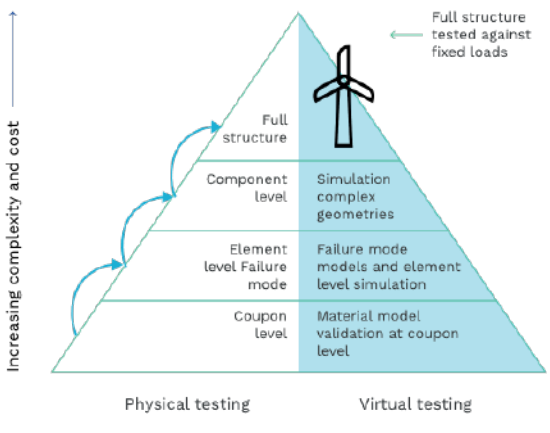
INNOVATIVE FUTURE-PROOF TESTING METHODS FOR RELIABLE CRITICAL COMPONENTS IN WIND TURBINES

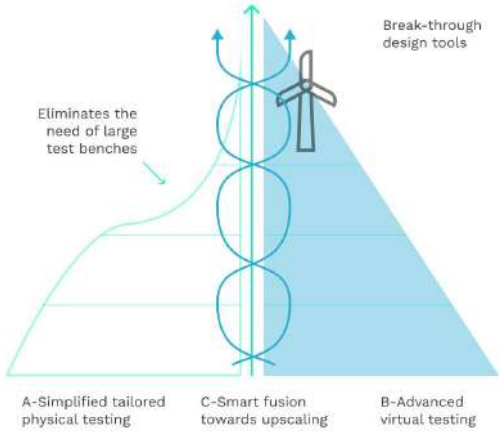
INNTERESTING proposes a new hybrid testing methodology able to robustly predict the expected reliability and lifetime of large wind turbine components [up to 20MW] without the need of performing physical tests of full-size prototypes nor building new large and expensive test-benches

INNTERESTING

CURRENT TESTING PYRAMID



INNTERESTING HYBRID TESTING METHODOLOGY

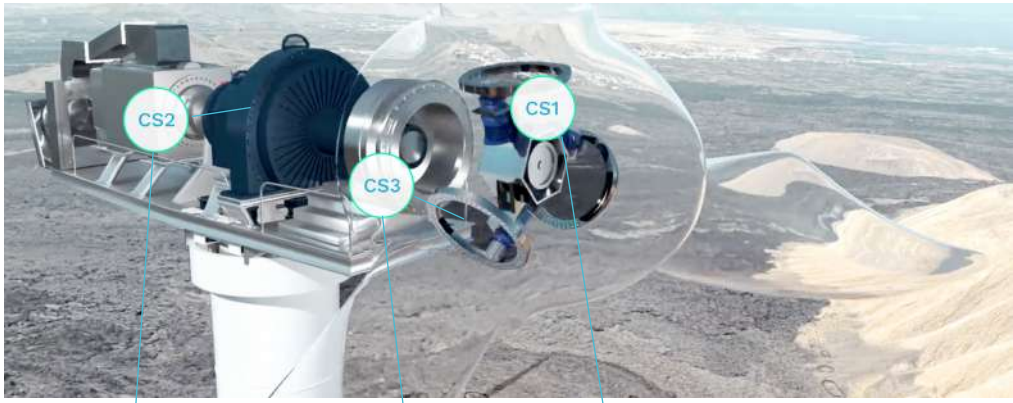


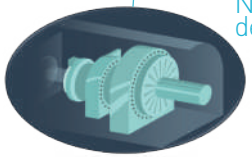
The new methodology combines results from simplified physical tests and advanced virtual testing through smart fusion process and upscaling techniques.

It will be useful for validating large wind turbine components and for evaluating lifetime extension concepts that must be implemented in already existing windfarms in order to extend the remaining life of the turbines.

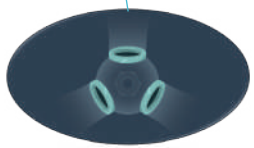
In addition to the technical aspects, the life cycle of the case studies will assessed to maximise the innovation potential of the INNTERESTING technological developments without losing their potential of lowering environmental, social and economic impacts.

New technology will be developed and validated through 3 different case studies:

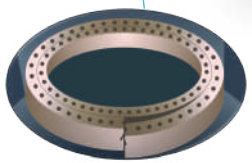




CS2
Novel gearbox design concept



CS1
Novel pitch bearing design concept



CS3
Novel stiffening concept for lifetime extension of existing pitch bearings

www innterestingproject.eu @INNTERESTING_eu /innteresting-eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 851245

ikerlan · KU LEUVEN · LAULAGUN bearings · moventas · VTT · SIEMENS Ingenuity for life · vito Energy Ville · Cluster Energía