

**AURORA**

# Aurora

## Research & Innovation

### Open Science Communities

Deliverable 6.4



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## Executive Summary

This report serves as an accompanying document to Aurora RI deliverable 6.4 - *Open Science Community starter kit and a platform for these communities to interact*.

This deliverable is the result of work carried out within the Aurora partner universities as part of the Horizon 2020 funded Aurora RI project.

We created an incubator programme for starting Open Science communities. Using this programme, we created Open Science communities at 6 of our 9 Aurora partner universities. In these Open Science communities, students and researchers who want to learn about Open Science can share experiences and inspire each other. We are piloting a platform for connecting these local communities with each other and the International Network of Open Science Communities ([INOSC](#)).

In this report, we describe:

- ▲ An introduction to Open Science Communities
- ▲ The OSC Incubator Programme
- ▲ Testimonials from three Aurora universities
- ▲ Future possibilities for the Aurora Open Science Communities

## Project Abstract

Aurora was formed in 2016 as a consortium of research-intensive universities deeply committed to the social impact of their activities. The objective of Aurora is to match academic excellence with societal relevance. One of the core values of Aurora is to learn from and with each other and the Aurora RI project is an important part in realising this.

The Aurora RI project will develop closer research and innovation support structures to complement the excellent research and innovation activities within the Aurora Alliance, a European Universities Initiative funded by the European Commission. It will further deepen and expand the cooperation between these universities and strengthen their identities as research-intensive universities dedicated to societal impact. The aim of Aurora RI is to develop a research and innovation support agenda framed by the Sustainable Development Goals (SDGs) and based on the four priority domains of the Alliance:

1. Sustainability and Climate Change
2. Digital Society and Global Citizenship
3. Health and Wellbeing; and
4. Culture: Diversity and Identity.

The project focus is to identify and achieve an understanding of best practices and policies on sharing research infrastructure and resources, cooperation on open science and entrepreneurial activity, empowering human capital, and encouraging citizen engagement. Throughout the project we will analyse and map best practices already in place, learning from each other. We will define barriers to cooperation at national and international level and find ways to overcome them where possible. The findings will create the basis of our Research & Innovation support agenda and will be shared with other European Universities and beyond. The actions implemented during the project period aim to create a platform for cooperation that will continue beyond the lifetime of the project and will equip researchers and students at Aurora Alliance Universities with a broad toolkit for conducting excellent research and disruptive innovation.

## Aurora RI Work Package 6: Open Science

Academia is in a transition towards a more transparent way of doing and sharing scientific research. This shift to Open Science increases the accessibility of research, which contributes to research integrity and opens new avenues for collaboration with other researchers and societal partners. In Work Package 6 of Aurora RI, we focus on *Sharing and implementing Open Science practices*. Within this Work Package, we have defined three tasks and four deliverables:

### 1. ***Building a shared knowledge base of Open Science resources, policies, and practices***

In this task, meta-information about research outputs, resources, policies, experiences, and practices on Open Science are collected from Aurora partners and beyond. The meta-information for Aurora partners is aggregated into an Open Science Monitor, and the best practices are collected in a knowledge base. This knowledge base allows the Aurora partners to learn from each other's choices and experiences. It is made freely available, so others beyond the Aurora Alliance may also benefit from it.

▲ *Deliverable 6.1 - Open science function to the SDG dashboard*

▲ *Deliverable 6.2 - A shared knowledge base of Open Science resources, policies, and best practices*

### 2. ***Establish a joint training programme on Open Science***

Building on the existing Aurora Open Education database and the knowledge base from Task 1, we establish Open Science training modules. These are aimed at helping students and researchers to incorporate Open Science practices into their research workflows and become ambassadors for Open Science. Topics that will be covered are Open Access publishing; how to make research data and software FAIR; how to guarantee research integrity; and how to engage with the general public about research. The educational resources for these training sessions will be made freely available.

▲ *Deliverable 6.3 - Open Science training modules*

### 3. ***Creation of a network of Open Science researcher communities within and between the Aurora institutions.***

A network of Open Science communities is created within and between the Aurora institutions. In these Open Science communities, students and researchers who want to learn about Open Science can share experiences and inspire each other. A platform will be created in which local communities within the Aurora Alliance institutions can interact with communities from other institutions, allowing for international collaboration.

▲ *Deliverable 6.4 - Open Science Community starter kit and a platform for these communities to interact*



## Introduction

The transition to Open Science is an ongoing process. In essence, it is about changing the current research culture. Such a change requires collaborative action of stakeholders at five different layers. To implement Open Science practices the required *infrastructure* should be in place, such as Open Access journals and data repositories. These infrastructures need to be made available to researchers, and *support and training* should be offered to make adoption of these new techniques easy. In the end, it is the academic *communities* themselves who determine the norms and standards in the field and are therefore at the heart of the transition. It must be noted though, that academics' behaviour is to a large extent driven by the *incentive structure* in academia -how to make a career in science- and on the requirements set in institutional or national *policies*.

The purpose of an *Open Science Community (OSC)* is to accelerate the normalisation of Open Science practices amongst academics. It does so by making the Open Science practices of its members visible and accessible to colleagues. OSCs encourage researchers to showcase how they incorporate Open Science in their workflow and help colleagues to follow suit. However, the majority of members don't have expertise that they can share (yet). An OSC is a place for learning and inspiration.

### *For whom?*

An OSC is open to everyone interested in Open Science. No prior knowledge or expertise is required to become a member. The target audience of OSCs are researchers and scholars from all disciplines and career stages. However, OSCs particularly welcome others with an interest in Open Science, such as support staff, administrators and stakeholders in OS. In fact, OSCs can help policy makers, service providers or providers of research infrastructure to connect with their end-users and collect feedback to improve their policies, tools and services.

### *Community activities and formats*

Community members have a profile page on the website of their local OSC where they feature the Open Science expertise for which they can be contacted by their colleagues. Other formats include workshops and activities that stimulate knowledge exchange amongst peers, blogs, podcasts, newsletters, Slack channels, etc. The topics addressed in these activities are diverse and span the whole palette of Open Science practices, from open access, to open data, to societal engagement. There are ample opportunities to reuse materials of other OSCs or organise joint events.

### *International Network of Open Science Communities*

The International Network of Open Science Communities (INOSC) facilitates knowledge exchange amongst the Core Teams of communities during regular meetings, where OSC representatives share best-practices and work on solutions. Regularly, OSCs team-up for joint-events or provide workshops to each other's OSCs. As the number of OSCs grows, OSC may also unite in regional or national networks, such as [OSC-NL](#), the network of Dutch Open Science Communities. National and international networks are well suited to interact with national and international stakeholders on behalf of their associated OSCs.

## Incubator programme

Together with representatives from INOSC, we created and facilitated an [incubator programme for new Open Science Communities](#).

This 12-week programme guides participants through setting up their local Open Science Communities. It covers six modules that focus on community vision and mission, community engagement, attracting members, stakeholder engagement, monitoring, and sustainability. Each module consists of a 2-hour online meet-up, preparatory materials and assignments. During the incubator, participants develop a comprehensive master plan that moves towards a so-called minimum viable community (e.g., forming a core team, creating a website, organising a launch event) and elaborates on each module in detail. Participation in the incubator program offers not only the initial idea of starting the community but also many ideas on how to start it. During the programme, there are coaching sessions in which the lecturers give feedback on the ideas from participants.

After finishing the incubator programme, an additional mentoring program is offered by INOSC for the duration of a year, consisting of monthly online meetings of up to 2 hours. In these meetings, participants can exchange experiences and best practices with fellow OSCs.

The OSC Incubator Programme was first run in September 2022. It has since been run twice a year by INOSC, with support from AURORA and Skills4EOSC. In every cohort, 10 university teams can participate to start their local communities.

## Testimonials

Over the course of the AURORA RI project, 6 of the 9 Aurora universities have started their own Open Science Communities. Together, these communities consist of several hundred enthusiastic members across the Aurora network. Below, we illustrate the status and future plans of three of the new Aurora Open Science Communities.

### Palacký University Olomouc - Open Science Community Olomouc

Palacký University Olomouc decided to establish its own open science community as a bottom-up approach to open science that would complement top-down initiatives. The aim was to create a network of people interested in open science, establish and enhance open science knowledge and skills, and support collaboration and sharing of best practices within specific domains and across disciplines. The process of building and developing an open science community unfolds in four stages. To launch the first stage, Prepare & Launch, the university joined the OSC Incubator Program in the fall edition, which ran from September 2022 to January 2023.





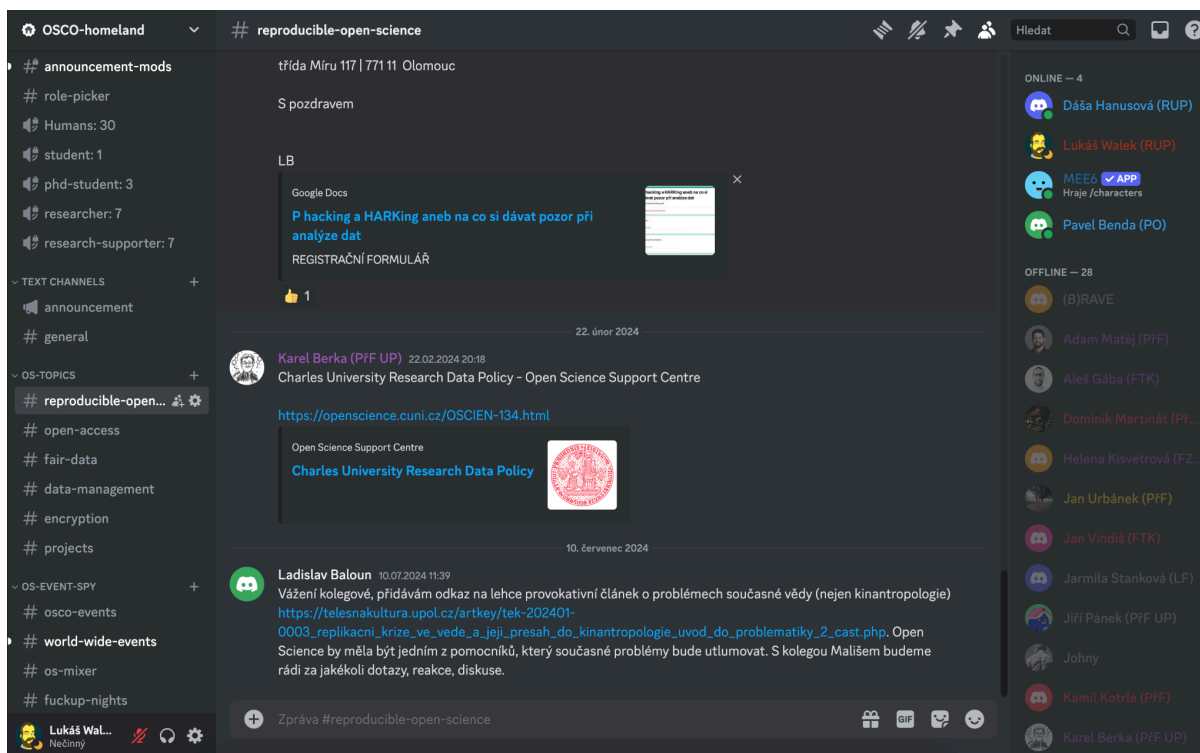
Open Science Community Olomouc, shortly OSCO, was officially launched on April 26, 2023. The launch event, titled "Challenges and Echoes of Open Science," was integrated into the program of the Academia Film Olomouc festival (AFO58).

First and foremost, the launch event introduced the newly established community. Then, it continued with a panel discussion among guest speakers, researchers and managers about the implications and challenges of open science. The launch event represented the community milestone enabling us to move to the second stage, i.e., Grow and Inspire, focusing on attracting members and inspiring open science practices.

OSCO primarily targets Ph.D. students, early career researchers, and research support staff. However, the community also welcomes undergraduate students and senior researchers. The community aims not only to bridge the gap between researchers and research support but also to create a diverse, inclusive, and collaborative environment where all members can engage, enhance their skills, contribute with their own perspectives and experience, and provide tailored support.

Discord was chosen as the community base and the primary tool for communication. The platform enables multiple channels dedicated to different topics, enabling focused discussions and information sharing, and supports various forms of communication, including text chat, voice calls, and live streams. It provides multiple entertaining features like role picking (e.g., PhD student, research supporter), gamification, or using bots.

It is easy to use without obstacles for external members to join or members to join other potential (Aurora) communities. The community also has its customised website, which we decided to combine with the entry point for open science at the university to support the synergy between the community and the university initiatives.



Regarding members, OSCO was initially centred around the Open Science Working Group, consisting of two sub-groups: faculty and institute members and expert members (research support staff). The working group cooperates on the university initiatives and represents one of our information channels. To attract and engage more members, we also launched a series of ten introductory lectures on open science and related topics (starting in the fall of 2023). The series combines two complementary needs – the need to raise awareness and build general knowledge on the one hand and the need to provide the context and understanding of open science to join the community on the other hand. Additionally, several informal Open Science Mixer meetups were organized to support the developing community network.

Apart from the series, other initiatives help to create an environment for open science and the community at the university. One of them is preparing a comprehensive research data management policy, along with its commented version, which provides additional clarity and guidance. The policy was prepared in cooperation with faculties and central units which helped to raise necessary awareness.

As for the OSCO future, the community needs to expand its visibility and impact and to grow. The community will be further promoted. Community development will also be integrated into project proposals to obtain resources to develop the community's full potential. The community events will be developed in various formats, such as talks and lectures with guest speakers, hands-on training and courses, one-to-one consultations between researchers and research supporters, fuck-up nights. Additionally, gamification will be integrated to make participation more engaging and rewarding.

## University Duisburg-Essen

University Duisburg-Essen (UDE) strongly supports Open Access and FAIR Data with engaged communities as well as top-down strategies and policies. The aim in Aurora RI was to expand these activities towards a generalised strategy and holistic approach. A common Open Science community was supposed to serve as an overarching network, bringing together different aspects of openness and encouraging new practices. In order to institutionalise these bottom-up activities, the framework conditions and possibilities for developing an open science policy should be explored.

To start the first stage, Prepare & Launch, two data stewards of the university library joined the OSC Incubator Program in 2023. The 12-week program guided them through the different steps for setting up a local open science community at UDE. It covered six modules comprising community vision and mission, community engagement, attracting members, stakeholder engagement, monitoring, and sustainability. During the incubator, the two data stewards made contact with departments and projects in UDE in order to set up a core team and bring together relevant stakeholders. The discussions among actors in initiatives like the German National Research Data Infrastructure (NFDI) were very fruitful and exposed Open Science as a highly relevant topic. On the other hand, a lack of resources became obvious, which made many people sceptical as to whether the involvement in another network was not too much. Consequently, a central organised network equipped with reasonable resources could be a solution and could be completed by a corresponding top-down approach. Therefore, the development of a general Open Science Strategy has been put forward to discussion.

Furthermore, we decided to strengthen the overarching aspects of Open Science within the single openness initiatives, in particular the open data community. UDE's data steward network regularly takes up the topic in their network meetings and includes Open Science in training sessions for PhDs and researchers. The international exchange of ideas and best practices beyond Aurora has been lively promoted by the foundation of the network EuDaNOS ("European Data Steward Network for Open Science") and so far, three annual meetings together with Erasmus University Rotterdam, Netherlands, University Oulu, Finland, Ruhr-University Bochum and TU Dortmund.

## Copenhagen Business School - Open Science Community Copenhagen

Copenhagen Business School (CBS) participated in the second round of the OSC incubator in spring 2023. This was a fantastic journey because of the

well-structured course and the overall learning experience. The incubator takes the learner over 12 weeks through the modules "Community vision and mission", "Community engagement", "Community growth", "Stakeholder engagement", "Monitoring", and "Sustainability". In addition to learning effective tools for community building, we created a small community of "OSC startups" during the incubator and experienced how communities empower individuals by inspiring, acting as a sounding board for ideas and offering practical



help. As a group of learners, we leveraged the same “power of communities” in the incubator that we would leverage in our local OSCs.

The aspiration is to create an OSC for the entire capital region of Copenhagen, where researchers, staff, and students from academic institutions in the Copenhagen region can engage with open science. Therefore, OSC Copenhagen (OSCC) is organised as a “community of communities” with local branches at the different universities in the capital region that organise local and regional OSCC events. The community offers a space where everybody interested in open science can meet, share knowledge, learn, discuss, and collaborate. The OSCC was officially launched in August 2023. We presented the community at the launch event of the Danish Reproducibility Network (DKRN) and discussed possible future collaborations between the two initiatives by organising shared events in the capital region and collaborating at the institutional level through e.g. book clubs.

Currently, our efforts are focused on the local branch of OSCC at CBS. The core team of OSCC/CBS consists of library staff. Our target groups include Ph.D. students, early-career researchers, research support staff, undergraduate students, and senior researchers. Our focus is creating awareness about open science as well as learning opportunities for members and other stakeholders, who can benefit from engaging with open science topics and practices. Thereby, the community contributes to creating an academic culture that is built on openness, transparency, reproducibility, responsibility, and collaboration. In the future, we would like to gain better visibility within CBS and increase the membership base through monthly open science lunches.

## Future developments

### **Foster further connections between Aurora Open Science Communities**

For this deliverable, we established local communities at 6 Aurora universities. Open Science Community Olomouc is piloting Discord as a platform for communication (see above). This platform can easily be scaled up to create one platform for all Aurora Open Science Communities. This will be explored within the Aurora2030 project.

### **Connect the Open Science Communities to training programme**

For deliverable 6.3, we focused on training opportunities for early-career academics (e.g. PhD candidates, postdoctoral researchers). Within the Aurora 2030 project, we will focus on strengthening the ties between support staff at the different Aurora universities as well. By connecting and involving the Open Science Communities, we can increase the number of (discipline-specific) workshops/ training opportunities in our Aurora Open Science training programme.