
# Open Science

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## An opportunity for joint reflection on communities' structural and emerging topics

Over recent decades, we have progressively witnessed significant transformations in the operating models of higher education institutions. These changes stem from a collective process of reflection on their core mission: to educate individuals capable of responding to labour market needs, not only from a technical perspective, but also endowed with critical thinking skills and high ethical standards, thereby contributing to the creation of sustainable and socially responsible contexts.

Thus, the motivations, forms, and agents involved in the creation and dissemination of scientific knowledge, in the context of intense globalisation and accelerated technological change, have inevitably become more dynamic and responsive to immediate needs. This evolution has imposed more agile, collaborative, and transparent models to address major global challenges, without compromising the rigour of practices that generate reliable knowledge and ideally adhering to interdisciplinary and transdisciplinary paradigms.

Starting from a more utilitarian and circumscribed concept such as Open Access, higher education institutions, particularly those whose core mission lies in research and innovation, have progressively developed additional lines of action aimed at Citizen Science, the promotion of Responsible Research and Innovation, the dissemination of Open Educational Resources, and, more recently, the management and availability of Research Data. The concept of Open Science arises as an aggregating framework for a broad ecosystem designed to benefit researchers, institutions, and, to a significant extent, society.

In the academic context, Open Science emerges as a catalyst for transparency and integrity in the creation and sharing of scientific knowledge, democratizing and universalizing access to relevant content that had previously been almost exclusively dependent on rigid commercial models defined by actors external to academia, constraining the scope of action of researchers and funding bodies alike. It is therefore understandable that this new paradigm encompasses a range of new practices, including the definition of institutional and national policies, the negotiation of transformative agreements to encourage publication and access under more favourable conditions, the implementation of new publishing models such as *Diamond Open Access*, and even a conceptual rethinking of research evaluation structures, incorporating metrics and practices that were previously undervalued.

In recent years, Universidade Católica Portuguesa has aligned its strategy with the major goals of Open Science, aiming to integrate key concepts and practices within its community. In this regard, at least three highly relevant strands can be identified. First, the implementation and restructuring of platforms for managing and disseminating scientific information, namely the Institutional Repository (*Veritati*), the Scientific Journals Portal, and the CRIS (Current Research Information System), *Ciência-UCP*, with particular emphasis on increasing interoperability between these systems and other internal and external platforms, streamlining information flows, and enhancing the impact of the data made available. The second component focuses on raising awareness within the entire academic community. This involves discussing key Open Science topics from both theoretical and practical perspectives and providing evidence of their benefits in relation to the recommendations and policies set by leading institutions and funding agencies. Third, the cross-cutting support provided by the science management team, characterized by a high degree of customization and personalization, directed towards the Rectorate's support services, Research Units, and researchers themselves.

The consolidation of Open Science practices and support structures developed at UCP occurs within the context of a significant organizational transformation, aiming for stronger functional and identity alignment between the headquarters and the different regional centres. This process has had a clear impact on research and innovation activities, as well as on the services that contribute to or manage this information, enabling

internal and external stakeholders to carry out their activities in pursuit of the common good, a shared mission, and the core motivations and values that define the institution as a community.

Within this emerging paradigm, research and the construction of robust Open Science foundations are developed in, between, and for communities, through the establishment of reliable strategic partnerships that must nonetheless consider a broad range of criteria. Among these, the impact of the current geopolitical context deserves particular attention, as do, increasingly, issues related to cybersecurity and the abusive sharing and use of information resources. These concerns are further heightened by global competition in the development of artificial intelligence mechanisms and tools that are trained on data available through scientific dissemination platforms.

The formation of extended communities arising from alliances such as *Transform4Europe* (T4EU), and from the relationships established between this alliance and other collective or individual entities close to its partners, enables the creation of global collaborative environments grounded in shared values and high levels of trust. In this context, Open Science emerges as a common denominator, a desired and encouraged practice for creating contextualized and relevant knowledge for the respective communities. In the specific national context, where well-defined support structures exist in terms of technology, interoperability infrastructures, and the standardization of Open Science policies and practices, in which UCP actively participates across multiple communities, the involvement in the alliance has consolidated much of the progress achieved in recent years.

To this end, UCP's participation in *T4EU*, particularly in the context of Open Science, has represented an opportunity for joint reflection on both structural and emerging topics, with a view to producing content and support services for an extended community. This engagement has helped introduce a culture of open knowledge creation and sharing among early-career researchers, including doctoral students. Despite being an international institutional alliance, the transversal nature of the theme has fostered closer relationships and the establishment of bridges between different university stakeholders, generating synergies and value-added services for the entire academic community in the promotion and practice of Open Science.