

Looking Ahead to Intergeo 2022: How 3D Models Make the World Smarter



Intergeo 2022 will have a strong focus on digital twins and will zoom in on 3D city models, BIM in surveying and digital urban planning. Additionally, the world's most prominent gathering for the geospatial community will once again integrate Interaerial Solutions, Europe's leading trade fair for commercial drones. Intergeo 2022 will take place from 18-20 October in Essen, Germany.

From urban quarters to entire construction projects and from transport to climate protection measures: digital twins visualize planning, maintenance and future scenarios interactively and realistically in a 3D model. At the same time, the three-dimensional image is linked to real parameters such as environment, time and condition. Many of the companies registered to be present at Intergeo 2022 are already implementing reality

capture – in real time with lasers, scanners, point clouds and sensors, whether by air, on the ground or by water. They are supported by technologies and devices that are intuitive, mobile, rugged and convenient. Similar to a backpack, you can simply carry them around, take them in your hand, attach them to a car, a UAV or tripod and off you go. Everything that is captured is based on geodata and geoinformation and is contextualized: Where is this and what is around it? This provides a 3D model as an integration basis that can be supplemented with further information from different systems, for example real-time data, sensor data, work orders or asset management data. The world thus becomes smarter.

Digital Twins and Their Applications to Solve Societal Challenges

Digital twins play an important role in the further development of urban data platforms in the context of smart cities. By connecting the digital twin with other data from various systems, enormous value is added through the information derived from it. Christiane Salbach from the Intergeo organizer DVW e.V. explains this with an example: "If we have separate data on rainfall and terrain information, we can only make predictions on possible flooding risks by connecting the data. At Intergeo, we have already been able to see this development for several years. That is why this year, we are focusing even more on the digital twins and their applications, but above all on their potential for social issues such as mobility of tomorrow, urban planning or climate change. We will show the benefits of 3D city models, BIM in surveying and digital twins for use in city planning. The technologies here are very advanced. Resolution, real-time data processing and the resulting fields of application are diverse and impressive. I can only recommend everyone to visit us in October and see for themselves," emphasizes Salbach, who is looking forward to meeting the global geospatial community this autumn.

Digitalization of the Construction Industry

Digital twins can give all participants intuitive and contextual access to a three-dimensional world in the context of construction and planning processes. Construction projects can be simulated, adapted and implemented with building information modelling (BIM). Construction, planning and maintenance become more efficient and cost-saving. The digitalization of the construction process is progressing ever faster. "Digital technologies are now being used on a larger scale and not only in design and construction, but also in operation and maintenance – in other words, in what we call the entire life cycle of a facility," says Ilka May, CEO of LocLab Consulting GmbH, a company specialized in the creation of digital twins.

The focus will be on the use of digital twins in BIM, smart planning and construction and their use in the context of smart cities. Modelling and simulation are essential, especially for predictions and scenarios in the event of a disaster. Rapid access to the latest geodata for a wide range of services also plays a major role. And in the field of mobility (e.g. autonomous driving), digital twins serve both as a basis and as a permanent source of information.

In addition, Intergeo will present current developments in the German surveying sector around its motto: 'Inspiration for a smarter world' – from spatial reference and positioning to 4D geodata and geospatial IoT to mobile mapping applications. Due to climate change, Earth observation data collected via satellites is also becoming increasingly important.

Drones and Surveying

Interaerial Solutions, Europe's leading trade fair for commercial drones, has been integrated into Intergeo since 2014. The focus here is on industrial drones, drones and their use in surveying, construction or transport. Current market developments, trends and the legal

framework will be discussed. Participants can experience live demonstrations and UAVs in action in the Flight Zone, the specially created outdoor area at Intergeo 2022 in Essen.

Pre-pandemic Dimensions

The preparations for the trade fair are already in full swing. Daniel Katzer, project manager Intergeo at HINTE GmbH, the organizer of the trade fair, is confident: "The preparations for Intergeo are very promising. It is very clear from our contacts with exhibitors and visitors that there is a great demand for exchanges at Intergeo. The booking behaviour of both international and German companies is already correspondingly strong. We expect Intergeo 2022 to return to pre-pandemic dimensions. The emerging investments in infrastructure and digitalization are signs of the attractive market potential for Intergeo's innovative partners."

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