



LATVIJAS VALSTS MEŽI

PLANTS · WOOD · RECREATION

Optimization of wood supply chain by Remsoft tools

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Montreal, Canada, March 24–26, 2026

Latvia



Forest area: 53 % of Latvia's total area
With 3.3 million ha Latvia is among the most forested countries in Europe

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Manage state forests
1.4 million ha



1300 employees



7 million m³ of
roundwood products



600 million EUR turnover,
200 million EUR profit

Business model - deliver roundwood

Cut to length logging technology



Complexity of business (per year)

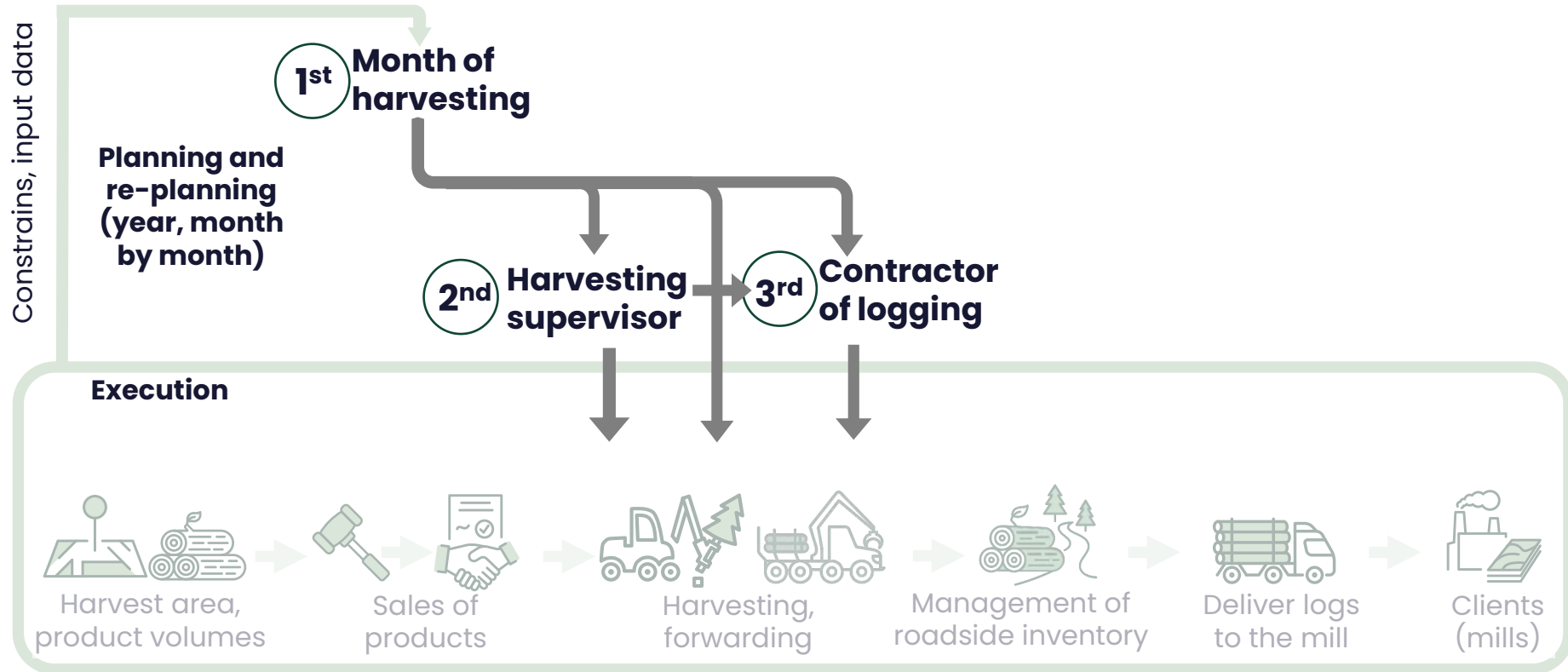


Goals of supply chain

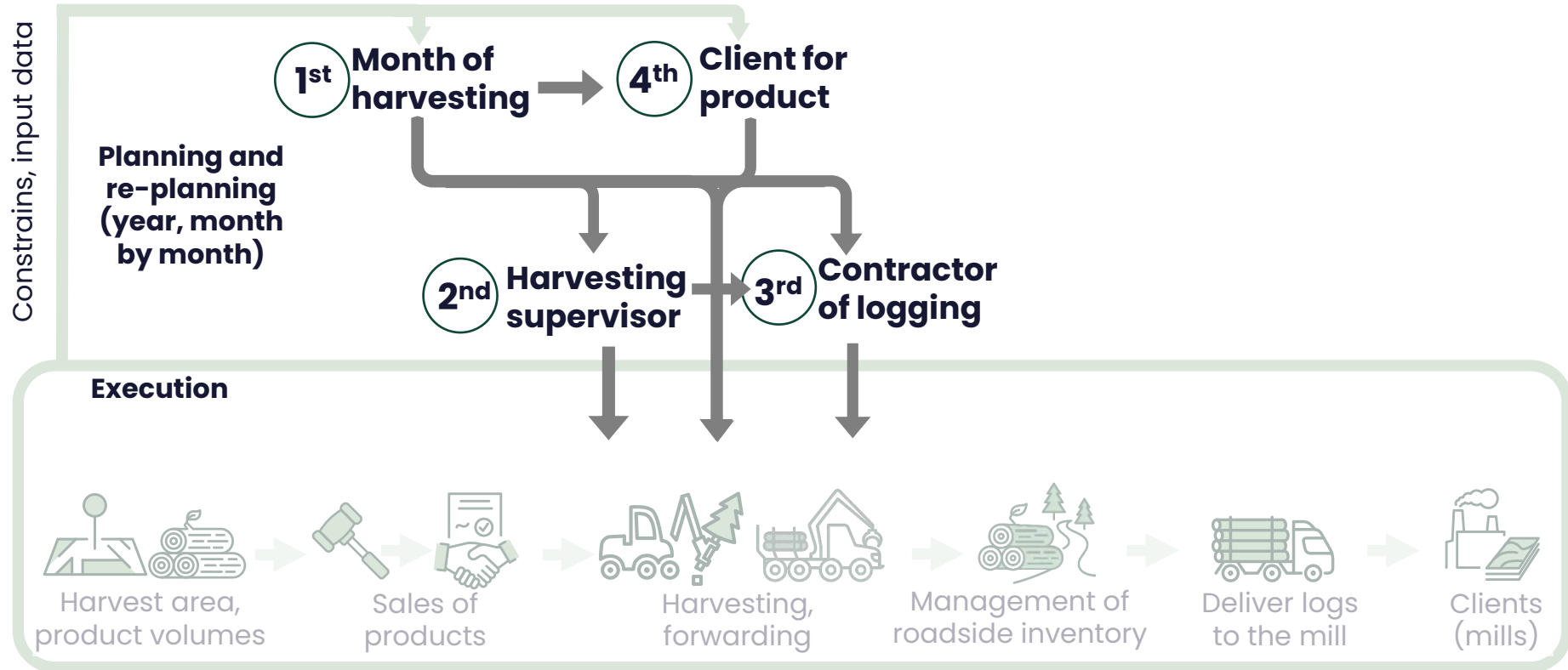
**Within the company and with outside partners:
integrated planning, efficiency, predictability**



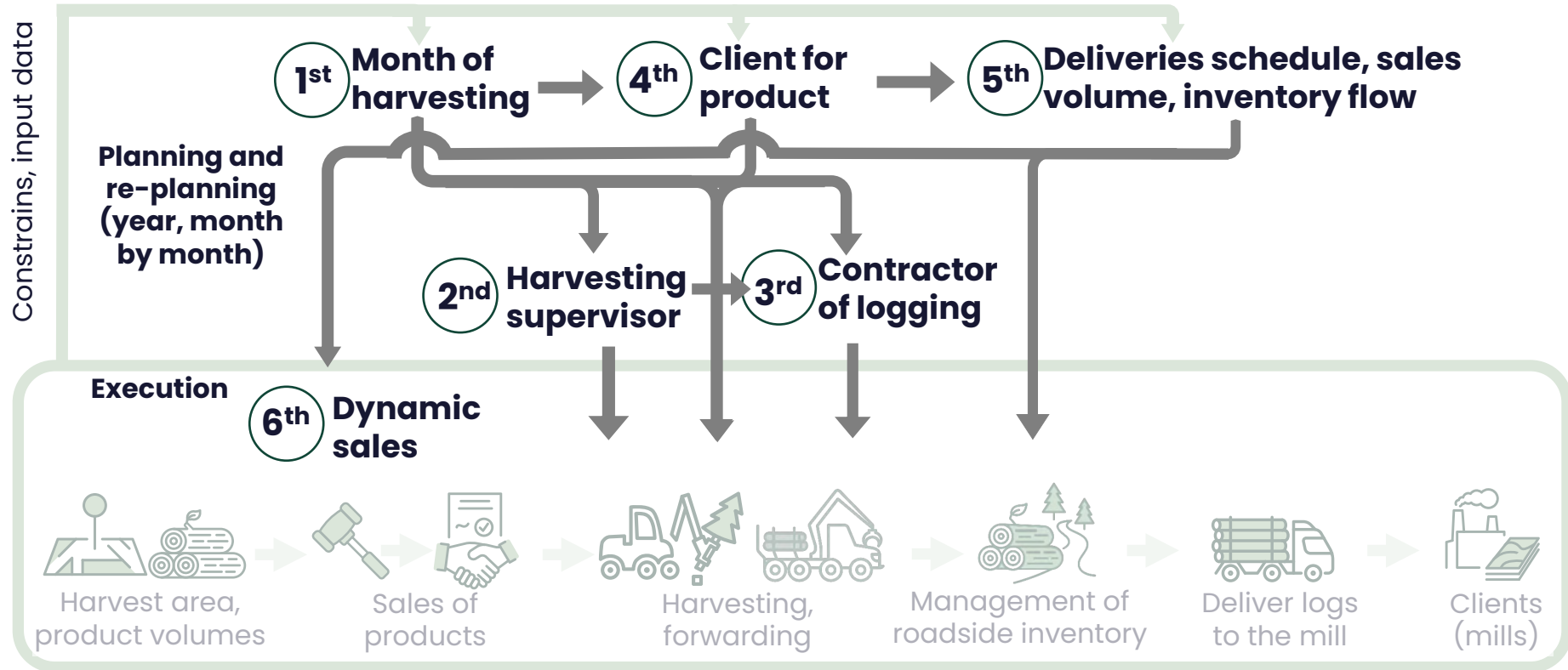
Main optimization models and sequence



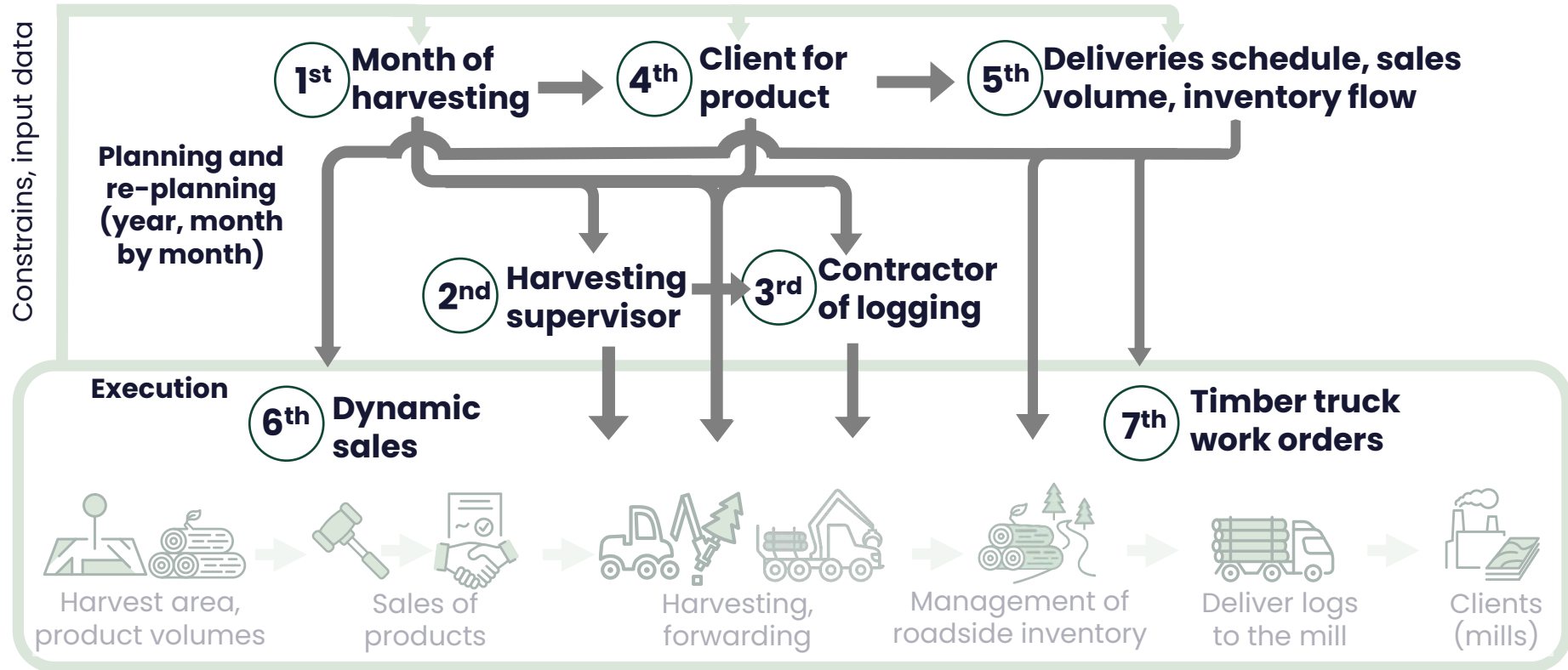
Main optimization models and sequence



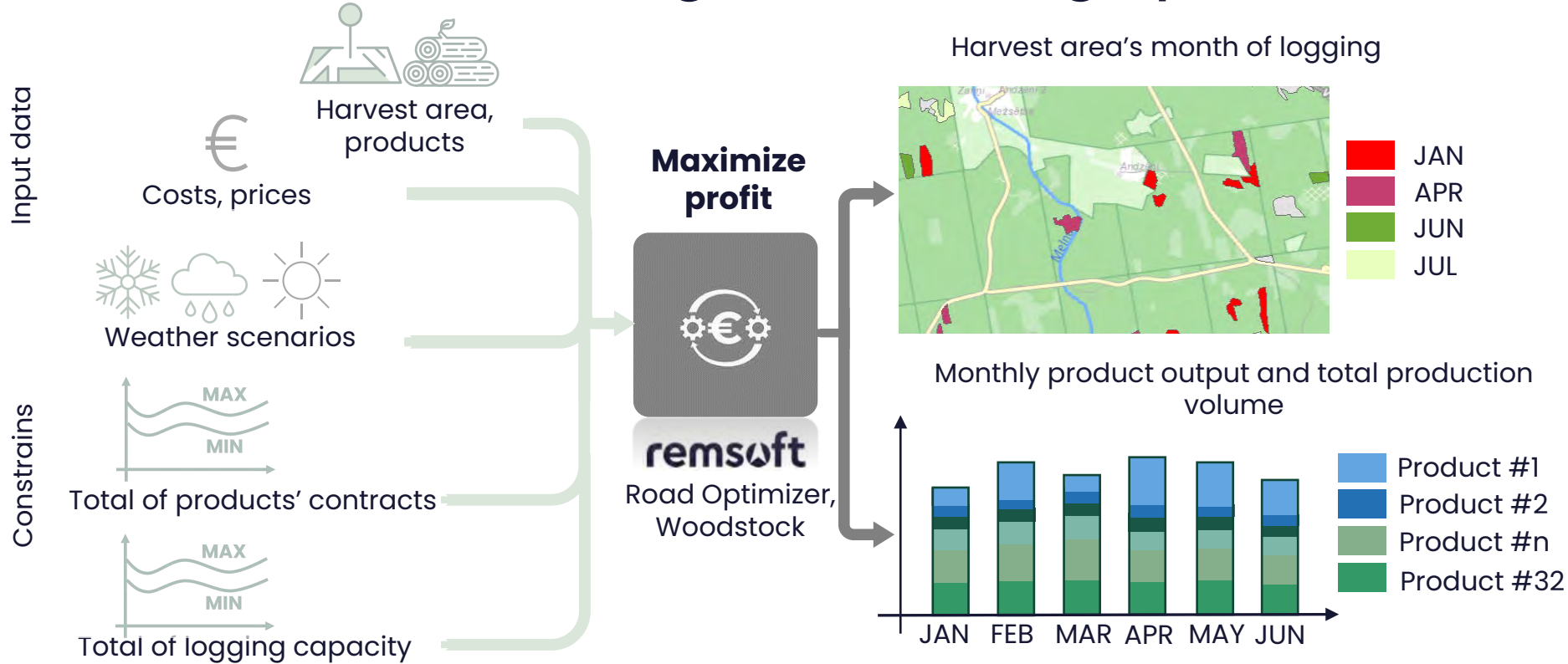
Main optimization models and sequence



Main optimization models and sequence



1st Month of harvesting - harvesting optimization



Challenges for us with logging operations



40%
of harvest
areas are on
extremely wet
and wet soils



Weather scenarios



Cold winter &
dry summer



Short winter &
medium summer



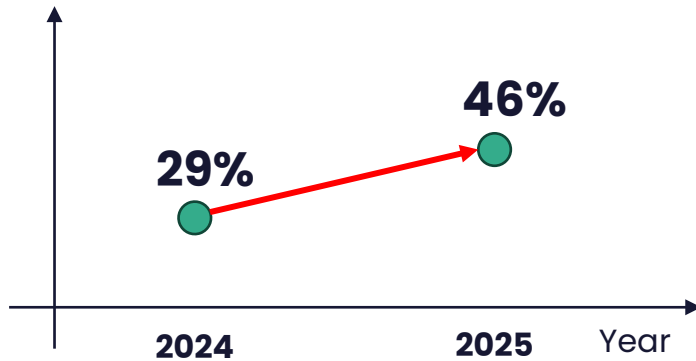
Frostless winter
& rainy summer



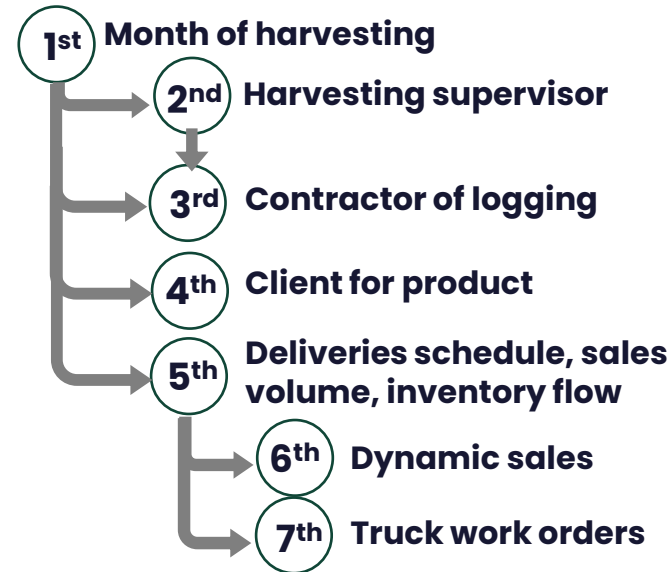
**Different
product
outcome and
production
volumes by
weather
scenario**

Harvesting optimization – main benefits

Acceptance rate of optimization result
(optimizations vs. real)



Harvesting optimization – **start** of the supply chain's **predictability**



2nd Harvesting supervisor – «wood flow» optimization

Input data

1st Month of harvesting

Costs



Volume by harvest type per employee

Constrains



Road network

Minimize costs

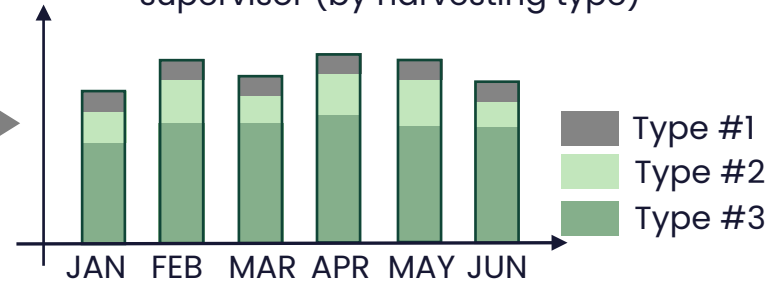


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Woodstock & Allocation

Territory of harvesting supervisor

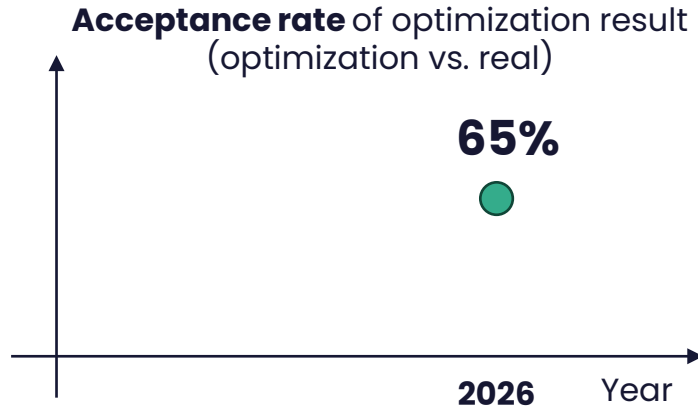


Monthly production volumes for each harvesting supervisor (by harvesting type)



Harvesting supervisor – main benefits

Started in Year 2026



No tangible benefits yet

3rd Contractor of logging – «wood flow» optimization

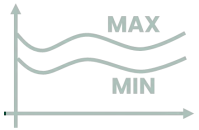
Ongoing project

Input data

1st Month of harvesting

2nd Harvesting supervisor

€
Costs



Contractors' capacity

Constrains



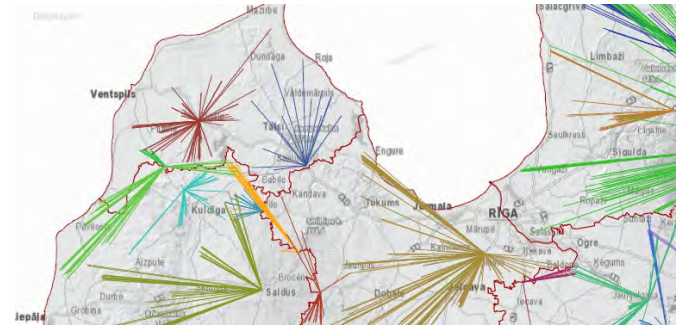
Road network

Minimize costs

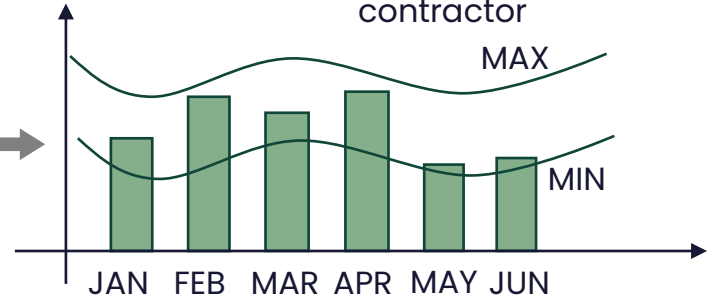


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Predictability: territory of contractor

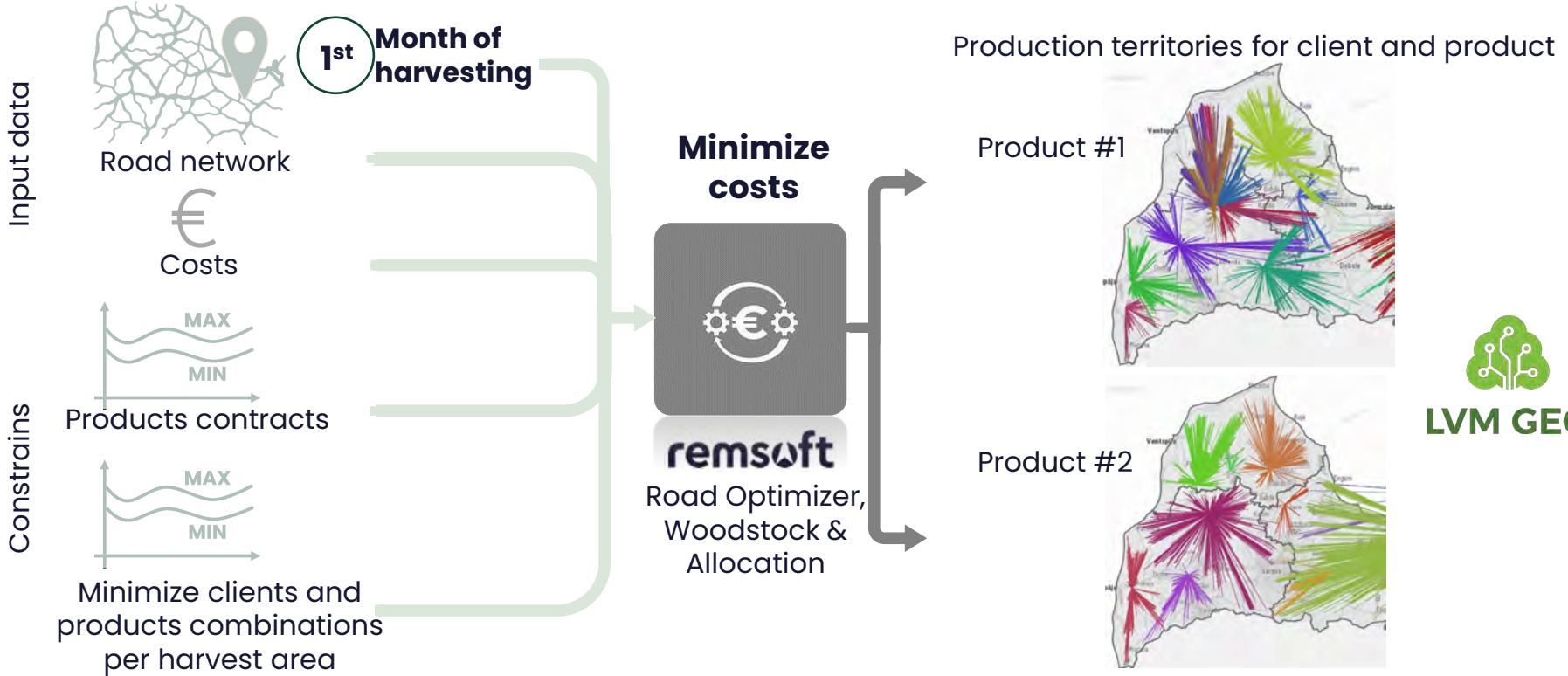


Predictability: monthly production volumes of contractor



4th

Client for product – wood flow optimization



Challenges for us with products and clients

We have **many clients and products** based on lower-value wood products

There is no chemical processing of wood in Latvia such as pulp or paper mills



Large number of products:

- increases logging costs
- Increases delivery costs

Large number of clients

- increases logging costs
- reduces delivery costs



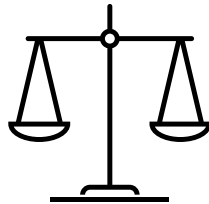
Minimize clients and products combinations per harvest area

Transportation costs



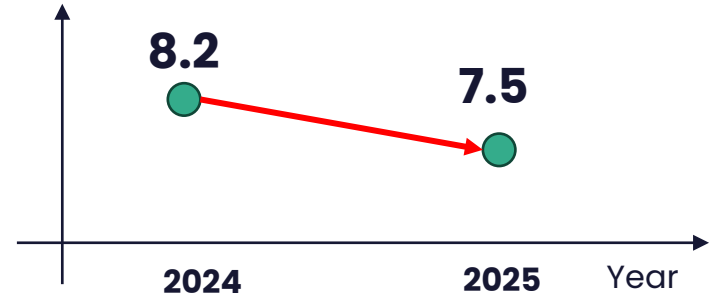
Minimize clients and products combinations

Minimize clients and products combinations per harvest area

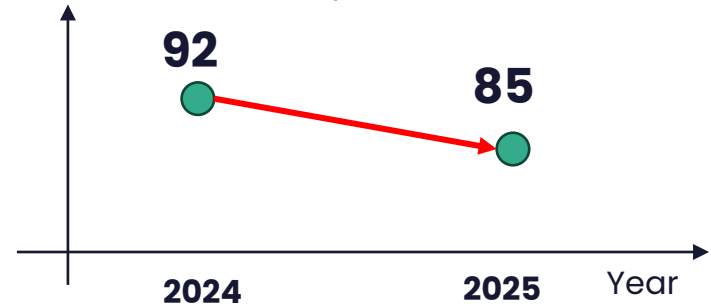


Transportation costs

Average number of client and product combination per harvest area



Products transportation distance (km)



To group similar products by road

Group identical products (landing pile) by road

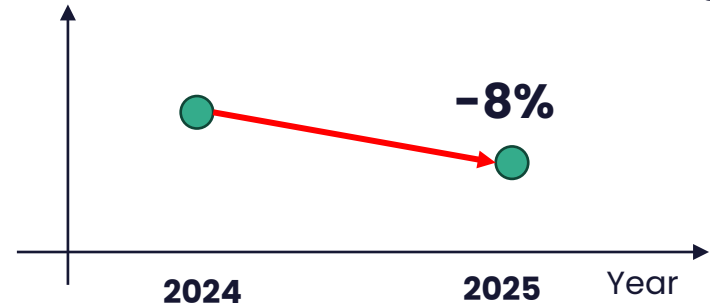
Transportation costs



Identical product (landing pile) is grouped by roads

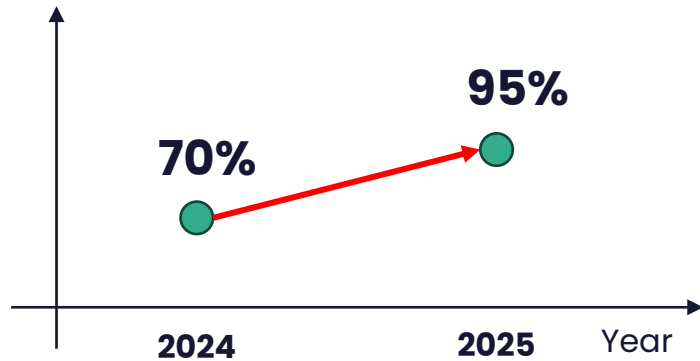


Distance of track loads with **2+ landings**

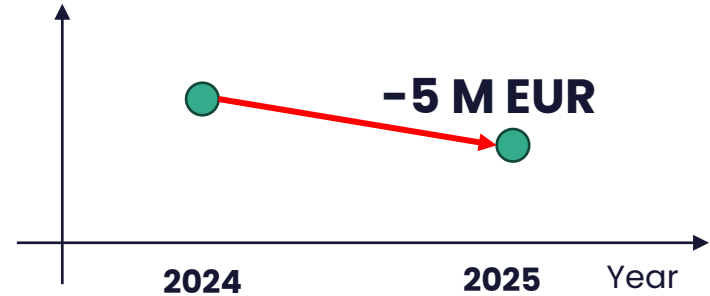


Minimize clients and products per harvest area

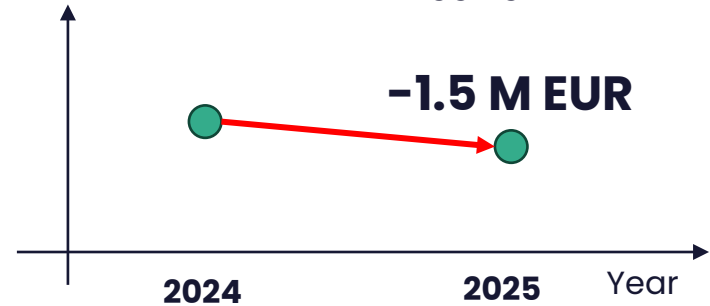
Acceptance rate of optimization result



Decrease of transportation costs



Decrease of logging costs



5th Deliveries schedule, sales volume, inventory flow

Input data

4th Client for product

1st Month of harvesting



Costs Landings, products



Constrains



Inventory turnover period



Contracts

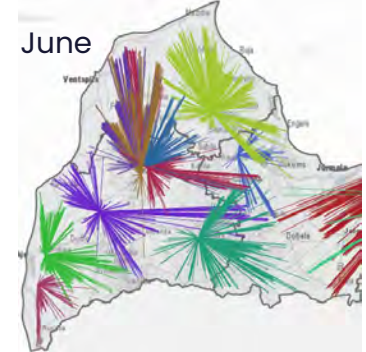
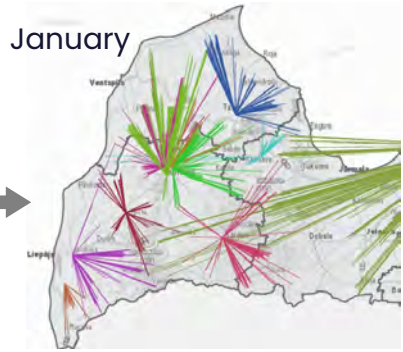
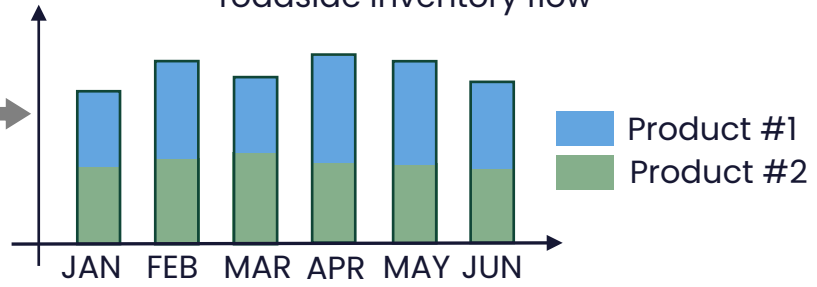


Road network

Minimize costs

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Product deliveries to client or volume for sales or roadside inventory flow



Complexity in contracts and customer options

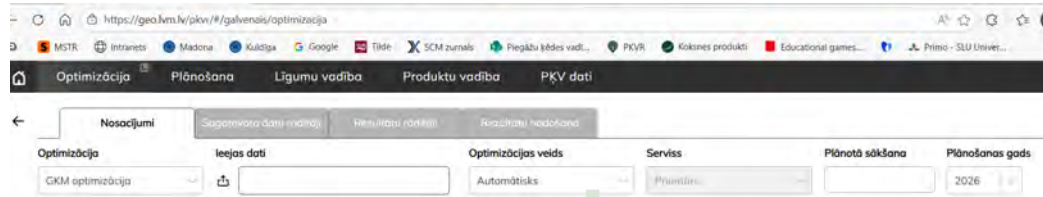
	2-month contracts (SPOT)	6-month contracts (Short term)	1-year contracts (Long term)
Number of contracts, Share of products volume	170 (15%)	600 (35%)	30 (50%)
Delivery period	2-month	quarter	quarter
Client's capacity max	month	month	month
Possibility for higher service level		monthly deliveries	monthly deliveries

Deliveries schedule, sales volume, inventory flow

Ongoing project – to automate data flow

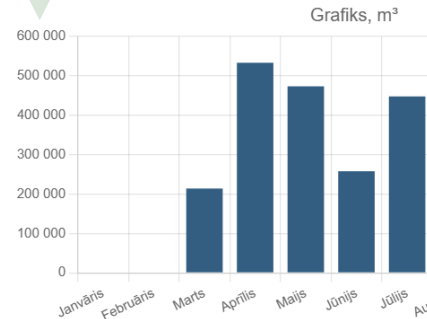
Input data and constrains

- Contract information system
- Logging information system
- Deliveries information system



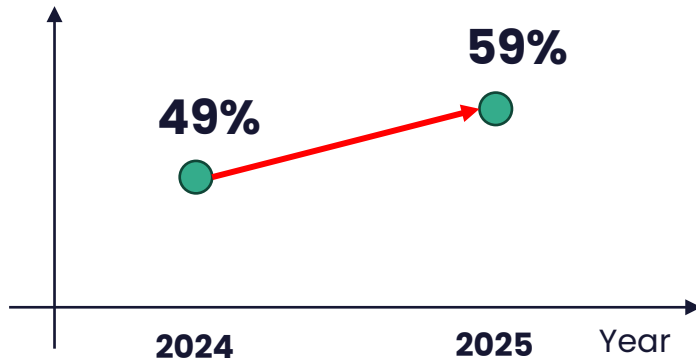
Woodstock

Periods	Grafiks, m3
Janvāris	0
Februāris	0
Marts	214 111
Aprīlis	533 325
Maijs	473 472
Jūnijs	258 020
Jūlijs	447 854

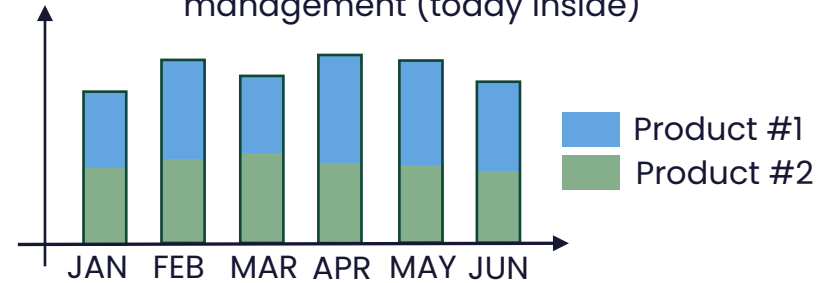


Main benefits

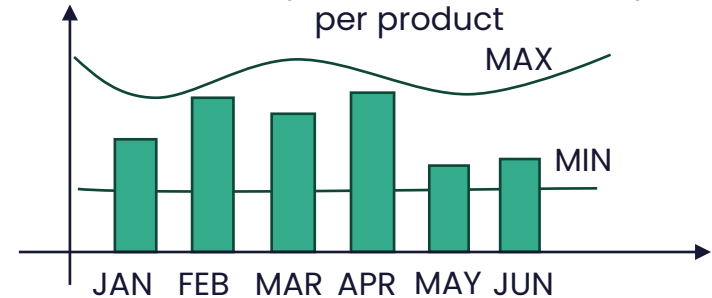
Acceptance rate of optimization result
(optimization vs. Real)



Predictability: within the company and with outside clients – contract performance management (today inside)



Predictability of roadside inventory flow per product



6th Dynamic sales – wood flow optimization

Input data

5th Deliveries schedule, **sales volume**, inventory flow

€
Costs

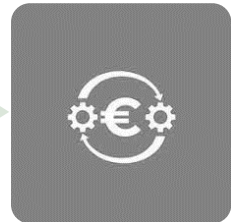


Constrains

€
Client's prices and product max

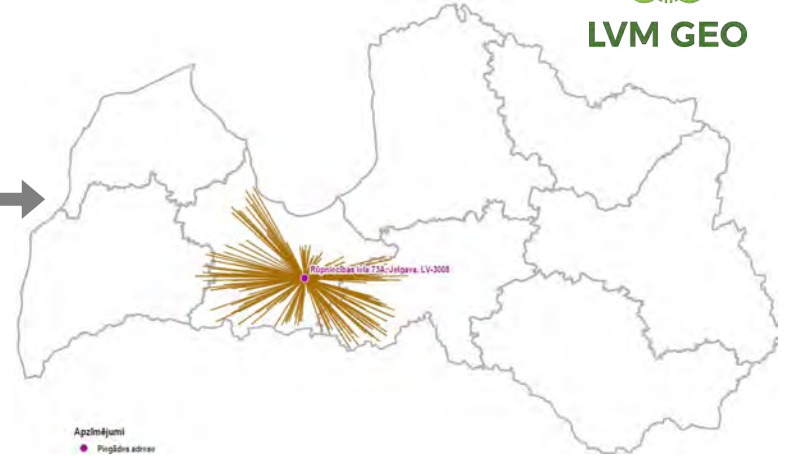


Maximize profit



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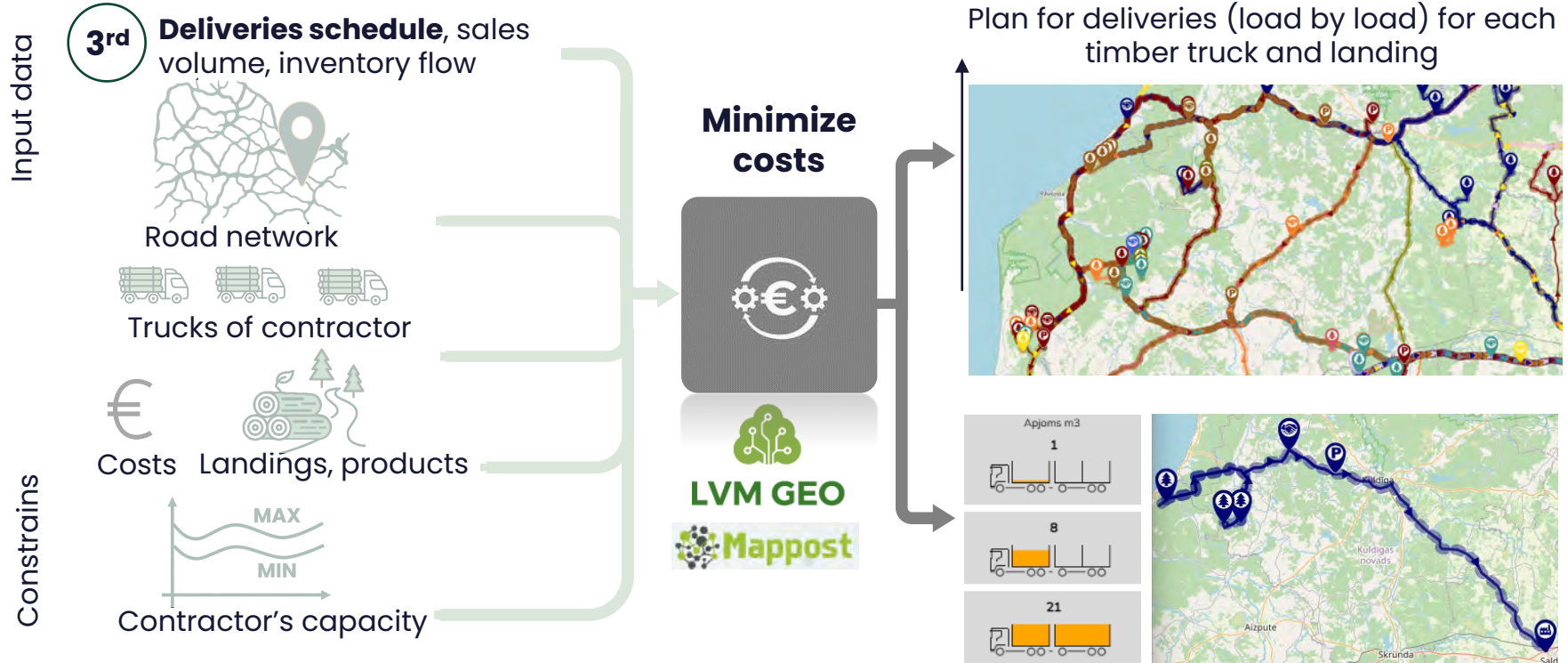
Volume sold to client



Acceptance rate of optimization result 100%

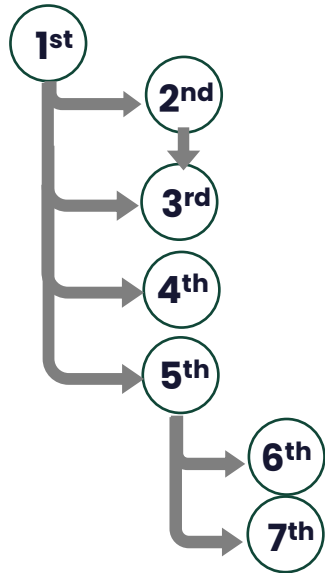
Fully automated!

7th Transportation optimization



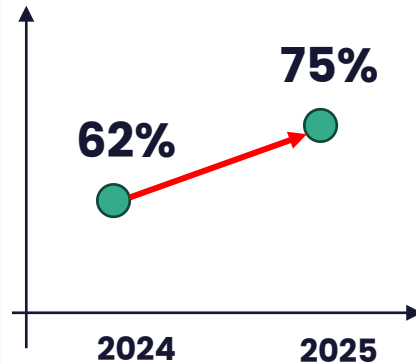
Integrated planning, efficiency, predictability

Integrated planning of supply chain



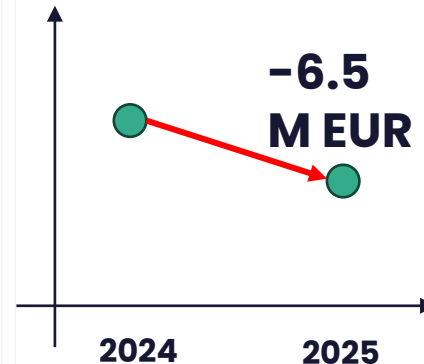
Acceptance rate of optimizations results

Average optimization vs. real



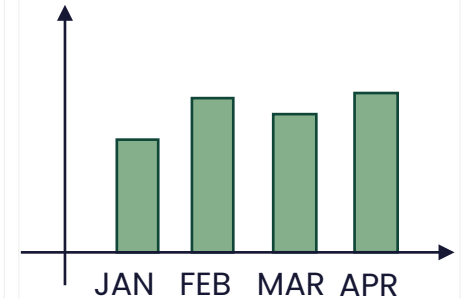
Efficiency of supply chain

Production and transportation costs



Predictability of supply chain

Within the company and with outside partners



Thank you for your attention!

Questions?