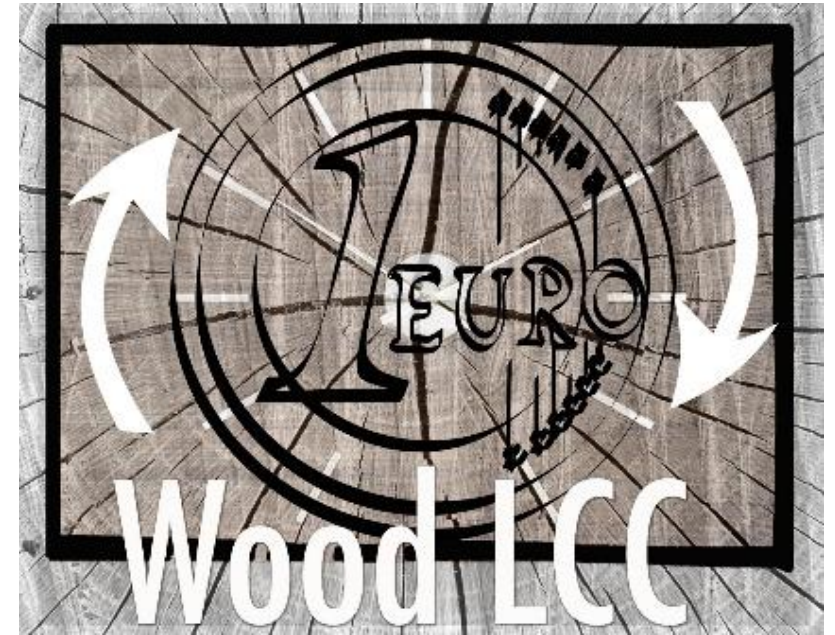


WoodLCC

Enhanced Life-Cycle-Costing in wood construction by novel methods for service life planning (JC2021).

Presented by Philip Bester van Niekerk
University of Göttingen, Germany



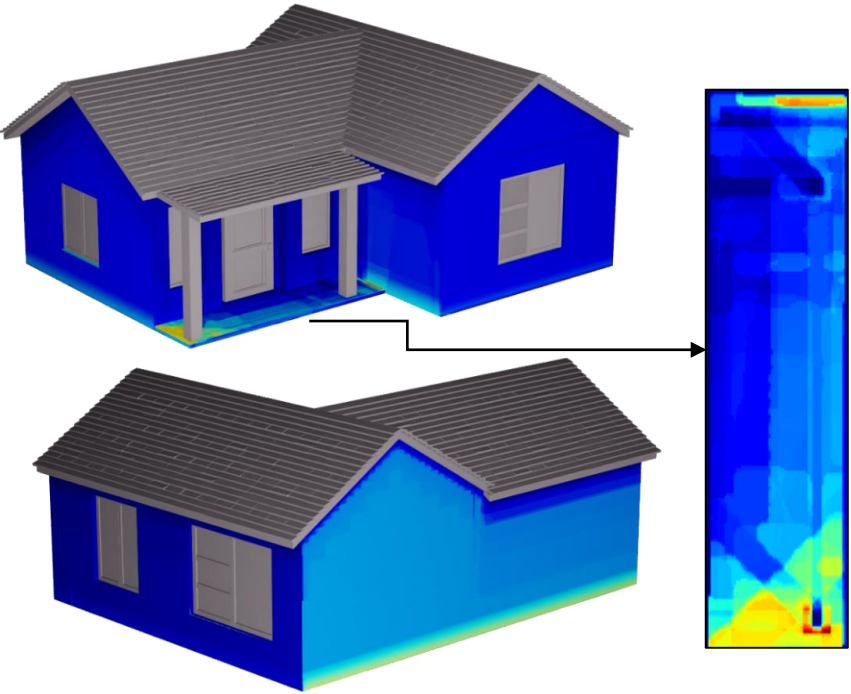
Objective

Enabling robust and precise Life-Cycle-Costing (LCC) based on input from novel models for detailed service life performance specification for wooden components and buildings

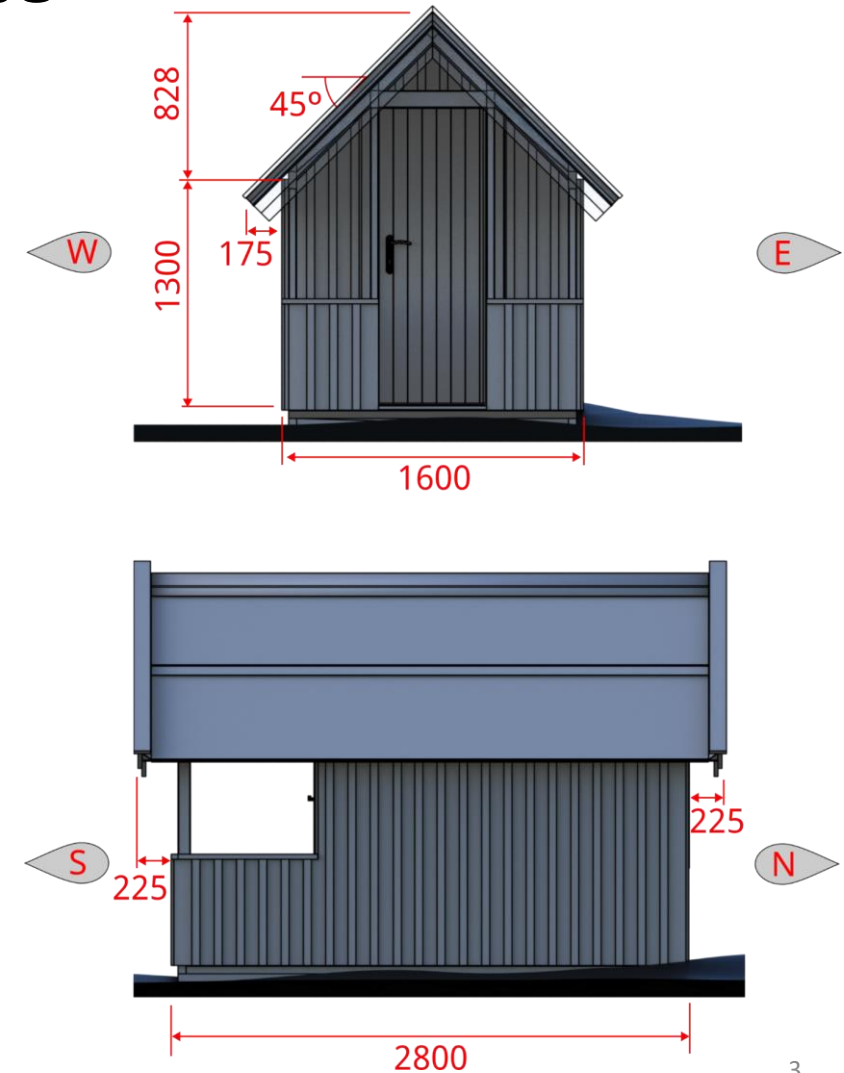
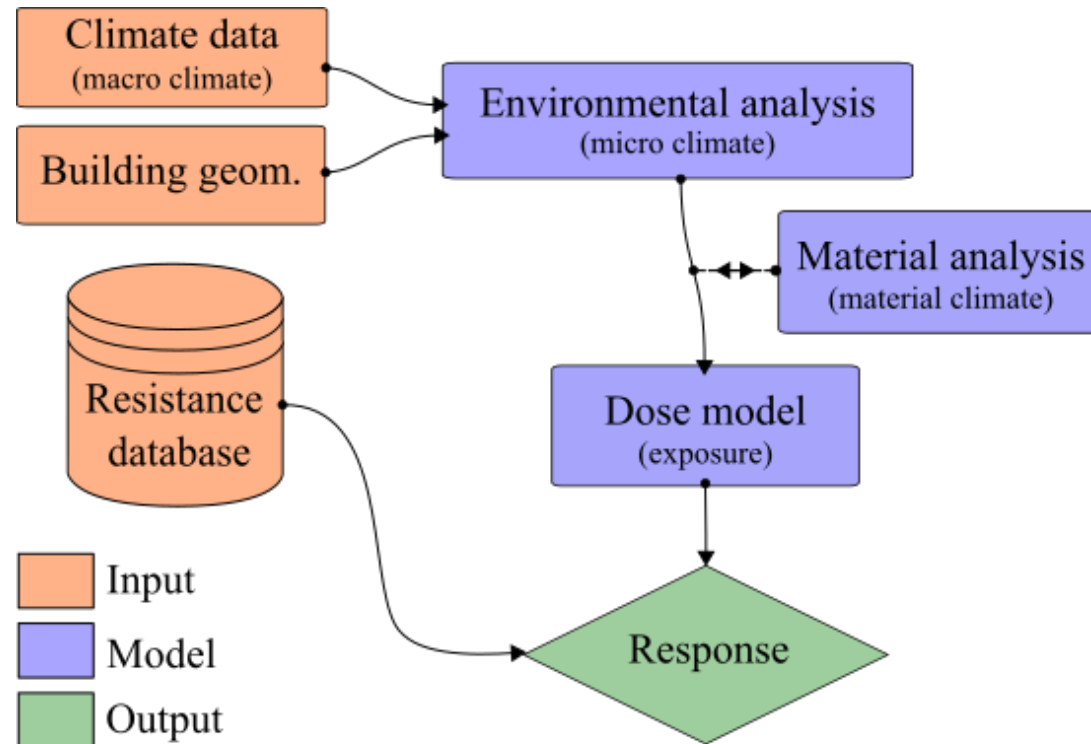
Scope

Product Stage			Construction Process		Use Stage					End of Life Stage			Benefits beyond the system boundary
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3/ C4	D
Raw material supply	Transport	Manufacturing	Transport	Construction- installation process	Use	Maintenance	Repair	Replacement	Refurbishment	De-construction	Transport	Waste processing / Disposal	Reuse- Recovery- Recycling- potential
					Operational energy use				B6				
					Operational water use				B7				

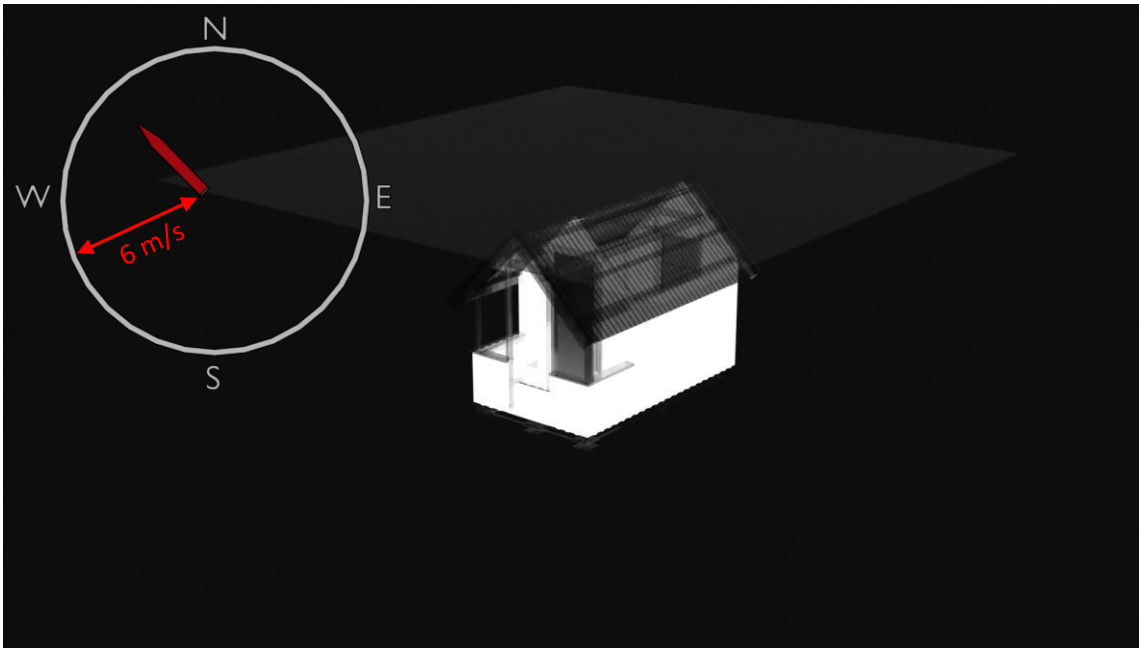
Concept



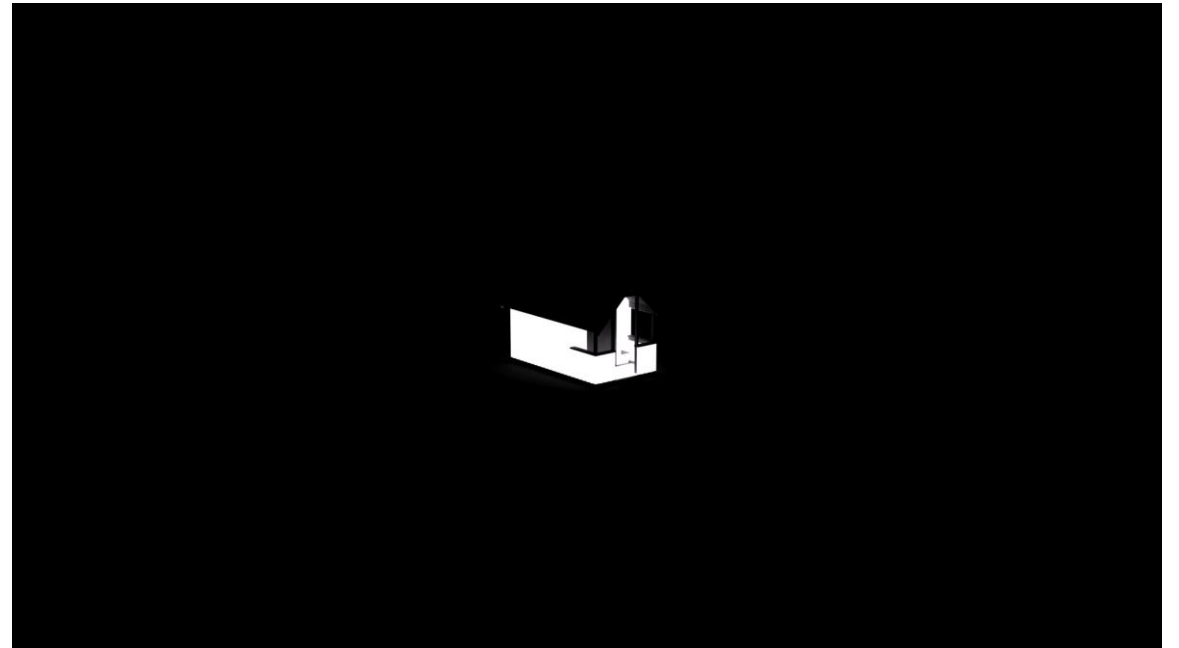
Creating a prototype



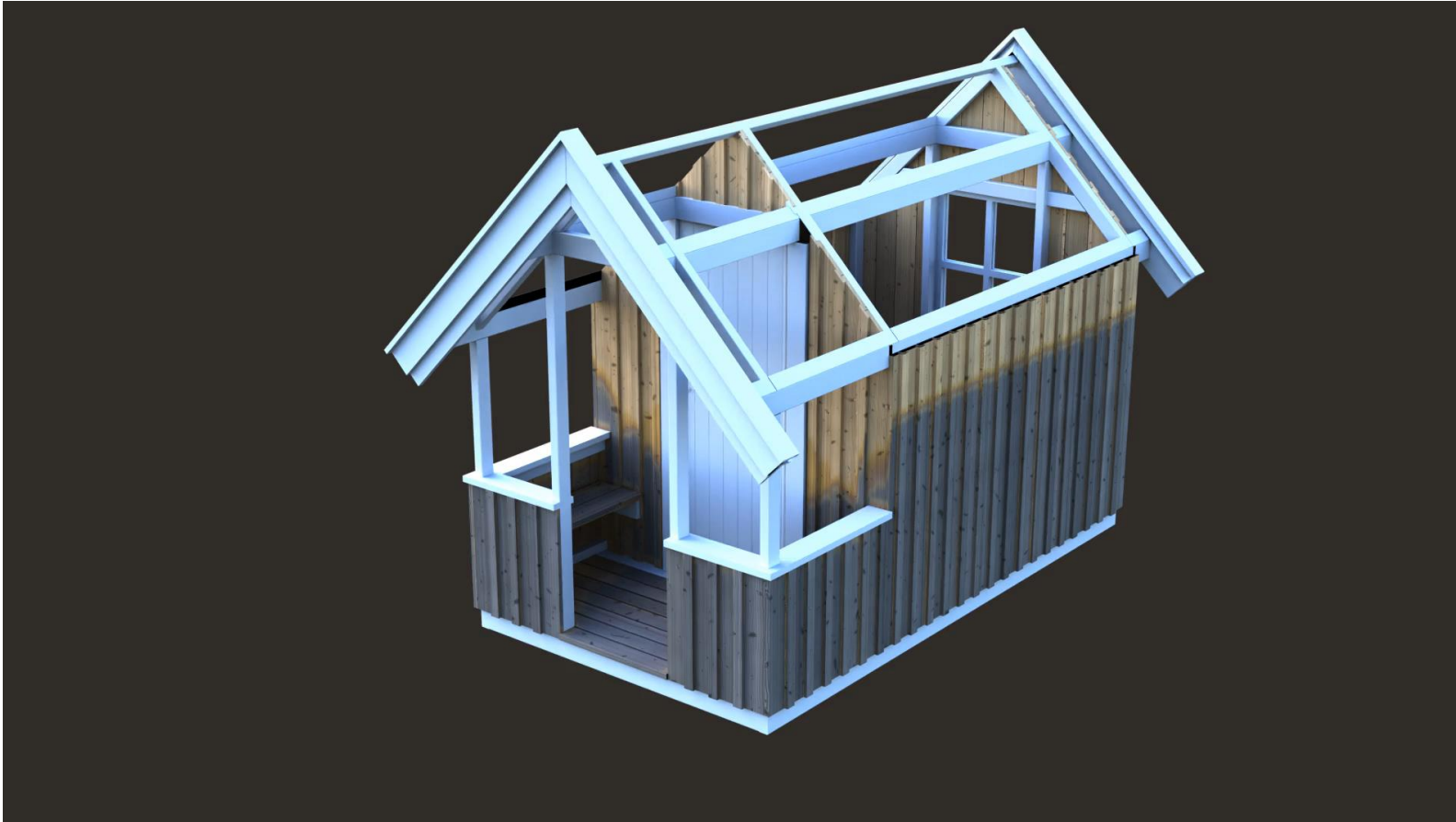
Driving rain simulation



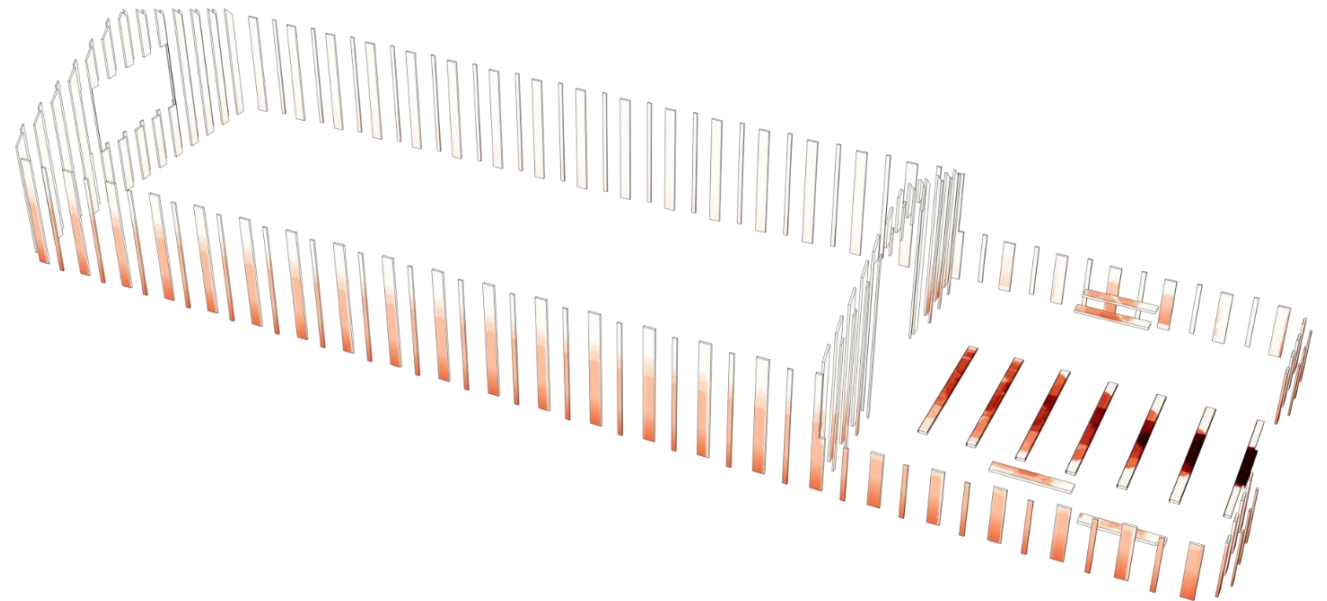
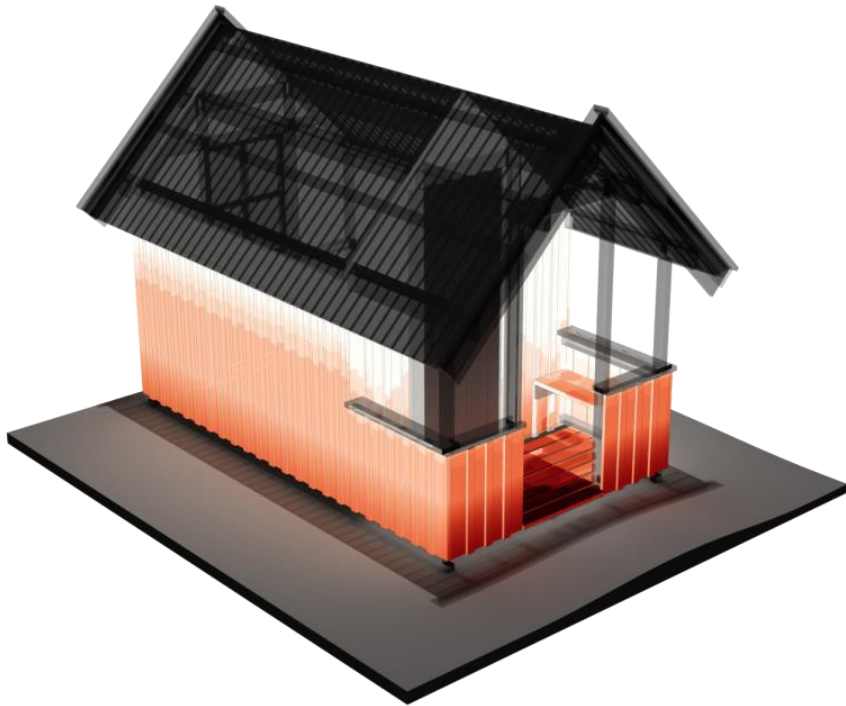
Solar simulation



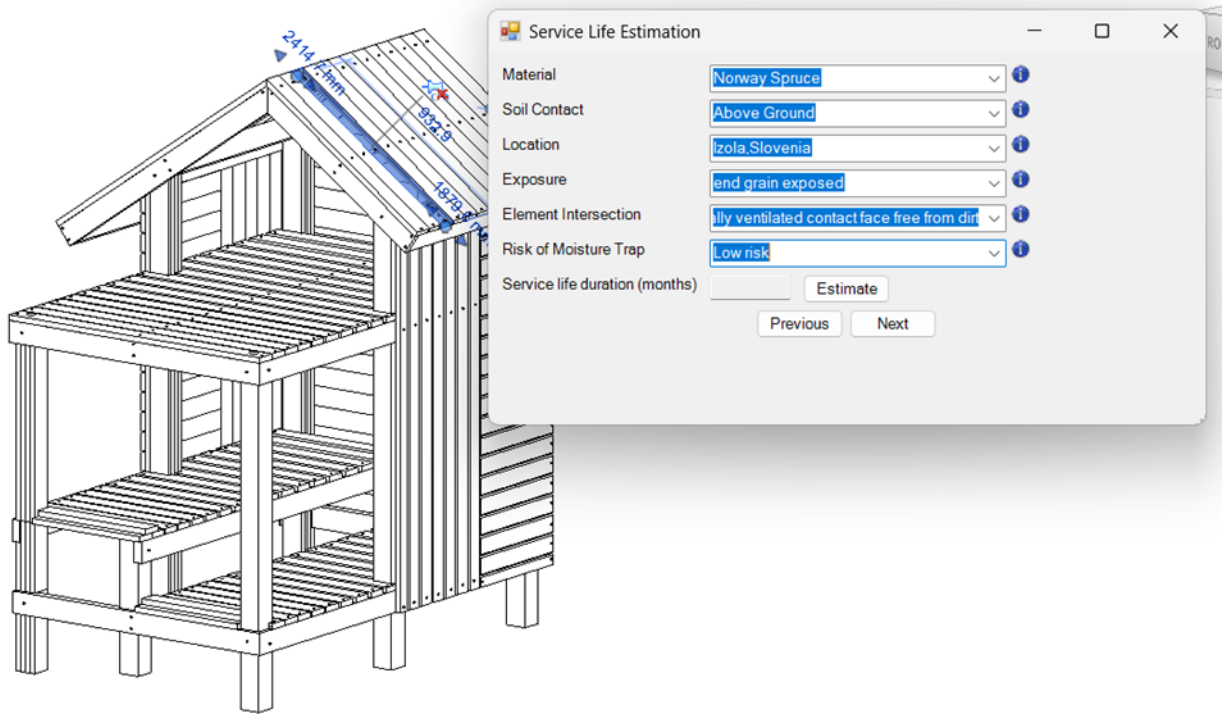
Aesthetic change



Decay dose



Playground structures



User Interface



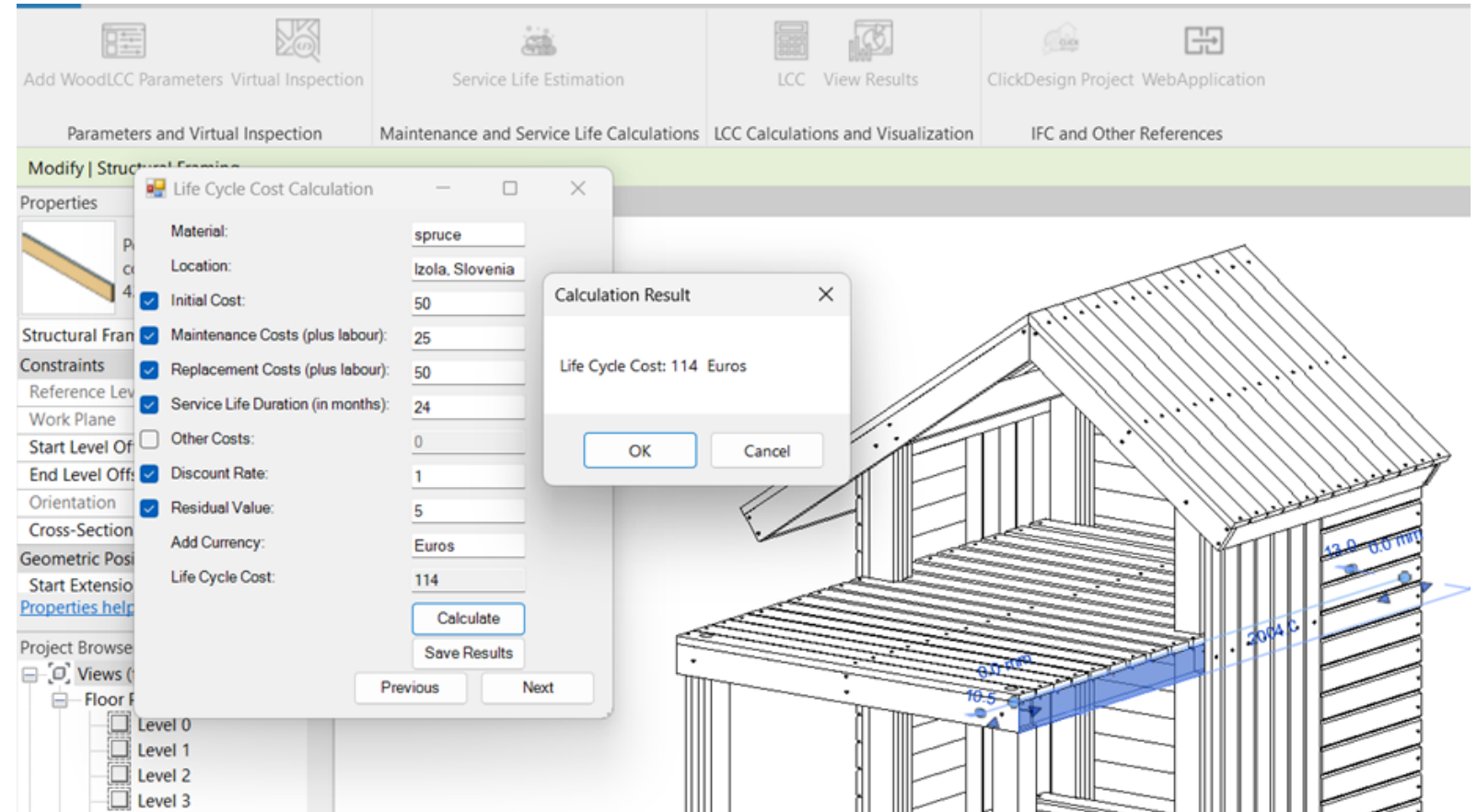
Virtual inspection

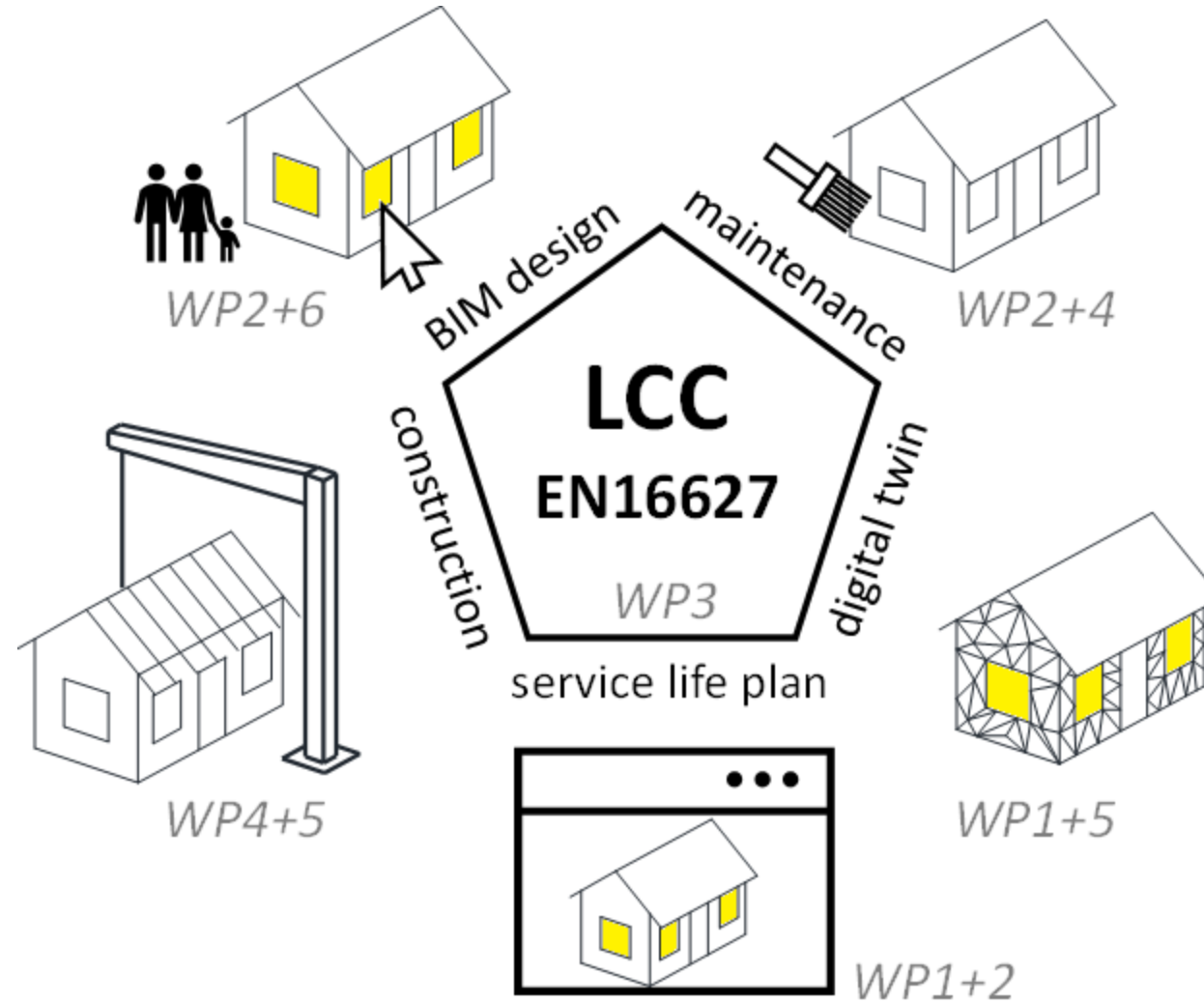


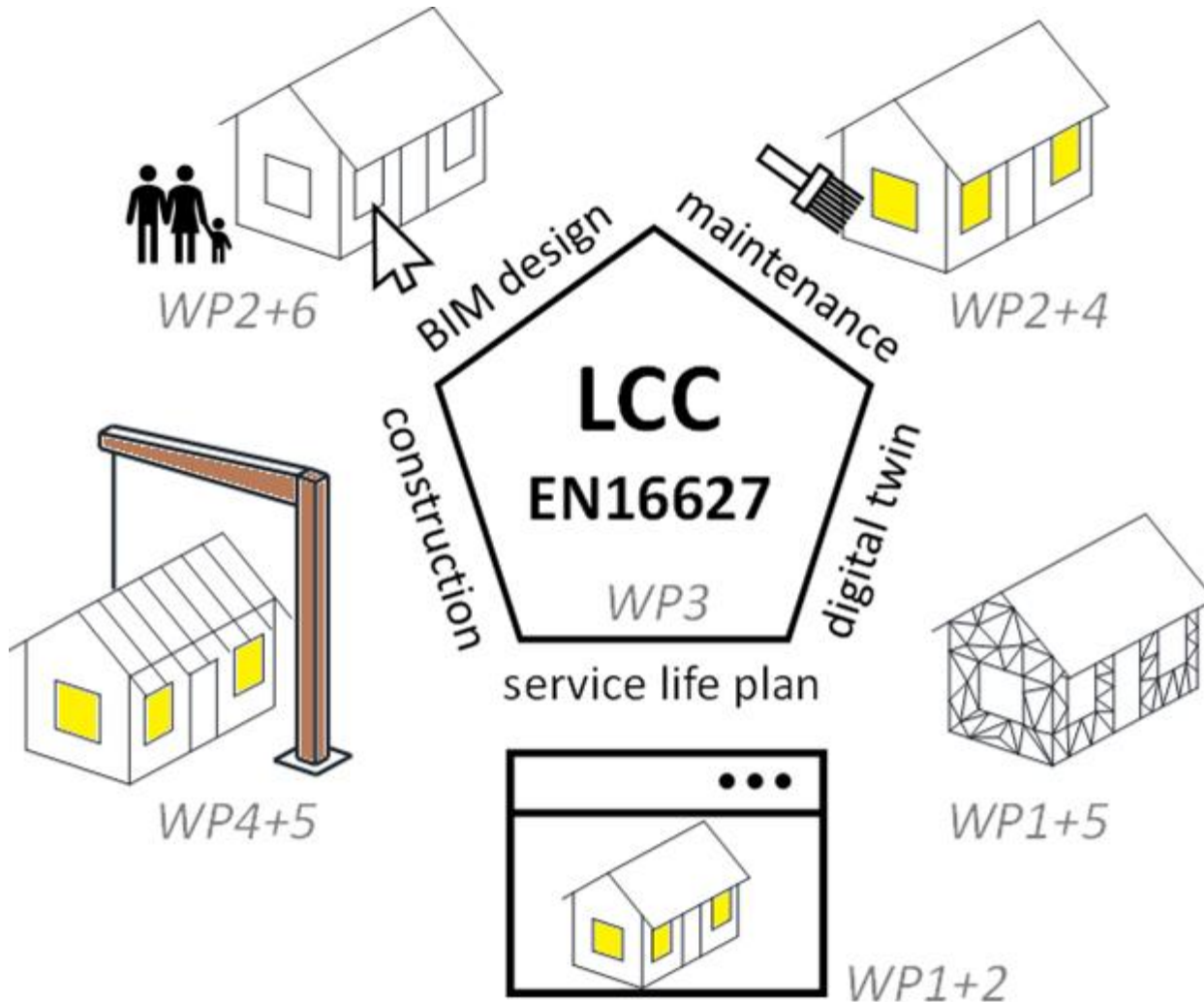
Service life prediction



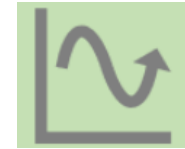
Life-cycle-cost estimation







Ongoing processes



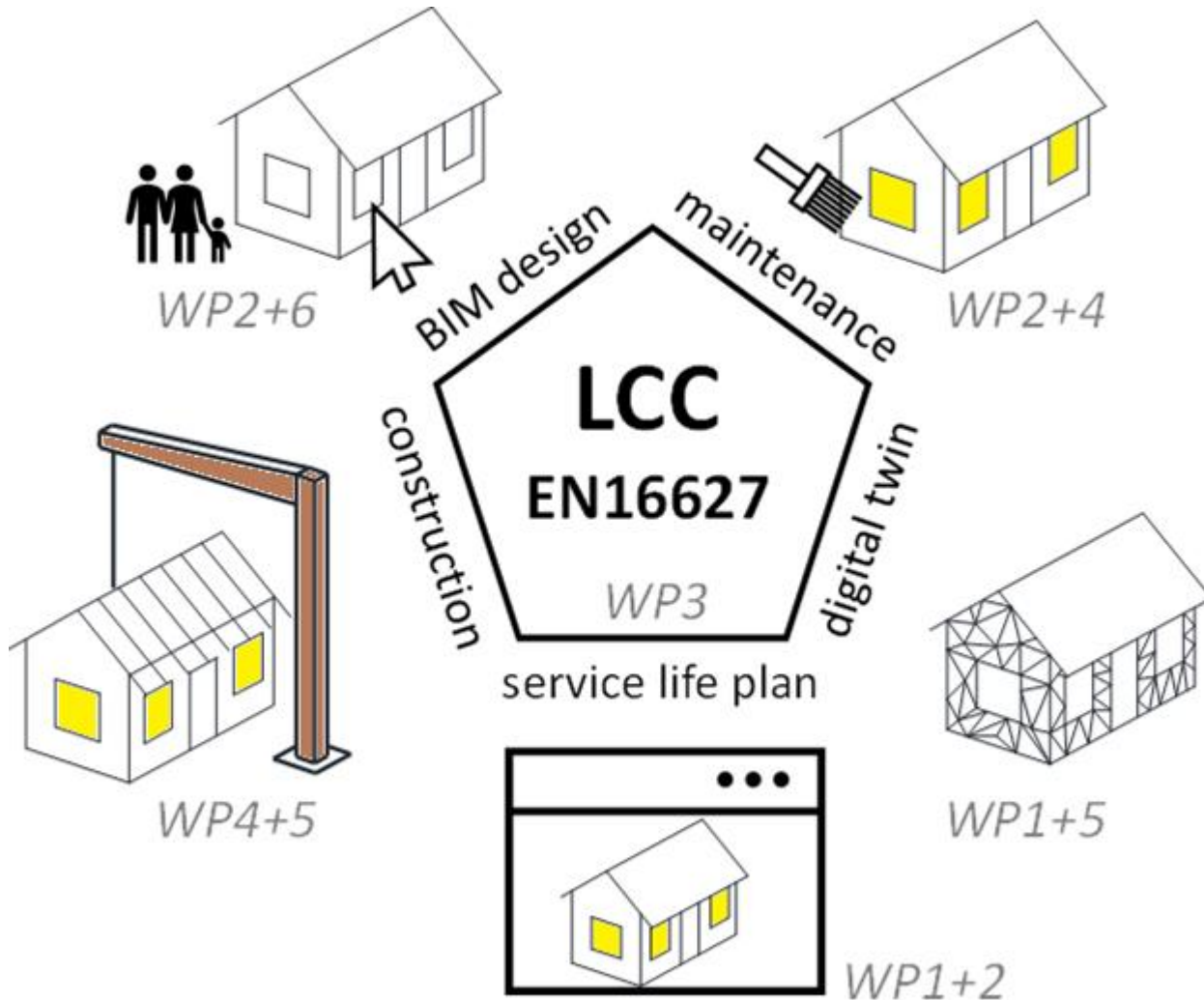
Update SLP model and service life database for LCC



Survey and quantification of limit states for different user preference categories



Data for SL and LCC on effect of inspection, maintenance, and repair intervals



Ongoing processes



Application of service life prediction and LCC methods to modern building techniques and materials



Dissemination

Type of dissemination or outreach	
Scientific papers	9
Conference papers, abstracts and presentations	32
Presentations at meetings, workshops etc.	9
Magazine, social media, blog, etc.	12
Deliverables – WoodLCC reports	4
Awards	2
PhD students	4
Master's students	4
Bachelor's students	4



ForestValue2

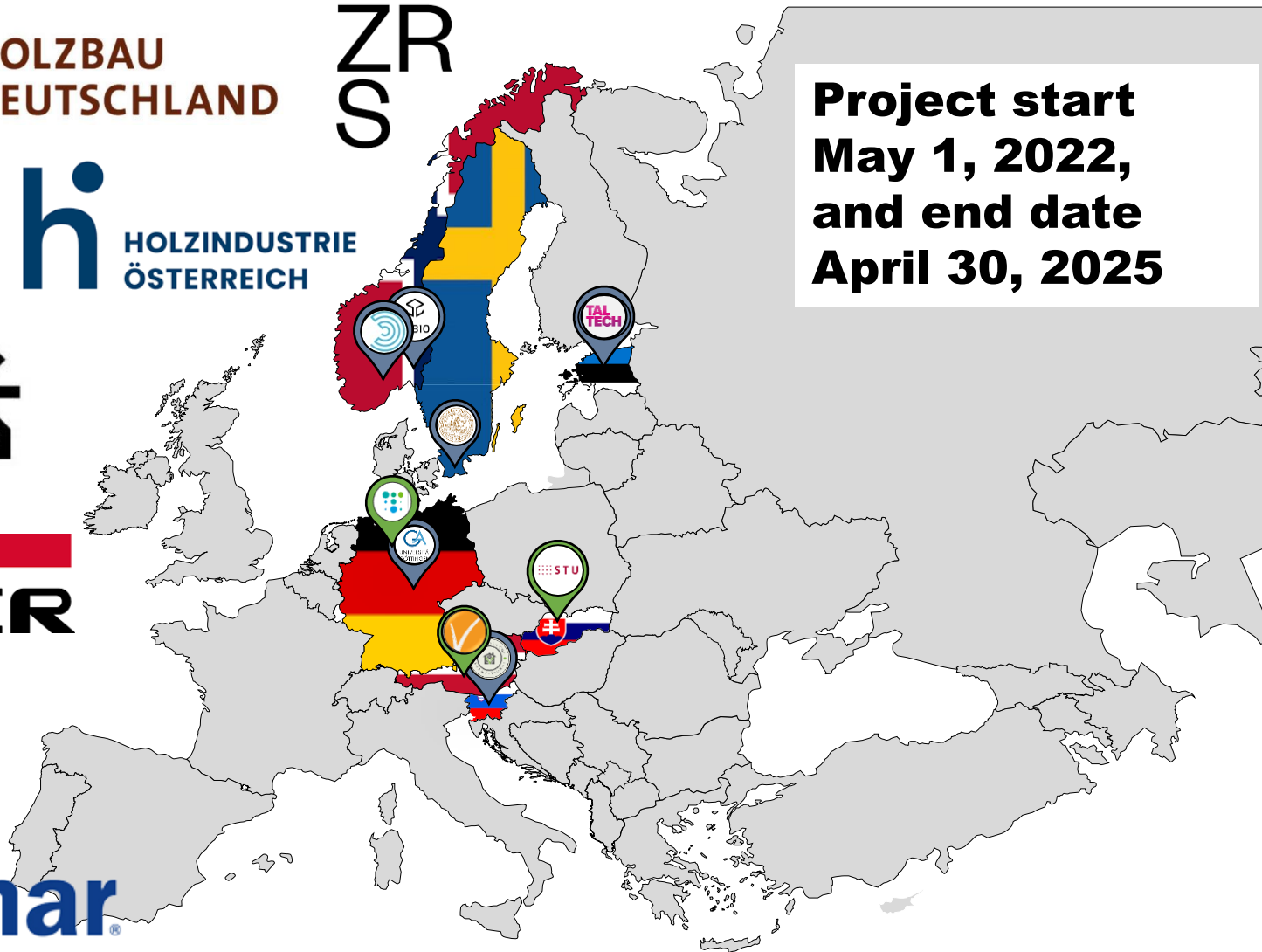


ZR
S

Norconsult
Informasjonssystemer



**Project start
May 1, 2022,
and end date
April 30, 2025**



Thank you!

Philip Bester van Niekerk

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