National Initiatives for Open Science in Europe

3P: Principles, procedures, platforms
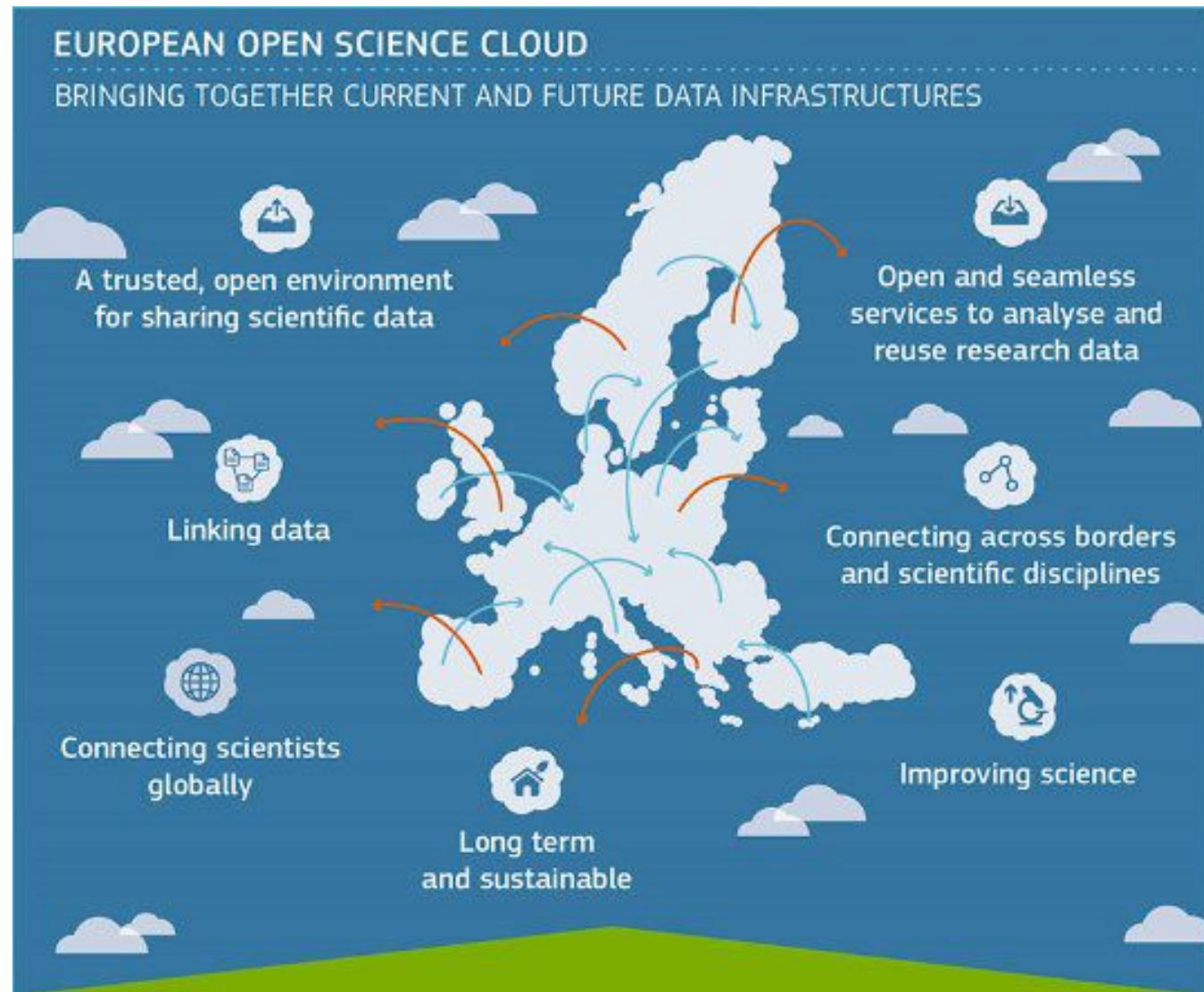
Anastas Mishev
UKIM

European Open Science Cloud

❏ The role of the EOSC is to ensure that European scientists reap the full benefits of data-driven science, by offering:

❏ "1.7 million European researchers and 70 million professionals in science and technology a virtual environment with free at the point of use, open and seamless services for storage, management, analysis and re-use of research data, across borders and scientific disciplines"
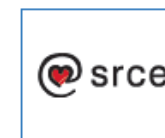
2016 Communication on the "European Cloud Initiative"

EUROPEAN OPEN SCIENCE CLOUD
BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES

A trusted, open environment for sharing scientific data

Open and seamless services to analyse and reuse research data

Linking data

Connecting across borders and scientific disciplines

Connecting scientists globally

Long term and sustainable

Improving science

Project administrative summary

- Name: National Initiatives for Open Science in Europe

- Acronym: NI4OS-Europe (pronounced "NIFOS")

- Call: INFRAEOSC-05 (b) Coordination of EOSC-relevant national initiatives across Europe and support to prospective EOSC service providers - Research and Innovation Actions

- Grant number: 857645

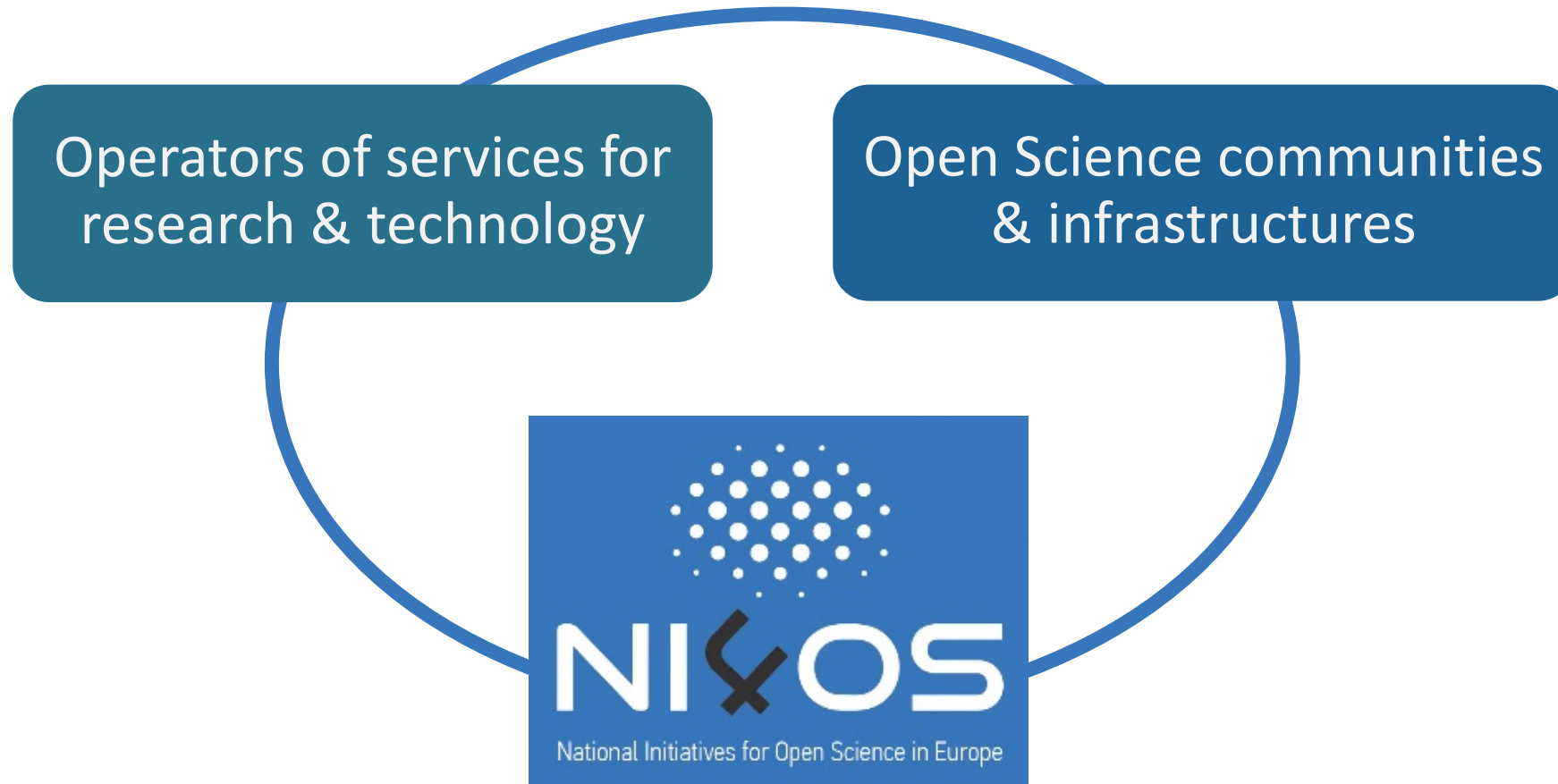- Amount of EC funding 5,599,475e

- 22 Partners from 15 countries

NI4OS Europe

Participating countries

Greece	Hungary	Albania	Republic of Moldova
Cyprus	Romania	Bosnia-Herzegovina	Armenia
Bulgaria	Slovenia	North Macedonia	Georgia
Croatia	Serbia	Montenegro	

Partnership

1	National Infrastructures for Research and Technology SA	GRNET	Greece
2	Athena Research & Innovation Center	ATHENA	Greece
3	The Cyprus Institute	CYI	Cyprus
4	University of Cyprus	UCY	Cyprus
5	Institute of Information and Communication Technologies	IICT	Bulgaria
6	SRCE - University of Zagreb, University Computing Centre	SRCE	Croatia
7	Ruđer Bošković Institute	RBI	Croatia
8	Governmental Agency for IT Development	KIFU	Hungary
9	University of Debrecen	UD	Hungary
10	National Institute for Research and Development	ICI	Romania
11	Executive Agency for Higher Education, Research, Development and Innovation Funding	UEFISCDI	Romania
12	Academic and Research Network of Slovenia	ARNES	Slovenia
13	University of Maribor Library	UMUKM	Slovenia
14	Institute of Physics Belgrade	IPB	Serbia
15	University of Belgrade	UOB	Serbia
16	Albanian Academic Network - Interinstitutional ICT Research Centre	RASH	Albania
17	University of Banja Luka	UNI BL	Bosnia-Herzegovina
18	Ss. Cyril and Methodius University in Skopje	UKIM	Northern Macedonia
19	University of Montenegro, Faculty of Electrical Engineering	UOM	Montenegro
20	Research and Educational Networking Association of Moldova	RENAM	Republic of Moldova
21	Institute for Informatics and Automation of the Academy of Sciences of Armenia	IIAP	Armenia
22	Georgian Research and Educational Networking Association	GRENA	Georgia

Partnership building blocks

Operators of services for research & technology
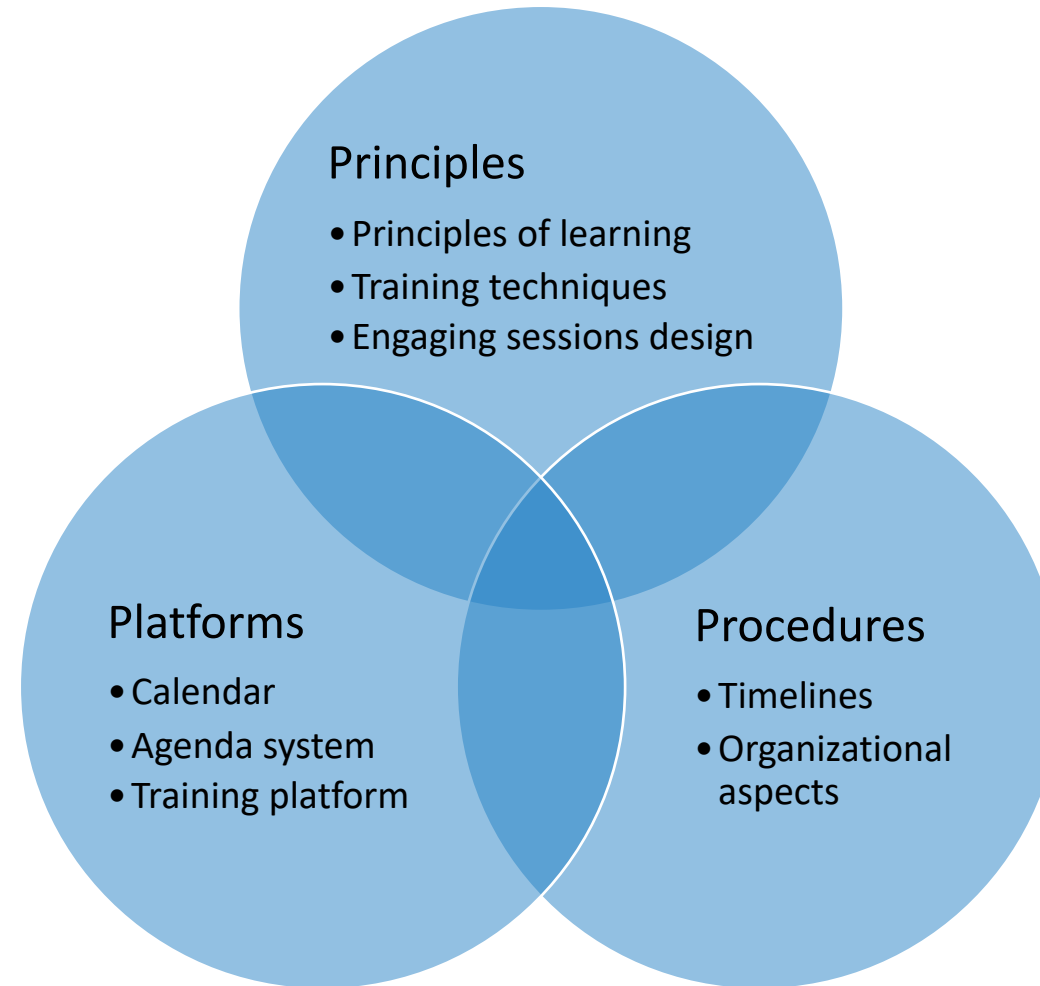
Open Science communities & infrastructures

Mission

Support
the development and inclusion of the national Open Science Cloud (OSC) initiatives in 15 Member States and Associated Countries in the overall scheme of EOSC governance
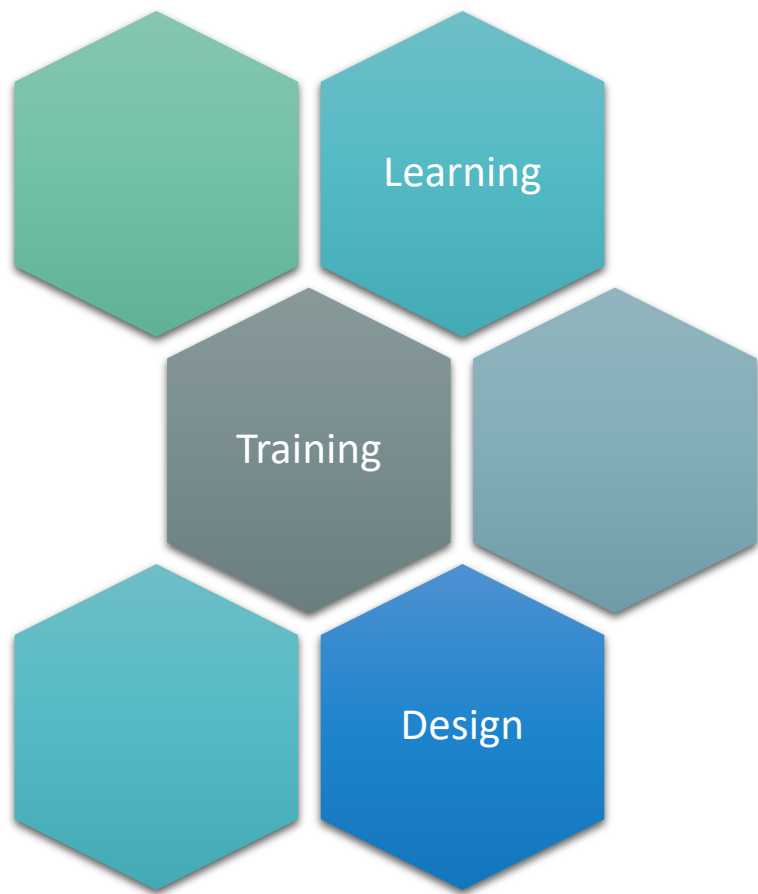
Spread the EOSC and FAIR principles in the community and train it

Provide technical and policy support in on-boarding of the existing and future service providers into EOSC

Agenda

Principles
- Principles of learning
- Training techniques
- Engaging sessions design

Platforms
- Calendar
- Agenda system
- Training platform

Procedures
- Timelines
- Organizational aspects

Learning

Training

Design

P: principles

TEACHING vs TRAINING

❑ Training is an approach used in **short and intensive courses** to build a person's skills, knowledge and attitudes on a specific subject.

❑ Even though the person has attained the highest academic qualifications, still she may want or need to acquire specific knowledge and skills on a given topic.

Learning theory

❑ no universal theory of learning

❑ evidence-based research

❑ Results: learning principles
  ❑ accepted and applied in several communities of practice
  ❑ How learning works

Learning principles

P1 Students' prior knowledge can help or hinder learning.

P2 How students organise knowledge influences how they learn and apply what they know.

P3 Students motivation determines, directs and sustains what they do learn.

P4 To develop mastery, students must acquire component skills, practice integrating them, and know when to apply what they have learned

P5 Goal-directed practice coupled with targeted feedback enhances the quality of students' learning

P6 Students' current level of development interacts with the social, emotional, and intellectual climate of the course to impact learning

P7 To become self-directed learners, students must learn to monitor and adjust their approaches to learning.

Adult learning or andragogy

- are internally motivated

- prefer to be active in decisions relating to their learning

- they bring a lot of prior knowledge and experience to learning

- need to have new knowledge linked with existing information

- are goal-oriented (so learning for learning's sake is unsatisfactory)

- prefer learning what is authentic and directly relevant to their work or existing interests

- are more practical learners, wanting to be able to apply what is learned

- prefer to be treated as partners in the learning experience

Teaching objectives and Learning Outcomes

Objectives are statements of what you are setting out to teach, although expressed as if the students were going to learn it.

Aims = Objectives

Outcomes ("desired outcomes") are statements of what you might (in principle) assess.

What a student will know or be able to do, if she or he has learned everything in the course or session.

What makes a good training session?

Start with learning objectives

The space in the training room influences behaviors

Learner-centric methods that empower learners to be more engaged

Small groups, team-based exercises, and collaborative endeavours

Try to give up the position of the "sage on the stage", to become the "guide on the side".

Interactive lectures

❑ Break the unidirectional flow of information at least once

❑ Begin the interactive segment with an engagement trigger that captures and maintains attention

❑ Incorporate an activity that allows students to apply what they have learned

❑ Include techniques such as think-pair-share, demonstrations, and role playing

    ❑ allow <u>all</u> students to participate

skills matrix for trainers

- verbal communication skills
- written communication skills
- presentation skills

- session planning
- curriculum planning
- event management

Communication

Planning and Management

Trainee Engagement

Expertise and Knowledge

- flexibility in delivery
- empathy with trainees
- understanding / knowledge of trainees

- subject are knowledge
- user application awareness
- knowledge of training methodology

Instructional strategies that collectively address all seven principles

S1   Collect data about students and use it to design instruction (P1,P3).

S2   Be explicit about your learning goals, learning objectives and expectations (P3, P5, P6). Make your learning goals challenging but attainable by most of the learners in your course. Write detailed learning outcomes about the knowledge and skills you are trying to help develop, and share your objectives with the learners.

S3   Scaffold complex tasks (P2-P7). Teach and test at a level that is challenging but not too far above the learners' current knowledge and skill levels.

S4   Help learners learn to function like experts (P2, P4, P7). Have learners formulate solution strategies before beginning to work on new problems, and when they complete assignments have them reflect on what they learned and what they will do differently in the future.

S5   Establish a supportive class climate (P3, P6). Learn and use learners' names and encourage them to interact with you in and out the course. Collect anonymous learner feedback and investigate and respond to any complaints related to class climate.

Gamification

- ❑ Promotes
  - ❑ ice breaking
  - ❑ interactivity
  - ❑ networking
  - ❑ fun
  - ❑ pace discontinuity
  - ❑ relax
- ❑ Games should
  - ❑ be designed/chosen accurately
  - ❑ have specific goals
  - ❑ not last too much
  - ❑ not be too frequent

The role of wrap-up sessions

❑ At the end of sessions (or a day, or the whole training)

❑ devote a few minutes to wrap-up and collect feedback

❑ Wrap-up should be carried out by participants

  ❑ identify max 4/5 main topics each day and assign each to a different participant to summarize

❑ Feedback at the end of each session should be quick and simple

Assessment

❑To be used when developing online learning content

❑*Summative assessment*

    ❑An exam or a test at the end of a course is an example of summative assessment

    ❑Aimed at evaluating learners' performance at the end of teaching

        ❑ at the end of a topic, a session, or at the end of the entire course

    ❑Multiple choice test questions can be an effective and efficient way to assess learning outcomes.

Feedback

- Short term feedback
  - assessment of training quality, participant and instructor performance
- Happens immediately at the end of the course with the purpose to measure the trainees' perception of:
  - the quality of the training and its organisation aspects,
  - the trainer's capacity to teach (performance),
  - the adequacy of the training to their expectations
  - the strengths and weaknesses of the training
- Predefined feedback questionnaires
  - You can expand and customize if needed

Training session design and plan

- Define learning goals and outcomes
- Identify the target audience and prerequisites
- Think if you want to make your presentation active and interactive
- Think whether you need or want to use a visual support
- Think whether you need to distribute some material in advance to the audience
- Sketch the structure/timeline of your presentation

Recipe to prepare a new training course

- Define the main idea (matching a perceived need)
- Define the Ideal Target Audience
- Define pre-requisites for the participants
- Select potential instructors. One of them plays the leader role. Involve him/her in all discussions from this point on.
- Breakdown into skills and concepts needed
  - for each skill
    - state learning objective(s) and write them down
    - consider exercise alternatives
    - gauge duration, technical requirements, testing
    - pick the best suited exercise
    - design a short lecture to precede it
    - adjust timing for an ideal training slot duration
    - prepare self-assessment questions
- Compose a logical sequence of slots and distribute them in a course plan timetable
- For each training day program a fist slot
  - On the fist day, use that slot to break the ice and establish team work discipline
  - On the other days, use it for the wrap-up of the content of the evening
- Plan a final wrap-up discussion at the end of the course
- Distribute the time slots through the days of training, using duration to balance the learning effort
- Use breaks to induce periods of collective reflection
- Foresee some physical activity

P: Procedures

Timeline   Organization

ToDos

NI4OS training events

❑ Project level
  ❑ 5 Train-the-Trainer
    ❑ To build the NI4OS training community that will deliver the national trainings

❑ National level
  ❑ Min 1 Capacity building - target stakeholders included in service onboarding processes
  ❑ Min 1 End-user – target service users

Training delivery

- ❑ Types
  - ❑ Webinar series (min 4h in total, 60-90 mins per webinar)
  - ❑ Face-to-face workshop (min 1 day)

- ❑ In addition: online self-paced courses
  - ❑ ex. ITSM online course – TBA in April 2020

Training timeline - 1st wave: Train-the-Trainer

FAIR data and principles	ORDM		
Feb. 2020	**Apr. 2020**	**June 2020**	**Aug. 2020**

	Mar. 2020	May 2020	July 2020	Sep. 2020
	EOSC promoters	Service on-boarding		ITSM
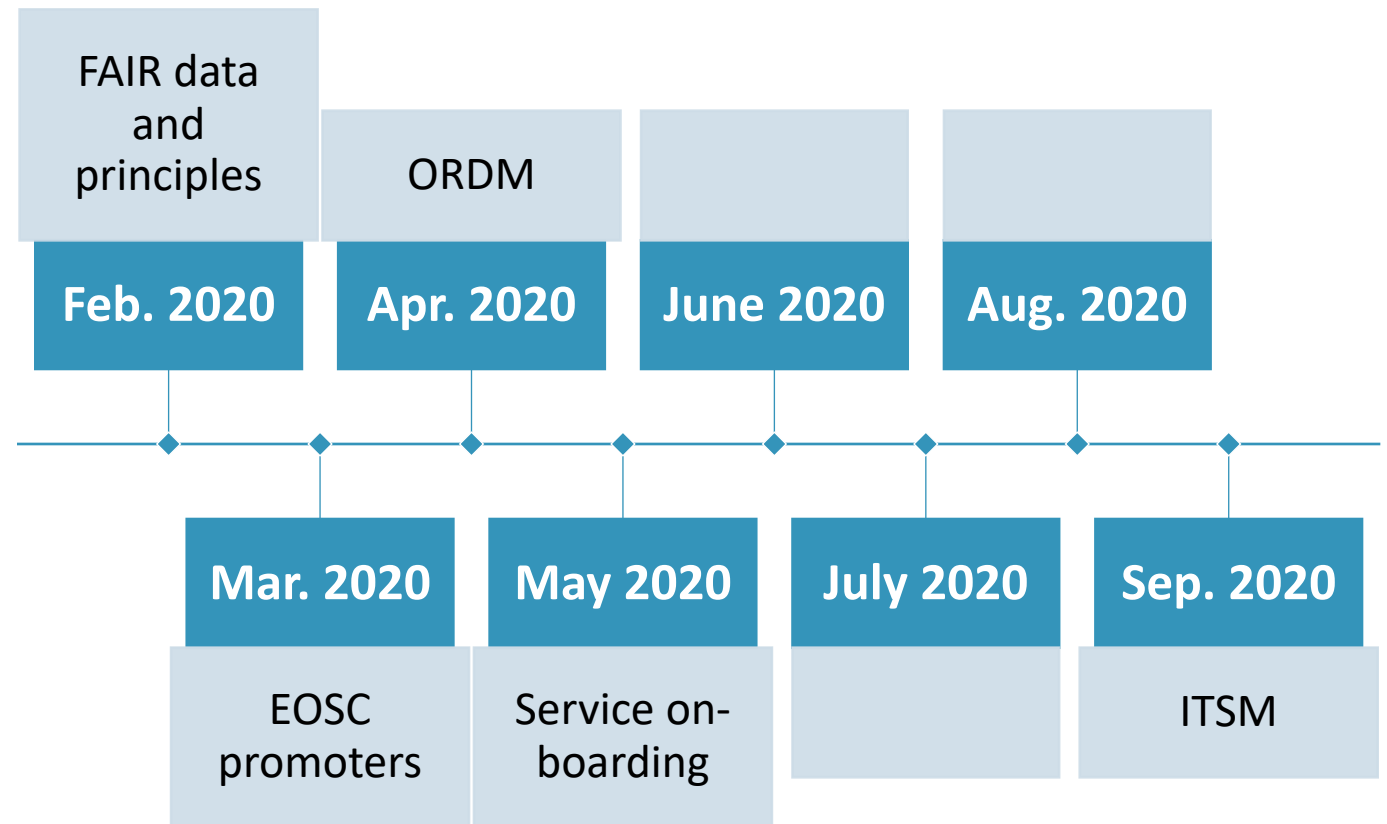
Notice ▶

- ❑ Train-the-trainer events are organized to build the NI4OS trainer community
  - ❑ NI4OS closed activities unless otherwise stated
- ❑ At least two participants per country should register for each event
  - ❑ Follow the recommendations in the call
- ❑ After each event, the training team will update the training directory on Box

Organization procedure

❑Special course on training platform

  ❑Training events organization

   ❑ Open for guest access and/or self enrollment
   ❑ Organizational check list for
     ❑ Self-paced online course
     ❑ Hands-on workshop
     ❑ Webinars
   ❑ Global timeline overview
   ❑ User guides
   ❑ Trainers directory

Event Organization

reminder

1 month

Before ToDos

Logistics

Program preparation

During ToDos

Trainees support

After ToDos

Feedback gathering

Training platform

Events system
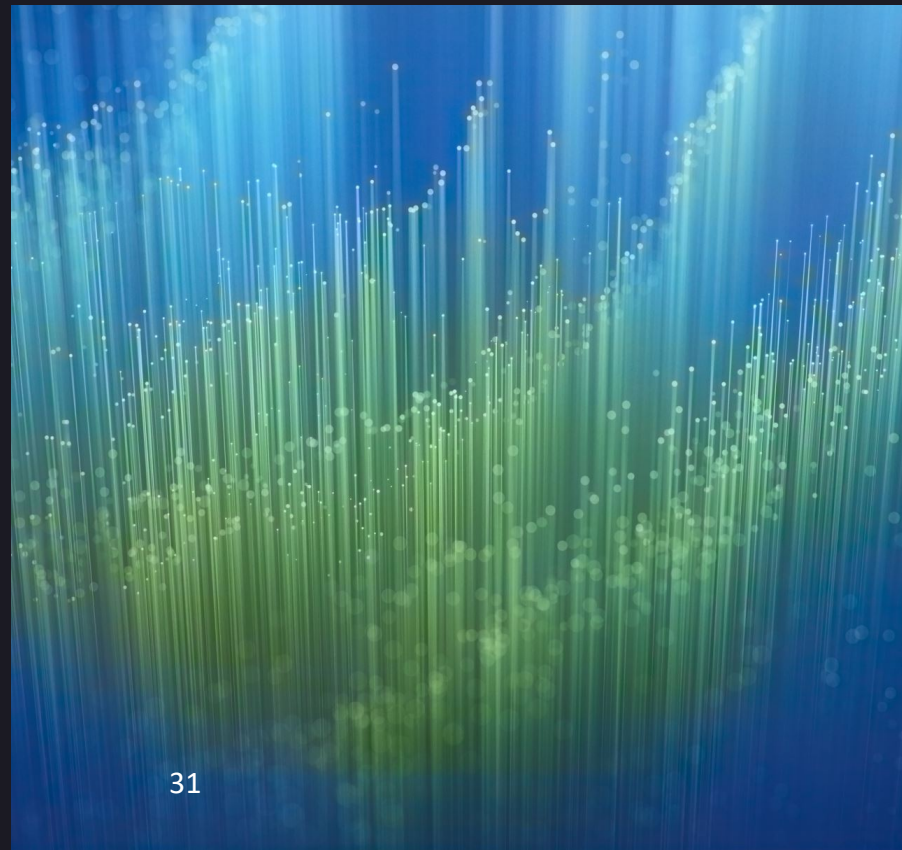
Calendar

P: Platforms

NI4OS website

- ❑ Training platform
- ❑ Training events
    - ❑ Training calendar

FAIR data

Training events system - https://events.ni4os.eu/

ANNOUNCE TRAINING EVENTS

HANDLE ONSITE LOGISTICS FOR WORKSHOPS
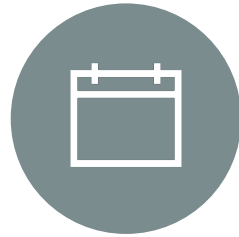
PROVIDE TIMETABLE FOR INTERESTED PARTICIPANTS
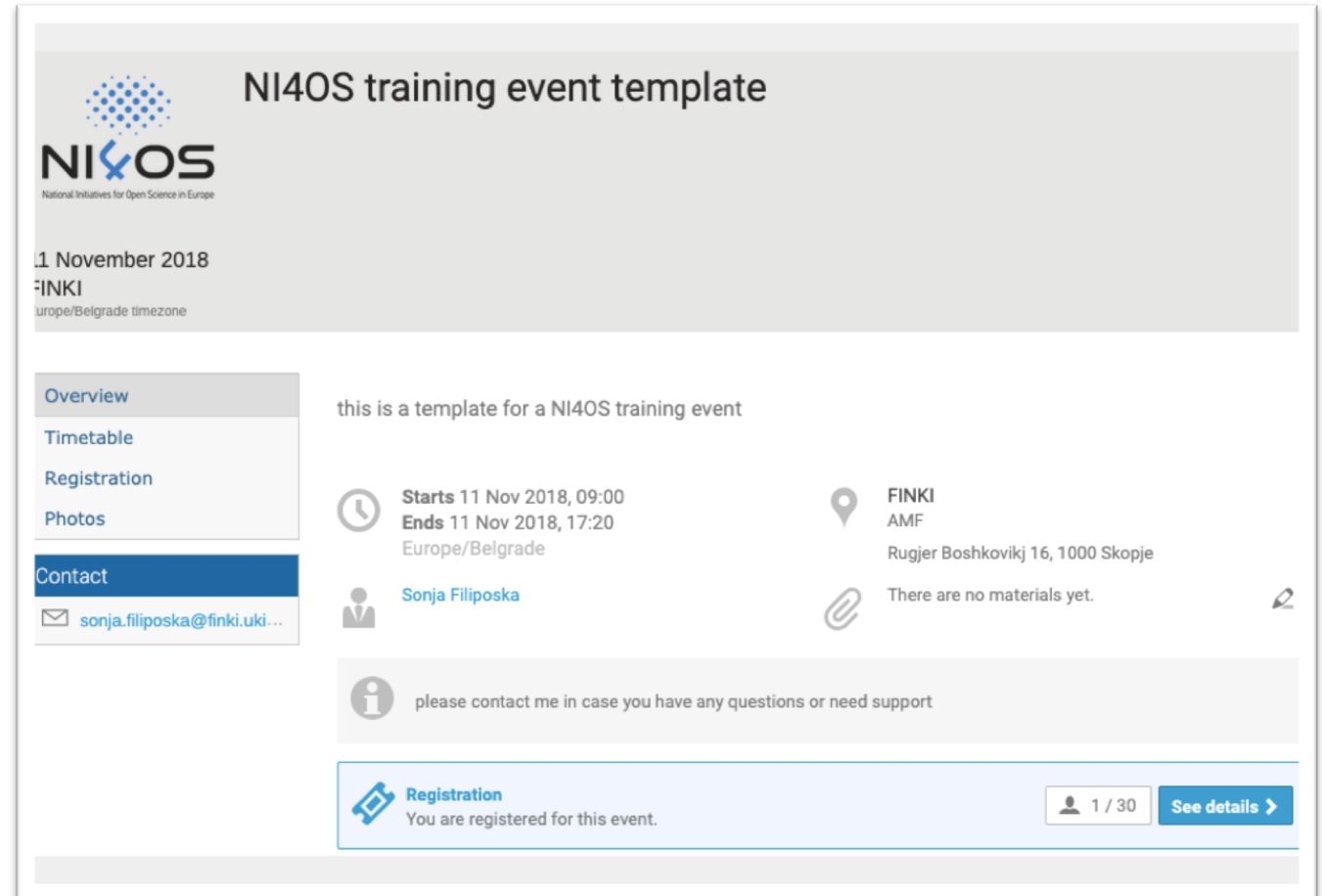
HANDLE REGISTRATION OF PARTICIPANTS

LINK PUBLICLY AVAILABLE MATERIALS
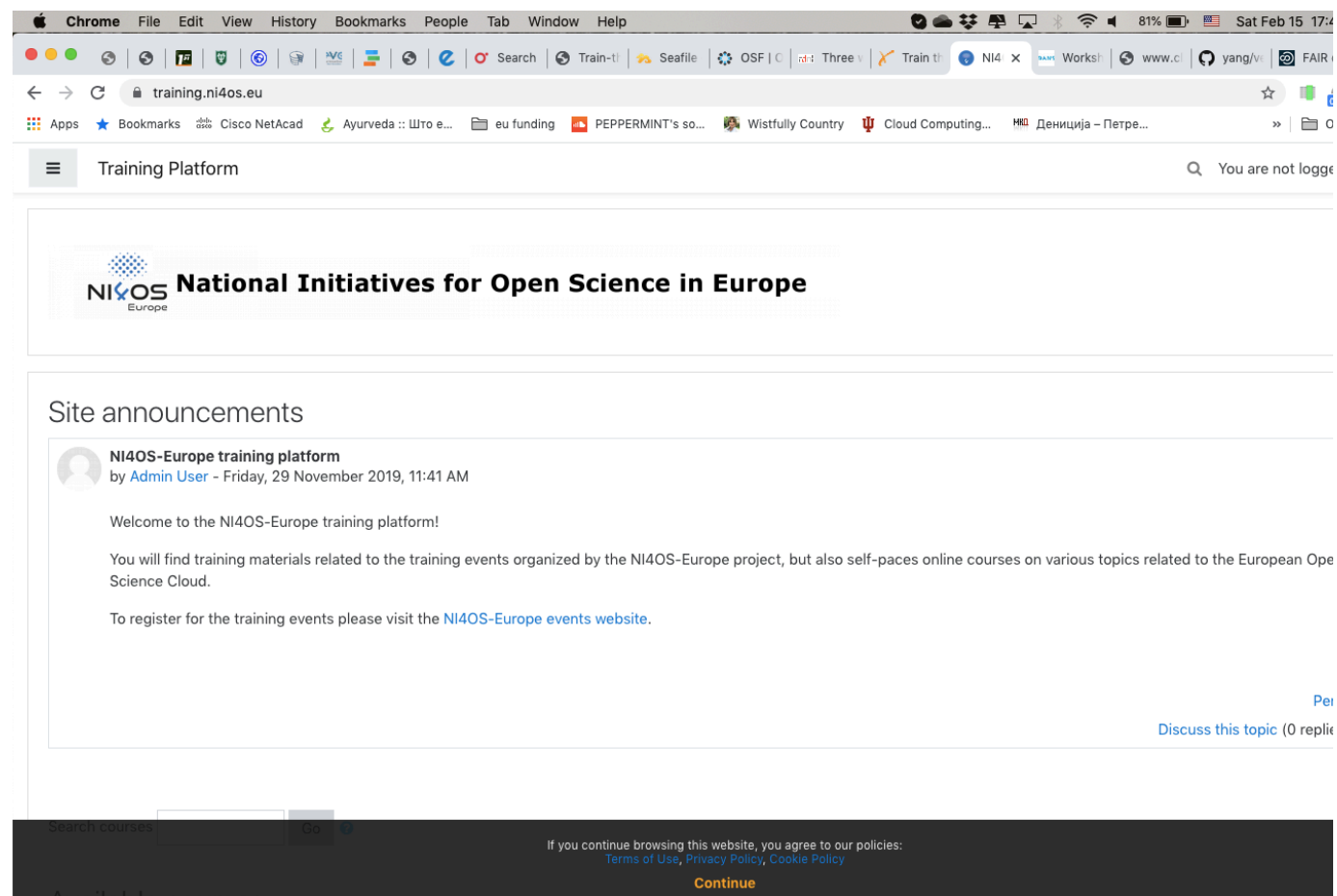
Training event pages

- ❏ Indico account necessary to manage the event pages
  - ❏ Request link
- ❏ Event template provided
  - ❏ Consistent project level approach
- ❏ Registration template provided
- ❏ Reminders functionality
- ❏ Note: event is initially hidden
- ❏ Do not forget to provide link to the corresponding training platform course

Training platform – Moodle - https://training.ni4os.eu/

AAI supported login

User types

Guest

Course Manager

Course Trainer

Course Trainee

Admin - WP6T2

Course categories

Enrolment methods

Name		Users	Up/Down
Self enrolment (Trainee)	Online self-paced	0	↓
Manual enrolments	NI4OS organized events	0	↑ ↓
Guest access	Imported and/or fully open content	0	↑

Course enrollment methods

Navigation

Global search
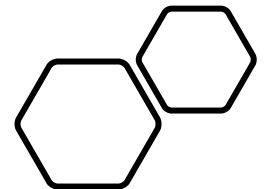
Search

Advanced search

Dashboard

🏠 Site home

📅 Calendar

📄 Private files

🎓 My courses

🎓 FAIR

🎓 TrainMngmt

Upcoming events

🌐 3P: Principles, procedures, platforms (UKIM)

Wednesday, 19 February, 10:00 AM » 11:30 AM

My courses

🎓 FAIR data and principles

🎓 Training events organization

All courses ...

Online users

2 online users (last 5 minutes)

👤 Sonja Filiposka

👤 Admin User

Findable **A**ccessible **I**nteroperable **R**eusable
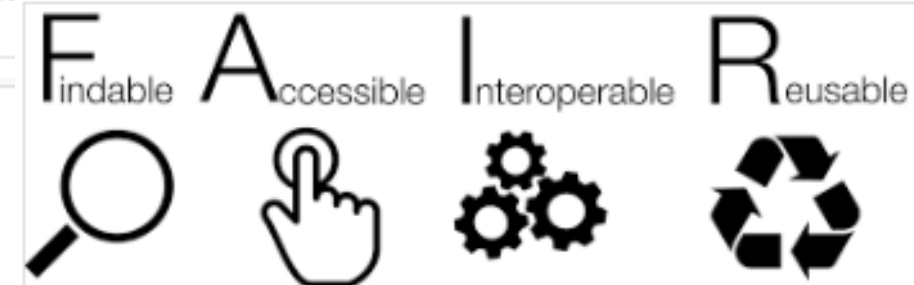
Train the Trainers

FAIR data and principles

14% complete

FAIR data and principles Train-the-Trainer webinar, 19.02.2020

Tags

FAIR

COURSES

🎓 FAIR data and principles
Category: Train the Trainers

🎓 Managing and Sharing Research Data
Category: End-users trainings

🎓 Assessing the FAIRness of Data
Category: End-users trainings

Tags

data data management plan data management policies data management tools ethics FAIR funders gold route green route hands-on intellectual property rights legal issues librarians licences MOOC online open access open access definition open access initiatives open access policies open access routes open collaboration open data open data definition open data journals open data use and reuse open peer review open principles open repositories open reproducible research open science open science evaluation open science guidelines open science policies open science workflows open source open workflow tools PhD students policy makers project managers publishers repository managers research administration research data management research workflow researchers self-paced students teaching webinar

Showing 50 most popular tags
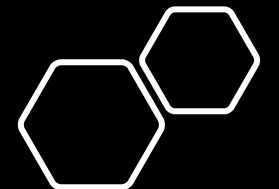
Course generation

- Request a course from training platform admin
- Template courses available
    - Self-paced course
    - Webinar course
        - Includes a webinar room + user guides
    - Hands-on workshop course
- All templates include
    - Announcement activity
    - Open forum activity
    - Feedback form
    - Placeholders for training material

Course administration

- Add/review course tags in edit settings
- Use turn editing on
  - To add/change content
  - To control the settings of activities
- Use more/users to control registered users to course

- ⚙ Edit settings
- ✏ Turn editing on
- ⚙ Course completion
- ▼ Filters
- ⚙ Gradebook setup
- 🗎 Backup
- ↥ Restore
- ↥ Import
- ← Reset
- ⚙ More...

Course activities

NI4OS webinar training room

Topic 1

Topic 2

Announcements

Topic 3

Open forum for discussion

Feedback

Additional materials

Add an activity or resource

ACTIVITIES

- Assignment
- BigBlueButtonBN
- Chat
- Choice
- Database
- External tool
- Feedback
- Forum
- Glossary
- Lesson
- Quiz
- SCORM package
- Survey
- Wiki
- Workshop

Select an activity or resource to view its help. Double-click on an activity or resource name to quickly add it.

Add   Cancel

Feedback

Overview Edit questions Templates Analysis Show responses

Add question Choose...

Overall, how would you rate this presentation?❗
Edit ▾ ○Poor ○Fair ○Good ○Very Good ○Excellent

How would you rate the effectiveness of the presenter in delivering the presentation?❗
Edit ▾ ○Poor ○Fair ○Good ○Very Good ○Excellent

How would you rate the scope and depth of the presentation?❗
Edit ▾ ○Poor ○Fair ○Good ○Very Good ○Excellent

How would you rate the usefulness of the presentation to your work?❗
Edit ▾ ○Not useful ○Somewhat useful ○Very useful

How would you rate the usefulness of the presentation's accompanying materials?❗
Edit ▾ ○Did not use them ○Not useful ○Somewhat useful ○Very useful

Would you be interested in additional training on this topic?
Edit ▾ ○Yes ○No

How would you rate the technical quality of the webinar?
Edit ▾ ○had lots of problems connecting and participating
○it was freezing and hard to hear from time to time
○all was ok with the exception of a few glitches

Feedback🔍

Overview Edit questions Templates Analysis Show responses

We strive to provide high quality experience during our training events! Please provide your feedback so that we can improve accordingly. It is anonymous and it will take you only a few minutes.

Overview

Submitted answers: 0
Questions: 8
Allow answers from: Thursday, 20 February 2020, 11:15 AM
Allow answers to: Sunday, 1 March 2020, 12:00 AM
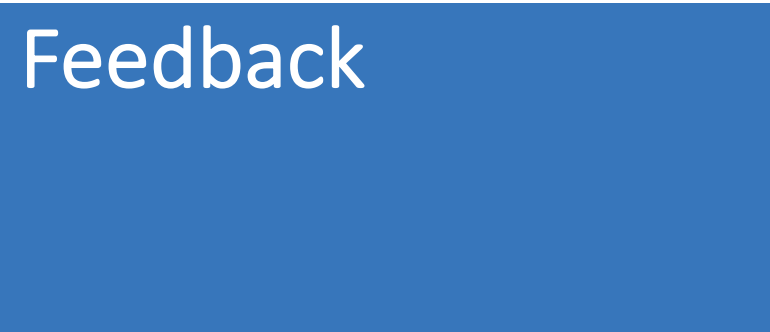
Completion message

Thank you for helpings us make our trainings better!

We hope you will choose to participate in other trainings provided on our training platform and continue building your knowledge base.

Until our next scheduled training, please feel free to browse the self-paced online courses section.
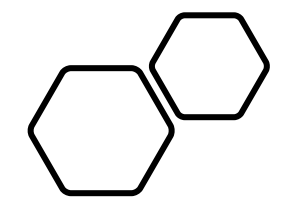
The feedback is not open ✕

Continue

Feedback

❑ Separate templates for webinars and hands-on workshops

Available content

❑ 13 Open Science courses imported from
  ❑ The FOSTER project
  ❑ Eliademy

❑ Full list on
  ❑ Site Home -> Available courses

Use Open Data in Teaching

The objective of the course is to promote use of open research data in teachin

The course offers good practices and examples of lesson plans and learning a together with practical information on how to use open data in teaching and in encourages the acquisition of research data management literacy among stud

This course was developed as part of the Use (Open Research) Data in Teachin project (UDIT) and is originally available on the FOSTER Open Science platfor

Open Science MOOC courses on Eliademy

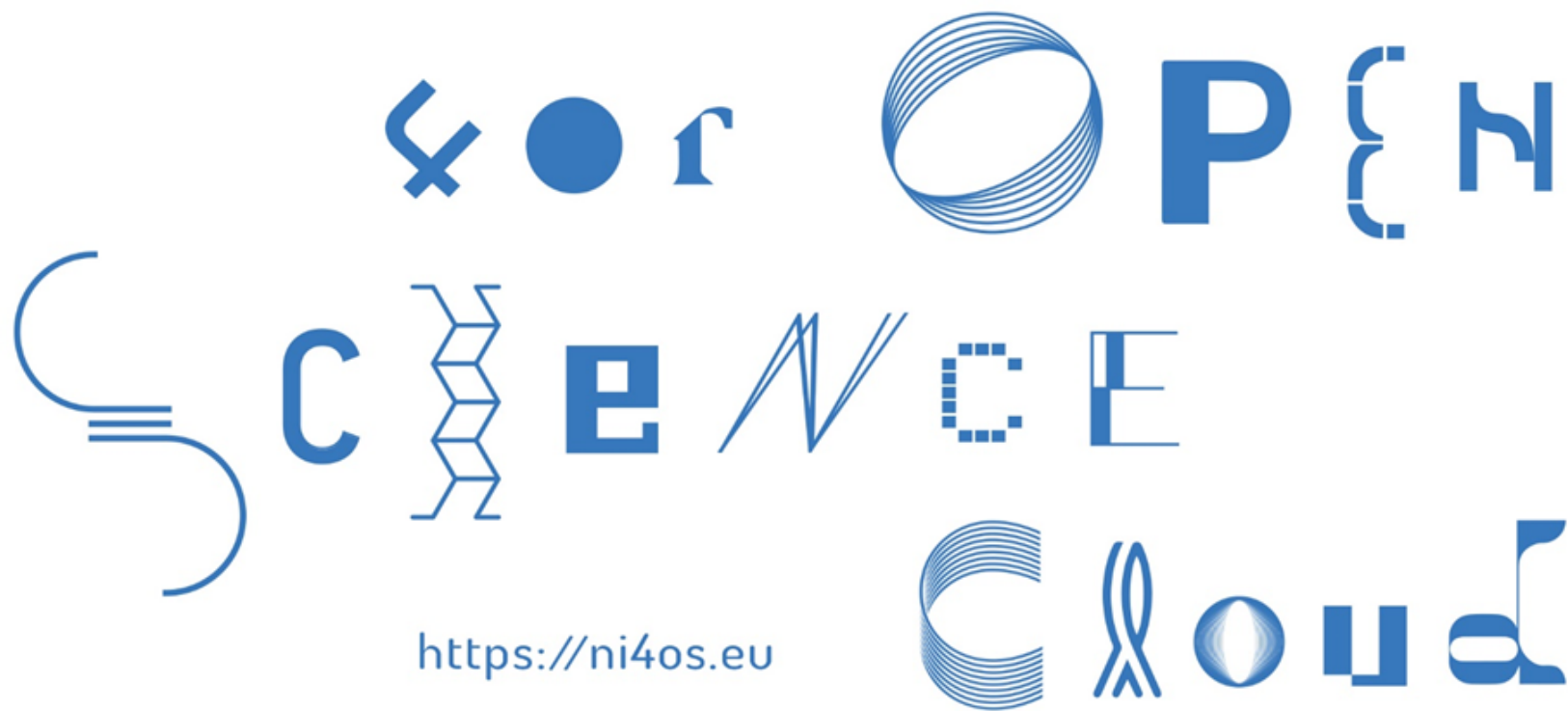Freely available courses on Open Science from Open Science MOOC.

What is Open Science?

Understand what open science is and why it is something you should care abo Expectations of research funders and how practising aspects of open science benefit career progression.

- why open science is an issue that you can't afford to ignore
- how to go about making your own research more open
- what funders expect to see about open access and data sharing when apply new grants

🐦 @NI4OS_eu   f @NI4OS