

JSC LATVIA'S STATE FORESTS

Where nature and technologies meet every day

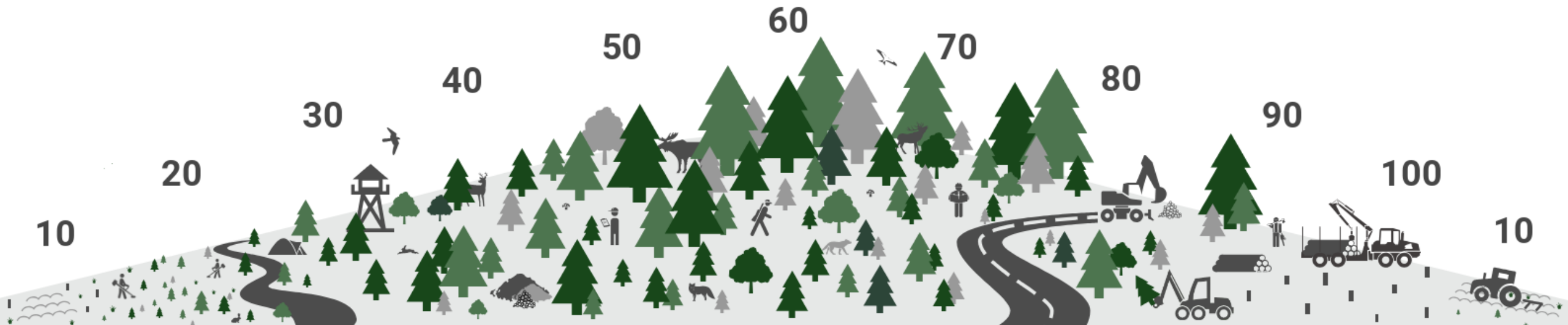


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STATE FOREST MANAGEMENT COMPANY



As one of the Baltics' leaders in efficient and innovative forestry we are an upright, mindful and caring manager of the forests owned by the Latvian government.



FACTS AND FIGURES

Founded: **1999**

Managing: **1.64 million ha of land**

Turnover: **333 million EUR (2018)**

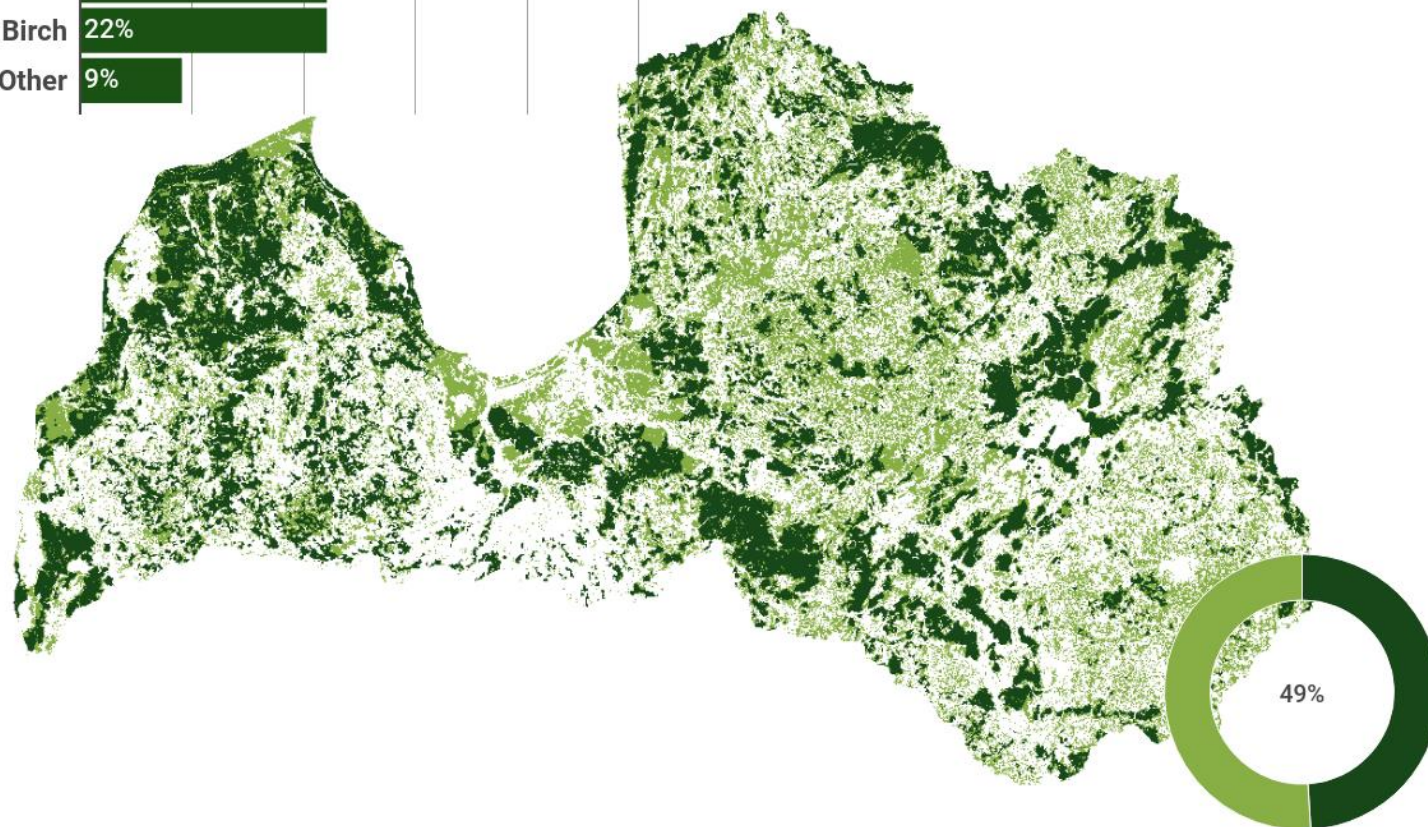
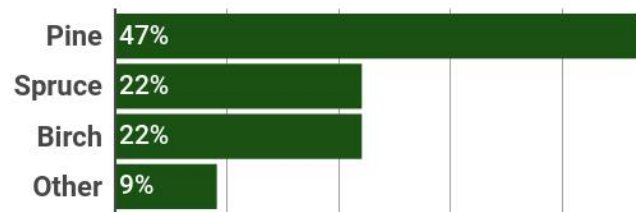
1 million forest compartments

17 000 harvest units per year

6.6 million m³ annual timber sales

15 000 ha regenerated yearly

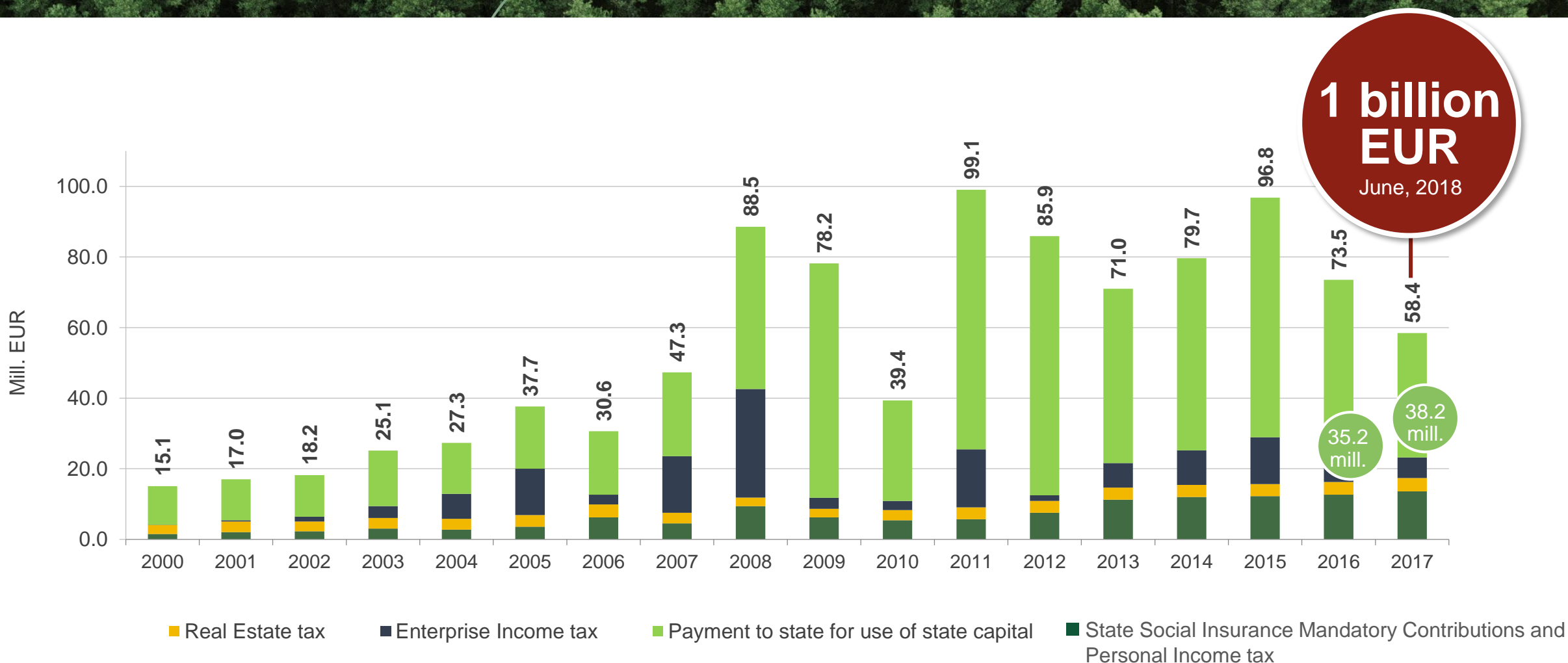
12 000+ km of forest roads owned



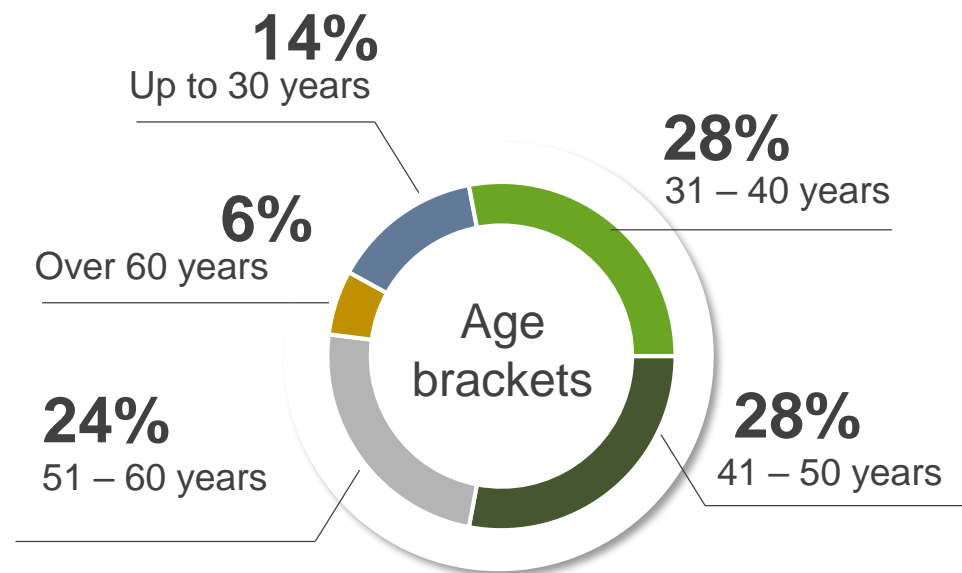
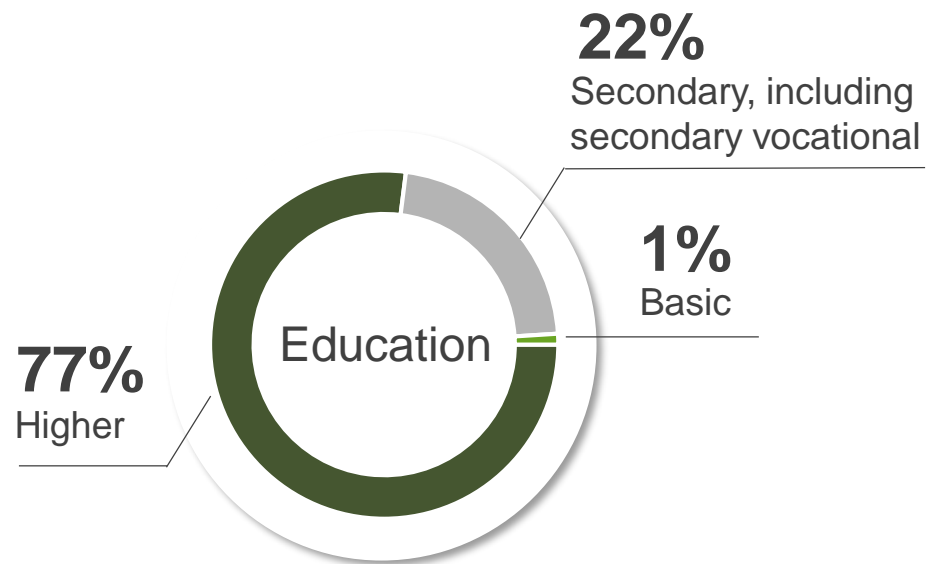
● LVM forests ● Other owners

LATVIA'S STATE FORESTS

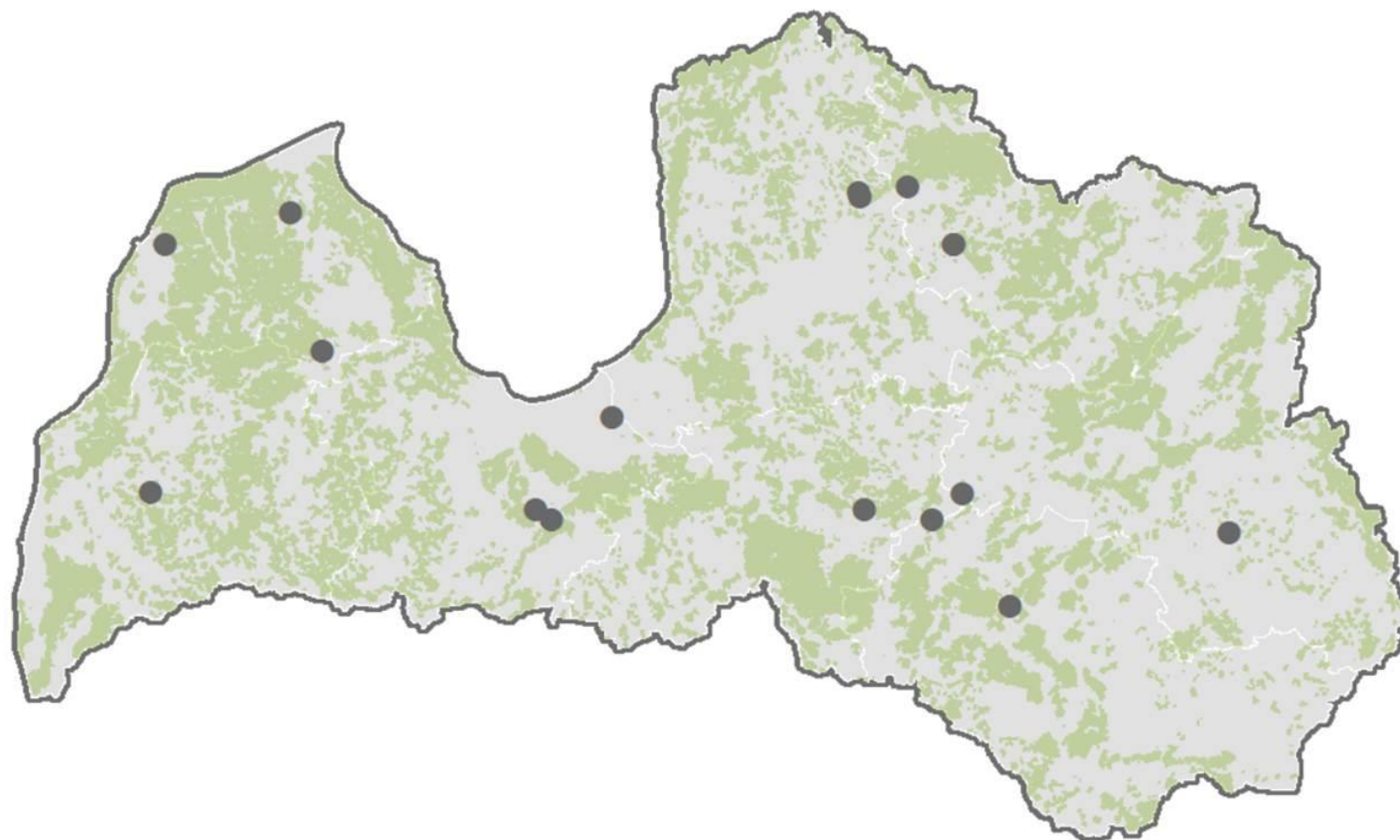
CONTRIBUTION TO GOVERNMENT AND MUNICIPAL BUDGETS



~ 1200 EMPLOYEES



WORK THROUGHOUT LATVIA



BUSINESS PRINCIPLE - OUTSOURCING

Forest management

~ 675 companies
~ 2000 employees



Providers of LVM services
in total

**1060 companies and
~ 7000 employees**



Infrastructure building

> 200 companies
~ 3000 employees



Timber transportation

~ 45 companies
~ 160 forwarders
~ 440 forwarder drivers



Harvesting

~ 140 companies
~ 164 harvesters
~ 210 forwarders
~ 900 operators
~ 800 loggers



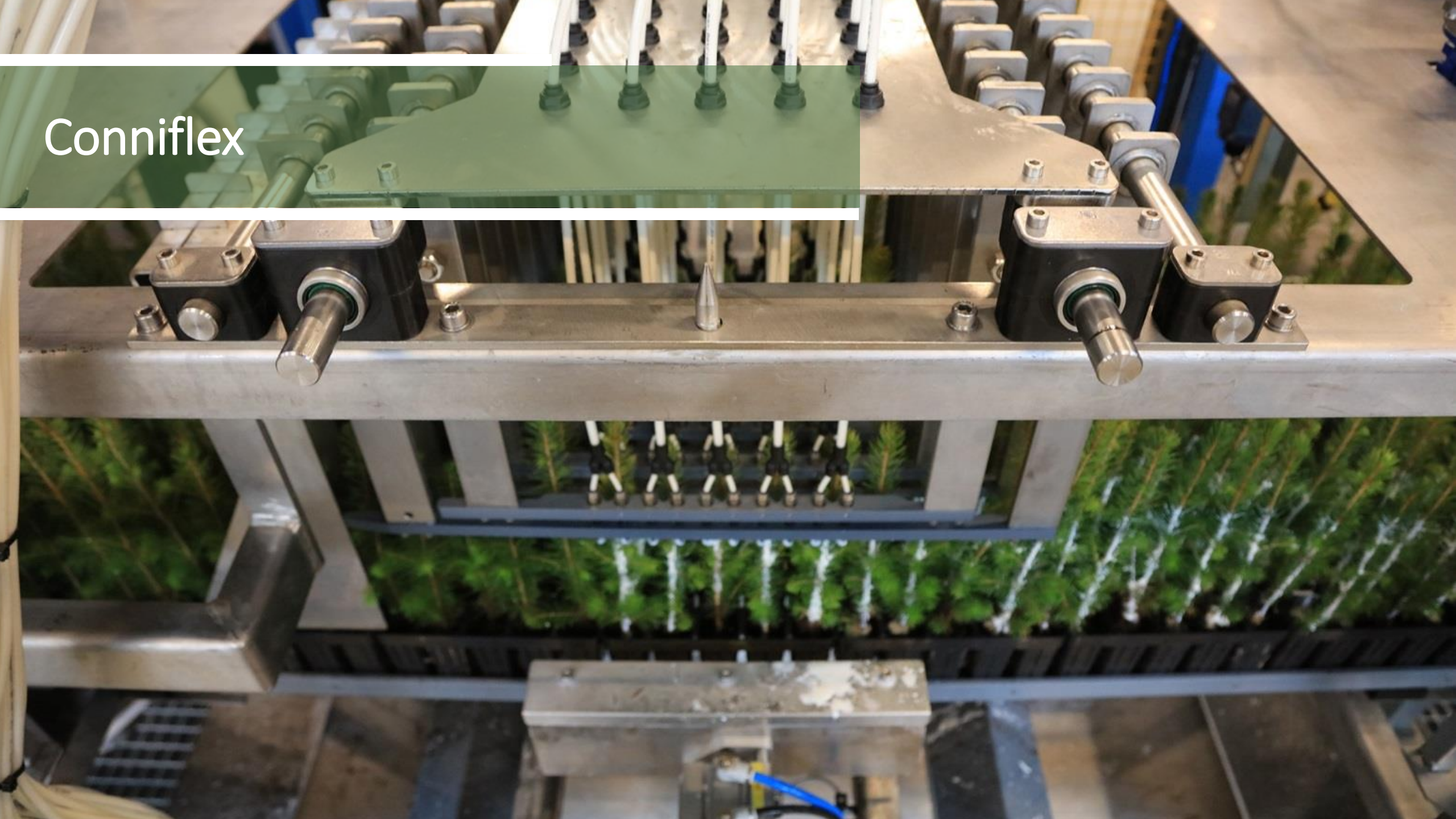
In 2018

52.4 million

Forest plants sold

**+17.5 mill.
in the next
5 years**

Conniflex



FOREST ROADS



**TRANSPORTATION
COSTS**



TRANSPORTATION
COSTS

TEMPORARY WOODEN PANEL ROAD

Work automatization

LVM GEO Mobile Sync



LABOUR-INTENSITY
COSTS



Planning
of felling area



Silviculture



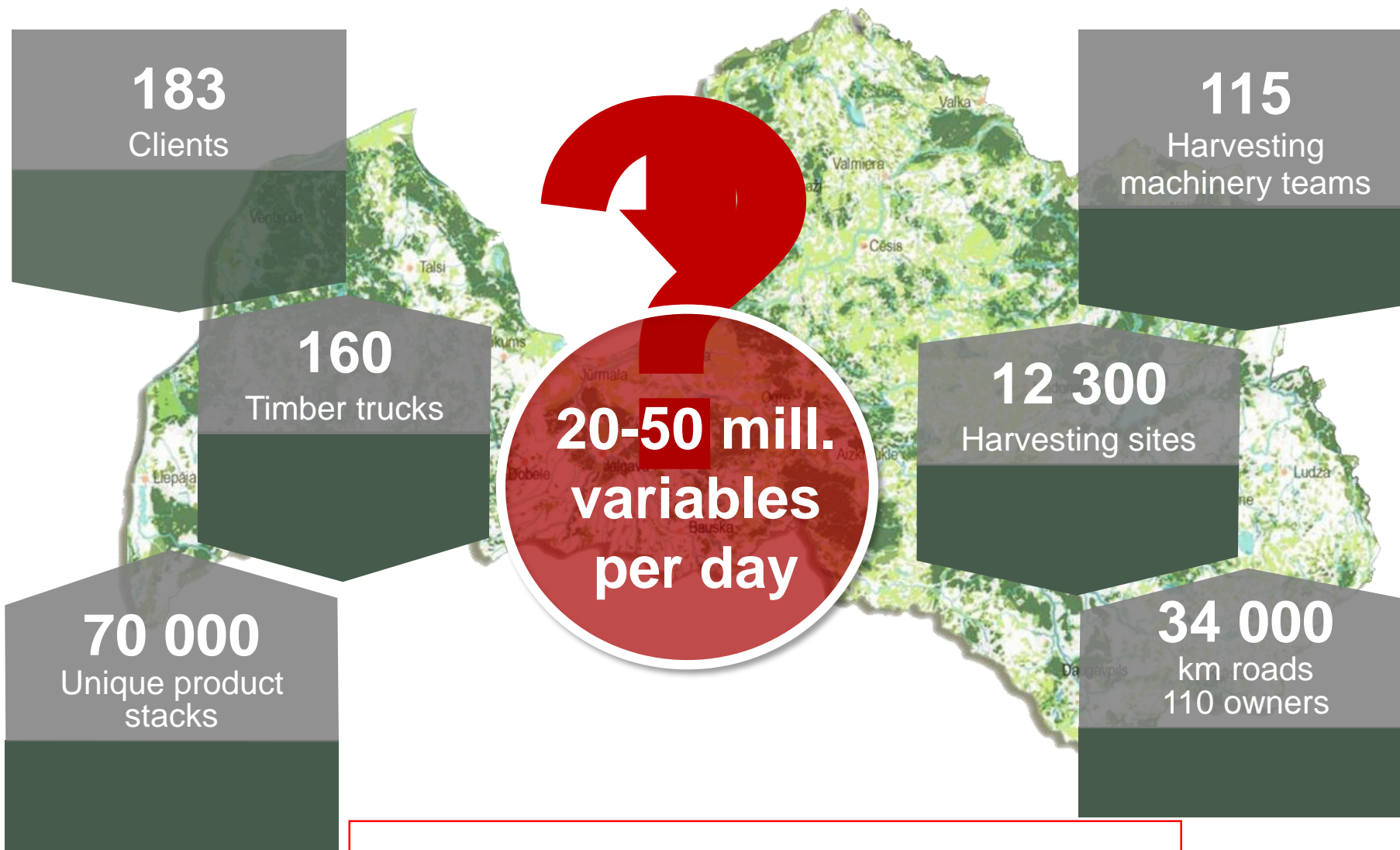
Roundwood
production

MORE THAN 300 LVM
EMPLOYEES

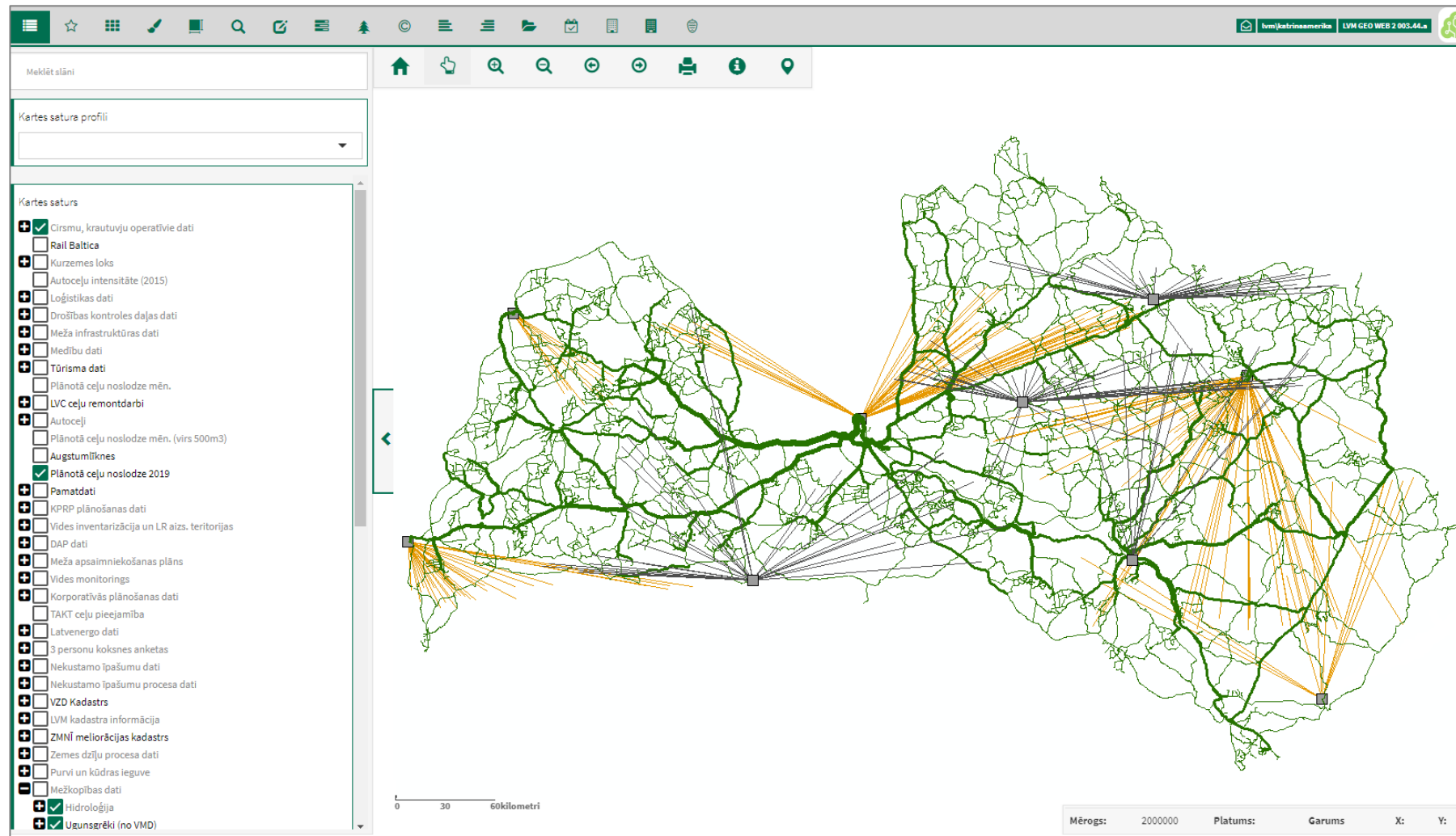


Harvesting





OPTIMIZING LOGISTICS



Remote sensing data



**LABOUR-INTENSITY
COSTS**

**LGIA ORTHOPHOTO
MAPS**

**LGIA INFRARED
ORTHOPHOTO MAPS**

LIDAR DATA – TERRAIN

**LIDAR DATA – HEIGHT
OF LAND COVER**

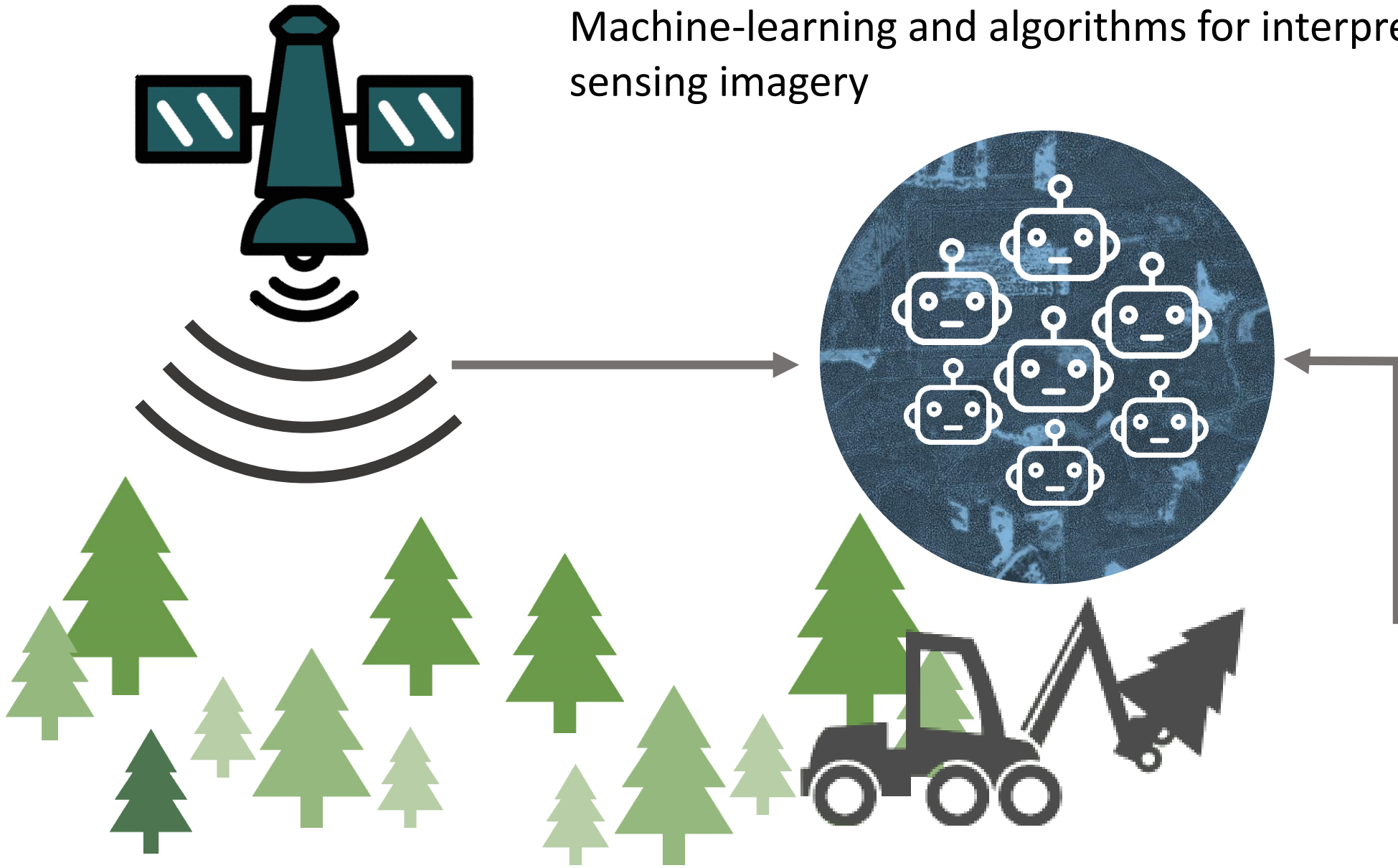
**SATELLITE
IMAGES
SENTINEL -1
(RADAR)**

**SATELLITE IMAGES
SENTINEL -2 (RGB)**

**SATELLITE IMAGES
SENTINEL -2
(INFRARED)**

**LASER FOREST TYPE
IMAGE (LAFTIM)
ASIA AIR SURVEY CO.,
LTD.**

Machine-learning and algorithms for interpreting remote sensing imagery

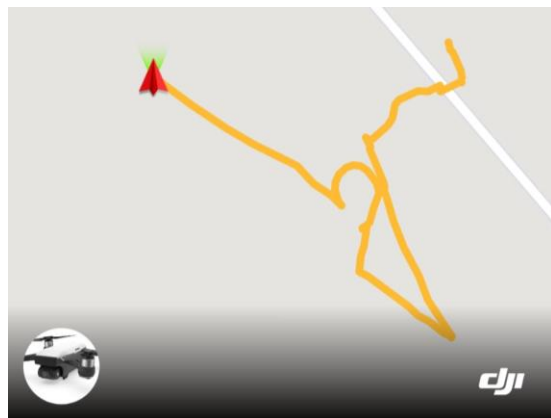


DRONES



Monitoring

- Ditches and undergrowth
- Soil preparation
- Young stands
- Weather events



R&D in collaboration with academic and research institutions

- Climate change
- CO2 emissions
 - Root rot
 - Insects
- ...and others





STRATEGIC OBJECTIVES

**Enhance and develop
products, services, and
knowledge of high-
added value**

**R&D and innovation
budget as a percentage
of 5-year average net
turnover**

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