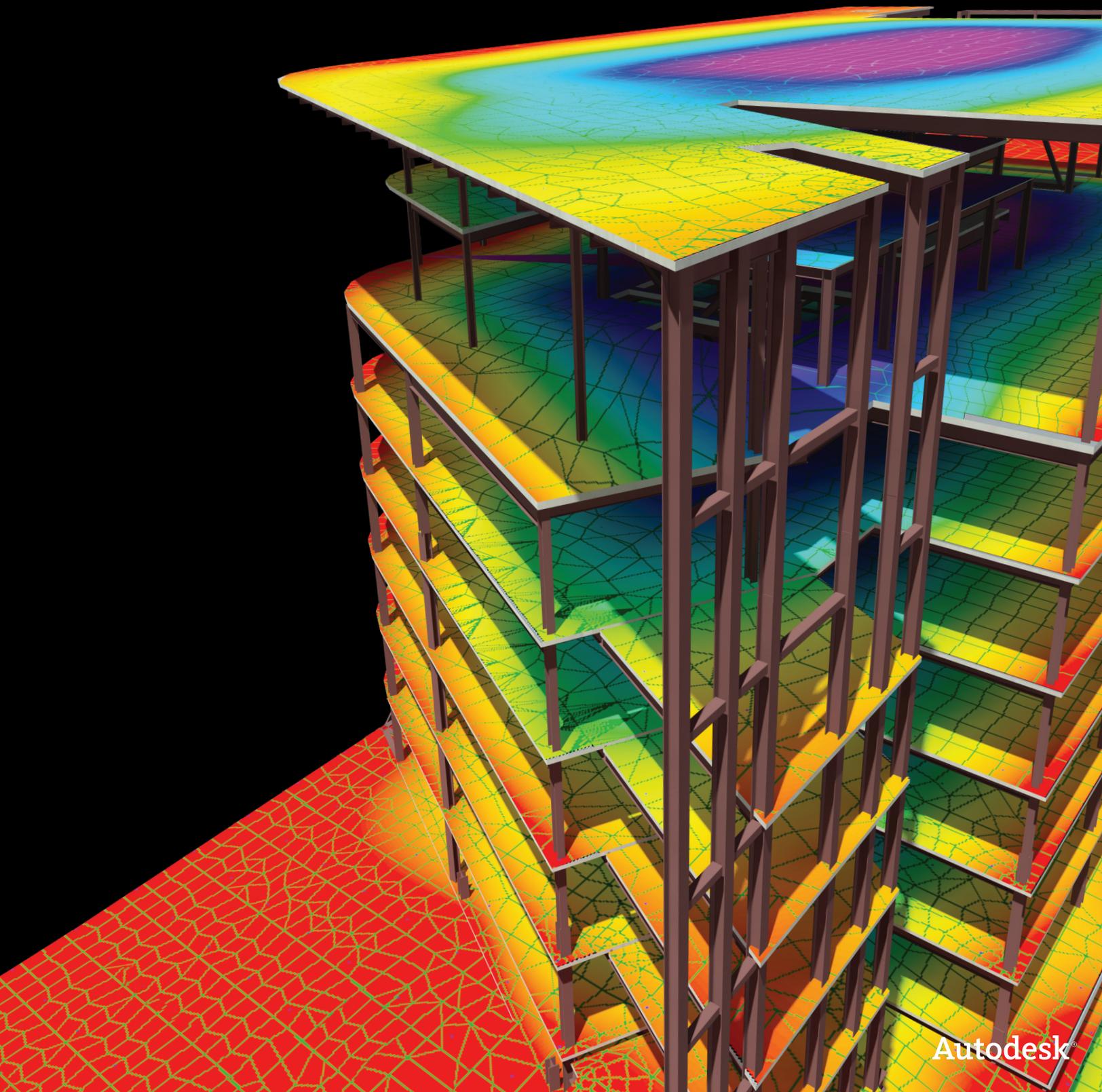


**Autodesk®**

Robot™ Structural Analysis Professional

Comprehensive analysis for your  
structural projects.



Autodesk®

# Integrated Structural Analysis Made Easier

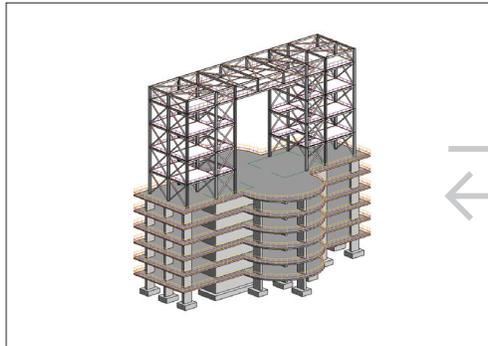
Autodesk® Robot™ Structural Analysis Professional software complements building information modeling (BIM) with coordinated digital analysis and design.

Autodesk® Robot™ Structural Analysis Professional software is a collaborative, versatile, and faster software application that can help you compete and win in the global economy. Purpose-built for BIM, Autodesk Robot Structural Analysis Professional calculates even your more complex models with powerful finite element auto-meshing, nonlinear algorithms, and a comprehensive collection of design codes to help you achieve results in minutes, not hours. Autodesk Robot Structural Analysis Professional offers a smoother, collaborative workflow and interoperability with 3D bidirectional links to Autodesk companion products. The open API (application programming interface) helps to provide a scalable, country-specific analysis solution for large and complex building structures.

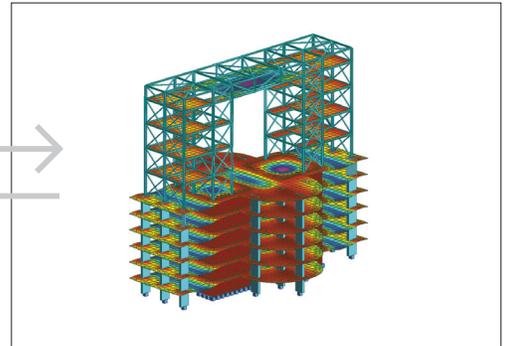
## Subscription Benefit

As an exclusive Subscription benefit, Robot™ Extensions for Autodesk® Robot™ Structural Analysis Professional software extend the capabilities of Autodesk structural analysis tools, providing structural engineers with even more flexibility to achieve their results. Simple tools are available that enable users to extract a large range of data from Autodesk Robot Structural Analysis Professional, and no special programming experience is required.

**Modeling in Autodesk Revit Structure**



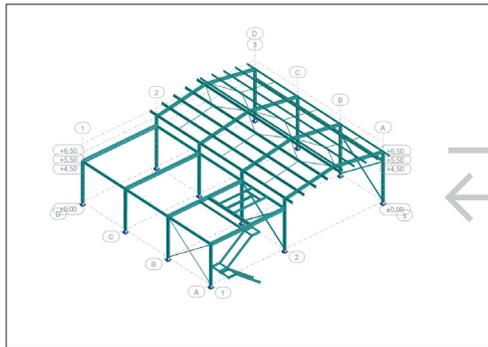
**Structural Analysis in Robot Structural Analysis**



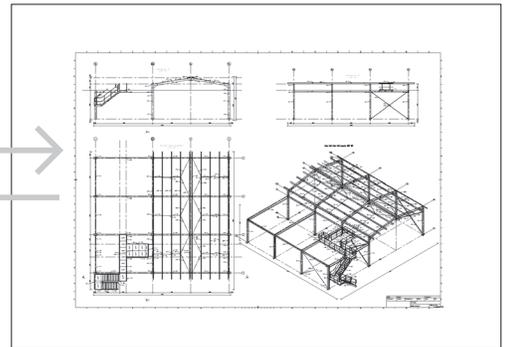
**Bidirectional Links with Autodesk Revit Structure**

Experience the powerful bidirectional integration of Autodesk Robot Structural Analysis Professional and Autodesk® Revit® Structure software. More smoothly import and export structural models between the two applications by using the Autodesk Revit Extensions analysis link. Bidirectional linking enables more accurate structural analysis and design results to be updated throughout the building information model for coordinated construction documentation.

**Structural Analysis in Robot Structural Analysis**



**Shop Drawings Created with AutoCAD Structural Detailing**



**From Analysis to Fabrication Drawings**

Structural engineers using Autodesk Robot Structural Analysis Professional can benefit from the ability to more smoothly transfer select design data to AutoCAD® Structural Detailing software, providing an integrated workflow from analysis through design to final project documentation and structural drawings.

# Faster Simulation and Calculations of Complex Structures

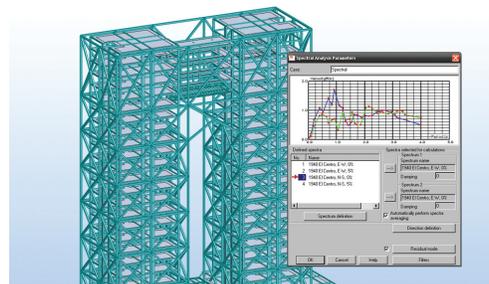
Autodesk Robot Structural Analysis Professional software utilizes state-of-the-art finite element auto-meshing capabilities.

We are very pleased with Autodesk Robot Structural Analysis Professional, which combines powerful advanced analysis capabilities with the multimaterial design expertise in one structural software package. Without a doubt, this solution helps us better respond to our clients' challenges and also stay more competitive.

—David Monti  
Principal, Structural Engineer  
GP Structures

## Modeling, Analysis, and Design

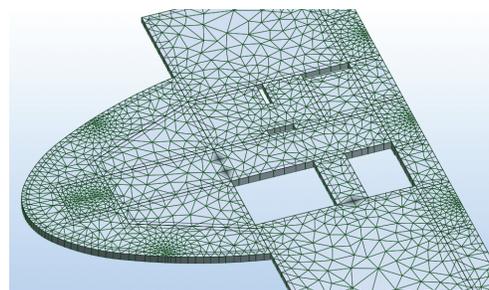
While Autodesk Robot Structural Analysis Professional can enable users to analyze a wide range of structures, the software includes features specifically created for the modeling, analysis, and design of buildings. The building design layout includes floor plane views to more easily create columns and generate beam framing layouts. Engineers can use tools to efficiently add, copy, remove, and edit geometry for similar building stories.



Wide Range of Analysis Capabilities

## Advanced Auto-Meshing and Modeling

Autodesk Robot Structural Analysis Professional is a robust structural analysis software application with powerful mesh generation techniques that enable structural engineers to more efficiently work with even more complex models. Automatic mesh definition tools allow for manual manipulation of the mesh, refinement, and meshing around openings of any shape and size. The many meshing tools available enable structural engineers to more quickly create a high-quality finite element mesh on virtually any shape of structure.



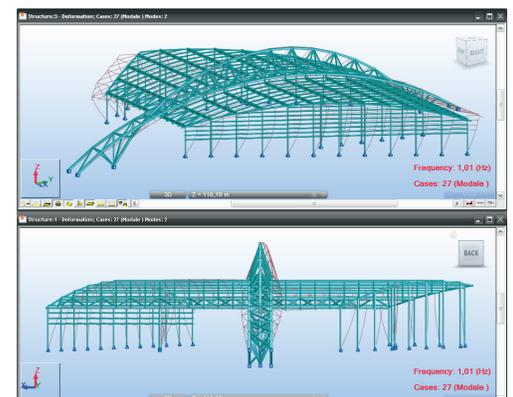
Advanced Auto-Meshing and Modeling Capabilities

## Analysis Capabilities

Autodesk Robot Structural Analysis Professional is a powerful, easier-to-use, and efficient tool for general linear static analysis. In addition, it equips structural engineers with the ability to go beyond the traditional analysis capabilities of other software programs. Engineers can better explore design alternatives and investigate the linear and true nonlinear behavior of a structure. The software enables the simple and effective analysis of many types of nonlinearity, including P-delta analysis, tension/compression members and supports, cables, and plastic hinges, just to name a few. Autodesk Robot Structural Analysis Professional provides cutting-edge tools for the dynamic analysis of structures, and high-level fast dynamic solvers help provide dynamic analysis that can be more easily carried out for demanding structures.

## Analysis Solvers

Autodesk Robot Structural Analysis Professional includes state-of-the-art solvers to deliver faster processing of even more complex structural models. These analysis algorithms, based on advanced technology, enable engineers to deliver more accurate results faster, helping them to more easily optimize and reanalyze structures and explore a variety of structural configurations.



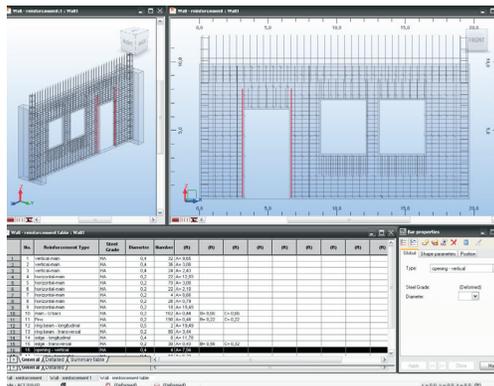
State-of-the-Art Analysis Solvers

# Greater Versatility and Global Analysis

Autodesk Robot Structural Analysis Professional software is a comprehensive global analysis application with an open API, delivering more flexibility to analyze and design a broad range of structures.

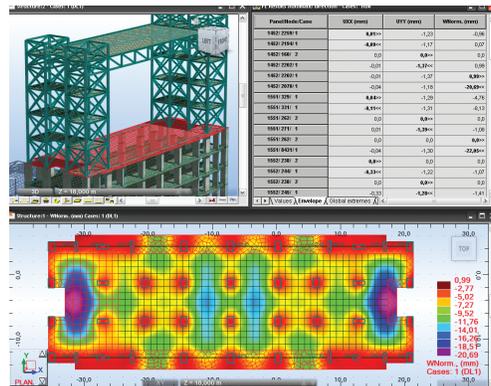
## Reinforced Concrete and Steel Design Solution

Autodesk Robot Structural Analysis Professional contains integrated reinforced concrete and steel design modules based on more than 40 international steel codes and 30 reinforced concrete codes, helping to simplify the design process, and assist engineers with selecting and evaluating structural elements.



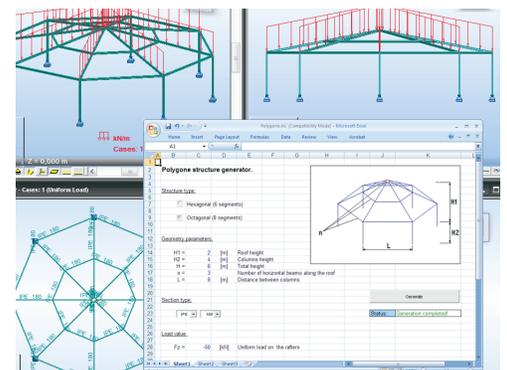
## Extensive Output of Analysis Results

Autodesk Robot Structural Analysis Professional provides wide flexibility in obtaining analysis results. Results may be viewed on individual members, parts of the structure, or for the structure as a whole in the forms of diagrams and maps. Tabular results may be easily filtered to show specific data and easily output to spreadsheets for user postprocessing of data.



## Extended Capabilities with an Open API

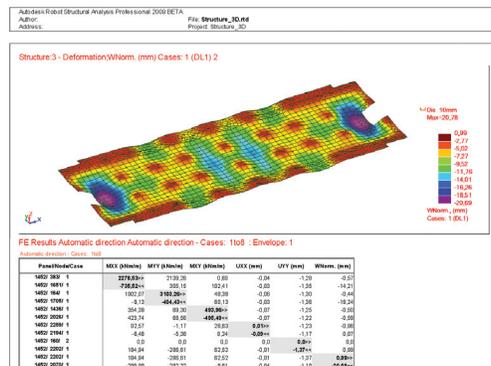
The concept of linking applications together to provide a single solution is not new, but few solutions offer the practical approach of Autodesk Robot Structural Analysis Professional. This program utilizes component object model (COM) technology as introduced by Microsoft, allowing the solution to be open architecture and openly programmable by any engineer. The open and more flexible API offers an extensive list of possibilities, including integrating Autodesk Robot Structural Analysis Professional software with external programs, such as Microsoft Excel® software, Microsoft Word, and AutoCAD® software; extracting results from Autodesk Robot Structural Analysis Professional; writing postprocessing software, such as special codified analysis for steel, concrete, timber, and aluminum; and the ability to create parametric structures in Autodesk Robot Structural Analysis Professional.



## International Design Codes

Autodesk Robot Structural Analysis Professional includes more than 60 sections and materials databases from around the world, enabling international projects to be completed more easily. With 70 built-in design codes for an array of countries, structural engineers can work with country-specific section shapes, imperial or metric units, and country-specific building codes within the same integrated model.

The printout composition feature provides the ability to save tables and model views in a user-defined layout. Results and maps saved in this layout are automatically refreshed after model changes. Printouts can be made directly from printout composition or can be presented in Microsoft® Word editor HTML format.

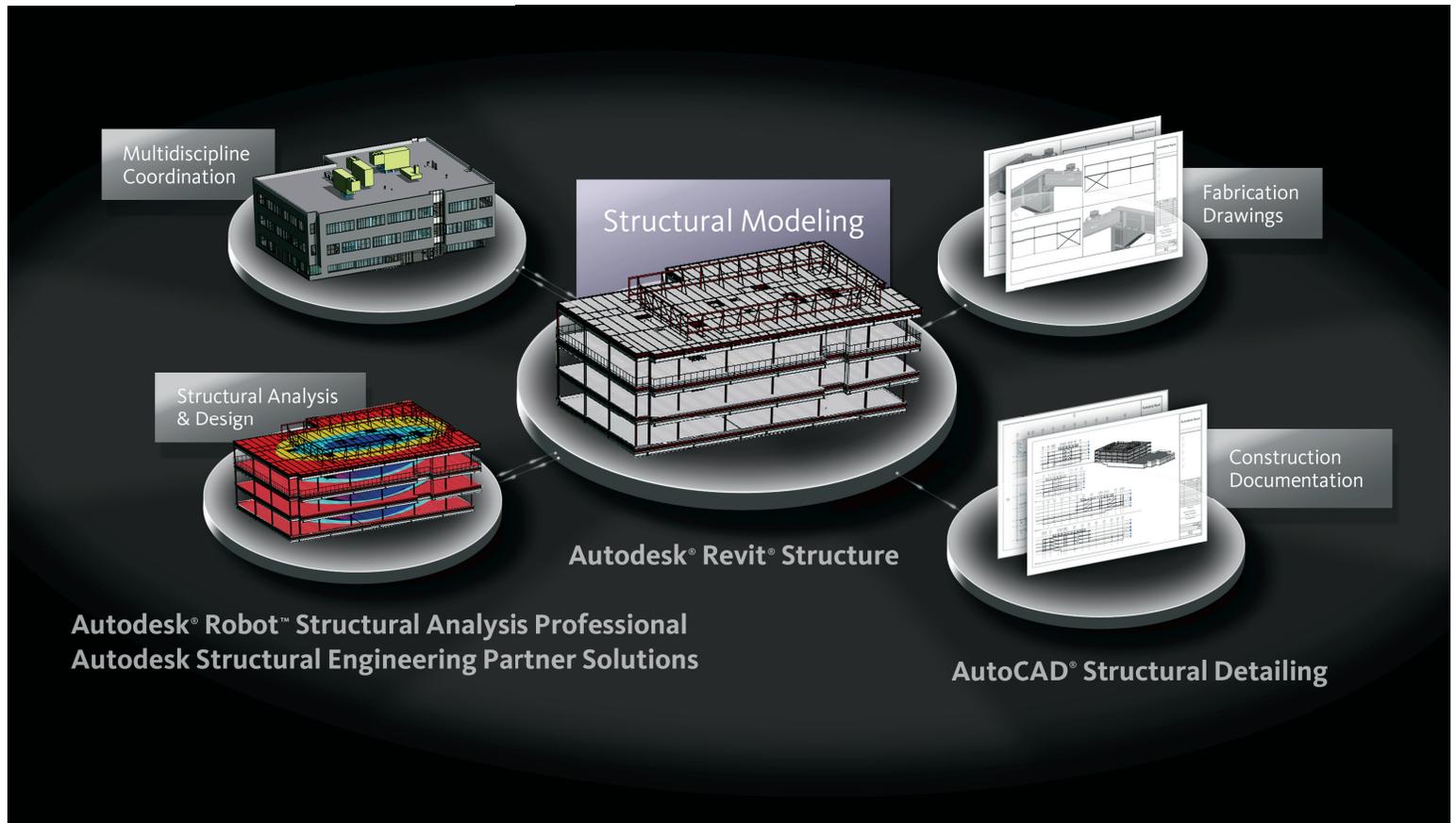


## Multilingual for Global Markets

Compete in the global market with Autodesk Robot Structural Analysis Professional. The software supports multinational design teams by providing many languages, including English, French, Romanian, Spanish, Russian, Polish, Chinese, and Japanese. Structural analysis can be performed in one language and output can be generated in another, providing versatility among global teams. Imperial and metric units can be used in combination within the same structural model, providing adaptability to varying environments.

# Building Information Modeling for Structural Engineering

A smoother workflow and interoperability with the Autodesk structural engineering BIM solution.



Building information modeling (BIM) is an integrated process built on coordinated, reliable information about a project from design through construction and into operations. By adopting BIM, architects, engineers, contractors, and owners can more easily create coordinated, digital design information and documentation; use that information to visualize, simulate, and analyze performance, appearance, and cost; and reliably deliver the project faster, more economically, and with reduced environmental impact.

BIM for structural engineers follows this same methodology for the entire structural engineering process, focusing on a digital model that can be used for coordination with architects; mechanical, electrical, and plumbing engineers; and civil engineers that is integrated with analysis, design, and construction documentation, and extending that digital model from design through fabrication and construction.

**Autodesk Robot Structural Analysis Professional**  
Autodesk Robot Structural Analysis software offers a smoother workflow and interoperability with the Autodesk structural engineering BIM solution, Autodesk® Revit® Structure software. Extend design and analysis capabilities by harnessing the power of the software's open API (application programming interface) to help fit your unique needs.

## **Autodesk Revit Structure**

Autodesk Revit Structure integrates multimaterial physical and analytical models, providing concurrent structural modeling for more efficient, up-to-date documentation as well as tight integration for analysis and design.

## **AutoCAD Structural Detailing**

AutoCAD® Structural Detailing software is a powerful solution for faster and more efficient detailing and creation of fabrication shop drawings for reinforced concrete and steel structures.

We have been using Robot Millennium software for more than 10 years because of its analysis performance as well as its design versatility for reinforced concrete, steel, and wood structures. We are looking forward to moving to Autodesk Robot Structural Analysis software and becoming even more productive and competitive.

—Grzegorz Bałd  
Vice President and Technical Director  
Biprostal SA Engineering and Consulting, Poland

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Access specialists worldwide who can provide product expertise, a deep understanding of your industry, and value that extends beyond your software. To license Autodesk Robot Structural Analysis Professional software, contact an Autodesk Premier Solutions Provider or Autodesk Authorized Reseller. Locate a reseller near you at [www.autodesk.com/reseller](http://www.autodesk.com/reseller).

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Model provided by McNamara/Salvia, Inc.

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