

# Drones in Forestry Planning



Metsä Group photographed in 2018 with drone about 3 500 hectares of forest in southern and western Finland and utilized the data as basis for forest plans for forest owners. According to experience, the method has been developed and now the drone forest plans are being sold as an alternative to traditional forest plans. The forest plan based on information described by Drone or copter with camera challenges the traditional forest planning. The method is used in particular to get more accurate tree information.

The drone plan will be of interest to the forest owners who want to be in the front and develop new developments with forest industry. For example, in a virtual forest, the data measured in the drone will create a precise tree map, where the trees are in the right places and the tree species are correct. In virtual reality, it will better reflect the fluctuations of the wood inside the forest compartment than the traditional forest plan information. The drone design and virtual forests form an interesting pair in the future by producing new experiences for forest owners.

The measurements will provide both the amount of trees in cubic meters and the value of the wood in euros more accurately than before. With drone surveys we also get information about the amount of dead wood – it helps to preserve the important structure of forest for diversity.

The method is capable of identifying tree three species: pine, spruce and birch. The remaining deciduous tree species are logged into the category of other deciduous trees. Based on the measurement data, treatment recommendations are calculated. This drone-made plan differs from the traditional, where human being makes the treatment recommendations.

The forest plan produced by drone is particularly suitable for updating the forest plan that is about to expire. It is also suitable for forest owners, who are particularly interested in the amount and value of the timber.

The forest plan of the drone also benefits from a faster delivery of traditional forest plan. Delivery time is few months, which is only half of the delivery times of traditional forest plan.

## DETAILS

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### ORIGIN OF WOOD

Forest

### TYPE OF WOOD

Stemwood

### KIND OF WOOD CONCERNED

Stemwood, energy wood

### IMPACT ON ENVIRONMENT & BIODIVERSITY

Positive

### INCOME EFFECT

Positive

### EXPLOITATION POTENTIAL

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### HUB

Northern Hub

### ECONOMIC IMPACT

Positive

### SPECIFIC KNOWLEDGE NEEDED

IT skills, knowledge of forest planning processes

### MOBILIZATION POTENTIAL

Medium

### SUSTAINABILITY POTENTIAL - VALUE

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### EASE OF IMPLEMENTATION

Easy, requires IT skills

### EASE OF IMPLEMENTATION - EVALUATION

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### KEY PREREQUISITES

IT skills needed, co-operation needed between IT companies and forest companies

### TYPE OF EVENT WHERE THIS BPI HAS BEEN FEATURED

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### JOB EFFECT

Positive

### COSTS OF IMPLEMENTATION ( EURO - € )

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## MORE DETAILS

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### CHALLENGE ADDRESSED

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

### DOMAIN

Forest management, ecosystem, resilience

### TYPE OF SOLUTION

Advice and services for forest owners

### KEYWORDS

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### DIGITAL SOLUTION

No

### INNOVATION

Yes

### COUNTRY OF ORIGIN

Finland

### SCALE OF APPLICATION

National

### START AND END YEAR

2017 -

## CONTACT DATA

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### OWNER OR AUTHOR

Metsä Forest

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### REPORTER

## REFERENCES AND RESOURCES

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### MAIN WEBSITE

<https://www.metsaforest.com/fi/Yritys/Tiedotteet/Pages/Tiedote.aspx>

### RESOURCES

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### PROJECT WEBSITE

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### PROJECT REFERENCE

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LOGO OF BEST PRACTICE

LOGO OF MAIN ORGANIZATION



PROJECT UNDER WHICH THIS FACTSHEET HAS BEEN CREATED

Rosewood

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