

EARTO Paper

Is there still room for Open Innovation in a Digital Single Market built on Open Science?

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The 350 RTOs members of EARTO play an important role in the innovation ecosystem, covering public and private sectors, addressing all societal challenges and supporting major industry as well as SMEs. The total economic impact of RTOs is estimated at up to €40 billion annually and at over €100 billion taking into account longer-term spillover effects.

Currently, **Open Innovation** is the way for RTOs to perform collaborative research (or partnerships) with industrial partners (large or small) and with other public research organisations (RTOs or universities). Open Innovation, as coined by author Henry Chesbrough, is characterized by the simultaneous presence of:

- *Value Creation* by the partners working in collaboration, facilitated and secured by intellectual property rights;
- *Value Capture* under conditions that enable each partner of the collaboration to capture a share of the economic value created in common, as part of a business and exploitation plan and a roadmap clearly defined. This is usually attained by licensing research results to industry, against a fee (or royalties) that is proportional to their contribution to the project and to the commercial use made of such results.

When both conditions are met, powerful incentives exist for technology creators (like RTOs and universities) and technology buyers (like industry) to interact with each other, thereby creating a thriving technology marketplace. At the same time, the costs and benefits of research are allocated proportionally between all entities that invest in a research project.

Today, RTOs and many companies are challenged by two new interlinked notions: the Digital Single Market (DSM) strategy and the Open Science concept. RTOs are concerned about how to match their mode of co-operation with industry with the challenges foreseen and how to be part of the ongoing development of these two notions.

The **Digital Single Market** relies on open, data-intensive and networked research as a driver for faster and wider innovation. The DSM is built on three pillars:

- Better access for consumers and businesses to digital goods and services across Europe;
- Creating the right conditions and a level playing field for digital networks and innovative services to flourish;
- Maximizing the growth potential of the digital economy.

The concept of **Open Science** is depicted as the transformation, opening up and democratization of science, research and innovation, often through ICT, with the objective of improving efficiency, transparency and interdisciplinary, changing the interaction between science and society and enabling broader societal impact and innovation.

On the whole, RTOs' usual business models are partly based on both Open Innovation and Open Science, provided that the latter is defined in a "balanced" way and with clear provisions and definitions, like in the OECD's document "Making Open Science a Reality" (dated from 15 October 2015). RTOs develop technology that is mainly transferred to their industrial partners (large and small), creating value together with them. Part of this value is captured by the RTOs and ploughed back into new research thereby fertilizing the European R&I ecosystem, contributing to creating jobs and growth.

A significant part of RTOs' activities rely on principles such as Open Access, Open Data and Open Source. However, RTOs apply such principles in a "balanced" way. When these principles are addressed in EU policies, EU policy makers should take great care to balance the envisaged benefits from "openness" for society at large against the proven needs of the existing technology marketplace, the latter requiring a clear competitive edge as well as clear return on its investments in innovation activities, where collaborative research plays a crucial role.

In the current context where EU R&I policy is looking at how to maximize impact of R&I investments in programmes and new funds, such as the new European Fund for Strategic Investments (EFSI), R&I actors should be given the possibility to manage business models with clear return on investments. Such efforts should not be limited by an unbalanced EU Open Science policy, often confused with “free of charge access for all”.

The concept of “Open Science” is often associated with “free of charge access for all”, thereby sacrificing the crucial element of shared Value Capture required for Open Innovation. **In a balanced approach to “Open Science”, the emphasis should therefore be on the availability and wide dissemination of technology rather than on the absence of pricing.**

The long-standing experience of RTOs shows that industry is usually only willing to invest in R&D leading to a competitive edge over entities that have chosen not to invest. This requires a protection by IPR of certain results. Where this concerns “Open Data”, the focus should be on optimum use of research data. Here, optimum use of research data should be looked at in terms of an optimal allocation of the costs and benefits of the research effort, thereby attaining a maximum societal impact of the public research funding spent.

Research results, i.e. data, should be “Open” where reasonably possible and “Restricted” where reasonably required. An unbalanced European Open Science policy not taking into account this recommendation will be working against any effective European Open Innovation policy.

As an active member of the European Research Area (ERA) stakeholders’ platform, EARTO encourages its members to take into account the Open Innovation requirements (value creation and value capture) and European economic interests by promoting a *balanced approach* when addressing optimal circulation and transfer of scientific knowledge.

EARTO is ready to bring its expertise to the European Commission, which announced its roadmap for completing the Digital Single Market, an initiative on data ownership and free flow of data for 2016. EARTO and its members’ experts remain ready to provide additional input on these topics and are available for further discussion with EU Institutions.

EARTO is a non-profit international association established in Brussels, where it maintains a permanent secretariat. The Association represents the interests of about 350 Research and Technology Organisations (RTOs) from across the European Union and “FP-associated” countries.

EARTO Vision: a European research and innovation system without borders in which RTOs occupy nodal positions and possess the necessary resources and independence to make a major contribution to a competitive European economy and high quality of life through beneficial cooperation with all stakeholders.

EARTO Mission: to promote and defend the interests of RTOs in Europe by reinforcing their profile and position as a key player in the minds of EU decision-makers and by seeking to ensure that European R&D and innovation programmes are best attuned to their interests; to provide added-value services to EARTO members to help them to improve their operational practices and business performance as well as to provide them with information and advice to help them make the best use of European R&D and innovation programme funding opportunities.

EARTO Working Group Legal Experts: is composed of 25 corporate legal advisers working within our membership. Established in autumn 2013, this Working Group has also worked on the revision of the State-Aid Rules & the GBER. Our experts also contributed to the setting-up of the DESCA Consortium Agreement model for Horizon 2020.

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