JSC LATVIA’S STATE FORESTS
Where nature and technologies meet every day

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Latvia’s State Forests
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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
~ 1200 EMPLOYEES

**Education**
- 77% Higher
- 22% Secondary, including secondary vocational
- 1% Basic

**Age brackets**
- 28% 31 – 40 years
- 24% 51 – 60 years
- 28% 41 – 50 years
- 14% Up to 30 years
- 6% Over 60 years
WORK THROUGHOUT LATVIA
BUSINESS PRINCIPLE - OUTSOURCING

Providers of LVM services in total

1060 companies and ~ 7000 employees

Forest management
~ 675 companies
~ 2000 employees

Timber transportation
~ 45 companies
~ 160 forwarders
~ 440 forwarder drivers

Infrastructure building
> 200 companies
~ 3000 employees

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
TEMPORARY WOODEN PANEL ROAD
Work automatization
LVM GEO Mobile Sync

Planning of felling area  Silviculture  Roundwood production

MORE THAN 300 LVM EMPLOYEES
183 Clients

160 Timber trucks

70 000 Unique product stacks

115 Harvesting machinery teams

12 300 Harvesting sites

34 000 km roads 110 owners

20-50 mill. variables per day

1 km = NP + EUR 300 000
OPTIMIZING LOGISTICS
Remote sensing data

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.

LABOUR-INTENSITY COSTS
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
<table>
<thead>
<tr>
<th>STRATEGIC OBJECTIVES</th>
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<td>Enhance and develop products, services, and knowledge of high-added value</td>
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