HxGN LIVE LAS VEGAS, NV 11-14 JUNE 2019

GEOSYSTEMS TRACK

Industry Descriptions

The HxGN LIVE Geosystems Track serves several industries. Discover what each is and how your story fits to become a presenter.

Surveying & Reality Capture

From conducting simple topographic surveys to preserving world-renowned cultural heritage sites, surveying and reality capture are a vital part of our everyday lives. Capturing large amounts of data in a relatively short time, these technologies are becoming a must for collecting data. Laser scanning, total station, GIS, GNSS, UAVs, mobile mapping platforms, and other geospatial technology innovations are key for generating business as it allows professionals to faster and more efficiently complete stakeout surveys, document as-built conditions, better understand any environment, and move to digitalised workflows. Reality capture solutions enable teams from varied disciplines to access smart digital realities to manage existing systems during the design, construction and maintenance cycles in user friendly, interactive and accessible ways.

Topics of interest in this industry include:

- *Multi-sensor Reality Capture*
- *Automated deformation monitoring*
- *Smart asset collection*

Building Construction

Innovative technology can dramatically improve building surveys, site visibility, progress reporting and construction inspection processes. Comprehensive visual documentation through every phase of the build facilitates the transfer of knowledge from the construction team to the property management team. Commercial construction projects need to fit seamlessly into existing infrastructure, be built to exacting standards, and remain flexible enough to support tenant improvements. Leveraging a comprehensive visual record to construct and maintain these dynamic buildings makes that process far easier. High-resolution photography, video, webcam, 3D immersive, and UAV services facilitate and simplify the process and reduce the risk, prevent rework and increase safety.

Topics of interest in this industry include:

- *Merging sensors for BIM*
- *Reality Capture in building construction projects.*
- *Actionable data and emerging technologies for construction.*

Heavy Construction

Time pressure, unexpected costs, and changes in design and delays are almost inevitable in nearly all heavy construction projects. These barriers can be torn down by connecting and sharing data across all elements of the construction chain in real time, increasing productivity and efficiency. Companies are aware that success on site also depends on the preparation, transfer and processing of 3D data in real time. Companies must learn to integrate intelligent solutions to manage and analyse machine control workflows for construction projects. Digitalisation is a trend that will drive the construction industry and lead it to make tremendous gains in both productivity and quality. Players integrating digitalisation have a better chance to create new businesses, stay competitive and improve productivity

Topics of interest in this industry include:

- *Bringing 3D planning to construction*
- *Digitising road works*
- *Productivity gains with 3D machine control*

Public Safety

Public safety officials face a multitude of challenges in their daily work. From ensuring the exact capture of a crime or accident scene so no critical piece of evidence is left out to quickly clearing an incident to restore normal operations, these professionals need precision, speed and safety. Regardless of the activity, be it disaster recovery, security planning, scene investigation, border patrol, route mapping or more, these professionals need the highest accuracy to provide the most qualified court-ready documentation. Partnering with police departments and investigative units, this critical work with can be achieved with geospatial solutions.

Topics of interest in this industry include:

- *Scan to scene diagram*
- *Incorporating new technology into the existing workflow of a traditional crime scene unit*
- *Fast and accurate capture of a crime scene to increase safety*

Utilities and Communication

Everywhere in the industrialised world, the utilities and communications sector finds itself pulled to economise and pushed to innovate. Because of the changes in customer demand, being a leading innovator is a much more compelling strategy than it used to be in the sector. Digital technologies are evolving, and customers are quick to adopt them. Utilities and communications companies will need to develop a sophisticated real-time business model, incorporating data analytics to tailor energy-related services, adapting automatically to changing circumstances. They require a capability in making good use of innovations, such as sensors, GIS, GNSS, airborne and mapping technology.

Topics of interest in this industry include:

- *Going below to protect above*
- *Understanding the many uses and benefits of ground penetrating radar*
- *The future of detection*