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Structural Analysis & Design Software

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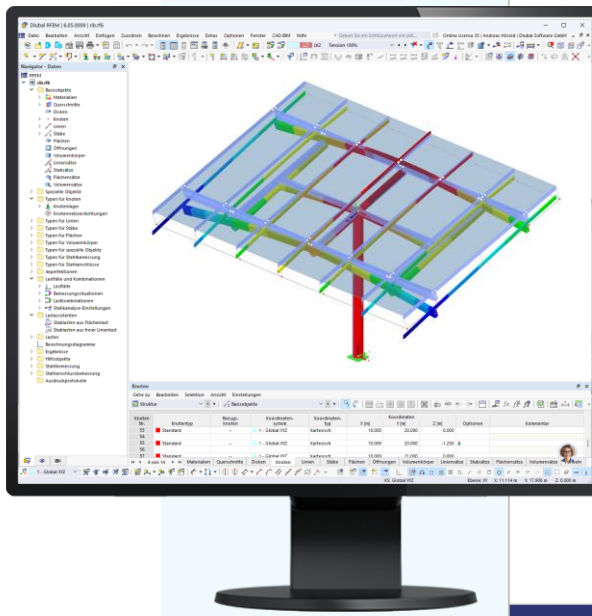
Head of Product Engineering
Dlubal Software GmbH

Webinar

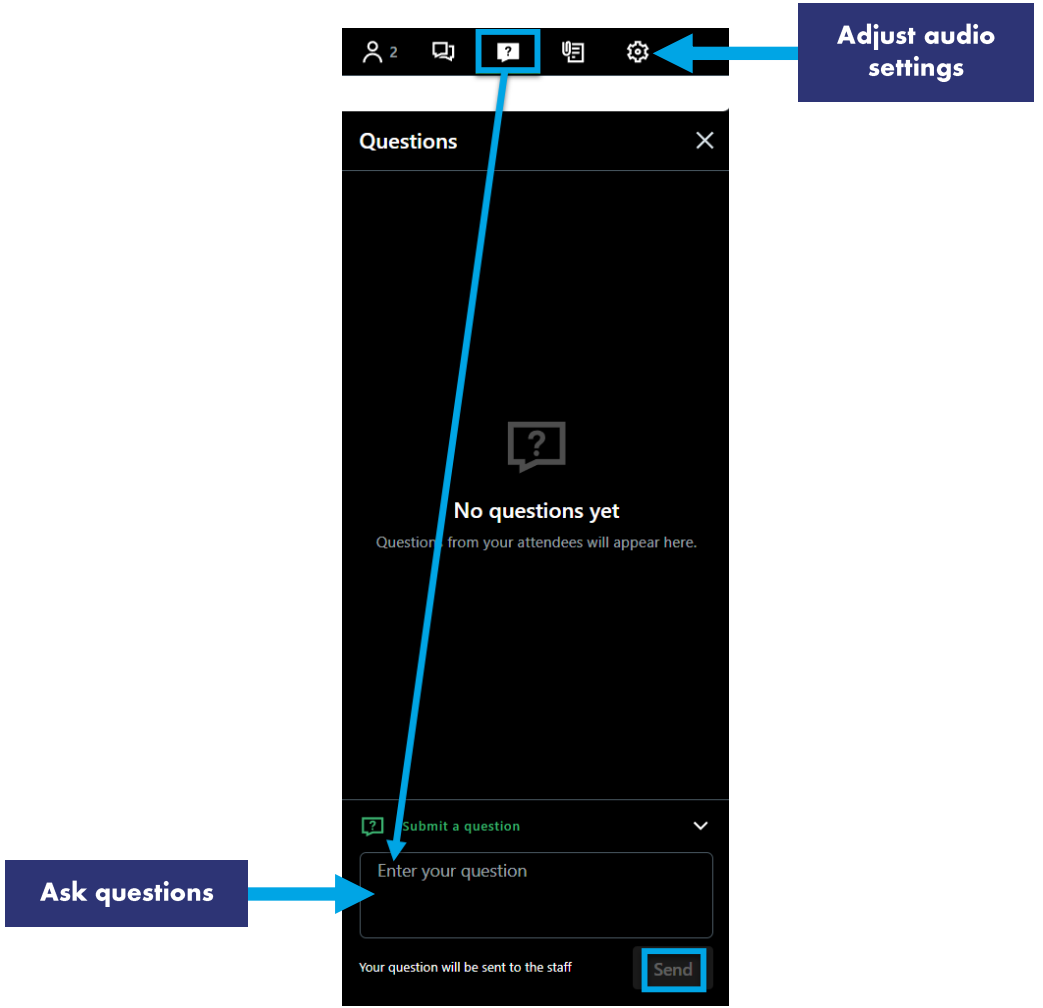
Structural Design of PV Systems: Identifying Challenges – Implementing Solutions with RFEM 6



Questions During the Presentation

GoToWebinar Control Panel
Desktop

E-mail: **info@dlubal.com**



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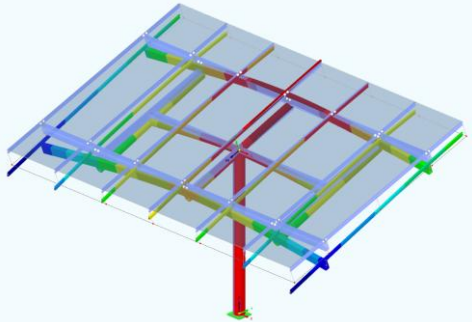
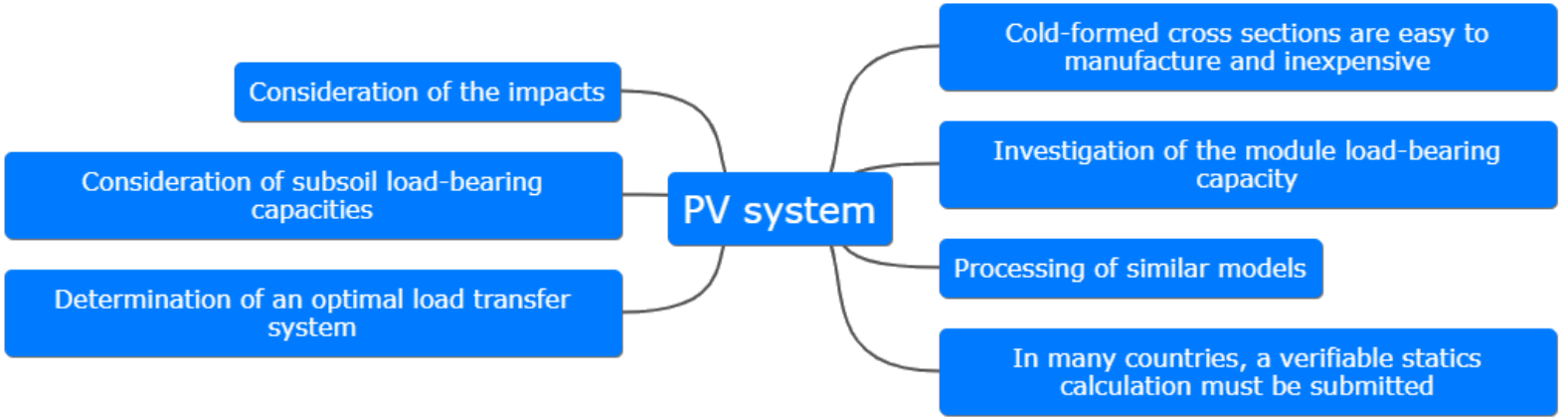
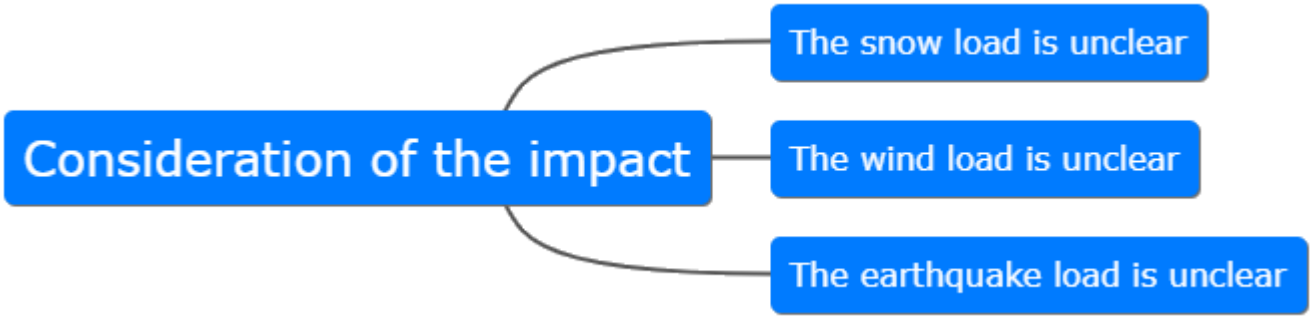


Webinar

Why PV systems challenge structural engineers today



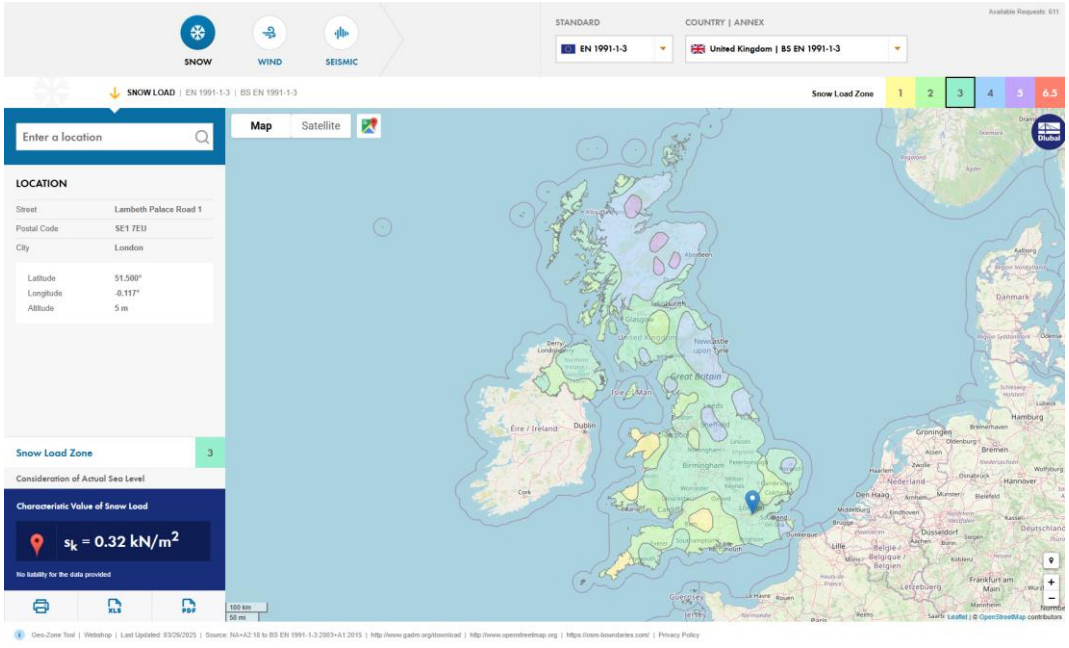
Typical challenges in structural design of PV systems



Consideration of the impacts

Consideration of the impacts

From theory to practice: how RFEM 6 simplifies everyday life



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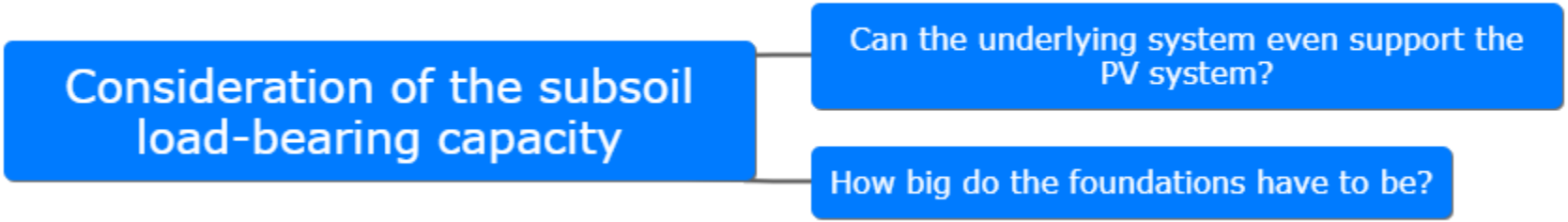

Consideration of the subsoil load-bearing capacity

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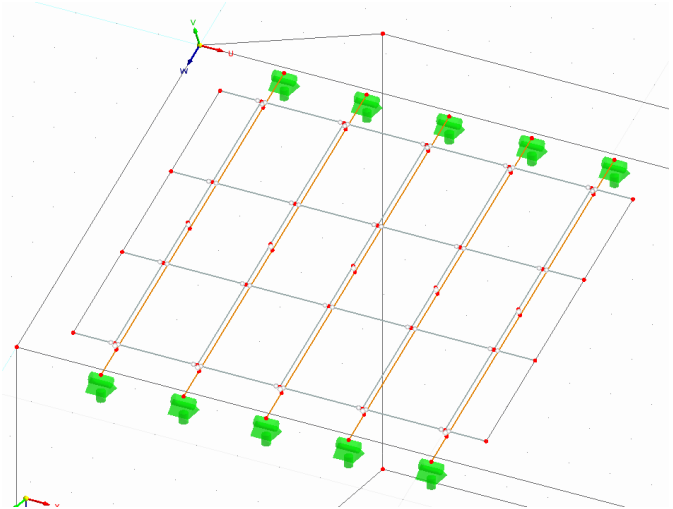
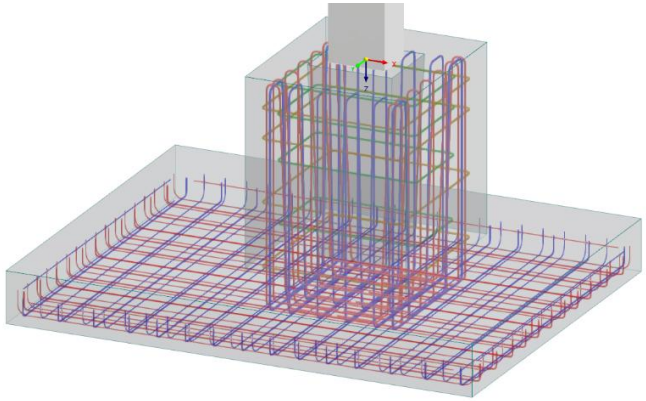
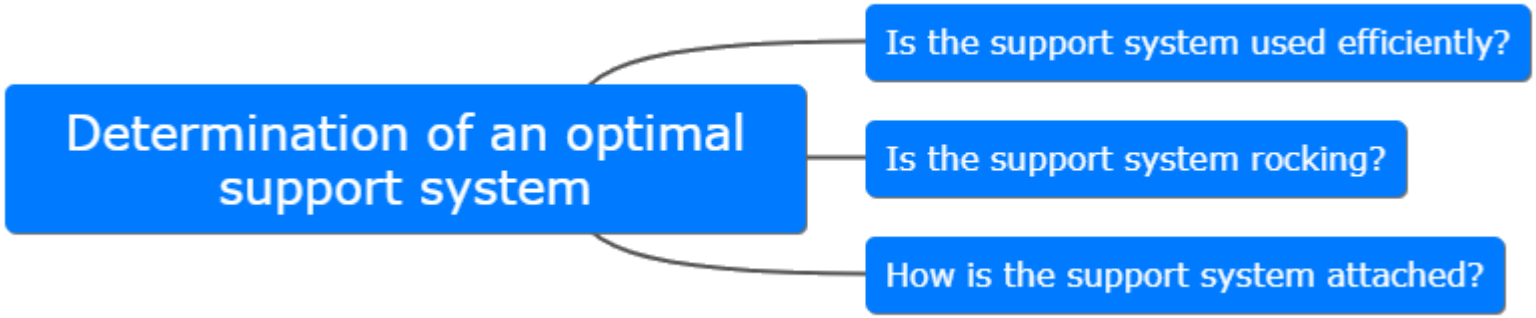
From theory to practice: how RFEM 6 simplifies everyday life





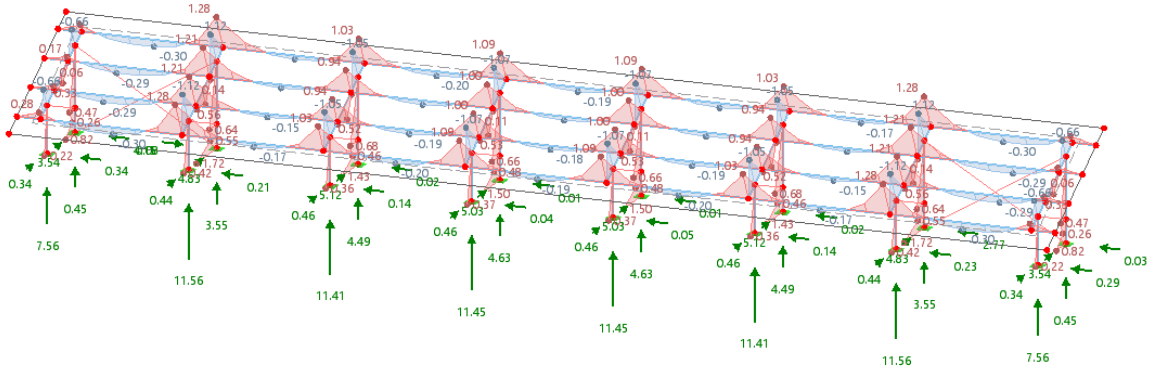
Typical challenges in structural design of PV systems

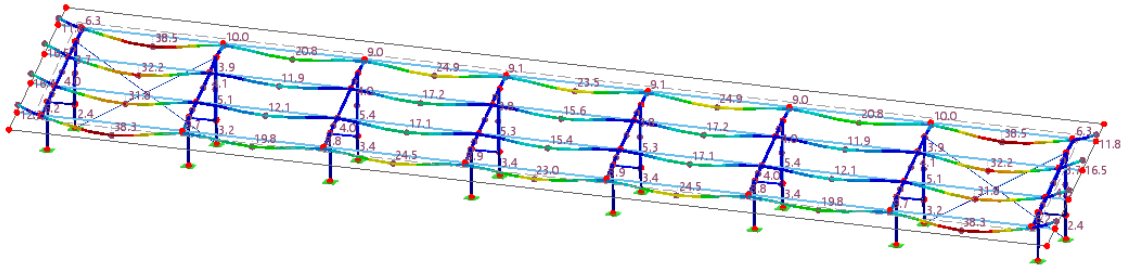


Determination of an optimal load transfer system

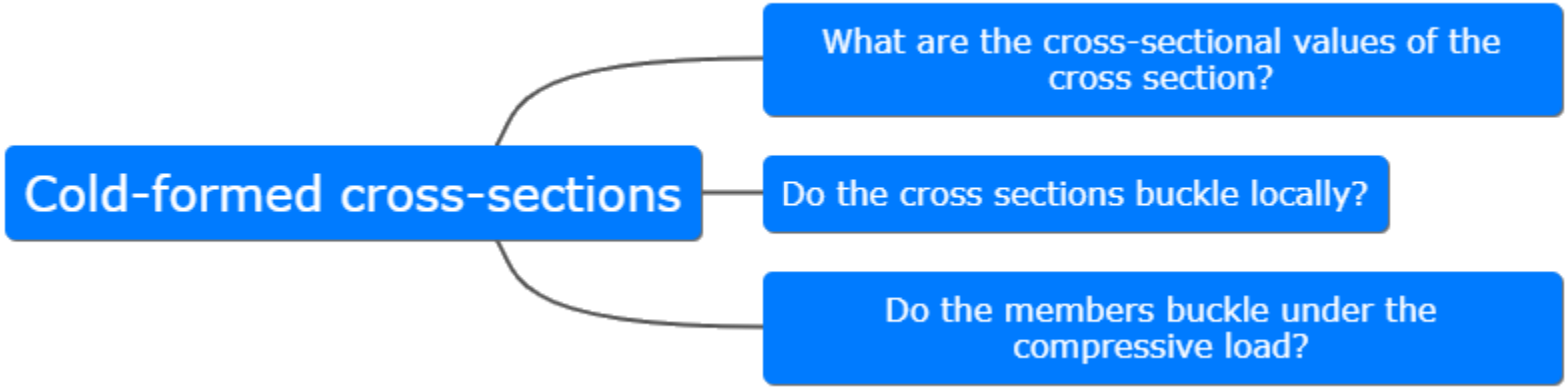
Determination of an optimal load transfer system

From theory to practice: how RFEM 6 simplifies everyday life

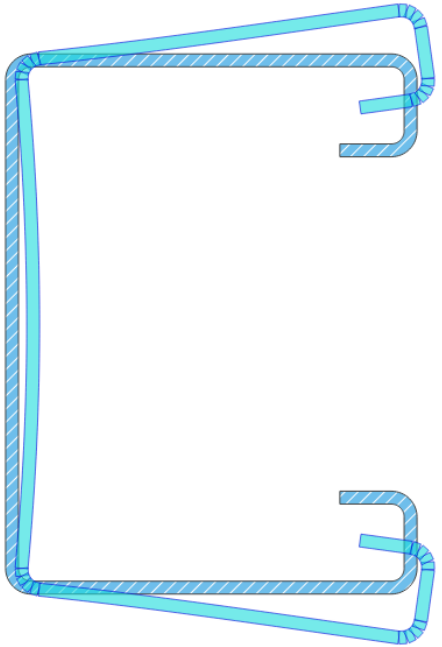




Cold-formed cross sections are easy to manufacture and inexpensive

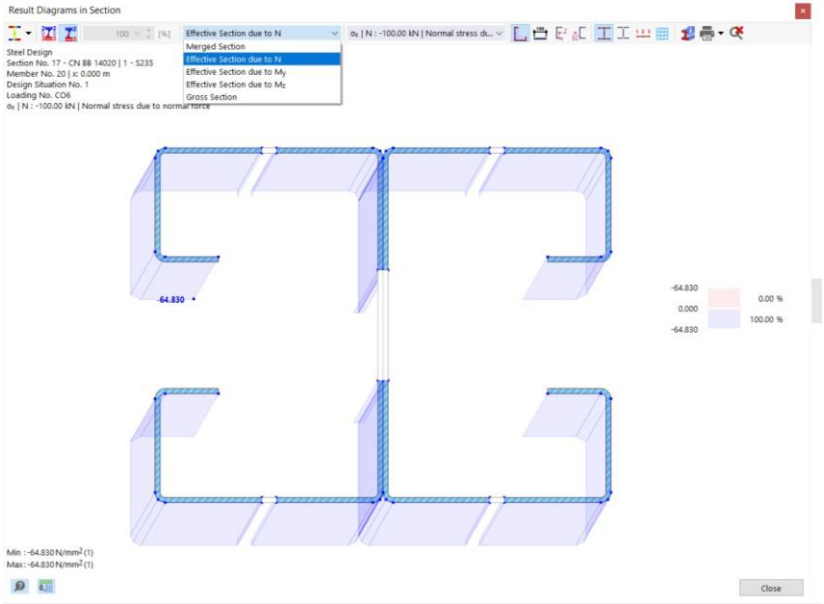


Cold-formed cross-sections

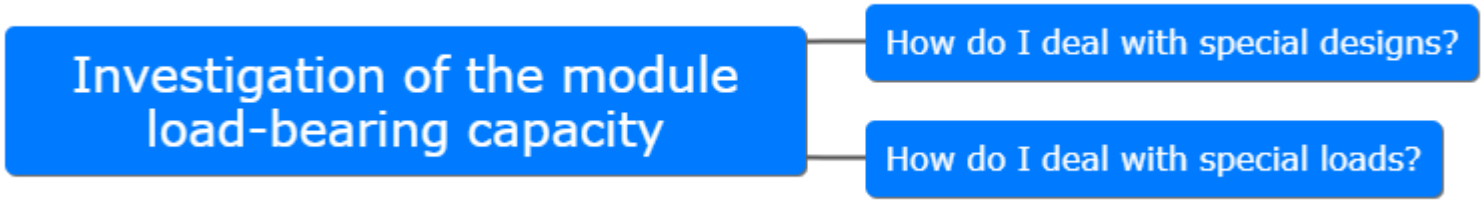


Cold-formed cross-sections

From theory to practice: how RFEM 6 simplifies everyday life



Investigation of the module load-bearing capacity



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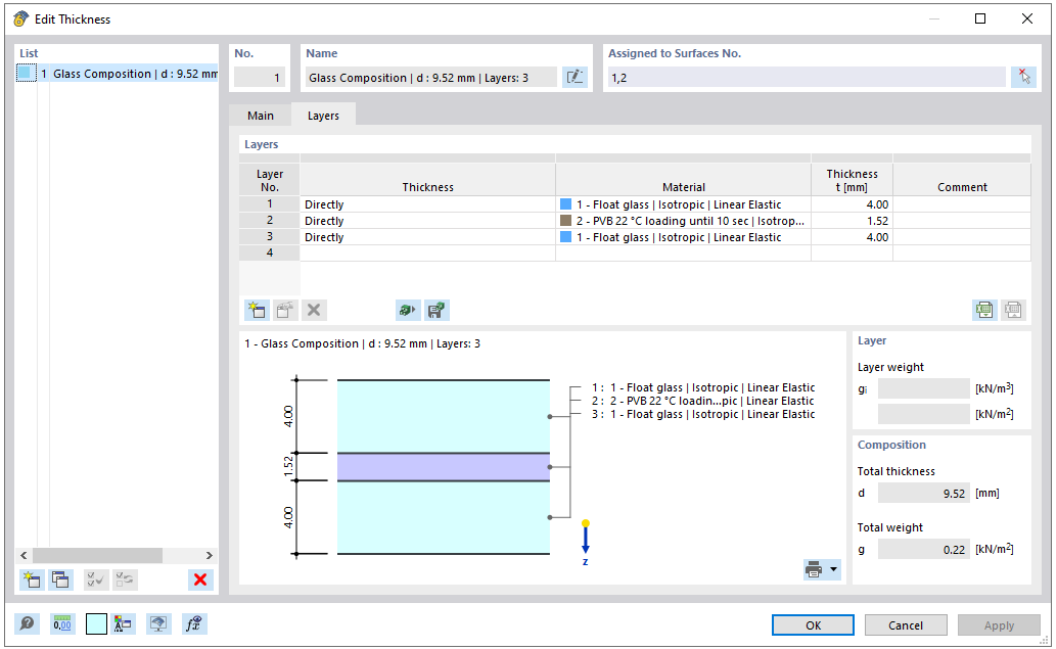
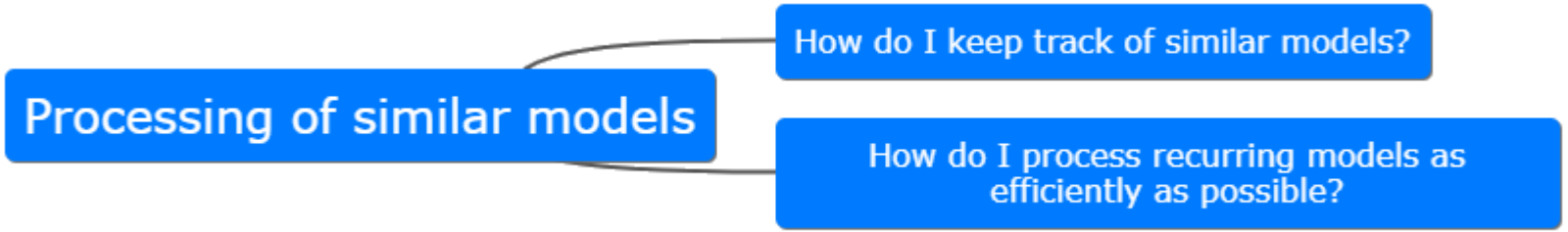
From theory to practice: how RFEM 6 simplifies everyday life



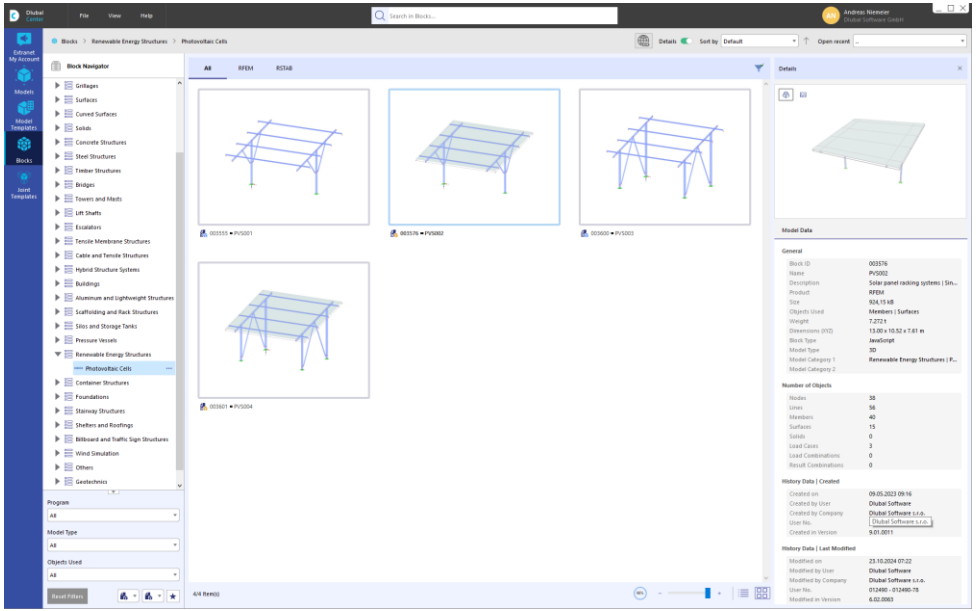
Processing of similar models



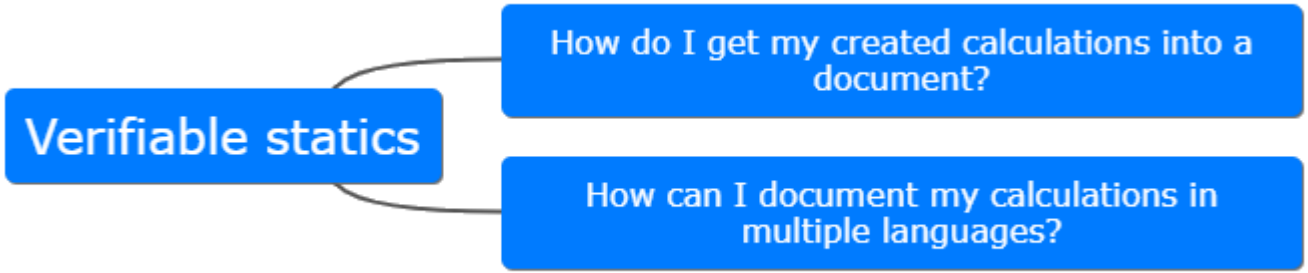
Processing of similar models

Processing of similar models

From theory to practice: how RFEM 6 simplifies everyday life



In many countries, a verifiable statics calculation must be submitted



Verifiable statics

Design Check SP6100 | EN 1993 | CEN | 2015-06

Section Proof
Axial and shear stress acc. to EN 1993-1-1, 6.2.1(5) | Elastic design

$$\eta_{6.1} = \sqrt{\left(\frac{\frac{\sigma_{x,Ed}}{f_y}}{\gamma_{M0}}\right)^2 + 3 \cdot \left(\frac{\frac{\tau_{Ed}}{f_y}}{\gamma_{M0}}\right)^2}$$

$$= \sqrt{\left(\frac{\frac{204.054\,N/mm^2}{350.000\,N/mm^2}}{1.00}\right)^2 + 3 \cdot \left(\frac{\frac{-13.432\,N/mm^2}{350.000\,N/mm^2}}{1.00}\right)^2}$$

$$= 0.587$$

6.2.1(5), Eq. 6.1

$$\eta = \eta_{6.1}$$

$$= 0.587$$

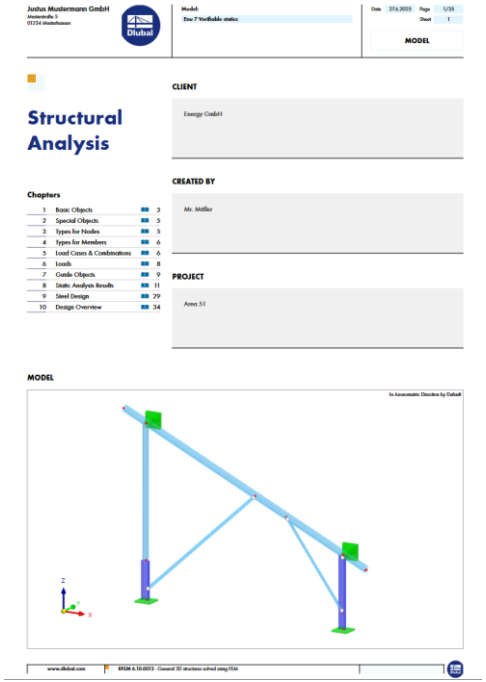
6.2.1(5), Eq. 6.1

$$\eta = 0.587 \leq 1 \checkmark$$

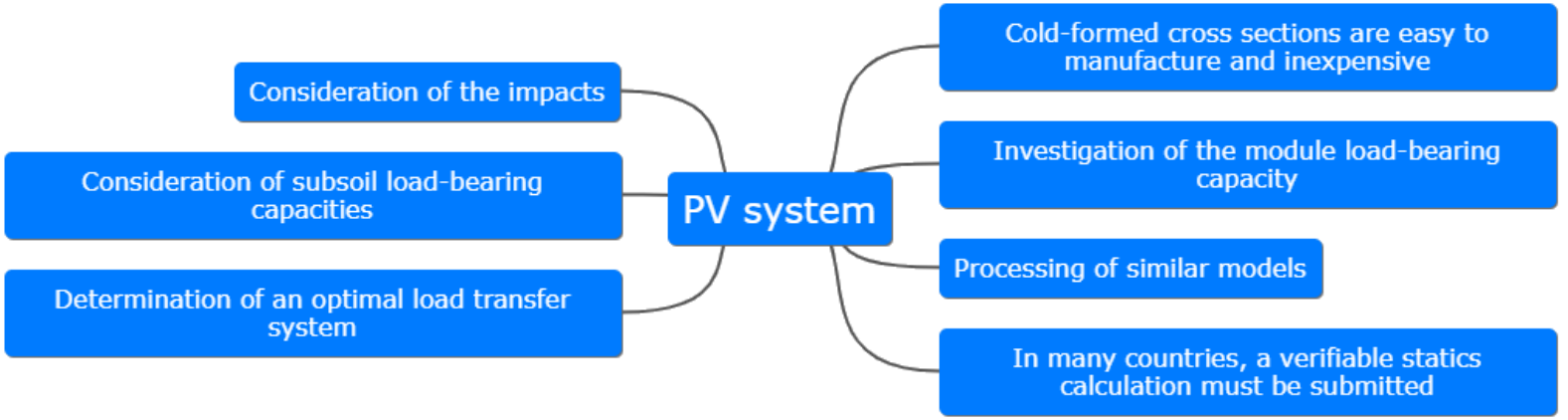
$\eta_{6.1}$ Design ratio
$\sigma_{x,Ed}$ Design axial stress
f_y Yield strength of stress point
γ_{M0} Partial factor
τ_{Ed} Design shear stress

Verifiable statics

From theory to practice: how RFEM 6 simplifies everyday life



Why PV systems challenge structural engineers today



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RFEM 6 Master Class

All you need to know for a start!

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Deep Dive in Reinforced Concrete Design with RFEM 6!

TO THE EC 2 COURSE

Eurocode 3 Master Class

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TO THE EC 3 COURSE

Online Courses

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TO THE EC 5 COURSE

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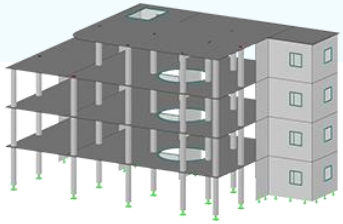
Masterclass: Eurocode 2 - Eurocode 3 - Eurocode 5

TO THE PACKAGE #1

Course Package #2

Masterclass: RFEM 6 - Eurocode 2 - Eurocode 3 - Eurocode 5

TO THE PACKAGE #2



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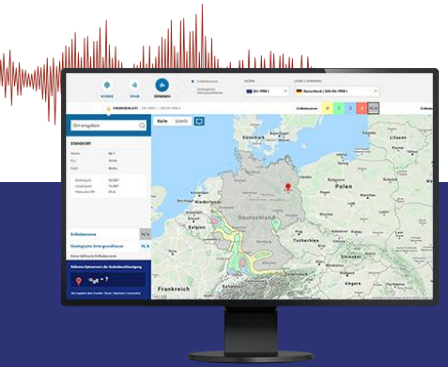
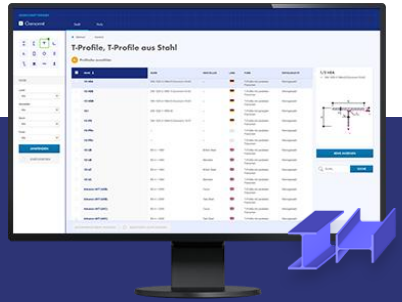
Geo-Zone Tool

Dlubal Software provides an online tool with snow, wind and seismic zone maps.



Cross-Section Properties

With this free online tool, you can select standardized sections from an extensive section library, define parametrized cross-sections and calculate its cross-section properties.



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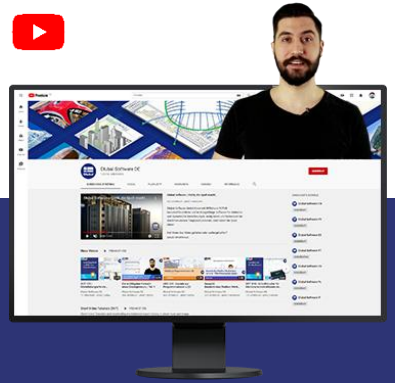

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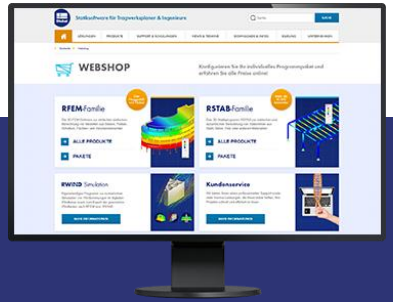

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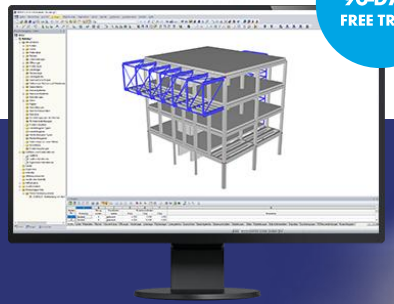

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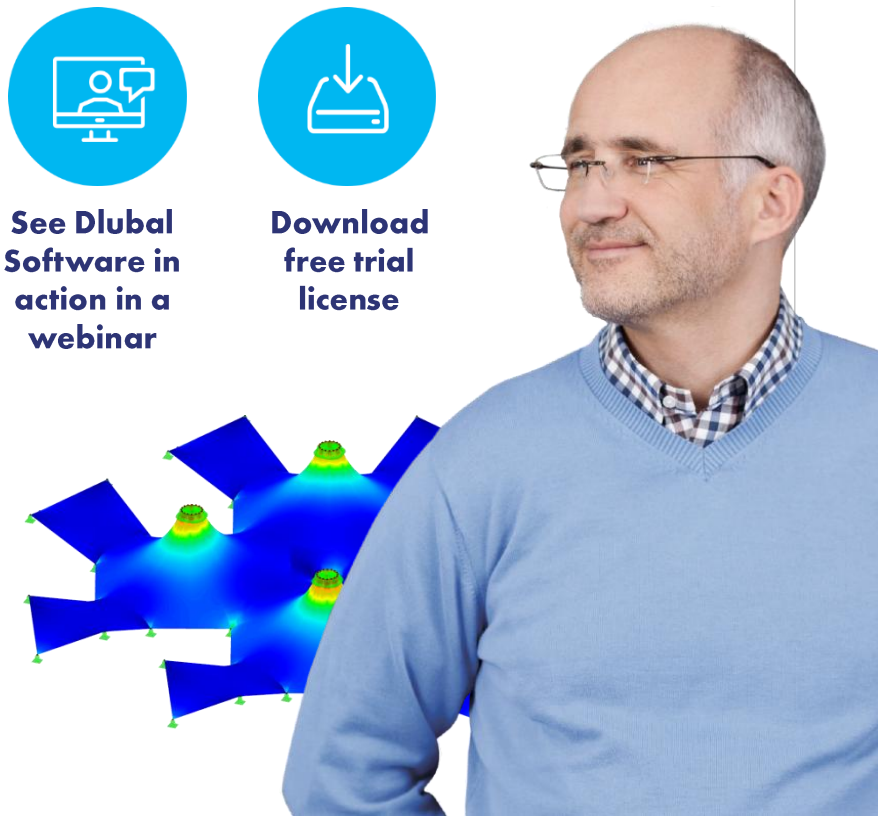

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