The RISE institutes Innventia, SP and Swedish ICT have merged in order to become a stronger research and innovation partner for businesses and society.

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PROJECT IDEA

AIM

- To develop new models and methods for assessing aging and life expectancy of large wooden structures, e.g. timber bridges, in the outdoor environment to ensure safe load bearing structures
- To develop new cost-effective improvement measures in case of damage or for renovation to meet changing needs in the future
- Measurement methods to facilitate inspections, damage investigations and warranty issues

OBJECTIVES

- The project develops methods and tools to assess the remaining life and evaluate various restraining measures
- Guidelines for sustainable construction, renovation and reconstruction of large wooden structures.

METHODS USED

- Evaluation of field tests of beams and posts
- Verification/validation and testing
- Studies of existing structures of different age
EXISTING PARTNERS/EXPERIENCE

- RISE Wood building technology
  - Field test with beams and poles in outdoor environment for about 10 years
  - Experiences from inspections and the field test: moisture changes, cracking, impact of impregnation and surface treatment
  - Design and construction, glued wood, timber production processes
  - Moisture in wood, inspections and measurement technology

MISSING PROFILES

- Field tests in other regions/climates
- Experts in simulation of moisture in wood and wood properties
- Expertise in renovation
- Builders, producers, manufacturers