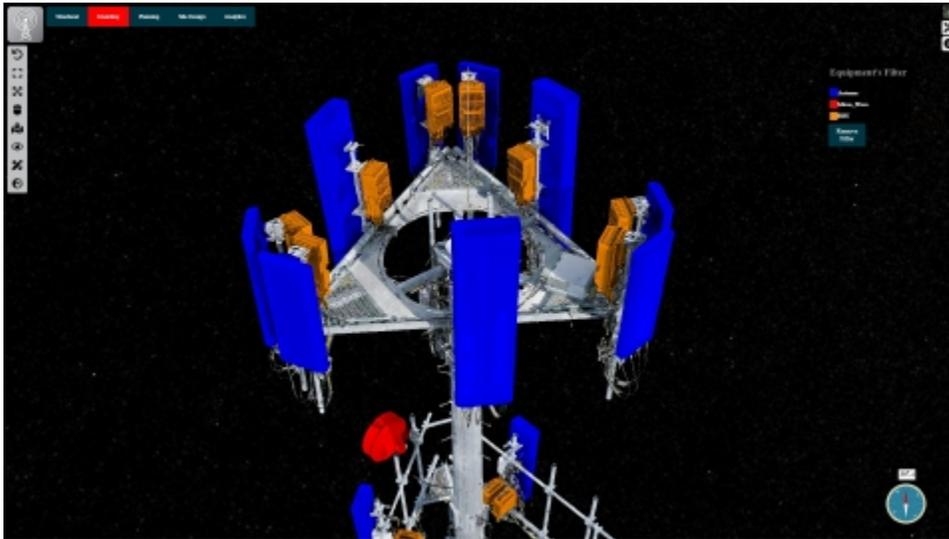# Bentley Acceleration Initiatives Launches OpenTower iQ, a Digital Co-Venture with Visual Intelligence and Aeroprotechnik for 5G Towers

March 23, 2021

Millimeter-accurate Digital Twin Solution Combines Patented Dual-sensor Drone Technologies and Artificial Intelligence to Help Tower Companies Accelerate Rollouts and Enhance Decision-making

EXTON, Pa.--(BUSINESS WIRE)--Mar. 23, 2021-- Bentley Acceleration Initiatives today announced the availability of *OpenTower® iQ*, a digital twin solution "powered by iTwin" for telecom towers that provides 3D visualization, real-time decision support, and predictive design from the ground up. *OpenTower iQ* is the result of a digital co-venture between Bentley and Visual Intelligence, a Houston, Texas-based sensor technology company, and Aeroprotechnik, an aerial inspection engineering company based in Viseu, Portugal.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20210323005733/en/

Conduct automated inventory including automated AI for equipment identification and classification. (Photo: Business Wire)

Bentley Acceleration Initiatives is Bentley Systems' (Nasdaq: BSY) strategic investment fund and incubator initiative. Its objective is to bring together ecosystem partners in a digital co-ventures to accelerate the go-to-market of creative cloud solutions based on the Bentley iTwin platform. *OpenTower iQ*, 'powered by iTwin,' is a textbook example of co-venturing that combines innovative digital technologies from entrepreneurial companies to address a market need in double-quick time.

As the demand for data continues to grow, tower companies and engineering firms are looking for all-inclusive, engineering-grade solutions to co-locate, modify, and maintain telecom infrastructure for the 5G rollout. *OpenTower iQ* makes it easy to modify existing towers and maintain accurate models, automating the repetitive work of producing as-built models and using artificial intelligence to detect critical components.

Tower companies can use *OpenTower iQ* to monitor the health of their towers and gain access to shared, secured data through an easy-to-understand portal. Data analytics provide cost benefit analysis to boost operational efficiency and revenue assurance. Improved accuracy of tower inspections and smart inventory management saves time, cost, and improves safety. *OpenTower iQ* is designed to handle the large asset portfolios of operators, easily processing and analyzing tens of thousands of towers.

Combines artificial intelligence and patented drone technologies

To accelerate the launch of *OpenTower iQ*, Bentley Acceleration Initiatives acquired digital twin technology from Aeroprotechnik, a leading aerial inspection engineering company that specializes in automated asset data capture and digitalization solutions. The technology included artificial intelligence and reality modeling capabilities that provide detailed information on current site conditions, which helps tower companies speed up rollouts, enhance decision-making, and shorten sales cycles.

Bentley Acceleration Initiatives also partnered with Visual Intelligence whose patented dual-sensor drone technology digitalizes physical infrastructure with millimeter accuracy to reliably deliver 3D, engineering-grade asset intelligence. Visual Intelligence is able to map more measurable surface area than alternative aerial and ground-based methods. Its patented drone sensor technology has the unique ability to capture the components of a tower including bolts, wires, ladders, and other items with an extremely high degree of accuracy that was not previously possible.

Now, with a comprehensive millimeter accurate digital twin, a tower company can virtually inspect their tower, see if it has been constructed correctly, determine if the tower's structural integrity is intact, and run co-location scenarios. Unlike rudimentary reality models produced from other cameras, Visual Intelligence enables a digital twin with such accuracy that it can support advanced analyses such as connection integrity analysis and mount mapping analysis.

"The objective of Bentley Acceleration Initiatives is to incubate new businesses and augment existing ones using Bentley iTwin technologies. We provide a go-to-market accelerator to rapidly bring to users the innovative ideas from Bentley's research and development in partnership with emerging industry leaders and technology specialists such as Visual Intelligence and Aeroprotechnik. Bentley Acceleration Initiatives helped incubate *OpenTower iQ* by funding its development, seeking out technology partnerships to fill whitespaces, and creating a comprehensive go-to-market strategy," said Santanu Das, senior vice president, chief acceleration officer, Bentley Acceleration Initiatives. "Our next step is to invite additional interested ecosystem partners to kick start new digital integrator services to capture huge emerging opportunities for enterprise integration and

implementation for towers. The telecom industry is going through a rapid transformation as multinetwork operators are expanding their portfolios through consolidation and moving from a 4G platform to 5G. Without a doubt, digital twin solutions like *OpenTower iQ*, 'powered by iTwin,' will help tower owners make the most of the industry's burgeoning opportunities."

"*OpenTower iQ* for tower planning and management is a game changer for the telecom market. Within a couple of days, we had a high-quality reality model available with the reports and other aspects of the projects. Now, all the tower data is available in digital form—and it's accurate and current," said Nikhil Jani, vice president, telecom and utilities, Genesys International.

"Until now, drone data has failed to live up to its promise to the tower industry. This is largely because survey-grade drone sensors can't collect the fidelity of data required to extract engineering-grade tower intelligence. Our patented drone sensor technology is the first of its kind to collect millimeter-class tower information. We partnered with Bentley to utilize *OpenTower iQ* to translate this new fidelity of data into as-built digital twins, and then apply AI to automate and unlock new kinds of tower insights. With *OpenTower iQ*, we're enabling new applications of drone data and accelerating the value of digital twins to tower companies worldwide," said Ted Miller, founder and chairman of Visual Intelligence and former chairman and CEO of Crown Castle International (NYSE: CCI).

"Bentley Acceleration Initiatives proved to be an effective platform for ecosystem partners like Aeroprotechnik to scale up artificial intelligence-based solutions, transforming emerging technologies into real value for Bentley's users," said Nuno Marques, founder of Aeroprotechnik.

Images and captions:

- Conduct automated inventory including automated AI for equipment identification and classification.

- Create a visual representation of the tower by combing a reality mesh with the digital engineering models.

- With OpenTower iQ, Tower Cos and Mobile Operators gain continuous access to near real-time information to better monitor, predict, and react to any required tower modifications by leveraging digital twins and reality modeling capabilities.

- Conduct automated infrastructure inspection including automated asset condition evaluation.

- OpenTower iQ brings to life a digital twin to provide intelligence for planning, visualization, and inspection.

About Visual Intelligence

Visual Intelligence, based in Houston, Texas, has emerged as an industry-leading software and sensor technology company that delivers geo-imaging solutions for airborne, terrestrial, and mobile applications. It provides the Visual Intelligence unified drone sensor and software automation platform that digitizes physical infrastructure with millimeter accuracy to reliably deliver 3D, engineering-grade asset intelligence. https://visualintelligenceinc.com/telecom/

About Bentley Systems

Bentley Systems (Nasdaq: BSY) is the *infrastructure engineering software* company. We provide innovative software to advance the world's infrastructure – sustaining both the global economy and environment. Our industry-leading software solutions are used by professionals, and organizations of every size, for the design, construction, and operations of roads and bridges, rail and transit, water and wastewater, public works and utilities, buildings and campuses, and industrial facilities. Our offerings include *MicroStation*-based applications for modeling and simulation, *ProjectWise* for project delivery, *AssetWise* for asset and network performance, and the *iTwin* platform for infrastructure digital twins. Bentley Systems employs more than 4,000 colleagues and generates annualized revenues of more than $800 million in 172 countries. www.bentley.com www.bentleyaccelerationinitiatives.com. www.opentower.com

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