SkillResilience4EU

SkillResilience4EU
Resilience through re-skilling and upskilling for European labour markets in transition

D8.3 – Initial Data Management Plan, including Ethics and IPR

DISCLAIMER:
THIS DELIVERABLE IS
PENDING EU APPROVAL.

Funded by
the European Union

The participation of the University of Applied Science and Arts Northwestern Switzerland (FHNW) is funded by the Swiss Secretariat for Education, Research and Innovation (SERI)

Project information

Project acronym:	SkillResilience4EU
Full title:	Resilience through re-skilling and upskilling for European labour markets in transition
Grant agreement:	101177821
Programme and call:	HORIZON-CL2-2024-TRANSFORMATIONS-01-03 - Minimise costs and maximise benefits of job creation and job destruction
Project coordinator:	HVL
Contact:	SkillResilience4EU@hvl.no
Project duration:	36 months
Project website:	To be created

Deliverable information

Deliverable number:	D8.3
Deliverable title:	Data Management Plan 1
Dissemination level:	SEN
Deliverable type:	DMP
License:	CC BY-NC-SA
Status:	Submitted 30/06/2025
Due date:	30/06/2025
Submission date:	30/06/2025
Work Package:	8
Lead Beneficiary:	HVL

Disclaimer

Copyright and license information

Revision History

Date	Version	Author	Comment
10/02/2025	V0.01	Marthe Vaagen Tjemsland, HVL	Creation of first draft
10/04/2025	V0.01	Marthe Vaagen Tjemsland, HVL	First draft ready for comments
08/05/2025	V0.02	Marthe Vaagen Tjemsland, HVL	Second draft ready for comments
20/06/2025	V0.02	Marthe Vaagen Tjemsland, HVL	Ready for peer review
23/06/2025	V0.02	Nora Geirsdotter Bækkelund, HVL Deyu Li, Utrecht University	Peer review
30/06/2025	V0.03	Risk and Quality Manager, HVL	Final check and approval for submission
30/06/2025	V 1.0	Coordinator, HVL	Final check and submission to the granting authority

Author List

Institution	First name and Name	Contact information
HVL	Marthe Vaagen Tjemsland	Marthe.vaagen.tjemsland@hvl.no
HVL	Maria Tsouri	Maria.tsouri@hvl.no
HVL	Janina Juranek	Janina.juranek@hvl.no

Abbreviations and acronyms

Abbreviations and acronyms used in this document	Explanation
CA	Consortium Agreement
DMG	Data Management Group
IPR	Intellectual property rights
FAIR	Findability, accessibility, interoperability, and reusability
KER	Key Exploitable Results
PC	Project Coordinator
QAPS	Quality Assurance Plan and Status
RP	Reporting Period

RQM	Risk and Quality Manager
EB	Executive Board
TL	Task Leader
WPL	Work Package Leader

Glossary

Term	Definition used or meaning in the Acronym project	Reference or source for the definition if applicable
FAIR DATA	Findable, Accessible, Interoperable and Reusable data.	https://www.hvl.no/en/library/research-and-publish/publishing/open-access/
Open Access	Open Access (OA) means free, online access to research results. Research that is openly accessible is published in OA journals or in institutional repositories.	https://www.hvl.no/en/library/research-and-publish/publishing/open-access/
Sikt	Sikt - Norwegian Agency for Shared Services in Education and Research is a public administrative body under the Ministry of Education and Research, Norway. Sikt offers a common infrastructure and joint services for the knowledge sector supporting digitalisation, data sharing and open research. All research projects at HVL that intend to gather personal information must be assessed by SIKT before the data collection commences	https://sikt.no/en/home
Teams	Teams is a collaboration platform provided by Microsoft 365. In this project the term “Teams” includes the Microsoft 365 services Teams, SharePoint and Onedrive. HVL uses Microsoft 365 as its standardized solution for communication, collaboration, and document management in daily work	

Executive Summary

The Data Management Plan (DMP) for the SkillResilience4EU project provides a detailed framework to ensure the safe handling, storage, and sharing of project data. It is designed to meet the contractual requirements of each partner's funding agency, follow the internal rules set by the Consortium Agreement, and comply with relevant data protection laws.

The Data Management Plan (DMP) will be a living document that is updated regularly until the project ends. It will also include plans for managing data after the project is finished to ensure that it remains accessible. HVL, the project coordinator, is primarily responsible for overseeing data management. The DMP explains how data will be collected and stored securely, detailing what specific data the project will gather. It sets clear guidelines for sharing data among consortium members and makes sure all actions comply with relevant data protection laws. Ethical issues concerning research data will also be addressed, with templates provided to help manage these aspects.

The deliverable D8.3 introduces the initial version, offering a preliminary description of the anticipated datasets. A key component of the DMP is the default use of the DataverseNO repository, which is fully compliant with FAIR principles, which emphasize making data Findable, Accessible, Interoperable, and Reusable.

The DMP has been prepared with the help of GPT UiO 1[1](language-based AI tool developed by University of Oslo and authorised for use by HVL) to improve language, structure and accessibility.

[1] https://www.uio.no/english/services/it/ai/gpt-uio/index.html

Table of Contents

}

List of tables

1 Introduction

Effective data management procedures are essential for the successful implementation of the SkillResilience4EU Project. This Data Management Plan (DMP) details the guidelines, processes, tools, and templates for data collection and documentation. HVL will be responsible for maintaining this document.

As Coordinator, HVL uses tools and templates that are largely based on those HVL has developed for other Horizon Europe projects it coordinates, including the SENSE, OCEAN, NOVO and FOODMISSION projects[2]. HVL uses a similar methodology for data management of such large collaborative projects, which has proven to be efficient and cost-effective to replicate, with necessary adaptations to the specificities of each project and consortium.

1.1 Purpose of the document

This document provides a framework for the entire consortium to manage data, either generated or reused within the project. The DMP will be a living document, regularly updated until the project is completed. Updates will be formally reported in periodic reports and in the final DPM D8.4.

The Data Management Plan (DMP) will be a living document that is regularly updated until the project concludes, and it will include plans for post-project data management to ensure continued accessibility, in full compliance with the FAIR (Findability, Accessibility, Interoperability, Reusability)[3] principles Some information in this initial DMP requires further clarification, which will be addressed in subsequent updates.

1.2 Relationship with other deliverables

The DMP is to be used across the project and in this regard is linked to all project deliverables, in particular with D1.2, D1.3, D2.1, D2.2, D2.3, D3.1, D5.1, D6.1.

1.3 Intended readership

This document is an internal document, to be used by all consortium partners as a framework to be consulted and complied with throughout the project.

1.4 Structure of the document

The document closely follows the structure of the recommended DMP template from the EC.
Annex 1 provides a structured overview of the datasets, including formats, sources, and metadata. Annex 2 contains the information letter and consent form template. Annex 3 outlines the data processing notification submitted to SIKT. Annex 5 offers a checklist to ensure proper data archiving and metadata standards in DataverseNO.

[2] SENSE. - grant agreement number: 101058507; **D1.3**– Initial Data Management plan including IPR **-** OCEAN – grant agreement number: 101076983; **D11.5 Data Management Plan - 31/03/2023.** NOVO grant agreement number: 101130979; D5.3 Data Management plan ; FOODMISSION D7.3 Data Management Plan- grant agreement number 101181774

[3] https://www.go-fair.org/fair-principles/

2 The SkillResilience4EU Project

The SkillResilience4EU project aims to develop a new framework to understand how the simultaneous green and digital transitions impact European labor markets. It will examine selected sectors like tourism, food, transport, agriculture, and energy to identify challenges faced by different regions and institutions. The project will create a management tool to assist policymakers in navigating these transitions and will evaluate educational programs for upskilling and reskilling. The focus will be on providing recommendations and resources for career guidance to support both individuals and employers.

As different sectors and regions experience varying effects from these transitions, there's a risk of unequal job creation and destruction, which could threaten social cohesion. The project emphasizes the need for flexible policies to address labour market mismatches and to develop targeted reskilling initiatives for vulnerable groups in collaboration with policymakers, educational institutions, and other stakeholders.

2.1 Project objectives

The project's objectives are to:

- Develop a framework to understand the twin transition's effects on job creation and destruction in European labour markets.
- Explore specific sectors and regions to identify challenges and offer recommendations for managing the transition, especially for marginalized groups.
- Evaluate upskilling and reskilling educational programs, providing resources for individuals and employers focusing on career development.
- Ensure the sustainability of the project's results through dissemination and advocacy to engage key stakeholders.

2.2 Involved Disciplines

The project involves a variety of disciplines included in the wider area of social sciences. These are the following:

- Economic Geography with a focus on innovation and valuation processes
- Innovation Management
- Economics
- Sustainability transitions
- Behavioural economics
- Policy research
- Institutional theory

In addition, for achieving its aim SkillResilience4EU includes the following disciplines as well:

- Visual design / graphic design
- Vocational training
- Education

2.3 Research Responsible institutions

- Western Norway University of Applied Science / Faculty of Technology, Environmental and Social Sciences / HVL Business School
- Utrecht University, the Netherlands
- BOKU University, Austria
- Berufsförderungsinstitut, Wien
- University of Warsaw, Poland
- University of Crete, Greece
- University of Applied Sciences and Arts Northwestern Switzerland
- London School of Economics, United Kingdom
- Simplon.co, France
- Municipality of Platanias, Greece

2.4 Utility

The data will be utilized by policymakers, researchers, and institutions to advance knowledge on the impacts of green and digital transitions on labour markets, addressing questions such as who will use the data and how it will be employed. Specifically, the data will provide tools for managing disruptions caused by the twin transitions while allowing for adaptability to future economic shocks, thus making the results transferable across various regions and sectors. Additionally, it will equip institutions to identify and mitigate the risks of exclusion, thereby enabling more proactive policies and targeted investments that can help solve systemic problems arising from these transitions.

2.5 Utility and Impact

The project aims to enhance social and economic resilience by improving our understanding of the impacts and interconnections of technological, demographic, and migratory changes. It seeks to develop a framework to analyse job-skill mismatches and identify vulnerable groups, while also evaluating the costs of inactivity compared to investing in skills to promote better job reallocations and reduce inequalities. Additionally, the initiative aims to increase the visibility of vulnerable groups, empowering them to better manage their job transitions. Through these efforts, the project endeavours to create a stronger foundation for resilience in society and the economy.

3 Legal and ethical considerations

The project will follow institutional policies, codes of conduct, and ethical guidelines. Researchers involved are responsible for following their organizations' ethical standards and national laws. We will share best practices and collaborate with all participants to maintain high research standards and ethical excellence. While there are no specific ethical challenges with the project or its results, we will follow these ethical guidelines:

- General guidelines for research ethics
- Social Sciences, Humanities, Law and Theology
- Internet Research

Following the principle of "data minimisation," HVL, as the data controller, will collect only the personal information that is directly relevant and necessary for a specific purpose. The project will retain the data only for as long as needed to accomplish that purpose.

HVL have registered the project with SIKT, the Norwegian Agency for Shared Services in Education and Research, with which HVL has a Data Protection Services agreement. HVL must notify SIKT via an online notification form at least 30 days before data collection begins. SIKT then evaluates compliance with data protection laws and the legal access to personal data.

3.1 Legal basis for processing personal data

The legal basis for processing general personal data is Public Interest (General Data Protection Regulation art. 6 nr. 1 bokstav 2), jf. art. 9 nr. 2 bokstav j).

If appropriate, we will be using consent forms as an additional measure. For this, the project follows the SIKT guidelines for informed consent. An information sheet is distributed to each participant, a separate consent form is signed, returned and stored (see Annex 2: Information letter and informed consent). These will be kept on paper (or digital format when possible) and securely stored by the responsible partner or associated partner.

3.2 Ethical concerns

We will ensure that all participants directly involved in the project are informed about their rights and the possible impacts the project may have on them. Participants will be told that they can withdraw from the project at any time, and we will delete their personal data to the fullest extent possible. Additionally, we will discuss the study's objectives, and any potential risks related to their involvement. Matters concerning personal data management and privacy will also be thoroughly addressed. For this, the project adheres to the SIKT guidelines for providing information to research participants.[4]

4 The data Management Process

HVL as coordinator will be responsible for developing, implementing, overseeing, and updating a comprehensive Data Management Plan for the envisaged project datasets, to define metadata, data collection and processing, data sharing, security and access, during and after the project. The PC will be supported by a research advisor (Project Manager) from the Division of Research, Internationalisation and Innovation for quality assurance.

SkillResilience4EU will follow HVL's guidelines for research data[5] processing and adhere to its general instructions for data storage[6] in the data management procedures outlined below.

[4]https://sikt.no/en/tjenester/personverntjenester-forskning/fylle-ut-meldeskjema-personopplysninger/information-participants-research-projects

[5]https://www.hvl.no/en/research/researchethics/guideline_personal_identifiable_and_health_data_in_research/guide-for-processing-research-data-at-hvl/

[6] https://www.hvl.no/en/hvl-students/it-tools-and-help-desk/it-regulations/data-storage-at-hvl/

4.1 Data Management Group

Each partner has appointed a Project Data Manager, constituting a Data Management Group (DMG) to define internal data quality processes, data preparation guidelines and research data flows between the partners. The PC chairs the DMG. The Data Management Group have regular meetings once a month.

The DMG ensures consistency of data collection approaches and data preparation across WPs and must be informed about all data collections. WP leaders and DMG address size and scope of data as well as data needs and categories in a consolidated way across the project via the Data Management Plan. It will also ensure common approaches for data collection across WPs to reduce overlap and maximize synergies and define priority areas for data collection as well as identification of available datasets to complement collected data if necessary.

For all data collections, the responsible data collector (usually the WP leader) will inform the DMP through email in good time before the collection starts. Overview of planned and ongoing data collections will be saved in the project's TEAM folder. If planned data collection poses any issues or controversies, the DMP will call an extraordinary meeting to resolve the issues. Otherwise, the DMG will discuss and update the overview of the data collections at their regular meetings (twice a year). At each Executive Board meeting, the agenda will contain an update and discussion point on Data Management.

Table 1: Data Management Group

#	Name	Organisation	Role
1	Maria Tsouri	HVL Business School	PC and WPL
3	Andreas Panagopoulos (WPL)	UoC	WPL
4	Deyu Li	UU	WPL
5	Magdalena Marczewska (WPL)	UW	WPL
6	Justyna Szczepanik	UW	Project member
6	Tina Haisch (WPL)	FHNW	WPL
7	Gesa Pflitsch	BOKU	WPL
8	Ulla Sever	BFI	WPL
9	Alexandra Sandu	LSE	Project member
10	Markos Malandrakis	MoP	Project member
11	Theo Biddulph (WPL)	Simplon	Project Member

4.2 Data storage and security

The responsibility of raw data storage during the project will be of the partner leading the regional case study. Data will be classified according to the below classification (Table 2) in local secure storage. During the project, data analyses and met analyses will be stored on Microsoft Teams as it will be the main collaborative tool and document repository for SkillResilience4EU. All Partners will have access to a shared MS Teams folder. There will be separate folders for each Work Package and Data Collections. Additional channels can be created if necessary. Further, data will

be translated, coded, and anonymized for research purposes, If appropriate, personal data containing special categories will be stored on HVLs secured research server, SILAF.
Analyses and metanalyses of the aforementioned data will be stored in and transferred through Microsoft Teams, and made public through academic publications and on the project website.

At the end of the project personal data will be completely anonymized (identification keys will be deleted; personally identifiable information will be removed, re-written or categorized) or deleted (any sound or video recordings will be deleted). After the project, open data generated in the project will be stored indefinitely post-project in DataVerseNO.

Table 2: Data Storage Overview

Communication or sharing tools and storage devices	Open -Green	Internal -Yellow	Confidential -Red
Institutional email without encryption	Yes	Yes, with conditions (1)	No
Zoom	Yes	Yes	No
Teams / SharePoint	Yes	Yes	No
Teams / SharePoint with special security	Yes	Yes	No
Smartphone	Yes	Yes, with conditions (3)	No
Private email (Gmail, Hotmail, etc.)	No, with conditions (1)	No	No
Data storage and exchange			
Institutional-controlled file system or approved subject system	Yes	Yes	Yes
OneDrive	Yes	Yes	Yes, with conditions (2)
Filesender	Yes	Yes, with conditions (4)	No
Personal cloud services (Dropbox, Google Drive, etc.)	No	No	No
SILAF - Secure Storage of Research Data (Research server hosted by HVL)	No	Yes	Yes
Institutional PC (local hard drive)	Yes	Yes, with conditions (5)	Yes, with conditions (4)
Private PC	Yes	No	No
USB flash drive / external hard drive	Yes	No	No
USB flash drive / external hard drive - encrypted	Yes	Yes	Yes, with conditions (6)

1. Red data can be stored in Teams, which is secured by HVL IT, requiring multi-factor authentication. Such MS Teams / SharePoint sites are set up based on the data owner's written assessment of needs, legal basis, and risk. Assessment should be reviewed at least once a year.

2. Exceptions for students if they follow guidelines for the use of personal devices
3. Yellow data can be temporarily stored in cloud services provided and approved by HVL, storing data within the EEA. Only HVL-provided cloud services should be used.
4. Employees are advised not to store data locally on PCs but to use OneDrive or MS Teams/SharePoint with two-factor authentication instead.
5. Red data may be stored on encrypted USB flash drives or encrypted external hard drives that meet the requirements outlined in HVL's guidelines. Data should not be temporarily stored, downloaded, or retrieved to home directories or other storage locations that cannot store red data but should be transferred directly to HVL SILAF (research server).

4.3 Long term preservation of data

DataverseNO can store the data indefinitely. The long-term preservation of all data uploaded and made available through DataverseNO is therefore ensured. All data and other research output generated in the project is evaluated against the fair principles and managed accordingly.

4.4 Data classification

Classification is an important tool for ensuring proper storage and handling of information. We use HVL's internal classification system to classify data into the following categories: Open (green), Internal (yellow), Restricted (red), with corresponding colour coding to facilitate overview. [7]The person responsible for collecting the data will classify the information based on its value and the laws and regulations in effect at any given time. Based on this assessment the right storage for the data has to be chosen. The DMP should be informed about the result of the assessment.

Table 3: Data Classification Overview

Open	Internal	Restricted
The information may be accessible to everyone. Can be shared with anyone, both internally and externally.	The information requires protection and access control. Can be shared with those who need the information for their work.	The information can be harmful to individuals, institutions, or public interests. Can be shared, but subject to needs assessment.

The value of the information has to be assed in relation to:

- **Confidentiality** - how important it is that the information is not known to unauthorized individuals
- **Integrity** - how important it is that the information is accurate and cannot be altered by unauthorized individuals
- **Availability** - how critical it is for the information to be accessible

[7] https://www.hvl.no/en/hvl-students/it-tools-and-help-desk/it-regulations/data-storage-at-hvl/

Open (Green) Information: Available to everyone
Information that can not only but also should be available to everyone - without restrictions.

Examples of open [green] information include:

- information about study programs and research activities
- open publications
- study and research materials not limited to copyright.

Intern (yellow) information: Accessible to those who need it for their work
This type of information is meant for specific groups within an organization or for named external collaborators who need access. If such information goes astray, it could cause minor harm to individuals, the organization, or its partners.
Like public information, this data must be protected from being changed, deleted, or damaged. However, it also needs extra protection to prevent unauthorized access or sharing.
To keep it secure:

- Access should be controlled by giving read and write permissions only to specific people or groups.
- The person responsible for the information should review who has access at least once a year.
-

Examples of internal (yellow) information include:

- Internal documents relevant to specific teams or departments
- Materials that are not publicly available but are not classified as confidential or strictly confidential
- Information stored in research, educational, financial, or administrative systems
- Personal data, excluding national ID numbers and sensitive categories of personal data

Confidential (red) information: Information subject to restricted access.
Confidential information refers to information that is inherently sensitive or that organisations are required to restrict access to by law, regulations, agreements, rules, or other regulatory frameworks.
"Confidential" corresponds to the classification level used in the Protection Instruction. It is used for information that, if disclosed to unauthorized individuals, would cause harm to public interests, institutions, individuals, or collaborating parties.
As a general rule, this information should only be stored in dedicated systems designed for the purpose and based on the owner's written assessment of the need, legal basis, and risks involved.
Furthermore, access to this information should be controlled by granting read and write permissions to authorized individuals or groups. Authorization for access is based on specific assigned tasks or approved research purposes.
Examples of confidential [red] information include:

- Personal identification numbers
- Special categories of personal data (sensitive data)
- Information regarding health, employment, and salary data

- Research data falling within this category - should be stored on HVL SILAF (research server)

4.5 Data sharing

Any sharing of personal and non-personal data among project partners and with others has to follow the above defined classification of data and the therefrom following appropriate storage and sharing tools.

5 Data Summary

SkillResilience4EU will use a multi-disciplinary mixed methods approach which include quantitative, qualitative and visualization empirical approaches. The project aims to gather and analyse data on technology and job sectors to create two key tools: *a twin transition matrix and a job-skill matrix*. These tools will help us understand how different jobs and skills are related to each other. The project will also collect information on issues like inequality, employment rates, incomes, gender distribution, occupations, education levels, the quality of institutions, and relevant surveys and policies. By using statistical methods, it will improve current measures of the economy and suggest new ones.

The matrices will help identify areas and people who are being left behind due to changes in the job market, as well as the factors that lead to job creation or loss in Europe. The project will include experiments and studies to understand the challenges faced by workers in unstable jobs. Lastly, it will conduct interviews, focus groups, and document reviews in five different sectors across various European regions to gain deeper insights into how policies and education affect local job markets.

Table 4: Overview of planned datasets

Dataset Name	Purpose	Data Type	Origin	WPs/Tasks
Knowledge base on twin transitions and labour market relevant literature, reports, etc.	Consolidate existing knowledge on twin transitions and labour market dynamics.	Literature, Reports	Secondary data	WP1: T1.1
Underlying data for the twin transition and job-skills matrix	Develop twin transition matrix and job-skills matrix.	Quantitative data	Secondary data	WP1: T1.2, T1.3
Data generated under each case study including interviews and focus groups	Explore labour market resilience mechanisms and social inclusion/exclusion dynamics.	Qualitative data	Primary data and secondary data	WP3: T3.1, T3.2, T3.3
Mapping of skill mismatches	Identify skill gaps and mismatches in the labour market.	Quantitative data	Secondary data	WP6: T6.1

Mapping of institutions	Analyse institutional dynamics and governance challenges.	Qualitative data	Primary data	WP4: T4.1, T4.2
Mapping of policies	Evaluate policies related to labour market resilience.	Policy documents	Secondary data	WP5: T5.1, T5.2
Mapping of education and training programmes	Assess reskilling and upskilling programmes.	Quantitative and qualitative data	Secondary data	WP6: T6.1, T6.2
Data from behavioral experiments	Investigate behavioural responses to economic transition pathways.	Experimental data	Primary data	WP2: T2.3
Data from programme design piloting	Evaluate the effectiveness of programme designs for reskilling and upskilling.	Quantitative and qualitative data	Primary data	WP6: T6.4
Data from stakeholder engagement process	Gather feedback and insights from stakeholders.	Qualitative data	Primary data	WP7: T7.2, T7.5

Table 5: Overview of secondary data

Data	Description	Purpose	Methodology	WPs
Patents registry (PATSTAT)	Worldwide patent database by the European Patent Office	Analyse regional innovation, technological specialization, and twin transition capabilities	Patent data classified using CPC codes and geolocated at NUTS-2 level; used for RTA and twin transition matrix	WP1: T.1.2, T.1.4 WP2: T2.1 WP5: T.5.4 WP7: T.7.1, T.7.3
European Labour Force Survey	The EU-LFS is a large household sample survey providing quarterly results on labour participation of people aged 15 and over and on people outside the labour force.	Analyse regional occupation and industry structure, and identify left-behind social demographic groups	Microdata used for panel analysis at occupational, social demographic group and regional level	WP1: T.1.3, T.1.4 WP2: T.2.1 WP6: T.6.4
EU statistics on income and living conditions	The EU statistics on income and living conditions (EU-SILC) aim to collect timely and	Analyse labour market mobility, employment patterns, and identify left-	Microdata used for panel analysis at occupational, social demographic	WP1: T.1.3, T.1.4 WP2: T.2.1 WP6: T.6.4

	comparable cross-sectional and longitudinal data on income, poverty, social exclusion, and living conditions	behind social demographic groups	group, and regional level	
Employer-Employee Data (National Statistical Offices)	Linked micro-data from national labour registries (e.g. Norway and the Netherlands)	Analyse labour market mobility, employment patterns, and skill supply	Microdata used for panel analysis; tracked over time and by region	WP1: T.1.3, T.14 WP5: T.5.4 WP7: T.7.1, T.7.3
Cedefop Skills-ESJS (2 flows)	European Skills and Jobs Survey	Analyse the development of skills over time and how they match with the job demands	Harmonized at EU level, used for job-skill matrix and mismatch detection	WP1: T.1.3, T.14 WP5: T.5.4 WP6: T.6.4 WP7: T.7.1, T.7.3
Job Vacancy Data (Employment Agencies)	National data on job vacancies, by occupation and region	Analyse current skill demands in labour markets	Text mining/NLP to extract skill requirements from job ads	WP1: T.1.3, T.14 WP5: T.5.4 WP6: T.6.4 WP7: T.7.1, T.7.3
Cedefop Skills-OVATE	Skills Online Vacancy Analysis Tool for Europe	Analyse demand for occupations and skills from online job postings	Harmonized at EU level, used for job-skill matrix and mismatch detection	WP1: T.1.3, T.14 WP5: T.5.4 WP6: T.6.4 WP7: T.7.1, T.7.3
European Skills Index (ESI)	Composite indicator developed by Cedefop	Evaluate performance of skill systems across EU	Aggregates 15 indicators in 3 dimensions: development, activation, matching	WP1: T.1.2, T.1.4 WP2: T2.1
Regional statistics datasets	*EEA, EUROSTAT, ARDECO, JRC, OECD , World Bank datasets and other statistical sources*	Developing an indicator matrix at NUTS-2 level for identifying left-behind places and sociodemographic groups	Assessment of existing indicators, harmonisation of datasets with different temporal coverages, development of NUTS-2 level indicator matrix	WP2: T2.1, T.2.2, T.2.4 WP5: T.5.4 WP6: T.6.4 WP7: T.7.1, T.7.3
Eurostat	Statistical office of the EU	Analyse demographic, labour market, economic indicators	Used for regional socio-economic profiles, inequalities, employment, education	WP2: T2.1, T.2.2, T.2.4 WP5: T.5.4 WP7: T.7.1, T.7.3
ILO / Cedefop Reports	Reports by International Labour Organization and Cedefop	Frame skills and occupational trends in global and EU contexts	Used in knowledge base and conceptual framework	WP1: T.1.1, T.1.4 WP5: T.5.1, T.5.2, T.5.3, T.5.4

Mixed case documents	Reports and documents on skill-needs and training initiatives in case regions and -industries	Background data for stakeholder interviews	Desk research as step in qualitative case studies	WP3: T.3.1, T.3.2, T.3.3, T.3.4 WP7: T.7.1, T.7.2, T.7.3 WP6: T.6.1
Policy Documents (Regional, National, Supra-National)	Public policies across innovation, climate, industry, education	Understand policy framing of reskilling and upskilling	Analysed using Gioia methodology for narrative extraction	WP5: T.5.1, T.5.2, T.5.3, T.5.4 WP7: T.7.1, T.7.3

Table 6: Overview of primary data

Data	Description	Purpose	Methodology	WPs/Tasks
Stakeholder Interviews	Semi-structured interviews with policymakers, training providers, employers, etc.	Understand policy narratives, training needs, sector-specific insights	Thematic and narrative analysis	WP3: T.3.1, T.3.2, T.3.3, T.3.4 WP4: T.4.1, T.4.2, T.4.3, T.4.4 WP5: T.5.3, T.5.4 WP7: T.7.2
Focus Group Discussions	Group interviews with vulnerable sociodemographic groups, training professionals, and employers	Explore mechanisms of exclusion/inclusion, access to reskilling, lived experiences	Common cross-case protocols; comparative qualitative analysis	WP4: T.4.1, T.4.2, T.4.3, T.4.4 WP6: T.6.2, T.6.4
Case Study Observations	Sector-specific data in 5 selected sectors across multiple regions	Capture sectoral variation in skill mismatches, regional impact of the twin transition	Comparative case study design based on Yin (2011, 2014)	WP3: T.3.1, T.3.2, T.3.3, T.3.4 WP4: T.4.1, T.4.2, T.4.3, T.4.4 WP5: T.5.3, T.5.4 WP6: T.6.2, T.6.4
Policy Document Analysis	National/regional policies in innovation, education, labour, climate	Identify how "skills", "reskilling", and "green/digital transition" are framed in policy	Desk research + Gioia methodology for qualitative coding	WP4: T.4.2, T.4.3, T.4.4 WP5: T.5.1, T.5.2, T.5.3, T.5.4 WP6: T.6.3, T.6.4, T.6.5
Lab-Based Behavioural Experiments	Experiments simulating job markets with incentivised student participants	Examine behaviour around up/reskilling investment, mobility, employer-employee interactions	Experimental economics (e.g., Charness & Kuhn, 2005, 2007, 2011; Niederle & Roth, 2003, 2005, 2009); includes risk/preference elicitation	WP2: T.2.3, T.2.4 WP5: T.5.4 WP6: T.6.5
Post-Experiment Surveys	Surveys completed by participants after lab experiments	Collect demographic, behavioural traits (e.g., risk aversion, time preference)	Survey instrument designed for behavioural inference	WP2: T.2.3, T.2.4 WP5: T.5.4 WP6: T.6.5

Educational Programme Content Data	Data on curricula from universities, VET centres, training providers	Assess alignment of current training with future skill demands	Desk review + interviews; mapped using ESCO and ESI frameworks	WP6: T.6.1, T.6.2, T.6.3, T.6.4, T.6.5 WP5: T.5.3, T.5.4
Reskilling Programme Performance Data	Feedback on success and challenges of existing training programmes	Identify best practices and design principles	Interviews, focus groups, qualitative benchmarking	WP6: T.6.1, T.6.2, T.6.3, T.6.4, T.6.5 WP5: T.5.3, T.5.4
Institutional Mapping (Transition Topology)	Data on institutional actors, events, norms in sectors/regions	Analyse institutional change and its influence on labour market transformation	Transition topology framework (Strambach & Pflitsch, 2018, 2020)	WP3: T.3.1, T.3.2, T.3.3, T.3.4 WP4: T.4.1, T.4.2, T.4.3, T.4.4 WP5: T.5.3, T.5.4 WP7: T.7.2
Discourse and Media Analysis	Narratives around green/digital jobs in media and public discourse	Understand cognitive and normative framing of transitions	Discourse analysis techniques; content coding	WP7: T.7.1, T.7.3, T.7.4, T.7.5, T.7.6
Cost-Benefit Case Data	Quantitative data on costs and returns of training vs. mobility policies	Compare investment effectiveness in upskilling vs. labour mobility	Economic modelling and comparative analysis	WP6: T.6.3, T.6.4
Scenario Simulation Inputs (Dashboard Tool)	Customizable inputs for policy scenarios (jobs created/lost, skills, training effectiveness, demographics)	Run simulations for future labour market scenarios	Scenario-based modelling integrated into dashboard UI	WP5: T.5.3, T.5.4 WP7: T.7.3, T.7.4, T.7.5 WP8: T.8.3, T.8.4
Self-Assessment Questionnaire Responses	Online questionnaire completed by individuals or firms	Evaluate personal/organizational skill gaps, awareness, training needs	Digital tool with adaptive logic and personalized outputs	WP6: T.6.1, T.6.2, T.6.4, T.6.5 WP7: T.7.3, T.7.4, T.7.5 WP8: T.8.3, T.8.4, T.8.5
Stakeholder Testing & Validation Feedback	Feedback from stakeholders during tool testing (dashboard, skill self-assessment)	Validate tools and conceptual framework, adapt design to user needs	Iterative feedback sessions, qualitative and quantitative evaluation	WP7: T.7.1, T.7.2, T.7.3, T.7.6 WP8: T.8.3, T.8.4, T.8.5

6 FAIR data

FAIR stands for Findable, Accessible, Interoperable, and Reusable[8]. These principles ensure that data is well-documented and structured so that both humans and machines can easily locate, access, integrate, and reuse it. By following FAIR, researchers enhance transparency, foster collaboration, and increase the long-term value of their data. Article 6 refers explicitly to the FAIR principles as outlined by GO FAIR (https://www.go-fair.org/fair-principles/) and DataverseNO

[8] https://www.go-fair.org/fair-principles/

(https://dataverse.no/) ensuring that our data handling practices align with international standards for openness and transparency.

6.1 Making data findable, including provisions for metadata

The metadata shall include a minimum of (1) author names, (2) date and location of data collection, (3) relevant search keywords, (4) data collection methods, (5) detailed descriptions of the dataset contents, and (6) grant information. Where applicable, digital object identifiers (DOIs) linking to related publications and outputs will also be provided. We will adhere to the metadata standards of DataverseNO.

To enhance discoverability and potential reuse, metadata will include carefully selected keywords—such as subject areas and statistical methods—entered in the keyword field.

Information such as subject areas and the statistical methods may be entered into the keyword field. We will offer metadata information about our data which allows them to be harvested and indexed. https://dataverse.no/, makes local dataset metadata available to remote harvesting clients. These can be other Dataverse installations, or any other clients that support OAI-PMH harvesting protocol.

6.2 Making data accessible

As a general rule, research data will be stored on HVL's secure digital infrastructure to prepare and cure the datasets and all research data for which data utility has been clearly identified will be made openly available without delay, after anonymisation/pseudonymisation and clearance of any IP or commercial sensitivity issues if applicable. Scientific publications will be linked to the relevant datasets.

Any data identified as useful will be made openly available as soon as possible—after it has been anonymised or pseudonymised and cleared of any intellectual property or commercial sensitivity concerns. Scientific publications will be linked to the relevant datasets.

After the project ends, data will remain freely accessible and preserved indefinitely through the FAIR-compliant repository DataverseNO, which HVL supports through an institutional agreement. If other repositories are considered to improve access or reuse, the Data Management Group (DMG) will assess them individually, focusing on FAIR compliance and any additional costs.

We plan to make research data available under a CC BY license, and metadata under a CC0 license. HVL's Library will ensure continued access to the data after the project ends. Other digital outputs—such as public deliverables, policy briefs, and communication materials—will be published on the project website hosted by HVL for five years post-project.

HVL will oversee data management and quality assurance throughout the project and beyond. All open data will be stored long-term in DataverseNO.

6.3 Making data interoperable

The DMG will define and agree suitable metadata, open and standard data formats, relying on relevant standard terminologies and following best practices for FAIR data management. The

metadata shall include a minimum of (1) author names, (2) data generation date and site, (3) keywords, (4) data collection methods, (5) description of the data and its purpose, (6) funding information.

6.4 Increase data re-use

The methodological approaches will be shared through articles and our public deliverables to increase reproducibility of our results and uncover any potential shortcomings and/or unidentified biases in the proposed methods.
Each dataset deposited in DataverseNO will also include a readme file with information including methodological information, methods for processing data, data & file overview, data-specific information, and sharing/access information. See Annex 3 for template README file for depositing data on DataverseNO.

Data will be licensed using standard reuse licenses, in line with the obligations set out in the Grant Agreement. All public deliverable and other outputs as long text formats are or will be licensed using the Creative Commons Attribution-Non-Commercial-ShareAlike 4.0 International license (CC BY-NC-SA 4.0)3. However, scientific publications and open data sets will be shared under license CC BY.

Data quality will be ensured through internal check of datasets before uploaded to the project Teams folder under respective Work Packages and, when first possible, made public on DataverseNO.
The HVL library will evaluate the quality of the data before uploading it to the repository.

7 Intellectual property rights (IPR)

SkillResilience4EU will follow the IPR principles outlined in the Horizon Europe framework and the Consortium Agreement. All results generated during the project will be subject to clear ownership and usage rules to ensure transparency, legal compliance, and the effective exploitation of project outcomes.

7.1 Ownership of Results

Each project partner retains ownership of the results they generate. In cases where results are jointly developed, joint ownership will be governed by Article 16.4 of the Grant Agreement and Annex 5, with the following additions:

- Joint owners must enter into a co-ownership agreement within six months of generating the results.

- This agreement will define:
    - The nature and scope of the jointly owned results.
    - Ownership shares of each party.
    - Responsibilities for protection and maintenance.
    - Plans for exploitation, including commercial use if applicable.

Unless otherwise agreed:

- Each joint owner may use the results for non-commercial research and teaching royalty-free and without prior consent.
- Each joint owner may exploit the results commercially or grant non-exclusive licenses (without sub-licensing) with 45 days' notice and fair compensation to the other owners.

7.2 Licensing

Licensing of project results will be handled in accordance with the Consortium Agreement and EU regulations. The following principles apply:

- Results intended for public benefit, such as policy recommendations, training materials, and conceptual frameworks, will be made available under open licenses where feasible (e.g., Creative Commons). After an initial discussion during the Kick-off meeting (cf Deliverable D8.1 Project Kick-off meeting report report) and later confirmed in the Data Management group to use CC BY-NC-SA.
- For results with commercial potential, licensing terms will be negotiated on a case-by-case basis, ensuring fair access and appropriate compensation.
- Third-party access to results will be granted only under clearly defined terms, respecting confidentiality, data protection, and the interests of all partners.

7.3 IPR Log

An IPR Log will be maintained throughout the project to ensure traceability and transparency of all intellectual assets. The log will include:

- A description of each result (e.g., datasets, tools, frameworks).
- The generating partner(s) and ownership status (sole or joint).
- Protection measures taken (e.g., copyright, trademark, patent).
- Licensing status and any agreements made.
- Dates of creation, protection, and dissemination.
- Any third-party access or usage rights granted.

The IPR Log will be regularly updated and reviewed by the project's IPR manager and shared with all partners to support coordinated exploitation and dissemination activities.

8 Other research outputs

Public deliverables will be made available upon approval by the granting authority on CORDIS. In addition, they will be made available as soon as they are submitted to the granting authority on the project website to ensure immediate access to the results. Finally, all outputs will also be uploaded during the last six months of the project on the Horizon Results Platform, organised according to the list of Key Exploitable Results.

9 Allocation of resources

All direct and indirect costs associated with storage, archiving, re-use, security, etc. is considered part of the normal research infrastructure offered at the coordinating institution and will not be charged to the project. HVL will cover these costs and bear main responsibility for the data management of the project.

10 Conclusions

This is the initial version of the DMP and while the general principles of data management and compliance with the FAIR principles are outlined, supported mainly using the DataverseNO and the professional support of HVL's Library Staff, that are yet to be operationalised.

In addition, there is still uncertainty regarding information presented in Annex 1: several aspects of the datasets already identified are not fully defined, data formats, size, and some relevant datasets might not have been identified yet, but the consortium has done its best efforts to reach a comprehensive overview by month 6.The DMP will be continuously updated as needed, but comprehensive updates will be carried out in conjunction with the General Assembly meetings every 6 months. Regular internal meetings on how to operationalise data management will be organised with partners responsible for datasets.

Data quality management processes need to be further elaborated upon, and detailed information for each dataset will be progressively completed. Consistent integration of data management as a process across the project will also be necessary. For example, there are obvious links with the dissemination and exploitation strategies and IPR management and these needs to be further discussed

11 Bibliography

- https://www.uio.no/english/services/it/ai/gpt-uio/index.html
- https://www.go-fair.org/fair-principles/
- SENSE - grant agreement number: 101058507; D1.3– Initial Data Management plan including IPR
- OCEAN – grant agreement number: 101076983; D11.5 Data Management Plan
- NOVO grant agreement number: 101130979; D5.3 Data Management plan
- FOODMISSION D7.3 Data Management Plan- grant agreement number 101181774
- https://sikt.no/en/tjenester/personverntjenester-forskning/fylle-ut-meldeskjema-personopplysninger/information-participants-research-projects
- https://www.hvl.no/en/hvl-students/it-tools-and-help-desk/it-regulations/data-storage-at-hvl/
- https://dataverse.no/

Annex 1: Detailed Overview of Data packages

A: Detailed overview of secondary data packages

A.1.: Patents registry (PATSTAT)

Attribute	Description
Dataset identifier	PATSTAT_EPO
Keywords	Patents, innovation, technology, CPC, regional specialization, twin transition
Purpose/Utility of data generation or re-use	Measure regional technological capabilities and innovation output in green/digital sectors
Origin of Data	European Patent Office
Partner responsible for dataset	UU
Partners involved in data collection	UU
Description	Patent data geolocated at NUTS2 level and classified using Cooperative Patent Classification (CPC)
Data type	Secondary, quantitative
Language of data	English
Does the dataset contain personal data?	No
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	No
Sample Size	Millions of patent records
Does the data collection include confidential or graded information?	No
Are there any other reasons why the data collection needs extra protection?	No
Data Quality (if anonymous data)	High-quality, structured by EPO standards
Security class (if personal data)	N/A
Data collection period	Retrospective, multi-year (e.g., 2000–2024)
Collection devices	Institutional computers
Data collection method	Download via EPO access/API or subscription
Collection Device (if personal data)	N/A
Size of data	Large (several GBs)
Format of data	CSV, SQL, XML
Software used	STATA, R, Python, PostgreSQL
Storage	Secured cloud-based storage
Transfer	Secured transfer methods
Archiving	Project-specific repository
Degree of openness/ Conditions of use of data	Restricted (EPO license required)
Embargo/Dataset planned availability	Available upon request to EPO
License	CC BY-NC-SA
Comment	Used to calculate Revealed Technological Advantage (RTA) and innovation intensity

A.2: European Labour Force Survey

Attribute	Description
Dataset identifier	EUROSTAT_EU_LFS
Keywords	Employment, unemployment, occupation, education, labour mobility, skills mismatch
Purpose/Utility of data generation or re-use	Provide harmonized micro-level labour market data across all EU Member States; used to analyse employment patterns, skill levels, mobility trends, labour force characteristics, and transitions relevant to twin transition sectors
Origin of Data	Eurostat, based on national statistical offices' data collection
Partner responsible for dataset	HVL
Partners involved in data collection	HVL, UU
Description	Large-scale household survey including detailed individual-level data on labour market status, occupation, education, age, gender, working time, contract type, sector, and regional information
Data type	Secondary, quantitative, microdata
Language of data	English (variable names and documentation); original collection in national languages
Does the dataset contain personal data?	Yes (anonymized microdata)
Categories of personal data	Age, gender, education, employment status, occupation, region (NUTS), contract type
Does the data collection include data on vulnerable groups?	Yes (youth, NEETs, women, migrants, older workers, low-educated individuals)
Sample Size	Over 1.5 million observations annually across EU; longitudinal panel for subsets
Does the data collection include confidential or graded information?	Yes – access to anonymized microdata is restricted and subject to approval
Are there any other reasons why the data collection needs extra protection?	Yes – must comply with Eurostat access agreements and national confidentiality protocols
Data Quality (if anonymous data)	Very high – harmonised EU methodology, regularly quality-checked
Security class (if personal data)	Class 2 – pseudonymized, restricted-access research use
Data collection period	Continuous quarterly survey (used waves from 2010–2024)
Collection devices	Collection via certified platform
Data collection method	Certified access to Eurostat platform
Collection Device (if personal data)	Collection via certified platform
Size of data	Very large (multiple GBs depending on years and countries used)
Format of data	DTA (Stata), CSV
Software used	Stata, R, Python
Storage	Secured cloud-based storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Access restricted to approved researchers under Eurostat licensing
Embargo/Dataset planned availability	Continuous updates; available upon application
License	CC BY-NC-SA

Comment	A cornerstone dataset for labour market trend analysis and regional employment profiling in the project; used to validate case studies, model skill transitions, and estimate policy impact

A.3: EU statistics on income and living conditions

Attribute	Description
Dataset identifier	EUROSTAT_EU_SILC
Keywords	Income, living conditions, poverty, inequality, employment, education, social exclusion
Purpose/Utility of data generation or re-use	Measure and analyse social inclusion, income inequality, and vulnerability across EU regions and groups; support analysis of how skill mismatches, labour transitions, and policy gaps affect disadvantaged populations
Origin of Data	Eurostat, based on national statistical institutes' data collection under EU regulation
Partner responsible for dataset	HVL
Partners involved in data collection	HVL, UU
Description	Harmonised microdata on income, living conditions, social exclusion, housing, labour status, education, and material deprivation for households and individuals
Data type	Secondary, quantitative, microdata
Language of data	English (variable names/documentation); collected in national languages
Does the dataset contain personal data?	Yes (anonymized microdata)
Categories of personal data	Age, gender, income, household structure, employment status, education, housing, migration background
Does the data collection include data on vulnerable groups?	Yes (e.g. low-income households, NEETs, unemployed, migrants, elderly, single parents)
Sample Size	~130,000 households / 270,000 individuals annually across EU
Does the data collection include confidential or graded information?	Yes – only anonymized datasets are provided to researchers, under agreement
Are there any other reasons why the data collection needs extra protection?	Yes – socio-economic and income data are sensitive; access subject to Eurostat license conditions
Data Quality (if anonymous data)	Very high – harmonised methodology and regular quality assurance by Eurostat
Security class (if personal data)	Class 2 – pseudonymized, restricted-access research use only
Data collection period	Annual since 2003 (cross-sectional and longitudinal panels available)
Collection devices	Collection via certified platform
Data collection method	Certified access to Eurostat platform
Collection Device (if personal data)	Collection via certified platform
Size of data	Large (multiple GBs depending on years and modules used)
Format of data	DTA (Stata), CSV
Software used	Stata, R
Storage	Secured cloud-based storage
Transfer	Secured transfer methods
Archiving	Project specific repository

Degree of openness/ Conditions of use of data	Restricted; available only to authorised institutions under license
Embargo/Dataset planned availability	Continuously updated; accessible upon application
License	CC BY-NC-SA
Comment	Vital for understanding how labour market changes interact with poverty, vulnerability, and inequality; complements LFS in social outcome modelling

A.4: Employer-Employee Data

Attribute	Description
Dataset identifier	EE_Admin_NSO
Keywords	Employment, sectoral mobility, skill supply, labour market
Purpose/Utility of data generation or re-use	Analyse workforce structure, skill mismatches, regional/sectoral labour flows
Origin of Data	National statistical offices (Norway, Netherlands, others)
Partner responsible for dataset	HVL, UU
Partners involved in data collection	UU, HVL
Description	Longitudinal employer-employee matched datasets by occupation and sector
Data type	Secondary, quantitative, microdata
Language of data	National languages (NL, NO), variable labels in English
Does the dataset contain personal data?	Yes (pseudonymized or anonymized)
Categories of personal data	Employment status, sector, wage, age, gender, region
Does the data collection include data on vulnerable groups?	Yes (e.g., older workers, migrants)
Sample Size	Country-level full population or representative samples (hundreds of thousands)
Does the data collection include confidential or graded information?	Yes
Are there any other reasons why the data collection needs extra protection?	Legal obligations under GDPR and national laws
Data Quality (if anonymous data)	High; official statistical source
Security class (if personal data)	Class 2 – pseudonymized, restricted-access research use only
Data collection period	Historical data (2000–2024) in time series
Collection devices	Collection via certified platforms
Data collection method	Administrative data extraction, research agreement-based
Collection Device (if personal data)	Secured institutional portals
Size of data	Very large (10–50 GB)
Format of data	CSV, DTA
Software used	R, STATA
Storage	Secured cloud-based storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Closed unless specifically approved by NSO

Embargo/Dataset planned availability	Project phase-specific; not publicly shared
License	CC BY-NC-SA
Comment	Data essential for skill supply estimation in twin transition sectors

A.5: Cedefop Skills-ESJS

Attribute	Description
Dataset identifier	CEDEFOP_ESJS_2014 / ESJS2_2021
Keywords	Skills mismatch, training, job needs, learning, EU labour markets
Purpose/Utility of data generation or re-use	Analyse adult skills use, mismatches, learning pathways, and training needs in relation to job requirements across EU countries
Origin of Data	Cedefop (European Centre for the Development of Vocational Training)
Partner responsible for dataset	HVL
Partners involved in data collection	HVL, UU
Description	Large-scale survey data from adult workers (aged 24–65) across EU on skills used at work, mismatches, job changes, training received or needed
Data type	Secondary, quantitative, cross-sectional (panel planned for future)
Language of data	English (metadata and codebook); national languages for responses
Does the dataset contain personal data?	Yes (anonymized microdata)
Categories of personal data	Age, gender, occupation, sector, education, training history
Does the data collection include data on vulnerable groups?	Yes (e.g., low-skilled, older workers, women, migrants)
Sample Size	ESJS1 (2014): ~49,000; ESJS2 (2021): ~46,000 respondents across 30 countries
Does the data collection include confidential or graded information?	No (anonymized public-use microdata)
Are there any other reasons why the data collection needs extra protection?	Only if using restricted variables or matching datasets
Data Quality (if anonymous data)	High – EU quality assurance and harmonization protocols
Security class (if personal data)	Class 1 (anonymized data for public use)
Data collection period	2014 (Wave 1); 2021 (Wave 2)
Collection devices	Download via Cedefop website or upon request
Data collection method	Download via Cedefop website or upon request
Collection Device (if personal data)	National survey agency devices, GDPR-compliant
Size of data	Moderate (~200–300 MB per wave)
Format of data	DTA (Stata), XLSX, PDF (documentation)
Software used	Stata, R
Storage	Secured cloud-based storage
Transfer	Secured transfer methods
Archiving	Project specific repository

Degree of openness/ Conditions of use of data	Open data with citation and acknowledgement
Embargo/Dataset planned availability	Released (2014, 2021); future waves planned
License	CC BY-NC-SA
Comment	Widely used in EU labour market and skills mismatch research

A.6: Job Vacancy Data

Attribute	Description
Dataset identifier	JOBVAC_LMI_NAT
Keywords	Job postings, skills demand, occupations, vacancies, labour market intelligence
Purpose/Utility of data generation or re-use	Analyse real-time labour market demand and required skills, identify mismatches, and feed into the job-skill matrix
Origin of Data	National employment agencies (e.g. NAV Norway, UWV Netherlands), private aggregators, online platforms (e.g. job portals)
Partner responsible for dataset	HVL, UU
Partners involved in data collection	HVL, UU
Description	Structured datasets of online or agency-reported job vacancies with occupational titles, required skills, education, and sectors
Data type	Secondary, quantitative and textual (semi-structured)
Language of data	National languages; English for metadata and translation
Does the dataset contain personal data?	No (employer-level data only)
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	Indirectly (via job types, regions, target group tags)
Sample Size	Varies by country and platform (from thousands to millions of records annually)
Does the data collection include confidential or graded information?	No, though access may be restricted by provider agreements
Are there any other reasons why the data collection needs extra protection?	Yes – terms of use or scraping limits may apply
Data Quality (if anonymous data)	High when structured (agency data); medium when scraped (platforms)
Security class (if personal data)	N/A
Data collection period	2025-2026 (real-time, updated regularly); archived data on vacancies for a period of ten years
Collection devices	Online scraping tools, APIs, internal access portals
Data collection method	Web scraping, API integration, public downloads, agency cooperation
Collection Device (if personal data)	N/A
Size of data	Large (5–20+ GB per country/year)
Format of data	CSV, JSON, XML
Software used	Python, NLP tools, R
Storage	Secured cloud-based storage
Transfer	Secured transfer methods

Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Varies by country: some open, some restricted under MOU or agreement
Embargo/Dataset planned availability	Rolling access during project; aggregated output
License	CC BY-NC-SA
Comment	A key dataset for analysing skill demand trends, mapped to ESCO for job-skill matrix construction

A.7: Cedefop Skills-OVATE

Attribute	Description
Dataset identifier	CEDEFOP_SKILLS_OVATE
Keywords	Online vacancies, skills demand, labour market trends, occupations, ESCO, job ads
Purpose/Utility of data generation or re-use	Analyse real-time and historical demand for occupations and skills across EU countries and regions; support development of job–skill matrix, mismatch analysis, and policy dashboards
Origin of Data	Cedefop (via collaboration with national public employment services and web crawling partners)
Partner responsible for dataset	HVL
Partners involved in data collection	HVL, UU
Description	Harmonised and categorised dataset of online job vacancies collected from multiple sources, mapped to occupations (ISCO), skills (ESCO), and education requirements; available at regional and national levels
Data type	Secondary, quantitative and text-derived (structured metadata)
Language of data	Original ads in national languages; results published in English
Does the dataset contain personal data?	No
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	Indirectly (through job types and targeted occupation tags)
Sample Size	Tens of millions of job postings from all EU countries, updated quarterly
Does the data collection include confidential or graded information?	No
Are there any other reasons why the data collection needs extra protection?	No – publicly accessible summaries; detailed data accessible via request
Data Quality (if anonymous data)	High – harmonised methodology and multi-source validation by Cedefop
Security class (if personal data)	N/A
Data collection period	2018–present (ongoing quarterly updates)
Collection devices	Access request by Cedefop
Data collection method	Certified access and download by Cedefop platform
Collection Device (if personal data)	N/A
Size of data	Very large (multi-GB per year)
Format of data	CSV, XLSX (via Skills-OVATE online tool)
Software used	R, Excel, STATA

Storage	Secured could-based storage
Transfer	Secured transfer method
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Publicly accessible summary data; detailed datasets available via research request to Cedefop
Embargo/Dataset planned availability	No embargo; continuously updated
License	CC BY-NC-SA
Comment	Central data source for understanding evolving skill demands across occupations; integrated with ESCO and ISCO frameworks to enable cross-country and regional comparability

A.8: European Skills Index

Attribute	Description
Dataset identifier	CEDEFOP_ESI_2022
Keywords	Skills development, activation, matching, labour market, EU benchmarking
Purpose/Utility of data generation or re-use	Evaluate and compare the performance of national skill systems across the EU in supporting employment, training, and skill matching—used for assessing training programme alignment and skill system readiness
Origin of Data	Cedefop (composite index based on Eurostat and national datasets)
Partner responsible for dataset	UU
Partners involved in data collection	UU, HVL
Description	Composite indicator consisting of 15 metrics grouped into 3 dimensions: Skill Development, Skill Activation, Skill Matching, provided at country level
Data type	Secondary, aggregated, quantitative
Language of data	English
Does the dataset contain personal data?	No
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	Indirectly (through dimension indicators on NEETs, employment rates, etc.)
Sample Size	31 countries (EU27 + UK, Iceland, Norway, Switzerland)
Does the data collection include confidential or graded information?	No
Are there any other reasons why the data collection needs extra protection?	No
Data Quality (if anonymous data)	High – harmonized indicators and validation from Eurostat and national sources
Security class (if personal data)	N/A
Data collection period	Annual (latest version 2022)

Collection devices	N/A
Data collection method	Aggregation of harmonized statistics
Collection Device (if personal data)	N/A
Size of data	Small (<50 MB)
Format of data	XLSX, PDF, CSV
Software used	Excel, R
Storage	Secured cloud-based storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Open access
Embargo/Dataset planned availability	Available immediately (latest: 2022 edition)
License	CC BY-NC-SA
Comment	Used for benchmarking skill system quality and interpreting the effectiveness of training interventions across countries and region

A.9: Regional statistics datasets

Attribute	Description
Dataset identifier	REGIONAL_INDICATORS_MATRIX_NUTS2
Keywords	Regional disparities, left-behind places, NUTS-2, inequality, demographic decline, labour market, transition risks
Purpose/Utility of data generation or re-use	Develop a harmonised matrix of indicators at NUTS-2 level to identify regions and groups vulnerable to exclusion from twin transitions; inform territorial targeting of policy tools and dashboard simulations
Origin of Data	Secondary sources: Eurostat (regional indicators), ARDECO (regional economic accounts), EEA (environmental risks), JRC (regional resilience indicators), OECD (well-being), World Bank (development indicators)
Partner responsible for dataset	LSE
Partners involved in data collection	LSE, UU, HVL
Description	Multi-source dataset of harmonised indicators on demographic trends, socio-economic disadvantage, employment structures, digital/green transition exposure, and institutional capacity at NUTS-2 level
Data type	Secondary, aggregated, quantitative
Language of data	English
Does the dataset contain personal data?	No
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	Yes – indirectly, through variables on NEETs, ageing, unemployment, rurality, education, gender inequality
Sample Size	~250 NUTS-2 regions × ~50–70 indicators = ~12,500–17,500 data points
Does the data collection include confidential or graded information?	No
Are there any other reasons why the data collection needs extra protection?	No – public domain sources, though documentation of harmonisation may require attribution

Data Quality (if anonymous data)	High – derived from official or internationally validated sources; harmonised by consortium for spatial and temporal consistency
Security class (if personal data)	N/A
Data collection period	Indicators compiled from data sources covering ~2000–2023
Collection devices	N/A
Data collection method	Download and aggregation from institutional repositories (Eurostat, OECD, EEA portals, etc.); time-series and cross-sectional alignment
Collection Device (if personal data)	N/A
Size of data	Moderate (~50–100 MB depending on time series depth)
Format of data	XLSX, CSV
Software used	Excel, R, STATA, Python
Storage	Secured cloud-based storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Open – all source datasets are public and reusable with citation
Embargo/Dataset planned availability	Available internally during development; published with deliverables in 2027
License	CC BY-NC-SA
Comment	A foundational dataset for identifying place-based vulnerabilities and tailoring reskilling strategies; enables spatialised dashboard scenarios and supports the project's territorial inclusion objectives

A.10: Eurostat

Attribute	Description
Dataset identifier	EUROSTAT_INDICATORS
Keywords	Labour market, employment, inequality, education, gender, wages, regions, NUTS2
Purpose/Utility of data generation or re-use	Provide harmonized socio-economic and labour market indicators across EU regions and countries, used for macro-level analysis, demographic profiling, skill mismatch detection, and policy benchmarking
Origin of Data	Eurostat (European Commission statistical office)
Partner responsible for dataset	LSE
Partners involved in data collection	LSE, UU, HVL
Description	Harmonized statistical indicators on employment, unemployment, income inequality, education levels, NEET rates, gender gaps, regional GDP, and other labour-related metrics at national and NUTS levels
Data type	Secondary, aggregated, quantitative
Language of data	English
Does the dataset contain personal data?	No
Categories of personal data	N/A

Does the data collection include data on vulnerable groups?	Yes, indirectly (e.g., NEETs, long-term unemployed, women, migrants, older workers)
Sample Size	Full coverage of EU27 + EFTA (aggregated data; not micro-level)
Does the data collection include confidential or graded information?	No
Are there any other reasons why the data collection needs extra protection?	No
Data Quality (if anonymous data)	High – standardised EU methodology, comparable across countries
Security class (if personal data)	N/A
Data collection period	Annual and quarterly (latest data: 2023)
Collection devices	N/A
Data collection method	Official national statistics harmonized by Eurostat
Collection Device (if personal data)	N/A
Size of data	Moderate (depending on the number of indicators)
Format of data	CSV, XLSX
Software used	R, Excel, STATA
Storage	Secured cloud-based storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Open access
Embargo/Dataset planned availability	Available continuously with regular updates
License	CC BY-NC-SA
Comment	Central to constructing regional socio-economic profiles and supporting all econometric modelling in the project

A.11: ILO / Cedefop Reports

Attribute	Description
Dataset identifier	ILO_CEDEFOP_REPORTS
Keywords	Skills foresight, vocational education, future of work, green skills, labour market trends
Purpose/Utility of data generation or re-use	Provide strategic insights and policy context on global and European trends in skills, training, employment, and the future of work; used to inform conceptual framework, literature review, and validation of project indicators
Origin of Data	International Labour Organization (ILO) and Cedefop (EU)
Partner responsible for dataset	UoC
Partners involved in data collection	UoC, UU, HVL
Description	Analytical and policy reports by ILO and Cedefop on employment trends, skill demands, education systems, and policy recommendations at global/EU level
Data type	Secondary, textual, qualitative and semi-quantitative
Language of data	English

Does the dataset contain personal data?	No
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	Yes (e.g., youth, NEETs, informal workers, women, migrants)
Sample Size	Dozens of reports, surveys, and outlook publications
Does the data collection include confidential or graded information?	No
Are there any other reasons why the data collection needs extra protection?	No
Data Quality (if anonymous data)	High – peer-reviewed, institutionally validated
Security class (if personal data)	N/A
Data collection period	Ongoing; major series from 2015–2024 used
Collection devices	N/A
Data collection method	Desk research, report downloads
Collection Device (if personal data)	N/A
Size of data	Small to moderate (~10–100 MB total)
Format of data	PDF, DOCX
Software used	NVivo (for thematic coding), Word, Excel
Storage	Secured cloud-based storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Open access
Embargo/Dataset planned availability	None
License	CC BY-NC-SA
Comment	Supports conceptual development, especially around skills frameworks (e.g. green, transversal, lifelong learning) and labour policy narratives

A.12: Mixed case documents

Attribute	Description
Dataset identifier	CASEDOCS_SKILL_TRAINING_CONTEXT
Keywords	Skills demand, training initiatives, sectoral strategy, regional policy, case study context
Purpose/Utility of data generation or re-use	Provide contextual knowledge about sector-specific and region-specific skills challenges, labour market initiatives, and existing training responses; used to inform the design and interpretation of stakeholder interviews and focus groups
Origin of Data	Secondary sources: regional development plans, sectoral strategy papers, training programme documentation, academic reports, grey literature
Partner responsible for dataset	UW, HVL
Partners involved in data collection	Regional case study leads (e.g. BOKU, LSE, HVL, UoC, UW)
Description	Collection of publicly available or internally shared documents relating to local training offers, skill needs

	reports, labour market assessments, twin transition strategies, and institutional or policy responses at regional and sectoral levels
Data type	Secondary, qualitative (textual documents)
Language of data	National languages (originals); key points translated or summarised in English
Does the dataset contain personal data?	No (documents are institutional, public, or anonymised)
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	Yes – many documents refer to target groups such as NEETs, older workers, migrants, or low-skilled workers
Sample Size	~10–20 documents per region × ~10 regions = ~100–200 documents
Does the data collection include confidential or graded information?	Possibly – depending on internal nature of some shared reports or unpublished training documentation
Are there any other reasons why the data collection needs extra protection?	Yes – citation restrictions or informal sharing may require usage limits
Data Quality (if anonymous data)	High – triangulated with interview/focus group results and sectoral evidence
Security class (if personal data)	N/A (but Class 2 if containing institutionally sensitive insights)
Data collection period	2025-2026
Collection devices	N/A
Data collection method	Desk research, web scraping, direct request to local institutions and stakeholders
Collection Device (if personal data)	N/A
Size of data	Moderate (~50–200 MB total, depending on number of documents)
Format of data	PDF, DOCX, XLSX
Software used	Word, PDF readers, NVivo
Storage	Secured cloud-based storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Internal use only; subject to copyright or sharing agreements
Embargo/Dataset planned availability	Not publicly shared; used as contextual input for primary data collection and analysis
License	CC BY-NC-SA
Comment	Forms the background layer for qualitative case work; enhances interpretation of stakeholder insights and triangulates institutional context

B: Detailed overview of primary data packages

B.1: Stakeholder interviews

Attribute	Description
Dataset identifier	INT_Stakeholder_Qual
Keywords	Reskilling, labour markets, transition, policy feedback
Purpose/Utility of data generation or re-use	Understand contextual insights, policy responses, validate findings

Origin of Data	Primary data collected in case study regions
Partner responsible for dataset	UW
Partners involved in data collection	Each regional case study lead (e.g., UoC for the Greek region, BOKU for the Austrian region)
Description	Qualitative interview transcripts with key stakeholders in 5 sectors
Data type	Primary, qualitative
Language of data	Local languages, transcripts in English
Does the dataset contain personal data?	Yes (pseudonymized)
Categories of personal data	Occupation, organization type, sector affiliation
Does the data collection include data on vulnerable groups?	Indirectly, through stakeholder knowledge
Sample Size	~10–20 interviews per case study (total ~100)
Does the data collection include confidential or graded information?	Yes – stakeholder identities protected
Are there any other reasons why the data collection needs extra protection?	Informed consent required; protection of anonymity
Data Quality (if anonymous data)	High; following ethical and GDPR-compliant protocols
Security class (if personal data)	Confidential – Class 2
Data collection period	2025 - 2026 (phased by case study)
Collection devices	Audio recorders, transcription software
Data collection method	Semi-structured interviews
Collection Device (if personal data)	Secure devices, institutional-approved software
Size of data	Moderate (~2–5 GB)
Format of data	PDF, DOCX, TXT, NVivo-compatible formats
Software used	NVivo, Word
Storage	Secured cloud based storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Not open; available upon request and ethical approval
Embargo/Dataset planned availability	Post-project finalization, under restricted terms
License	CC BY-NC-SA
Comment	Rich qualitative data for triangulating and interpreting quantitative results

B.2: Focus group Discussions

Attribute	Description
Dataset identifier	FGD_LabourTransitions
Keywords	Skills, inclusion, exclusion, job transition, disadvantaged groups

Purpose/Utility of data generation or re-use	Explore experiences of vulnerable groups and professionals on up/reskilling, access, and barriers
Origin of Data	Collected in 5 sectoral case study regions
Partner responsible for dataset	BOKU
Partners involved in data collection	Each regional case study lead (e.g. LSE for the Spanish case, UU for the Dutch case)
Description	Transcripts and field notes from moderated group discussions with stakeholders and vulnerable groups
Data type	Primary, qualitative
Language of data	Local languages; translated summaries in English
Does the dataset contain personal data?	Yes (pseudonymized)
Categories of personal data	Age, gender, occupation, migrant status, education level
Does the data collection include data on vulnerable groups?	Yes (e.g., migrants, older workers, low-skilled individuals)
Sample Size	~5–7 participants per group, 2–3 groups per case (~50–100 participants total)
Does the data collection include confidential or graded information?	Yes
Are there any other reasons why the data collection needs extra protection?	Ethical protection for at-risk participants
Data Quality (if anonymous data)	High – guided protocols and ethical compliance
Security class (if personal data)	Confidential – Class 2
Data collection period	2025 - 2026
Collection devices	Audio recorders, note-taking, transcription tools
Data collection method	Focus group interviews following standardized guide
Collection Device (if personal data)	Institutional-approved recording devices
Size of data	Moderate (~3–6 GB)
Format of data	PDF, DOCX, TXT, NVivo format
Software used	NVivo, Word
Storage	Secured cloud based storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Restricted access upon request and ethical review
Embargo/Dataset planned availability	Post-project finalization, under restricted terms
License	CC BY-NC-SA
Comment	Essential for understanding skill barriers among real users of labour market support

B.3: Case study observations

Attribute	Description
Dataset identifier	CS_OBSERVATIONS_TT
Keywords	Twin transition, labour markets, regional resilience, sectors, qualitative data, case study

Purpose/Utility of data generation or re-use	Collect in-depth contextual insights on how green and digital transitions affect specific sectors in different European regions; understand mechanisms of job creation/destruction and skill mismatches
Origin of Data	Primary data collected in 5 sectors (Tourism, Food, Agriculture, Transport, Energy) across at least 10 European NUTS2 regions
Partner responsible for dataset	UW
Partners involved in data collection	All project partners with regional focus in the 5 sectoral case studies
Description	Field notes, contextual analyses, internal reports and qualitative summaries from case study research on the dynamics of the twin transition in selected regions/sectors
Data type	Primary, qualitative (narrative, observational, descriptive)
Language of data	Local languages and English summaries
Does the dataset contain personal data?	Indirectly (only if combined with interview/focus group data)
Categories of personal data	Possibly includes role, affiliation, or occupational information (pseudonymized)
Does the data collection include data on vulnerable groups?	Yes (e.g., low-skilled workers, migrants, women, older workers in exposed sectors)
Sample Size	5 sectors × 2 regions each = ~10 region-sector observation sets
Does the data collection include confidential or graded information?	Possibly, depending on stakeholder involvement
Are there any other reasons why the data collection needs extra protection?	Regional specificity and contextual sensitivity of employer or workforce situations
Data Quality (if anonymous data)	High, based on structured fieldwork protocols
Security class (if personal data)	Class 2 (restricted/confidential if identifying elements exist)
Data collection period	2025-2026
Collection devices	Field notes, digital recorders (for linked interviews), internal templates
Data collection method	On-site observation, document review, contextual profiling, case comparison
Collection Device (if personal data)	Researcher-approved institutional tools (if linked to other primary data)
Size of data	Small to moderate (10–50 MB per case)
Format of data	DOCX, PDF, XLSX, NVivo-compatible formats
Software used	NVivo, Word, Excel
Storage	Secured cloud based storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Internal project use; selected excerpts may be published in anonymized form
Embargo/Dataset planned availability	Released post-project in thematic reports
License	CC BY-NC-SA
Comment	Crucial for triangulating findings with statistical data and behavioural insights; part of comparative case study analysis for understanding labour market resilience in diverse European contexts

B.4: Policy document analysis

Attribute	Description
Dataset identifier	POLICIES_TwinTransition
Keywords	Skills policy, reskilling, regional policy, labour market
Purpose/Utility of data generation or re-use	Understand policy framing of skills and transition strategies
Origin of Data	National and regional policy documents
Partner responsible for dataset	UoC
Partners involved in data collection	UoC, HVL, all partners will provide local language input
Description	Text corpus of strategic policy documents across 5 policy areas
Data type	Primary (collected texts), qualitative
Language of data	National languages; translated summaries in English
Does the dataset contain personal data?	No
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	Indirectly
Sample Size	~50–100 policy documents
Does the data collection include confidential or graded information?	No
Are there any other reasons why the data collection needs extra protection?	No
Data Quality (if anonymous data)	N/A
Security class (if personal data)	N/A
Data collection period	2025-2026
Collection devices	Institutional access to public policy repositories
Data collection method	Desk research, web scraping
Size of data	Small
Format of data	PDF, DOCX, TXT
Software used	NVivo, Word
Storage	Secured cloud storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Public documents
Embargo/Dataset planned availability	None
License	CC BY-NC-SA
Comment	Basis for Gioia methodology coding of skill policy narratives

B.5: Lab-Based behavioural experiment

Attribute	Description
Dataset identifier	LABEX_Reskilling_Decisions
Keywords	Labour market experiments, decision-making, upskilling, behavioural economics
Purpose/Utility of data generation or re-use	Identify behavioural drivers behind up/reskilling choices, employer-employee interaction
Origin of Data	Lab-based economic experiments with university students
Partner responsible for dataset	UoC
Partners involved in data collection	UoC, UU, HVL, UW, BOKU, Simplon, BFI, LSE
Description	Data from incentivized decisions, plus demographic and behavioural survey responses
Data type	Primary, quantitative
Language of data	English (and/or national language at location)
Does the dataset contain personal data?	Yes (pseudonymized)
Categories of personal data	Age, gender, risk preference, education, income expectations
Does the data collection include data on vulnerable groups?	No (students only, but behaviours modeled represent broader labour market dynamics)
Sample Size	500 students for the main experiment; of which ~100 students across multiple smaller sessions
Does the data collection include confidential or graded information?	Yes
Are there any other reasons why the data collection needs extra protection?	Yes – compliance with ethics guidelines for human subjects research
Data Quality (if anonymous data)	High – pre-tested protocols and validation
Security class (if personal data)	Confidential – Class 2
Data collection period	2025-2026
Collection devices	Online experiment platforms, tablets/computers
Data collection method	Controlled experiments + post-task survey
Collection Device (if personal data)	University IT infrastructure or secure experiment software
Size of data	Small to medium (~1–2 GB)
Format of data	CSV, XLSX, TXT, survey-compatible formats
Software used	Behavioural experiment specific software
Storage	Secured cloud storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Access upon justified request under ethics approval
Embargo/Dataset planned availability	Post analysis
License	CC BY-NC-SA
Comment	Will help design behavioural policy tools for upskilling encouragement

B.6: Post-Experiment Surveys

Attribute	Description
Dataset identifier	SURVEY_POSTEXP_BEHAVIOUR
Keywords	Behavioural economics, preferences, demographics, decision-making, labour market choices
Purpose/Utility of data generation or re-use	Collect complementary individual-level data on participants' socio-demographics, behavioural traits (e.g. risk and time preferences), labour market expectations, and reskilling intentions following the lab-based economic experiments
Origin of Data	Primary data collected immediately after lab sessions with participants (typically university students)
Partner responsible for dataset	UoC
Partners involved in data collection	Behavioural economics research teams involved in the lab experiments
Description	Structured survey responses linked anonymously to experimental outcomes, capturing demographic info, labour market preferences, policy attitudes, and psychometric measures
Data type	Primary, quantitative (survey), individual-level
Language of data	English (and possibly national language versions, depending on experimental site)
Does the dataset contain personal data?	Yes (anonymized or pseudonymized)
Categories of personal data	Age, gender, field of study, employment status, subjective expectations, attitudes
Does the data collection include data on vulnerable groups?	No (student participants only)
Sample Size	500 students for the main experiment; ~100 students across multiple smaller sessions
Does the data collection include confidential or graded information?	Yes (survey data treated as sensitive, even if anonymized)
Are there any other reasons why the data collection needs extra protection?	Ethical research compliance for human subjects and GDPR considerations
Data Quality (if anonymous data)	High – validated questions, piloted before deployment
Security class (if personal data)	Confidential – Class 2 (research restricted access)
Data collection period	2025-2026
Collection devices	Online survey tools (e.g., Qualtrics), lab computers or tablets
Data collection method	Self-administered post-experiment digital survey
Collection Device (if personal data)	University lab infrastructure or secure web platform
Size of data	Small (~1–2 MB per survey wave)
Format of data	CSV, XLSX, DTA
Software used	Excel, Stata, R
Storage	Secured cloud storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Restricted; available on request with ethics approval

Embargo/Dataset planned availability	After project completion and anonymization
License	CC BY-NC-SA
Comment	Critical for interpreting behavioural mechanisms behind reskilling decisions; complements experimental outcomes with personal and motivational context

B.7: Educational programme Content Data

Attribute	Description
Dataset identifier	EDU_Reskilling_Mapping
Keywords	Reskilling, upskilling, education, training content
Purpose/Utility of data generation or re-use	Assess alignment between educational offerings and future skills demand
Origin of Data	Collected from universities, VET centres, programme websites
Partner responsible for dataset	BFI
Partners involved in data collection	All case-study partners
Description	Programme content analysis from educational institutions
Data type	Primary (collected texts), qualitative and structured metadata
Language of data	National languages; English coding
Does the dataset contain personal data?	No
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	Indirectly (target groups identified in programme descriptions)
Sample Size	~50–100 programmes
Does the data collection include confidential or graded information?	No
Are there any other reasons why the data collection needs extra protection?	No
Data Quality (if anonymous data)	N/A
Security class (if personal data)	N/A
Data collection period	2026-2027
Collection devices	Online forms, institutional queries
Data collection method	Desk research + Web scraping
Size of data	Small
Format of data	DOCX, XLSX
Software used	Excel, NVivo
Storage	Secured cloud storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Internal, with institutional use possible
Embargo/Dataset planned availability	Post-project
License	CC BY-NC-SA
Comment	Used in educational alignment and ESI comparison

B.8: Reskilling Programme performance data

Attribute	Description
Dataset identifier	RESKILL_PROGRAMME_PERF
Keywords	Training evaluation, upskilling, re-skilling, programme effectiveness, labour market outcomes
Purpose/Utility of data generation or re-use	Identify success factors, challenges, and best practices in existing regional/national reskilling programmes; evaluate training impact on labour market integration and career resilience
Origin of Data	Primary data collected via interviews and document analysis from training providers, public agencies, and employers; possibly supplemented by monitoring data (if accessible)
Partner responsible for dataset	BFI
Partners involved in data collection	All partners conducting case studies involving VET, employment support, and policy actors
Description	Qualitative and structured metadata on selected reskilling and upskilling initiatives, including participant feedback, institutional setup, delivery methods, and outcomes
Data type	Primary, qualitative and structured metadata
Language of data	Local languages and English summaries
Does the dataset contain personal data?	Possibly (if participant feedback is included); mostly pseudonymized or institutional
Categories of personal data	Role/function, demographic characteristics, if individual interviews occur
Does the data collection include data on vulnerable groups?	Yes (e.g., low-qualified workers, older adults, NEETs, migrants)
Sample Size	20–30 programmes across sectors and regions; 1–3 stakeholders per programme
Does the data collection include confidential or graded information?	Yes (e.g., internal evaluations, sensitive feedback)
Are there any other reasons why the data collection needs extra protection?	Ethical protection of informant anonymity and internal institutional insights
Data Quality (if anonymous data)	High, via triangulation of sources and partner validation
Security class (if personal data)	Class 2 – confidential (restricted use)
Data collection period	2026-2027
Collection devices	Interview guides, document review templates, transcription software
Data collection method	Semi-structured interviews, qualitative surveys, desk review
Size of data	Moderate (~5–10 MB per programme)
Format of data	DOCX, XLSX, PDF, NVivo-compatible
Software used	Word, Excel, NVivo
Storage	Secured cloud storage
Transfer	Secured transfer methods
Archiving	Project repository, long-term according to DMP
Degree of openness/ Conditions of use of data	Internal use; anonymized summaries may be included in public deliverables
Embargo/Dataset planned availability	Post-project

License	CC BY-NC-SA
Comment	Vital for developing quality principles for training design and contributing to the dashboard's programme matching engine

B.9: Institutional Mapping (transition Typology)

Attribute	Description
Dataset identifier	INSTMAP_TRANSITION_TOPOLOGY
Keywords	Institutions, twin transition, actors, agency, regional governance, innovation systems
Purpose/Utility of data generation or re-use	Map and analyze the institutional configurations and dynamics that influence the twin transition and labour market transformations in regional case studies; identify change agents, events, and enabling or constraining structures
Origin of Data	Primary data collected through document analysis, interviews, and desk research in regional case studies
Partner responsible for dataset	BOKU, FHNW, UW
Partners involved in data collection	All project partners conducting institutional analysis in sectoral/regional case studies
Description	Structured mapping of key institutional actors (public, private, third sector), their roles, interrelations, narratives, and change trajectories influencing up/reskilling and labour adaptation
Data type	Primary, qualitative, structured metadata
Language of data	Local languages (for source documents); English (for analysis and summaries)
Does the dataset contain personal data?	Possibly (e.g., stakeholder roles); anonymized or pseudonymized when reported
Categories of personal data	Role/affiliation, organizational type (if interviews or profiles are included)
Does the data collection include data on vulnerable groups?	Indirectly (through representation or neglect in institutional arrangements)
Sample Size	~10–20 institutions per region × 10 regions = ~100–200 entities mapped
Does the data collection include confidential or graded information?	Possibly (if based on unpublished stakeholder feedback)
Are there any other reasons why the data collection needs extra protection?	Sensitive insights into institutional coordination or gaps may be politically or strategically delicate
Data Quality (if anonymous data)	High – based on structured and comparative methodology (Strambach & Pflitsch, 2018, 2020)
Security class (if personal data)	Class 2 – restricted/confidential if informant-specific data exists
Data collection period	2025-2027
Collection devices	Institutional mapping templates, interview guides, desk research forms
Data collection method	Desk research, stakeholder interviews, policy analysis
Size of data	Moderate (~10–30 MB per region)
Format of data	DOCX, XLSX, NVivo, PDFs
Software used	Excel, NVivo
Storage	Secured cloud storage
Transfer	Secured transfer methods
Archiving	Project specific repository

Degree of openness/ Conditions of use of data	Restricted to project team; published in aggregate or anonymized form
Embargo/Dataset planned availability	2027 (with final reporting); selected visual summaries may be public
License	CC BY-NC-SA
Comment	Critical for understanding institutional enablers and barriers to skill system reform and for framing stakeholder roles in the labour market transitions

B.10: Discourse and Media Analysis

Attribute	Description
Dataset identifier	DISCOURSE_MEDIA_TT
Keywords	Public discourse, media narratives, green transition, digital transition, skills, framing, cognitive regimes
Purpose/Utility of data generation or re-use	Analyse how green and digital transitions, jobs, skills, and inclusion/exclusion are framed in media and public discourse at regional and national levels; understand the cognitive and normative dimension of labour market change
Origin of Data	Primary data collected from media articles, op-eds, public statements, social media posts, and regional campaign materials
Partner responsible for dataset	BOKU, FHNW
Partners involved in data collection	All regional case study partners conducting narrative and discourse analysis
Description	Textual corpus and qualitative coding of narratives around skills, employment, transitions, and policy debates using discourse analysis methods
Data type	Primary, qualitative
Language of data	Local languages (original sources); English (for translated analysis)
Does the dataset contain personal data?	Possibly (if named individuals are quoted); pseudonymized when needed
Categories of personal data	Names, affiliations, public roles (if media coverage involves individuals)
Does the data collection include data on vulnerable groups?	Yes (as narrative subjects in coverage and framing)
Sample Size	~50–100 media/discourse items per region × 10 = ~500–1,000 items total
Does the data collection include confidential or graded information?	No (publicly available sources only)
Are there any other reasons why the data collection needs extra protection?	Careful citation and de-identification needed if discourse quotes individuals in critical roles
Data Quality (if anonymous data)	High – structured coding based on validated discourse analysis frameworks
Security class (if personal data)	Class 1 (public domain) to Class 2 (if source includes identifiable opinions/roles)
Data collection period	2026-2027
Collection devices	Media scraping tools, qualitative coding templates
Data collection method	Manual and automated media search, text extraction, qualitative coding
Collection Device (if personal data)	N/A (data collected from public sources)

Size of data	Moderate (~20–50 MB total)
Format of data	TXT, PDF, DOCX, NVivo-compatible
Software used	NVivo, Excel
Storage	Secured cloud storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Not open (due to copyright); qualitative summaries may be published
Embargo/Dataset planned availability	Publicly referenced in reports by 2027; raw corpus not open
License	CC BY-NC-SA
Comment	Supports understanding of public perception and legitimacy of transition policies and labour narratives; complements stakeholder interviews and institutional mapping

B.11: Cost-Benefit Case Data

Attribute	Description
Dataset identifier	COSTBENEFIT_SKILLS_POLICY
Keywords	Reskilling, labour mobility, training investment, economic evaluation, policy trade-offs
Purpose/Utility of data generation or re-use	Compare the effectiveness and efficiency of alternative labour market interventions (e.g. reskilling vs. mobility incentives) by quantifying their costs and returns for individuals, firms, and public agencies
Origin of Data	Mixed sources: primary data from stakeholder interviews and programme evaluations; secondary data from Eurostat, national accounts, and training programme cost structures
Partner responsible for dataset	BFI, HVL, UoC, LSE
Partners involved in data collection	Regional case study partners; economic modelling teams
Description	Structured case-specific datasets including cost items (training delivery, foregone income, subsidies) and benefit measures (employment probability, wage increases, firm productivity) in selected transition sectors and regions
Data type	Mixed (quantitative + qualitative), aggregated and case-specific
Language of data	English
Does the dataset contain personal data?	No (aggregated programme-level data)
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	Yes (e.g. older workers, NEETs, migrants) if targeted by analysed interventions
Sample Size	10–15 case studies; each with multiple cost/benefit indicators
Does the data collection include confidential or graded information?	Yes – includes internal or unpublished cost figures or impact estimates from partner institutions
Are there any other reasons why the data collection needs extra protection?	Commercial sensitivity or reputational concerns (e.g., underperformance of programmes)
Data Quality (if anonymous data)	High – triangulated from multiple sources and cross-checked
Security class (if personal data)	N/A (but Class 2 if internal programme evaluations are used)
Data collection period	2026-2027
Collection devices	Structured data collection templates, cost-benefit modelling sheets

Data collection method	Desk research, expert interviews, economic modelling
Collection Device (if personal data)	N/A
Size of data	Moderate (~5–10 MB per case study)
Format of data	XLSX, CSV, DOCX, PDF
Software used	Excel, R, STATA
Storage	Secured cloud storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Restricted; summary results published, raw data by request only
Embargo/Dataset planned availability	Finalised in 2026 (end of project); outputs in policy briefs
License	CC BY-NC-SA
Comment	Key for justifying strategic choices in the dashboard and policy toolkits; links economic efficiency with social impact across transition pathways

B.12: Scenario Simulation Inputs (Dashboard Tool)

Attribute	Description
Dataset identifier	SIMINPUT_TwinDash
Keywords	Scenario planning, job creation/destruction, demographic inputs
Purpose/Utility of data generation or re-use	Enable policy simulation of skill needs, job transition paths, re/upskilling impacts
Origin of Data	Synthesized from project datasets
Partner responsible for dataset	HVL, UU, UoC, FHNW
Partners involved in data collection	All
Description	Parameterized inputs for policy scenarios across regions and sectors
Data type	Synthetic, derived from other data
Language of data	English
Does the dataset contain personal data?	No
Categories of personal data	N/A
Does the data collection include data on vulnerable groups?	Indirectly
Sample Size	~100–500 scenario configurations
Does the data collection include confidential or graded information?	No
Are there any other reasons why the data collection needs extra protection?	No
Data Quality (if anonymous data)	Modelled from validated data
Security class (if personal data)	N/A
Data collection period	Synthesized late 2027
Collection devices	Scenario builder UI
Data collection method	Expert input and modelling
Size of data	Small
Format of data	URL
Software used	Web dashboard tool

Storage	Secured cloud storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Publicly viewable, configurable
Embargo/Dataset planned availability	Released alongside dashboard
License	CC BY-NC-SA
Comment	Enables interactive policymaking support for stakeholders

B.13: Self-Assessment Questionnaire Responses

Attribute	Description
Dataset identifier	SELFASSESS_TOOL_RESPONSES
Keywords	Skills gap, training needs, individual profiling, organisational needs, reskilling pathways
Purpose/Utility of data generation or re-use	Collect self-reported data from individuals and/or organisations about their skill sets, training needs, awareness of the twin transition, and perceived barriers to upskilling; support individualised advice and policy dashboards
Origin of Data	Primary data collected via an online self-assessment tool co-developed with stakeholders
Partner responsible for dataset	BFI, Simplon, MoP, HVL
Partners involved in data collection	All partners promoting the tool during piloting and stakeholder engagement phases
Description	Structured questionnaire responses from individuals (workers, jobseekers) and/or organisations (HR, training managers), providing data on skills, knowledge, preferences, motivations, and challenges in training or transition
Data type	Primary, quantitative and qualitative (survey)
Language of data	Multilingual interface (national languages); standardised outputs in English
Does the dataset contain personal data?	Yes (consent-based and pseudonymized)
Categories of personal data	Age group, gender (optional), occupation, education level, location (region), training history, motivation/attitude indicators
Does the data collection include data on vulnerable groups?	Yes (tool targeted at including low-skilled, older workers, migrants, NEETs)
Sample Size	Estimated 500–1,000 users during pilot phase
Does the data collection include confidential or graded information?	Yes – individual feedback may be sensitive or self-reflective
Are there any other reasons why the data collection needs extra protection?	Yes – GDPR compliance, informed consent, and ethical handling of vulnerability indicators
Data Quality (if anonymous data)	High – enforced data validation rules and internal consistency checks
Security class (if personal data)	Class 2 – restricted, pseudonymized with controlled access
Data collection period	Late 2027
Collection devices	Web browser or mobile-accessible digital form
Data collection method	Self-administered digital questionnaire via platform UI

Collection Device (if personal data)	User-side device (e.g. smartphone, computer); data stored on GDPR-compliant server
Size of data	Moderate (~5–10 MB for full pilot phase)
Format of data	JSON, XLSX, CSV
Software used	Custom online survey infrastructure; data exported to Excel/R
Storage	Secured cloud storage
Transfer	Secured transfer methods
Archiving	Project specific repository
Degree of openness/ Conditions of use of data	Not open; aggregated insights may be published
Embargo/Dataset planned availability	Post-project, only in anonymized, aggregated form
License	CC BY-NC-SA
Comment	Essential for user-centred design of skill-matching tools and for integrating behavioural insights into the policy dashboard; complements focus groups and experimental findings

Annex 2: Information letter, consent form template

Participation information form

Researchers:

[Date]
[Participant's Address]
[City, State, Zip Code]

Dear Participant,

You are invited to participate in a research project studying how European labour markets are adapting to the green and digital transitions. The aim is to identify mechanisms and conditions that influence labour market resilience, inclusion and exclusion, and the challenges faced by key stakeholders. This is an academic research project and the collected personal data will be used exclusively for research purposes

The purpose of the project

The study is part of the wider research project Resilience through re-skilling and upskilling for European labour markets in transition (SkillResilience4EU). The project is funded by the HORIZON EUROPE programme. The main objective of SkillREsiliene4EU is to explore and reposition the concept of resilience of European labour markets taking into account the rapid digital and green changes and related challenges, and to describe the possibilities for action, through reskilling and upskilling, to reduce the labour market mismatches caused by this twin transition. The ultimate aim of the project is to promote new approaches that can help policy makers to better understand individual problems and make the best policy decisions in order to enhance labour market resilience. The data we collect from your participation will be used for this purpose only and is intended to benefit both the research and the local community. The results are to be published in reputable scientific journals.

Why are you being asked to participate?

You are invited to participate because your professional or lived experience offers valuable insight into labour market changes brought on by green and digital transitions. Participants are selected from various sectors and regions across Europe. You were identified either through institutional networks, public domain sources, or by recommendation from project partners.

Which institutions is responsible for the research project?

Western Norway University of Applied Sciences (HVL) is responsible for the project (data controller). University of Crete (Greece), Utrecht University (the Netherlands) BOKU University (Austria), Berufsförderungsinstitut Wien (Austria), University of Warsaw (Poland), University of Applied Sciences and Arts Northwestern (Switzerland), London School of Economics (United Kingdom), Simplon.co (France), Municipality of Platanias (Greece), are joint data controllers and official partners in the project. All data sharing will have the same adequate level of protection.

Participation is voluntary

Participation in the project is voluntary. You can stop your participation at any time without giving a reason. There will be no negative consequences for you if you chose not to participate or later decide to withdraw.

What does participation involve for you?

You may be invited to participate through personal or group interviews, participant observation, or stakeholder workshops. These sessions will focus on the challenges and dynamics in regional labour markets during the twin transition. We will collect the following personal data: - Name and contact information - Background information - Audio/video recordings (with consent) Data will be recorded electronically and securely stored. We may also use publicly available data, such as institutional websites or publications, to supplement our understanding**.**

Data protection - how we store and use your personal data

Your data will be accessible only to the project team within the institutions mentioned. Your name and contact details will be replaced with a code stored separately. Data will be securely saved on institutional servers, encrypted and/or password-protected. You will not be personally identifiable in any publications unless you explicitly agree to it. If any third-party services are used (e.g., transcription), they will be bound by confidentiality agreements. No data will be processed outside the EU unless specified with appropriate safeguards.

Your personal privacy – how we will store and use your personal data

- We will only use your personal data for the purpose(s) specified here and we will process your personal data in accordance with data protection legislation (the GDPR).
- The data will only be processed by staff employed by the responsible institutions in this project (see above). This means that identifiable data (recordings, notes and interviews) gathered in the Norwegian case studies will only be available to researchers from HVL. Data or findings can be shared with the other partners in the project, but this data will be completely anonymised.
- Your name and contact details will be replaced with a code. The list of names, contact details and respective codes will be stored separately from the rest of the collected data.
- The data will be collected on devices owned by the involved institutions and stored on the HVL-secured OneDrive account.
- No personal data will be publicly available.

What gives us the right to process your personal data?

We will process your personal data based on Public interest (General Data Protection Regulation art. 6 nr. 1 bokstav 2), jf. art. 9 nr. 2 bokstav j).

What happens to your personal data when the project ends?

The planned end date of the project will be 31.12.2027. After the project ends, your data will be anonymised and stored for future academic use (e.g., replication, education, or further research). Only de-identified data will be retained, stored securely by project partners

Your rights

As long as you can be identified in the collected data, you have the right to:

- access the personal data that is being processed about you
- request that your personal data is deleted
- request that incorrect personal data about you is corrected/rectified
- receive a copy of your personal data (data portability), and
- send a complaint to the Norwegian Data Protection Authority regarding the processing of your personal data.

Where can I find out more?

If you have questions about the project, or want to exercise your rights, contact: - Project Leader Maria Tsouri (Maria.Tsouri@hvl.no)

HVL's Data Protection Officer: Trine Anniken Larsen (personvernombud@hvl.no) Implementing partner Data Protection Officer: NAME (email@partner)

If you have questions about how data protection has been assessed in this project, contact: Data Protection Services, by email: (personverntjenester@sikt.no) or by telephone: +47 53 21 15 00.

Only to be used if Consent is used as legal processing basis

CONSENT FORM

I have received and understood the information about the Skillresilience4EU research project and have been given the opportunity to ask questions.

I consent to participate in the research	**YES**	☐	**NO**	☐
I consent to be recorded/taped	**YES**	☐	**NO**	☐
I agree that the following personal data will be collected with the purpose of (specify for each data): -XX -XX	**YES**	☐	**NO**	☐
I agree that my personal data can be processed until the end of the project (DATE)	**YES**	☐	**NO**	☐
I agree that I can be contacted again for follow-up activities	**YES**	☐	**NO**	☐

Signed by participant, date)

Skill Resilience 4EU

Funded by the European Union

Annex 3: SIKT notification form

The notification form is available on MS Teams : SIKT notification form 30.06.2025.pdf

Sikt

Notification Form for personal data

Reference number
637378

Which personal data will be processed?

- Name
- Contact information
- Online identifiers
- People in images or video recordings
- Voice on audio recordings
- Background information that, when combined, can be used to identify an individual

Describe the background information
workplace, skills, education, income brackets,

Data controller

Institution responsible for the project
Høgskulen på Vestlandet / Fakultet for ingeniør- og naturvitskap / Mohnsenteret for innovasjon og regional utvikling

Project leader
Maria Tsouri, Maria.tsouri@hvl.no, tlf: 55587937

Do multiple institutions share responsibility (joint data controllers)?
Yes

Joint data controllers

Institution
University of Warsaw
Poland
marczewska.m.a@gmail.com

Joint data controllers

Institution
BOKU University
Austria
gesa.pflitsch@boku.ac.at

Joint data controllers

Institution
University of Crete
Greece
andreas.panagopoulos@gmail.com

Joint data controllers

Institution
Fachhochschule Nordwestschweiz Academy of Art and Design
Switzerland
tina.haisch@fhnw.ch

Joint data controllers

Institution
London School of Economics
United Kingdom
a.rodriguez-pose@lse.ac.uk

Joint data controllers

Annex 4: Checklist DataverseNO

Checklist & workflow

DataverseNO

Follow the steps below to make sure that your dataset complies with the DataverseNO Deposit Agreement. Follow the links for more detailed information.

Prepare

- ❑ **File naming and organization**
  - ❑ Follow good practice for file naming and organization.
  - ❑ Follow general recommendations for spreadsheets / tabular files.
- ❑ **Convert to preferred file formats**
  - ❑ Choose a file format that is suitable for long term-preservation.
  - ❑ Convert your data files into a preferred file format before archiving.
- ❑ **Prepare a ReadMe file**
  - ❑ Describe your data in a ReadMe file, using a template (general | code).
  - ❑ Save in plain text format (.txt) with Unicode UTF-8 character encoding.
- ❑ **File and dataset size**
  - ❑ The size of an individual file should not exceed 100 GB.
  - ❑ The size of a total dataset should not exceed 200 GB.
  - ❑ For larger files or datasets, contact our support service!

Deposit

- ❑ **Create an account**
- ❑ **Create a draft**
  - ❑ Choose your home institution or project from the top banner.
  - ❑ Click the 'Add Data' button and select 'New Dataset'.
- ❑ **Enter metadata**
  - ❑ Enter as much metadata as possible.
  - ❑ Click the 'Save Dataset' button at the bottom of the page.
- ❑ **Enter more metadata**
  - ❑ Select the 'Metadata' tab and click the 'Add + Edit Metadata' button.

  (Note that more metadata fields will appear)
  - ❑ Click 'Save Dataset' button at the bottom of the page.
- ❑ **Confirm or specify a license**
  - ❑ Standard license for reuse is CC0. Not suitable or archiving code? Contact our support service!
- ❑ **Upload files**
  - ❑ A dataset must not contain more than 300 files. More files? See deposit guide!
  - ❑ A file upload should not exceed 200 GB in total size.
  - ❑ Select the 'Files' tab and click 'Upload Files'.
    - ❑ Upload single files: click 'Select Files' to 'Add' button.
    - ❑ Want to keep folder structure? Click the 'Upload a Folder' button.
  - ❑ Click 'Save' button when done.
- ❑ **Restricted access**
  - ❑ Need to share a dataset before publication, for instance with collaborators or peer-reviewers? Contact our support service!
  - ❑ You may restrict access to files in a published dataset for a limited time period.

Submit

- ❑ **Submit for review**
  - ❑ Prepared your data according to the guidelines? Click 'Submit for Review.'
  - ❑ Note that your dataset is only a draft. The dataset DOI is not active yet.

Checklist & workflow

DataverseNO

Get your data published

- ❑ **Curation**

A curator from your institutional collection will review your dataset for compliance with the deposit guide and, if necessary, inform you about changes that need to be made before publication. Allow a few days for this process. You will receive a curation report by email and the dataset will be returned to you for revision.

- ❑ **Revision**
  - ❑ If needed, make the recommended changes. Alternatively, explain why you don't agree with the recommendations.
  - ❑ Done with the revision? Click 'Submit for Review' button.
- ❑ **Publication**

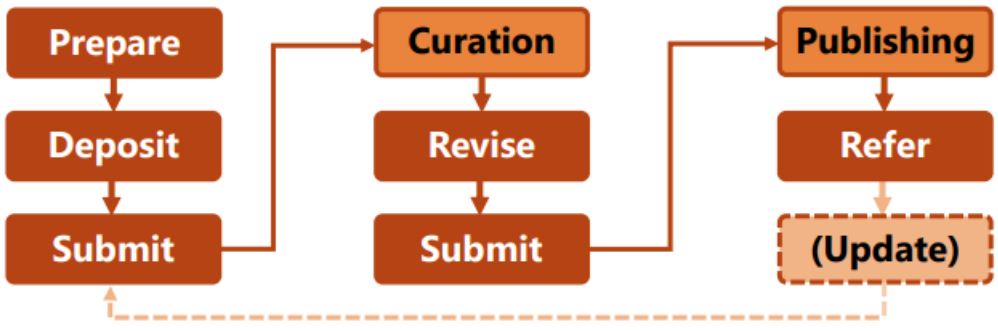
Once your dataset draft is approved, the curator will publish it. The dataset DOI is activated.

After publication

- ❑ **Refer to your dataset**
  - ❑ Refer to your dataset in publications using the reference in the blue box provided by the repository.
- ❑ **Modifications after publication**
  - ❑ Log in, click 'Edit Dataset'.
  - ❑ Make your changes. To upload a new version of a file, first delete the old one.
  - ❑ Click 'Save changes' (metadata) or 'Done' (files).
  - ❑ Click 'Submit for Review'.
  - ❑ A curator from your institutional collection will review your modifications and republish your dataset.
  - ❑ Note that this will create a new version of the dataset. Previous versions are still accessible.

More information and help

- ❑ Didn't find what you were looking for? Check the full deposit guide!
- ❑ Any questions? Contact the RDM support of your home institution!



Annex 5: The Consortium

Short name	Full name	Homepage	Logo
HVL	Western Norway University of Applied Sciences	https://www.hvl.no/en/	
BOKU	BOKU University	https://boku.ac.at/en/	
LSE	London School of Economics	https://www.lse.ac.uk/	
UoC	University of Crete	https://www.uoc.gr/en/	
UW	University of Warsaw	https://en.uw.edu.pl/	
UU	University of Utrecht	https://www.uu.nl/en	
FHNW	University of Applied Sciences and Arts Northwestern Switzerland	https://www.fhnw.ch/en/	
BFI	Berufsförderungsinstitut Wien	https://www.bfi.wien/	
Simplon	Simplon.co	https://www.simplon.co/	
MOP	Municipality of Platanias	https://www.platanias.gr/en/	

Annex 6: Project Summary

SkillResilience4EU - Resilience through re-skilling and upskilling for European labour markets in transition.

The twin transition (defined as the coexistence and interplay of the green and digital transitions) has enormous impacts on European labour markets. Because the green and digital transformations can feed into, facilitate, or hinder each other, it has been difficult to predict how labour markets will absorb and respond to changes and disruptions in employment conditions, skill needs and job availability and mobility. Other ongoing global challenges and macro-economic events, like the COVID-19 pandemic, also contribute to a profound reshaping of labour markets in Europe. New sectors emerge, existing sectors need to adapt and transform. New skills need to be developed or need to be transferred from other industries. Regions and sectors need to narrow labour market and skill mismatches to minimise the costs and to maximise the benefits of job destruction and job creation processes.

Different sectors and regions are affected in varying ways and intensities, either by green or digital transitions, or the combined impact of the twin transition. This inequal distribution of job creation and destruction processes may favour or leave behind places, sectors, and socio-economic groups and may threaten social cohesion and inclusion. The institutional and policy context needs to become more flexible and responsive to cope with the ongoing transformations and narrow down the labour market mismatches. Tailored and cost-effective policies and programmes for reskilling and upskilling, in particular for the most vulnerable and left-behind socio-demographic groups and places, need to be developed together with policy makers, VET providers, unions, public authorities, and other decision makers.

Funded by Horizon Europe, the European Union's Framework Programme for Research and Innovation, SkillResilience4EU will introduce a novel conceptual framework to describe and understand the impacts of the twin transition on European labour markets and will investigate the complex mechanisms, dynamics, and challenges that regions and institutions undergo by exploring selected sectors (tourism, food, transport, agriculture, and energy). The project will develop a management tool for policy makers to support them in managing labour markets in transition with recommendations for policy scenarios. SkillResilience4EU will also map and evaluate educational and training programmes for upskilling and re-skilling and will deliver recommendations and practical resources to support individuals and employers with specific focus on career guidance and development.

To achieve this ambition, the SkillResilience4EU consortium unites higher educational institutions (Western Norway University of Applied Sciences, Utrecht University, London School of Economics, University of Warsaw, University of Natural Resources and Life Sciences in Vienna, University of Crete, North-Western Switzerland University of Applied Sciences) one vocational training institute (BFI), one private training organization (Simplon.co) and a local public authority (Municipality of Platanias). The partners cover a whole range of expertise: economic geography, innovation studies, regional development, sustainability transitions, qualitative research, institutional research, policy research, labour and behavioural economics, education, arts and design, social inclusion, VET and lifelong learning. Coordinated by Western Norway University of Applied Sciences, the project was launched on 1st January 2025 and will run for 3 years.