

Factsheet – RTOs

What are RTOs?

Research and Technology Organisations (RTOs) are mission-oriented knowledge organisations dedicated to the development and transfer of science and technology to the benefit of the economy and society. Well-known RTOs include the Fraunhofer Gesellschaft in Germany, the CEA in France, VTT in Finland, TNO in the Netherlands, and SINTEF in Norway.

What do they do?

RTOs build bridges between basic research and practical applications by supporting product and process innovation in all branches of industry and services. They help to develop technologies that feed directly into new goods, processes and services. They do technology and market foresight and monitor social developments so that policymakers and businesses can make better decisions about future needs and market opportunities.

RTOs do a wide range of activities, from basic and applied research to advanced engineering, design and development, measurement and tests, prototype production, studies, and industrial exploitation through licensing and the formation of spin-off companies. Putting knowledge to practical use is the common denominator.

How are they different from universities?

RTOs and universities are increasingly strongly linked, but they have very different missions and operating modes. RTOs do more applied research than universities and exploit the resulting knowledge in industrial innovation and development projects. They have industry-relevant skills and often work in an interdisciplinary manner. They are also programme-driven, not project-oriented, which is linked to their strategic role in developing new technologies and applications and the consequent need to obtain a financial return on that investment and on their often expensive equipment. Studies conducted at national level show that while industrial clients use both universities and RTOs, they do not contract the two types of organisations for the same purposes.

How are they funded?

RTOs win the greater part of their funds competitively. Typically, their funding is a mixture of “core” subsidy that let them develop capabilities and industrial income which allows them to exploit these capabilities for the benefit of industry.

Why are RTOs important?

RTOs play a major role in the European innovation system. They work with both universities and enterprises, large and small, in order to find practical solutions to the societal “Grand Challenges”, while creating economic growth and employment through more effective exploitation of research and adaptation of technologies for specific business applications. RTOs also play a pivotal role in the European Framework Programme for Research and Technological Development, coordinating about a third of the projects in which they are involved. RTOs have a strong history of helping SMEs go beyond their capabilities, by providing technological and human



resources and expertise not normally available to them. In economic terms, the annual impact of RTOs is estimated at up to €40 billion. In social terms, RTOs are at the centre of major projects to tackle pressing societal challenges, in fields such as sustainable energy, environment and health technology. This reflects the pluri-disciplinary nature of RTOs and the range of their activities, resources and know-how.