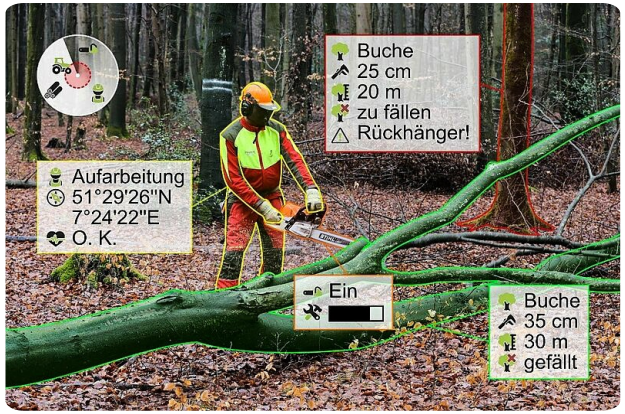
KWH4.0 | Center of Excellence for Forestry 4.0



Forest and Wood 4.0 - the forest cluster becomes smart

The Center of Excellence for Forestry 4.0 is developing Industry 4.0 digitalization concepts for the forest and wood cluster. The driving force behind this approach is a closely cooperating working group of companies, research centers and the Forestry Education Center North-Rhine Westphalia as a practical testbed.New, intelligent and decentrally acting machines, devices, services and people, will enable the cluster to optimize its complex value-added networks, develop new business models and meet current challenges from ecology, economy and climate change. Existing approaches address the complexity of structures and processes, and the conflicting demands on forest management only insufficiently. To "smartify" the forest and wood cluster, existing competencies from industry, science and administration must be bundled: The goal of KWH4.0 is to create a know-how base and infrastructures, and to implement forest and wood 4.0 components via innovative Smart Forest Labs. The Smart Forest Labs serve as experimental forestry laboratories in which developed components, systems and processes are tested, standardization advanced, concepts disseminated, and actors trained. Developed concepts and standards are continuously published as practical recommendations, a first version of the communication infrastructure S3I (Internet of Things application) has been established. In addition, there is an increasingly smart fleet: forestry machines have been upgraded to retrieve digital information (GPS position, fuel consumption, production data, etc.) and at the same time networked via alternative radio standards with machines in regions where mobile communication is not possible.

DETAILS

ORIGIN OF WOOD
--

TYPE OF WOOD
--

KIND OF WOOD CONCERNED
--

IMPACT ON ENVIRONMENT & BIODIVERSITY
Other solutions from the KWH4.0 network address sensor-supported forest monitoring in order to increase resilience against climate change.

INCOME EFFECT
--

EXPLOITATION POTENTIAL
--

HUB
Central-West Hub

ECONOMIC IMPACT
--

MOBILIZATION POTENTIAL
High, the KWH4.0 as a competence hub supports a wide range of projects and digital solutions, which in turn support wood mobilization.

SUSTAINABILITY POTENTIAL - VALUE
Very Positive

EASE OF IMPLEMENTATION
The KWH4.0 has received ERDF funding to start working. A challenge can be the core collaboration from both sides, forestry and ICT, needed to kick off activities.

EASE OF IMPLEMENTATION - EVALUATION
--

KEY PREREQUISITES
--

TYPE OF EVENT WHERE THIS BPI HAS BEEN FEATURED
Study visit (T2.3)

JOB EFFECT
--

COSTS OF IMPLEMENTATION (EURO - €)
--

SPECIFIC KNOWLEDGE NEEDED

--

MORE DETAILS

CHALLENGE ADDRESSED

5.- Enhance economic and environmental performance of forest supply chains

DOMAIN

Innovation management, hubs, clusters

TYPE OF SOLUTION

Modelling, simulation, optimization

KEYWORDS

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DIGITAL SOLUTION

Yes

INNOVATION

Yes

COUNTRY OF ORIGIN

Germany

SCALE OF APPLICATION

Regional/sub-national

START AND END YEAR

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REFERENCES AND RESOURCES

MAIN WEBSITE

https://www.kwh40.de/

PROJECT WEBSITE

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PROJECT REFERENCE

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RESOURCES

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LOGO OF BEST PRACTICE

LOGO OF MAIN ORGANIZATION

PROJECT UNDER WHICH THIS FACTSHEET HAS BEEN CREATED

Rosewood 4.0

POST DATE

11 Aug 2021

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY