# How IDEA StatiCa works with your other software?
# September 21, Noon - EDT

IDEA StatiCa®
Calculate yesterday's estimates

ETABS
STEEL

SAP2000
STEEL

Tekla Structures
STEEL

AUTODESK® REVIT® Structures
Revit
STEEL

AUTODESK® ADVANCE STEEL
Advance Steel
STEEL

Tekla Structural Designer
STEEL

ROBOT STRUCTURAL ANALYSIS PROFESSIONAL
Robot Structural Analysis Professional
STEEL

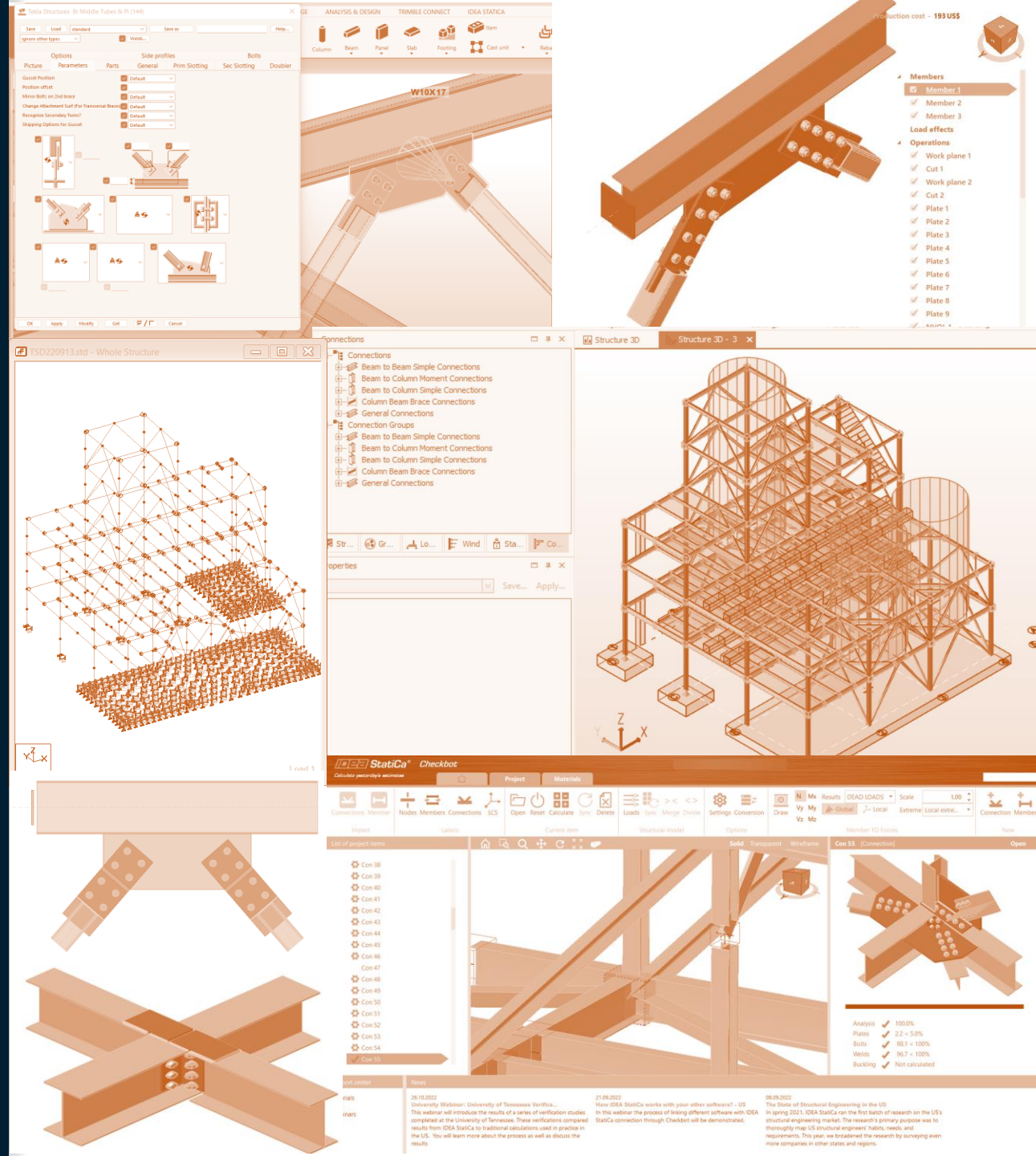
STAAD.Pro
STEEL

RAM Structural System

RISA
A NEMETSCHEK COMPANY
RISA 3D (SAF)

# Agenda

- Type of links
- Demonstration
  - STAAD.Pro/ETABS
  - Tekla Structural Designer
  - RAM Structural System
  - RISA 3D
  - Revit/Advanced Steel
  - Tekla Structures
- Q&A



# Type of link

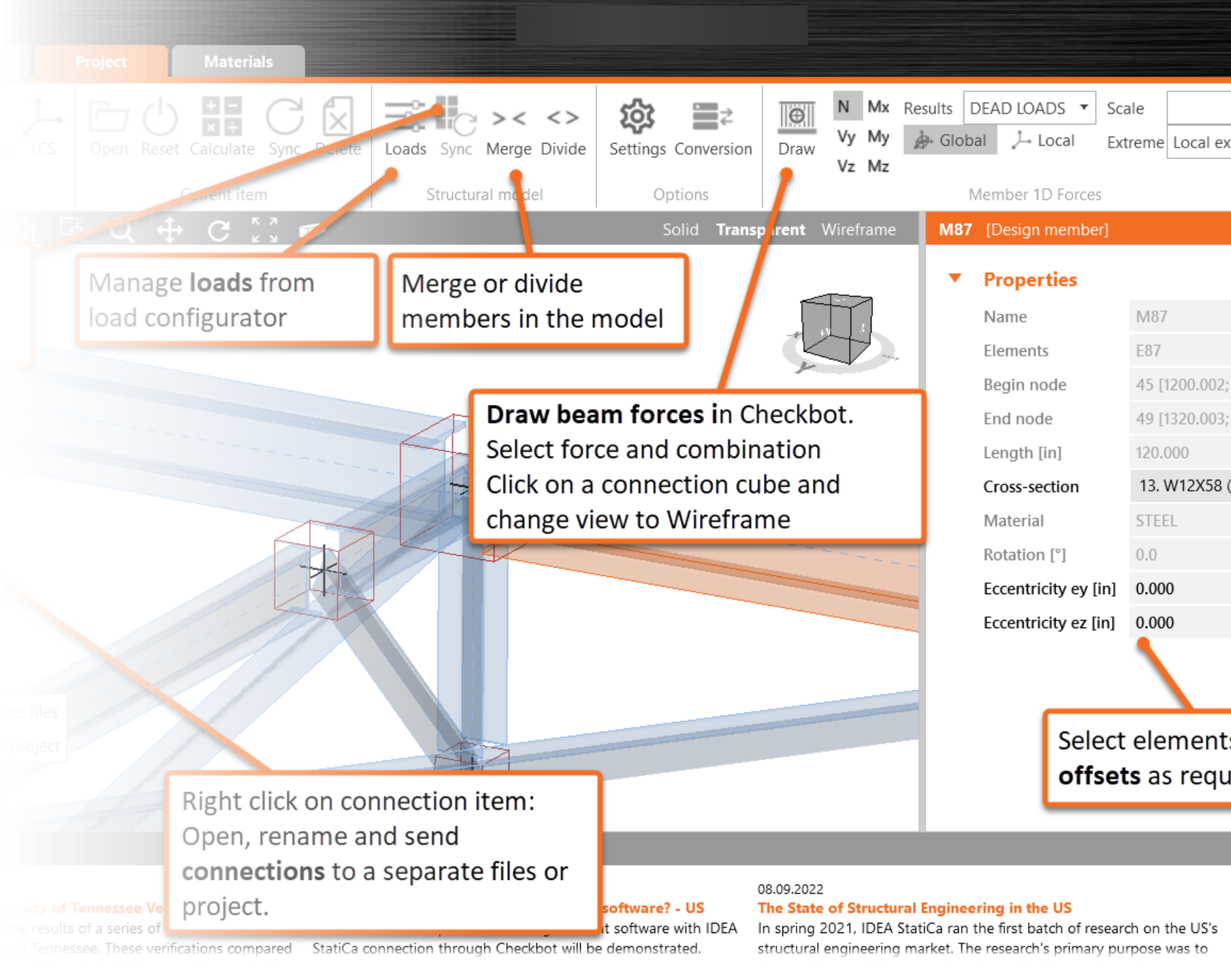
FEA

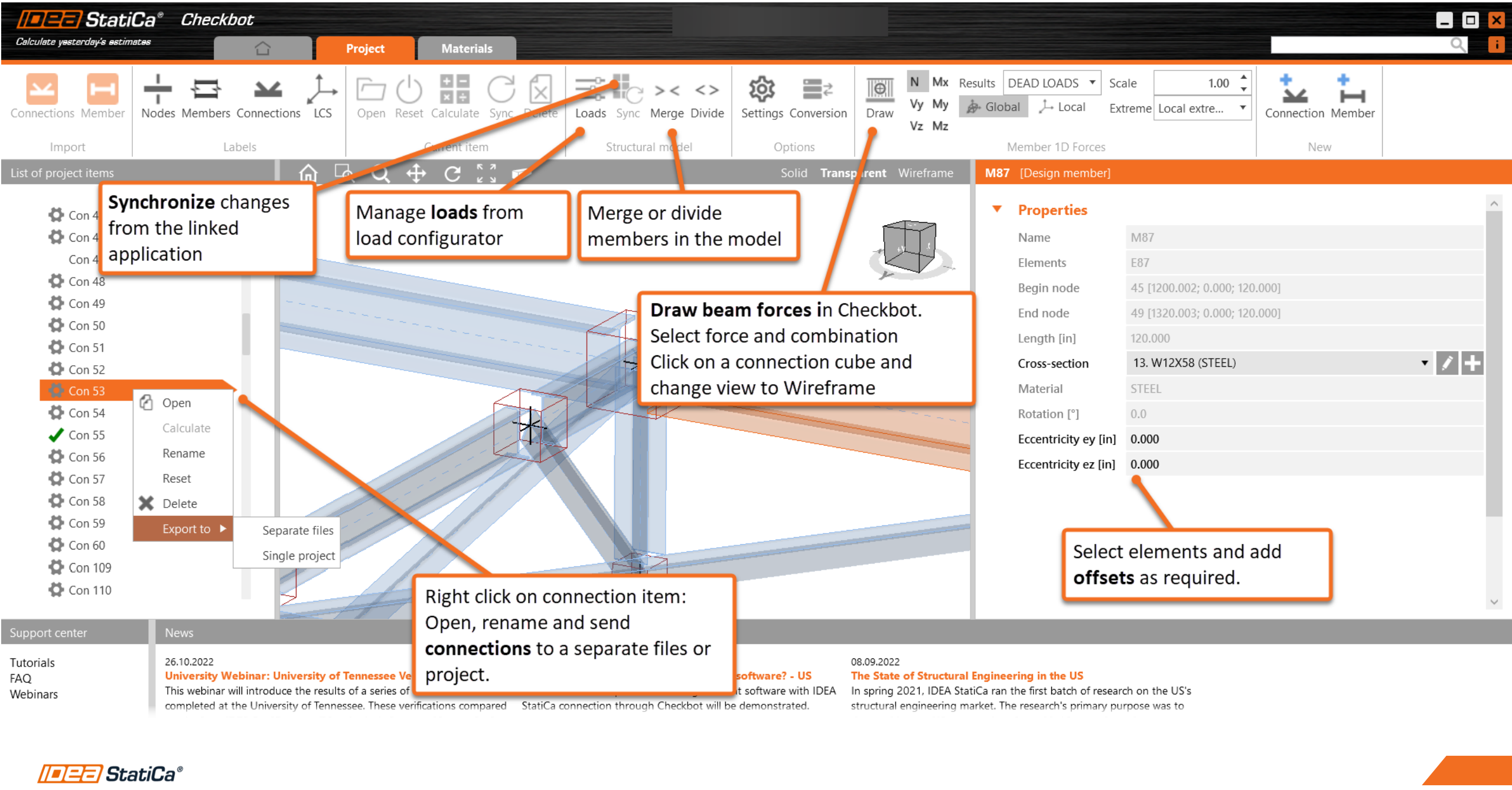
- STAAD.Pro
- ETABS
- SAP 2000
- Tekla Structural Designer
- RAM Structural System
- RISA 3D (Just geometry)

BIM

- Tekla Structures
- Revit
- Advance Steel

# Checkbot


Project
Materials
Loads
Sync
Merge
Divide
Settings
Conversion
Draw
Results
DEAD LOADS
Scale
Global
Local
Extreme
Structural model
Options
Member 1D Forces
Solid
Wireframe
M87 [Design member]
Properties
Name
M87
Elements
E87
Begin node
45 [1200.002;
End node
49 [1320.003;
Length [in]
120.000
Cross-section
13. W12X58
Material
STEEL
Rotation [°]
0.0
Eccentricity ey [in]
0.000
Eccentricity ez [in]
0.000
Manage loads from load configurator
Merge or divide members in the model
Draw beam forces in Checkbot.
Select force and combination
Click on a connection cube and change view to Wireframe
Right click on connection item:
Open, rename and send connections to a separate files or project.
Select elements
offsets as requ
08.09.2022
The State of Structural Engineering in the US
In spring 2021, IDEA StatiCa ran the first batch of research on the US's structural engineering market. The research's primary purpose was to


IDEA StatiCa Checkbot
Calculate yesterday's estimates
Project
Materials
Connections
Member
Import
Nodes
Members
Connections
LCS
Labels
Open
Reset
Calculate
Sync
Delete
Loads
Sync
Merge
Divide
Structural model
Settings
Conversion
Options
Draw
N
Mx
Vy
My
Vz
Mz
Results
DEAD LOADS
Global
Local
Scale
1.00
Extreme
Local extre...
Member 1D Forces
Connection
Member
New
List of project items
Solid
Transparent
Wireframe
M87 [Design member]
Properties
Name
M87
Elements
E87
Begin node
45 [1200.002; 0.000; 120.000]
End node
49 [1320.003; 0.000; 120.000]
Length [in]
120.000
Cross-section
13. W12X58 (STEEL)
Material
STEEL
Rotation [°]
0.0
Eccentricity ey [in]
0.000
Eccentricity ez [in]
0.000
Con 48
Con 49
Con 50
Con 51
Con 52
Con 53
Con 54
Con 55
Con 56
Con 57
Con 58
Con 59
Con 60
Con 109
Con 110
Open
Calculate
Rename
Reset
Delete
Export to
Separate files
Single project
Synchronize changes from the linked application
Manage loads from load configurator
Merge or divide members in the model
Draw beam forces in Checkbot.
Select force and combination
Click on a connection cube and change view to Wireframe
Right click on connection item: Open, rename and send connections to a separate files or project.
Select elements and add offsets as required.
Support center
Tutorials
FAQ
Webinars
News
26.10.2022
University Webinar: University of Tennessee Ve
This webinar will introduce the results of a series of
completed at the University of Tennessee. These verifications compared
software? - US
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IDEA StatiCa

# STAAD.Pro/ETABS/SAP2000

# STAAD.Pro/ETABS/SAP2000

**Highlights**

- Loads and geometry
- Node and members keeps the same name
- Sync is available if analysis/model is modified in the main application
- Plugin is called from the application
- Full model or just some joints

**Limitations**

- No offsets

# Tekla Structural Designer

# Tekla Structural Designer

**Highlights**

- Loads and geometry
- Improved link with 2022 SP2
- Connection with braces
- Multiple selection from Tekla Structural Designer
- Sync is available
- Tekla Support center

**Limitations**

- Data is one-way from TSD to Checkbot.
- Large models

# RAM Structural System

IDEA StatiCa
Calculate yesterday's estimates
STEEL
CONCRETE
BIM
Support center
Connection
Member
Checkbot
Detail
Open
Import
Recent projects
76.ideaCon
Behuer call.ideaCon
HSS Column Base Plate.ideaCon
stiffness.ideaCon
CapacityandStiffness.ideaCon
RBS-1.ideaCon
Shear tab connection gusset to beam and column-HS
Design of members, cross-sections and details
News
08.06.2022
What's new in IDEA StatiCa 22.0? - US
Join us for the second webinar from the US team! This session will discuss the latest enhancements in V22 with a specific focus...
08.06.2022
Connection Wednesdays - New way of project collabora...
An effective process of structural design is something that most engineers and also their managers dream about. Clever sharing ...
26.05.2022
Problems with dead load are dead
Want to get certified?
Keep in touch at

# RAM Structural System

**Highlights**

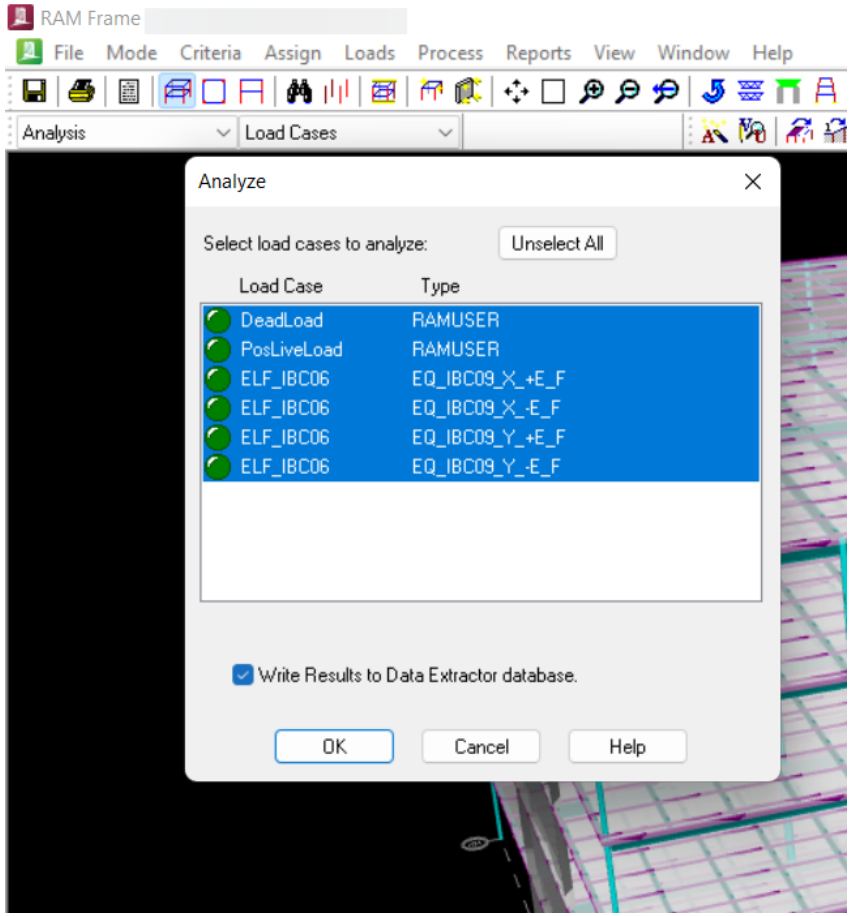
- Loads and geometry
- All the RAM SS joints imported in Checkbot
- Offsets imported, top of steel considered
- Available from V22 of IDEA StatiCa

**Limitations**

- One time import, no sync is available
- Mapping is needed for some profiles (steel joist, C-beam, etc.)
- No partial import

# Before importing…

- Database is closed and RAM Structural System in not running.
- A RAM Frame analysis is required
- ‘Write Results to Data Extractor database’ checked.
- The model should be saved once results have been completed.
- All elements should have a defined size.



# RISA 3D

# RISA 3D

**Highlights**

- SAF File import (.xlsx file)
- Geometry and materials

**Limitations**

- No loads imported
- No sync available
- No offset

IDEA StatiCa®
Calculate yesterday's estimates
STEEL
CONCRETE
BIM
Support center
1
Connection
Member
Checkbot
Detail
Open
Import
Any topology, any loading, in minutes
Recent projects
Iteration 6.ideaCon
Base plates Axis A.ideaCon
Modified model with weld operations.ideaCon
modified model.ideaCon
HSS-W_Moment.ideaCon
original.ideaCon
Beam To Beam -Test.ideaCon
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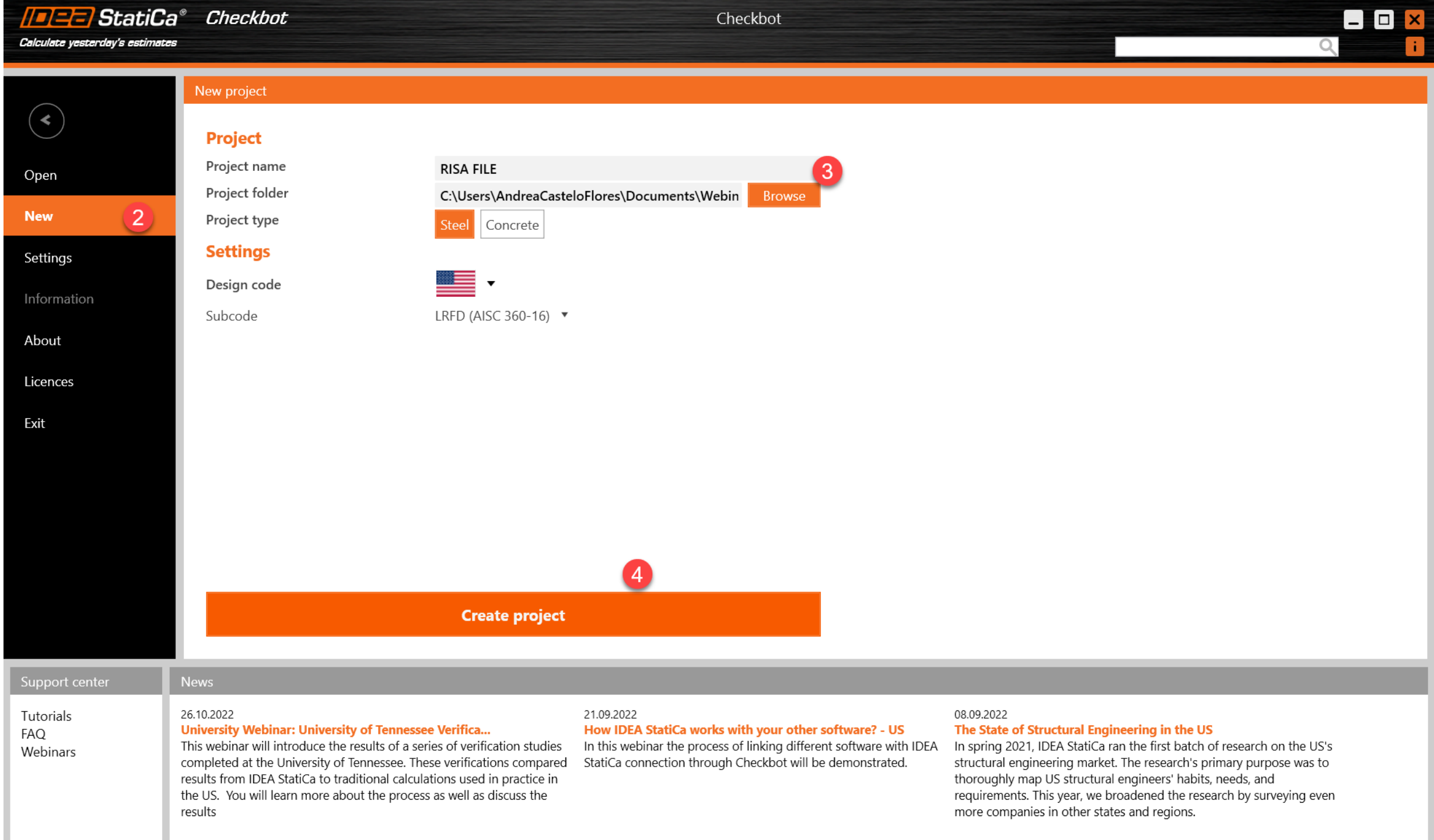
IDEA StatiCa Checkbot
Calculate yesterday's estimates
Checkbot
Open
New
2
Settings
Information
About
Licences
Exit
New project
Project
Project name
RISA FILE
3
Project folder
C:\Users\AndreaCasteloFlores\Documents\Webin
Browse
Project type
Steel
Concrete
Settings
Design code
Subcode
LRFD (AISC 360-16)
4
Create project
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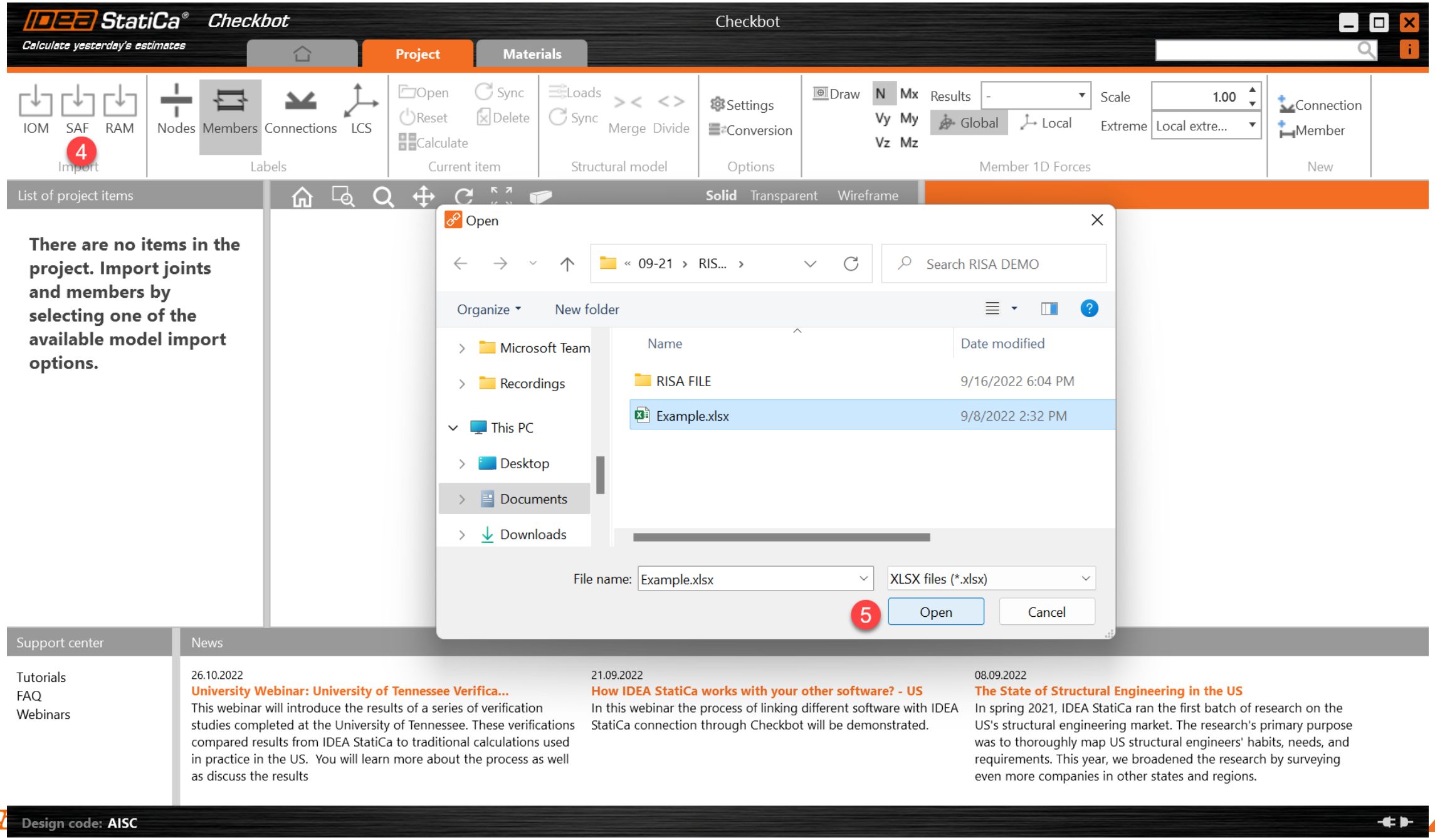
IDEA StatiCa Checkbot
Calculate yesterday's estimates
Checkbot
Project
Materials
IOM
SAF
RAM
4
Import
Nodes
Members
Connections
LCS
Labels
Open
Sync
Reset
Delete
Calculate
Current item
Loads
Sync
Merge
Divide
Structural model
Settings
Conversion
Options
Draw
N
Mx
Vy
My
Vz
Mz
Results
Global
Local
Scale
1.00
Extreme
Local extre...
Member 1D Forces
Connection
Member
New
List of project items
There are no items in the project. Import joints and members by selecting one of the available model import options.
Solid
Transparent
Wireframe
Open
09-21 › RIS... ›
Search RISA DEMO
Organize
New folder
Microsoft Team
Recordings
This PC
Desktop
Documents
Downloads
Name
Date modified
RISA FILE
9/16/2022 6:04 PM
Example.xlsx
9/8/2022 2:32 PM
File name:
Example.xlsx
XLSX files (*.xlsx)
5
Open
Cancel
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Design code: AISC

IDEA StatiCa® Checkbot

Calculate yesterday's estimates

Checkbot

Project | Materials

IOM | SAF | RAM — Import

Nodes | Members | Connections | LCS — Labels

Open | Sync | Reset | Delete | Calculate — Current item

Loads | Sync | Merge | Divide — Structural model

Settings | Conversion — Options

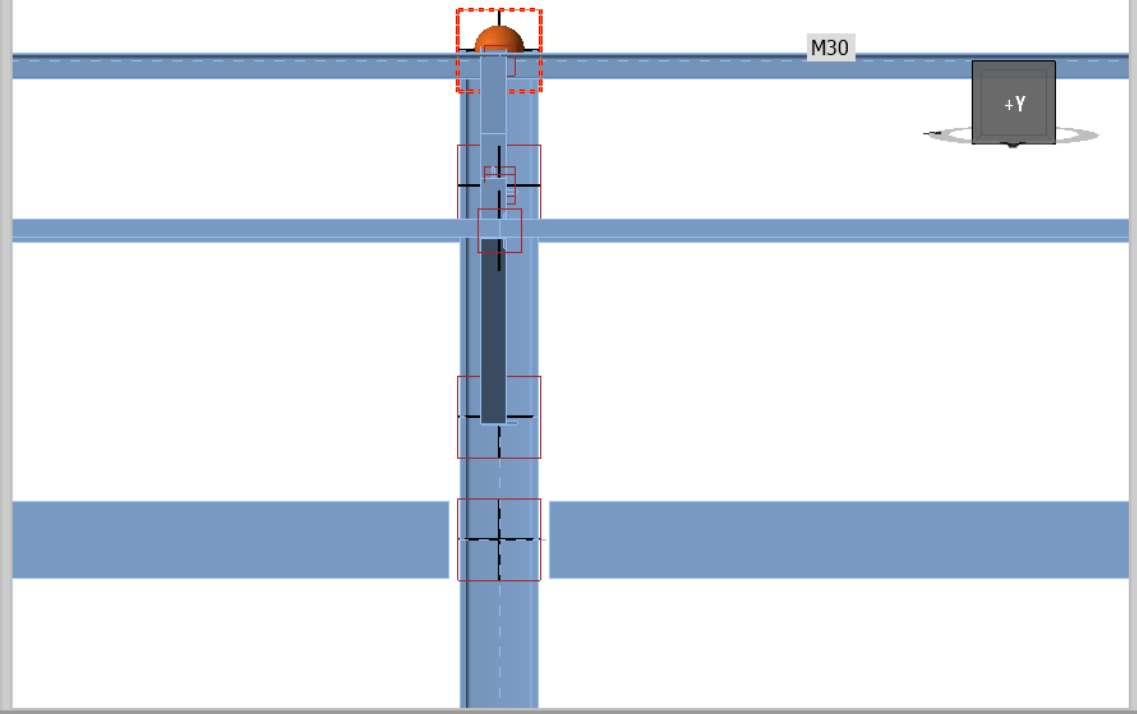
Draw | N | Mx | Vy | My | Vz | Mz | Results LC3 | Global | Local | Scale 1.00 | Extreme Local extre... — Member 1D Forces

Connection | Member — New

List of project items

- Connections
  - N1
  - N17
  - N19
  - N62
  - N81
  - N67
  - N3
  - N18
  - N20
  - N61
  - N103
  - N108
  - N21
  - N137

Solid | Transparent | Wireframe




N108 [Connection] Open | Load update | Reset

## Properties

| | |
|---|---|
| Name | N108 |
| Node | N108 |
| Connected members | M2, M31, M33 |
| Connection point | [120.000; 0.000; 122.004] |

## Loads

| | |
|---|---|
| Result class | All ULS Fund |

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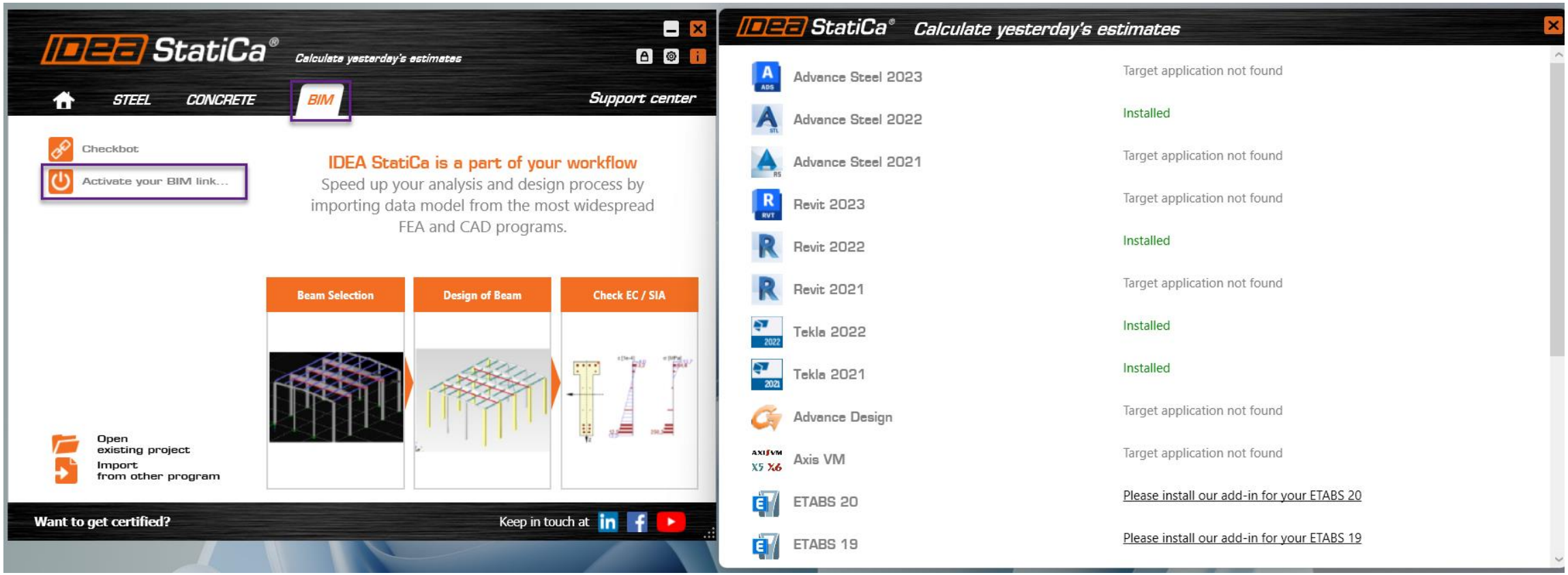
Design code: **AISC**

# Automatic Plugin installation for BIM Links



# REVIT/Advanced Steel

# REVIT

**Highlights**

- Connection model imported from Revit
- If loads are model in Revit, also loads can be imported
- Assign general connections and finish your design in IDEA StatiCa

**Limitations**

- A connection must be modeled in Revit
- One way link

# Tekla Structures

# TEKLA Structures

**Highlights**

- Connection model and geometry
- Sync is available
- Process:
  - Select node
  - Select members (support member first)
  - Select connection entities

**Limitations**

- One way link
- Welded and composite cross-sections are not supported.
- Some welds are not detected, use recommended weld option
- The anchoring import is not supported
- Bulk selection available in ID V22.1
- Workarounds for limitations

# Q&A

# Thank you

## David Eckrote

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- Andrea.Castelo@ideastatica.com