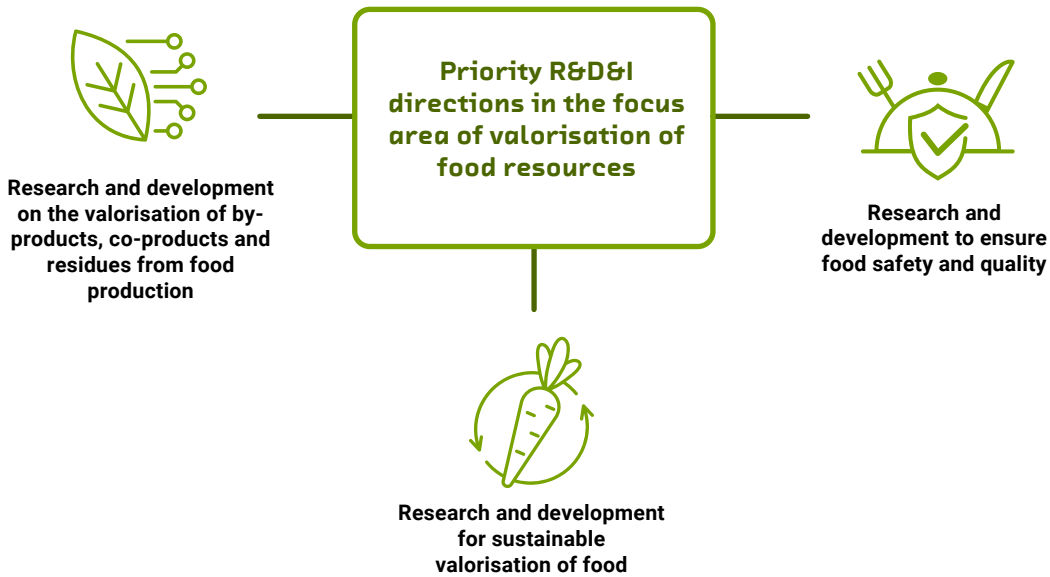
Valorisation of food resources

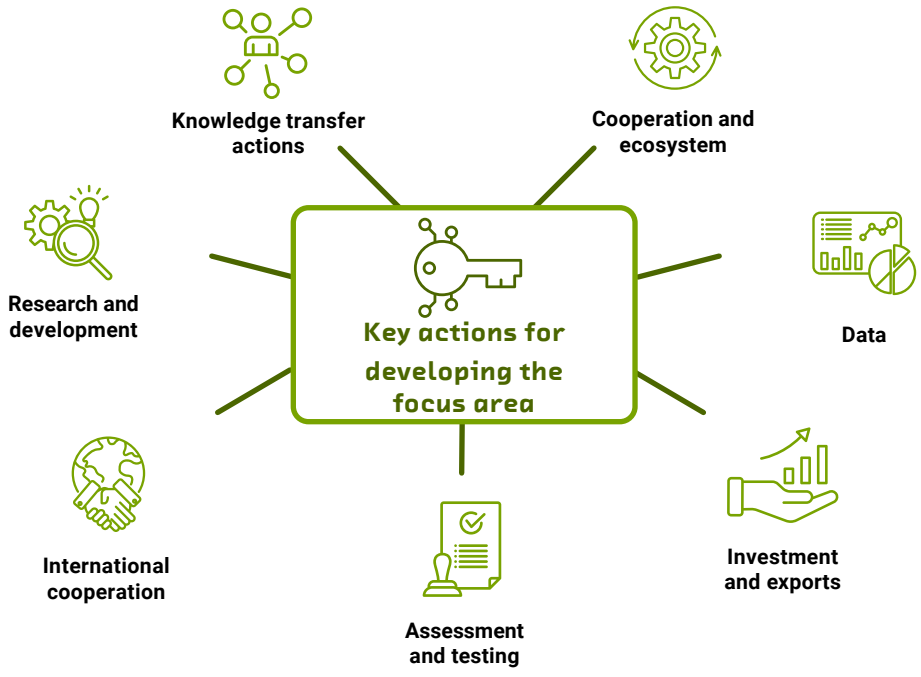
One of the starting points of the Estonian Research and Development, Innovation and Entrepreneurship Strategy is the need to make smart choices and to concentrate activities and funding on the areas that can best contribute to **creating solutions to society's challenges, based on research results and 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 community, solutions that enable the sustainable use of local resources, creating added value while boosting the circular economy. The circular economy 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 **food resources**.

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

It was agreed in the roadmap that the most important focus in food resource valorisation should be on research-based solutions that make the best use of **by-products and residue from food production to develop new products**. Equally important are research and development activities and the development of technologies to **harness food resources from both plants and animals** and to explore the potential and limitations of **new food sources**, e.g. in marine aquaculture, cell farming, plant protein use, etc. There is a need for better knowledge and solutions to **ensure food safety, preservation, quality and health**, including in relation to the impact of packaging on food.



In order to find appropriate research-based solutions for the needs identified, it was agreed in the roadmap that what needs support most in the focus area of valorisation of food resources is **the uptake of research results and the technologies developed**, e.g. through basic and applied research, the development of research directions, joint activities involving business communities and researchers, the mutual sharing of knowledge and experience between researchers and business communities, the provision of R&D services, international cooperation, etc. 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. Equally important is the **automation** of the food industry and the development of **testing facilities and environments** for the solutions that are created, so that solutions created through R&D and product development can be tested outside the laboratory on a larger (industrial) scale and in a real-life environment. In particular, the valorisation of food co-products, by-products and residues requires the **collection and smart use of data**. 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 food resources will be designed by the Ministry of Education and Research and the Ministry of Economic Affairs and Communications, alongside general research and business community funding measures such as research grants, research infrastructure grants, business community grants, etc., for which there are no priority areas.