Practical Guide
for Open Badges in RDM/Open Science

This short guide of the OBERRED ecosystem aims to present the specificities and issues related to the use of open badges (OBs); the roles and competences necessary for the recognition of skills in the sharing and management of research data (RDM) and finally the principles of application and use of open badges for the recognition of these skills

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1. Introduction

1.1 What is this document about? Who worked on it?

This document is a practical guide with a set of hands-on recommendations for implementing open badges in research data management at your institution. It has been created, organised and planned by a variety of experts. Coordinated by the University of Nice Sophia Antipolis, Open Badge Ecosystem for the Recognition of skills in Research Data management and sharing, for short OBERRED, is an Erasmus + KA2 Project started in September 2019 (2019-1-FR01-KA203-063056). The project is at a crossroads of two strategic directions advocated by the European Union: the promotion of Open Science in its more advanced aspects, and the implementation of Open Education.

1.2 Who is this document for and how can you use this guide?

Our document has been prepared by a variety of experts for our future students. This Practical Guide includes the technical specificities and issues of open badges (OBs), roles and skills related to research data management (RDM) and principles for the application of OBs to RDM.

1.3 Content of the practical guide

- Presentation of the ecosystem (functioning and relationship between OB/RDM)
- Presentation and description of the tasks of the actors involved (case studies)
- Open badges: general presentation, issues, objectives, detailed technical description
- RDM : Overview, principles, roles and key competencies

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2. The OBERRED project

2.1 What is the purpose of the OBERRED project?

The OBERRED project provides the Open Science community with a set of Open Badges dedicated to the recognition of skills in the management and sharing of research data (RDM). These skills are based on a RDM framework which was also produced by the project and is freely available.

OBERRED Skills FRAMEWORK (Erasmus+)

2.2 What are the key outcomes in the OBERRED project?

In the context of Open Science, sharing data generated or used by research teams represents a new area that implies new competencies and it now becomes necessary to identify, evidentiate and accredit those new skills towards stakeholders of scientific research. The Open Badges are a method of accreditation adapted to the field of transversal skills of Open Science and within it, particularly the multiple skills required by the Research Data Management (RDM) that mobilise various technical knowledge and associate different professions of the scientific field, professions themselves renewed by the digitization of the objects of science. The OBERRED project, in its lifetime, has developed:

- An ecosystem of RDM Open Badges to download and reuse in your context;
- An RDM skills framework that can be easily integrated and adapted, allowing you to map and promote skills internally;
- A training program and online initiation courses to Open Badges;
- Online courses on Open Science and Research Data Management;
- A practical guide that will help you set up an RDM project with Open Badges (methodology, environment, techniques, tools etc.);
- Concrete case studies of the use of RDM OBs in a professional context.

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2.3 Which elements can I use in my own projects?

Open Badges can be collected in a format that makes them shareable on different platforms of each user's choice to represent larger scale achievements. They allow individuals to demonstrate the various skills and experience they have acquired and it helps to describe themselves in a more representative way to employers, peers, colleagues etc.

All elements produced by OBERRED are freely (CC-BY licence) reusable and adaptable to your project. The import procedures are presented in this document and detailed in the annexes.

3. Open Badges

3.1 What are Open Badges?

The following description was taken from the MOOC1 "Open Badges for Open Science", which is a course for persons working or interested in the field of Research Data Management (RDM). It is one of three MOOCs provided by the OBERRED project, co-funded by the Erasmus+ Programme of the European Union:

https://platform.europeanmoocs.eu/course_open_badges_for_open_science#structure

3.1.1 General information

Open Badges are digital badges which can be used to recognise achievements, skills and experiences, and are designed in a format that make them shareable on different platforms in dedicated spaces, such as backpacks. Open Badges are a powerful tool to certify achievements, knowledge and skills in a digital format . They help motivate badge earners to pursue lifelong learning. Unlike certificates or degrees, Open Badges typically represent specific competences of the earners. They allow one to showcase one's specific individual set of skills and pieces of knowledge. Open Badges are a very powerful tool to promote the principles of Open Science and Research Data Management and to certify relevant skills.

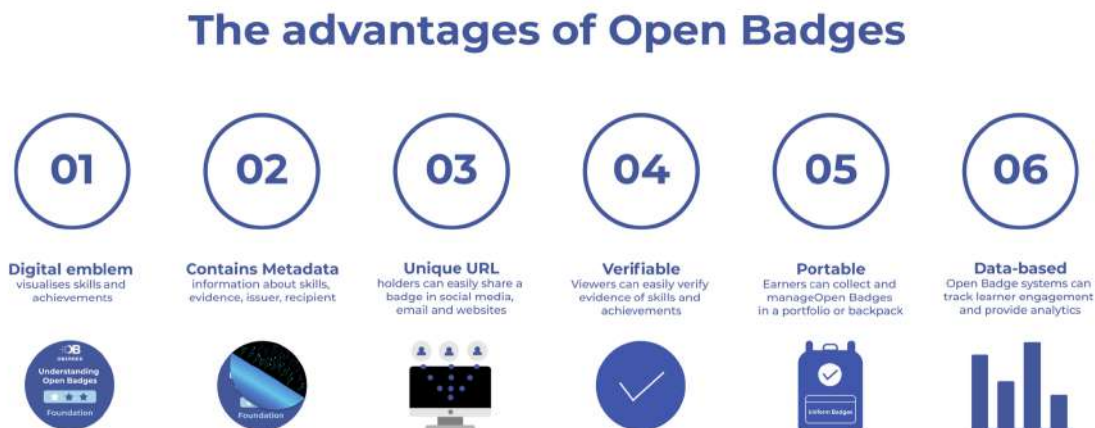Open Badge Ecosystem for the Recognition of skills in Research Data management and sharing
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3.1.2 Concept and benefits of Open Badges

The advantages of Open Badges

01	02	03	04	05	06
Digital emblem visualises skills and achievements	**Contains Metadata** information about skills, evidence, issuer, recipient	**Unique URL** holders can easily share a badge in social media, email and websites	**Verifiable** Viewers can easily verify evidence of skills and achievements	**Portable** Earners can collect and manageOpen Badges in a portfolio or backpack	**Data-based** Open Badge systems can track learner engagement and provide analytics

Figure 1: "The advantages of Open Badges": MOOC1 "Open Badges for Open Science"; Foundations of Open Badges; Lesson 1/3, Unit 2/3

https://platform.europeanmoocs.eu/course_open_badges_for_open_science

The principle of interoperability, portability and decentralised use of Open Badges across different platforms is one of the key factors that distinguishes Open Badges from other forms of digital badges and traditional types of credential and can represent a wide range of attributes of the earners.

Open Badges can be collected and displayed on different platforms of each user's choice to represent larger scale achievements. Earners can describe themselves in a more representative way to employers, peers, colleagues etc. On the other hand, the legitimacy of the issuer, people and organisations who award badges, such as schools, colleges, employers, organisations, communities etc., need to be trusted and verifiable.

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An Open Badge as a digital image with embedded data about the badge award, including information about the issuer and the represented skills, can be shared and viewed in online platforms, together with supporting material.

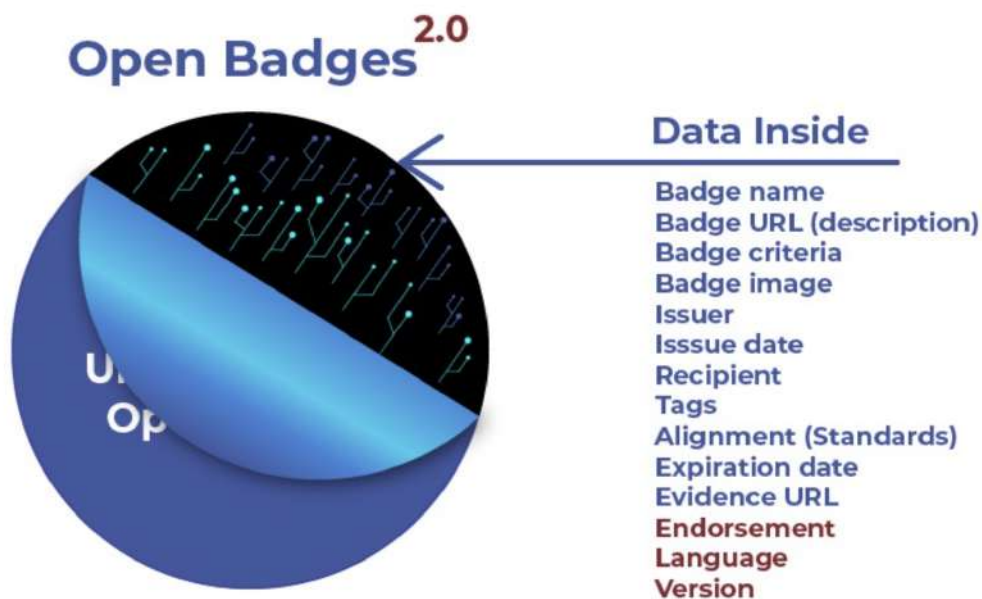### 3.1.3 Technical description of an OB: Schema and metadata

Figure 2: MOOC1 "Open Badges for Open Science"; Technologies for Open Badges; Lesson 2/3, Unit 1/3

https://platform.europeanmoocs.eu/unit_lo21_demonstrate_the_technolog

Open Badges include metadata consisting of digital elements that verify content about awarded course modules and/or certified competencies and skills. This includes the name of the badge, the badge description, the criteria to earn it, the issuer name, the required evidence, the date issued, standards, important associated tags, and other relevant information about the awarded Open Badge, which are presented under the badge image.

Most badge platforms (Badgr, Open Badges Factory, Credly...) offer interfaces that allow you to easily integrate the metadata of your badges without any particular technical knowledge; however, it is important to understand what these metadata are used for and how they work.

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It is therefore this metadata that you will include in your badges that will make them "valuable" and recognized :

▶ Open Badges: Becoming a Badge Issuer (In 5 Minutes)

3.1.4 Open Badge Infrastructure
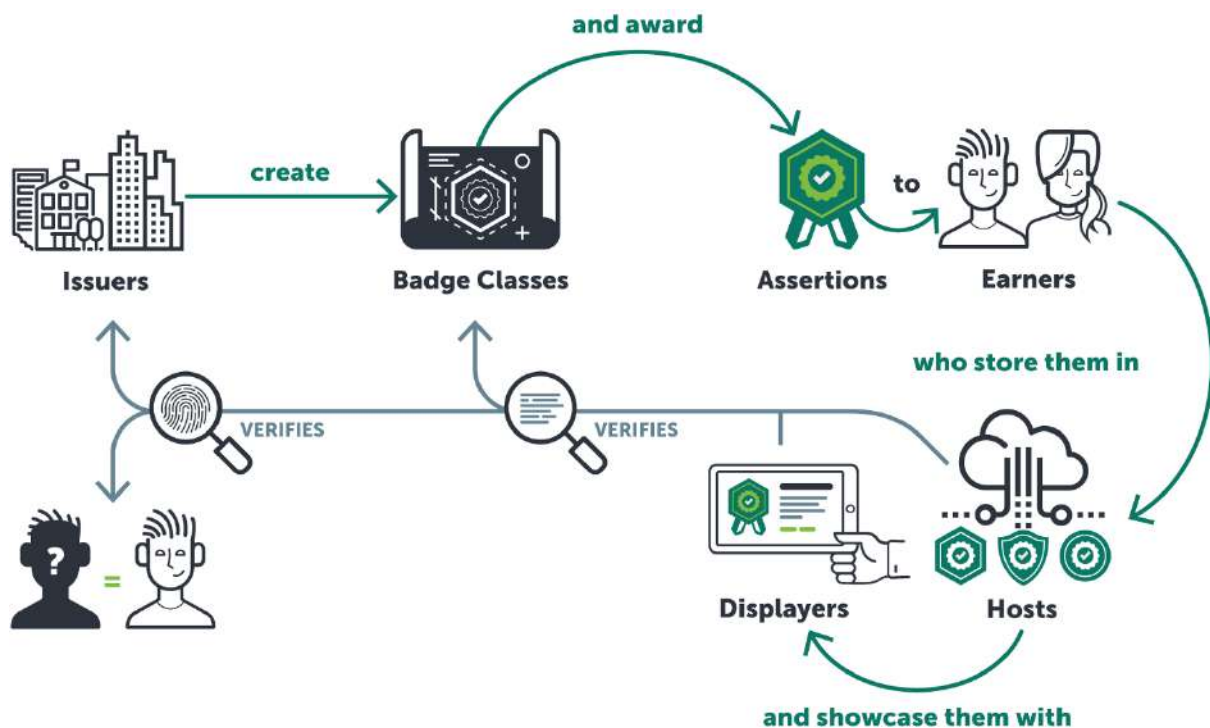
Source: Open Badges 2.0 Implementation Guide – IMS Final Release
https://www.imsglobal.org/sites/default/files/Badges/OBv2p0Final/impl/index.html

In order to produce, issue, endorse and manage badges as an issuer (whether you are an individual, a company or an institution), you will need to use a "dedicated" platform that allows you to do these different operations.

As anyone can issue badges, it is important to use similar technical specifications, and therefore a standard, to make badges interoperable and to ensure that they work regardless of the platform used.

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The Open Badges specification is now managed by the [IMS Global Learning Consortium](), which took over the role of the Badge Alliance in early 2017. To find out more about the technical specifications, visit the [IMS Global website]().

3.1.5 Choosing a badge platform

There are many different platforms issuing open badges. Each of them offers a combination of custom services, including: online tools for designing and issuing badges, user profiles, social media sharing and tools for integration with existing learning systems. All platforms issuing open badges should allow users to export badges to the backpack of their choice, so they can store and share their badges earned on different platforms. This can only be possible by ensuring adequate interoperability and portability.

Depending on your project, your needs, your knowledge, it is up to you to choose a platform that best meets your criteria: interoperability, ease of use, cost, location, viability, recognition, technical possibilities...

In order to use the full potential of open badges, many technical aspects need to be considered when designing and issuing them..

In MOOC 1 we have been presented with 14 most popular Open Badge platforms. These are:

- [Accredible]()
- [BadgeBuilder]()
- [Badgecraft]()
- [BadgeFactor]()
- [BadgeOS]()
- [Badgr]()
- [.Bestr]()
- [Credly]()
- [ForAllRubrics]()
- [MyMantl]()
- [Open Badge Factory]()
- [P2PU]()
- [Openbadges.me]()

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If you need a reminder about any of them, please go back to MOOC 1 LO2.2 for a recap.

3.1.6 Choosing a hosting service for badges

A backpack manager is a virtual space where you can store and manage the open badges you have been awarded. This space will also allow you to "share" badges that you wish to display publicly, for example to demonstrate that you have specific skills recognised by the award of a badge.

It is also worth noting that some platforms or professional social networks, such as Linkedin, allow you to display the badges contained in your backpack. :

▶ How to add Open Badges to your LinkedIn profile

The choice of a backpack manager (for yourself or to advise your recipients) also depends on your criteria but the technical implications are less important than in the choice of a badge platform.
It is also important to note that most backpack managers are generally free (unlike some badge issuing platforms)

Here are some backpack managers you can use:

https://openbadgepassport.com/
https://www.badgewallet.eu/en/
https://info.badgr.com/…
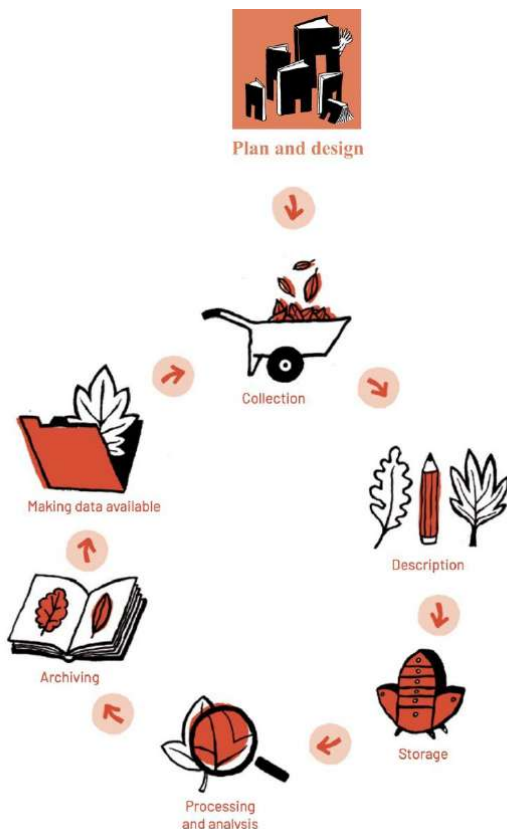
4. Research Data Management

4.1 RDM definition

There is no simple definition for Research Data Management (RDM) because it depends on many factors such as the specificity of the project, type of data and others. However, the definition below makes it quite clear what Research Data Management is:

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"Research data management (or RDM) is a term that describes the organisation, storage, preservation, and sharing of data collected and used in a research project. It involves the everyday management of research data during the lifetime of a research project (for example, using consistent file naming conventions). It also involves decisions about how data will be preserved and shared after the project is completed (for example, depositing the data in a repository for long-term archiving and access)."

Source: https://pitt.libguides.com/managedata

RDM covers all the steps involved in the day-to-day management of data during the life of a research project.

source :"The Passport For Open Science" ,

https://www.ouvrirlascience.fr/passport-for-open-science-a-practical-guide-for-phd-students/

See more in the MOOC Context and Stakes of Research Data Management (RDM): https://platform.europeanmoocs.eu/unit_open_science_and_rdm

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4.2 RDM stakeholders

The activities related to RDM are numerous and mobilise various skills. Of course, not all of these skills rest on the researcher's shoulders alone. Different stakeholders may be involved depending on the activity concerned (e.g. the legal department, documentalists, IT professionals, etc.).

There may be different types of stakeholders in your ecosystem who will be interested or are currently involved in Research Data Management activities or are responsible for decision making in the organisation and thus need to understand the importance of RDM.

Librarians

They can help the researcher in the choice of metadata standards, get involved in data curation, and advise on the choice of repositories.

Researchers

They are the principal actors of the project and the main data producers (their activities involve data description, datasets definition and others). They are often the DMP coordinators and data managers.

Data support staff

Data professionals are responsible for developing and implementing RDM– and open science procedures.

Research office

They are staff responsible for supporting the administrative side of project management, from the proposal stage to the reporting.

IT professionals

They are the best interlocutors for data storage and security, infrastructure aspects and associated costs.

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NB: For more details, case studies are available in the appendix

5. Open Badges & RDM

In the context of Open Science, the sharing of data generated or used by research teams represents a new field that requires new skills. The Oberred project aims at identifying and accrediting these new competences to scientific research actors. To achieve this objective, the use of Open Badges seems relevant as they allow individuals to demonstrate the different skills and experiences they have acquired.

Unlike certificates or diplomas, Open Badges are more flexible and allow specific skills to be recognised, such as:

- Organising and naming different resources;
- Creating backups to ensure data security;
- Applying a metadata schema relevant to the discipline;
- Storing data in different secured places;
- Depositing data and publications in a repository;
- And many others!

    For more information see: 6.2.2. Use Oberred framework and badges.

5.1 What are the arguments for using OBs in the RDM process?

#1 OBs facilitate the identification of skills
OBs can be useful for analysing RDM–related activities and highlighting acquired/expected competences. Some badge platforms allow the competences created to be visualised in the form of a pathway. The tool then becomes an aid for mapping skills, creating logical links between them and prioritising them.

#2 OBs are verifiable

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The information contained in an OB (who issued the badge? to whom? according to what criteria? for how long? etc.) is contained in the code in the form of metadata. These details are publicly visible and can therefore be verified.

A research organisation can thus make the competences of its staff transparent and enhance them. This transparency can also be beneficial for the professional career of staff, as it provides a verifiable source of information for potential recruiters.

#3 OBs are more flexible than diplomas

Traditionally, educational curricula are based on competency frameworks. These competences are thought out and fixed beforehand, then verified by an examination and attested by a diploma or certificate. This process is time-consuming to implement and less agile in the face of change.

In the context of open science, competences can change rapidly, and new competences can also emerge. It is much simpler to start by quickly attesting a few identified competences with the OBs. These competence bricks can be built up over time and, when they form a coherent unit, can be the equivalent of a degree!

#4 OBs are… open!

Open Badges can be displayed anywhere across the web. They are based on free and open source technology. Whatever the platform used by the issuer (Badgr, Open Badge Factory…), beneficiaries can display their badges on the platform of their choice but also on a website, on social networks, on an online CV.

In addition, OBs platforms also allow the integration (in the form of an API) of automatically assigning badges. For example, a researcher who has published a dataset in a repository could be awarded a badge attesting the fact that the data was correctly documented at the time of deposit.

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#5 <u>OBs promote your skills!</u>

As we saw in the previous point, Open Badges can be integrated almost everywhere on the web thanks to their digital and interoperable format. They are therefore a good way to promote your skills on social networks, your website or online CV.

This highlighting of skills not visible on diplomas or certifications can be useful for the career of PhD students for example (but not only).

6. Animate the ecosystem of OBs in RDM!

6.1 Role of the animator/facilitator in the ecosystem

You start the project of implementing OBs in your organisation – how to manage this process?

As a facilitator of OBs in RDM your role in the process of implementing OBs is to **accompany** and **support** this process, and not serve as a trainer in RDM or manager of the whole process. Your role is to help existing teams to understand their needs, produce educational materials (on the conceptual, and technical level), and allow for sustainability of created workflows.

The implementation of OBs requires the creation of a **collaborative network**, a small ecosystem of OBs in Open Science. To function properly, this ecosystem needs to be animated by a facilitator within the network of partners.

6.2 Analysing local situations, finding opportunities

6.2.1 Identifying opportunities to implement OBs for RDM in your organisation

In the context of Open Science, the sharing of data generated or used by research teams represents a new field that requires new skills. The Oberred project aims at **identifying and accrediting these new competences to scientific research actors**. To achieve this objective, the use of **Open Badges** (OBs) seems relevant as

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they allow individuals to demonstrate the different skills and experiences they have acquired.

Learn more in the link below.

https://view.genial.ly/60b5ed75d83ac40db405e85c

Knowledge of the basics of RDM - understanding what research data is, which processes constitute RDM, who is involved in the research data ecosystem – should allow you to identify RDM activities in your organisation. However, as a facilitator, this is only a first step for you. You also need to be able to assess which RDM processes could benefit from OBs, or when it is the right time to propose the application of this recognition tool.

This part of your role as a facilitator will always demand some flexibility and imagination. However, there are a couple of patterns you might look for that occur in each RDM-related organisation to identify the right situation for OBs introduction into the RDM processes.

Each context of a research project is different, so as a facilitator, you will be very likely confronted with situations where certain services are absent (no Data Support Staff for example). The key is therefore to identify some activities, which skills they mobilise, and who would be best placed to take care of them. This is what we propose to identify through this series of questions.

→ **RDM actors and stakeholders**

There may be different types of stakeholders who will be interested or are currently involved in Research Data Management activities or are responsible for decision making in the organisation and thus need to understand the importance of RDM.

https://view.genial.ly/6065788a7e2ace0cd7da3e41

6.2.2 Use OBERRED framework and badges

Within the OBERRED project we have created a framework that allows you to define OBs that could cover general and specific competences at each point of the RDM process.

FRAMEWORK OF RDM COMPETENCES & SKILLS		BADGES
GENERAL COMPETENCES *Stages of the RDM lifecycle competences grouping*	**COMPETENCES**	**Badge N°**
Plan and design	**Data models**	A1
	Data policies and open data	A2
	F.A.I.R. data	A3
	Data Management Plan (DMP)	A4
	Choose a repository	A5
	Metadata and PID standards	A6
Data collection and management	**Collect data**	B7
	Tools for data collection	B8
Data Description	**Describe data**	C9
Data formatting and storage	**Organise data**	D10
	Store data	D11
	Secure data	D12
Data quality assurance	**Clean and normalise data**	E13
	Assess data quality	E14
Data processing and analysis	**Integrate data**	F15
	Analyse data	F16
	Data Reproducibility	F17
	Visualise data	F18
Data Archiving	**Archive data**	G19
Publication and discoverability	**Publish data**	H20
	Disseminate data	H21
	Data discoverability	H22

The full Framework is available here: 🗓 *OBERRED Skills FRAMEWORK (Erasmus+)*

These OBs could be selected based on the current needs and priorities of your ecosystem. You may also wish to adapt a badge to your local context: e.g. badge H20 Publish data could cover repositories based in your country and/or linked to your institution.

6.3 Explaining and convincing stakeholders

6.3.1 What are the arguments for using OBs in the RDM process that could persuade the stakeholders in your ecosystem?

OBs represent an opportunity to recognise and value good practices. Unlike certificates or diplomas, OBs are more flexible and allow specific skills to be recognised. For more information about the advantages of using OBs to verify the RDM–related skills, see: 5. Open Badges & RDM.

RDM encompasses a whole process that mobilises different professional bodies (documentalists, researchers, computer scientists, lawyers, etc.). Obviously, not all laboratories have the same human and technical resources. However, regardless of the resources available within the scientific teams, it is possible to highlight the skills needed to implement this RDM process, and to enhance the skills already in place. And this is where OBs can be useful!

6.4. Supporting Open Badges projects

6.4.1 Mastering the basics of project management

How to manage the process of implementing OBs in your organisation?

As a facilitator of OBs in RDM, your role is to accompany and support the process of implementing OBs, and not serve as a trainer in RDM or manager of the whole process. Your role is to help existing teams to understand their needs, produce educational materials (on the conceptual, and technical level), and allow the sustainability of created workflows.

To do so you need to help:

1. Assign and describe roles and responsibilities in the process of introducing OBs into the RDM processes,
2. Create proper workflows and scheduling,
3. Choose project management tools if needed.

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Additionally, it is important to receive feedback for your work as a facilitator to learn, and improve in the future.

To learn more about the basics of project management, see this video:

https://youtu.be/AOmS_UrnBD0

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https://platform.europeanmoocs.eu/unit_open_science_and_rdm

https://sites.google.com/site/openbadgesinhighereducation/beuth-university

https://view.genial.ly/6065788a7e2ace0cd7da3e41

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Appendixes

➔ **Appendix 1 – case studies**

➔ **Appendix 2 – framework**

➔ **Appendix 3 – Using and adapting Oberred badges to your project**

➔ **Appendix 4 : Example of a badge creation, sending and receiving procedure**

Appendix 1 - case studies

What do we mean by case studies?

Case studies presented in the OBERRED project are a way of illustrating how Open Badges can be used in the field of RDM and Open Science. Each case study brings to life a real-life scenario from diverse work environments and learning contexts. The case studies are descriptions of various use cases from the field of Open Science/RDM practice, which are meant to present complex content in an understandable way and provide impulses for use in practice.

These case studies are available at this address:

https://oberred.eu/visual-composer-740/

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Appendix 2 – framework

INTRODUCTION

In the context of Open Science, the sharing of data generated or used by research teams represents a new field that implies new competences and it is now necessary to identify, highlight and accredit these new competences to the actors of scientific research, public or private.

The skills framework proposed in the OBERRED project is therefore intended to provide interested parties with a framework for describing, organising and promoting the skills needed to carry out projects involving the sharing of research data. The proposed framework takes into account a certain number of case studies conducted in the field; it identifies in particular a few "key" professions, representative of current issues, for which it proposes to describe the expected competences as well as ways of acquiring and assessing them.

The prerequisite of this framework was to describe the competences sufficiently to allow their integration in the form of metadata to easily generate (and deliver) Open Badges of competences while preserving the possibility of making the framework evolve (and allowing its use in the greatest possible number of cases) according to specific needs (related to the localization, to different legal constraints according to the countries, to own needs...) and to the constant evolution of the data and technologies

The OBERRED framework is therefore usable as such, and offers a complete set of skills that can be valued and recognised through a set of open badges provided; but it is also fully modifiable and adaptable to the context and research environments in which it will be used.

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USE OF THE FRAMEWORK

The OBERRED framework proposes to recognise competences in sharing science data according to 8 "general competences" based on and adapted from the data life cycle model as proposed by several actors and more particularly on the one proposed by the Passport for Open Science.

source :"The Passport For Open Science" ,
https://www.ouvrirlascience.fr/passport-for-open-science-a-practical-guide-for-phd-students/

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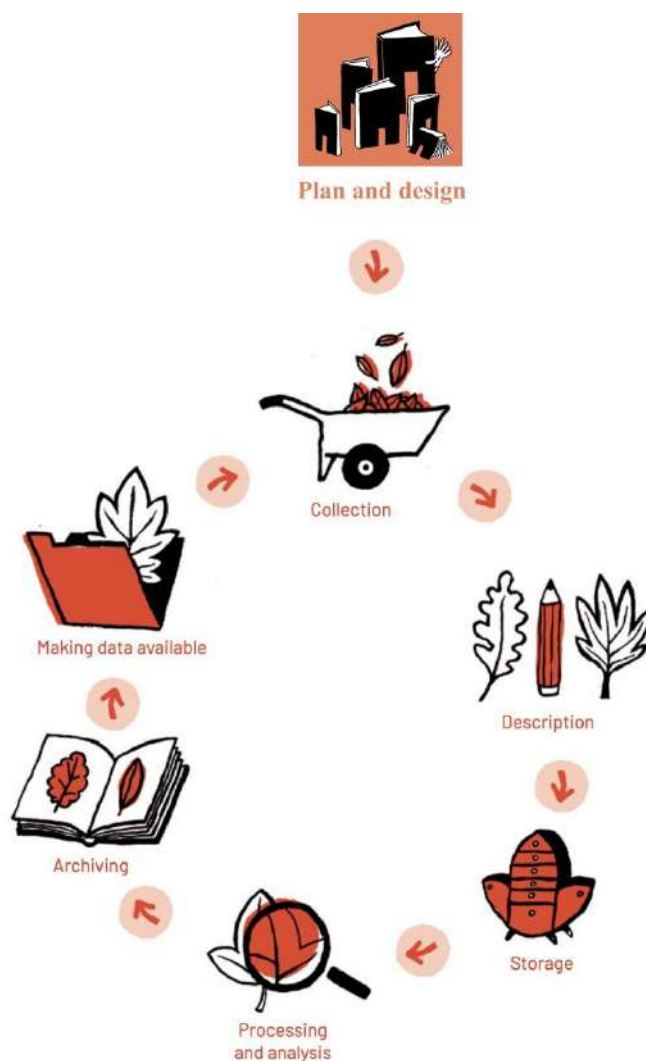
We have therefore defined 8 general competences:

- Plan & design

- Data collection and management

- Data description

- Data formatting and Storage

- Data Quality assurance

- Data processing and analysis

- Data archiving

- Publication and Discoverability

These eight skills were then broken down into a total of 22 sub–skills, each of which constitutes the "L" level, i.e. the level of skills for which a badge can be issued.

ADAPTING THE FRAMEWORK

The majority of the skills and badges offered in OBERRED are usable as such, however local adaptations are possible (and necessary) in some cases.

Depending on the national context (particularly legislative), local positions whose "Open Science" approach may vary, or even simply specific local needs (for example, the recognition of a specific skill not included in OBERRED), the competences (and the metadata constituting the badges) may be modified and adapted.

For example, the skill *Opening data and data policies* (which is part of the general skill Plan & Design) allows the issuing of the badge *Law / Policies of data*.

This skill involves mastering the following general aspects in particular:

- I am familiar with national and international research data policies.
- I know the legal principles that govern the opening of research data (in my country, internationally).

Each entity wishing to use this framework, and the related badges, must then define precisely the competences to be assessed: what is the national legislation on the opening of data, what is the European legislation on personal data, etc. For this purpose, it will be necessary to define the assessment method (MOOC, Quizz, questionnaire, etc.) which, if successful, will lead to the issue of a competence badge : *Law / Policies of data.*

It is these evaluated skills that constitute the metadata of the badge issued and describe precisely the related knowledge.

For France, for example, this metadata could be :
- I know what the CADA (Commission for access to administrative documents) is and what its missions are.
- I know the rules of anonymisation of personal data in survey data (as defined by the GPDR).
- Example of the case study "Open Mandate" and the skill "Cultural data".

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Appendix 3 – Using and adapting Oberred badges to your project

All 22 badges created within the OBERRED project are available on the [Badgr](#) platform. These badges can be freely downloaded, modified and reused in the context of your project.
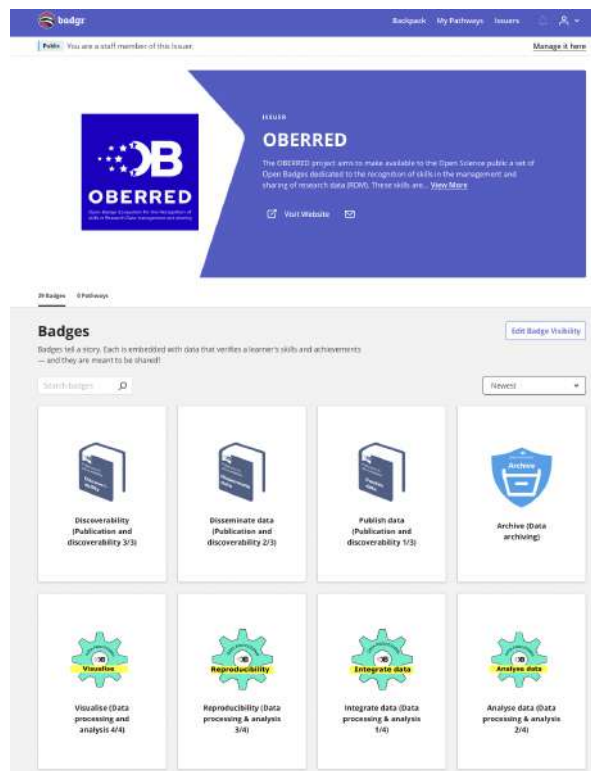
Contents of an OBERRED Open Badge

Organise data (Data formatting & storage 1/3)

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Each badge is made up of the same content and the metadata is systematically organised as follows:
- An image
- A badge name
- The competence group to which it belongs (see column A of the OBERRED reference system based on the life cycle of the data)
- A brief description
- A serial number in the competence group
- Attribution criteria:
    - The general competence(s) targeted
    - The detailed competences targeted
    - The proposed award criteria
- A link to the OBERRED competency framework on which the badge is based

Optionally, some badges may also include a link to the ESCO reference framework.

Finally, it is important to note that OBERRED badges DO NOT include the following additional information (which you may or may not add to your own badges once they have been imported into your platform):
- Validity period of the badge
- Alignment to other repositories
- Key words

All this information can be found in the detailed description of each badge on the Badgr platform.

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Data policies (Plan & Design 2/6)

Created on **20 janv. 2022**

Offered by **OBERRED**

Data policies and open data. This badge certifies that I am familiar with national and international research data policies. This skill is acquired as part of the overall competence "Plan & Design" which in total consists of 6 badges. This badge is number 2/6

Badge Details

EARNING CRITERIA
Recipients must complete the earning criteria to earn this badge

GENERAL COMPETENCES TARGETED : This badge certifies that I master the following general skills:

- I am familiar with national and international research data policies

DETAILED TARGET COMPETENCES :

- I know the legal principles that govern the opening of research data (in my country, internationally)
- I know the principles of the GDPR (Europe) and what it implies for the collection of data
- I am familiar with intellectual property and consortium agreements

AWARD CRITERIA :
In the sample exercises below, I answered at least 80% of the questions correctly :

- Check among different proposals, the 3 exceptions to the obligation to publish its data.
- Tick the rows of a spreadsheet with data that are not GDPR compliant from several proposals
- I know the principles of the law "pour une république numérique", in particular the article that concerns research data (french example).

This badge's metadata are an example that you are free to adapt to your project.
This badge is based on the OBERRED (Erasmus+ project) competence framework "Open Badge Ecosystem for the Recognition of skills in Research Data management and sharing" available at this address :

View External Criteria 🗗

We Issue **Open Badges** 🎖

View JSON

How to import and reuse an OBERRED badge ?

It is very easy to import OBERRED badges into your open badge platform and then modify them to suit your needs. When you are on the public page of OBERRED badges, simply display the details of a badge and click on "View JSON".

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All you have to do is copy the content "Copy to Clipboard" and import it into your badge platform.

If you use Badgr for example to import a badge you just have to create a free account and then in your "Issuers' " page click on the "Import Badge" button.

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Just paste the JSON content you copied earlier into the "Badge JSON" area and click on "Continue".

This imported badge then appears in the list of your badges on your account and all you have to do is adapt or modify it according to your needs and then issue it to your partners, teams, students, colleagues, etc.

NOTE: Importing a badge is different from issuing a badge. When you "copy" an OBERRED badge, OBERRED does not issue it to you (we do not recognize any of the skills described in the badge); it will be up to you to issue the badge to people who meet the criteria you have defined for its award.

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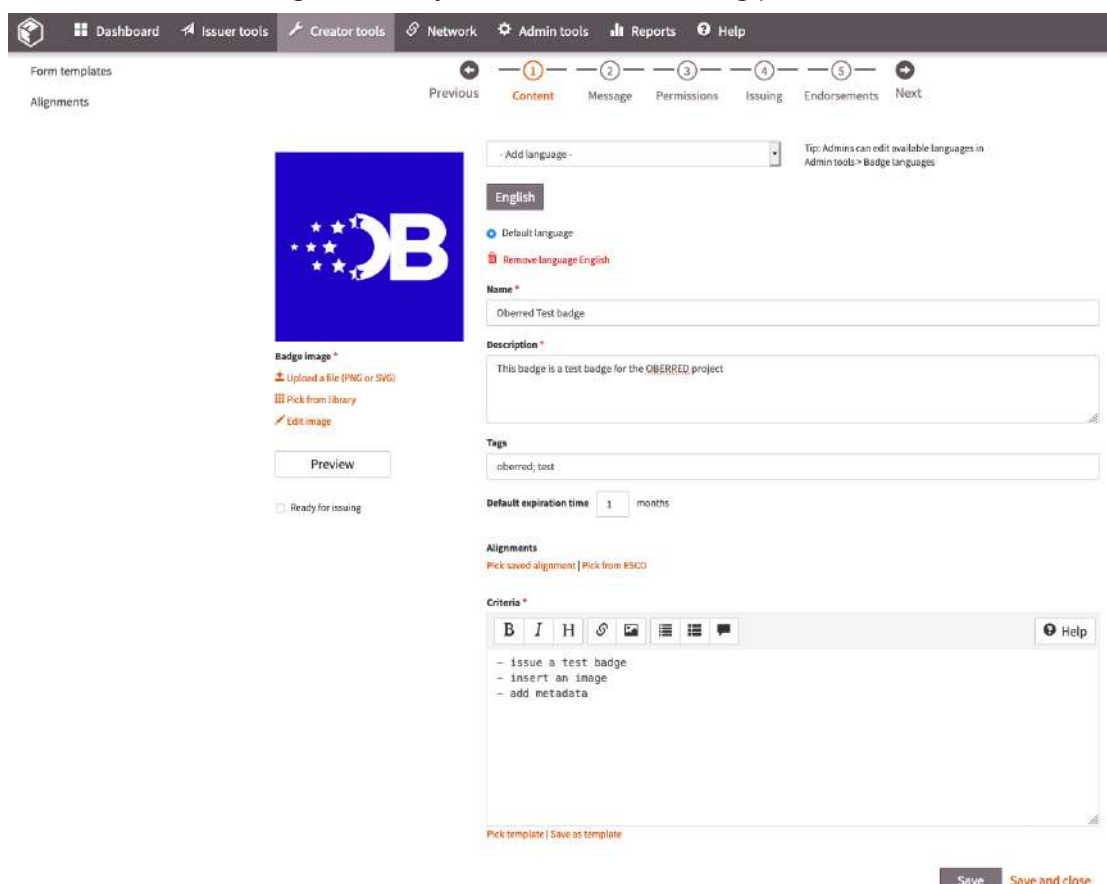
Appendix 4 : Example of a badge creation, sending and receiving procedure

In this example you will follow the different phases of creating, issuing, receiving and integrating a badge into a backpack. In order to understand the notions of openness and interoperability of badges, the badge will be created and sent from one platform – Open Badge Factory (OBF) – and received and integrated into the backpack of another platform – Badgr.

This example is designed with the Open Badges Factory platform but the main steps are the same no matter which tool you use to design and deliver your badges.

CREATION

- I create a badge from my creation and sending platform

Note: in this example, the criteria are reduced to a minimum and alignments with other competence frameworks (ESCO type) are not filled in. In reality, your badges will be much more detailed.

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– I prepare an invitation email for the recipients of the badge

Note: this email is important as it will inform recipients that a badge has been issued and how to collect it.

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– I check my badge details and validity dates

Note: This step is important, because it determines the "life" of your badge (and therefore its expiry date – if relevant). You can also add criteria that are not part of your default badge created earlier.

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– I select the recipients of my badge

Note: it is possible to directly enter the list of recipients (emails) or to import a contact file.

– I issue my badge

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RECEPTION

My beneficiaries receive an email informing them that they have received a badge.

In this example (the sender is *Urfist Mediterranée*), simply click on "Get your badge" in the text of the email to receive the badge (redirection to the issuing platform)
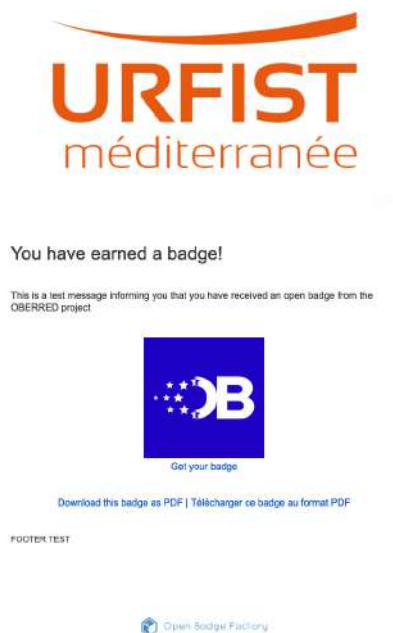
Note: I can also download a pdf version of the badge (not digital) which will be identified by a QR Code.

The beneficiary sees the details of the badge and has several options:

- Refuse badge
- Download badge (to integrate it into an existing backpack)
- Download PDF version
- Click on "Accept Badge" and be redirected to the backpack proposed by the platform that issued the badge (if available)

CONGRATULATIONS, YOU HAVE GOT A BADGE!

This badge is issued to: **oberred1@gmail.com**

OBERRED TEST BADGE

Issued by:	Urfist Méditerranée
Issued on:	11.5.2021
Expires on:	11.6.2021

This badge is a test badge for the OBERRED project

CRITERIA

Open criteria...

- issue a test badge
- insert an image
- add metadata

[Accept badge] [Decline badge]

⬇ Download this badge   🚫 I don't want this badge

🖼 Download badge image

📄 Download pdf

📄 Oberred Test badge (en)

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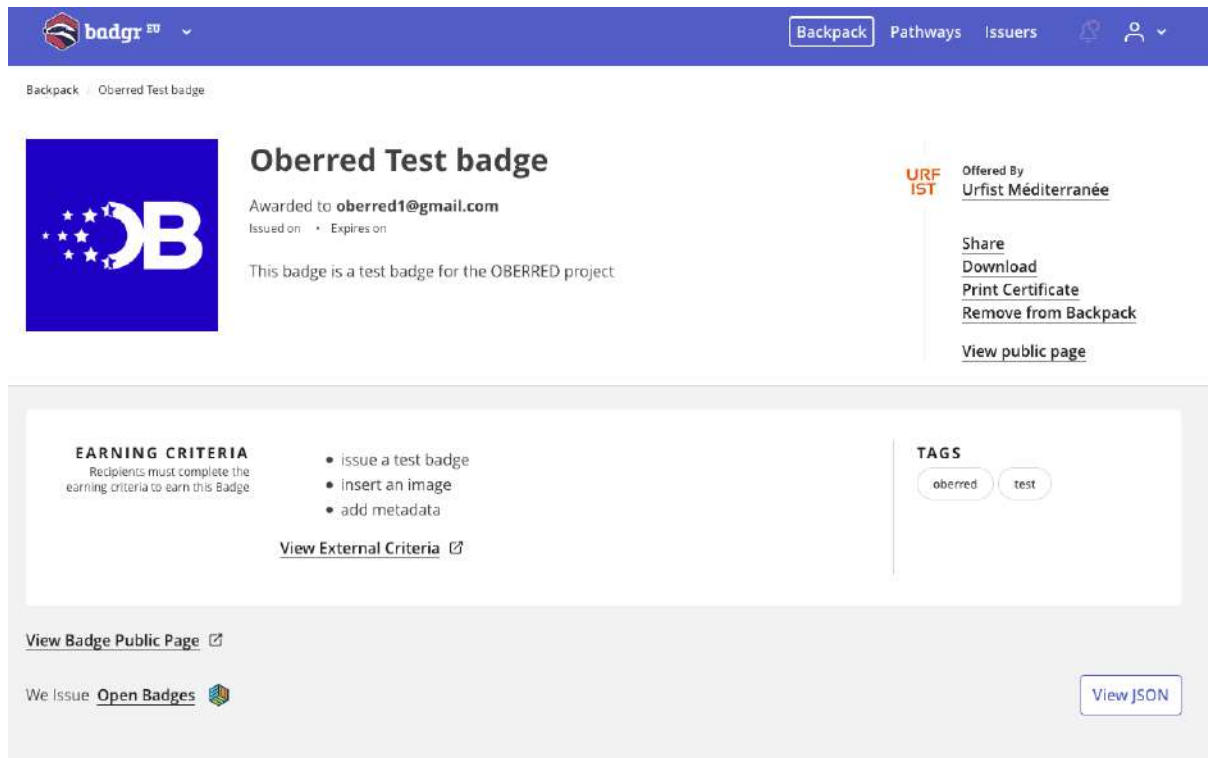
Note: When you download the badge ("download badge image"), you are downloading an image file including metadata.

The recipient integrates the badge into his/her backpack

- If the beneficiary does not have a backpack, s/he can use the one proposed by the issuer (if proposed – which is the case in our example with Open Badges Factory).
- If he already has a backpack (for example with Badgr) then s/he downloads the image and adds it to his backpack "Add Badge".
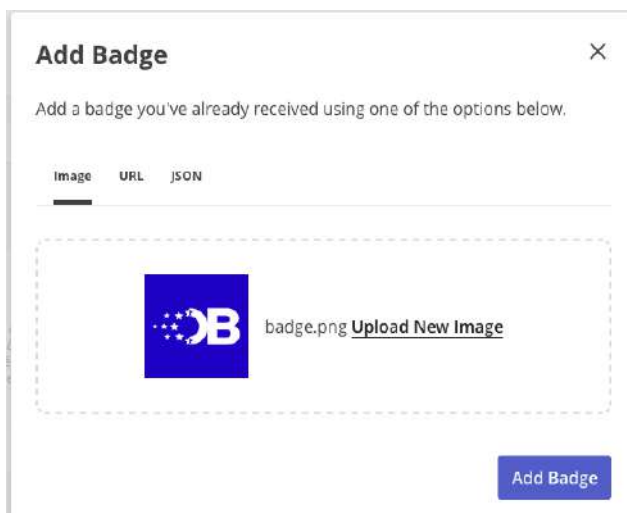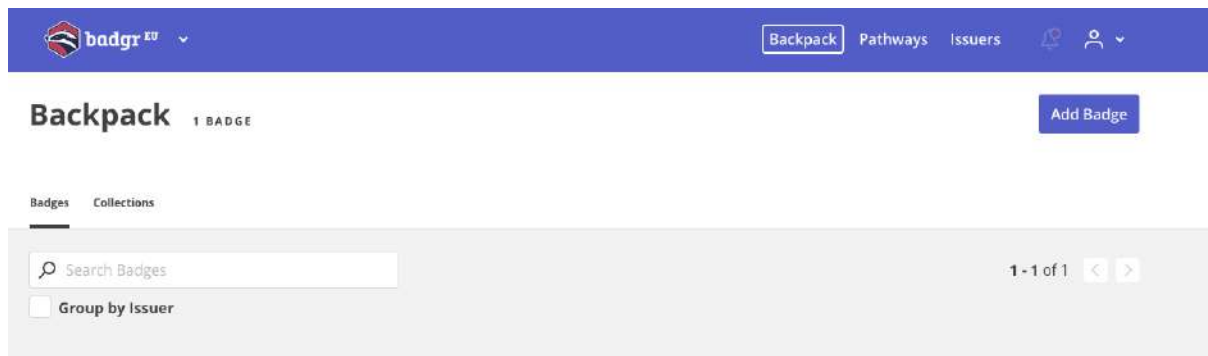
The badge appears directly in the backpack with its metadata

At this stage, many options are available for the management of the beneficiary's badges: s/he can delete them, share them, check their validity. The options available depend on the backpack chosen, hence the need to test several before choosing one definitively.

The sharing options allow for example to display it on a website:

or share it via a social network:

You also have the possibility to see directly the metadata integrated in the "View JSON" badge, in which case you will see this:

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Badge Award JSON ✕

This code defines your Badge Award and conforms to the Open Badges 2.0 Assertion specification.

```
{
  "type": "Assertion",
  "id": "https://openbadgefactory.com/v1/assertion/7d4a4a86638b
  "@context": "https://w3id.org/openbadges/v2",
  "recipient": {
    "type": "email",
    "salt": "xnuD0ASrRh",
    "hashed": true,
    "identity": "sha256$25c708ebbd050b72db242933c085053bca84e91
  },
  "badge": "https://openbadgefactory.com/v1/badge/_/QSXTLZaIY2a
  "issuedOn": "2021-05-11T00:00:00Z",
  "image": {
    "id": "https://media.eu.badgr.com/uploads/badges/10690b7029
  },
  "expires": "2021-06-11T00:00:00Z",
  "verification": {
    "type": "HostedBadge"
  }
```

Part of **Open Badges** ⧉   **View Specification** ⧉

Copy to Clipboard

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