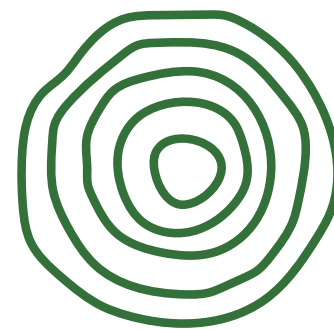


Valorisation of wood resources

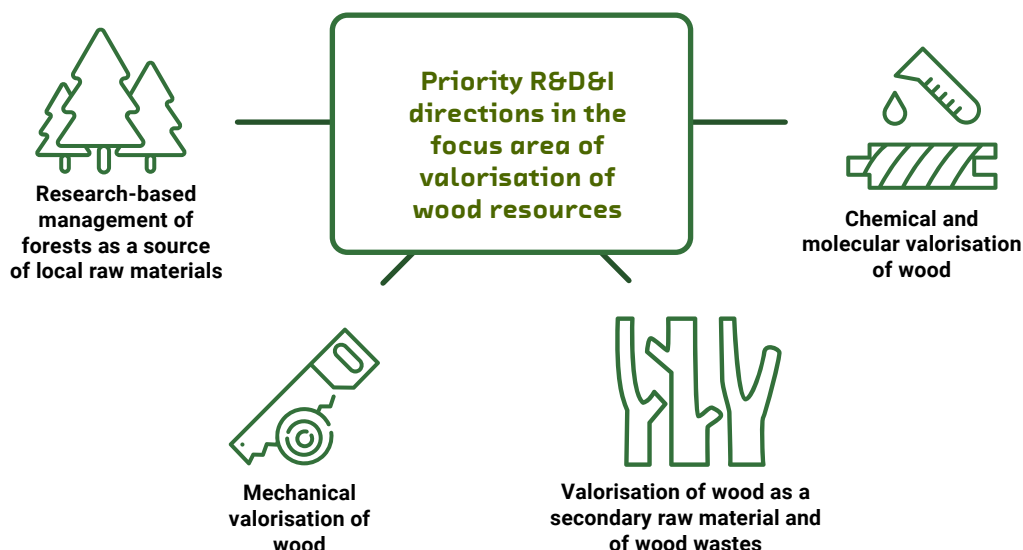


One of the starting points of the Estonian Research and Development, Innovation and Entrepreneurship Strategy is the need to make smart choices and to concentrate activities and funding in those areas that can best contribute to **creating solutions to society's challenges, based on research results and cooperation between different actors**. To this end, the Strategy identifies priority areas for development and increased financial support.

One such priority area is the valorisation of resources. The aim of resource valorisation is to develop, in partnership between research and business, solutions that enable the sustainable use of local resources, creating added value while boosting the circular economy, which enables the efficient use of resources, from production and consumption to waste management and recycling, creating more value from available resources while generating less waste. In the area of local resources, particular attention is paid to **wood resources**.

In order to best support the valorisation of wood resources, a roadmap was drawn up in cooperation with researchers, businesses, government agencies and other partners. In the roadmap, the parties agreed on the priority needs for the development of the wood focus area in cooperation between research and business, and what is needed to ensure that the Estonian economy and society benefit most from the development of the focus area.

The valorisation of wood resources covers the entire value chain of wood material, from the growing of the tree in the forest to the manufacturing and marketing of the final product. It was agreed in the Roadmap that the most important area for development is the **chemical and molecular valorisation of wood**, whereby certain substances are extracted from wood to be used for the production of something else, such as packaging or textiles. Chemical and molecular valorisation of wood has the potential to strongly increase the added value of the whole wood focus area. **Research-based silviculture** is also an important way forward to grow local wood in the best growing environment, to reduce and prevent diseases and other threats to wood quality. We must also support the **mechanical valorisation of wood** in order to maximise the use of wood raw materials and to create long-lasting wood products such as wood buildings. It is also important to develop **solutions for the use of wood as a secondary raw material and waste**, so that by-products of wood processing and residues from semi-finished production could be reused.



In order to find appropriate research-based solutions to the needs identified, it was agreed in the roadmap that the most important support for the valorisation of wood resources is to **support the development of the focus area's research capacity**, e.g. basic and applied research and the development of research directions. It is equally important to support **the uptake of research results and the technologies developed**, e.g. through joint activities involving businesses and researchers, the mutual sharing of knowledge and experience between researchers and businesses, the development and provision of R&D services, international cooperation, etc. We also need to develop the **capabilities and environments for assessing and testing** the solutions we create, so that the solutions generated through R&D and product development can be tested outside the laboratory on a larger (industrial) scale and in real-life environments. Ensuring the **next generation of researchers and engineers** in the focus area is crucial, especially in terms of the chemical and molecular valorisation of wood. There is a need for **broader cooperation** between research institutions, businesses and the public focus area, and internationally, including the development of industrial symbiosis, whereby by-products from one industry become raw materials for another. There is also a need to boost **investment and exports**.

The roadmap is approved for a period of 3–4 years, after which it will be updated to take account of changes in the field. The development of

the focus area will be regularly monitored and assessed to allow changes to be made to the roadmap and to the focus area's activities and funding. On the basis of the roadmap, **support measures** for the development of the area of valorisation of wood resources will be designed by the Ministry of Education and Research and the Ministry of Economic Affairs and Communications, alongside general research and business funding measures such as research grants, research infrastructure grants, business grants, etc., for which there are no priority areas.

