



JANUARY 17-19, 2018, HYDERABAD INTERNATIONAL CONVENTION CENTRE

**CONSTRUCTION & INFRASTRUCTURE**

January 18 & 19, 2018

**DRAFT AGENDA**

<p>18<sup>th</sup> January 1400 – 1530</p>	<p>Keynote Session: <b>Sustainable and Resilient Infrastructure – Key to Economic Growth</b></p> <p>Speakers:</p> <ul style="list-style-type: none"> <li>• Vinit Goenka, Member Taskforce (IT), Ministry of Road Transport &amp; Highways, and Member Governing Council – Centre for Railway Information System *</li> <li>• Mr RK Pandey, Member (Projects), National Highways Authority of India</li> <li>• Subodh Dubey, Group CIO, Shapoorji Pallonji, India</li> <li>• Shrikant Kommu, General Manager - Technical &amp; Projects, Delhi Mumbai Industrial Corridor Corporation <i>BIM for infrastructure development</i></li> <li>• John Whitehead, Director of Sales and Distribution, APAC, Trimble, Singapore <i>Topic: The New Paradigm of 3D Scanning Technology in the Transportation Infrastructure segment: Case Studies from Around the Globe</i></li> <li>• Kaushik Chakraborty, Vice President &amp; Regional Executive, SE Asia and India, Bentley, Singapore</li> </ul>
<p>1530 – 1630</p>	<p>Visit to Exhibition/Tea Coffee Break</p>
<p>1630- 1800</p>	<p><b>Session 2: Modernization of Construction and Engineering</b></p> <ul style="list-style-type: none"> <li>• Rainer Dirk Ebersbach, Managing Director, LEHMANN + PARTNER GmbH, Germany</li> <li>• Y Pari, Head - GeoSpatial Technologies, L&amp;T Construction, India</li> <li>• Sanghee Shin, President, Gaia3D, Inc., South Korea <i>Mago3D - An innovative AEC/GIS integration platform that can service millions of 3D objects on a web browser</i></li> <li>• ROB ROEF, Co-Leader, AirportRoom, buildingSMART International, Netherlands</li> </ul>

	<ul style="list-style-type: none"> <li>• Vikram Jasrotia, Business Development Manager, Hexagon, India <i>Creating the digital construction process for delivering project on time with efficient cost management using Hexagon Solutions</i></li> <li>• MA XIAOYU, Founder, Tianhe Construction, China</li> <li>• Dr. Debajit Mishra, Scientist/Project Coordinator, Odisha Space Applications Center, India <i>Geospatial data modelling for industrial and infrastructure development</i></li> <li>• JUGAL MAKWANABIM Director - Asia Pacific, AECOM, Singapore</li> </ul>
19 <sup>th</sup> January	
0930 – 1130	<p>Session 3:</p> <p><b>A. Advances in Construction Technology (Airport)</b></p> <p>Speakers:</p> <ul style="list-style-type: none"> <li>• Alexander Worp, Strategic Advisor BIM, Asset Management Department, Schiphol Airport Netherlands <i>Asset management in Schiphol airport</i></li> <li>• Wolfgang Haller, Head of Competence Center, Technical Documentation, Munich Airport, Germany <i>Integrating BIM in the GIS World of Munich Airport</i></li> </ul> <p><b>B. Structural Engineering</b></p> <ul style="list-style-type: none"> <li>• Rohit Dembi, ITES- Head, NJS Engineers</li> <li>• Amresh Mehta, Business Development Head, Shiva Engineering Services (SES) <i>3D laser scanning for Industrial applications</i></li> <li>• Prerna Sidharth, Principal Architect and Partner, Archisolutions, Bangalore <i>BIM for industrial applications</i></li> </ul> <p><b>C. Surveying &amp; Mapping</b></p> <ul style="list-style-type: none"> <li>• Michael Mayer, Managing Director, RiCOPTER UAV GmbH, Austria <i>Latest Trends in Wide-Area High-Resolution Aerial LiDAR Surveying</i></li> <li>• Venkatesh Sai, Chief Technical Officer, Zuppa, India <i>How Infrastructure and Construction Companies can leverage UAV-based Mapping</i></li> <li>• Vijay Chowdhury, Sales Engineer, Const. BIM / CIM, FARO Business Technologies, India <i>Explore Laser Scanning Revolution in As-Built Survey</i></li> <li>• Sreehari K.G., Research Scholar, Department of Design, Indian Institute of Technology – Hyderabad, India <i>Operate and Maintain Infrastructure Efficiently and Effectively</i></li> </ul>

130 – 1230	Visit to Exhibition/Tea Coffee Break
1230 – 1330	Lunch
1330 – 1530	<p>Session 4.</p> <p><b>A. Advances in Construction Technology (Roadways, Highways and waterways)</b></p> <ul style="list-style-type: none"> <li>• Akhilesh Srivastava, Chief General Manager (IT &amp;HO), National Highways Authority of India</li> <li>• G. Nagabhushanam, DGM (Engineering), Andhra Pradesh Industrial Infrastructure Corporation Ltd*</li> <li>• Adin Lee, Product Manager, High-Target, China</li> </ul> <p><i>USV for Smart Waterway Survey</i> (More speaker confirmations awaited)</p> <p><b>B. Subsurface Mapping</b></p> <ul style="list-style-type: none"> <li>• Prof Niranjana Swarup, Director, Construction Industry Development Council, India</li> <li>• Geoff Zeiss, Principal, Between The Poles, Canada</li> </ul> <p><i>Mapping national underground infrastructure: The last frontier of remote sensing</i></p> <ul style="list-style-type: none"> <li>• Carsten Roensdorf, Head of Advisory Services, Ordnance Survey UK</li> </ul> <p><i>Underground infrastructure - Mapping what you cannot see</i></p>
1530 – 1600	Visit to Exhibition/Tea Coffee Break
1600 – 1700	<p><b>Advances in Construction Technology (Metros and Railways)</b></p> <ul style="list-style-type: none"> <li>• B.P. Awasthi, Executive Director (Track), Railway Board, India</li> <li>• Malcolm Taylor, Head of Technical Information, Crossrail, UK</li> </ul> <p><i>Crossrail: Design, Construction &amp; Operations with Geospatial Data</i></p> <ul style="list-style-type: none"> <li>• G.B.Nagendra, Chief Engineer - Infra, Konkan Rail, India</li> <li>• Mr Akhilesh Saxena, Executive Director Jaipur Metro, India*</li> <li>• Stuart Gosney - GIS Manager, HS2 Ltd, UK</li> </ul>

ABOVE IS TENTATIVE AGENDA, THE SPECIFIC TIMINGS OF PRESENTATION ARE SUBJECT TO CHANGE

## **BACKGROUND NOTE**

Infrastructure is the foundation of modern-day civilization. We ultimately rely upon infrastructure to provide us with access to the resources needed to exist at this scale and density on our planet. Yet there exists a stark funding gap — there is currently a \$1 trillion global shortfall on basic infrastructure investment worldwide as compared to what's needed. This seriously threatens our future prosperity and development.

With the growing population and national development plans of countries around the world, there is an increasing emphasis on heavy infrastructure, industrial and institutional structures. While this has generated demand for construction, the construction and engineering ecosystem itself is undergoing a paradigm shift that project owners and project managers need to address. The projects are getting larger and more complex, posing challenges in meeting budget and schedule. Every project varies from the other, and requires an in-depth understanding to deliver most optimum solutions. There are also growing expectations on project managers; project owners and the public are increasingly expecting more work to get done for less money, while maintaining safety, quality, project transparency, and environmental sustainability.

A large part of this infrastructure will inevitably be exposed to a plethora of natural hazards including floods, earthquakes, storms, tsunamis etc. At the same time, there is a risk that the new infrastructure may itself create new disaster risks. The objective of building a coalition is to generate new knowledge on hazard risk assessment, disaster resilient technologies and mechanisms for integrating risk reduction in infrastructure financing. This will help ensure that all new infrastructure is not only disaster resilient itself but also does not create new disaster risks.

In such a scenario, the most pressing need for the construction industry is to put innovation at the core of its processes to address many of these challenges. Introducing geospatial technologies - including positioning, GIS, BIM, and LiDAR in construction and engineering

offers detailed information, improves collaboration, efficiency, and performance in planning and design phase, during construction, in post-build savings and for ongoing operational management of an engineering project. Further, geospatial technology itself is witnessing a lot of innovations that are scaling up their potential from basic positioning information to offering a seamless integration across all stages, giving intelligent, connected workflows that help improve predictability, productivity, and profitability for engineering projects.

The program on 'Construction and Engineering' with theme Sustainable and Resilient Infrastructure – Key to Economic Growth during Geospatial World Forum 2018 will highlight the relevance, applications, and emerging trends in geospatial technology for construction and engineering. The program will present a high level discussion forum focused on addressing the challenges and opportunities for construction and showcase of solutions that can help gain more accurate, accessible, and actionable insights, which can benefit throughout the execution and lifecycle of the projects. It will glance through latest technology revolutions and what they offer today, tomorrow, and in the future.

## **MAIN DISCUSSION THEMES**

### **The Geospatial Leverage for Mega Projects**

Mega projects in the construction sector play a crucial role in shaping the economy and result in prosperity of nations. These projects represent the best advancements in engineering technology, tipping the scales in many dimensions - size, complexity, and cost. With large investment commitments, vast complexities, and long lasting impact on every level of society, such projects are also vulnerable to incredible amount of risk and massive cost overruns. The smallest of error can result in huge losses and delay in the projects. In such scenario, projects need highly accurate information and careful planning in all stages of construction. With its ability to provide accurate information, automation in building processes and seamless integration of information across all stages of construction, geospatial technology is the most critical tool and investment that these projects can make

to realize these technological marvels. This session will share the vision and technology implementation behind such mega projects, and the latest advancements in geospatial technology that can power such vision.

## **Towards Resilient Plan & Design of Infrastructure**

Before even hitting the ground, project managers can properly plan with 2D/3D visualization and analysis. Geospatial platforms help in modeling scenarios and share information, considering the natural and built environments from the very first stages of planning. While CAD can create designs, it does not offer transparency, project management or analysis. Combining CAD workflow with geospatial visualization gives a holistic perspective of the surrounding environment and informing all the design decisions made by project managers.

## **Construction, Buildings & infrastructure**

Moving from design stage to build stage brings its own set of 'ground' challenges Addressing these issues through technology viz. construction grade surveying with the use of LiDAR, as-built mapping, construction scheduling and estimations, and project management will be addressed by the experts in this session. Lack of coordination during the build phase can be unsafe and fiscally costly. Geospatial information facilitates connectivity amongst various project members by using familiar maps populated with critical workflow, personnel, and asset data to orient and inform stakeholders. Geospatial technology is also emerging a great asset in field operations.

## **Operate and Maintain Infrastructure Efficiently and Effectively**

Efficient project management does not finish with the finished product. Ensuring its safety and sustainability is equally critical. Geospatial-based real-time data processing, dashboards,

and mobile tools facilitate the smooth and safe operations and maintenance of facilities. Such finishing touches to the project enhance credibility of project managers. The session will also highlight post-construction operations and management of the infrastructure by owners or operators.

## **Post-disaster infrastructure reconstruction and recovery**

Post-disaster, the damaged/lost infrastructures have to be re-built to support the rehabilitation activities. Whether restoring the partially damaged structures or building the lost ones from scratch, each structure requires careful planning and implementation, taking due cognizance of the risk factors. Geospatial technology has an important role to play in this process and manage the vulnerable structures.

### **Focus Sectors:**

Roads and highways | Tunnels & Special Bridges | Rail & Metros | Buildings (Institutional/commercial structures) | Industrial structures (Refineries, Power Plants, Manufacturing Plants) | Ports & airports

### **Target Audience**

Policy Makers | Government & Public Sector Undertakings | Infrastructure Developers (Public/ Private) | Construction Companies/ EPC Contractors | Engineering Companies | Consultants (Environmental/ Engineering/ Project Management) | Financial Institutions and Banks | Project Executing Agencies at National and State Level | IT Solutions Providers | Academic & Research Bodies