

CIVITAS

Sustainable and smart mobility for all

2030



New Mobility Services community

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Image Courtesy of DPR Construction

Reshaping urban mobility infrastructure with Digital Twins

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An aerial perspective of a city intersection. A prominent building with a glass facade and a green roof is the central focus. To its left is a brick building with many windows. To its right is a large, curved building with a grey facade. The street has cars, a red brick pedestrian path, and trees. The text "Our focus:" is overlaid in the center.

Our focus:

Digitalising Infrastructure: We provide innovative technologies, to better design, build and operate the world's infrastructure.

Infrastructure Digital Twins Unlock Tremendous Value



When it comes to sustainable and resilient infrastructure, digital twins are the sharpest tools in the shed

digital twins are the sharpest tools in the shed

10 SEPT 2022 | BY LORI HUFFORD

A quick glance at any newspaper around the world will reveal stories of drought, excessive temperatures, water shortages, extreme flooding, storms, fires, and all sorts of climate-related catastrophes.

As communities, businesses, and governments cope with these events, we need to acknowledge that the infrastructure that we build plays a big part in addressing our relationship with our planet. Infrastructure provides economic and social advancements in communities, but it has historically driven carbon emissions and other unwanted environmental impacts. By advancing how infrastructure is designed, built and operated, we can aspire to meet both our economic and sustainability goals as we future-proof our physical environment from climate change.



Lori Hufford is a senior project engineering collaboration Systems

Today, innovative technology, as a precursor to 5G, lets software developers create virtual, interactive kind of purpose in any kind of setting. We can use technology to make our infrastructure more resilient in the real world.

Case in point, the info

An infrastructure digi

something in the phy

with real-time data, making the digital twin a

Digital twins are primed to revolutionize the infrastructure industry

Key Takeaway: Digital twins promote efficient collaboration and seamless communication among project stakeholders, regardless of their location.

Digital Twins Help Infrastructure Become Smarter

Key Takeaway: Digital twins enable project managers to optimize resource allocation, minimize waste, and enhance project efficiency.

Redefining energy infrastructure: The game-changing impact of digital twins

Key Takeaway: Digital twins facilitate proactive maintenance, improve asset lifespan, and optimize facility management processes, leading to cost savings.

Utilities
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Improved Visualization and Design

Key Takeaway: Digital twins enable stakeholders to visualize and optimize designs before construction, minimizing errors and avoiding unnecessary expenses.

ney. The ability to visualize the final product beforehand allows for better of costly errors.

holders to visualize and optimize designs before construction, minimizing as.

unication

ject, and digital twins simplify this process significantly. By utilizing cloud-based platforms, all project stakeholders can access the virtual model, making it easier to exchange ideas, provide feedback, and

that everyone is sharing of tions. act

ment of various resources, including materials, manpower, and equipment. Digital ent by providing real-time data on resource utilization and performance. By the asset, project managers can identify potential bottlenecks, allocate resources and.

rice

Once the construction phase is completed, digital twins continue to provide value during the operational phase of the building. By integrating sensor data from the physical asset into the virtual model, facility managers can monitor its performance in real-time. This allows for early detection of issues or anomalies, enabling prompt maintenance and reducing downtime. Additionally, digital twins facilitate asset management by providing a centralized platform for recording maintenance schedules, tracking equipment history, and ensuring compliance with regulations. This proactive approach improves the lifespan of the asset, reduces operational costs, and enhances overall facility management.

Key Takeaway: Digital twins facilitate proactive maintenance, improve asset lifespan, and optimize facility management processes, leading to cost savings.

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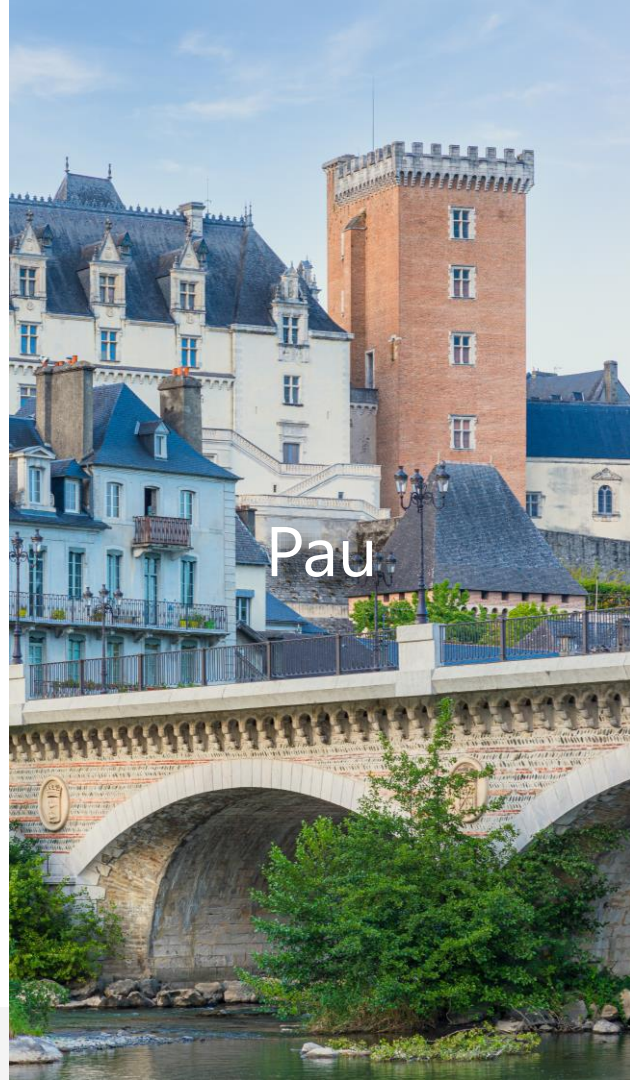


“

With a **data-centric** approach, the data contained in files is unlocked and made available to the right person at the right time to make more informed decisions, leading to better outcomes.”

Nicholas Cumins | COO, Bentley Systems

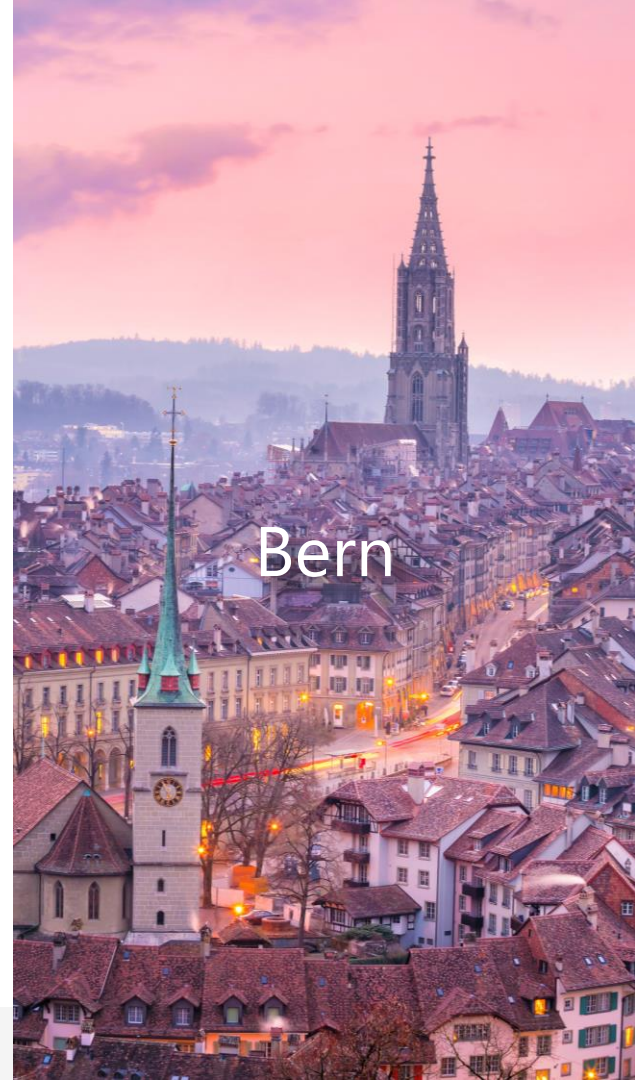




Pau



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are fast-tracking ride pooling.

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