

IBM Unveils New Capabilities for Preserving Aging Infrastructure Using AI, 3D Modeling and Data Capture

IBM Maximo for Civil Infrastructure is designed to assist organizations like Sund and Baelt in better managing, monitoring and maintaining their infrastructure assets.

ARMONK, N.Y., Oct. 23, 2020 /[PRNewswire](#)/ -- IBM (NYSE: [IBM](#)) today announced new capabilities in IBM Maximo for Civil Infrastructure to help prolong the lifespan of aging bridges, tunnels, highways, and railways. New enhancements include the ability to deploy on Red Hat OpenShift for hybrid cloud environments, as well as new AI and 3D model annotation tools that can provide deep industry and task-specific insights to support engineers.

In the United States roughly \$2 trillion in infrastructure repairs were unfunded in 2015, according to the [2017 American Society of Civil Engineers Infrastructure Report Card](#). And around the world, the prevalence of aging infrastructure threatens the continuity of day-to-day life for citizens worldwide. Owners, operators and engineers need to be able to improve their ability to decide where, when and how to address infrastructure issues with critical assets that must endure for generations.

IBM Maximo for Civil Infrastructure can consolidate numerous sources of data including maintenance and design details; near real-time IoT data generated from sensors; wearables; stationary cameras, drones and weather data from The Weather Company. This data can help operators assess the impact of damage such as cracks, rust and corrosion, as well as displacement vibrations and stress. By better managing and prioritizing infrastructure repair, organizations can work to reduce the need for time-intensive manual inspections and unnecessary costs.

"Tools like AI, predictive maintenance, drones and hybrid cloud will play an important role in meeting the challenge of rising infrastructure costs, and helping these vital structures endure for future generations," said Bjarne Jørgensen, Executive Director, Asset Management at Sund and Baelt. "These solutions can help determine the exact need for maintenance in near real-time to assist organizations in extending the lifetime of structures."

IBM Maximo for Civil Infrastructure allows civil engineers to make structures come alive using 3D modeling and AI visual recognition tools developed by IBM Research. Additional capabilities like [Maximo Visual Inspection](#) can make it easier to identify defects, their root-cause, and place them in the context of the greater structure. These tools that allow for more rapid assessments can be increasingly important for future engineers as skills availability may be a challenge.

"Infrastructure maintenance is a problem that's being compounded from all sides: Bridges are getting older, payloads are getting larger, and the necessary preventive actions and maintenance are often postponed due to lack of funding," Jørgensen added. "With Maximo for Civil Infrastructure, IBM is introducing a solution that addresses the problem from all sides, using IoT and AI technology to administer more proactive repairs, maintain invaluable institutional and engineering knowledge, and better prioritize resources."

"Maximo for Civil Infrastructure was developed with input from some of the largest operators of infrastructure in

the world so that IBM's powerful technology across AI and IoT is carefully adapted to the unique needs of civil engineers," said Joe Berti, VP of AI Applications at IBM. "With these tools we believe civil engineers will be able to innovate and improve the methods for monitoring, maintaining and preserving important structures around the world."

IBM Maximo for Civil Infrastructure provides the following new capabilities, in addition to the core offerings available as part of the IBM Maximo Application Suite.

Maximo Application Suite licensing and Open Shift deployment: With a single license, customers can now deploy asset management, sensor integration, advanced data analytics including AI functionality and visual analytic capability. Capabilities including Monitor and Health can be deployed now on RedHat Open Shift, allowing customers to more quickly deploy, manage and scale their hybrid cloud deployments with ease.

Defect Management: A new user interface allows inspectors to record defect information, add multi-variable defect rankings, attach pictures and store defect history. Structural defects do not exist in isolation, they can affect everything they touch and the integrity of the overall structure. By comparing detected defects against work history, sensor data, weather and traffic data and more, AI can help engineers better identify root causes and patterns that indicate a defect may reoccur.

Improved 3D Visualization: Most serious defects are located within the structure and are not necessarily visible from the outside. New tools within the Maximo BIM viewer plugin allow users to add annotations to their standard 3D models, giving users access to a 3D representation of an asset, for example a pillar or beam, where all the defects have been annotated.

Asset Loader Improvements: While every piece of civil infrastructure is unique, many share common hierarchies of assets, and some organizations have hundreds or even thousands of similar structures that need to be defined in the asset management system. A new tool streamlines the import and export of an asset hierarchy, including a new UI to manage the process and select files.

IBM Maximo for Civil Infrastructure integrates 30 years of recognized industry-leading infrastructure asset management with best-in-class models from the world's premier infrastructure firms. It helps operators and engineers address one of the world's largest and most complex challenges — extending the lifespan of critical structures under frequently changing conditions. You can watch a video about Maximo for Civil Infrastructure [here](#) and read more about the solution [here](#).





About IBM Maximo

Powered by IBM's investments in artificial intelligence, fueled by IoT data, and built for hybrid cloud, The IBM Maximo Application Suite is extending its leadership as one of the most trusted enterprise asset management systems on the planet. And with new investments in remote monitoring, computer vision and AI-powered anomaly detection, it is poised to remain a leading solution for tomorrow's asset management challenges, empowering Operational Technology (OT) and Information Technology (IT) leaders with a comprehensive view into asset performance. For more information please visit: www.ibm.com/products/maximo.

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