



**TIMBETER**

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CEO & Founder



# What is TIMBETER?

[T] TIMBETER

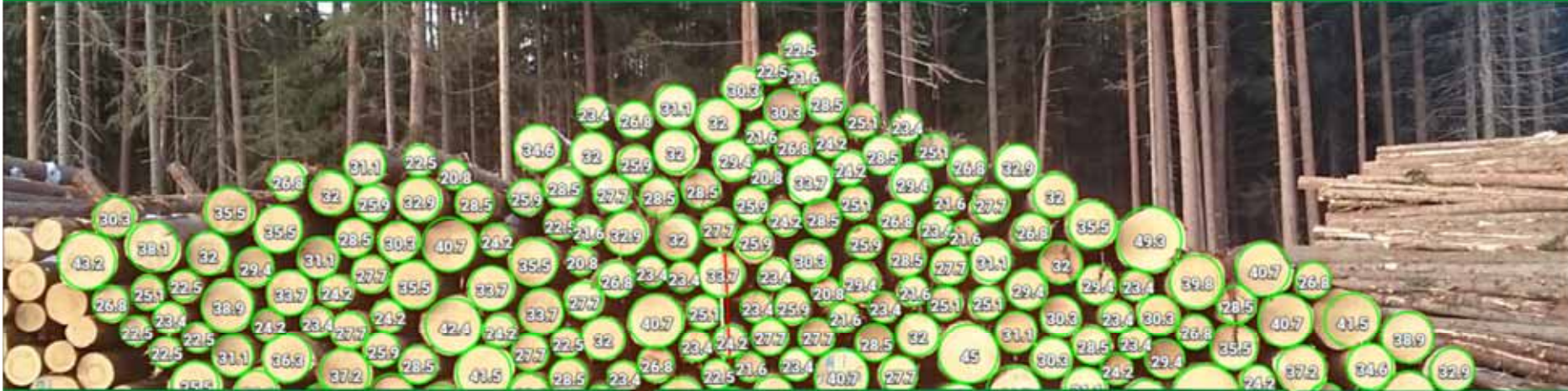
Easy-to-use solution for quick and accurate timber measurement





# How it works

## Diameter measurement



### 1 Location

Storage:

Latitude:

Longitude:

or

### 2 Timber

Measured by:

Measured on:

Measurement type:

Wood type:

Wood quality:

Wood assortment:

Log length:  m

Volume formula:

Reference size:  m

### 3 Log diameters

|       |    |
|-------|----|
| 21 cm | 4  |
| 22 cm | 10 |
| 23 cm | 31 |
| 24 cm | 16 |
| 25 cm | 11 |
| 26 cm | 11 |
| 27 cm | 14 |
| 28 cm | 16 |
| 29 cm | 27 |
| 30 cm | 10 |
| 31 cm | 16 |
| 32 cm | 18 |
| 33 cm | 7  |
| 34 cm | 8  |
| 35 cm | 3  |
| 36 cm | 11 |
| 37 cm | 3  |
| 38 cm | 1  |
| 39 cm | 3  |
| 40 cm | 6  |
| 41 cm | 8  |
| 42 cm | 8  |

# Log detection algorithm



- **Machine-learning** and **computer-vision** based algorithm.
- Algorithm „trained“ on more than **150 000** pictures.
- Certified by **Metrocert** – measurement certification authority.
- Error margin **0,5-1,5 %**.

# Defect-marking

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08:19

Measure again

|       | Volume              | %      | Count |
|-------|---------------------|--------|-------|
| Total | 26.89m <sup>3</sup> |        | 77    |
| Pine  | 25.29m <sup>3</sup> | 94.05% | 74    |
| Cull  | 1.60m <sup>3</sup>  | 5.95%  | 3     |

| Reason       | Volume             | Count |
|--------------|--------------------|-------|
| Wrong length | 0.62m <sup>3</sup> | 1     |
| Rot          | 0.53m <sup>3</sup> | 1     |
| Wrong size   | 0.44m <sup>3</sup> | 1     |

OK

Av diameter: 24.90cm

Log count: 77

Log length: 5.5m

Reference size: 1m

Formula: GOST





# Pulp-and fuelwood measurement

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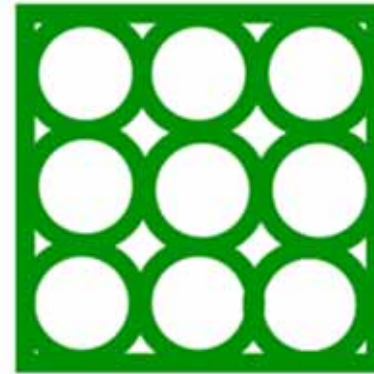


# Different measurement options

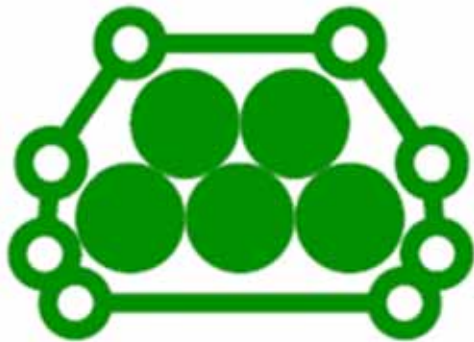
[T] TIMBETER



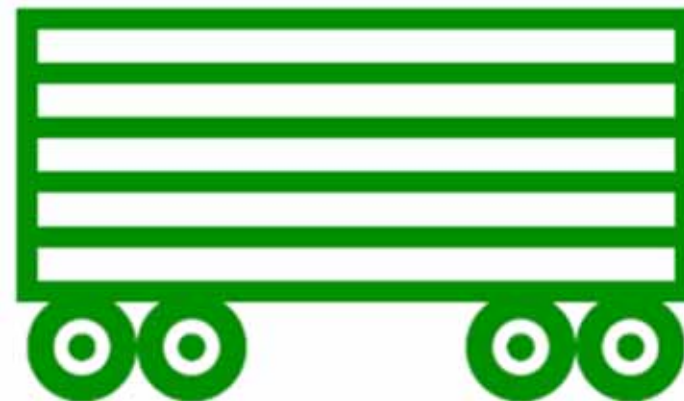
DIAMETER



CONTAINER



PILE



TRUCK

# Data platform



Storage

Measurement date

 to 

Measurement type

Status

[Show additional filters](#)

[Clear](#)

[Filter](#)

[Show Map view](#)

[Save as Excel](#)

Name

Coordinates

Last update

Status

Total

[>](#) **Timbeter HeadQuarters**

59.39806, 24.66172

June 27, 2016

● In progress

34,086.38 m<sup>3</sup>



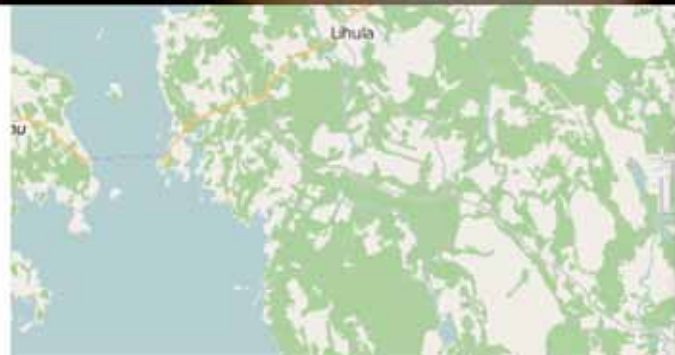
[>](#) **Nordic Lumber**

58.9543, 23.90861

June 17, 2016

● In progress

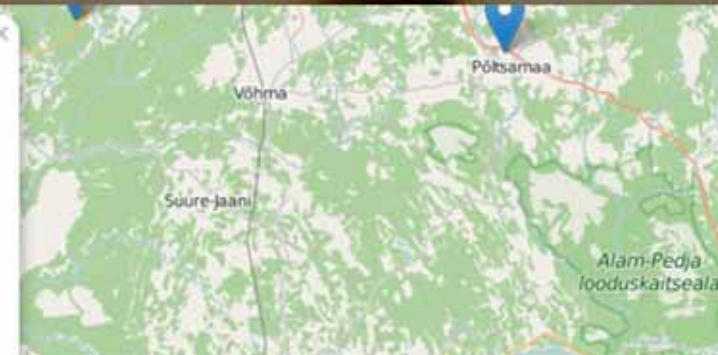
0.06 m<sup>3</sup>



## Paikuse

Coordinates 58.3144 24.76473  
Wood type Spruce  
Wood quality Pulpwood  
Created on 2016-06-15  
Total 110.16 m<sup>3</sup>  
Status In progress

[Open measurements](#)





# 2-way information synchronization



- All measurements from different devices stored under one account in cloud.
  - Real-time overview of all the measurements made (geographical location, volumes, piece counts)
  - Possibility to correct measurement in desktop computer.
- 
- All company-custom information inserted from storage module (storages, species, assortments, cull etc).

# Certifications/Evaluations



IRELAND



LITHUANIA



ESTONIA



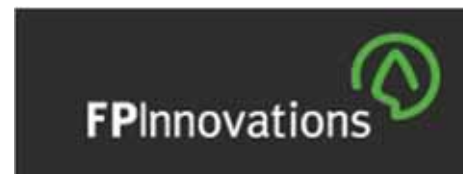
GERMANY



NETHERLANDS



CANADA



AUSTRALIA





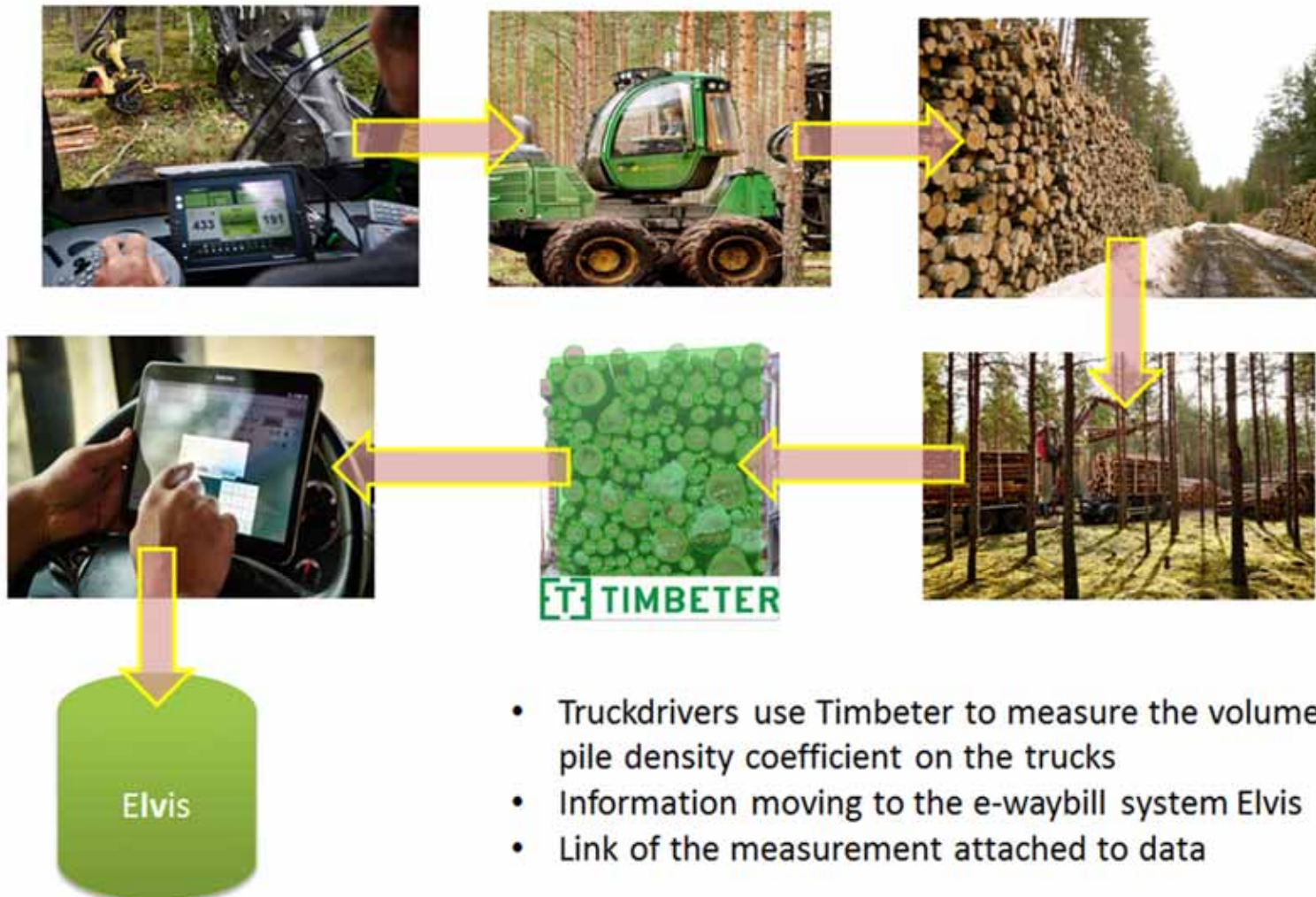


- Quick and accurate **piece count** and volume measurement.
- All required data structured: **measurement – number of container-bill of lading**.
- Information easily shared via **link**.
- In case of disagreements **digital proof** always available.
- No **duplicate** data entries.
- Reduction of **human error**.
- All measurements can be **re-measured**.
- Number of **claims** dropped.



# Estonian State Forest Management Centre supply chain

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# Benefits

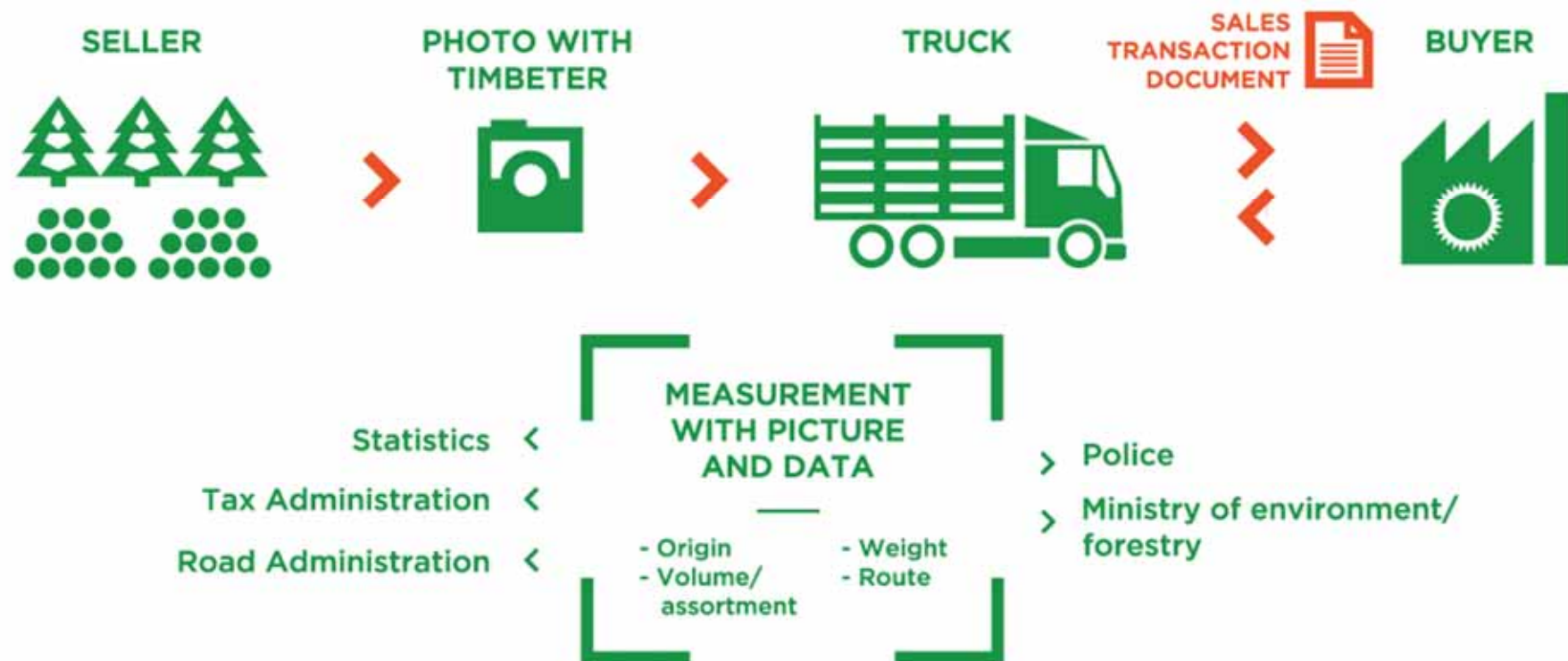


- Exact measurement
- Digital proof of measurement
- Overview of the volumes and coefficients
- Reduction of possible human error
- Control on the weight of the truckload
- Transparency and trackability



# Digital supply chain of timber

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- Multifunctional use of data
  - Exact data on cutting volumes
  - Data for Statistics
  - Reduction of reporting for companies
  
- Origin of timber always known
- Digital surveillance
- Transparency
- Trackability
- Efficiency
- Increase of fair competition
- Increase of tax revenue

# Next steps

- Single high-value log
- Measurement from both side





## Contact

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