

# THE SMART MANUFACTURING POST

Vol III Issue 2



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## Smart Manufacturing Forum- Digitizing Manufacturing Sector



**Amit Saluja**  
Senior Director & Center Head,  
NASSCOM CoE-IoT,  
Gandhinagar

The gap between the virtual and real world is reducing in an unprecedented manner resulting in ease of operations but at the same time demanding higher efficiency and flexibility in our plants. In the last two years, we have seen large enterprises with resources to fund digital initiatives, have accelerated their pace while MSMEs still face the challenges of Awareness, Accessibility and Affordability. There is a disparity in tech adoption between large enterprises and SMEs which has increased many folds. This gap between large and small will be a dampener to the growth of manufacturing in India and specially to Make in India initiative.

With an aim to drive holistic development of manufacturing ecosystem, NASSCOM CoE launched the Smart Manufacturing Forum to enable MSMEs kickstart their digital journey and become future-ready. The Forum will be a closed group of 100-150 forward-looking manufacturing enterprises having revenues less than 1000 Crore to work with us to build digital talent and implement low-cost and easy to deploy solutions from startups.

Our focus will be on helping MSMEs to enhance productivity, boost efficiency, and become globally competitive. The Smart Manufacturing Forum will provide support in three verticals, viz. Skill & Capacity building, Handholding for Digital Journey, and Branding & Market Reach. Enterprises will get opportunities for learning and skill-building about Industry 4.0 for employees across all the levels of the organization. There will be quarterly interactive workshops for leaders and monthly sessions for managers & workforce.

The Handholding for Digital Journey will include digital maturity assessment, design thinking workshops to build technology road map and solution implementation through startups. Through Branding & Market Reach, enterprises who implement the solution will get showcased as smart manufacturer and will get support for building their brand as a Smart Manufacturer.

The manufacturers will also get 24x7 access to Smart Manufacturing Competency Centre (SMCC), a virtual platform to help them improve efficiency, productivity, and safety in plants by experiencing end-to-end smart manufacturing solutions.

There are multiple subscription options as per your stage of digital journey (i.e., DigiNext, DigiAdopter, and DigiLeader). To join the Forum, write to us at [smartmanufacturing@nasscom.in](mailto:smartmanufacturing@nasscom.in)

## VOICE OF INDUSTRY

**By: Nagesh Gupte, Director, Epsilon Engineering Pvt Ltd.**

### What a powerful concept - the DIGITAL Evolution !

Those who are reading this article – welcome to be belonging to the intelligent specie!

Nature designed us physically weaker than feline cats, strong tailed reptiles, and mammoth mammals. Bodily fatigued, we chose to develop our brain, our imaginative and creative prowess to outrun the fastest, to avoid physical combat through use of innovative means as slings, archery, swords, and chisels, to demolish the strongest – so much for survival and yet dangers loomed from fellow specie.

To counter these dangers, through the cycle of evolution, we have strived to advance in civilisation and sciences.

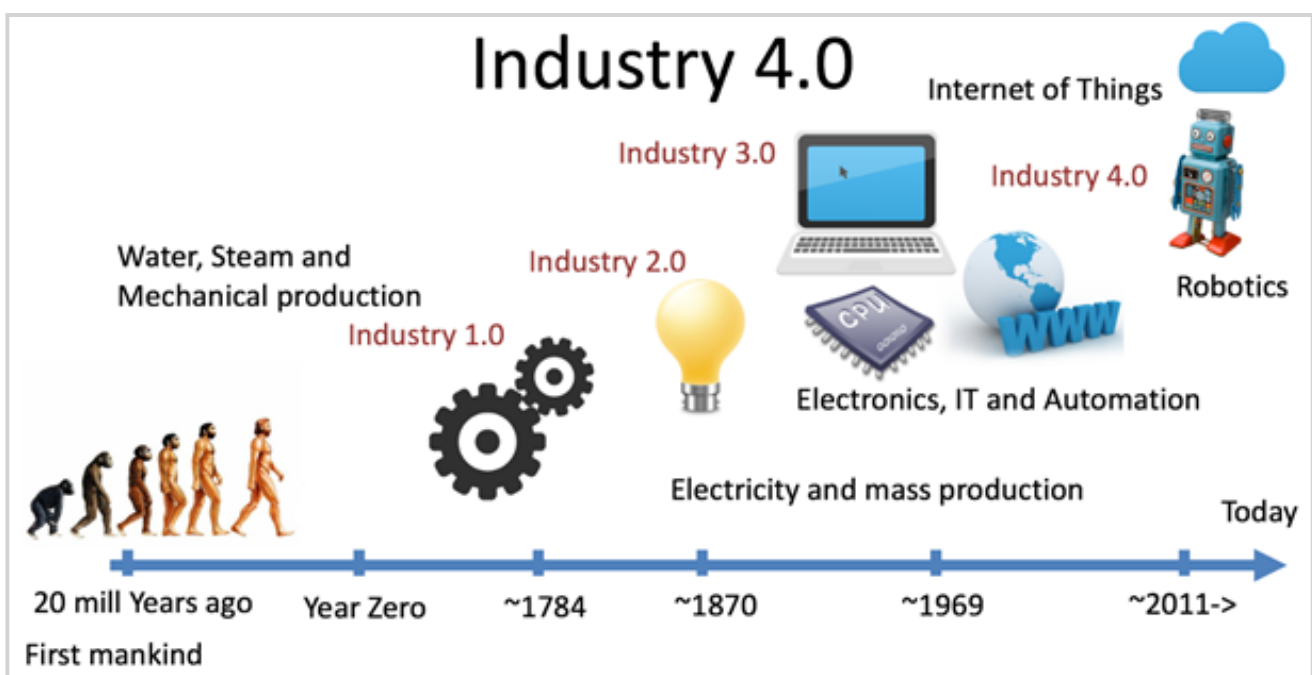
For survival of every single human, we had to invent mass production tools -flawless industrialisation was a compulsion. Yet we remained prone to fatigue, laziness and prone to mistakes leading us to concepts of quality, quality controls, quality measurements, quality assurances.

To adapt to our laziness, we evolved concepts of SQC (Statistical Quality Control) like  $\bar{x}$ -R,  $6\sigma$ , and so on – which generally would indicate the probability of quality being right, and yet, in a way authorising our laziness.

A step further – we were smarter to evolve a whole industry of certifications and audits -as in ISO9000 which gave credence to our degree of laziness- where somebody tells you -they have my certification seal – there is a high likelihood for you to get quality product from companies certified by me.

Alas, it all conveyed relative reliability - no one says 100% no defect!

But here I must pay tribute to our human race – our quest for perfection doesn't wither out. We came up with a revolutionary binary concept – more popularly the DIGITAL concept. Simply put it is - yes or no,



exists or doesn't exist, present or absent, conforms or doesn't conform, complies or doesn't comply – nothing in between.

Once conceived, we now race on to attain it in practical and physical terms– for ex. there is sensing technology – a digital camera says keep me powered and I shall not blink the way your eye does, I shall always capture what you ask me to, I shall never be lazy, I shall analyse to the least count that you have built me to. Similarly other sensors to measure temperature, proximity, sound and so on. It would always stand the test of time. Plain and simple, the DIGITAL concept says – yes or no, fit for use or not fit for use nothing in between – and evidence when needed – you don't have to just take my word.

We have so much to thank to Nasscom CoE, to the current administration, for promoting adoption of this DIGITAL concept.

We at Epsilon remain profoundly grateful to the Digital Manufacturing Champions initiative from Nasscom CoE, which nudges us to experiment the concept and handhold the MSMEs to adopt the digital solutions which can improve productivity and efficiency in plants. Should we succeed, what confidence and predictability it will provide to our employees, to our customers, to our regulatory agencies, to our stakeholders - towards our produce and processes!

## UPCOMING PROGRAM

### Masterclass for Manufacturing Leaders

Increased demand for technology adoption among manufacturing enterprises have also eventually increased the need to upskill the manufacturing leaders in the technology domain. With this objective, NASSCOM CoE is planning to start a series of masterclasses on the topics related to Industry 4.0 to create awareness and help manufacturing leaders to learn the recent developments in the domain.



These sessions will be taken by the Senior Industry Leaders, Technical Experts, Professors etc. who possess experience in the areas of Industry 4.0. The series will also provide networking opportunity for manufacturing leaders to connect with peer manufacturers and the experts.

### Manufacturing Innovation Challenge



Manufacturing Innovation Challenge (MIC) is one of the flagship programs of NASSCOM CoE where large manufacturing enterprises nominate their problem statements for the challenge and to solve these problems startups propose their digital solutions. The best solutions get chance to work with the respective enterprises. We have successfully completed 4 editions of MIC and engaged 15+ startups with large industries to co-create the respective solutions. We invite industry partners to nominate their use cases for the next edition. For more details, write to us on [smartmanufacturing@nasscom.in](mailto:smartmanufacturing@nasscom.in)

## NASSCOM COE LED INDUSTRY 4.0 INITIATIVES

NASSCOM CoE has supported scores of manufacturing enterprises by helping them identifying the right digital solutions for their manufacturing challenges. At NASSCOM, we are earnestly striving to create an ecosystem of co-innovation and co-creation by bringing all the stakeholders like industry, startups, academia and policy makers at one platform. Leveraging our strong network of associates and collaborators from the manufacturing industry, we are aiming to make India a global leader in Industry 4.0.

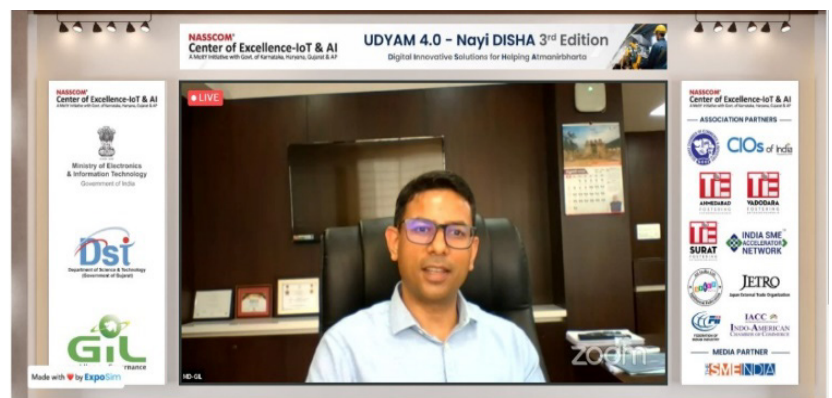
### Launch of Udyam 4.0 Smart Manufacturing Forum

Realizing the potential among MSMEs for adoption of technology, NASSCOM CoE launched **UDYAM 4.0 Smart Manufacturing Forum** during *Udyam 4.0 Nayi DISHA 3rd Edition* on **22<sup>nd</sup> February 2022** to help manufacturing enterprises with an annual turnover of less than Rs. 1,000 crores to start, scale, and sustain



the adoption of Industry 4.0 solutions that can aid in optimising operations, maximising capacity utilisation, and building a resilient supply chain. The Smart Manufacturing Forum will provide support in three verticals, viz. Skill & Capability building, Handholding for Digital Journey, and Branding & Market Reach.

Mr. Sachin Gusia (IRS), Managing Director, Gujarat Informatics Limited joined as the Chief Guest during the event. Addressing the participants, Mr. Gusia said, *“MSMEs face numerous challenges in technology adoption. I congratulate NASSCOM CoE for the launch of Smart Manufacturing Forum, as it will help in maximising adoption of technology by MSMEs and lead them towards smart manufacturing.”*

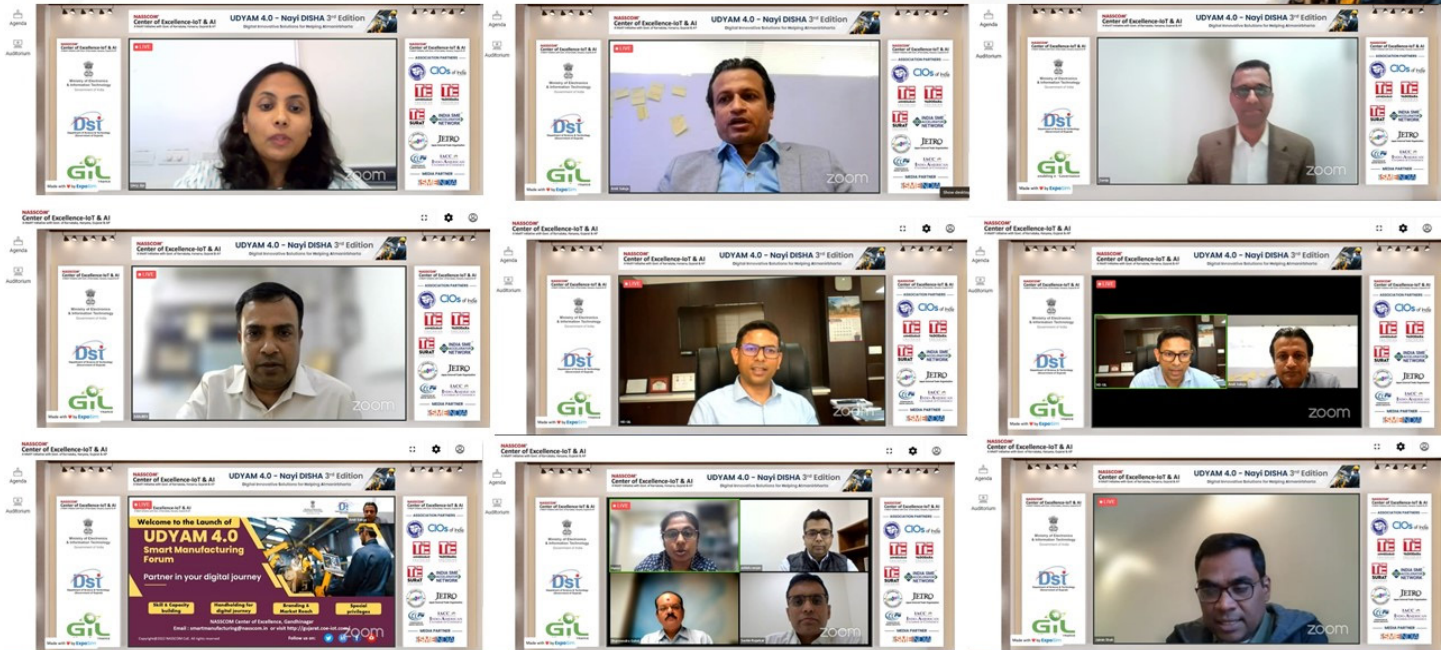


The viewpoints shared by senior industry leaders during the event were incredibly enthralling.

**NASSCOM®**  
**Center of Excellence-IoT & AI**  
A MeitY Initiative with Govt. of Karnataka, Haryana, Gujarat & AP

# UDYAM 4.0 – Nayi DISHA 3<sup>rd</sup> Edition

Digital Innovative Solutions for Helping Atmanirbharta



✉ smartmanufacturing@nasscom.in

**NASSCOM Center of Excellence, Gandhinagar**

Follow us on:

Steps to get going in your digital journey involves: Defining current challenges, Identify critical KPIs to improve, pick up the top Use cases, draw your data canvass, understand gaps in your IT/OT architecture, Go usecase backward, train internal people- to define use cases, understand data engineering and application of digital journey. **Mr. Samip Mutha, Vice President and Group Head – Digital Innovation, RPG Group**

Mr. Sanjeev Shroff, Plant Head, Kalol Grinding Unit of J K Lakshmi Cement shared low cost and easy to deploy use cases that includes, online health monitoring system integrated with biometrics, unmanned weighbridge system, online energy manager, wireless and full proof inverter fault detection system, in house auto bag counting system, online borewell water meter system, Plant introductory information board using QR Scan.

The panel discussion on **LEAD (Learn, Evaluate, Architect and Deliver) your digital journey** delved upon views from Industry 4.0 adopter enterprises about various aspects of Industry 4.0 transformation.

**Moderator :**

Ms. Hamseswari Renganathan, Digital Transformation Lead, ZF Group

**Panelists:**

Mr. Sachin Rajurkar, Head, Supply Chain Digitalisation, Larsen & Toubro Defence.

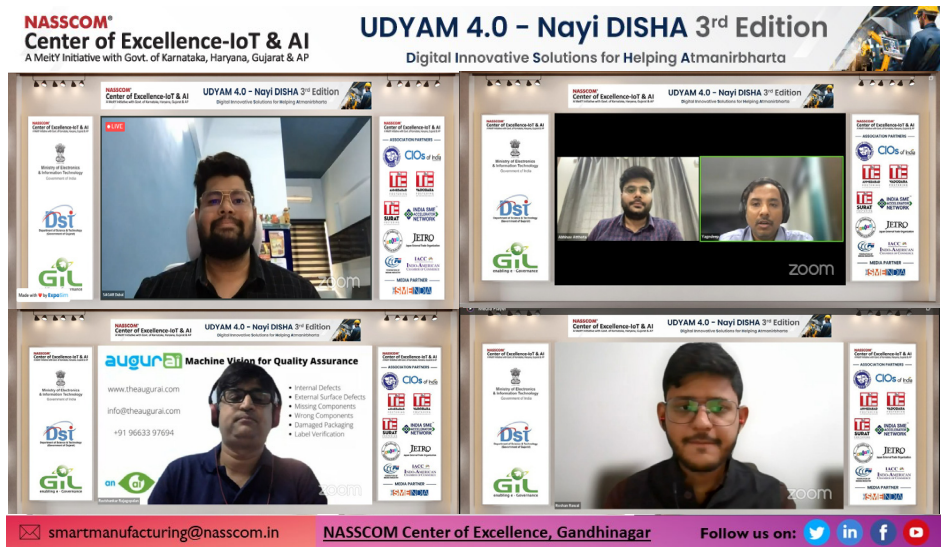
Mr. Ashish Ranjan, Chief Digital Officer, National Engineering Industries Ltd. (NBC Bearings)

Mr. Dharmendra Gohel, CIO, Meghmani Organics Ltd.



NASSCOM CoE's incubated four deep-tech startups viz. **Exposit Immersive Solution Pvt.Ltd., Autobits labs Pvt. Ltd., augurai Pvt. Ltd. and Leapsquare Labs** presented their cost effective and easy to deploy innovative solutions relevant for MSMEs.

**Mr. Jaimin Shah Co-Founder & Managing Director, DEV Information Technology Ltd** representing Gujarat Chamber of Commerce and Industry joined us for the valedictory remarks.



While sharing his thoughts said, "NASSCOM CoE has been diligently working to bring an equilibrium in the MSME ecosystem by encouraging them to adopt digital solutions and explore the potential & opportunities around them, only at Udyam 4.0-Nayi DISHA"

## COLLABORATIONS WITH STAKEHOLDERS

### Memorandum of Understanding (MoU) signing for the UDYAM 4.0 Smart Manufacturing Forum with Gujarat Chamber of Commerce and Industry (GCCCI)



NASSCOM CoE IoT & AI signed MoU with **Gujarat Chamber of Commerce and Industry** as an association partner of the UDYAM 4.0 Smart Manufacturing Forum .

The association between NASSCOM CoE and GCCCI will help to enable industry to keep abreast of advancements and practical applications of new age technologies by providing support to the manufacturers under three verticals, viz. Skill & Capability building, Handholding for Digital Journey, and Branding & Market Reach.

This Forum is aimed to accelerate the adoption of digital technologies and building a collaborative ecosystem to improve productivity, efficiency, and safety in manufacturing plants. MSMEs looking for guidance on technology adoption can get more details about Smart Manufacturing Forum by writing to [SmartManufacturing@nasscom.in](mailto:SmartManufacturing@nasscom.in)

## Memorandum of Understanding (MoU) signing for the UDYAM 4.0 Smart Manufacturing Forum with India SME Accelerator Network (ISAN)



as an Association Partner of the

**UDYAM 4.0 SMART MANUFACTURING FORUM**

NASSCOM CoE IoT & AI signed MoU with **India SME Accelerator Network (ISAN)** as an association partner of the UDYAM 4.0 Smart Manufacturing Forum. India SME Accelerator Network (ISAN) is an exclusive business accelerator network that connects community of credible micro, small and medium business owners, leverages networks to support individual business contexts and enables scale-up and growth. Through this association both ISAN and NASSCOM CoE will share common objective of helping manufacturers to accelerate the adoption of digital technologies and building a collaborative ecosystem to improve productivity, efficiency, and safety in plants.

## Memorandum of Understanding (MoU) signed with Adani Institute of Digital Technology and Management

CoE recently signed an MoU with **Adani Institute of Digital Technology and Management (AIDTM)** on 21<sup>st</sup> January 2022 with an objective to accelerate digitization of manufacturing enterprises. Mr. Amit Saluja, Senior Director, and Center Head was invited by AIDTM for delivering the expert talk on Digital Transformation for SMEs and their Faculty members on 25th February 2022 in a hybrid mode. Mr. Saluja enlightened participants regarding the opportunities and benefits of digital transformation.

## Memorandum of Understanding (MoU) signed with Gujarat Technical University

NASSCOM CoE signed an MoU with Gujarat Technical University on 14th February, 2022 to enhance and strengthen the entrepreneurship ecosystem through mentoring, guidance, funding support to the entrepreneurs. The aim of this collaboration is to promote innovation and opportunities for technology startups. There is a common interest to foster research activities in and around industry 4.0. NASSCOM CoE looks forward to the long-term association with GTU to promote technology among students, startups and industries.



## INDUSTRY 4.0 EVENTS WITH PARTNERS

### Knowledge Session by CIOs of India

The banner features a blue background with a world map and a hand pointing upwards. It includes logos for CIOs of India (Powered by ISMF) and NASSCOM Center of Excellence-IoT & AI (A MeitY Initiative with Govt. of Karnataka, Haryana, Gujarat & AP). The main title is "Building Future Ready Digital Enterprise". Two speakers are highlighted: Prof. Chandan Chowdhury, Senior Associate Dean, ISB, with the topic "The Digital Intensity & Transformative Management To Drive Share Holder's Value"; and Amit Saluja, Sr. Director, Head of NASSCOM center, Gandhinagar, with the topic "Digital Maturity Assessment - Framework to create a transformation roadmap". The event details are: Date: 12<sup>th</sup> February 2022 (Saturday), Time: 11 AM onwards.

NASSCOM CoE supported the exclusive initiative by CIOs of India. In this knowledge session on "**Building Future Ready Digital Enterprise**," the esteemed speakers **Dr. Chandan Chowdhury, Senior Associate Dean, ISB** and **Mr. Amit Saluja, Sr. Director, Head of NASSCOM Centre of Excellence IoT & AI, Gandhinagar** shared their thoughts on systemizing the digital innovations and initiatives to appropriately respond to the challenges and orient technology towards business goals.

The discussion was very insightful and explained Steps to make digital transformation work. Speakers insisted to leverage emerging technologies to make the organization future ready.

### Panel Discussion by StrategInk

**StrategInk** organised a Panel Discussion on '**Autonomous Industry- Data Driven Workloads Transformation**' where Mr. Amit Saluja, Senior Director & Center Head, NASSCOM CoE, Gandhinagar, Mr. Atul Govil, Business Transformation Head, India Glycols and Mr. VS Srirangarajan, CIO – Pulp and Fibre Business, Grasim Industries Ltd joined the session as panelists. The session was moderated by Mr. Arjun Vishwanathan, Research Lead, StrategInk.

The panelists discussed the imperatives around 'Autonomous Industry' and how Industry 4.0 technologies were already transforming manufacturing operations before the pandemic. The panellists also brought a critical point during the discussion that now adoption is diverging between those that employ technology as against those who are yet to embark on this critical journey.

# NASSCOM COE LED INITIATIVES FOR STARTUPS

## 11<sup>th</sup> Digital Innovators Meetup – for Startups

The 11<sup>th</sup> Digital Innovators Meet- **Session on Startup Funding: Perfect Pitching Recipe** by **Mr. Mihir Joshi, President GVFL** moderated by **Mr. Amit Saluja, Senior Director & Center Head, NASSCOM CoE** held on 26<sup>th</sup> February 2022.

Mr. Joshi helped startups to understand the nitty-gritty to raise funds through investors. He insisted that before reaching to the VCs for fund, entrepreneurs should understand the need to raise fund and be clear about the dynamics of the business.

He also asked startups to raise adequate amount of money to create the capital for longer period instead of raising money every 6-7 months. Startup founders liked the readymade recipe for pitching sessions given by the expert during the interactions.

We are soon going to announce the next DIM for the tech startup founders. For more details, please connect with us at [smartmanufacturing@nasscom.in](mailto:smartmanufacturing@nasscom.in).

**REGISTER NOW**

**11<sup>th</sup> Digital Innovators Meet**

Join us for the Insightful Session on  
**Startup Funding: Perfect Pitching Recipe**

Date: **Saturday, 26<sup>th</sup> Feb 2022**  
Time: **11:00 am –12:30 pm**

**VIRTUAL CONFERENCE**

**SPEAKER**

**Mihir Joshi**  
President, GVFL

- Crafting your story
- When to raise funds, how much to raise, and from whom
- How to negotiate a funding deal
- Startup fundraising Dos and Don'ts

**Inviting Founders of Digital led Technology Start-ups**

**REGISTER NOW**

For more details reach out to us on: [smartmanufacturing@nasscom.in](mailto:smartmanufacturing@nasscom.in)

## Capability Session on The Future of Data Science Solutions



The session was conducted by the industry expert Dr. Sheela Siddappa, Principal Scientist at Kyndryl India. She addressed the Founders and the Co-founders of the tech startups where, she provided inputs on the advanced aspects one should consider while developing solution.

n. She also highlighted the major challenge that the solution providers are facing where there is a huge leap from the scenario of **“No Data to Infinite Data”** and capturing the relevant data for providing the solution is again an element to be considered before offering any solution.

The session was highly interactive where startups and Dr. Siddappa discussed the challenges and the possibilities of the future of data science solution.

# ACCELERATING THROUGH INNOVATION – STARTUP CORNER

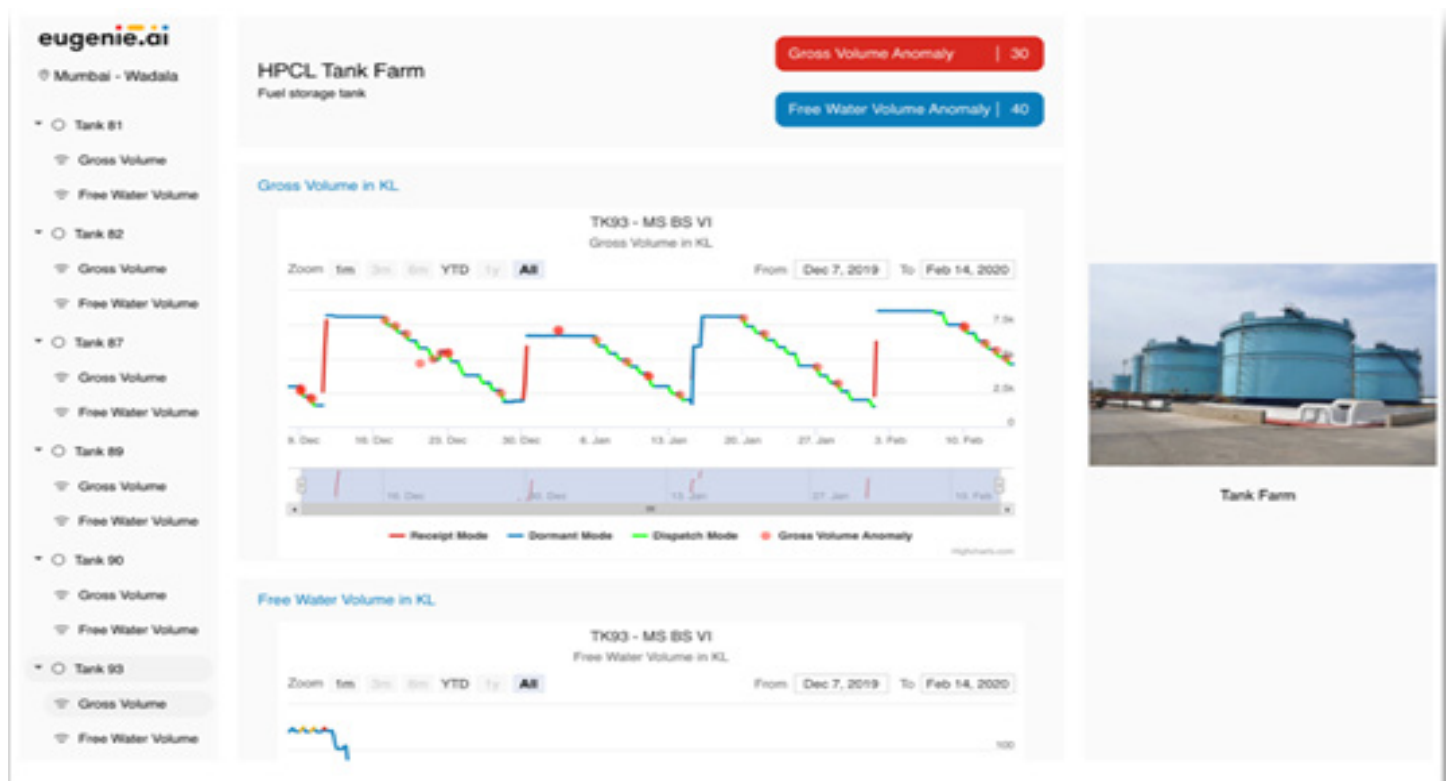
## 01. Eugenie Technologies Pvt Ltd

**Founder:** Dr. Soudip Chowdhury

**Team:** Narayanan Subramaniam, CTO, Indraneel Tembhre, Ramesh Kumar, and 26 highly qualified and committed individuals across India, USA, and Europe.

**Use Case:** We help companies achieve their ESG targets without compromising operational profitability by improving the reliability of their assets and processes.

**Industry Challenge:** Unforeseen mechanical equipment failures result in unscheduled production downtimes which in turn result in lost revenue and hydrocarbon losses. This occurs because even with the advent of Industry 4.0, IoT and IIoT, which has resulted in mass-sensorization of production equipment, there lacks the ability to account for sensor degradation and the creation of inaccurate data due to that degradation. This may result in unnecessary maintenance downtimes, and or lapses in scheduled maintenance.



**Solution Implementation:** Eugenie is deployed as a cloud-based SaaS application, it is compatible with all cloud providers, and can support both legacy and modern equipment.

**Major Customers:** Oil and gas companies, mining companies, and process manufacturing companies. Our customer geographies cover Latin America, USA and India.

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## 02. Orangewood Research and Advancement Pvt Ltd

**Founder:** Aditya Bhatia, Abhinav Das, Akash Bansal

**Team:** Sneha Das, Satish A V, Sombodhi, Rishikesh

**Use Case:** We are into automating mundane jobs, to name a few, we are targeting use cases like spray painting, powder coating, pick and place.

**Industry Challenge:** Labor shortage, 70% of MSME jobs are mundane jobs, Quality issues, Delays, Inefficiency, Human errors, All these can be solved using robotic arms to the mundane jobs, while shifting, the current labors to more skill based jobs

**Solution Implementation:** Conducts a factory visit where we visit customer's premises, and observe the operations. Consulting the customer on how and where can bring the changes in operations to make it more efficient. Lab trials are conducted according to the specific needs of the customer. Implementation in the factory

**Major Customers:** Micro, Small and Medium Enterprises



## ABOUT US

NASSCOM CoE, a joint initiative of MeitY and NASSCOM, is India's largest collaborative platform for start-ups, enterprises and companies specialising in deep-tech solutions, helping manufacturing companies co-create digital solutions for the new world.

We invite manufacturing leaders, startups, researchers and academicians to come forward and share write up in and around Industry 4.0 to be featured in this newsletter, would you like to be included as part of the NASSCOM Manufacturing Initiative or have any queries, write to us on:

[smartmanufacturing@nasscom.in](mailto:smartmanufacturing@nasscom.in)