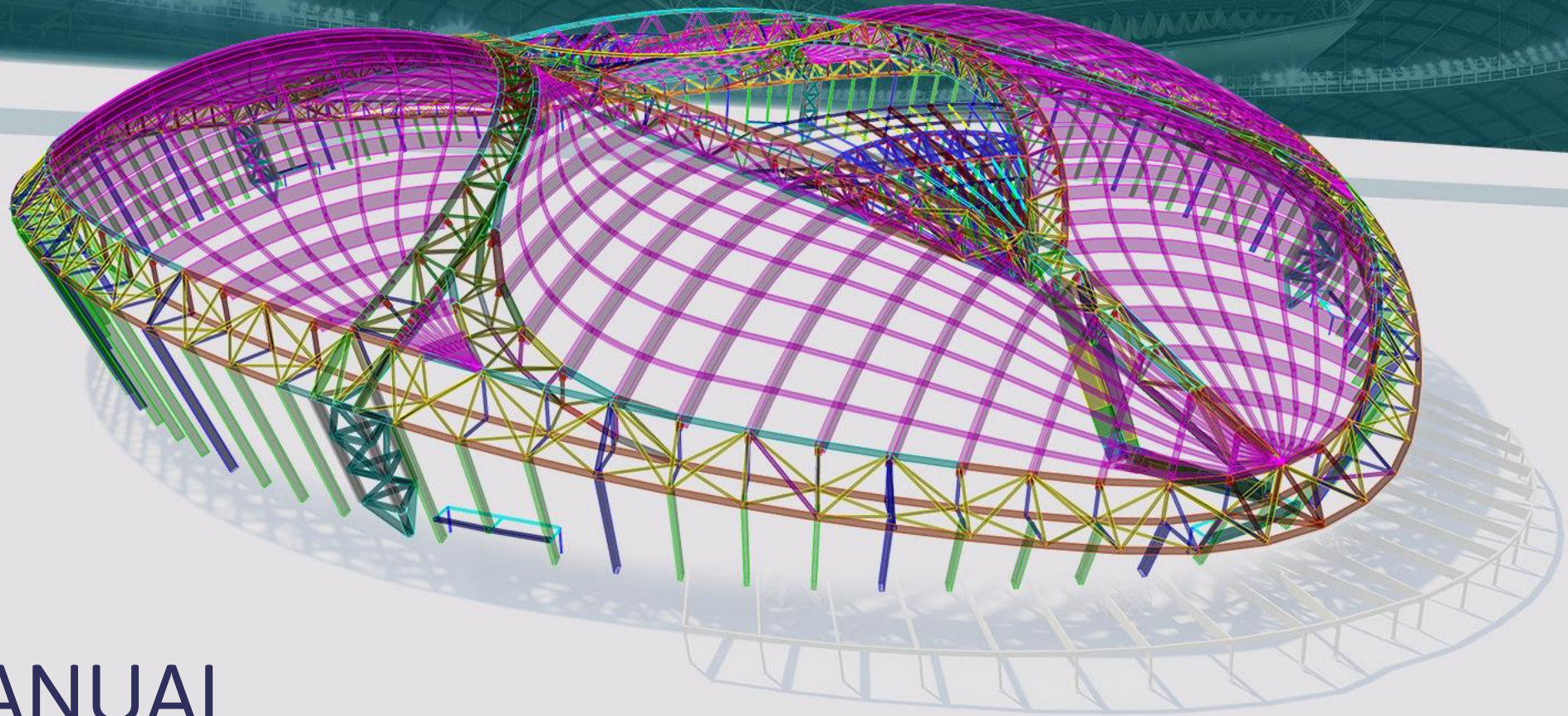


SCIA
ENGINEER

SUPER POWERED.
SUPER EASY.



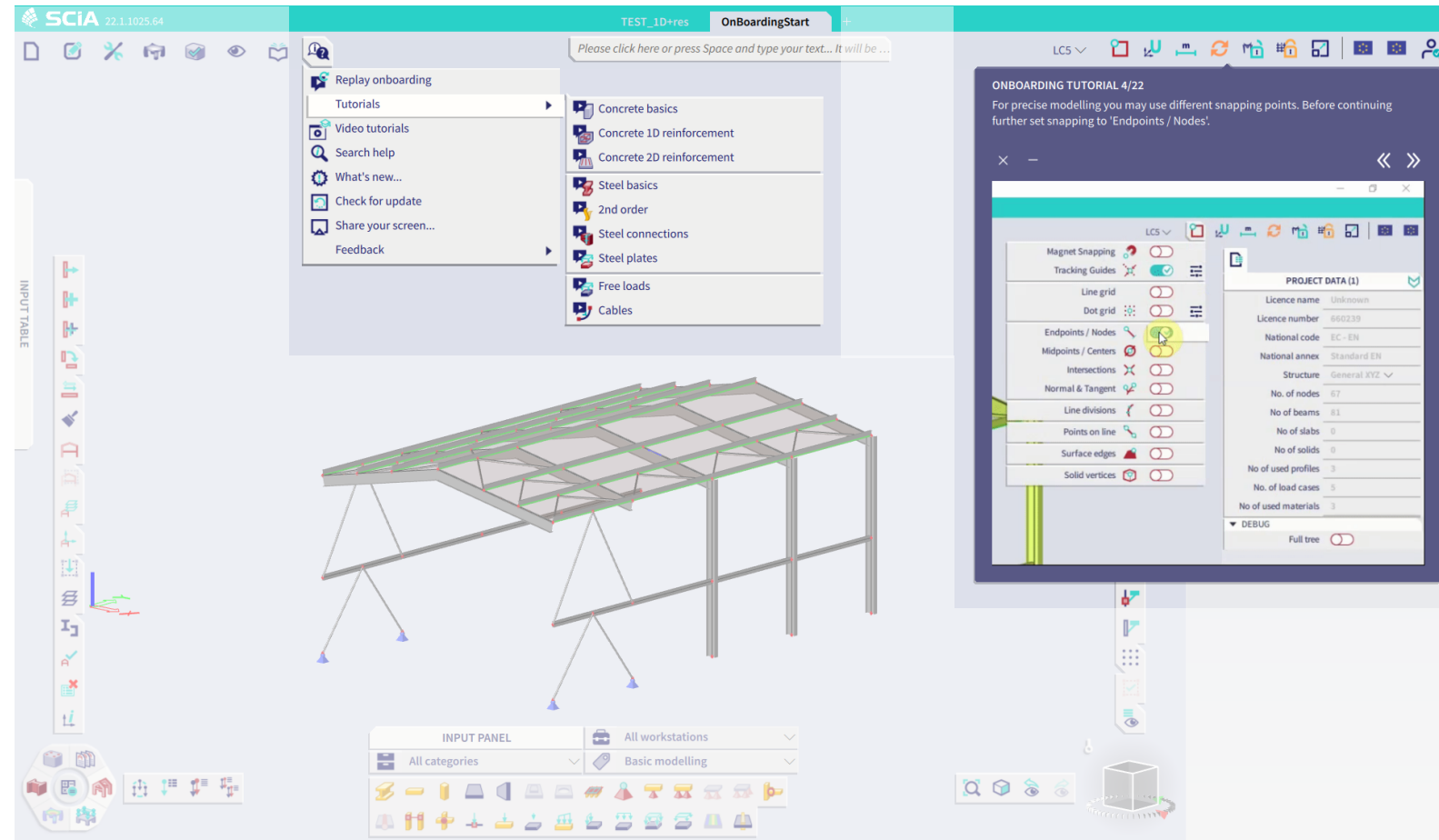
UI MANUAL

LISE BIBERT

ONBOARDING TUTORIAL

AND OTHER TUTORIALS

- Built-in way of learning
- Tutorials for several topics
- New tutorials added regularly



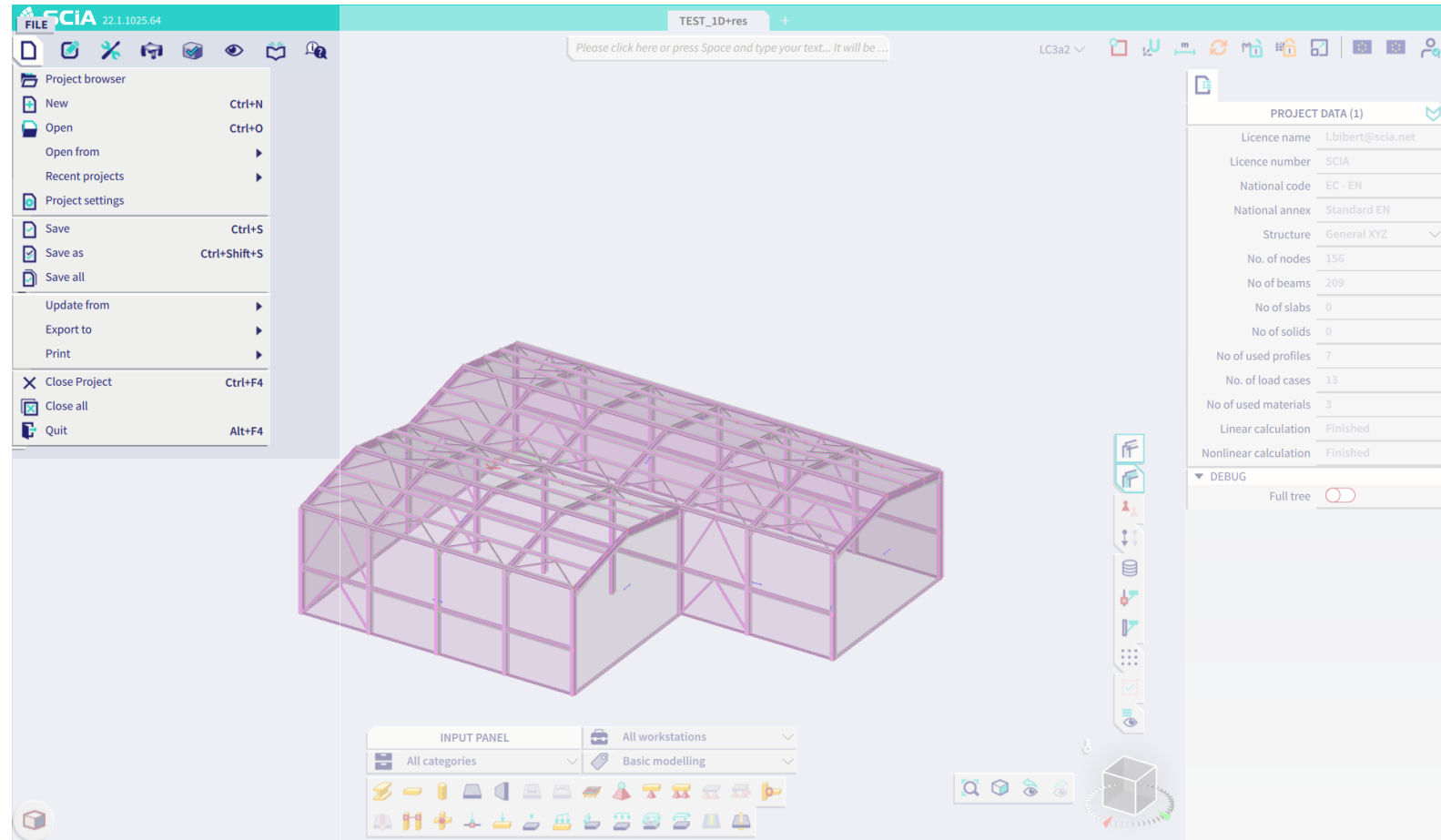
MENU'S

MENUBAR

- **Menu content**

- File
- Edit
- Tools
- Results
- Design
- View
- Libraries
- Help

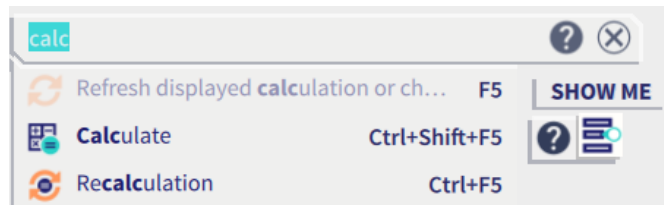
- **Drag & drop to process toolbar**
- **Change hotkeys**
- **Single letter hotkeys possible**



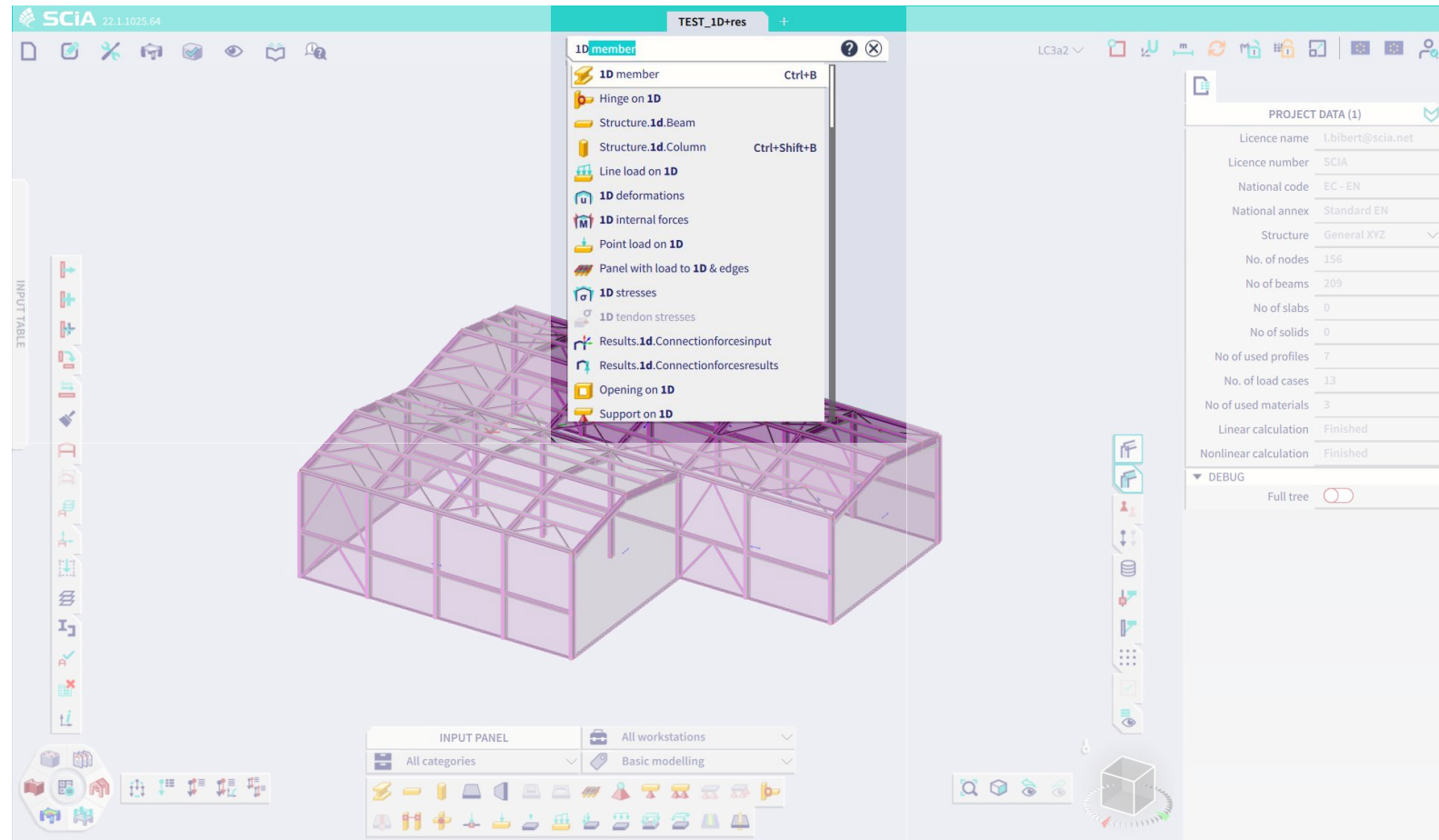
SPOTLIGHT

SEARCH BAR & COMMAND LINE

- **Autofill**
- Results in order of relevance
- **Space bar** to focus
- **Show me** (in menu) & **help**



- Highlighted during command
- Enter **coordinates** directly during command
- Change **hotkeys**
- **Repeat** last command

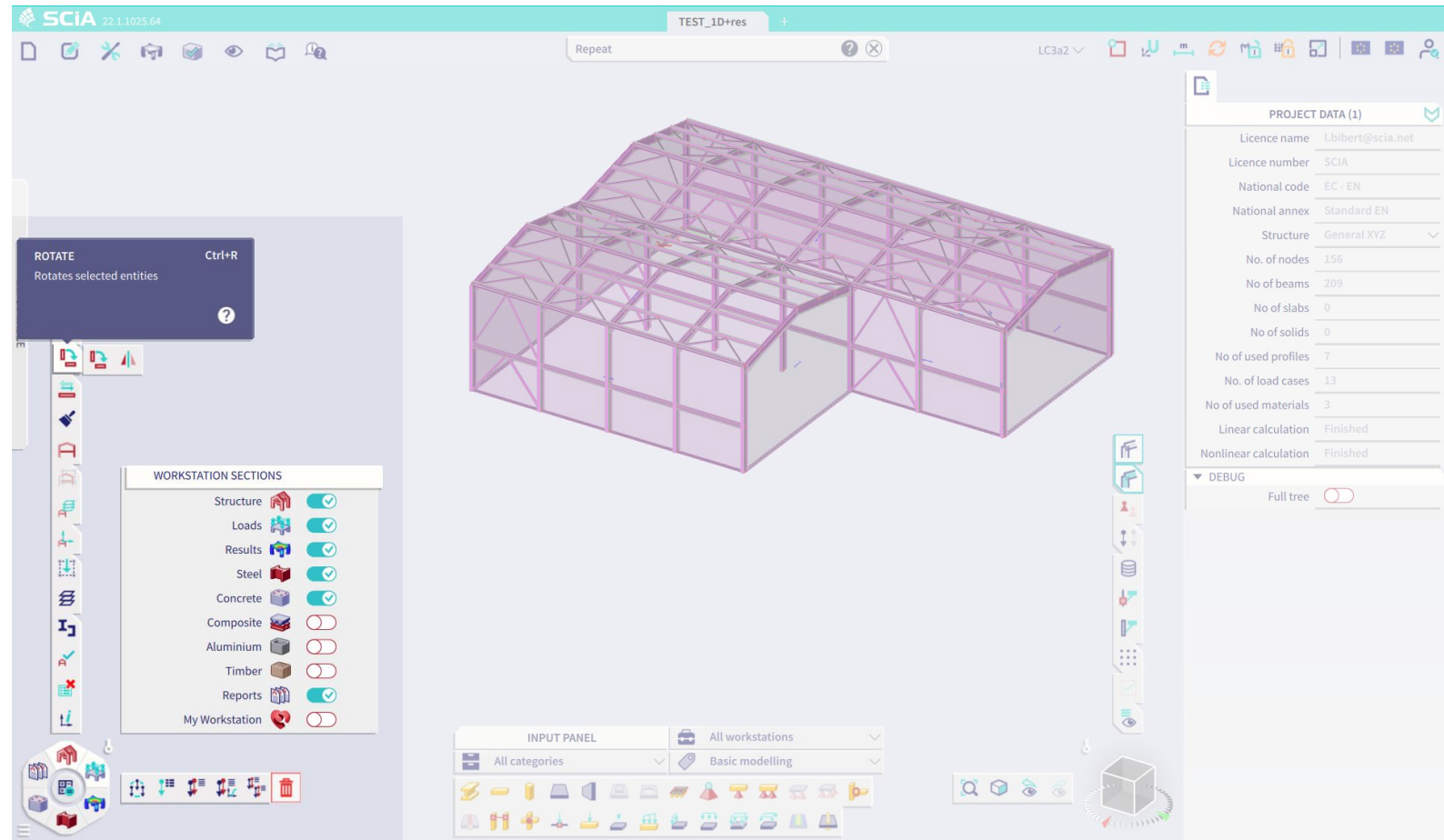


PROCESS TOOLBAR

& WORKSTATION WHEEL



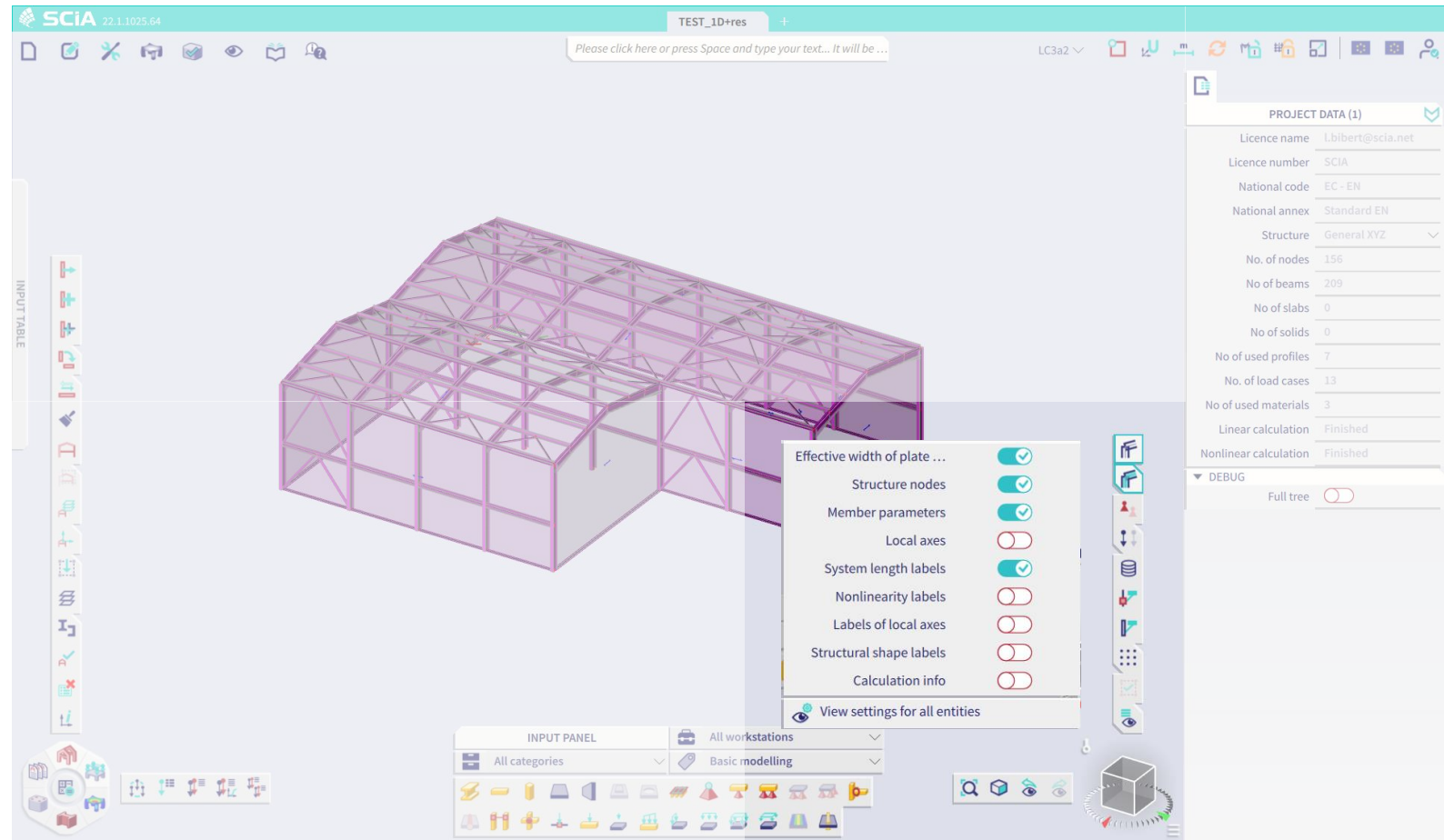
- Different **workstations** with toolbar in the wheel
- **Two workstations open** at the same time
- Change workstation on click and ctrl+click
- Workstation selection from hamburger menu
- Minimize or drag
- Arms can be switched
- **Drag & drop** commands from spotlight or menu
- Commands can be **stacked**
- **Tooltip** on hover (**help & hotkey**)
- **Calculate** button
- Visible if/which results are calculated



VIEW BAR

& NAVICUBE

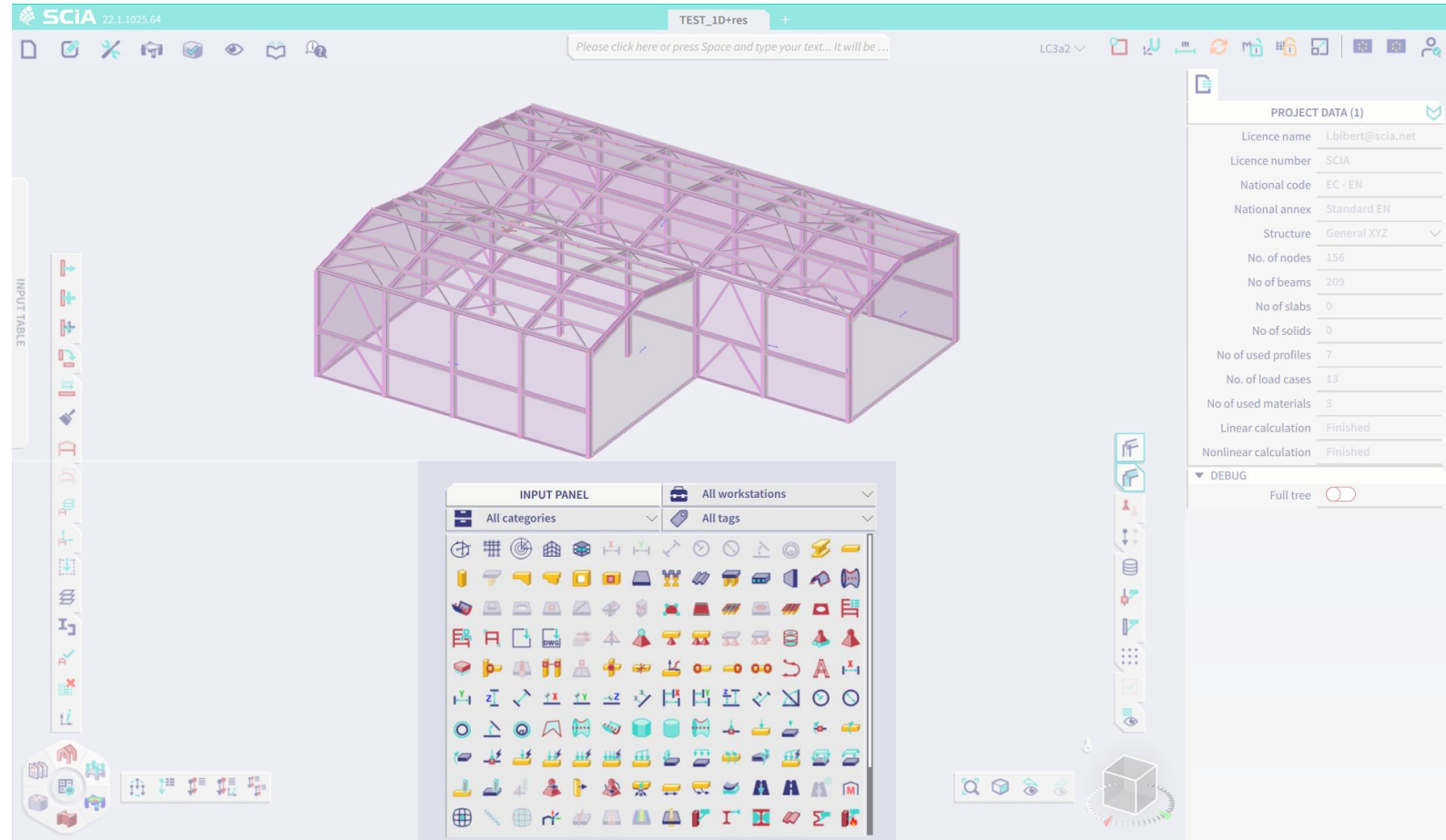
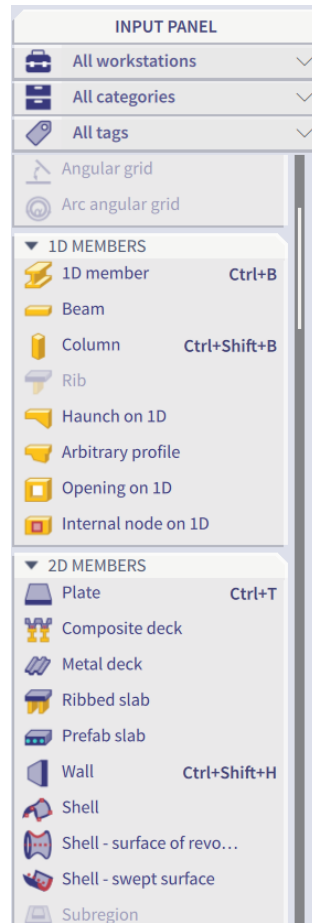
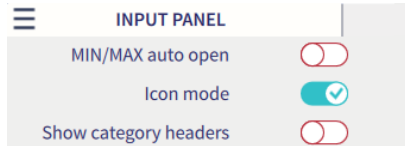
- Similar to Process Toolbars
- **View, zoom, visibility** commands & settings
- Arms can be switched
- **Navicube** shows x, y and z
- **Minimize** via hamburger menu
- Fixed position



INPUT PANEL

& FILTERS

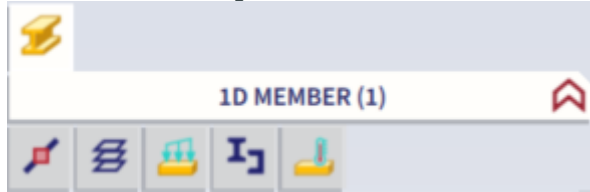
- **Filters & workstations**
- **Drag, dock, tear out, minimize**
- **Icon mode or command names**
- **Change hotkeys**



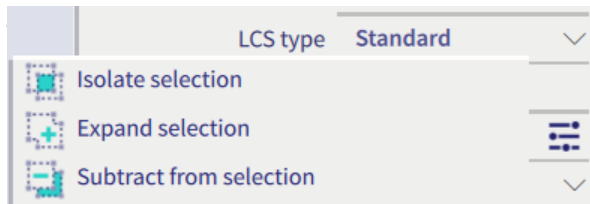
PROPERTIES PANEL

& RESULTS

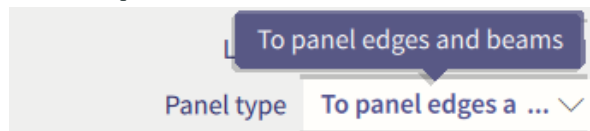
- Selected objects & associated data



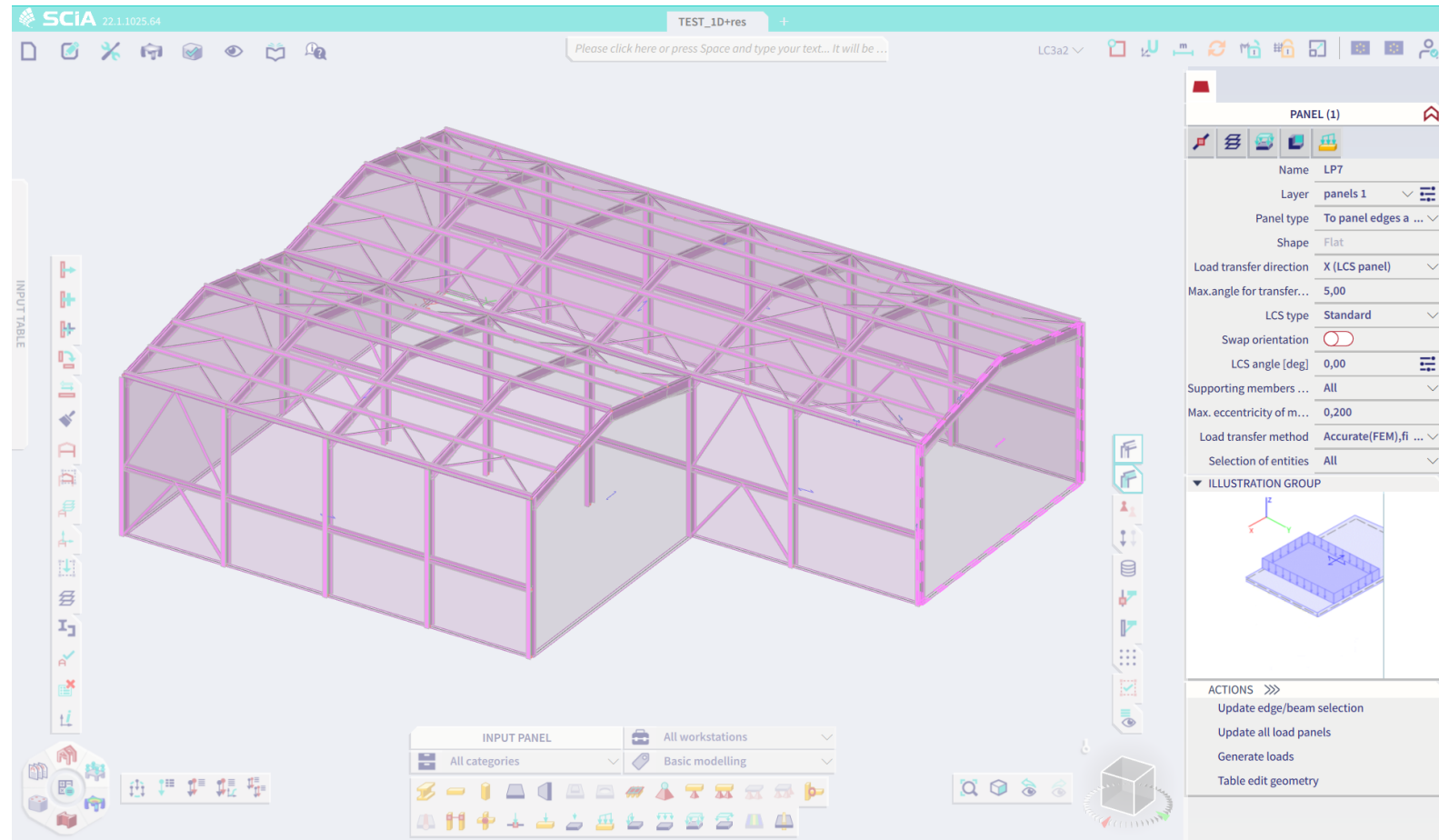
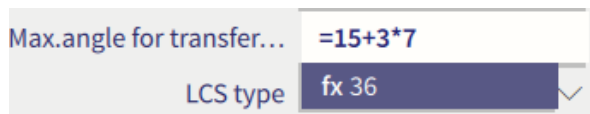
- Drag, dock, tear out, minimize
- Basic / Advanced mode
- Selection tools on right click, even



- Tooltip on hover



- Formulas



PROPERTIES PANEL

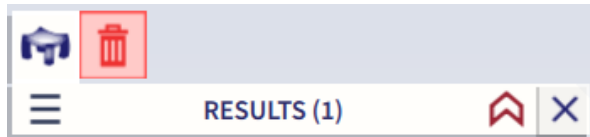
& RESULTS

- Result generation can be **cancelled** from Spotlight

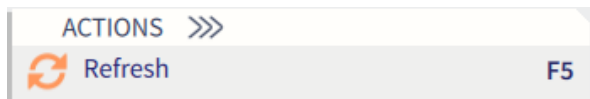
Calculating: 89 / 205

Available part is shown

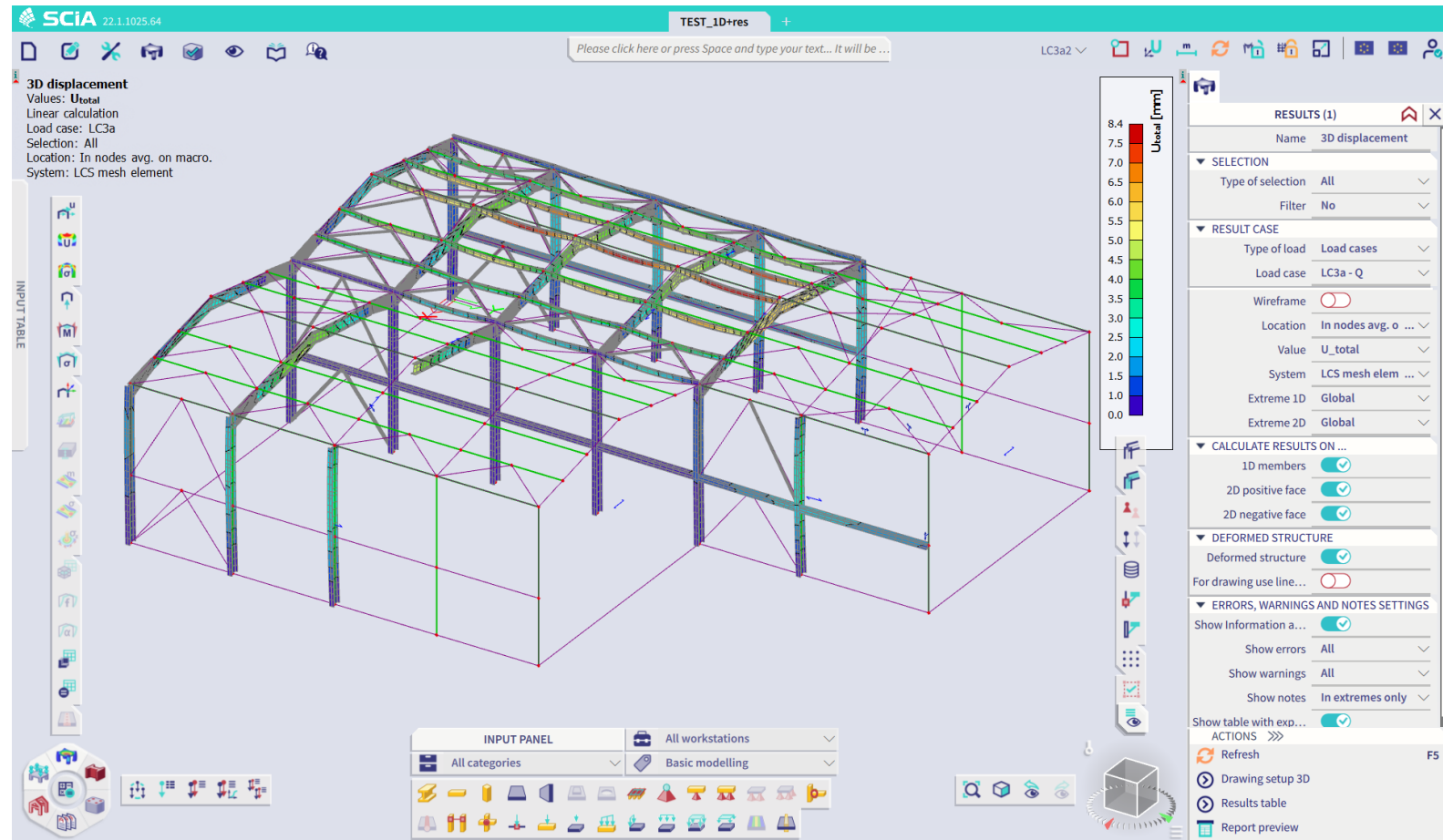
- **Close** results with bin or close button



- (Change) Hotkey for **refresh** results



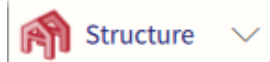
- **Manual/Autorefresh** results & results lock in status bar



INPUT TABLE

SHOW & EDIT VALUES

- Drag, dock, tear out, minimize
- Switch workstations

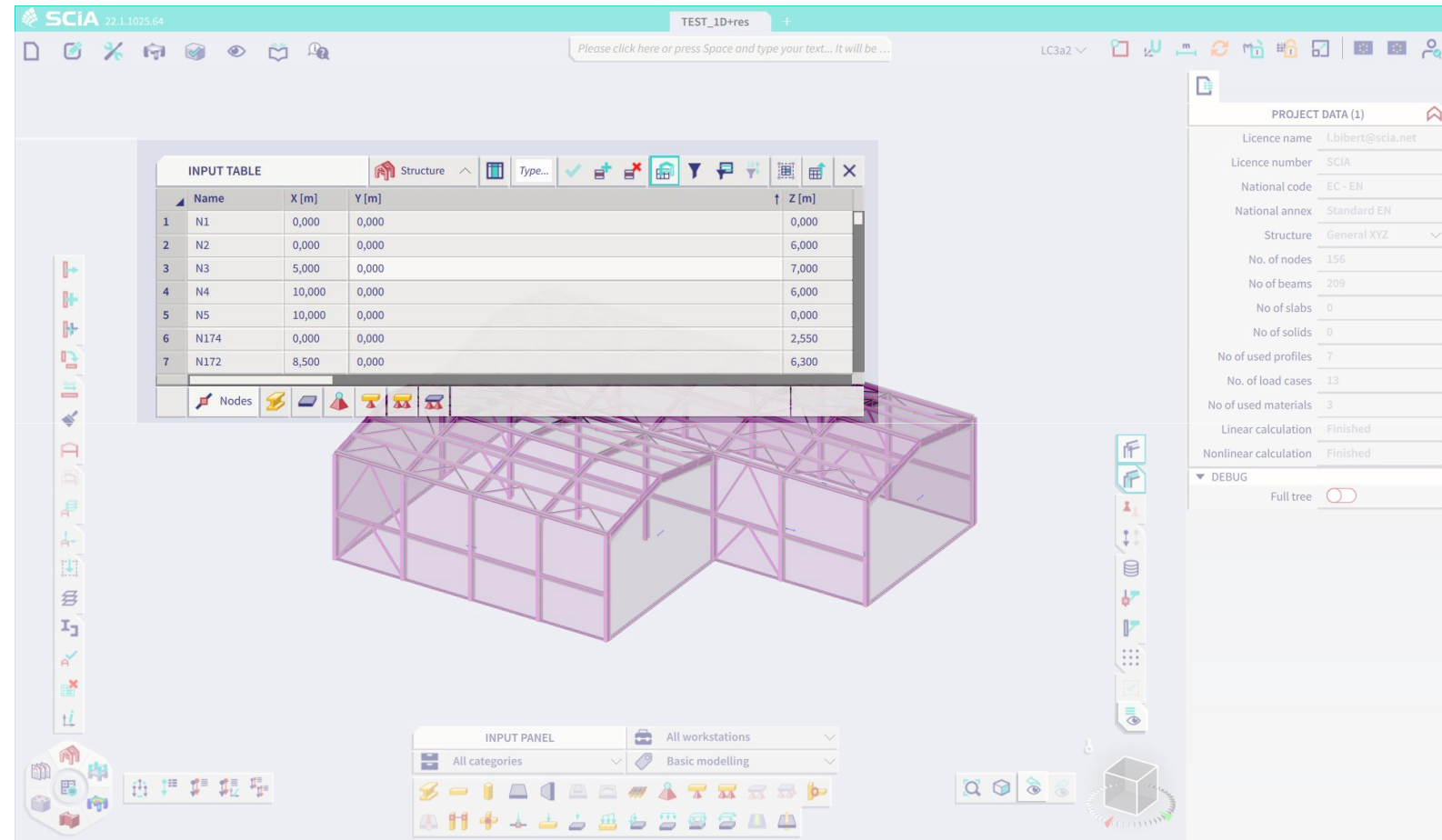
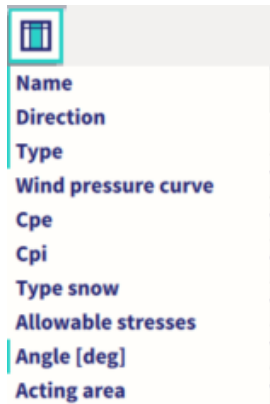


Structure
Loads
Libraries

- Switch/remove tabs



- Add or remove columns



INPUT TABLE

SHOW & EDIT VALUES

- Add or remove elements



- Edit values with context menu on right click

Copy
Paste
Copy value to editbox

- Edit values for a selection in the multieditbox
- Parameters are supported

The screenshot displays the SCIA 22.1.1025.64 software interface. A window titled 'INPUT TABLE' is open, showing a table with columns for Name, X [m], Y [m], and Z [m]. The table contains 7 rows of data. Below the table is a toolbar with icons for 'Nodes' and other functions. A tooltip titled 'MULTIEDIT BOX OPERATIONS' is visible on the right side of the screen, providing instructions on how to use the multiedit box to modify values. The tooltip lists several operations: +x (add), -x (subtract), *x (multiply), /x (divide), ~x (round), >x (replace), and ?x (search). A text input field at the bottom of the tooltip is labeled 'Type here'.

	Name	X [m]	Y [m]	Z [m]
1	N1	0,000	0,000	0,000
2	N2	0,000	0,000	6,000
3	N3	5,000	0,000	7,000
4	N4	10,000	0,000	6,000
5	N5	10,000	0,000	0,000
6	N174	0,000	0,000	2,550
7	N172	8,500	0,000	6,300

MULTIEDIT BOX OPERATIONS
Modify the value of selected cell(s).
Available operations are:
+x : add x
-x : subtract x
*x : multiply by x
/x : divide by x
~x : round to the closest multiple of x
>x : replace by x
?x : search the table for x

All operators can be typed directly or inserted using the context menu (right-click).
Type here

INPUT TABLE

FILTERING & VISIBILITY

- Filter bar with conditioning functions
- Filter by selected rows or load case
- Filter by visibility in 3D scene
- Select cells with the same value
- Highlighted items in table are selected in 3D scene and vice versa
- Send table to report

INPUT TABLE

Name	Material type	Thermal...	Unit ma ...	E modulus [MPa]	Poisson ...	Indepen ...	G mod...
1	C16	Timber	0,0	310,0	8000,000	0,0	500,00

FILTER CONDITIONS
Given the specified **condition**, show rows of the table where the value x in the same column is such that...

- a : x contains a
- $=a$: x is equal to a
- $\neq a$: x is not equal to a
- $<a$: x is less than a
- $\leq a$: x is less than or equal to a
- $>a$: x is greater than a
- $\geq a$: x is greater than or equal to a
- $(a;b)$ or $[a;b]$: $a < x < b$
- $<a;b>$ or $[a;b]$: $a \leq x \leq b$

All operators are applicable to numerical, text and boolean values (checkboxes), as well as parameters.

For filtering boolean properties, use values **1** for *true* and **0** for *false*.

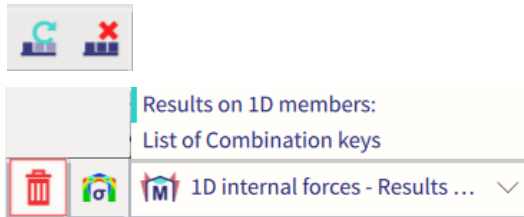
INPUT TABLE

Name	Type	Begin node	End node	Cross-section	Length [...]	Layer
B323	general (0)	N239	N236	CS10 - I + lw prom (IPE300; 180; 14 ...	5,099	hall 1
B324	general (0)	N87	N261	CS10 - I + lw prom (IPE360; 180; 14 ...	5,099	hall 1
B325	general (0)	N263	N262	CS4 - IPE360	6,000	hall 1
B326	general (0)	N262	N261	CS10 - I + lw prom (IPE360; 180; 14 ...	5,099	hall 1
B327	general (0)	N108	N264	CS10 - I + lw prom (IPE360; 180; 14 ...	5,099	hall 1
B328	general (0)	N266	N265	CS4 - IPE360	6,000	hall 1
B329	general (0)	N265	N264	CS10 - I + lw prom (IPE360; 180; 14 ...	5,099	hall 1
B330	general (0)	N260	N261	CS4 - IPE360	6,000	hall 1

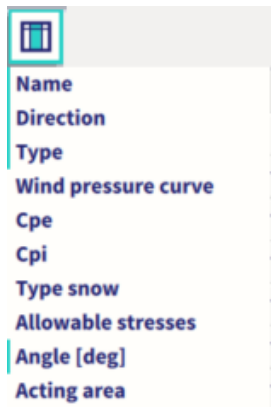
1D members

RESULTS TABLE

- Drag, dock, tear out, minimize
- Switch, remove, or regenerate tabs



- Add or remove columns



SCIA 22.1.1025.64 TEST_1D+res

1D internal forces
Values: M_y
Linear calculation
Combination: CO1
Coordinate system: Principal
Extreme 1D: Global
Selection: All

RESULTS TABLE

Name	dx [m]	Case	N [kN]	V _y [kN]	V _z [kN]	M _x [kNm]	M _y [kNm]
1 B502	0,000	CO1/1	-400,63	0,00	0,26	0,01	0,00
2 B501	0,000	CO1/1	439,17	0,00	-5,30	-0,01	0,00
3 B3	6,000	CO1/2	-40,93	-16,47	-0,41	0,00	-2,44
4 B3	2,550+	CO1/3	-62,55	19,34	0,43	0,00	1,11
5 B428	0,000	CO1/4	-61,54	-0,13	-18,03	0,00	0,00
6 B95	0,000	CO1/5	-16,26	-2,72	69,75	-0,12	-142,03
7 B346	0,000	CO1/6	-26,15	0,00	0,15	-0,62	0,00
8 B320	1,500+	CO1/6	-14,11	2,35	10,67	0,61	23,71

RESULTS (1)
Name: 1D internal forces

SELECTION
Type of selection: All
Filter: No
Results in sections: All

RESULT CASE
Type of load: Combinations
Combination: CO1

EXTREME 1D
Extreme 1D: Global
Values: M_y
Interval:

Coordinate system: Principal

OUTPUT SETTINGS
Print combination key:

DRAWING SETUP 1D
Display value name:
Display values:
Display units:
Display case:
Display section dx:
Display combination ...:
Display combination ...:
Color scheme: Defined by result
Graph type: Filled transparent
Envelopes drawing: 0 to extreme

ACTIONS
Refresh
New combination from Combination key
Results table
Report preview

RESULTS TABLE

- Get or update results from result panel

Results table



- Identify result

EC-EN 1993 Steel check ULS



- Change output detail or Preview detailed check

Summary

Summary

Detailed

SCIA 22.1.1025.64 TEST_1D+res

1D internal forces
Values: M_y
Linear calculation
Combination: CO1
Coordinate system: Principal
Extreme 1D: Global
Selection: All

RESULTS TABLE								
Name	dx [m]	Case	N [kN]	V _y [kN]	V _z [kN]	M _x [kNm]	M _y [kNm]	
1 B502	0,000	CO1/1	-400,63	0,00	0,26	0,01	0,00	
2 B501	0,000	CO1/1	439,17	0,00	-5,30	-0,01	0,00	
3 B3	6,000	CO1/2	-40,93	-16,47	-0,41	0,00	-2,44	
4 B3	2,550+	CO1/3	-62,55	19,34	0,43	0,00	1,11	
5 B428	0,000	CO1/4	-61,54	-0,13	-18,03	0,00	0,00	
6 B95	0,000	CO1/5	-16,26	-2,72	69,75	-0,12	-142,03	
7 B346	0,000	CO1/6	-26,15	0,00	0,15	-0,62	0,00	
8 B320	1,500+	CO1/6	-14,11	2,35	10,67	0,61	23,71	

RESULTS (1)

SELECTION
Type of selection: All
Filter: No
Results in sections: All

RESULT CASE
Type of load: Combinations
Combination: CO1

EXTREME 1D
Extreme 1D: Global
Values: M_y
Interval:

Coordinate system: Principal

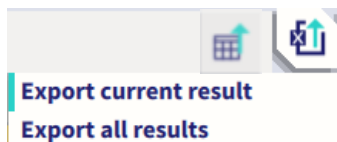
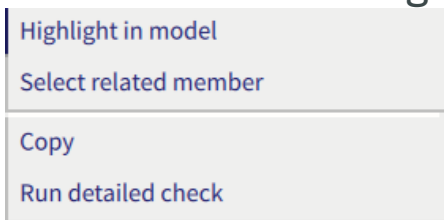
OUTPUT SETTINGS
Print combination key:

DRAWING SETUP 1D
Display value name:
Display values:
Display units:
Display case:
Display section dx:
Display combination ...:
Display combination ...:
Color scheme: Defined by result
Graph type: Filled transparent
Envelopes drawing: 0 to extreme

ACTIONS
Refresh
New combination from Combination key
Results table
Report preview

RESULTS TABLE

- Filter bar with conditioning functions
- Filter by selected rows or load case
- Filter by visibility in 3D scene
- Show/select items in 3D scene via context menu on right click
- Send table to report or export



Name	dx [m]	Case	N [kN]	Vy [kN]	Vz [kN]	Mx [kNm]	My [kNm]	Mz [kN]
B3	2,550+	CO2/3	-46,83	12,89	0,29	0,00	0,74	-7,15

FILTER CONDITIONS

Given the specified **condition**, show rows of the table where the value *x* in the same column is such that...

- a** : *x* contains *a*
- =a** : *x* is equal to *a*
- <>a** : *x* is not equal to *a*
- <a** : *x* is less than *a*
- <=a** : *x* is less than or equal to *a*
- >a** : *x* is greater than *a*
- >=a** : *x* is greater than or equal to *a*
- (a;b)** or **]a;b[** : $a < x < b$
- <a;b>** or **[a;b]** : $a \leq x \leq b$

All operators are applicable to numerical, text and boolean values (checkboxes), as well as parameters.

For filtering boolean properties, use values **1** for *true* and **0** for *false*.

REPORT PREVIEW

- Open from result panel, table, spotlight...



- Settings, printing, export



- Zoom



The screenshot displays the SCIA Engineer interface. The main window shows a 3D model of a steel truss structure. A 'REPORT PREVIEW' window is open, displaying the following data:

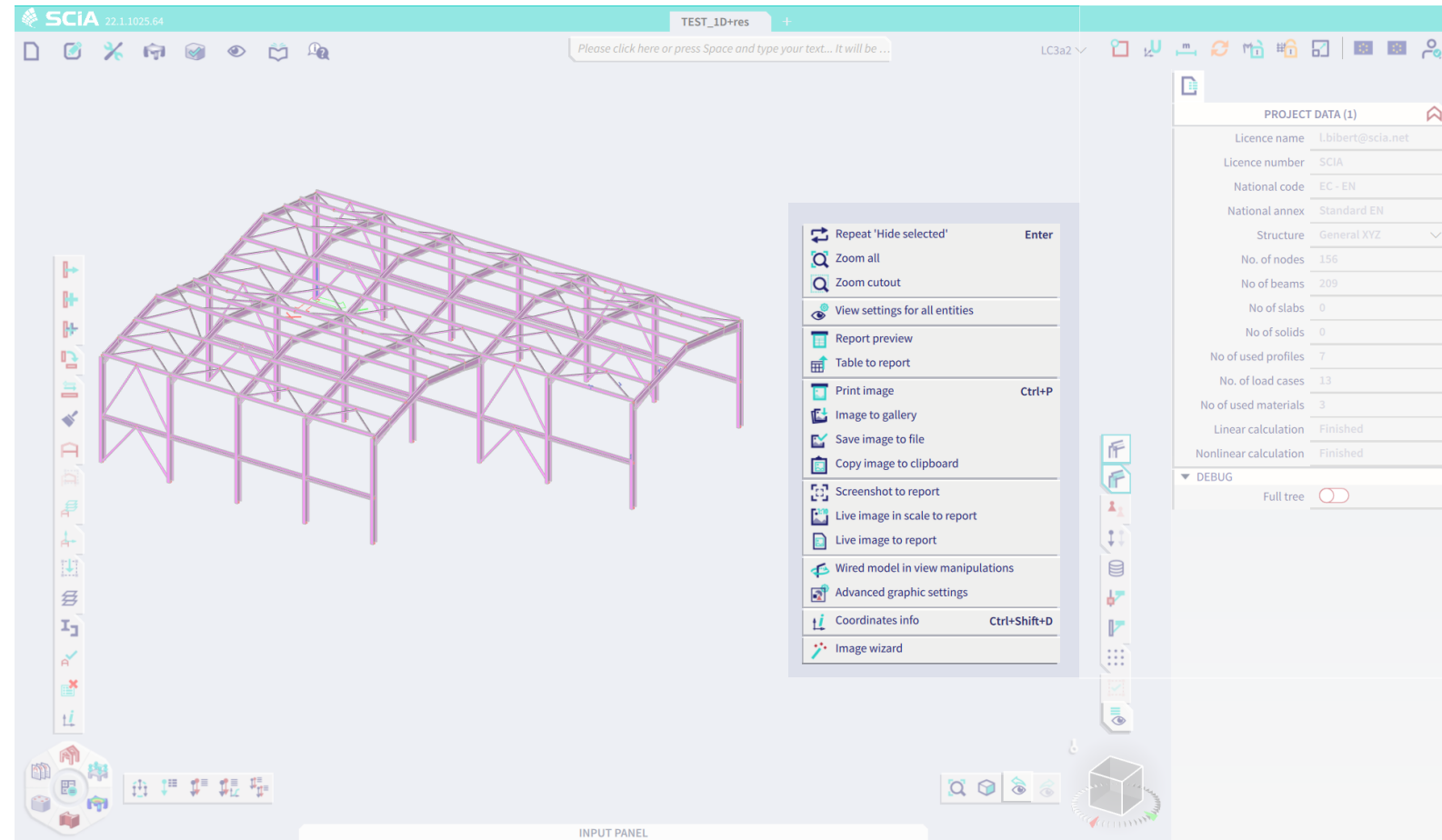
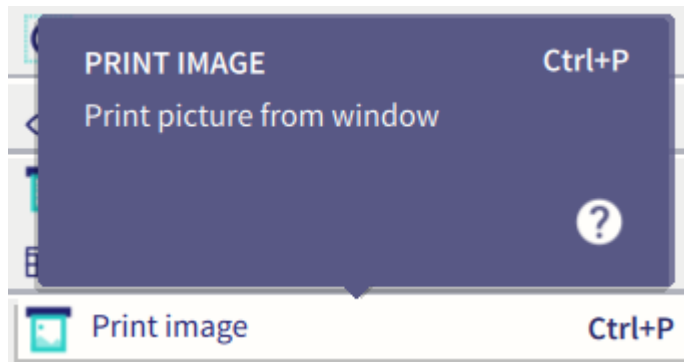
1D internal forces
 Linear calculation
 Combination: CO1
 Coordinate system: Principal
 Extreme 1D: Global
 Selection: All

Name	dx [m]	Case	N [kN]	V _y [kN]	V _x [kN]	M _x [kNm]	M _y [kNm]	M _z [kNm]
B502	0.000	CO1/1	-400,63	0.00	0.26	0.01	0.00	0.00
B501	0.000	CO1/1	439,17	0.00	-5.35	-0.01	0.00	0.00
B3	6.000	CO1/2	-40,93	-16,47	-0.41	0.00	-2.44	-0.85
B3	2.550+	CO1/3	-62,55	19,34	0.43	0.00	1.11	-10,72
B428	0.000	CO1/4	-61.54	-0.13	-18,03	0.00	0.00	0.00
B95	0.000	CO1/5	-16.26	-2.72	69,75	-0.12	-142.03	3.38
B246	0.000	CO1/6	-26.15	0.00	0.15	-0,62	0.00	0.00
B320	1.500+	CO1/6	-19.11	2.35	10.67	0,61	23.71	2.70
B55	0.000	CO1/5	-21.50	-0.04	66.94	0.01	-150,03	0.02
B429	5.099	CO1/5	-17.74	1.08	4.92	0.16	76,27	-1.86
B3	2.550-	CO1/7	-77.13	-16.14	-0.41	0.00	-1.04	-11,94
B3	4.673	CO1/3	-57.71	0.53	0.43	0.00	2.03	10,59

Below the table, a 'Combination key' section lists various load combinations (CO1/1 to CO1/7) with their respective mathematical expressions.

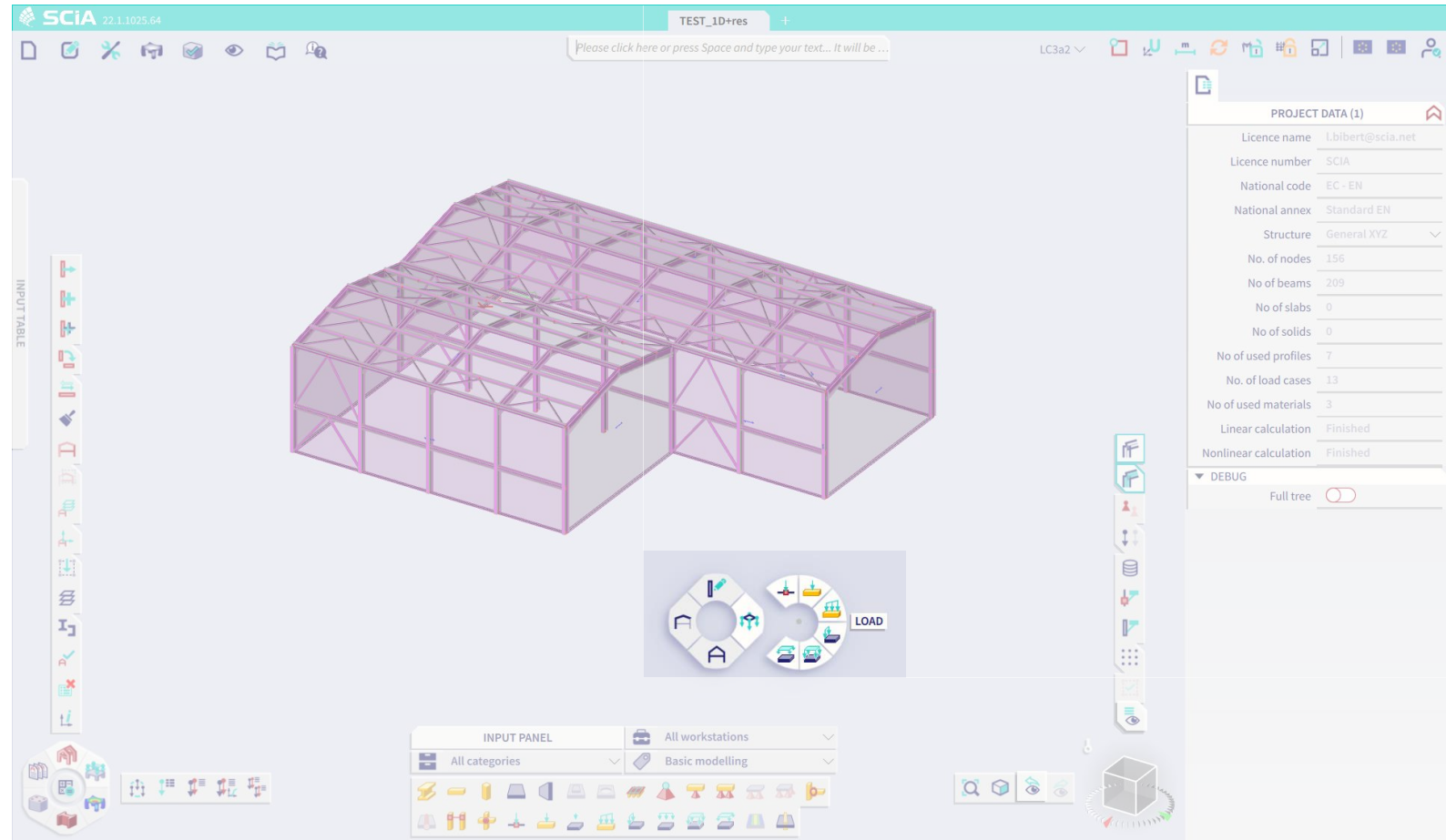
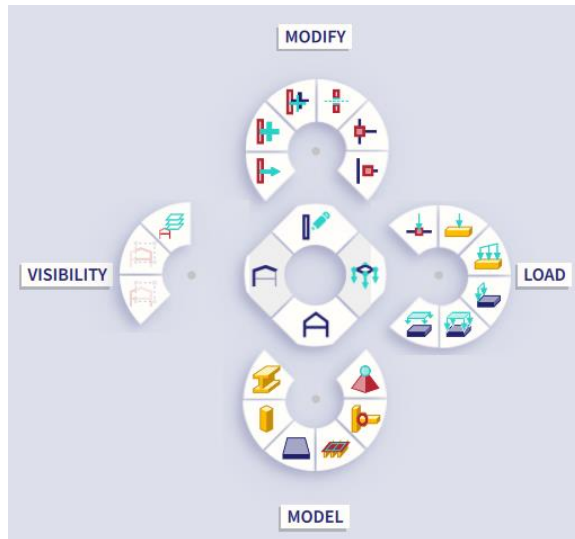
CONTEXT MENU

- Right click in 3D scene
- Visibility and image commands
- Tooltip on hover
- Change hotkeys



MARKING MENU

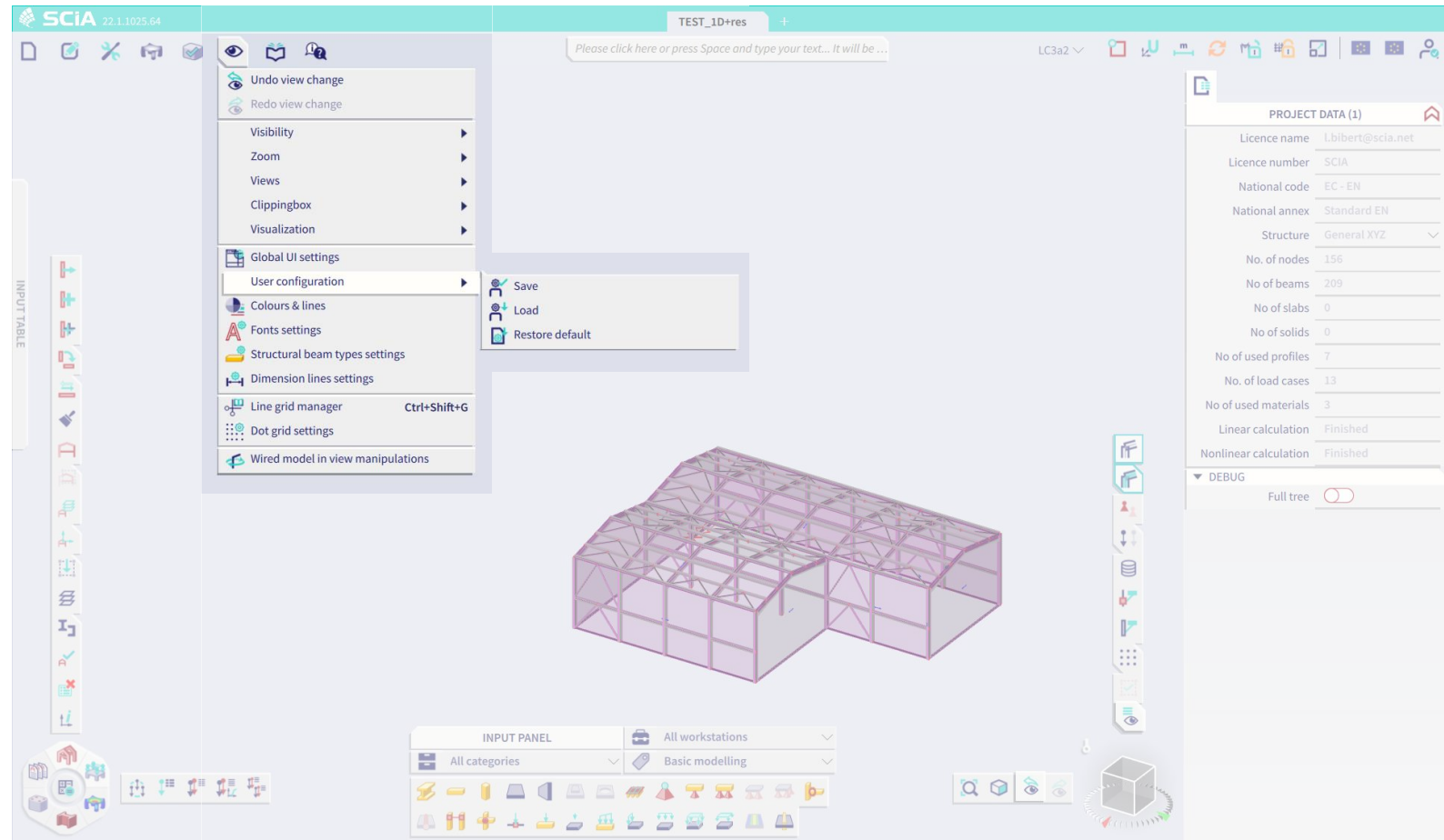
- Invisible helper
- Alt + right click
- Fast modelling on muscle memory
- Fixed commands (for now)
- Best used with skip input dialog in global UI settings



CONFIGURATION

- Personal layout, hotkeys ... remembered
- Transferred to new versions
- Can be saved in file

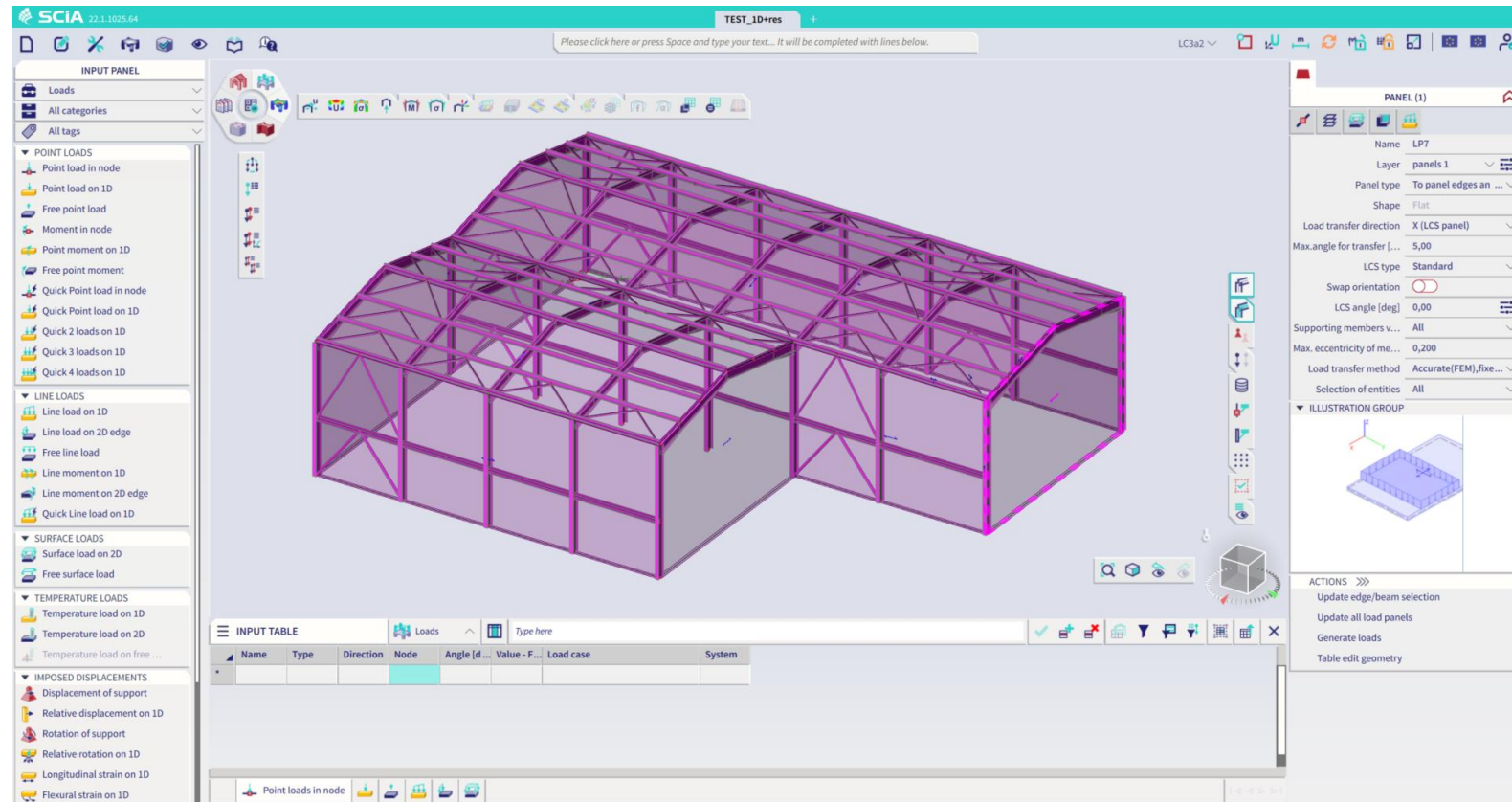
- Possible to use the **same configuration** for a group/company



CONFIGURATION

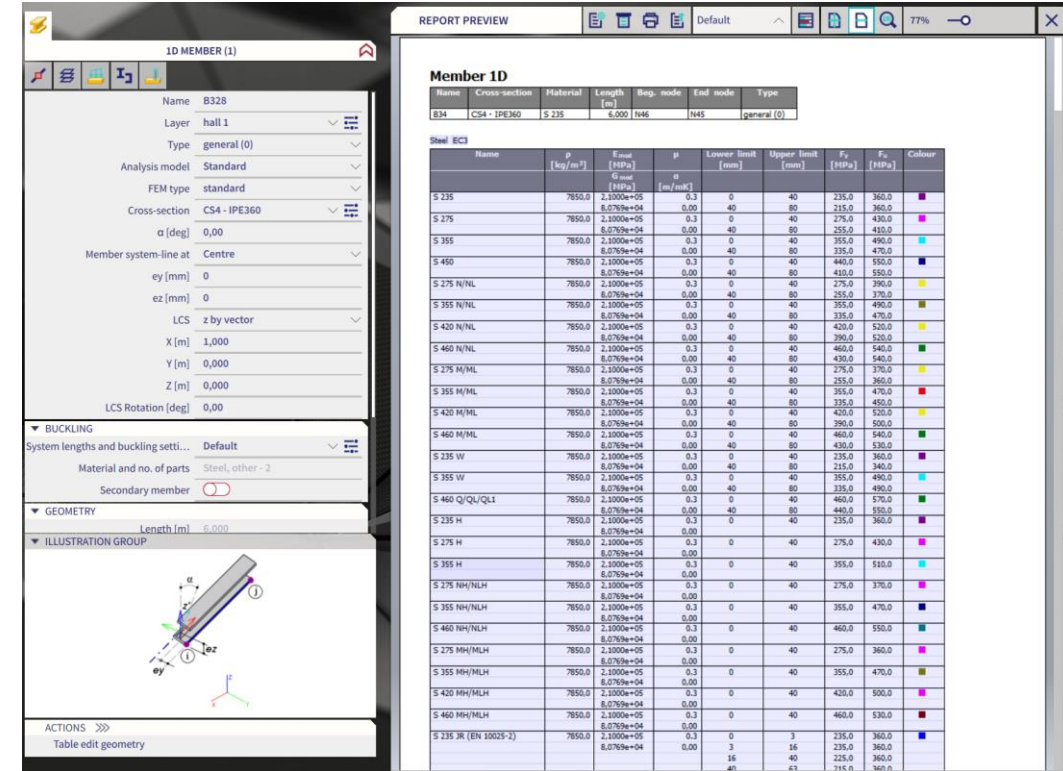
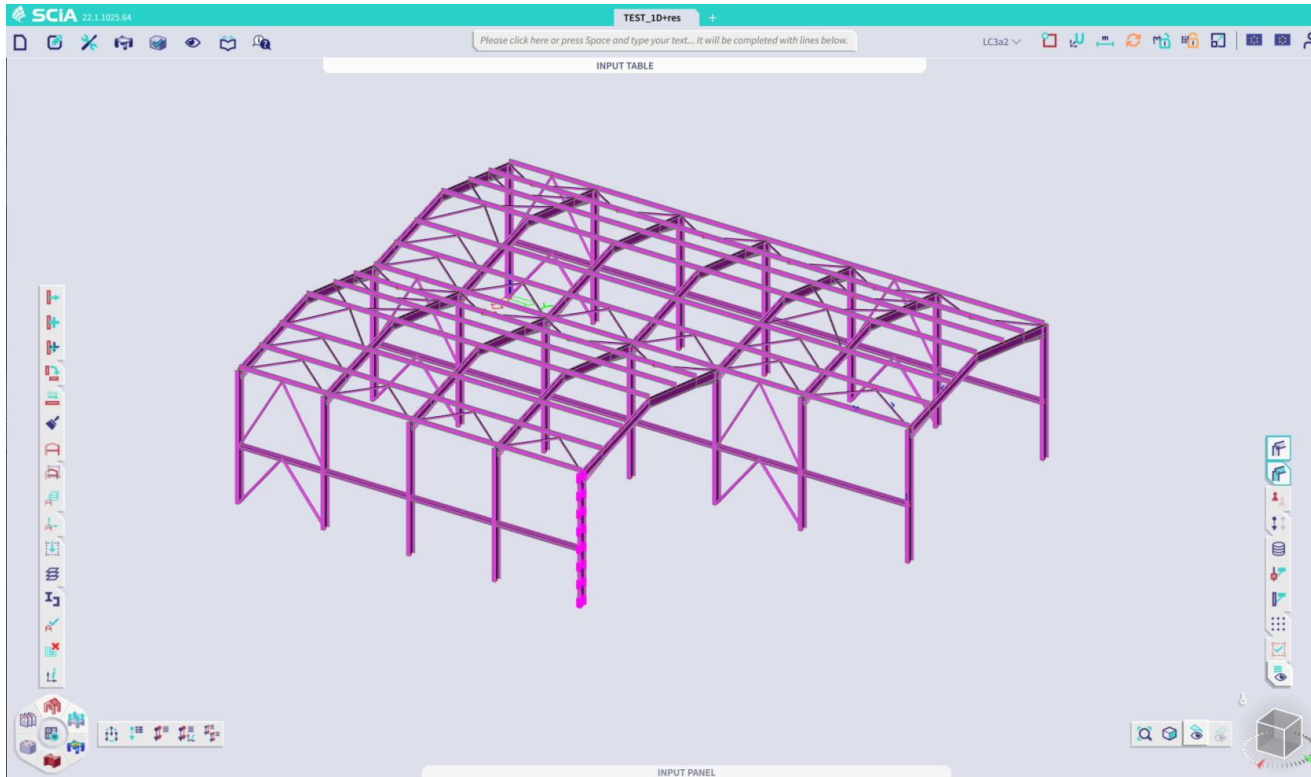
SMOOTHER TRANSITION TO NEW UI

- Example layout for smoother transition
- Input panel left
Icon mode off
Category headers on
- Input table docked on bottom
- Process toolbar top left
Structure workstation horizontal
Active workstation vertical



CONFIGURATION

EXPLOIT FREEDOM TO THE MAX



- Example layout for full size model

First screen

- Input panel minimized
- Input table docked on top
- Process toolbar bottom left

Second screen

- Properties panel torn out
- Report preview torn out