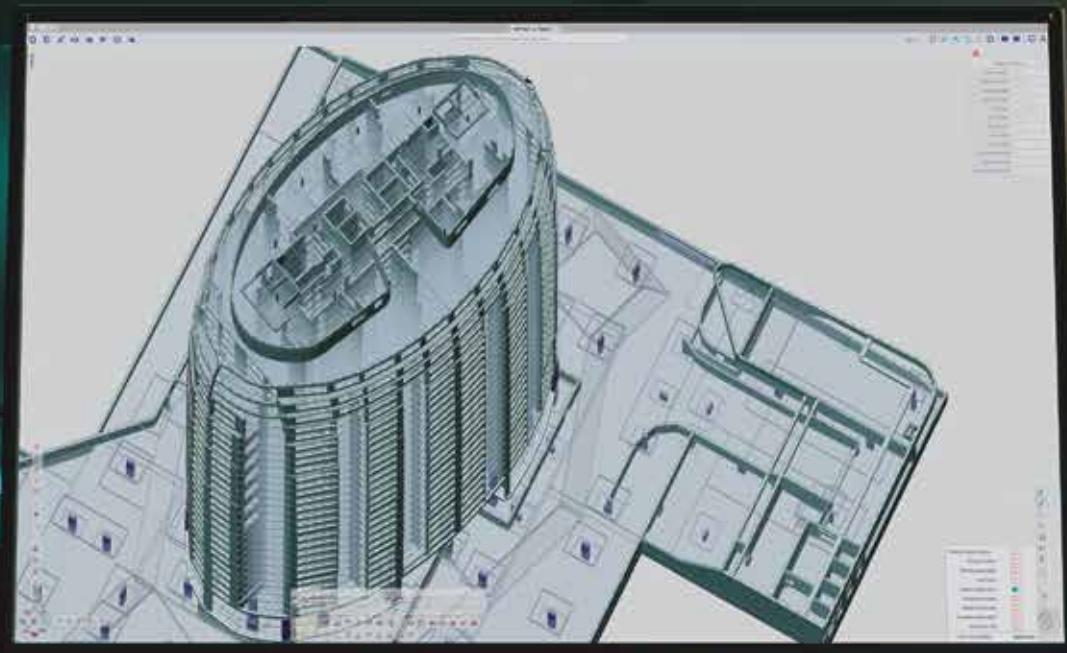# SCiA ENGINEER | 21.0

SUPER POWERED.
SUPER EASY.

WHAT'S NEW IN SCIA ENGINEER 21

REDEFINED, REIMAGINED, REVOLUTIONISED.
SCIA ENGINEER 21 is a giant leap in structural engineering software design.

Forget about cluttered and overwhelming interface, fixed workflows, limited customisation and insufficient working space. SCIA Engineer 21 brings a revolutionary new interface with leading-edge ergonomics and unequalled efficiency gains that is easily customised to suit the way you work.
It makes your work faster and easier.

WELCOME TO THE FUTURE

✓ UNEQUALLED EFFICIENCY

The new interface works in perfect harmony with you as a structural engineer: You need less mouse clicks on almost every task. With SCIA Spotlight you instantly find the tools and functions you need. All this means **more time to spend on actual engineering, or other things you enjoy**!
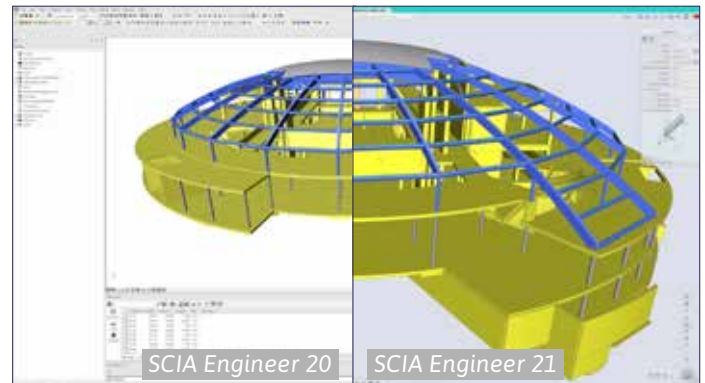
✓ LEADING-EDGE ERGONOMICS

A total workspace transformation providing you with nearly 100% screen use, with the project taking the centre stage. No more cluttered menus. Just smart workstations and clean toolbars with **all the key functions you use day in day out at your fingertips**.

✓ ON DEMAND CUSTOMISATION

Take the maximum productivity advantage through on demand, as you work, customisation of your SCIA Engineer workspace: Bring the tools you use most to the front, hide the one's you don't. **It is your workspace now!**

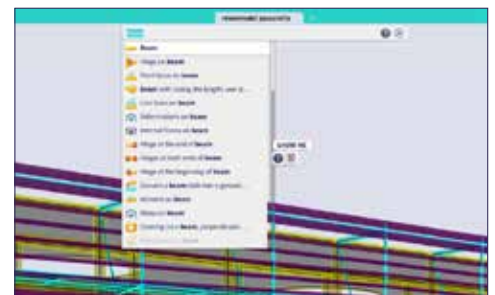**We maximise your productivity which will save you at least 1 hour, every day.**

SCIA Engineer 20   SCIA Engineer 21

REDESIGNED INTERFACE

Maximised working space
- model area now takes nearly **100% of the screen space**
- no need any more for frequent zooming in and out
- easier focus on engineering tasks reduces the chance of making mistakes
- less view adjustments save valuable time and improve ergonomics

SCIA Spotlight
- direct access to any SCIA Engineer function – simply start typing
- SCIA Spotlight also suggests all related functions and commands
- keyboard shortcuts can be assigned directly in the search-results list
- SCIA Spotlight eliminates time consuming browsing of menus when searching for a rarely used function, **saving up to 80% of your time**
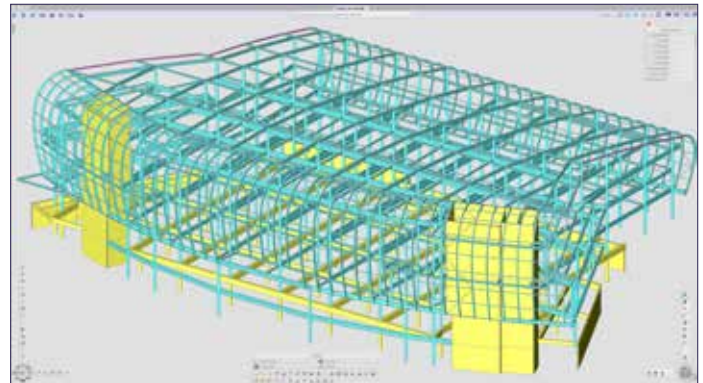

Smart workstations and process toolbar
- easy control of which workstations (structure, results, concrete, steel, etc.) are accessible keeps the workspace clean and tidy
- process toolbar allows you to access 2 workstations simultaneously (e.g. structure & loads or results & concrete) **saving about 30% of valuable time** when iterations in workflow are necessary
- time spent on modifications of the model is **reduced by 50%**

Real time customisation

- customisation is now **part of a standard workflow**, not a separate task
- whenever you want to move an icon to another toolbar – just do it
- keyboard shortcuts can be assigned when browsing the menu or reading the search results in SCIA Spotlight – one click and new shortcut is assigned
- popular and frequently used commands can be grouped on a "Favourites" toolbar
- **it is your workspace now**, and it can be also easily shared with your team

Advanced selection tool

- selecting an entity provides also direct access to all associated entities – select a beam and you can edit also its nodes, loads, hinges, layers, and other parameters
- expand or isolate the current selection to create even complex selections in just a few clicks
- new approach **saves up to 50% of previously required clicks**
- making complex selections is now **2-times faster**

Easy to learn

- the onboarding tutorial guides you through the new environment
- SCIA Spotlight finds for you immediately the command you search for
- SCIA Spotlight also offers related functionality helping you to learn as you go
- common functions are at your finger tip, while the special and rarely used ones do not hinder your view

ANALYSIS & RESULTS

Model modifiers for modal and seismic calculation

- model modifiers can now be used for seismic load cases and modal calculation
- easy verification of the impact of stiffness reduction on eigen frequencies

New method to determine sectional properties using FEM

- correct calculation of shear, torsion and warping stresses for any cross-section shape, including composed sections and sections with large openings

STEEL DESIGN
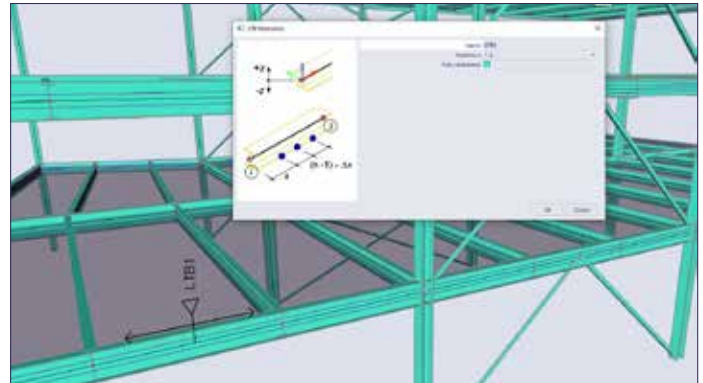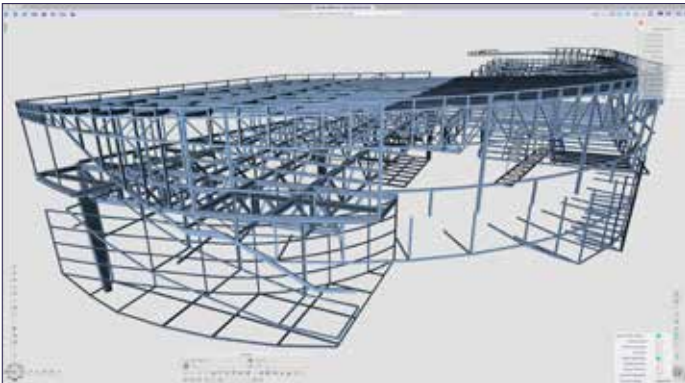
Bow imperfection defaults

- default settings for bow imperfections are now inside the material setup
- imperfections on all your steel, timber, composite and aluminium members can be thus input in just a few clicks

Full length LTB restraints

- it is now possible to define lateral torsional buckling restraints over the full length of a member
- if a member is fully restrained, the LTB-check is skipped

Cat E adaptation for France

- support of the latest new rules for Category E loading
- it is now possible to select category E1 or E2(a,b,c) loading when using the NA for France

Utilisation factor η

- implementation of the valorisation project SEMI-COMP+ n° RFS2-CT-2010-00023 is now extended by the utilisation factor η
- It allows for the use of less conservative section classes for the EC3 stability checks, which can lead to considerable material savings
- stability check uses the class of the section with the highest utilisation factor (instead of the highest class along the member)

CONCRETE DESIGN

Code dependent deflections

- check of long-term deflections now takes shrinkage in the account
- optional manual input of load combinations for creep and immediate deflection
- ability to switch between a standard (brief) and a detailed output

EASY concrete

- unified, single concrete Setup with all the options and parameters in one clear and customisable dialogue
- transparent input of the initial diameter for reinforcement design
- quick editing of provided reinforcement accessible directly from the Property panel
- 50% faster calculation of reinforcement design in 2D members
- improved graphical representation of required reinforcement with the peak values automatically eliminated from the palette

www.scia.net