

designboom

World's First 3D Printed Steel Bridge Installed over One of Amsterdam's Oldest Canals

By Sofia Lekka Angelopoulou
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After two years of suspense, the world's first 3D printed steel bridge, developed by MX3D, has been installed over one of amsterdam's oldest canals, in the red light district. The futuristic, multi-award-winning bridge, designed by joris laarman lab with arup as lead engineer, was transported by boat through the city's canals and now spans across oudezijds achterburgwal. The dutch company kicked off this project in 2015, when it proposed printing a metal bridge with its innovative large-scale, robotic 3D printing technology, offering a playful, inspiring example of how digital tools can create a new form language for architectural objects.



all images courtesy of MX3D

MX3D's smart bridge was unveiled on July 15, 2021, by máxima, her majesty the queen of the netherlands, in the city center of amsterdam. the first 3D printed steel bridge is now open to the public in the red light district, the oldest neighbourhood of amsterdam. the installation of the bridge is the culmination of several years of work, developed together with joris laarman lab and arup.



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equipped with a state-of-the-art sensor network, the futuristic steel bridge also functions as a 'living laboratory', powering a cutting edge research project. together with academic and industry researchers, the city of amsterdam will use the bridge's data streams to explore the role of IOT systems in the built environment.



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project info:

company: MX3D

designer: joris laarman lab

lead structural engineer: arup

partners: autodesk, heijmans, arcelormittal

public partners: technische universiteit delft, imperial college london, university of twente, amsterdam institute for advanced metropolitan solutions (AMS institute) and the city of amsterdam

support: the alan turing institute data centric engineering programme, lloyd's register foundation, air liquide, ABB robotics and lenovo

contributors: FORCE technology, HBM, OERLIKON by lincoln electric, FARO technologies, STV weldingsupplies, mousBV, and plymovent group

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