

# Challenges of BIM Scalability for Major Projects Surmounted

Bentley Systems has announced the availability of AECOsim Building Designer CONNECT Edition, Bentley's building information modeling (BIM) application designed for building projects of significant size and/or engineering complexity, and which are typically characterized by the challenges of combining vertical construction and horizontal infrastructure (like roads, railways, utilities, etc.). On such projects, design and project delivery firms often have broad responsibilities for multiple project delivery disciplines and across subcontractors and joint venture organizations.

Users of [AECOsim Building Designer](#) V8i have demonstrated its versatility in a wide range of project types. Among Bentley's 2017 Be Inspired Awards nominations, 63 projects credited AECOsim, including 15 of the 51 finalists, in projects as diverse as bridges, airports, Olympic sports facilities, mining, manufacturing, offshore, municipal, power generation, utility transmission and distribution, and water and wastewater treatment facilities. Nominations also cited GenerativeComponents, a feature within AECOsim Building Designer that provides computational design capabilities to explore iterative design ideas and embed design intent with design constraints and relationships to improve design quality and performance.

## Improved Data Exchange

The AECOsim Building Designer CONNECT Edition shares a comprehensive modelling environment with all of Bentley's CONNECT Edition applications. Without a comprehensive modelling environment, engineers and architects have had to struggle with complex data exchange, resulting in information loss and repeated translations, or even resort to force-fitting a BIM application beyond its intended use to model geometry, which is lacking in BIM intelligence.

AECOsim Building Designer CONNECT Edition integrates the work of architects, structural engineers, and MEP engineers in a single application and extends its scalability by leveraging CONNECT Edition's comprehensive modelling environment. This release provides seamless, translation-free, intra-operability with Bentley's full multi-discipline portfolio of design, analytical and construction modelling applications.

## Reality Mesh

All CONNECT Edition applications, including MicroStation CONNECT Edition, benefit from the deliverables production automation inherent in the CONNECT Edition's documentation centre. This improves the consistency, quality and efficiency of drawing set organization. AECOsim Building Designer also benefits from reality modelling, by which existing conditions are captured through photos and/or scans and converted into engineering-ready reality meshes with Bentley's ContextCapture, bringing the actual geo-coordinated context directly into the AECOsim design environment.