OPEN SCIENCE AND DATA

ACTION PROGRAMME FOR THE
FINNISH SCHOLARLY COMMUNITY

INTRODUCTION

Open Science is a science policy movement that strives to update the practices of openness, which is a basic part of science in the digital environment. Free online access to scholarly information and research products (such as publications and data), enhances the quality of science, promotes democratic decision-making, enhances public understanding and awareness, and serves the business community. The key principles of Open Science include accountability: as open as possible, as closed as necessary.

In 2018, Finland is an internationally recognised pioneer in Open Science. Thanks for this are due to the Ministry of Education and Culture's (OKM) Open Science and Research (ATT) project in 2014– 2017 which was based on co-operation between many actors across many fields of study. It is important for the scholarly community to continue down the path of Open Science in the future.

In summer 2017, UNIFI: the Finnish universities' council of rectors, set up a working group to consider solutions for research data management at different stages of the research lifecycle. As work progressed, on one hand, there was a need to broaden the perspective to cover both the universities and the Finnish scholarly community, and on the other hand, alongside practical research data solutions, to examine the challenges of publication and culture. It was decided to produce an Open Science and data operational programme for the entire scholarly community. A special grant from OKM enabled an extension of the job description.

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OBJECTIVES FOR THE OPERATIONAL PROGRAMME

Main objective: Finland is an Open Science trendsetter. In Finland, Open Science is part of the daily life of science at all levels.

Photo: Piktochart

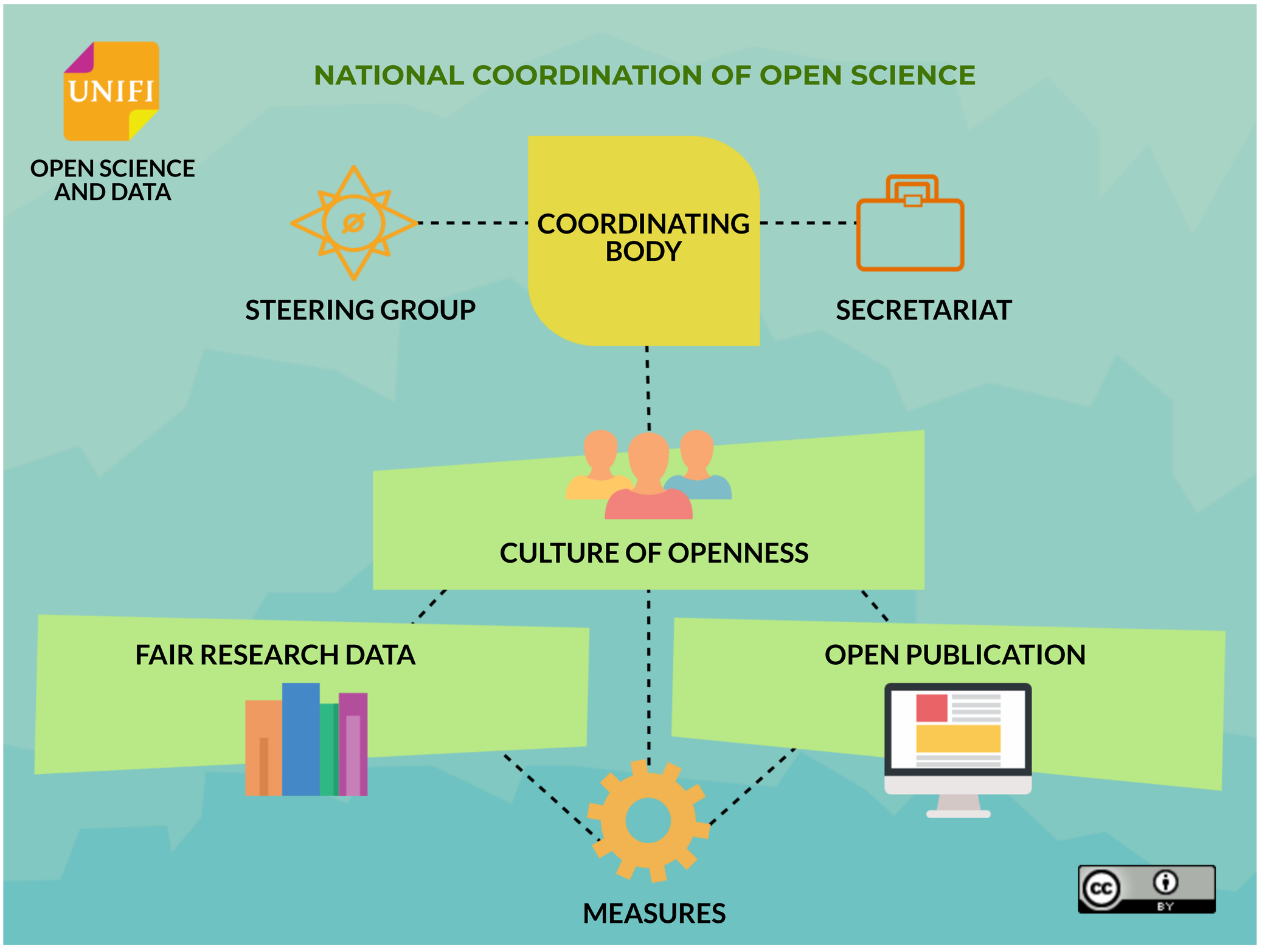
Objective 1: Researchers will get the support and services they need for their research easily, and from close at hand. Local support services benefit from nationally coordinated solutions. While collaborating, the Finnish scholarly community is more than the sum of its parts.

Objective 2: The operating methods and standards used in Finland will be compatible with those used internationally. The Finnish scholarly community will follow international Open Science developments and be a trendsetter.

NATIONAL COORDINATION

The national coordination of Open Science is divided into three themes: FAIR research data, open publication and a culture of openness. The purpose of the themes is to facilitate the structuring of Open Science as a phenomenon. They are not closed silos but are constant mutual interaction perspectives on the common challenges of the scholarly community.

The Federation of Finnish Learned Societies (TSV) will begin to coordinate the national debate on Open Science and assume responsibility for the establishment of an Open Science coordination body. The coordinating body will be responsible for identifying and dealing with the current issues of Open Science including all stakeholders in the scholarly community. The coordinating body does not implement reforms and development measures directly, but rather it contributes to and enables the sharing of roles and responsibilities within the scholarly community. The structure and resources of the body will be outlined in the implementation by the TSV after the action programme has been made public.



PROMOTION OF FAIR RESEARCH DATA

For the purposes of this operational programme, ‘research data’ means any digital material collected, detected or created for analysis and the production of new research data and results. The definition does not cover physical resources, such as the samples on which digital ‘research data’ is based.

‘Research data’ does not form a single entity. To identify and respond to data-related service needs, it is useful to classify research data into data types.

Cumulative data

‘Cumulative data’ is generated while the research is running, and it is therefore more meaningful to manage the data locally.

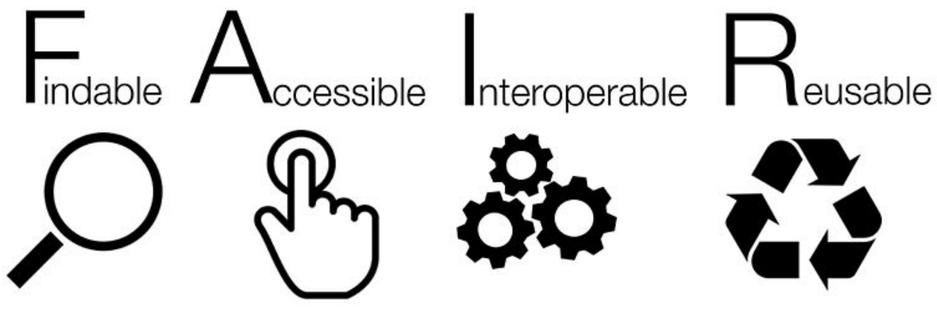
Permanent data

‘Permanent data’ relates to a particular research result and it is important to maintain the transparency and repeatability of the results. The storage of such data is close to archiving and is suitable for coordination at national level.

Public data

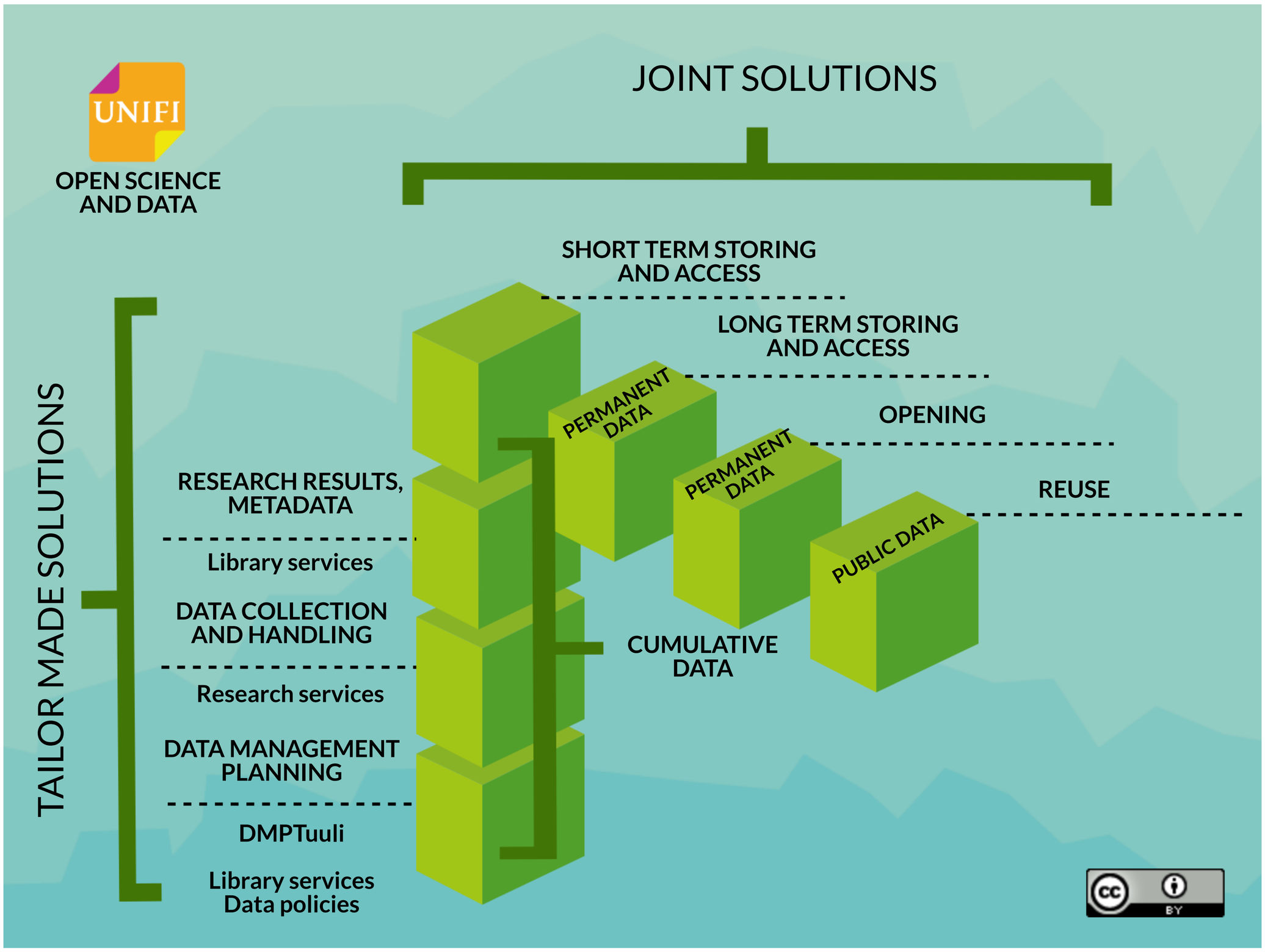
‘Public data’ may be either the raw material for the research or one of its products, in addition to permanent data. ‘Public data’ is related to the management of research data when it is created in research, but it can also come from outside the scholarly community, in which case coordination needs to be more focused on ethical management, for example.

Not all research data can be public. The FAIR principles have been developed to specify the concept of transparency in terms of research and the metadata in particular; in other words, the citing of data. FAIR is an acronym that stands for findable, accessible, interoperable, and reusable.

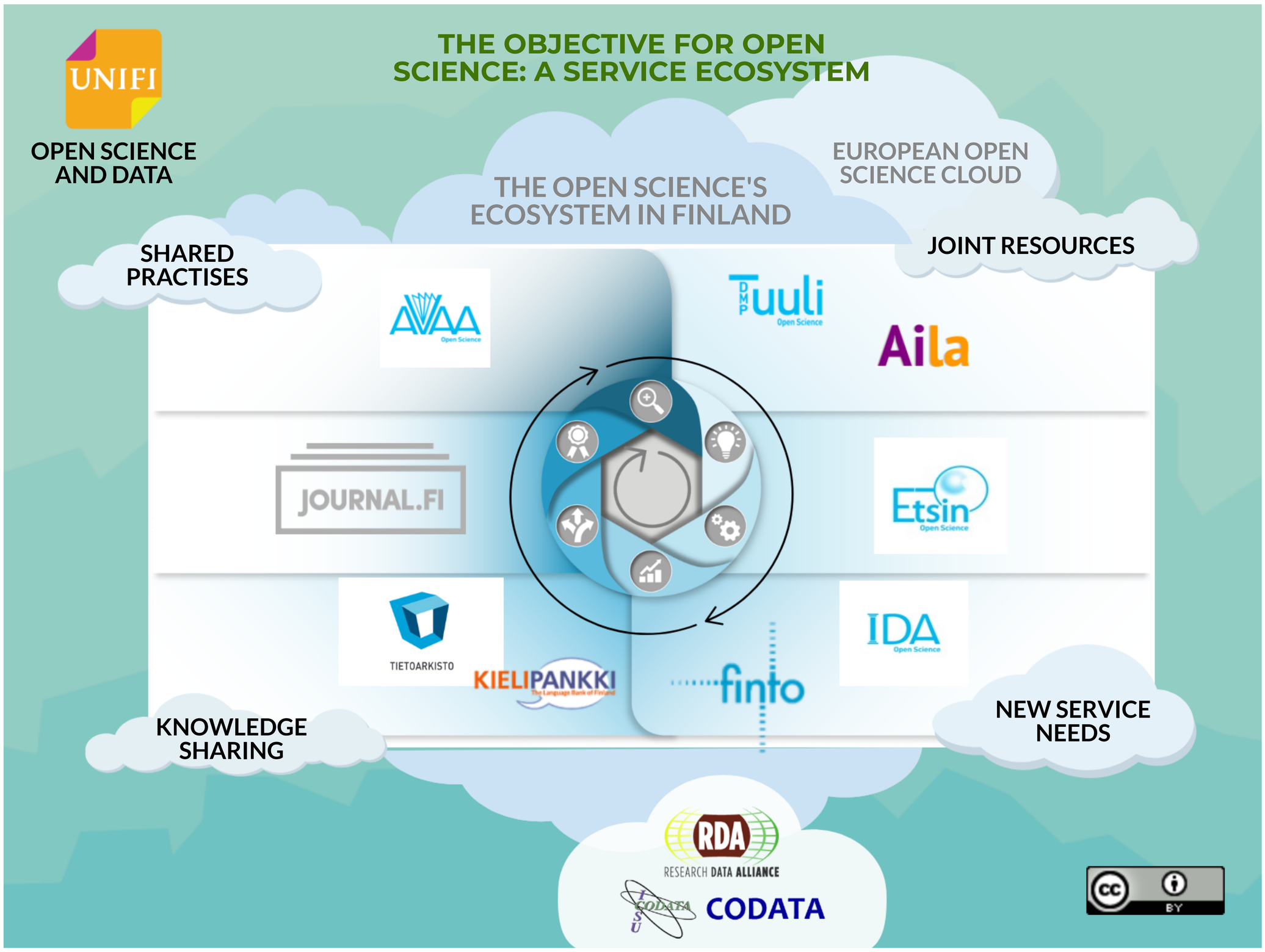


Source: https://commons.wikimedia.org/wiki/File:FAIR_data_principles.jpg
Author: Sangya Pundir

Services related to the preservation of research data require a lot of resources to be of high quality and it is therefore the most meaningful to build them at national level under the auspices of the CSC, the IT Centre for Science. In turn, the advice, policies and other orientations related to the data will benefit from the everyday knowledge of the research and are suitable for use by research organisations. The national and local levels should be in constant dialogue and interaction with each other.



THE OBJECTIVE FOR OPEN SCIENCE



MEASURES

1 An Open Science coordination body will be established

The permanent coordinating body will promote interoperability between national solutions and will make it more agile in dealing with emerging challenges.

2 Funding Open Science

The transformation of an Open Science culture is not just a change of attitudes. Open Science requires direct financial investments in services, infrastructure and staff.

3 Producing a national open publication policy

The national open publication policy takes a position on issues such as embargoes, parallel recording, hybrid publications and different types of cost models.

4 Commitment to DORA and recognition of transparency as a merit for the research career

The DORA declaration, published in 2012, calls for the release of platform-based indicators and instead focus on content in the evaluation of research and researchers. International work on the development of transparency indicators is still ongoing. The most promising models should be piloted at a national level when employing staff and allocating research funding.

5 Implementing a data reference road

The National Committee for Data published a Finnish data citation road map in spring 2018. Referring to the research data promotes the implementation of the FAIR principles and encourages researchers to manage the data responsibly.

6 Ensuring that the research services needed are produced

The dialogue and cooperation between the CSC and research organisations and researchers will ensure that nationally produced services meet the needs of research.

7 Providing research services on a one-stop-shop basis

The researcher does not need to know whether his or her service is produced by a university, CSC or a commercial supplier. The local support services act as a gateway between the researcher and the service provider.

8 Commitment to the European Open Science Cloud Declaration

Finnish research organisations will sign the EOSC declaration and undertake one of the measures outlined therein.

IMPLEMENTATION OF THE OPERATIONAL PROGRAMME

The implementation of the operational programme has been announced at avointiede.fi. The Federation of Finnish Learned Societies will assume the main responsibility for coordinating the debate on the operational programme from June 2018.

The achievement of the objectives of the operational programme requires mutual understanding and cooperation between the whole scholarly community. After the programme has been published, the demand for a multi-voice and participatory debate on Open Science and data will not be lost, but will be rather stronger.

Photo by rawpixel on Unsplash

OPEN SCIENTIFIC GUIDELINES

DORA 2012, San Francisco Declaration on Research Assesment, DORA Community. URL: https://sfdora.org/read/

European Commission 2017, European Open Science Cloud Declaration, European Commission. URL: https://ec.europa.eu/research/openscience/pdf/eosc_declaration.pdf#view=fit&pagemode=none

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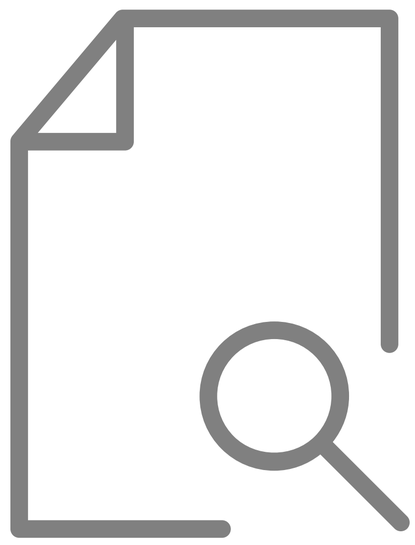
Ministry of Education and Culture 2014, Tutkimuksen avoimuudella yllättäviä löytöjä ja luovaa oivaltamista: Avoimen tieteen ja tutkimuksen tiekartta 2014–2017, The Ministry of Education and Culture's Publications 2014:20. URN: http://urn.fi/URN:ISBN:978-952-263-317-0

The Academy of Finland 2018, Suomen tutkimusinfrastruktuurien strategia ja tiekartta 2014–2020 – Väliarviointi 2018, The Academy of Finland. ISBN: 978-951-715-898-5

Wilkinson, M D et al. 2016, The FAIR Guiding Principles for scientific data management and stewardship, Scientific Data 3, Article number: 160018 (2016). DOI:10.1038/sdata.2016.18



Published 28/5/2018

Publisher: Universities Finland UNIFI

URN:NBN:fi-fe2018111648265