



**Transform  
Dairy  
Net**

# **Deliverable D8.1**

## **Data management plan**



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## List of Acronyms

CA	Consortium Agreement
CSV	Comma Separated Values
CCC	Cow-Calf Contact
DEC	Dissemination, Exploitation, and Communication
DPIA	Data Protection Impact Assessment
EC	European Commission
EKIN	European Knowledge and Innovation Network
FAIR	Findable, Accessible, Interoperable, and Reusable
GDPR	General Data Protection Regulation
JPEG	Joint Photographic Experts Group
LL	Living Lab
MP4	Moving Picture Experts Group version 4
NIPs	National Innovation Practice Hubs
NNF	National Network Facilitator
PNG	Portable Network Graphic
TDN	TransformDairyNet
TIFF	Tag Image File Format
TN	Thematic Network

# 1. Introduction

This Data Management Plan (DMP) outlines the strategy for managing data generated, shared, and archived within the TransformDairyNet project. TransformDairyNet is a thematic network project funded by Horizon Europe which will harness the expertise of 26 European partners to create 11 National Innovation Practice Hubs (NIPS) and a European Knowledge and Innovation Network (EKIN) of dairy farmers, veterinarians, advisors, supply chain actors, farmer organisations, researchers and policy makers. The aim of TransformDairyNet is to work together to upscale cow calf contact (CCC) in the dairy industry.

The network involves multiple institutions across Europe, necessitating robust coordination and adherence to European data standards, legal requirements, and best practices in data management. The DMP aims to ensure that data is handled in a manner that supports open science, fosters collaboration, and protects sensitive information. A DMP is a formal document that outlines how data is to be handled both during a research project and after the project is completed. Data management plans must assure that data is traceable, available, authentic, citable, properly stored and that it adheres to clearly defined legal parameters and appropriate safety measures governing subsequent use. This DMP follows the structure template provided by the European Commission (EC) template.

## 2. Data summary

The project will align with best practice data management principles, including adherence to General Data Protection Regulation (GDPR), and the FAIR (Findable, Accessible, Interoperable, and Reusable) data principles. These ensure that data is collected, processed, and stored in compliance with European and international standards.

All relevant information obtained during TransformDairyNet will be managed according to the FAIR principles. The project outputs will be collected and managed according to a standard framework and methodology for synthesis, storage and wider distribution of CCC knowledge. Standardised data recording sheets for all partners will be developed, for example in the collation of process and content outputs by National Network Facilitators (NNF) in National Innovation Practice Hubs (NIP's) and for Living Labs (LL). Data access and use will be restricted to TransformDairyNet partners initially. The use of data within TransformDairyNet for communication, dissemination and exploitation (DEC) purposes will be integrated into the DEC plan and approved by the Management group. Personal data will be managed in compliance with GDPR.

All activities will be undertaken with participants on a strictly voluntary basis and all participants will be at least 18 years old. Participants will be provided with written information in their own language about the requirements of their involvement and they in turn will provide written consent of their participation in a format appropriate to the task (for example, through clicking a consent button in an online survey or signing a consent form for a face-to-face interview). Participants may withdraw their participation at any time without providing a reason. The minimal amount of personal data will be collected, and all data will be collected and processed in line with GDPR requirements. Further, mailing lists for e-newsletters, webinar and workshop registrations and other dissemination activities that collect personal data will also comply with GDPR requirements and will be stored in a secure Microsoft Sharepoint folder. Access to these folders will be limited to TransformDairyNet partners. All mailing lists will include an opt in and unsubscribe feature and email addresses will only be shared with the owners permission.

TransformDairyNet is a thematic network as opposed to a scientific research project, however a range of data will be gathered and generated to support its objectives. including:

- **Project data:** Project outputs (e.g., LL results, survey results)
- **Project Deliverables:** Detailed documentation on various milestones and results achieved during the TransformDairyNet project.
- **Administrative data:** Project management, partnership agreements
- **Survey and interview data:** Qualitative data from stakeholders and participants
- **Metadata:** Detailed documentation describing data collection methods, variables, and processes

While not strictly research data the following research records may also be important to manage throughout the research lifecycle and beyond:

- Correspondence (electronic mail and paper-based correspondence)
- Project files
- Grant applications
- Ethics applications
- Technical reports
- Research reports
- Master lists
- Signed consent forms

## 2.1. Data Format and Standards

Data will be collected and stored in widely accepted formats to ensure interoperability and longevity: Reports and documents containing textual data, along with multimedia data such as images and videos, will be collected.

- **Text data:** CSV, word documents
- **Numeric data:** CSV and excel
- **Images and media:** JPEG, PNG, TIFF, MP4
- **Metadata:** Based on FAIR principles (Findable, Accessible, Interoperable, Reusable), such as Dublin Core, an international metadata standard.

## 2.2. Generating and reusing data

One of the objectives of Work Package (WP) 3, is to collate existing knowledge on current CCC practices in Europe. This will be achieved by distributing an online survey to European CCC and dairy industry stakeholders. All data collected will be anonymous and in line with all GDPR regulations. All participants will provide written consent and can withdraw at any time.

## 3. FAIR Data

### 3.1. Making data findable, including provisions for metadata

#### 3.1.1. Data Collection Process

Data will be collected through a range of methods and sources. TransformDairyNet will gather information from farmers in each NIP on existing CCC practices. The LL process will generate further data in the form of trial results. Additionally, the project will utilise the findings from surveys and questionnaires to gather information on cow-calf contact practices throughout Europe.

Data will be collected through collaborative platforms such as cloud-based repositories, shared drives, and secure servers, in compliance with GDPR.

All data collection processes will follow standardised protocols to ensure consistency across partners.

Each dataset will be accompanied by descriptive metadata to ensure clarity, replicability, and proper usage.

Robust provisions will be implemented for metadata to ensure data is findable, accessible, interoperable, and reusable (FAIR principles). Collaboration tools and shared repositories will be designed to facilitate metadata exchange and integration across different systems and institutions within the thematic network, promoting interoperability. We will regularly update metadata to reflect any changes and ensure compliance with evolving European data management standards.

### 3.2. Making data accessible

TransformDairyNet is a Thematic Network (TN) with a primary role to compile existing theoretical and practical knowledge on CCC systems in easy to use and accessible tools and materials for dairy farmers and other actors across the European dairy sector. TransformDairyNet is therefore not primarily aiming to produce new research publications. However, to target the wider scientific community and advisors and policy makers across the supply chain we intend to co- generate scientific articles on compiling existing CCC knowledge and identifying end-user needs, generating new knowledge through co-innovation and learning from TransformDairyNet to transform farming systems. According to the ethical principles of publication, participating farmers and other actors will co-own this knowledge through authorship. These TransformDairyNet publications will conform to open access principles (either green or gold publishing arrangements) that actively improve access to scientific information and add value to public investment in research funded under Horizon Europe.

In the compiling of research publications, partners will be communicated with as potential contributors in advance of paper preparation, and where relevant, this may include consulting with and gaining input from members of NIPs and the EKIN. Accepted guidelines for authorship are documented in the Consortium Agreement (CA). All TransformDairyNet results and outputs, including end-user tools and materials such as Technical Notes, Video case studies and Podcasts, will be accessible online via the TransformDairyNet website in line with open access policies without infringing publishers' rights. All peer-reviewed publications will be available free of charge through the academic partners' open access repositories (Open Source Europe). The TransformDairyNet website will be linked to social media channels, where end-user tools and material will be widely disseminated across existing freely accessible channels, according to the most impactful mechanisms for end-users in each partner country. All outputs from the project will be repositied on the TransformDairyNet website and the EU Farmbook platform. The main purpose of EU-FarmBook is to support knowledge exchange, by further developing, expanding and maintaining an easily accessible and user-friendly EU-wide Online Platform for practitioners in the agriculture and forestry sectors.

### 3.2.1. Meta data

While we are not producing new data or databases, we will be making our outputs available through the TransformDairyNet website and EU-Farmbook. The use of EU-Farmbook ensures the outputs will be available after the life of the three-year project. Meta data will be produced from various aspects of the project.

## 3.3. Making data interoperable

In our DMP for TransformDairyNet, we will prioritise making data interoperable to ensure seamless integration and use across different platforms, systems, and research disciplines. To achieve this, we will adhere to internationally recognised metadata standards such as Dublin Core, and domain-specific standards relevant to the thematic focus. Data will be formatted in widely accepted, machine-readable formats like CSV, PDF and Microsoft word, facilitating easy data sharing and linking between repositories. We will use controlled vocabularies and ontologies, such as the European Multilingual Thesaurus and other domain-specific frameworks, to standardize terms and ensure consistency in how data is described and categorised. Where applicable, we will implement APIs and open data protocols to enable automated data exchange, and we will work closely with European partners to ensure that our data management practices align with broader interoperability frameworks, such as those promoted by the European Open Science Cloud (EOSC). This approach will ensure that data can be easily reused and integrated by other researchers and stakeholders within the thematic network and beyond.

### **3.3.1. Increase data re-use**

Research outputs may be in the form of articles in scientific publications, practice abstracts, webinars and podcasts will be open access to ensure outcomes from the project are widely accessible.

## 4. Other research outputs

Publications in scientific journals, conference presentations, articles in magazines, project abstracts, and posters will be key channels for disseminating TransformDairyNet's results and technical innovations. These efforts will highlight the project's methodologies, findings, and solutions, contributing to the broader knowledge base and encouraging collaboration with experts and practitioners in the dairy and agricultural sectors. For specific outputs, such as exhibition participation and brochure guides, the project will use its social media platforms to share announcements.

### 4.1. Allocation of resources

Data management is the responsibility of all partners in the consortium, however UCD will oversee the data management plan in their role as the project co-ordinator.

Outputs from the project will be available on the TransformDairyNet website and also on EU-farmbook. EU farm book can be used to house all materials produced from the project as it will be available after the project finishes. The main purpose of EU-FarmBook is to support knowledge exchange, by further developing, expanding and maintaining an easily accessible and user-friendly EU-wide Online Platform for practitioners in the agriculture and forestry sectors. EU-Farmbook allows wider access to trustworthy knowledge objects according to FAIR data principles.

### 4.2. Data Security

All data will be collected in line with GDPR requirements and will be stored in a secure Microsoft Sharepoint folder. Access to these folders will be limited to TransformDairyNet partners.

## 5. Ethics

### 5.1. Ethical and Legal Considerations

The project will comply with the GDPR to safeguard personal data. This includes:

- Ensuring informed consent from all research participants
- Processing personal data only for specified, legitimate purposes
- Implementing technical and organisational measures to protect data privacy

A Data Protection Officer (DPO) has been appointed to oversee data protection processes. As the coordinating partner, UCD have completed Data Protection Impact Assessments (DPIAs) to identify and mitigate risks and are considered a low-risk project.

Ethical approval will be sought for specific aspects of the project as necessary, in line with each organisation's ethic's policy.

### 5.2. Data Preservation and Archiving

Upon project completion, all datasets and associated metadata will be archived in long-term, trusted repositories that comply with the Open Archival Information System (OAIS) standard. Datasets will be preserved for a minimum of 10 years to ensure their availability for future research and policy-making.

All archived data will retain its metadata and version history to ensure traceability, reproducibility, and transparency. Sensitive data will be archived in accordance with GDPR, with appropriate access controls in place.

This DMP is a living document and will be reviewed regularly to ensure its continued relevance and compliance with evolving data management standards and regulations. Reviews will be conducted regularly by the project coordinator, with updates made as necessary based on project progress, changes in legislation, or emerging data management best practices.

This DMP ensures that the multi-European partner thematic network project adheres to best practices for data management, respecting legal requirements, and ensuring that data is accessible, reusable, and secure for the benefit of future research and stakeholders.

# 6. Other issues

The UCD Data Protection Impact Assessment (DPIA) has been carried out which involves a screening questionnaire and low-risk assessment for this project. The DPIA is a tool designed to identify risks arising out of the processing of personal data, and to minimise these risks as far and as early as possible by introducing risk reducing measures. We have also sought advice from the UCD Data Management Advice Clinics.

HISTORY OF CHANGES		
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1.1		

