Discover the Benefits of Advance Steel, BIM Software for Steel Detailing and Fabrication

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Technical Marketing Manager

Autodesk

About the presenter

- Philippe Bonneau

Technical Marketing Manager - Autodesk

Background:

- 20 years of experience in the structural steel industry
- worked in different steel detailing companies for 5 years
- technical specialist for steel detailing software at Graitec for 5 years
- technical marketing manager for Advance Steel at Graitec for 9 years
- joined Autodesk in november 2013

Located in Paris, France.

Class summary

Understand features & benefits of Autodesk Advance Steel software.

Highlight workflows from design to fabrication and construction.

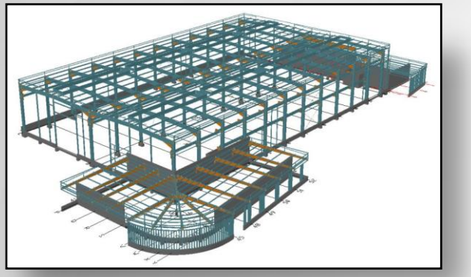
We will start with the bidirectional link between Revit and Advance Steel, and will see how Advance Steel can undertake some detailed design work (inserting steel connections) to get the fabrication & construction documents.
We will then push model to Navisworks and BIM 360 Glue.

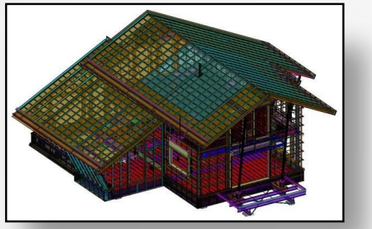
Key learning objectives

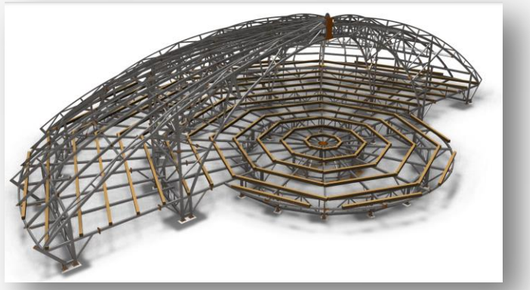
At the end of this class, you will be able to:

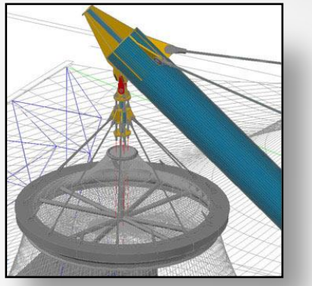
- Exchange intelligent models with Advance Steel, Revit and Robot
- Create a fully detailed structural 3D model
- Take full advantage of templates to generate shop drawings & BOMs
- Collaborate more easily using Navisworks & BIM 360 Glue

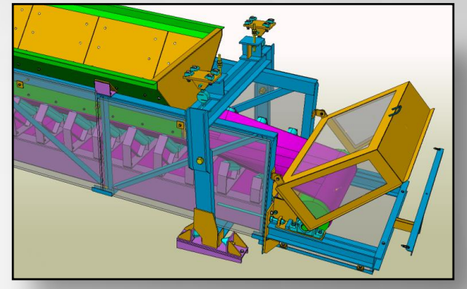
Key Use Profiles

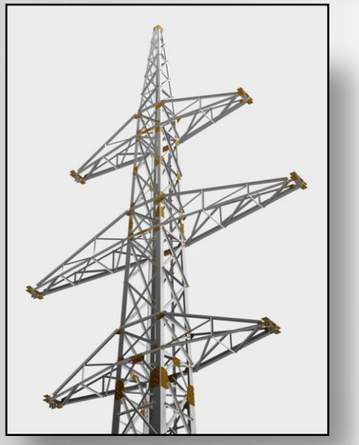












Oil & Gas
Delivering challenging and complex projects

Unconventional Oil & Gas
Pre-eminent provider of services to the industry

Mining
Expertise and delivery from concept to closure

Nuclear
Expertise spanning the entire lifecycle of complex nuclear assets

Renewables / Bioprocess
A century of experience supporting today's renewable energy

Power
Shaping the future of clean energy

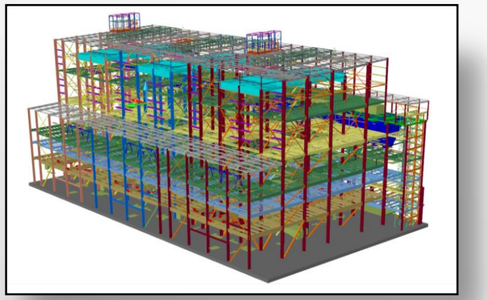
Transmission & Distribution
Innovative and high value added solutions

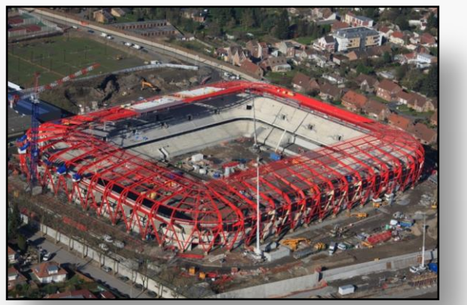
Water
Global expertise in every aspect of water, from source to ocean

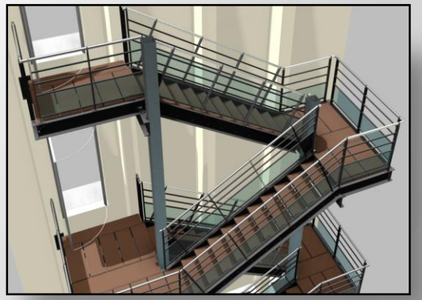
Transportation & Infrastructure
Innovative solutions for complex transportation needs

Government Services
Comprehensive engineering services and solutions

Industrial / Commercial
Offering a whole world of technical expertise







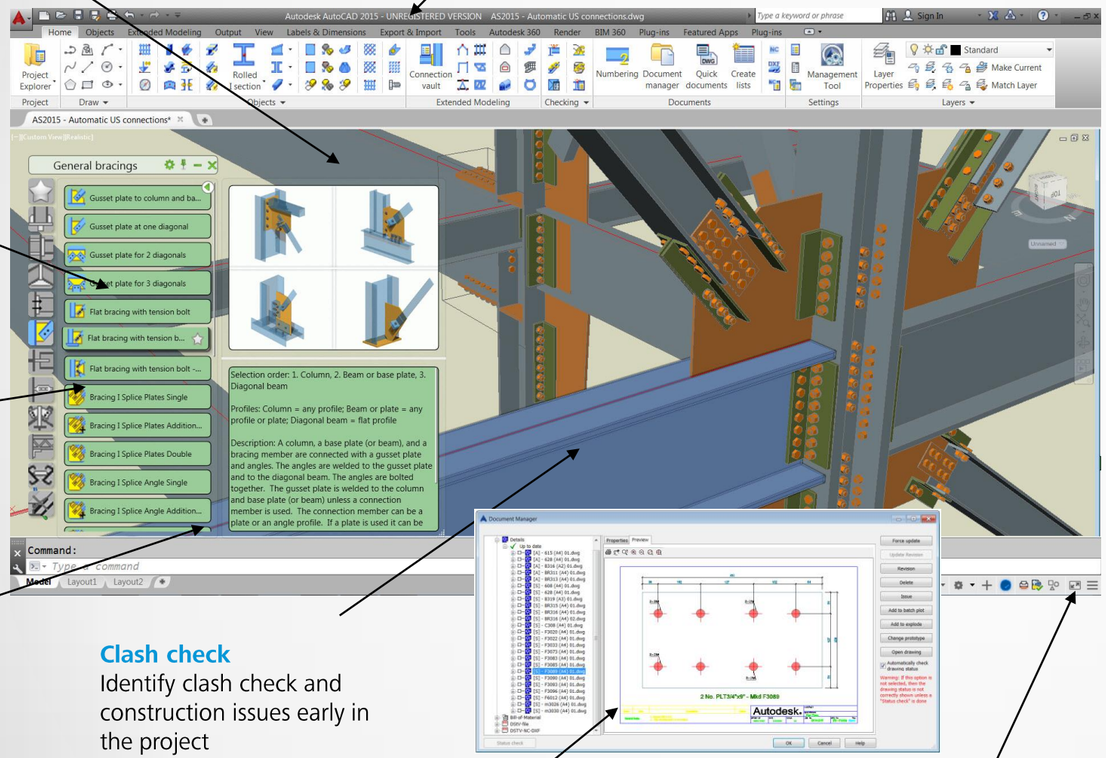
Advance Steel for steel detailing and fabrication

Dynamic modeling
Three-dimensional
Real-time
User friendly visualization

AutoCAD-based application
Powerful platform
Familiar commands
Ribbon user interface
Easy-to-use & easy-to-learn

Intelligent model
Building geometry
Spatial relationships
Quantities & properties
of building components

Steel connections
Comprehensive library
From simple to complex
connections available
Integrated Joint Design

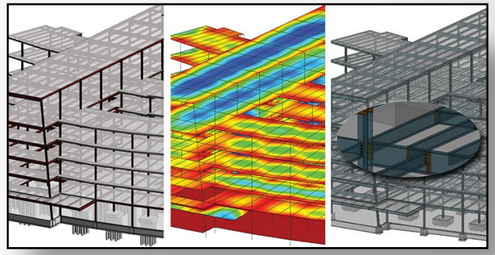


Effective marketing presentation
Realistic 3D view
Usage of different materials
Background, lights, shadows
Walk and fly tools

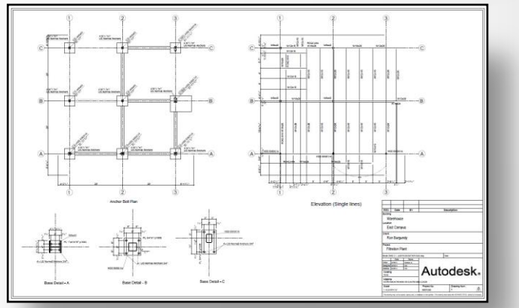
Clash check
Identify clash check and
construction issues early in
the project

Changes are made in the 3D model and are automatically updated to BIM
Increased coordination of construction documents
Integrated revision control

Multi-user or single-user mode
Models shared between team members
Productivity gains
Secure solution



BIM workflows
Communicates with others (Revit, Robot, Navisworks, BIM 360 Glue, Recap, Plant 3D, …)
File format standards (IFC, CIS/2)
Integrated workflow benefit
Increased productivity, quality



Automatic drawings creation
From one single model to multiple drawings
Ready-to-use templates for shop and GA drawings creation
DWG file format
Automatic update

Automatic BOM creation
Correct quantities to order, to fabricate and to send at site…
Exportable to PDF, XLS
Automatic update

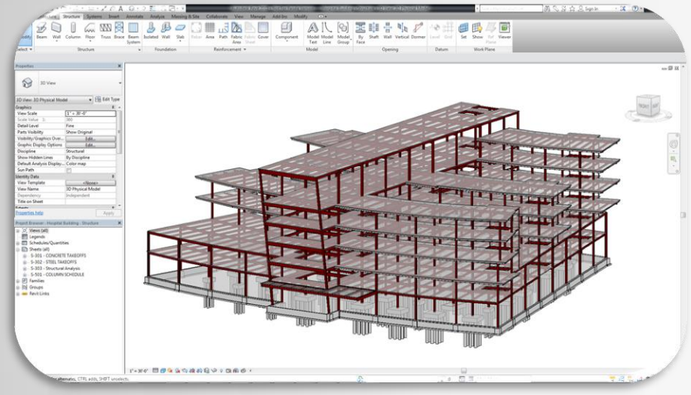
Automatic CNC data creation
NC-DSTV files
NC-DXF files
MIS software interoperability
Automatic update

Collaborate with engineers using Revit & Robot

Advance Steel & Revit workflow

Workflow

AUTODESK® **REVIT**®

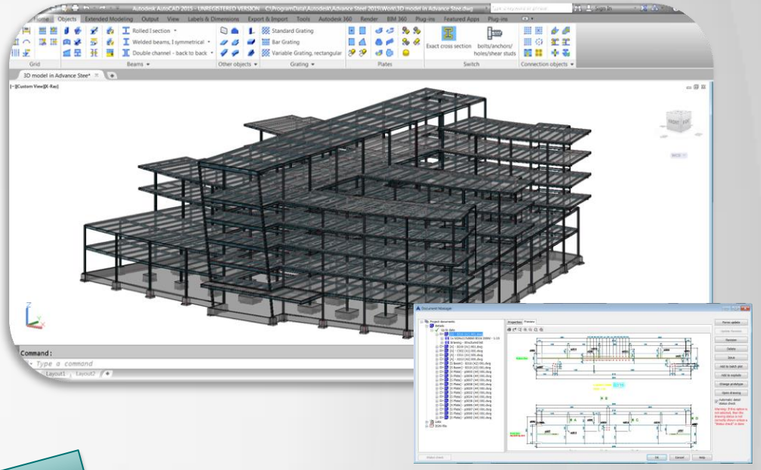


- Design your structure
- Use parametric components and families
- Advance Steel Plug-in for Revit

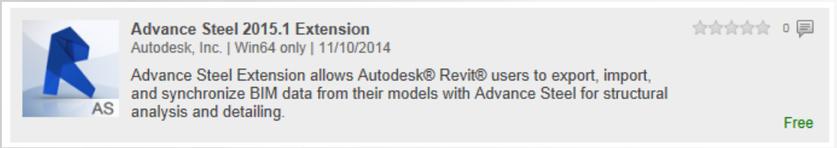
Export / Import

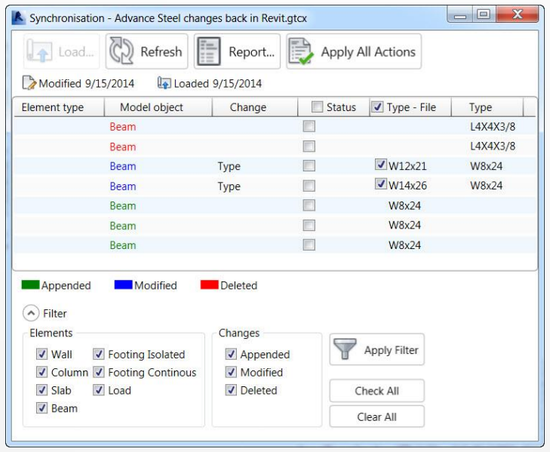
Synchronization

ADVANCE STEEL

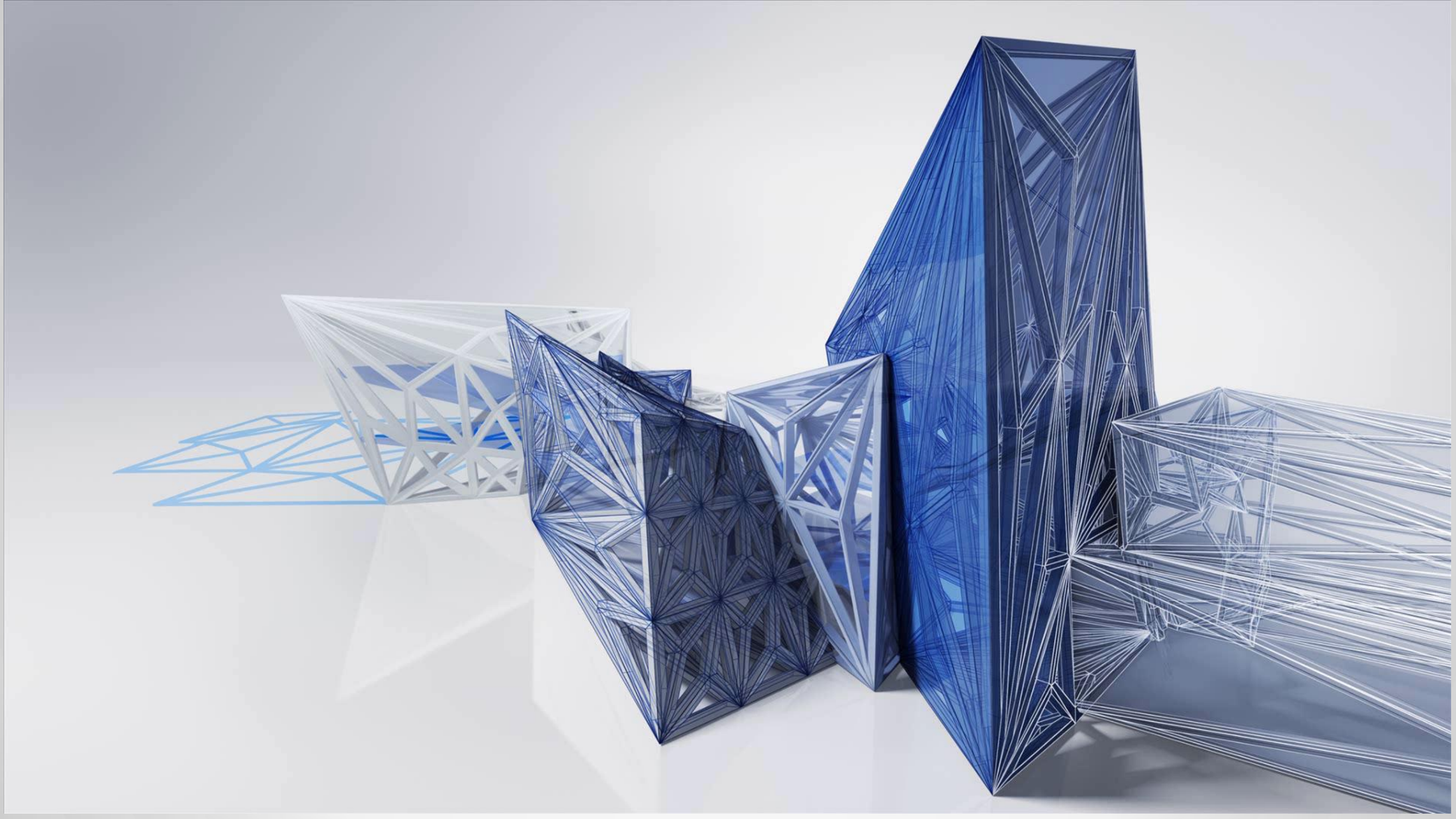


- Access to a comprehensive library of steel connections
- Get shop drawings, BOMs and CNC
- Integrated revision control





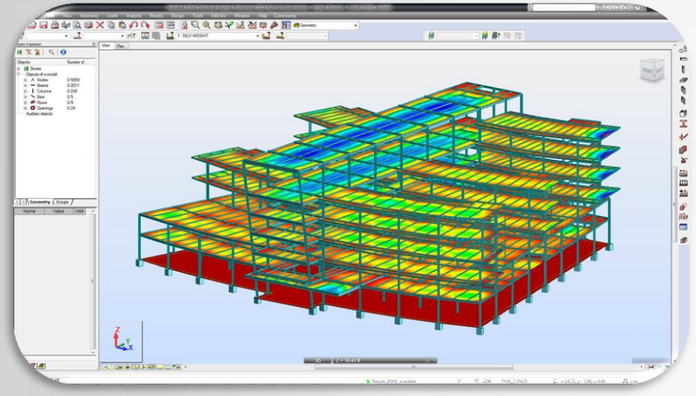
- Option to select which elements to export/import
- Automatic section & material mapping
- Color-coded differences when synchronizing
- Full control on changes
- Detailed summary report



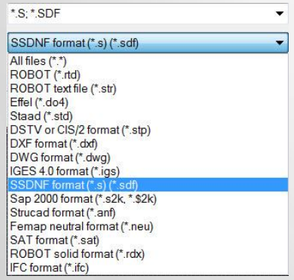
Advance Steel & Robot workflow

Workflow

AUTODESK® ROBOT™ STRUCTURAL ANALYSIS PROFESSIONAL

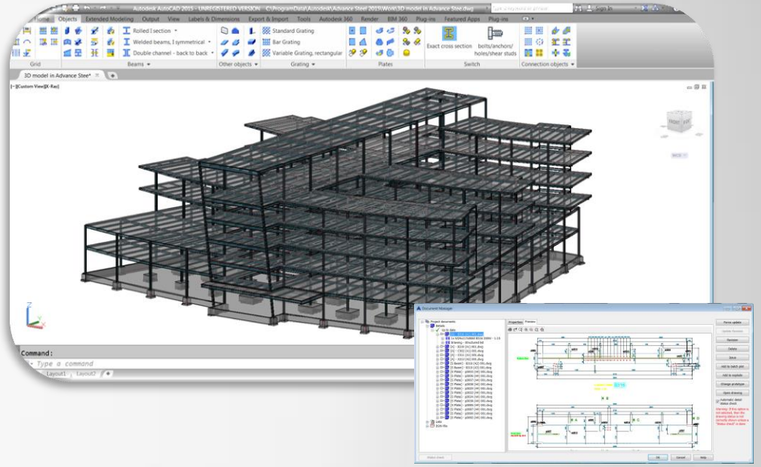


- Design your structure
- Perform simulation and analysis on a variety of structures
- More than 70 design built-in design codes
- Reporting analysis structure results



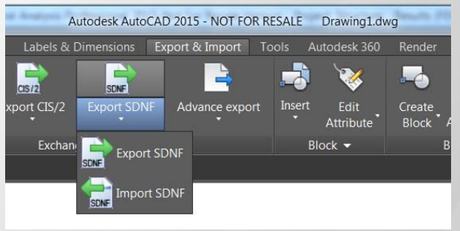
Import / Export

ADVANCE STEEL



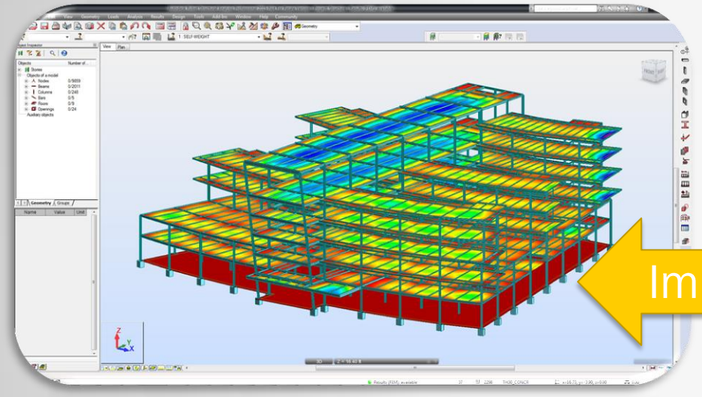
- Access to a comprehensive library of steel connections
- Get shop drawings, BOMs and CNC
- Integrated revision control

- Bidirectionnal link between Robot and Advance Steel
- Enhanced collaboration between designers and structural engineers
- Smoother exchange of the structural information



Workflow

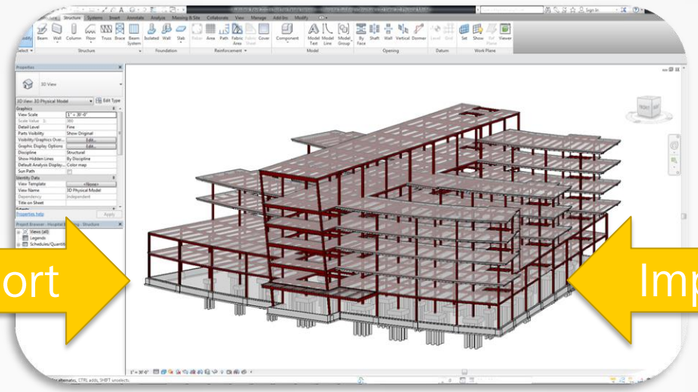
AUTODESK® ROBOT™ STRUCTURAL ANALYSIS PROFESSIONAL



- Perform simulation and analysis on a variety of structures
- Transfer members and efforts on nodes

Import / Export

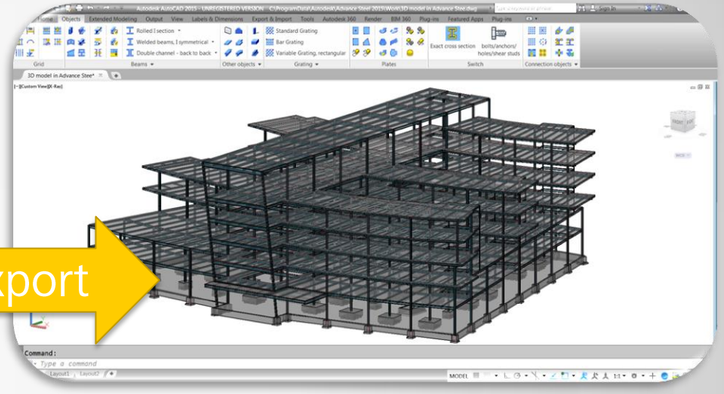
AUTODESK® REVIT®



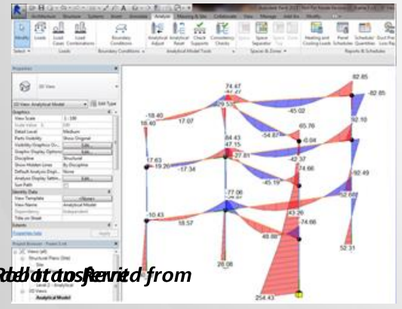
- Get members and efforts on nodes
- Advance Steel Plug-in for Revit

Import / Export

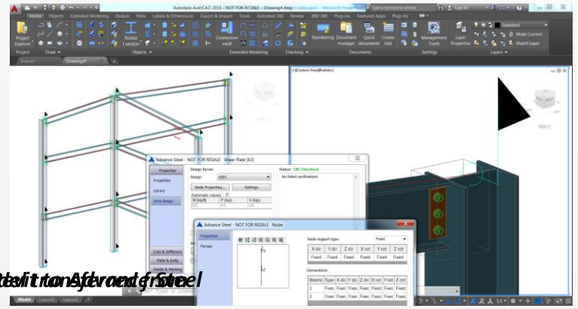
ADVANCE STEEL



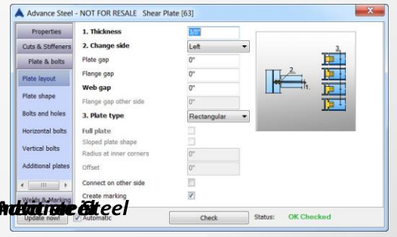
- Validate connections by checking compliance with AISC or EC3
- Obtain a printable report of calculations based on the formulas that were used



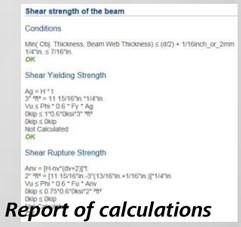
Model transferred from Robot to Revit



Model transferred from Revit to Advance Steel



Automatic steel connection

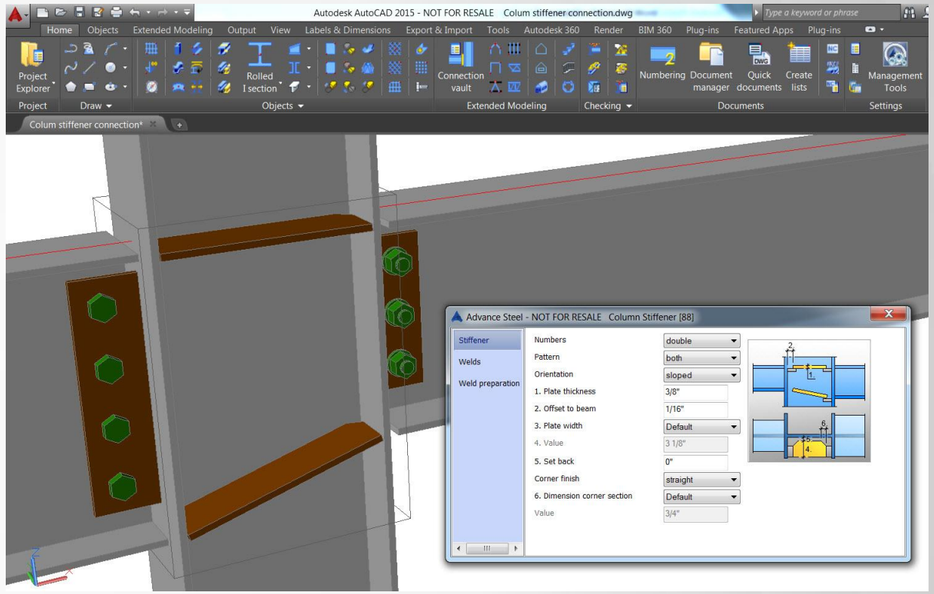


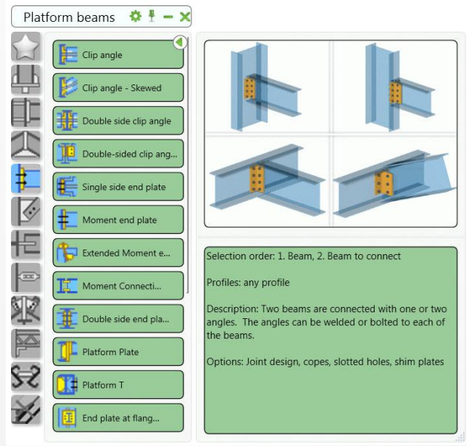
Report of calculations

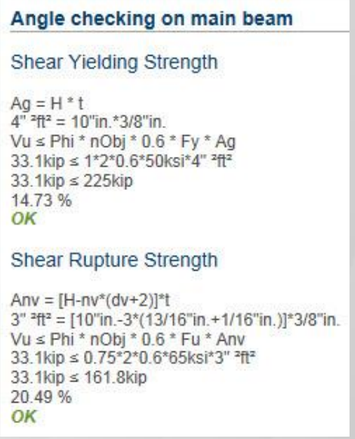
Create a fully detailed structural 3D model

Automatic steel connections

- Comprehensive library of automatic steel connections
- User-friendly classification in the Connection Vault
- Options to set up the connection layout
- Save custom values into the library
- Built-in design engine (AISC & EC3)

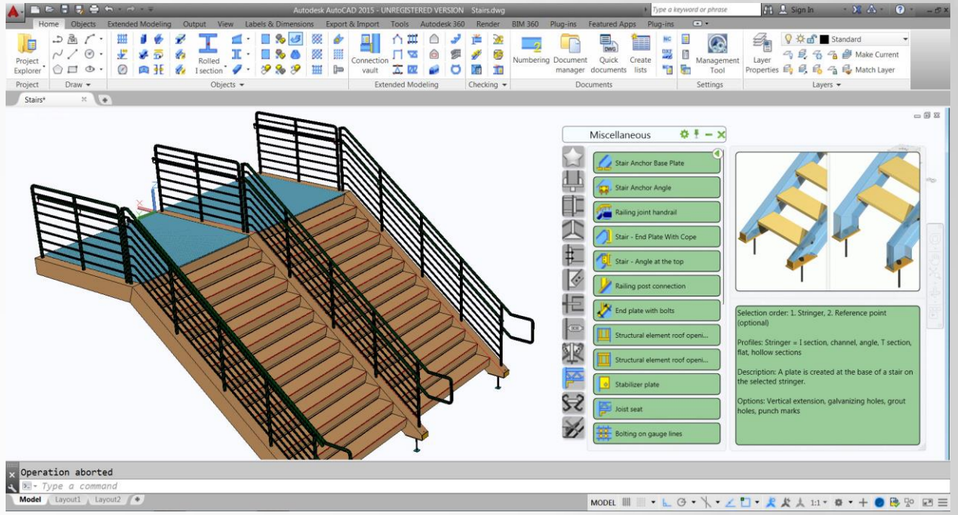


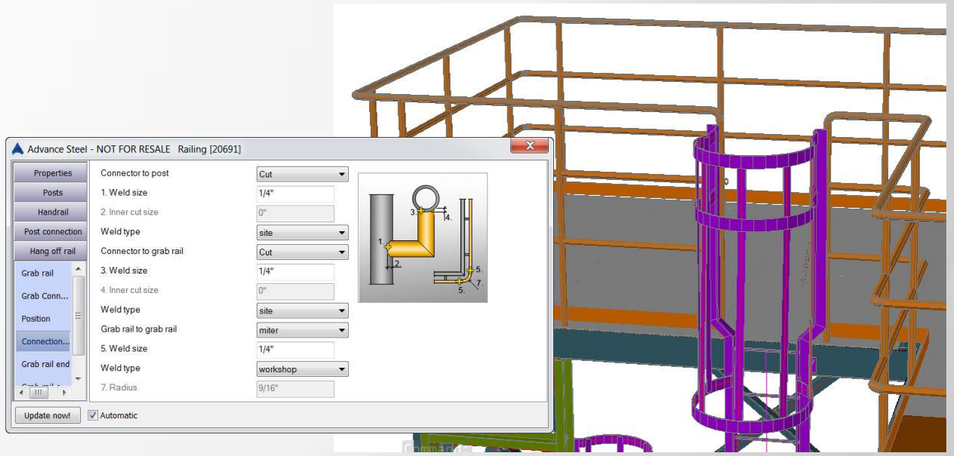


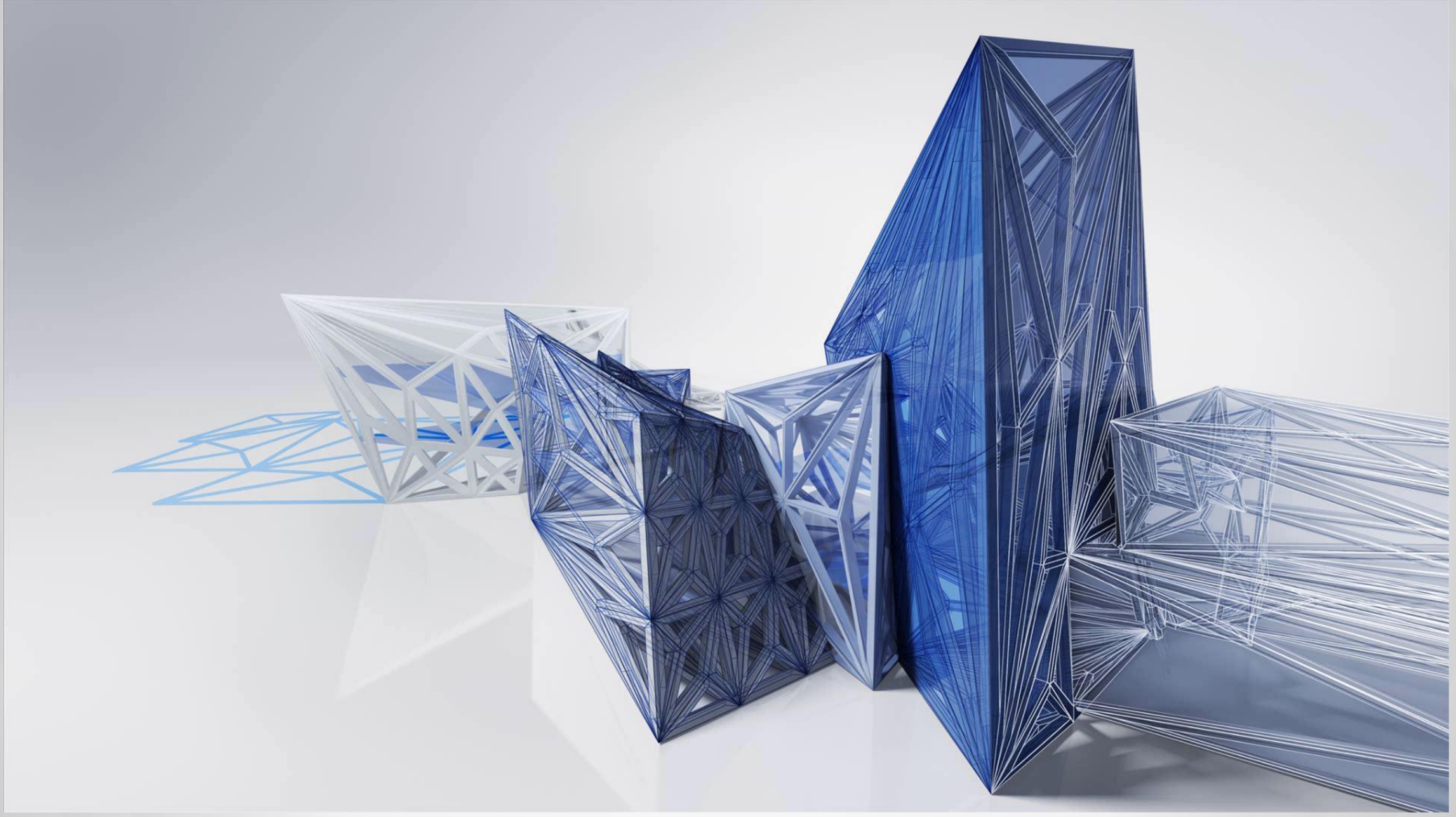


Automatic tools for miscellaneous steel

- Powerful dedicated wizards
  - Straight & spiral stairs
  - Straight & curved railings
  - Cage ladder
- User-friendly dialogs allow to define all components
- Ready-to-use templates for detailing the miscellaneous steel members



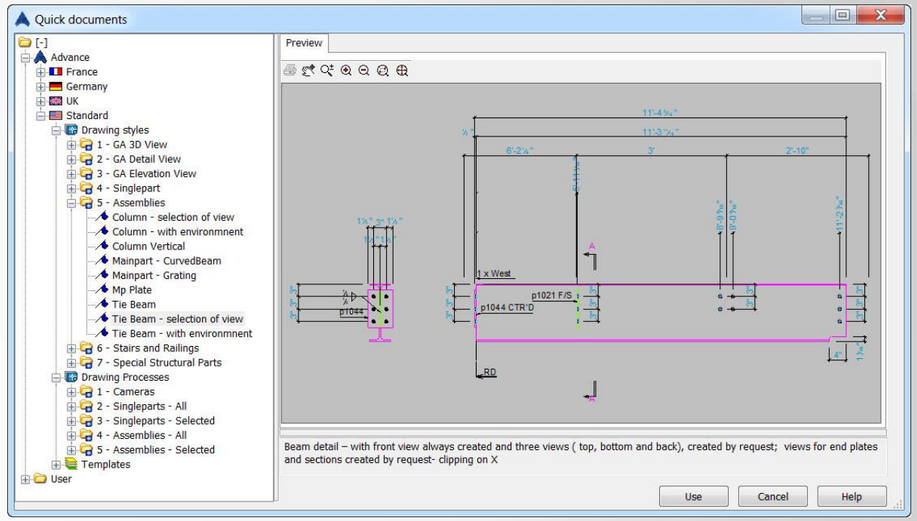


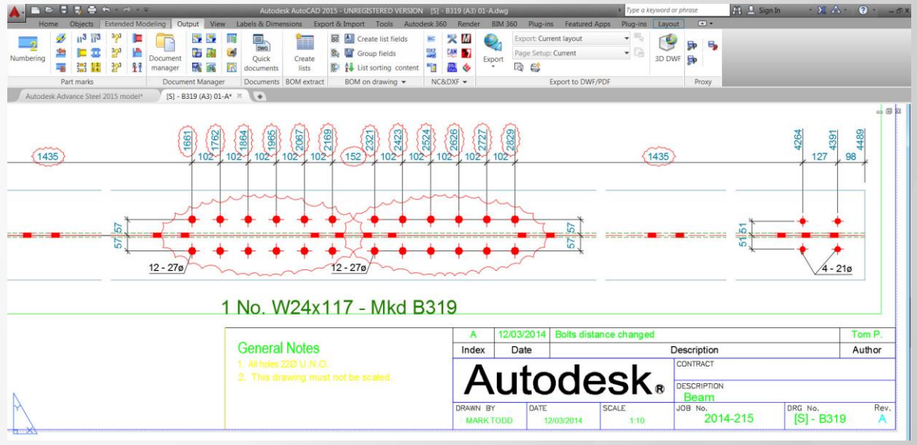


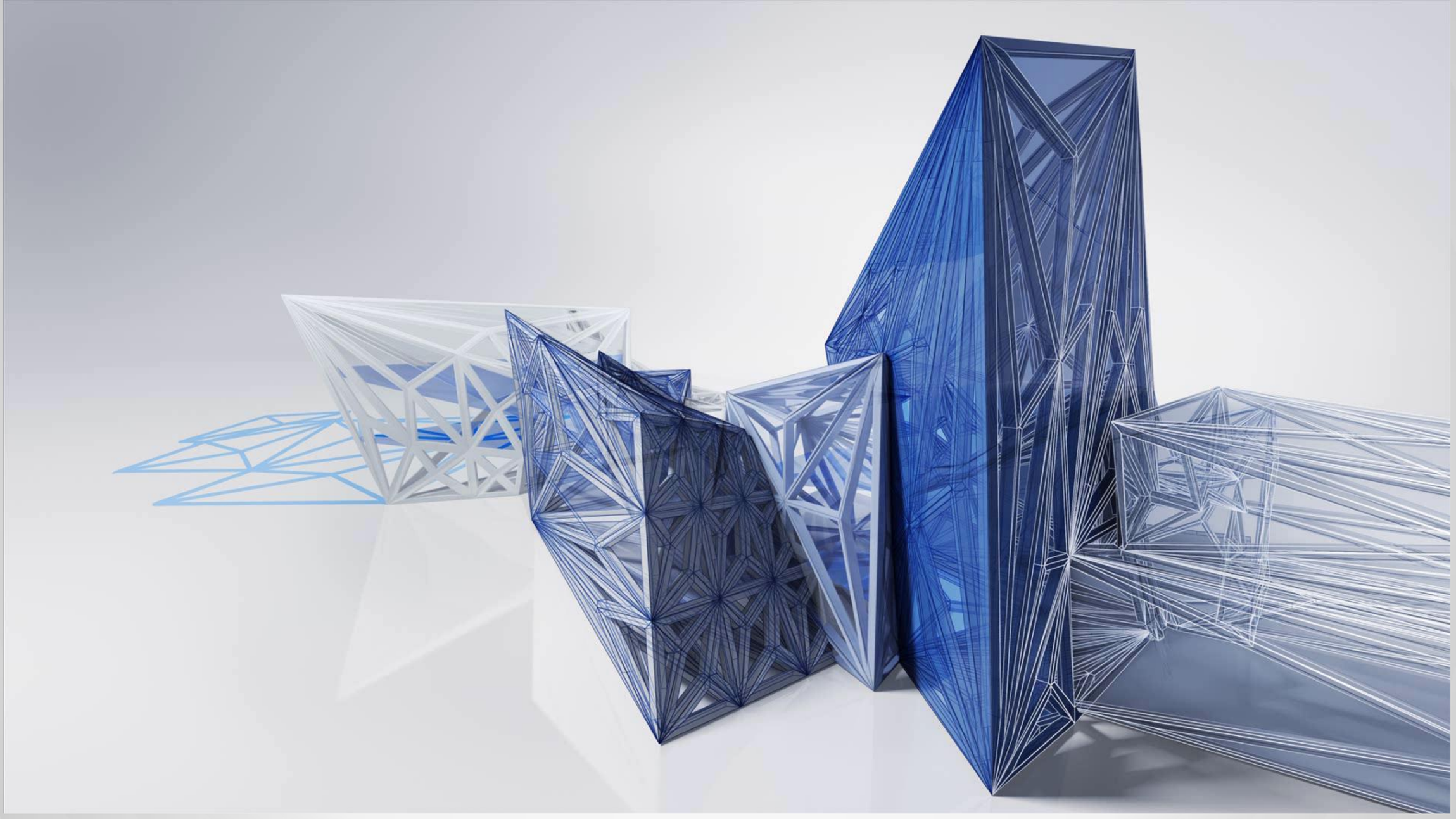
Ready-to-use templates for drawings

Drawing styles for shop & GA drawings

- Single part & assembly drawings automatically created from the 3D model
- Run ready-to-use available templates
- Drawings generated with labels & dimensions according to your expectation
- Automatic updates in case of changes
- Integrated revision control with clouds



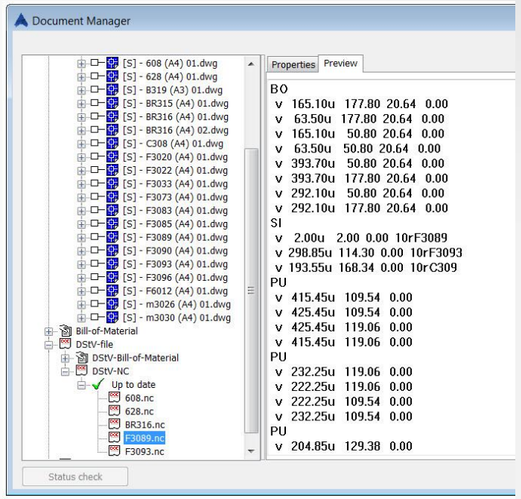


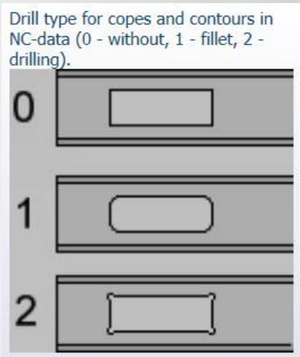


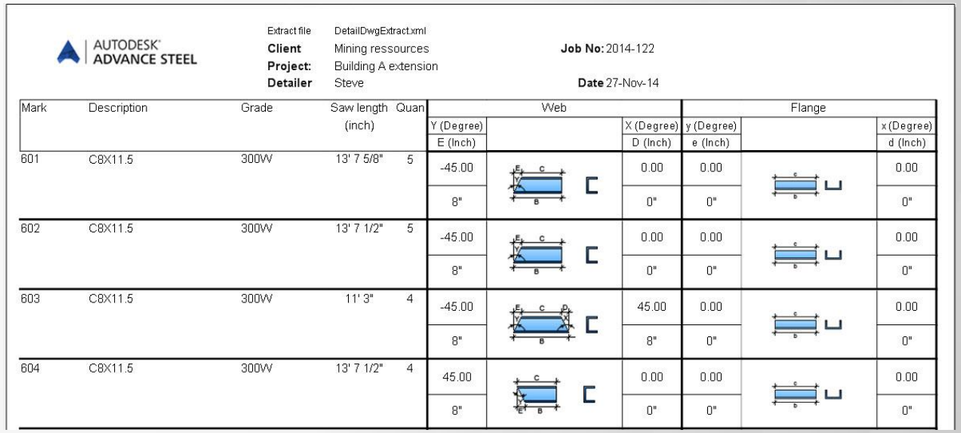
Ready-to-use templates for bills of material

Bills-of-material and CNC data

- Automatic creation of lists for workshop & site purposes
- Wide variety of BOM templates
- CNC files (NC-DSTV & NC-DXF) for workshop machines
- XML files for welding robots
- Link to MIS Software with KISS file





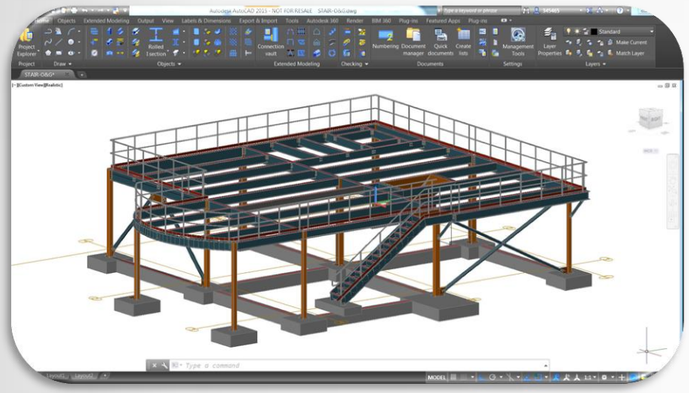


Improve communication and collaboration

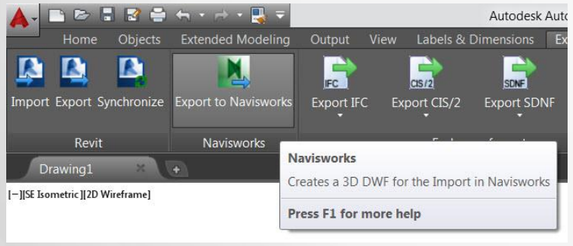
Export to Navisworks

Workflow

ADVANCE STEEL

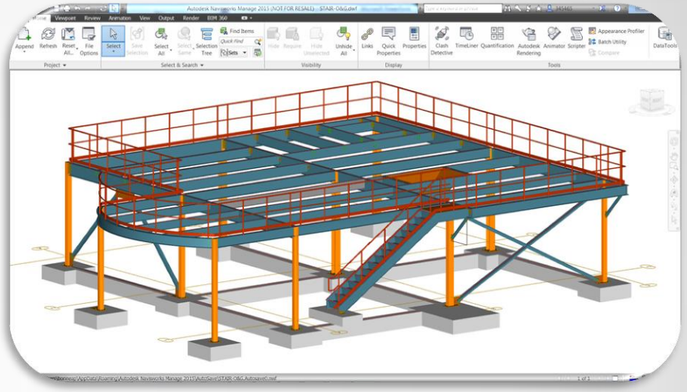


- Powerful tools to create the 3D model
- Shop drawings & BOMs & CNC data
- Export to Navisworks icon for sharing the model with your project team in Navisworks



Export

AUTODESK® NAVISWORKS®



- All Advance Steel object properties available
- Clash check between different disciplines
- Time liner..

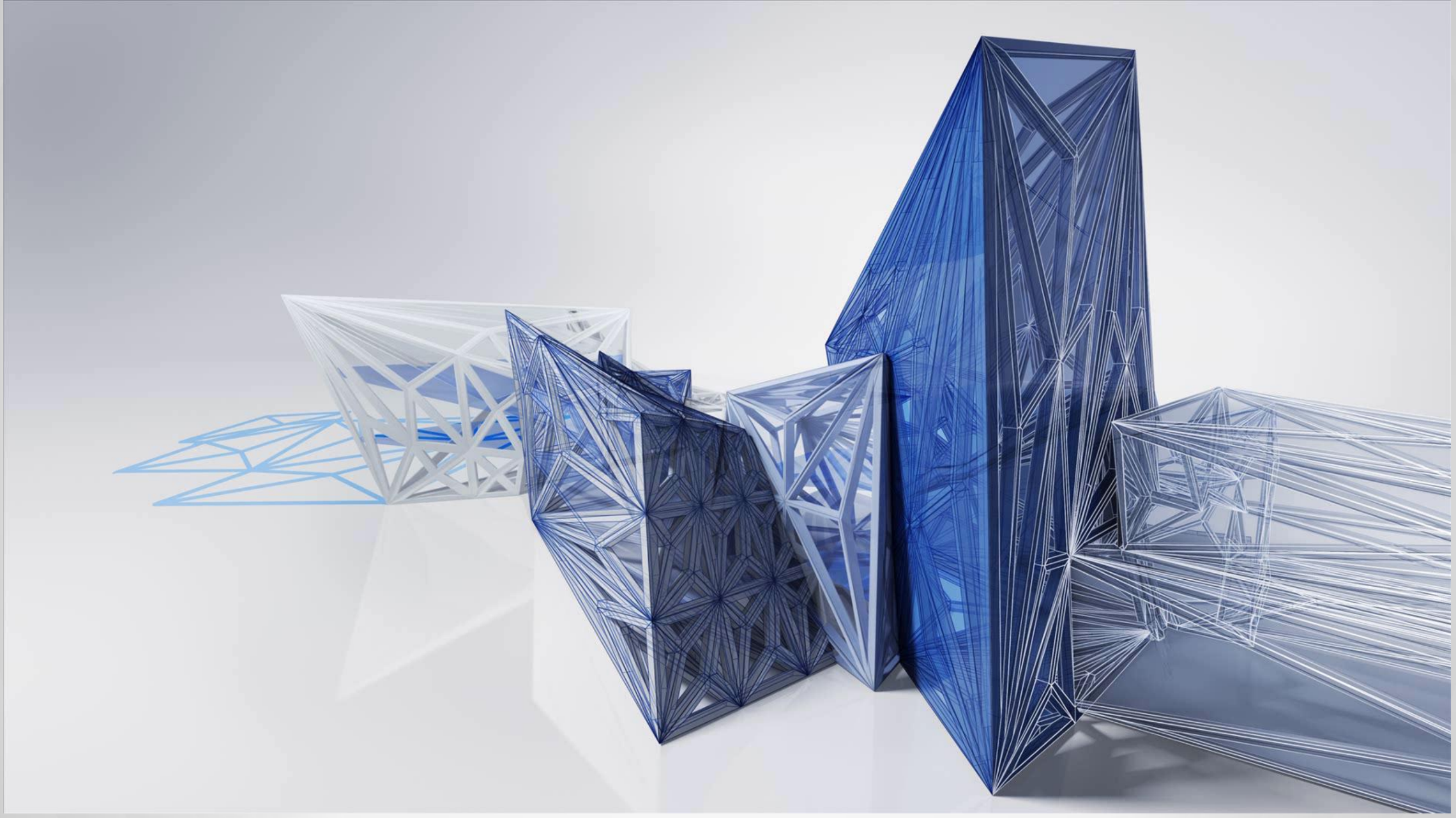
Export

AUTODESK® REVIT®

AUTODESK® AUTOCAD® CIVIL 3D®

AUTODESK® AUTOCAD® PLANT 3D

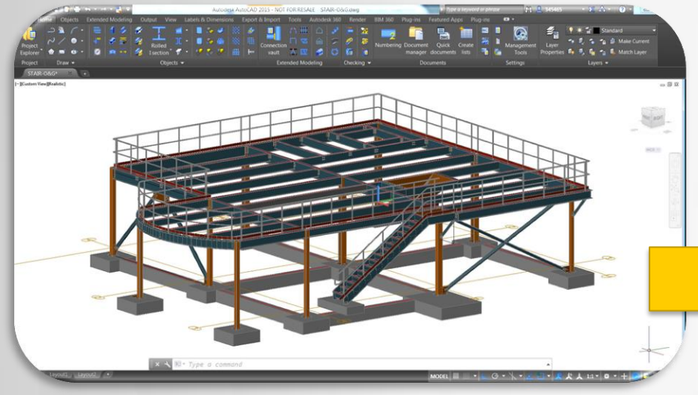
AUTODESK® INFRAWORKS™



Export to BIM 360 Glue

Workflow

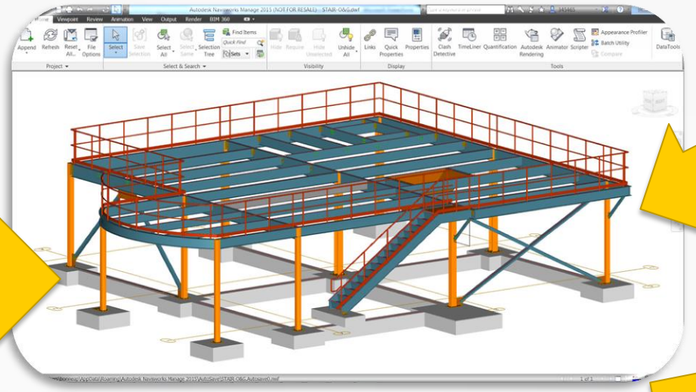
ADVANCE STEEL



- Powerful tools to create the 3D model
- Shop drawings & BOMs & CNC data
- Export to Navisworks icon for sharing the model with your project team in Navisrworks

Export

AUTODESK® NAVISWORKS®

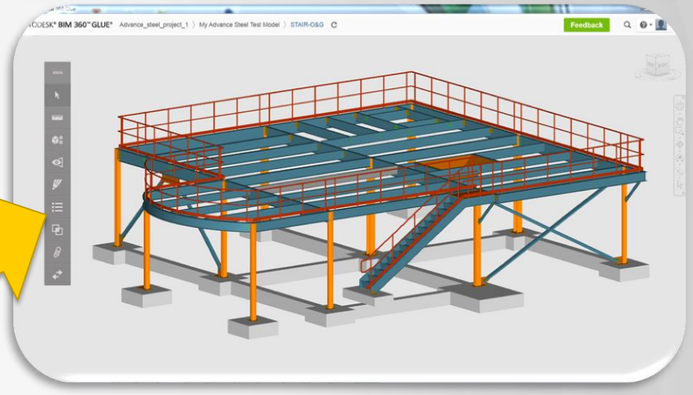


- Glue models directly from Navisworks to BIM360 Glue projects

Export

Export

AUTODESK® BIM 360™ GLUE®



- Cloud-based BIM management and collaboration product
- Provide one-click-to-BIM access to the entire team
- Send links and notifications to project reviewers and stakeholders

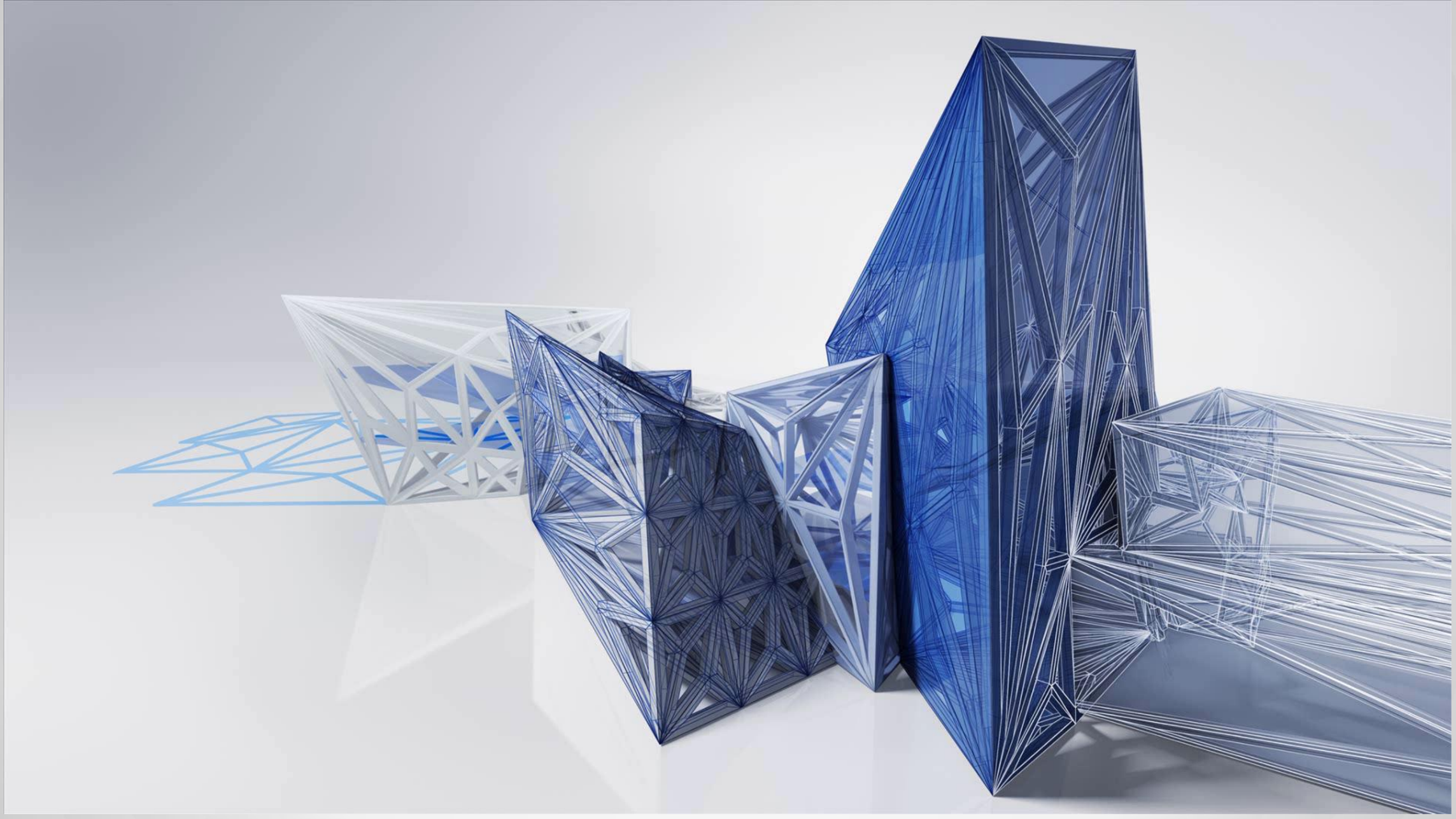
- Anytime, anywhere access to BIM projects and data
- Navigate using intuitive gesture-based pan, zoom and orbit
- Verify measurements in the field

For your iPad

BIM 360 Glue iPad app

Access and explore multidisciplinary BIM 360 Glue and **Navisworks** models online or offline, review intelligent object properties, and take simple measurements.

APP STORE



Summary

AUTODESK®
ADVANCE STEEL

Software for structural steel engineering, detailing and fabrication

- Work with easy-to-use, 3D model-based tools that enable faster, more accurate steel detailing
- Improve accuracy of deliverables and help speed time to fabrication
- Robust interoperability offers great flexibility in workflows

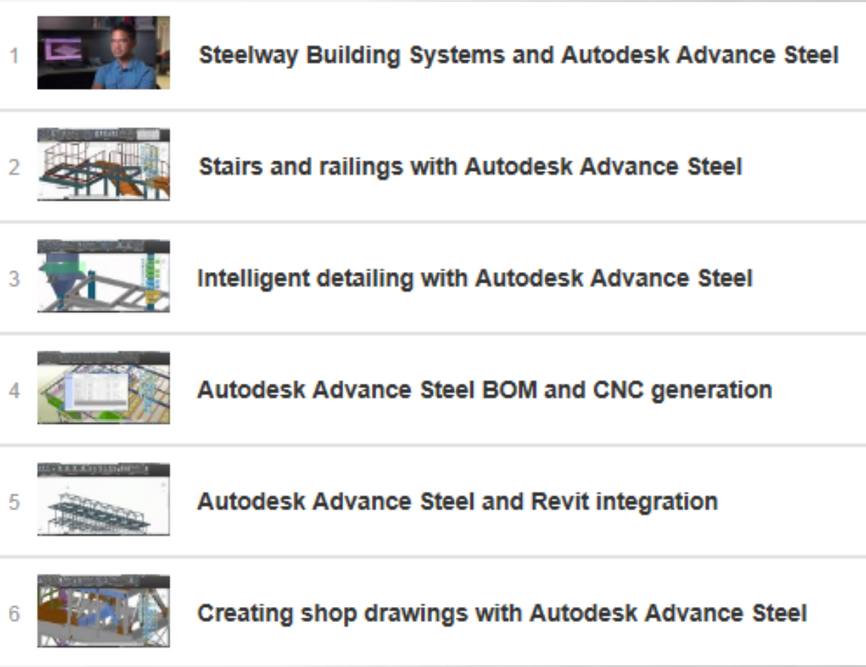
Learn more

- Advance Steel movies on YouTube

http://autode.sk/AdvanceSteelVideos

- Try out Advance Steel?

www.autodesk.com/advancesteel



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Session Feedback

- Via the Survey Stations, email or mobile device
- AU 2015 passes given out each day!
- Best to do it right after the session
- Instructors see results in real-time

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