The *Year in Infrastructure* and *Going Digital Awards*
Speed Interview Topic Descriptions
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CITIES AND CAMPUSES

Cities, campuses, and airports around the world face many challenges, including changing demand, different operating conditions, and higher costs. With siloed data, inconsistent or manual workflows, complex technology ecosystems, and an expanding list of stakeholders, they must always remain agile and responsive—working smarter to optimize safety, sustainability, and the resilience of assets and related services that they deliver.

Join our experts to learn how our visionary owners, government authorities, and supply chain members are embracing Bentley technology, including digital twins approach, to gain the increased visibility and insight needed to make the cities, campuses, and airports of tomorrow more sustainable, cost-effective, and accessible.

CONSTRUCTION

It's no secret that the demand for sustainable, quality infrastructure is booming. Governments worldwide have shifted their priorities and brought forward long-term spending plans to boost communities post-pandemic, as well as invest in more resilient and sustainable economies. As the infrastructure demand increases, so do industry challenges. Increases in project size, design complexity, resource scarcity, and delivery expectations have added significant difficulty to projects. To overcome these challenges, construction teams need to leverage technology that digitizes, automates, and simplifies their workflows—on and off the job site.

Join Bentley leadership to hear how civil infrastructure construction teams are deploying digital solutions to better plan and deliver projects by optimizing resources and real-time performance tracking, leveraging the latest technologies that include 4D construction digital twins, cloud collaboration, and mobile data access and capture in the field. Learn how Bentley's visionary users, including the finalists in our *2022 Going Digital Awards in Infrastructure*, are leveraging cutting-edge digital construction management to obtain the real-time project visibility and insights needed to drive quick decisions around productivity, quality, and safety.

INFRASTRUCTURE DESIGN ENGINEERING

It's estimated there are 28 million engineers working globally on projects to advance infrastructure and improve our quality of life. It seems like a lot, yet firms are still faced with workforce shortages and are struggling to keep up with today's pace of change and increasing societal and environmental responsibilities. Added to these pressures are accelerating client demands for digital deliverables, sustainable designs, and increased risk sharing. New business opportunities abound, though, including post-COVID investments, expansion beyond design, and new solution-based opportunities. You'll find engineering firms eager to close the gap between opportunity and their ability to capitalize on it.

Join our Bentley leadership team to learn how Bentley is helping engineering firms move beyond traditional design workflows and business models to a place where organizations at any stage of digital maturity can increase the capacity of their organization and supply chain; improve the quality and richness of their deliverables; and catalyze their growth with new business models.

ELECTRIC GRID

Demand for energy is surging globally, putting strain on the electrical grid. It is especially true for transmission and distribution networks, which were build decades ago and often lack up-to-date documentation and the latest engineering standards. Servicing these substations means traveling sometimes long distances for a time-consuming, dangerous, error-prone, and inefficient operation. But now, it is possible to transform this outdated process. Truck rolls can be replaced with reality models and 3D designs that are created with high resolution images and LiDAR data. Engineers can interact with intelligent 3D models, which help plan upgrades, verify clearances, and produce automated bill of materials to reduce redundant data entry. Sharing 3D models across the organization improves collaboration of information, including inspection reports and service records.

Join our Bentley leadership team to hear how utilities are embracing innovative technology today, including using a digital twin approach to work smarter, not harder. Learn how Bentley's visionary users, including the finalists in our *2022 Going Digital Awards in Infrastructure*, are reducing design time, improving efficiency, and reducing costly errors, improving design and documentation quality in support of their move to a greener, more reliable grid of tomorrow.

SUBSURFACE SCIENCE AND GEO-ENGINEERING

Today, the world's most innovative organizations are helping build a more resilient future by connecting the built world above ground with the hidden world below it—bridging the gaps between subsurface science, ground engineering, and infrastructure design and construction. Whether you need to get a clean supply of drinking water to over a million refugees in Bangladesh, find a way of developing wind and geothermal energy renewable sources faster and more reliably, mitigate the geo-risk on the 167.5 million structurally deficient U.S. bridge crossings or even build a whole city underground in Singapore, it's important to understand the full subsurface picture in 3D.

Join leaders from Seequent, The Bentley Subsurface Company, as they discuss the digital advancements that are helping customers tackle increasingly complex and diverse environmental and energy challenges by deepening their understanding of the subsurface. With connected digital workflows, teams, and data across the project lifecycle, users are uncovering a truer picture of the subsurface to improve understanding, enabling decisions that are ultimately better for people and the planet. You will hear from users on how they are creating resilient transportation infrastructure, delivering mining environmental and energy project success, and improving ES(D)G performance.

PROCESS AND POWER GENERATION

We are already seeing huge changes in the process and power generation market due to political and environmental events around the globe. Supply and demand increases, shortages in natural resources, and the move towards a renewable and greener future are forcing organizations to change their business strategy, all while trying to maximize and optimize current projects. They need to be more reliable and productive, reducing downtime and their carbon footprint. This is exacerbated by data still being inaccessible or being unused in data silos while data continues to increase in volume, velocity, and variety. That's why these organizations are turning to digital solutions, specifically digital twin technology. Digital twins help to drive down costs, improve safety and reliability, enable users to make faster decisions about changes that cut emissions, and find new business opportunities.

Learn how these innovative new approaches deployed by our *2022 Going Digital Awards in Infrastructure* finalists in the Process and Power Generation category. Hear how they demonstrate how digital technology, such as digital twins, are helping achieve their goals faster and ahead of schedule, how collaboration is key when multiple parties and various data applications are integrated together for one source of truth, and how they are turning the goal of a net-zero carbon future into a reality.

RAIL, TRANSIT, BRIDGES, AND TUNNELS

With the world's population predicted to hit 9.7 billion by 2050, and around 68% of people opting to live in urban areas over the same period, rail and transit is undoubtedly a vital component of our future transportation needs. Offering fast, safe, and reliable mobility within cities and countries worldwide, the future of rail must also be more sustainable. To meet government commitments for net-zero carbon emissions, as with other modes of transport, the decarbonization challenge faced by our railways is significant—lower carbon is no longer enough.

Join our Bentley leadership team to hear how owner-operators and their supply chains are embracing innovative technology today, including using a digital twin approach across the asset lifecycle, to work smarter, not harder. Learn how Bentley's visionary users, including the finalists in our *2022 Going Digital Awards in Infrastructure,* are completing projects within shorter deadlines, saving significant time and effort under the pressure of tighter budgets. Hear how they are adapting to the changing demands of a post-pandemic world, in support of their move to a cleaner, greener railway of tomorrow.

ROADS, HIGHWAYS, BRIDGES, AND TUNNELS

Safe, reliable, and sustainable roads, highways, and bridges are critical for the efficient movement of people and goods to their desired destinations and for the quality of life of citizens. Many roads, highways, and bridges around the world are over a half-century old and require repair or replacement.

Join our Bentley leadership team to hear how digital delivery and digital twins help streamline processes, enabling transportation agencies and the engineering consultants that they work with to increase efficiency, improve reliability, and reduce cost throughout the asset lifecycle. Learn how Bentley's visionary users, including the finalists in our *2022 Going Digital Awards in Infrastructur*e in the Roads and Bridges category, are working with Bentley to improve productivity as they plan, design, construct, and operate road and bridge networks around the world.

STRUCTURAL ENGINEERING

Resiliency, sustainability, and openness are the three main objectives that structural engineers want to see in their workflows. Resilience is critical for coping with events like earthquakes and hurricanes. Advances for seismic dissipation devices and true physical behavior simulation enable safer, more resilient structures. Sustainability has driven investment in renewable energy. Users can produce more environmentally friendly designs for their offshore wind turbines and analyze geotechnical-structural interaction. They can also simulate installation and operational performance to reduce risk for owners. Lastly, openness is delivered by empowering users to utilize our software in various workflows not covered by our solutions. Analytical result validation capabilities enable cloud-based interoperability and design review for all stakeholders to easily access critical design results.

Join our executive leadership to hear how Bentley is offering solutions to help users achieve these goals.

SURVEYING AND MONITORING

Infrastructure owners are increasingly challenged to deal with aging assets and the demand to modernize and improve those assets. Being able to capture, manage, analyze, and share a vast amount of real-time data helps to better plan, construct, and monitor infrastructure assets.

Join our Bentley leadership team to hear how surveying and monitoring technology adds 4D digital context, supports the creation and continuous update of infrastructure digital twins, and improves collaboration by sharing reality data across teams. Learn how Bentley's visionary users, including the finalists in our *2022 Going Digital Awards in Infrastructure*, are utilizing innovative technologies to capture the current and changing condition of assets using reality modeling, mobile mapping, instrumentation, and sensor data management to enable better decision-making throughout the asset lifecycle.

WATER AND WASTEWATER

Join the water infrastructure leaders at Bentley to discuss the latest trends, challenges and opportunities in the water industry and steer the speed interview to the topics most pressing for your audience. Topics range from global issues like droughts and flooding, climate change, to regional issues like infrastructure funding challenges, reducing non-revenue water losses, reducing energy use, and improving carbon footprint, to matching demand and supply in a water scarce future. Bentley's OpenFlows is the software of choice for over a hundred thousand engineers around the world focused on designing, building, operating, and maintaining smart and resilient water infrastructure. Explore how the latest in innovative OpenFlows solutions are helping leaders advance digitally to modernize their water and wastewater systems and empower people to do more with less, in a smarter way.