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The second edition of *Udyog Utsav*, the *Festival of Manufacturing*, celebrated India's dynamic manufacturing sector and the Make in India initiative.

For more details, please refer to page number 34

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SMART WATER METRE

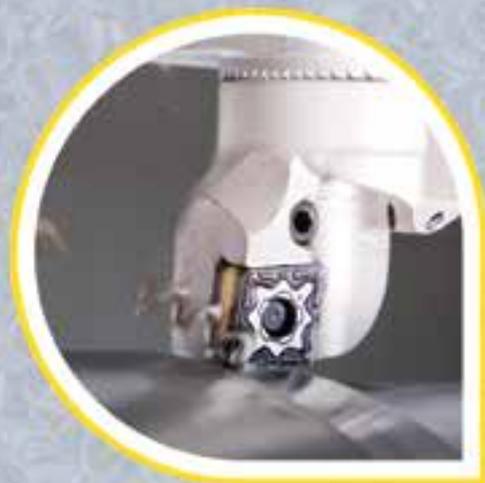
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ARE ORGANISATIONS PRIORITISING FRONTLINE EMPLOYEE EXPERIENCE? (AND IS IT ENOUGH?)

Amidst the dynamic contours of the Indian manufacturing sector, a notable majority of organisations are taking proactive strides to embrace flexibility, ushering in a new era of improved working conditions for their frontline workforce, a study revealed, recently. Additionally, the study addresses pressing concerns such as cybersecurity in the era of digital transformation, the evolving role of artificial intelligence in manufacturing, and the strategic focus on building a skilled talent pipeline within the Indian manufacturing landscape.

In the fiscal year 2019-20, amid the peak of the pandemic, the Indian Parliament enacted four new labour codes. These codes consolidated a network of 29 central labour laws and encompassed the Code on Wages, 2019; the Industrial Relations Code, 2020; the Occupational Safety, Health and Working Conditions Code, 2020; and the Code on Social Security, 2020. Despite this, certain states are still in the process of formulating and publishing rules to implement these codes, given that labour is a subject falling under the jurisdiction of both the central government and individual states.

Moreover, an overwhelming 96 per cent of organisations find their state's current labour laws and regulations effective in fostering a favourable working environment for the manufacturing industry. Regarding year-over-year changes in compliance costs in the past 12 months, 75 per cent of organisations noted shifts, with 50 per cent reporting a moderate increase and 25 per cent indicating a significant increase.

The survey included manufacturing organisations from different Indian states, with the breakdown as follows: Andhra Pradesh (10 per cent), Bihar (11 per cent), Gujarat (14 per cent), Haryana (10 per cent), Karnataka (15 per cent), Maharashtra (32 per cent), Tamil Nadu (15 per cent), Telangana (6 per cent), Uttar Pradesh (13 per cent), West Bengal (7 per cent), and Other (3 per cent).

That said, in India, the study reveals that 52 per cent of Indian manufacturing organisations have adopted flexible scheduling practices, empowering employees with the autonomy to set shift availability, swap shifts, or extend working hours. Other key offerings include 51 per cent prioritising employee well-being through wellness programs, 49 per cent extending financial wellness benefits such as earned-wage access and same-day pay, 39 per cent utilising an employee communications mobile app, 34 per cent offering hybrid or remote-work options, and 34 per cent emphasising predictable work schedules. Additionally, 27 per cent provide paid time off, and 44 per cent offer training and development opportunities.

In the meantime, 69 per cent of Indian manufacturing employees (31 per cent strongly agree, 38 per cent agree) feel that their organisation is not doing enough to take advantage of mobile technology to support the frontline employee experience. Presently, 10 per cent of Indian manufacturing organisations leverage the power of Artificial Intelligence (AI) for optimising workforce scheduling. In contrast, 38 per cent of these organisations rely on digital tools to enhance their scheduling processes. Furthermore, 41 per cent of Indian manufacturing entities harness electronic tools for workforce scheduling. On the other hand, 11 per cent still adhere to manual processes for scheduling.

Over the upcoming year, 47 per cent of manufacturers are placing a high priority on employee well-being and safety, while 41 per cent are emphasising cybersecurity, and 40 per cent are directing their attention towards digital transformation. Additional priorities encompass recruitment (32 per cent), retention (23 per cent), Diversity, Equity, Inclusion, and Belonging (DEI&B) initiatives (39 per cent), sustainability efforts (39 per cent), fortifying supply chain resilience (35 per cent), exploring AI and generative AI (35 per cent), nurturing a positive workplace culture (32 per cent), and preparing for resiliency and disaster scenarios (27 per cent).

R Kamat
Editor

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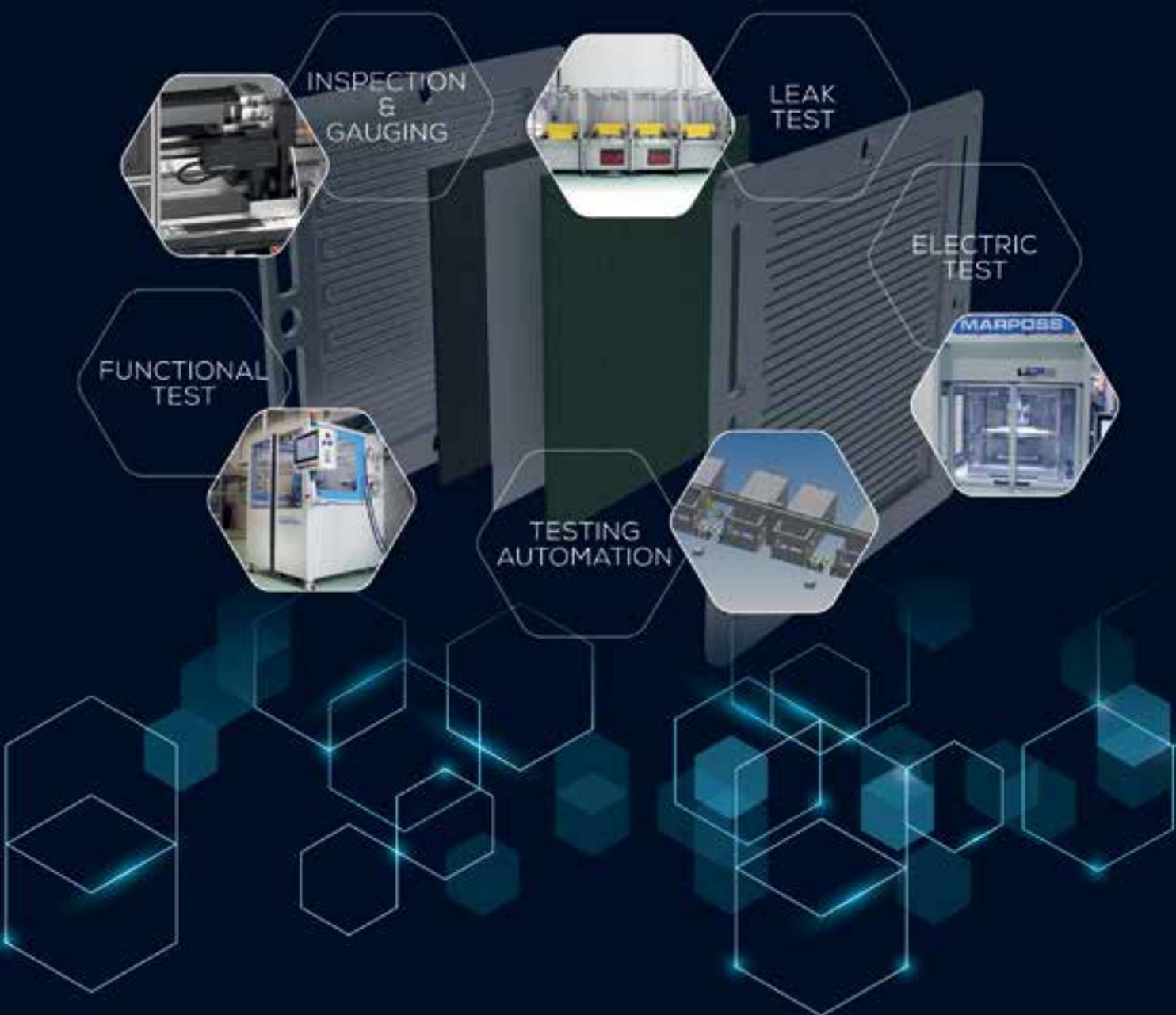


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Triveni Engineering and Industries Ltd. acquires a 25.43 per cent stake in Sir Shadi Lal Enterprises Limited

TRIVENI ENGINEERING & INDUSTRIES LTD., one of the largest integrated sugar producers in the country, a leading player in engineered-to-order high-speed gears & gearboxes and water and wastewater management business, recently announced acquiring 25.43 per cent stake in Sir Shadi Lal Enterprises Limited (SSEL).

Under a Share Purchase Agreement executed with Vivek Viswanathan and Radhika Viswanathan Hoon on January 30, 2024, the company on March 11, 2024, acquired a 25.43 per cent equity stake in SSEL for an aggregate consideration of Rs 35 crore, i.e. for Rs 262.15 per equity share of SSEL.



With an intent to acquire a majority stake in SSEL, the company had launched an open offer under Regula-

tions 3(1) and 4 of SEBI (Substantial Acquisition of Shares and Takeover) Regulations, 2011 to the shareholders of SSEL to acquire up to 26 per cent of the outstanding voting share capital of SSEL for Rs 262.15 per share in cash. The company's acquisition aims to expand its operations in the Sugar and Alcohol industries.

Commenting on the transaction, Tarun Sawhney, Vice Chairman and Managing Director, said, "This is a strategic acquisition due to synergies in both businesses. The company would look at further expanding the business and driving the next growth phase of the SSEL".

Godrej & Boyce and Thales forge strategic partnership for a sustainable future

IN A LANDMARK move towards a low-carbon future, Godrej Precision Engineering, a key player in the Godrej & Boyce manufacturing conglomerate, has entered into a letter of intent with Thales, a global technology leader in defence and security, aeronautics and space, and digital identity and security, agreeing to work together to tackle climate change in their respective value chains. The agreement was formalised during Thales' recent India Strategic Suppliers event, marking a pivotal moment in their collective commitment to environmental stewardship.

Underlining the significance of this collaboration, Godrej Precision Engineering has pledged to align its operations with Thales' ambitious CO2 emission reduction targets for 2030 across Scope 1, 2, and 3 emissions. This includes comprehensive measures to identify, implement, and assess the impact of initiatives aimed at reducing carbon footprints. The company provides annual progress reports to Thales, showcasing its dedication to transparency and accountability.

Thales is working with its strategic suppliers to achieve its CO2 emissions reduction targets for 2030, which have been validated by the SBTi and are compatible with the objectives of the Paris Agreement. These include a 50 per cent reduction in absolute CO2 emissions related to its operational processes (Scope 1) and energy consumption (Scope 2)

and a 15 per cent reduction in absolute CO2 emissions related to its supply chain and the use of its products by customers (Scope 3). Thales also aims to achieve net zero operations-related CO2 emissions (Scopes 1 and 2) by 2040.

Godrej & Boyce, in line with its recently declared sustainability goals for the next decade, continues to champion sustainable progress. The company has enrolled in the EP100 global business initiative, aiming for doubling energy productivity by 2030. Additionally, Godrej & Boyce has set an intensity-based decarbonisation target of reducing carbon intensity for Scope 1 and 2 emissions by 60 per cent by 2031-32.

As part of its commitment to sustainability, Godrej & Boyce has launched the 'Beyond Sourcing' initiative, aimed at fostering a responsible, efficient, and resilient supply chain. As part of the initiative, the company aims at creating a greener supply chain by aiming to have 80 per cent of its domestic buying from GreenCo certified or SBTi certified suppliers. Beyond Sourcing is a testament to the company's overarching goal of 'Building a Greener India' and underscores its belief that a sustainable supply chain is not only vital for the planet but also a driver of business competitiveness.

Roque Carmona, Chief Procurement Officer at Thales, expressed enthusiasm for the collaboration, stating, "Thales is committed to a proactive and responsible

approach to environmental protection in India and globally. As part of our strategy for a low-carbon future, procurement teams across Thales are working diligently with growing numbers of key suppliers to reduce the carbon footprint of our respective value chains. We will only meet our ambitious objectives by working together with our suppliers to promote energy efficiency and the use of renewable energy sources, optimise our processes and logistics operations, and adopt the principles of eco-design for our new products. We are proud to join hands with Godrej & Boyce in line with our strategy."

Sushil Agarkar, Executive Vice President and Business Head at Godrej Precision Engineering, echoed this sentiment, emphasising the commitment to a fully green supply chain. He stated, "Our collaboration with Thales represents a significant step towards achieving sustainability goals as we work collectively to address climate change and create a positive impact within our respective value chains."

Thales has already reviewed and approved action plans of more than 150 of its key suppliers, with over 100 suppliers committing to support Thales' carbon footprint trajectory. This strategic partnership between Godrej & Boyce and Thales exemplifies the power of industry-level collaboration in driving meaningful change towards a sustainable and environmentally responsible future.

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Rittal inaugurates a new integration centre for Cooling Units and LCP Solutions

RITTAL PRIVATE LIMITED, a leading manufacturer and supplier of enclosures, power distribution, climate control and IT infrastructure systems celebrated the inauguration of the new integration centre dedicated to Cooling Units and Liquid Cooling Package (LCP) solutions at its manufacturing facility in Bangalore, India. This significant expansion will increase company's overall production capacity and meet the growing demand for Industrial Cooling Solutions in the market.

The new integration centre is a state-of-the-art facility equipped with latest machines and testing centres designed to meet optimum productivity and flexible to manufacture Cooling Units for industrial applications and LCP solutions for IT infrastructure. This new facility



is strategically incorporated to support continued growth in India and other emerging markets even more efficiently with premium made in India products.

Lars Platzhoff, Executive Vice President of Business Unit Cooling Solutions, Rittal GmbH & Co. KG, Germany, graced the occasion and emphasised the significance of this milestone. He

stated, "This facility marks a groundbreaking achievement to Rittal and becomes the 3rd facility to produce the world's best Industrial Cooling Units. Rittal Cooling Units are unique in the market and well recognised for its disruptive technology and exceptional efficiency".

Over the past few years, Rittal Cooling Units have received an overwhelmingly positive response from customers. Mathew Jacob, Vice President of Sales and

Marketing, Rittal Private Limited, expressed, "With this expansion, we further strengthen our commitment to India and neighbouring markets. We shall continue to focus on customer value creation by developing intelligent Industrial Cooling Solutions that help our customers reduce energy consumption, save cost and combat climate change."

nasscom CoE partners with Capgemini

NASSCOM CENTRE OF EXCELLENCE (COE), Gandhinagar, a Digital India initiative established with the support from the Ministry of Electronics and Information Technology (MeitY) and the Government of Gujarat, held a concluding event to their six-weeks Smart Manufacturing Accelerator Program (SMAP), in partnership with Capgemini.

The program is aimed at capability building for manufacturing leaders and SMEs, providing step-by-step guidance on accelerating the adoption of digital technologies at plants to improve operational efficiency and productivity.

The manufacturing sector is embracing smart solutions, with a shift towards automation and cyber-physical systems powered by advanced technologies. While some large organisations have successfully digitalised, many are still grappling with where and how to begin. Thus, there's a growing demand to prepare manufacturing leaders to effectively navigate and lead this transformation.

Driving a cohort of more than 120 leaders & SMEs from the industry, SMAP has played an instrumental role

in providing strategic views on how advanced technologies can be applied in distinct manufacturing functions. Over the course of five virtual weeks, distinguished speakers from renowned organisations such as Capgemini, Nestle, Aditya Birla, Coromandel, AB Inbev, Adani Green Energy, ZyduS, and others have actively contributed their insights and experiences regarding the digitalisation of processes. Their valuable contributions have focused on improving efficiency and boosting productivity through the adoption of digital technologies. Moreover, the cohort has access to a wealth of resources including case studies, research reports, videos, and blogs, all aimed at driving digitalisation within manufacturing plants effectively.

Sanjeev Gupta, Vice President & Head of Digital Manufacturing CoE, Capgemini says, "We firmly advocate for manufacturers to swiftly embrace change amidst evolving market dynamics and technological advancements, all while upholding efficiency and sustainability. Together with Nasscom CoE, we share a common objective: to equip the industry with the tools and strategies needed to

adapt & thrive in digital transformation. And through SMAP, we have been able to offer a comprehensive roadmap towards this journey".

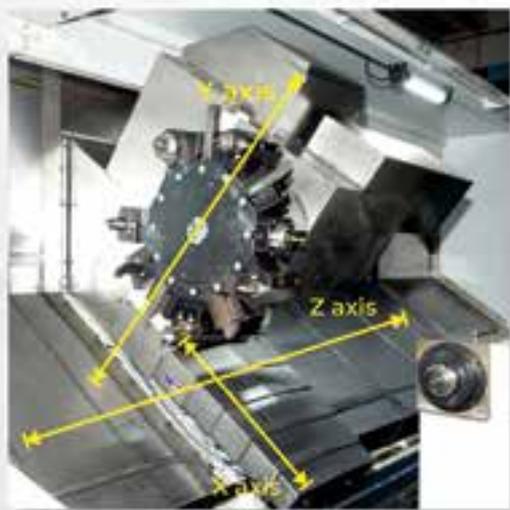
"The Smart Manufacturing Accelerator Program represents a significant step forward in digitalising India's manufacturing sector. Our esteemed speakers have guided the cohort through vital topics including OEE Analysis, Predictive Maintenance, Smart Supply Chain Management, Computer-vision & Camera-based Quality Inspections, and more. We are committed to advancing India's journey towards Industry 4.0 and extending support to numerous organisations in their digitalisation endeavours," says Sanjeev Malhotra, CEO, nasscom CoE.

To commemorate the program's success, the partners, the speakers, and the cohort came together for a close-knit roundtable discussion on the intricacies of industry challenges, best practices, and digitalisation strategies before concluding the event. The leaders also forged connections with industry peers and celebrated their success and a much-deserved felicitation, marking their dedication towards the program.

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Tata Technologies appoints S Sukanya as its new Chief Operating Officer

TATA TECHNOLOGIES, a leading global engineering, and product development digital services company has announced the appointment of Sukanya Sadasivan as its new Chief Operating Officer (COO). Sukanya will be instrumental in driving Tata Technologies' growth and transformation agenda, primarily focusing on strengthening delivery, practice, and internal digital & IT systems.

As COO, Sukanya will work with the delivery heads to charter the next phase of growth, enhance engagement margins, and strengthen the company's people supply chain in collaboration with HR and the Resource Management Group (RMG). Sukanya will work with the practice team to develop new service lines and guide the Digital Information Office to effectively leverage digital technologies to accelerate the ongoing transformation of the business. Sukanya will be based out of Pune, India, and report directly to CEO & MD, Warren Harris. The Global Delivery, Practice organisation, and Digital Information Office teams will report to her.

Sukanya brings to Tata Technologies

more than three decades of formidable knowledge and experience in the services sector, having previously served in various senior leadership capacities at Tata Consultancy Services (TCS). Before joining Tata Technologies, Sukanya held the position of Senior Vice President & Chief Information Officer at TCS, leading strategic transformation initiatives across the organisation. A technologist at heart, Sukanya's extensive experience in managing large, complex relationships with clients across the globe will significantly strengthen Tata Technologies' ability to navigate evolving business landscapes as it scales up its relationship with top Automotive, Aerospace and Industrial Heavy Machinery customers.

Warren Harris, CEO & Managing Director, Tata Technologies, expressed his enthusiasm for Sukanya's appoint-



ment, stating, "Sukanya's exceptional track record and depth of experience in the technology and services industry will be a tremendous asset to our leadership team. I am confident that her insight and guidance will help our team prepare for the next phase of our growth as we scale up our relationships with top R&D spenders across the world."

S. Sukanya, COO, Tata Technologies shared her delight at the new

opportunity, stating, "Joining Tata Technologies is a thrilling opportunity for me to contribute to a company that stands at the forefront of engineering innovation. I am eager to leverage my experience to drive operational excellence, enhance customer engagement, and support the company's strategic growth initiatives. Together, we will work towards achieving Tata Technologies' vision of engineering a better world."

JK Tyre honoured with ICC Social Impact Award for its Water Conservation Initiative

INDIAN TYRE INDUSTRY major, JK Tyre & Industries received recognition for their water conservation endeavours at the 6th Indian Chamber of Commerce (ICC) Social Impact Awards 2024, hosted in Kolkata. In the Clean Water and Sanitation category, JK Tyre's Water Conservation Project stood out as the undisputed winner, as acknowledged by the jury. The award was presented by Dr. C.V. Ananda Bose, Hon'ble Governor of West Bengal, to BS Dagar, Head IR & CSR, JK Tyre & Industries.

As a part of its CSR initiatives, JK Tyre has undertaken numerous water conservation initiatives in the villages adjacent to its manufacturing facilities, empowering local communities to achieve water self-sufficiency. The company successfully built 100+ water conservation structures in the last five years, providing more water sources for



the community's consumption. These initiatives have significantly benefitted over 2,00,000 lives through enhanced water conservation measures.

Commenting on the achievement, Dr. Raghupati Singhania, Chairman & Managing Director, JK Tyre & Industries, said, "Our CSR initiatives place emphasis on addressing the needs of mar-

ginalised communities including women, children, and the elderly, ensuring that our endeavours have a meaningful impact where it counts the most. We are proud that our water conservation initiatives have brought significant positive changes in people's lives, contributing to community prosperity. This accolade underscores our unwavering commitment to sustainable practices and community welfare. I would like to thank the Indian Chamber of Commerce for recognising our efforts and affirming that we are moving in the right direction."

The ICC Social Impact Awards, organised by the Indian Chamber of Commerce (ICC), aim to recognise, and celebrate social impact initiatives by corporate entities, NGOs, and implementing agencies across India for activities aligned with social transformation and upliftment.



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Repeatability	0.02 µm	0.02 µm	0.02 µm	0.15 µm
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By Anil Kumar, Managing Director, Inovance Technology India

EMPOWERING THE FUTURE: SKILLING THE INDIAN MANUFACTURING WORKFORCE

The article delves into the importance of skilling in Indian manufacturing workforce and outline Inovance's commitment to empowering individuals with the necessary tools and knowledge to thrive in the industry.

In the dynamic landscape of Indian manufacturing, the significance of a skilled and empowered workforce cannot be understated. We at Inovance Technology are committed to driving innovation and excellence and recognise the pivotal role of skills development in fueling the nation's growth trajectory. In this article, we delve into the importance of skilling the Indian manufacturing workforce and outline our commitment to empowering individuals with the necessary tools and knowledge to thrive in the industry.

ADDRESSING THE SKILLS GAP:

One of the foremost challenges facing the Indian manufacturing sector is the widening skills gap. Despite rapid technological advancements, a significant portion of the workforce lacks the requisite skills to adapt to evolving industry demands. At Inovance Technology, we view this gap not as a hindrance but as an opportunity to effect meaningful change. Through strategic initiatives and partnerships, we aim to bridge this gap



by providing comprehensive training programs that equip individuals with the skills needed to succeed in a technology-driven environment.

FOCUS ON TECHNOLOGICAL LITERACY:

In today's digital age, technological literacy is paramount for success in the manufacturing sector. Inovance Technology is committed to democratising access to technology

by offering training programs that cover a wide range of subjects, including automation, robotics, and every technical upgrade. By fostering a culture of continuous learning and upskilling, we empower individuals to harness the power of technology and drive innovation within their respective fields.

HANDS-ON TRAINING AND EXPERIENTIAL LEARNING:

We firmly believe that experiential learning is key to skills development. Inovance Technology's training programs are designed to provide hands-on experience

in situational leadership, fire safety, and team collaboration. Our state-of-the-art facilities offer an environment where participants can gain practical insights and hone their skills under the guidance of industry experts. This emphasis on experiential learning ensures that individuals are not only equipped with theoretical knowledge but are also proficient in applying their skills in real-world scenarios.





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INDUSTRY-ACADEMIA COLLABORATION:

Inovance Technology recognises the importance of collaboration between industry and academia in addressing the skills gap. Through strategic partnerships with educational institutions and vocational training centres, we facilitate knowledge exchange, curriculum development, and internship opportunities that align with industry requirements. By actively engaging with academia, we ensure that our training programs remain relevant, up-to-date, and in sync with the evolving needs of the industry.

EMPOWERING WOMEN IN MANUFACTURING:

Gender diversity is integral to the success and sustainability of the manufacturing sector. Inovance Technology is committed to promoting gender inclusivity by actively encouraging women to pursue

careers in manufacturing and technology. Through targeted outreach programs and mentorship initiatives, we aim to create a more inclusive and diverse workforce that reflects the rich tapestry of Indian society.

INOVANCE TECHNOLOGY'S APPROACH:

As a "Great place to work – Certified" company, we navigate the complexities of the modern manufacturing landscape, and skilling the Indian workforce emerges as a cornerstone of sustainable growth and development. At Inovance Technology, we view skilling as a strategic imperative, essential for driving innovation and sustaining growth. Our approach to workforce development is multi-faceted, encompassing training, upskilling, and reskilling initiatives tailored to the evolving needs of the industry. We aim to bridge the skills gap and create a talent pool that is future ready. 

INDIAN BUSINESSES ARE OPTIMISTIC ABOUT NEW TECHNOLOGIES ENHANCING SUPPLY CHAIN EFFICIENCY AND VISIBILITY: REPORT

New research supported by DP World and led by Economist Impact reveals that Indian businesses are deploying innovation and technology in supply chains to capitalise on opportunities arising out of the shifting geopolitical and trade landscape. The report serves as barometer for the logistics sector and captures the perspectives of trade experts and senior executives globally.

The findings of the fourth edition of the Trade in Transition report revealed that 2023 was a pivotal year in supply chain innovation while technology drives optimism for 2024.

In line with this, India's positive trade outlook is backed by new technologies and agile supply chains, and Indian businesses are leading the charge when it comes to tech adoption. Nearly, 66 per cent of Indian business leaders are employing or planning to employ augmented or virtual reality for troubleshooting and repairs, surpassing the 54 per cent global average. Further, 79 per cent are employing or planning to employ AI, big-data analytics, and predictive analytics for real-time insights and disruption forecasting, up 7 per cent on the global average. 80 per cent are utilising the Internet of Things (IoT) and radio frequency identification for real-time tracking and monitoring, 9 per cent higher than the global average.

Highlighting India's focus on strengthening and diversifying its supply chain that is backed by technological interventions and multimodal infrastructure like free trade warehouse zones, the study observed a significant jump in businesses moving to a just-in-case

inventory model from last year's findings. It noted that to ensure supply chain resilience, executives in India are investing in creating higher inventory buffers with a focus on protecting businesses from external fluctuations.

This year's global study shows that, on average, 41 per cent of companies surveyed have an additional inventory buffer of around 1 to 3 months as compared to 20 per cent in 2023, reflecting a 2x increase in businesses moving to a just-in-case inventory model. This indicates a clear shift from the previously followed 'Just-in-time' strategy to a more risk assessed strategy.

Rizwan Soomar, CEO & MD, DP World North Africa and India Subcontinent, said: "The findings of the new Trade in Transition report reflect the sentiment of Indian businesses that have not only embraced innovation through technology but also effectively leveraged initiatives under the Public Digital Infrastructure created by Government of India. As a partner to India's strengthening export competitiveness, DP World's multimodal end-to-end logistics solutions and on ground assets like FTWZs, warehouses and cold chain, rail freight network and inland terminals, are opening new markets for businesses.

Our integrated technological solutions like real time tracking, warehouse automation, paperless documentation, AI based route calibrations, CO2 emissions insights, and optimal inventory management are helping businesses achieve better logistics cost efficiencies while enhancing sustainable cargo movement."

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By Dipika Lalwani

“URBAN ROPEWAY PROJECTS ARE A NECESSITY IN RELIGIOUS PILGRIMAGE TOWNS”

India, with its expansive landscape, has historically witnessed the prevalence of conventional urban transportation systems. In this interview, **Anil Kumar Yendluri, Managing Director, Vishwa Samudra Group**, initiates a discussion about significant urban transportation initiatives poised to transform India's landscape, emphasising the incorporation of green technology and eco-friendly infrastructure strategies.



Anil Kumar Yendluri, Managing Director, Vishwa Samudra Group

Mr. Kumar, could you talk about your journey and experience in the infrastructure industry that led you to the role of Managing Director at Vishwa Samudra Group?

I initially served as the Director and CEO of Krishnapatnam Port in Nellore, Andhra Pradesh. During my tenure, I played a role in both the construction and management of the port. Under my

leadership, Krishnapatnam Port evolved into India's second-largest private port, boasting a remarkable 42 berths. Navigating the challenges of developing a greenfield port, our responsibilities extended across all infrastructure phases, marking the beginning of a transformative journey in the infrastructure sector.

Our internal infrastructure team played a pivotal role in the complete construction of the port, displaying our expertise in developing intricate superstructures within the marine and civil domains.

With a cumulative experience of over 13 years in successfully navigating the challenges of constructing complex structures, this endeavour marked a significant milestone in our evolution. Today, we stand as a testament to our successful transition into a robust infrastructure company.

What are the present technologies being used in Indian urban transportation? Can you share specific examples of technological innovations that have had a significant impact on improving urban transportation within your projects?

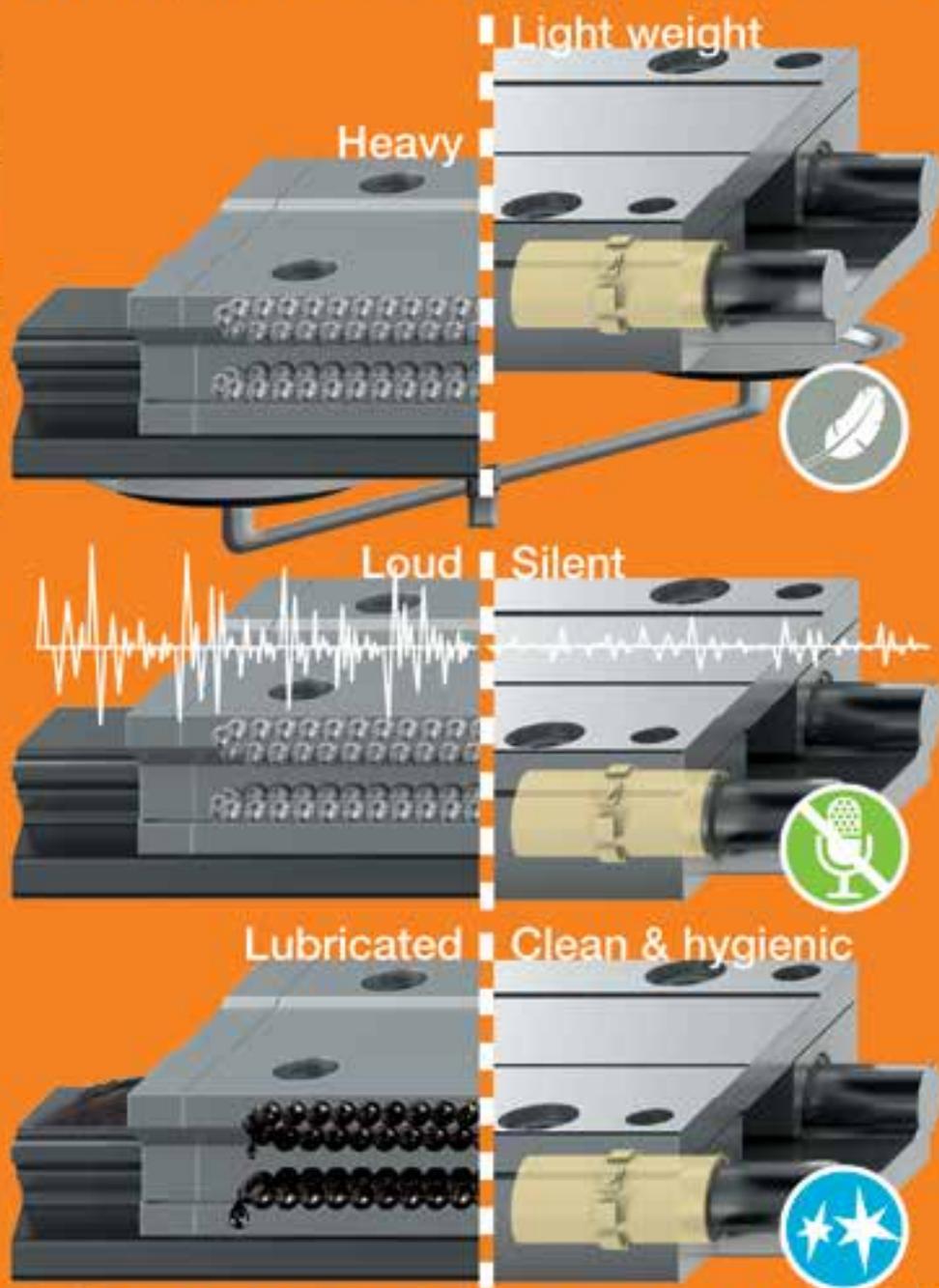
India, with its expansive landscape, has historically witnessed the prevalence of conventional urban transportation systems.

Among these, metro rails emerged as the latest addition and have been successfully implemented in major cities across the country. This innovative mode of transportation represents a significant leap forward in addressing the diverse and growing mobility needs of urban populations.

Yet, in the temple towns of India, characterised by high population density and limited space for expanding existing roads or installing metro rail systems, a novel urban transport solution has emerged: ropeways. Recognising the constraints posed by the size of elevated pillars associated with traditional

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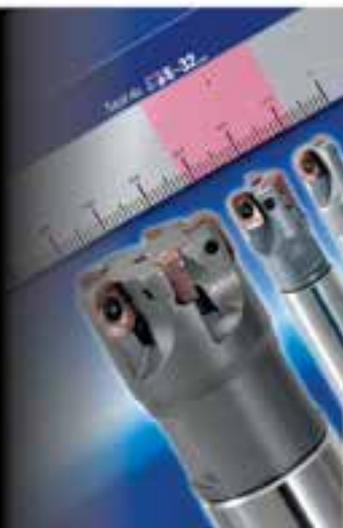
Small dia Lineup of small diameter sizes from $\phi 6$ to $\phi 32$.
 ▶ Can be used instead of solid end mills.

Multi-function JDMT-type inserts for shoulder cutting and EDMT-type inserts for low-depth, high-feed-rate machining can be used in the same holder.
 ▶ Concentration of roughing tools

By using a modular-type holder, a carbide shank and special arbor suitable for the cutting depth and cutting shape can be selected.
 ▶ Broad cutting range

Easy cutting Uses low-force fine-cutting-shape insert.
 ▶ Compatible with low-powered small-sized machines equivalent to 85-90.

Environment ▶ Economical insert with 2-corner specifications
 ▶ Special environmentally-friendly, high-hardness, corrosion-resistant surface treatment employed on holder.



Features 01 2 types of applications, by changing inserts

High-efficient tooling system to match cutting depth or work shape.

- 1 Steel Shank type
- 2 Carbide Shank
- 3 Modular Arbor



EDMT-type insert for machining efficiency



Utilizes R2.8 cutting edge shape.
 ▶ No uncut remnants peculiar to high feed tools
 ▶ Low cutting resistance

Work material: 500C
 Tool: ASM0715R-2.8 (2.8KT)
 +ASC10-6 S-114-40
 Cutting Conditions: Vc: 150m/min
 ap: 1.0mm
 fz: 0.1mm
 Tool marking: 20mm



JDMT-type insert for high-grade machined surfaces



Utilizes Fine Wall (FW) shape.
 ▶ Decrease unevenness of machined surfaces
 ▶ Decrease burring

Work material: 500C
 Tool: ASM0715R-3.8 (3.8KT)
 +ASC10-6 S-114-40
 Cutting Conditions: Vc: 200m/min
 ap: 0.5mm
 fz: 0.1mm
 Tool marking: 20mm



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Urban ropeways are breaking new ground in India. We are currently spearheading the construction of India's inaugural urban ropeway transport system in Varanasi, Uttar Pradesh, marking the world's third such installation.

metro rail infrastructure, ropeways have become a viable alternative. While not a new concept in India, as they have long been operational in the hill stations of Jammu and Kashmir and Himachal Pradesh, ropeways are now finding application in addressing the unique transportation challenges of densely populated temple towns.

Urban ropeways are breaking new ground in India. We are currently spearheading the construction of India's inaugural urban ropeway transport system in Varanasi, Uttar Pradesh, marking the world's third such installation. Commissioned by NHLML, a subsidiary of NHAI, this innovative urban ropeway is poised to revolutionise the landscape of urban transportation in the country, particularly in areas characterised by high population density. The project is set to be a game-changer, ushering in a new era by redefining how we navigate and address transportation challenges in densely populated regions.

Is implementing green technology in road construction becoming a reality in India? What do you think are its setbacks, and how will this impact greenhouse gas emissions?

Road construction is inherently associated with environmental impacts, including habitat disruption and significant carbon emissions. We are committed to adopting green technologies as part of our endeavours. Our focus is on implementing sustainable practices that

not only conserve natural resources but also actively contribute to reducing carbon emissions.

We have incorporated technologies into our road construction endeavours, with a notable example being StabilRoad. Originating from Germany and employed in over 18 countries, we hold the exclusive licence for its use in India, the Maldives, Tanzania, Guyana, and Suriname. This innovative technology, based on a 100 per cent natural mineral additive, employs full-depth recycling and soil stabilisation techniques.

StabilRoad is designed to optimise the existing soil, significantly minimising the need for additional aggregates, resulting in a remarkable 80 per cent reduction in the consumption of natural resources. Beyond resource conservation, this technology also leads to a substantial reduction in fuel requirements for transportation during the construction process, thereby actively lowering carbon emissions.

These two key elements influence the use of this green technology more prominently across India, without compromising on the strength of the road. This approach to road construction certainly reduces greenhouse gas emissions. While there may be initial hesitancy from traditional road construction companies, the advantages of this green technology become increasingly apparent. As the industry evolves, there is a growing realisation of the significance of integrating environmentally friendly practices into construction methodologies.



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As we envision the year 2030, we anticipate a landscape adorned with an expanded network of roads connecting cities, enhanced airport infrastructure, and a plethora of innovative transportation solutions.

What, according to you, are the upcoming projects that will change the face of Indian infrastructure in 2024?

I wholeheartedly advocate for the implementation of urban ropeway projects. I believe they are a necessity, particularly in religious pilgrimage towns in the country. The escalating population in these densely populated areas underscores the urgency for a swift, convenient, and eco-friendly mode of transportation. In my view, this initiative will be a game-changer, addressing the immediate needs of these regions. I commend NHAI and NHLML for their visionary approach and commitment to progressive concepts, paving the way for innovative solutions in urban mobility.

Are there upcoming projects or initiatives by the group that you are personally looking forward to?

We are also thrilled to venture into port development once again as we undertake the construction of a deep-water port in Mulapeta, Andhra Pradesh. This dual venture demonstrates our commitment to innovation and diverse contributions to transformative infrastructure projects.

In your vision, what is the potential of eco-friendly infrastructure in boosting development growth in India?

In today's times, the green index and green quotients of countries and companies play a big role in boosting

their image and the way they project themselves globally.

This is synonymous with the green initiatives undertaken across industries in the country. The infrastructure and construction industry contributes to almost 18 per cent of the GDP, which is quite enormous.

So, you can imagine the effect green activities can have on the sector, which would then directly contribute to India's image of being an eco-friendly infrastructure-oriented country, which then brings in a lot of European and green-inclined investment and initiatives as they are the zones that are high on this index.

How do you think Indian infrastructure will take shape by 2030?

As we envision the year 2030, we anticipate a landscape adorned with an expanded network of roads connecting cities, enhanced airport infrastructure, and a plethora of innovative transportation solutions. The future holds the promise of greener buildings and the emergence of impressive superstructures such as dams, tunnels, and bridges, designed to simplify the lives of citizens. A robust rural road network will further strengthen connectivity.

The cumulative impact of these advancements will significantly reduce logistics costs, fostering seamless communication and travel. This, in turn, is poised to stimulate business growth, contributing to the overall prosperity of the economy. 



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By Gourav Ray, Regional Vice President - Sales, Salesforce India

INDIA'S LOGISTICS SECTOR: LEVERAGING TECHNOLOGY TO UNLOCK GROWTH

The article sheds light on why the Transportation and Logistics (T&L) sector needs a comprehensive system overhaul, emphasising the importance of unifying data, enhancing customer experiences, and leveraging technology.

The Indian logistics sector plays a pivotal role in the nation's economy, acting as a linchpin for the seamless movement of goods across diverse industries. According to a recent Ernst & Young report, India is projected to grow to a \$26 trillion economy by FY48. As the nation gears up for rapid growth over the next 25 years, the transportation and logistics sector stand ready to serve as the backbone, facilitating this unprecedented expansion. The efficient flow of goods, materials, and products is often regarded as the lifeblood of an economy, and in India, with its vast and diverse landscape, the logistics industry assumes a pivotal role. Yet, despite its significance, the sector faces persistent challenges that threaten to hinder its progress and global competitiveness.

One of the most pressing challenges confronting the Indian logistics sector is the disproportionately high logistics costs, constituting approximately 7.8-8.9 per cent of the country's GDP, surpassing the global average of 8 per cent. This directly impacts the global competitiveness of Indian businesses, placing them at a disadvantage compared to international counterparts with lower logistics expenses.

EFFICIENCY AND ECONOMICS OF LOGISTICS

A primary challenge stems from the intricate network involving multiple players and intermediaries, leading to a multitude of cargo exchanges. This not only results in escalated costs but also introduces inefficiencies into the system. Further adding to this issue, unorganised players often prioritise manual labour over technology due to its perceived cost-effectiveness.

The diversity in export and import commodities



further compounds the situation by causing a mismatch between the types of containers used. This lack of standardisation contributes significantly to operational inefficiencies within the industry.

On the digital front, the absence of a seamless data infrastructure to map the movement of goods creates challenges in optimising operations due to a lack of data-driven decision-making. This deficiency hampers

the sector's ability to make informed choices for enhancing efficiency.

Although some digital solutions exist, they fall short of providing comprehensive end-to-end visibility, leaving gaps in the tracking and monitoring of goods throughout the supply chain. The poor adoption of digital technology in logistics exacerbates the issue, leading to inefficient route selection, reliance on manual processes, and uninformed decisions resulting in increased costs.

Furthermore, the Transportation and Logistics (T&L) sector grapples with a multitude of challenges, including the impact of inflation, macro-environmental effects such as the Ukraine and Israel wars, ongoing disruptions in the supply chain, the looming threat of recession, rising interest rates, increased fuel prices, and a cautious consumer base. These factors collectively contribute to a complex and challenging operating environment.

Adding to the complexity is a siloed infrastructure setup within the sector, which hinders seamless collaboration and communication between various components. Additionally, there is a deficiency in modern equipment adoption, further impeding operational efficiency. The uneven utilisation of freight resources exacerbates these challenges, creating an environment where the sector needs help to adapt to the dynamic landscape effectively.

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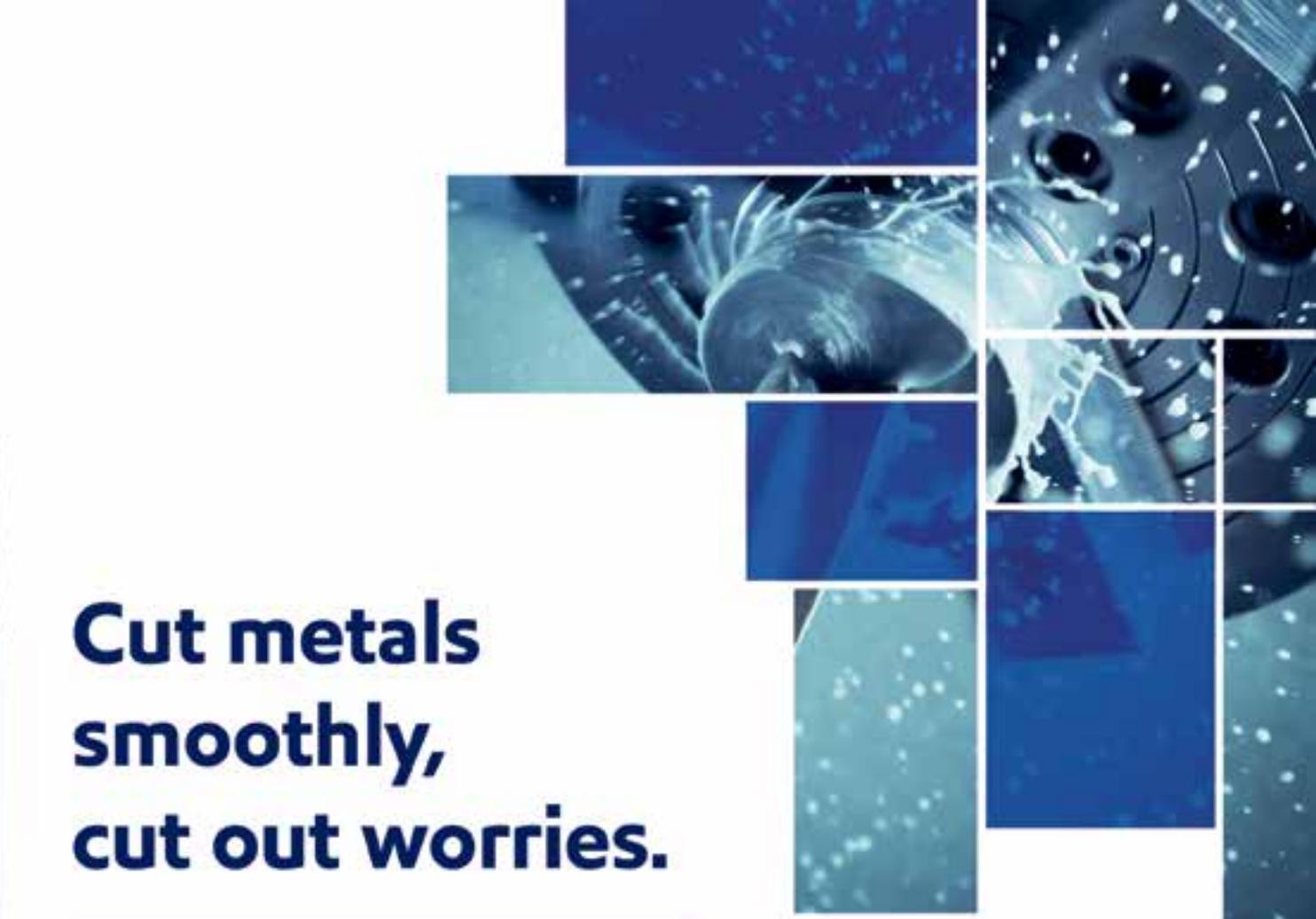


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How does one manage such economic tumult? Successful companies in the sector are futureproofing themselves by adopting strategic measures.

UNIFYING CUSTOMER DATA

Amidst heightened uncertainty, smart Transportation and Logistics (T&L) organisations proactively strategise for best, expected, and worst-case scenarios. The efficacy of such planning hinges on the continuous monitoring and analysis of crucial signals, such as capacity in key lanes, customer spend by lane, and customer lifetime value. This meticulous approach facilitates informed decision-making regarding resource allocation, strategic investments, and adjustments in response to market dynamics. Achieving this level of agility necessitates the seamless integration of customer data across sales, service, and operations.

Unfortunately, a considerable portion of T&L business operations, especially in sales, marketing, and customer service, still rely heavily on manual methods, such as phone calls, spreadsheets, and email. This leads to important knowledge being scattered across shared drives or even just in employees' memories, creating risks for operational continuity, particularly during employee turnover or absence. Imagine the challenge of locating critical information for a special high-value consignment when the responsible individual is unavailable or unknown; the importance of efficient information management for maintaining strong customer relationships.

Logistics companies acknowledge the need for diverse services but often fail to segment or analyse customers based on value. Without centralised customer data, it's challenging to apply intelligence and analytics to identify trends or prioritise strategic initiatives effectively.

T&L companies embracing data unification experience rapid and substantial benefits. Integrating multiple data sources and creating a cross-sectoral use case for logistics stakeholders facilitates improved data accessibility and enhances operational efficiency within the logistics sector.

DELIVERING SUPERIOR SHIPPER EXPERIENCES

Transportation and logistics leaders are leveraging the power of centralised customer data to drive efficiencies and enhance business resilience, ultimately elevating the overall shipper experience. A prime example involves harnessing internal and external data through artificial intelligence (AI) to predict customer retention and identify potential churn.

This predictive approach empowers sales and marketing teams to take proactive measures, enabling

them to address potential issues before they escalate into crises. Real-time data intelligence equips customer service agents with the capacity to make informed decisions swiftly, leading to faster problem resolution. The intelligent assembly of data unfolds compelling narratives that provide valuable insights.

By scrutinising volume trends across different geographies or evaluating staffing requirements in warehouses, docks, or call centres, businesses can uncover critical information. Remarkably, many large companies lack access to shipper-specific on-time delivery performance - a gap that shippers themselves often fill based on their firsthand experiences. It becomes imperative for sellers to possess data reflecting both successes and failures to truly comprehend their relationships and engage effectively with clients.

Effective leaders ensure that their teams have access to the right data, fostering a deeper understanding of customer interactions. This strategic approach yields tangible results, as evidenced by a notable 29 per cent increase in sales productivity. By embracing data-driven decision-making and prioritising insights, T&L leaders not only enhance operational efficiency but also cultivate stronger, more informed relationships with their clients.

Ultimately, combining these strategies is crucial to exceed the expectations of shippers. While navigating economic ups and downs, T&L companies must redefine their approach from quoting to final delivery. Automation, AI, and real-time data integration offer solutions to reduce redundancies, cut costs, and foster efficient growth. Equipping teams with the necessary information ensures smarter decision-making, even in ambiguous situations, leading to tangible outcomes. In essence, the evolution of T&L requires a holistic approach, unifying data, enhancing customer experiences, and leveraging technology to emerge stronger and more resilient in an ever-changing economic landscape.

In conclusion, over the past few years, the world has witnessed transformations that have significantly disrupted global supply chains. Consequently, the Transportation and Logistics (T&L) industry must undergo an intense transformation. To shape the future of transportation and logistics, companies should adopt a distinct strategy, focusing on essential imperatives such as envisioning the future, achieving operational excellence, keeping up to date with emerging technology, and unifying customer data, to ultimately deliver better customer experience. By addressing these key areas, T&L companies can scale up, incorporate fresh capabilities, and strategically enhance their businesses to ensure resilience and future success. 

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By Jitendra Srivastava, CEO, Triton Logistics & Maritime Pvt. Ltd.

CHARTING A TRANSPERENCY-DRIVEN FUTURE FOR GLOBAL SUPPLY CHAINS

The article discovers the impact of transparency, emerging technologies, and collaborative efforts in reshaping supply chain operations. From unveiling hidden costs to leveraging AI algorithms, explore the roadmap towards transparent, sustainable, and efficient supply chains.

In the ever-evolving landscape of global supply chains, a profound metamorphosis is underway, driven by a confluence of factors that are reshaping the way we perceive and engage with these intricate networks. No longer confined to the shadows, transparency has emerged as the guiding light that not only exposes hidden costs but also propels us towards a more sustainable and ethical future. As we navigate this transformative journey, a symbiotic relationship between consumer demands, technological advancements, and collaborative efforts is reshaping the very fabric of supply chain operations.



for transforming opaque operations into transparent, sustainable, and efficient supply chains.

COLLABORATION IS KEY

The transformative power of transparency extends beyond individual efforts, finding its zenith in collaborative action. Imagine a future where stakeholders across the supply chain—from raw material suppliers to manufacturers, logistics providers,

and retailers—operate on a shared platform. This collaborative ecosystem fosters trust, accountability, and a shared commitment to ethical and sustainable practices.

UNVEILING THE HIDDEN COSTS

The era of blissful ignorance is behind us, with consumers now attuned to the far-reaching impacts of their purchases. A profound shift in consumer preferences has been noted, as highlighted by a 2023 McKinsey survey indicating that 70 per cent of global consumers are willing to pay a premium for sustainable products. This surge in conscientious consumerism demands a departure from traditional, opaque supply chain operations. The call is for a radical shift towards open, data-driven ecosystems where every stage of the supply chain is visible, from raw materials to the end product.

EMERGING TECHNOLOGIES, BLAZING THE TRAIL:

At the heart of this transparency revolution lies technology, which is playing a pivotal role in reshaping global supply chains. Artificial intelligence (AI) algorithms analyse vast datasets, uncovering hidden risks and inefficiencies, while predictive analytics optimise logistics, minimising environmental impact. Together, these technologies form a powerful toolkit

FROM TRANSPARENCY TO TRANSFORMATION:

While transparency serves as the foundation, the ultimate goal is a profound transformation of global supply chains. Empowering consumers to make informed choices based on real-time data about product origin, environmental footprint, and social impact is a cornerstone. This empowerment transforms consumers into active participants, driving positive change. Furthermore, transparency sheds light on unsustainable practices, allowing companies to address environmental concerns and adopt more sustainable practices. It also exposes unethical labour practices, enabling stakeholders to collaborate in eradicating exploitative activities and ensuring fair and dignified treatment for workers. Trust, a crucial element in an interconnected world, is nurtured through transparency, leading to more resilient and collaborative supply chains.

BENEFITS OF USING GLOBAL SUPPLY CHAINS:

The advantages of employing global supply chains go beyond mere cost reduction. Access to quality partners, a broader perspective on business, and the ability to tap

into international customer bases are crucial aspects. However, managing multiple vendors, processes, and teams can be complex, necessitating the integration of supply chain planning software. This technology streamlines workflows, minimises risks, enhances production, and automates tasks to reduce human error.

The journey towards a transparent and sustainable future for global supply chains is multifaceted and ongoing. Challenges such as data security, standardisation, and infrastructure gaps must be

addressed. Yet, undeniable momentum is propelling the transformation forward. Consumers are demanding change, technology is providing the tools, and collaborative efforts are paving the way. By harnessing the transformative power of transparency, a future is envisioned where every mile of the supply chain shines with ethical sourcing, environmental responsibility, and a commitment to the well-being of people and the planet. As we navigate this road ahead, it is not just about shedding light but using it as a catalyst for lasting change in the global supply chain landscape. 

HONDA INDIA GROUP SHOWCASE AT BHARAT MOBILITY GLOBAL EXPO 2024

Honda's esteemed group of companies in India, comprising Honda Motorcycle & Scooter India (HMSI), Honda Power Pack Energy India (HEID), Honda Cars India Limited (HCIL) & HIPP (Honda India Power Products) is participating in the first-ever Bharat Mobility Global Expo 2024 ongoing from 1 - 3 February 2024, at Bharat Mandapam in New Delhi.

This event, organised to showcase the latest developments in the mobility sector, serves as a platform for Honda to demonstrate its commitment to innovation and sustainability by showcasing cutting-edge technology.

HONDA MOTORCYCLE & SCOOTER INDIA (HMSI)

At the heart of the Honda stall is HMSI's first flex-fuel powered motorcycle developed specially for the Indian market. The pre-production model displayed here uses innovative "Flex Tech" Technology, allowing riders to experience a benchmark product with reduced environmental impact by utilising a blend of gasoline and ethanol.

The flex-fuel powered motorcycle will be HMSI's first FFV (Flex Fuel Vehicle). It will be powered by a 293.52cc, single-cylinder, air-cooled engine compliant with up to E85 fuel (85 per cent ethanol and 15 per cent gasoline).

HONDA POWER PACK ENERGY INDIA (HEID)

HEID showcases its new-age technology, including Honda Power Pack Exchanger e: and Honda Mobile Power Pack e: at Bharat Mobility Global Expo 2024.

During the expo, HEID will showcase Honda e: Swap, an innovative battery-sharing technology tailored for electric two and three-wheelers. The service offers efficient and convenient battery swaps, reshaping the landscape of electric mobility.

In addition to the battery-sharing service, HEID intends to work closely with Original Equipment

Manufacturers (OEMs) interested in integrating Honda's advanced battery technology into their vehicles.

HONDA CARS INDIA LIMITED (HCIL)

Honda Cars India is featuring its Honda City e:HEV and recently launched SUV, Honda Elevate, at the expo. The City e:HEV boasts a self-charging, highly efficient two-motor strong hybrid system, delivering exhilarating performance while maintaining outstanding fuel efficiency. With three multi-mode drive powertrain options – EV Drive Mode, Hybrid Drive Mode, and Engine Drive Mode – the New City e:HEV underscores Honda's commitment to bringing cutting-edge technologies to the country.

Both showcased models come equipped with Honda's advanced safety technology, 'Honda Sensing.' This system uses a high-performance front camera with a wide-angle detection system to scan the road, alerting the driver and intervening when necessary to minimise accident risks.

HIPP (HONDA INDIA POWER PRODUCTS)

Honda India Power Products limited is showcasing its Li-ion Battery-powered Lawn and Garden range comprising of Robotic lawnmower, Handheld Grass trimmer, Hedge trimmer and Blower ideally suited for efficient and eco-friendly turfcare.

Bio-fuel compatible advanced Fuel Injection (FI) equipped portable inverter generator model EU70is (5.5kVA) is on display and along with EU30is (3kVA) model is increasingly being used for Drone charging applications for fertilizer spraying in Agriculture and Horticulture besides others.

HIPP is also exhibiting its eco-friendly, bio-fuel compatible advanced 4 Stroke Honda Marine model BF20 that offers a clean, reliable, and durable mobility solution for sustainable and efficient use in Indian waterways and along the coastline for coast guard and tourism purposes.

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‘उद्योग उत्सव’
“THE FESTIVAL OF MANUFACTURING”™

Co-powered By

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THE FESTIVAL OF MANUFACTURING 2.0: CELEBRATING 10 YEARS OF MAKE IN INDIA!

The Festival of Manufacturing recently concluded its second edition at the Dr. Ambedkar International Centre in Delhi. The event celebrated India’s vibrant manufacturing sector and the Make in India initiative, convening industry leaders to discuss progress and future visions. With over 1,200 attendees from conglomerates, ministries, MSMEs, startups, and more, it showcased India’s manufacturing prowess across various sectors. **Shri R.K. Singh**, Union Minister of Power and New & Renewable Energy, Government of India, graced the event as Chief Guest and he credited government initiatives for the success of Make in India in his address.

By Nisha Shukla



The Festival of Manufacturing, popularly known as Udyog Utsav, returned with its second edition, celebrating India’s industrial prowess and the Make in India initiative. Held on 7th March at Dr Ambedkar International Centre, Delhi, the one-and-a-half-day event gathered the industry’s finest minds, celebrating India’s vibrant manufacturing sector while enabling meaningful discussions and deliberations to step up India’s game on a global level.

The theme for the 2.0 edition revolved around ‘Celebrating 10 Years of Make in India’, initiating dialogue about its impact across various sectors such as construction equipment, automotive, defence and aerospace, electronics, and more. Discussions also delved into progress made, existing challenges, and



outlined a vision for the next decade.

The 'Presenting' Partner for 'The Festival of Manufacturing 2024' was ExxonMobil Lubricants, and the event was 'Co-Powered By' Ace Micromatic Group. Lenovo served as the 'Technology' Partner, whereas Iqus India was the 'Associate' Partner. Kandui Industries served as 'Masterbatches & Compounding' Partner, and Marposs India as 'Quality' Partner. The 'Supporting Partners' for the event were Zeiss, Omega Seiki Mobility, Tally Solutions, and The Timken Company. The Media Partners for the event were ET Now, The Machinist Magazine, and ET Polymers Magazine, and Bennet University served as 'Education' Partner.

The daylong event held on March, 7, 2024, drew over 1,200 attendees, bringing together conglomerates, key ministries, MSMEs, startups, associations, financial, R&D, and educational institutions, showcasing India's burgeoning manufacturing sector under one roof.

Additionally, Shri RK Singh, Union Minister, Ministry of Power and New & Renewable Energy, Government of India, graced the event as the Chief Guest, and Shri Atul Dinkar Rane,

OS & Director General, BrahMos, DRDO and CEO & MD, BrahMos Aerospace, graced the occasion as the Guest of Honour.

The event kicked off with an inaugural ceremony followed by auspicious lamp lighting ceremony attended by esteemed guests, including Shri RK Singh, Union Minister, Ministry of Power and New & Renewable Energy, Government of India; Shri Atul Dinkar Rane, OS & Director General, BrahMos, DRDO and CEO & MD, BrahMos Aerospace; Sujay Baisya, Vice President – Indirect Sales (North), ExxonMobil; TK Ramesh, Managing Director, Ace Designers Group; Venu Nuguri, Managing Director & CEO, Hitachi Energy in India and South Asia and Rahul Kamat, Editor – B2B Division, Worldwide Media, The Times Group.

After the inaugural ceremony, Shri R.K. Singh, Union Minister of Power and New & Renewable Energy, Government of India, addressed the audience. The key highlight of his address revolved around the significance of the manufacturing sector in generating vast employment opportunities in the country. He elaborated on how government initiatives have played an instrumental role in doubling the power generation capacity. *(Detailed coverage on page no: 39)*

Following the Chief Guest's address, the Guest of Honour, Shri Atul Dinkar Rane, OS & Director General, BrahMos, DRDO, and CEO & MD, BrahMos Aerospace, delivered his address: *(Detailed coverage on page no: 40)*

Apart from Shri Atul Dinkar Rane, Pujya Dr Gnanvatsal Swami, Life Coach & Eminent Speaker, BAPS Swaminarayan Sanstha, offered insights on the topic of 'Reinvent, Evolve & Lead' *(Detailed coverage on page no: 41)*. This was followed by Lt Gen VG Khandare, Principal Advisor, Ministry of Defence and Sujay Baisya, Vice President – Indirect Sales (North) at ExxonMobil, who presented their keynote addresses to the audience. *(Detailed coverage on page no: 42 & 43)*





GALA DINNER:

On March 6th, 2024, a day before the event, an invite-only Gala Dinner unfolded at Radisson Blu, Delhi. The evening sparkled with a perfect ambiance, offering a blend of inspiration, glamour, laughter, and engaging conversations, setting the stage for camaraderie. As it was 8 PM, luminaries from the country's manufacturing sector graced the red carpet, leading to the banquet hall hosting the prestigious Gala Dinner for the Festival of Manufacturing.

Padmashri Awardee, Shital Mahajan, an Indian extreme sportsperson, and holder of eight world records in skydiving, alongside stand-up comedian Pratyush Chaubey, graced the evening with their esteemed presence. The festivities commenced with Rahul Kamat, Editor of the B2B Division at Worldwide Media, The Times Group, outlining the evening's agenda.

Subsequently, a series of over 10 inspiring stories emerged from the realm of manufacturing, illustrating the dedication of individuals—from shop floor workers to CEOs—in making production a reality. Among these narratives, certain stories resonated deeply, shedding light on the transformative journey of those who, with effort and resilience, carved a path for

themselves and transformed their lives with the support of manufacturing. The Festival of Manufacturing shared these inspiring stories, evoking emotions that brought tears to the eyes of both speakers and listeners, showcasing the evolution and impact of this sector.

Following the emotional journey of these inspiring individuals, Padmashri Awardee Shital Mahajan Rane shared her daring adventures in skydiving, including jumps from the Everest peak, Himalayas, North and South poles of Earth, and more.

Following the inspiring and ambitious journey of the female skydiver, stand-up comedian Pratyush Chaubey entertained the entrepreneurs and manufacturers with his spontaneous and rib-tickling act, leaving the audience in splits.

The Gala Dinner also provided a platform for participants to reconnect and network with each other, fostering relationships and collaborations beyond the event.

PANEL DISCUSSION

The second edition brought together key players in the manufacturing industry to discuss innovations, challenges, and opportunities shaping the sector





through the lens of Make in India.

Concurrent sessions covering a range of industries, including electronics, construction, automotive, renewables, defence, and aerospace, were held in the two halls of the Dr. Ambedkar International Centre, Delhi, namely Bhim and Nalanda. Renowned speakers from leading manufacturing companies shared valuable insights, delved into progress made and existing challenges, and outlined a vision for the next decade.

‘A DECADE OF MAKE IN INDIA: ACHIEVEMENTS, CHALLENGES, AND LESSONS LEARNED’

The first-panel discussion, which took place in the Bhim Hall, focused on ‘A Decade of Make in India: Achievements, Challenges, and Lessons Learned.’ Industry leaders deliberated and reflected on key achievements, advancements, and challenges encountered throughout this decade-long journey of Make in India, delving into its forward-looking perspective.

The panel, moderated by Rahul Kamat, Editor, B2B Division, Worldwide Media, included stalwarts from the industry, such as Claudio Maffioletti, CEO and Secretary-General of the Indo-Italian Chamber of Commerce and Industry; TK Ramesh, Managing Director, Ace Designers Group; Sujay Baisya, Vice President of Indirect Sales (North), ExxonMobil; and Prashanth Doreswamy, President, and CEO of Continental India. *(Detailed panel discussion on page no: 44)*

‘MAKE IN INDIA 2.0: A CEO’S VISION FOR THE NEXT DECADE’

The second-panel discussion centered around the theme ‘Make in India 2.0: A CEO’s Vision for the Next Decade.’ The deliberation saw industry leaders sharing their perspectives on this enlightened journey.

Eminent panellists for the CEO panel, including

Mahesh Gupta, CMD of Kent RO; Ramashankar Pandey, CEO of Tata Green Batteries; and Mihir V Shah, Executive Director & CFO of Vipul Organics Limited, shared their insights, strategies, and foresight for the next decade within the framework of the Make in India initiative under the moderation of Vinit Goenka, a former Spokesperson for BJP Delhi, Governing Council Member of CRIS, and author. *(See page no: 46 for a detailed panel discussion)*

‘REVOLUTIONISING THE RENEWABLE POWER LANDSCAPE: A DECADE OF MAKE IN INDIA’

With Industry 4.0 and now 5.0 taking centre stage, the need to adopt energy efficient solutions to create a stronger impact on the global economy has become more crucial than ever. The third panel discussion revolved around the topic: “Revolutionising the Renewable Power Landscape: A Decade of Make in India.” Industry leaders deliberated on the renewable journey through the lens of Make in India.

Moderated by Abhijeet Sinha, Technocrat, National Program Director for Ease of Doing Business, and Project Director - NHEV, Ex-CAG, the panellists comprising Preeti Bajaj, CEO & MD, Luminous Power Technologies, Amar Variawa, Vice President and Country Head, Vestas India, Rakesh Sarin, President – Corporate Development, Suzlon Energy and Rahul Bhutiani, Head- Marketing and Sales, Adani Solar, discussed the need for innovation and efficiency in the renewable power sector. Additionally, the importance of tapping into the market to make renewable energy accessible in rural India was a major theme throughout. *(See page no. 47 for a detailed panel discussion.)*

‘REVOLUTIONISING INDIA’S AEROSPACE AND DEFENCE LANDSCAPE: A DECADE OF MAKE IN INDIA’

An engaging panel discussion on the transformation

of India's aerospace and defence sectors was hosted in the Bhim Hall as part of the 10-year celebration of Make in India. The esteemed panellists comprising Amol Suryawanshi, Sr. Director – Operations, ideaForge; Col Rajneesh Ralli, Vice President - Growth Operations, Dhruva Space; Maneck Behram Kamdin, SPV and Business Head, Godrej Aerospace; Satyabrata Satapathy, CEO & Co-Founder, BonV Aero; Yogesh Ramanathan, Founder & CEO, Vinata Aeromobility Pvt Ltd; AK Kapoor, Outstanding Scientist & Director DRDO (Retired) & Emeritus Scientist; shared valuable insights into the challenges and opportunities within the defence and aerospace sector.

Moderated by Anagh Singh, Assistant Vice President at Invest India, the discussion kicked off with a recognition of the pivotal role that aerospace and defence play in India's economic growth trajectory. (See page no: 49 for a detailed discussion.)

REVOLUTIONISING THE CONSTRUCTION EQUIPMENT LANDSCAPE: A DECADE OF MAKE IN INDIA

Moderated by Samir Bansal, General Manager of Off-Highway Research, in the Nalanda Hall, the panel comprising Sanjay Saxena, COO, SANY India and South Asia; Navneet Sethi, Executive Vice President – Operations, JCB India; Shalabh Chaturvedi, Managing



Director, CASE Construction Equipment, India & SAARC delved into the significance of construction equipment in India's development and how self-reliance in equipment manufacturing is the need of the hour. (See page no: 51 for a detailed panel discussion.)

REVOLUTIONISING THE ELECTRIC AND ELECTRONIC LANDSCAPE: A DECADE OF MAKE IN INDIA

Under the moderation of Nisha Shukla, Assistant Editor, B2B Division of Worldwide Media, The Times Group, industry stalwarts gathered at the Nalanda Hall to share insights on the journey and challenges of domestic electronic manufacturing. The panellists comprising Vivek Yadav, Executive Vice President, Havells India; HS Bhatia, MD, Kelwon Electronics and Appliances Private Limited; Sushil Virmani, Managing Director, Best Power Equipments; and Abhijit Vaish, Executive Director, Instapower Ltd, delved into the transformative impact of Make in India over the past decade on electric and electronic manufacturing, exploring challenges and achievements in the sector. (See page no. 52 for a detailed panel discussion.)

After the panel discussion, an elaborate felicitation ceremony was held to recognise The Machinist Best Brands in Metal Cutting 2023 and Champions of Manufacturing 2024.

In summary, the Festival of Manufacturing 2.0 delineated India's trajectory towards becoming a manufacturing powerhouse, bolstered by the Make in India initiative. The second edition concluded with the promise of returning next year bigger and better with industry-specific concepts and continuing the tradition of celebrating achievements and exploring opportunities for further growth and development of the manufacturing industry. TM



REIMAGINING INDIA, REINVENTING INDIA – UNLOCKING THE TRUE POTENTIAL OF INDIA WITH SUSTAINABLE USE OF POWER AND RENEWABLE ENERGY

Chief Guest Address by **Shri RK Singh**, Union Minister of Power and New & Renewable Energy, Government of India



While addressing the audience at the Festival of Manufacturing 2024, Shri RK Singh, Union Minister of Power and New & Renewable Energy, Government of India, emphasised the imperative role of the manufacturing sector in transforming India's economy. The key highlight of his address revolved around the significance of the manufacturing sector in generating vast employment opportunities in the country.

Shri RK Singh reiterated how the past ten years have revolutionised the workings of this sector. He also attributed the accomplishment of the "Make in

India" dream to excellent government initiatives which further helped in promoting the manufacturing sector.

Singh also reminisced about a time when growth in the manufacturing sector was impeded due to several factors, including stringent licensing policies, land acquisition impositions, credit problems, and financing costs. He elaborated on how relaxation in policies and regulations during the past 10 years has accelerated growth in India and how the idea of self-reliance (Atma Nirbharata) has taken center stage.

Furthermore, Shri RK Singh elaborated on how government initiatives have played an instrumental role in doubling the power generation capacity. With heavy investment in equipment and the establishment of 3,900 new substations, India has shown remarkable progress in the manufacturing sector. He also highlighted how India possesses one of the most powerful transmission systems in the world.

Talking about the initiatives his Ministry undertook under the Make in India campaign, Singh outlined a long-term vision of doubling the power capacity by 2030. Additionally, the goal in the next few years will be to add more substations and transmission lines.

The Minister for Power and New & Renewable Energy also mentioned certain challenges for the government to further accelerate growth in the manufacturing sector. He highlighted how importing equipment must pass through strenuous processes. Moreover, the cost of storage needs to be reduced for sustainability in the power sector.

Lastly, he articulated how India needs prudent fiscal policies to lower the inflation rate. He also focused on the need to create products that meet stringent quality standards to be able to compete globally. Additionally, the Minister also propagated the idea of marketing products at competitive prices and fostering innovation in technology, along with collaboration with global markets, to reach new heights.

Concluding his address, the Minister said, "the dream of "Make in India" has become a huge success globally," and the manufacturing sector plays a pivotal role in contributing to India's growth and development. 

“MANUFACTURING SECTOR IS THE BACKBONE OF THE SOCIAL AND ECONOMIC DEVELOPMENT OF THE COUNTRY”

Here's what **Shri Atul Dinkar Rane**, Outstanding Scientist and Director General (BrahMos), DRDO and CEO & MD, BrahMos Aerospace said in his address...

In his keynote address, Shri Atul Dinkar Rane, Outstanding Scientist and Director General (BrahMos), DRDO and CEO & MD, BrahMos Aerospace, elaborates on the importance of supporting the manufacturing sector by integrating industry partners. For instance, he discusses how BrahMos has played a crucial role in bringing everyone together under the umbrella of “self-reliance” or “Aatmanirbharta”. The success of BrahMos highlights how India as a nation has grown in the past decade. The self-reliance goal also revolves around the capability to manufacture platform systems like tanks, aircraft, submarines, spacecraft, etc. Hence, the nation should have the capability to repel a surprise attack and be able to sustain war for a long time through economic security.

Furthering his talk, Shri Atul Dinkar Rane emphasises on how the manufacturing sector is the backbone of the social and economic development of the country. He also attributes the success of the Indian economy to this emerging sector. However, he also addresses the cracks which need to be filled by re-emphasising the use of high-technology systems in India. One of the most important aspects is not relying on other nations for raw materials. Therefore, having a solid foundation is the key to excelling as a nation in the long run.

Shri Atul Dinkar Rane also discusses three basic dimensions of manufacturing competitiveness. These include innovation in product design and manufacturing processes, upgraded use of technology, and following the quality standards. These three play an instrumental role in building the brand image in the manufacturing sector. Additionally, what is needed for growth is great infrastructure, skilled manpower, resource planning, and supply chain management.

Moreover, he discusses how government initiatives like FDI, Offset policy, IDR Act, Startup India, etc., have reformed the workings of the defence sector. His illustrative examples throughout the speech were intriguing to listen to.

In a nutshell, he concludes by re-emphasising the need to invest in the manufacturing sector to boost



exports. Undoubtedly, his speech clearly underlines the underlying vision he has for the nation, and the role of the manufacturing sector is a crucial one. 

REINVENT, INVOLVE, AND LEAD: DR. GNANVATSAL SWAMI'S VISION FOR MANUFACTURING

Through his address, **Pujya Dr Gnanvatsal Swami**, Life Coach & Eminent Speaker, BAPS Swaminarayan Sanstha, offered insights on the topic of 'Reinvent, Evolve & Lead.'

Spiritual Leader and Motivational Speaker, Pujya Dr Gnanvatsal Swami, addressed the gathering at The Festival of Manufacturing: 10 Years of Make in India, on 7th March 2024. His address centered around the principles of reinvention, involvement, and leadership.

He started with the analogy of building the biggest conventional Hindu temple in the world, the Akshardham. Initially projected to take 35 years to complete due to its size and scale, the temple was completed in merely five years, thanks to skill development initiatives. By sourcing talent from deep inside the villages of Rajasthan and Odisha and redeveloping their skills through workshops, the construction workforce expanded from 800 to over 5,000 skilled artisans. This highlights the crucial role of skill development in manufacturing sector growth, which will be a key theme for the next decade of Make in India.

Dr. Swami's narrative went beyond the physical construction journey of Akshardham. He emphasised its importance as a symbol of reinvention. The temple's London counterpart, with components created in Indian villages and assembled abroad, is a testament to India's innovation and capabilities.

Central to Dr. Swami's speech was the idea of internal transformation within organisations and individuals. He emphasised how an entity's internal composition directly correlates with its long-term success. Drawing a parallel with carbon-based materials like coal, graphite, and diamond, which vary greatly in value based on their internal structures, Dr. Swami highlighted how organisations achieving long-term success are shaped by their internal systems, i.e., their values and ethos.

What industries in India should aim for is value-driven and output-driven growth, prioritising ethics over mere profitability. Dr. Gnanvatsal Swami emphasises this sentiment, stating, "In the pursuit of profits, no matter how they come, organisations often abandon their values and resort to unethical practices. It is crucial to stick to one's internal values to uphold integrity to sustain long-term success."

Dr. Swami further advocated for a shift from competition to cooperation, talking about the recently inaugurated Ram Mandir in Abu Dhabi, as a proof of collaboration and resilience. In this project, manufacturing, and engineering, along with representatives from different religions, came together to create a marvel amidst the deserts of Abu Dhabi.

In summary, Dr. Gnanvatsal Swami's address underscored the importance of reinventing oneself and fostering collaboration within the manufacturing landscape. Through skill development, internal refinement, and collaborative endeavours, organisations and individuals can navigate challenges and pave the way for the coming decade of Make in India.

CHALLENGES TO OVERCOME AS A NATION — THE UNSAID STORY

This is what Lt Gen VG Khandare, Principal Advisor, Ministry of Defence said in his special address...



In his keynote address, Lt. Gen. VG Khandare, Principal Advisor, Ministry of Defence, talks about the challenges we need to overcome as a nation to achieve indefeasible feats. According to him, the defence of the nation is no longer solely related to security. There are new forms of warfare such as cyber, space, and information, and these new kinds of threats are non-attributable. Hence, combating them is a major challenge for the government.

Giving a new meaning to the term “Atmanirbhar,” he reiterates that this requires a strategic culture because we have been sabotaged by superpowers in the past. Hence, becoming self-sufficient in every arena is key. As the transfer of technology is expensive, the need to own it is very important for the nation to tread the path of success.

Also, he talks about how work culture improvement is required, and accountability needs to be fixed if transformation in the manufacturing sector is to happen. Furthermore, the cost of manufacturing needs to be lowered to make it more affordable. Also, the transition from labour-intensive methods to mechanisation needs to happen to emerge as a winner. Instead of setting long-term goals, he talks about how we need to set short-term goals like a “100-day agenda” to progress faster.

Lt Gen VG Khandare, also talks about the loopholes like silos and inter-governmental and inter-ministerial gaps that need to be bridged to enable growth as a nation. Also, modernising the armed forces is key to emerging as a stronger nation, as the focus needs to be shifted to the security sector.

Further elucidating, he gives an illustrative example of BrahMos, which is a profitable venture. Talking about accountability, he wants the people in charge to take hold and move at a faster pace than usual. 

PRUDENT USE OF ENERGY IS THE KEY TO SUSTAINABLE FUTURE

Sujay Baisya, Vice President of Indirect Sales at ExxonMobil India, delivered a keynote speech at the 2nd edition of the Festival of Manufacturing. Here's what he said...

The manufacturing sector stands as the cornerstone of India's economic strength, buoyed by initiatives like Make in India and favourable policies facilitating ease of doing business. With the implementation of Production Linked Incentive schemes and government support, India is poised to become a global manufacturing powerhouse, with projections to potentially export goods worth US\$ 1 trillion by 2030.

As India embraces Industry 4.0 technologies, including artificial intelligence and the Internet of Things, the manufacturing sector is undergoing a transformation, characterised by increased efficiency and competitiveness. This digital advancement, coupled with rising affluence and demographic dividends, is positioning India for sustained high economic growth and global prominence.

As we chart our course forward, it is important to acknowledge that with economic advancement comes an inevitable increase in energy consumption. This is a direct result of the rising standards of living in our country. Therefore, we must prioritise smart strategic policies, and innovation in the manufacturing sector. Technologies such as artificial intelligence (AI) and the Internet of Things (IoT) have become increasingly prevalent in our daily lives, further emphasising the need for energy efficiency in our operations.

In today's digital age, we are not merely offering lubricants but comprehensive solutions to enhance operational efficiency. Our Mobil Lubricant Analysis program and MachineXT initiative revolutionise lubricant management services, ensuring optimal machine performance and longevity.

India's strategic economic policies, particularly initiatives like Make in India, are helping to boost the country's reputation as a preferred manufacturing destination.

Energy-efficient manufacturing solutions and digital transformation are instrumental in driving India's manufacturing revolution forward. Mobil's DriveX initiative, an on-road Van Activation program, has been instrumental in educating and uplifting a considerable part of the workforce across the country, reaching over one lakh factory workers, and creating awareness about Mobil products.



The Make in India initiative has been instrumental in driving economic growth and development. The manufacturing sector, contributing nearly 17 per cent of India's GDP and providing growing employment opportunities, stands as the backbone of our economy. However, to sustain this momentum and ensure long-term success, we should continue to invest in research, innovation, and green policies aligned with our sustainable growth objectives.

We are committed in driving innovation and excellence within the manufacturing sector. By embracing these principles and working collaboratively, we can ensure a brighter and more prosperous future for India and its people. 

A DECADE OF MAKE IN INDIA: ACHIEVEMENTS, CHALLENGES, AND LESSONS LEARNED

Make in India celebrates nearly a decade of impactful contributions to manufacturing. Industry leaders reflect on achievements, challenges, and future strategies, emphasising skill development, sustainability, innovation, and international collaboration for continued growth.



Make in India would be soon completing 10 years; however, the initiative has been making a huge impact on the manufacturing industry. In a recent panel discussion on “A Decade of Make in India: Achievements, Challenges, and Lessons Learned,” industry leaders deliberated and reflected on key achievements, advancements, and challenges encountered throughout this decade-long journey of Make in India, delving into its forward-looking perspective.

The panel, moderated by Rahul Kamat, Editor – B2B Division, Worldwide Media, comprised industry stalwarts such as Prashanth Doreswamy, President and CEO, Continental India; Ravi Kumar Kanakarajan, Director - Product Management, Lenovo; Sujay Baisya, Vice President – Indirect Sales (North), ExxonMobil; TK Ramesh, Managing Director, Ace Designers Group; and Claudio Maffioletti, CEO and Secretary-General, Indo-Italian Chamber of Commerce and Industry.

The discussion began with Prashanth Doreswamy, President, and CEO of Continental India, reflecting on the progress over the past decade. He emphasised that Make in India is an ambitious policy aimed at positioning India as a global manufacturing hub. Currently, manufacturing constitutes 16.5 per cent of the GDP, with a target of reaching 23 per cent within the next five years. To drive this growth, Doreswamy stressed the importance of government policies and the affordability of technology in India’s value-driven market.

He also emphasised the need to bridge the skill gap in India’s growing workforce. Despite the country’s high number of science and mathematics graduates worldwide, there’s a significant mismatch between their academic qualifications and industry readiness. Moreover, Doreswamy called for a more nationalistic approach in domestic manufacturing while discussing the necessity to uplift the SME sector. He highlighted the challenge of research and development (R&D) for



MSME industries and suggested shifting the approach from sole reliance on upfront subsidies towards enhancing the competitiveness of SMEs.

Claudio Maffioletti, CEO, and Secretary-General of the Indo-Italian Chamber of Commerce and Industry underscored the role of Italian companies in fostering growth within India. With over 750 Italian companies and 4,000 productive plants in India, the country has been a destination for Italian investments, particularly in the machinery and engineering sectors. However, Maffioletti raised concerns regarding India's increasingly protectionist stance, hindering global partnerships. He proposed breaking this protectionist barrier through strategic alliances between regions, stressing the important role of politics in initiating this change. Maffioletti envisioned India evolving into a global R&D development hub, leveraging its technological expertise combined with manufacturing capabilities to increase its share in global exports. "Despite India's population of 1.4 billion people, India's share of global exports is about 1.5 per cent. The quality of exports must improve, and international collaborations will play a pivotal role in this," said Maffioletti.

Sujoy Baisya, Vice President of Indirect Sales (North) at ExxonMobil, addressed the growing importance of sustainability in manufacturing. He highlighted ExxonMobil's recent investment of 1,000 crores in establishing the first green plant in Mumbai as proof of the company's commitment to innovation and low-carbon technologies. He highlighted the necessity of investing in research and innovation to address sustainability challenges while simultaneously tackling the issue of upskilling labour to meet the demands of a growing manufacturing sector.

TK Ramesh, Managing Director of Ace Designers Group, underlined the need to make manufacturing an appealing career choice for the younger generation. Recognising the stagnant percentage of GDP contributed by manufacturing, Ramesh stressed

the importance of instilling a sense of purpose and excitement around manufacturing to attract the right talent. He stressed the crucial role of the next three to five years in reshaping the perception of manufacturing among the youth.

Ravi Kumar Kanakarajan, Director of Product Management at Lenovo, echoed optimism for India's manufacturing landscape. Kanakarajan highlighted the importance of increasing manufacturing capacity to meet growing consumer demands, citing Lenovo's journey from earlier catering to the Indian market to now becoming a global exporter. He emphasised the need for continued investments in India to support manufacturing capabilities and facilitate exports to the rest of the world. He mentioned that the quality of exports will play a huge role in determining India's position as a manufacturing hub on the global stage. He talked about the importance of investing in innovation to elevate the quality of exports to meet global standards.

Throughout the discussion, the panel spoke about the importance of addressing challenges such as skill gaps, sustainability, and international collaboration to unlock the full potential of Make in India in the next 10 years. Skill enhancement emerged as a key highlight of the discussion, with a mutual consensus that India's workforce must be adequately equipped to meet the demands of the manufacturing industry.

From upskilling initiatives to educational reforms, efforts will be required to ensure that our workforce is prepared for the challenges ahead. Innovation and R&D were among the key topics discussed throughout the session, highlighting the importance of staying ahead in an increasingly competitive global market. The panel concluded with panellists and the moderator agreeing on the fact that there is a need for a collective effort from both the government and industry stakeholders to take this sector to new heights and that the next decade holds exciting prospects for India's manufacturing industry.

MAKE IN INDIA 2.0: A CEO'S VISION FOR THE NEXT DECADE

The panellists shared their insights, strategies, and foresight for the next decade within the framework of the Make in India initiative.

In a recent panel discussion on 'Make in India 2.0: A CEO's Vision for the Next Decade,' held at the Festival of Manufacturing saw industry leaders sharing their perspectives on this enlightened journey.

Eminent panellists for the CEO panel, including Mahesh Gupta, CMD of Kent RO; Ramashankar Pandey, CEO of Tata Green Batteries; and Mihir V Shah, Executive Director & CFO of Vipul Organics Limited, shared their insights, strategies, and foresight for the next decade within the framework of the Make in India initiative under the moderation of Vinit Goenka, a former Spokesperson for BJP Delhi, Governing Council Member of CRIS, and Author.

Mahesh Gupta, CMD of Kent RO, shared his exquisite experience of being in the manufacturing industry for 35 years. He emphasised how the manufacturing sector has transformed in the past decade due to initiatives taken by Prime Minister, Shri Narendra Modi. The government's vision to bring about these positive reforms was the major highlight.

However, he also addressed the loopholes in the manufacturing sector such as the need for good quality products, which require urgent attention to surpass China. Additionally, Gupta discussed the potential for increased productivity through AI and automation to compete with market giants. He further highlighted the issue of water shortage due to contamination, citing it as a major cause for concern. According to him, impure water is one of the leading causes of cancer. Boiling water alone is not the solution to removing impurities, thus emphasising the necessity to purify water. He vouched for the reverse osmosis process, which helps purify water effectively, a technology adopted by Kent for water purification.

Ramashankar Pandey, CEO of Tata Green Batteries, discussed the necessity for a long-term vision to Make In India, emphasising the importance of starting car manufacturing within the country. Like Mahesh Gupta, he stressed the need for the manufacturing sector to be driven by productivity and innovation. Furthermore, the panel elaborated on how India needs



to become sustainable by involving more people in the ecosystem. Attracting talent and building capacity are key to progress in the sector.

Moreover, Pandey highlighted how his initiatives have played a crucial role in solving societal problems such as road accidents. Hence, there is a need to connect a sense of purpose with the manufacturing sector to ensure the safety and security of citizens.

Mihir V Shah, Executive Director & CFO of Vipul Organics Limited, began by stating his passion for manufacturing. He emphasised how an increased standard of living will play an instrumental role in the sector's growth. Shah also highlighted the role of people in helping a company achieve formidable feats, stating that it goes beyond just having good products or infrastructure.

Furthermore, Shah discussed how his company invests most of its resources in scaling and R&D, noting that they go hand in hand. He also stressed the importance of upskilling, drawing a stark contrast between the IT sector and the manufacturing sector. He applauded the manufacturing sector's sense of job security, contrasting it with the thousands of layoffs often seen in the IT sector.

In conclusion, the panellists highlighted how India can transform the manufacturing sector to emerge as a winner. Increasing exports is essential to significantly contribute to GDP growth. Additionally, they also emphasised sustainability and attracting new talent to the manufacturing sector for future progress. 

REVOLUTIONISING THE RENEWABLE POWER LANDSCAPE: A DECADE OF MAKE IN INDIA

With vast, largely untapped renewable energy potential, India is positioning itself as a key player in the global green energy landscape. The panellists delved into the strides and innovations reshaping India's renewable energy sector. Additionally, they also discussed on the achievements, challenges, and prospects of India's renewable energy journey.



With Industry 4.0 and now 5.0 taking centre stage, the need to adopt energy efficiency solutions to create a stronger impact on the global economy has become more crucial than ever. At a recent panel discussion on “Revolutionising the Renewable Power Landscape: A Decade of Make in India” held at the Festival of Manufacturing, industry leaders deliberated on the renewable journey through the lens of Make in India.

Moderated by Abhijeet Sinha, Technocrat, National Program Director for Ease of Doing Business, and Project Director - NHEV, Ex-CAG, the panellists comprising Preeti Bajaj, CEO & MD, Luminous Power Technologies; Amar Variawa, Vice President and Country Head, Vestas India; Rakesh Sarin, President – Corporate Development, Suzlon Energy; and Rahul Bhutiani, Head- Marketing and Sales, Adani Solar, discussed the need for innovation and efficiency in the renewable power sector. Additionally, the importance of tapping into the market to make renewable energy accessible in rural India was a major theme throughout.

Preeti Bajaj, CEO & MD of Luminous Power Technologies, emphasised the need to make energy solutions creative and competitive to stand out in the global market. She talked about how small and medium enterprises can adopt ways to use energy efficiently. Her illustrative examples throughout the session were noteworthy: generating your own power, storing it, reusing it, and being more independent. Hence, having distributed power everywhere is a boon for a developing country like India.

Rakesh Sarin, President – Corporate Development, Suzlon Energy, talked about incentivising MSMEs and manufacturers and tapping into the great opportunity. This can be made possible by exploring the hidden potential of innovation and R&D, which can lead to setting up more manufacturing units and making deployment available. As a result, this can be dispensed to people, and they can adopt thinner and leaner ways of becoming more energy efficient. Sarin also elucidated on how the government is working to increase energy capacity to meet the increasing demands of the people. Furthermore, he highlighted areas that need

improvement, which include reducing the costs for the adoption of renewable energy in India.

Amar Variawa, Vice President and Country Head of Vestas India, talked about bridging the gap between the high cost of renewable energy and rising demands by manufacturing more at a larger scale. Bringing innovative solutions for solar energy is key to making it more affordable and sustainable for both urban and rural populations.

Rahul Bhutiani, Head of Marketing and Sales at Adani Solar discussed the important concept of obtaining subsidies for handholding smaller units while putting up a solar panel. He also talked about how the demand for going green is increasing in exports and that the adoption of sustainable practices completely is yet to happen. Furthermore, he laid emphasis on the need to reduce dependency on other countries for exporting solar panels. He also applauded government initiatives

for bringing the supply chain to India and making it a success. Additionally, the Surya Ghar Yojana intends to power 1 crore houses in India with a 60 per cent subsidy, proving that India is heading in the direction of making renewable energy an integral part of its energy ecosystem.

Apart from that, Bhutiani also highlighted the need to distribute solar panels. He also elucidated on how farmers need to be empowered to use solar pumps to sustain their crops.

In a nutshell, the panel discussed ways to make renewable energy more affordable in India. The key takeaways of the discussion focused on the need for initial investment to be worked upon, especially for solar energy. The real challenge is to help renewable energy, especially solar, become a part of every household. The panel also talked about the importance of adopting innovative solutions to make renewable energy accessible to every part of India. 

TABREED AND GIZ PARTNER TO ACCELERATE ADOPTION OF ENERGY-EFFICIENT DISTRICT COOLING SOLUTIONS IN INDIA

Tabreed, the world's leading district cooling company, has signed a Memorandum of Understanding (MoU) with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) through the 'Energy Efficient Cooling' programme.

This initiative is jointly implemented by GIZ and the Bureau of Energy Efficiency (BEE), to continue working together in catalysing the market, to drive adoption of energy-efficient district cooling systems and thermal storage solutions in India. As such it aligns with the country's Nationally Determined Contribution under the Paris Agreement to adopt a climate friendly approach to development.

Due to rising temperatures and the corresponding surge in air conditioner usage, projections indicate that, by 2050, cooling could be responsible for 60 per cent of peak energy demand in India. Drawing upon GIZ's proficiency in sustainable development strategies, notably its collaboration with BEE on district cooling guidelines, and Tabreed's unrivalled experience in the industry, the partnership aims to promote widespread adoption of energy-efficient district cooling systems to deliver on sustainable and holistic economic and human development in India.

Through this alliance, Tabreed and GIZ will work together to complement each other's global and local expertise across three broad focus areas: First, to facilitate bilateral exchange between governments to strengthen national and regional policy, regulatory, legal, and institutional frameworks in support of the development of district cooling markets. Second, to

democratise Cooling as a Service across key urban, educational, and industrial clusters through collaborative project development. Third, to support other ongoing initiatives to build human, institutional and corporate capacities at regional, national, and local levels through unique and innovative training workshop formats, supplemented by exchange visits to plants for participants across the value chain, including policy-makers, developers, urban planners and consultants.

Commenting on this development, Sudheer Perla, Managing Director, Tabreed Asia said: "Over the past five years, Tabreed has steadfastly pursued the development of district cooling markets in India. Tabreed, in a joint venture with the International Finance Corporation (IFC), established an investment platform committing to invest up to \$400 million in India and Southeast Asia. This partnership with GIZ marks a significant milestone in our ongoing endeavours to establish planet inclusive cooling solutions as a mainstream choice in India."

Nitin Jain, Programme Head, Energy-Efficient Cooling (EE Cool), added: "For several years, we have collaborated closely with BEE in India to champion energy-efficient solutions in industries, buildings and cooling. Together, we have undertaken numerous initiatives to further this goal, including the recent launch of District Cooling Guidelines. Against this backdrop, our partnership with Tabreed couldn't have come at a better time. As India strides toward a sustainable future with a bold vision for sustainability, the role of district cooling becomes more pivotal than ever."

REVOLUTIONISING INDIA'S AEROSPACE AND DEFENCE LANDSCAPE: A DECADE OF MAKE IN INDIA

The panellists discussed challenges and opportunities in India's aerospace and defence sectors during the Make in India celebration, emphasising indigenisation, funding, and collaboration for sustainable growth.

The Festival of Manufacturing hosted an engaging panel discussion on the transformation of India's aerospace and defence sectors as part of the 10-year celebration of Make in India. The esteemed panellists comprising Amol Suryawanshi, Sr. Director – Operations, ideaForge; Col Rajneesh Ralli, Vice President - Growth Operations, Dhruva Space; Maneck Behram Kamdin, SPV and Business Head, Godrej Aerospace; Satyabrata Satapathy, CEO & Co-Founder, BonV Aero; Yogesh Ramanathan, Founder & CEO, Vinata Aeromobility Pvt Ltd; AK Kapoor, Outstanding Scientist & Director DRDO (Retired) & Emeritus Scientist; shared valuable insights into the challenges and opportunities within these industries.

Moderated by Anagh Singh, Assistant Vice President at Invest India, the discussion kicked off with a recognition of the pivotal role that aerospace and defence play in India's economic growth trajectory. Singh set the stage by highlighting the ambitious target for defence sector exports turnover, set at US\$25 billion by 2025, and posed the crucial question: How can we achieve this target amidst the challenges facing the industry?

Maneck Behram Kamdin, SPV and Business Head at Godrej Aerospace, reflected on Godrej's longstanding commitment to manufacturing in India spanning over 126 years. He also emphasised the organisation's contribution to helping startups

with their manufacturing capabilities and expertise, sponsoring colleges with exhibitions, and other contributions to foster innovation within the sector. Despite India's advancements in product design, Maneck emphasised the persistent challenges in manufacturing. He pinpointed two hurdles: the continued reliance on imports for manufacturing components and dependence on controllers from large foreign companies, which are often geographically constrained. Maneck stressed the need for indigenous controllers and machines to drive the growth of the aerospace sector.

Satyabrata Satapathy, CEO and Co-founder of BonV Aero, indicated the important role of funding in enabling startups to achieve the 'Atmanirbhar' status. He highlighted significant improvements in funding systems with the government also participating in funding startups, particularly in the deep tech space.

Satapathy elaborated on key government initiatives such as iDEX and the Fund of Funds for Startups (FFS) Scheme, which provide financial incentives for startups at various stages of their journey, including proof of concept, prototype development, and market entry. However, he emphasised the need for collaborative efforts between the corporate sector and government schemes, citing the drone industry's financial backing under the PLI scheme as an example.

Amol Suryawanshi, Senior Director of Operations-India and USA, at ideaForge, shed light on the various





challenges faced by startups venturing into the defence sector. Firstly, securing adequate funding is a hurdle, hindering the growth of budding startups. Secondly, the lack of infrastructure poses significant constraints on execution capabilities. Thirdly, red tape remains a persistent issue, as startups face regulations, especially when seeking permission to test their products. Next, the scarcity of skilled workforce poses a substantial challenge, necessitating collaboration between academic institutions and industries to bridge the skill gap. Lastly, supply chain vulnerabilities increase working capital costs due to the lack of complete indigenisation of components.

Col Rajneesh Ralli, Vice President of Growth Operations at Dhruva Space, highlighted how the last 5 years have been pivotal in terms of the policies that have come up in the defence aerospace sector. However, there are challenges to be overcome. He highlighted three areas crucial for growth in the sector. Firstly, he stressed the importance of commercialisation to leverage the potential of the private industry. By involving private players, innovation can be accelerated, and a broader democratisation of use cases can be achieved. Secondly, Ralli underscored the significance of mega-constellations, drawing attention to the transformative impact witnessed globally, particularly by countries like China and the USA. “The capabilities of such mega-installations are beyond our imagination,” he said.

Lastly, he emphasised the importance of deep tech advancements, including AI, robotics, and quantum computing, in driving innovation within the space sector. Ralli noted the existence of the right policies and ecosystem, positioning India at an inflection point. However, there’s a need for increased investment in deep tech to unlock its full potential.

AK Kapoor, Outstanding Scientist & Director DRDO (Retired) & Emeritus Scientist, emphasised the need to commercialise the aerospace and defence sectors. He talked about the concept of concurrent

engineering; wherein private players are integrated from the initial stages of innovation to familiarise them with the processes.

Furthermore, Kapoor highlighted the significant cost associated with infrastructure, test facilities, innovation, and more, creating the necessity for larger companies to support startups in this regard. He emphasised the role of collaboration between big companies and startups in commercialising R&D within the defence and aerospace sectors to drive growth.

Yogesh Ramanathan, Founder & CEO of Vinata Aeromobility Pvt Ltd, advised startups entering the aeromobility sector to focus on developing a minimum viable product as the prerequisite for establishing a company in this field. He stressed the significance of partnering with technology firms to enhance credibility for early-stage startups.

Additionally, Ramanathan advised young startups to keep an eye out for opportunities and government support. He also spoke about how the transportation sector is standing on the brink of transformation and commuting practices will inevitably change over the next five years. The CEO of Vinata Aeromobility emphasised the need for concentrated efforts in this sector to sustain this pace.

In his closing statement, Suryawanshi said, “We must regard our supplier ecosystem with the same care as our internal manufacturing operations. While we often prioritise Industry 4.0 and lean practices within our factory premises, it’s crucial to extend this focus to our broader supplier network. We need to support and coach our suppliers to ensure a seamless and efficient supply chain.”

The panellists shared a mutual consensus on the need for indigenisation to solve supply chain challenges and acknowledged the support from government and corporate players. The conversation pointed the way ahead for the industries, emphasising the importance of working together for sustainability and growth. 

REVOLUTIONISING THE CONSTRUCTION EQUIPMENT LANDSCAPE: A DECADE OF MAKE IN INDIA

The panellists delved into the significance of construction equipment in India's development and how self-reliance in equipment manufacturing is the need of the hour.



Moderated by Samir Bansal, General Manager of Off-Highway Research, the panel comprising Sanjay Saxena, COO, SANY India and South Asia; Navneet Sethi, Executive Vice President – Operations, JCB India; Shalabh Chaturvedi, Managing Director, CASE Construction Equipment, India & SAARC delved into the significance of construction equipment in India's development and how self-reliance in equipment manufacturing is the need of the hour.

Bansal set the stage by highlighting the crucial role of construction equipment in driving the nation's infrastructure development. He emphasised how these equipments serve as the lifeline of the country's progress, connecting every corner of the nation, from the highways that link cities to transportation networks like railways, and other infrastructure, these machines drive the economic growth of India.

Shalabh Chaturvedi, Managing Director, CASE Construction Equipment, India & SAARC, continued the dialogue by highlighting the complex nature of the construction equipment industry. He highlighted the potential for India to become a net exporter in this industry. "For this to happen, the government needs to incentivise the manufacturing sector," added Chaturvedi.

Drawing parallels with the Production Linked Incentive (PLI) scheme that currently covers 14 sectors like telecommunication, textiles, automobiles, specialty steel, and more, Chaturvedi advocated for similar incentives to be extended to the manufacturing sector. He stressed that such initiatives not only increase investment in the manufacturing landscape but also

lead to job creation. He discussed how generating employment in manufacturing is indispensable for the sector's growth. Additionally, he highlighted the industry's obligation to make itself appealing to attract the right talent.

Navneet Sethi, Executive Vice President of Operations at JCB India, underscored the importance of self-reliance in manufactured goods. He highlighted that even after so many years of independence, there exists a

substantial import dependence across various sectors, including automobile manufacturing. Sethi emphasised the need for investment and government support to achieve this self-sufficiency. He also called for better quality standards and highlighted the role of automation in improving product quality. Talking about JCB India Ltd., he highlighted how the organisation is making efforts to leverage automation and AI to enhance manufacturing processes and product quality.

Sanjay Saxena, Chief Operating Officer of SANY India, and South Asia echoed the sentiment of 'Make in India, for the World. He highlighted the necessity to meet global quality standards and emphasised the importance of localisation in the construction equipment industry. Sanjay stressed the significance of supporting local vendors through training, assistance in prototype development, and quality control measures. He showcased SANY India's commitment to localisation by way of collaborating with SMEs and helping them with the same. Saxena proposed a theme for the next decade of Make in India: 'Innovate in India,' signifying a transition towards a more innovation-driven approach in manufacturing.

Throughout the discussion, the panellists talked about the importance of government support, investment incentives, and skill development to propel the construction equipment industry forward. There was a mutual consensus on India's potential to emerge as a global leader, depending on embracing innovation and enhancing quality. The panellists showcased their organisations' efforts in adopting advanced technologies and processes to elevate product quality and efficiency.

REVOLUTIONISING THE ELECTRIC AND ELECTRONIC LANDSCAPE: A DECADE OF MAKE IN INDIA

The panel delved into the transformative impact of Make in India over the past decade on electric and electronic manufacturing, exploring challenges and achievements in the sector.



The Festival of Manufacturing witnessed a thought-provoking panel discussion centered on the theme of revolutionising the electric and electronic landscape in India, commemorating 10 years of the Make in India initiative.

Under the moderation of Nisha Shukla, Assistant Editor, B2B Division of Worldwide Media, The Times Group, industry stalwarts gathered to share insights on the journey and challenges of domestic electronic manufacturing. The panellists comprising Vivek Yadav, Executive Vice President, Havells India; HS Bhatia, MD, Kelwon Electronics and Appliances Private Limited; Sushil Virmani, Managing Director, Best Power Equipments; and Abhijit Vaish, Executive Director, Instapower Ltd, delved into the transformative impact of Make in India over the past decade on electric and electronic manufacturing, exploring challenges and achievements in the sector.

Abhijit Vaish, Executive Director of Instapower Ltd, initiated the dialogue by discussing the significant shift in the context of electronic manufacturing in India. He highlighted a substantial increase in domestic production capacities, partly attributed to robust government support measures for the manufacturing sector. Vaish emphasised the preferential treatment given to manufacturers with a substantial “Make in India” component, highlighting the correlation

between the availability of credit finance and domestic production. “These initiatives,” he said, “have not only led to job creation and skill development across sectors but have also driven innovation in domestic manufacturing.” However, Vaish also highlighted persistent challenges such as “electricity shortages in factories,” which continue to impede productivity. “Addressing this challenge is indeed the need of the hour,” he added.

Sushil Virmani, Managing Director of Best Power Equipments (BPE), emphasised the significant role of technological advancements and government policies in stimulating the demand for electronics and consumer goods in India. He highlighted key initiatives such as the National Policy on Electronics (NPE) 2019, the implementation of GST, Digital India, and Smart Cities programs, among others, that have supported the growth of the electronics sector. Virmani emphasised that while India has made strides in achieving “local for vocal,” the next step is towards “local for global.” He urged the government to prioritise skill development initiatives and address infrastructure challenges to enable Indian electronic goods to compete on the global stage.

HS Bhatia, MD of Kelwon Electronics and Appliances Private Limited, recognised the positive impact of the government’s Production Linked Incentive (PLI) scheme on domestic manufacturing.

He also noted how this scheme, designed to provide financial incentives for domestic production, has significantly boosted the electronics sector.

Additionally, Bhatia commended other government initiatives such as the Prime Minister's commitment to 1 crore solar-powered houses, highlighting them as monumental steps forward. He proudly highlighted significant strides in electronics manufacturing, noting the transition from being a net importer to becoming an exporter, particularly in mobile phone manufacturing. He credited this remarkable growth to the reduction of entry barriers in manufacturing which has facilitated the entry of newcomers into the market.

Vivek Yadav, Executive Vice President, Havells India, discussed his organisation's strategic decision to substitute imports by setting up domestic manufacturing plants for parts that were once imported. He emphasised that such localisation is imperative for India's growth, citing how the biggest economies of the world invested in manufacturing early on.

Moreover, Yadav stressed the importance of

innovation in areas like AI and IoT for manufacturing, highlighting the necessity for products to be IoT-enabled, interconnected, and remotely accessible. He also spoke about the importance of enhancing labour quality and promoting gender diversity in manufacturing, citing Havells' groundbreaking step of creating a manufacturing facility with a 100 per cent women workforce.

The panel discussion concluded with a sense of optimism regarding the government's support and incentivisation, coupled with a mutual acknowledgment of the challenges that lie ahead. While India strives towards self-reliance and aims to become a net exporter in electronic manufacturing, the panellists reiterated the importance of addressing infrastructure challenges and fostering skill development to sustain the sector's growth.

In summary, the discussion concluded with a mutual consensus among the panellists on emphasising the need for collaboration between industry and government to maximise Make in India's next decade of electronic manufacturing. 

ULTRAVIOLETTE ROLLS OUT ITS CUTTING-EDGE DC FAST CHARGING INFRASTRUCTURE - UV SUPERNOVA

Ultraviolette Automotive, has announced the rollout of its cutting-edge DC Fast Charging infrastructure - UV SUPERNOVA. Within UV's charging ecosystem, the 6-kW offering is introduced as SUPERNOVA, while its 12 kW counterpart is designated SUPERNOVA PLUS. The launch of SUPERNOVA DC fast charging stations marks a pivotal moment for Ultraviolette, as it gears up to revolutionise the landscape of intercity and cross-country travel for its customers.

With faster charging times and enhanced convenience, the F77 customers can now embark on cross-country electric motorcycle travel with greater ease and confidence.

In the first phase, Ultraviolette has initiated the deployment of 100+ SUPERNOVA and SUPERNOVA PLUS DC fast charging stations, with 10 stations already making their mark in Maharashtra, Karnataka, and Tamil Nadu. Located at key motorcycling routes, including popular cafes and along major highways, these stations ensure riders and their F77s are ready for the next leg of their journey in no time.

The SUPERNOVA DC fast charging stations come equipped with the type 6 connector, ensuring compatibility and ease of use based on the IS17017-2-6 (IEC 62196-6) standard recognised by the BIS. Within this range, the SUPERNOVA represents the 6-kW

option featuring dual 3 kW DC Fast Charging guns, and the SUPERNOVA PLUS escalates the offering to 12 kW charging capacity with dual 6 kW DC fast charging guns. Both configurations provide a swift and efficient charging solution that complements the optional boost charger available with the F77, making them integral to Ultraviolette's innovative charging network.

Speaking on the launch of Ultraviolette SUPERNOVA charging stations, Narayan Subramaniam, Co-Founder & CEO, Ultraviolette said, "The debut of Ultraviolette SUPERNOVA charging stations is a transformative milestone in our commitment to delivering a seamless and user-friendly charging infrastructure for our customers. The sole purpose of this initiative is to facilitate intercity and cross-country travel for our F77 customers, and we are confident that this will play a pivotal role in propelling the growth of electric mobility, solidifying Ultraviolette's position as an industry leader. These charging stations by Ultraviolette are a big step towards cleaner, more efficient mobility and will redefine the future of electric motorcycle travel in India. Combining the industry-leading 307 km IDC range of the F77 with the expansion of the SUPERNOVA and SUPERNOVA PLUS charging stations, our customers can embark on thrilling adventures beyond city and state borders."

By Jitender Thirwani, COO, Smarterhomes

SMART WATER METRE INTEGRATION: TRANSFORMING REAL ESTATE PROJECTS INTO WATER-EFFICIENT COMMUNITIES

Discover how smart water metre integration is reducing costs, promoting sustainability, and fostering data-driven decision-making. Learn about the advantages, benefits, and environmental impact of smart water metres, and explore the way forward for this transformative technology in India.



India is urbanising at a rapid pace. Urban population has experienced a six-fold increase since 1951, growing from 62.4 million to 377.1 million in 2011, and it is estimated that 590 million will live in Indian cities by 2030, which is twice the entire population of the USA.

With increasing urbanisation, we are also seeing a rise in urban buildings to house the growing population. High rise residential apartments now constitute to a bulk of urban living. These concentrated dwellings have put pressure on city infrastructure including water supply and waste water management. More and more urban communities are depending on ground water and or tanker water to meet their demand. With increasing urbanisation this trend would continue. The lack of adequate water

supply and increasing demand therefore puts the onus on communities to manage demand for water.

Surprisingly, while the apartment dwellers are used to paying for electricity by metre, most of the communities pay for water as part of the common area maintenance charge. Hence water consumption and charges for them are 'invincible'. This results in

inadequate control over consumption and leakages resulting in per capita consumption beyond acceptable limits.

MEASURING EVERY DROP OF WATER - HOW DOES IT HELP?

Peter Drucker has famously said, "you cannot control what you don't measure"

With advances in technologies, it is now possible to accurately measure





With advances in technologies, it is now possible to accurately measure water consumption in individual apartments based on their actual water consumption.

water consumption in individual apartments based on their actual water consumption. This enables housing societies to bill for water in an equitable manner and create economic disincentives for high consumption. Smarter communities are already part of this growing trend towards water efficient communities - from being invisible to invoiceable.

Smart water metre integration is revolutionising real estate projects, leading to water-efficient communities. Here's how, backed by compelling facts:

Data-Driven Precision: Smart metres provide real-time consumption data, reducing water wastage by up to 35 per cent through improved awareness and behavior adjustment.

Cost Savings: Communities embracing this technology consequently save their highest cost water source, which often is tanker water. This leads to disproportionate savings in their water bills.

Leak Prevention: Smart metres detect leaks promptly, that often goes unnoticed.

Sustainability and Attraction: Real estate developers adopting smart water metres become sustainability leaders. They attract environmentally conscious residents, leading to higher property values and investments.

Future-Proofing for Scarcity: In regions with water scarcity concerns, these communities are better prepared. They can adapt to changing conditions with less water consumption than non-metreed counterparts.

SMART WATER METRES - HOW ARE THEY REDEFINING TRADITIONAL WATER METREING?

Smart water metres have redefined water monitoring in

real estate projects by offering a spectrum of advanced features and functionalities, from real-time data and remote monitoring to leak detection and of course invoice as per usage. Below is a comparison between traditional water metreing and smart water metreing:

ADVANTAGES OF INTEGRATING SMART WATER METRES IN REAL ESTATE PROJECTS

The integration of smart water metres contributes to the creation of water-efficient communities within real estate projects through real-time data monitoring, quick leak detection, and the encouragement of water-saving behaviors. This transformative technology delivers numerous advantages, including significant cost savings, sustainability benefits, and the ability to make data-driven decisions for more efficient water management.

Additionally, smart metres promote fair billing, ensuring residents pay only for the water they use, eliminating disputes and fostering a sense of accountability among consumers.

TOP 5 BENEFITS OF SMART WATER METRE INTEGRATION:

Cost Savings: Communities can reduce water bills by up to 30 per cent, providing financial relief to both property managers and residents.

Leak Detection: Smart metres quickly identify leaks, preventing water wastage and property damage.

Fair Billing: Smart metres promote fair billing, ensuring residents pay only for the water they use, eliminating disputes and fostering accountability among consumers.

Feature/Functionality	Smart Water Metreing	Traditional Metreing
Real-Time Data	Provides real-time water usage data	N/A
Remote Monitoring	Allow remote tracking and management on mobile app and dashboard	Require physical inspections and readings which are not possible in apartment buildings
Leak Detection	Identify leaks and abnormalities	N/A
Data Analysis	Generates historical data and comparative data for informed decisions	Provide no historical data for analysis
Billing Accuracy	Automatic billing	Manual billing leading to errors
Relationship with water	Provides the emotional connect with water and promotes conservation	N/A

Sustainability: Smart metres help reduce the environmental footprint by conserving water, making real estate projects more attractive to eco-conscious stakeholders.

Behavioral Change: Residents are encouraged to adopt water-saving practices, leading to a noticeable reduction in water consumption.

DATA BACKED INSIGHTS FROM SMART WATER METRES - HOW DOES IT HELP?

The data collection process begins with smart water metres, which continuously and precisely record water consumption. These metres are equipped with sensors that measure water flow and transmit this data wirelessly to a central hub, ensuring real-time monitoring. The collected data is then subjected to thorough analysis. Advanced algorithms and software are used to process the data, identifying patterns, anomalies, and trends. Consumption data is compared against historical averages, and the software can detect any irregularities, such as sudden spikes that may indicate leaks or excessive use.

This analysed data serves several essential purposes:

Real-Time Awareness: Residents have access to real-time data through web interfaces or mobile apps, enabling them to monitor their own water consumption.

Leak Detection: Any abnormal usage patterns are flagged, allowing for prompt leak detection. Residents and property managers receive automated alerts, and maintenance teams can address issues immediately.

Consumption Insights: Consumption data provides residents with insights into their habits and areas where water is being used inefficiently.

Data-Driven Decisions: Property managers use the data to make informed decisions regarding water management, enabling them to implement conservation measures effectively.

Tiered Pricing Models: The data supports the implementation of tiered pricing models, where responsible water usage is rewarded with lower rates, while excessive consumption incurs higher costs.

Sustainability Initiatives: Data analysis allows for evidence-based sustainability initiatives. Communities can assess the effectiveness of water-saving strategies and make adjustments as needed.

ENVIRONMENTAL IMPACT OF SMART WATER METRES

Widespread adoption of smart water metre technology in real estate holds significant sustainability benefits.



Reports underscore the urgency of water conservation, and smart water metres empower communities to measure and manage their water use effectively. "What cannot be measured cannot be controlled," and through these metres, we can measure, control, and contribute to a sustainable future.

Lower consumption within communities also indirectly contributes towards environment in general:

- Lower electricity charges for the society from less pumping
- Lower groundwater abstraction
- Lesser tankers on the road
- Lower pressure on the municipal water system

IMPLEMENTING SMART WATER METRES - THE WAY FORWARD

In the current landscape, there are no specific regulatory compliances in place for real estate developers regarding the integration of smart water metres. However, the context of the conversation is changing rapidly, given the escalating water crisis in various cities. As cities grapple with the challenge of water scarcity, there is a growing need for municipal bodies to step forward and mandate the implementation of sub-metreing systems. Enabling a 'pay as per usage' model through smart water metres holds the potential to revolutionise the way we use and conserve water resources.

The IGBC (Indian Green Building Council) perspective also comes into play, particularly for environmentally conscious developers. As part of sustainable development and green building initiatives, developers should consider the significant benefits of adopting smart water metre technology. Beyond the potential regulatory aspects, this proactive approach aligns with the broader sustainability goals of conserving natural resources, reducing water wastage, and creating more environmentally responsible communities. 

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I, Sunil Dad, hereby declare that the particulars given above are true to the best of my knowledge and belief.

(Sunil Dad)

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Signature of the Publisher

igus INTRODUCES MICRO GEARS WITH 0.2 MODULE

From microdrives to microscopes to precision engineering, engineers around the world are building increasingly compact products. igus now produces microgears for them with modules as small as 0.2. Tooth dimensions are very close to those of a human hair. Thanks to high-performance plastics, the teeth still allow precise, low-wear movement for high-quality products.

When a photographer zooms his camera, a gearbox consisting of tiny gears spanning just a few millimetres moves inside the lens. Their teeth are much smaller and scarcely visible to the naked eye. "Such precision-engineering applications require microgears that are still strong and wear-resistant enough to operate reliably for years," says Steffen Schack, Head of Business Unit iglidur Gears at igus. "For this reason, we have optimised our production to mechanically manufacture microgears with a module as small as 0.2 from high-performance plastic." The company uses iglidur bar stock, including iglidur A180 and iglidur A500. These materials are tribologically optimised: not only are they robust, but they also have very good friction and wear specifications. At the same time, they are much lighter than metal gears.

Teeth as fine as a human hair

With modules as small as 0.2, igus has further pushed the limits of its mechanical production. "The capability of manufacturing gear teeth that can hardly be seen with the naked eye sets us apart from many



competitors on the market," says Schack. "Despite their size, the teeth have excellent mechanical specifications. They allow reliable, highly precise movements in precision engineering."

Economical pricing even for small quantities

igus now offers customer-specific production of microgears made of high-performance plastics. "Our mechanical

production from iglidur bar stock allows economical pricing even for small quantities. We can produce large quantities with injection moulding - for automobile series production, for instance," says Schack. The gears are suitable for a wide range of applications that require finely coordinated movements in very small installation spaces, for instance microscopes and other optical instruments, miniature motors and microdrives.

MONARCH BST PARTICIPATES IN THE PRESTIGIOUS SMART LIFT & MOBILITY WORLD (SLMW) EXPO 2024

Monarch BST, an Inovance company, recently participated in the prestigious Smart Lift & Mobility World (SLMW) Expo 2024. Held from March 1st to 3rd, 2024, at the Bangalore

International Exhibition Centre (BIEC), Bengaluru, Monarch BST registered its prominent presence at Stand No. D1 and

D2 in Hall No. 1. The Smart Lift & Mobility World (SLMW) Expo 2024 promised to be a dynamic platform for industry leaders, innovators, and enthusiasts to converge and explore the latest advancements in the field.

Products on display included the SLC Slim Line Series, exclusive Elevator Drives, COP & LOP,

and other elevator accessories; NICE Integrated Solutions for Elevators, including the NICE3000, NICE1000, and NICE100+ series.

Anil Kumar, Managing Director of Inovance Technology India, said "As a pioneering force in the realm of elevator solutions, our attendees engaged with our team of experts, explored interactive demonstrations, and gained insights into the future of elevator solutions. Our stall exhibited the revolutionary advancements designed to enhance efficiency, safety, and accessibility in lift and mobility applications."



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