Trucks • Refrigerated Railway Wagons • Refrigerated Cargo Containers	• Retail, Terminal, Markets, Factory, Ports, Airports



INDIAN INSTITUTE OF MATERIALS MANAGEMENT
BANGALORE BRANCH

IIMM Bangalore Branch is delighted and happy to present the 17th edition of Supply Chain Management Exposition, (SCALE 2018) in Bangalore on 09th and 10th August 2018 at Chancery Hotel, Residency Road, Bangalore – 560 025.

"Innovation and Optimization of Supply Chain towards Business Excellence"

Innovation and supply chain need them more than ever. Challenges are multidimensional. Mergers and acquisitions, new players, new products have further added to the dynamic scenario.

IIMM, Bangalore have always been at the forefront to cater to the needs of the changing scenario by introducing the latest in SCM with its Executive Development Program, training calendar and it's educational activities.

While we acquire new processes and technologies, managing them with right talent and capabilities is as vital as the new process or the technology itself. It has been IIMM's endeavor to bring together like minded professionals through such forums like the SCALE,NATCOM, etc. to share skills and knowledge.

Interactions with leaders from various verticals and discipline will be the key highlight of SCALE 2018. Focus areas are the Manufacturing Sector, logistics and the fast-growing services sector. SCALE 2018 with a theme of **"Innovation and Optimization of Supply Chain towards Business Excellence"** will be an excellent platform for knowledge sharing and take-aways for the participants.

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IFPSM

From the Desk of The National President

Dear Professionals,

Greetings from Your National President!!!

It is a matter of great pleasure for the Institute, that AICTE has recognised our two programs i.e. Post Graduate Diploma in Materials Management (PGDMM) and Post Graduate Diploma in Supply Chain Management & Logistics (PGDSCM & L) each of 2 year duration on all India basis.

The most interesting development is the Govt. order for removal of Territorial Jurisdiction for standalone institutions. This has really given a great relief to all of us as now we can run these courses not only within our country but also abroad.

I appreciate the efforts made by Dr. M K Bhardwaj and his team for this gigantic task with in very short span.

IIMM Pune will be hosting its 5th Annual Award Function on 7th July 2018 and IIMM Bangalore is coming up with two day Signature Event "SCALE 2018" on 9th& 10th August 2018. I wish them a grand success for the forthcoming events.

IIMM Kolkata had organised one day knowledge seminar on 2nd June 2018 on Supply Chain.

It is right time for IIMM branches to launch a special drive for maximum enrolment of students from all the Govt., Public and Private Sector Organisations in and around their city especially for PGDMM and PGDSCM&L programs.

I look forward for your active support for enhancing the student's enrolment in the current session.

Yours

G. K. SINGH
National President - IIMM
e.mail : s_gksingh@yahoo.co.in

From the Desk of Chief Editor

Dear Members,

The scope and influence of Logistics was 1st felt in Late 1940s after the 2nd world war, and in 1950s and 60s, Military was the only organization using logistics in its operations. However, the scope of logistics was extended beyond Army as a tool for developing competitiveness. Logistics facilitates in getting products and services at competitive rates, as and when required by the customer. Logistics becomes more and more important with the rise of mass production systems.

In the present scenario of global economics, logistics play a key role in facilitating trade and, by extension, ensuring the success of business operations. However, changing consumer demands, complex business models and growing client demands are just some of the top factors that pose a challenge in streamlining logistics management.

The Indian logistics sector is valued at USD$ 150 billion, contributing 14.4 % of country's GDP. With easing of FDI norms, implementation of GST, increasing globalization, growth of ecommerce, positive changes in the regulatory policies, and government initiatives such as "Sagarmala", "Make in India", and the sector is expected to touch $200 billion by 2020.

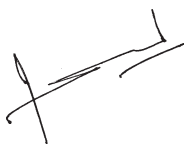
However, Logistics costs in India are 13-14% of the GDP and are much higher than those in developed countries. Government wants to bring it down to the level of 10%, by 2022 so as to make Indian Origin Products competitive amongst the global players and increase the Export Share by timely and safe delivery. The World Bank Logistics Performance Index ranked India 35 in 2016, compared with 54 in 2014.

Emphasising that logistics is the backbone of economic activity which determines how fast an economy can grow, the logistics division was created on paper in July 2017 under Special rank Secretary in the Ministry of Commerce and Industry. The Finance Ministry's approval of its proposal to grant infrastructure status to the logistics sector is being counted as its first achievement. The grant of infrastructure status to logistics means the companies associated with the sector will now get access to cheaper and long-term loans.

It is also a good move by Govt. to create an integrated logistics portal, or logistics e-marketplace, to connect buyers with logistics service providers with all the government agencies such as customs, port community systems, sea and airport terminals, shipping lines, railways, among others for the real time check and speedy clearances from the port authorities/custom authorities.

What India lacks in becoming a Super Economic Power is, it's Logistics Sector. We must aim at increase in speed at the same time reducing the costs. Seamless movement of goods across different states and Intermodal transportation (Road transportation carries 65% of total freight, which is a costly affair, while Railways carries only 26% of total freight volume).

Logistics sector will provide huge employment opportunities at the same time finding skilled manpower for this booming sector is another constraint. Logistics Sector is slated to grow at a good pace and is in want of around 40 Million skilled workforce by 2022 from 22 Million now. Government and various stakeholders including Sector Skill Councils, training institutions and logistic firms will need to come together to cater to the growing needs of the Logistics Sector.



(DR. M.K. BHARDWAJ)

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COLLABORATIVE PROCUREMENT

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"Coming together is a beginning, stayingtogether is progress, working together is success."Henry Ford

Globalization, competition, scarce resources and technological advancementsare forcing organizations to enter into collaborative arrangements. To cope up with increasing competition, to stay update with technological advancements, improve efficiencies and productivity, reduce costs, manage risks, joint development of new products / markets, to increase innovation and creating value, for better flexibility of operations, deliver joint objectives, to expand core competenciesand to sustain growth, organizations are entering in to strategic approach of collaboration by pooling, sharing, using and exploiting existing assets and resources; skills and expertise; sharing strengths and capabilities, know-hows and effective governance. Technological advancements in IT and other areas of enterprise systems have made it possible to access to the real-time data for sharing information and collaboration among the divisions (or business units) of a company or across different group companies, or between different companies across the geographies by tearing down silos, transcend boundaries, co-operate and work together in cross-unit / functional teams or across companies on common platform of data and information to create additional value and generate benefits and profits.Collaboration with right endeavor may trigger an increasing pace of innovation.

Collaboration is a process of mutual co-operation, understanding and willingness to work together by partnering and establishing relationships by interdependent parties and engage with each other with trust by sharing some of the business values like vision, knowledge, skills, technology, systems & methods, processes, resources or exchange of views, data & information of mutual interest through proper interactions and communication for better integrated planning, managing, executing and performance measurement in synchronism for achieving collective win-win goals by taking joint ownership of decisions and collective responsibility of the outcomes to create value proposition for mutual benefits, minimize risk and to secure the best possible commercial benefits and gain competitive advantage on sustainable basis. (As defined by the author in his article "Supply Chain Challenges: In Rapidly Changing Global Scenario" published in Nov'2014 issue of MMR)

Collaboration transcends everything to become a new way of working together with the fundamental theme subscribing to long term assurance of commitment in contrast to standalone solution and working in silos. Adaptation is essence of collaborative approach which is likely to generate far reaching changes in the operating model within individual organisations and across the associated organizations. Collaboration requires identifying and driving alliances across a range of identified categories and putting in place governance, policy, agreements, systems, processes, content and measures, for working together, standardising business processes, redesigning of process and products and establishing significant business change culture etc keeping in mind factors such as crucial compliance, benchmarking and demand management, sustainability and capacity planning.Some forms of collaborations are joint ventures, licencing arrangements, franchises, service agreements, consortiums, co-operatives, networking, collaborating with suppliersetc

These days procurement is transforming to become a more dynamic and agile; more strategic to capture value and reduce the lifetime costs; more innovative to support early involvement in new product developments and meet customers' expectations; creating a win-win situation for both the organization and the suppliers;creating favorable environment for striving together for continued improvement; socially and environmentally responsible for the relevant products that are sourced; deep commitment to embedding sustainability etc. On the other hand there are challenges to manage the diverse set of suppliers spread across the geographies; the challenges associated with dealing with suppliers of different cultures, races and languages and based in different time zones throughout the world; the challenges of agility, flexibility, speed and just in time requirements; the challenges of product innovations and obsolesces; the challenges of increased risks and complexities etc. These opportunities and challenges are allowing creating a strategic supply base and intensifying relationships; enter into long-term partnerships; opting for outsourcing options; reduce risks and reduce complexities; sharing information and operate on common platforms; and work together for mutual benefits - that is collaborating with suppliers for mutually beneficial relationship. Toyota pioneered the collaborative supply chain with the **keiretsu** concept more than fifty years ago. Best-in-class companies are now striving to integrate their suppliers in both innovation and business fulfillment by constantly reviewing supply base, selecting the best suppliers in terms of total cost of ownership, including quality,

reliability and timely delivery.

The term "collaborative procurement" covers a range of co-operative arrangements in procurement with the interested partners to share tangible and intangible resources,expertise, and work together or engage in co-sourcing arrangements or associating with each other for mutual interests based on strategic or operational alliances to leverage potentially huge technical or commercial benefits; efficiencies and competitive advantages in procurement.

Procurement Collaboration is a coherent strategy and acts as a catalyst to boost business interests of associated partners in acquiring the best quality goods and services at the lowest cost and goes beyond on process improvements and exploring innovative business ideas to gain competitive advantage in the market. Increasingly organizations today across industries are focusing on supplier collaboration, strategic sourcing and sound category management practices.Even some small organizations which are too small to have enough spend in a category to warrant large supplier discountsarealso opting collaborationwith other such procurement organizationsto increase their leverageby combining their requirements of certain products or services, and buy those products or services at a presumably lower cost than any individual organization could obtain on its own. Outsourcing procurement to a third party Business Process Outsourcing (BPO) units or such buying consortiums is also gaining momentum to leverage buying power.

Benefits of Collaboration in Procurement :

- Engagement & Early Supplier Involvement
- Building Long Term Relationships
- Better Utilization of Resources & Asset Management
- Resource Development Planning & Training
- Integrated Team Working : Sharing & Utilize Expertise & Joint Endeavors for Implementing New Ideas, Concepts & Innovations & Continuous Improvements, transfer Know-how
- Leverage Spending Power& Increase Cost Effectiveness: Economies of Scale, Shared Finances, Pooling & Bulk Purchasing, Reduce Resource Engagement Costs, Shared Development Costs, Reduction of Transaction Costs, Save inventory costs.
- Improve Performance & Value Additions : Improved Quality, Service Levels & Speed of Delivery, secured supply
- Achieve Reliable &Sustainable Supply Base : Increase Dependability with few closely associated suppliers (Reduce Supplier Numbers & Reduce Number of Procurements)
- Improve Operational Efficiencies : Increase procurement visibility, Ease of Operations & Procedural Simplifications, Improve process efficiency, Reduce cycle times, Increase contract compliance, operational flexibility
- Improve Business & Market Predictability
- Shared Risks & Risk Management
- Sharing Lessons Learnt / Best Practices
- Improve Business Growth : Joint Venture Prospects

DIFFERENT DIMENSIONS OF COLLABORATION : Author of "Understanding the meaning of collaboration in the supply chain" - Supply ChainManagement: An International Journal, MarkBarratt (2004) provides a framework with various ways of collaborating - mainly two forms - vertical and horizontal. Beside the vertical and horizontal form, Simatupang and Sridharan (2002) defined the lateral form of collaboration. Let us discuss briefly to better understand collaboration :

VERTICAL COLLABORATION : Vertical collaboration is concerned with partnerships formed along business areas that are at different points belonging to the same supply chain, such as downstream with the suppliers (backward collaboration) of the core company or upstream with customers (forward collaboration). Conventional customer-supplier relationships are vertical in nature. The strategy is used by organizations to gain control over its suppliers to increase the firm's buying power in the marketplace, reduce transaction costs and secure sustainable supplies.

Examples of vertical cooperation are supplier relationship management, Vendor Managed Inventory (VMI), collaborative planning & scheduling, collaborative product design, collaborative manufacturing, shared services and Collaborative Planning, Forecasting, and Replenishment (CPFR).

For example an automobile company may collaborate with an ancillary unit manufacturing car parts. Allied Nippon Ltd (ANL) - a Joint Venture between the Talwar Group of Companies and Japan Brake Industrial Company Ltd.(JBI) Part of the Hitachi group –manufacturing friction components such as **brake shoes / brake pads / brake linings is an ancillary unit to Maruti Suzuki.**

HORIZONTAL COLLABORATION : It concerns collaboration between organisational entities providing the same or similar products or services belonging to the same industry and same supply chain stage, such as a different unit of a same group involved in a same business or competitor company with whom the core company may share some facilities or expertise; cooperation between different actors from different sectors who share a common challenge; a consortium represented by many across the industry.

Joint venture gas pipelines; use of common corridors; logistic coordination; centralized purchasing for group companies are some of the examples of horizontal collaboration.

Examples : Joint venture between VW Sharan& Ford Galaxy – The **Ford Galaxy** is a large multi-purpose vehicle (MPV) was designed as a joint venture product between Ford and the Volkswagen Group, produced at Portugal plant - development& production identical by two competitors.

Star Alliance –The Star Alliance network is the leading global airline network, with Strategic Alliance of 27 Airlines (Air India also is a member), offering more than 18,500 daily flights serving 1,316 destinations in 192 countries.

M-Junction – a e-commerce company is a joint venture between SAIL & Tata Steel

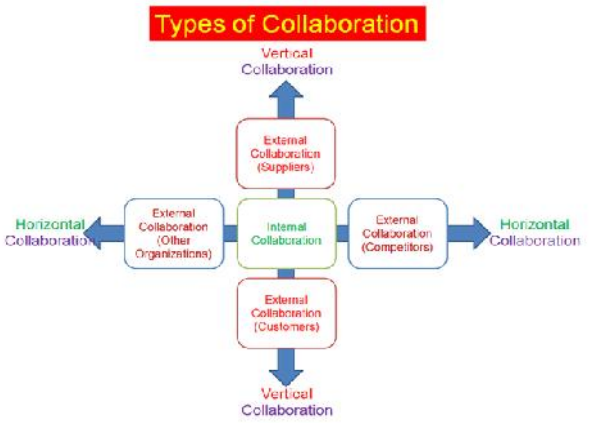
LATERAL COLLABORATION : Simatupang and Sridharan (2002) advocated lateral form of collaboration which is a combination of Vertical and Horizontal collaborations involving Cross-functional and cross-enterprise collaboration. This strategy is deployed when the challenges are characterized by different activities, different organisations, different levels, different geographical dispersion etc. In general vertical collaboration is possible even at lower level also while lateral or horizontal collaboration upper level involvement is essential. In addition there are internal & external collaborations :

INTERNAL COLLABORATION: Internal collaboration takes place within a firm. Functional divisions of a buyer collaborate internally. Internal collaboration involves reduce departmental and functional barriers and working across business units, functional groups, sales offices, buying departments, country subsidiaries, manufacturing sites etc. Collaborating internally improves the company at its core - advocates a sharing culture; improves team cohesiveness and leverages specialty knowledge that exists within the company; improves operational efficiencies and productivity; reduces costs, improves delivery, quality, service, and source flexibility.

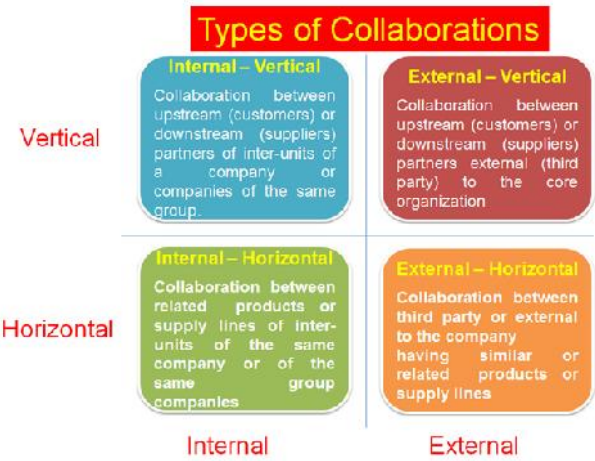
Examples are cross-functional team collaboration in supplier selection and sourcing; procurement department being involved in early stages of a project, such as specification writing or product design; centralized procurement; co-sourcing arrangements; clubbing of inter-unit requirements;innovative cross-unit product development and the transfer of best practices that reduce costs.

EXTERNAL COLLABORATION : External collaboration is partnering with external partners or third parties having business beyond corporate walls like suppliers, customers, logistic and other service providers, or even with competitors or non-competitors; or associating with related or un-related industry partners having legally and economically independent companies across business lines and working together for mutual interests. It is cross-enterprise collaboration to encompass a broader value network.External collaboration of procurement may allow individual organizations to rely on the collaborative network for their specialists, and allow to overcome a lack of internal capabilities and expertise; share scarce resources; improve productivity and to reduce risk.It builds relationships with suppliers, decreases research, product development costs, results in reduction of costs and increase profitability and improves service levels.

Examples : Early Supplier involvement – product development teams, Vendor Managed Inventory (VMI), Outsourcing Procurement activity, Job-work / Contract Manufacturing, e-procurements, 3PL services, Cloud networking, Web Based Information Integration (WBII) etc.



MIXED FORMS OF COLLABORATION : Combination of Horizontal & Vertical collaboration and Internal & External collaboration results into four more types of collaborations : Internal-Vertical, External-Vertical, Internal-Horizontal and External-Horizontal collaborations. The key to business success is integrating both internal and external collaboration strategies as well as vertical and horizontal collaboration into the business plan. Mixed types of collaboration enable businesses to be more competitive and do things faster and more efficiently and maximize business value.



INTERNAL-VERTICAL COLLABORATION : This is an internal collaboration between upstream (customers) or downstream (suppliers) partners of inter-units of a company or companies of the same group. For example a unit supplying some products or services to another unit of the same company or group company may collarate with each other. Another example- a purchase managerworking with a line manager to developnew product or supply alternate products which may result

in cost reduction

EXTERNAL-VERTICAL COLLABORATION : This is a collaboration between upstream (customers) or downstream (suppliers) partners external (third party) to the core organization. Example - collaboration with external vendors or supporting service providers

INTERNAL-HORIZONTAL COLLABORATION : Units or companies owned by the same parent group having similar businesses may collaborate by bridging differences among them. This is collaboration between related products or supply lines of inter-units of the same company or of the same group companies.For example an engineering plan developed in one unit may be adopted at other units of the company; centralized procurement orjoint procurement falls under this category.

EXTERNAL-HORIZONTAL COLLABORATION : This is a collaboration between external parties having similar product or services. For example sharing common facilities or corridors or forming a joint committees or associations for fighting a common cause.

TRANSFORMATION OF COLLABORATION - THREE Ts: Collaboration gradually evolves over a period of time moving from initial adversarial (combative) relationships to collaborative relationships **with shared vision, win-win mind set, relationships and strategic approach.** The "three Ts" of ways of working together starts initially from Transactional (coordinative) relationship to Transitional (cooperative) association and moves on to Transformational (collaborative) partnership to gain significant and long-term business values, based on essential factors of binding such as **trust, transparency,** relationships **etc.**

Transactional Collaborative Procurement is the lower level of collaboration involving mostly **coordinationwith partners**for optimizingand improving administrative/ processing side of procurementand the channel performance on transaction wise, such as information sharing, demand – supply & inventory planning. The objectives are achieved through consolidation & clubbing of requirements, centralized purchasing, standardization, automation or ERP system and viewing the contracts from the perspective of the downstream partner to guarantee the price, quality level, and delivery date for their orderto reduce the risks associated with delivery and forecasting errors.etc. The collaboration happens generally within internaldepartments and inter-functional areas within an organization. On the external front the collaboration is mostly contractual relationship based on transaction to transaction and contingency measures to set right for short-term failures;missing on long term and strategic agreements.

Transitional CollaborativeProcurement is a make shift improvement over transactional procurement with establishment of better **co-operative relationships**by extending external integration of sharingfacilities, joint planning ofdemand-supply &inventory, entering in to mutually beneficial long term contracts, early supplier involvement and improved interface with partners etc. The focus is on sharing information and facilities; joint working for improving processes, effectiveness and efficiencies;incentivizing partner to invest resources and finance or jointly taking measures to increase the benefits. This type of relationship implies certain level of trust and loyalty factors that binds for long term association.

Transformational Collaborative Procurement is a **higher level of collaboration with mission driven approach** withhaving close **cognitive association** between partners involving top management, sharing business values, long term objectives and strategic business goals. This type of collaboration requires pre-establishment of transactional and then transitional relationship and looks in to larger value chain and life cycle planningfocusing on new or different business opportunities or different ways of functioning involving higher levels of information sharing, effective business processes, enterprise level alignment and integrated relationships and create favourable opportunities to achieve sustainable competitive advantage. In this collaboration new and common mission and goals are created; mutual commitments are made based on higher levels of trust; resources are pooled; risks are shared; authority, leadership, ownership and controls are balanced as mutually agreed; focussed on longer-term results; and marked by comprehensive planning and integrated communication channels. The collaboration is also to address some operational aspects ofsupply agility, adaptability and alignment of business requirements to create consistency.Joint ventures, franchising andlicensing agreements, sound supplier management, sharing of costly infrastructure such as pipe lines for crude oil & gas, air terminals, warehouses, transportation modes (integrating train, road, sea transportation), Supply Value Management (SVM), Vendor Managed Inventory (VMI), Collaborative Planning, Forecasting, and Replenishment (CPFR), joint product development, outsourcing procurement activity, e-procurements, 3PL services, cloud networking etc are some of the examples of higher level collaborations. The collaboration is orchestrated by sound supplier management with collaborative processes and

networking; balanced scorecard approach with competitive dynamics; strategic sourcingwith value chain collaboration; strong supplier relationship management, benchmarking – best practices & pricesetc.

SOME EXAMPLES OF COLLABORATION : Bhagyanagar Gas Limited (BGL) - a Joint Venture Company (between HPCL, GAIL and the Government of Andhra Pradesh) andAavantika Gas Limited - a Joint Venture Company by GAIL (India) Ltd. and HPCL for **distribution and marketing of environmental friendly fuels (green fuels) viz. CNG and Auto LPG.**

Petronet LNG Ltd **-** a joint venture company promoted by the Gas Authority of India Limited (GAIL), Oil and Natural Gas Corporation Limited (ONGC), Indian Oil Corporation Limited (IOC) and Bharat Petroleum Corporation Limited (BPCL) for import of liquefied natural gas (LNG) and set up LNG terminals in the country.

Mahindra is developing new petrol engines in collaboration with their Korean partners SsangYong. While the product will get the Mahindra badging in India, the car will be sold elsewhere as aSsangyong.

Boeing uses a Product Lifecycle Management (PLM) solution from DassultSystemes as its worldwide collaborative platform for product engineering across its core supply base. This allows for faster product development cycles because companies can work on their portion of the product at the same time instead of having to do sequential design and testing.

Wal-Mart, the biggest retail chain in the U.S. allows its suppliers to access its internal information management system in order to get an overview of its stock situation. Suppliers therefore know when it is time to make a replenishment delivery. Wal-Mart collaborated with its vendors and implemented several external integration initiatives like satellite based vendor-store links, item-level RFID tracking, vendor managed inventory (VMI), etc.

The multinational corporation Coca-Cola Enterprises (CCE) Ltd. and the British firm ECO plastics have collaborated to run a recycling plant in Lincolnshire, UK. Their agreement marks a turning point in industrial processing of plastic waste in the UK.

CMA CGM, Maersk Line and MSC Mediterranean Shipping Company SA have agreed to establish a long-term operational alliance on East – West trades, called the P3 Network. The aim is to improve and optimize operations and service offerings.

Toyota Motor Corp. has chosen Microsoft's technology platforms to build its communications and collaboration infrastructure for the Toyota family of companies worldwide for the deployment of Microsoft Office 365-dedicated cloud services as their exclusive environment in June 2012.

Ariba – a e-commerce company engages with partnering company in a collaborative sourcing and supplier management program that leverages web based technology and tools as well as structured processes expertise and a networked community.

COLLABORATION-SUCCESS FACTORS &FAILURES : Cross-functional and cross-enterprise collaborations succeed when the following factors are kept at the core of partnership :

The first and prime most requirement is identifying needs of collaborative values with certain organizational expectations and **objectives of mutual interest with win-win mindset**.

The next step is **choosing the right partners** matching the intra and inter-organizational needs and capabilities.

Collaboration **works on factors of binding** such as **trust, transparency,** relationships**, truthfulness, recognition** and **congenial joint working environment with well-defined** responsibility**,** authority and accountability; resource sharing and rewards**; information and** communication; joint decision making and risk sharing **etc.**

One of the most successful factor of collaboration is alignment of partnering organization's values, mission, structures, systems and cultures.

On the other hand individual organizations within a collaborative engagement inevitably face differing profiles of risks and benefits, given their differing requirements, spend values and levels of reliance on the product or service in question. Factors like not taken adequate care in selecting the partner;Objectives are biasedwith one sided interests; Imbalance of inter-dependencies – one overtaking and dominating the other - dominant partner trying to maximize his own benefits; Fear of losing independency – locked in a bond; Over dependency on the partner – partner shifting loyalty or breaking ties for opportunities outside the collaboration; Lack of understanding, trust and transparency; Improper communication and information sharing system; Inadequate risk sharing mechanism – trying to pass on negative risks to other partner Over estimating or wrong estimating partner's capabilities leading to delivery failures; Lack of fair governance structures and systems that are appropriate for the particular collaboration; Differences in people related believes, behaviours and cultural barriersetc may lead to failure of collaborative efforts.

Despite various risks, difficulties and challenges associated with collaborations, organizations can no longer afford to ignore toforge collaborations since the benefits over weigh conceived negativities. Well defined collaboration with trust and transparency strengthens core functions and founds beneficial to the partners.

●●●

HANNOVER FAIR 2018 IN GERMANY

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The undersigned visited Hannover Fair 2018 in the last April. The main focus of this year Fair besides Technical Exhibition was about major sea changes impacting on the world of Industrial production. Industry 4.0 interlinked production, artificial intelligence, the new dynamics of electro mobility, etc. The term Industry 4.0 was named in Germany to label a push toward digitization of production in Germany and to highlight the necessity of change. Industry 4IR refers to abbreviation for Fourth Industrial Revolution.

Hannover Fair is the largest high- tech Trade Fair in the world and showcase state of the art technologies including seminars and conferences on emerging trend in all areas of Industry including Supply Chain and Logistics. Any innovation will be exhibited first in the Hannover Fair. It is held in a place called Hannover near Hamburg. The fair will be generally for 5 days and is attended from all the countries in large numbers.

Every year there will be different partner countries. In the year 2015, India was the partner country when our Prime Ministry Sri NarendraModi inaugurated the Fair. This year the partner country was Mexico. The partner countries incorporate themselves into Global Value Chains.

There were scores of conferences on all topics of technology and management within the Hannover Fair and I could attend few of them. I have given below some of the definitions noted during the conference although we are already familiar with these.

1. Additive Manufacturing: Under this, products are manufactured from various materials by means of 3D printing. It is already a standard practice for prototyping and modeling and it is becoming more and more common in production.

2. Artificial Intelligence (AI). This field of research is one of the domain of computer scienceand deals with automating intelligent behavior in machines and process. AI refers to the attempt to emulate human intelligence using information technology and algorithms for intelligent behavior.

3. Augmented Reality: It is the term for supplementary information being overlaid on the normal working environment. It can be implemented using mobile devices such as smartphones and tablets.

4. Big Data: The term describes the large amount of data produced and collected during the manufacturing and use of a product.

5. Cloud Computing: The term describes the practice of providing processing power or application software over the internet without requiring any installation on the local computer. It is used via interfaces and protocols, for example, by means of an app or web browser.

6. Crowd funding: Funding sponsors and investors via internet platforms.

7. Data Mining: The term describes the use of statistical methods to identify pattern in large and complex data sets and use them to develop recommendations for actions.

8. Digitization: The introduction of IT and communications solutions and algorithms into all areas of living and working. This will change the world of work. This may also eliminate some jobs and profession but it may also create new jobs. However, digitization is not a Job Killer.

9. Disruptive :The rapid displacement of existing technologies, process and structures. In contrast to continuing development (evolution), disruptive developments can result say, new comers, in the market quickly bringing lasting changes to conventional technologies or processes. Some time it can displace them completely. Typical examples are Hotel Vs. AirBnB, Traditional Travel Agents Vs. Uber, Ola etc.,

10. Embedded Systems: Microchips are embedded in products in order to enable the products to communicate with the environment and immediately process generated data.

11. Internet of Things: This is the technological vision of integrating devices, people, and objects of all kinds into a universal digital network. Each object has a unique identifier and acts or moves in a smart environment. :

12. Lean Manufacturing or Lean Production: The term used to describe a systematized production

organization method followed at Japanese automobile companies compared to prevalent in USA and Europe at that time which was called as "Buffered Production".

13. Machine Learning: This is generally referred to self-adopting algorithms in the programing of the machines.

14. Predictive Maintenance: Using predictive analytics to plan maintenance work in order to prevent interruptions in the runtime of a machine, facility or factory resulting from faults or breakdowns.

15. R A M I : Reference Architecture Model Industry 4.0. This is a structural model. It divides complex processes into manageable packages and aggregates elements and IT related components into a layer and life cycle model.

16. R F I D: Radio Frequency Identification technology for transceiver systems. This is an automatic, contactless identification of objects used mainly for tracking.

17. Virtual Reality: (VR). Representation and simultaneous perception of reality and physical characteristics using a virtual, interactive environment computer-generated in real time. Immersion in VR is referred to effects similar to seasickness.

18. Value Creation Chain: This refers to the entire process from the customer placing an order to the delivery during which the outsourced company acts to create or increase the value of a product or service. It was highlighted by the speaker that the maximum role in this is by Supply Chain Management.

It was acknowledged that this year partner country Mexico has transformed from a developing country into an industrialized nation in a short space of time. It was stated that this was possible since German companies directly invested 12B$ in Mexico and also created 2,20,000 jobs there. This is an example of creating Global Value Chain.

In Hannover Fair, companies dialogue with other companies of the world and get them involved in networks abroad. There will be record number of Chambers of commerce representing at the fair, bringing business delegations from all over the world. This trade fair has become a must-do event for most of Chamber of Commerce across the globe.

There was a seminar in Indian pevilian on Ease of Doing Business in India. It was projected that India is now a leading destination for foreign investment. It was clarified and mitigating measures were explained about all key challenges and culturally bewildering operations faced by foreign investors. It was also told that it may be difficult to manage local compliances from abroad. Instead these statutory compliances can be entrusted to Indian professionals and conduct regular audits to evaluate the effectiveness of governance models.

Engineering Export Promotion Council (EEPC) has taken a role to promote Technology transfer and digitization.

This is a potential avenue for exploring partnership in the areas of technology transfer, innovation, digitization, fast track development, smart supply chain and clean manufacturing. This is the most appropriate platform for Indian companies to foster dynamic relations with international giants, tap global markets, technology collaborations and Export opportunities.

For professionals, it is an interesting and professionally educative forum to update ourselves.

This is a brief note on my exposure in the fair and most of the points are noted from the speakers of the various seminars and conferences during five days of fair.

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CUSTOM EXCHANGE RATES

(All rates per unit) w.e.f. 22nd June, 2018

CURRENCY	IMPORT	EXPORT
Australian Dollar	51.65	49.20
Bahraini Dinar	186.60	174.80
Canadian Dollar	52.25	50.40
Chinese Yaun	10.70	10.35
Danish Kroner	10.80	10.40
Euro	80.30	77.35
Hong Kong Dollar	8.85	8.55
Kuwait Dinar	233.05	218.10
Newzealand Dollar	48.00	45.85
Norwegian Kroner	8.50	8.15
Pound Sterling	91.35	88.15
Qatari Riyal	19.30	18.25
South Arabian Riyal	18.80	17.60
Singapore Dollar	51.10	49.20
South African Rand	5.15	4.85
Swedish Kroner	7.80	7.55
Swiss Franc	69.80	67.05
UAE Dirham	19.20	18.00
US Dollar	69.10	67.40
Japanese Yen	62.90	60.55

Source : www.dailyshippingtimes.com/custom-exchange-rates.php

MULTITIER SUPPLY CHAIN MANAGEMENT

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Multitier supply chain is a supply chain in procurement, and is mostly in multitier chains, usually in industries that produce an end customer product or service, and which goes more than one step of manufacturing. Multitier supplier is a single multi-single tier supplier in collaboration, and the relation of supply is in multiple supplier, buyer, within on supply but the practice is that it will have several suppliers, but one customer, from which part supply chain can be derived.

Recent trends towards outsourcing and global sourcing have created longer, and more complex, and fragmented supply chain. The development of multitier supply chain management is by adopting by inductive study done on a supply chain, and the development has brought supply chain consisting of buyers, suppliers, and suppliers supplier.

Multitier visibility and collaboration extend across the entire product life cycle, as this indicates the sourcing is increasingly becoming a key strategy, across multiple industries, helping to drive lower cost, reduce capital assets, so as to get products to market more efficiently, since outsourcing has its drawback, which includes increased complexity, and reduced visibility and control.

Multitier visibility has the issue of developing electronic connection with suppliers , enabling to collaborate forecast and demand as well as increase the visibility in supply chain inventory and shipments, since organizations rely on many different companies or organization around to deliver the products to customer on time at the lowest possible cost, as a result many companies or organization are extending the supply chain strategy to include multiple tier for multi organization network, and for the consideration taken contract management, 3PL, vendor managed industry.

N-Tier visibility is not constant in supply chain, as it changes, it will gain a significant competitive advantage in terms of cost structure, responsibility, operation and execution in multitier supply chain providing a new level of insight that has simply not been possible for any company or organization. N-Tier would know if there is a critical supplier hidden in the supply chain that multitier, have, and thereby avoiding any false sense of diversification in supply chain. N-Tier would help the cost structure and drivers of Tier-1 supplier, and negotiate better agreement for both parties. It will analyze Tier 1 delivery performance, correlate to its supply chain structure, it will also allow to see if the end-to-end supply chain responds quickly enough to description of any change in demand. N-Tier visibility in supply chain is probably the most visible up to Tier-1, supplier, as supply chain data is fragmented across multitier system in an organization or business, and going beyond Tier1 is more a challenge, and companies do manage, their Multitier supply chain, and it gets obsolete as suppliers go through the change in products, and manufacturing process, but by innovation technology it is possible to receive Multitier supply along with associated data, location of products, as new Multitier supply chain network ensures the correct data and on a continual basis.

Benefits of Multitier visibility: More product launches: since good co-ordination among multi supply chains, which ensures faster products in preparation for a product launch, and multi-tier connectivity provides to successful collaboration that require significant amount of resources, and this is the reasons why manufactures require multitier connectivity in supply chain.

Coordinated product launch: New products are critical area of focus in an organization, and in industries, with high technology product, with shorter life cycle, and profit making with severe competition, coordination with supply chain for ensuring prompt production, and smooth flow of products, initiates preparation of product launch with multitier supplier connectivity, and provides foundation for a successful production.

Improved coordination: As production goes on manufacturers or suppliers need visibility into availability, of key components to ensure smooth production, as some of these components may be short supply, so visibility of production, with manufacturer or supplier is critical. Multitier visibility provides transparency with raw materials availability and ordering to en sure downstream activities all occur well planned.

Reduced planning cycle: Multitier products connectivity can accelerate the information flow thereby improving the information used in planning and reduce cycle time by improving strategically.

Supplier performance improved: that is to measure the performance of strategic supplier, original equipment manufacturing is connected regardless of the tier, since by improving supply and demand they can measure the on-going performance such as effectiveness, in delivering against demand and flexibility, in responding to changes against multitier products.

Supply chain risks: Operational disruption against value chain, the organization are able to respond to sources of supply chain risk operation, and supply chain performances are impacted, multitier visibility, also enables to work in collaboration with Tier, with different suppliers and resolve issues more effectively. Multitier visibility and collaboration enables manufacturers, suppliers to synchronize planning and coordinate effectively activities on the information with relevant suppliers, however transmitting to multitier in supply chain.

Social responsibility in a Multitier supply chain, where three tier supply chain management, exists, in which the importance is given to Tier 2 supplier to sell to Tier 1 supplier due to compulsion, which in turn sells to Buyer (Tier). The Tier 2 supplier who supplies in supply chain violates social and environmental standards, which result in harm to Tier (Buyer). Each of the supplier of the supply chain can improve the responsibility in Tier 2 and with the efforts of Tier(Buyer) and Tier 1, in which the product are substitutable with one another**, and** this shows substitutable of products with one another, and the complimentary efforts of Tier 2, and under these conditions the buyers optional strategy is to have direct control of the Tier2 partnership, and now only Tier 1 will supply to Tier2,or there will be no effort to work in Tier 2, and determine which is optional or optimal, by deriving a buyers strategy which allows to analyze several decisions regarding the management of Tier 2, supplier risks, and the impact of supply chain by multitier tasks. Given that the delegation of authority is much simpler, and more scalable, strategy that the control of buyer with extensive supply chain suppliers, and the control is optimal as we quantify incremental value, and how resources can prioritize direct control of management of Tier 2 supplier, which has the greatest impact, and how progressive pressure from consumers influences buyers strategy, and level of responsibility in supply chain.

In a multitier supply chain risk management is a challenge therefore end-to-end risk management approach is needed to fortify the entire supply chain network. In a multitier supply chain consisting of 4 Tier supply chain, Supplier, Manufacturer, retailer, consumer, are a part of the supply chain, since each supply chain proponents (supports) are assumed to have two objectives to maximize profit, maximize risk which are associated with the economic or political conditions. Risk, problems in a multitier end-to-end risk, and the management approach is to see that the organization working towards achieving the goal, and the contribution in the supply chain risk specially in the supply change demand side risks, since multitier consists of 3 tier of decisions, which makes the manufacturers, the distributors, and retailers, which allows physical as well as electronic transaction.

In the multitier profit, the supply chain, the supplier and the manufacturer incur product cost, depending upon the production quantity, and each of them incur certain transaction cost for the economic transaction, depending upon the transacted quantity. Inventory cost is mostly associated with inventory level, and if any further cost incurred is associated with each risk occurred. In order to optimize, Supplier problems, Maximize Sales revenues from manufacturing, production cost, inventory handling cost, and thus the expected cost incurred due to internal risk, and this should take the constraints of Production capacity. In the manufacturing organization, it maximize sales revenue from retailers, Inventory holding cost, Procurement cost, and the constraints of Inventory sales. In the retailer's optimization of profits, maximization of sales revenue, inventory holding cost, procurement cost, which is expected that the cost, which has incurred due to internal risk, and the constraints are due to inventory and sales.

The sustainability of Multitier supply chain covers the aspect of responsibility, of operation, environmental, social and economic aspects, of supply chain. Since sustainability in supply chain is important as it drives to manage the multitier organization in supply chain. It is only possible that the first Tier supplier that can have a role in furthering the sustainable supply chain management initiatives on behalf of the main organization, and if especially when the network of supply is large, it is not possible for the Buyer companies or organization to aim and form relationship with all supplier. The sustainable supply chain management can also be seen to include the management of untypical supply chain possibilities.

Business which do not go beyond first Tier 1, suppliers in a Multitier and are bound to have risks in the blind spots of the organization, which would affect revenue, corporate reputation, operational stability, which lie deeper in supply chain.

The liability of multitier supply chain the responsibility attributes for un-sustainability supplier behavior is a phenomenon by which consumers hold firms responsible for un-sustainability behavior for supply chain liability. Responsibility attributions do not differ from organization, from supplier, size, since strategic importance of the product supplied. The supply chain liability creates a strong risk, for the organization, higher responsibility and attribution to increase consumer's responsibility to boycott the product.

Achieving Multitier transparency is a challenging by consumer brands, and leading organization are using data from the best concept ins supply chain to tackle critical safety issues and improve worker conditions at productions globally, as companies that monitor and understand supply chain data are better placed to access and mitigate risks, since they also identify positive trends, replicate good practices, and build a web of supply chain in organization and substantially improve identify supplier sustainability needs, with rising globalization , and the demand for products like energy, and with growing demand for business change, it is clear that sustainability issues will become more critical, to organization, and their suppliers, and the organization are recognizing the power of supply chain and collaborating to bring transparency, in supply chain and tackle sustainability issues at a larger scale.

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SMART FARMING IN THE CLOUD IMPROVES PRODUCTIVITY AND EFFICIENCY

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Cloud computing in dairy sector: Cloud computing is playing a very dynamic role in food industry in many areas, for example, Customer Relationship Management, Customer Service and Supply Chain Management etc. Food service suppliers nowadays want to ensure that they have the correct product at the correct place at the accurate time. As cloud computing connects people and companies in real-time, it makes the food service provider's life easier. While most installations of food and beverage enterprise resource planning (ERP) systems are still on premise, there are a growing number of cloud computing-based systems for food and beverage industry, particularly in smaller operations. The Software-As-A-Service (SaaS) model offers subscription pricing and reduces front-end investment in hardware. The food and beverage (F&B) sector in India is going through a similar shift today as far as embracing IT and in specific Cloud is concerned. The large enterprises in this sector have already embraced IT applications and processes to create new business opportunities and compete in the national and global markets.

Dairy sector in India: India has been the leading producer and consumer of dairy products worldwide since 1998 with a sustained growth in the availability of milk and milk products. Dairy activities form an essential part of the rural Indian economy, serving as an important source of employment and income. However, the milk production per animal is significantly low as compared to the other major dairy producers. Moreover, nearly all of the dairy produce in India is consumed domestically, with the majority of it being sold as fluid milk. Along with offering profitable business opportunities, the dairy industry in India serves as a tool of socio-economic development. Keeping this in view, the Government of India has introduced various schemes and initiatives aimed at the development of the dairy sector in the country. For instance, the "National Dairy Programme (Phase-I)" aims to improve cattle productivity and increase the production of milk expanding and strengthening and expanding the rural milk procurement infrastructure and provide greater market access to the farmers. On the other hand, the private participation in the Indian dairy sector has also increased over the past few years. Both national and international players are entering the dairy industry, attracted by the size and potential of the Indian market. The focus is being given to value-added products such as cheese, yogurt, probiotic drinks, etc. They are also introducing innovative products keeping in mind the specific requirements of the Indian consumers. These players are also improving their milk procurement network which is further facilitating the development of the dairy industry in India. Looking forward, the market is expected to reach a value of INR 18,599 Billion by 2023, exhibiting a CAGR of around 15% during 2018-2023.

The major challenges that the farming industry are faced with:

- Lack of resources limited availability of land, depletion of natural resources and environmental issues such as effluent disposal and deforestation are constraining expansion of livestock production.
- Strong demand for more food as the world's population grows.
- Land management problems resulting from the preparation of the land to grow the crops to improper grazing practices.
- Food waste from spoilage and produce culled by retailers.
- Government policies and intervention.

Dairy automation: Every milk collection sub-station is prepared with fully incorporated milking systems (sourced from De Laval Agri (I) Ltd.) which accurately measure individual buffalo milk production.20 buffaloes data base is maintained in the milk parlor. An indicator lamp system is detecting the instances of non-milking or non-registration of milk in storage unit. All milking point activities such as milk yield recording, pulsation, soft stimulation and cluster removal are managed. They empower their farmers with micro and macro scientific and technical know-how, to help them broaden the expanses of their operations. Towards this, we have been pioneering the concept of satellite farms, as part of which, we extend unconditional technical assistance and 25% subsidy for facility expansion purposes to farmers in surrounding villages. The beneficiary farms are automated to monitor various activities like feeding, milking and cleaning. Each milk farm is equipped with milking machines and dung scrapers. Chitale is supplying mineral mixture, de-worming, orally fed tablets, vaccines for foot & mouth and H.S. and B.Q. are supplied at subsidized rates. Chitale dairy is having their own mobile veterinary staff to provide door to door medical services

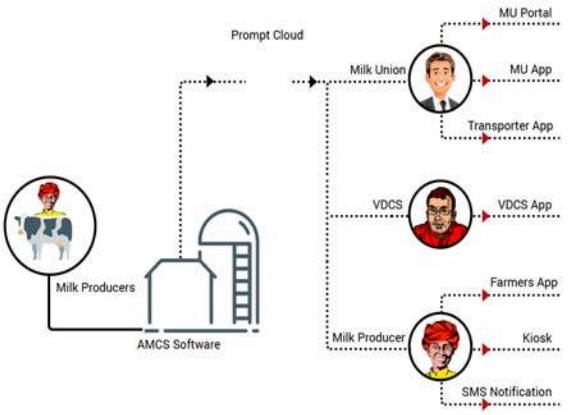
to farmers such as AI and pregnancy diagnosis. Today, 62 satellite farmers have been established at different places in the district.

IT Integration in Dairy Industry: Indian dairy sector forms the biggest part of Indian economy and also the largest milk producer across the globe. Major revenue is earned through this sector in India. It is because of the underlying fact that the entire rural population, which contributes to over half of the total Indian population, drives the dairy sector in India. It is only because of the farmers that the dairy industry has been blooming exponentially. If the farmers all over the country are brought together on a single platform, the Indian dairy industry will surpass all other giants around the world. It is a big challenge to bring about such transformation and maybe next to impossible. But as they say, well begun is half done. Amul, the biggest dairy industry in India has, in association with Prompt Group, has taken up this initiative to make this dream come true through a common software system that has already been running quite successfully in Gujarat.Amul had two key concerns, **First, how to include milk producer in this process and how to benefit through digital technology.** The milk procurement process is run by three major stakeholders, farmers, milk cooperative societies, and milk unions. To connect and all of them in a single platform and bring about transparency, AMCS provides various mechanisms.

Farmers IoT : A farmer is provided with **Farmers App** that enables him to keep track of his entire business. It shows him how much quantity of milk he is giving to the milk society in morning and evening, what is the amount of fat and SNF, how much he was paid, amount credited in his account, complete passbook of his bank account, compare how much milk he gave last month/ year, how much fat SNF was there and how much cattle feed did he buy from milk society. It gives full information of transactions with milk societies imparting easy business management."Our objective is to reach out to all 18,500 village cooperative societies through this app. It will enable us to link farmers and his village to a product made out of his milk being sold anywhere in India." as quoted by Sodhi. Thus, Amul AMCS software is an extremely significant project in Cow to Consumer process.

Access to Centralized Data : The peculiarity of this project is that there exists just one AMCS software in entire Gujarat. A centralized data management system is maintained at one place for data analysis, milk production estimation in any district or village or route, to identify and analyze milk production variation based on seasonal and climatic conditions and for future milk production estimations. Earlier, officials had to commute and visit each and every village to meet farmers to discuss their concerns and solve them. But now, thanks to Amul AMCS project, they can monitor, all activities going on in any district or village sitting at one place and based on that, take necessary actions. They can also manage and respond to farmers' complaints and issues centrally.

Cashless Society : One salient and eminent feature that Amul AMCS offers is Cashless Society. Previously, payments to farmers were made on a weekly or bi-monthly basis. Owing to Digital India initiative, it will become easy to deposit money directly into farmers' accounts and they will be automatically linked to milk society's bank account. Besides, farmers will receive instant notifications whenever payment is credited to their accounts. Hence, AMCS project stands extremely important for all these activities in coming days. A milk producer, basically a farmer, can keep track of his business and all the essential information useful for future decision making, altogether proving to be favorable.The beneficiaries of this project will be all the stakeholders like farmers, district union officers, and the Federation. Apart from this, the whole system will become transparent. RS Sodhi, while congratulating the entire team including members of milk societies for their invaluable contribution, district union officials for supporting this initiative wholeheartedly and Prompt Group for taking up this project, implementing and making it possible, expressed his wish that the Amul AMCS reaches out to all the milk societies all over Gujarat. There's no doubt that Amul AMCS project has brought in digital transformation throughout many villages in Gujarat. The mindset of people is changing and so is the nation. India is on its way to bridge the gap and become a developed nation. And with the help of Amul AMCS project, it will turn possible to what seemed to be next to impossible on the surface.



Conclusion: The digital transformation helps the dairy farmers' most precious livestock healthier and producing at a 10x higher yield, through big data analytics, automated farmer to-do lists and computerized breeding management.

This kind of transformation was nearly impossible just a generation ago, and owes itself to a creative and innovative use of technology that helps foster opportunity for the farmers around them.

In Maharashtra Chitale Dairy drives dairy production cloud virtualization supporting 50,000 farmers and 200,000 cows. In this micro-documentary, the growth of healthier animals contributes to a healthier India, and how VMware helps to power this transformation.

IT innovation, virtualization and cloud technology, help the farmers in their community and across the country. Because of technology improvement all dairy firms mainly focus on animal health and scalable productivity that is boosting the local economy, and creating higher-quality milk products.

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SUSTAINABLE SUPPLY CHAIN MANAGEMENT EXPERIENCED IN INDIAN SHIP BUILDING INDUSTRIES

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Abstract: Supply chain sustainability is the management of environmental, social and economic impacts throughout the lifecycles of goods and services (BSR, 2010). The main objective is to create, protect and grow long term environmental, social and economic value for all stakeholders or team members involved in bringing products and services to market. The supply chain consists of those activities associated with manufacturing from raw material purchase to final product delivery. The ship blocks are modeled in design office using 3D software and are passed on from the design office to the production department in form of 2D (2-dimension) drawings (ICSOT, 2011). Modularization and standardized parts and system interfaces are being used in the design of future ships, in order to increase productivity and flexibility while reducing total cost of ownership. These initiatives will make it even more important to integrate and coordinate the shipbuilding supply chain and thus will achieve a sustainable competitive advantage by building and delivering ships better, faster and cheaper. In this paper, a scientific tool namely 'AHP' (Analytical Hierarchy Process) has been applied to achieve the rankings or priorities among the different sustainability criteria or measures already implemented or to be implemented in Indian ship builders.

Introduction: GRSE (Garden Reach Ship Builders & Engineers Ltd.), a leading shipbuilding industry in India, believes in the concept of sustainable development in the manufacturing of vessels or warships for the Indian Navy. GRSE has emerged as a leading shipyard of India, building a wide array of vessels, from world class Frigates to Fast Interceptor Boats, thereby make every effort to contribute towards sustainable development of the society and become a partner in nation building (GRSE, 2014).

Fig. 1: Triple Bottom Line (TBL) in Sustainability

Prevention of environmental ruin is a primary characteristic of sustainable growth. The integration of sustainable SCM in Indian shipbuilders, lowers the business risks, generates cost savings, enhances corporate reputation in the competitive market and finally builds innovations in terms of development of new products & services that are more sustainable and socially responsible (Hill, Toth, 2013). A sustainable business analytics helps to design and build the modern vessels of excellent quality. Since, shipbuilding is a complicated process with risk to the health, safety and the environment, (e.g. working at height, hot work, confined spaces, sea trials etc.) hence, strong manual worker and health and safety practices result in the cost efficiency and improved productivity (DAMEN, 2014). Moreover, supply chain observations in ship builders are an important characteristic in identifying the areas for improvement in the manufacturing of ships. It can also help to determine the actual lead time, processing time and wait time at each step in the supply chain before the vessel finally reaches to the end user i.e. Indian Navy (Cognizant, 2015).

Fig. 2: P28 (ASWC) Vessel Manufactured by GRSE in a Sustainable SCM Environment

Research Methodology: Structured questionnaires were prepared and distributed among the willing vendors and the employees of the organization directly associated with the ship building. Besides these, additional sources of information in this study were different research papers already published on sustainability in ship building industries and collection of information from various sources like, survey, newspapers articles on the recent developments, industrial reports etc.

Application of AHP in Prioritization of different

sustainability measures in Indian ship builders: In the present study we have taken into consideration four alternatives and three criteria to follow the sustainability in supply chain throughout the GRSE shipyard. The corresponding alternatives and criteria are as follows-

Alternatives:

A1: Role of Suppliers in delivering sustainable shipbuilding resources.

A2: Role of Designers in sustainability.

A3: Role of Customers & Material Recovery Section in sustainability & finally,

A4: Role of GRSE Management to implement sustainable guidelines throughout the organization.

Criterions:

C1: Environmental Sustainability.
C2: Social Sustainability & finally,
C3: Economic Sustainability.

Results:

Table - 1: Pair wise comparisons among the four alternatives:

Alternatives	Role of Suppliers	Role of Designers	Role of Customers & Material Recovery Section	Role of GRSE Mgmt.
Role of Suppliers	1.00	7.00	0.33	3.00
Role of Designers	0.14	1.00	0.17	0.25
Role of Customers & Material Recovery Section	3.00	6.00	1.00	5.00
Role of GRSE Management	0.33	4.00	0.20	1.00

Table – 2.a: Ranking by Normalization and Consistency Analysis of Alternatives:

Alternatives	Weights (w) (obtained by Geometric Mean)	Ranking	Consistency Measure (Weighted Sum Vector)
Role of Suppliers	0.273	2nd	1.132
Role of Designers	0.047	4th	0.202
Role of Customers & Material Recovery Section	0.516	1st	2.216
Role of GRSE Management	0.120	3rd	0.501

Table – 2.b: Ranking by Normalization and Consistency Analysis of Alternatives:

Alternatives	Ratios (Consistency Vector)	λ max	Consistency Index (CI)	Consistency Ratio (CR) = CI / RI
Role of Suppliers	4.152	4.234	0.078	0.086
Role of Designers	4.332			
Role of Customers & Material Recovery Section	4.292			
Role of GRSE Management	4.158			

Therefore, as per the ranking of the alternatives in the present study shown in Table – 2.a above, the third alternative i.e. the 'Role of Customers & Material Recovery Section' in shipbuilding sustainability has achieved the highest rank followed by the alternatives – 'Role of Suppliers', 'Role of GRSE Management' and 'Role of Designers', respectively. Moreover the consistency ratio in Table – 2.b is C.R. = 0.086 < 0.1, hence AHP is applicable.

Now, we will continue 'AHP' for each of the four alternatives individually against the three sustainability criteria.

Table – 3: Pair wise comparisons among the three Criteria against the 1st Alternative:

A1: Role of Suppliers	Environmental Sustainability	Social Sustainability	Economic Sustainability
Environmental Sustainability	1.00	8.00	6.00
Social Sustainability	0.13	1.00	0.25
Economic Sustainability	0.17	4.00	1.00

Table – 4: Ranking by Normalization and Consistency Analysis for the 1st Alternative:

A1: Role of Suppliers	Weights (w)	Consist. Measure	Ratios	λ max	C. I.	C. R.
Environmental Sustainability	0.733	2.299	3.136	3.136	0.068	0.080
Social Sustainability	0.064	0.199	3.136			
Economic Sustainability	0.176	0.553	3.136			

Table – 5: Pair wise comparisons among the three Criteria against the 2nd Alternative:

A2: Role of Designers	Environmental Sustainability	Social Sustainability	Economic Sustainability
Environmental Sustainability	1.00	7.00	9.00
Social Sustainability	0.14	1.00	4.00
Economic Sustainability	0.11	0.25	1.00

Table – 6: Ranking by Normalization and Consistency Analysis for the 2nd Alternative:

A2: Role of Designers	Weights (w)	Consist. Measure	Ratios	λ max	C. I.	C. R.
Environmental Sustainability	0.758	2.383	3.145	3.145	0.072	0.085
Social Sustainability	0.158	0.497	3.145			
Economic Sustainability	0.058	0.181	3.145			

Table – 7: Pair wise comparisons among the three Criteria against the 3rd Alternative:

A3: Role of Customers & Material Recovery Section	Environmental Sustainability	Social Sustainab.	Economic Sustainab.
Environmental Sustainability	1.00	0.33	6.00
Social Sustainability	3.00	1.00	7.00
Economic Sustainability	0.17	0.14	1.00

Table – 8: Ranking by Normalization and Consistency Analysis for the 3rd Alternative:

A3: Role of Customers & Material Recovery Section	Weights (w)	Consist. Measure	Ratios	λ max	C. I.	C. R.
Environmental Sustainability	0.285	0.884	3.100	3.100	0.050	0.059
Social Sustainability	0.625	1.937	3.100			
Economic Sustainability	0.065	0.202	3.100			

Table – 9: Pair wise comparisons among the three Criteria against the 4th Alternative:

A4: Role of GRSE Management	Environmental Sustainability	Social Sustainability	Economic Sustainability
Environmental Sustainability	1.00	0.20	6.00
Social Sustainability	5.00	1.00	9.00
Economic Sustainability	0.17	0.11	1.00

Table – 10: Ranking by Normalization and Consistency Analysis for the 4th Alternative:

A4: Role of GRSE Management	Weights (w)	Consist. Measure	Ratios	λ max	C. I.	C. R.
Environmental Sustainability	0.210	0.665	3.163	3.163	0.082	0.096
Social Sustainability	0.703	2.225	3.163			
Economic Sustainability	0.052	0.165	3.163			

Table – 11: Final Comparison or Judgment Matrix

Alternatives / Criteria	Role of Suppliers	Role of Designers	Role of Customers & Material Recovery Section	Role of GRSE Mgmt.	Final Overall Priority	Final Ranking
Alternatives' Weightages (Values obtained from Table – 2.a)	[0.273]	[0.047]	[0.516]	[0.120]		
Environmental Sustainability	0.733	0.758	0.285	0.210	0.408	2nd
Social Sustainability	0.064	0.158	0.625	0.703	0.432	1st
Economic Sustainability	0.176	0.058	0.065	0.052	0.091	3rd

Discussions: The present study reveals the best sustainability criteria as the 'Social Sustainability', followed by 'Environmental Sustainability' and 'Economic Sustainability', respectively. Thus 'AHP' has been successfully applied in this study, where MCDM (Multiple Criteria Decision Making) is essential to find out the prioritization of alternatives & criteria, for sustainable supply chain management in ship building industries in India.

Conventionally, the economical portion in business is given more priority to produce further profit as a replacement for the society and the environment. Thus the society and the environment are continuously being neglected by the very beginning with the industrialization and modernization. In our present study, the 'Social Sustainability' has achieved the highest priority, since it is the first and foremost criteria to look after the benefits of the employees of an organization, who are directly related to the production, designing and on the whole to the sustainability of the total supply chain management of an organization. The 'Environmental Sustainability' has achieved the second position to make the total supply chain management 'green' and finally the 'Economic Sustainability' has achieved the least priority in the present study, since the overall profit in making the system sustainable may

be realized not unpredictably, but in the long run.

Conclusion: The progress that 'GRSE' makes towards the environment and society development comes from its sense of responsibility and willingness to do the best possible. GRSE management is taking appropriate steps to implement other recommendations and initiatives as well, to help 'GRSE' to be more sustainable now & in the upcoming future (GRSE, 2014).

It has already been stated that energy consumption during shipbuilding can be reduced by improved production methods, techniques and processes, mostly by elimination of rework (Misra, 2012). At a glance, it may be believed that, since the study depicts a lowest priority for economic sustainability, hence the project will not be economically viable. But by widening our vision, we can realize that the socially responsible products and practices are not only good for the environment, but are important for long-term profitability i.e. profits can be achieved in the long run and thus the economic sustainability is also accomplished. In these ways, sustainable supply chain management applied in the ship building industries in India can successfully be achieved, which has been analyzed in the present study by the application of the scientific tool 'AHP'. Moreover, the tool 'A. H. P.' can be applied in the near future, more accurately, to find out a comprehensive vision of the 'sustainability' in a broader area.

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COMMODITY INDEX

Commodities	Days's Index	Prev. Index	Week Ago	Month Ago
Index	2675.2	2677.2	2672.9	2633.8
Bullion	4793.6	4784.1	4868.7	4839.1
Cement	2031.7	2031.7	1888.2	1871.8
Chemicals	2412.1	2454.1	2475.1	2559.3
Edible Oil	1745.1	1745.1	1762.2	1729.2
Foodgrains	2208.9	2208.9	2197.5	2203.8
Fuel	2736.2	2738.3	2746.6	2759.1
Indl Metals	2199.7	2221.0	2191.3	2102.0
Other Agricom	2262.5	2262.5	2251.0	1924.5
Plastics	1807.8	1807.8	1772.1	1710.9

Source: ETIG Database dated 22nd June 2018

EMERGING IMPACT OF 5G SUPPLY CHAIN –RE-ENERGISE FUTURE FOR GROWH

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Abstract: Under the paradigm shift of Smart SCM 4.0, it is needed a strategic holistic vision to see the new growing forest, through the old trees.With the confluence of social and business trends of **Industry 4.0.,** and the **emerging technologies**, the value chain willbecome fully digital and globally integrated; from suppliers, factories to customers. **Digitalization** has started by theintegration of information flows and the incremental digitalization of products and services supported by **Internet of Things**. Next will be the implementation of **intelligent processes, fostered by Artificial Intelligence.**

The global supply chain management will play a key role in the new paradigm looking holistically beyond the existingsilos and functions. The decentralized and intelligent supply chain optimization will involve both **hyper-communication**and big data to achieve the highest agility.

With 5G we get better coverage, higher capacity, lower latency and much higher data speeds. This will enable your car not only to stream Spotify all the way from the city to your cabin, but also to drive itself there, gathering information from other cars, pedestrians, traffic lights and even the road itself along the way.

The present paper provides a brief overview of **opportunities and challenges** encountered by the emerging digital innovative supply chain 4.0 , **The impact of 5G, How will 5G affect supply chain & logistics**, practice in India'seconomy. It is heartening to note that India is called the '**services hub'** of the world.

The present paper provides a brief overview of **opportunities and challenges** encountered by the emerging Innovative Supply Chain Practicein India's economy. It is heartening to note that India is called the '**services hub'** of the world.

Key Words : (Industry, Digital, Smart, Ecosystem, Global)

I.Introduction : SCM 4.0, **The impact of 5G in Supply Chain** – Understanding and meaning for the Supply Chain ManagementToday the main focus is on the **smart factory** but what is the meaning for the supplychain management?

The internet of things leads to a high transparency regarding the status of the supply chain and itsnodes. The amount of information increases rapidly withthe automatic acquisition of data/events. Standardized event information in high quality canbe distributed within the supply chain with methodsof the internet of things**.**But: transparency is not enough, the rightconclusions have to be drawn at the right points.

To help visualize this future, to imagine our car talking to everything and everyone it meets. It is being controlled by a computer in the cloud, or rather thousands of computers, calculating and adjusting our vehicle every millisecond of the way. Our car's self-contained "intelligence" from its own on-board computer would only be present as an emergency backup if connection with the Internet is lost, or to play a supporting role in the handling of the vehicle. Even without Internet, the 5G capabilities of car-to-car, car-to-road, and car-to-pedestrian communication, would play an important role in getting us safely from A to B.

II. What Is Smart SCM 4.0 ?

Smartis the new age- the age where everyone and everything will be increasingly connected to the **internet** giving rise to lots of internet savvy, **"give it to me now"** mentality people. These people will be connected to each other **(Social)** and be constantly on the go **(Mobile)**. There will be a tremendous amount of data generated which will be even more difficult to slice and dice **(Analytics).** We need to **Re-imagine** everything- the rules, the restrictions, the impossible and view it in a

new **Technology** framework

III. Why SMART and Why Supply Chain? Why the two together?

The world is becoming increasingly connected. By 2020, an estimate 4 billion people are going to be connected to the internet. These people are going to be truly **global**-developed, developing and also surprisingly under-developed nations will have a burst of people who will be connected, social and mobile. With so many people coming online, the demand for goods and services in a highly responsive fashion is going to stress supply chain management to the max. It is high time when supply chain stops ignoring the outburst, becomes realistic and plans out how the fraternity will cope with this new global challenge

IV. Exploring Oppudigital future: Extraordinary requirements from the 5G network

The 5G network is in large part designed by and for the automotive industry, thanks to organisations such as the 5G Automotive Association (5GAA), backed by the industry giants Audi, BMW, Daimler, Mini and Rolls Royce in addition to telecom and technology companies. The most important factors for 5G to be meeting its full potential in cars are the following:

- High mobile connectivity capabilities, quickly connect to devices and maintaining a stable connection at high speed
- Low latency for critical road information and potentially dangerous high-speed situations
- High device-density capability, as many devices will be connected at the same time in, or passing through, a small area
- Security, hacking of vehicles and interception of sensitive data is a growing problem, and thus we must make the communication between devices as secure as possible
- Extreme reliability is critical, especially for autonomous steering and navigation

Perhaps the biggest challenge for the 5G network and connected cars will be land area coverage and the associated cost. There are vast areas with roads that have little or no signal from today's mobile networks, and the 5G network will most likely be made with base stations with a much shorter range than today's 4G (and older) equipment. Clearly in these situations the cars would need to be able to fall-back safely to their on-board computer or, in some cases, even manual driving.

Interested in Blockchain? The future of Blockchain in shipping depends on open standards and industry-wide collaboration

V. How digital impacts supply chains Fundamental to all these changes is the fact that information is now available in vast amounts, at **affordable prices.** Information is becoming the new "**blood"** within the lifelines of the world, carrying within it the nutrients for future success. One that will increasingly depend on dynamic business strategy and its integration into supply chain strategy, with information and technology being the lifeblood of both Tomorrow's resilient, dynamic and agile supply chain will continue to deliver finance, products and information but, increasingly, it will be integral to product and service design, as the entire value chain is impacted by digital technologies.

VI.The Emergence of 5G A Digitally Based Supply Ecosystem:

Just as we are all getting used to having the blazing data speeds of 4G on our mobile devices, we are learning that this is nothing compared to what 5G has in store for us.

5G is the next generation mobile network that promises to be a game changer when it comes to how we live our lives, and that also challenges how we do business in just about every industry. A big claim for sure, but if we look at the past 10 years, we have already seen some radical changes in both consumer behaviour and business already. Advances in mobile technology have been a big driver of these changes.

Traditional corporates are generally bound to a heavy legacy asset base and struggle with the innovators' dilemma (i.e., how to choose between maintaining and developing the existing business and venturing into new areas), whereas new start-ups, inventing the business without any legacy issues, can move fast.

Established multinationals are learning that not being close to the **start-up's** innovative source or having access to digital innovation capabilities can be a competitive disadvantage. Corporates are at risk of being marginalized by the next disruptive supply chain innovation,like**Uber**did with transportation, **Airbnb** with hospitality or **Adidas** is planning to do with its Store Factory concept

1. **Cost containment**– Rapid, constant change is rocking this traditional area of strength and outstripping supply chain executives' ability to adapt.
2. **Visibility** – Flooded with more information than ever, supply chain executives still struggle to "see" and act on the right information.

3. **Risk** – CFOs are not the only senior executives urgently concerned about risk; risk management ranks remarkably high on the supply chain agenda as well.

4. **Customer intimacy** – Despite demand-driven mantras, companies are better connected to their suppliers than their customers.

5. **Globalization** – Contrary to initial rationale, globalization has proven to be more about revenue growth than cost savings.

Digital is effectively disrupting existing business models, products and services enabled by data and technology across the enterprise. The industrial setting is no exception. to do things in new exciting ways:

1. Internet-enabled sensors collect data around the clock and provide real-time tracking of production.

2. Automotive manufacturers use advanced analytics to calibrate driverless cars for self-navigation.

3. Machine learning enables predictive maintenance and condition monitoring.

4. Automated delivery of parts and subassemblies optimizes production processes.

5. Cybersecurity becomes an integral part of all business in order to protect data and gain the trust of customers.

VII. Addressing today's challenges

1. **Go beyond just data, generate insights –** Use data analytics to understand customers,market trends, track usage patterns, predict failures etc.

2. **Improve, standardize, and automate:** processes to reduce internal cost to serve

3. **Contract effectively** to get best value and manage risk in the changing digital landscape

4. **Embrace technology to support business** e.g. application of sensors, drones, machine learning, 3D printing etc.

5. **Develop right skills internally and explore partnerships** to meet new digital needs

The Internet of Things (and the planet) depends on 5G

One of the great expectations for the future is not only that every human is connected to the Internet, but also most of our stuff is connected too. It is called the Internet of Things (IoT). With all our devices being smart and connected to the Internet we will enable smart homes that help us be more energy efficient, save time on housekeeping and shopping, and enjoy safer and more efficient public and private transportation.

Today's mobile network technology is not ready to fully handle these devices yet. However, this is an evolution and the first IoT solutions are being rolled-out on today's mobile networks.

The IoT is totally dependent on network devices that are more energy efficient, more reliable and use a mobile network with a much higher device density. This is where 5G plays a crucial role. If society wants to reap all the benefits that the IoT can give us, such as reducing our carbon footprint, living longer and healthier lives, and increasing efficiency in production and transport, we need to welcome the new generation of mobile networks with open arms.

5G may be here sooner than you think : **Patrick Waldemar tells us that 5G is just around the corner. Big technological advances tend to be announced in relation to the world's biggest sporting events, such as the Olympics. With the Winter Olympics of 2018 in South Korea less than one year away, this will be the perfect backdrop for some impressive demonstrations of an early version of 5G.**

The first commercial 5G network will then most likely be available to most people by the next Summer Olympics though, in Japan in 2020.

Among the biggest forces driving the development of 5G are the manufacturers of 5G-enabled equipment such as automobile manufacturers, internet technology companies, the media industry, the medical industry and of course telecoms companies. Since the infrastructure and capability of 5G relies much more on software compared to 4G and its predecessors, we can see a much bigger interest from companies outside the traditional telecoms industry developing our next mobile network, says Patrick.

It is very exciting, and unparalleled in history, that companies that plan to provide content and services through the 5G network are strongly involved in defining the specifications and capabilities of our new network infrastructure. This will push the technology faster, resulting in better services as well as and more specialized services and capabilities in the end product.

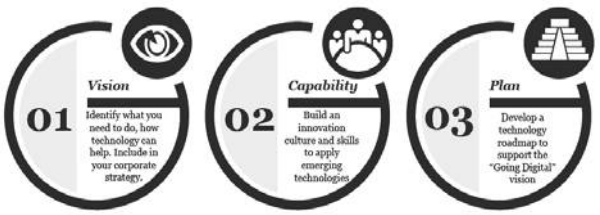
Challenges that 5G must overcome

As with all new technology still on the drawing board, the 5G network has a few challenges it must overcome before becoming a viable solution for the future of mobile networks. Some of the bigger obstacles the technology need to overcome are:

- Finding space for much more data in the already saturated wireless spectrum
- Figuring out how to efficiently manage a large number of varying sized packages of information
- Creating computer systems able to handle the vast amounts of data that will be created by IoT communications
- Reducing both size and power consumption of network devices to meet the needs of the increasingly large number of applications using IoT

VIII.What can you do to prepare for the future?

Behind the great potential of the digital supply chain (DSC) lies Industry 4.0, the fourth industrial revolution. A transformation in production and automation was brought on first by steam and water power (Industry 1.0), then by electrification (2.0), and more recently by the digital computer (3.0). Industry 4.0, digitization, is about companies orienting themselves to the customer through e-commerce, digital marketing, social media, and the customer experience.



Digital ubiquity is also causing companies to completely rethink how they go about operations. Operations is often mistakenly viewedas "manufacturing," but operations is what gives a company its ability to act. As with every other aspect of a company, digital technology is enabling completely new operating models.

IX. Conclusion: Several important phenomena are associatedwith e-commerce. **Smart SupplyChain 4.0** has unleashed yet another revolution,which is changing the way businesses buy and sell products and services. Newmethodologies have evolved. The role ofgeographic distances in forming businessrelationships is reduced. **Technology inSupply Chain** is the future of shopping.

With the deployment of 4G and 5G wireless communication technologies, the internet economy will continue to grow robustly. Inthe next 3 to 5 years, India will have 30 to70 million internet users which will equal, ifnot surpass, many of the developedcountries. Internet economy will thenbecome more meaningful in India. With therapid expansion of internet, E-commerce isset to play a very important role in the 21st century, the new opportunities that will bethrown open, will be accessible to both largecorporations and small companies. The roleof government is to provide a legal framework for **Technology in Supply Chain** so that while domestic and internationaltrade are allowed to expand their horizons,basic rights such as privacy, intellectual property, prevention of fraud, consumer protection etc are all taken care of.

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WOMEN AND SUPPLY CHAIN MANAGEMENT

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In today's competitive environment, it only makes lot of difference to advance women into senior leadership roles to motivate supply chain innovation, fill the talent gap and improve business performance.

In the recent past, many companies have taken initiatives to close the supply chain talent gap. This is all because, the supply chain has become very critical and increasingly an important part of business strategy and its transformation.The skills and capabilities required for the future are very different from those of past requirements. The ability to acquire services of great leaders, further develop their skills in line with the companies' needs, retain the talented personalities and refine the capabilities of the great leaders will definitely give the companies a competitive edge in their vision to innovate, create value for the clients and improve supply chain overall performance.

A very wise vision to close the talent gap, is recognizing and finding the unutilized potential of women in today's supply chain. It can be in middle level and also, women in senior leadership roles. In today's competitive business environment, it is very crucial to have considerably, more women in leadership roles, which may have the great impact in innovation as well as financial and operating performance of the business entities.

Having more women in senior leadership positions can influence the culture and reputation, or the supply chain career brand of a company in ways that are critical to winning the challenges on talent.

Whether a company is consumer-facing or in a business-to-business environment, women leaders in supply chain can play an important role in understanding customer perspectives and strengthening customer relationships. Women tend to bring communication and collaboration skills that facilitate cross-functional and inter-firm integration, as well as the kind of big picture thinking that is so important to supply chain performance today.

The shortage of women in senior leadership positions means there are few role models for young women to look up to when considering a career in supply chain. There is also a clear link between an organization's demonstrated value for diversity and the ability to recruit and retain diverse candidates.

***Manju Dhawan** of Ecom Express – A Supply Chain IconCo Founder and Head Customer Care at Ecom Express Pvt Ltd*

Manju feels organisations today greatly benefit from gender diversity and equality within the workplace. "Women are considered to have qualities that assist in creating a comprehensive workforce. They are also known to be good at multi-tasking and are better in soft skills, which gives them an edge when it comes to relating to people"

Anuradha Thakur IAF, PGDMM, left IAF in March 2013. She served for 11 years and retired as Squadron Leader. Later, she worked in Aptar Pharma, US based MNC and Currently, with Flextronics at Pune, Heading the Supply Chain for Indian region, with multiple plants across the region.

Mickey North Rizza Senior-level procurement, sourcing and supply management experience. Mickey has also been an award-winning Supply Chain analyst with Gartner and AMR Research.B.A. in Materials Logistic Management from Michigan State University.

There are many more women in Supply Chain, who are in leading roles and moving forward by breaking the glass ceiling! To name a few:

- **Manisha Ketkar,** is **IIMM Member** and got her **PhD in Supply Chain Management and Currently working as Director-Symbiosis School of Banking and Finance, Pune.**
- **Pallavi Palkar**, MBA from IIM, Ahmedabad now **Heading Supply Chain at Big Basket** and responsible for **SCM and Operations for 14 States of India**. **She is a very young Lady leading such a highly responsible position in India**.

There are many more youngsters, who also are doing outstandingly well and looking forward for their opportunity to get recognised and demonstrate their capabilities.

It is not only in Supply Chain Management but also, in other areas like Politics, Defence, etc.

Here, would like to mention with a great privilege,

our Honourable Minister of Defence,
Mrs Nirmala Sitharaman and

our Honorable Minister of External Affairs,
Mrs Sushma Swaraj,

who are shining through in discharging their duties very well.

All we need is –

A Good Team Work and Leadership skills;

A Strong personality with emphasis on bearing manners, social etiquette and soft skills;

and last but not the least

"**Exceptional levels of commitment; Ethics and Hard work".**

In conclusion: Diversity matters at every level in an organization. Given the opportunities and challenges faced by supply chain organizations today and the continued shortage of talent at every level, advancing women's leadership is a business imperative.

- A request to the readers of this Article: To please forward your views and suggestions to the Editor of MMR, on how to take it forward further.
- Reference: Internet; Colleague references and Self Experience.

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INDIRECT TAXES UPDATES
GST, CUSTOMS, EXCISE, SERVICE TAX & VAT
MONTH - MAY 2018 (UPDATED UP TO 03RD JUNE 2018)

CMA RAKESH BHALLA
PAST CHAIRMAN NIRC OF ICAI (CMA)
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GST

- **Time limit for furnishing the return by an Input Service Distributor in FORM GSTR-6 under sub-section (4) of section 39 of the said Act read with rule 65 of the Central Goods and Services Tax Rules, 2017, for the months of July, 2017 to June, 2018, has been extended till the 31st day of July, 2018. (Refer Notification No. 25/2018 – Central Tax dated 31st May 2018).**

- **For GST Refund, GSTR-1 & 3B not must for all. Composition tax payer to file GSTR-4, ISD – GSTR-6 and Non-resident – GSTR-5. (Refer Circular No. 45/19 /2018 – GST dated 30th May 2018).**

- **Roll out of E-way Bill System for intra-State movement of goods in Maharashtra, Manipur States & five Union Territories (without Legislation)**

  E-way bill system for Inter-State movement of goods has been rolled out from 1st April 2018. As on 23rd May 2018, e-way bill system for intra-state movement of goods has been rolled out in 19 States & 1 Union Territory. Further, implementation of e-Way Bill system of intra-state movement of goods - 25th May 2018 in two more States & five Union Territories. **(Refer Press release dated 24th May 2018).**

  Latest news about E-way Bill – Refer Latest Updates dated 02.06.2018 – www.ewaybill.nic.in:

- E-way bill operations compulsory for intra-state movement of goods for West Bengal from 3rd June 2018.

- E-way bill operations compulsory for intra-state movement of goods for Tamil Nadu from 2nd June 2018.

- E-way bill operations are compulsory for intra-state movement of goods for Chhattisgarh, Goa, Jammu & Kashmir, Odisha, Punjab and Mizoram from 1st June 2018.

- **Late fee waived for not furnishing GSTR - 3B in specified situation :** Late fee waived for failure to furnish monthly return in FORM GSTR- 3B by due date for the months of October 2017 to April 2018. The waiver is for those taxpayers who had submitted FORM GST TRAN-1 but could not file the same on or before 27-12-2017 on the GST portal, but has now been filed before 10-05-2018. The waiver of late fees is available only if such registered person files FORM GSTR -3B for each of such months on or before 31-5-2018. **(Refer Notification No. 22/2018–CT, dated 14-5-2018).**

- **GST leviable on transfer of tenancy rights:** Transfer of tenancy right against consideration in form of tenancy premium is supply of service liable to GST. Surrendering of such rights by outgoing tenant against consideration is also liable to GST. However, grant of tenancy rights in a residential dwelling for use as residence against tenancy premium or periodic rent or both are exempt. **(Refer Circular No. 44/18/2018 - GST, dated 2-5-18)**

- **Inspection, confiscation and release of goods – Procedure:** Detailed procedure has been prescribed for interception of conveyances and for inspection of goods in movement. Procedure has also been laid down for detention, seizure and release and confiscation of such goods and conveyances. An e-way bill number may be available with person in charge of conveyance in the form of a printout, SMS or written on the invoice and all these forms of having an e-way bill are valid. Confiscation order will be uploaded on common portal and demand accruing from said order will be added in electronic liability register. No order for confiscation of goods or conveyance, or for imposition of penalty, shall be issued without giving the person an opportunity of being heard. Various forms have also been prescribed for the purpose. **(Refer Circular No. 41/15/2018-GST, dated 13.04.2018).**

- **Recovery of arrears of Excise, Service Tax and Cenvat credit–Procedure:** Arrears of central excise duty, service tax or wrongly availed Cenvat credit, unless recovered under then prevalent law, are to be paid as central tax (CGST, utilizing amounts available in electronic credit/cash ledger under GST. Credit wrongly carried forward as transitional credit can also be paid similarly. Arrears of interest, penalty and late fee however have to be paid through electronic cash ledger. Arrears from assesses under the laws as prevalent before 1-7-2017 who are not registered under present GST regime, will also be recovered in cash. **(Refer Circular No. 42/16/2018-GST, dated 13 -4-2018).**

- **E -way Bill in Bill-to Ship–to transactions clarified:** Bill-to-Ship-to model of supply which involves two transactions, only one e-way bill is to be generated –either by the person ordering goods to be sent to another (A) or by the person actually sending the goods (B). **According to Press Release dated 23-4-2018,** if B (person sending the goods) generates e-way bill, he needs to mention his details in the field for "Bill from", and mention details of A (person ordering sending of goods) in the field for "Bill To" while mentioning details of the recipient in the field for "Ship To". In case the e-way bill is generated by A, he needs to mention details of the person receiving the goods, in both "Bill To" and "Ship To" fields, while mentioning his own detail in the field for "Bill from".

- **GST refund to UIN agencies clarified:** Government has granted a one -time waiver, in case of non-recording of UIN by supplier in invoices for supplies to UIN agencies, from July 2017 to March 018. The UIN agencies' authorised representative however has to submit attested copy of such invoice to the jurisdictional officer, for quarterly GST refund. Agencies to manually furnish (for the time being) the statement containing invoice details along with refund application. Further, officers have been advised not to request for original or hard copy of invoices unless necessary. **(Refer Circular No. 43/17/2018-GST, dated 13-4-2018)**

- **GST Council grants in -principle approval to new return design:** In principle approval given for the new design for filing of returns. All taxpayers, except a few, will be required to file single monthly return with a simple design and easy IT interface. B2B dealers will have to fill invoice-wise details of outward supply. There will be no automatic reversal of ITC on non-payment of tax by seller, and recovery of tax or reversal of ITC will be through online process of issuing notice and order. The new system will be implemented in 6 months and till then filing of GSTR-3B and GSTR-1 will continue. **(Refer GST Council meeting dated 4-5-2018).**

- **Rate concession in digital payments, and sugar cess –Issue referred to Group of Ministers:** Discussion on concession of 2% in GST rate (where GST rate is 3% or more, 1% each from applicable CGST and SGST rates) on B2C supplies for which payment is made through cheque or digital mode. There would be a ceiling of Rs. 100 per transaction. Discussion held on imposition of sugar cess over and above 5% GST, and reduction in GST rate on ethanol. Both the proposals will be looked into by the Group of Ministers who will make their recommendations. **(Refer GST Council meeting dated 4-5-2018).**

- **Seizure on inter-state movement where Part-B not filled, when unjust:** Allahabad High Court has held that goods in transit from a consignor in UP to a transporter in the same State for further despatch to a consignee in other State cannot be seized when details of the vehicle are not found in Part-B of e-way bill. It observed that unless the goods reach the place of the transport company from where they were required to be transported to its ultimate destination, it was not possible to fill up the details of the vehicle. **[Rivigo Services Pvt. Ltd. v. State of UP - 2018-VIL-204-ALH]**

- **GST payable on one-time lease premium when specific exemption absent:** Division Bench of Bombay High Court has held that GST is leviable on one-time lease premium paid by the allottee to acquire plots for business purposes on long term lease. It was held that once the law treats the activity particularly in relation to land and building and includes a lease, as supply of goods or supply of services, then the consideration there for as a premium/one-time premium is a measure on which the tax should be levied.

  The allottee also sought exemption under Section 7(2) of Central GST Act as activities performed were the in nature of statutory obligations, tenders being floated by sovereign authorities. The Court however rejected the plea noting absence of notification and further held that merely going by the status of the CIDCO, it cannot be held that lease premium would not attract liability to pay GST. **[Builders Association Navi Mumbai v. Union of India – Judgement dated 28-3-2018 in Writ Petition No. 12194 of 2017, Bombay High Court]**

- **State government whether can issue notification for inter-State e-way bill? – Allahabad High Court refers issue to Larger Bench:** Whether the State Government is empowered under Rule 138 of U.P. GST Rules to issue a notification prescribing carrying of any forms or documents along with a consignment during inter-State movement? Allahabad High Court has referred the question to its Larger Bench taking note of two diametrically opposite judgements of the coordinate benches, one affirming such notification by the State government and other nullifying it. It noted that while one judgment did not consider the relevant statutory provisions, the other judgment overlooked the earlier judgment which was a binding precedent. The dispute involved transportation of goods without e-way bill from Delhi to U.P. in Nov. 2017. **[Om Disposals v. State of U.P - 2018-VIL-200-ALH]**

- **CGST Act does not authorise issuance of second SCN for same demand and period:** Gujarat High Court has held that the Revenue department cannot issue second show cause notice pertaining to same period and for same demand of unpaid taxes. The Court while interpreting Section 74 of the CGST Act stated that powers under Section 74(3) cannot be exercised for expanding or enlarging the liability arising out of show cause notice issued under Section 74(1). It also observed that practice of collecting post-dated cheques either voluntarily or by coercion during raid is not permissible when no tax demand has been confirmed or crystallised. Provisional attachment of the petitioner's two bank accounts was also lifted, subject to certain conditions. **[Remark Flour Millsv. State of Gujarat – Judgement dated 19-4-2018 in R/Special Civil Application No. 4835 of**

2018, Gujarat High Court].

- Liquidated damages liable to GST @ 18% - Manner of payment immaterial: **Liquidated damages are liable to GST @ 18%. Held that fact that damages were deducted from contract price, was immaterial. The AAR also held that said service is covered under clause (e) of para 5 of Schedule II of CGST Act, classifiable under Heading 9997. It was also held that time of supply in respect of such service would be defined once delay in completion of the project is established. The Authority in this regard observed that levy is not when the delay is occurring but when liability for payment is established on part of the contractor**. [Maharashtra State Power Gen. Co. Ltd. – Order dated 8-5-2018, AAR Maharashtra]

- **Supply to international outbound passengers, when not exports:** Supply of goods to international outbound passengers, by a retail outlet situated in security hold area of international airport, is not covered under export or zero-rated supply. Authority for Advance Ruling, Delhi while holding so, observed that the outlet is within the territory of India as defined under Section 2(56) of the Central GST Act and Section 2(27) of the Customs Act, and hence applicant is not taking goods out of India. Reliance in this regard was also placed on definition of 'export' under Sec 2(18) of Customs Act & 2(5) of Integrated GST Act. Applicant was held liable to GST on such sales. **[Rod Retail Pvt. Ltd. – Order dated 27-3-2018, AAR Delhi]**

- **Road reinstatement charges paid to municipality liable to GST:** AAR, Maharashtra has ruled that charges for restoring roads from the patches dug up by business entities cannot be equated to performing a sovereign function by the municipality under Article 243W of the Constitution of India. The Authority observed that there are many such entities such as telephone, gas, etc., which dig up the road and restoration is required to be done. It was held that restoration work is different from construction and maintenance of roads covered under the sovereign function of the municipality. Reinstatement and access charges paid to municipal authorities were thus held to be exigible to GST. **[Reliance Infrastructure Ltd. – Order dated 21-3-2018, AAR Maharashtra]**

- **Package containing name of company to be considered as bearing brand name:** Package of goods having a declaration mentioning name and registered address of the assessee as manufacturer or under 'Marketed by', as per statutory requirements, cannot be considered as not bearing a 'brand name'. Maharashtra Authority for Advance Ruling while holding so, also held that exemption under relevant entries of Notification No. 2/2017-Central Tax (Rate), and similar notifications under IGST and SGST, will not be available. AAR in this regard noted that the goods were supplied through specific stores which also had registered brand name as on 15- 5-2017. **[Aditya Birla Retail Ltd. – Order dated 23- 3-2018, AAR Maharashtra]**

- **Sale of used vehicle as scrap liable to GST:** Supply of old motor vehicle as scrap after its usage is 'supply' in the course or furtherance of business and is liable to GST. AAR, Maharashtra held that buying new assets and discarding old and unusable ones is an activity in the course of business. The AAR rejected the plea of coverage under Schedule I (disposal of business assets) and Schedule II (transfer of business assets) of the Central GST Act. It observed that while Schedule I covers exceptional case where consideration is absent, Schedule II classifies supplies into goods or services. Question as to whether input tax credit on purchase of such vehicles which are used for cash management business and supplied post usage as scrap, was however referred to the Appellate Authority for Advance Ruling, as there was difference of opinion among the Members of the AAR. **[CMS Info Systems Ltd. – Order dated 19-3-2018, AAR Maharashtra]**

- **Coaching service provided by private institution is liable to GST:** Service of coaching for entrance examinations comes under ambit of GST. AAR, Maharashtra held that exemption under Sl. No. 66 of Notification No. 12/2017-Central Tax (Rate) is not available as said service is not covered under 'service provided by an educational institution'. It noted that private institute does not have any specific curriculum, examination and it does not award any qualification recognised by law. The AAR held that the service would be taxable at the rate of 9% CGST and 9% Maharashtra GST. **[Simple Rajendra Shukla – Order dated 9-3- 2018, AAR Maharashtra]**

- **Cenvat credit of Krishi Kalyan Cess carried from earlier regime is not admissible input tax credit:** Accumulated Cenvat credit of Krishi Kalyan Cess (KKC) carried forward from earlier Service Tax regime into new GST regime on 1-7-2017 is not an admissible input tax credit. Maharashtra Authority for Advance Ruling while holding so observed that credit of KKC was to be utilised for payment of KKC only and hence it cannot be treated as excise duty or service tax. Cenvat credit referred in Section 140(1) does not include credit of KKC. The AAR further noted that CBEC had in its FAQ clarified that Cenvat credit of Swach Bharat Cess (SBC) and KKC cannot be carried forward to GST credit ledger. **[Kansai Nerolac Paints Ltd. – Order dtd 5-4-18, AAR Maharashtra]**

- **Construction of complex – Valuation and rate of GST:** Authority for Advance Ruling, Delhi, in an issue involving value and rate of GST on service of construction of a complex, building, etc., intended for sale to a buyer, has ruled that GST would be payable on two-third of total amount consisting of amount charged for transfer of land. It was also held that whole of consideration would be added for payment of GST even if agreement was entered after part of construction already completed. Notification No. 11/2017-Central Tax (Rate) was relied by AAR for this purpose. **[Sanjeev Sharma– Order dated 28-3- 2018, AAR Delhi]**

- **Dried tobacco leaves undergoing curing liable to GST @ 28%:** AAR, Delhi has held that 'dried tobacco leaves' which have undergone process of curing after harvesting are 'unmanufactured tobacco' covered under HSN Code 2401. The goods were held to be covered under Sl. No. 13 of Schedule-IV of Not. No. 1/2017-Central Tax (Rate) attracting 14% (CGST & SGST each) or 28% (IGST). Goods proposed to be supplied had undergone curing by sun-dry/ air-dry processes, hence the same cannot be covered under Sl. No. 109 of Schedule-I as 'Tobacco Leaves'. **[Shalesh Kumar Singh – Order dated 6-4-2018, AAR Delhi].**

- **Books primarily used for writing classified as 'Exercise Books':** AAR, Delhi, in an application involving classification of books Sulekh Sarita Part-A, Part-B and Part 1-5, has held that they should be classified as Exercise Books (HSN 4820 of GST Tariff). CGST rate of 6% was held as applicable in terms of Entry No. 123 of Schedule II of Notification No. 1/2017-Central Tax (Rate). Primary use of the goods supplied was writing and that printing was merely incidental. Further, contention that persons who are not liable to tax shall not be required to take registration was rejected by the AAR observing that registration is compulsory if a person has GST liability under reverse charge mechanism. **[Sonka Publications (India) Pvt. Ltd. – Order dated 6-4-2018, AAR Delhi]**

- **Maintenance of railway track taxable @ 18%:** Maintenance work of railway tracks, involving cleaning, surface preparation and painting of the rails, welding of joints, fabrication and fixing of guard rails, and other related work, is taxable @ 18% under Sl. No. 3(ii) of Notification No. 11/2017-Central Tax (Rate). West Bengal Authority of Advance Ruling while holding so declined the benefit of amendment dated 13-10- 2017 in respect of works contracts involving predominantly earth work. The AAR also held that appropriate tariff code for the said works contract service would be sub-group 995429. **[Sreepati Ranjan Gope & Sons – Order dated 3- 5-2018, AAR West Bengal]**

- **Floor mats impregnated and coated with PVC classifiable under Chapter 39:** Authority for Advance Ruling, Maharashtra has ruled that PVC floor mats are classifiable under Customs Tariff Heading 3918 and not under Heading 5705. It was also held that the product falls under Sl.No. 104A of Schedule III to Notif. No. 1/2017-Central Tax (Rate), thereby attracting GST @ 18%. The applicant's claim of classification under Heading 5705 was rejected. The AAR noted that Note 2 to Chapter 39 excluded goods of Section XI & that latter excluded nonwovens covered with plastic. **[National Plastic Industries – Order dated 2-4-2018, AAR Maharashtra]**

- **Rate of GST on canteen services -** Even though the meal, snacks, teas are provided to and consumed by workers/employees of recipient, applicant is providing service to the recipient and not to workers / employees of the recipient - it is not in the nature of service provided by a restaurant - The service is attracting Goods and Service Tax @ 18% (CGST 9% + SGST 9%) **- AAR**

- **Levy of GST - composite contracts -**The applicant supplies works contract service, of which freight and transportation is merely a component and not a separate and independent identity, and GST is to be paid at 18% on the entire value of the composite supply, including supply of materials, freight and transportation, erection, commissioning etc. **- AAR**

Customs

- **Automotive mining and oil rigging equipments – Import policy condition:** Ministry of Commerce has introduced a new policy condition for import of old/used and new automotive mining equipment, oil rigging equipment for operation in captive mines or oil rigging areas and other vehicles for research and development purposes. According to amendment by Notification No. 7/2015-20, dated 8-5-2018, Policy Condition No. 1 and 2 (except for import through particular port in India), under Chapter 87 of the ITC (HS) would not be applicable to these items if these are re-exported or scrapped after the purpose is served.

- **India expands import restrictions on pulses, while issue raised at WTO:** Urad and moong in split and other forms, classifiable under HS 0713 90 10 and 0713 90 90, have been put in restricted import category with total annual import quota of 3 lakh MT. Notification No. 6/2015-20 in this regard amends import policy and condition for these items from 4-5-2018.It ay be noted that DGFT had in August 2017 restricted import of urad and moong covered under HS 0713 31 00. The annual (fiscal year) quota will now be applicable for all 3 HS codes. Meanwhile, Australia, EU, Canada, USA, Ukraine and Japan have, in WTO Committee on Import Licensing, raised concerns against these quantitative restrictions.

- **No import restriction prior to 20-5-2015 on remnant fuel in ship brought for breaking:** CBIC has clarified that remnant fuel contained in vessel brought in India for breaking is not subject to any import policy restriction under Chapter 27, prior to 20-5-2015. Circular No. 9/2018-Cus., dated 19-4-2018 relied upon a Supreme Court decision which had upheld CESTAT order, in turn holding that HSD is an integral part of such vessel/ships classifiable under Chapter89 of the Customs Tariff and is free from restrictions. DGFT had in 2015 revised its stand, classifying remnant fuel under Chapter27 and made such imports free from restrictions.

- **Advance authorisation provisions in Chapter 4 of FTP HoP Vol.1 revised:** Ministry of Commerce and Industry has amended certain paras of Chapter 4 of Handbook of Procedures. The changes include provision for issuance of Advance Authorization for Annual Requirement where ad hoc norms exist for a resultant product. Provision has also been made to submit manual Bank Realization Certificates (BRC) and self-attested copy of exporter's copy of shipping bill. According to Public Notice No. 9,

dated 14-5-2018, these changes have brought clarity and have harmonised documentation requirements for Export Obligation Discharge Certificate (EODC).

- **Drug exports–Implementation of Track and Trace System extended till 16-11-2018:** DGFT has extended implementation of Track and Trace System for export of drug formulations. System for maintaining parent-child relationship in packaging levels and its uploading on Central Portal will now be implemented from 16-11-2018. Resultantly, all drugs manufactured by SSI as well as non-SSI units & having manufacturing date after 15-11-2018 can only be exported if both tertiary & secondary packaging carry bar coding as applicable, and the relevant data is uploaded on Central Portal. Public Notice No. 5/2015-20, dated 9-5-2018 has been issued for this purpose.

- **SAD refund – No condition that subsequent sale has to be in same form:** Mere conversion of imported logs in to sawn timber without loss of identity of original product, before subsequent sale, would not deprive importer of the benefit of notification granting refund of SAD. Upholding the view taken by the Tribunal and the High Court, the Apex Court rejected the plea that subsequent sale must be in the same form in which goods were imported. It observed that the plea was not supported by plain reading of notification dated14-9-2007 even if construed in the strictest terms. **[Commissioner v. Variety Lumbers – Civil Appeal Nos. 10258-10296/2011 and Ors., decided on 24-4-2018, Supreme Court].**

- **End-use of imported goods when valid for classification:** In the dispute pertaining to classification of calcium nitrate and mono potassium phosphate, CESTAT Mumbai has held that the goods are classifiable under Chapter 31 and not Chapter 28 of Customs Tariff Act, 1975. The Tribunal observed that when grouping of products and their description connotes end-use, disassociation with classification is not correct. It was noted that the goods composed of two out of three fertilizing elements, and that the government had issued licence for these. **[Commissioner v. Solufeed Plant Product - Order No. A/85989-85997/2018, dated 5-4-2018, CESTAT Mumbai]**

- **Bona fide purchaser can opt to pay redemption fine and duty:** In a case involving confiscation due to misdeclaration, Kerala High Court has held that bona fide purchaser of imported goods can opt for payment of redemption fine along with short levied duty to get goods released. It was held that such payment is not a levy rather an option provided under Section 125 of the Customs Act, 1962. If option for redemption of goods is not exercised then owner loses its property in goods, and subsequently, liability of short duty along with interest passes on to the original importer. **[Commissioner v. Nalin Choksey - Customs Appeal No. 18 of 2009, decided on 3-4-2018, Kerala High Court]**

Central Excise and Service Tax

- **Valuation –Inclusions that enrich value of article, permissible -No difference in 'transaction value' and 'normal value':** Inclusions that enrich value of article till its clearance, are permissible additions to value under Section 4 (prior to 2000) of the Central Excise Act, 1944 as well as transaction value under amended Section 4 effective from 1-7-2000. No discernible difference in statutory concept of transaction value and judicially evolved meaning of normal price in this regard. It approved the judgement in Bombay Tyre International and held that views expressed in para 84 of the judgement in Acer India are not in conflict with the earlier decision. Measure of levy contemplated in Section 4 will not be controlled by the nature of the levy, and that so long a reasonable nexus is discernible between the measure and the nature of the levy, both Section 3 and 4 would operate in their respective fields. **[Commissioner v. Grasim Industries –Judgement dated 11-5-2018 in Civil Appeal No. 3159/2004 and Ors., Supreme Court]**

- **Exemption to SEZ – Notification No. 9/2009- S.T. cannot prescribe conditions:** CESTAT Delhi has held that Central Government cannot issue a notification under different statute, i.e. under Finance Act, 1994, to provide for conditions for grant of refund of such tax paid on taxable services used for authorised operations in SEZ. The Tribunal noted that all the activities relating to SEZ are to be guided and governed by the provisions contained in the SEZ Act and the SEZ Rules only. It observed that by virtue of Section 51 of SEZ Act, the provisions of the said Act and the Rules made there under have an overriding effect over the provisions contained in any other statute. [Cummins Technologies India Ltd. v. Commissioner - Final Order No. 51683/2018, dated 4-5-2018, CESTAT Delhi]

- **Depot sales – Applicability of valuation Rule 7 when additions made at depot:** In a case involving sale of branded MS/HSD under name 'speed' from depot after addition of octane boosters, CESTAT Mumbai has held that Rule 7 of the Central Excise Valuation Rules will apply. Department's contention that sale price of Speed MS/HSD at which the goods are sold from depot is applicable, was thus rejected. The Tribunal was of the view that sale price of plain MS/HSD as cleared from factory will apply as term 'such goods' appearing in Rule 7 means goods originally cleared from the factory. **[Bharat Petroleum v. Commissioner - A/86006- 86007/2018, dated 13-4-2018, CESTAT Mumbai]**

- **Surrender charges for discontinuance of ULIP policy are not taxable:** Observing that surrender charges are not for management of investment in Unit Linked Insurance Plan, CESTAT Mumbai has held that same cannot be subjected to service tax. These charges, when an insured person dilutes its policy completely or partially, are in nature of penalty or liquidated damages. It noted that ULIP is a contract and said charges are compensation

under Sections 73 and 74 of the Contract Act, 1872, incidental to ending of the contract. **[Reliance Life Insurance v. Commissioner - Order No. A/85966/ 2018, dated 12-4-2018, CESTAT Mumbai]**

- **Coconut oil in small containers – Classification issue referred to Larger Bench of Supreme Court:** Consequent to difference of opinion among two Judges, Supreme Court of India has referred the question of classification of coconut oil in small packages, to its Larger Bench. According to one opinion, mere packing in small containers and use of the product by some customers as hair oil cannot be a valid basis for classification under Chapter 33 as hair oil, even after amendment in 2005. However, as per another view, relying on common parlance and Interpretative Rule 3(c), the goods were held as classifiable under Chapter 33, and not under Chapter 15 as vegetable oil. **[Commissioner v. Madhan Agro Industries (I) Pvt. Ltd. – Judgement dated 13-4-2018 in Civil Appeal No. 1766/2009 and Ors., Supreme Court]**

- **Service Tax liability and sharing of fees:** CESTAT Mumbai has held that assessee-appellant should not suffer double taxation when another company (agent) collected fee from clients & discharged service tax liability on whole amount of fee collected. Assessee, a stock-broking company, was providing online trading facility through its affiliate who provided online trading plat form and was entrusted with sole responsibility of collection of card fee including service tax for such consolidated service to the customer.Held that tax demand under Business Support Services in SCN and under Stock Broking service in impugned order, was not permissible.**[Reliance Securities Ltd. v. Commissioner - Order No. A/85964/2018, dated 10-4-2018, CESTAT Mumbai]**

- **Cenvat credit on construction of hotel rooms:** Relying on Cenvat Rule 6(5), CESTAT Mumbai has allowed Cenvat credit on Construction service used in construction and renovation of rooms by a hotel when assessee was discharging service tax on rent-a-cab service, convention service, mandap keeper service, outdoor catering service, health and fitness service, etc. It observed that overall hotel business was rendered from the common hotel building and that the construction service received in respect of construction of any part of the hotel was a common input service which had nexus with overall hotel business. **[Lemon Tree Hotels v. Commissioner - Order No. A/85880/18, dated 3-4-18, CESTAT Mumbai]**

- **Inputs removed as such to own unit – Excise Valuation Rule 8 not applicable:** CESTAT Mumbai has held that duty to be paid on clearance of inputs as such to own units should be equivalent to the amount of Cenvat credit availed on such inputs. Department's contention that duty was required to be paid according to Rule 8 of Central Excise Valuation (Determination of Price of Excisable Goods) Rules, 2000, was thus rejected. The period involved in the dispute was from 11-10-2003 to 25-10-2003, and the Tribunal relied on Cenvat Rule 3(4) prevalent at that time. **[Bhuwalka Steel Industries v. Commissioner - Order No. A/85811/ 2018, dated 22-3-2018, CESTAT Mumbai]**

VAT

- **Works contract or sale and service contract – Nature of contract is relevant:** When there are two contracts, one for purchase of component and other for labour and service then the nature of contract is relevant in determining transaction as sale simpliciter or works contract. The Court, considering documentary evidence, held that transaction of sale was inter-State sale, and Section 3(a) of Central Sales Tax Act would be applicable thus excluding State authorities from imposing VAT. It observed that purchase orders were placed by the contractees / purchasers with the manufacturing unit in Maharashtra, and that movement of goods occasioned from Maharashtra to Karnataka. The ground that assessee had employed dubious method by executing separate contracts for works and sale was also rejected by the Court while allowing the writ petition. **[Thyseenkrupp Elevatorv. Commissioner– Judgement dated 24-4-2018 in W.P. Nos.13607/ 2017 & 14081-14091/2017 (T–RES), Karnataka High Court]**

- **Rajasthan VAT –"Ujala Supreme"is an industrial input:** Supreme Court has rejected the contention of the Revenue department that item "Ujala Supreme" is to be covered under Schedule V of the Rajasthan Value Added Tax Act as it is a consumer product. The Court in this regard relied on it earlier decision in respect of pari materia provisions under Kerala Value Added Tax Act. The Apex Court had then held the goods to be classifiable as industrial input. The goods were held to be covered under provisions of Schedule IV, Part-B, Entry 119 of the Rajasthan VAT Act, 2003. **[Asstt. Commissioner v. Jyoti Laboratories –SLP No. 36386/2017 and Ors., decided on 17-4-2018, Supreme Court]**

- **Erection & Commissioning -Coverage under Service Tax and not Sales Tax:** The assessee had entered into an agreement for erection and commissioning of equipment which the Department considered as 'transfer of right to use goods' under Section 2(39)(d) of West Bengal VAT Act. The Board noted that concerned contract was of pure service and there was neither any transfer of possession and effective control of the materials nor any consideration was paid. **[Damodar Valley Corp. v. Commissioner –Order dated 7-12-2017 in Revision VAT Case No. 2411 of 2016-17, West Bengal Commercial Tax Appellate & Revisional Board]**

***Member ZAC & RAC Chandigarh - Central Excise & Service Tax (now GST) & Customs, Govt. of India, Member of Indirect Tax committee SIAM , Member, ASSOCHAM National Indirect Taxes Committee, Chief General Manager Finance- SML Isuzu Ltd., Winner Achiever Award 2015 by ICAI (CMA).**

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DEMAND FORECASTING IN A SUPPLY CHAIN
A COMPANY SHOULD LINK FORECASTING TO ALL PLANNING ACTIVITIES THROUGHOUT THE SUPPLY CHAIN

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Not many can look into the crystal ball and predict the future. But if one wants to manufacture right and sell all the products, the key is to forecast accurately. Thanks to global competition, demand is no longer certain for any business. Gone are the days of certainty, long product life cycles and loyal consumers. The overall environment today is dynamic. In such a situation, firms increasingly realise that understanding demand, planning demand and linking supply with demand pays. At the same time, if the supply chain forecast is wrong, the ramifications will be felt throughout the entire process.

This is why forecasting has assumed a significant importance, and more and more managers look to forecasting to reduce costs. Despite significant developments in the area of supply chain forecasting as well as IT, most organisations do a poor job of incorporating demand uncertainty into their production planning processes. Most often this is blamed on forecasting without realising the importance of selecting the appropriate forecasting technique. Managers need to identify first the firm-level variables, which cause variability in the supply chain. Once these are tabled, forecasting will be less uncertain in an uncertain environment.

Forecasting practices are characterised by some interesting insights about changes in techniques. Research indicates that in the 1980s, despite the growing availability of computer-based forecasting systems, companies continued to rely predominantly on subjective techniques. Since the mid 1990s companies have started using computer-based forecasting systems, yet surprisingly forecast accuracy has not improved even among those who use these models.

This gives rise to a range of questions: Are forecasts reviewed and agreed upon by key departments in the organisation? Are right statistical methods used in forecasting the demand for a product? What horizons and time period are used for both long and short-term forecasting? How are statistical and judgmental considerations combined? In a study conducted by the Great Lakes Institute of Management, Chennai, it was found that the most widely used method of forecasting is the sales force composite method. Causal and time series models have given way to rolling plans. With the changing nature of businesses and increasing complexity due to the changing nature of demand, this shift from quantitative to qualitative models is understandable. But what we found surprising was that even where causal and time series models would have been appropriate, IT-based sales force composites were used blindly. Forecasting is not owned as yet by any department, thus a consensus approach has yet to evolve leading to a budget-driven demand planning.

Not all demand is unpredictable: there are times when demand follows a predictable pattern. While auditing the forecasting processes of a lifestyle major, I found that the company used the time series technique for its vacuum cleaners and spare part requirement. The forecast error was so high that it gave up forecasting in favour of an ERP system where sales force composite forecasts were converted into rolling forecasts. This too did not meet with much success. To understand the problem we used data collated from Mumbai's Colaba market and found that the consumption data showed strong seasonality. No forecast would be accurate unless corrected for the seasonal trend and combined with the appropriate time series technique. Nor would the investment in an up-to-date information system be of much help.

Similarly, another company, a tractor major, for which we designed a forecasting model, had almost given

up the causal method of forecasting and embraced the sales force composite method, even though the latter's accuracy remained a major worry. Tractor demand is closely related to what happens to agriculture. We had identified a causal model that was based on drivers of demand for tractors and provided a fair guide in planning sales. The company did not know how to convert causal forecasts into short-term forecasts for better operational planning and, thus, gave up scientific forecasting for judgmental methods.

On the other hand, agribusiness firms such as Bayer and Syngenta have been quite successful in this area. Along with their rolling plans, they also forecast the crop scenario for various regions. They use their sales forces to track changes in the cropping pattern, areas under different crops, procurement prices and rainfall. This data is then used to create an operational sales forecast on both a quarterly and a monthly basis. Not surprisingly Syngenta and Bayer have been able to minimise inventory in comparison to other players in the industry.

Indian firms seem to have lost direction. Their choice of forecasting methods seem to be dictated by supply chain requirements with little understanding of when, where, what and how to forecast. For example, we found that there is a tendency for small changes in customer demand to be amplified within a production distribution system. Upstream replenishment demand and physical shipments exceed the original order quantity. They are a result of orders moving up the supply chain levels, unplanned trade and promotion discounts, long lead-time and batch ordering.

Such business driven variability is further distorted as marketing and promotions create havoc with market data or demand trends. Most members of the supply chain stock during promotions and discounts, leading to a jump in demand. But each promotion is carried out in isolation vis-à-vis the rest of the organisation; and strategically to compete with key competitors. Keeping track of these spikes seems next to impossible, be it in the consumer durables sector or in an engineering company or for that matter agribusinesses. A forecaster sees the upward trend and forecasts high leading to inventory costs in the supply chain. Similar problems are posed when a full truck load becomes the norm due to the transport discount, and here again the jump in data can mislead forecasters. We also found that longer lead times meant higher demand amplification, poor forecast and excessive inventory cost.

In sum, firms often blame forecasts for the error when the real culprit is their own business practice. Forecasting methods can work when you are in apposition to track this business driven variability and then factor them into your forecast. Finally, it should be remembered that forecasting is an integrated exercise in which all levels of the supply chain are involved and are willing to share information which helps in increasing demand visibility within organisations as well increase the performance of forecast. IT thus is a critical tool. But, most firms show a significant level of dissatisfaction with the quality of IT.

We found that most firms lack extended enterprise functionality and open system architecture that can facilitate integration and collaboration and bring transparency across the supply chain. The current information systems are inward looking and miss linking across the boundaries of the organisation. Information systems in these companies also lack flexibility in adopting to the changing needs of the supply chain in terms of business models and processes. There is a lack of collaborative architecture in decision support software. These firms still use ordering-based information instead of flow-base. The lack of advance planning with process functionality hinders optimal supply chain allocations. Real-time communication between information systems transport and warehouse management systems and advance planning systems is absent. Information systems in these companies, thus, lack a modular, pen and internet-like architecture or "web-enabled ERP".

We found that firms that used forecasting successfully had developed not only cross-functional trust, but also cross-organisational trust with distributors and suppliers.

Thus, it is clear that forecasting as an exercise is more than using sophisticated techniques. These techniques will work effectively only when we create demand visibility across the supply chain. This calls for aligning marketing, promotions, discounts and other logistics decision with a clear purpose of creating demand visibility across the supply chain.

Source: Business Standard

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DIGITAL TRANSFORMATION IN THE MANUFACTURING INDUSTRY: CHALLENGES AND ACCELERATORS

The manufacturing industry is one of the industries which moved rather slow from an enterprise-wide and certainly ecosystem-wide digital transformation perspective.

Industry 4.0 offers multiple benefits – enhanced productivity is just the beginning (The Boston Consulting Group)

Several driving forces of digital transformation in the manufacturing industry are relatively similar to those in other industries. Moreover, industry initiatives and national initiatives across the globe such as Industry 4.0 (Germany and parts of the EU) or the Industrial Internet (Consortium) accelerate transformations with IoT and the integration of IT and OT as key components.

The changing expectations of consumers impact the entire supply chain as various manufacturers obviously depend on each other so even manufacturers which don't produce consumer goods are impacted by these consumer changes. Moreover, manufacturing decision makers also have different expectations as, in the end, we are all consumers. It leads us to the data-intensive and (semi-)autonomous evolutions in Logistics 4.0 where speed and connectivity, with again IoT and cyber-phsyical systems being key.

Digital transformation in manufacturing: evolving towards the 'as a service' economy

Other drivers include traditional digital transformation goals on the level of enhanced efficiency, cost reduction and, in more mature stages, innovation and the development of new revenue sources in an age where data – and how it is leveraged – is the currency of automation, optimization and profound transformation at the core where new business models in an 'as a service' economy are sought.

The manufacturing industry obviously is a broad industry with giant multinationals and smaller manufacturers; and with industrial manufacturers which produce for industrial partners and manufacturers of goods that are closer to the consumer.

Just like many other industries, the manufacturing industry is diverse and moving at different speeds. While in general digital transformation strategy has been missing and initiatives have been ad hoc, things are changing in some areas but as we'll see a holistic picture is still missing and the goals remain relatively traditional and isolated.

The similarity between digital transformation and Industrial Internet drivers

Regarding the areas where change is happening one can, for instance, only notice the key role of IoT in the manufacturing industry, advanced data analytics, digital twins and the various components of the Industrial Internet or Industry 4.0 space with an obvious place for, among others, advanced data analytics, industrial robots and collaborative robots, a.k.a cobots.

By 2018, 60% of Large Manufacturers Will Bring in New Revenue from Information-Based Products and Services, While Embedded Intelligence Will Drive the Highest Profitability Levels (IDC, see below)

As mentioned previously, manufacturing is not just the largest industry from an IoTspendingperspective, it is also at the center of the Industrial Internet of Things (IIoT).

Some even say that the Industrial Internet of Things only is about the manufacturing industry. Although that is not correct, it's easy to see why this is the case, if we look at the main Industrial IoT players and at the areas where most IIoT spending occurs.

The reasons why the manufacturing industry is so active in Industrial IoT are threefold and directly relate with manufacturing industry challenges and digital transformation challenges or, more positively, opportunities.

Three large challenges in the manufacturing industry

Economic, geo-political and consumption uncertainties – the need for efficiency

Looking at the end of 2016, 2017 and probably the years beyond, a challenge that hasn't maybe been the most pressing in past years but clearly has become crucial for the future: geo-political and macro-economic conditions.

The manufacturing industry is going through extremely uncertain times and unpredictability regarding consumer

spending/confidence on one hand and the larger geo-political and macro-economic picture on the other is high. There is the protectionist climate in the US whereby manufacturing is one of the key focus points of the new presidency. In other regions similar protectionist risks are present.

European manufacturers are rallying to drive the Industry 4.0 vision forward, amidst the growing uncertainty (and let's not forget the Brexit uncertainties) even faster than before. Also in other parts of the world initiatives are taken in an undeniable reality where globalization has gone from an evidence for many to a source of distrust for many others.

It is clear that in such conditions the push to automate and save costs, while increasing efficiencies (enhance time-to-market, digitize and digitalize to maximize revenue, etc.) becomes even higher. It is most certainly here that we see an even faster than expected uptake of the Industrial Internet of Things whereby the initial drivers are the same as in the initial digital transformation drivers: increase agility and reduce waste, bring down costs and enhance efficiencies, from manufacturing operations and business processes to maintenance and services.

The customer factor: from speed to better products, services and customer experience

Once these efficiencies and the rather process-oriented and internal-facing Industry 4.0 or Industrial Internet objectives we've just mentioned are achieved, new opportunities arise and efforts are done, looking more at customer-facing optimization and innovation.

Note: obviously, in practice, these various goals can be and are sought at the same time (it is not a gradual processes although de facto prioritization is essential). Automation, optimization and the efficiency- and cost-driven goals do have a customer-centric goal as well.

In the end, speed and information-rich, streamlined process optimization efforts don't just bring down costs but also are what both end customers and the many partners in the manufacturing ecosystem seek. In an increasingly complex and connected value chain (which is another challenge and opportunity for manufacturing) and in the optimization of industrial and business processes, data/information and the Industrial Internet of Things plays an inevitable role. At the same time both are key components of the ability to work in a more customer-centric way in various regards: the improvement of services (towards consumers or industrial partners as is illustrated in the story of how ABB Robotics could offer far better services to its customers, buyers of industrial robots, thanks to the Industrial IoT), the production of goods which are better tailored to customer demand through actionable data and insights, customer experience enhancement through collaborative models and data regarding quality, the list goes on.

Competition and the disruptive impact of manufacturers who have transformed at the core

A third element and also an inevitable consequence of the first two is closer to digital transformation at the core – in the business models and in the detection of new information-driven and connected revenue opportunities in the 'as a service' evolution.

By 2020, Manufacturers Will Capture 20% More Aftermarket Revenue by Using Product and Service Quality Measures to Enhance Customer Experiences (IDC, see below)

The old concept of the extended enterprise is pushed much further in the development of new revenue sources, built around services and information, often in collaboration with a-typical partners. Moreover, it's also key to see how digital transformation initiatives and innovations can be realized in the more traditional ecosystem context of manufacturers with, for example, retail, transportation and logistics etc.

It's in the dimension of innovation regarding information-based services and 'products', that the most mature manufacturing industry players shift business models or at the least find new ways to increase profitability.

It's also here that leading manufacturers become 'disruptive', which obviously then is an additional – competitive – challenge for other manufacturers who haven't reached the same levels of maturity or 'innovative disruption'.

In this context it's important to point out research of The Boston Consulting Group, released end 2016, that many manufacturers see Industry 4.0 as a priority (many also weren't familiar with the term which influences the outcomes no doubt) but relatively few look at the possibilities to tap into new revenue sources, let alone increase revenues to begin with. There is still a lot of emphasis on productivity optimization and a holistic approach/strategy lacks.

It's the same picture we see popping up over and over in other industries too and shows how we can't keep stressing the importance of digital transformation strategy and of a holistic digital transformation perspective enough. More on the research of BCG below this post.

Digital transformation and Industry 4.0 challenges to address in manufacturing

On top of these three challenges and opportunities in manufacturing (and the industrial Internet) are several other manufacturing challenges.

The traditional manufacturing skills gap challenge has close to everything to do with the integration of IT and OT (operational technology) and the other technological

and customer/service/innovation evolutions mentioned above.

So, to summarize and, reading between the lines of our three Industrial IoT and at the same time digital transformation drivers, we have the following drivers/ challenges/opportunities for digital transformation and manufacturing:

- **An uncertain macro-economic and geo-political context** where risk needs to be managed and cost reductions and enhanced efficiencies are inevitably (read: automation).
- **A more complex and connected supply chain** where data/information and speed are key.
- **The need to better understand the possibilities and benefits** which can be achieved. While that is a strategic and information matter, it also requires manufacturing companies to understand technological enablers of new opportunities such as digital twins, robotics, artificial intelligence and 3D printing to name a few – within their benefit, use case and holistic context.
- **A changing customer** with an increasing need to be not just more customer-centric but also be more customer-adaptive and innovative.
- **A highly competitive landscape** in which faster movers are poised to gain advantages and even become disruptive.
- **The need to diversify and tap into new revenue sources**, leveraging new ecosystems, and (connected) data, to thrive and in some cases survive.
- **A lack of clear vision and of a strategic holistic approach** to tap into the revenue growth and new revenue source potential of Industry 4.0.
- **The human talent dimension** in an altering reality where technology and innovation play more profound roles and the talent in many of the mentioned areas (data, industrial IoT, convergence of IT and OT, new business models etc.), nor the culture are present to take the necessary steps.

Industry 4.0 and the changing face of work in manufacturing

Regarding the human talent and skills gap dimension, it's clear that as Industry 4.0 arrives and the digital transformation of manufacturing continues, the work reality changes.

According to IDC (data end 2016, more below), by 2020, 60 percent of plant floor workers at G2000 manufacturers will work alongside automated assistance technologies such as robotics, 3D printing, AI and AR/ VR.

Moreover, let's say it as it is, the ongoing automation, optimization and transformation, comes with a human cost. From a sheer business perspective this is a challenge as well.

We need add the human consequences, as they MUST be addressed in times when people see fast digitalization as a threat. Each organization, and in manufacturing it is certainly a key element, must realize the impact of automation and that it has a role in society, whereby overlooking human costs can lead to further erosion of brand equity and trust and declines in consumer confidence and buying 'power'.

More resources on Industry 4.0 and the digital transformation of manufacturing in 2017 and beyond

Of course we didn't tackle all manufacturing challenges and digital transformation opportunities nor the evolutions in specific manufacturing industries.

Below are a few additional sources you can check out regarding digital transformation in manufacturing in 2017 and beyond:

10 Predictions for the Manufacturing Industry.

In this blog on IDC Manufacturing Insights, Kimberly Knickle, gives an overview of the main 10 predictions which IDC published end 2016, for the coming years.

The post essentially contains the 10 predictions – with data – as you can find them in the report (and of which we mentioned a few) and some more challenges in the manufacturing industry such as more integrated IT and operations (the convergence of IT and OT we've mentioned), business security and the need to rethink the future of work in manufacturing.

Sprinting to Value in Industry 4.0.

As mentioned earlier, The Boston Consulting Group released a report about the evolutions in Industry 4.0 and the implications for the US manufacturing industry.

On top of detecting challenges regarding the gaps between the perceived needs to move (faster) in Industry 4.0 among manufacturing professionals and the lack of strategic vision and speed to do so with a far too restricted focus on optimization and not enough focus on generating more revenues, let alone, the identification of new sources of revenues.

Read more about it in our article on the state of Industry 4.0.

Source: i-scoop

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INDIA MAKES STRIDES TO TACKLE CLIMATE CHANGE

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Facing the grave challenges of climate change India has taken some definite strides in two fields -the Swachh Bharat campaign and the pursuit of renewable sources of energy, especially solar power. On both fronts, the country has been quite successful and there has been commendable progress. In fact, toilets are being built all over the country with government assistance with the objective of making the country defecation free by the year 2019. The pace of activity in the solar power sector has picked tremendously in the last two years due to strong government support and increasing price competitiveness of solar power.

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There is a hue and cry over natural resources of the earth being mindlessly exploited globally, resulting in a poor state of their regeneration and causing irreversible damage to the planet. Every year, the World Environment Day is observed with great fanfare but in reality whatever is being done by most countries is not sufficient to restrict global warming to save mother earth.

One cannot deny the fact that climate change and global warming has become a problem and at the end of the last five-six years, it is declared the warmest year. This is expected to continue as experts believe that the declarations by individual countries as per the Paris Accord, even if implemented in letter and spirit, may result in global warming increasing between 2°C to 3°C, if not more.

Coming to India, the environment is being threatened as ecological disruptions are taking place in various ways. The November 2015 report of the World Bank found that climate change could effectively negate economic progress, pushing 45 million Indians into extreme poverty over the next 15 years. Other reports point out that India lost more people to the impacts of climate change than any other country and suffered third highest financial losses from extreme weather events as per a report on global climate vulnerability released on November 9, 2017. The Global Climate Risk Index 2018 referred to India's intense heat waves, extreme rainfall events and severe floods to label the country as the sixth mist vulnerable in 2016 after Haiti, Zimbabwe, Fiji, Sri Lanka and Vietnam.

The report, prepared by German Watch and other organizations from across the world, found climate change impacts had killed 2119 people in India during 2016, a number higher than any other country. However, analysts believe that India's actual vulnerability may be even higher than assigned because the effects of long-term climate impacts such as sea level rise which, in the country, affects regions like the Sunderbans with a population of five million had not been considered in assessing the climate risk. It estimated that India lost about $ 21,500 million due to extreme weather events during 2016, the third highest financial loss after those suffered by China and the US.

Again, India is set to overtake China and become the world's largest emitter of sulphur dioxide, an air pollutant that is generated when coal is burnt and can lead to severe haze, acid rain and asthma complications. A US study (released on November 9 last year) found that though China's sulphur dioxide emissions have fallen by 75 per cent since 2007, India's emissions increased by 50 per cent. The findings, based on measurements by an instrument on NASA's Aura satellite, point to "effective sulphur dioxide control in China and lack thereof in India", the researchers pointed out in the journal, Scientific Reports. The number of Indians exposed to dangerous levels of the pollutant increased from 13 million in 2013 to 33 million in 2016. China's share of such population dropped from 457 million to 99 million over the same period.

All this clearly point to the fact that there is an ecological crisis in the country that needs to be tackled effectively. Though one cannot deny the fact that environmental awareness has been growing, the dimension of the looming crisis has surety threatened our ecological system.

Estimates reveal that India needs over $1 trillion to meet its requirements to counter climate change and would like to have a meaningful resolution of the issue of long-term finance at the global climate negotiations. It is estimated that India needed $ 206 billion to support plans to curb emissions, $ 189 billion to execute national and state level climate action plans and $ 134 billion for low carbon growth related mitigation.

It goes without saying that we are on the brink of the worst impacts of climate change. However, it may be pointed out that experts and even the UN Secretary General, Antonio Guterres has expressed optimism about the start on decoupling emissions from economic growth and massive economies such as China and India are on track to surpass their Paris pledges. But experts have been questioning whether the steps taken are adequate to tackle the looming crisis ahead.

All the above developments confirm that the so-called modern civilization is destroying the tropical forests,

hastening land degradation and desertification, destroying the environment, destroying livelihoods of poor farmers and turning human lives into well trained slaves, specially in Third World countries, including India. Moreover, a latest report of the

Southern University of Science & Technology in China has pointed out that even if global warming is limited to 2°C, as per the Paris Accord, around 25 per cent or even more of the total land surface will become drier. And this includes land in all five climatic zones - hyper arid, arid, semi arid, dry sub-humid and humid.

India's Initiatives : Gandhiji had the foresight to recognize the imminent danger threatening the existence the Earth as a result of environmental destruction and violence and references are found in his famous book, Hind Swaraj. He predicted "We all have to die with it (modern civilization), if we do not act, that is, if we don't do our duty".

In such a critical situation, India has taken some definite strides in two fields -the Swachh Bharat campaign and the pursuit of renewable sources of energy, specially solar power. On both fronts, the country has been quite successful and there has been commendable progress. In fact, toilets are being built all over the country with government assistance with the objective of making the country defecation free by the year 2019. Certain sections believe that this may take another year or so to achieve the objective and, within this time frame, the habits of people are also expected to change.

Also, as stated by the Union Water Resources Minister Shri Nitin Gadkari, the result of Ganga cleaning would be visible on the ground by March next year as water quality would be 70 to 80 per cent cleaner from 2014-15 levels. "It is a general perception that nothing significant is being done under 'Namami Gange' programme but this is not correct. Our works have started results on the ground", Shri Gadkari said. A total of 195 projects worth Rs 20,959 crores have been sanctioned under the programme which is being implemented by the National Mission for Clean Ganga (NMCG) in association with the states.

The water resources secretary of U.P. confirmed that water quality of the river has improved in terms of three parameters - biochemical oxygen demand (BOD), dissolved oxygen (DO) and coliforms which indicate the health of the river. The DO levels have improved at 33 locations and BOD levels at 26 locations while coliform bacteria count is reduced at 30 locations, while referring to water quality monitoring data of Central Pollution Control Board (CPCB) for 2015-17 period.

As regards the power sector, the Prime Minister Shri Narendra Modi wants to raise renewable capacity to 175 gigawatts by 2022 from 45 gigawatts at present. In addition to meeting its own energy targets, which Bloomberg New Energy Finance estimates may cost $200 billion. India wants to emulate industrial development in neighbouring China, where solar manufacturing has created a world-leading export industry.

Meanwhile India has become one of the biggest clients of Chinese photo-voltaic manufacturers in the absence of its own domestic capacity. But this is expected to change as our country has the necessary skills and along with finance, being provided by the government, future prospects appear quite bright. Moreover the switch to renewable sources of energy should create more and more demand for photo-voltaic products, not just in India but also in the neighbouring countries.

Reports indicate that installed solar capacity, including rooftop and off-grid segments, in the country has crossed 10 gigawatts (GW). In fact, the pace of activity in the sector has picked tremendously in the last two years due to strong government support and increasing price competitiveness of solar power. "India is expected to become the world's third biggest solar market from next year after China and the US", according to consultancy firm, Bridge to India stated.

This was a dramatic increase from the 20,000 MW envisaged in the Jawaharlal Nehru National Solar Mission launched in the year 2010. The present stress on solar power at the behest of none other than the Prime Minister himself is indeed a strategic tool for the government under its changed attitude after the Paris Accord. India receives about 5000 trillion kilowatt hours (kWh) equivalent of energy per year through solar radiation. Just one per cent of the country's land area can meet its entire electricity requirement till 2030.

Experts believe that solar power is one way of meeting India's shortfall and increasing energy requirements in the coming years. It is indeed regrettable that nearly 400 million people in the country do not have access to electricity but less than 6000 solar lanterns are used to day.

In a survey undertaken by McKinsey & Company (in May 2009), it was pointed out that India has one of the world's highest solar intensities with an annual solar energy yield of 1700 to 1900 kilowatt hours per kilowatt peak (kWh/KWp) of the installed capacity. After India, US mainly California state, Hawaii and Spain are the largest solar power producers with 1500 to 1600 kWh/KWp followed by Italy, Australia, China, Japan and Germany. It may also be heartening to note that as per Ernst & Young's renewable energy country attractiveness indices which ranks countries based on regulatory environment, fiscal support, unexploited resources, suitability to different technologies and other factors determining renewable energy growth in a country, India attains a ranking within the top five in the world.

Future Outlook : Afforestation, desiltation of rivers and canals and replenishment of soil with organic matter - will need maximum resources that now flow to power, large industry and irrigation. The present thrust on solar power and wind power are, no doubt, steps in the right direction but this has been very late in the day. As it is quite obvious, "afforestation can be successful only if, for a few decades, the forests are freed from the pressure of firewood and dams and other development do not replace these forests, causing extermination of wild life". This is the price we have to pay for the destruction we have carried out in the name of development.

Finally, it needs to be reiterated that at this juncture a civilization that is ecologically balanced has to be the strategy of all countries, including India. Humans have to learn to care about what happens to other species and ecosystems that is, to treat nature as if it mattered. What is more important at this juncture is that humans can no longer treat the environment and other species as mere objects but take care of them for their own well being.

Source : Kurukshetra, June 2018

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DEVELOPMENT THROUGH DIGITIZATION

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For years, India has been a complex nation, making it difficult for the common man to access government services. The rapid adoption of digital technology across sectors is making things easy and eliminating all forms of human intervention. This has a major impact on the efficiency and effectiveness of governance

The world is getting digitized at a rapid pace in all aspects be it enterprises making products and selling them, humans transacting their daily lives and governments delivering social services to their citizens. The astronomical pace of digital data generation, dropping costs of data storage and compute infrastructure have enabled digitalisation at unprecedented levels which is now being termed as the 4th Industrial Revolution. Government of India and various State Governments have identified the transformational potential of Digital India and have started proactive adoption of these technologies.

In the last few years, governance in India across sectors has been redefined through business process reengineering, technology and data analytics. Technology is reshaping the way government is designing and implementing programmes. The use of technology has brought in better systems, greater efficiency and is beginning to have a profound impact on governance.

The government launched several major and minor e-goveraance and digitalisation programmes which were all later brought into the fold of

"Digital India" programme. After the launch of 31 Mission Mode Projects under e-Kranti: National e-Governance Plan 2.0, due to growing adoption of new platforms such as "mobile" and "cloud", a need was felt to reorient the Digital India Programme with the vision of "Transforming e-Governance for Transforming Governance". All eGovernance projects now follow the key principles of e-Kranti namely 'Transformation and not Translation', 'Integrated Services and not Individual Services', 'Government Process Reengineering (GPR) to be mandatory in every MMP', 'ICT Infrastructure on Demand', 'Cloud by Default', 'Mobile First', 'Fast Tracking Approvals', 'Mandating Standards and Protocols', 'Language Localization', 'National GIS (Geo-Spatial Information System)', 'Security and Electronic Data Preservation'.

India has combined the use of unique biometric identifiers and financial inclusion for effectiveness in social benefits and to reduce the vast number of illegitimate beneficiaries under welfare programmes. The Direct Benefit Transfer (DBT) has been implemented across 437 schemes, and helped save Rs 83,000 crore till date. Its implementation has led to 2.75 crore duplicate, fake or non-existent ration cards being deleted, and 3.85 crore duplicate and inactive consumers for liquefied petroleum gas (LPG) subsidy being eliminated.

Leading the Way in Financial Inclusion : This is in stark contrast to how the governments worked before. During my tenure in Kerala, I got a unique opportunity to work in the fisheries sector. The task was to improve the livelihood of traditional fishermen. The sector was riddled with middlemen, and fishermen were getting only 25 per cent of the market price offish.

The government formed self-help groups and provided them with new technology: fibreglass crafts, outboard motors and fishing nets to enhance their productivity. Beach-level auctions were introduced so that earnings from their daily catch could be deposited in their bank accounts. The biggest challenge was to get bank accounts opened for the fishermen. It took us 10 months of chasing physical banks and bank managers to get this done. The process of 'Know Your Customer' (KYC) was a nightmare.

Contrast this with my experience last month. I walked into a bank branch and opened my account using my biometric on a hand-held device in one minute flat. From 10 months to one minute has been the paradigm shift.

The JAM (Jan Dhan - Aadhaar - Mobile) trinity forms the basic data infrastructure for the India Stack services consisting of e-KYC, eSign, instantaneous payments (UPI) and file storage (Digilocker). It has been the single largest factor for expansion of financial inclusion across the world. According to the Global Findex Report 2017 released by World Bank, a whopping 55 per cent of all bank accounts created during 2014-17 were opened in India. Through the Jan Dhan Yojana, which has led to opening of more than 31 crore new bank accounts so far since 2014, the proportion of Indian adults with bank accounts has increased from 53 per cent in 2014 to 80 per cent in 2017 now.

Public Finance and Public Procurement going Digital

The Public Financial Management System (PFMS) has led to the creation of a financial management platform for all plan schemes, a database of all recipient agencies, integration with core banking solution of banks,

integration of state treasurers and tracking of fund flow to the lowest tier of implementation of plan schemes on real-time basis. PFMS has also led to just-in-time release of funds and efficient management in the use of funds, including ultimate utilisation. On March 28, Rs 72,000 cr was digitally transacted through the PFMS portal for 98 lakh transactions. This is a record of number of digital transactions processed in a single day.

In 2016, Government e-Marketplace (GeM) was launched for single-window online procurement of commonly used, small-value goods and services. The Central Public Procurement Portal facilitates e-procurement for larger-value items (Rs 0.2 million or higher). GeM enables direct purchase, e-bidding, reverse e-auctions, online registration facilities for government users, product sellers, and service providers and provides a market place for government purchase. As of April this year, there are already over 22000 government buyers, over 1 lakh sellers and service providers, 2.31 lakh listed products with cumulative transactions worth Rs. 6500 crore. 44 per cent of these procurements have been made from MSMEs.

Pioneers in Innovate Consumer Payments : Unified Payments Interface (UPI) and Bharat Bill Payment System (BBPS) have triggered a plethora of private sector-innovated apps, which have significantly eased citizens' bill payments towards services provided by the government. BBPS has more than doubled the number of bills paid digitally from April 2017 when the pilot was launched. The value of bills paid on the platform has jumped by about 46 per cent during this period. According to a KPMG report, by the end of 2016, the size of bill payments market in India was more than Rs. 5.85 trillion, out of which 70 per cent of the bill payments were done using cash or cheque. It estimates the size of the bill payments market in India to reach Rs. 9.4 trillion by 2020.

Digital payment transactions have now become extremely simple, thanks to the Bharat Interface for Money (BHIM) UPI. We have seen the emergence of Google Tez and WhatsApp payment. In 2017-18, India has seen over a billion digital payment transactions in volume and over a trillion rupees in value. There will be increased disruption with new players and new technologies. A report by Credit Suisse projects India's digital payments space to be USD 1 trillion by 2023.

Digital Transformation : Digitalisation of collection of direct taxes has led to huge benefits. The Income Tax Department received 6.84 crore income tax returns in FY 17-18, a growth of 26 percent and an additionality of more than one crore new tax returns. 98.5 per cent of those IT returns have been filed online.

The rollout of the goods and services tax (GST) has resulted in a 50 per cent increase in unique indirect taxpayers compared with the pre-GST system. This translates to a substantial 3.4 million new indirect taxpayers leading to a radical formalisation of the economy.

Digital Monitoring : In the Pro-Active Governance and Timely Implementation (PRAGATI) programme, Prime Minister has used technology to cut across departmental silos and geographical boundaries to ensure speedy project implementation. He has dealt directly with senior central and state officials to monitor, review and evaluate progress of social sector schemes and infrastructure projects that were facing severe bottlenecks. Through video conferencing, the Prime Minister held 25 PRAGATI meetings and cleared over 227 projects worth more than Rs 10.5 lakh crore. The recently proposed Ayushman Bharat scheme will digitally link primary and community health centres with district hospitals. Along with the Rs 5 lakh health insurance, which will cover 50 crore Indians, it will ensure healthcare through a paperless, cashless, portable scheme. The health stack linked to Aadhaar will be transformational.

Impact of Frontier Technologies : Analysis by Accenture reveals that Artificial Intelligence (AI) has the potential to add US$ 957 billion, or 15 per cent of current gross value added, to India's economy in 2035. India offers unique challenges that can be solved by application of AI. In addition, a recent Microsoft-International Data Corporation (IDC) study, 'Unlocking the Economic Impact of Digital Transformation in Asia Pacific', predicts that digital transformation will add $154 billion to India's GDP by 2021, increasing the growth rate by 1 per cent annually. In 2017, about 4 per cent of GDP was derived from digital products and services created directly through the use of technologies like Cloud, Internet of Things (IoT) and artificial intelligence (AI).

The government is exploring the use of new technologies and their potential adoption in government processes and schemes. NITI Aayog, mandated with the task of developing the National Programme on Artificial Intelligence, has been engaged in discussion with ministries, academia, industry, researchers and startups. This is a qualitative effort to understand the technologies, their utility for the economy and governance, risks they pose and their future development trajectory. Further, NITI Aayog has also taken up implementation of these technologies for specific use cases, under national priority areas, to assess and demonstrate the benefits of the frontier technologies. These are termed as Proof-of-Concept (PoC) projects and are being tested in areas of precision agriculture using AI, land records on blockchain, assistive healthcare diagnostics using AI etc. The goal of these PoCs is to test the effectiveness of the technologies in solving the extant problemsand demonstrating the feasibility of adopting frontier technologies in governance at a national scale.

For years, India has been a complex nation, making it difficult for the common man to access government services. The rapid adoption of digital technology across sectors is making things easy and eliminating all forms of human intervention. This has a major impact on the efficiency and effectiveness of governance.

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WTO UPDATE :

AZEVÊDO: WE MUST FACE THE CHALLENGES OF A NEW INDUSTRIAL REVOLUTION

Speaking at the International Monetary Conference in Washington D.C. on 4 June, Director-General Roberto Azevêdo said that at a time of fundamental economic change dominated by automation and new technologies, we need to find ways to shape the new economy in a way that benefits all, to speak up for the trading system as a powerful force for growth and development and to be ready to evolve to meet the challenges of today. He concluded: "We have the chance to ensure that this revolution is truly inclusive, to reshape the debate, and to ensure that a modern, responsive trading system is part of the solution." This is what he said:

Good morning. Thank you for your kind invitation.

We are living through a time of fundamental structural economic change – but also a time of real disaffection and division. Throughout history these two factors – economic change and social division – are often found together. Today we say we're seeing the 'Fourth Industrial Revolution'. The term is accurate, not just because of the economic message it sends, but also because of the societal upheaval it implies.

Previous industrial revolutions created great wealth and opportunity, but they also created significant social disruption – with many missing out on the benefits entirely. In my view, the economic revolution we are seeing today has to be different. It has to be inclusive. It has to be an answer to the problems we are seeing today – not an aggravating factor. So we all have a responsibility to mould it in this way – and that includes trade and the trading system.

The expansion of global trade in recent decades has helped to lift hundreds of millions of people out of poverty. It has helped to raise living standards for many millions more. And it has boosted growth and development around the world. It has acted as a tool to deliver in the national self-interest – not as a threat to those interests.

I know that I don't have to make the case for globalisation here. But, as positive as it has been on the whole, there is no doubt that many people feel excluded. Many feel angry and let down. I don't detract from those concerns at all. They are absolutely valid and heartfelt, and they demand a response. My priority, however, is that we find the right response. The tendency can be to find easy targets – the foreigner or the outsider. And as these sentiments enter the political arena, they can lead the debate down the path of nationalism, intolerance, and protectionism. This is a real concern.

Of course moves towards protectionism are nothing new. Since World War 2, whenever tensions have emerged between trading partners, the multilateral trading system has been able to respond effectively, keeping those tensions at bay.

We all rely on the stability and predictability that the system creates. In fact, it can be argued that without the WTO, we would have been in a trade war some years ago. After the crisis of 2008 we did not see an outbreak of protectionist policies, as we did in the past. This is precisely because of the framework of rules and practices provided by the multilateral trading system, by the WTO.

However, the circumstances today feel somehow different from anything we have seen before. Some of the policies and the rhetoric in the trade debate are not just seeking to raise barriers here and there, or to challenge specific elements of the rules. Rather, they are actively opposed to the aims of the trading system itself. Long-held principles such as shared rules, cooperation, dispute settlement through the system, and enhancing stability and predictability, seem to be thrown into question. Taking those policies further could undermine the system, and thereby pose a serious risk to the stability of the global economy as a whole.

Of course, I understand the attraction in wishing away the rulebook. The bigger the country, the bigger this temptation becomes. But these same leading economies created this rules-based system for a very good reason. Without the rules, trade war would be a certainty. Unilateral actions would escalate, leading to a tit-for-tat series of trade measures. In the best case scenario this could happen slowly and take time to develop. But if we go down this road, the destination is clear.

And in an interconnected economy, the effects of such actions would likely be globalised, reaching far beyond those countries who are directly involved. These effects are likely to spread to many different economic sectors as well, touching on areas that were entirely disconnected from "ground zero". Let me give you one illustration of how disruptive this could be. If tariffs returned to the levels before the multilateral trading system was created, we could see trade flows fall by almost two thirds. At the same time, the global economy could contract by 2.4%. That's even bigger than the contraction after the 2008 crisis. It's an extreme example, but it shows just how important the system is.

So how should we respond?

The challenge is to shape the new economy in a positive and inclusive way, and to shape the debate which is raging on these issues right now. I think that there are three main steps we need to take. The first step is to take a clear-eyed look at what is really causing the disruptions in our economies. The research shows that trade is not the key factor.

The majority of jobs lost in manufacturing, around 80%, have been lost due to automation and new technologies.

This is the major force that is driving economic change today. The shift is structural, and it is global – it is not only happening in the advanced economies. McKinsey research suggests that by 2030 manufacturing jobs will fall by 22% in China and 15% in India. And it will affect the services sector as well – including financial services.

As Artificial Intelligence develops, it's going to be replacing white-collar jobs in fields such as accounting, banking and legal services. According to the Bank of England, as many as 15 million jobs in the UK could end up being replaced by AI-enabled software and machines in the years ahead.

A response that simply raises trade barriers would not respond to the cause of the difficulties we face today. Indeed, choking off global trade would only bring greater harm.

The fact is we are entering a new economic era. The 'Fourth Industrial Revolution' is real. We need to find ways to adapt and do it in a way that benefits all, with a particular focus on those who are being left behind.

And we have no time to waste. We have no precedent for the speed, scale and scope of change that is underway today. Besides, entrepreneurs, companies and other economic agents are already creating rules, norms, techniques and infrastructure around the new technologies. So it is clear that, in 10 years, it will be too late to try to frame these changes in a more inclusive manner.

The structure of new technologies will be more or less set, and the perspectives and values of those who created them will be firmly embedded in possibly anti-competitive platforms and within the many technologies that surround us and which have become part of us. So this is an urgent challenge.

In addition, we need to help the workforce to adjust to these new realities. Domestic policies will be key here.

Education, skills and support policies, for example, will have to evolve to match the challenges of the new economy. And there is no 'one size fits all' recipe to deal with these challenges. Each country will have to find the policies that work best for them.

So that's the first step – responding to real drivers of change today. With all of that in mind, the second step is to speak up for the trading system, and to raise awareness of its inherent value.

Trade can continue to be a powerful force for growth and development in the world – but only if we continue to strengthen and improve it. Governments listen to the private sector. Yet, I think that many are not making their views heard. This has to change. The global trading system cannot be taken for granted. Its efficacy and responsiveness rely on the support of those who have the clear vision to perceive its vital importance. This brings me to my third point; the third step.

International institutions – including the WTO – need to be ready to evolve to meet the challenges of today. The trading system needs to be responsive to members' needs.

While stability is essential, that does not mean stasis. Helping governments and businesses meet the demands of a rapidly evolving global economy is a vital, on-going task for multilateral institutions.

Our members have shown that they are prepared to deliver new reforms, and that they are prepared to think differently. The WTO's Trade Facilitation Agreement is a case in point. This deal aims to streamline, simplify and standardise customs procedures. Estimates show that the full implementation of the Agreement could reduce trade costs globally by an average of 14.3 per cent. The economic impact here would be greater than if we eliminated all tariffs that exist today around the world.

This Agreement succeeded because members were willing to do things differently and pursue a more flexible framework for that agreement. In an organisation with 164 members of different sizes, different political priorities and different stages of development, these kinds of flexibilities are essential.

Members are still seeking to make progress where negotiations are already ongoing. And many have begun conversations in a number of new areas, which are related to the economic changes we are living through.

This includes discussions on:

- electronic commerce,
- investment facilitation,
- steps to help smaller businesses to trade, and
- how trade connects to the economic empowerment of women.

Trade finance is another case in point.

After the financial crisis banks started to pull out of certain markets as risk appetites shrank and new regulations changed the calculus.

Huge gaps have since emerged in trade finance provision. The Asian Development Bank estimated that the global trade finance gap was $1.5 trillion. And of course the effects are felt most acutely by SMEs and in developing countries.

I am working with the International Finance Corporation, the regional development banks, the Financial Stability Board and others to tackle this issue. This is vital if the system is to be genuinely inclusive and responsive to its users.

So there is a range of challenges before us. We are on the cusp of a new era. It truly is a new industrial revolution. And this demands a truly revolutionary response aiming at the right targets.

It demands clear thinking. It demands new thinking. And it demands engagement – we can't just cross our fingers and hope for the best. We have the chance to ensure that this revolution is truly inclusive, to reshape the debate, and to ensure that a modern, responsive trading system is part of the solution.

I look forward to your support towards that end.

Thank you.

Source: WTO Website, 4th June 2018

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BRANCH NEWS

AURANGABAD BRANCH

IIMM Aurangabad have conducted evening training program on the occasion of MM Week **"Transforming to Smart Digital Supply Chain Fostering Technology Sustainability & Innovation"**on16th April, 2018 ,at "Aryabhatta Hall", in MGM's Jawaharlal Nehru Engineering college, Aurangabad. Chief Guest was Shri. Pratapraoji Borade , Director _MGM_Aurangabad .Faculty for this One hour's program was Mr. Sanjay Sanghai, National Council Member– IIMM, Vice President – Strategic Sourcing, Endurance Technologies Limited.

Faculty Mr.Sanjay Sanghai guiding Audience

IIMM Aurangabad Team with Faculty

Mr.Sanghai focused on the stages of growth observed in digitization from industry 1.0 to recent Industry 4.0 . The transformations phases for the overall operations and business communications. Mr.Sanghai discussed about the needof digitization and innovations in supply chain .He shared the opportunities in the innovations to have sustainable business growth. His practical approach made the session very effective.

Large audience attending the session

Mr.Phanikumar Procedding the session

100+ people from Industries like AEPL, BG Fasteners, Endurance, Rucha, Bagla group, Dhananjay Group, Dhoot Transmission,Sanjeev Auto and Also Engineering College Students from MIT, PES, JNEC, Shreeyash, their Professor's and Principals attended the same .QCFI Members were also present.

NC Member Dr Narendra Joshi briefed about the branch activities and focus areas of IIMM. He also appealed for becoming IIMM members to delegates, who are not IIMM members.

Proceeding for the program and Introduction of faculty was done by ECM Mr Phanikumar.

VP (West) Mr.Jitesh Gupta ,NC Member Dr. Narendra Joshi , Chairman Mr. K. Srihari, Vice Chairman Mr.Sushant Patare , Hon. Secretary Mr. Milind Ghogale , along with EC Members -Mr.R.D.Jaulkar ,Mr. Shrikant Muley took efforts to make this event successful.

Vice Chairman Mr. Sushant Patare offered "Vote of

Thanks" Program was concluded by National Anthem.

IIMM Aurangabad have conducted evening Seminar on Liver care and Organ donation**"LIVE LIFE, LOVE LIFE, SAVE LIFE"**on19th May 2018, Saturday,at "Aryabhatta Hall", in MGM's Jawaharlal Nehru Engineering college, Aurangabad. Chief Guest was Mr.B.Uma Rao ,Head Production , Scoda Auto ,Aurangabad . This program was conducted to pay tribute to Late Shri.P.P. Reddy,Mr. Prabhakar Reddy was founder member of IIMM since 1981 and was devoted his time,experience and knowledge for over three decades .He served various senior positions of IIMM and was awarded with various acknowledgments for his work at national level.Faculty for this two hour's program was Dr.Anurag Shrimal (MS, DNB, MNAMS), Fellowship-ASTS (Duke Univ, USA), Consultant -Abdominal organ Transplantation and HPB surgery. Currently he is working in Wockhardt Hospitals Ltd, Mumbai.

Faculty Dr. Anurag Shrimal guiding Audience

IIMM_Aurangabad Team with Faculty

Mr.Phanikumar_Procedding the session

Dr. Anurag Shrimal focused on Functions of lever, how to keep the lever healthy- Things to Do & Things not to do. He also describes, How to know if i have any lever disease. Disease - Cirrhosis, Livercancer,Hepatitis A, B, and C, Liver failure due to genetic diseases andexcessive alcohol, Ascites, Etc.He shared the ways and means to Prevention, Diagnosis & Treatment.His practical approach made the session very effective. Dr. Anurag Shrimal explained about the importance of Organ Donation and Transplant. What is Brain death, Why to donate an organ, How to make transplant as a treatment, He Pledge to donate organ.

70+ people from Industries like AEPL, Endurance, Morgen Advance Materials ,Bagla group,N H K Auto, E & H, Upturn Precision, MAN Diesel, Dhoot Transmission, Sanjeev Auto and Also Engineering College Students from MIT, JNEC, their Professor's and Principals attended the same .Senior citizens were also present.

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

Proceeding for the program and Introduction of faculty was done by ECM MrPhani kumar.

VP (West)Mr.Jitesh Gupta ,NC Member Dr. Narendra Joshi , Chairman Mr. K. Srihari, Vice Chairman Mr.Sushant Patare, Hon. Secretary Mr. Milind Ghogale, along with Treasure Mr.Lalit Lohade, EC Members -Mr.R.D.Jaulkar, Mr. Shrikant Muley, Mr. Santosh Pande, Mr. Yogesh Khose, took efforts to make this event successful.

Vice Chairman Mr. Sushant Patare offered "Vote of Thanks". Program was concluded by National Anthem.

BANGALORE BRANCH

25.05.2018 – One day work shop on "Warehousing and Logistics Management": IIMM Bangalore branch has organised one day workshop on Warehousing and Logistics Management on 25.05.2018 at IIMM Conference Hall. Mr. Abdul Kader, Sr Faculty handled the sessions. Participants more interacted with the speaker and exchange their view.

One day workshop on Warehousing and Logitstics Management held on 25.05.2018 - Mr. A. Kadhar Speaker issuing participation Certificate

A view of participants for Lecture program

Mr. Prashanth Balasubramanian, CEO-LASTBIT handling session on Block Chain Technolgy in SCM - Lecture on 25.05.2018

25.05.2018 –Lecture Program : Indian Institute of Materials Management – Bangalore has organised monthly lecture program on "Block Chain Technology in Supply Chain Management" on 25th May 2018 by Mr. Prashanth Balasubramanian, CEO – LASTBIT – Bangalore at Ramanashree Brunton, Bangalore. Mr. Mahesh Kulkarni, Hon Treasurer welcomed speaker with bouquet and introduced gathering. Program was very interesting and knowledge oriented and absorbing for the members.

26.05.2018 – One day workshop on Inventory and Materials Management: IIMM Bangalore branch has organised one day workshop on "Inventory and Materials Management" for Hospital Administrators and Supply Chain Managers in collaboration and support from Johnson and Johnson on 26.05.2018 at Royal Orchid Central, Bangalore. Mr. Srinivas V. Rao, Branch Chairman and Sr. Faculty and Dr. Naresh Shetty, MBBS, D' Ortho, M.S. (Ortho), AO Fellow, President of M. S. Ramaiah Memorial Hospital& International Projects Management handled the session on Supply positioning model, Hospital inventory management, Total cost of ownership, Supplier relationships management and discussed Case studies and also conducted Role Plays. The workshop was very interesting with lively interaction by participants with the speakers.

Mr. Srinivas V. Rao, Branch Chairman and Sr. Faculty Handling seesion for workshop on Inventory and Materials Management conducted Health Care Executives on 26.05.2018

Dr. Naresh Shetty,President, M.S Ramaiah Hospital handling guest lecture for Hospital Staff

A group of Participants attended from various Hospital for workshopat Royal Orchid Central

02.06.2018 – One day workshop on Inventory and Materials Management: IIMM Bangalore branch has organised one day workshop on "Inventory and Materials Management" for Hospital Administrators and Supply Chain Managers in collaboration and support from Johnson and Johnson on 2nd June 2018 at, Radisson Blu, Jaipur**.** Mr. Srinivas Rao P. Sr. Faculty, handled the session on Supplier Base Rationalization & Supplier Partnerships, Through Technology – Use of Bar Codes, RFID etc. Selective Inventory Control System- ABC, VED, HML, FSN, XYZ etc, Analyses, Single & Multiple Procedures Moving from Low Cost Sourcing to Best Cost Sourcing, Quality V/s Cost, Total Cost of Ownership (TCO)

& Concepts, discussed Case studies. Program was well received by the participants.

15.06.2018 – Monthly Evening Lecture Program: Indian Institute of Materials Management – Bangalore has organised monthly lecture program on "SCM digitization – e Sourcing" on 15th June 2018 by Dr. Sathyanarayanan K. Head of SCM, ABB Global Industries & Services, spoke on the subject and covered Vision 2035 Technological Innovations in SCM ,Dimensions of Digital Supply Chain,Digital Technologies in Supply Chain ,Case Studies, E-Procurement,Cloud SC, B2B Market, VR in Manufacturing. Mr. K.V. Sudheendra, Vice Chairman, Welcome speaker and Mr. C. Subash, EC Member proposed vote of thanks. The Lecture was very interesting and Members more interacted with the speaker and exchange their View.

KOLKATA BRANCH

One Day Seminar on Redesigning Supply Chain with Automation & Digitisation held on June 2,2018 : In today's modern economy, automation and digitalization plays an important role in all industry and role of supply chain professionals turns out to be most crucial for selecting the right technology. To understand what technology to be used for maximum impact in top-line and bottom-line and to get a first-hand experience from users and service providers, Indian Institute of Materials Management (IIMM) Kolkata Branch organised a seminar on "Redesigning supply chain with automation and digitization - deployment strategy and implementation techniques" at The HHI Kolkata on June 2, 2018, where supply chain professionals from diverse industries participated in large numbers.

Mr. G.K.Singh, NP - IIMM, Mr. D.P.Patra - EVP (HR & OPS), Haldia Petrochemicals Ltd., Mr. Animesh Chattopadhyay - Branch Chairman, Mr. Debasis Mohanty, Director, Consulting Technology at Deloitte LLP.

On the Occassion of One Day Seminar held on 2.6.2018 at Hotel Hindustan International Organised by IIMM, Kolkata, view of Sr. Members of Delegate sitting in the Seminar Hall

Handover the Memento Branch Chairman Mr. Animesh Chattopadhyay to National President IIMM Mr. G.K.Singh

Mr. G.K.Singh, NP and Mr. K.M.Bhardwaj - VP (East) before entrance the Seminar Hall, Welcome by Vice Chairman, Kolkata Branch Mr. Koushik Roy and Mr. K.Gupta, Admn. Manager

The Chief Guest of the Seminar, Mr D.P.Patra, EVP (HR & OPs), Haldia Petrochemical and Wholetime Director, MCPI, stressed the need of the different skill set to handle the emerging trend and dispelled fears that job loss would be rampant. But once right technology is adapted by the industry to improve its efficiency, output would

be exponential and supply chain professionals currently developing skill set on a reactive mode would be impacted, said the Keynote speaker Mr Debasis Mohanty, Director, Consulting Technology at Deloitte LLP. IIMM has positioned itself to satisfy this need of the upcoming supply chain professionals as it is a need of the hour, said the IIMM National President, Mr G.K.Singh in his deliberation as Guest-of-Honour.

View of Inauguration of Souvenir printing on the occasion of Seminar held.

The Mint was corporatized for the need to enhance efficiency and the skill set of its employees were revamped to take on the challenge, said Mr S.N.Lahiri, retired Chief General Manager of Mints and Presses of Security Printing & Minting Corporation of India Ltd.

CESC identified very long lead time in manufacturing, procurement and logistics as its bottleneck and attempted to reduce use of paper to improve efficiency. CESC currently aims to go paperless from indenting to ordering by launching Online Analysis of SRR Integrated System, said General Manager Materials Mr Partha Bhattacharya in the first technical session.

Improving efficiency also necessitates lower cost of technology. Software vendors are charging very high as they are selling technology in India at international prices, said Debranjan Roy, General Manager Procurement, Praxair.

Software vendors however defended the high cost in the second technical session post lunch as project delivery lead time has reduced drastically for competition. Cost is higher as not only technology change rapidly, business and its priority also changes, said Ms Madhumita Banerjee, Associate Director from IBM Automation. SAP has rolled out a separate product "SAP Leonardo" to cater to the cognitive needs of Client in procurement space as it has turned out to be an emerging need, Mr Danish, Associate Director of SAP said. In the eCommerce sector, instead of negotiating best price, Government sector has now set their nriority on sanitization of data, Mr Partha Kumar Chakraborty, head eProcurement from Logistics sector is now witnessing more innovative solutions and automation service offered is now helping both buyers and service providers, Mr Prashant Soni, Director Business Development at Blackbuck said in the last technical session of the Seminar.

But it is practical to use technology when it is necessary and not get carried away as competitors are using it, said Mr Amit Mukherjee, Director, Unigrow who was initially with Spencers group of Reliance Retail as its Executive Director.

The Seminar ended with a sum up session by Mr Biplab Banerjee, Sr. Vice President, Simplex Infrastructure and closed with resounding success for the IIMM Kolkata Branch.

LUCKNOW BRANCH

Report on the Evening Lecture held on 4th June 2018 at 19.00 hours at IIMM Lucknow Branch : An evening lecture was arranged on 4th of June 2018 at the IIMM Premises wherein 2 speakers from various fields shared their experiences.

A view of audience

Mrs. Ragini Johri, Asstt. Professor in IIM Lucknow deliberated about the trends in the field of Education and its standard. She spoke in general and said some of the students are very serious about their Studies and some others come to the college just to waste their time and trouble the other genious students. It is not that students who come to disturb others are not intelligent but they need motivation. Therefore for improvement of standard of Education, Motivation is an important aspect. She gave a power point presentation. Listeners were Senior Management and Middle management Executives who enjoyed the Programme.

Next to speak was Col.Kar, who is heading Armed Forces Medical Stores Depot (AFMSD) at Lucknow.Its jurisdiction lies between J & K in North to Arunachal in North East.

The learned speaker shared his experience and deliberated about the Medicines, How these are procured, delivered to the stores, Hospitals, and ultimately to the patients and the procedure and paper work followed. As everybody is aware every medicines has an expiry date. Nobody Doctor Hospital Shop keeper or Patient would accept expired medicines. Then there are short expiry period medicines also and these are also required to be handled properly. Medicines is an important part of our routine life and it becomes essential after a certain age. It becomes an accessory of a person like Mobile, Wrist Watch, Reading Glasses, etc. The more Medicines are invented that many diseases

also occur. This is all due to our Life Style which is changing at a tremendous speed. Therefore our life style should be balanced one.

The lecture though in general was appreciated by everyone present. The attendance was about 25-30. The programme concluded with Vote of Thanks by the Secretary and a light refreshment was served.

MANGALORE BRANCH

IIMM Mangalore branch in association with Mangalore Senior Citizen's Association (MASCA) organized talk on

"Life & Senior Citizen" by **Dr. Leela Upadhyaya**, Academic Adviser, Sharada Group of Institutions, at Karnataka Bank Auditorium, Kodialbail, Mangalore on 26-May-2018.

(L to R) MASCA Secretary Sri K Ramesh Rao, President Sri C.D. Kamath, Vice President Sri T.G. Shenoy, Guest Speaker Dr. Leela Upadhyaya, IIMM Vice Chairman Sri. Philip C. C, MASCA joint Vice President Sri. Jairaj B. Rai & IIMM Secretary Sri Deepak T.

Performing MC by MASCA Branch Secretary

Welcome Speech by MASCA Member

IIMM Vice Chairman Sri. Philip C. C sharing few words on the occasion

Dr. Leela Upadhyaya, Speaker for the day, exchanging the Insights on the subject.

Branch members & audiences relishing the talk

Vote of Thanks by MASCA Branch President Sri C.D. Kamath.

Members dispersed with fond hope of meeting soon another interesting presentation.

NAGPUR BRANCH

Two days seminar titled ETHICAL LEADERSHIP- A VIGILANCE PERSPECTIVE FOR SUSTAINABLE EXCELLENCE

The Nagpur Branch of the IIMM held a two day seminar on "**ETHICAL LEADERSHIP - A VIGILANCE PERSPECTIVE**

FOR SUSTAINABLE EXCELLENCE" on the 21st and the 22nd of April 2018 Hotel Heritage, Centre Point Nagpur.

The seminar was inaugurated by the chief Guest Shri R N Jha, Chairman and Managing Director, Mineral Exploration Corporation Limited, Nagpur on the 21st of April 2018. In his inaugural address the chief Guest stressed on "Ethical behavior in a firm is a key to success. So it is essential that all activities carried out in an organization are directed towards this prime goal.

The Other guests of honor who delivered their key note addresses were Shri. V Ramachandran, former Chief Technical Examiner of the Central Vigilance commission, Shri M Bhimte, Chief Vigilance Officer Mineral exploration Corporation Limited, Nagpur and Shri A P Labhane, Chief Vigilance Officer Western Coalfields Limited, Nagpur.

The evening started with the welcome song and the lighting of the lamp, which was was done by the chief guest and the other guests of honor. The chairman of the Nagpur Branch, Dr. Y Venkataramana in his chairman's address said the "Management means doing right things while leadership means doing things rightly". He defined an ethical leader being "truthful, responsible accountable and fair". National Councilor, Mr. Dharamraj Kumar gave a brief introduction of the IIMM and its activities as well the activities of the Nagpur Branch.

The Seminar was graced by the august presence of the National President, Mr. G K Singh , Shri. L R Meena, National secretary and treasurer and Shri. J Prakash Rao, Vice President Central . Shri. G K Singh, National President , in his presidential address expressed his happiness on this seminar as well as the theme, which is so very important in any growing organization, and congratulated the Nagpur branch of IIMM, under the leadership of Dr. Y Venkata Ramana. He spoke of his long term association with the IIMM Nagpur branch. The national President also presented the President's appreciation medal to Executive committee of the Nagpur Branch.

The Chief Guest and the guests of honour also released the Sovenir of the seminar, which was appreciated by all present. Important dignitaries off the dias, were honored by the members of IIMM Nagpur with mementos. The IIMM Nagpur branch also honored our past chairmen Mr. V K Menon, Mr. S K Mathur and Mr. B S Nagashetty for gracing the occasion.

On the 22nd of April 2018, there were 4 technical sessions, during the day. The main speakers at these sessions were **Mr. V Shankarnath** – Founder MD of Visisht Corporate growth assocates, based in Hyderabad and a professional " Executive " coach at several medium and large sized organization, **Mr. V Ramchandran**, Ex CTE/CVC, **Mr. Asis Kumar Tripathy** – Chie HRD MS & L&D Manager, Indian Oil Corporation Mumbai, and **Ms Atika Dhandia** – Personal Branding and wellness consultant, Motivational, speaker, Director Training –Art of Living foundation. All the speakers deliberated on the theme of the seminar **" ETHICAL LEADERSHIP"**, in their own way.

While **Mr. V Ramchandran,** with his wide experience in the public procurement system in the coal sector and Indian Railways, gave a deep insight into the CVC Guidelines for Ethical practices in the Government Procurement System. He mentioned that the problem of corruption has been recognized globally, and this was the reason for the essentiality of introducing the CVC guide lines in the public procurement system.

Mr. Shankarnath, a professional speaker spoke at length on maintaining ethical practices at the work places. It was most essential for the leader to be ethical in his way of conducting himself, which becomes a model to be followed by his down the line.

Mr. Asis Kumar Tripathy, an HRD trainer, with a wide and long experience in the field of HRD Training, questioned each one " Are We Ethical ?" the response was astonishing, as he unfolded the true meaning of ethics. If we were really ethical, he said, then we don't need any vigilance department or CVC.

Ms. Atika Dhandia, a wellness consultant and the Director training of the Art of Living spoke of Ethics and Ethical practices in the holistic world. She brought in the importance of Yoga and spiritual well being and practices to curb unethical practices which leads to stress and other related problems.

The seminar concluded with the valedictory session, which had guests of Honor Mr. A P Labhane, CVO Western coalfields limited Nagpur, Shri Anil Ramteke, Chairman Railway Recruitment board, SECR Bilaspur and Mr. B S Nagashetty, Immediate Past Chairman and National Counciller IIMM Nagpur Branch. All the Guests of honour congratulated the chairman IIIMM Nagpur branch and the entire Nagpur IIMM team for the grand success of the seminar. They also honored each member by presenting them with mementos.

The secretary IIMM Nagpur Branch, Mr. Sukumar Adhikari, read out the oath and the code of ethics of IIMM, which was followed by the vote of Thanks by the secretary Nagpur Branch. The evening ended with high tea and a time of fellowship. The Secretary also acknowledged the messages of good wishes received from the Chairman and Managing Director, Western coalfields Limited Nagpur, Mr. R R Mishra, Chairman and Managing Director, Manganese Ore India Limited Nagpur, Mr. M P Chaudhari, Mr. G K Singh, National President IIMM.

The two days seminar was attended by around 120 delegates from various organizations such as WCL, SECL, MCL, CIL, MOIL, MECL and IOCL, etc. The evening ended with high tea and a time of fellowship which each one enjoyed thoroughly.

VADODARA BRANCH

MDP Workshop on 'Negotiation & Contract Management' in JUN'18 at Conf. Hall, Vadodara : The MDP Workshop on '**Negotiation & Contract Management**' topic was organised on **15th, 16th June'18** at Conference Hall of IIMM Vadodara branch for **43 Participants** representing **20 Organisations** comprising of PSUs, Corporates, Industries, Academics, etc. from Purchase/Procurement, Stores, Materials Dept. wherein faculty Dr.C.Subbakrishna successfully conducted ITC-MLS based programme. The actual registration was done by 47 participants wherein 43 participants attended the workshop.

The planning of MDP Workshop was done in week-3 of May'18 after which the brochure, etc. were designed for sending it to various Industries, Organisations located in & around Vadodara. Initially, the response was not as expected but later on the momentum picked up with joint efforts of Committee Members & Staff Members to reach the desired no. of participants. The Fees were moderately decided keeping in mind the workshop being conducted at our premises with in-house availability of required infrastructure and to match the expectations of Faculty & Participants. The Food & Refreshment arrangements were accordingly done to satisfy the taste of participants. The inaugural session was attended by Mr.Lalbhai Patel-former National President, Mr.Malay Mazumdar-Sr.Vice President, Mr.D.B.Trivedi-NC Member, Mr.K.C.Joshi-Senior Member, Mr.H.M.Bhatt-BoS Member and branch EC Members Mr.M.Sambhudevan Nair-Vice Chairman, Mr.Manojkumar Patel-Hon.Secretary, Mr.Rakesh Desai-Hon.Treasurer, etc. During Inauguration, Mr.Sambhudevan Nair shared Faculty profile while Mr.Malay Mazumdar & Mr.L.P.Patel delivered talk on topic of workshop. The Case Studies were shared by Faculty on both the days wherein participants got involved in groups to share their views. The soft copy of Reference Material in CD with few topic related Notes in hard copy were given to all participants at the end of workshop. The Feedback was very positive & encouraging for future programmes.

The participants appreciated the lecture delivery and were satisfied with the contents of workshop. They intimated their interest in participating in such workshops in future. The Participation Certificates were distributed to all participants by Dignitaries after Valedictory session with following photos depicting highlights of MDP Workshop –

Dr.C.Subbakrishna delivering lecture on second day of Workshop.

The Group Photos of Participants attending MDP Workshop.

VISAKHAPATNAM BRANCH

23-24.06.2018 -Two days International Workshop on Developing Supply Strategies and Suppliers Relationship Management : IIMM Visakhapatnam Branch was organized "Two days International Workshop on Developing Supply Strategies and Suppliers Relationship Management" based on (MLS) Modular Learning System recognised by International Trade Centre, Geneva (ITC-WTO-UNCTAD on 23rd and 24th June 2018 at Ambica Sea Green,Visakhpatnam, oppsite R K Beach. Began with an Invocation to Lord Ganesha and National anthom. There after Mr. A.V. Rajendra Kumar, Secretary IIMM Vizag. welcomed dignitaries on the dias offering boquet and also welcomed august gathering. Udaya Bhanu, Chairman IIMM Vizag welcomed Chief guest and intoroduced august gathering consisting of experts from various sectors, Government bodies, CSPU's and members of IIMM fretenity who attended workshops from Various sectros.

Mr. Durga Prasad, Course Director briefed about IIMM activitities and address the gathering. International Workshop was ably organised under the leadership of Mr. N.Udaya Bhanu, Branch Chairman and Dr. Rabi Narayana Padhi,Convenoer for ITC MLS ,National Council Member, with support of Mr. A.V. Rajendra Kumar, Hon. Secretary, Mr. V.K. Praviraj,-NC , and Mr. K.N.K. Kishore, Branch Treasurer.

Mr. Rabi Narayana Padhi, welcomed all degnitaries for Inaugurating workshop by Litening Lamp. Dr. C. Subbakrishna, Past National President, and Sr. Speaker and Chief Guest of the day of the workshop,inaugurated by Litening Lamp along with other dignitaries Mr. Durga Prasad,Past Chairman, Course Dirctor & NC, Mr. Udaya Bhanu, Chairman – IIMM, Dr. Rabi Narayana Padhi, NC, and Mr. A.V. Rajendra Kumar Secretary, IIMM, and Mr. S.M. Nagaraj, Manager Administration, Mentor of the event from IIMM, Bangalore Branch.

Dr C. Subbakrishna, Chief Guest and Expert International Speaker, addressed in his inaugural session and explained and briefed about Purchasing strategy. In the last two decades managers have witnessed a revolution in how business is conducted. A variety of shocks occurring throughout global markets has radically changed the way managers view their environments. The accelerated rate of change in markets, products, technology, and the level competition is requiring mangers to make decisions on shorter notice and with less information and with higher failure costs. At the same time customers are demanding quicker delivery of products, as borne out by the growth of express mail competitors. These same customers demand products that utilize state of the art technology incorporating the latest features. Products are becoming less standardized, with options tailored to the unique requirements of individual customers.

Any Buyer should normally first try to bring down prices of the existing sources through Negotiations. This needs careful study of the current prices and the review of the same with a view to bring down prices. Ideally, such an attempt should be made jointly by the Buyer & the Supplier. Modern Tools like Reverse Auction, Strategic Sourcing, Outsourcing etc. could be tried to achieve the Goal. On 24th June 2018, he covered session on Contract Management and Supplier relationship Management. He also discussed some case studies and group discussion for participants.

The event /workshop concluded on fantastic note delivered by Dr. Rabi Narayan Padhi and awarded participation certificate to all delegates by Chief Guest. Prof.D Ramachandra , Andhra University.

Mr. N. Udaya Bhanu, Chaiman, IIMM Vizag Branch, thanked all organizations who have nominated delegates, and attended from **RINL, VSP, DCI, HAL, NTPC, VIZAG PORT TRUST, NALCO, JK PAPER, INDIAN NAVY, DOZCO, BIOCON, Dr Reddy Lab, CMA, Vivhav , GSPC, ONGC, SALPG, RVR, Indian Railway, OM SRIRAM ENGG, Ultra Tech IIT Bhubaneswar, MMTC, MSTC, BNPML, CMA, HSL, GSPC and MNC's at Vizag. He also thanked all EC and NC and organizers who have given best support,grand success of Two days workshops.**

Participants well received the program and gave very good feed Back.

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EXECUTIVE HEALTH

CONTROLLING THE FIVE SENSES TO ATTAIN HARMONY

R S RAMASWAMY
DIRECTOR GENERAL, CENTRAL COUNCIL FOR RESEARCH IN SIDDHA, (MINISTRY OF AYUSH), GOVT. OF INDIA, dr. rsramaswamy@gmail. com

Unlike other modern medical systems, Siddha aims not only to cure diseases of the body and the mind, but also those of the soul, by purification which leads to salvation. The last line of the above verse indicates that Siddha is also for spiritual health. Thirumoolar emphasises the practice ofyogamfor leading a disease free life

The term "yogam" means "Union". That is to say, the union of jeevanma (individual consciousness) with the paramanma (the universal consciousness) — and this is the ultimate goal of human birth. Yogam in another sense means controlling of one's five senses and thereby enabling the mind to focus on a single entity and achieve the end. Yogam is dealt elaborately by Siddhar Thirumoolar in his Thirumanthiram. This article highlights some important views of Siddhars like Thirumoolar on yogam which is a part of Siddha medicine.

In Thirumanthiram, Siddhar Thirumoolar defines Siddha medicine as follows:

- One that cures a physical ailment is medicine
- One that cures a psychological ailment is medicine
- One that prevents ailment is medicine and
- One that bestows immortality is medicine.

Unlike other modern medical systems, Siddha aims not only to cure diseases of the body and the mind, but also those of the soul, by purification which leads to salvation. The last line of the above verse indicates that Siddha is also for spiritual health. Thirumoolar emphasises the practice of yogam for leading a disease free life. According to Thirumoolar yogam consists of eight limbs and hence he calls it Attanga Yogam.

ATTANGA YOGAM: Iyamam, Niyamam, Asanam, Pranayamam, Prathiyaharam, Dharanai, Dhyanam and Samathi are called Attanga Yogam i.e. the eight steps or limbs of yogam. In Siddha system of Medicine, Kayakalpam (Rejuvenation therapy) is an important therapy which is classified as 'Kalpa Avizhtham' and 'Kalpa Yogam.' Kalpa Avizhtham deals with medicines which are both preventive and curative. Kalpayogam deals with yoga techniques, the practice of which keeps the body, mind and spirit healthy long. According to Thirumoolar, the first part of yogam is 'Iyamam" and the last but the most important part is 'Samathi', the real goal of human birth.

I YAM AM: It is the practice leading to a healthy state of the mind which will be free from impurities such as lust, anger, jealousy and self-conceitedness. A mind free from such impurities will be free from diseases.

NIYAMAM: It is,the practice leading to healthy state of activities including one's daily chores—from waking up in the early morning till retiring to bed in the evening.

The author is Director General, Central Council for Research in Siddha, (Ministry of AYUSH, Govt. of India) He has written books on Yoga and Basic Principles of Siddha and authored and co-authored a number of research publications in peer reviewed journals Trained in Yoga he has conducted a great number of yoga training sessions including lifers in Central Jail, Palayamkottai. Chennai. Niyamam simply means'maintaining purity in one's actions'. Niyamam ensures healthy environment in one's sphere of activities.

AS AN AM: It is the practice of keeping the body steady and motionless in a particular posture for a specific time. It simply means 'pose' or 'posture.' According to Thirumoolar there are thousands of such postures. Practice of asanam prevents many diseases and promotes one's health. It is rehabilitative too. Unlike physical exercise which entails expending of our energy, asanam derives energy especially the bio-magnetic energy. Asanam strengthens not only the external body structures and voluntary muscles but also the internal organs (especially heart, lungs, stomach, liver, spleen, kidneys and uterus) and stimulates and regulates their functions. They regulate the glandular secretions, regulate digestion of food and excretion of waste materials and maintain proper circulation, ventilation and body temperature. They regulate the functions of endocrine glands which prevail over one's lifetime. Asanam proves to be supportive or main therapy in preventing or curing diseases. While doing asanam, the blood vessels, nerves and muscles do not become rigid as they do while doing hard physical exercises. On the contrary, they become soft and flexible.

PRANAYAMAM: It is the practice of controlling one's breath. It indicates the innumerable breathing exercises

that energises our body cells especially the nervous system. Thirumoolar describes pranayamam as methods of controlling one's breath by calculation. The practice of pranayamam keeps Yaman, the god of death away.

Pranayamam is preventive, curative and rejuvenative in nature. It increases the capacity of the lungs ensuring supply of adequate oxygen to our body cells. It is also called 'vasi'and 'vasiyogam.' Thirumoolar indicates the duration of Pooragam (inspiration), Kumbakam (Retention or otherwise the pause between inspiration and expiration) and Rechakam (expiration) as 16 Mathirai, 64 Mathirai and 32 Mathirai respectively.

PRATHIYAHARAM: It is the practice of controlling or withdrawing of the five senses namely, taste, sight, touch, hearing and smell as perceived through the five sense organs namely tongue, eye, skin, ear and nose respectively. Gnanenthiriyangal form a link between senses and sense organs. That is to say, Gnanenthiriyangal are the instruments which work the senses through the sense organs.

According to Siddha system panchabutham or five elements constitute the universe as well as man.They are: mann (earth), neer (water), thee (fire), valilkatru (air) and veli (space/ether). Poriorigal or five sense organs constitute: mei (skin), va/(mouth, i.e. the tongue), kann (eye), mookku (nose) and sevi (ear). Pulangal ore the five senses and they comprise of: suvai (taste), oli (vision), ooru (touch), osai (hearing) and natram (smell). The panchabutham are related to the pulangal in this way: suvai—water, oli—fire, ooru—air, osai—space/ether and natram—earth. Man also possesses a sixth sense. Tholkappium, the earliest book on Tamil grammar and literature, writes, 'Mavum Makkalum lyarivinave Makkal thame ar arivuyire\ which means that man differs from and is superior to other living beings by possession of his sixth sense, i.e. the power of reasoning, with which he can refrain from committing sins and lead a disciplined life. By this he can achieve salvation—the real end of human birth. Further, Thiruvalluvar, the author of Tirukkural, a treatise on ethical principles, says, 'Suvai oli ooru osai natram endru ainthin Vahai therivan katte ulagu', which means that this world is functioning only with the knowledge of those capable of working, i.e. applying, the five senses sensibly. On control or withdrawal of the five senses, Siddhar Pathirakriyaar says, 'Aangaram ulladakki aimpulanai chuttaruthu Thoongamal thoongi sugam peruvathu ekkalam' which means 'Subdue your ego, burn your five senses and get deeply absorbed in meditation till you reach the stage of self-realization'.

Perception or enjoyment of senses should be within normal limits as it entails expenditure of life- energy. Therefore, excessive indulgence in sensual pleasures will lead to consumption of life-energy. Siddhars by completely withdrawing their senses, preserve their life-energy for a long time, live a long life, acquire divine sacred knowledge easily and serve others.

Thiruvalluvar explains the importance of withdrawing or controlling of senses as follows: 'The one who is capable of controlling the senses functioning through the five sense organs by analyzing with his power of reasoning is like a seed bound for salvation'.

DHARANAI: It is the method or practice of concentration or fixation of the mind. The practice of dharanai, a technique for concentrating the mind, is a prerequisite for Dhyanam (Meditation).

DHYANAM: It is the art of gaining complete control over (mastering) the mind. Dhyanam can also be defined as cessation of all thoughts except one. Under the guidance of a yoga expert, sitting in Sukahasanam or Padmasanam on a soft bedspread spread on an even floor, one can do meditation 20 to 30 minutes daily in the morning, evening and night and prevent or cure diseases caused especially by stress. Meditation keeps us fresh throughout the day; ensures sound sleep for those who suffer from loss of sleep or disturbed sleep; increases the mental strength to face problems boldly and solve them efficiently.

Though all times are suitable for doing meditation, early morning (the time of Bhramamuhurtham) and evening during sunset are considered the best and the most beneficial. It is best to do Dhyanam sitting on a bedspread facing north or east.

SAMATHI: Samathi is the last step of Yogam. Samam + Athi, which means attaining the state equal to God. When we analyse through the philosophy of Pathi, Pasu and Paasam, Samathi is a state in which Pasu, the Jeevanma (the individual soul) by freeing itself from Paasam, the material bondage, becomes one with Pathi, the Paramathma (the Universal soul).

Samathi may also be called thoughtless self-meditation. That is to say, it is the desireless state of the Athma (soul) residing within the body along with senses and sense organs but remaining separated from it; it is a supreme state of forgetting oneself and one's surroundings; it is a state fully free from consciousness and feeling. It is the state of Samathi.

RAJAYOGAM: Siddhars have also explained about Rajayogam, which means raising the Kundali Shakti (serpent power) from Mooladharam to Aakkinai and attaining eternal bliss.

CONCLUSION: By celebrating the International Day of Yoga on June 21 every year, India takes pride in contributing its own spiritual science 'yogam' to the entire world to maintain peace and harmony within and without.

Source : Yojana, June 2018

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BRANCH ACTIVITIES

AURANGABAD BRANCH : *Chairman Mr. K. Srihari briefing the branch activities*

BANGALORE BRANCH : *Dr. Sathyanarayanan K. Head of SCM, From ABB handling lecture on SCM Digitization -e Sourcing on 15.06.2018*

KOLKATA BRANCH : *National President Mr. G.K.Singh delivering his message.*

LUCKNOW BRANCH :

MANGALORE BRANCH : *(L to R) MASCA Secretary Sri K Ramesh Rao, President Sri C.D. Kamath, VP Sri T.G. Shenoy, Guest Speaker Dr. Leela Upadhyaya, IIMM Vice Chairman Sri. Philip C. C, MASCA Joint Vice President Sri. Jairaj B. Rai & IIMM Secretary Sri Deepak T.*

NAGPUR BRANCH : *National President Mr. G.K.Singh Lighting the Lamp*

VISHAKHAPATNAM BRANCH : *Dignitaries on the Dais*

Two International Workshop (MLS) Inaugural - Lightning the Lamp by Dr. C.Subbakrishna, Past NP and Sr. Speaker and other dignitaries

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