Recent Activities / Events

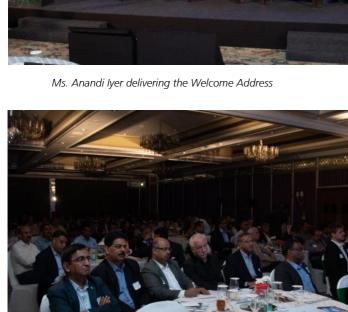
e-Newsletter - Issue 8/2018 Dec, 2018 Dec 5th 2018: 5th Fraunhofer Innovation and Technology Platform (5th FIT) - "Digitalization: The Game Changer"

(FIT) on Dec 5th 2018 in Hotel TAJ West End, Bangalore. 5th FIT thematically focused on Digitalization across the sectors Manufacturing, Energy, Buildings, Mobility, Space, Healthcare and Cultural Heritage with a view to catalyze the collaboration in this very important subject between India and Germany. Fraunhofer experts from various Fraunhofer institutes participated and showcased technology needs/solutions from a global perspective and suggested the road ahead for India-Fraunhofer cooperation. 5th FIT 2018 was supported by Federal Ministry for Economic Affairs and Energy (BMWi), Govt. of Germany. 5th FIT witnessed a participation of nearly 220 delegates, out of which 41% were mainly from the top level management i.e. CEOs, Managing Directors, Vice-Presidents, Advisors to the Govt. of India, 51% were of middle level management. The remaining 8% were mainly young research-

Fraunhofer Office India had organized the 5th edition of its biennial flagship event Fraunhofer Innovation and Technology Platform

The event began with an inaugural plenary session. Ms. Anandi Iyer, Director, Fraunhofer Office India welcomed the gathering and set the context of 5th FIT. Mr. Karl Ehlerding, Deputy Consul General, Consulate General of the Federal Republic of Germany in Bangalore, Dr. Eckart Bierduempel, Head of Multinational Networking, Fraunhofer Gesellschaft and Vice President of World Association of Industrial and Technological Research Organizations (WAITRO), Shri. Gaurav Gupta, Principal Secretary to the Government, Department of Information Technology, Biotechnology and Science & Technology, Government of Karnataka, Smt. Sukriti Likhi, Joint Secretary, Department of Heavy Industry, Ministry of Heavy Industries and Public Enterprises, Government of India, Prof. Dr. Thomas Magedanz, Director, Business Unit Software-based Networks, Fraunhofer FOKUS and Dr. Gopichand Katragadda, Group CTO, TATA Sons Ltd. were the distinguished personalities who shared their experiences and vision towards Digitalization during this session. The session culminated by a special address delivered by the Guest of Honour Dr. Gunther Grathwohl, Head of Inter-

national Digital Dialogue, German Federal Ministry for Economic Affairs and Energy (BMWi). Fraunhofer



Dignitaries lighting the lamp



5th FIT participants Photos from Inaugural plenary session

wohl, Smt. Sukriti Likhi, Dr. Gopichand Katragadda, Dr. Eckart

Bierduempel

for the data economy for modern day businesses followed the two technical sessions.

The event then progressed with two technical sessions. Session 1 focussed on Digitalization in Manufacturing and Healthcare. Mr. Franz-Josef Woestmann, Head of Department - Casting Technology and Lightweight Construction, Fraunhofer IFAM, Mr. Ashish Modi, Director - Center for Research and Application in India (CARIn), Carl Zeiss India Pvt. Ltd., Mr. Ashish Bhat, Head of Digital Factories Division, Siemens India Ltd. and Dr. Lorenz Granrath, Advisor, Asian Productivity Organization (APO) were the speakers in this session. Session 2 focussed on Digitalization in Energy, Mobility, Space and Efficient Buildings. Dr. Thomas Schlegl, Head of

L to R: Ms. Anandi Iyer, Prof. Dr. Thomas Magedanz, Dr. Gunther Grath-

Game Changer

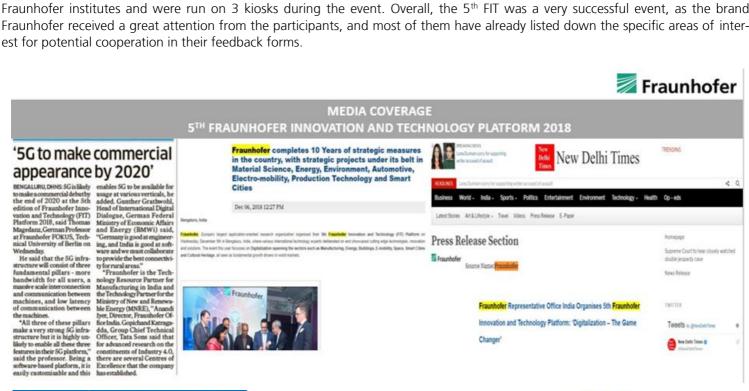
Department Energy System Analysis, Fraunhofer ISE, Dr. Thoralf Knote, Head of Department - Vehicle and Transport System Engineering, Fraunhofer IVI, Dr. Simon Schmidt, Scientific Head of Climate Culture Building, Fraunhofer IBP and Mr. Rainer Horn, Managing Partner, SpaceTec Partners – Munich were the speakers in this session. A special session showcasing Fraunhofer's competencies in digital technologies for restoration and protection of cultural property, and designing a smart and trustworthy architecture Game Changer

Session 1 speakers: 2nd from L to R: Mr. Franz-Josef Woestmann, Mr. Ashish Modi, Mr. Ashish Bhat, Dr. Lorenz Granrath A panel discussion in the valedictory session was organized to sketch the key takeaways from the conference, the necessary technology interventions and next steps for India - Fraunhofer cooperation in Digitalization. The panel comprised of eminent industry body representatives like Mr. Vinnie Mehta, Director General, Automotive Components Manufacturers Association (ACMA) and Mr. K S Viswanathan, Vice President - Industry Initiatives, Na-

tional Association of Software and Services Companies (NASSCOM), along with Prof. Dr. Thomas Magedanz, Director, Business Unit Software-based Networks, Fraunhofer FOKUS, Mr. Franz-Josef Woestmann, Head of Department - Casting Technology and Lightweight Construction, Fraunhofer IFAM. Ms. Anandi lyer, Director, Fraunhofer Office India moderated the panel discussion. Many meetings with potential clients and media interactions for Fraunhofer delegates were organized during the event. Interesting nathan, Ms. Anandi Iyer, Mr. Franz-Josef Woestmann, Mr. Vinnie Mehta

Session 2 speakers: L to R: Mr. Rainer Horn, Dr. Thomas Schlegl, Dr. Thoralf Knote, Dr. Simon Schmidt Valedictory Session: L to R: Prof. Dr. Thomas Magedanz, Mr. K S Viswa-

videos showcasing Fraunhofer's path-breaking technologies in Industry 4.0, Smart Energy Systems, Acoustic manufacturing of production processes and many more were requested from various est for potential cooperation in their feedback forms. pletes 10 Years of strategic me '5G to make commercial ntry, with strategic projects under its belt in cience, Energy, Environment, Automotive, appearance by 2020' or all users.



Fraunhofer

the machines.

"All three of these pillars make a very strong 8G infra-structure but its highly unlikely to enable all these three features in their 5G plastorm, said the professor. Being a software-based plastorm, its easily customisable and this has established.

In the machines.

"All three of these pillars play, Dyncorn, Park (Park), "Alam pyer, Dyncorn, "Alam pyer, Dyncorn, Park (Park), "Alam pyer, Dyncorn, Park (Park), "Alam pyer, Dyncorn, "Alam pyer, D

constituents of Industry 4.0, there are several Centres of Excellence that the company has established.

'5G to make commercial appearance by 2020'

Being a software-based platform, it is easily customisable and this enables 5G to be available for usage at various verticals, added he. ANI Fraunhofer organises 5th Innovation and Technology platform, Digitalization - The Game Changer Entertainment - Health - Science - Tech - Energy - Press Release - Videos New Delhi [India], Dec 6 (NewsVoir): Fraunhofer, Europe's largest application-oriented research organization organised their 5th Fraunhofer Innovation and Technology (FiT) Platform on Wednesday in India. Various international technology experts deliberated on and showcased cutting edge technologies, innovation and solutions. The event focused on Digitalization span the sectors such as Manufacturing, Energy, Buildings, E-mobility, Space, Smart Cities and Cultural Heritage, all seen as fundamental growth drivers in world markets. The symposium witnessed participation from leading CEOs, CTOs, senior policy makers and innovation experts representing the Government, Industry and the Research fraternity who are also stakeholders and decision makers in the impl various Government programs. Some of the dignitaries included: Dr. Gunther Grathwohl - Head of International Digital Dialogue, German Federal Ministry

of Economic Affairs and Energy (BMWi)

journey. Our institutes have been a long time trusted inno

fer Gesellschaft.

innovation ecosystem.

ofer has been active in India for over 10 years, initially with a Frau

With this event it will look to commemorate this milestone in the presence of industry leaders and key stakeholders from the government and industry. The 5th Fraunhofe Innovation and Technology Platform held in the morning was followed by a high-level panel discussion on 'Innovation - the Fulcrum of a Global Industry', featuring marquee industry leaders discussing successful innovation ecosystems across leading nations, the Ind

scenario - challenges and opportunities, trends and ways to scale up the Indian innovation

collaborating with some of the major players in the field of Material Science, Energy, Environment, Automotive, Electro-mobility, Production Technology and Smart Cities, while

tremendously over the last few years and we look forward to another successful decade of meaningful partnerships between the two great nations," said Prof. Frank Treppe.

Fraunhofer has been active in India for over 10 years, initially with a Fraunhofer Senior Advisor 2012 with a Fraunhofer Representative Office supporting the activities of the Fraunhofer Institu this event it will look to commemorate this milestone in the presence of industry leaders and k stakeholders from the government and industry. The 5th Fraunhofer Innovation and Technolog held in the morning was followed by a high-level panel discussion on 'Innovation - the Fulcra

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institutes have been a long time trusted innovation partner in India, collaborating with some o

players in the field of Material Science, Energy, Environment, Automotive, Electro-mobility, Pro Technology and Smart Cities, while working with Industry, Government and Public Sector. Our clients have grown tremendously over the last few years and we look forward to another succe

decade of meaningful partnerships between the two great nations." - Prof. Frank Treppe, Ma Director Political & International Affairs and Associate Board Member, Fraunhofer Gese

working with Industry, Government and Public Sector. Our Industry clients have grow

Managing Director Political & International Affairs and Associate Board Member,

ofer has been involved in India for 10 years now, and it has been such an exciting

sor and since 2012 with a Fraunhofer Representative Office supporting the activities of

5G is likely to make a commercial debut by the end of 2020 at the 5th edition of Fraunhofer Innovation and Technology (FIT) Platform 2018, said Thomas Magedanz, German Professor at Fraunhofer FOKUS,

Elaborating about the 5G, which is a software-based communication platform, the professor said that the 5G infrastructure will consist of three fundamental pillars which are - a lot more of bandwidth for all users, a massive scale interconnection and communication between machines, and low latency of the

"All three of these pillars make a very strong 5G infrastructure but it is highly unlikely to enable all three

of these features in their 5G platform, " said the professor at the event.

Technical University of Berlin on Wednesday.

communication between the machines.



Business Standard

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Fraunhofer organises 5th

Game Changer

Innovation and Technology

platform, Digitalization - The



L to R: Ms. Saloni Malhotra, Mr. Anantha Sayana, Ms. Anandi Iyer, Mr.

Thomas Fuhrmann, Dr. V. Sumantran, Dr. Makarand Phadke

SELECTED HIGHLIGHTS

Fraunhofer Office India: Wall of Fame

Fraunhofer-Wipro Technology Day was organized on Dec 6th 2018 in Wipro Campus, Electronic City, Bangalore. Fraunhofer and Wipro intend to enter into a cooperation in the areas of Industry 4.0, ICT / IoT for Smart Energy, Smart Buildings and Smart Cities.

interactive session between the participants and panellists was inclined towards realizing the benefits derived from developing and

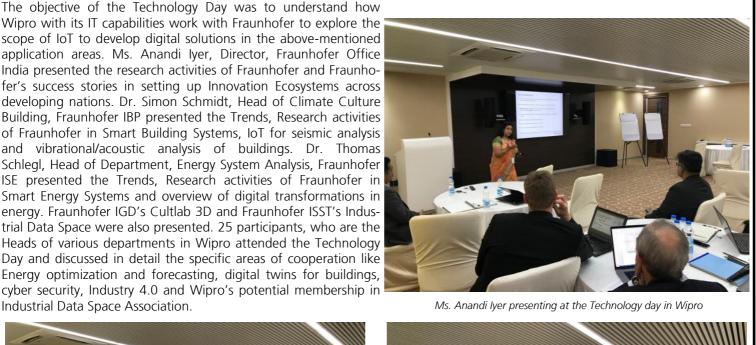


Dec 6th 2018: Fraunhofer - Wipro Technology Day

Industrial Data Space Association.

Panel Discussion on Innovation - the Fulcrum of a Global Industry

Fraunhofer



Dr. Simon Schmidt presenting at the Technology day in Wipro

Fraunhofer

VATION, TECHNOLOGY AND ENTERPRISE



transferring sustainable innovative practices in society.

Dr. Simon Schmidt presenting at FORSITE

Kochi and draw out the critical areas of interventions.



Presenting the results to Mr. APM Mohammed Hanish (C)

Visit to Central Kochi

Visit to local market of Kochi

Visit to KMRL Command Control Centre

Ms. Anandi Iyer along with other panellists in the inaugural session

for Rejuvenation and Urban Transformation (AMRUT). additional relevant stakeholders to be engaged to develop a detailed feasibility study.

2. Inclusive Housing Development and Smart Buildings

4. Environmental Protection (Water and Waste Management)

Dr. Thomas Schlegl presenting the results of the working group on Energy

CSML Team explaining the Area Based Development to Fraunhofer Team

Visit to low income houses and local market

Visit to Solar Project of KMRL

Dec 10th 2018: Launch of Kochi Smart City Innovation Lab

for delivering the potential best practices to Kochi.

of Kochi Metro Rail Ltd.

1. Renewable Energy

Disaster Management

Participants of the Stakeholders Workshop

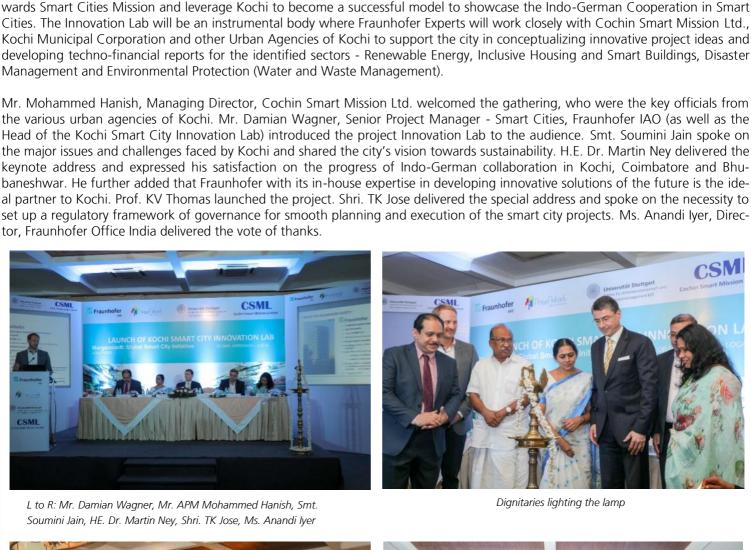
Group Photograph with Fraunhofer and CSML Teams Group Photograph with Workshop Participants

Following the stakeholders workshop of Dec 7th, CSML had organized on-site visits for Fraunhofer Smart City Team to Kochi Central Business District, low income house clusters, local markets, heritage sites, experience of Kochi MRTS and a visit to Solar Project

Dec 8th 2018: On-site visits for Fraunhofer Smart City Team organized by Cochin Smart Mission Ltd. (CSML)

The workshop progressed with specific working group discussions on the above identified areas and priorities were set taking into account the interest of the city and stakeholders. The results were then presented to Mr. APM Mohammed Hanish, Managing Director, Cochin Smart Mission Ltd. by the moderator of the each working group and next steps with the timelines were discussed

Workshop participants setting up priority to the areas identified



Group photograph of the dignitaries with Fraunhofer and Cochin Smart Mission Ltd. teams Standards'. The objective was to analyze and address the challenges faced by the Indian solar industry and also develop recommendations. Ms. Anandi Iyer, Director, Fraunhofer Office India delivered the welcoming address with a brief introduction of Fraunhofer. Shri, Jatindra Nath Swain, Managing Director, Solar Energy Corporation of India (SECI), Govt. Of India delivered keynote address mentioning SECI's initiatives and the current status of the Indian PV sector quality aspects. Dr. Jochen Rentsch, Head of Department - PV Production Technology, Fraunhofer ISE presented on 'Current technology options across the PV value chain' and 'PV module quality standards and reliability as the differentiator for Indian PV Manufacturers'.

Dr. Jochen Rentsch presenting at Intersolar 2018 2nd from R: Shri, Jatindra Nath Swain, 3rd from R: Ms, Anandi Iver, 3rd from L: Dr. Jochen Rentsch along with other speakers Fraunhofer Office India received a request to be a speaker at the Intersolar 2018 in the session on "AgroPV + India's Solar Pumping

requests other Fraunhofer institutes engaged in Industry 4.0 activities to foresee this opportunity for exhibiting their technologies as well. Please get in touch with Mr. Rohit Rohilla, Manager - Production Technology, Fraunhofer Office India at <u>rohit.rohilla@fraunhofer.in</u> to know more details of participation. Visit of Prof. Frank Treppe, Managing Director Political and International Affairs & Associate Member of the Board, Fraunhofer

Gesellschaft to India.

Feb 19th - 20th 2019:

a presentation in this conference.

Please get in touch with Mr. Aditya Fuke, Manager - Electronics, Fraunhofer Office India at aditya.fuke@fraunhofer.in for your

interest to participate as a speaker. IGSTC 2+2 Call 2018 Indo-German Science & Technology Centre (IGSTC) invites First Stage Proposals for joint R&D&I projects of industrial relevance Sustainable chemical process technologies Technologies to reduce / mitigate water and air pollution.

Kochi Municipal Corporation and other Urban Agencies of Kochi to support the city in conceptualizing innovative project ideas and developing techno-financial reports for the identified sectors - Renewable Energy, Inclusive Housing and Smart Buildings, Disaster Management and Environmental Protection (Water and Waste Management). Mr. Mohammed Hanish, Managing Director, Cochin Smart Mission Ltd. welcomed the gathering, who were the key officials from the various urban agencies of Kochi. Mr. Damian Wagner, Senior Project Manager - Smart Cities, Fraunhofer IAO (as well as the Head of the Kochi Smart City Innovation Lab) introduced the project Innovation Lab to the audience. Smt. Soumini Jain spoke on the major issues and challenges faced by Kochi and shared the city's vision towards sustainability. H.E. Dr. Martin Ney delivered the keynote address and expressed his satisfaction on the progress of Indo-German collaboration in Kochi, Coimbatore and Bhubaneshwar. He further added that Fraunhofer with its in-house expertise in developing innovative solutions of the future is the ideal partner to Kochi. Prof. KV Thomas launched the project. Shri. TK Jose delivered the special address and spoke on the necessity to set up a regulatory framework of governance for smooth planning and execution of the smart city projects. Ms. Anandi Iyer, Direc-CSM Dignitaries lighting the lamp Audience Dec 11th - 13th 2018: Intersolar India 2018, Bangalore The Intersolar India is one of the largest exhibition and conference for the solar industry in India. This year the conference focussed on the areas of photovoltaics, energy storage systems and solar thermal technologies. Fraunhofer ISE was one of the knowledge partners to Intersolar 2018. On the first day (Dec 11th 2018) of the conference, Fraunhofer ISE and Solar Energy Corporation of India (SECI), Govt. of India had jointly organized a Workshop on 'Solar Energy in India - PV Manufacturing and Quality Assurance &

Fraunhofer has partnered with Cochin Smart Mission Ltd. to setup a Smart City Innovation Lab in Kochi with funding from the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU) Climate Initiative (IKI). This partnership is in the ambit of 'Morgenstadt Global Smart City Initiative' - A Smart City project coordinated by Fraunhofer across Europe. The project Kochi Smart City Innovation Lab was launched on Dec 10th 2018 in the Gateway Hotel Marine Drive, Kochi in presence of H.E. Dr. Martin Ney, German Ambassador to India, Prof. KV Thomas, Member of Parliament, Ernakulum District, Smt. Soumini Jain, Hon. Mayor, Kochi Municipal Corporation and Shri. TK Jose, Additional Chief Secretary, Local Self Government Department Kerala. The Innovation Lab aims to provide state-of-the-art and long term vision tools to support and strengthen Kochi's current approach to-

- The Best of Two Worlds" held on Dec 12th 2018. On behalf of Fraunhofer ISE, Mr. Sanmati Naik, Manager—Energy (RE) delivered a presentation on Agro-Photovoltaics: Combining PV with Crops - Harvesting for Power and Food. Also on the sidelines of Intersolar event, Dr. Rentsch and Mr. Naik attended Solar Business Club organized by National Solar Energy Federation of India (NSEFI), Indo-German Energy Forum (IGEF), The Energy and Resources Institute (TERI) and Indo-German Chamber of Commerce (IGCC). The Fraunhofer team visited the Intersolar exhibition and also had brief meetings with the potential clients, where they discussed business opportunities / possible cooperation with Fraunhofer in the areas of PV and RE. **Upcoming** Jan 24th - 30th 2019: Indian Metal Forming Exhibition (IMTEX) 2019 organized by Indian Machine Tool Manufacturers' Association (IMTMA), Bangalore IMTEX is a flagship event for the Indian metal cutting industry organized once a year. It is South and South East Asia's apex exhibition showcasing the latest trends as well as technological refinements from India and other global players. The mega event attracts visitors from a wide spectrum of manufacturing and ancillary industries including key decision and policy makers as well as industry captains who are keen to source latest technologies and manufacturing solutions for their product lines. For the last 6 years, Fraunhofer has been showcasing its capabilities in Lightweight technologies in Automotive components, forming technology and additive manufacturing along with select exhibits at IMTEX, and every year, Fraunhofer has received a



in 2+2 Mode of Partnership in the following thematic areas: 1. Sustainable Production 2. Clean and Green Technologies Solid waste management technologies (electronic, electrical, biomedical, industrial and urban solid waste). Deadline to submit first stage proposals: Feb 4th 2019 Visit http://www.fraunhofer.in/ Fraunhofer Office India e-Newsletter is a monthly feature and a compilation of Fraunhofer Activities and Industry Specific News Updates of India. To unsubscribe from this e-Newsletter, please email to aditya.fuke@fraunhofer.in

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tory of the Future model. This will be an ideal platform for various Fraunhofer institutes to present their Industry 4.0 topics and showcase exhibits in the areas of industrial processes, human-machine interaction, autonomous systems, digital twins etc. Fraunhofer Office India in coordination with Fraunhofer IWU and IPT is planning this ambitious association with IMTMA, and

Indo-German Summit on Green Building and Sustainable Energy with the focus on 'Eco-technological and Digital Solutions for Smart Cities' organized by Rajagiri School of Engineering and Technology (RSET) in Kochi. RSET has invited Fraunhofer to deliver