Bentley
Advancing Infrastructure

ProjectWise®, Powered by iTwin®

Digital Design Delivery and Collaboration for the Water Utilities Industry

Bentley has extended the digital capabilities of ProjectWise, now powered by iTwin, from engineering work-in-progress to full digital delivery for more efficient, collaborative, and sustainable water infrastructure design, construction, and operations.

Climate change and population growth are placing ever-growing demands on the supply and security of our water. Water utilities are having to increase the resilience of their network and operations in response, all while controlling costs and meet sustainability targets.

IMPROVE COLLABORATION
To operate effectively and deliver more sustainable projects, utility companies, government agencies, and engineering firms involved in water and wastewater supply and management require secure interdisciplinary collaboration applications to manage their complex projects.

INCREASE PRODUCTIVITY
Removing silos of data and ensuring visibility and access to the right data through a single, connected platform enables teams to leverage their data across multiple projects and assets. This process helps improve the quality of designs and project deliverables, improve productivity across teams, and increase operational efficiencies.

INTERDISCIPLINARY COLLABORATION

To help reduce the frequent flooding on the Yangtze River and then across Shanghai, the city implemented the USD 300 million South Extension Renovation Project of the Zhangjing River. The project consisted of a pump station, bridges, revetments, roads, and pipelines. By choosing ProjectWise to connect their many engineering teams within a standardized environment, the Shanghai Water Engineering Design and Research Institute simultaneously carried out the multidiscipline design and improved overall collaborative efficiency by 25%, saving three months and USD 60,000. *View Project*

ADVANCED INTEROPERABILITY

Mott MacDonald was asked by the Environment Agency in the United Kingdom to create an interoperable, data-connected smart object library to facilitate digital reuse of standardized 3D assets, accessible to their suppliers and their systems. The library has achieved a return of three times the investment within the first three months by improving productivity and enabling the EA to optioneer designs for efficiency, sustainability, and, ultimately, carbon neutrality. *View Project*

LEVERAGE YOUR DATA

Jacobs Engineering was tasked with upgrading the F. Wayne Hill Water Resources treatment facility, Georgia, United States to increase the existing capacity. They shared a cloud-based reality mesh of the existing conditions, together with the as-built models within ProjectWise, to perform design reviews. Viewing the models in the iTwin Platform also allowed the team to quickly resolve clashes of small pipes and proceed with confidence. As a result, they quickly resolved over 20 design issues that would have taken 300 hours and numerous site visits, saving 10% in design costs. *View Project*

OUR WATER UTILITIES USERS HAVE REALIZED THE FOLLOWING BENEFITS:

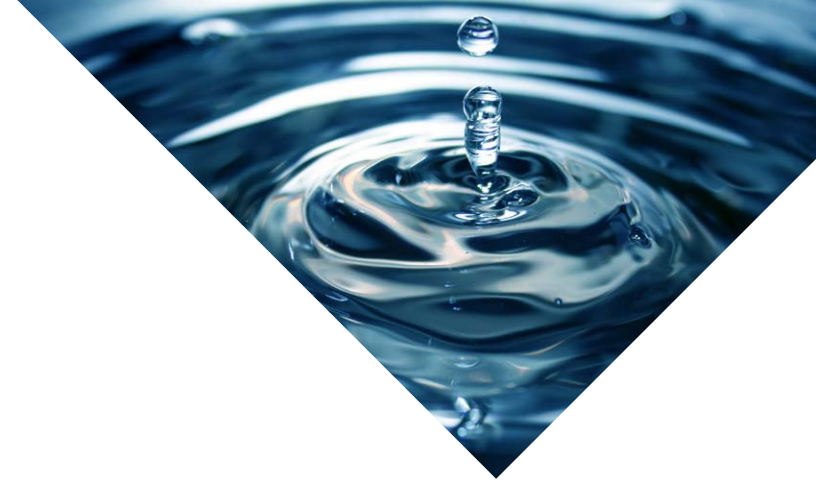**25%**

IMPROVEMENT IN OVERALL COLLABORATIVE EFFICIENCY[1]

3X

ROI IN FIRST THREE MONTHS[2]

10%

SAVINGS IN DESIGN COSTS[3]

[1] New Pump Station, Shanghai Water Engineering Design and Research Institute Co., Ltd.
[2] Smart Object Library for the Environment Agency, Mott MacDonald
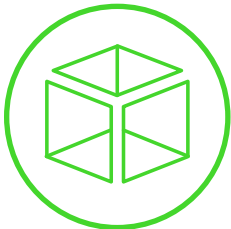[3] F. Wayne Hill Water Resources Center Membrane Improvements, Jacobs Engineering

HOW CAN PROJECTWISE, POWERED BY ITWIN, HELP YOU...

IMPROVE COLLABORATION?

- Multidiscipline teams create and synchronize data during the design lifecycle to minimize project risk early on and resolve issues with collaborative interdisciplinary design reviews using our digital twin technology.

- Securely share large datasets, 3D models, and 2D deliverables with the entire project ecosystem, regardless of authoring applications, facilitating early supply chain involvement to ensure best practice and value.

- Enforce information standards, such as ISO 19650 BIM, right from the start, with automated workflows and processes, reducing the need for manual interventions and any inconsistencies.

ACCELERATE DESIGN REVIEWS?

- Use ProjectWise Components Center, a cloud-based library of digital objects, for regularly encountered assets, such as a pump, a tank, or a valve, before inserting them into a design model. It can then be shared in another application, such as OpenFlows™ WaterGEMS®, reducing the design time from days to hours.

- Confidently leverage your data across your portfolio to share knowledge and drive best practices, as well as glean timely insights that enable you to make decisions better and faster, which drives efficiencies and savings

LEVERAGE INSIGHTS FROM YOUR DATA?

- Easily find and analyze data with the right capabilities to interrogate it and collaborate on it. Information-rich, geospatial models contain the latest information so you can quickly identify issues and resolve them, creating high-quality deliverables.

- Deliver your designs confidently to your clients knowing that you have validated all design rules, standards, and quality with rich automated interrogation tools.

- Bring real world context to your projects by combining engineering and reality data in your models, such as sharing simulation of pump water flow. Designs can be quickly optimized and validated. Reviewers and stakeholders can perform virtual interactive flythroughs within ProjectWise, powered by iTwin, querying model information and analyzing embedded property data by simply using a web browser.

- Select quality-assured components from the ProjectWise Components Center based on whole life costs, as well as their data being incorporated into a dashboard to track carbon reduction goals, dramatically increasing the efficiency, safety, and quality of current and future projects.

TO LEARN MORE ABOUT HOW OUR USERS HAVE REALIZED THE BENEFITS OF PROJECTWISE, SCAN THE QR CODE OR VISIT https://qrco.de/beBfbY

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FIND OUT MORE AT BENTLEY.COM

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