MESSAGES

Narendra Singh Tomar
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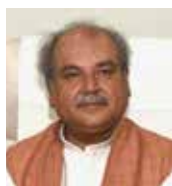I am delighted to know that the India Trade Promotion Organisation and the Exhibitions India Group are co-jointly hosting the 6th Smart Cities India and the 28th Convergence India Expo 2021 from 24th-26th March 2021, at Pragati Maidan, New Delhi. I applaud their efforts to make the cities more sustainable, healthy, efficient, transparent and above all, to enhance the quality of life of the citizens.

The ministry has been actively supporting, encouraging and catering to the information needs of the Panchayati Raj Institutions, especially Gram Panchayats, to play an important role on issues of national importance. The aim is to make Panchayati Raj Institutions (PRIs) an effective, efficient and transparent vehicle for local governance, social change and public service delivery mechanism, meeting the aspirations of local population. The Ministry strives for empowerment, enablement and accountability of PRI to ensure inclusive development with social justice, and efficient delivery of services.

The government introduced the National e-Governance Plan (NeGP) with the vision to make all government services accessible to the common man, whilst ensuring efficiency, transparency and reliability of such services at affordable costs. e- Panchayat is one of the mission mode projects (MMP) currently being implemented. The project is transforming the Panchayati

Raj Institutions (PRIs) into symbols of modernity, transparency and efficiency. It is a one-of-its-kind nationwide IT initiative introduced with the agenda to not only automate the functioning of the 2.45 lakh Panchayats in the country, but also encourage people participation in the decision making, implementation and delivery of projects. The project addresses all aspects of the functioning of Panchayats including planning, monitoring, implementation, budgeting, accounting, social audit and delivery of citizen services like issue of certificates, licenses etc.

India is well endowed with natural resources, particularly minerals, which serve as raw material for many industries, paving a path for rapid industrialization and infrastructural development. This, in turn, facilitates the economy's ascent to a path of sustained growth and a five trillion-dollar economy. The vision is to double the production of important minerals over the next 5 years with resultant reduction in import dependency, by allocating and regulating minerals in a transparent and sustainable manner and to promote exploration and mining of deep seated minerals to meet country's needs and to effectively implement other policy goals, thereby enabling the country to progress towards attaining self- sufficiency in major mineral production.

My best wishes for a productive and successful business exhibition.

Shri Dharmendra Pradhan
Cabinet Minister
Ministry of Petroleum and Natural Gas, Government of India

I am pleased to learn that the India Trade Promotion Organisation and Exhibitions India Group are Organizing the 6th Smart Cities India and the 28th Convergence India expo in New Delhi, from 24th-26th March 2021, Under the leadership of Hon'ble Prime Minister, the government of India has strived to enhance the 'Ease of Living' for citizens. Initiatives like PM Awas Yojana, PM Ujjwala Yojana, SAUBHAGYA, Jan Dhan Yojana, Swachh Bharat Mission, Jal Shakti Mission and many more are ensuring a decent and dignified life for crores of Indians. Programmes like the National Smart City Mission have leveraged key schemes like

Digital India and Make in India for fuelling the growth of India's urban centres. Convergence of the latest technologies with socially-impactful policies is essential for the high-quality delivery of public services to citizens.

Platforms such as 6th Smart Cities India and the 28th Convergence India Expo play an important role in bringing together entrepreneurs, academicians, thought leaders and policymaker to engage in meaningful discussions for further improving the lives of Indian Citizens and help them become self-reliant. I wish this event all success.

Shri Som Parkash
Hon'ble Minister of State
Ministry of Commerce & Industry
Government of India

I would like to congratulate India Trade Promotion Organisation (ITPO) and Exhibitions India Group for organizing the 28th Convergence India and 6th Smart Cities India expo at Pragati Maidan, New Delhi during 24-26th March 2021.

The long-term vision of Ministry of Commerce and Industry is to make India a key player in world trade, and emerge as a global leader in international trade organizations. Various ambitious policies and bold steps are undertaken by the Government of India to provide impetus to the Indian entrepreneurial spirit. The Startup India Seed Fund worth is all set to go live in the new financial year. The scheme would allow startups in India to avail financial assistance for proof of concept, prototype development, product trials, market entry, and commercialisation.

Over the next 4 years, INR 945 Crore will be spent on providing seed funding to eligible startups through eligible incubators across India, with 3600 startups expected to be supported by the scheme.

The government is also devising several policies to support the Traders and Retailers. The COVID-19 pandemic has sharply impacted our citizens, the economy, and commercial growth. The industry has exhibited great examples of working with the government to contain the pandemic. We must continue to work in synergy and contribute towards making India self-reliant in every way possible.

My best wishes to the organisers and participants of this grand event. This platform gives a unique chance for industry participants, both domestic and overseas, to forge new relations with each other.

Shri Amitabh Kant, IAS
Chief Executive Officer
Niti Aayog
Government of India

I t gives me great pleasure to learn that India Trade Promotion Organisation (ITPO) and Exhibitions India Group are organizing the 28th Convergence India and 6th Smart Cities India expo at Pragati Maidan, New Delhi, from 24-26 March 2021.

India must cement its position as an integral part of the global economy, and become a significant cog in the global supply chain if we are to grow 9-10% over the next 3 decades. We must strive towards becoming an exporting hub if we want to increase our national income and create wealth for our people. The government's 'Aatmanirbhar Bharat' initiative will go a long way in making India an indispensable entity in the global supply chain.

In the post-pandemic world, only the nations that thrive in the digital ecosystem will continue to grow. In line with the government's 'Digital India' initiative, we remain committed to work with the nation's young entrepreneurs to establish India as a global technology garage. Over the course of the COVID-19 crisis, the private and public sector have exhibited model synergetic relationships with innovative solutions developed by the former, and the government using its reach as a key strength.

A key driver in India's energy growth story will be renewable energy. A strong focus on zero carbon emissions is essential in getting rid of pollution in Indian cities. India's transportation sector is the third-largest energy consumer, behind the industrial and residential sectors. Keeping in view the Paris Pact, our focus must be on zero carbon emissions, and on switching to mobility powered by renewable energy sources. Our cities should also adapt to the new 'transit-oriented development' where public modes are the backbone of urban transport. E-mobility disruption will have to be centred on offering solutions that are accessible, affordable, inclusive and safe for citizens.

Events such Convergence India and Smart Cities India expo are instrumental in promoting key government initiatives to make India a sustainable, self-reliant global leader.

My best wishes to the organisers and participants of the event.

Shri Pratap Chandra Sarangi
Hon'ble Minister of State
Ministry of Micro, Small & Medium Enterprises, Government of India

I am happy to know that the 28th Convergence India and 6th Smart Cities India series of expos are being organised by India Trade Promotion Organisation (ITPO) and Exhibitions India Group at Pragati Maidan, New Delhi, from 24-26 March 2021.

The Expo presents excellent opportunities to businessmen and entrepreneurs in Communications, Broadcasting, Media and ICTs sector for technology collaborations, business tie-ups and networking. The exchange of business ideas among the participants, I am sure, Will promote the brand India as "Manufacturing Hub" under the Make in India and Atmanirbhar Bharat Abhiyan.

I wish the ITPO all success in organizing the event.

Shri L C Goyal
Chairman and Managing Director
India Trade Promotion Organisation

I am pleased to welcome you to the 28th Convergence India & 6th Smart Cities India expo, scheduled from 24-26 March 2021, at Pragati Maidan, New Delhi; being organized by Exhibitions India Group (EIG) and the India Trade Promotion Organisation (ITPO) as a co-organiser.

After a difficult year for businesses across all verticals of commerce, it's now time to accelerate nation building at India's largest technology and infrastructure expo. With the priorities of the Union Budget 2021-22 at hand, the eve of the next financial year is an ideal time to resume networking and demonstrate a show of strength and optimism– with the expo being the first meaningful live event since trade fairs were allowed to resume in the country.

The Convergence India series of expos are at the forefront of India's digital revolution, while Smart Cities India expo reflects India's emerging modernization and development landscape. The combination of these two leading expos, supporting 'Digital India' & 'Smart Cities Missions,' will deliver an event that focuses on unlocking new opportunities and reviving economic growth. The event will provide a multitude of opportunities to explore new business opportunities, joint ventures, investment and collaborations; as well as facilitate engagement with innovators and thought leaders from across sectors. All efforts will be channeled to ensure a safe and successful expo for our stakeholders and partners with strict adherence to all regulations and COVID related SOPs.

ITPO remains deeply committed to contribute to the growth of our economy by showcasing India's commercial potential through trade fairs/exhibitions both domestically and abroad. Pragati Maidan is being redeveloped into a world class Integrated Exhibition-cum-Convention Centre (IECC)- a modern, up-to- date centre to host global conferences and exhibitions.

I extend my best wishes to Exhibition India Group, industry leaders, participants as well as supporting bodies for their cooperation in hosting this mega expo.

28th Convergence India Expo

6th Smart Cities INDIA EXPO

IN CONVERSATION WITH

Chandrika Behl
Managing Director, Exhibitions India Group

Tell us about the vision behind Convergence India and Smart Cities India expo, and their evolution.
Launched in 1992, the Convergence India series of expos is credited as India's leading Technology Show, and has come a long way since it was conceptualised. Having begun as a communications and ICT event, it has developed into a mega expo showcasing a convergence of technologies, including Communications, Digital Broadcast, Internet of Things, AR, VR, Artificial Intelligence, Robotics, Embedded Technology, Mobile Devices & Accessories, Gaming & Entertainment. With the theme of 'Digital India – Connecting the Unconnected' – Convergence India expo consists of a series of expos that include IoT India, FinTech India, EmbeddedTech India, Mobile India and Digital Gaming expos.

At the same time, the Smart Cities India series of expos has also developed into Asia's largest trade fair and conference on the subject. The expo comprises key verticals that make up the smart city framework, including Buildings, CleanTech, Solar, Transport and Water. The showcase includes products, solutions and technologies that assist in making urban lives sustainable; and deliberations include initiatives made towards sustainable national growth, including government policies, rules, regulations and schemes. The platform offers deeper communication and a more practical approach to resolving societal problems; offering business opportunities for organisations working towards making smart cities a reality.

What was the motive behind merging these two leading expositions?
Convergence India is at the forefront of India's digital revolution, while Smart Cities India reflects India's emerging modernization and development landscape.

A core ethos of sustainable development is that we can achieve continual growth in a finite world by harnessing the powers of technology, which helps in efficient utilization of available resources. The Indian Science & Technology sector is proving its mettle on the global stage, emerging as a pioneer in both innovation and execution. The Government of India, through its many initiatives, is working to foster the entrepreneurial spirit and inculcating ground breaking technologies, including AI, Blockchain and Machine Learning across sectors ranging from Urban Mobility to Smart Buildings, and Green Energy to CleanTech solutions. It's our vision that a Digital India will lead the way to a Smart & Sustainable India.

A combination of these two leading expos, supporting India's Digital & Smart Cities Missions, will deliver an event that focuses on unlocking new opportunities and reviving economic growth. Together, the expo will deliver India's largest Technology & Infrastructure event on all aspects vital to nation building.

How are Convergence India & Smart Cities India going to evolve in the COVID-era and beyond?
The COVID-19 pandemic has impacted every aspect of our existence, and the way we interact socially or for work, has undergone a monumental shift. The global exhibitions industry has rallied to adapt to the 'new normal,' and what we saw was the genesis of dynamic new platforms for webinars, digital expositions and virtual business matchmaking. That being said, while digital communication has been a lifeline in the months of lockdowns and beyond, this time has also underscored the significance of face-to-face interaction.

Virtual Events will not be able to replace Physical Events in value, but we believe that Hybrid Events, such as the 28th Convergence India and 6th Smart Cities India expo, will find further traction. We are committed to offering the best of both worlds by providing in-person networking opportunities, as well as new and dynamic digital elements, including personalized business matchmaking & sophisticated data capturing mechanisms, apart from exhibitor chatrooms, virtual interaction, exhibitor product marketplaces, and more.

The future will witness a swift adoption of several key modifications that will alter the face of exhibitions in the post-pandemic world. Some of the signature changes will involve a redesign of Exhibition Models, growth in the application of Big Data, increased focus on Insurance & Security, and further integration of Digital Technologies in Trade Shows.

Could you shed some light on the key highlights of the expo?
The central role played by technology across every aspect of our lives today has been highlighted during this last year. As dedicated advocates of innovation and R&D in sustainable technologies, we are keen to shed light on leading areas of innovation and cutting-edge solutions across sectors. To showcase these, several Pavilions around niche´ themes have been curated at the expo:

"THE HEALTH & SAFETY OF OUR STAKEHOLDERS AND PARTICIPANTS IS OUR UTMOST PRIORITY, AND WE WILL STRICTLY ADHERE TO THE GOVERNMENT-MANDATED SOPS TO ENSURE A SAFE, IN-PERSON NETWORKING EXPERIENCE."

"THE TIME HAS NOW COME TO ACCELERATE NATION BUILDING AT INDIA'S LARGEST TECHNOLOGY AND INFRASTRUCTURE EXPO. THIS IS THE PERFECT TIME TO RESUME NETWORKING AND DEMONSTRATE A SHOW OF STRENGTH AND OPTIMISM GOING INTO THE NEXT FINANCIAL YEAR – WITH THIS EXPO BEING THE FIRST MEANINGFUL LIVE EVENT SINCE THE AUTHORITIES PERMITTED THE RESUMPTION OF TRADE FAIRS."

The Satcom Pavilion showcases technologies in satellite & telecommunications, transmission systems & equipment, cabling systems, home systems & broadband, broadcast & digital media, carrier ethernet, fibre communications, emerging technologies, content production, management & delivery, 5G, telecom, power & systems, etc.

The Startup Pavilion, supported by 'Startup India,' will feature 35+ startups across various segments of ICT & Smart Cities technologies, bringing to light new innovations this year, and promoting the Government of India's initiative of Aatmanirbhar Bharat. This year's edition will feature a 'Start up Pitch' competition being sponsored by IC IIT Patna across various sectors including IoT, Automation, Mechatronics/Robotics, Medical Electronics, Industry 4.0, Smart Cities and other related sectors of ESDM, with the best 3 startups awarded with incubation at their facility in Patna, and the top winner rewarded a cash prize of INR 1 Lac additionally.

The Smart City India (SCI) Awards, scheduled for March 26th, 2021, is a unique platform designed to felicitate, recognize and encourage individuals, policy makers, companies, municipalities, government bodies and associations to illuminate the work done across both urban and rural sectors.

For the first time, the expo has adopted a hybrid format- being simultaneously held in both physical and digital formats. Participants can connect with 60 international exhibitors at the Virtual expo; with interactive features including Virtual Booths, Exhibitor Meetings, Exhibitor Live Chat, Video Calls & Virtual Room, Exhibitor Product Marketplace, Exhibitor Lead Capture, and more. Our Phygital Conference will see 50+ conference session- both on-ground and virtual- taking place concurrently across a vast range of topics.

Where does the expo figure in the cause of policy advocacy and supporting national missions?
As an organizer, we go to great lengths to ensure that the expo has an optimal mix of government and private player participation – on both the exhibition floor, as well as throughout the conference. We align ourselves with key missions of the Government of India, including the 'Digital India,' 'Skill India,' 'Smart Cities India' and 'Make in India' initiatives. Industries of strategic importance to India's growth story, including Electronics and Solar Manufacturing, can pave the way to develop India into a 'Manufacturing Hub,' and require deliberations from both policymakers and industry players to set the course. India's burgeoning entrepreneurship ecosystem, which has been given massive impetus under the 'Startup India' initiative, requires dynamic assistance in terms of both financial and regulatory support.

Both sides of the aisle come together at our platform to chart the course for the future of the Indian economy, developing the most sustainable blueprint to attain the vision of an 'Aatmanirbhar Bharat,' or self-reliant India.

What's the reason behind hosting conferences alongside the expo?
Conferences are catalysts for dialogue and change. By inviting experts and thought leaders from across industries, we set the stage for sharing of best practices, experiences and success stories. With a stellar speaker line-up from across government and industry, our Conference Sessions facilitate pivotal deliberations regarding the challenges, policy environment and roadmap for various industry verticals and trends.

At the City Leader's Conclave, for instance, we will hear how cities' civic administrations demonstrated adaptive leadership during the pandemic by efficiently deploying innovative tools to minimize adversity. City Administrators from various Indian Smart Cities including Bhopal, Jabalpur, Gwalior, Ahmedabad, Ajmer, Nagpur, Amravati, Varanasi, Srinagar, Faridabad, Sagar, Kota, Chandigarh, and many more, will convene at the 6th Smart Cities India 2021 expo for multi-layered discourses on how India's 100 Smart Cities hit the ground running during the COVID-19 pandemic; learning along the way, and leading by example.

What message do you have for old and new participants at the expo?
India is one of the most important emerging economies in the world today. The Prime Minster has set a target of making India a 5 trillion dollar economy by 2022. With increasing ease of doing business a priority of the government, India has emerged as one of the most attractive investment destinations, propelled largely by economic reforms and a large consumer base. Trade, commerce and investments are key drivers on this path.

As a dedicated trade promotion organisation, we value our partners, and cultivate & nurture our networks with great care. Our legacy spanning 3 decades has garnered us esteemed associates and valued stakeholders over the years. Having faced this once-in-a-lifetime disruption brought about by the pandemic, our commitment to serve the business community has only grown stronger. The support of our exhibitors, sponsors and participants throughout this time has been unwavering, increasing our resolve. We are devoted to the cause of trade promotion, encouraging joint ventures, investment opportunities and knowledge transfers, as we strongly believe these to be important chapters in India's inevitable growth story.

What do you envision as the future roadmap of Convergence India & Smart Cities India?
The Convergence India and Smart Cities India expo has steadily grown to become the leading tech and infra expo in the country today. We take pride in the work we do, and our commitment to creating an India, which is a sustainable tech leader, is supported by both the industry and the Government of India. Our dedicated team understands the importance of value-addition, and we continue to add new, important facets with each edition to cater to the ever-rising demands of the industry. The current scenario has further accentuated the need to develop technology that improves the lives of people, as well as the need for smart & sustainable solutions for our citizens.

It's the need of the hour for all of us to come together to learn, grow, adapt and innovate. Expos, like ours, bring people together – professionals, academia, the government, innovators and business houses – to exchange ideas and collaborate for a better tomorrow.

IN CONVERSATION WITH

Kunal Kumar
Joint Secretary & Mission Director of Smart Cities Mission, Ministry of Housing and Urban Affairs, Government of India

Kunal Kumar has been closely involved with the Smart Cities Mission since its inception, first as the Municipal Commissioner of Pune and then as the National Mission Director at Delhi. He has had a long inning in urban development with more than 8 years of experience in the 3 Municipal Corporations of Nagpur, Kolhapur and Pune. He is a rare combination of strategic thinking and entrepreneurial approach. Under his leadership, the Mission has spread its wings into cutting-edge areas of work like data, technology and innovation. The pace of Mission implementation has grown by leaps and bounds under his leadership. He firmly believes that cities hold the golden ticket to India's bright future. Let's hear from him in an insightful conversation.

What is your opinion on the tremendous growth that the smart cities have reflected in the past few years?
Yes, there has been continuous growth. It is not as if this growth has taken place only in the past 18 months or so. It has been consistent, though not linear, rather like a S curve; it has been bottom-up, not mandated from top; it has been entrepreneurial and not routine. There has been a four-fold increase in development works under the Mission over the last 2 years. That's only the quantitative aspect. More importantly, it is the quality of interventions that should give us hope. Smart cities are working on a never-before canvas of ideas. They are transforming public spaces into citizen-friendly realms, using technology for betterment of citizens' lives, promoting innovation through startup-friendly initiatives. I can go on and on.

Which is where I would like to emphasize a very important point, Hon' Prime Minister was not thinking business-as-usual when he envisioned and launched the Mission in 2015. The Government, under his leadership, has taken a transformational approach to urban development and our Smart cities are doing their best to sketch a new way of governance and service delivery. The Mission has introduced outcome indices like the Ease of Living Index, ClimateSmart Cities Assessment and the Municipal Performance Index. Ultimately, only those cities which work for their people can be termed as Smart cities and hence these indices have a key guiding role to play in the evolution of India's Smart cities journey.

How can Indian cities and the world respond to climate change and embark on a journey of sustainable development?
I cannot stress enough the importance of climate-sensitive development in any sphere of activity, whether it be rural or urban. Ultimately, we are surviving only because nature's regenerative mechanisms can balance our incessant demands on its resources. Development is all about trade-offs and making the right choices is important for sustainable development to take place and for intergenerational equity to be preserved. Cities are responsible for two-thirds of humanity's energy use and GHG emissions. With impending rapid urbanization and imperatives for ease of living and doing business in India, the pressure on our natural resources, energy consumption and air quality is only going to increase. So clearly, there is an acute need for cities to understand the importance of putting the climate lens on development.

How do they begin? I think, the journey of a thousand miles begins with the first step. It is important to visualize the city's climate picture from the world of data. The ClimateSmart Cities Assessment Framework helps cities think through and harness important data points to create visualization dashboards around climate. Once they are able to understand the reality, they have to undertake efforts both for adaptation and mitigation of the negative effects of climate change. Broadly these actions fall into five verticals- water and waste-water management, solid-waste management, mobility and air-quality, biodiversity and management of green spaces, energy and green buildings.

It is here that I want to emphasize on a key aspect of this process - democratic participation. Cities are what they are because their collective consciousness imagines them to be so. Yes, there are individual or organizational champions who steer the course in the beginning, for example, evangelizing creation of a walkable city or a city with great biking infrastructure, but in the long run it is the democratic acceptance of all stakeholders that transforms these beginnings into sustainable large-scale developments. Also, the effective use of communication in getting people to understand policies and projects goes a long way towards their successful implementation. I strongly believe that strategic assistance, which involves championing autonomy and enhancing adaptive capabilities of cities to experiment needs to be prioritized by the Central Government for the growth of India's urban system as a whole. Decentralization must become a key feature of our urban governance, especially for better climate outcomes.

Could you throw some light on your role in the urban transformation of Pune?
Pune is one of the finest cities of the country. It is the cultural capital of Maharashtra, is termed as 'Oxford of the East' for its excellent educational infrastructure, has been blessed with rich diversity of people, arts and occupations, is a buzzing industrial centre and metropolis. No wonder, it has always been rated as India's most liveable cities. One thing which I would like to highlight about Pune is that its citizens care about the city. Just like a human who is cared for lives longer and happier, the same goes for a city. It is for this reason alone that I can vouch for a very bright future for Pune.

Pune has always been a pioneer in urban governance practices. From citizen-led participative budgeting to innovations in solid-waste management – it has always offered new ideas and learnings for the entire country. I joined the city as Municipal Commissioner in 2014 and relinquished charge in 2018. I got to work with the smartest of people and the most brilliant of minds. Through our teamwork, we supported the creation of a Vision Community in Pune – a sort of friend, guide and philosopher to capture the city's aspirations into its projects and initiatives. This led to creation of the ambitious USD 5 Billion plan of 'Pune Towards Urban Transformation' containing all major interventions needed to transform the city's infrastructure and services as per the needs of its citizenry.

Sustainable livelihood programs like the 'Lighthouse' were initiated to empower underprivileged youth, and to operationalize digital literacy to bridge the digital divide. Pune Metro, River development, BRTS, cycling plan, augmentation of city-bus services were some key interventions in the field of mobility. The 24/7 water-supply project was the largest project to be taken up by the Pune Municipal Corporation in its history. The 200 crore Munibond that we raised for the project was an important milestone to cherish. And there were many more. The city received several international and national accolades and recognition like selection in 100 Resilient Cities Program –by The Rockefeller Foundation. The city recently won the World Sustainable transport Award at ITDP's Mobilize event. Also, Pune was one of the 6 finalists in the City Award category, chosen out of 250 entries from 45 countries at the World Smart City Awards in Barcelona, 2016-17.

You have been involved with the Smart Cities Mission in India for more than a year. What are the major concerns faced by smart cities?
Our cities are in different stages of their journeys – some are big, some small; some more developed than the others; their socio-economic DNAs are different. Their concerns, are therefore, different from each other. Having said that, there are some general, fundamental issues which our cities face. One cannot look at the Smart Cities Mission in isolation. It has to be juxtaposed within the overarching perspective of urban governance in the country. All of us are aware of the structural issues facing our local governance even after the enactment of the 74th CAA and its implementation thereafter.

The Funds, Functions and Functionaries, or 3F mismatch, is the core concern facing our cities. We cannot wish that away. So clearly, improving our local governance paradigm has to be on the top of our agenda. Once this issue is addressed, other issues automatically start to get adequate attention. It's the same in any organization or government anywhere else. When the leadership issue is resolved, and when such leadership is empowered, decision-making is quicker and problem-solving happens in an agile and effective manner. Greater inculcation of evidence-based planning, adoption of innovative mechanisms for urban finance, better ways to assess need for infrastructure and services, mature systems of participative governance are some key issues that we are trying to deepen in our cities. The threat of climate change has put the existence of the human race at risk. Cities are the prime contributors to the deteriorating world environment. The need for greater capacity to address these issues is an important concern.

5. The Smart Cities Mission underlines that citizens deserve better quality of life. How significant is the role of stakeholders in making Indian cities future-proof in the 21st century?
The Mission, at its core, is trying to address three key issues—Livability, Economic-ability and Sustainability. A city cannot be truly future-ready unless it is not only significantly enabled but also adequately resilient on these three fronts. While a top-down approach is necessary to provide a regulatory framework, policy and for consistent action to take place, it cannot succeed unless 'bottom up' thrust exists in the form of the community's 'thought-action-feedback loop'. To ensure the 'bottom-up thrust' is always there, the Mission has 'Citizen at the core' as its guiding principle.

We believe in the idea of co-creation where all voices are heard and represented. Smart city proposals were drafted with active participation of citizens, vulnerable sections of society (disabled, children, elderly etc.), ward committees and Area Sabhas, important citizens' groups (associations, organizations and institutions such as local chamber of commerce). Various expert groups, including representatives of donor agencies also gave their inputs into making the proposals citizen centric. This was only the beginning. Over time, the framework of citizen engagement has expanded to include many platforms for two-way dialogue like the Smart City Advisory Forum, Joint Working Groups, Data Alliances, TULIP and others. Participation in the form of cocreation is picking up. Smart cities are engaged with their citizenry in every initiative they undertake, whether it is about building new cycling infrastructure or new streets, water systems, new parks or mobile apps. One of the best examples of this two-way engagement was observed during the handing of the COVID crisis by these cities at the initial stages of its emergence.

How important are AI, ML, IOT and Blockchain in terms of adoption of Smart Cities?
No discussion on Smart cities ends without the mention of these jargons! Each of these technologies has a role, and each of them is an important piece of the puzzle going forward. One has to understand the key differentiator in the thinking about technology vis-à-vis smart cities in the west, and in our country. For example, If you ask the definition of 'smartness' to a Western European citizen, the general one-line answer you may get is that it denotes the use of latest digital technologies to improve citizens' lives. In India, our definition is multi-layered – from fixing sewerage infrastructure to providing Wifi and drone-based services, the range of interventions vary tremendously. This makes me state a very important principle, especially in our context – technology is not the goal, it is a means, an important one though, to achieve those multi-layered outcomes desired by our citizens.

These technologies have immense applications in every sphere of urban governance and activity. From urban planning to intelligent mobility to peer-to-peer energy solutions, all sectors can benefit from these technologies. Machine learning can help predict environmental outcomes, drones can help in emergency response and in surveys of all kinds. Electric vehicles will be key area of focus going forward, while blockchain has a lot of potential for transforming the way Government builds trust on various platforms with its citizens. There are myriad functions like birth and death records, land registration, medical records, payments etc. which can use Blockchain as a technology. IoT is critical in the sensing layer for all smart city solutions.

The National Urban Digital Mission (NUDM) along with the DataSmart Cities strategy are two core programs helping us scale the use of technology in Smart cities. The Centre for Digital Governance set up at NIUA is a key decision in this regard. The Mission is also championing the development of an AI strategy for urban India.

When we talk about the grievance systems and data, how much is being done in the field of data security and cyber security?
There are a lot of things that are said about data. Well! data has always been there and has been used from times immemorial. What has changed is the amount of it and the technologies behind its storage, transmission and visualization. Also, our abilities to harness its potential for decision-making has improved manifold. Which is why data is a very important thing in modern times. It is at the core of all our activities – especially urban governance and service delivery. What we need to understand is that technologies are after all for humans and should be looked at in the context of the values and principles prevalent in the social domain.

Data safety and security are non-negotiables and hence our effort is to ensure that they are incorporated by design. Besides, security by design, accountability and transparency are two vital elements of a data-governance framework. Measuring the social impact of data is something that smart cities are learning. They are not only themselves innovating on top of available data, but also allowing the ecosystem to use it for research and innovation through platforms like Open Data portal and India Urban Data Exchange (IUDX). Creating Data Standards is another key area of our work. Cyber Security is built into each level of technology deployment in Smart Cities. The Mission is revamping its model RFP to incorporate even more advanced elements of cyber security into its product acquisition framework. Besides we are investing immensely in training our cities understand the complexity of cyber security.

How do you think has the Smart Cities Mission assisted in the battling of COVID-19 pandemic? What is the future roadmap for post-COVID recovery?
COVID-19 has caused widespread disruptions in human wellbeing (jaan)and economies (jahaan) across the world. India is no exception. The magnitude of the COVID-19 crisis presented many challenges for cities to overcome, including lack of available staff, technical knowledge to repurpose existing smart solutions and capacity building and training for those manning COVID-19 war rooms.

India's Smart Cities have been at the forefront of this fight from testing, isolation, treatment, enforcing the lockdown to using technological innovations for information collection, crisis management, effective communication, and predictive modelling. Smart Cities worked on a novel 4 Quadrant framework of Disaster Response – Information, Communication, Management and Preparedness which helped contain the crisis expeditiously. They leveraged Integrated Command and Control Centres (ICCCs) by converting them into 'War Rooms' that became essential hubs for crisis management.

We realize that cities that are innovative and adaptive enough to take agile decisions were able to effectively contain the spread of the disease. For the sustainable growth of our cities in our country and across the world, it's pivotal to leverage data and digital technologies for enhanced decision making. Evidence-based policymaking in a participatory manner must become the norm for policy and planning in the coming years. The Mission recognizes this and is making every effort to provide an ecosystem that allows thinking, acting and making collective decisions at a local level so that communities can future proof

themselves and become resilient. Decentralization, both administrative and financial, with greater degrees of freedom to local governments will help build our crisis management muscle in the future.

How has your journey as the Mission Director of Smart Cities Mission been so far?

I see my current role more as a mission Facilitator or Anchor than a Director. The real protagonists, the doers are our Smart city CEOs and their teams and the State/UT Governments supporting them. It is not only them, but the larger team comprising multiple stakeholders from the industry, academia, partner agencies, civil society, research organizations that have made possible whatever has been achieved. Tenders worth 175,000 crore and works under implementation/ completed worth 140,000 crore in less than 5 years of work initiation are by no means small achievements. I have been a Municipal Commissioner for long and I understand the struggles one has to go through to get things done, so any number of words of acknowledgement for this achievement for the entire team would be less.

I have said this before too, that Smart Cities are not built overnight, and we are in it for the long haul. Expectations are high. On-ground action does not always proceed at a speed with which we imagine things in mind. A good beginning has been made and more importantly belief has set in. Things we

used to consider impossible are now happening. Things we never dared to attempt are becoming commonplace. I have every confidence that the Smart Cities Mission will be a turning point in India's urban journey. It will make a transformative contribution in addressing India's urbanization challenge going forward.

I truly feel humbled and honored to have got this opportunity and cannot thank the Government of India enough for reposing faith in me. I am no expert in smart cities, in fact the more time I spend with this work, the more I feel that I know so little and there is so much more to learn. I have seen my perspectives and thought evolve along with the Mission. For any outsider, it is just a Mission. For me, the Mission is my teacher, my passion and my inspiration. The journey has been nothing short of an enthralling ride, one full of twists and turns but immensely satisfying.

In what way does the 6th Smart Cities India expo be furthering the cause of Smart Cities in India?

Sharing of information is the first step towards building collective action. With so many delegates visiting the expo, it becomes an incredible platform for knowledge sharing. Events like these catalyze new ideas, ignite partnerships and help practitioners meet with their like from other parts of the country and the world to draw inspiration from. I wish the conference great success!

CITY LEADER'S CONCLAVE

25 March 2021 |
1000-1800hrs | In-Person Event

The pandemic resulted in widespread turbulence across the world. As part of an emergency response to the pandemic, the Indian government leveraged its Smart Cities Mission (SCM) to enable cities to effectively leverage technology in improving citizen services and overall quality of life. Being future-ready is the aim of India's SCM. Indian cities witnessed a mammoth challenge in containing the virus while ensuring the safety and security of its citizens. With the onset of the COVID-19 pandemic, the existing smart city models proved their agility and ability to handle the challenge in executing various projects where use of technologies in cities, waste and sludge treatment, energy saving, low carbon transport systems, command control systems, etc. proved to be helpful. Even in the face of a public health crisis, social unrest, massive budget shortfalls, and mounting climate disasters, the city leaders are innovating, and taking bold steps to tackle their cities' most pressing challenges. City Leaders have employed new ideas and tools, in a very short time, leaving no scope for trials and errors. While responding to an unknown crisis of this scale, cities have strived to maintain the delicate balance between life and economic well-being as both ultimately meant the same thing- precious human lives had to be saved at all costs, and the quality of life of its citizens had to be improved.

The task of City Leaders to steer and shape their city's destiny has never been so crucial, and 'City Leaders Conclave' is designed to hear directly from our City Leaders about their experiences, challenges, way forward. How different will Smart Cities Mission 2.0 be from the 1st phase? How can we work on a collaboration approach more effectively? How is the mission comforting industry participation? What can we do to make Indian cities more investor-friendly?

1000 - 1100hrs Opening Session: Building Better Cities

Opening Address and Setting the context: **Mr. Nilachal Mishra,** Partner and Head of Government Advisory, KPMG in India

Special Address: **Dr. O.P. Agarwal,** CEO, WRI India

Ambassador speaks: **H.E. Mr. Andre Aranha Correa do Lago,** Ambassador, Embassy of Brazil

Guest of Honour Address: **Shri Durga Shanker Mishra,** IAS, Secretary, Ministry of Housing and Urban Affairs, Govt. of India

Launch of Knowledge Paper by: **Mr. Akshay Bhalla,** Office Managing Partner - North KPMG in India *Road to Sustainable Smart Cities:Challenges, opportunities and emerging trends*

1100-1110hrs Break and Changeover

1110 - 1300hrs
Session: Smart Cities Response to the Pandemic

1110-1115hrs
Setting context by Session Moderator: **Ms. Neetika Chhabra,** Director – Infrastructure, Government & Healthcare, KPMG in India

1115 - 1130hrs
Keynote Address by: **Shri Hitesh Vaidya,** Director, NIUA

1130 -1140hrs
Special Address by: **Dr. Charru Malhotra,** PhD (IIT-D), Coordinator (Centre of eGovernance), Indian Institute of Public Administration

1140 - 1200hrs Panel Discussion and Q/A

1200 - 1315hrs Presentation by India Cities: Part I
1200 - 1210hrs: Dr. Garima Mittal, IAS, CEO, Faridabad Smart City
1210 - 1220hrs: Mr. Aditya Singh, CEO, Bhopal Smart City Ltd.
1220 - 1230hrs: Mr. Ashish Kumar, CEO, Jabalpur Smart City Ltd.
1230 - 1240hrs: Mr. Gaurang Rathi, IAS, Varanasi Smart City
1240 - 1250hrs: Ms. Jayati Singh, IAS, CEO, Gwalior Smart City Ltd.
1250 - 1300hrs: Mr. Nitin Sangwan, IAS, Ahmedabad Municipal Corporation

1300 - 1315hrs Discussions and Q/A
1315 - 1400hrs Lunch Break

Presentations by Indian Cities: Part II
1400 - 1410hrs: Setting the context
1410 - 1420hrs: Mr. Mahesh Moroney, Deputy Chief Executive Officer, NAGPUR Smart City
1420 - 1430hrs: Mr. Raj Cherubal, CEO, Chennai Smart Cities
1430 - 1440hrs: Mr. Rahul Singh Rajpoot, CEO, Sagar Smart City
1440 - 1450hrs: Mr. Mukesh Malhotra, CEO, Biharsharif Smart City Ltd.
1450 - 1500hrs: Mr. Ravi Pawar, CEO and Dy. Commissioner, Amravati Smart City

1500 - 1515hrs Discussions and Q/A
1530 - 1545hrs Networking Break

1545-1625hrs Session: Heritage as an Enablement for Effective and Usable Urban Environment

Session Moderator: **Mr. Ashutosh Kapoor,** Director - Infrastructure Government and Healthcare, KPMG in India

Distinguished Speakers:
• **Mr. Navin Piplani,** Director, INTACH
• **Mr. Athar Aamir ul Shafi Khan,** Municipal Commissioner, Srinagar Municipal Corporation, Jammu and Kashmir
• **Mr. Khushaal Yadav,** CEO, Ajmer Smart City Ltd.

1625-1630hrs Changeover

1630-1730hrs
Session: How Important is to create "Sister Cities Concept" for Smart and Sustainable Cities?
Moderator: **TBD**

Distinguished Speakers:
• **Dr. Bernadia Irawati Tjandradewi,** Secretary General, UCLG
• **Ms. Fathimath Afshan Latheef,** CEO, Local Government Authority, Republic of Maldives
• **Mr. Ravi Ranjan Guru,** DDG, AIILSG
• **Mr. Rafael Greca,** Mayor of Curitiba, Brazil
• **Mr. Junaid Azim Mattu,** Mayor, Srinagar Municipal Corporation

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BUILDING YOUR DIGITAL ECOSYSTEM – GX GROUP

Make in India setup
Manufacturing in India

or Routers' portfolio to the event especially launched for this event.

Make In India Dream
To further strengthen the execution of our long-term vision in India, we with the help of the Netherlands Government- Dutch Growth Fund investments, are setting up GX-owned facility for manufacturing in the state of Haryana, with a target of creating a global hub in India for manufacturing of FTTH products. This is something that has always been the vision since the launch of the operations in India back in 2013, and along with this we look forward for setting up state-of-art testing labs for Wi-Fi, ensuring highest end consumer experience.

As a global vendor, we also drive and contribute to the global broadband standardization, as cybersecurity is an ever-growing concern and requirement. We continue to make significant investments in ensuring cybersecurity along with ensuring latest technology introduction in the market with our niche quality and development.

We have vested interests in R&D and next generation products, along with expansion in Asia with a focus on manufacturing & exports from India. We have recently appointed Sanjay Kaul, President of Cisco APAC as a board advisor to support our Asia strategies to further expand our footprint to emerging markets. With the future being impossible to forecast, and the pandemic making life ever more unpredictable, the one thing that's clear is that technology will play a major role, where equal rights for internet will be important, as Internet access today is a Human right.

Despite the billions of people accessing the Internet, with only 54% of the global population being connected to the internet, there are regions in the world that do not have access.

Due to the lack of access and suppressive tactics by certain governments, the United Nations (UN) has declared 'online freedom' as a 'human right,' and the one that must be protected, as announced in the form of a resolution A/HRC/32/L.20 in 2016.

GX Group has been a major contributor since 2000, in connecting homes, and has

Paritosh Prajapati
CEO
GX Group

witnessed the entire technology boom in the networking industry, emerging as a leading vendor in the European market, where we started our journey by deploying products. The European market today, is the highest penetrated market in terms of FTTH connections with an average of 40-to-45 percent connected homes.

Our Market Focus
Our focus has been on manufacturing of FTTH products based on GPON (Gigabit Passive Optical Network) and XGSPON technology (10 Gigabit Passive Optical Network), where we design and develop the central equipment OLT (Optical Line Terminal) and the home gateway ONU (Optical Networking Unit), enabling seamless internet connections for homes, offices and other premises.

Convergence India is Asia's biggest platform for technology developers to showcase their true might. We have researched and engineered the Fiber Technology to such an extent that we now want to introduce Hi-Performance Home Gateways

IN THE COMING YEARS, WE WILL WITNESS THE NEXT WAVE OF DIGITAL INDIA, IN THE AFTERMATH OF LOCKDOWN AND SOCIAL DISTANCING. WE ARE TO WITNESS AN EXPLOSION IN BOTH INTERNET ADOPTION AND FREQUENCY OF USAGE, ENABLING INDIA TO DEVELOP THE WORLD'S LARGEST DIGITAL WORKFORCE.

New router portfolio launched
Fast. Advanced. High Performance

A GLOBAL END-TO-END SOLUTIONS PROVIDER

PPC Broadband

Today's global broadband market features ever-changing technologies and vast differences in regional architectures. The Asia Pacific differs from Europe, which differs from America, which in turn demand different components than Africa and the Middle East. To serve each region – to be a true worldwide partner to the industry's largest network operators and service providers – a company must amass an incredibly broad product portfolio and suite of services to support each geographic market.

PPC Broadband is one of those rare global solution providers, that are able to support customers and network demands to all of the world's localities.

For over nine decades, PPC has established itself as the premier innovator within the communications space. As an early pioneer of connectors used in CATV and digital cable systems, PPC holds more patents in connector technology than any other company in the world. And over the last decade, PPC has become a major provider of fiber and optical network components to the biggest telecommunications companies around the globe. Through its advanced fiber test laboratory and strategic growth initiatives, PPC has rapidly expanded its product breadth today by offering comprehensive solutions for Central Office, Outside Plant, and Premises applications for network architectures of all types.

Central Office Solutions

PPC offers copper and fiber solutions for the central office that includes cabling, connectors, fiber management, passive and active transport, and more. Passive and active products in the optical headend portfolio include multiplexers, splitters, patch cords, and optical line terminals (OLTs), among others. These are complemented by rack and cabinet products, high density fiber management platforms, connectors, and testing equipment.

Outside Plant Solutions

Outside Plant solutions within the PPC portfolio are broad. Optical passive products, street hubs, cabinets, underground and aerial solutions, and myriad hardware options enable a clean signal transfer from the central office to the customer premises.

Premises Solutions

Whether for multi-dwelling units (MDU) or single-family homes (SFU), PPC's comprehensive set of product solutions for the customer premises help ensure subscriber satisfaction. Fiber and category options, alongside coaxial products, create one of the marketplace's complete product offerings. PPC's revolutionary Miniflex® fiber cable, QuikPush® cable assemblies, terminal boxes, wall plates, and connectors form the core of its FTTH solution set.

Global Support Services

With manufacturing, sales, and customer services locations across six continents, PPC is positioned to support customer needs regardless of the location. Manufacturing and warehousing redundancy mitigates the effects of regional disruptions, and offers security and peace of mind for our partners. Regional sales and customer service support is available across the map to provide informed local support to PPC's customers. Training and other knowledge-based support programs are also available, enabling customers and ensuring that the installation and use of PPC products is optimized for network and all types of network applications.

PPC Broadband – Active Solutions for FTTH

PPC is proud to return to the Convergence India Show in 2021. As a true end-to-end solutions provider, PPC offers a range of optical products that enable signal transmission from the central office through the outside plant to the customer premises. At this year's show, we are displaying our active product solutions alongside our passive product portfolio.

Active Products Display

The PPC Broadband exhibit will feature three core active product displays:

• **Optical Line Terminals (OLT) & Optical Network Terminal (ONT)**
GPON network consists of mainly two active transmission equipment, namely- Optical Line Terminal (OLT) and Optical Network Unit (ONU) or Optical Network Terminal (ONT).
An OLT shall provide aggregation and switching functionality between the core network and PON interfaces. It shall offer PON interfaces (towards ONU/ONTs) & Service interfaces (towards core network). The interfaces towards ONU/ONTs are called PON interfaces and the interfaces towards core network are called Uplink interfaces (SNI).
ONU and ONT are the system blocks to provide access to the users. The access node in FTTH architecture for network termination installed within user premises is termed as ONT. Whereas the access nodes in FTTB/FTTC/FTTCab architectures, installed at locations such as Curb/Cabinet/MDU (or MTU) basement, are termed as ONU.

• **Erbium Doped Fiber Amplifier (EDFA)**
Erbium Doped Fibre Amplifier is an optical amplifier that is used to boost optical signals carried through a fibre optic communications system. The power of a data transmitter may be boosted with a high-power EDFA before entering a long fibre span, or a device with large losses, such as a fibre-optic splitter. It operates at 1550 wavelength which is in line with the low-loss band of fibre, where telecom fibres have their loss minimum and its technology has been relatively mature and so widely used. The core element of a fibre amplifier is a piece of fibre doped with a rare earth element, which can provide laser amplification via stimulated emission, when it is optically pumped with other light injected into the fibre.

Passive Products Display

The PPC Broadband exhibit will feature a range of passive network products on displays:

• **Fiber Pigtails / Patch Cords**
The Patchcords and pigtails are terminated with high quality connectors, which provide low insertion loss and high return loss. Each patchcord or pigtail is individually tested and supplied with test certificates. The unique serial number provides traceability of every single product. It is available in all types of single mode and multimode fiber types.

• **Splitters and Coupler**
Planar Lightwave Circuits (PLC) splitters are manufactured using silica glass wave guide circuits and extremely precise alignment of optic fibers in a very small package. They split or combine light from one or two incoming fibres to multiple numbers of outgoing fibers. They perform uniformly over a wide spectral range, with ultra-low losses. Splitters are highly compact, reliable and available in very wide range of fiber and connector types. All PLC splitters are fully compliant with the Telcordia GR-1209 & GR-1221 standard.

• **Patch Panels and Cabinets**
The Fiber Optic Patch Panel has been designed to facilitate internal fiber management and also to maximize fiber density in 1U, 2U, 3U and 4U height increments. The sliding tray provides easy access to fiber cabling, making this panel ideal for 'Pay as you Grow' applications. The panel supports 24 way, 48 way and 96 way configurations in SC Simplex, SC Duplex, ST/FC (D cut out), LC Duplex (SC simplex foot print), LC Quad (SC Duplex foot print). Versions are available with MTP MPO cut-outs on the back for use with pre-terminated MTP/MPO trunks

Vision for Future Growth

Despite its rapid expansion in the last decade, PPC has no plans to slow down. In recent years, an internal focus on innovation has been paired with the addition of global brands to make PPC the end-to-end solutions provider, that it is today. The company continues to emphasize on innovation focused on organic product development, aiming to solve customer challenges with new designs and technologies. The continued growth of the PPC product portfolio, the evolution of new technologies for next generation networks, and the creation of solutions for unique customer needs will remain a driving force for PPC's growing footprint in international markets.

A True Partner to Every Customer

PPC is a committed partner to our worldwide base of customers. Pairing the capabilities of our global manufacturing sites with the knowledge-base of our regional sales and customer support offices, we are able to equip and enable large-scale multiple system operators (MSOs), internet service providers (ISPs) and telco companies as well as regional operators, local operators, and public and private in-building providers.

NAMAMI GANGE

The river Ganga is more than just a river, it has been and it will be one of the most important rivers of India, not only for its history, rich heritage and culture but also for its economic and ecological importance. Considered as a lifeline for millions of people, River Ganga faces several challenges from high levels of pollution, resulting from domestic and industrial wastes, non-point sources of pollution from agricultural run-off containing pesticides etc.

With the objective of restoring the wholesomeness of the River Ganga, the Government of India launched an ambitious programme of Namami Gange under the leadership of Prime Minister Narendra Modi. It is a flagship programme for the rejuvenation of Ganga and its tributaries. National Mission for Clean Ganga (NMCG) is the implementing authority of this program. An integrated programme was launched at a monumental scale of Rs. 20,000 crores with assured funding consisting of multi sectoral, multi-agency and multi-level interventions.

Under Namami Gange, the focus is on the interlinking of Ganga and the cities along the Ganga river. To rejuvenate the river, it is important to focus on the urban agglomeration along the river. Through the mission, the focus now has been shifted from pollution abatement to urban renewal, not only in the sector of water and sanitation but also for providing the open spaces to the cities so that nature and urban population can co-exist together. The Namami Gange program can be placed into four categories ie. Nirmal Ganga, Aviral Ganga, Jan Ganga and Gyan Ganga.

A total of 315 projects have been sanctioned under Namami Gange programme at a cost of Rs. 28,854 crores. 130 projects have been completed and the remaining are at various stages of execution. Pace of execution and consequently the expenditure has also increased many folds with the expenditure for FY 2019-20 being Rs. 2673.09 crores as compared to Rs. 170.99 crores in FY 2014-15.

TALLY PRIME: A WHOLE NEW LOOK, A WHOLE NEW EXPERIENCE

Tally Solutions Pvt Ltd is a pioneer in the business software products arena. Since its incep-tion in 1986, Tally's simple yet powerful products have revolutionized the way, small and medium businesses run and manage their business. Today, Tally caters to nearly 2 million businesses across 100 countries of the world, and remains unchallenged as a leader in its space.

Tally's latest product TallyPrime is the all-new business management software. The product greatly simplifies the familiar experience of previous Tally products and comes with a new user interface and powerful capabilities that will help business owners take full advantage of the product. TallyPrime helps a business simplify accounting, inventory, banking, payroll and GST compliances among other business areas.

TallyPrime also facilitates secure access to business reports on web browsers. This, along with other connected services like e-invoicing, e-payments and data synchronization are made available through the Tally Software Services (TSS) subscription. The TSS subscription also provides users free upgrades to all the new releases of the product.

Tally products are made available to customers through an extensive network of more than 28000 partners. Among these, there are some partners who are certified for their product knowledge and the ability to give a great customer experience. Some of them also build add-ons and solutions on top of the default product, thereby catering to unique require-ments.

Be it manufacturing, trading, retail or services; TallyPrime fits into all sectors. The product is built in a manner that will give these diverse businesses the feeling that it is made for them.

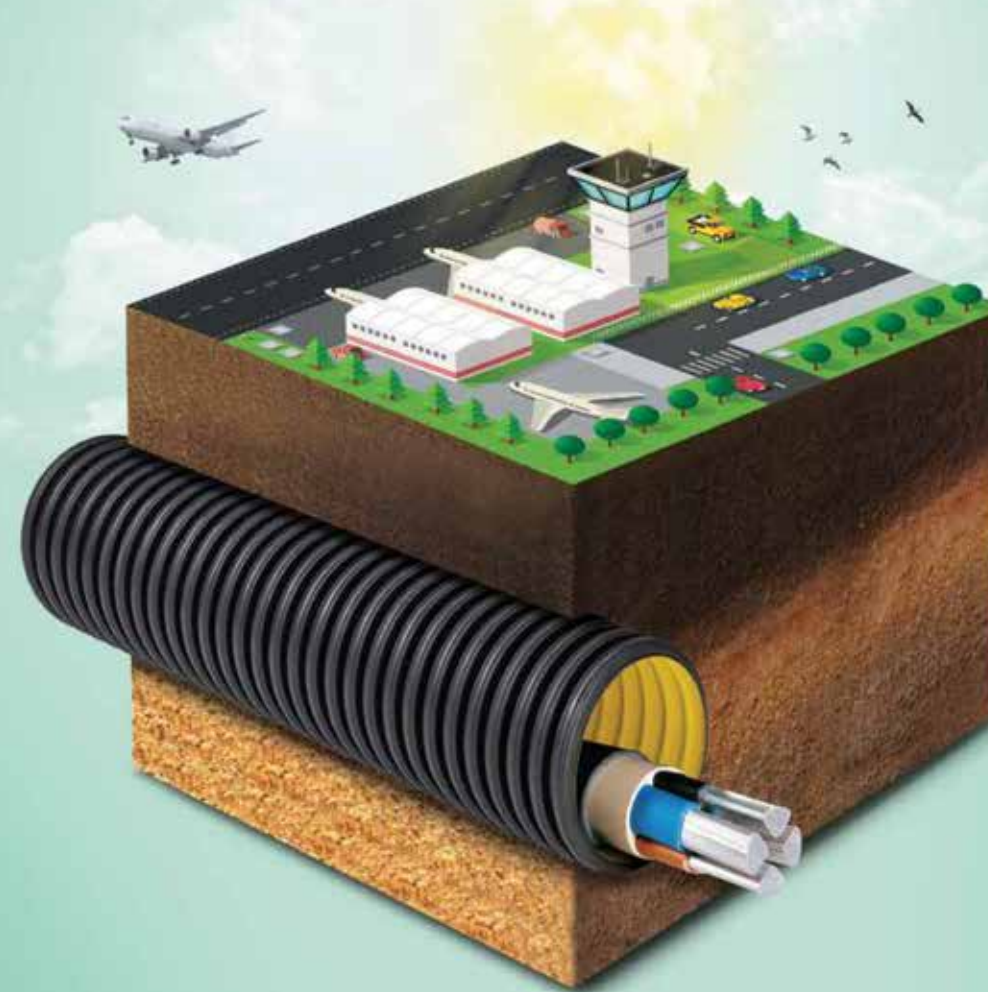Tally customers are assured of timely and effective support, as and when required. The sup-port is available through multiple channels like call, email, chat and mobile app. Further, there is an exclusive support portal (help.tallysolutions.com) where one can get step-by-step guides on all topics related to the product, as well as all the FAQs (frequently asked questions).

Over the last few years, with the advent of virtualization, the demand to access Tally applications and other crucial data using technologies such as Windows RDP, Citrix, Windows Thin Client, cloud services etc. have gained momentum. Given the current situation with the pandemic, this need has accelerated even more. Keeping up with Tally's commitment to bring in changes that makes users' life easier and serves the growing need to access Tally-Prime anytime, anywhere, Tally has made a change in their licensing policy to authorize and support the virtual usage of TallyPrime. This will be operated through a Tally Virtual User (TVU) pack.

The latest release of TallyPrime supports e-invoicing compliance. Effective 1st April 2021, it's expected that all businesses generating B2B invoices will need to transition to the e-invoicing era. Going forward for a B2B invoice to be considered valid, it will be important to carry an IRN (invoice reference number) and QR code. These will be issued once such in-voices are registered on the IRP (invoice registration portal). TallyPrime helps you generate e-invoices at the click of a button while you are saving your invoice. The product communicates directly with the IRP to make this happen and you therefore don't have to go outside the application for e-invoice generation.

ASTRAL PIPES: LEADING PIPE MANUFACTURING IN INDIA

storage tanks that have recently been launched.

The piping and water storage tank industry comprises of a major chunk of unorganized players providing subpar products leading to performance issues. The industry also faces major complications, owing to consumers' low involvement and lack of in-depth knowledge about piping, leading to dependency on decision making.

Astral Pipes offers a varied range of products that emerges as a backbone for the city's in-frastructure. From DRex, a double walled corrugated piping system used for stormwater and sewerage and Astral Hauraton, a product for draining rain water from the surface to Astral MultiRex and Astral TeleRex a cable through channels for cable protection; the products are world renowned and widely used.

At the 28th Convergence India and the 6th Smart Cities India expo, Astral Pipes will be showcasing its range of esteemed products such as CPVCPRO, PEX-a-PRO, Silencio, Un-der Ground, Drain Hulk, Foamcore, Hauraton, Aquasafe, D Rex, Telerex, and Multi Rex.

With the sole purpose of boosting industry standards and helping consumers with high quality products and services, and value for their money, Astral pipes believes in embracing newer technologies, overriding the old age and primitive techniques in piping.

Astral Pipes is one of India's leading manufacturers of plastic piping, providing solutions for various verticals such as plumbing, drainage, agriculture, infrastructure and industrial usage. Since its inception, the company has strived for excellence and has been known for introducing novel innovations in the piping arena, raising the bar for quality products. From being the first one in India to launch technologies such as CPVC Piping and lead-free uPVC piping, company's brand mission has been to maintain and grow a commanding presence in the minds of customers with consistently delivering promised values. Astral Silencio and Astral Pex-a Pro are the results of the path-breaking philosophy of delivering quality products and services that the company adheres to. The product profile of the company has also been broadened with the introduction of infrastructure products like water

THE FUTURE OF VIDEO STREAMING IS HERE

Bitmovin Wins the Award for Development of Massive Processing Optimized Compression Technologies

With the number of households consuming online content (as opposed to traditional broadcast) soars to new heights, alongside the number of available services to stream new content, there's an equally growing demand for efficient transmission of the millions of hours of content worldwide. As of summer 2020, there was an estimated count of 105,000 available hours of content in the US alone, per household, on an average. Given the recent launches of HBO Max, Peacock, Discovery+, and more, one can assume that the number has drastically increased over the course of last year.

Delivering that much content at a scale is no easy task, especially when it comes to maintaining a high perceptual quality, in a timely fashion, and across all varieties of available bandwidth. That's where Massive Processing Optimized Compression Technologies (encoding) comes into play to ensure that good amount of content is delivered efficiently, to as many organizations as possible. Thus, a new Emmy® Award was born to display the innovations in chunk and/or shot-based encoding mechanisms that transmits information into finer and smarter segments. As of February 2021, Bitmovin was honoured as a recipient of the Technology & Engineering Emmy® Award for Development of Massive Processing Optimized Compression Tech+ologies.

HOW DID WE GET HERE?
Our educational roots
Bitmovin's DNA and our original founding story came from contributing to the development of the open-source MPEG DASH adaptive bitrate standard through our founder's Ph.D. research and active members of the Alliance for Open Media (AOMedia). Our innovative mindset towards improving streaming quality has been at the core since 2013 in the form of public re-search, shared development of open-source standards and code, and real-world deployments of proprietary commercial implementations at scale.

This came to fruition when the other two Bitmovin founders, Chris Mueller & Christian Timmerer, participated with me in contributing to the development of the MPEG-DASH standard, which became the de facto video streaming standard used today by the largest online broad-casters in the world of Netflix, Google, YouTube. Bitmovin's earliest products essentially referenced implementations of this standard in development for both processing (Encoder) and playback (Player), when Bitmovin was founded as a spin-out of the University of Klagenfurt, Austria in 2013.

Our encoding product is born
Soon after the release of the commercial stable products in 2014, Bitmovin saw stunning growth as evidenced by its roster of some of the world's largest online broadcasters such as Hulu Japan, the BBC, and many others.

Within two years in 2016, Bitmovin released the next generation of video streaming innovation with its Per-Title encoding service — one of the first commercial solutions available to broad-casters for leveraging the power of perceptual quality measurement as applied to video encoding bitrate optimization. Again, Bitmovin grew its roster of global scale online broadcasters with this technology including Hulu, HBO, and Stan - officially premiering the solution at the 2018 International Broadcasting Convention (IBC).

As time passed by, our regular contributions and research efforts with the University of Klagenfurt were expanded to a new effort in 2020, the ATHENA program — a joint investment from the Austrian Federal Ministry of Digital and Economic Affairs (BMDW), the University of Klagenfurt and Bitmovin GMBH, for establishing a multi-million Euro research project for uncovering video transmission technology techniques that will enhance the video streaming experiences of the future.

Developing technology for the future: Per-Title Encoding
The joint project established a dedicated research team to investigate potential new tools and methodologies for encoding, transport, and playback of live and on-demand video using the HTTP Adaptive Streaming protocol that is widely used by online video and TV providers. The resultant findings will empower the creation of next-generation solutions for higher quality video experiences at a lower latency with potentially reduced storage and distribution costs, while leveraging the human-centered perceptual quality metrics.

Recently, Bitmovin, further improved its parallel encoding compute capabilities by launching additional cloud-based processes with Cloud Connect Encoding, that massively supports parallel encoding to achieve significant multiples over real-time, deployed on the 3 most popular infrastructure services: Amazon Web Services, Google Cloud Platform, and Microsoft Azure. Each of these services has different API specifications as well as configuration particularities.

All of these innovations culminated with Bitmovin as an honoured recipient of the Technology & Engineering Emmy® Award for Development of Massive Processing Optimized Compression Technologies.

What does this mean for the future of Bitmovin & Online Video?
Bitmovin will continue to develop and evolve per-title encoding solutions to create real-time implementations of quality-based encoding at low latencies, as it's still an early-stage technology and lacks widespread accepted industry standards. We also expect to see further adoption and improvements in AI and machine learning for video quality measurements that will allow organizations like Bitmovin to apply even more optimal encoding parameters. However, it may take few more years to witness material impacts on the market from AI/ML applied to encoding, as it's in an early research and experimentation phase.

THE ELECTRONICS INDUSTRY IS GEARED FOR SKILL DEVELOPMENT & CAPACITY BUILDING

The Electronics Sector in India is currently experiencing a high growth and with the National Policy on Electronics (NPE) 2019, envisions to position India as a global hub for ESDM by encouraging and driving capabilities in the country for developing core components, including chipsets and by creating an enabling environment for the industry to compete globally.

The NPE 2019 replaces the NPE 2012, which had successfully built the foundation for a competitive Indian ESDM value chain. The NPE 2019 targets to promote domestic manufacturing and export in the entire value chain of ESDM to achieve a turnover of USD 400 Billion by 2025.

The Electronics System Design & Manufacturing (ESDM) industry includes electronic hardware products and components relating to information technology (IT), office automation, telecom, consumer electronics, aviation, aerospace, defence, solar photovoltaic, Nano electronics and medical electronics. The industry also includes design-related activities such as product designing, chip designing, Very Large-Scale Integration (VLSI), board designing and embedded systems.

• India's digital base is the second largest in the world and is growing at the second-fastest rate among the 17 leading economies.

• The Digital India Program has been transforming the Country into a digitally empowered society and knowledge economy since its launch in July 2015.

• India is the third biggest start-up hub in the world, as 1300 new tech start-ups were added, in 2019 alone.

The Government of India has embarked upon several programs and incentive schemes to strengthen the ESDM ecosystem with a complete value chain and to position India as the global hub for ESDM.

The huge growth being experienced is also taking the electronics manufacturing to a situation of high demand for skilled manpower across the product lifecycle and the Ministry of Electronics and Information Technology (MeitY) supporting the ESDM Capacity building across the country.

The skill development eco-system being built around the National Skill Qualification Framework-NSQF, promulgated in 2013 is also at a stage of high growth and the Electronics Sector Skills Council of India, ESSCI has taken the responsibility to build skilled capacity across the sub-sector landscape addressing the complete product lifecycle.

Electronics Sector Skills Council of India (ESSCI) is a Not-for-Profit Organization, registered under the Indian Companies Act, 1956. The Council has been promoted by six Associations i.e. CEAMA, ELCINA, IESA (formerly ISA), IPCA, MAIT & ELCOMA, with financial support by National Skill Development Corporation (NSDC).

The ESSCI's focus is on establishing an effective and efficient ecosystem for developing and imparting outcome oriented skills for the Electronics Systems, Design and Manufacturing Industry (ESDM).

ESSCI's mandate comprises of plethora of deliverables including development of curriculum, courses, information database, and delivery system. ESSCI is responsible for standardization, accreditation and certification processes to enhance the employability of the Indian workforce globally. It envisions to enable a world class electronics manufacturing industry with an eco-system for skill development and enhanced employability of large number of Indian human resource.

ESSCI strives to establish a structured mechanism wherein ESSCI will facilitate & collaborate with NSDC in strengthening the existing vocational education system for skill development in electronics sector & upgrade vocational training system for the industry to achieve global standards in manpower productivity.

The approach of ESSCI is to build a robust ecosystem of partners and knowledge contributors leading to research analysis and developing a training mechanism leading to accreditation and certification of trained resources.

ESSCI has over 250 training partners with over 4550 training centres across the country, that are well equipped to undertake skill development across job roles in all segments of ESDM. ESSCI has developed 162 Qualification Packs (QPs) and over 250 National Occupation Standards (NOS). The Qualification Packs in emerging areas are being developed and the existing QP's are continuously being upgraded to align with the technological and market demands.

ESSCI has numerous credible Qualification Packs for the skill development in this segment and have been closely developed with the industry, after assessing the intrinsic demand for trained technical manpower in the industry in near future.

The Electronics Sector Skills Council of India has, so far, skilled over 12,00,000+ candidates into various job roles in electronics and is moving towards supporting the electronics Industry with skilled manpower and ensuring the operations are not in any way impeded by lack of appropriately skilled manpower.

The Electronics Sector Skills Council of India is Committed to the dream of making India a Global electronics manufacturing hub and be the backbone of the industry by ensuring seamless supply of skilled manpower. It is moving ahead with an ambitious program to work closely with the industry and is committed to skill over 2 million candidates in the electronics sector.

FINANCIAL ADVISOR OF THE FUTURE: HIGH TECH AND HIGH TOUCH

INDUSTRY SPOTLIGHT

Future of Financial Advisory

What happens when baby boomers' kids who want nothing to do with their parents' financial advisor inherit their wealth? Will consumers pay advisory fees when they can easily build a personalized investment portfolio online for a fraction of the cost? Where is the future of Financial Advisory headed? These are just some of the worries that are plaguing the financial advisory industry.

Automation has always been seen as a threat to the job security of advisors, but that may not be the case after all. The demand for personal financial advice is growing and will continue to grow stronger as income levels and savings rates rise. The demand for financial assets is also increasing at the same time. With recent news of the US personal savings rate hitting its highest level in 39 years, the wealth management industry is poised for skyrocket growth.
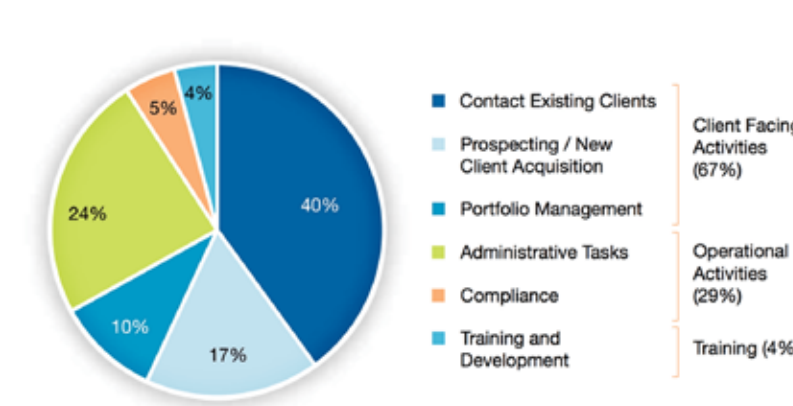
Financial Advisor's Ally

According to a survey conducted by Capgemini, financial advisors spend 67% of their time engaging with clients. While 29% of their time is used to perform administrative tasks. Leaving only 4% to perform productive tasks such as monitoring and rebalancing client's portfolios.

However, all these mundane and repetitive tasks can go away with the help of a Robo-advisor. Automation can help wealth management firms:
1. Increase the advisor's productivity
2. Improve operational efficiency
3. Improve advisor-client relationship
4. Increase market share and improve reach
5. Assist in the delivery of simple and complex financial services


Figure 1: Financial Advisor Time Allocation (%), 2009

Source: Capgemini Analysis 2010; PWC Survey, 2009

A shift in Consumer's Expectations

Now that financial advisors are relieved of the repetitive mundane tasks, they can focus more on enhancing client experiences. Research by Salesforce found that 84% of respondents expect very highly of customer experience, to the extent that it holds the same importance as the products or services.

Just as how technology has evolved, the client's expectations have done so as well. It is no longer enough to just deliver an extraordinary product,
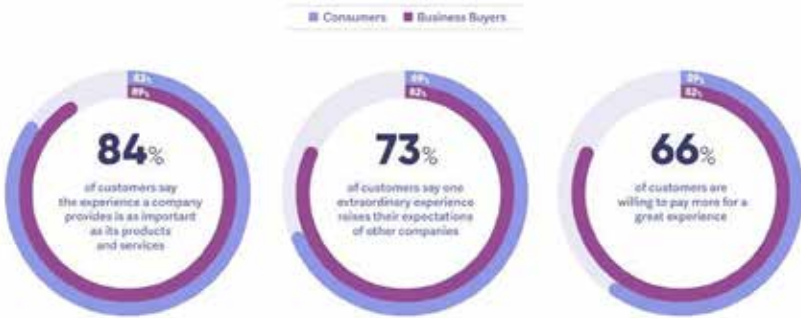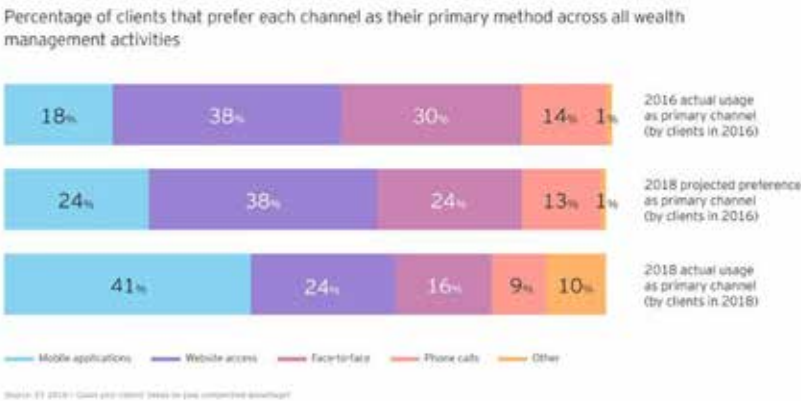

a customer's experience is just as important. Therefore, the integration of automation in financial services will enable financial advisors to deliver the finest customer experience while retaining high productivity.

Digital Consumers

Even though technological advancements have been going on for years, companies are still having trouble keeping up with the digital change – including wealth management firms. Unfortunately for the firms, these changes are inevitable and will not stop, especially with digital consumers as the driving force behind it all.

In 2019, Ernst & Young surveyed 2,000 investors across 26 countries on various topics surrounding the wealth management scene. This is what they found.

So what does this tell us about consumers' behavior? First of all consumer's behavior is definitely evolving and it's evolving fast.

Percentage of clients that prefer each channel as their primary method across all wealth management activities

In 2016, 18% of clients used mobile applications as their primary channel with a projected 6% increase by 2018. And once again, as consumers, we underestimated the rate of change. The actual percentage of clients who use mobile applications doubled from the amount in 2016. Coupled with those who prefer website access, ⅔ of clients prefer digital platforms as their primary channel.

Smartphones have only become smarter. Everything can be done at the touch of a button, from grocery shopping to finding jobs. Convenience and efficiency are the main drivers behind increasing preference from clients.

As clients drift towards mobile, first-generation channels such as websites are becoming obsolete. Projected to stay constant at 38%, the

actual numbers would beg to differ. In less than three years, the preference for websites as a primary channel dropped by a third.

These numbers are the average across all wealth management activities. Hence, will the number differ when we dive into specific activities?

The answer is no.

Clients who prefer to use each method as their primary channel in the next three years for key wealth management activities.
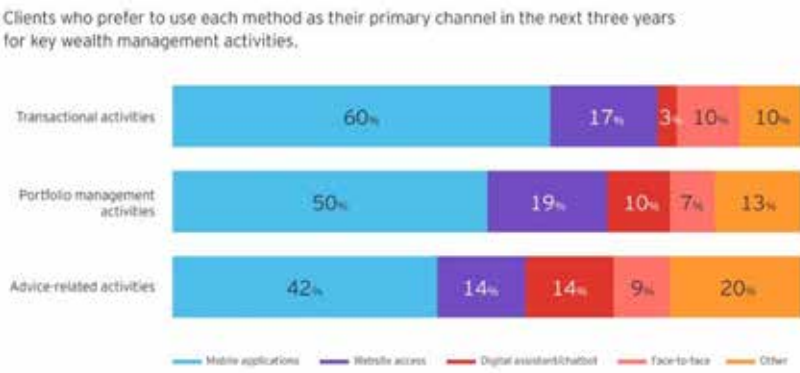
The gap is even wider. Although a large portion of the clients uses mobile applications for basic tasks, there has been increasing popularity in using apps for advanced activities as well- such as portfolio management, and advice-related tasks. These percentages are expected to increase over the coming years with advancement in wealth management tech and ease of use for clients of all ages. Another compelling observation found that in correlation with the complexity of tasks, the client's preference for digital assistant or chatbot increases as well.

A survey conducted in 2018 found that only 1.4% of respondents are currently using digital assistants. However, it is projected to increase eight times the amount in the future. The demand for digital assistants is not restricted to only simple tasks. Clients are actually more inclined to use digital assistants for complex tasks such as advice-related activities.

High Touch Engagement

Nonetheless, the need for traditional advisors is still prevalent. High touch engagement is even more important during a volatile time and major life milestones. Looking at the results from the survey below, we can see that for all major life stages, more than half of the clients are looking to use advisory services.

Why is this so?

As human beings, we fear uncertainty, and major life changes are full of it. When faced with such changes, clients search for trustworthy advisors to help them navigate through the murky waters of life. However, the demand for human interaction can vary depending on the types of clients. Clients with more complex financial strategies or situations request more human interaction.

To many people's surprise, the demand for face-to-face meetings actually decreases with wealth. The rate of mass affluent demand for such services is nearly double the rate of the ultra-high net worth clients- 11.7% and 6.5% respectively. This counters the general perception that

automated services are for the mass affluent.

What's Next?

Integrating automation does not mean eliminating human advisors. Yes, consumers are shifting more towards digital as a primary channel. However, some clients require the help of a traditional financial advisor. It is said that the absence of emotions is one of Robo-advisors biggest strengths. But in times of uncertainty, clients need someone who can empathize with them and reassure them by providing that human touch.

So what does this mean for firms? Do they move to digital or remain the same? Well, both. It is all about balancing high tech and high touch services. Through harnessing state of the art technology, firms can improve productivity and automate repetitive tasks. As a result, advisors can focus on delivering high-quality engagement to clients who desire the human touch.

According to a Deloitte survey, 66% of consumers seek a self-directed journey. Providing omnichannel delivery will enable consumers to lead their own journey and choose how they want to interact with wealth management firms. Those who prefer little to no human interaction can opt for the full digital experience. Whereas, clients who seek to consult a financial advisor still have the option to do so; providing the best of both world experience for modern clients. This is truly the financial advisor of the future.

Be a financial advisor of the future with Bambu

Bambu can help you and your company prepare for the future. Our products have an easy-to-use and well-designed interface, helping to facilitate the smooth journey that you seek to deliver to your clients. Our features are powered by proprietary algorithms, allowing us to automate things like portfolio rebalancing, pull financial insights, visualize data and value add to financial advisors in many ways.

Percentage of clients planning to use or considering using advisory services during major life stages

TAIWAN EXCELLENCE AT FOREFRONT DURING PANDEMIC TO OFFER RESILIENT TECHNOLOGY

Mark Wu
Executive Director
Taiwan Excellence

The previous year has been a challenging one for everyone. As uncertainty took hold of all the aspects of our lives, there was a growing need for ways and means to move forward with the help of the right kind of technology and innovations.

While the world tried to adapt to remote working, learning and smart manufacturing, countries like Taiwan came forward to help plug gaps by offering the requisite technology and solutions to ease the situation without any bottlenecks. Leading Taiwanese brands stepped up to offer collaboration tools with usability improvements at a time when the world needed them the most.

The symbol of Taiwan Excellence honours Taiwan's most innovative products that provide tremendous value to users worldwide. All products carrying this symbol are award-winning solutions and are testimony to outstanding R&D, design, quality, marketing and Made-in-Taiwan merits. Taiwan Excellence believes that innovation makes a difference in everyone's life. Excellence means creative designs that we use every day on the street, at work, at home. It also means the technology that makes us healthy, promises our future generations a green tomorrow and keeps us moving.

This is what we live by and this is how we continue to serve the world even during the pandemic.

At the peak of the outbreak, as the world struggled, Taiwan Excellence was at the forefront offering robust, easy-to-use communication tools that enabled working and learning from the safety of homes. All through the period, Taiwanese brands came forward to build knowledge sharing platforms to display resilient and flexible collaboration tools that enhanced the quality and utility of remote communication. They worked on a war footing to offer solutions to help companies and educational institutions across the world to equip employees and students to work agilely, collaboratively, and securely–with access to specialized support mechanisms.

For decades now, Taiwan has been known for its strong ICT industry and for its many products optimally suited to support new ways of working and learning. With a pragmatic approach to the development of emerging technologies, the country is bolstering its presence globally driven by the growing adoption of wireless connectivity of electronic devices.

Some of its sterling products that held special importance during the peak pandemic included CyberLink's 'U Communication Suite' designed for business communication with a fully integrated service for online meetings, presentations and business chats. Aver's 'Mechanical Arm Wireless Interactive Visualizer' is ultra-lightweight and convenient for teachers to carry. It is equipped with a 4K 13-megapixel camera and 60fps imaging, which accurately presents teaching materials without missing any of the finer details. Another was BXB's 'Q.con Video Conferencing Solution that helps to improve the quality of video conferencing and is equipped with a lens that can auto-track and provide close-ups of participants.

Overall, the ICT industry went through a difficult phase during the pandemic. Even now, as countries have started administering vaccines, it is not plain sailing for all businesses in the market. The strain on infrastructure networks, contractions in consumer spending, disruptions to supply chain, reduced availability of components, and the all-around financial impact, is still taking a toll.

Yet, it's time to move forward as Covid-19 has forced every industry to innovate and adapt to the current events. We have entered an era in which digital technology has become the default and, in some cases, the only means of ensuring business continuity both internally and externally. As continuous experimentation and IT agility are key to responding to the constant changes, Taiwan Excellence too is rising up to the challenge.

After a gap of several months, Taiwan Excellence will be participating in Convergence India 2021 which is an on-ground event. A number of leading Taiwanese brands are participating in the expo and are displaying some cutting-edge products in the areas of ICT, smart healthcare, technology and smart lifestyle. These products include A-Tech's TFT LCD Laser Display Repair, AAEON's High-Performance Intelligent Edge Computing PC, Acer's Swift 3X ultra-thin laptop, ADATA's XPG GAMMIX S70 Solid State Drive, AIFA's Wi-Fi Remote Control BOX, AOPT Fiber Optics Connectors, AVer's AI Auto Tracking PTZ Camera, Avision's A3 Multi-function Printer, BenQ's Wireless Android-based Smart Projector, CyberPower's UT Series UPS, D-Link's EXO AX1500 Wi-Fi 6 Router, GWinStek's Electrical Safety Analyzer, LuftQi's Duo (Portable filterless air purifier), Maktar's Qubii Duo Phone's Auto Backup and Storage Device, Optoma's 4K UHD HDR Smart Home Laser Projector, Plustek's SecureScan X-Mini, Synology's Network attached Storage devices, Tokuyo's Massage Chair, Thermaltake's Tempered Glass ARGB Cabinet, Zyxel's Wi-Fi 6 Dual Radio PoE Access Point.

"Innovation has been a source of competitive advantage for Taiwan since many years. Taiwanese companies and brands have been developing digital strategy, implementing it, and working with international counterparts to see how digitisation can be enhanced. In the pandemic too, Taiwan Excellence steadily offered cutting-edge, high-tech products that helped the world in some way and showed the way forward in easing life. In the future, the potential for digital transformation will be limitless across the globe and Taiwan is looking forward to partnering with other countries to harness the power of digital. We will continue with our efforts to transform and upgrade our technology to adjust to the changes and will work hand-in-hand with the international community during and post COVID-19," Mark Wu, Executive Director of Taiwan Excellence.

REDEFINING COMMUNICATION

Started its journey in the year 2015, HoduSoft is a well-known Voice over Internet Protocol (VoIP) solution provider in India. It has served 200+ customers in 32 countries spread across 6 continents along with 51 partners offering products all over the world. With a decade-long experience in the VoIP field, HoduSoft has come up with several innovative products to redefine communication. All the products designed are highly efficient as well as user-friendly. The com-pany is highly committed to developing top-notch communication products and solutions ensuring its users best returns on technological investments.

HoduSoft Products

All the products at HoduSoft are designed and developed to deliver high performance and stability to their users, which further makes these products quite competitive in terms of price, performance, and user-friendliness. Here is the list of widely popular HoduSoft products:

- HoduCC- Call & Contact Center Software
- HoduPBX- IP PBX Software
- HoduBlast- Voice & SMS Broadcasting Software
- HoduConf- Audio Conferencing Software

HoduCC - Call & Contact Center Software

HoduCC - Call & Contact centre software is one of the most popular products of HoduSoft. It is an automated system that is used to streamline the communications between the enterprise and its customers. Suitable for every sizes of the business, the software consists of assorted state-of-the-art features for inbound and outbound call centre processes to provide for seamless end-to-end business communications.

By using the software, businesses can improve customer service experience, augment agent's productivity, build customer loyalty, and enhance ROI. The key highlights of HoduCC includes Predictive Dialer, Preview Dialer, Progressive Dialer, WebRTC Phone, Auto Dialer, Call Re-cording, Multi Level IVR, and Real-Time Analytics & Reports.

HoduCC also allows customer support teams to provide omnichannel communication or unified communication approach across multiple channels including Voice, Video, Email, SMS, Chat and Social Media integration with Facebook, Twitter, Whatsapp for Business, Instagram and Telegram. HoduCC also has plugins for Salesforce, Zendesk and Zoho Phonebridge. This approach allows consumers to have a consistent and seamless brand experience.

HoduPBX-IP PBX Software

HoduSoft's award winning HoduPBX – IP PBX software is a perfect solution for global business communications. It provides a unified platform where all the branch offices of a company can communicate effectively. The Internet Telephone Service Providers (ITSP's), Internet Service Providers (ISP's) and Telecoms can utilize HoduPBX for providing superior Hosted PBX services to the customers in their brand.

This VoIP IP PBX Software is available in two customisable categories:

- Multi-tenant IP PBX software for ITSPs, ISPs and Telecoms.
- Single-tenant IP PBX software for Enterprises.

Depending upon the key business requirements, the solution can be customised to an exceptional user

Business Partnership Program

HoduSoft

sales@hodusoft.com | +1 707-708-4638 | www.hodusoft.com

interface, user experience, and connectivity from the office, via mobile or a browser interface.

The software is comprised of various advanced features that makes communication a seamless experience for the customers including Android & iOS apps along with Chrome Extension. It also offers add-on features like Reseller Module, Queue Monitoring, SMS, Voice Transcription and SIP Trunking as a Service.

Some of the key highlights of HoduPBX-IP PBX software are Multi-Tenant, Prepaid & Postpaid Billing, Auto Provisioning, Payment Gateway Integration, Least Cost Routing (LCR), BLF & Presence, Audio Conference, and Real-Time Analytics.

By investing in HoduPBX, businesses would be able to provide flawless communications, en-hance productivity, and have faster ROI.

HoduBlast- Voice & SMS Broadcasting Software

HoduSoft's HoduBlast - Voice & SMS Broadcasting Software is an advanced automated software that comprises of various modern features. It is suitable for all types of businesses, from small and large enterprises to providing easy integration with the existing business operations. With the facility to upload personalized voice recordings, companies can schedule a voice broadcast and reach out to the masses, even in the remote areas.

HoduBlast is an excellent choice for businesses that are looking forward to running event promo-tions, campaigns, polls, and surveys or just wants to send alerts, reminders, reports, or any updates to their customers. Some of the key highlights of HoduBlast - Voice & SMS Broadcasting Software are Multi-Tenant, Multi Level IVR, Campaign Management, Lead Management, Job Scheduler, and Real-Time Reports & Analytics.

HoduBlast comes with a SMS channel integrated with well-known SMS providers like Twilio and Telnyx. Moreover, custom SMS Provider integrations are also available upon customer's request.

By investing in HoduSoft's HoduBlast - Voice & SMS Broadcasting Software, enterprises can embrace multiple channels of communication for carrying out as many interactions as possible with potential customers.

HoduConf - Audio Conferencing Software

HoduSoft's HoduConf - Audio Conferencing Software is an ideal solution for all kinds of con-ferencing needs. HoduConf is a feature-rich and robust software, suitable for managing everything right from small interactive meetings to large webinars.

This simple and easy-to-use audio conferencing software is highly secure and intuitive, which makes team communications easy and enjoyable. It also facilitates conference call recording, as and when required. Some of the key highlights of HoduConf - Audio Conferencing Software are Multi-tenant Support, Multilingual Support, Scheduling, Pre-recorded Messages, Real-time Ana-lytics, and Call Tracking.

By investing in HoduConf - Audio Conferencing Software, businesses can enjoy the best com-munication experience in the form of better voice quality with additional features. It helps them collaborate better with employees, partners, service providers, clients, and others by connecting from any of their end devices like mobile, desktop, tablet, and laptop. Depending upon the com-munication requirements, businesses can get customized solutions that can help them achieve their goal of communication.

SPACEBRIDGE: ALL THINGS CONNECTED

David Gelerman
President & CEO
SpaceBridge

CXO SPEAKS

Founded in 1988, SpaceBridge Inc, previously known as Advantech Wireless Inc., is an es-tablished supplier and global market leader in the broadband satellite communications systems technology. Headquartered in Montreal, Canada, SpaceBridge Inc is well positioned to meet the demands of today's global market, with two affiliate R&D offshore innovation centres and sales and support offices, as well as remote offices in Brazil, Colombia, United Kingdom, the Middle East, Indonesia, China and Russia. SpaceBridge is an ISO9001 registered vendor. SpaceBridge Inc. also provides Cloud-Based autonomous managed services for its customers, helping them eliminate initial large CapEx investments and save on network management OpEX, while speeding time-to-market.

SpaceBridge Inc.'s diverse portfolio includes the ASAT™ product line, which serves different verticals with various technologies and applications. Key areas of focus are: Cellular Backhaul for 2G/3G/4G and 5G, Industrial Internet of Things-IIoT, Commercial and Military Satcoms-On-The-Move, High-Speed Broadband, Multicast IPTV, Voice-over-IP, Videoconferencing, L2/L3 VPN, Virtual Network Operator, and HD/UHD TV Broadcasting.

Due to the critical nature of the military missions, reliable, fast and real-time communication be-tween the base command, control centers and the units widely dispersed in the field is essential for situational awareness and realtime decision-making. The establishment of resilient and fast voice, video and data communications is crucial in the tactical development of the troops in the field. "In times of war or special operation, there is no opportunity for failure. In military communications systems, the design, production and quality assurance processes must be strictly followed in order to guarantee maximum quality and availability. At SpaceBridge, we are proud of being recognised by the United State Defense Information System Agency (DISA) for meeting the urgent Warfighter and dismounted troops' needs in the US Department of Defense, providing 99.999% system availability through SpaceBridge's platforms, which have been operational since 2005 and has been continuously upgrading and expanding," Mr Gelerman, President & CEO, SpaceBridge.

However, high availability is not the only concern related to communications for the armed forces around the world. Information has been identified by several armed forces as the fifth domain of warfare besides land, sea, air and space where military operations can take place and therefore, its protection has become a priority not only for military forces but also for intelligence agencies. "Security measures at both, physical and data levels are performed to guarantee safeguarding of sensitive or classified resources to be transmitted over the network," Mr Gelerman, President & CEO, SpaceBridge.

At SpaceBridge, we are all hands-on deck for the research and development of bold military-grade products that we will be able to implement via our high-throughput commercial solutions to provide the required flexibility, security, availability and resilience needed on military communications while offering the latest innovations in the marketplace.

MATRIX COMSEC TO EXHIBIT A BRILLIANT INNOVATION DRIVE AT CONVERGENCE 2021

ANANT UCS | SERVER IP-PBX
"Explore Infinite Professional Connectivity With The Cloud"

Hardware Independency | Remote Mobility | Low Cost Conveyance

PRODUCT HIGHLIGHT

Ganesh Jivani
Managing Director
Matrix Comsec

The new-age business sphere demands crisp advancements. With a vision to enable the corporate world to keep pace with the same, Matrix was established in 1991, as an innovator of Telecom and Security solutions for modern enterprises. Being a technology-driven and customer-centric organization, Matrix believes in delivering futuristic solutions that withstands the test of technology and time. With more than 40% of the manpower indulged in the research and development process, it keeps striving towards excellence through innovation in multiple fortes such as Telecommunication, Access Control, Time Attendance and IP-Video Surveillance. Matrix proudly embraces a staunch global market foundation through an extended business family of more than 2500 channel partners providing network presence in Asia, the Middle East, Europe, North America, South America and Africa. The enthusiasm to create the latest technology products has empowered the company to bring many international laurels to its name.

Meet The Matrix Telecom Marvels At Convergence 2021
Convergence India is a major tech extravaganza that brings ICT professionals on a common platform to grow. Matrix is eager to participate in showcasing its latest Telecom solutions such as Unified Communication Servers/Platforms, Universal Media Gateways, User Termi-nals and Convergence's high-end audience this year.

We look forward to meeting key decision-makers and service providers at various business enterprises. To bring the first-hand experience of our Telecom solutions that provide a competitive advantage to our customers worldwide, will be our primary aim. Our core marketing and sales ethics are to touch and impact as much of the professional network as possible. So through Convergence, we open our doors to welcome you to take a quick tour of Matrix and its potential.

Which Are The Promising Tech-volutions Adorning Matrix's Wall Of Fame?
The dynamic nature of swiftly evolving next-gen workforce and space does not wait for anyone and neither do we at Matrix. With the mantra of "We Aid All", our tech evolutions thrive to cater for every firm that scouts cutting edge developments, regardless of its scale, structure or sort.

Post the pandemic and global emergencies, the definitions of normal have gone for a toss. In wake of such chaos, industries are forced to revisit their norms and navigate the attention precisely on having minimal human intervention. At Convergence expo, Matrix will put forth a plethora of reliably feature-rich solutions to help them do so. Some of which are highlighted here as:

Matrix VARTA - The UC Softphone Mobile Client
It is a one-stop package that any firm would wish to instil for ensuring staff safety, while not compromising its productivity and efficiency, amidst a pandemic. As an embodiment of limitless remote access and through its avant-garde VoIP tech, it takes your workflow out of the box (cubicle).

With BYOD (Bring/Use Your Own Device) in its action plan, this softphone targets 4 key features:
a. Contact-less virtual communication for mobility
b. Retaining your existing telephony assets
c. Cutting your company calling cost significantly
d. Availability for Windows OS, Android and IOS

Matrix ETERNITY PENX - The SMB & SOHO IP-PBX
We at Matrix, are well aware that availing numerous benefits in a single package is what the new business trend is all about. Thus, we present an integrated IP-PBX with seamless mobility, designed to offer the flexibility to choose from a variety of customizations and categories of what suits best to your firm.

Along with its universal network connectivity, the new PENX platform offers higher RAM and Flash with enhanced features of SARVAM application. It can be summed up as a hybrid device between the digital and VoIP, that in-turn works the facility of both.

Matrix ANANT UCS - The Open Server IP-PBX
Why limit your business potential? Instead, explore infinite professional connectivity with the cloud. Matrix presents ANANT UCS, which is steadfastly changing how companies communicate, across the globe with its ultra-effective hardware-independent nature.

It popularly eliminates cumbersome manual upgradation and incurrence of wiring cost, while simultaneously boasting of bringing the best customer engagement through its enterprise-grade, durable, scalable - integration and calling features.

Apart from this, Matrix will be sharing its exclusive yet wide range of solutions that are crafted to drive the business sphere towards a tech-savvy future.

Presumably, as organizations consider re-opening the doors for their peers, the vital requirements would be that of introducing contactless operations. This could help them focus more on the aftermath of industrial growth while maintaining the safety of any company's most important asset - its employees. With our solutions, the market would see a substantial uplift in various sectors which would inhibit the betterment of society.

"TOGETHER WE ENVISION, TOGETHER WE MOVE, TOGETHER WE GROW"

ETERNITY PENX
IP-PBX System for SOHO and SMBs

YOUR PATH TO 5G WITH ANRITSU

PRODUCT HIGHLIGHT

Anritsu Test & Measurement Solutions for a Connected world. Anritsu is at the leading edge for the development and deployment of 5G, providing testing and monitoring solutions across the telecom eco-system and a diverse range of industry verticals related to 5G. Anritsu test and measurement solutions cover the full range of devices, base-station and access networks, data centres and core networks, and across the full life cycle of R&D, certification, production, and installation/maintenance. The monitoring solutions for mobile networks provide enhanced visibility across domains, with advanced analytics and insights into network performance.

We see 5G technology as an enabling tool for a connected & faster data transfer lifestyle ex-pectation. Anritsu has a wide range of Test and Measurement Solutions for the 5G eco system.

Some of the key 5G Test & Measurement solutions with its

application area are listed below.

ME7873NR- 5G Conformance Test
The ME7873NR supports RF (TRX and Performance) measurement, and radio resource management (RRM) conformance testing of 5G NR non-standalone and standalone devices as per 3GPP 38.521-1 and 38.521-3. The ME7834NR systems support protocol conformance testing of 5G NR non-standalone and standalone devices for both sub-6 GHz and mmWave as per 3GPP 38.523-1.

ME7803NR: RF Regulatory Test System
The newly developed RF Regulatory Test System ME7803NR uses the Radio Communication Test Station MT8000A as a simulated 5G NR base station in combination with spectrum analyzer and signal generator to implement ARIB/ETSI/FCC-compliant FR1 RF tests. In addition, the measurement efficiency and the quality of 5G terminals are assured by the easy-to-operate GUI and built-in calibration function for improved reliability. It is a platform that can perform spurious tests as

Madhukar Tripathi
Anritsu

well as interference tests, which are otherwise difficult for customers to build in their own testing environment.

The ME7803NR makes it easier to evaluate, whether the RF performance of 5G terminals meets regulatory requirements as well as simplifies evaluation or whether the radio-waves are being used efficiently or not, helping the 5G market penetration.

Anritsu expects its new ME7803NR to play an important role in deploying commercial 5G mobile network services by facilitating the spread of 5G terminals.

MT8000A-5G network simulator
Anritsu MT8000A is the latest 5G network simulator for 5G device/

chipset R&D testing of protocol and RF measurement. MT8000A supports both protocol tests and RF measurement testing in one box. MT8000A is an All-in-One test platform that supports RF Measurements and Protocol Tests in FR1 (to 7.125 GHz) and FR2 (Millimeter-Wave) Bands.

With a 5G base station emulation function, a single MT8000A test platform supports both the FR1 (to 7.125 GHz), including band n41, and the FR2 (millimeter-wave) bands used by 5G. Combining it with the OTA Chamber enables both millimeter-wave band RF measurements and beam-forming tests using call connections specified by 3GPP.

MT1000A Network Master Pro
MT1000A Network Master Pro is a portable and easy to use test solution with 10G, 25G and 100G interfaces that accurately measures and analyses critical network performance parame-ters. These include one-way latency, which allows 5G operators to ensure URLLC perfor-mance and be

confident about the end-to-end quality of service.

The compact, battery-powered and easy-to-use Anritsu MT1000A with Transport Module MU100010A/MU100011A has everything in a single, handy tester required to install and maintain communication networks from 1.5 Mbps to 100 Gbps.
- Metro and core networks OTN installation and maintenance
- OTN up to OTU4 including mapping of Ethernet, CPRI, Fibre Channel, SDH/SONET client signals, multistage mapping and FEC (Forward Error Correction)
- Testing and verification of new OTN functions: ODU0 and ODUflex
- Carrier Class Ethernet installation and troubleshooting
- Ethernet up to 100 GigE including RFC 2544, RFC 6349 and Y.1564 testing
- Ethernet OAM up to 100 GigE
- MPLS-TP and PBB up to 10 Gbps
- Mobile backhaul installation and verification
- Synchronous Ethernet up to 25 GigE (ITU-T G.826x)
- Time/Phase error measurement (ITU-T G.8265.1, ITU-T G.8275.1) (with High Performance GPS Disciplined Oscillator MU100090A)
- Mobile front haul installation and verification
- eCPRI/ IEEE1914.3 testing up to 100Gbps
- CPRI testing up to 24.3302 Gbps
- OBSAI testing up to 6 Gbps
- Powerful Storage Area Networking (SAN) testing
- 25G Ethernet
- Fibre Channel up to 16 Gbps
- Quick and easy testing of SDH/SONET and PDH/DSn networks
- SDH/SONET up to STM-64/OC-192
- PDH/DSn (E1, E3, E4, DS1, DS3)
- Optical connector inspection and reporting to ensure network quality
- IEC61300-3-35 based PASS/FAIL

MS2090A Field Master Pro
Anritsu's Field Master Pro MS2090A is a real time spectrum analyser and delivers performance

that has not been previously available in a compact, handheld instrument. With continuous frequency coverage from 9 kHz to 54 gHz, the Field Master Pro MS2090A has been specifically designed to meet the test challenges of a full range of other wireless technologies in use today, including: 5G, LTE, wireless backhaul, aerospace/defense, satellite systems, and radar.
- 5GNR base station Measurement validates the performance of the gNB base station with essential measurements that are in full compliance with 4GPP TS 38.104

V15, including;
- Frequency errors
- Time offset
- cell/sector ID
- Modulation quality
- Unwanted emissions
- Occupied bandwidth

- Adjacent channel leakage ratio
- Transmitter spurious to 12.75 GHz
- EIRP
- Synchronisation signal block (SSB)
- 5G Coverage Mapping aims to receive a clear representation of the signal strength of 5G transmitters over intended geographic area by continuously measuring RF data — including 5G channel power, EIRP, or RSRP with results graphically displayed on a digital map or building floor plan.
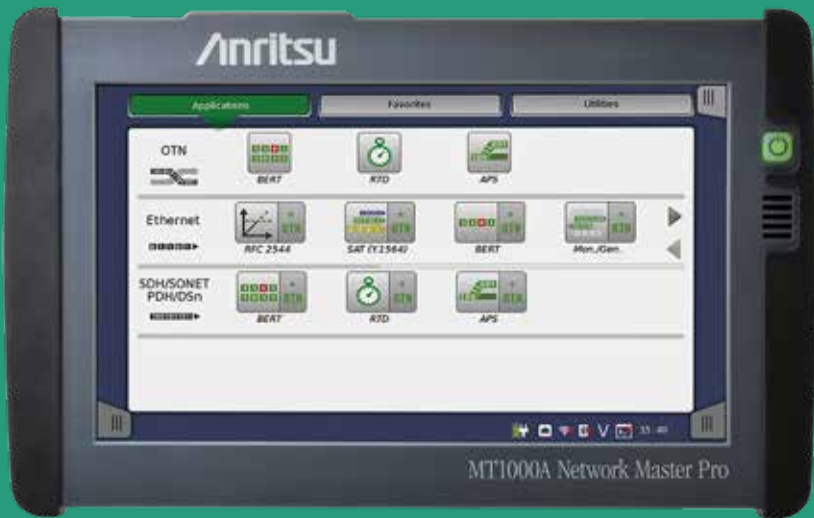
SHAHZAD FATMI, CEO, SETTLEMINT INDIA

About your company: mission, goals and vision

Founded in 2016 SettleMint is one of the fastest growing blockchain technology company globally. With 35+ global deployments and 500+ used case explorations, SettleMint is one of those organizations which are delivering real blockchain solutions to enterprises. We were recognised by Gartner as one of the three cool vendors for 2019.

The vision of the company is to simplify blockchain adoption for enterprises through our unique low code modular architecture which allows single click deployment of in-frastructure and blockchain protocols, comprehensive smart contract templates and integration abilities.

New innovations undertaken/ implemented by the company

We are providing the core blockchain technology+ layer. Where other players are trying to develop standalone products which lock-in customers and hamper inter-operability, we believe that for a large scale adoption of blockchain technology, interoperability and ability to integrate with existing applications is critical. SettleMint's BPaaS is chain & protocol agnostic while other players are building their applications on a single protocol and are having a closed system.

Embracing new technologies/ concepts in the aftermath of the pandemic

The impact of COVID-19 illustrates the need to make medical supply chains more resilient, to improve medicines development processes and data management for an enhanced patient care. Digitalization is now needed more than ever but the legacy tools for digitalization prohibits the advancement and limits its applications.

The legacy system means that the data is locked in silos because participants aren't offered the incentives and safeguards that they require to join collaborative data-sharing networks. Blockchain-supports decentralizes the networks, by providing the needed incentives and safeguards, to unleash the power of data in the medical and tech sectors.

The potential applications based on better data management systems ushered in by permitted blockchain technologies that are wide but we are still at a very early stage in the adoption curve. This means there is a vast opportunity for businesses, research organizations, and governments to leverage this new data infrastructure for the benefit of all the participants.

Soft launch of a new product/ service

We are a dynamic company with constant improvement and enhance-ment of our existing platform as well as product offerings. We are uniquely placed where we provide our clients with the shortest path to convert a used case in blockchain solution on a production grade environment. We also have another platform, "DataBroker DAO" which is a blockchain based market place for data and as we know data is the new oil, we are sure this will attract a lot of interest from insurance and telecom companies.

Industry challenges & roadblocks

Blockchain like any other successful technologies has to overcome the barrier of human inertia. The biggest challenge has been to identify the appropriate used case where blockchain actually made a difference. However, off late we see most of the companies which are ahead of the digital curve has a few identified used cases which reduces the challenge for implementation.

Policy advocacy for your sector

The picture of regulations and compliances on the blockchain are still emerging. The government needs to clearly define regulations on blockchain technology to further accelerate the adoption of the same.

What's being showcased at the expo

Our unique and robust platform makes the building of blockchain solutions easy. We are expecting to meet & greet key stakeholders from different corporates and public sector and also keep ourselves abreast with latest developments in different technologies

Special focus on any launches or special products/solutions being displayed at the expo

During this expo, we will be sharing the experience we had with hundreds of Blockchain use cases and implementations, explaining why 86% of enterprise blockchain implementations fail and what we can do to increase your chances of success. More specifically, we will review:

- Misunderstanding of what the tech can do and where it fits in.
- Most common reasons why blockchain implementations fail.
- How can project managers avoid those pitfalls?
- What will a low code platform bring to your project?

How can your solutions/ technologies/ideologies be leveraged for a better tomorrow?

Our world is inundated by emerging technologies like IoT, AI, machine learning, robotics and 3D printing. All these technologies are disruptive on their own, rapidly ushering in a new reality for businesses and propelling us into nothing short of the fourth industrial revolution. And to make things even more complicated, they are coming off age on timelines that coincide.

Blockchain technologies, emerging in parallel at an incredible pace, will be crucial in the interconnected, autonomous future that we are rapidly heading towards.

THE MOVE TO A SUSTAINABLE FUTURE THROUGH ELECTRIC TWO-WHEELERS

Mukesh Malhotra

The 2018 Environmental Performance Index ranked India 177th out of 180 countries making India one of the world's most polluted countries. Particulate matter (PM) and NOx were the mail pollutants with PM level in nearly all cities above the acceptable limit and causing health hazards on a massive scale. Additionally, India's dependence on fuel import has been costing the exchequer $70 billion every year and given the global geo political scenario and its impact on oil prices, is likely to further increase. It is the context that has triggered a serious dialogue on the transition of vehicles dependent on fossil fuel to those using renewable sources especially electric vehicles.

India as a country has a mixed record of being able to drive dramatic changes effectively. This note attempts to lay down the choice of action areas for accelerating this transition to cleaner cities and lesser dependence on fuel imports without impeding transportation needs and assuming no material change in public transport infrastructure. This note drills down on the role of two wheelers, risks to be mitigated and factors to be considered in policies for increasing the adoption of electric vehicles.

Firstly, 28 percent of the particulate matter causing air pollution in India most populous cities like Delhi in Winters is due to vehicles o road and rest from fuel and biomass burning largely for cooking and general heating needs. Within the vehicular particulate matter pollution, two wheelers are at 25 percent of the total vehicular PM (7 percent of total PM), despite being 80 percent of the total number of vehicles.

Secondly the main factor causing vehicular pollution is the proportion of aged vehicles and the traffic congestion within India's towns and cities. Vehicles older and 10 years have emissions at much higher than current regulated norms for new vehicles. Cars and trucks in use currently have a high proportion (17 percent) of vehicles over 10 years of age.

Thirdly, Studies have found that at low speeds such as during congestion vehicles burn fuel inefficiently and burn more per trip, India's key metros have congestion levels (per cent additional time to travel in peak hours) ranging from 130-170 per cent, two wheelers do not cause congestion and given the ease of traffic navigation on two wheelers, their emission are rarely a significant contributor of pollution caused by congestion as opposed to passenger cars which have much higher rates of pollution due to congestion.

It is important to understand the efficacy of energy usage within the country for transport needs given the massive fuel import bill. The average mileage or fuel import bill. The average mileage or fuel efficiency of a two-wheeler is 60 Km/L compared to 20 Km/L for passenger cars, implying lesser fuel consumption per passenger kilometer for two wheelers is significantly lower.

The two-wheeler is an instrument of progress (esp. in rural parts of the country) providing much needed affordable access and low-cost mobility to millions making the country's progress more inclusive. In the absence of public transport infrastructure for a considerable mass of population, a two wheeler provides the most cost and emission efficient transportation option for this segment.

With BS VI norms getting enforced from April 2020, Emission norms for two wheelers and passenger cars will be at par with the most developed economies of the world. Pubic transport in India is also used on average by 30 million Indians daily to travel an average of 7+ km.

Undertaking an effort to significantly overhaul the public transport vehicles to use alternate fuels or electric energy may provide most immediate and significant impact both on the levels of air pollution within the country and on India's import bill.

To ensure an effective transition to EVs, the Government and the OEMs would need to ensure certain basic performance standard in terms of durability, reliability, quality, safety etc. to be acceptable to the mass segment. A push to transition to EVs will only be meaningful if the cost of vehicle ownership doesn't increase significantly, as even at current prices there is low penetration of two-wheelers (12 percent). If the price of a two-wheeler goes up we might be giving the masses a less sustainable alternative. Lower cost options such as lead acid battery run vehicles pose significant issues in terms of short life, lower battery capacity as well as an environment risk in disposing of used batteries.

Even as the government plans a significant transition to electric vehicles, it is important to ensure that the transition is seamless – alternate fuel and hybrids could represent a faster bridge transition to EV. The government and the broader ecosystem will need to ensure that the charging infrastructure is robust enough to drive adoption.

Further study is also required to compare "well to wheel" emission in case of internal combustion powered vehicle with similar end to end assessment of producing an electric vehicle and providing electricity. We believe we also need to focus on modernizing our power plants and the distribution grid to avoid energy losses due to inefficiencies.

Lastly, India should encourage battery development in India to enable innovation in the high value market. We will need to put in place a talent reskilling (to EV) plan to create jobs across the supply chain.

All of these points need to be considered carefully with proper analysis to ensure the highest level of impact in terms of change undertaken.

Understanding the role of each mode, risks from a consumer behavior perspective and addressing these systematically will be the difference between a successfully implemented change initiative and a poorly executed non- starter.

The author was Founder & CEO of Ecoforus Sustainable at the time of writing this article.

CAN LOCAL ISPs LEVERAGE HYPER–LOCAL STRATEGIES TO DEFEAT THE BIG CORP CHALLENGE? BY SENSARA TECHNOLOGIES

INDUSTRY SPOTLIGHT

The world of Internet Service Providers (ISP) is undergoing a major shift. ISPs have a loyal base of subscribers but are vulnerable to fierce competition who are offering premium services bundled with competitive prices. In order to stay ahead of the competition, ISPs need to embrace newer technology and offer additional value added services. This is the only way to gain a competitive advantage.

Broadband is an essential service but on its own is not good enough to challenge the competition. The provider can offer better bandwidth, reliability, service and flexibility, however, this is a low entry barrier for competitors who can offer additional services like OTT, IoT and other home automation services. The competition is aggressive and is revolutionizing the way internet services are bundled to consumers. A major worry is churn. Strategically, ISPs should look beyond prices and tariffs and study the new trends in order to maintain their market posi-tion and competitive advantage.

Opportunities in the post Covid-19 world
During the 2020 lockdown, digitalisation has kept the economy going. This has also put online streaming at the centre of entertainment and continues to gain traction. ISPs were able to deliver reliable services and have fairly done well to keep their services up and running. The growth of digital arena accelerated by this emergency is not over and must be seen as an op-portunity. ISPs have already laid the infrastructure for connectivity, have local presence and trust to provide high touch consumer services. They must capitalize on this treasure by offering newer products and services in order to retain their loyal consumers and also look at additional monetisation opportunities.

What strategy to use?
ISP provides internet services to business and residential subscribers with hosts of services, network, customer-care system and so on. The network bandwidth is steadily increasing, and the established infrastructure is uniquely positioned to leverage their expertise and scale with new services.

The value proposition is to capitalise on a niche and underdeveloped marketplace for providing video streaming services. There are two areas of businesses described below.

OTT Streaming Services
Local ISPs should host online video platform and provide low-cost streaming devices to consumers that can connect to any HDMI enabled TV. They should also provide consumers with a broadcast-quality linear TV channel streaming experience and bundle premium OTT ap-plications. Offer tiered packages to bundle free-to-air channels, premium-channels and OTT applications with increase in ARPU and to reduce the churn of the ISP subscribers.

Hyper local streaming services
With the presence and reach to the local communities, the ISPs can leverage it to install and stream video from popular points of interest. Create a marketplace to host high-quality live or on-demand streaming of video from places like parks, temples, streets, commercial estab-lishments, tourist-spots, local-events and so on. Capture this potential market by aggregating this service and monetise over the internet for local and to some a global viewership.

What kind of Technology Partner to choose?
ISPs can reduce the total cost of ownership to launch the streaming services by partner-ing with technology providers who provide state-of-the-art video platforms.

Choose the platform that is ready-to-launch with minimum investment and utilise the existing infrastructure seam-lessly.

ISPs should be able to create, launch and manage the platform that scales to reach their audiences. They should choose the online video platform that makes it easy to add live streaming cameras, allow discoverability with metadata that can be AI driven for a rich user experience. ISPs should influence applications, linear channels, live streaming that are viewed by the user and yet provide discoverability to a plethora of content with personalisation.

ISPs can monetise with subscriptions, pay-per-view, credits or a mix of all. They should partner with a technology vendor who has the ability to monetise on the EPG banner ads, video ads, data analytics exchange, and targeted advertisement. Their business should scale to additional revenue channels with digital like interfaces with demand side platforms (DSP), ad agencies, ad exchange, ad networks and other platforms

About Sensara Technologies
Sensara Technologies is a deep tech company working with premium clients such as Pay TV operators, TV brands, OTT app providers, media content providers and TV measure-ment companies with a reach to the global market. We offer complete solutions for creating, launching and monetising video applications at scale.

"Today local ISPs feel threatened by the entry of big brands with exciting bundle of offers. If they don't act now, customers have choices and there will be lot of churn. This is the time to innovate, bundle new products and raise the entry barrier with hyper local services. This strength is only with local ISPs. Sensara is positioned well to offer such technology solution and there is a huge incentive for local ISPs to monetise."

INFORMATION SECURITY

STARTS HERE ▶ ISO 27001

Datasheet

Safeguarding your information assets

Lloyd's Register

PRODUCT HIGHLIGHT

In this technology-driven world, it is critical to protect both your customer's and your own data.

Implementing an information security management system (ISMS) and gaining ISO 27001 certification will ensure you have the processes and controls in place to protect your information assets and manage the threats posed to your organisation from malicious attacks.

What is ISO 27001?

ISO 27001 provides a best practice framework to identify, analyse and then implement controls to manage and mitigate risks – reducing the likelihood of an information security breach.

Benefits of ISO 27001 certification

Minimising risk

ISO 27001 certification from Lloyd's Register (LR) ensures controls are in place to minimise the risk of an information security breach and avoid any system weaknesses being exploited.

Best practice

By gaining ISO 27001 certification, your customers can be confident that you have addressed all security risks relating to IT, people, physical and business continuity requirements.

Legal and regulatory compliance

Certification to ISO 27001 requires you to identify and comply with applicable legislation and local regulations. This has a positive impact on risk management and corporate governance.

Competitive edge

Certification to ISO 27001 with LR provides a public and independent statement of your capability – helping you to attract new business.

Reduced costs

The methodical risk assessment approach outlined in ISO 27001 ensures resources are applied effectively to reduce overall risk and cut costs.

How we can help

Our range of assessment and training services is suitable for organisations of all sizes and locations, and can help you make the most of the standards.

Training

LR's range of bespoke and packaged training services supports your organisation throughout your journey to ISO 27001 certification.

• Introduction to ISO 27001:2013
• ISO 27001:2013 Implementation
• ISO 27001:2013 Internal Auditor, Lead Auditor, Lead Auditor Conversion

Gap analysis

This assessor-delivered activity enables you to focus on critical, high risk or weak areas of your system prior to your formal assessment visit. Wherever you are in the certification process – the scope can be defined by you.

Certification

This is typically a two-stage process consisting of a system appraisal and an initial assessment, the duration of which is dependent on the size and nature of your organisation.

Surveillance

Once we've approved your ISMS, we carry out regular surveillance visits to ensure the ongoing effectiveness of your system.

This gives you, and your top management, the assurance that your ISMS is on track and continually improving.

Integrated management system assessment

If you're looking to combine your organisation's ISMS with an existing management system (such as quality) you could benefit from a co-ordinated assessment and surveillance programme. This could result in an overall reduction in audit time and costs due to the common content of many ISO management systems standards.

Why work with LR

We understand that people sit at the heart of a successful business. Your customers, suppliers and employees all place their information in your hands and expect you to do everything in your power to protect it.

That's why we go beyond compliance, diving deeper into your business to emerge with meaningful insights and smarter solutions.

Our assessors and trainers are industry experts who work with you to understand what helps your business operate at its optimum level. They create long lasting value through collaboration, delivering a greater impact on your business, your people and your customers. The organisations we work with tell us that this is what makes us stand out from our competitors.

About Lloyd's Register

We started out in 1760 as a marine classification society. Today, we're one of the world's leading providers of professional services for engineering and technology – improving safety and increasing the performance of critical infrastructures for clients in over 75 countries worldwide. The profits we generate fund the Lloyd's Register Foundation, a charity which supports science and engineering related research, education and public engagement around everything we do. All of this helps us stand by the purpose that drives us every single day: Working together for a safer world.

In a world of increasing complexity – overloaded with data and opinion – we know that our clients need more than technology to succeed. They need an experienced hand. A partner to listen, cut through the noise and focus on what really matters to them and their customers. Our engineers and technical experts are dedicated to assurance. That means a commitment to embracing new technology, and a deep-rooted desire to drive better performance. So we consider our customers' needs with diligence and empathy, then use our expertise and over 250 years' experience to deliver the smart solution for everyone.

After all, there are some things technology can't replace.

Get in touch

Visit www.lr.org for more information or email enquiries@lr.org

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Lloyd's Register   *ISO 27001 Information security certification*

Catalysing Emerging tech Startup
Ecosystem in India

Enabling a **360-degree support ecosystem** in the form of Infrastructure (Hardware & Software Labs), Knowledge & handholding, Funding & Investment opportunities, Mentoring & Networking to nurture innovative startups in emerging technologies and make India a technology Product Nation

25+ CoEs PLANNED
13 LAUNCHED

A multi-stakeholder robust collaborative ecosystem comprising **government, industry, academia, & investors**

Targeted Outcomes of Already Launched CoEs
- 12+ Challenges / Hackathons Contests / Call for applications per year
- 1550+ Innovative IT/ESDM startups as beneficiaries
- 500+ startups with marketable product service
- 100+ Patents IPRs
- 12 industry leaders as chief mentors
- 150+ pan-India mentor pool
- 110+ partners

Envisioning Indian IT Industry
Ahead of Time

Exponential Growth in IT/ITeS Exports by STPI Units

₹ 4,66,926 Cr. (2019-20)
₹ 52 Cr. (1992-93)

Tremendous Growth in STPI Registered Units
1992-93: **227**
2019-20: **5,128**

STPI: THE PIONEER OF BOLSTERING SOFTWARE EXPORTS FROM INDIA

The first historic event that triggered the high-octane growth of IT Industry in India was the establishment of three Software Technology Parks (STPs) in Bengaluru, Bhubaneswar and Pune in the year 1989. Consequently, in 1991 these three STPs were merged to create a single entity called the Software Technology Parks of India (STPI). STPI, an autonomous society under Ministry of Electronics and Information Technology,

Government of India working with an objective to promote the development and export of software and software services including Information Technology (IT) enabled Services from the country.

Since its inception, STPI has been working towards equitable and inclusive IT-led growth pan-India, which in turn has helped in tremendous growth in India's Software exports. Starting with a few centres in 1991, STPI has grown all over the country with 60 centres, out of which 52 centres have been established in Tier II/II

cities with an objective of uniform and overall development of IT/ITES exports across the country.

Acting as a 'single-window in providing services to the software exporters', STPI is delivering statutory services under Software Technology Park (STP) scheme and the Electronics Hardware Technology Park (EHTP) scheme, plug & play and raw incubation facilities for the start-up companies and young entrepreneurs, High Speed Data Communication (HSDC) services for a seamless access for offshore IT/ITES exports,

PMC services and other value-added services. Further, STPI constantly endeavoring to create an environment apposite for the start-ups and the same is manifested by multiple initiatives for nurturing entrepreneurship and start-up ecosystem in the country i.e. Centres of Excellence (CoEs) in various emerging technologies including Electropreneur Park & Atal Incubation Centre, Semiconductor Measurement, Analysis & Reliability Test (SMART) Lab, FAB Lab, Schemes like Next Generation Incubation Scheme etc.

Working closely with all stakeholders, STPI has played a key role in transforming the country as the preferred IT destination, a fact that aptly proven by the stupendous growth in exports by STP-registered units from Rs. 52 crores in 1992-93 to Rs. 4,66,926 crores in 2019-20, which is approximately 50% of the national software exports. STPI has also played an important role in promoting Tier-II/III cities of the country. Out of 60 STPI centers, 52 centers are in Tier-II and Tier-III locations with an objective of uniform and overall development of IT/ITES exports across the country.

STPI aspired to be the largest technology startup ecosystem in the country, with the endeavor to transform the country into a software product nation, as envisaged in National Policy on Software Products (NPSP) 2019. To achieve this, STPI has evolved a collaborative model wherein the gov-ernment, industry, academia, and other stakeholders play a vital role in providing end-to-end sup-port i.e. state-of-the-art infrastructure, skilling, mentoring, market connect to the startups for promoting R&D, innovation, product & IPR creation.

Aligned with this vision, for promoting entrepreneurship, creating a robust start-up ecosystem and to ensure India builds leadership in the emerging technologies, STPI is executing multiple CoEs across the country in collaboration with industry, academia and other stakeholders in in different domain such as IoT, Fintech, Blockchain, Augmented & Virtual Reality, Gaming & Animation, Artificial Intelligence (AI), Machine Learning (ML), Computer Vision, Data Science & Analytics, Agritech, MedTech, Autonomous Connected Electric & Shared(ACES) Mobility, ESDM, Cyber Security, Industry 4.0, Robotics & Drone etc. 13 such CoEs have been launched i.e. IoT OpenLab at Bengaluru, FinBlue at Chennai, IMAGE at Hyderabad, MOTION at Pune, NEURON at Mohali, VARCoE at Bhubaneswar, APIARY at Gurgaon, MedTech at Lucknow, OCTANE- Phase 1 in North East (includes IoT in Agriculture at Guwahati, Animation at Shillong, AR/VR at Imphal) and Electropreneur Parks at Delhi & Bhubaneshwar

Other Initiatives/activates Next Generation Incubation Scheme (NGIS)

STPI is implementing NGIS, a comprehensive incubation scheme with aim to provide vibrant soft-ware product ecosystem in Tier-II and Tier-III cities to complement the robust IT Industry for con-tinued growth, new employment and to enhance competitiveness. NGIS has been launched from 12 STPI locations (Agartala, Bhilai, Bhopal, Bhubaneshwar, Dehradun, Guwahati, Jaipur, Lucknow, Prayagraj, Mohali, Patna and Vijayawada). The applications have been invited through CHUNAUTI contest. With the support of 125+ mentor pool, 46+ knowledge partners which were roped in and more than 15+ outreach programs conducted online, CHUNAUTI has received overwhelming response in the form of 1820 complete applications. Final round of pitch presentation of 111 shortlisted startups has been completed and result of the same is under process.

Modified Electronics Manufacturing Cluster (EMC 2.0) Scheme

STPI is working as Project Management Agency (PMA) for implementation of EMC 2.0 scheme which was launched by MeitY in June 2020 with an objective to create a comprehensive supply chain / ecosystem for strengthening electronics manufacturing base, attract Anchor Units to set up production, development of World class Plug and Play infrastructure along with Standard Factory Sheds and reducing the infrastructure & logistics cost.

India BPO Promotion Scheme/ North East BPO Promotion Scheme

STPI is the nodal agency for implementation of India BPO Promotion Scheme (IBPS) and North East BPO Promotion scheme (NEBPS) under Digital India Initiative. The objectives of the schemes are to create job opportunities for the local youths of smaller towns by setting up BPO/ITES operations and also to attract investments in the respective regions for all round development. Currently 245 BPO/ITES units are operational in

102 cities/town across 27 State/ UTs. These units have provided around 41,000 jobs to local youth and thus played a critical role towards arresting migration of youths to metro cities. Viability Gap Funding of Rs 53 Crores has already been disbursed/under approval to BPO/ITES units under the schemes.

FabLab

STPI in collaboration with Fab Foundation has set up FabLab at Bhubaneswar in 2019 to provide access to the tools, the knowledge and the financial means to educate, innovate and invent using technology and digital fabrication to allow anyone to make anything, and thereby creating opportunities to improve lives and livelihoods in India. The mission of Fab Lab is to enrich our community by providing education, community, workforce and business programming that teaches innova-tion, design-thinking, problem-solving and change-making,

together with open and equitable access to 21st Century digital fabrication tools, equipment and technology.

Semiconductor Measurement Analysis and Reliability Test (SMART) Lab

STPI in collaboration with Govt of Karnataka has setup a SMART Lab at Bengaluru. A first of its kind initiative driven by STPI enabling start-ups and semiconductor companies to test their chip designs locally and reduce product design cycle and operation costs. STPI SMART Lab is equipped with latest high-end Semiconductor Test, Measurement and Reliability Test equipment and is aimed at supporting the growth of design and hardware companies out of India. One more such Lab is being setup at Bhubaneswar in Odisha. The SMART Lab has gone live w.e.f. 20th December 2017. More than 30 companies have started using the facility since its Go-Live.

Department of Information Technology
GOVERNMENT OF BIHAR

visit us at : www.dit.bihar.gov.in /DOITBihar

BIHAR IT/ITES VISION

To develop the IT/ITeS industry of the State for inclusive socio-economic growth and gainful employment generation , and to emerge as the next investment destination for IT/ITeS companies in the country, while offering an enabling environment for industrial investments , stable policies and transparent governance, strategic infrastructure development , and enhanced service delivery by effective use of information technology.

Mission
1. To promote Bihar as one of the leading investment destinations for IT/ITeS companies in the country by ensuring a congenial industrial climate , stable policies that are industry friendly , transparent governance and a large technology talent pool available at competitive rates.
2. To develop a sector-focused state-of-the-art infrastructure ecosystem in the state through a slew financial, regulatory and institutional reforms leading to a revival of investor sentiment in the state.
3. To create opportunities for gainful employment of the youth in the sector, enhancing their employability and developing a sustainable skill ecosystem wherein the workforce is equipped with employable skills and knowledge to be able to contribute to the economic growth of the State and the country.

4. To leverage IT to contribute significantly to GSDP and employment and to provide seamless, secure and reliable citizen-centric services and information for the people and thereby to enhance transparency, efficiency and accountability of the government and government bodies.
5. To build a strong eco-system for nurturing innovation in the State and empower Start-ups to grow through innovation, design and by inviting new ideas and business across domain in the IT/ITeS sector.
6. To promote and develop new IT/ITeS destinations in the State by providing assistance in setting up state-of-the-art IT infrastructure in these locations.
7. To strengthen the assessment and certification standards , and encourage IT/ITeS companies within the state to conform to quality standards at par with global practices.

E-Governance Projects of the Department:
- The IT enablement initiative focuses on integrated applications like CFMS & HRMS including integrated infrastructure like BSWAN and Bihar Cloud
- The new state-of-art Tier III State Data Center is enabled with upgraded features and certifications. The department's IT service infrastructure is modelled over common application architecture & ERP Model

Shri Jibesh Kumar
Hon'ble Minister,
Department of Information Technology,
Government of Bihar

providing better application hosting services to assist and run applications across various departments of Government of Bihar. These applications support features like unified single sign on option, multi-factor authentication.
- Bihar Aadhaar Authentication Framework (BAAF) enables all Aadhaar based transaction in the State and helps to authenticate identity of beneficiaries electronically, in a safe and quick manner making the service delivery more effective and efficient.

Entrepreneurship, Business & Startup Support
- Support to businesses, entrepreneurship, startups and ventures in IT, ITeS and ESDM domain. TCS has opened a 500 seat 'development center' in Patna along with several other BPO contributing to employment generation in the state.

- The department has developed an Incubation center at IIT Patna for supporting medical electronic startup ventures along with upcoming incubation center at BIT (Birla Institute of Technology) Patna.
- IT department has also developed a 'startup hub' in Biscomaun Tower in the heart of city Patna with special offerings for startups in terms of incubation.
- Several upcoming IT zones, such as IT City, Rajgir in district Nalanda, IT Park in Bihta of district Patna, IT Tower in Patna, Extension STPI in Darbhanga and Bhagalpur are in progress.
- Ease of doing business and single window clearance portal 'Udyog Mitra' is already in place.
- State Captive values are 'knowledge hub', 'pool of talent availability', 'support infrastructure development' in terms of connectivity, electrification and huge consumer market.
- 'Bihar Industrial Investment Policy – 2016' and 'Bihar Startup Policy – 2017' are well defined documents.
- The state has well-connected integrated infrastructure to serve the consumption market of East, North East and North India, as well caters to the needs of neighboring countries like Nepal, Bhutan and Bangaladesh.
- Bihar's cutting-edge initiatives in IT, ITeS and ESDM industries and integration in the market is all set to enhance IT penetration and innovation.

THE GRIHA IMPACT

Green buildings make common sense. We are a tropical country and our ancestors knew through experience which direction the windows should face in order to reduce heat gain and maximize natural light. Unfortunately today, there is a general misconception in India that green buildings are more expensive in terms of the capital cost. This unfortunate perception got rooted in the early days of the industry in India when compliance with foreign rating systems required the large-scale import of expensive material. Although certain elements of green buildings (for example, UPVC windows) might appear to be more expensive than alternatives at the outset, these costs can easily be offset through value engineering, which in itself is an indispensable part of the green buildings. With insulated walls, UPVC windows, provision of daylight and solar panels, the energy requirement for lighting and heating, the ventilation and air conditioning decreases proportionately and systems may be designed and installed in accordance with the reduced demand, saving on capital costs. If one incorporates rainwater harvesting and the treatment of waste water, water bills can also subsequently be reduced, in addition to boosting groundwater levels in the region through recharge.

The life of a building is well over half a century. Through efficient consumption of resources, a green building can continue to be an asset to the owner and occupants throughout its life, especially in the face of ever-increasing costs of electricity and water. The valued engineering that goes into designing

Sanjay Seth
CEO, GRIHA

and building a GRIHA rated project ensures that the increased up-front cost and effort that goes into obtaining a rating is quickly offset during the operations phase, not to mention the intangible benefits conferred to occupants and the environment as a whole.

With the adverse effects of unmitigated carbon emissions and runaway climate change becoming increasingly apparent, there has been a marked increase in awareness and sensitization toward sustainability especially within the younger demographic. It has also become of common knowledge that the greatest economic benefits are realized when impact on the environment and on people are addressed jointly from the very start of designing stage of the building with clear intent being set to achieve key metrics – for example, improved air quality without sacrificing energy efficiency.

The GRIHA rating system takes a holistic approach toward

sustainability action intended to mitigate climate change, the significant aspect of which is reduction in GHG emissions from the construction and operation of the building stock in India. As India's only indigenous rating system, GRIHA criteria have been designed specifically to cater to the climate and prevalent construction practices of the subcontinent. Given India's commitment under the Paris Agreement and the Kigali Agreement, the surge in the usage of HVAC systems in India needs to be coupled with the potential to embed energy efficiency features and use of cost-effective low GWP refrigerants.

All standards referenced by GRIHA are Indian, and our system emphasises on-site verification for compliance through multiple site visits over the course of construction. Provisions for inclusivity, sanitation and the well-being of the workers are unique with GRIHA – no project can be

awarded a rating without strictly adhering to the basic requirements for health and safety of the workers. In addition, post construction, GRIHA emphasises on the actual data collection and the final rating which is only awarded when energy audits have been conducted. With continual improvements and updates being made to the rating system, GRIHA aims to stay abreast of the new developments in the construction sector as we pursue our goal of ensuring a greener and a more sustainable India in the days to come. Trends that are coming to the forefront include Life Cycle Cost (LCC) and Life Cycle Analysis (LCA) - performing a Building Life Cycle Analysis is currently the most reliable way to evaluate the sustainability of a building and its adoption by building professionals is a response to the backlash against vague eco-labelling and increased citizen awareness about how the built environment affects climate change.

GRIHA currently has 2200 registered projects across the country with a combined footprint spanning over 650 million square feet. Out of these, the buildings that have already been rated have 86 MWp of renewable energy systems installed and are responsible for saving 90,64,500 MWh of energy and preventing 2.5 million tons of carbon dioxide from being released into the atmosphere every year. All projects registered with GRIHA this far are operational and the projection would cost 2525 MWp in installed renewable energy systems and offset 28.16 million tons of carbon dioxide emissions annually. Any ground-breaking idea needs time to take root, and currently only a minuscule part of India's built infrastructure can currently be considered "green". However, one must understand that that chunk of the infrastructure is yet to be built, and there are huge opportunities ahead of us to make sure that we are moving forward on the correct path toward a sustainable future.

"IN ORDER TO STRIKE A BALANCE BETWEEN TECHNOLOGY & DESIGN; CODES, STANDARDS AND REGULATIONS ARE INDESPENSABLE. TECHNOLOGY FOLLOWS STANDARDS. SEVERAL GOVERNMENT POLICIES HAVE COME INTO PLAY IN RECENT TIMES THAT ENCOURAGE, INCENTIVIZE AND WHERE NECESSARY, MANDATES THE IMPLEMENTATION OF SUSTAINABILITY PRINCIPLES AND PRACTICES IN THE CONSTRUCTION SECTOR"

AERIS LEADING THE PACK IN CONNECTED TECHNOLOGIES FOR BUSINESS AND SOCIAL SECTOR

Dr. Rishi Bhatnagar
President, Aeris Communication India Pvt. Ltd.

Aeris' modular IoT technology is the broadest in the industry – spanning connectivity to vertical applications. Aeris provides end-to-end connected vehicle technology and has deep experience deploying complex, global programs for the world's largest automotive OEMs. Our groundbreaking technology scales to tens of millions of new vehicles per year. Today, more than 50,000 connected devices from India are managed on Aeris IoT platform.

Aeris technology has been helping businesses of varied scales and sizes to capture and use data from commercial and personal vehicles including trucks, tempos, tractors, commercial cars, 2,3 & 4 wheelers and electric vehicles at unprecedented volumes and speeds. During this Covid-19 crisis and lockdown, Aeris technology helped law enforcement and disaster management agencies in multiple cities for improving response time to crisis with faster mobilization of police vehicles via live location tracking, enabling better coordination between the police vehicles and faster action for crisis management.

In May 2020, we launched the Smart Fleet Platform -industry's first end-to-end connected platform and telematics solution for the fleet owners. It also provides unparalleled security to identify the changes and respond accordingly. In the past, our connected technology has successfully recovered stolen vehicles, especially, eRickshaws, high-end cars and commercial trucks. The offering manages fleets on a single platform and comes with unique features to help maximize fleet efficiency and operational excellence. The unique value proposition of this innovative platform lies in its ability to address three of the biggest challenges that fleet owners face – reducing accidents, instances of theft and improving efficiency. Aeris is uniquely positioned to cater to the needs of the fleet owners with flexible commercial models, deployment capabilities and 24*7 multi-lingual helpdesk.

At Aeris, we have always worked towards expanding the spectrum of IoT adopters. Working closely with more than a dozen clients in multiple regions as their technology partners, we identified the problem of huge credit defaults on heavy and light commercial vehicles for the financers as a major concern area. To this effect, we launched the Aeris Asset Assurance Platform for the BFSI Sector, which is again industry's first Asset Protection and Repossession Platform Based IoT Solution. The industry proven, Asset Assurance Platform was formally launched in Feb 2020 with rich suite of features, providing on-demand visibility of moving assets by tracking their location as well as utilization history. In case the asset is reported stolen, the platform can help locate and remotely disable the IoT powered asset and help with its repossession.

Aeris Asset Assurance Platform has already on-boarded and servicing leading OEMS, auto financing, leasing and insurance companies as our clients in India, Africa & the APAC region. The platform is delivering benefits in complete asset protection and repossession to more than a dozen of our clients, proving our capability to deliver comprehensive and distinct IoT solutions for the BFSI sector. The auto financing and lending companies as well as enterprises using third party fleet services for their logistics and distribution are using our technology for facilitating easy financing of vehicles by the virtue of asset assurance features, such as, live tracking, geo fencing and immobilization. Our technology is helping them in proactive credit default detection, reducing repossession costs related losses, improving business profitability and enhancing service experience with 24×7, multilingual service support by Aeris.

Technology and IoT can create tremendous social impact. At Aeris, we are determined to lead, to show that technology can be inclusive and change the world in amazing ways. We are working very closely with the Social sector, especially in the water conservation projects with The Art of Living and Welthungerhilfe. The Art of Living is able to create positive social impact by using Aeris connected technology along with mobile apps to track progress of our watershed development projects across the country. Welthungerhilfe, India water conservation project 'Tech Nirmal' uses connected mobility solution from Aeris and its technology partner Manacle Technologies to enable local communities monitor & track encroachment of water bodies on their own & functions as a social accountability tool too! The mobile application has helped in implementing the programme on "Building grass-roots civil society cadres for effectiveness and transparency" in seven states of India: Uttar Pradesh, Bihar, Madhya Pradesh, Jharkhand, Chhattisgarh, Odisha and Rajasthan. The EU co-funded programme is being implemented in partnership with local NGO partners, such as, PARMARTH SAMAJ SEVI SANHTHAN, TARUN BHARAT SANGH, JAL JAN JODO ABHIYAN, PRAYOG SAMAJ SEVI SANSTHA and also indirect partners such as the donor fraternity and government agencies working in the not-for-profit sector. Also, during the pandemic, Aeris launched the 'Aeris Charities' programme in which multiple NGO's in India, such as, Social Uplift Through Rural Action (SUTRA), ANTARA Global Mental Health Institution, Helping Hands, Neighbourhood Woof & iSaksham NGO were provided aid to run smooth operations during crisis.

CONFERENCE PROGRAMME HALL A

24-25-26 MARCH 2021

24TH MARCH 2021
SMART CITIES CONCLAVE

1130 – 1300hrs	**Opening Session: Building Cities for People**
Moderator:	**Mr. Puneet Narang,** Partner - Major Project Advisory and Urban Transformation Infrastructure, KPMG in India
Chief Guest:	**Shri Satyendra Jain,** Minister of Health & Family Welfare, Industries, Home, Public Works Department, Power, Urban Development and Transport, Government of NCT of Delhi

Keynote Speakers:
- **Dr. Renu Khosla,** Director, CURE
- **Mr. Kunal Kumar, IAS,** Joint Secretary, Ministry of Housing and Urban Affairs, Govt. of India
- **Shri PK Gupta,** Chairman and Managing Director, NBCC
- **Shri Rajeev Talwar,** CEO, DLF
- **Shri Rajesh Agrawal, IAS,** Executive Director, India Trade Promotion Organisation

1300 - 1400hrs	**Lunch Break**
1400 - 1430hrs	**Keynote: 5G handset ecosystem in India - Impact of Atmanirbhar Bharat Abhyan**
Moderator:	**Mr. Shivank Bhat,** Feature Editor, Xitetech
Speaker:	**Mr. Madhav Seth,** CEO, Realme
1430 - 1600hrs	**Session by Telecommunications Standards Development Society, India (TSDSI): Looking beyond 5G – Path to 6G**
Session Chair:	**Ms Pamela Kumar,** Director General, TSDSI

Speakers:
- **Mr Satish Jamadagni,** Vice-Chair, TSDSI (Reliance JIO)
- **Dr R K Upadhyay,** Co-Chair Outreach Committee, TSDSI (CDOT)
- **Mr Subhas Mondal,** Governing Council Member, TSDSI (WIPRO)
- **Mr Rajesh Gangadhar,** Member TSDSI (STL)
- **Dr. Radha Krishan Ganti,** Member TSDSI (IIT Madras)

1600 - 1615hrs	**Networking Break**
1615 - 1715hrs	**Session: The Combination of 5G and AI**
Moderator:	**Mr. Mritunjay Kapur,** Head of Technology, Media Telecom Sector, KPMG in Europe, Middle East and Africa

Distinguished Speakers:
- **Shri SK Gupta, Secretary,** Telecom Regulatory Authority of India
- **Dr. Brejesh Lall,** Professor Electrical Engineering Department, IIT Delhi
- **Mr. Arvind Bali,** Chief Executive Officer, Telecom Sector Skill Council
- **Mr. Biswajit Biswas,** Chief Data Scientist, Tata Elxsi
- **Mr. Mukesh Jain,** Chief Technology & Innovation Officer, Capgemini

25TH MARCH 2021
EMERGING TECH SUMMIT

1000-1130hrs	**Session: The Changing Landscape of Emerging Technology**
Moderator:	**Mr. Sharat Chandra,** President, GBA India and Advisor EarthID

Distinguished Speakers:
- **Dr. Omkar Rai,** Director General, STPI
- **Shri Saurabh Gaur, IAS,** Joint Secretary, MeitY
- **Mr. Anil Kumar Jain,** CEO, NIXI
- **Dr. Rishi Bhatnagar,** President, AERIS Communication
- **Mr. Ankur Malhotra,** Director, Mazars, India
- **Mr. Anand Ramamoorthy,** MD, Micron Technology
- **Mr. Jim Morrish,** Founding Partner, Transforma Insights

Launch of Thought Leadership Report by Mazars: Where is my cloud?

1145 - 1200hrs	**Networking Break**
1200 - 1230hrs	**Presentation on Digital Transformation of Electronics Design, Manufacturing and Related Quality Processes**
Industry Presentation by:	**Dr. Karthik Sundarraj,** Technical Manager, Indo-Pacific, Hexagon
1230 - 1300hrs	**Keynote:** AI for Society

Moderator:	**Mr. Nishith Pathak,** Global Chief Technologist for Emerging Technologies & Analytics, DXC Technology
Keynote Address:	**Ms. Anna Roy,** Sr. Adviser, Niti Aayog
Special Address:	**Dr. Anita Gupta,** Head – NSTEDB, Ministry of Science & Technology
1300 - 1400hrs	**Lunch Break**
1400 - 1530hrs	**Session: It's a Smart World after all – The Role of IoT in Buildings, Education, Healthcare, Manufacturing, Utilities & Beyond**
Session Chair:	**Dr. Rishi Bhatnagar,** President, AERIS

Distinguished Speakers:
- **Dr. Aloknath De,** SVP and CTO, Samsung India (Virtual)
- **Mr. Vinay Solanki,** Head of Digital Solutions & General Manager, Napino Auto & Electronics Ltd
- **Mr. Shridhar Pandey,** Managing Director, Elecorev Ramway India Pvt Ltd
- **Mr. Vartul Mittal,** Technology & Innovation Specialist,Formerly-IBM, Kotak Mahindra Bank, Coca Cola
- **Mr. Mukesh Sinha,** Managing Partner, Innovative Infratech Solution Private Limited
- **Mr. Sanjay Tiwari,** General Manager, Ligman Lighting Co. Ltd.

1530 - 1540hrs	**Changeover**
1540 - 1605hrs	**Keynote: Impact of AI in Healthcare**
Moderator:	**Mr. Ram Kumar,** CEO, Nirog Street
Keynote Address:	**Dr. Anurag Agrawal,** Director CSIR Institute of Genomics and Integrative Biology
1605 - 1615hrs	**Networking Break**
1615 - 1730hrs	**Session: Blockchain in Action**
Moderator:	**Mr. Sharat Chandra,** President, GBA India and Advisor EarthID

Distinguished Speakers:
- **Ms. Debajani Mohanty,** Blockchain Author
- **Mr. Amit Jindal,** CEO, Felix Advisory
- **Mr. Dhaval Joshi,** Vice President– Strategy & Consulting, Panamax
- **Mr. Aman Sanduja,** Blockchain Hustler

26TH MARCH 2021
SOLAR INDIA SUMMIT

1000 - 1100hrs	**Session: Pathway to Green Hydrogen Economy in India**
Chief Guest:	**Ms. Gauri Singh,** Deputy Director-General, IRENA

Distinguished Speakers:
- **Shri Deepak Gupta,** IAS (Retd.) Hon. Director General, NSEFI, Former Chairman, UPSC (former Secretary, MNRE and former Special Secretary, MoHFW)
- **Shri K. R. Jyoti lal,** IAS, Principal Secretary, Department of General Administration, Revenue and transport, Government of Kerala
- **Mr. José Ignacio Sanz Saiz,** VP Gas, Renewables and Power India - India Country Chair, Total Group (Virtual)

Moderator:	**Mr. Subrahmanyam Pulipaka,** Chief Executive Officer, NSEFI
1100 - 1110hrs	**Changeover**
1110 - 1215hrs	**Session: Aatma-Nirbhar in Manufacturing-Self Reliant Solar Industry**

Distinguished Speakers:
- **Shri Pradip Kumar Das,** CMD, IREDA
- **Shri Hitesh Doshi,** Chairman and Managing Director, Waaree Energies
- **Mr. Sujoy Ghosh,** Vice President -APAC & India Region, First Solar
- **Mr. Sunil Badesra,** Country Head - Sungrow India

Moderator:	**Mr. Rishabh Jain,** Manager- Market Intelligence, CEEW-CEF
1215 - 1225hrs	**Networking Break**
1225 - 1330hrs	**Session: Solar PV Recycling- Action and Direction**

Distinguished Speakers:
- **Mr. Jan Clyncke,** MD, PV Cycle
- **Mr. Máté Heisz,** Director of Global Affairs, SolarPower Europe

Moderator:	**Mr. Subrahmanyam Pulipaka,** Chief Executive Officer, NSEFI

Launch of Report by NSEFI: Solar PV Recycling in Indian Context

CONFERENCE PROGRAMME HALL B

24-25-26 MARCH 2021

24TH MARCH 2021

5G AND BEYOND LEADERSHIP SUMMIT

1130-1300hrs Session: Future Roadmap for 5G
Moderator: Mr. Shobhit Agrawal, Partner, KPMG in India
Keynote Speaker: Shri P.D Vaghela, IAS, Chairman, TRAI

Distinguished Speakers:
- Mr. NG Subramaniam, Chair TSDSI (COO-TCS)
- Mr. R K Pathak, DDG (IC), Department of Telecom
- Mr. Hari Om Rai, CMD, Lava International
- Mr. Vikram Tiwathia, Dy Director General, COAI

1300 - 1400hrs Lunch Break

SMART CITIES CONCLAVE

1400 - 1520hrs Session: The Future of Mobility in India
Moderator: Mr. Dhruv Behl, Editor, autoX

Distinguished Speakers:
- Shri Amit Kumar Ghosh, IAS, Joint Secretary, Ministry of Road, Transport and Highways
- Shri Sudhendu J. Sinha, Adviser (Infrastructure Connectivity –Transport and Electric Mobility),Niti Aayog
- Mr. Puneet Anand, AVP - Corporate Affairs Unit, Hyundai Motor India Ltd.
- Mr. Venkata Chunduru, Director, IBI Group India

1520 - 1530hrs Changeover
1530 - 1630hrs Session: Water Security

Distinguished Speakers:
- Mr. G. Asok Kumar, Mission Director, National Water Mission
- Dr. Rajiv Ranjan Mishra, Director General, NMCG
- Mr. Avinash Mishra, Adviser, Niti Aayog
Moderator: Mr. Ashish Sachdeva, Founder President, Green Dream Foundation
1630 - 1645hrs Networking Break
1645 - 1800hrs Session: Making Affordable, Sustainable and Innovative Housing a Reality in Cities
Moderator: Ms. Nitika Krishan, Associate Director - Infrastructure Government and Healthcare, KPMG in India

Distinguished Speakers:
- Mr. Sanjay Seth, Senior Director – Sustainable Habitat Programme,TERI), & CEO, GRIHA Council
- Dr. Shailesh Kr. Aggarwal, Executive Director, BMTPC
- Prof. Charanjit Singh Shah, Founding Principal, Creative Group

25TH MARCH 2021

CITY LEADERS CONCLAVE

1000 - 1100hrs Opening Session: Building Better Cities
Opening Address and Setting the context: Mr. Nilachal Mishra, Partner and Head of Government Advisory, KPMG in India
Special Address: Dr. O.P. Agarwal, CEO, WRI India
Ambassador speaks: H.E. Mr. Andre Aranha Correa do Lago, Ambassador, Embassy of Brazil
Guest of Honour Address: Shri Durga Shanker Mishra, IAS, Secretary, Ministry of Housing and Urban Affairs, Govt. of India
Launch of Knowledge Paper by: Mr. Akshay Bhalla, Office Managing Partner - North KPMG in India
Road to Sustainable Smart Cities:Challenges, opportunities and emerging trends
1100-1110hrs Break and Changeover
1110 - 1300hrs Session: Smart Cities Response to the Pandemic
1110-1115hrs Setting context by Session Moderator: Ms. Neetika Chhabra, Director – Infrastructure, Government & Healthcare, KPMG in India
1115 - 1130hrs Keynote Address by: Shri Hitesh Vaidya, Director, NIUA
1130 - 1140hrs Special Address by: Dr. Charru Malhotra, PhD (IIT-D),

Coordinator (Centre of eGovernance), Indian Institute of Public Administration
1140 - 1200hrs Panel Discussion and Q/A
1200 - 1315hrs Presentation by India Cities: Part I
1200 - 1210hrs: Dr. Garima Mittal, IAS, CEO, Faridabad Smart City
1210 - 1220hrs: Mr. Aditya Singh, CEO, Bhopal Smart City Ltd.
1220 - 1230hrs: Mr. Ashish Kumar, CEO, Jabalpur Smart City.
1230 - 1240hrs: Mr. Gaurang Rathi, IAS, Varanasi Smart City
1240 - 1250hrs: Ms. Jayati Singh, IAS, CEO, Gwalior Smart City Ltd.
1250 - 1300hrs: Mr. Nitin Sangwan, IAS, Ahmedabad Municipal Corporation
1300 - 1315hrs Discussions and Q/A
1315 - 1400hrs Lunch Break

Presentations by Indian Cities: Part II
1400 - 1410hrs: Setting the context
1410 - 1420hrs: Mr. Mahesh Moroney, Deputy Chief Executive Officer, NAGPUR Smart City
1420 - 1430hrs: Mr. Raj Cherubal, CEO, Chennai Smart Cities
1430 - 1440hrs: Mr. Rahul Singh Rajpoot, CEO, Sagar Smart City
1440 - 1450hrs: Mr. Mukesh Malhotra, CEO, Biharsharif Smart City Ltd.
1450 - 1500hrs: Mr. Ravi Pawar, CEO and Dy. Commissioner, Amravati Smart City
1500 - 1515hrs Discussions and Q/A
1530 - 1545hrs Networking Break
1545-1625hrs Session: Heritage as an Enablement for Effective and Usable Urban Environment
Session Moderator: Mr. Ashutosh Kapoor, Director - Infrastructure Government and Healthcare, KPMG in India

Distinguished Speakers:
- Mr. Navin Piplani, Director, INTACH
- Mr. Athar Aamir ul Shafi Khan, Municipal Commissioner, Srinagar Municipal Corporation, Jammu and Kashmir
- Mr. Khushaal Yadav, CEO, Ajmer Smart City Ltd.

1625-1630hrs Changeover
1630-1730hrs Session: How Important is to create "Sister Cities Concept" for Smart and Sustainable Cities?
Moderator: TBD

Distinguished Speakers:
- Dr. Bernadia Irawati Tjandradewi, Secretary General, UCLG
- Ms. Fathimath Afshan Latheef, CEO, Local Government Authority, Republic of Maldives
- Mr. Ravi Ranjan Guru, DDG, AIILSG
- Mr. Rafael Greca, Mayor of Curitiba, Brazil
- Mr. Junaid Azim Mattu, Mayor, Srinagar Municipal Corporation

26TH MARCH 2021

CLEAN AND WATER INDIA SUMMIT

1000 - 1050hrs Session: Disposable Plastic Waste: Now & the Future. Alignment with the Sustainable Development Goals & Principles of Circular Economy

Distinguished Speakers:
- Dr. Binish Desai, Recycle Man of India
- Ms. Shalini Goyal Bhalla, Advisor, Sustainability and Circular Economy
- Mr. Ujwal Desai, Managing Director, Lucro Plastscycle Pvt. Ltd.

Moderator: Mr. Ashish Sachdeva, Founder President, Green Dream Foundation
1050 - 1100 Changeover
1100 - 1145hrs Session: Integrated Solid Waste Management & the 'Triple Bottom Line' Approach to Meet India's Waste Crisis

Distinguished Speakers:
- Mr. R.K. Sud, Managing Director, EESL
- Mr Masood Mallick, Joint Managing Director, Ramky Enviro (REEL)

CONFERENCE PROGRAMME HALL B

24-25-26 MARCH 2021

- Dr. Abhinav Akhilesh, Director - Human and Social Services, KPMG in India
Moderator: Mr. Ashish Sachdeva, Founder President, Green Dream Foundation
1145 - 1200hrs Networking Break
1200 - 1300hrs Session: Efficient Water Management
Distinguished Speakers:
- Dr. Fawzia Tarannum, Assistant Professor, TERI School of Advanced Studies

- Mr. Raman VR, Head of Policy, WaterAid India
- Md. Mazharul Haque, Managing Director, Oasis Wfs Pvt Ltd.
- Mr. Chinnayya Math, CEO, Nimble VisionPvt. Ltd.
- Mr Ganesh Shankar, Founder & CEO at FluxGen Technologies
Moderator: Dr. Pranab J Patar, Chief Executive, Global Foundation for Advancement of Environment and Human Wellness

CONFERENCE PROGRAMME VIRTUAL

DAY 1: 24 MARCH 2021 (WEDNESDAY)

FINTECH SUMMIT

1100 - 1150hrs Session: India's Leading Fintech Landscape
Moderator: Mr. Alekh Tiwari, Partner, KPMG in India

Distinguished Speakers:
- Mr. Ganesh Ananthanarayanan, COO, Airtel Payments Bank
- Mr. Rishi Gupta, MD & CEO, Fino Payments Bank
- Mr. Naveen Kukreja, Co-Founder and CEO, Paisabazaar.com
- Mr. Ashneer Grover, CEO, BharatPe
- Mr. Harshil Mathur, CEO, Razorpay

1150 - 1200 Changeover
1200 - 1300hrs Session: The Outlook for InsureTech
Moderator: Prof. Manoj K Pandey, Associate Professor - Insurance & Marketing, Birla Institute of Management Technology

Distinguished Speakers:
- Ms. Shanai Ghosh, ED & CEO, Edelweiss General Insurance
- Mr. Yashish Dahiya, CEO, PolicyBazaar
- Mr. Vishwanath Ramarao, CPTO , Acko General Insurance
- Mr. Aly Madhavji, Managing Partner, Blockchain Founders Fund

1300 - 1400hrs Break
1400 - 1450hrs Session: Redefining Payments Infrastructure
Moderator: Mr. Abhishant Pant, Founder, The Fintech Meetup

Distinguished Speakers:
- Mr. Abhishek Arun, COO, PayTm Payment Banks
- Mr. Akash Sinha, Co-founder & CEO, Cashfree
- Mr. Kunwar Raj, Co-Founder & CEO, Invoid
- Mr. Rohit Taneja, CEO, Decentro
- Mr. Anand Vaidya, Regional Business Head, Advance. AI

1450 - 1500 Changeover
1500 - 1600hrs Session: The Future of Digital Lending in India
Moderator: Mr. Prashant Muddu, Managing Director and CEO, Jocata

Distinguished Speakers:
- Mr. Alok Mittal, Co-Founder, Indifi
- Ms. Radhika Binani, Chief Product Officer, Paisabazaar.com
- Mr. Saurabh Sinha, Director Vertical Head – FinTech & e-commerce, TransUnion CIBIL Limited
- Mr. Akshay Mehrotra, Co-Founder, Early Salary

1600 - 1615 Networking Break
1615-1715hrs Session: The Future of Wealth Management
Moderator: Mr. Musheer Ahmed, CEO, Finstep Asia

Distinguished Speakers:
- Ms. Prerna Soni, Senior Assistant Vice President, Invest India

- Mr. Vidhu Shekhar, President, CFA Institute
- Mr. Pratik Oswal, Founder and CEO, Glide Invest
- Mr. Ajay Kamath, Commercial Director, Bambu
- Mr. Varun Sridhar, CEO, PayTm Money

1715 - 1815hrs Session: Accelerating Financial Inclusion in India
Moderator: Mr. Dharmender Jhamb, VP Public Policy & Government Relations, PayTm

Distinguished Speakers:
- Ms. Neha Mehta, Co-Founder, Femtech Partner
- Mr. Manish Khera, Founder and CEO, HAPPY
- Mr. Ashish Ahuja, Chief Operating Officer, Fino Payments Bank
- Mr. Jason Fernandes, President (India Operations), XREX Inc

CLEAN INDIA SUMMIT

1100 - 1230hrs Session: Water, Sanitation & Hygiene Promotion
Moderator: Mr. Ashish Sachdeva, President Founder, Green Dream Foundation
Keynote Speaker: Shri Arun Baroka, Additional secretary (SBM & CVO), Department of Drinking Water and Sanitation, Ministry of Jal Shakti, Govt. of India

Distinguished Speakers:
- Dr. Suresh Kumar Rohilla Programme Director, Centre of Science and Environment
- Dr. Nimish Shah, Managing Director - India, Toilet Board Coalition
- Brig. Rajiv Williams, Corporate Head – CSR, Jindal Stainless Limited Group

1230 - 1240 Changeover
1240 - 1310hrs Session: Smart & Sustainable Cities
Distinguished Speakers:
- Mr. Will Sibia, Founder & CEO, urbs | Urban Systems
- Mr. Paritosh Prajapati, Group CEO, GX Group

1300 - 1400hrs Break
1430 - 1600hrs Session by WWF Climate Resilience in Indian Cities
1430 - 1435hrs Setting the context
Moderator: Dr. Suchismita Mukhopadhyay, WWF-India
1435 - 1545hrs Climate resilience in Indian cities – success stories, challenges, and way forward

Distinguished Speakers:
- Dr. Alby John Varghese, I.A.S., Regional Deputy Commissioner, Greater Chennai Corporation
- Dr. Umamaheshwaran Rajasekar, Head Climate Centre for Cities (C-Cube) & Chair Urban Resilience, National Institute of Urban Affairs (NIUA)
- Dr Vinitaa Apte, Founder Director, TERRE Policy Centre
- Dr Faiyaz A. Khudsar, Scientist-in-charge, Yamuna Biodiversity Park
- Dr Harini Nagendra, Professor – Sustainability, School of Development, Azim Premji University

1545 - 1555hrs Q &A

CONFERENCE PROGRAMME VIRTUAL

DAY 1: 24 MARCH 2021 (WEDNESDAY)

1555 - 1600hrs	**Closing**
1600 - 1615hrs	**Networking Break**
1615 - 1730hrs	**Session: Innovative Solutions & Technologies to Tackle Asia's recurring Air Pollution – Prevention & Cure**
Moderator:	**Mr. Ashish Sachdeva**, President Founder, Green Dream Foundation

Distinguished Speakers:
- **Prof. SN Tripathi**, HAG Professor- Department of Civil Engineering Indian Institute of Technology Kanpur
- **Ms. Bharti Singhla**, COO and Founder, Chakr Innovation
- **Dr. Jorge Sousa**, Researcher - R&D, VITO
- **Dr. Peter Harrop**, Chairman and Founder, IDTechEx

DAY 2: 25 MARCH 2021 (THURSDAY)

OTT SUMMIT

1000 - 1100hrs	**Session: India's Evolving OTT Landscape**
Moderator:	**Mr. Girish Menon**, Partner and Head - Media and Entertainment, KPMG in India
Industry presentation by:	**Mr. Ervin Chan**, VP Sales – APAC at Kaltura

Distinguished Speakers:
- **Mr. Tarun Katial**, Former CEO, ZEE5
- **Mr. Ali Hussein**, CEO, Eros Digital
- **Mr. Zubin Jimmy Dubash**, COO- Digital, Shemaroo Entertainment Ltd.
- **Mr. Vivek Jain**, Chief Operating Officer, MX Player
- **Mr. Vishal Maheshwari**, Board and Selection Committee Member, Venture Networks

1100 - 1115hrs	**Networking Break**
1115 - 1215hrs	**Session: Diversification of Content**
Moderator:	**To be decided**

Distinguished Speakers:
- **Mr. Anindo Banerjee**, Originals Head, Hoichoi
- **Mr. Mayur Puri**, Writer, Actor, Lyricist, Director
- **Mr. Dhruv Sheth**, Chief Operating Officer, OML
- **Mr. Sushant Tomar**, Country Director, M&C Saatchi Performance
- **Mr. Gautam Talwar**, Chief Content Officer, MX Player

1215 - 1230hrs	**Networking Break**
1230 - 1300hrs	**Keynote: How do Advertisers look at OTT Platforms?**
Keynote Address:	**Ms. Kavita Shenoy**, Founder and CEO, Voiro
1300 - 1400hrs	**Lunch Break**
1400 - 1530hrs	**Session: Enhancing the OTT Experience with Emerging Technologies**
Moderator:	**Mr. Uday Sodhi**, Sr. Partner, Kurate Digital Consulting

Distinguished Speakers:
- **Mr. Hans Massart**, Head of Media & Broadcast, ST Engineering iDirect
- **Mr. Aloke Majumdar**, Technology Head, Hoichoi
- **Mr. Bharat Mohan**, CEO, SensaraTV
- **Mr. Paritosh Prajapati**, Group CEO, GX Group
- **Mr. Damien Sterkers**, Product Manager, Broadpeak
- **Mr. Amey Sukhthanker**, Head - Sales & Alliances, Sterlite Power Transmission Ltd.

1530 - 1545	**Networking Break**
1545 - 1615hrs	**Keynote: Smart TVs and OTT: Encashing Synergies**
Keynote Address:	**Mr. Vynsley Fernandes**, Managing Director & CEO, NXTDIGITAL Limited
1700-1800hrs	**Decoding Kids' Genre in OTT Space**
Moderator:	**Mr. Uttam Pal Singh**, Head-Discovery Kids, Discovery

Distinguished Speakers:
- **Ms. Soumini Sridhara Paul**, Senior Vice President, Hungama Digital Media Entertainment Private Limited
- **Ms. Gayatri Sundaram**, Head-Special Projects, KidZania
- **Mr. Amit Agrawal**, Founder, OckyPocky
- **Mr. Rajiv Chilaka**, Founder & CEO, Green Gold Animation Pvt. Ltd
- **Mr. P. Jayakumar**, CEO, Toonz Media Group

TRANSPORT INDIA SUMMIT

1000-1130hrs	**Session: Boosting EV Charging Infrastructure**
Moderator:	**Mr. Anil Srivastava**, Principal Consultant & Mission Director - National Mission on Transformative Mobility & Battery, NITI Aayog

Distinguished Speakers:
- **Dr. Praveer Sinha**, CEO and Managing Director, Tata Power
- **Mr. Awadhesh Jha**, Vice President, Fortum Charge & Drive India Pvt. Ltd.
- **Mr. Amit Bhatt**, Executive Director, WRI India
- **Mr. Abhijit B Mulay**, General Manager, Automotive Electronics Department, The Automotive Research Association of India

1130 - 1145hrs	**Networking Break**
1145 - 1300hrs	**Session: India's Promising Energy Storage Market**
Moderator:	**Mr. Anish De**, Partner and National Head - Energy and Natural Resources, KPMG in India

Distinguished Speakers:
- **Dr. Rashi Gupta**, Founder & Managing Director, Vision Mechatronics Pvt. Ltd.
- **Mr. Debi Prasad**, Executive Director, India Energy Storage Alliance
- **Mr. Abhinav Mahajan**, Director, IB Solar
- **Mr. Samit Jain**, Managing Director, Pluss Advanced Technologies Pvt. Ltd.

1300 - 1400hrs	**Lunch Break**
1400 - 1530hrs	**Session: Adoption of New Strategies for Sustainable Mobility and Safer Roads**
Chair & Moderator:	**Mr. Manojit Bose**, Sr. Advisor, Smart Cities

Distinguished Speakers:
- **Dr. Bhairavi Joshi**, CEO and Director, BYCS India
- **Prof. Sanjay Gupta**, Professor and Head, Transport Planning, School of Planning and Architecture, New Delhi
- **Mr. Shantanu Sonar**, Head of Driving Functions, Engineering – ADAS Systems, India, Continental Automotive
- **Mr. Parag Bedarkar**, Manager-Sales, TomTom
- **Mr. Atul Kumar**, Associate Manager - Automotive and Transportation, MarketsandMarkets

1530-1535	**Changeover**
1535-1600hrs	**Keynote: Ridesharing with EVs**
Keynote Address:	**Mr. Vinod Kumar Poomalai**, Strategic Sales Manager, TomTom
1600-1615hrs	**Networking Break**
1615-1730hrs	**Session: Sustainable Urban Future: Experience from Brazil**
Keynote Address:	**H.E. Andre Aranha Correa do Lago**, Ambassador, Embassy of Brazil
Special Address:	**Mr. Roberto Paranhos do Rio Branco**, President, Brazil India Chamber of Commerce

Presentations by:
- **Mr. Basilio Jafet**, Director, Jafet Inc
- **Mr. Aloisio Pereira DA Silva**, CEO, Infracities
- **Mr. Thomaz Assumpção**, Founder & CEO, Urban Systems

Moderator: **Ar. Rajendra Kumar**, Director, School of Architecture, Noida International University

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CONFERENCE PROGRAMME VIRTUAL

DAY 3: 26 MARCH 2021 (FRIDAY)

CYBER SECURITY CONCLAVE

1000 - 1100hrs	**Session: Cyber Security in the New Normal World**
Moderator:	**Mr. Atul Gupta**, Partner and Head - IT Advisory Services, KPMG in India

Distinguished Speakers:

Keynote Address: **Lt. Gen. (Dr) Rajesh Pant**, National Cyber Security Coordinator, Prime Minister's Office, Government of India

Special Address:
- **Dr. Muktesh Chander**, IPS, Special Commissioner, Delhi Police
- **Mr. Shirish Bapat**, Assessor Manager, LRQA SWA

1100 - 1110hrs	**Changeover**
1110 - 1210hrs	**Session: How Secure is your Data on the Cloud?**
Moderator:	**Mr. Nikhil Narendran**, Partner, Trilegal

Distinguished Speakers:
- **Mr. Vijay K. Banda**, Senior Director- Cyber Security, Qualcomm India
- **Mr. Moshe Ferber**, Chairman, Cloud Security Alliance, Israel
- **Mr. Vijay Kumar**, Founder, DigitalFort Technologies
- **Mr. Akshay Shah**, CEO, iWeb
- **Mr. Deepak Talwar**, National Cyber Security Officer, Microsoft

1210 - 1220hrs	**Changeover**
1220 - 1320hrs	**Session: New Emerging Trends in Cyber Crimes**
Moderator:	**Mr. Vijay Kumar**, Founder, DigitalFort Technologies

Distinguished Speakers:
- **Ms. Lopa Mudra Basu**, Cyber Security Expert
- **Dr. Balsing Rajput**, Superintendent of Police, Maharashtra Cyber, Maharashtra Police
- **Mr. Kunal Gupta**, Partner, Trilegal
- **Mr. Nikhil Mahadeshwar**, Chief Technology Officer, Skynet Softtech Pvt. Ltd.

EMERGING TECH SUMMIT

1000 - 1130hrs	**Session: Building Embedded Systems for IoT**
Moderator:	**Mr. Ravi Subramanyam**, Founder and President, iBot Control Systems Inc.

Distinguished Speakers:
- **Mr. Siddharth Verma**, IOT Lead India, Microsoft
- **Mr. Vinay Thapliyal**, Technical Marketing Manager, MCD, INDIA, STMicroelectronics
- **Mr. Amit Rao**, VP - Strategy & Business Development, APAC, Trusted Objects
- **Mr. Deepu Chandaran**, Sr. Technical Manager, LDRA India
- **Mr. Nate Srinath**, Founder and Director, INXEE

1130 - 1145hrs	**Networking Break**
1145 - 1315hrs	**Session: Industry 4.0: Reinventing Manufacturing**
Moderator:	**Mr. Sunil David**, Regional Director-IOT (India & Asean), AT&T

Distinguished Speakers:
- **Mr. Arun Handa**, Chief Technical Officer, Servotech Power Systems
- **Mr. Samip Mutha**, Head of Digital, RPG Group
- **Mr. Manuj Ohri**, Partner, KPMG
- **Mr. Naveen Kumar Singh**, Group CEO, Napino Auto & Electronics
- **Mr. Sandeep Sehgal**, Head Enterprises, Nokia

1330 - 1400hrs	**Startup Pitch Session**
1400 - 1600hrs	**Smart Cities India Awards (Physical)**

Smart Cities India (SCI) Awards is a unique platform designed to felicitate, recognize and encourage individuals, policy makers, companies, municipalities, government bodies and associations to illuminate the work done in both urban and rural sectors. SCI Awards is industry's most prestigious and well recognized platforms with 800+ submission forms scrutinized and reviewed by the eminent jury in last 5 years. The winners of SCI Awards 2021 will be announced (Physical) on 26th March 2021 at Pragati Maidan, New Delhi.

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