

IET FUTURE TECH PANEL

2021
ANNUAL REPORT





Message from the Chair

Dr Rishi Bhatnagar



Message from the
Country Head

Shekhar Sanyal

Dear members of the IET Future Tech Panel,

Wish you a very happy and prosperous 2022! It is a great way to begin the year by looking back at everything this group has been able to achieve in 2021 - in what has been another challenging year, globally.

I would like to begin by thanking each and every one of you for all the hardwork and energy you put into our activities last year. This was a milestone year for the volunteers of the IET - by joining in the 150th year celebrations of this esteemed institution - and as a volunteer - I am honoured to have all of your support in delivering the mission we have for this group.

Looking back at 2021 - we have had some monumental achievements:

1. For the first time ever, we were credited and acknowledged by the Government of India as contributors to national policy - the national blockchain strategy document.
2. We were covered 24 times by national media for our views and expert opinions
3. Our volunteers have authored 13 whitepapers and 3 advisories this year
4. Our panels have also put together 11 IET India Digital Conversations and curated over 17 hours of content on cutting edge topics.
5. Over 6500 people showed interest in our discussions and 1500 attendees listened to our conversations

These are great numbers and even greater impact on the ecosystem and I am grateful to all of you for all your support.

Looking forward to 2022, we have a number of key activities lined-up aligned to our charter. I am also encouraged by the fact that you have all aligned your plans to the IET's societal challenges of digital futures, healthy lives, productive manufacturing, sustainability and climate change and people centric infrastructures.

I look forward to some of our headline projects including the disease surveillance project, industry 4.0 video series for MSMEs, future tech faculty development programme, digital twin paper, Vision 2035 for cities and data science internships for water challenges taking off soon and all the great work that will follow.

Like I always say, we are a team of volunteers and there is no limit to what a team of passionate volunteers like us can do - to make a positive difference and engineer a better world!

Dear members of the panel,

The past year was an extraordinary one with unprecedented uncertainties leading to profound changes to lives of people across the world. It was a year in which many of us faced difficult personal challenges and loss while businesses grappled with economic fallout of the pandemic. In spite of this, as an organisation, we were focused towards overcoming the challenges and thriving during and post the pandemic. The tough times taught us to emerge stronger, more focused and better positioned to deliver our vision to engineer a better world.

Our volunteers played an incredible role in helping us achieve this by demonstrating honest passion, positivity and resilience to support the technology innovation needs of the society.

As I look back on the last year, it is remarkable how much our volunteers of the IET Future Tech Panel persevered and accomplished. The number of members and working groups of the IET Future Tech panel and the knowledge output produced by them, touched an all time high. Their knowledge, engineering expertise and experience, helped us engage and influence the government and other stakeholders by providing proactive inputs for policy frameworks.

Our volunteers were an integral part of our 150th years anniversary celebrations involving themselves in the various exciting projects that we launched, like the IET India Awards, IET India Scholarship Awards and the movie celebrating Indian engineering.

We also launched the IET's 2030 strategy for the IET globally which articulates our commitment to accelerate the pace of development and adoption of technology. We also released the five important societal challenges which we will work hard to solve during this period - sustainability and climate change, people centric infrastructure, digital futures, healthy lives and productive manufacturing. I personally believe that our volunteers are the front and centre of us making an impact in these areas and look forward to all of you guiding us in creating and delivering sustained outcomes for all relevant stakeholders in each of these areas. I am confident that with our volunteers, we will deliver on our strategy, reinvent the future and make a difference to the world.

I hope you enjoy reading this annual report that we have put together to spotlight the great achievements and impact created last year.

This Annual Report of 2021 covers all that happened in 2021 in the world of the IET Future Tech Panel. It gives glimpses of the work done by our volunteers, the knowledge outputs produced and key highlights of the panel's involvement in furthering IET's vision to engineer a better world.

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ADVISORY BODY

The Advisory body of the IET Future Tech Panel advises on strategic directions as well as ways to stay relevant



Sir Robin Saxby
Ex-Founding CEO,
ARM Holdings



Dr Richard Soley
Executive Director, Industrial
Internet Consortium



Jim Morrish
Founder,
Transforma Insights



Prof Jeremy Watson
Chief Scientist and
Engineer BRE



Shri N Sivasailam
Former Special Secretary
(Logistics),
Ministry of Commerce, Gol



Aruna Sundararajan IAS
Ex-Secretary, Department of
Telecommunications, Gol



Luis Jorge Romero
Director General
ETSI



TV Ramachandran
Honorary Fellow of
the IET



Dr Gopichand Katragadda
Founder, Myelin Foundry



Vijay Karia
Chairman, Ravin Group



Indra Menon
Executive Director & President,
Senapathy Whiteley Pvt Ltd

IET Future Tech Core Panel Members



Dr Rishi Bhatnagar
Chair, IET Future Tech Panel & President, Aeris Communications India



Shekhar Sanyal
Country Head and Director, IET India



Ravi Pagar
Group COO, Managing Director, DTDS Technology Pte Ltd



Ravi Ramaswamy
Sr. Director & Head, Health Systems & Philips Innovation Campus



Dr Pradeep Srivastava
ED TIFAC



Prashant Tripathi
Head-IoT technology Pentair



Dr Purnendu Sinha
Technology Leader - IoT & Analytics, Group Technology & Innovation Office, Tata Group



Gnaneshwar Kambali
General Manager for IIoT Strategy and Solution, Hitachi



Dinesh Sharma
Director, Standards Public Policy, EU Project SESEI



Sushil Kumar
DDG - IOT , TEC, DoT



Krishna Sirohi
Founder & President i2TB Research Foundation



Digvijay Choudhari
CEO & MD, Sobus Insight Forum



Indrajit Chatterjee,
Board Member- Wheels Global Foundation-India



Monika Gupta
VP, Capgemini Global 5G Engineering Lead



Vijay Kumar
Ex-Sr VP, Tech Mahindra



Vivek Singh
CEO, Innovant & Director, SSF



Himanshu Kumar,
Founder, tax4Wealth



Ajay Gupta
Partner & Head Digital & Technology, Infrastructure, Government & Healthcare, KPMG, India



Arvind Tiwary
Chair, TiE IoT Forum & Founder, SangEnnovate



Vijay Parihar
National Logistics Head, Philips India Limited



Dr Kumudhini Ravindra
CSO and Co-founder, Inytu Inc



Anil Kadam
GM, Schneider Electric

Technical experts

Artificial Intelligence, Robotics, Blockchain, Open Digital Innovation



Sameer Dhanrajani,
Chief Executive Officer, AIQRATE



Sanjay Ahuja,
Founder & CEO, Cionlabs



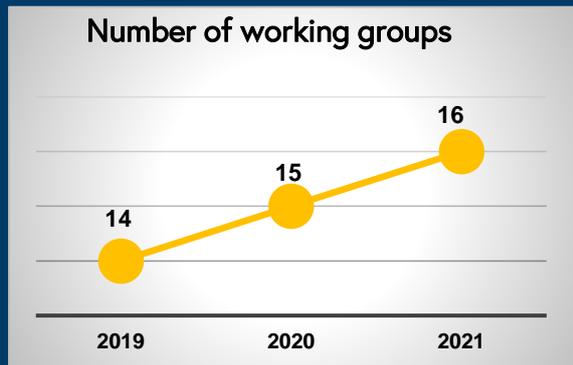
Sharat Chandra,
Blockchain & Emerging Tech Evangelist, Advisor EarthID



VSR
Chairman & MD, Chief Digital Consultant, BT & BT

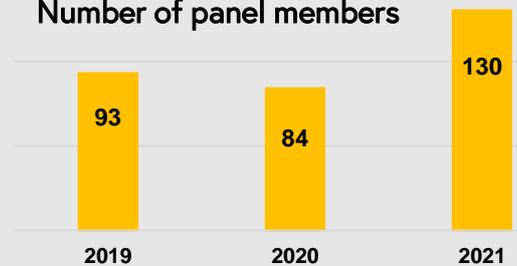
IET Future Tech Panel's Journey

The following graphs present the growth of the IET Future Tech Panel from 2019 to 2021 on parameters such as number of working groups, member population and knowledge outputs produced



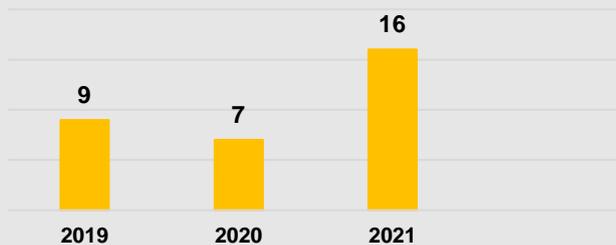
The number of working groups have been increasing over the years

Number of panel members



55% increase in the number of panel members as compared to 2020

Number of Whitepapers, position papers and recommendations produced

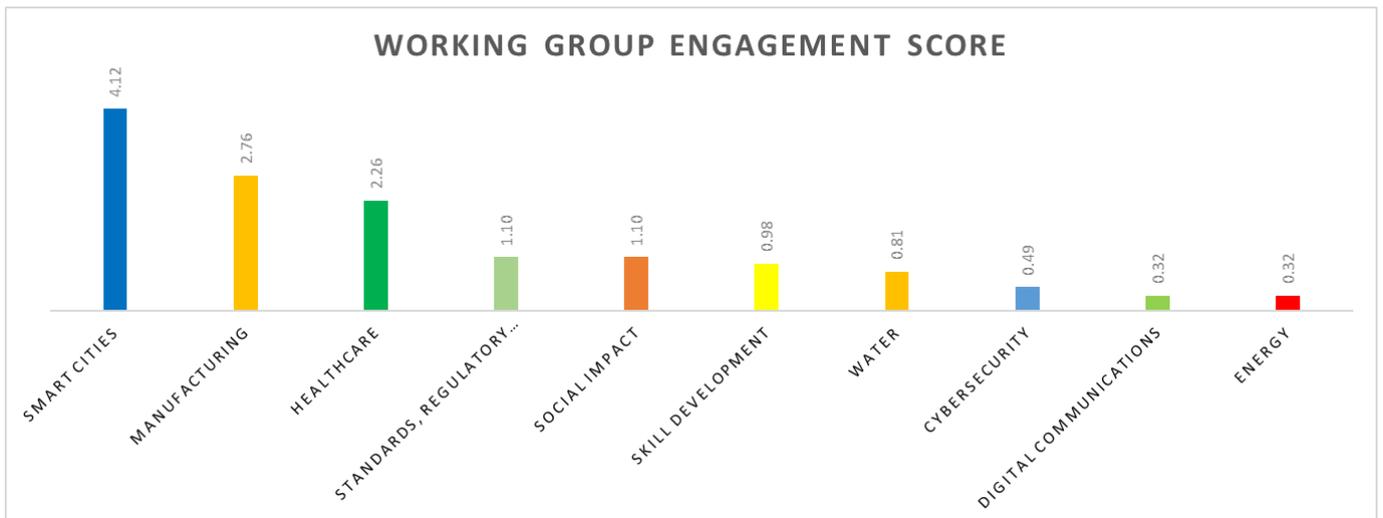


129% increase in the number of whitepapers, position papers and recommendations produced since 2020

Combined reads/views/traction

9389

Between 2020 and 2021, we have had the largest number of combined reads/ views/ traction ever from all the knowledge outputs that have been produced by the panel



Methodology: Cumulated weighted average of active panel members, knowledge outputs created, charter adherence, strategic initiatives aligned with the IET, number of IET India digital conversations/events led and new members added to the team.

Highlights

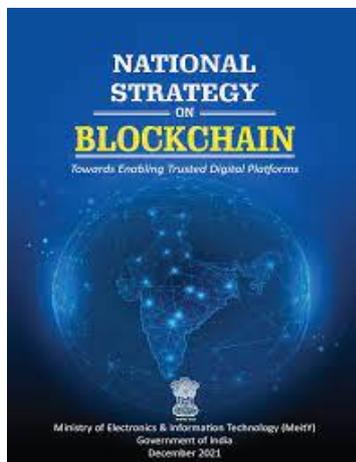
- Smart cities, Manufacturing and Healthcare working groups have managed to bring on board maximum number of members representing the ecosystem, produce knowledge reports, run IET India digital conversation series and lead events at the IET. **These working groups have managed to get a tick against all their proposed areas of delivery and focus.**
- BFSI and Retail working groups had their respective chairs join the panel in the 3rd quarter of this year. While the charters have been submitted for these working groups, in pursuit of the purposes stated in the same, they are working towards building their team. Artificial Intelligence, Blockchain, Robotics and Open Digital Innovation –our four relatively new working groups have not been considered for this exercise.

IET FUTURE TECH PANEL HIGHLIGHTS 2021

IET FUTURE TECH PANEL INPUTS IN THE NATIONAL BLOCKCHAIN STRATEGY

IET India was recognised as one of the contributors to the Ministry of Electronics and Communications' **National Strategy on Blockchain**, which was released on December 3, 2021. The policy consists of inputs collated from eight volunteers from IET in the areas of healthcare, smart cities, cybersecurity and standards to feed into this important strategy document for India:

- Ravi Ramaswamy, Chair – Healthcare Working Group, IET Future Tech Panel; CEO, RV Consultants
- Dr Vikram Venkateswaran, Member – Healthcare Working Group, IET Future Tech Panel; Founder and Editor Healthcare India
- Ajit Ashok Shenvi, Member – Healthcare Working Group, IET Future Tech Panel; Director, Big Data & Analytics, Philips Innovation Campus
- V Srinivasa Rao (VSR), Chair – Smart Cities Working Group, IET Future Tech Panel; Chairman & Managing Director, Chief Digital Consultant- BT & BT
- Dinesh Chand Sharma, Chair – Standards, Legal and Regulatory Working Group, IET Future Tech Panel; Director, Standards Public Policy, EU Project SESEI
- Sharat Chandra, Chair- Blockchain Working Group, IET Future Tech Panel; President GBA India, Advisor – EarthID
- Arvind Tiwary, Chair – Cybersecurity Working Group, IET Future Tech Panel; Chair, TiE IoT Forum and Founder, SangEnnovate
- Arnab Chattopadhyay, Member – Cybersecurity Working Group, IET Future Tech Panel; Associate Director, IBM



IET FUTURE TECH PANEL CHAIR'S MEETING WITH SHRI RAVI SHANKAR PRASAD

In September, Dr Rishi Bhatnagar, Chairman, IET Future Tech; President, Aeris Communications met Shri Ravi Shankar Prasad, who has been the Union Minister holding the Law and Justice, Electronics, Information Technology and Communications portfolios between 2014 and 2021 to tell him about the IET Future Tech Panel and the kind of work the panel working groups have been doing. In 2016 and 2018, Shri Ravi Shankar Prasad ji had very kindly sent in a video message for the 1st and 3rd edition of the IoT India Congress that we had hosted in Bengaluru and he has promised to join us in our IET Future Tech Congress event that is being planned for 2022

IET FUTURE TECH PANEL RESPONSE TO CONSULTATION PAPERS RELEASED BY MINISTRY OF HEALTH AND FAMILY WELFARE, GOVERNMENT OF INDIA

Experts of the IET Future Tech Panel's Healthcare Working Group presented their comments for two consultation papers released by the Ministry of Health and Family Welfare, Government of India. These invited comments on certain strategic and functional fundamentals of the Health Facility Registry and Healthcare Professional Registry. The inputs were provided by:

- Ravi Ramaswamy, Chair – Healthcare Working Group, IET Future Tech Panel; CEO, RV Consultants
- Dr Vikram Venkateswaran, Member – Healthcare Working Group, IET Future Tech Panel; Founder and Editor Healthcare India



IET INDIA DIGITAL CONVERSATION SERIES LED BY THE FUTURE TECH PANEL

This year, we ran 18 IET India Digital Conversations (DCs) and of these, 11 were led by the IET Future Tech panel working groups – Healthcare (3), Smart cities (3), Manufacturing (3), Social Impact (2); while the remaining 7 were driven by the events team and sponsors. These 11 events led by the panel had 51 speakers and close to 1500 attendees.

Atleast 12 DCs from the 16 planned for next year, will be driven by the panel. This is already in progress with the working groups presenting topics of their choice that are future focused technology concepts whose applications and relevance for India can be demonstrated, whose focus coincides with the working groups' focus and aligns with their respective charters.



IET FUTURE TECH PANEL IN THE MEDIA

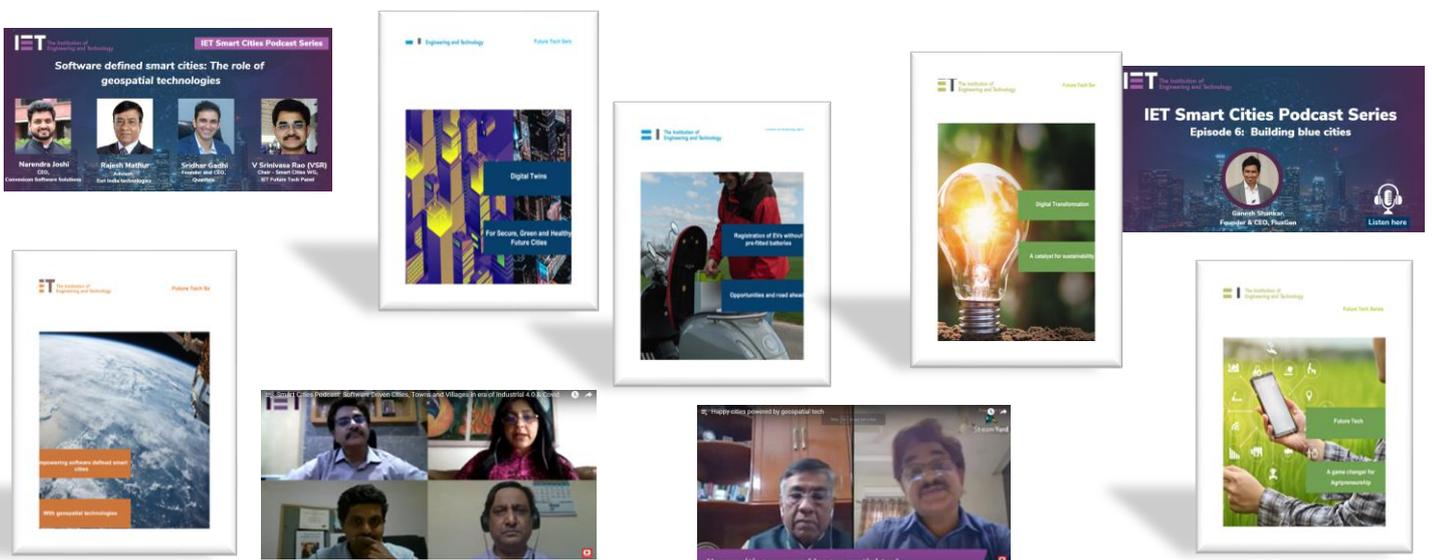
9 of our IET Future Tech panel experts presented their views in 24 authored articles, industry stories and news articles this year across 30 leading national and regional online and offline media publications such as ANI News, APN News, Bhaskar Live, Big News Network, Bizwire Express, Business Standard, CIOL, City Air News, Dailyhunt, Data Quest, ET CIO, Financial Express, HT Syndication, India Education Diary, India Info Line, India News Republic, India Times, India Today, LatestLy, Lokmat, News Kerala, The Ceo Magazine, The Economic Times, The Financial Express, The Hans India, The Quint, The Week, Times of India, Yahoo and Zee 5.



KNOWLEDGE OUTPUT PRODUCED BY THE IET FUTURE TECH PANEL

Whitepapers and policy inputs: This year we had 16 whitepapers, proactive government advisories and approach papers authored by the experts of the IET Future Tech panel across different working groups, including the Chair of the IET Future Tech Panel and the Country Head and Director of IET India. The working groups that contributed include Healthcare, Manufacturing, Water, Smart Cities, Cybersecurity and Standards, Legal and Regulatory.

Podcasts and Workshops: The Smart Cities working group produced 12 podcasts and webcasts this year. They also conducted a workshop on systematic innovation and design thinking for the members and a 'Vision 2035' workshop which featured as part of their Smart Connectivity initiative that will release a whitepaper to help visualise the most desirable smart city of 2035.



IET FUTURE TECH PANEL'S PARTICIPATION IN IET INDIA'S 150 YEARS CELEBRATION

September and October 2021 were the peak of IET's 150th year anniversary celebration activities with most of them being around the IET India Scholarship Awards that was re-launched this year in a digital format to commemorate the IET's 150th anniversary. After finding our 4 Regional Round winners (and National Finalists), on 27th and 28th of October, we concluded the National Finals of the IET India Scholarship Awards. Many of our volunteer members of the IET Future Tech panel who were a part of the judging process in the regional round, mentored the finalists and coached them individually to equip them with tips that could help them make their presentation better and also become a better presenter themselves. We had the following volunteers as a part of the jury panel for the IET India Scholarship Awards contributing with close to 110 hours of volunteering as judges and we would like to extend our heartfelt thanks to them for helping us with this journey:

- Ajith Chandran, Member- Water WG, IET Future Tech Panel; Managing Director, Development Interlinks International Pvt Ltd
- Arnab Chattopadhyay, Member- Cybersecurity WG, IET Future Tech Panel; Vice President Engineer, Firecompass
- Chethan Seegehalli, Member- Manufacturing WG, IET Future Tech Panel; Head Digitalization and Technology Solutions and Solution Engineering, Siemens Technology
- Dr Vikram Venkateshwaran, Member- Healthcare WG, IET Future Tech Panel; Founder and Editor Healthcare India
- Hari Kumar, Director, Member- Smart Cities WG, IET Future Tech Panel; Sustainability Problem Solver (OPC) Pvt. Ltd.
- Kamala Rai, Member- Healthcare WG, IET Future Tech Panel; Vice-President Sr Global Program Head - Global Health Development Unit, Novartis
- PavanKumar PVN, Member- Smart Cities WG, IET Future Tech Panel; Sr. Director & Chief Expert | DSC Industrial IoT Product Management | SAP Labs India
- Purnendu Sinha, Chair- Manufacturing WG, IET Future Tech Panel; Technology Leader, Group Innovation, Tata Sons
- Rahul Nabar, Member- Manufacturing WG, IET Future Tech Panel; Adj. Associate Professor, Dept. of Chemical Engineering-IIT Bombay / Engineering Consultant
- Rajesh Mathur, Member- Water WG, IET Future Tech Panel; Advisor, Esri India technologies Ltd
- Rakhee Chachra, Member- Smart Cities WG, IET Future Tech Panel, Business Development- 5G Telco Cloud, IBM
- Rangaraj M.S, Member- Social Impact WG, IET Future Tech Panel; Chief Digital Officer, FlamencoTech, Advisor and consultant GMR Group for Digital transformation for GMR Airports
- Ravi Ramaswamy, Chair- Healthcare WG, IET Future Tech Panel; CEO, RV Consultants
- Shekhar Priyadarshree, Member- Social Impact WG, IET Future Tech Panel; Management Consultant
- Shikha Pillai, Member- Healthcare WG, IET Future Tech Panel; Head Strategy – Siemens Healthineers Development Center
- Shivoo Koteswar, Member- Skills WG, IET Future Tech Panel; Group Director, DG Digital implementation Site - Leader and R&D Head, Synopsys Inc
- Shreyas Jayasimha, Member- Standards, Legal and Regulatory WG, IET Future Tech Panel; Advocate, Aarna Law
- Smitha Hemmigae, Member- Skills WG, IET Future Tech Panel; Head of Marketing, ANSR
- Soutik Mondal, Member- Smart Cities WG, IET Future Tech Panel; Program Manager, Information Services Group
- Vasantha Natesh, Member- Smart Cities WG, IET Future Tech Panel; Vice-President, FluxGen Engineering Technologies
- Vijay Kumar, Chair- Skills WG, IET Future Tech Panel; Ex- Senior VP, Tech Mahindra
- Vishnu Ram, Member- Standards, Legal and Regulatory WG, IET Future Tech Panel; Technology Consultant (Services and Solutions) at TSDSI and also a Consultant for ITU-T driving the focus group on AI/ML

WORKING GROUPS

HIGHLIGHTS 2021

Smart Cities

Chair



Ajay Gupta
VP and head of Strategy & Sales, SCSTECH India



Rajesh Bhatia
Chief Technology Officer, Genpact



Rakhee Chachra
Business Development- 5G Telco Cloud, IBM



Ganesh Shankar
Founder and CEO, FluxGen Engineering Technologies



Kamlesh Naidu
General Manager - Digital Services, Ericsson



Sharad Jahagirdar
Assistant Manager, Information Services Group (ISG)



Soutik Mondal
Program Manager, Information Services Group



Naga Sravani
Tech, sustainability enthusiast & software engineer; Blockchain expert



Vasantha Subbiah
Vice-President, FluxGen Engineering Technologies



PVN Pavan Kumar
Sr. Director & Chief Expert | DSC Industrial IoT Product Management | SAP Labs India



Hari Dilip Kumar
Director, Sustainability Problem Solver (OPC) Pvt. Ltd.



Vinay Rajagopal
Technology Lead Partner Solutions & Architecture, Red Hat



Aravind Saroke
Senior Manager - Presales and Solutions | IoT and Smart Cities, Wipro Limited

KEY HIGHLIGHTS

Structure of the Working Group

1

- 13 members

Initially, the team was being led by VSR, Chairman & MD, Chief Digital Consultant, BT & BT as the Chair and Ajay Gupta, VP and head of Strategy & Sales, SCSTECH as the Co-Chair. VSR has moved to lead the newly formed Open Digital Innovation working group as its Chair.

Events led

2

Led 3 IET India Digital Conversations on:

- Future Cities - Autonomous administration with Blockchain, IoT and AI
- Intelligent Transportation Systems & Internet of Roads
- Need for Water Twins - City Water Management System using Digital Twins

Knowledge output produced

3

- Produced 12 podcasts/webcasts with a total of close to 600 unique views and listens
- Provided inputs for the draft National Strategy on Blockchain by Ministry of Electronics and Information Technology (MeitY), Government of India
- Released a whitepaper on Geospatial Technologies Empowering Smart Cities in association with Rajesh Chandra Mathur, Member- Water Working Group, IET Future Tech Panel; Advisor, ESRI India technologies

Upcoming

- Release India's first water digital twin whitepaper and Vision 2035 Smart Cities document

Workshops conducted

4

- Conducted a virtual ideation workshop titled 'Vision 2035-Software defined smart cities' which invited ideas from the IET Future Tech panel members on what the cities of 2035 would look like. This aimed at tapping into the collective intelligence, experience and imagination of the group to help visualise the smart city of 2035- a whitepaper in progress from the team
- Invited Dr Kumudhini Ravindra, Chair- Energy Working Group, IET Future Tech Panel; CSO and Co-founder, Inytu Inc to drive a virtual workshop on systematic innovation and design thinking for the members

Media mentions

5

Ganesh Shankar and VSR (previous Chair of the Smart Cities Working Group) featured in authored articles and industry stories by leading publications such as India Today, CIOL, APN News, India Education Diary, City Air News, India News Republic

Manufacturing

Chair



Dr Purnendu Sinha
Technology Leader, Group
Innovation, Tata Sons

Co-Chair



Gnaneshwar Kambali
General Manager for IIoT
Strategy and Solution,
Hitachi



V Ranganathan Iyer
CIO, JBM Group



Chethan Segehalli
Head Digitalization and
Technology Solutions and
Solution Engineering,
Siemens Technology



Lt Col Ashutosh Verma (Retd)



Sanjeev Gupta
Vice President - Engineering and
R&D, Capgemini



Thilak Ramanna
Country Head - India and
ANZ, The Qt Company



Dr (Prof) Rahul Nabar
Adj. Associate Professor,
Dept. of Chemical
Engineering-IIT Bombay /
Engineering Consultant



Dr A Balamurugan
Director, Growth Hacking Partners



Veena Ravishankar
Consultant (Digital), TATA
Consulting Engineers (TCE),
Bangalore

KEY HIGHLIGHTS

1

Structure of the Working Group

- 10 members

Earlier this year, the panel lost a long standing member, mentor and friend to many in the team, Lux Rao, Senior Director & Head – Solutions & Digital Transformation, NTT India who was also the Co-Chair of the Manufacturing WG. Gnaneshwar Kambali was nominated to take up the role of a Co-Chair in March 2021.

2

Events led

Led 3 IET India Digital Conversations on:

- Confluence of digital transformation and Industry 4.0
- Embracing Industrial Automation and Robotics – Guidance for MSMEs
- Human-Machine Interaction (HMI) in Digital Manufacturing

3

Knowledge output produced

- Released 3 whitepapers this year covering various aspects of technologies in manufacturing:
 - Technology considerations for MSMEs;
 - Cognitive maintenance for improving the reliability of defence systems leveraging AI & IoT;
 - Tracking and tracing 4Ms

Upcoming:

- The working group has initiated short 2-3 minute video byte series that will lead people to explore online materials related to manufacturing, share insights on manufacturing that could aid the digital journey of Indian MSMEs and point the audience to articles that the team members will be publishing/have published.

Healthcare

Chair



Ravi Ramaswamy
CEO, RV Consultants



Ajit Ashok Shenvi
Director, Big Data & Analytics, Philips Innovation Campus



Ashvanni Srivastava
Founder and Managing Partner, Synergie Group



Dileep Mangsuli
Executive Director, Siemens Healthineers



Neeraj Jain
Country Head-India, PATH



Dr Vikram Venkateswara
Founder and Editor Healthcare India



Atul Kurani
Head – Life Sciences Business (Global) and IoT / IIoT Practice, Vice President, Capgemini Engineering, Capgemini

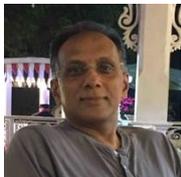


Dhanaraj (Dan) Putlur Nadanasigamani
Head of Sustaining Engineering & Product localization, Healthcare Innovation Center (HIC) Philips



Shikha Pillai
Head Strategy – Siemens Healthineers Development Center

Advisory members



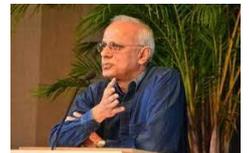
Dr Rajakumar Deshpande
Director, Brain and Spine Care, Fortis Hospitals



Dr Kamla Rai
Vice-President Sr Global Program Head - Global Health Development Unit, Novartis



Dr Sumeet Kad
Head - Enterprise States Cluster, Roche



Dr Sudhakar Varanasi
Healthcare Consultant, Integra Micro

Dr Uday Patil
Head of Radiology, Manipal Hospitals

KEY HIGHLIGHTS

1

Structure of the Working Group

- 9 members and 5 advisory members

2

Events led

Led 3 IET India Digital Conversations on:

- Doctor on call? Scaling Telehealth in India
- Disease Surveillance: The Why and the How
- Artificial Intelligence in Healthcare

3

Knowledge output produced

- Produced 4 whitepapers
 - Health Facility Registration- IET Response to Ministry of Health and Family Welfare
 - Healthcare Professionals Registry- IET Response to Ministry of Health and Family Welfare
 - Digital Twins: How does it impact healthcare
 - Personal Data Protection Bill and Patient Privacy How should the Indian healthcare system comply?
- Provided inputs for the draft National Strategy on Blockchain by Ministry of Electronics and Information Technology (MeitY), Government of India

4

Media mentions

- Dr Vikram Venkateswaran authored an article on how patient privacy concerns impacts healthcare in India which was featured in Data Quest magazine

5

Disease surveillance project

- The healthcare working group will launch a project titled IET Disease Surveillance Project that aims to use publicly available data and convert them into actionable insights around prediction of future epidemics

Standards, Legal, Regulatory

Chair



Dinesh Chand Sharma
Director, Standards Public Policy, EU Project SESEI

Co-Chair



Sushil Kumar
DDG - IOT , Telecom Engineering Centre, DoT

Vice-Chair



Krishna Sirohi
Professor of Practice, Bharti School of Telecom Technology and Management IIT Delhi



Shreyas Jayasimha
Advocate and Founder, Aarna Law



Sheahan Verghese
Founder, TLA



Vishnu Ram
Technology Consultant (Services and Solutions); TSDSI Consultant for ITU-T (AI/ML)



Jitender Kumar
Scientist D, Jt Director, Bureau of Indian Standards



Dr Lovneesh Chanana
Vice President, Digital Government (Asia pacific and Japan), SAP



Sachin Gaur
Local Coordinator, India – EU ICT Standardisation Collaboration



Sharad Arora
Founder and Managing Director Sensorise Digital Services Private Limited



Vikram Tiwathia
Deputy Director General , COAI



Aurindam Bhattacharya
Group Leader at C-DoT



Debashish Bhattacharya
Sr. Deputy Director General, Broadband India Forum

KEY HIGHLIGHTS

1

Structure of the Working Group

- 13 members

Knowledge output produced

2

- Produced 1 whitepaper on Evolution of Standards & Policies around M2M/IoT and enabling future technologies
- Provided inputs for the draft National Strategy on Blockchain by Ministry of Electronics and Information Technology (MeitY), Government of India
- Provided inputs for a whitepaper titled "Future proofing standards documents: a philosophy to checklist" released by the Cybersecurity working group

Social Impact

Chair



Digvijay Choudhari
CEO and Managing
Director, Sobus Insight

Co-Chair



Indrajit Chatterjee
MIET- IIT Kgp B Tech 1970; Board
Member- Wheels Global
Foundation-India



MS Rangaraj
Adviser/Consultant - Smart
Airports & Smart Airport Cities -
WAISL & GMR Airports



Resha Patel
Content strategist, writer &
editor, Art of Living



Ashwin Swarup Adurthi
VP of Data Science and Data
Engineering; Digite, Inc



Shekhar Priyadarshie
Management Consultant

KEY HIGHLIGHTS

1

Structure of the Working Group

- 6 members

2

Events led

Led 2 IET India Digital Conversations on:

- Future Tech: A gamechanger for Agripreneurship?
- Creating rural innovation (eco) systems

3

Knowledge output produced

- Released 1 social impact newsletter that gave inputs and updates on various ways in which societal impact could be intentional

4

Workshops led

- Conducted a series of entrepreneurial ecosystem-building activities via SVERI's Sobus Center of Excellence (CoE) at Pandharpur, Solapur district, Maharashtra. Aimed at encouraging the spirit of entrepreneurship in educational institutes, the CoE facilitated an online AICTE Faculty Development Program (FDP) on Design Thinking for Social Entrepreneurship. This was attended by over 100 faculty members and educationists from 60 institutes across the country. The CoE led 1200 students through a discovery workshop to share their entrepreneurial perceptions and needs. They also shared their goals and vision for Pandharpur and its surrounding region.

5

Media Mentions

- Digvijay Choudhari featured provided his comments for the Union Budget 2021" that featured in leading publications such as Business Standard, India Info Line, Bhaskar Live, ANI News, Yahoo, Daily Hunt, Zee 5, the CEO magazine, Big News Network, amongst others

Skill Development

Chair



Vijay Kumar
Ex-Senior VP,
TechMahindra

Co-Chair



Vivek Singh
CEO, Innovant and Director,
Saraswati Seva Foundation



Dr. Shivananda (Shivoo) Koteswar
Group Director, DG Digital
implementation Site - Leader and
R&D Head, Synopsys Inc



Praveen Ahuja
Vice President & Global Head
of Delivery Financial Services
(BFSI), Orion Innovation



Krishna Kumar
Co Founder and CEO,
GreenPepper



Smitha Hemmigae
Head of Marketing, ANSR



Anjan Banerjee
Senior IT Consultant, National
Skill Development Corporation,
New Delhi



Onkareshwar Pandey
Chairman and Editorial
Director, Observer Media
Global Group

KEY HIGHLIGHTS

1

Structure of the Working Group

- 8 members

2

Media Mentions

- An article authored by Vivek Singh was carried in CIOL online under the headline "Will internet access continue to be a hurdle for online learning in India?"
- Views from Krishna Kumar featured in The Indian Express in an article titled "Web3 imagines a decentralised web: Here's what it wants to achieve"

Workshops led

3

- The Skill Development WG, in association with Saraswati Seva Foundation (SSF) provided soft-skills and communications training to under-privileged youths in Chikballapur district (Karnataka). This initiative had been undertaken with the aim of imparting functional skills and preparing the rural youth for Private Sector (Investment Banking Operations). Members from the Skills WG mentored the trainees in a multi-session program
- IET India Skills working group conducted a workshop in association with TiE Chennai on 'Reimagine SMB's with AI for Scalability & Competitive advantage'. Sameer Dhanrajani, Chair- AI Working Group, IET Future Tech panel played an instrumental role in delivering this

Upcoming: Provide a 50 hrs Faculty Development Programme on Future Tech to the academic affiliates of the IET to give the faculty an understanding of industry and tech dynamics as well as what future looks like.

Water

Chair



Prof Dr Pradeep Srivastava
ED, TIFAC

Co-Chair



Prashant Tripathi
Head-IoT technology-Pentair
Water India



Rajesh C Mathur
Advisor, Esri India technologies Ltd



Ajith Chandran
Managing Director, Development
Interlinks International Pvt Ltd



Sunderrajan Krishnan
Executive Director,
INREM Foundation

KEY HIGHLIGHTS

1

Structure of the Working Group

- 5 members

2

Knowledge output produced

- Released a whitepaper on Geospatial technologies for water conservation and management

3

Media Mentions

- Sunderrajan Krishnan featured provided his comments for the Union Budget 2021" that featured in leading publications such as Business Standard, India Info Line, Bhaskar Live, ANI News, Yahoo, Daily Hunt, Zee 5, the CEO magazine, Big News Network, amongst others
- Dr Prof Pradeep Srivastava and Sunderrajan Krishnan commented on an article for the World Water day 2021 which was published in APN News, India Education Diary, City Air News and India News republic

4

Water Internship Program

- The team will work towards providing data-science internships for students to work with water data to make data-led decisions for national challenges

Cybersecurity

Chair



Arvind Tiwary
Chair Emeritus IoTForum
and Founder,
SangEnnovateIndia



Arnab Chattopadhyay
Vice President of
Engineering, FireCompass



Syam Madanapalli
Director-IoT, NTT Data Service
and Chair- IEEE P1931, Roof
Computing working group



Kishore Kar
Chief Business Officer,
Cyber Security
Integrators India Pvt



Anand Handa
Senior Project Executive Engineer,
C3i Center, IIT Kanpur



Amit Rao
VP, Strategy and Business
Development (APAC),
Trusted Objects



Bipin Pradeep Kumar
Research Consultant,
Systems Biology Institute

Abhijit Lele
Principle Consultant, Research &
Technology Center, Robert
Bosch India

1

Structure of the Working Group

- 8 members

2

Knowledge output produced

- Released a whitepaper titled "Future proofing standards documents: a philosophy to checklist"
- Provided inputs for the draft National Strategy on Blockchain by Ministry of Electronics and Information Technology (MeitY), Government of India

Digital Communications

Chair



Monika Gupta
Vice President, Capgemini,
Global 5G Engineering Lead



Mohan Raju
Vice President - IoT,
Reliance Jio



Sunil David
Regional Director-IoT (India & ASEAN
region), AT&T



Ali Hosseini
Chief Executive Officer and
Director, SenRa



Sucheta Mahapatra
Head-India Business Operations,
WeWork

KEY HIGHLIGHTS

1

Structure of the Working Group

- 5 members

2

Knowledge output produced

- Provided inputs for a whitepaper titled "Future proofing standards documents: a philosophy to checklist" released by the Cybersecurity working group

Energy

Chair



Dr Kumudhini Ravindra

Principal - Strategic Innovation & Research, Innomantra Consulting Private Limited and CSO and Co-founder, Inytu Inc

Co- Chair



Anil Kadam

General Manager,
Schneider Electric



Vikrant Sankhe

Vertical Market Leader - Oil & Gas,
Siemens



Prakash Chandrekar

Country Business Unit Head,
Distribution System and
Future Grid Siemens Ltd



Ajit Tulo

Sr Engineering Director & Global
Engineering Centre Head,
Pentair

KEY HIGHLIGHTS

1

Structure of the Working Group

- 5 members

2

Workshops led

- Delivered a virtual workshop on systematic innovation and design thinking for the members of Smart Cities Working group

BFSI

Chair



Himanshu Kumar
CEO and Founder,
Tax4Wealth

Member

Ramani Meenakshisundaram
Founder and Director,
Rapido Global Consulting (RGC)

KEY HIGHLIGHTS

1

Structure of the Working Group

- 2 members; they are working towards inducting new members into the team

2

Focus

- Become a Centre of Excellence in IoT- BFSI space and delivering recommendations to government, industry and business; constantly working towards engaging Banks, NBFCs in banking and life and GI companies in Insurance, along with regulator and government

Retail

Chair



Vijay Parihar
National Logistics Head, Signify
Innovations India Limited

KEY HIGHLIGHTS

1

Structure of the Working Group

- 1 member; This is a relatively new working group. The chair will induct new members into the team

2

Focus

- Build a roadmap for improving logistics infrastructure and implementing a smart, integrated and digitised supply chain ecosystem enabling the Indian Retail community to become globally competitive

Blockchain

Chair



Sharat Chandra
Blockchain & Emerging Tech
Evangelist, Advisor EarthID

Member



Dr Deepankar Roy
Assistant Professor, National
Institute of Bank Management

KEY HIGHLIGHTS

1

Structure of the Working Group

- 2 members; This is a relatively new working group.
- The chair will induct new members into the team

2

Focus

- Bring together diverse set of stakeholders in the industry, academia and the government and build use-cases and pilot projects that can accelerate adoption of Blockchain as well as aid scalability

3

Knowledge output produced

- Provided inputs for the draft National Strategy on Blockchain by Ministry of Electronics and Information Technology (MeitY), Government of India

4

Media mentions

- Sharat featured in 11 news articles, industry stories and authored articles on blockchain and cryptocurrency by publications such as Financial Express, The WEEK, ET CIO, India Times, Economic Times, The Quint and India Today

Artificial Intelligence

Chair



Sameer Dhanrajani
CEO, AIQRATE

KEY HIGHLIGHTS

1

Structure of the Working Group

- 1 member; This is a relatively new working group. The chair will induct new members into the team

2

Focus

- Become a platform for various stakeholders including Government, Academia, User enterprises, and Innovators to connect and work on amplification, adoption, capability enhancement, research & policy development in Artificial Intelligence

3

Workshops led

- As a part of the Skills Development Working group's initiative, helped conduct a workshop in association with TiE Chennai on 'Reimagine SMB's with AI for Scalability & Competitive advantage'

Robotics

Chair



Sanjay Ahuja
Founder and CEO,
Cionlabs

KEY HIGHLIGHTS

1

Structure of the Working Group

- 1 member; This is a relatively new working group. The chair will induct new members into the team

2

Focus

- Become a platform of choice for the Indian Government, Academia and Industry to leverage robotics technology to transform the digital industrial economy
- Aid the convergence of robotics thought leaders & influencers to build awareness and adoption of latest robotics trends and best practices in the industry for the benefit of society

Open Digital Innovation

Chair



VSR
Chairman & Managing Director, BT&BT



Sathya Venkatesh Polepalle
Head - PDIT Delivery, Tata Consultancy Services



Bhavani Shankar Surabhi
Executive Manager and Head IOT, Efftronics System Private Limited



Anir Chowdhury
Senior Program Manager, Deloitte Consulting



Vijaya Kumar Pisupati
Chief Executive Officer, Digidext Information Systems Private Limited



Vikram Boidapu
Program Manager of Customer Transformation and Innovation, Microsoft India



Sita Mahalakshmi Durvasula
Vice President Of Software Engineering, ShipConsole



Nagini Chandramouli
Senior Enterprise Agile Coach



Srinivasu Chowta, PMP
Group Manager, Oracle India

Jyeshtha Bathija
Manager- Account Strategic Market Intelligence & Research, Capgemini

Think Tank Members



N.T. Arunkumar
Board Director, Investor & Strategic Advisor



Navneet Bhushan
Founder Director CRAFTITI CONSULTING



Suhas Mhaskar
CEO, Accent Technovation, Two Wheelers/ Shared CIO, Mahindra Group Companies; Business & Technology Leader and CXO Advisor



Prof N Siva Prasad
Pro VC of GITAM Deemed University; Former Professor of Mechanical Engineering and Registrar, IIT Madras



Prof K.Chandrasekaran
Dean, R.M.K.Engineering College; Former Professor, Mechanical Engineering, Anna University



Ananthakumaran Nair
Director (Rtd) Lucas TVSServices



Jagdish Belwal
Board Member | Former CIO GE & Tata Motors | CEOs' Advisor for Business Transformation | ClarITea Chat

Rama Krishna Dasari
CEO & MD, EFFTRONICS SYSTEM



Prof Sivarama Krishna
Vice Chancellor, Gitam University

Vijayanand Kondapaneni
Strategic Advisor, Innovation Champion, Media & Entertainment; Former Executive Vice President - Corporate, Zee Entertainment Ent.

Dr Subbarao Ghanta

Former Faculty, University of Minnesota, University of Florida, KFUPM, Dhahran, and JNTU, Hyderabad; Founder president, Institute of Electronic Governance, Government of AP; Pioneer of Chief Ministers' Excellence Centers, Government of AP

KEY HIGHLIGHTS

1

Structure of the Working Group

- 10 working group members and 11 Think Tank members
- This is a newly formed working group which is being headed by VSR who used to be the Chair of the IET India Smart Cities Working Group

2

Focus

- This working group will concentrate on digital engineering and technology innovations that will be used to address global issues
- The four pillars of the Open Digital Innovation working group include:
 - Digital Engineering and Technology Innovations Body of Knowledge (DETIBOK)
 - Digital Engineering and Technology Innovations Skill Development
 - Crowdsourcing digital platform to unlock the digital innovation potential of rural and urban India Mentoring ecosystem for Digital Engineering & Technology Startups.

About IET India



The Institution of Engineering and Technology (The IET)

The IET is one of the world's largest professional societies for engineers, headquartered in the UK. It is a 150-year-old organisation that works closely with industry, academia and government in its mission to engineer a better world. In line with this, the IET also has specific global initiatives around key sectors that are relevant to solving problems that impact the society at large. In India, the IET has over 13,000 members and has wide ranging activities in alignment with the overall global IET strategy that also includes sector focus in areas such as Future technologies, Future of Mobility and Transport, as well as the Future of Work. Shri Ratan Tata, Former Chairman Tata Sons, N R Narayana Murthy, Chairman Emeritus, Infosys and T V Ramachandran, President, Broadband India Forum (Ex-Resident Director, Vodafone) are Honorary Fellows of the IET.

The IET is working to engineer a better world by inspiring, informing and influencing our members, engineers and technicians. The **Institution of Engineering and Technology – India**, the IET office started operations in India in 2006, in Bangalore. With our members, we are driving innovation and change in the fields of engineering and technology. We research, investigate, review and analyse the industry's challenges, proposing solutions that will have a significant impact on the world for years to come. Our strategy is to make a meaningful impact on the overall competency and skill levels within the Indian engineering community and play an influencing role with the industry in relation to technology innovation and solve problems of public importance. We want to do this by working in partnership with industry, academia and government, focusing on the application of practical skills within both learning & career lifecycles, driving innovation and thought leadership through high impact sectors. Our volunteer led panels are means through which we deliver our strategy.

IET Future Tech Panel

The IET constituted a think tank called the IET IoT Panel in 2015 with representation from leaders in the Internet of Things (IoT) space to evangelise IoT and help accelerate its adoption in India.

Within 6 years, the panel was able to engage key ministries with the government of India, contribute to policies as well as influence stakeholder action across the ecosystem. The panel also organised 4 successful editions of IoT India Congress dubbed as the most important event for technology

stakeholders in the region, which has had combined attendance from over 6,000 attendees from around the globe.

While all of this is indeed encouraging, we are constantly recalibrating our influence and impact – globally. We believe that IoT is indeed an all pervasive technology and are proud of the role we have played in building awareness and deployment in our region. However, we believe that in the coming years (and we can already see evidence) that IoT alone will not suffice. AI, Blockchain, ML, VR, robotics are taking centre stage and the use-cases that are coming in are fascinating.

Therefore, we decided to pivot and scale our focus to technologies beyond Internet of Things. With this in mind, we recast our panel in 2020 to be called as **"The IET Future Tech Panel"** which we believe will help us become more inclusive for those technologies that need development of country-wide roadmaps and ecosystem building. With this, we also hope to be able to reflect the Institution of Engineering and Technology's global legacy and connects. The panel works through 16 Working Groups currently – Cyber Security, Digital Communication, Water, Healthcare, Manufacturing, Retail, Skill Development, Smart Cities, Social Impact, Standards, Legal and Regulatory, BFSI, Energy, Artificial Intelligence, Blockchain, Robotics and Open Digital Innovation.

Read more about our Future Technology focus as well as our panels here:

<https://india.theiet.org/innovation-knowledge/>. To become a volunteer and to contribute, please write to us at sectors@theiet.in