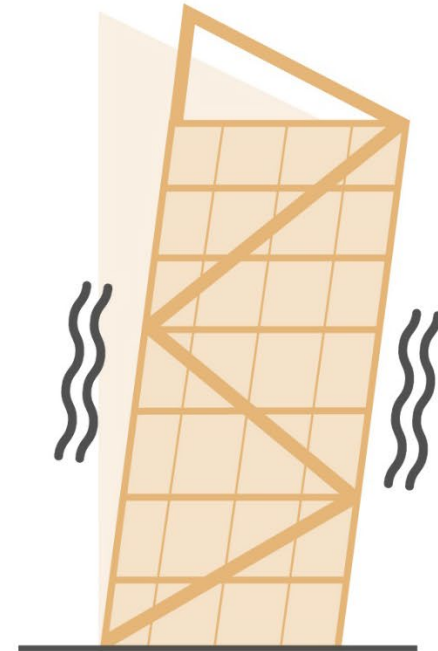
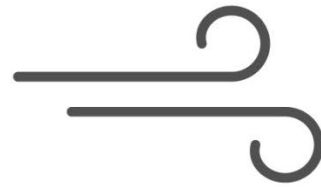


# *Dyna*TTB

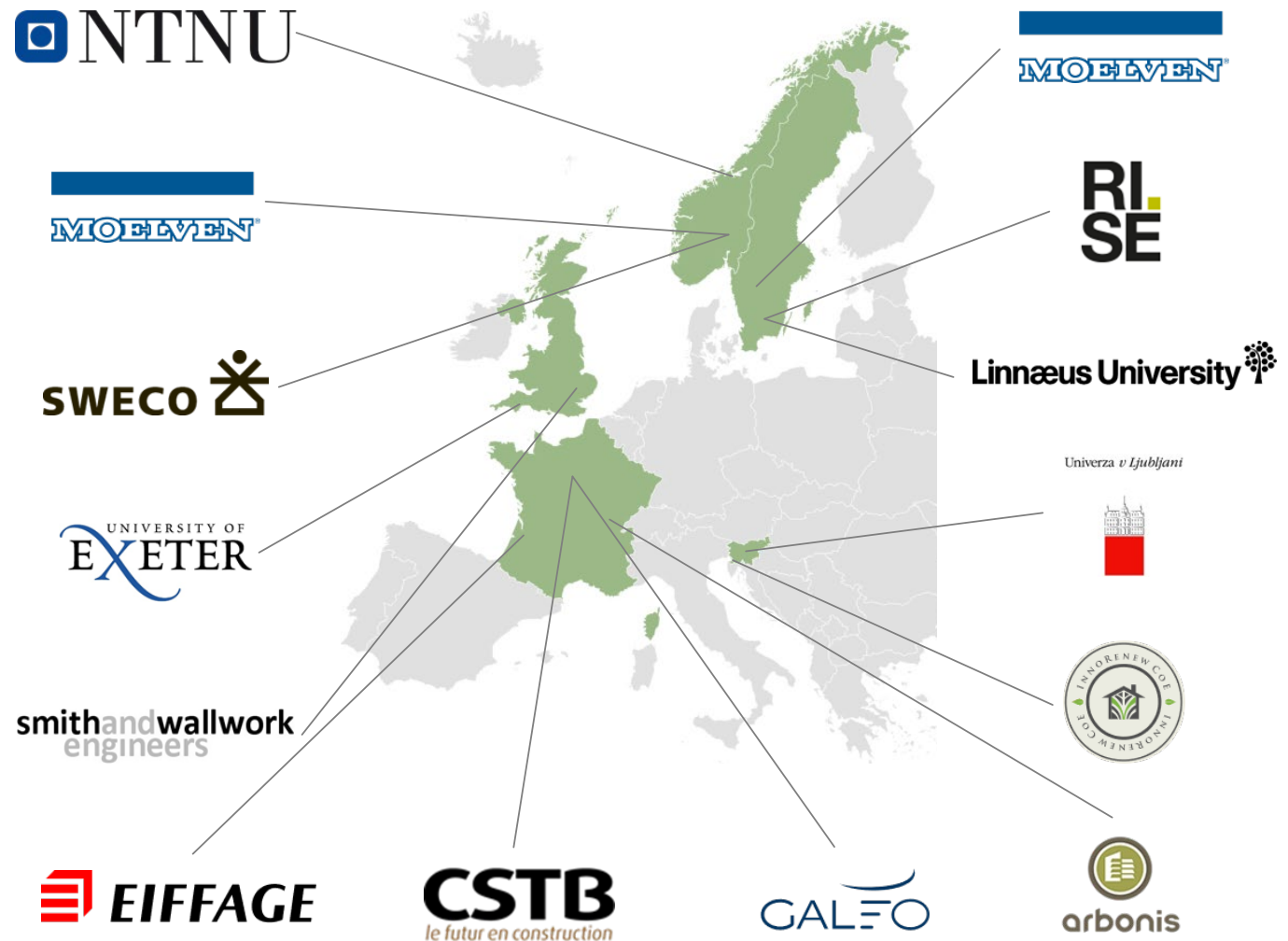
Dynamic Response of Tall Timber  
Buildings under Service Load



# Aim of the project

- Quantify the structural damping in as-built TTBs.
- Identify and quantify the effects of connections and non-structural elements on the stiffness, damping and wind-induced dynamic response of TTBs.
- Develop a bottom-up numerical FE-model for estimating the dynamic response of multi-storey timber buildings.
- Validate the predicted response with in-situ measurements on TTBs.
- Disseminate findings via a TTB Design Guideline for design practitioners.

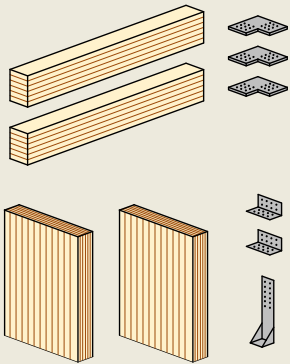
# Partners



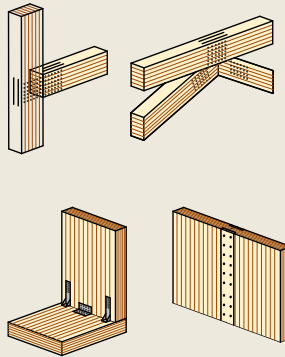
# Project structure

WP 1 – Project management

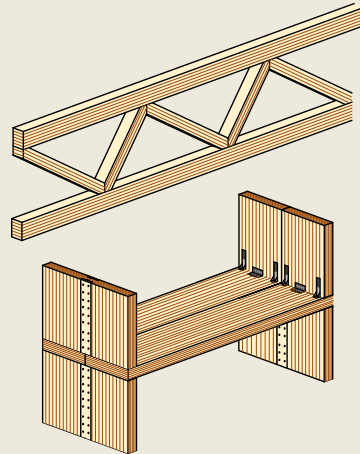
WP 2 – Laboratory experiments



*Components*

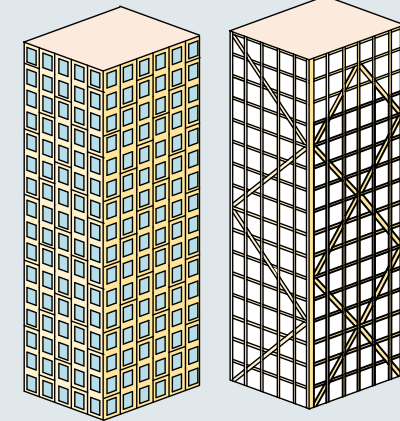


*Connections*



*Sub-assemblies*

WP 3 – In-situ measurements



*Complete buildings*

WP 4 - Modelling

WP 5 – Dissemination



# Buildings

(Planned)

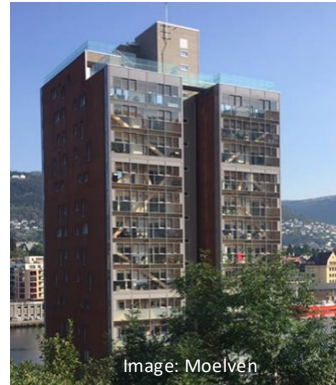


Image: Moelven  
Treet, 14 stories, glulam+volume elements



Image: Julie Lewis-Thompson  
Norsenga bridge, glulam

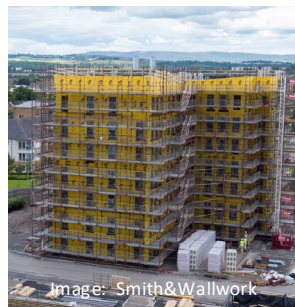


Image: Smith&Wallwork  
Yoker, 7 storeys, CLT



Image: Eifage  
Hyperion, 18 storeys, hybrid + CLT



Image: Arbonis  
Treed-IT, 12 storeys,

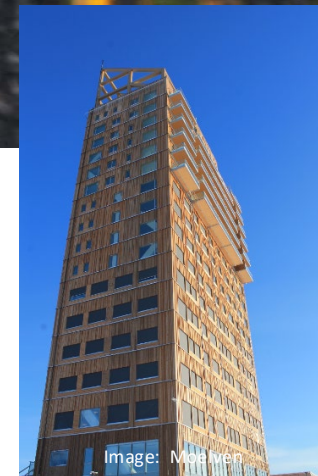


Image: Moelven  
Mjøstårnet, 18 storeys, Glulam



Image: Manehus  
Eken, 6 storeys, Glulam

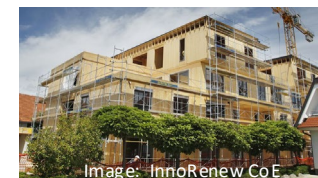


Image: InnoRenew Co E  
Karantanika, 4 storeys, CLT



**Website: [www.dynattb.com](http://www.dynattb.com)**

## Contact details

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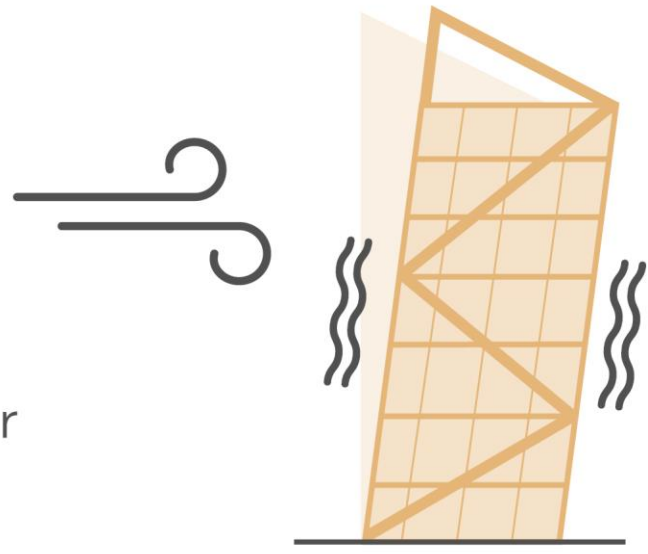


*Project Dyna-TTB is supported under the umbrella of ERA-NET Cofund ForestValue by Vinnova – Sweden's Innovation Agency, Agence Nationale de la recherche, Ministry of Education, Science and Sport, The Research Council of Norway and Forestry Commission. ForestValue has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 773324.*



**DynaTTB**

Dynamic Response of Tall Timber  
Buildings under Service Load



## Dynamic Response of Tall Timber Buildings under Service Load

Despite the increasing popularity of Tall Timber Buildings, at the current time, there is minimal information or knowledge as to the damping and distribution of mass and stiffness on sway from these wooden structures. The dynamic response are primarily driven by the stiffness and the damping in timber connections but also the effects of non-structural elements.

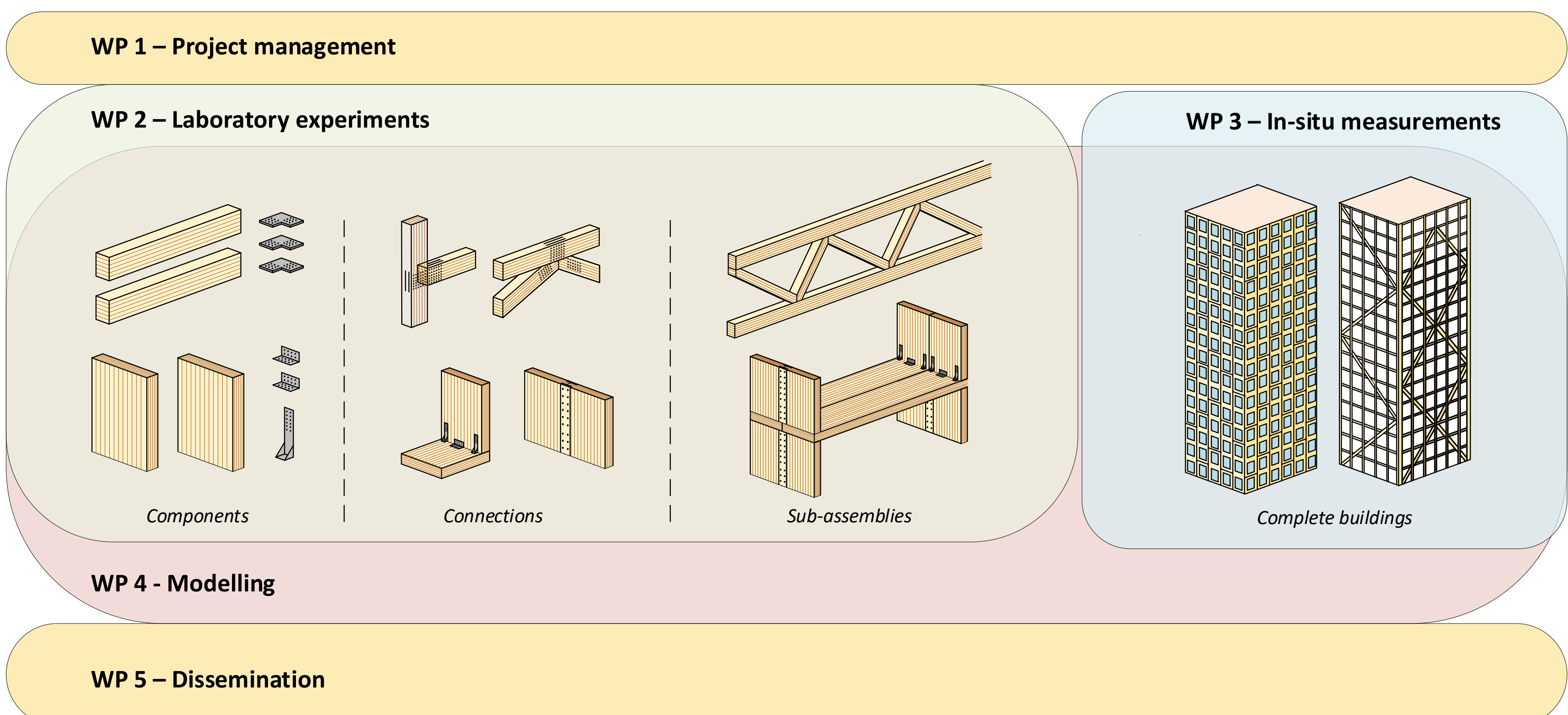
### The objectives of the project are to:

- Quantify the structural damping in as-built TTBs.
- Identify and quantify the effects of connections and non-structural elements on the stiffness, damping and wind-induced dynamic response of TTBs.
- Develop a bottom-up numerical FE-model for estimating the dynamic response of multi-storey timber buildings.
- Validate the predicted response with in-situ measurements on TTBs.
- Disseminate findings via a TTB Design Guideline for design practitioners.

### Buildings to be measured and modelled (Planned)



### Project structure



### Project partners:



Linnæus University



Univerza v Ljubljani



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Phonenumber +46 10 516 62 51

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