

User name: Webuild s.p.a.

Project name: 4D modeling and construction management for steel bridge construction in the new ENI HQ

Location: San Donato Milanese, Lombardia to Milano, Italy

Background:

- The new ENI headquarters is set to become one of the world's most sustainable developments, with three interconnected office buildings, a skybridge, and 11,684 square meters of green space.
- Webuild was contracted to deliver the project over a short timeline amid a limited footprint.

Challenges:

- Offer an innovative design under a short timeline, limited space, and within environmental considerations of a densely populated urban environment.
- Iconic skybridge spanned 85 meters long, 3 meters to 15 meters wide, and 6 meters to 20 meters high.
- Previous design methods, including 2D and 3D static drawings, were not enough. Webuild needed a collaborative digital approach and dynamic construction visualization.

Solution:

- SYNCHRO established a virtual construction environment and a digital twin of the project.
- Solution provided rapid evaluation of multiple options, performed clash detection, and brought an innovative design to life.
- Optimized construction planning and safety while minimizing social and environmental impact.

Outcomes:

- Better connected people and data helped this project achieve greater awareness and collaboration to overcome limited resources, climate conditions, and more.
- Reduced rework by 90% and the construction schedule from 85 days to just four days.
- Optimized site layout and provided construction insights, decreasing the carbon footprint of the project by 30%, achieving zero on-site accidents.

Quote: "The SYNCHRO suite was adopted for the digital rehearsal of multiple construction options during the pre-construction phase, providing significant support to choose the best solution in terms of planning, safety, optimization of the logistic and impact for the community." – *Luca Sivieri, BIM Manager, Webuild.*

Image caption/courtesy 1: Webuild selected SYNCHRO to plan the construction process for the unusual design of the ENI headquarters. *Image courtesy of Webuild.*

Image caption/courtesy 2: The team rapidly evaluated multiple options and performed clash detection. *Image courtesy of Webuild.*

Image caption/courtesy 3: The connected digital platform optimized site layout and provided construction insights. *Image courtesy of Webuild.*

For more information, please contact Bentley PR at PR@news.bentley.com.