

## Spectrum 2019 on 22 & 23 Feb 2019 at MMA auditorium Chennai-Report

### ➤ Event in brief

IIMM Chennai branch, conducted its annual mega event **on 22 and 23 Feb 2019 at Madras Management association Convention Hall** at Patahri road (off Anna salai Chennai). The theme of this event Spectrum 2019, providing for cross industry learning is “**Multi disciplinary intelligent supply chain for business growth**”. This theme evolved out of series of interactions among supply chain professionals and elected by the executive committee members of IIMM Chennai branch.

A total of 150 plus professionals participated in this event, where intense technical discussions were held on topics current and modern in the supply chain field. The event narrative and conduct was provided by Mr.N.Sivaraman as master of ceremony.

### ➤ Inaugural session on 22 Feb 2019

The inaugural event began with an invocation song rendered by Miss Sadhvi, daughter of Mr Balaji EC member. Starting with lighting of lamp by dignitaries Mr G.K.Singh National President IIMM, Chief Guest (Retd ) Vice Admiral B.Kannan, MD and CEO of L&T Shipping Ltd, keynote speaker Mr.Raghuttama Rao CEO-GDC-IIT Madras , MrB.Ramesh Spectrum Event Chairman, MrJ.Ravishankar Vice chairman IIMM CHENNAI BRANCH, the event witnessed depth interactions.

The professionals who participated in this event representing 7 different industry verticals and 52 organizations and 17 sponsors- namely Zoho corp., Barani Hydraulics Pvt Ltd, Raj Group, JKIG Automotive India Pvt Ltd ,Ramnashekar steels ltd, Sun Pressings (P) ltd, etc., and Motor India the media partner were welcomed by Mr J.Ravishankar , branch vice chairman. The opening remark was provided by Mr B.Ramesh event Chairman. The summary of the proposed narrative of the entire event was rendered by Mr Subbu Subramanian Content Committee Chairman. He highlighted how technology drives the supply chain.

Mr G.K.singh National President IIMM provided an overview of IIMM activities at all India level. He awarded gold medal to all key office bearers in recognition of excellent performance maintained by Chennai branch in overall performance as No 1, in India among the branches.

Mr B.Kannan, Chief guest, highlighted the warm link he has with old friends in Chennai branch office bearers and also predecessor CEO's of L&T group. He narrated how the Logistics industry has developed over the last 3 decades which had witnessed great changes in the industrial development. He provided an overview of the changes that have taken place in the field from Kardex days to containerization of cargo, the ERP systems, computerization and now the digital technologies.

### ➤ Keynote address by Mr. Raghuttama Rao- CEO GDC-IIT Madras

The keynote address for the programme, was rendered by Mr.Raghuttama Rao, the CEO of GDC-IIT Madras . He began with highlighting the shift in share of traded goods towards higher valued goods. The share of low value commodities is less than 20% of goods and services traded across the globe, was a key statistic, shared by him. He added that more than 80% of goods and services are accounted due to contribution by highly skilled labour. Lots of goods also travel within border than cross border. This

indicates that the domestic demand itself has grown. Lot of these products are actually developed in developing countries but are consumed in the West.

With 50% of world trade being online, a shift from the earlier 20% share was the key point to observe. Dataflow over the internet has also increased in quantum. It has lot of meaning for logistics business. IOT, Block chain, digital technologies etc will bring down transaction costs.

The containerization starting from 80's has impacted the entire economics of several industries worldwide. The MRP in materials management started in 1970's for minimizing logistics costs. In 1980's spreadsheet, Lotus 123 and all quantification tools started in supply chain.

MRP II that came in 1980's was top-selling software of that period. By 90's ERP had arrived and technology started entering management of data bases. Globalization started with Asian Tigers and rising of China. Supply chain management started replacing Logistics Management By 2000, due to spread of internet and Google, technological start-ups have emerged. Internet has again changed technology. Embedded software on RFID, has led to IOT, which started adding lot more value.

National level policy on Logistics for startup funding is provided. E commerce has completely disrupted the logistics business.

➤ **Corporate Award given by IIMM CHENNAI BRANCH**

Chairman Corporate training Mr M.Sundaram, announced the IIMM Corporate Award for 2019 to Ms NTC Logistics Mt. Thillai, Director Operations & Mr. Raja Sundarm, Director Finance received the award on behalf of NTC Logistics. The inaugural session closed with vote of thanks provided by Mr Sethu Venkataraman, Hony. Treasurer IIMM Chennai branch.

➤ **Recognition of work done by IIMM Chennai branch**

Mr G.K.singh, the National President, awarded gold medals to branch officials which were received by Vice chairman J.Ravishankar, Secretary Mr B.Ramesh, treasurer Mr. Sethu Venkataraman and the Chairman who would receive it on his return from abroad in the next function. This award was given in recognition of their contribution to development efforts.

With this the inaugural session came to a close with formal vote of thanks by treasurer, Mr.Sethu Venkataraman.

## **Individual Technical sessions (T1 to T10 )**

### **1. T1 Session On Circular supply chain**

Mr.N.Sivaramakrishnan, former Director – Quality, Alstom and former branch chairman and senior faculty member from IIMM, chaired this session. The speaker of the session Mr.S.Eswaran was introduced by him. The speaker, Mr Eswaran is Partner Supply chain & Manufacturing Operations Leader Deloitte India .Mr Eswaran provided an overview of how circular supply chain will drive future. He highlighted its evolution from linear supply chain. In the presentation he focused on the note that

circular supply chain is restorative and regenerative by intention and design. He shared the example of the building of Shanghai city when almost one third of world's total backhoe population was aggregated for that purpose. But after the completion of work, there was no need for any backhoe.

Presently remanufactured models, extended warranty, assured resale price, power of inner circle, power of circling longer and cascaded use across the industries have emerged. The 4 major ways through which value creation process takes place in a circular supply chain was highlighted by him

- Use of Sustainable Materials
  - Use of renewable energy/inputs
- Fully Utilized Capacities
  - Maximize capacity utilization through co-owning, co-sharing and resource pooling
- Product Life Extension -
  - Enhance product life by repairs, maintenance
- Value Recovery from Disposal-
  - Extract value from energy recovery/recycling

He stressed on the need to transit into circular supply chains and to make it sustainable, it has to address multiple internal and external dimensions. The internal dimensions are product design and innovation, redefine production process, build knowledge, awareness, reverse logistics, new material resources, ICT. The external dimensions are horizontal and vertical collaboration, vendor re-skilling, reassess cash flow demand, engagement with Govt and regulatory agencies, communication with customers, collaboration with research and educational institutions. He illustrated with an example of automotive industry which practices circular supply chain such as use of one third of recycled materials in the manufacture of new trucks. Also the use of recycled aluminum which reduces the energy consumption by 95% was illustrated. In India, an MNC which shreds used trucks to recover steel for reuse in trucks was also narrated. The practices used by food and beverage industry were also narrated, apart from sharing of specific organizations such as Volvo, Caterpillar, Bosch, GM, Michelin in moving towards circular economy. He ended with a note that the transition to circular chain can generate profit opportunities, greater security in supply chain and new demand for business services.

## **2. T2 Session-Supply chain management to the financial services**

This session was facilitated by Prof. Dr G.Balasubramanian, Professor, IFMR Business school. Mr. M.Sundaram Chairman Corporate training chaired the session. The speaker gave a overview of the on generic valuation framework, he provided the following structure. The shareholder value creation process comprises business strategy and financial options as two lines of flow. This he said can be put as a valuation equation stated below

- $V_0 = \sum FCF_i / (1+WACC)^i$ 
  - $V_0$  =Present value
  - $FCF_i$ =free cash flows occurring at time i
  - WACC=weighted average cost of capital

- Supply chain management attacks the numerator-free cash flows
- Supply chain finance attacks the denominator as well as the numerator

He quoted the following on emergence of supply chain finance ‘Supply chain finance is tipped to become US\$2.27tr market for Chinese internet firms by 2020.’ - Kevain Day, HPD Software SCF Report 2018. The following example of supply chain finance was provided

“Procter & Gamble (P&G), the world’s largest consumer packaged goods, announced that it would extend its payment terms to suppliers by 30 days, from the current 45 to 75 days. At the same time, P & G announced a supply chain financing (SCF) program giving eligible suppliers the ability to contract with one of two global banks to receive discounted”.

“The SCF program originated in a longstanding challenge for the treasury group: How to leverage our conservative financial policies to drive economic value for P & G and our business partners. These policies give us very tight pricing on debt issues and commercial paper, but as we extended our payment terms, we wanted to find a way to support our external business partners and strengthen our supply chain

Formed a cross-functional team that included treasury, banking, legal, purchasing group and technology. It should be win-win for all- P & G, business partners and banks. The following valuation framework was quoted as an example

- ✓ Dual payment objective:
- ✓ Extended payment term for P & G
- ✓ Early payment for suppliers

Three bilateral contracts-

- Contract between P&G and its suppliers(commercial)
- Contract between P&G SCF Banks(service)
- Contract between Suppliers and SCF Banks(Financing contract)

In essence P&G’s AA- credit rating makes its receivables into short-term, high-quality, liquid assets. The underlying premise is that the higher the differential between its AA- rating and its suppliers cost of funds, the more value P& G can create for its suppliers

He also stressed on the following advantages in SCF

- ✓ Access to early settlements at preferential rate. Source of low cost funding
- ✓ Committed supply; Vendor relationship management ; Up the Strategic alliance spectrum
- ✓ Financial security when being part of large customer supply network; Better intelligence gathering; Focused account management and can be cost effective

### **3. T3 Session E-commerce shipping strategy**

Mr.N Govindaraj, executive committee member of IIMM chaired the session. The session was facilitated by Mr. Murali Ramanathan Head Retail architecture & digital technology of TCS. He focused on the embracing of technology for a digital supply chain. He narrated the following developments as having

significant impact on business Intelligent things and internet of things, Typical functions in warehousing such as sorting, picking, shipping and delivery will be shifting to augmented reality or conversational technologies like Alexa, to a level of 20%, in next few years.

As first example, Zara fashions was quoted. Zara has stores worldwide has 2220 stores which are fully RFID enabled. The year on year growth for RFID implementation is 41% and such operations contribute to almost 10% of total sales. .

Second example quoted was EDEN technology, that is used by Walmart. This leverages machine learning and the temperature monitors predict the likely shelf life of fresh products. It has implemented it in 43 distribution centres and \$80 million was saved in year 2017.

The third example used was that of Woolworth, Australia's largest supply transformation case study i.e "Form to Fork". It had implemented Internet of things devices on every farm , vineyards and depots. It also used SMART shelves that can use IOT. This has led to quantum reduction in costs.

He also stressed that artificial intelligence will have significant impact on supply chain. The Mobile first to AI first an intelligent interface was taken as the example. The self learning capabilities of AI will increase so much, that by 2023, 30% of warehouse operations will be having workers supported by collaborative robots. AI can power significant visual inspection activities in future warehouses.

The next technology of Real Time advanced analytics, was briefly mentioned. It is expected that by 2023, 50% of global companies will be using advanced analytics, in supply chain operations. As an illustration he used H&M clothing retail company which is scaling digital supply chain, using algorithms. The example of Starbucks coffee using traceability technologies in efforts to involve suppliers of coffee beans in Costa Rica and Jamaica, was stated as an illustration of block chain technology use.

He summed up that the last mile logistics really spurs innovation in E commerce operations. It is clear that digitization is disrupting everywhere from Just Eat to Wallmart to Domino's Pizza.

#### **4. T4 session – Success story of NTC Logistics**

This session was facilitated by Mr R.Venkatesh from NTC Logistics. This organization was promoted by by 3 entrepreneurs. Initially, it started as a truck business. Gradually, they wanted to specialize and in year 2000, they shifted to Over dimensional cargo (ODC) operation. Starting from transportation NTC Logistics, provides complete solutions. It shifted from asset-based company i.e transporter to a solution focused organization i.e full service freight forwarder, taking complete responsibility for profit management of transportation logistics. It is currently, the largest player in ODC segment. It owns more than 2000 trucks and trailers. Now it is engaged more in engineering than in transportation. NTCL does extensive research on transportation. It has 4 axled and 5 axled trailers which can carry very heavy payloads. They have transportation capacity to haul up to 70 tonnes. They also provide training in complex equipment. Skill development council has certified NTCL for training in ODC transportation. They are also expanding into international operations. In freight-forwarding, they compete with China and also win business. They are fully moving into freight forwarding, where considerable fee is generated. They also have plans to enter into contract logistics such as such as auto, auto components customers, pharmaceuticals etc. They are now working on a wide range of payloads from 5 mgs to 1000 tonnes.

**For the year 2019 NTC Logistics India Pvt Ltd is awarded the IIMM Corporate Award** The award was given by Vice Chairman Mr J.Ravishankar on behalf of IIMM CHENNAI BRANCH.

#### **5. T 5 Session- Impact of E mobility on supply chain**

The first session of second day was chaired by Mr. Sethu Venkataraman treasurer of IIMM CHENNAI BRANCH and the session was facilitated by Mr. S Muthukrishnan, GM Tata Motors. The session focussed on E mobility covering electric vehicles and entire electric eco system. The focus was on future E mobility comprising electric vehicles, batteries, E cars and autonomous driving. The narrative began from the inception of e-vehicles in the beginning of 20th century and needs and drivers of EVs. As they provide for clean environment, unlike the other energy resources like solar wind, e mobility could be the most preferred option, unlike their limitations. Increasing economic and environmental concerns will cause a shift from conventional fuel driven vehicles towards e vehicles.

#### **6. T 6 Patient centric pharma supply chain**

The session was facilitated by Mr. Sundar Narasimhan Sr Vice president &Head SCM Neuland laboratories Hyderabad .This session was chaired by Mr. K. Nagappan – Head of SCM in Apollo group (retd.). The following aspects were covered in the presentation-

- Supply chain links to manufacturing, distribution, retail/pharmacy, and finally to patient process
- Delivering the product in the most convenient way—when and where they need it ( Amazon like)
- Shifting Regulatory Landscape and integration with Supply Chain processes
- Use of IoT Devices, Data Loggers, Online Platforms in Pharma Supply Chain
- Management of Regulations, Expirations, Spurious Drugs - Branded and Generic Drugs

He gave a brief on Global Pharma industry with turnover exceeding \$1.3 trillion and growing. He highlighted the following 4 major trends large sized market, clocking decent growth rate, less Regulated markets driving volumes and the rapid growth of China market. He dealt at length the shift from traditional to patient centric approach. The traditional approach was product led and disease-centred. The patient centred approach looks at the three areas of

- How does industry deploy profit,
- Patient led approach
- Patient- centred.

He gave the following example of Astra Zeneca’s approach to patient-centricity

Putting the patient first in an open and sustained engagement of the patient to respectfully and compassionately achieve the best experience and outcome for that person and their family

Integrated measures for listening to and partnering with patients and putting patient’s well-being at the core of all initiatives

This approach is carried on the following 5 pillars

- Inclusiveness
- Sharing goals
- Empowerment
- Transparency
- Partnering

He shared the experience of leading pharmaceutical companies in new drug development as a 5 step approach

- Recognize – Patients expectations differ from healthcare provider objectives
- Patient experience key driver for development of solutions
- Incorporate designs and endpoints – patient’s perspective
- Capture data of patient’s journey and understand patient needs
- Improved patient adherence to drug regimes – better outcome for patients

The Pharmaceutical Supply Chain – Digitalization journey was narrated with the use of following digitalization enablers -Sensors and geo-locations, Robots, drones and A,RFID, IOT, Supply analytics and big data and Nanotech using 3 D printing. He finally concluded with the triad approach of prevention, detection and response in building patient-centricity

#### **7. T7 Session - Fast moving goods, Smart thinking customers 23 February 2019**

This was anchored by Dr R.Arunachalam who holds a Ph.D. in Supply Chain Management from Kanchi University. He is currently CEO of Pro Connect a logistics organization belonging to Redington group. The session was chaired by Mr.V.Ramachandran, executive committee member and advisor MSME -Govt of India. Dr Arunachalam, highlighted, in his presentation, the modern trends which drive the logistics and warehouse operations. He narrated, how the steps taken by Govt of India such as abolition of octroi, permits and gradually check posts, have led to better utilization of logistics assets.. All these steps lead to improved fleet utilization and parts delivery. He visualized that with the expected growth in E commerce, the market will cross US\$200 billion by 2026.

Developments such as value added services like drones etc and full service expectations by end customers drive FMCG suppliers really hard. This gets reflected in the asset valuations of companies where a simple warehousing company can increase its market valuation by more than 5 times, with full fledged 4PL services

#### **8. T8 Session on Block chain technology**

Mr.Subbu Subramanian is the session chairman who briefly mentioned the origin of this "Block chain technology'. Dr Vinayaka Pandit from Block chain research, IBM Research India, facilitated this highly technical session starting from supply chain co-ordination. He the audience by providing a snapshot of Block chain Revolution, starting from **Bitcoin**. From the registration of Bitcoin in 2008, its software was made open source for large people to participate. Ethereum, which started in 2015 issued Ether- its crypto currency. A number of distributed applications through SMART contracts, led to Hyper ledger in Dec 2015. He highlighted the evolution of blockchain, on how it connects the following

- Business networks, markets and wealth
- Connected customers, markets
- Participants, transactions and contracts

He also stressed the key problem of identifying and monitoring asset ownership. He dealt at length on how a solution- shared, permitized ledger can become a usable block chain for business.

Core issues in Industrial block chain such as pluggable consensus were highlighted. He also stressed that managing externalities is essential. He closed with the key note on whom are you trusting and what is the trust model a the core issues in block chain.

#### **9. T9 Supply impact on capital projects**

Session Chairman Mr.T.N.Srinivasan introduced the facilitator for the session **Mr. Nitin Dhimole** Gr A IRSS Officer of 1985 batch and Chief Materials Manager ICF Chennai. Train 18-Best in Class train set as part of Make in India initiative was released recently. This carries no separate locomotive, in line with the latest trend all over the world of using trainsets. He narrated the development journey from concept finalization to the consultancy contract, i.e - new bogey design with fully suspended traction motor. The **procurement contract and judicious selection of suppliers** was elaborated. He highlighted the interactions with contracted suppliers and consultants on Key drawings, shop floor meetings, prototype rake readiness-to release it by 15 Oct 2018. He also stressed that with all the efforts ICF owns IPR and Govt has requested to make 100 rakes, which use LHB design as base. He also provided the testing methods up to 180 kmph speed running on track and the advantages of the train design, such as quick acceleration and interiors. The session also had a video play on the inauguration of the T18 introduction by PM of India.

#### **10. T10 Panel discussion How will supply chain careers evolve in next decade**

##### **Panel speaker -SCM consultant from consulting - Mr Upendra Sai Director Analytics- E&Y**

He highlighted how the technology is going to transform supply chain and the changes that will come in supply chain. He dwelt at length on how supply chain professionals need to manage the change. In the narrative, he emphasized that the scope of SCM has remained the same, i.e., increasing the efficiency and effectiveness in both B2B and B2C segments. He stated that the technology- led developments do not change supply chain expectations. Management expectations have remained same but technology up gradation like data automation like in warehouses, in production functions, has major impact. While stressing that automation which is little more intelligent, does not result in net reduction of jobs. Before ATMs were introduced there existed only 250 tellers, in a bank in US. . After ATM introduction it increased to 3500 tellers. ATM machines made banks efficient with reduced cost and more business was generated. This required more people. However the nature and title of jobs could become different



Other change mentioned was the customer behavior. He gave an example of one of leading organization. In their market, each customer wants individual experience, on demand service etc. Any technical breakdown is taken as entire supply chain breakdown and lack of response. He stressed that SCM people need to manage disruption, learn to work with robots and manage automation. Since we are lot more knowledgeable and indispensable than robots, we should be able to bring intelligent quotient and innovation. The way data is captured also impacts automation. He further highlighted that we need to know

- Digital nativity which technology will be used in which situation
- Digital technologies that will affect your business
- How to work in digital environment - digital knowledge

He emphasized on use of Data Analytics as a tool.

**Panel speaker -HR professional from manufacturing – Ms. Dhivya Anand Senior manager Learning &Development &HRBP at Beroe Consulting Pvt ltd**

She narrated the session with a story on importance of problem solving. She also stressed the point that it is man and machine and not man versus machine. Collaboration with machines is necessary, in business today.. New job creation is need of hour. 65% of kids will shift in roles. Lots of roles were not accepted earlier, but have become normal now. Ability, motivation and opportunity enhancement are the three key challenges. Shift in human resource management towards strategic goal identification, was narrated. Key new roles that stand out such as digital engg i.e data science drawing insight from data, role of sales and marketing and emerging skill sets. She specifically focused on the following 6 skills

- Complex problem solving
- Creative thinking
- Adaptability
- Flexibility
- Agility
- Innovation

Cultural change, need for being open and readiness to collaborate,, network and build foundations of clients were highlighted by her. While certification can be funded by employees, need to have full expertise in end to end supply chain was stressed. Knowledge sharing in forums, relationship building with suppliers and customers are equally emphasized. Besides sharing success stories, she stressed the need to share failures as well.

**Panel speaker - SCM educator-Mr. T Vallinayagam Consulting faculty CII Institute of logistics**

He stressed that value analysis which are more into logistics is also moving into supply chain. Logistics has also taken many of the areas of supply chain. As country moves from service sector to manufacturing function, the savings in manufacturing can lead to investment in R&D. Less than 1% of our present GDP is spent on R&D. As an example he narrated on How the cold chain corridors have become a challenging issue. The essence of learning from the panel discussion was well summarized by

Mr N.Sivaraman, the session chairman highlighting the need to continuously update the skills and knowledge.

## **Feedback session Spectrum 2019**

The event concluded select participants sharing their verbal feedback, a summary of which is given below.

### **1. Senior manager from Delphi TVS Ltd,**

This event is my first experience and an eye opener. The association with IIMM is good and all of us, before dying need to give our knowledge to others

### **2. Mr. Srinivasan Propel industries Coimbatore**

I thank the entire team, for providing true learning during the two days. The topic selection, theme and appropriate speakers who are leaders in the field right from Raguththama Rao to Mr Easwaran on circular supply chain, highlighting that one man's trash is other man's treasure are wonderful. Also on lean manufacturing and supply chain finance, we could understand how buyer's credibility is taken into a/c taken by banks to provide better terms, in business

Success stories of NTC Logistics are highly inspiring. The session on block chain was excellent. I specifically thank IIMM administration manager Mr.Purushothaman

### **3.Mr. Nandish Vijay representing CSIR National aerospace Laboratories**

This event is not as flamboyant as similar event conducted by Bangalore Office. But speakers are knowledgeable and high level of interactions take place which will also be communicated to Bangalore branch. The content opened our eyes and I will take it forward in my own organization to take these things in practice

### **4.Mr. Arun. L&T valve centre**

Main benefit is cross industry learning from new industries on how they are in SCM

### **5. Mr. Sathya, Vestas Wind Technology India Pvt. Ltd.**

Entire session is interesting and different people from different industry, have presented their years of experience. This is a wonderful opportunity for every participant

### **6. Mr. Avinash Kumar, F.L.Smith SCM dept**

I have been with a graph of 10 years in career in the sales operations and now supply chain field. I learnt, how technology is going to affect our business and the need to change mindset

to adopt new technology. I stress on the following three things, which I learnt from the programme

1. Value creation process through getting returns
2. How block chain is easing business process complexity
3. Need to be more customer-centric and also move to higher level of customer centricity

## **7. Ms Nagamani Takata pvt ltd**

We need to stress on recycles process in future. There is no need to waste food since so many poor people are suffering and we need to give that unused food to others.

## **Summing up by Subbu Sbramanian Content committee chairman**

Most complex exam in the world is the London taxi driver **licensing** exam. The examinees are expected to traverse by the shortest route, remember the route and give answers to questions on the number of signals and roundabouts, en route. Overnight the experienced London taxi drivers, who were earlier proud of their skills, lost their pride with release of Google Map. Even London court rejected their claim to ban use of Google Map. He posed following challenges to audience

How many of us use Google small mike?

How does the system respond with a general query “Who is Indian Prime minister of India?” based on previous data capture and use of analytic. The system is able to connect the previous question to current question is linked. Technology is the real enabler. Domain knowledge is very important, for any professional and technology helps over the domain knowledge. For example, Alexa will change entire warehouse command

## **Acknowledgement of sponsors**

The following sponsors were provided with a token memento for acknowledging their sponsorship : - Snerith Engineers, SDR Auto, Pick Fab, SD Packing, Sunlight Packaging Industries, Total Package, Sri Venkateswara Engineering, Aditya Logistics, Zoho corporation, Barani hydraulics, Rajpetro, Ramanasekhar steels, Sun Pressing, JK automotive India Pvt Ltd, Circles Safety and Certification, Aravind Polymers, TekAfforde Solutions Pvt.Ltd

As a move towards greener supply chains, IIMM CBR has given every speaker of session and other dignitaries, a sapling to grow in their house/office representing the message for sustainable growth.

**Spectrum 2020 dates are scheduled on 19 and 20 Feb 2020 (Friday and Saturday) for participants to note and firm up in their calendar**

Event ended with a vote of thanks by Ramesh, Chairman, Spectrum 2019. The event formally ended with playing of national anthem