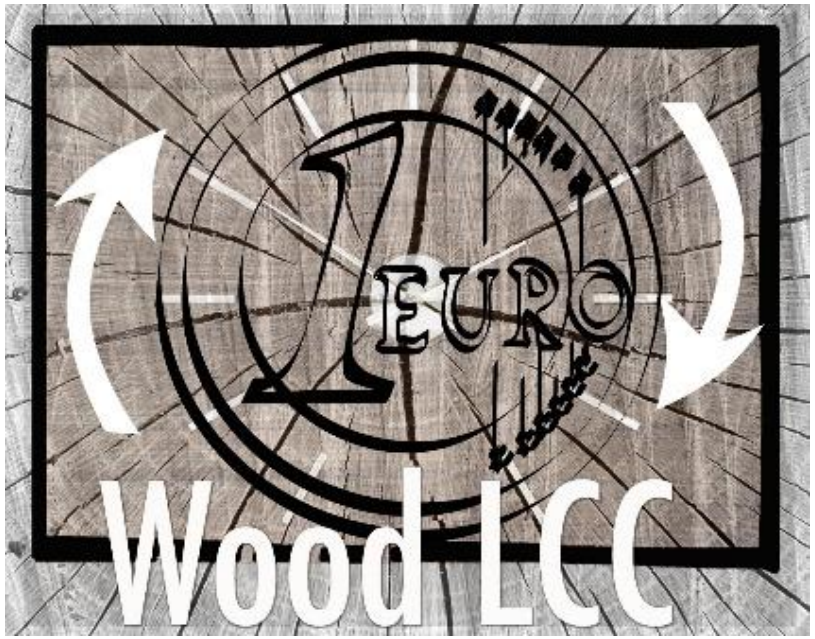
WoodLCC

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

Presented by Villu Kukk

TalTech Tallinn University of Technology, Estonia



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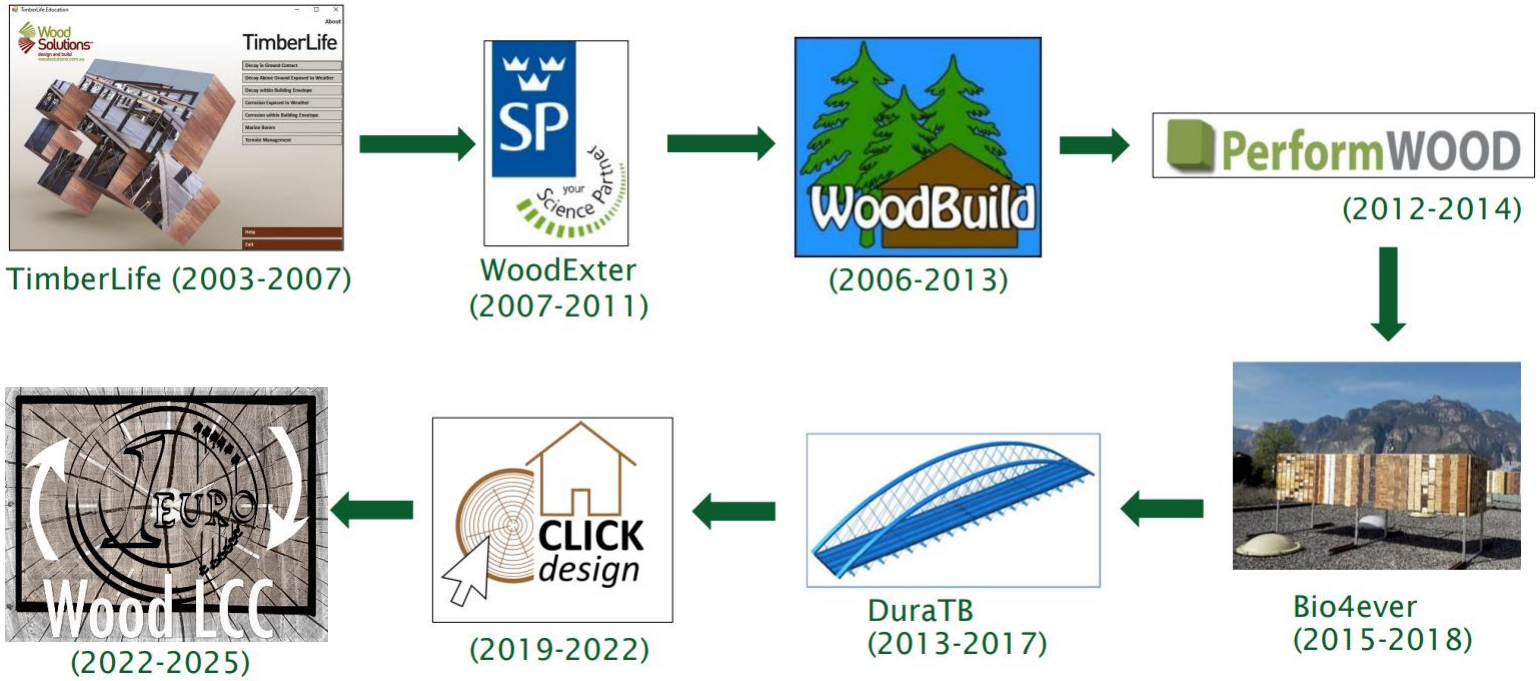
ForestValue2



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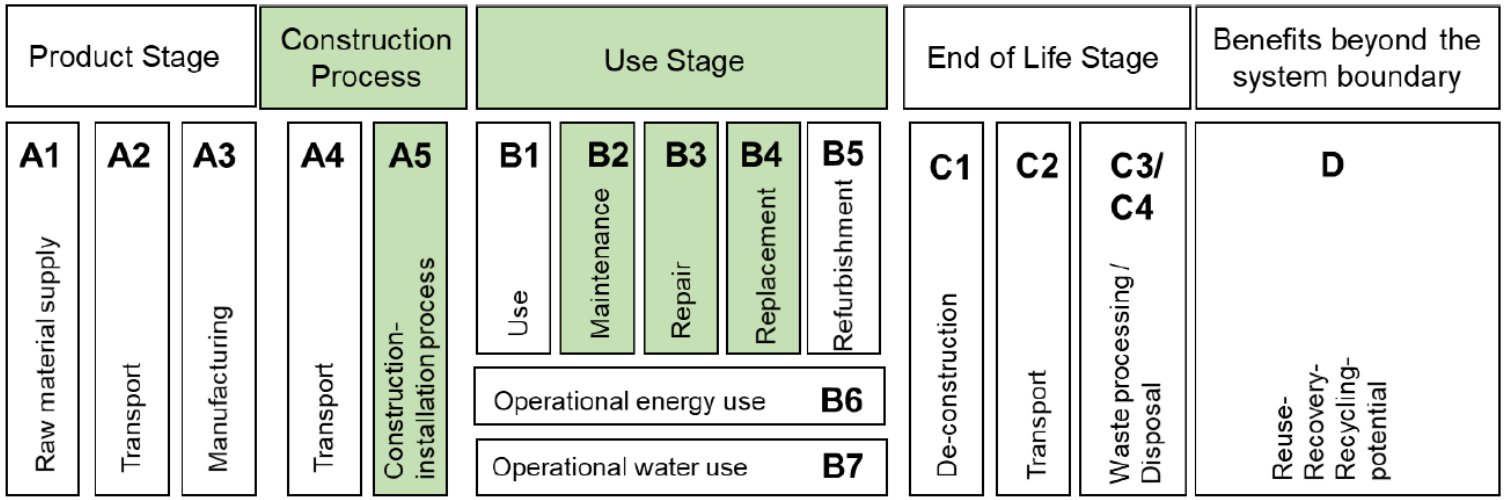
https://forestvalue.org/

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



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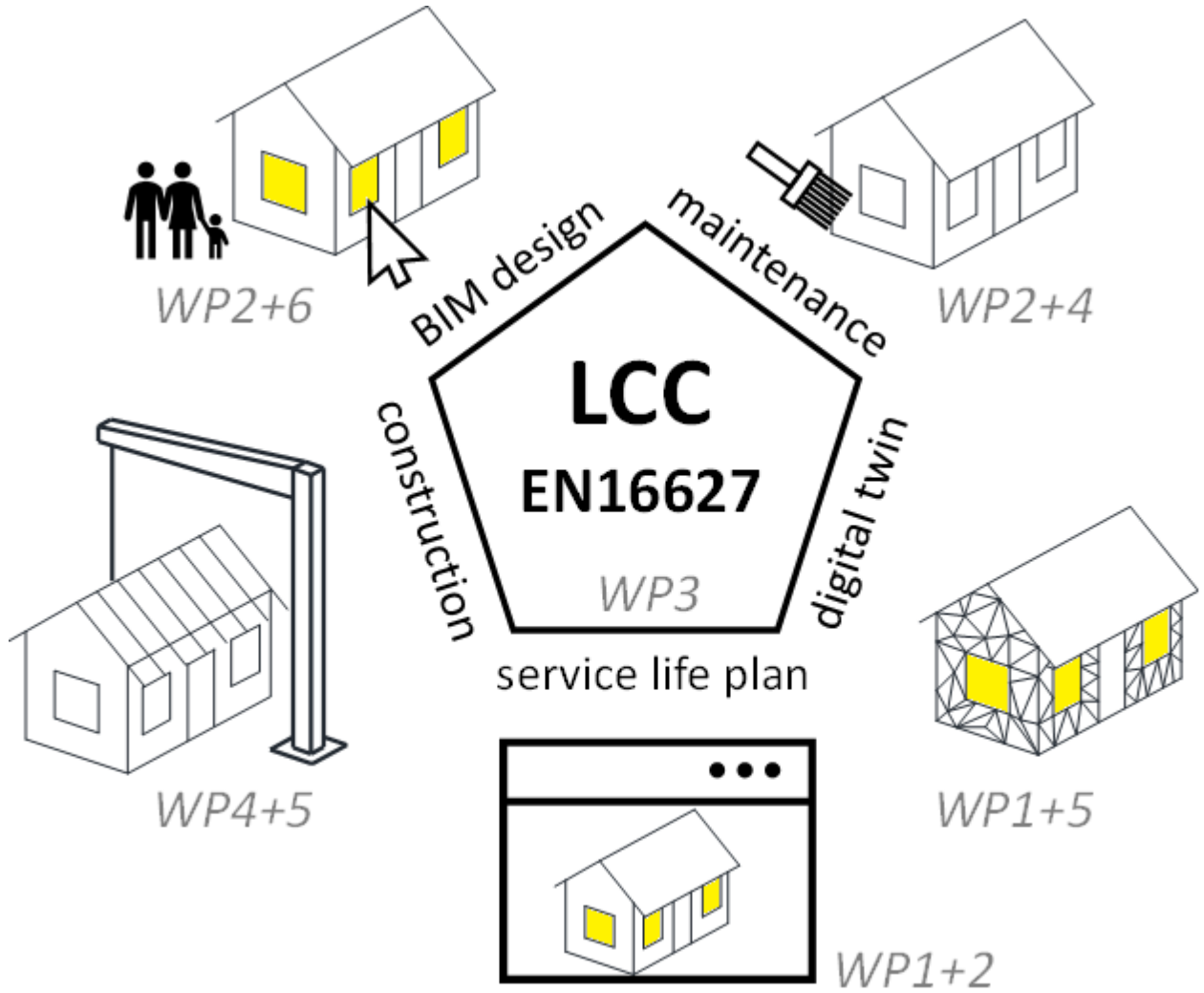

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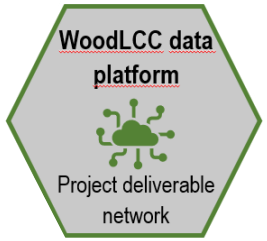
The project was completed with the support of 6 work packages

How can we enable accurate yet fast service life prediction?

How can all of this be integrated into BIM for user access?

What are user acceptance, expectations in terms of damage and costs?



How does construction practices influence service life and costs?

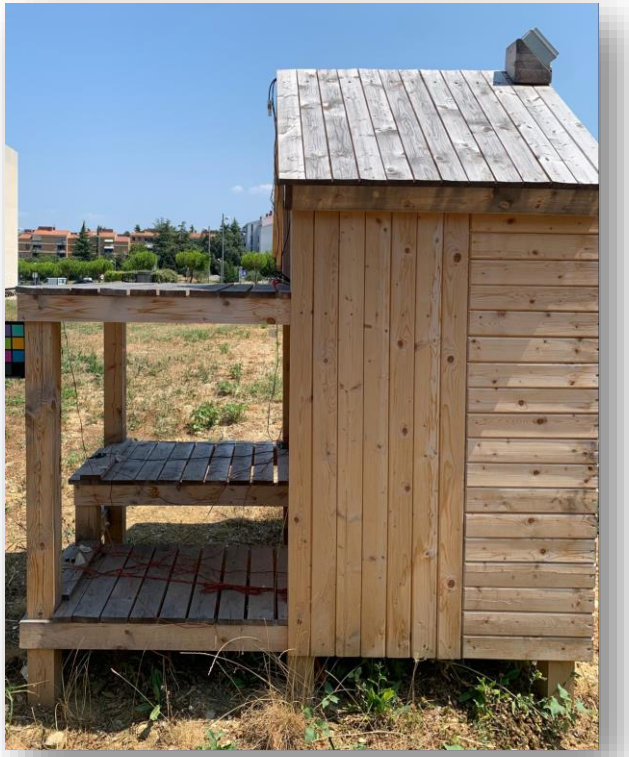
How can we integrate service life models into LCC frameworks?

How does design imperfections, maintenance, coatings affect the long-term performance and costs?

Creating the prototype

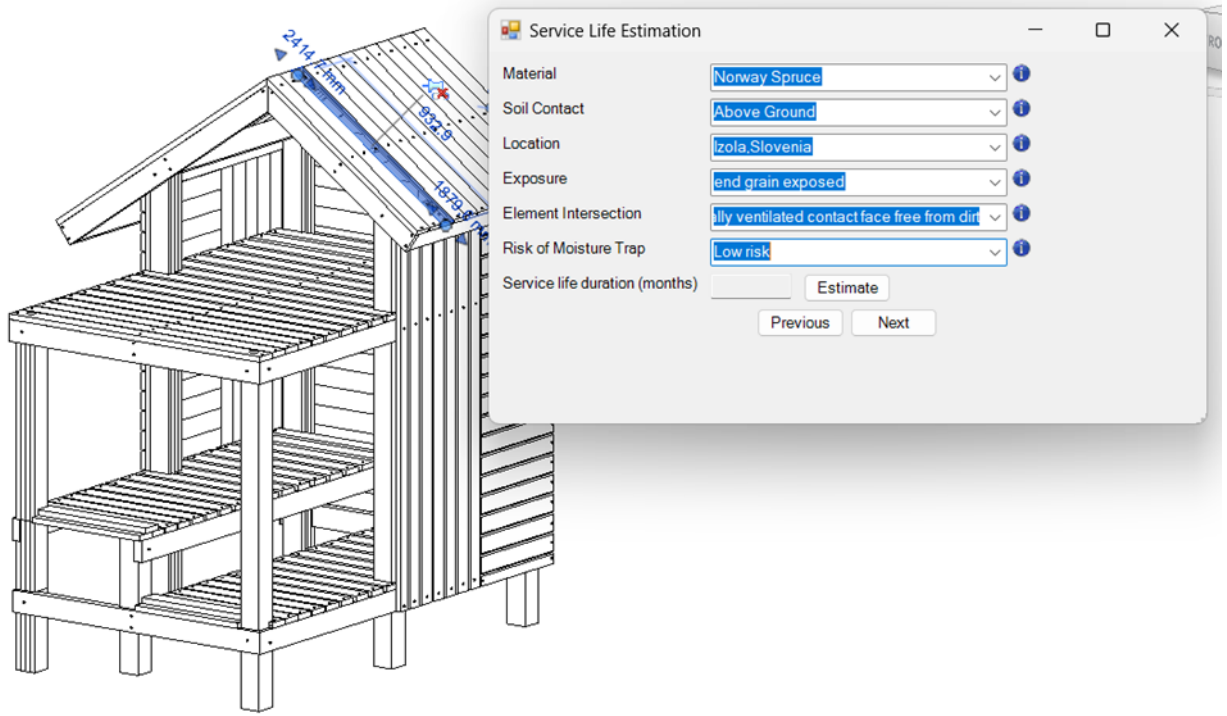
BIM

Sweden



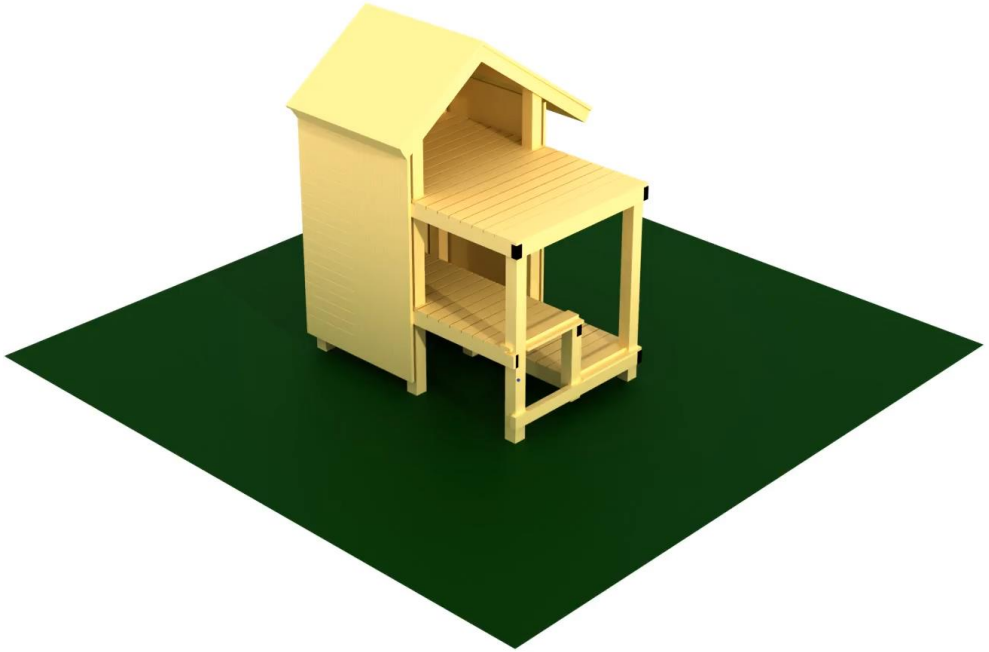
Slovenia

Performance-based life cycle costing

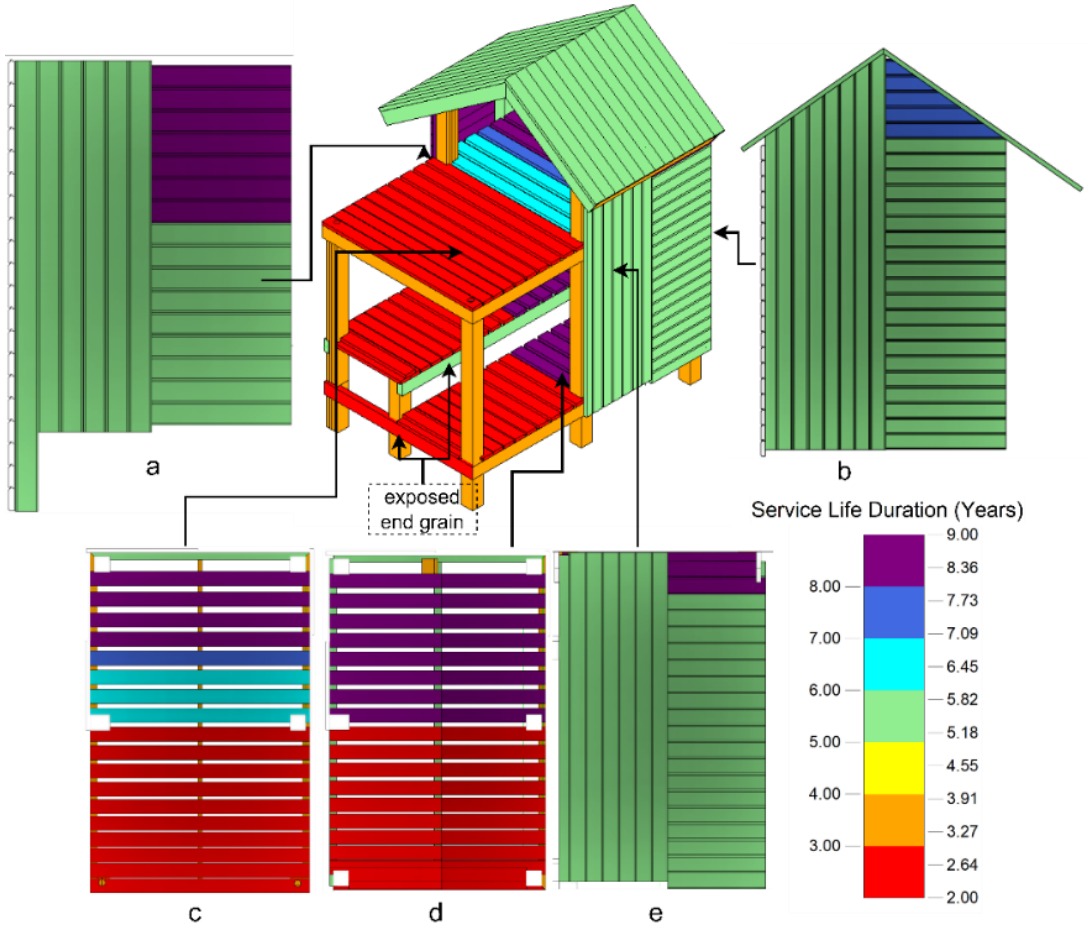


Environmental simulation

- Simulation of detailed geometries.
- Rain and solar analysis
- Fluctuating humidity and temperature

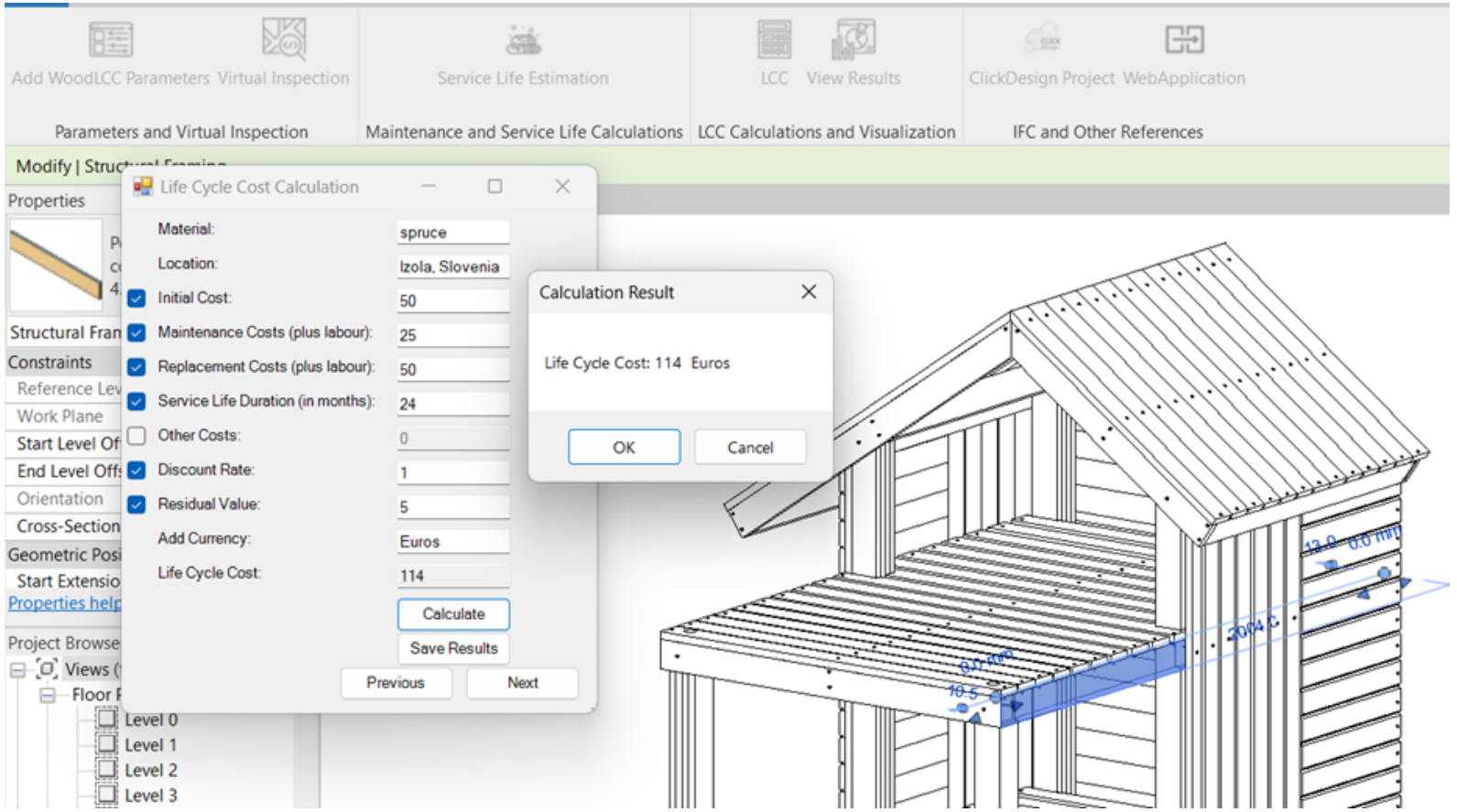


Service life assessment



User Interface

- Virtual inspection
- Service life prediction
- Life-cycle-cost estimation



Aesthetics

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Dissemination

Type of dissemination or outreach	
Scientific papers	16
Conference papers, abstracts and presentations	36
Presentations at meetings, workshops etc.	12
Magazine, social media, blog, etc.	15
Deliverables – WoodLCC reports	5
Tools	3
Awards	2
PhD students	6
Master's students	5
Bachelor's students	4

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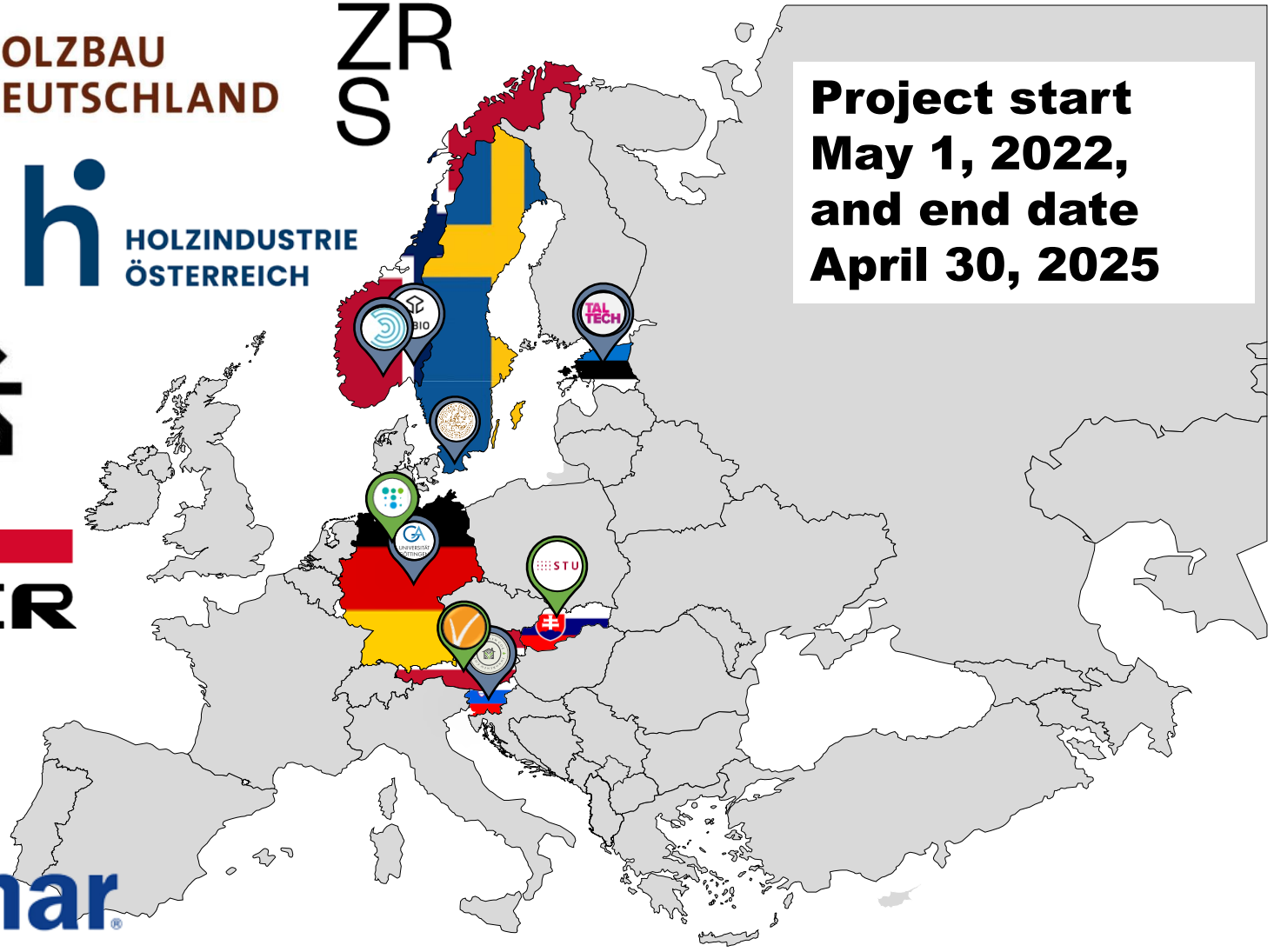

Project start May 1, 2022, and end date April 30, 2025

Thank you!

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