

# EUROPEAN LARGEST PELLET PRODUCER

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COO

graanul invest

# OUR VISION

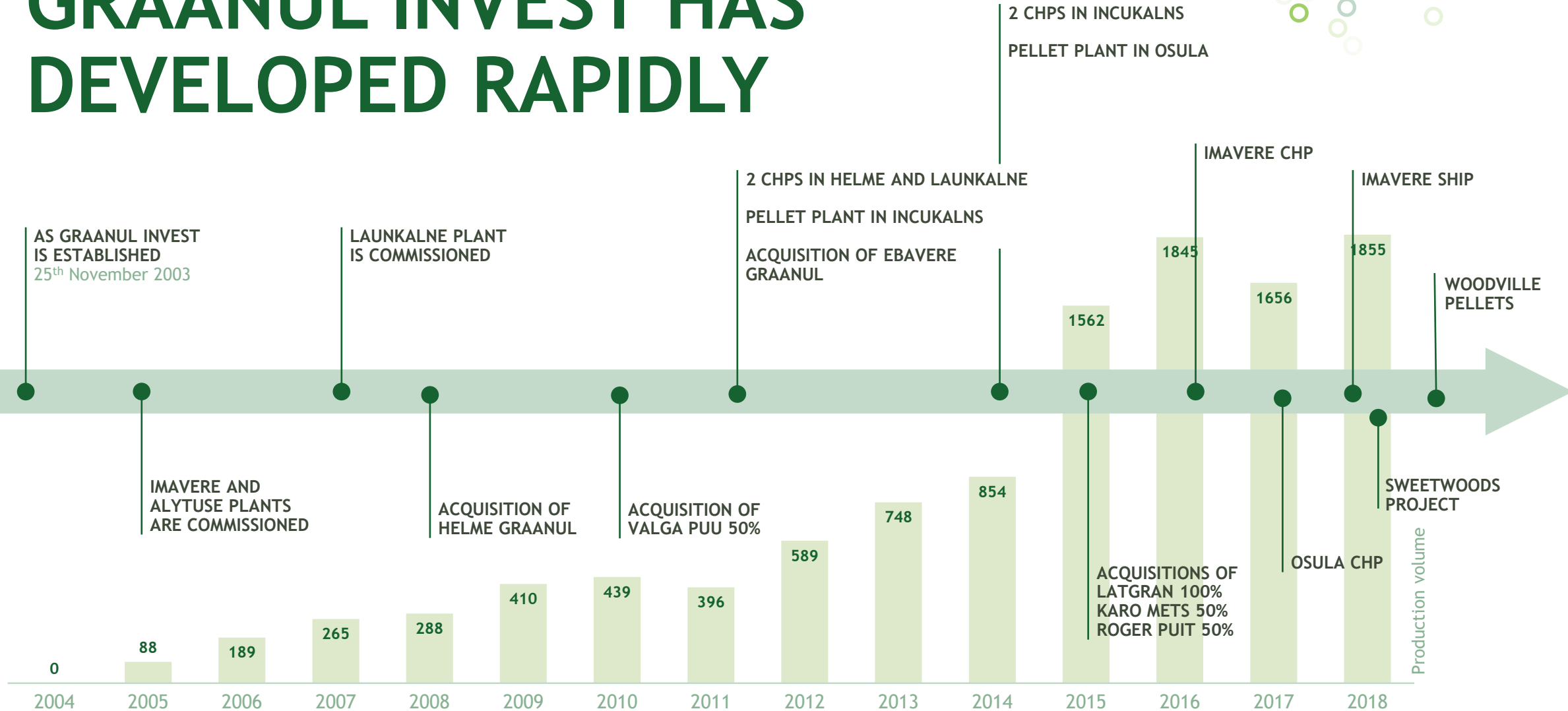
We operate in the field of bioenergy, renewable energy production and forestry.

## WE WORK WITH:

- production of wood pellets
- production of renewable heat energy and electricity
- forestry



# GRAANUL INVEST HAS DEVELOPED RAPIDLY



# MOST RELIABLE PRODUCER

Graanul Invest group is  
the biggest producer of  
wood pellets in Europe

- Our capacity is **2,7 million tons** of pellets per year.
- We have **100% sustainable** wood supply and certified pellets production.
- In production of pellets we are dedicated to energy efficiency and low emissions.



# PELLETS

## ENVIRONMENTALLY FRIENDLY ENERGY

### PELLET

- Diameter of 6-8 mm
- Length of up to 40 mm
- Consist of only wood

### ENVIRONMENT

Burning pellets releases only as much carbon dioxide as gets absorbed from the atmosphere by the growth cycle of trees that are used for raw material.

### RAW MATERIAL

We use only the leftovers from forest and timber industry:

- Sawdust
- Chipped wood
- Off-cuts
- Firewood
- Defective logs
- Pulpwood
- Forest chips



# PRODUCTION

Our pellet plants produce high quality industrial and premium pellets

## ESTONIA

**EBAVERE GRAANUL OÜ**  
Väike-Maarja; Acquisition  
**110,000 tons**

**GRAANUL INVEST AS**  
Imavere; Greenfield  
**330,000 tons**

**HELME GRAANUL OÜ**  
Tõrva; Acquisition  
**210,000 tons**

**OSULA GRAANUL OÜ**  
Sõmerpalu; Greenfield  
**330,000 tons**

## LATVIA

**GRAANUL INVEST SIA**  
Launkalne; Greenfield  
**240,000 tons**

**GRAANUL PELLETS SIA**  
Incukalns; Greenfield  
**330,000 tons**

**LATGRAN SIA GULBENE**  
(Gulbene; Acquisition)  
**185,000 tons**

**LATGRAN SIA JAUNJELGAVA**  
Jaunjelgava; Acquisition  
**95,000 tons**

**LATGRAN SIA JEKABPILS**  
Jekabpils; Acquisition  
**185,000 tons**

**LATGRAN SIA KRASLAVA**  
Kraslava; Acquisition  
**185,000 tons**

## LITHUANIA

**GRAANUL INVEST UAB**  
Alytus; Greenfield  
**85,000 tons**

## USA

**WOODVILLE PELLETS**  
Woodville; Acquisition  
**450,000 tons**





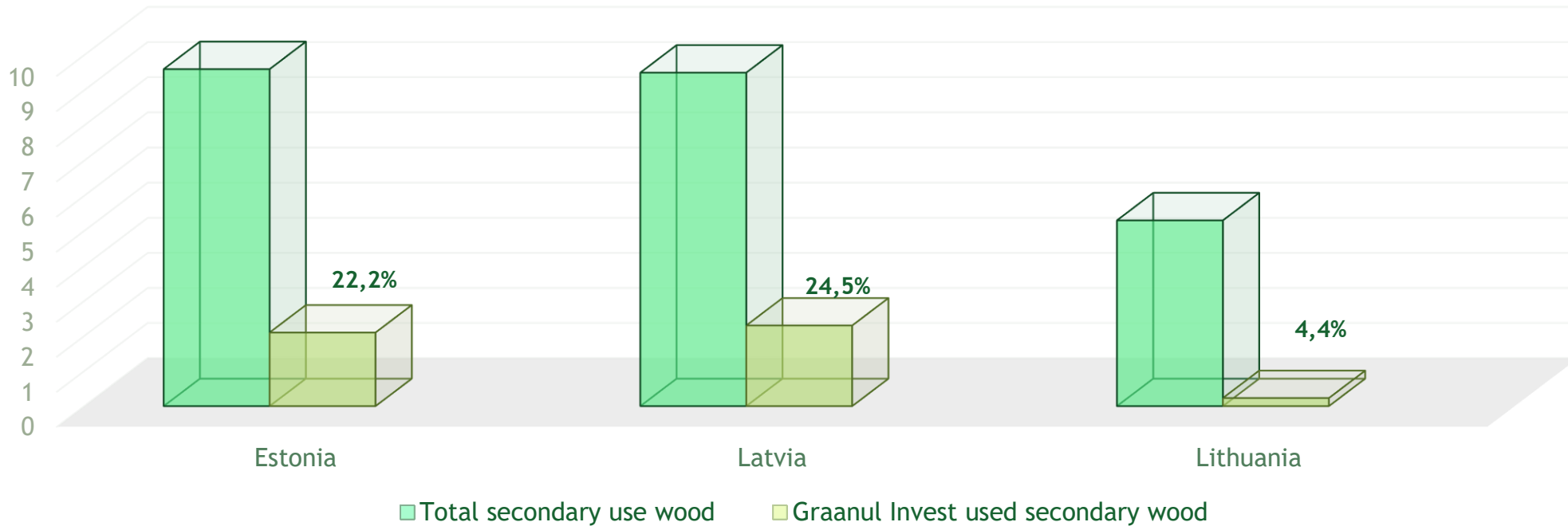
# 12

PELLET  
FACTORIES



# VALORIZING SECONDARY WOOD

Secondary use wood in Baltics

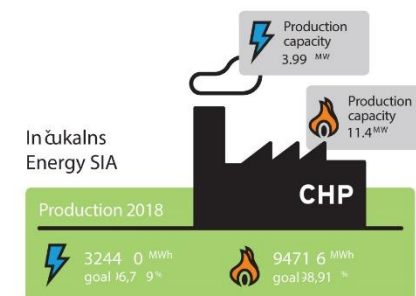
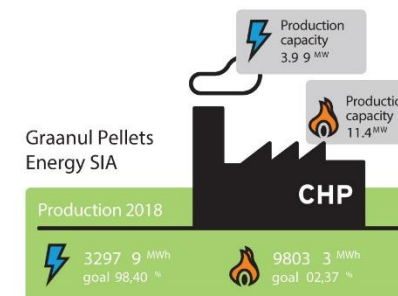
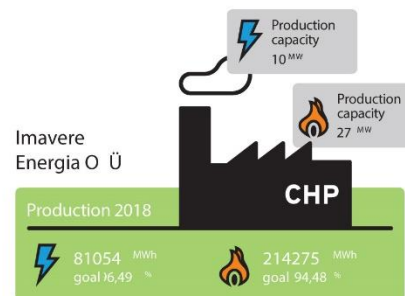




# COMBINED HEAT AND POWER PLANTS

CHPs are installed next to pellet plants since 2012

- All of the power we generate is renewable energy free of fossil emissions.
- Graanul Invest Group is now generating more energy than it consumes.
- We use wood bark and chipped forest residues as fuel for the CHPs.





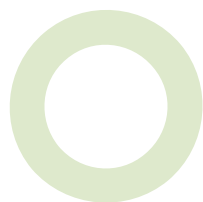
Graanul Invest  
Imavere  
Koostootmisjaam

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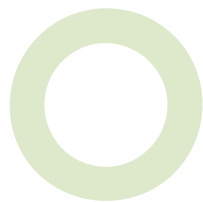


GI Imavere

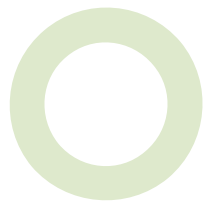
# WE MANAGE OUR FOREST SUSTAINABLY



We managed 47,384 ha of Estonian forestland in 2018, it is 3,9% of Estonian private forests.



Over **1 000 000** trees were planted in 2018



We have several **acknowledged certificates** proving the sustainable management of the forests



# WE AIM TO GROW OUR FOREST PORTFOLIO

	Revenue 2018	Forest stock
<b>KARO METS OÜ</b> 100% GI since 2015	18.3 M €	3 550 ha
<b>VALGA PUU OÜ</b> 67% GI since 2010	36.9 M €	15 529 ha
<b>ROGER PUIT AS</b> 50% GI since 2015	13.3 M €	28 305 ha

## PROCUREMENT

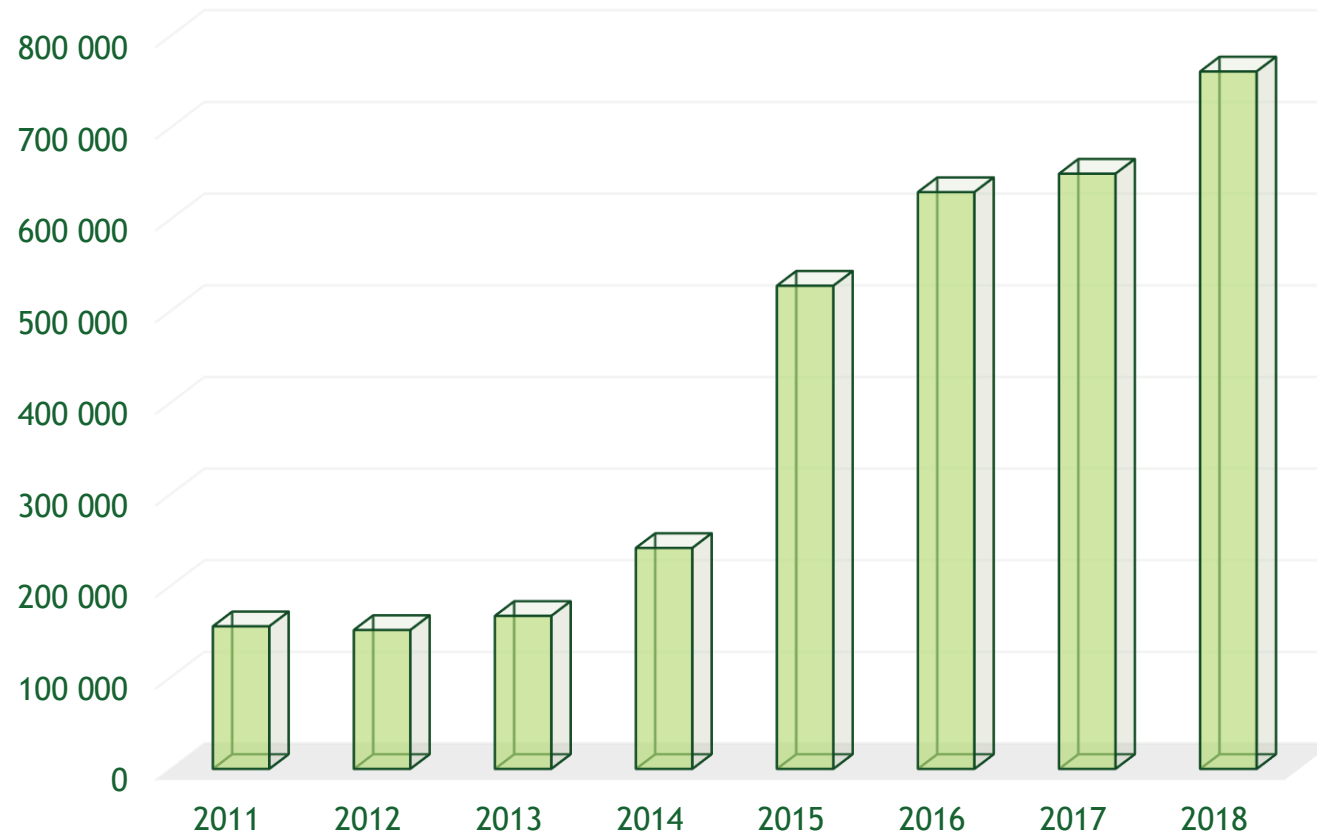
Graanul Invest buys raw material from areas where it is actually generated.  
Our average material procurement radius from production plant is under 60 km.



# GRAANUL INVEST

## TOTAL FELLING

SOLID CUBIC METERS / YEAR





**WE TURN LOWER  
VALUE WOOD  
INTO ENERGY  
CHIPS**

A large blue and red cargo ship named 'IMAVERE' is docked at a port. The ship has two large yellow cranes on its deck. Two smaller tugboats are positioned in front of the ship. The foreground shows a concrete pier with yellow and black bollards. The sky is clear and blue.

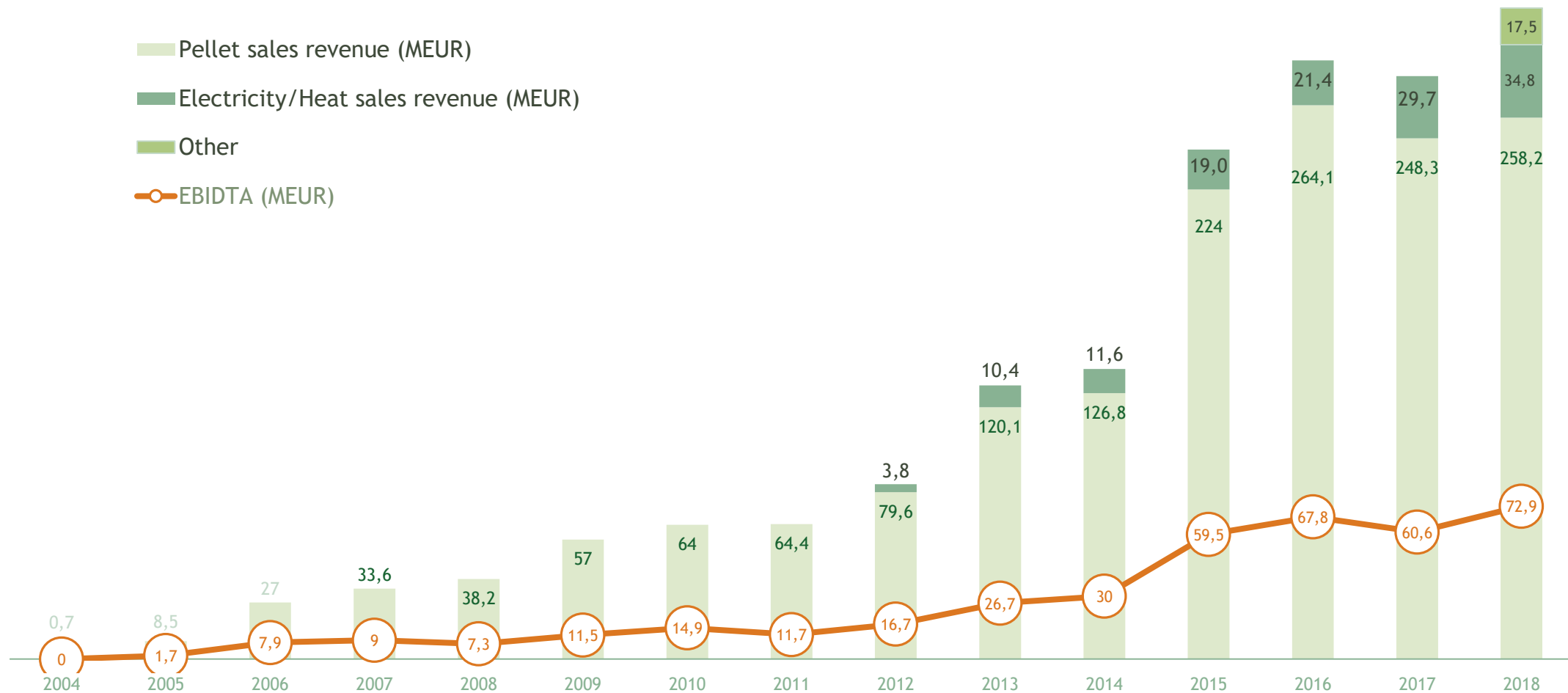
Our first ship MV **Imavere**

Carries ca 30 000 tons of pellets per voyage

Operates at  
Riga/Tallinn –  
UK/Netherlands

In 2018 did **23 voyages** with  
**693 000 tons** of pellets

# SALES AND REVENUE







**We search  
for  
innovative  
solutions**





# LOADMON

MEASURE IT

loadmon.com



**PRECISION**

High-quality lasers, more than 70 000 000 points per scan



**RESULTS**

Full 3D scan of the truck with calculated volume, ratio and load distribution

99%

**RELIABILITY**

Measuring success rate of 99+%



**REAL TIME**

Results in under 2 minutes per measurement.



**SYSTEMATIC**

Objective measurements, independent of operators or human factors



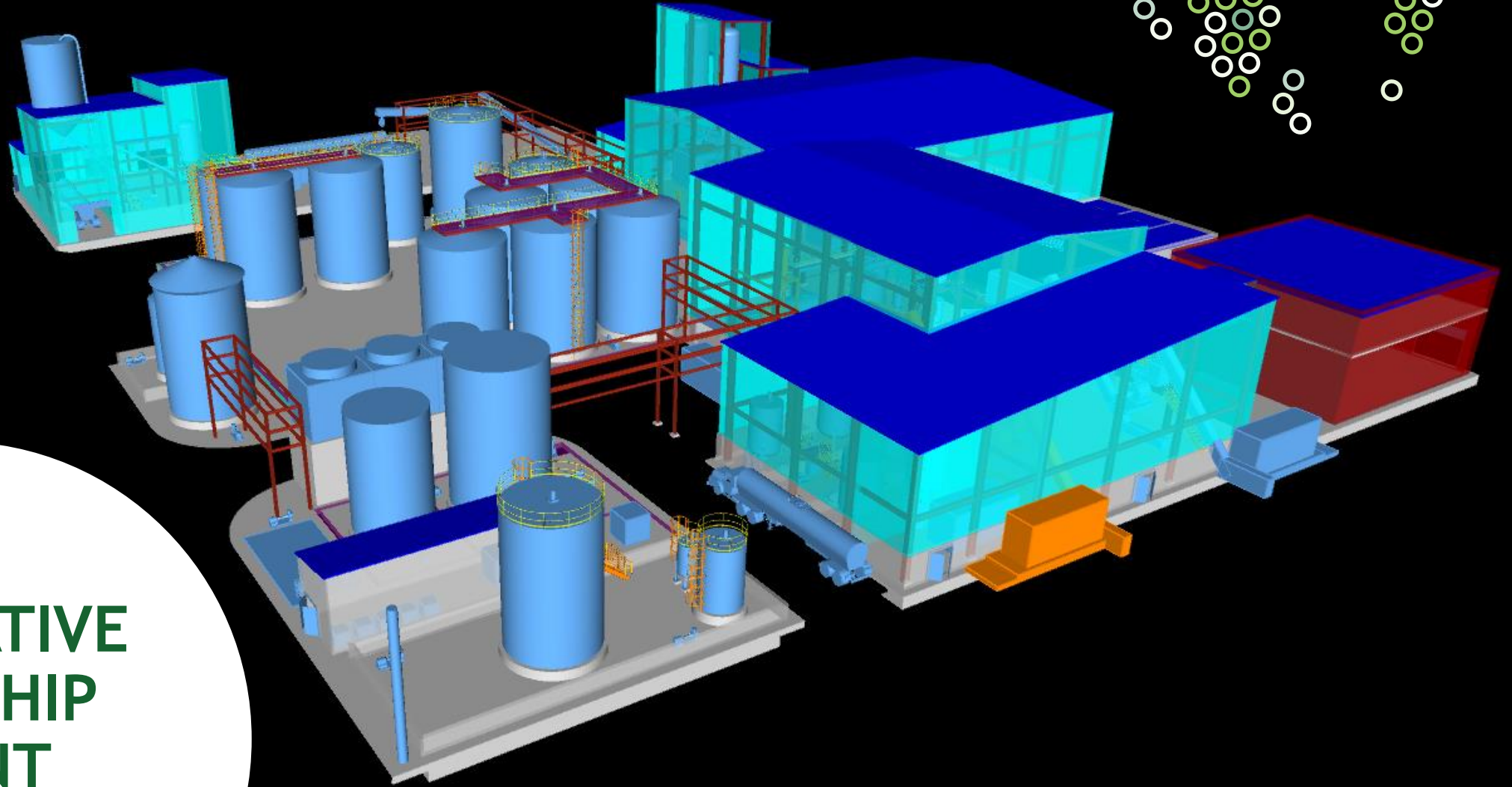
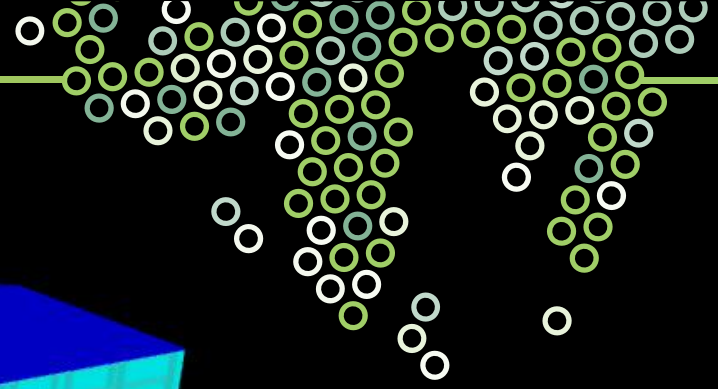
**INTEGRATION**

Easy integration with third party systems (ERP, logistics, analytics etc)





Actual scanning



# INNOVATIVE FLAGSHIP PLANT

EXPECTED TO BE FULLY  
FUNCTIONAL 2021



# SWEETWOODS

We received a grant of €20.9 million from the EU to establish a first-of-a-kind wood fractionation demo plant that uses sustainable biomass as material.

We aim to demonstrate industrial production of exceptionally high-quality lignin and wood sugars that could be further made into large variety of products.



Horizon 2020  
European Union Funding  
for Research & Innovation



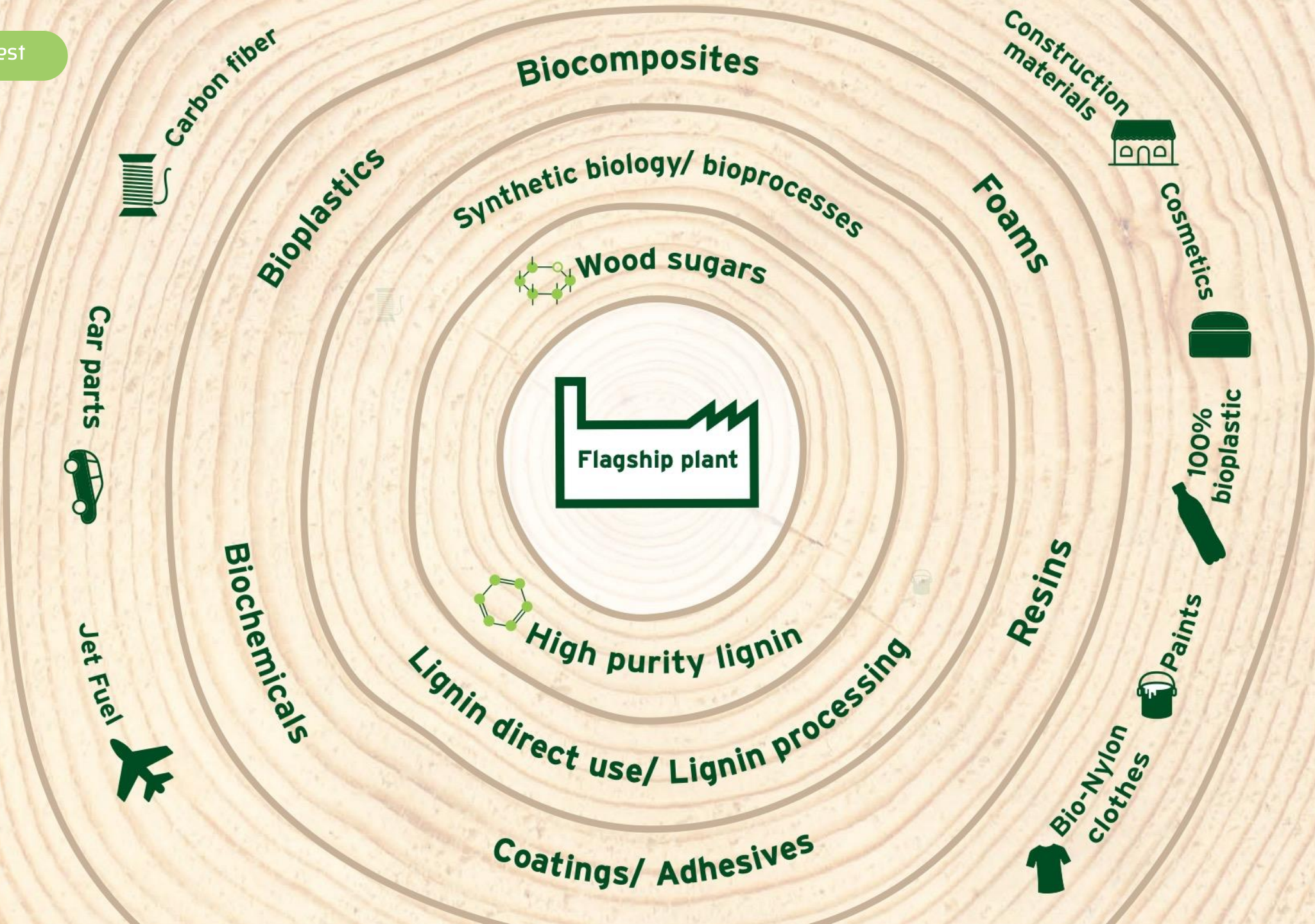
Bio-based Industries  
Consortium



**Wood sugars**



**High purity lignin**



# OUR STRATEGIC TARGET

Become the leading European  
lignocellulosic biomass derived  
biochemical and biomaterial  
producer by 2030





graanul invest

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