

Joint Venture for Cloud Services for 'Constructioneering'™



Topcon Positioning Group and Bentley Systems announced their joint intentions to connect cloud services for 'constructioneering'. During the keynote speeches, the companies' CEOs presented new construction workflows designed to increase efficiency and productivity with enhanced integration between their respective cloud services. Each company will bring to market cloud-based solution offerings, which include services of both and provide construction workflows not previously possible.

Initially, Bentley Systems will offer its ProjectWise CONNECT Edition users seamless connectivity with MAGNET Enterprise, and Topcon will incorporate ContextCapture image processing for its mass data collection via unmanned aerial systems (UAS).

Compared to traditional workflows between design and construction in which data from survey and digital engineering models can be lost and inefficiently recreated, constructioneering empowers engineers to extend their role within both surveying and construction.

Construction Site Conditions to Engineers

Cloud services first bring the construction site conditions to the engineers so their work starts with an accurate model of the current 3D context—as captured by Topcon UAS photogrammetry and laser scanners—and then processed into engineering-ready 3D reality meshes by Bentley's ContextCapture software. Cloud services subsequently convey the engineers' work directly to construction processes in the field. This automation process—achieved through the connection between Topcon MAGNET cloud service and Bentley's ProjectWise CONNECT Edition cloud services—improves project delivery, with design performed in context, and the resulting digital engineering models feeding the 3D machine control that guides the construction machinery.

Topcon and Bentley expect to expand the constructioneering workflow to further applications for infrastructure services.