

Precision Forestry Management

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Network to Innovate: New Innovative
Technologies in Forestry
8 September 2026

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Co-funded by
the European Union

Precision Forestry Management Research Group in RTU, Riga, Latvia

PFMRG Anno is 2024

PFMRG is a part of [Faculty of Computer Science, Information Technology and Energy](#)

The aim - to strengthen the field of precision forestry in Latvia and Northern Europe by developing and helping to implement new technologies, methods, and robotic systems.

Participant number: from 3 to 5, additionally 2- 4 students every year

Collaboration with companies from the industry

Ongoing Projects

“Automated Unmanned Aerial System for Monitoring Young Stand Maintenance Operations”

Latvian Rural Development Programme
2014–2020, No. 23-A01612-000005



“Development of Automated Technologies for Seedling Thinning and Weed Removal in Tree Nurseries”

European Agricultural Fund for Rural
Development, No. 24-00-C0LA1601-000018



Collaboration with other stakeholders

- The first project is implemented in collaboration with JSC 'Latvia's State Forests' (LVM), which is the largest forest management company in Latvia and manages ~50% of the country's forests.
 - LVM designed its own IT product called LVM GEO (a mobile application and GIS platform) and aims to add new features to it.
- For our second project, we are collaborating with Riga Forests Ltd. and conducting research alongside an industry partner, AgroRobot Ltd., at a tree nursery owned by Riga Forests.
- **The majority of our collaboration takes place within innovation projects, where forestry stakeholders identify automation challenges and validate our technologies**
- **Other side of our collaboration is focused on work with the industry, which is able to use new technologies, adapt them and produce market products.**



Challenges

- **Unpredictable funding** for innovation and research at both national and EU levels.
- Some innovation and research funding programs **do not allow organizations to protect their intellectual property rights**, requiring all outcomes to be publicly available.
- **Excessive formal requirements** and bureaucracy in Latvian national programs, which delay or block promising innovations right from the start.
- **Restrictive salary caps** for project staff within certain R&D programs (e.g., hourly rates capped between €8–€13/h, or strictly fixed at €20/h for researchers).
- **A lack of long-term vision** from funding institutions regarding their strategic goals and how these projects integrate into macro- and microeconomic plans.
- **Insufficient support** for Small and Medium Enterprises (SMEs) to develop innovative products; more effective tax models are needed.

Future

Perspectives for the future

- Robotics and automation (UAV, UGV, robotics, AI) will arrive sooner than we think.
- Innovation is not possible without research and development at both the industrial and academic levels.
- The requirement for open-source or publicly available outcomes in innovation projects should be eliminated to protect commercial viability.

Thank you!

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