D6.3: DATA MANAGEMENT PLAN – VERSION 2

Funded by
the European Union

THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON EUROPE RESEARCH AND INNOVATION PROGRAM UNDER GRANT AGREEMENT NO. 101060818

ABSTRACT

aWISH project aims to develop and offer a cost-efficient solution to evaluate and improve the welfare of meat producing livestock at a large scale, across Europe. This approach will be developed and evaluated in close collaboration with all actors involved, from primary producers up to policy makers and citizens.

DOCUMENT SUMMARY

Full Title	**Animal welfare indicators at the slaughterhouse – aWISH**		
Call	HORIZON-CL6-2021-FARM2FORK-01		
Topic	HORIZON-CL6-2021-FARM2FORK-01-05	**Type of action**	Research and Innovation Actions
Project coordinator	EIGEN VERMOGEN VAN HET INSTITUUT VOOR LANDBOUW- EN VISSERIJONDERZOEK (EV ILVO)		
Project URL	www.awish-project.eu		
Project start date	**01.11.2022.**	**Duration:**	**48 months**
Deliverable	D6.3 Data Management Plan - Version 2		
Document Type	R		
Dissemination Level	PU		
Lead beneficiary	EV ILVO		
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Due date of delivery	31/10/2024	**Submission date**	29/10/2024

DOCUMENT INFORMATION

HISTORY OF CHANGES			
Version	**Publication date**	**Changes**	**Author**
1.0	28/04/2023	Initial version	Anneleen De Visscher (EV ILVO)
			Anneleen Watteyn (EV ILVO)
			Jarissa Maselyne (EV ILVO)
2.0	29/10/2024	Version 2	Anneleen De Visscher (EV ILVO)
			Shanida Mullatahiri (EV ILVO)
			Noémie Van Noten (EV ILVO)

APPROVED BY:			
Version	**Publication date**	**Organisation**	**Person responsible**
1.0	28/04/2023	UAB	Pol Llonch
			Xavier Manteca
2.0	29/10/2024	Ubitech	Kostas Perakis

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GLOSSARY OF ACRONYMS

Acronym / Term	Description
AW	Animal Welfare
AWI	Animal Welfare Indicator
aWISH	Animal Welfare Indicators at the SlaughterHouse
BPG	Best Practice Guide
CA	Consortium Agreement
DMP	Data Management Plan
DSA	Data Sharing Agreement
EC	European Commission
GA	Grant Agreement
GDPR	General Data Protection Regulation
HE	Horizon Europe
WP	Work Package

Deliverable executive summary

The Data Management Plan (DMP) aims to ensure that the Horizon Europe project aWISH (Animal Welfare Indicators at the Slaughterhouse) activities are compliant with the Horizon Europe open access policy rules, recommendations of Open Research Data pilot and EU General Data Protection Regulations (EU Regulation 2016/679, EU Directive 2002/58/EC, EU Directive 2006/24/EC). Open science practices as described in the Grant Agreement will be implemented: (1) Open access (scientific) publications, (2) Open access data, (3) Engage and involve citizens, and (4) Responsible and reproducible science. According to the EC Directorate-General for Research and Innovation (research) data should be Findable, Accessible, Interoperable, and Reusable (FAIR).

The 2nd iteration of the DMP gives an overview of the collected and created data and data exchange and usage of the aWISH project. By month 24, the 6 WPs generated 27 general results, 17 deliverable and 6 milestone reports, and 8 scientific publications. Data exchange and analyses was regulated by the Consortium Agreement and through the newly developed Data Sharing Agreement (DSA) for focus companies. Currently, 32 signed DSA and 2 ethical approval documents are collected. The established expert panels of the aWISH project have 105 members offering a broad network for feedback and input related to livestock, industry and retail, government and NGOs and research topics. A DMP per Work Packages was created using a prefilled template developed by EV ILVO and completed by the WP leads.

1. Introduction

1.1 Objective

The main objective of the Horizon Europe project animal Welfare Indicators at the Slaughterhouse (aWISH) is to develop and to offer the capacity to evaluate and improve the welfare of meat-producing livestock, pigs and chickens, throughout Europe via automated monitoring of animal-based welfare indicators at the slaughterhouse. The aWISH project aims to give feedback and advice on best practices to those responsible at the various stages of production, i.e. at the farm, at the catching team, during transport and at the slaughterhouse. This approach will be developed and evaluated in a cost-effective and objective way for the entire meat production chain, including small- and large-scale enterprises and both intensive and extensive production, and in close collaboration with all actors involved, from primary producers up to policy makers and citizens.

This deliverable D6.3 "Data Management Plan – version 2" of the aWISH project is part of Work Package 6 (WP 6) "Project management and coordination" (led by EV ILVO), and specifically Task 6.3 "Data Management Plan" (M1-M48).
The first version of the Data Management Plan (DMP), deliverable D6.2 (M6), described the data life cycle for the (research) data to be collected, processed, and generated in aWISH, applied methodologies and standards, and shared and open access data during the lifetime of the project and afterwards. The DMP aims to ensure that aWISH activities are compliant with the Horizon Europe (HE) open access policy, recommendations of open research data pilot and EU General Data Protection Regulations (GDPR) (EU Regulation 2016/679, EU Directive 2002/58/EC, EU Directive 2006/24/EC). All work package (WP) leads created a DMP related to their tasks and contributions to the project.
In this second iteration (M24) an overview is given of collected and created data and data exchange and usage. Also new versions of the WP-specific DMPs were made with detailed information on collected, provided and (re-)used data.

1.2 Methodology

A prefilled DMP template was developed for all WPs based on the input of the first DMP. WP and pilot leads were asked to complete the templates and add detailed concrete information at this stage of the project.

1.3 Link to other Tasks or WPs

With this DMP aWISH shows how to meet the responsibilities regarding data quality, data sharing and data security in all WPs, at the 6 pilots, and when collaborating with external stakeholders. The DMP will help to manage the data and helps others to use the data when shared with them. This DMP is closely linked to WP 3, WP 4 and WP5 for monitoring the data collection in the pilots and to WP 5 concerning the expert panels and members of the stakeholder advisory board.

1.4 Structure of the deliverable

This second version of the DMP of the aWISH project presents an overview of the aWISH collected and created data and data exchange and usage by month 24 with emphasis on aWISH output, deliverable and milestone reports, scientific publications, Data Sharing Agreements, expert panels, and ethical approval documents. A DMP per Work Packages was created using a prefilled template developed by EV ILVO and completed by the WP leads.

2. Data management strategy

2.1 Open science policy

The general rules of the Open Research Data pilot of the European Commission (EC) comprising open access to (scientific) publications and (research) data, the engagement and involvement of citizens and responsible and reproducible science are described in the aWISH Grant Agreement (GA) and in the first version of the DMP (D6.2 - M6).
In this second iteration of the DMP an overview is given of collected and created data and data exchange and usage.

aWISH results

By M24 of the aWISH project, the 6 work packages generated a diverse output (Table 1), available on the project website or social media accounts (open), on the aWISH Consortium Teams (consortium partners only), on the aWISH Data Platform (with identity authentication, authorization and policy management mechanism), through the open Zenodo repository (or other approved repositories) and in open access journals. Some data are not openly available, but stored by the aWISH communication (WP1) or coordination team (WP6).

Table 1: aWISH output by M24 of the aWISH project.

aWISH output	WP	Available	Format
Project website	WP1	Online	NA
Dataset "Origin of website visitors"	WP1	Communication team	.csv
Dataset "Expert panel features"	WP1	Communication team - Internal 2-steps approval process	.xlsx
Dataset "Newsletter subscriptions"	WP1	Communication team	Mailchimp
Datasets "Communication" - "Dissemination" - "Publications" of consortium partners	WP1	Consortium Teams	.xlsx
Project banner and poster	WP1	Consortium Teams	.pdf
Project leaflets	WP1	Project website	.pdf
General aWISH presentation	WP1-WP6	Consortium Teams	.pptx
Newsletters and press releases	WP1	Project website	.pdf
Videos e.g. "Consortium meeting Paris"	WP1	Project YouTube	mp4
Project webinar recordings	WP1	Consortium Teams	mp4
Metadata website and social media posts	WP1	Communication team	.xlsx

Survey results "Existing technologies to assess animal welfare indicators: pigs"	WP2	Survey report for expert panel	.pdf
Survey results "Existing technologies to assess animal welfare indicators: broilers"	WP2	Survey report for expert panel	.pdf
Animal Welfare Catalogue - first version	WP2	Project website	NA
Data of existing and new technologies in 6 pilots	WP3-WP4-WP5	aWISH Data Platform - Identity authentication, authorization and policy management mechanism	Different formats
Survey results "Identifying best practices to improve animal welfare for broiler chicken and fattening pigs"	WP4	Survey report for expert panel	.pdf
aWISH Data Platform	WP4	Through project website - Identity authentication, authorization and policy management mechanism	NA
Survey results "A consumer survey on animal welfare of meat producing livestock in Europe"	WP5	Survey report for expert panel and deliverable report	.pdf
Survey results “Stakeholder interviews”	WP5	Survey report for expert panel and deliverable report	.pdf
Dataset "Expert panel members"	WP5	Not open - Internal 2-steps approval process	.xlsx
Data Sharing Agreements	WP6	Coordination team	.docx
Ethical committee approvals	WP6	Coordination team	.pdf
Dataset “Related initiatives and projects”	WP6	Consortium Teams	.xlsx
Deliverable reports	All WPs	Sensitive: Consortium Teams - Public: project website	.pdf
Milestone reports	All WPs	Consortium Teams	.pdf
Publications	All WPs	Open access journals - Zenodo	.pdf

Deliverable and milestone reports

Seventeen deliverable reports (Table 2) and six milestone reports (Table 3) are developed by M24 of the aWISH project and submitted on the EU Funding & Tenders Portal. Deliverable reports and milestone reports are stored on the aWISH Consortium Teams and available for all consortium partners.

Table 2: Deliverable reports submitted by M24 of the aWISH project.

N°	Deliverable name	WP - Responsible	Type	Due date
D1.1	CD&E Plan and Execution Report - Version 1	WP1 - Consulai	R	M6
D1.2	CD&E Plan and Execution Report - Version 2	WP1 - Consulai	R	M24
D1.4	Project website	WP1 - BioSense	DEC	M6
D1.5*	Social media engagement strategy	WP1 - BioSense	DEC	M7
D1.6	Practice Abstracts - Batch 1	WP1 - Consulai	R	M18
D2.1*	Report on valid AWI for pigs and broilers, on farm, loading, transport and at slaughter	WP2 - UCPH	R	M12
D2.2*	Report on methodology for measuring each AWI	WP2 - UAB	R	M12
D2.4	AWI catalogue for fattening pigs and broiler chickens - Version 1	WP2 - UAB	DEC	M24
D3.1	Pilot sites implementation plan and standardized data collection protocols	WP3 - BioSense	R	M9
D3.2	Periodic evaluation of pilots, common challenges analysis, technology reusability exploitation and learning take-aways - Version 1	WP3 - BioSense	R	M18
D4.1	Data platform design requirements	WP4 - Ubitech	DEM	M12
D4.3	Best Practice Guides - Version 1	WP4 - TiHo	R	M24
D5.2	Value chain actors' needs, perceptions, constraints analysis	WP5 - White Research	R	M24
D6.1	Project Management Handbook	WP6 - EV ILVO	R	M3
D6.2*	Data Management Plan - Version 1	WP6 - EV ILVO	DMP	M6
D6.3	Data Management Plan - Version 2	WP6 - EV ILVO	DMP	M24
D6.5	Ethics Rating Plan	WP6 - EV ILVO	R	M3

*Available on the aWISH project website

Type: R: document, report; DEC: website, patent filings, videos; DMP: data management plan

Public deliverables are made available on the project website after approval by the EC and the assigned external reviewers.

Table 3: Milestone reports submitted by M24 of the aWISH project.

N°	Milestone name	WP - Responsible	Due date
M1	Project website up and running	WP1 - BioSense	M3
M2	Social media channels operational	WP1 - Consulai	M8
M5	List of measures for which experimental work will be needed	WP2 - UCPH	M6
M6	Workshops and interviews for measurement technology	WP2 - UAB	M11
M7	Start of data collection at first phase pilots for welfare monitoring	WP3 - BioSense	M12
M9	Data platform operational	WP4 - Ubitech	M24
M10	Proper dataset collected to start environmental & economic analysis	WP5 - Thuenen	M24

Scientific publications

All relevant information related to scientific publications, such as type of publication, persistent identifier, title, authors, etc. is collected in a shared spreadsheet on the aWISH Consortium Teams and added on the EU Funding & Tenders Portal. Papers will be submitted in open access journals. Publications will also be made available through the repository Zenodo (https://zenodo.org/) if not yet available in another valid repository.

Eight peer-reviewed abstracts have been submitted by month 24 of the aWISH project (Table 1).

Table 4: Peer-reviewed publications by M24 of the aWISH project.

Title	Authors	Journal or equivalent	PID of deposited publication
A review of indicators and sensor technologies to assess pig welfare at the slaughterhouse	Ramón-Pérez et al.	Book of abstracts of the 4th FSVO/UFAW Symposium "Humanly ending life of animals"	10.5281/zenodo.12795392
A systematic review of indicators to assess pig welfare and the sensor technologies to monitor them	Ramón-Pérez et al.	II Jornadas cientificas redCIBA: el comportamiento natural como factor clave para el bienestar animal	https://hdl.handle.net/10612/17108
Introducing the aWISH project: Animal Welfare Indicators at the SlaughterHouse	Maselyne et al.	Proceedings of the 55th Congres of the ISAE	10.5281/zenodo.12794300
Introducing the aWISH project: Animal Welfare Indicators at the SlaughterHouse	Maselyne et al.	Book of abstracts of the 73rd Annual Meeting of the European Federation of Animal Science	10.5281/zenodo.12794382

Measuring behaviour 2024 conference publication	Rodenburg et al.	Proceedings of the 13th International Conference on Methods and Techniques in Behavioural Research	https://zenodo.org/records/13254457
Automated monitoring of pig and chicken welfare at the slaughterhouse - tracing back to farm, transport and slaughter.	Tuyttens et al.	Book of abstracts of the 75th Annual Meeting of the European Federation of Animal Science	10.5281/zenodo.13969389
Guidelines to validate sensor output of animal-based measurements	Maselyne et al.	Book of abstracts of the 75th Annual Meeting of the European Federation of Animal Science	10.5281/zenodo.13969484
Validation guidelines of sensors used for the automatic assessment of animal welfare	Lonch et al.	Book of Abstracts of the 9th International Conference on the Welfare Assessment of Animals at Farm Level (WAFL)	10.5281/zenodo.13991422

Currently, three peer-reviewed scientific papers are being written about (1) validation guidelines, (2) valid animal welfare indicators (AWI) for pigs and (3) valid AWI for broilers.

Data sharing agreements

Data sharing among consortium partners is regulated through Article 10 “Non-disclosure of information” of the aWISH Consortium Agreement, signed by all consortium partners (Figure 1).

The exchange of data with so-called focus companies, i.e. farmers, catching teams and transporters, is legally organized through a Data Sharing Agreement (DSA) (Figure 1). The DSA is made by and between the aWISH coordinator EV ILVO and 15 aWISH partners and the focus companies as 2nd party and relates to following data:

- Farms:
  - Information on the farmer, the farm and possible employees
  - Information on production and management
  - Information on the stables and other facilities
  - Pigs and broilers farm data
  - Information on production costs
  - Information on selling prices
  - Information on water and energy consumption
- Broilers: catching teams
  - Thinning of the flock
  - Removal of the whole flock at the end of production
  - Information on catching
  - Catching and loading
- Transport companies:
  - Informataion on the driver and truck
  - Information on transport
  - Information on transportation of pigs/broilers

The aWISH partners and 2nd parties remain owners of their own data. The aWISH partners will store the 2nd party data, link the data to the corresponding slaughterhouse data and process and analyse the 2nd party data. The resulting processed anonymous data, i.e. the project results, will be shared with the other consortium partners and disseminated to external companies and institutes. Project results and 2nd party data will be available on the aWISH data platform as well. Each 2nd party will only have access to their own data.

The addition of external databases to the aWISH data platform for the animal welfare, socio-economic or environmental assessments will be regulated case-by-case through the development of a specific data sharing agreement (Figure 1).

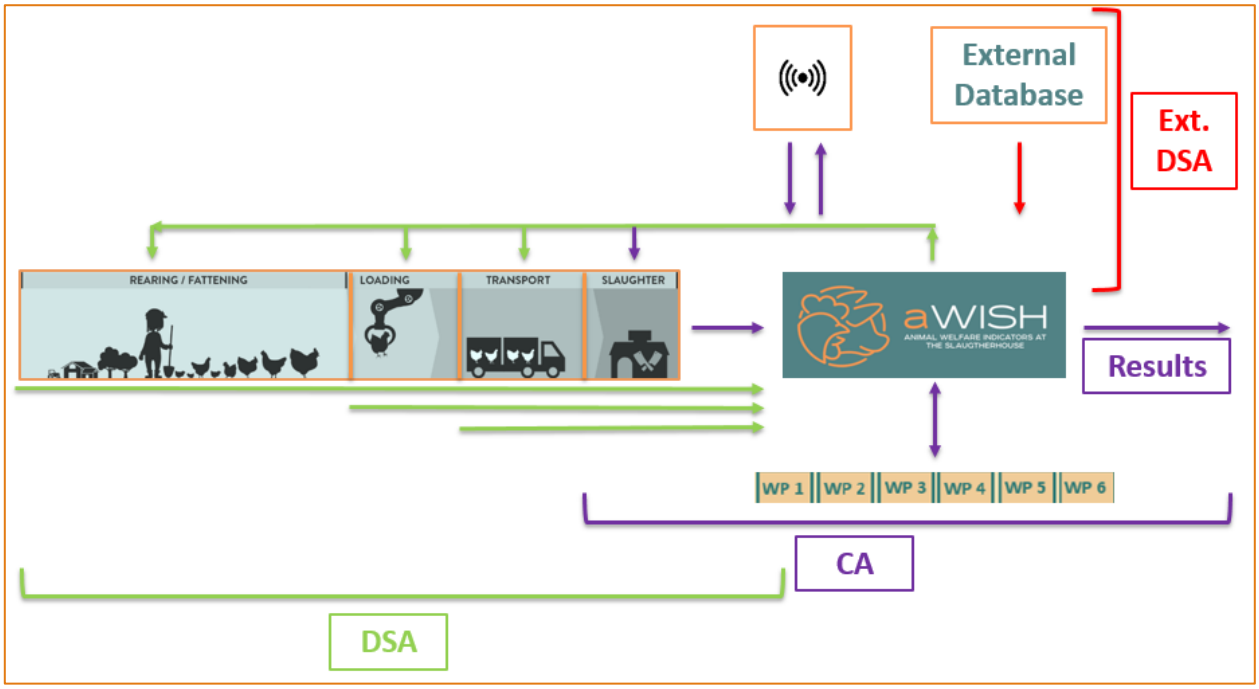

Figure 1: Data sharing regulations of the aWISH project.

Currently pilot leads and scientific co-leads are collecting signed DSA from their focus companies (Table 5). These are stored by the project coordinator EV ILVO.

Table 5: Number of signed Data Sharing Agreements per pilot.

Pilot N°	Pilot lead	Number of signed Data Sharing Agreements
P1	Vion - The Netherlands	4
P2	Batallé - Spain	0
P3	Plukon - Duc - France	21
P4	Plukon - Sieradz - Poland	6
P5*	Grossfurtner - Austria	0
P6*	Carnex - Serbia	1

*2nd phase pilot

Multi-actor approach

Expert panels were created as part of the multi-actor approach of the project with 4 defined categories: the livestock sector, research, government and NGOs, and industry and retail. A two-steps verification process was developed by WP5 in close collaboration with the coordination team of the aWISH project for the membership of the aWISH expert panels. The online registration form include the terms of reference, a consent form, an information sheet for applicants, and a declaration of acceptance.
A total of 105 members were approved for the different categories of the expert panels (Table 6).

Table 6: Number of expert panel members per category.

Expert panel category	Number of members
Livestock	17
Research	41
Government and NGOs	23
Industry and retail	24

Ethical approval documents

Ethical application, decision and approval documents are stored by the project coordination team. Approvals were requested and obtained by
- the Animal Welfare Body Utrecht, related to the intervention study (task 4.2)
- the Ethical Review Board, for the WP5 stakeholder interviews (tasks 5.2).

2.2 Management of research data and other outputs per WP

The FAIR principles are described in the first version of the DMP (D6.2 - M6). The project coordinator, EV ILVO (WP6), is responsible for the DMP and data usage in the project. The generated output per WP is summarized in Table 1 and shown in 2.1 Open science policy - aWISH results.

Pilot-specific meetings have been organized by WP6 in collaboration with the work packages in need for data

- to monitor the technology installation and implementation of the pilots (WP3),
- to organize and develop the aWISH Data Platform (WP4),
- to assess animal welfare (WP4) and
- to analyse socio-economic and environmental performance (WP5).

The DMP of each WP and the data handling of the pilots was collected through a DMP template. This template was developed in an early stage of the process using the guidelines of the EC, the dmponline tool and input from the Data Manager of the project coordinator EV ILVO. Prefilled DMPs were made with content of the first version and WP leads were asked to complete the template and add detailed information which was not available in the early stage of the project when the first version needed to be developed.

The DMPs of the 6 WPs can be found in the Annex of this report. WP1 and WP6 mainly create new data, such as communication material and data sharing agreements, whereas the other WPs work with both reused and new output using data collection questionnaires and templates. The estimated size of the data ranges from 25 MB (WP6) to 1 TB (WP3).

3. Annexes

3.1 Data Management Plan Work Packages

WP 1

Project	Animal Welfare Indicators at the Slaughterhouse
Acronym	aWISH
GA number	101060818
DMP version	V1.0
Work Package (WP)	1
WP lead	CONSULAI (Dina Lopes)
WP co-lead	BIOSENSE (Sandra Stojanovic)
Main contact person DMP	Dina Lopes
Date	17/09/2024

Data summary	At this moment, on the project website, we'll have text, image and video data most of which will be in HTML. We also implemented a survey for the website visitors to understand their origin and that data is currently in tabular format and will be exported in .CSV format when needed. Other than that, we implemented Experts Panel feature which is allowing experts from few different spheres of interest to be a part of the project. That data is gathered using a form which is later then saved in .xlsx (excel) format. In order to get in touch with more people using the newsletter, we also have a form on the website which is used by the targeted audience to subscribe to it with their email address. The website newsletter form is connected to our Mailchimp account which is responsible for storing all contact data.

What type of formats of data and other (research) outputs will the work package generate or re-use?

This work package will produce image, audio and video data, with an estimated low volume, since they are always simple contents. To monitor the KPIs and the audience reached by the communications channels, we extract a .csv or .xml file.

Will you reuse any existing data and what will you reuse it for?

We might buy and use visuals such as videos and images in future to better describe project mission and goals and make a stronger connection with our targeted audience.

What is the purpose of the data generation or reuse and its relation to the objectives of the project/work package?

In terms of project website, collected survey data will be used for better understanding the origin of our visitors as well as helping them connect with related field experts via our Experts Panel functionality.

What is the expected size of the data that you intend to generate or reuse?

Not more than 5GB.

What is the origin/provenance of the data, either generated or reused?

Most of the project website and social media data will be newly generated and the ones that we are going to buy for enhancing the user experience (images, videos) will be from valid sellers such as Shutterstock.

To whom might your data be useful ('data utility') outside your work package and outside the project?

This data can be useful to business operators in the meat sector (farmers, catchers, transporters, slaughterhouses), suppliers and service providers to meat sector (technology providers, vets, advisors, etc.), clients of meat sector (food sector, retail, consumer org.)

FAIR data - General info	

FAIR data	Making data findable, including provisions for metadata

Publications and proceedings will be made open access, researchers will also use them on their personal repositories.

How are the data produced and/or used in your work package discoverable with metadata? What metadata will be created? What disciplinary or general standards will be followed? In case metadata standards do not exist in your discipline, please outline what type of metadata will be created and how.

Project website and social media channels will have metadata for images, posts, and users. Images would have title and description as metadata, post metadata would include author information, publish date, last updated date and category. When it comes to our users, we use metadata such as full name, username, email, role, and status.

How are the data produced and/or used in the WP identifiable? Refer to standard identification mechanisms. Will data and other (research) outputs be identified by a persistent identifier? What naming conventions will be followed? Please describe.

Visuals and posts presented each have their own unique title which is in most cases used as their ID.

Will (research) keywords be provided in the metadata to optimize the possibility for discovery and then potential reuse? Indicate yes or no and describe.

Title and description metadata is used for that purpose so there is no need for extra keywords.

Will metadata be offered in such a way that it can be harvested and indexed? Indicate yes or no and describe.

Website's metadata will only be used better indexing by search engines but not for external users.

FAIR data

Making data accessible

Will all data and other (research) outputs be made openly available? Indicate yes or no and give the reason why certain datasets cannot be shared openly.

Access to participant information and data derived from that information, will only be accessible to those people or groups whom have been given authorization from the provider of this data.

How will the data be made accessible? Will data and other (research) outputs be deposited in a trusted repository? Indicate yes or no and describe or explain why. Please provide the link or Digital Object Identifier (DOI) if relevant.

All documents will be identified with a DOI or other identifier, stored on the website and uploaded in open repositories.

Have you explored appropriate arrangements with the identified repository where your data and other (research) outputs will be deposited? Indicate yes or no and describe.

Not yet.

Does the repository ensure that the data and other (research) outputs are assigned an identifier? Will the repository resolve the identifier to a digital object?

Not applicable.

Is an embargo applied to give time to publish or seek protection of the intellectual property (e.g. patents)? Indicate yes or no.

Not applicable.

If an embargo is applied, specify why and how long this will apply, bearing in mind that research data should be made available as soon as possible.

Not applicable.

Will the data and other (research) outputs be accessible through a free and standardized access protocol? Indicate yes or no and describe.

Yes.

If there are restrictions on use, how will access be provided to the data, both during and after the end of the project?

Not applicable.

How will the identity of the person accessing the data be ascertained?

Not applicable.

Is there a need for a data access committee? Indicate yes or no and describe.

No.

Will metadata be made openly available and licensed under a public domain dedication? If not, please clarify why.

Not applicable.

Will metadata contain information to enable the user to access the data? Indicate yes or no and describe.

Not applicable.

How long will the data remain available and findable? Will metadata be guaranteed to remain available after data is no longer available?

The images, audio, and videos produced by WP1 will always remain available and findable on the internet

Will documentation or reference about any software needed to access or read the data be included? Will it be possible to include relevant software (e.g. in open source code)?

Not applicable.

FAIR data	Making data interoperable

What data and metadata vocabularies, standards, formats or methodologies will you follow to make your data interoperable to allow data exchange and reuse within and across disciplines? Will you follow community-endorsed interoperability best practices? Which ones?

The images, audios and videos should be easy to be used by everyone, they are in standard formats.

In case it is unavoidable that you use uncommon or generate project-specific ontologies or vocabularies: Will you provide mappings to more commonly used ontologies? Will you openly publish the generated ontologies or vocabularies to allow reusing, refining or extending them?

Not applicable to WP1.

Will your data and other (research) outputs include qualified references to other data (e.g. other data from your work package, or datasets from previous research)? Indicate yes or no and describe.

WP1 produces data based on the results received from other WPs.

FAIR data **Increase data reuse**

When will the data be made available for reuse? How long is it intended that the data remains reusable?

There is no time limit.

How will you provide documentation needed to validate data analysis and facilitate data reuse?

Not applicable.

Will your data and other (research) outputs be made freely available in the public domain to permit the widest reuse possible? Will your data and other (research) outputs be licensed using standard reuse licenses, in line with the obligations set out in the Grant Agreement?

The images, audio and video produced by WP1 can be reused but cannot be edited by everyone.

Will the data and other (research) output produced in the work package be useable by third parties, in particular after the end of the project? Indicate yes or no and explain.

Yes, data collected or co-owned by aWISH partners, can be made available min. 1 year after data collection. Researchers can decide to make data earlier available, if that is not in conflict with the consortium agreement (CA).

Will the provenance of the data and other (research) outputs be thoroughly documented using the appropriate standards?

Yes.

Describe all relevant data quality assurance processes.

For the experts panel functionality, we have people that are responsible for approving new members by validating their registration applications.

Other research output

Do you have any additional information, that was not addressed in the previous sections, which you wish to provide regarding other (research) outputs that are generated or reused throughout the project?

No.

Allocation of resources

What will the costs be for making data and other (research) outputs FAIR in your work package?

Very low.

How will these be covered?

By the WP budget, if necessary.

Who will be responsible for data management in your work package?

CONSULAI (Dina Lopes)

How will long-term preservation be ensured?

Still to be defined

Data security

What provisions are or will be in place for data security?

Project website data is backed up every day

Will the data be safely stored in trusted repositories for long-term preservation and curation? Indicate yes or no and describe.

Yes.

Ethics	
	Are there, or could there be, any ethics or legal issues that can have an impact on data sharing? Indicate yes or no and describe. GDPR.
	Will informed consent for data sharing and long-term preservation be included in questionnaires dealing with personal data? Indicate yes, no or not applicable and explain. Yes.
Other issues	Do you, or will you, make use of other national/funder/sectorial/departmental procedures for data management? If yes, which ones? Please list and briefly describe them. No.

WP 2

Project	Animal Welfare Indicators at the Slaughterhouse
Acronym	aWISH
GA number	101060818
DMP version	V1.0
Work Package (WP)	2
WP lead	UCPH
WP co-lead	UAB
Main contact person DMP	Björn Forkman
Date	17/09/2024

Data summary

What type of formats of data and other (research) outputs will the work package generate or re-use?

Several kinds of data will be used, primarily literature for T2.1, T2.2, and T2.4, interviews and focus groups for T2.2 and T2.3
The data will be digital, such as deliverables, and presentations. Moreover, the data will be mainly observational, i.e., surveys results and reports written form literature information. The format will be tabular data (.xlsx) and textual data (.docx)

Will you reuse any existing data and what will you reuse it for?

Yes, used for establishing the welfare catalogue.

What is the purpose of the data generation or reuse and its relation to the objectives of the project/work package?

Establishing the welfare catalogue, construct the algorithms for T2.3.

What is the expected size of the data that you intend to generate or reuse?

Maximum 2GB, but probably less. No physical data

What is the origin/provenance of the data, either generated or reused?

Data from interviews, focus groups, workshops

To whom might your data be useful ('data utility') outside your work package and outside the project?

Algorithms produced as well as the basis for the algorithms will be of interest to industry as well as researchers

FAIR data - General info

FAIR data

Making data findable, including provisions for metadata

How are the data produced and/or used in your work package discoverable with metadata? What metadata will be created? What disciplinary or general standards will be followed? In case metadata standards do not exist in your discipline, please outline what type of metadata will be created and how.

To be decided

How are the data produced and/or used in the WP identifiable? Refer to standard identification mechanisms. Will data and other (research) outputs be identified by a persistent identifier? What naming conventions will be followed? Please describe.

Orcid for the publications, to be decided for the raw data

Will (research) keywords be provided in the metadata to optimize the possibility for discovery and then potential reuse? Indicate yes or no and describe.

Yes. Data obtained from tasks 2.1 and 2.2 will be tagged to be used in the development of tasks 2.3 and 2.4 (final catalogue).

Will metadata be offered in such a way that it can be harvested and indexed? Indicate yes or no and describe.

Only one version will be uploaded.

FAIR data	Making data accessible

Will all data and other (research) outputs be made openly available? Indicate yes or no and give the reason why certain datasets cannot be shared openly.

Yes, but only within the constraints of GDPR.

How will the data be made accessible? Will data and other (research) outputs be deposited in a trusted repository? Indicate yes or no and describe or explain why. Please provide the link or Digital Object Identifier (DOI) if relevant.

To be decided.

Have you explored appropriate arrangements with the identified repository where your data and other (research) outputs will be deposited? Indicate yes or no and describe.

Yes. Data will be stored either in aWISH or institutional (aWISH beneficieries) repositories.

Does the repository ensure that the data and other (research) outputs are assigned an identifier? Will the repository resolve the identifier to a digital object?

Yes, all datasets will have a unique identifier that will ensure proper identification.

Is an embargo applied to give time to publish or seek protection of the intellectual property (e.g. patents)? Indicate yes or no.

Yes.

If an embargo is applied, specify why and how long this will apply, bearing in mind that research data should be made available as soon as possible.

12 months.

Will the data and other (research) outputs be accessible through a free and standardized access protocol? Indicate yes or no and describe.

Yes, data will be freely accessible.

If there are restrictions on use, how will access be provided to the data, both during and after the end of the project?

No restrictions are expected.

How will the identity of the person accessing the data be ascertained?

Not applicable.

Is there a need for a data access committee? Indicate yes or no and describe.

No.

Will metadata be made openly available and licensed under a public domain dedication? If not, please clarify why.

Yes.

Will metadata contain information to enable the user to access the data? Indicate yes or no and describe.

To be decided.

How long will the data remain available and findable? Will metadata be guaranteed to remain available after data is no longer available?

To be decided.

Will documentation or reference about any software needed to access or read the data be included? Will it be possible to include relevant software (e.g. in open source code)?

Algorithms from T2.3 will be provided.

FAIR data

Making data interoperable

What data and metadata vocabularies, standards, formats or methodologies will you follow to make your data interoperable to allow data exchange and reuse within and across disciplines? Will you follow community-endorsed interoperability best practices? Which ones?

To be decided.

In case it is unavoidable that you use uncommon or generate project-specific ontologies or vocabularies: Will you provide mappings to more commonly used ontologies? Will you openly publish the generated ontologies or vocabularies to allow reusing, refining or extending them?

Yes.

Will your data and other (research) outputs include qualified references to other data (e.g. other data from your work package, or datasets from previous research)? Indicate yes or no and describe.

Yes.

FAIR data

Increase data reuse

When will the data be made available for reuse? How long is it intended that the data remains reusable?

To be decided.

How will you provide documentation needed to validate data analysis and facilitate data reuse?

To be decided.

Will your data and other (research) outputs be made freely available in the public domain to permit the widest reuse possible? Will your data and other (research) outputs be licensed using standard reuse licenses, in line with the obligations set out in the Grant Agreement?

Yes, within the limitations of GDPR.

Will the data and other (research) output produced in the work package be useable by third parties, in particular after the end of the project? Indicate yes or no and explain.

To some extent, result from focus groups, interviews etc are however context specific.

Will the provenance of the data and other (research) outputs be thoroughly documented using the appropriate standards?

Yes.

Describe all relevant data quality assurance processes.

To be decided.

Other research output

Do you have any additional information, that was not addressed in the previous sections, which you wish to provide regarding other (research) outputs that are generated or reused throughout the project?

No.

Allocation of resources

What will the costs be for making data and other (research) outputs FAIR in your work package?

To be decided

How will these be covered?

To be decided.

Who will be responsible for data management in your work package?

To be decided.

How will long-term preservation be ensured?

To be decided.

Data security

What provisions are or will be in place for data security?

To be decided.

Will the data be safely stored in trusted repositories for long-term preservation and curation? Indicate yes or no and describe.

To be decided.

Ethics

Are there, or could there be, any ethics or legal issues that can have an impact on data sharing? Indicate yes or no and describe.

Yes, primarily GDPR.

	Will informed consent for data sharing and long-term preservation be included in questionnaires dealing with personal data? Indicate yes, no or not applicable and explain. Yes.
Other issues	Do you, or will you, make use of other national/funder/sectorial/departmental procedures for data management? If yes, which ones? Please list and briefly describe them. No.

WP 3

Project	Animal Welfare Indicators at the Slaughterhouse
Acronym	aWISH
GA number	101060818
DMP version	V1.0
Work Package (WP)	WP3
WP lead	BIOSENSE
WP co-lead	Pilot leaders
Main contact person DMP	Sandra Stojanović
Date	21/09/2024

Data summary

What type of formats of data and other (research) outputs will the work package generate or re-use?

Data generated and data shared on the central aWISH data platform will consist of images, data collection protocols, SOPs, data sharing agreements (if necessary; all provided in .docx or .pdf), presentations (in .pptx) and manual data collection files (in .csv or .xlsx). At the moment, however, it is not clear which data formats will be used when uploading data generated by CLK to the platform so that there might be data in other format types we might not have considered yet.
We will reuse data generated in WP2 (methodology and algorithms for selection and aggregation of AWI as well as the animal welfare catalogue) and outputs from WP4 (central data platform and feedback loop). Detailed information on these data will be provided by WP2 and 4 leaders.

Within **Pilot 1**, the following data are collected: Audio data - sound data at unloading/lairage (STREMODO, FBN), Physical samples - blood samples (IGF BPs, FBN) Tabular data – back fat and muscle depth insertion probe (CGM), carcass ultrasound data (AutoFOM 3, Carometec), carcass health data (veterinary reports), on-farm welfare assessments (ILVO/UU), on-farm climate data (CAF), Image data – images of pig carcasses (PigInspector, CLK), Video data – video of unloading/lairage (AI4Animals, Deloitte), tear staining and lung images (ILVO/UU). Data collected through ILVO/UU are research-specific data collected as part of a PhD project within aWISH. Audio/images/video/physical data will be transformed into tabular data. Tabular data are then provided to the aWISH dataplatform (see also WP4).
Pilot 2 can distinguish between existing data (i.e. carcass grading data - Autofom 3, Carometec) and new sensor data generated by the new sensors implemented during the first year of the project: barn climate monitoring (Enviro Detect, InnoTech Vision), weight prediction (Weight Detect, InnoTech Vision), pulmonary and liver health monitoring (Lesion Detect, InnoTech Vision), consciousness check (Stunning Effectiveness), tear staining (UAB - EV ILVO). All this data is observational data.
Common formats will be tabular data (csv files) and textual data (txt files). Some sensors can provide also image data.
In **Pilot 3** Aggregated data for footpad and hock burn camera (ChickenCheck Hockburn and ChickenCheck Footpad, CLK): .csv reports (2 kb per report, one per day), .pdf reports (4 mb per report, one per flock)
Individual data for footpad, hock burn: .jpeg (100 kb per image, 15000 per day) ; EBENE® evaluations aggregated database (Itavi); individual atmosphere transport monitoring (Itavi); Database of isolated vocalizations associated with acoustic descriptors (EBroilerTrack Sound, Itavi); Database of individual mobility variables (EBroilerTrack Image, Itavi).
In **Pilot 4** Aggregated data for footpad, hock burn and catch damage and scratch camera (ChickenCheck Hockburn, ChickenCheck Footpad, ChickenCheck Catch Damage and Scratch CLK): .csv reports (2 kb per report, one per day), .pdf reports (4 mb per report, one per flock) and EBENE® evaluations aggregated database (Itavi).

In **Pilot 5** generated data will be in format of images, data collection protocols, SOPs, data sharing agreements (if necessary; all provided in .docx or .pdf), presentations (in .pptx) and manual data collection files (in .csv or .xlsx). At the moment, it is not clear which data formats will be used when uploading data generated by CLK to the platform so that there might be data in other format types that might not have been considered yet. Existing data: pH measurements and meat classification (Optiscan-TP, Classpro).
New data: ear, tail and skin lesions and tail length (PigInspector, CLK).
In **Pilot 6** currently Pig Sense (Bitgear-BioSense) provides data (.xls, .csv, dashboard insights) on temperature, relative humidity, NH3, food level, feed consumption and facility mortality reports and relations between measured quantities that helps optimizing and maintaining animal wellbeing. Furthermore, it is expected to expand the research by using audio samples and pictures that will characterize level of stress between finishers inside the stalls (Enviro Detect, InnoTech Vision). Recordings of sound on the lairage area (Stremodo, FBN) and pictures from the slaughter line of lungs and livers (Lesion Detect, InnoTech Vision) is the format of data to be collected.

Will you reuse any existing data and what will you reuse it for?

Data generated in other work packages of aWISH project will be reused, more particularly data from WP2 and WP4. We will also gather knowledge on the assigned tasks and related topics by reading and processing previously published scientific articles and datasets. For some of the measured traits historical data may be present for usage.
In Pilot 1 Historical data may be used for carcass ultrasound data (AutoFOM) or carcass health data (veterinary reports) to address the aWISH objectives, particularly the analyses of pig welfare at farm/chain and regional/national level.

Pilot 2 will reuse data about carcass grading classification (based on Autofom III equipment) to complement AWI collected by the new sensors (Stunning, Tear staining and lung and liver sensors).
Pilot 3 will not reuse any existing data.
Pilot 4 will generate data to check for the animal welfare indicators footpad lesions, hock burns and catch damage.
Pilot 5 will reuse data generated in WP2 and 4.
Pilot 6 will not reuse any existing data.

What is the purpose of the data generation or reuse and its relation to the objectives of the project/work package?

The following deliverables are declared in the Grant Agreement for WP3:
- Pilot sites implementation plan and standardized data collection protocols
- Periodic evaluation of pilots, common challenges analysis, technology reusability exploitation and learning take-aways
- Final results, lessons learned and recommendations from pilots multi-actor groups
Generated data is directly linked to the deliverables mentioned above and will subsequently be communicated for the overall purposes of the project.
- Together with the university of Utrecht 12 to 15 farmers will be monitored with on-farm sensors information, for these farmers it might be interesting to have historical data.
- To improve the effectiveness of the new sensors considering relevant individual data related to the fattening phase.
Data from Pilot 1 are generated or re-used to address the aWISH objectives, particularly the analyses of pig welfare at farm/chain and regional/national level. Also, farmers are monitored with on-farm sensors information, and for these farmers it might be interesting to have historical data.
Pilot 2 improves the effectiveness of the new sensors considering relevant individual data related to the fattening phase.

Pilot 3 purpose is to check for the animal welfare indicators footpad lesions and hock burns, thermal stress in the lairage area before stunning (EBroilerTrack sound) and during transport, on farm broiler welfare evaluation (EBENE and EBroilerTrack image).

Generated data in Pilot 5 is directly linked to the deliverables mentioned above and will subsequently be communicated for the overall purposes of the project.
For Pilot 6 the reason for collecting data is to create data base from which some conclusions could be drawn on animal behavior and animal welfare in the slaughterhouse.

What is the expected size of the data that you intend to generate or reuse?

Data available on the central data platform will not exceed 1TB. More detailed information on how much data will be generated can be shared when animal welfare indicators that should be assessed and the duration of data collection have been defined.
Size of reused data cannot be estimated as there are no outputs of WP2 available now. Some data will be batch wise (i.e. lairage sound measurements) and some on individual carcass base (tail length, health data, backfat and muscle depth measurements). Some will be single measurements and some extensive data sets (the raw AutoFOM measurements will be very large).
In Pilot 1 Audio data - sound data at unloading/lairage (STREMODO, FBN). Size TBD. Physical samples - blood samples (IGF, FBN). Size 18 samples per batch for approx. 24 batches = 432 blood samples, Tabular data – carcass ultrasound data (AutoFOM), carcass health data (veterinary reports), on-farm welfare assessments (ILVO/UU), on-farm climate data (CAF), Size approx. 50kB per batch (AutoFOM, veterinary reports); 1 GB for research-specific batch data of on-farm welfare and climate data (ILVO/UU/CAF), Image data – images of pig carcasses (PigInspector, CLK). Size approx. 35 GB per

hour of recording (PigInspector, CLK), Video data – video of unloading/lairage (AI4Animals).

Size depends; for AI4Animals system only flags instances to check the videos and all video data removed after 28 days. Size approx. 125 GB for research-specific batch data of tear staining and lung videos (ILVO/UU)
In pilot 2 - About Digital data:
Existing data: 0,003 Gb per day; Stunning sensor: 0,001 Gb per day (if image collection: 1Gb per day); Tear staining sensor: 0,001 Gb per day (if image collection: 2Gb per day); Lung and liver sensor: 0,001 Gb per day (if image collection: 4Gb per day).
In pilot 3 - Aggregated data for footpad and hock burn camera: .csv reports (2 kb per report, one per day), .pdf reports (4 mb per report, one per flock). Individual data for footpad and hock burn: .jpeg (100 kb per image, 15000 per day) Time frame of data collection is not known yet. For running systems images are saved 28 days, reports will be available throughout the project.
EBENE® evaluations aggregated database (~1Go for 40 evaluations/year; Individual atmosphere transport monitoring: 170Ko/monitoring and 20 evaluations/ year; Database of isolated vocalizations associated with acoustic descriptors EBroilerTrack sound: not generate for the moment because new measurements will occur in October 2024 for database establishment and modeling. Database of individual mobility variables EBroilerTrack image: 14Ko/camera/30min video so with 2 cam, 17 days for a flock and 4hours/day = 17*14*8*2=3808Ko/flock.
In Pilot 4 Aggregated data for footpad, hock burn and catch damage camera: .csv reports (2 kb per report, one per day), .pdf reports (4 mb per report, one per flock); Individual data for footpad, hock burn: .jpeg (100 kb per image, 15000 per day); Individual data for catch damage: .jpeg (700 kb per image, 15000 per day)
Pilot 5 estimates 5-8TB of processed/annotated data need to be kept centrally.

What is the origin/provenance of the data, either generated or reused?

In Pilot 1 Data are owned by the farmer or Vion.
In pilot 2 existing data comes from the weighing system and the carcass grading equipment (Autofom III, Frontmatec). New data comes from the newly developped sensors.
In Pilot 3 data is being newly generated, no reused data. Data is generated by the camera systems, directly the sensors or the output of the models developed.
In Pilot 4 there will be only newly generated data by the camera systems.
In Pilot 5 observational data are generated at the slaughterhouse and further processed by technology partners and Vetmeduni. All other data will either be created by Vetmeduni or other project partners (specifically WP2 and 4). Reused data include data from WP2 and 4 as well as publicly accessible articles and -if relevant- datasets.
In pilot 6 there will also be newly generated data coming from newly installed equipment.

To whom might your data be useful ('data utility') outside your work package and outside the project?

In pilot 1 Data are used for analyses by WP4 and WP5. Research output may be of interest to livestock industry, academia (life sciences), policymakers, competent authorities.
In pilot 2 the new sensors can provide new phenotypes related with AW. The new phenotypes can provide valuable data in scientific trials developed to analyze factors that can affect AWI.
In pilot 3, data can be used for research purposes, when it is anonymous. Also useful for the slaughterhouse and DUC/Plukon.
In pilot 5 data collected within WP3 will flow back to WP2/4 and 5. Outside the project, the results delivered by WP3 will be helpful not only for all parties along the production chain, but also for technology providers, researchers and stakeholders as well as all parties involved in the feedback loop.
Considering pilot 6, data can potentially be used for other WP inside the project and wider business and scientific community that cooperates with Carnex or uses its products.

The new sensors can provide new phenotypes related with AW. The new phenotypes can provide valuable data in scientific trials developed to analyze factors that can affect AWI.

FAIR data - General info	All our collected datasets will be confidential for external stakeholders of the project. Data will be usable for the scientific teams of the project in order to achieve the project goals. But the data should remain confidential for external use .

FAIR data	**Making data findable, including provisions for metadata** How are the data produced and/or used in your work package discoverable with metadata? What metadata will be created? What disciplinary or general standards will be followed? In case metadata standards do not exist in your discipline, please outline what type of metadata will be created and how. In pilot 1 Data are uploaded to the aWISH data platform and the management of the data follows the same as per the aWISH data platform (see WP4) In pilot 2 All collected datasets will be confidential for external stakeholders of the project. Data will be usable for the scientific teams of the project to achieve the project goals. But the data should remain confidential for external use. In pilot 3 all the file name have a timestamp and flocknumber. Rating is directly on the filename also for the footpad and hockburn evaluations. In Pilot 4 the file name of the images have a timestamp, rating and flocknumber. In pilot 5 detailed metadata will be stored along with the data itself. Procedures and methods are part of the metadata and will be stored in a separate file with the data or in the metadata. Details of datasets, data ownership and restrictions and data contacts will be specified in the next version of the Data Management Plan (DMP). In pilot 6 it is yet to be determined.

How are the data produced and/or used in the WP identifiable? Refer to standard identification mechanisms. Will data and other (research) outputs be identified by a persistent identifier? What naming conventions will be followed? Please describe.

Most of pilots did not have the answer on this question.
Pilot 1 stated that data will be identifiable as per aWISH data platform (see WP4).
Pilot 3 stated that all data are saved in folders by year, date and flock. Every five seconds images are saved according to the actual quality distribution for the footpad and hockburn evaluations.

Will (research) keywords be provided in the metadata to optimize the possibility for discovery and then potential reuse? Indicate yes or no and describe.

In pilot 1 yes, as per aWISH data platform (see WP4).
In pilot 2 quality class is collected of large number of images and segmented the images to develop the algorithm.
In pilot 3, quality class is in the filename of the images. Timestamp and flocknumber in all the file name.
In Pilot 4 quality class is in the filename of the images.
No inputs from pilot 5 and pilot 6.

Will metadata be offered in such a way that it can be harvested and indexed? Indicate yes or no and describe.

In pilot 1 yes, as per aWISH data platform (see WP4).
In pilot 3 no version numbers, .csv reports are one per day, so only one dataset per day. Images and .pdf reports are not automatically uploaded. .csv and .xls files can be imported to a database and be indexed.
No inputs from other pilots.

Will all data and other (research) outputs be made openly available? Indicate yes or no and give the reason why certain datasets cannot be shared openly.

In pilot 1 due to data sharing limitations all data will remain private and securely stored within the aWISH dataplatform. As per aWISH dataplatform (see WP4).
In pilot 2 each dataset will be open to the partners involved in the task (equipment provider and scientific leader) but will be closed to other partners.
In pilot 3 no, because data can hold confidential information, only when it is made anonymous some data can be shared.
In Pilot 4 no, because data can hold confidential information, only when it is made anonymous some data can be shared.
Pilot 5 wrote their response based on the GA: Documents and multimedia will mainly be open, apart from deliverables noted as confidential. Datasets will be made open if possible (see Grant Agreement 1.2.6). Code and algorithms that are part of the (commercial) exploitation plans of the companies will be protected (those of the technical developments, e.g. image processing algorithms to detect and classify skin lesions in pigs or stunning effectiveness in broilers), but other code and algorithms (those of the research work, e.g. the AI algorithms to aggregate AWI into an overall index) will be published at the time of publication of the methodology and results (so linked to a scientific
publication), as well as the training and validation dataset they are based upon. All agreements on IPR protection will be made in the CA and adapted during the project where needed.
No answer yet from pilot 6.
At least a report of the analysis of the data should be made openly available. Individual data most likely not.

How will the data be made accessible? Will data and other (research) outputs be deposited in a trusted repository? Indicate yes or no and describe or explain why. Please provide the link or Digital Object Identifier (DOI) if relevant.

In pilot 2 Data will be allocated in a trusted repository, according to the project working plan. Ubitech is the responsible of the management of the data repository for the aWISH project (WP4).
Data will be allocated in a trusted repository, according to the project working plan. Today is too early to identify the repository name and link.
In pilot 3 .csv files can be sent via mail. All the valuable data will be uploaded on the awish platform and the raw data for model training will be stored by ITAVI on hard drives or laptop.
In Pilot 4 the suggestion is to send .csv files via email.
In pilot 5 the response has been taken from GA: All documents will be identified with a DOI or other identifier, stored on the website and uploaded in open repositories (e.g. CORDIS). Publications/proceedings will be made open access, researchers will also use them on their personal repositories (e.g. ResearchGate, institute sites). Researchers will use their ORCID IDs. Datasets and databases similarly, under the restrictions at hand (see 1.2.6), on trustworthy digital repositories (e.g. Zenodo, European Open Science Research Cloud), with their metadata and contacts.

Have you explored appropriate arrangements with the identified repository where your data and other (research) outputs will be deposited? Indicate yes or no and describe.

For pilot 1 not applicable – data are uploaded to the aWISH data platform (see WP4)
In pilot 2 they will do in few weeks.
In pilot 3 all the valuable data from the technologies will be uploaded on the awish platform, other data sharing need validation by Plukon (economic data for example).

Does the repository ensure that the data and other (research) outputs are assigned an identifier? Will the repository resolve the identifier to a digital object?
Yes.

Is an embargo applied to give time to publish or seek protection of the intellectual property (e.g. patents)? Indicate yes or no.

No, not from Vetmed's side, but this needs to be discussed with the technology providers as well. (pilot 5)

If an embargo is applied, specify why and how long this will apply, bearing in mind that research data should be made available as soon as possible.

If necessary 2 year will be nice lead time. (pilot 1)

Will the data and other (research) outputs be accessible through a free and standardized access protocol? Indicate yes or no and describe.

Depending on the data and who owns them. (pilot 1)
No, data will not be publicly available. (pilot 3).

If there are restrictions on use, how will access be provided to the data, both during and after the end of the project?

Not discussed yet.
Pilot 2 Data access will be restricted and stopped after the end of the project.

How will the identity of the person accessing the data be ascertained?

User registration process for the awish platform.
User ID and password are needed to access the aWISH data platform.

Is there a need for a data access committee? Indicate yes or no and describe.

Not necessary if rules of access to data information are clear at the beginning.
Yes, Plukon needs to validate all data access (pilot 3)

Will metadata be made openly available and licensed under a public domain dedication? If not, please clarify why.

No, because data can hold confidential information. (pilot 3)
(Adapted from the GA)
Metadata of deposited data will be open under a Creative Common Public Domain Dedication (CC 0) or equivalent (to the extent legitimate interests or constraints are safeguarded), in line with the FAIR principles (in particular machine-actionable) and provide information at least about the following: datasets (description, date of deposit, author(s), venue and embargo); Horizon Europe or Euratom funding; grant project name, acronym and number; licensing terms; persistent identifiers for the dataset, the authors involved in the action, and, if possible, for their organisations and the grant. Where applicable, the metadata will include persistent identifiers for related publications and other research outputs.

Will metadata contain information to enable the user to access the data? Indicate yes or no and describe.

Yes (pilot 3).

How long will the data remain available and findable? Will metadata be guaranteed to remain available after data is no longer available?

Data will not be publicly available. (pilot 3)

Will documentation or reference about any software needed to access or read the data be included? Will

it be possible to include relevant software (e.g. in open source code)?

Yes, documentation or reference about any software/model will be provided to access or read/generate the data.
In pilot 3 the code will be included in a relevant software for acoustic monitoring and EBENE but not for transport heat stress modeling and EBroilerTrack image.

FAIR data	Making data interoperable

What data and metadata vocabularies, standards, formats or methodologies will you follow to make your data interoperable to allow data exchange and reuse within and across disciplines? Will you follow community-endorsed interoperability best practices? Which ones?

In pilot 1 when possible, they would follow standard formats.
In pilot 3 a single flock ID is used on all files generate.
Pilot 5 gave answer once again taken from the GA: Documents will be stored in pdf, video's in mp4, software and code in the software language they were written in, but with explanatory reports (e.g. Jupyter notebooks). Data will be stored in open, program independent formats (like .csv, .txt, .png). The data platform will utilize a common semantic data model based on, but also in the meantime extending, the current available standards (ICAR, Animal Trait Ontology for Livestock, Semantic Sensor Network, AGROVOC, OGC working groups). Data collection will be based upon a standard template design that aligns all processes and reduces computing power and work to convert different datasets (e.g. from the different pilots) to the same format. This standard template will use a common ontology and define naming and format conventions, as well as needed metadata.
No information from other pilots.

In case it is unavoidable that you use uncommon or generate project-specific ontologies or vocabularies: Will you provide mappings to more commonly used ontologies? Will you openly publish the generated ontologies or vocabularies to allow reusing, refining or extending them?

Mostly no information on this topic.
Pilot 2 can create vocabularies if necessary.
Pilot 5 Yes.

Will your data and other (research) outputs include qualified references to other data (e.g. other data from your work package, or datasets from previous research)? Indicate yes or no and describe.

In pilot 3 No.
For pilot 5 yes, qualified references to other data and previous research will be indicated whenever a relevant link is identified.
No information from other pilots.

FAIR data | **Increase data reuse**

When will the data be made available for reuse? How long is it intended that the data remains reusable?

In pilot 3 already available, raw data from transport modelling and acoustic modeling are available but models are still under development so the output of those two models are not available now.
Preferably, data will be available during the project lifetime. After the end of the project, data will not be accessed.
No information from other pilots.

How will you provide documentation needed to validate data analysis and facilitate data reuse?

Pilot 2 will provide the documentation under petition of the coordinator or the scientific leader of the WP.
Pilot 3 people who need documentation can ask Plukon and ITAVI to date.

Pilot 5 Information on the methodology of data collection (including variable definitions and codebooks), processing and analysis will be provided as Word documents.
No information from other pilots.

Will your data and other (research) outputs be made freely available in the public domain to permit the widest reuse possible? Will your data and other (research) outputs be licensed using standard reuse licenses, in line with the obligations set out in the Grant Agreement?

For pilot 3 Data will not be publicly available.
Pilot 5 adapted from the GA: Relevant research outputs and data (i.e. the datasets, software, algorithms) will be made open access where possible. Care will be taken that confidential and proprietary data collected in the project will not be openly available when published, unless it can be anonymized, not to block commercial exploitation by partners and to be in line with legal requirements. Any algorithms or developments based on code/knowledge under open licenses will be published again adhering to these licenses. All data generated by the project will be as FAIR (see 1.2.7) and open as possible. External data where partners have/get access to, is subject to the contract with the owner (contracts will be collected by the coordinator) and the contract needs to specify the terms under which data can (or cannot) be published. Each partner that handles data in aWISH needs to appoint a person responsible for the data and data sharing (e.g. leading senior researcher), who will also be the data contact during and after the project. Data collected or co-owned by aWISH partners, can be made available min. 1 year after data collection. Researchers can decide to make data earlier available, if that is not in conflict with the consortium agreement (CA). Data that has been made available will be as much as possible the raw data, except when data is subject to GDPR, ethics or other legal objections. Then ggregated, pseudonymized or anonymized data can be stored. Data will be made available in online repositories (e.g. European Open Science Cloud, Zenodo, or a more specific one), depending on the type of data.

In general, our data outputs will not be open to the public domain (always according to the Grant agreement). Licensing can be studied in every case, if necessary.

Will the data and other (research) output produced in the work package be useable by third parties, in particular after the end of the project? Indicate yes or no and explain.

Pilot 2 - In general, data will not be usable by third parties. In particular situations, with a previous study, we can give permission to use some datasets.
Pilot 3 - Yes after validation with Plukon and ITAVI depending on the technologies output is needed.
Pilot 5 - Adapted from the GA: Yes, results will be published in scientific papers and associated data will be linked to a repository with a persistent identifier. Deliverables, presentations, policy briefs, trainings and other dissemination material will be open access with CC-0/ BY/ BY NC license. The main aWISH results will be made available/accessible for the long-term.

Will the provenance of the data and other (research) outputs be thoroughly documented using the appropriate standards?

Yes, thanks to appropriate standards. (pilot 3)
Yes for pilot 5.

Describe all relevant data quality assurance processes.

Pilot 3 - Single flock ID and timestamp on each metadata files.
Pilot 5 - Data quality will be checked regularly according to (at least) the following criteria: accuracy (completeness, measurement error, level of bias, degree of problems with consistency), internal (internal consistency, stability across time, linkability) and external (identifying units of analysis; level of agreement with the literature and available reports) validity, reliability (level of agreement with other databases), timeliness (time to acquisition, time to release, currency of data) and interpretability

(documents, policies and procedures, formats libraries, metadata, data model diagrams).

Other research output

Do you have any additional information, that was not addressed in the previous sections, which you wish to provide regarding other (research) outputs that are generated or reused throughout the project?

No.

Allocation of resources

What will the costs be for making data and other (research) outputs FAIR in your work package?

For pilot 3 depends on what data have to be stored and accessed.
For pilot 5 Vetmed as a research partner receives a dissemination fee of €3500. This includes an open access publication fee (and a conference/event subscription fee). All other costs (& how much budget there is to spend on WP3) regarding FAIR data access need to be defined by WP4/UBI (central data platform).
How will these be covered?

Part of the Horizon Europe grant. (pilot 3).

Who will be responsible for data management in your work package?

The owner of data is responsible for data management.
In Pilot 2 Technical manager of the project at Selección Batallé and the data protection manager of Selección Batallé.
In Pilot 3 Plukon.

How will long-term preservation be ensured?

In Pilot 3 - For ITAVI, database of labeled acoustic sound will be kept by ITAVI, to be enriched after the project and also the model developed. The rest of the data will be deleted at the end of the project: EBENE® evaluation, videos, raw sounds track, transport monitoring. Images are only available 28 days; reports are available for five years.
In Pilot 4 Images are only available 28 days, reports are available for five years.

Data security

What provisions are or will be in place for data security?

In Pilot 2 - All provisions are actually actives on our working network. Includes firewall and backup copies.
In Pilot 3 - Back-ups are available, firewalls before accessing as well.
In Pilot 4 Back-ups are available, firewalls before accessing as well.

Will the data be safely stored in trusted repositories for long-term preservation and curation? Indicate yes or no and describe.

Yes, security is ensured by passwords.
The data storage process should be the same for all WP3-partners and probably for the whole project

Ethics

Are there, or could there be, any ethics or legal issues that can have an impact on data sharing? Indicate yes or no and describe.

In pilot 1 data owned by farmers should be legally arranged for usage.
For pilot 3 Yes, therefore only anonymous data can be used.
For pilot 5 data ownership, data anonymization (farm data) and data (e.g., algorithms) sharing by technology providers are topics that still need special emphasis and will be further described in the next version of the DMP.

Will informed consent for data sharing and long-term preservation be included in questionnaires dealing with personal data? Indicate yes, no or not applicable and explain.

The setting up of a Data Transfer Agreement between all partners within each pilot needs to be considered.
Pilot 1 - Data sharing agreements are signed by all focus companies.
Pilot 3 - Not when only anonymous data is shared.
Pilot 5 - Informed consent will be collected whenever non-anonymized personal data is processed.

Other issues	Do you, or will you, make use of other national/funder/sectorial/departmental procedures for data management? If yes, which ones? Please list and briefly describe them. No.

WP 4

Project	Animal Welfare Indicators at the Slaughterhouse
Acronym	aWISH
GA number	101060818
DMP version	V1.0
Work Package (WP)	4
WP lead	UU (Bas Rodenburg - Mona Giersberg)
WP co-lead	Ubitech (Kostas Perakis)
Main contact person DMP	UU (Bas Rodenburg - Mona Giersberg)
Date	21/09/2024

Data summary

What type of formats of data and other (research) outputs will the work package generate or re-use?

The work package will re-use the data generated by the pilots in WP3. This will be a combination of routinely collected data throughout the production chain and sensor data from the technologies incorporated at the pilot sites. Within task 4.1, the aWISH data platform will also generate new data based on the inputs from WP3. Will may include derived data, such as transformed data and interlinking of discrete datasets. For task 4.2, new data will be generated for the intervention studies. The type of data will be the same as for task 4.1, but data from contrasting situations will be collected (before/after improvements; standard versus enhanced conditions etcetera). For task 4.3, the work package will also re-use pre-existing national data on broiler and/or pig welfare. For task 4.4, output will mainly consist of best practice guides.

Data will include results from the expert surveys, literature research, generated data from the project, sensor readings, measurements at slaughter, welfare assessments, reports from national authorities, reports from slaughterhouses, farmer data. Specific data types and volumes are yet to be established.

Will you reuse any existing data and what will you reuse it for?

Yes, as mentioned above, WP4 will re-use data from the pilots, collected within WP3. Also, for task 4.3, we will re-use data from national databases on welfare data collected around slaughter.

What is the purpose of the data generation or reuse and its relation to the objectives of the project/work package?

For Task 4.1 the purpose is the facilitation of visualization and the generation of new insight by combining multiple datasets. This work package also aims to share the project data with the consortium partners in a structured and controlled manner.
For Task 4.4 the data will be used for the development of the Best Practice Guides. Based on the project results, expert knowledge and information from literature, Best Practices to increase animal welfare along the production chain can be identified and evaluated.

What is the expected size of the data that you intend to generate or reuse?

The expected size of data will be approximately the size of the originals.

What is the origin/provenance of the data, either generated or reused?

Reused data: WP3 data. For task 4.3, data will be re-used provided by the NVWA (Dutch Food Safety Authority). Generated data: aWISH pilots.
For Task 4.4 data will be reused from scientific literature (review) and from other WP's of aWish (WP2, 3,4). Data will be also newly generated by expert surveys.

To whom might your data be useful ('data utility') outside your work package and outside the project?
Livestock industry, academia (life sciences), policymakers, competent authorities.

FAIR data - General info

FAIR data

Making data findable, including provisions for metadata

How are the data produced and/or used in your work package discoverable with metadata? What metadata will be created? What disciplinary or general standards will be followed? In case metadata standards do not exist in your discipline, please outline what type of metadata will be created and how.

Several metadata are included in the platform, such as partners' metadata, spatial metadata, temporal metadata, as well as metadata related to the production (e.g. slaughter type, stunning type, etc.), the facilities (e.g. type, number of pens, etc.) and the employees (e.g. age gender, etc.). No metadata standards apply.

How are the data produced and/or used in the WP identifiable? Refer to standard identification mechanisms. Will data and other (research) outputs be identified by a persistent identifier? What naming conventions will be followed? Please describe.

The datasets are confidential, hence there is not a publicly available identifier. However, within the platform, for its dataset ingested we assign a persistent UUID.

Will (research) keywords be provided in the metadata to optimize the possibility for discovery and then potential reuse? Indicate yes or no and describe.

Keywords have been associated with the metadata included in the platform, such as the animal case, the production stage, etc.

Will metadata be offered in such a way that it can be harvested and indexed? Indicate yes or no and describe.

The metadata will remain private, at least for the project duration.

FAIR data

Making data accessible

Will all data and other (research) outputs be made openly available? Indicate yes or no and give the reason why certain datasets cannot be shared openly.

Due to data sharing limitations all data will remain private and securely stored within the platform.

Data from Task 4.4 (BPG's) will be openly available through the project website as well as printed documents.

How will the data be made accessible? Will data and other (research) outputs be deposited in a trusted repository? Indicate yes or no and describe or explain why. Please provide the link or Digital Object Identifier (DOI) if relevant.

Due to data sharing limitations all data will remain private and securely stored within the platform.

Have you explored appropriate arrangements with the identified repository where your data and other (research) outputs will be deposited? Indicate yes or no and describe.

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Does the repository ensure that the data and other (research) outputs are assigned an identifier? Will the repository resolve the identifier to a digital object?

Not applicable.

Is an embargo applied to give time to publish or seek protection of the intellectual property (e.g. patents)? Indicate yes or no.

Not applicable.

If an embargo is applied, specify why and how long this will apply, bearing in mind that research data should be made available as soon as possible.

Not applicable.

Will the data and other (research) outputs be accessible through a free and standardized access protocol? Indicate yes or no and describe.

Not applicable.

If there are restrictions on use, how will access be provided to the data, both during and after the end of the project?

Not applicable.

How will the identity of the person accessing the data be ascertained?

Within aWISH platform, all individuals requesting access to the stored datasets are ascertained via a robust identity authentication, authorization and policy management mechanism.

Is there a need for a data access committee? Indicate yes or no and describe.

No.

Will metadata be made openly available and licensed under a public domain dedication? If not, please clarify why.

Due to data sharing limitations all metadata will remain private and securely stored within the platform.

Will metadata contain information to enable the user to access the data? Indicate yes or no and describe.

Yes, in the metadata there are attributes which define and control the accessibility of the associated dataset by certain users and groups.

How long will the data remain available and findable? Will metadata be guaranteed to remain available after data is no longer available?

Due to data sharing limitations all data will remain available but not findable for a period that will be determined by the cloud storage cost.

Will documentation or reference about any software needed to access or read the data be included? Will it be possible to include relevant software (e.g. in open source code)?

Instructions to access the API of the data platform are provided to the consortium partners.

FAIR data	**Making data interoperable**

What data and metadata vocabularies, standards, formats or methodologies will you follow to make your data interoperable to allow data exchange and reuse within and across disciplines? Will you follow community-endorsed interoperability best practices? Which ones?

Not applicable.

In case it is unavoidable that you use uncommon or generate project-specific ontologies or vocabularies: Will you provide mappings to more commonly used ontologies? Will you openly publish the generated ontologies or vocabularies to allow reusing, refining or extending them?

Not applicable

Will your data and other (research) outputs include qualified references to other data (e.g. other data from your work package, or datasets from previous research)? Indicate yes or no and describe.

To be established.

FAIR data	Increase data reuse

When will the data be made available for reuse? How long is it intended that the data remains reusable?

Not applicable.

How will you provide documentation needed to validate data analysis and facilitate data reuse?

Not applicable.

Will your data and other (research) outputs be made freely available in the public domain to permit the widest reuse possible? Will your data and other (research) outputs be licensed using standard reuse licenses, in line with the obligations set out in the Grant Agreement?

Due to data sharing limitations all metadata will remain private and securely stored within the platform. Some of the project's deliverables will be made publicly available.

Will the data and other (research) output produced in the work package be useable by third parties, in particular after the end of the project? Indicate yes or no and explain.

Yes, data from Task 4.4 (Best Practice Guides) will be useable by third parties (livestock industry, advisors, policy,...) after the end of the project. The Best Practice Guides should be available in digital (open access) and printed versions.
To be established

Will the provenance of the data and other (research) outputs be thoroughly documented using the appropriate standards?

Not applicable.

Describe all relevant data quality assurance processes.

Not applicable.

Other research output

Do you have any additional information, that was not addressed in the previous sections, which you wish to provide regarding other (research) outputs that are generated or reused throughout the project?

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Allocation of resources

What will the costs be for making data and other (research) outputs FAIR in your work package?

To be established.

How will these be covered?

To be established

Who will be responsible for data management in your work package?

To be established.

How will long-term preservation be ensured?

To be established.

Data security	What provisions are or will be in place for data security? Within aWISH platform, all individuals requesting access to the stored datasets are ascertained via a robust identity authentication, authorization and policy management mechanism. Will the data be safely stored in trusted repositories for long-term preservation and curation? Indicate yes or no and describe. To be established
Ethics	Are there, or could there be, any ethics or legal issues that can have an impact on data sharing? Indicate yes or no and describe. To be established Will informed consent for data sharing and long-term preservation be included in questionnaires dealing with personal data? Indicate yes, no or not applicable and explain. To be established
Other issues	Do you, or will you, make use of other national/funder/sectorial/departmental procedures for data management? If yes, which ones? Please list and briefly describe them. …

WP 5

Project	Animal Welfare Indicators at the Slaughterhouse
Acronym	aWISH
GA number	101060818
DMP version	V1.0
Work Package (WP)	5
WP lead	Thuenen
WP co-lead	White Research
Main contact person DMP	Petra Thobe
Date	27/09/2024

Data summary

What type of formats of data and other (research) outputs will the work package generate or re-use?

TI: Reused research output:
From practice partners generated data (slaughtering and transport), protocols, models
Generated output:
Collected anonymized data along the value chain, economic and environmental data
Data types:
Qualitative and quantitative data from focus groups and surveys, quantitative data from sensor readings (aggregated), sensory observations and qualitative measurements, derived variables;
Data formats: xlsx, txt, csv.

WR: Data collected through desk research:
Type: research papers
Format: .docx, .ppt, .pdf, .xlsx
Data collected through stakeholder interviews
Type: Notes
Format: .docx, .ppt, .pdf, .xlsx

Data collected through online survey
Type: Answers captured from a web-based survey platform
Format: .csv, .xlsx
Data collected during Expert Panels workshops
Type: Notes, videos
Format: .8docx, .ppt, .pdf, .xlsx, .mp4, .mov, .jpg, .tiff

Will you reuse any existing data and what will you reuse it for?

TI: Yes, the result of the tasks where TI is responsible will feed WP2, 3 and WP4.
WR: Yes, the result of the tasks where WR is responsible will feed WP2 and WP4.

What is the purpose of the data generation or reuse and its relation to the objectives of the project/work package?

The data will be used for the development of models for the environmental impact assessment foreseen in the GA. The data will also be used for protocols and deliverables as foreseen in GA.

What is the expected size of the data that you intend to generate or reuse?

TI: We expect 20 GB data volume for the work package.
1000 photos (á 5 MB) = 5 GB
10 expert interviews = 3 GB
simulation model = 12 GB
Part of the data will be provided by end of October2024 (Milestone 10).

WR: Data collected through desk research:
Size: ~ 0.04 GB
Data collected through stakeholder interviews
Size: ~ 0.3 GB
Data collected through online survey
Size: ~ 0.1 GB
Data collected during training workshops and webinars
Size: up to 50MB for each doc, 1 MB for each .xlsx, 250 MB per video file.

What is the origin/provenance of the data, either generated or reused?

Ti: The data used in this work package are made available by the project partners in order to calculate various scenarios in a simulation model.

WR: Already existing technical documentation, publications. Personal opinions.

To whom might your data be useful ('data utility') outside your work package and outside the project?

TI: The data could be useful to policy makers, actors of the broiler and pig value chain, scientists.
The data can be used to assess the economic and ecological consequences in the preliminary stages of political measures that affect actors along the entire value chain to derive political measures on the basis of a sound database . For actors along the value chain a transparent database will be useful to improve the management and a sustainable production.

WR: Stakeholders across the value chain, Government & Policy makers, Researchers, NGOs, Industry representatives, etc.

FAIR data - General info

FAIR data

Making data findable, including provisions for metadata

How are the data produced and/or used in your work package discoverable with metadata? What metadata will be created? What disciplinary or general standards will be followed? In case metadata standards do not exist in your discipline, please outline what type of metadata will be created and how.

TI: The metadata meet the requirements for citability of the respective datasets (title, description, data collection time, dataset name, categories, dataset author, licence, associated publication(s), metadata schema, embargo, legal requirements). The work package documents metadata in open formats, such as .xml, .csv, .txt, .md, according to common metadata standards (e.g. Dublin Core, DataCite Metadata Schema). Additional descriptive metadata is also recorded in a structured document and stored in an open format. The supplementary metadata is stored as part of the respective dataset and published if necessary. For geographical data (longitude and latitude), the underlying reference system is specified. Work package creates reference documentation for all metadata, except for metadata standards, and uses variable names and entities consistently and globally for all project data.

How are the data produced and/or used in the WP identifiable? Refer to standard identification mechanisms. Will data and other (research) outputs be identified by a persistent identifier? What naming conventions will be followed? Please describe.

TI: Data sets that are published are made uniquely referenceable with a persistent identifier (e.g. DOI).
The rules for naming files and folders, as well as a folder directory, are specified by the WP and Task Leaders before the start of data collection.
Data collected through desk research:
No identification.

WR: Data collected through stakeholder interviews
No identification.

Data collected through online survey
No identification.

Data collected during Expert Panels workshops
No identification.

Will (research) keywords be provided in the metadata to optimize the possibility for discovery and then potential reuse? Indicate yes or no and describe.

TI: If possible, the keywords are given as part of the metadata. However, this depends on the repository to be selected and will be clarified no later than six months before the end of the project.

WR: No, at the current stage it is not defined yet.

Will metadata be offered in such a way that it can be harvested and indexed? Indicate yes or no and describe.

TI: The work package will prefer a repository that has an interface (e.g. OAI-PMH) for harvesting the metadata.

WR: Data collected through desk research: No.
Data collected through stakeholder interviews: No.
Data collected through online survey: No.
Data collected through expert panels workshops: No.

FAIR data	Making data accessible

Will all data and other (research) outputs be made openly available? Indicate yes or no and give the reason why certain datasets cannot be shared openly.

TI: The work package will publish the research data unless there are legal, contractual or ethical reasons against it. A license that is as open as possible is chosen for the publication of the research data. The data from the expert interviews cannot be published because they cannot be made anonymous. The results of the interviews will be published in a scientific publication.

WR: No, raw data (captured answers) will not become available. Analysed/aggregated data will be reported to a public deliverable. Data will be anonymised. Personal information data will be aggregated/anonymised before being reported to a public deliverable.

How will the data be made accessible? Will data and other (research) outputs be deposited in a trusted repository? Indicate yes or no and describe or explain why. Please provide the link or Digital Object Identifier (DOI) if relevant.

TI: Whenever possible, research data will be published in a certified repository. The repository will be selected no later than six months before the end of the project. The data sets are uniquely referenced with a persistent identifier (e.g. DOI).

WR: Internal project repository. Only anonymised and aggregated data will be made open to ensure that data subjects cannot be identified in any reports, publications and/or datasets resulting from the project. The project partner serving as the data controller in each case will undertake all the necessary anonymisation procedures to anonymise the data in such a way that the data subject is no longer identifiable.

Have you explored appropriate arrangements with the identified repository where your data and other (research) outputs will be deposited? Indicate yes or no and describe.

TI: Not yet. The repository will be selected no later than six months before the end of the project

Does the repository ensure that the data and other (research) outputs are assigned an identifier? Will the repository resolve the identifier to a digital object?

TI: The repository will be selected no later than six months before the end of the project.

Is an embargo applied to give time to publish or seek protection of the intellectual property (e.g. patents)? Indicate yes or no.

TI: We will decide this point once the project staff is hired. For example, if a PhD students are part of the project staff, they will be granted an embargo to fully complete the PhD process.

WR: Not applicable.

If an embargo is applied, specify why and how long this will apply, bearing in mind that research data should be made available as soon as possible.

TI: Please see above.
WR: Not applicable.

Will the data and other (research) outputs be accessible through a free and standardized access protocol? Indicate yes or no and describe.

TI: The research data will be published in a repository when possible. The metadata can be called up or viewed via the Internet or downloaded via the interfaces offered by the repository. The question can only be answered with the selection of the repository. See also the answers to the previous questions.

WR: Not applicable.

If there are restrictions on use, how will access be provided to the data, both during and after the end of the project?

TI: The expert interviews are subject to data protection and are only accessible to the project staff who collect the data. The results will then be published in the form of an open access scientific publication.

WR: WR will provide access to the data regarding the specific task, as function of the involvement of the partner in the task.

How will the identity of the person accessing the data be ascertained?

TI: Providing a link to the information in the internal project repository once TI has received the data by involved partners/pilots.
WR: Providing a link to the information in the internal project repository.

Is there a need for a data access committee? Indicate yes or no and describe.

TI: Usually, project leaders or heads of institutes decide whether someone gets access to the research data.

WR: Not applicable.

Will metadata be made openly available and licensed under a public domain dedication? If not, please clarify why.

TI: Yes.

WR: No metadata will be created, as the datasets created won't be publicly available.

Will metadata contain information to enable the user to access the data? Indicate yes or no and describe.

TI: The contact options for inquiries about the use of data are given. The contact options are part of the metadata.

WR: Not applicable.

How long will the data remain available and findable? Will metadata be guaranteed to remain available after data is no longer available?

TI: In accordance with good scientific practice, the raw data is generally stored at the Thünen Institute for 10 years. Access is granted where there is a legitimate interest, as long as there are no legal, contractual or ethical reasons against it.
How long published datasets can be found depends on the repository and can only be answered after it has been selected.

WR: Not applicable.

Will documentation or reference about any software needed to access or read the data be included? Will it be possible to include relevant software (e.g. in open source code)?

TI: This work package won't use special software. The data can be used without a special software.

WR: Not applicable.

FAIR data	Making data interoperable

What data and metadata vocabularies, standards, formats or methodologies will you follow to make your data interoperable to allow data exchange and reuse within and across disciplines? Will you follow community-endorsed interoperability best practices? Which ones?

TI: The work package will observe the specifications of the subject-specific consortia BERD@NFDI and KonsortSWD of the National Research Data Infrastructure (https://www.nfdi.de/konsortien/) for research data management.

WR: Not applicable.

In case it is unavoidable that you use uncommon or generate project-specific ontologies or vocabularies: Will you provide mappings to more commonly used ontologies? Will you openly publish the generated ontologies or vocabularies to allow reusing, refining or extending them?

TI: The work package will answer this question at a later point in time, since it is not certain at this point in time whether a corresponding ontology will be created.

WR: Not applicable.

Will your data and other (research) outputs include qualified references to other data (e.g. other data from your work package, or datasets from previous research)? Indicate yes or no and describe.

TI: The work package will answer this question at a later point in time, since the data from the other work packages has not yet been generated and so a statement on the links cannot yet be made.

WR: Not applicable.

FAIR data	Increase data reuse

When will the data be made available for reuse? How long is it intended that the data remains reusable?

TI: As described above, the research data will only be made accessible if there are no ethical, legal or contractual reasons against it. Since the research data contains personal data, the question of reusability still has to be clarified.

WR: The datasets won't be publicly available.

How will you provide documentation needed to validate data analysis and facilitate data reuse?

TI: Documentation will be created and made available upon request unless there are legal or contractual reasons to the contrary.

WR: Not applicable.

Will your data and other (research) outputs be made freely available in the public domain to permit the widest reuse possible? Will your data and other (research) outputs be licensed using standard reuse

licenses, in line with the obligations set out in the Grant Agreement?

TI: The work package will publish the research data unless there are legal, contractual or ethical reasons against it. A license that is as open as possible is chosen for the publication of the research data. The data from the expert interviews cannot be published because they cannot be made anonymous. The results of the interviews will be published in a scientific publication.

WR: The datasets won't be publicly available.

Will the data and other (research) output produced in the work package be useable by third parties, in particular after the end of the project? Indicate yes or no and explain.

TI: The data could be useful to policy makers, actors of the broiler and pig value chain, scientists.
see above.

WR: The results in the public deliverables will be useful to Stakeholders across the value chain, Government & Policy makers, Researchers, NGOs, Industry representatives, etc.

Will the provenance of the data and other (research) outputs be thoroughly documented using the appropriate standards?

TI: The work package will document the provenance of the research data and the other outputs by using appropriate metadata schemas (e.g. Dublin Core, DataCite Metadata Schema) in the metadata.

WR: Not applicable.

Describe all relevant data quality assurance processes.

TI: Multiple – control of the results internally and externally.

WR: data quality assurance processes (will) include data validation, cleansing, consistency checks, and regular audits to ensure accuracy, completeness, and reliability.

Other research output

Do you have any additional information, that was not addressed in the previous sections, which you wish to provide regarding other (research) outputs that are generated or reused throughout the project?

TI: No.
WR: Not applicable.

Allocation of resources

What will the costs be for making data and other (research) outputs FAIR in your work package?

TI: Not applicable.

How will these be covered?

TI: Not applicable.
WR: Not applicable.

Who will be responsible for data management in your work package?

TI: The data steward if the work package/individual Task is responsible for the data management.

WR: The data management will be overseen by the internal project team assigned by White Research.

How will long-term preservation be ensured?

TI: The Thünen Institute will provide a possibility for long-term data storage of the research data for a period of ten years.

WR: Data will be preserved in the internal project repository for the duration needed by the project, with anonymised and aggregated data reported in a public deliverable.

Data security

What provisions are or will be in place for data security?

TI: The research data of the work package are stored in the IT infrastructure of the Thünen Institute. The data is stored on servers that have a back-up routine. Sensitive data is only made accessible to authorized persons through an access and rights management system.

WR: Data will be stored in the internal project repository, secured through anonymisation, access controls, and compliance with data protection regulations.

Will the data be safely stored in trusted repositories for long-term preservation and curation? Indicate yes or no and describe.

TI: Please look under FAIR data.

WR: Not applicable.

Ethics

Are there, or could there be, any ethics or legal issues that can have an impact on data sharing? Indicate yes or no and describe.

	TI: Yes, the work package will handle sensitive data. WR: All data are or will be anonymized and aggregated.
	Will informed consent for data sharing and long-term preservation be included in questionnaires dealing with personal data? Indicate yes, no or not applicable and explain. TI: Yes, the informed consent is part of the questionnaires used and is formulated together with the data protection officer and the legal department of the Thünen Institute. WR: Yes, informed consent will be obtained where necessary, and personal data will be anonymised or aggregated.
Other issues	Do you, or will you, make use of other national/funder/sectorial/departmental procedures for data management? If yes, which ones? Please list and briefly describe them. TI: No. WR: No.

WP 6

Project	Animal Welfare Indicators at the Slaughterhouse
Acronym	aWISH
GA number	101060818
DMP version	V1.0
Work Package (WP)	6
WP lead	EV ILVO
WP co-lead	/
Main contact person DMP	Anneleen De Visscher
Date	19/09/2024

Data summary

What type of formats of data and other (research) outputs will the work package generate or re-use?

Developed within WP 6:

- Project Management Handbook
- Data Management Plan
- Ethics Rating Plan
- General aWISH project presentation
- Other presentations: conferences, events, consortium meetings
- Webinar recordings

Collected by WP 6:

- Ethical committee forms of the pilots
- Data Sharing Agreements of the focus companies
- Data Management Plans of all WPs
- Deliverables reports
- Milestone reports

Used by WP 6 and other WPs:

- Consortium Teams platform

All data are doc and pdf files and video and image data, including templates, deliverable and milestone reports, agendas, minutes, webinar recordings etc.

Will you reuse any existing data and what will you reuse it for?

No

What is the purpose of the data generation or reuse and its relation to the objectives of the project/work package?

The data collection is related to the main task of WP 6, project management and coordination and linked to the deliverables.
According to the GA the following deliverables will be made by WP 6:

- D6.1 Project Management Handbook (submitted)
- D6.2 Data Management Plan version 1 (submitted)
- D6.3 Data Management Plan version 2
- D6.4 Data Management Plan version 3
- D6.5 Ethics Rating Plan (submitted)

What is the expected size of the data that you intend to generate or reuse?

Approximately 25 Mb (Deliverables and other forms).
No significant storage requirements.

What is the origin/provenance of the data, either generated or reused?

/

To whom might your data be useful ('data utility') outside your work package and outside the project?

- New (research) projects (Deliverables), e.g. as advice for better project management and implementation. Also expertise, knowledge and workflows can serve as a basis for new reports and coordination work.
- Stakeholders (General aWISH presentation).
- Policymakers, competent authorities.

FAIR data	**Making data findable, including provisions for metadata**
	How are the data produced and/or used in your work package discoverable with metadata? What metadata will be created? What disciplinary or general standards will be followed? In case metadata standards do not exist in your discipline, please outline what type of metadata will be created and how.
	The non-confidential public data will be downloadable on the aWISH website, e.g. public deliverables. Other data will be stored on the Consortium Teams, e.g. sensitive deliverables, Data Management Plans of the WPs, or at the internal Teams of the project coordinator, e.g. Data Sharing Agreements, Ethical forms. No metadata are created yet for these documents, but all necessary information is included in the title of the document and the documents itself.
	How are the data produced and/or used in the WP identifiable? Refer to standard identification mechanisms. Will data and other (research) outputs be identified by a persistent identifier? What naming conventions will be followed? Please describe.
	Unique and persistent identifiers will not be used.
	Will (research) keywords be provided in the metadata to optimize the possibility for discovery and then potential reuse? Indicate yes or no and describe.
	Not applicable.

Will metadata be offered in such a way that it can be harvested and indexed? Indicate yes or no and describe.

Final versions of the deliverables will be uploaded on the EC participant portal and the consortium Teams. After approval of the EC, public deliverables will also be available on the website.
Work versions of all WP 6 reports will be stored on the internal aWISH Teams of the project coordinator EV ILVO.

FAIR data	Making data accessible

Will all data and other (research) outputs be made openly available? Indicate yes or no and give the reason why certain datasets cannot be shared openly.

The non-confidential public data will be downloadable on the aWISH website, e.g. public deliverables.
Other data will be stored on the Consortium Teams, e.g. sensitive deliverables, Data Management Plans of the WPs, or at the internal Teams of the project coordinator, e.g. Data Sharing Agreements of the focus companies, Ethical forms.

How will the data be made accessible? Will data and other (research) outputs be deposited in a trusted repository? Indicate yes or no and describe or explain why. Please provide the link or Digital Object Identifier (DOI) if relevant.

The non-confidential public data will be downloadable on the aWISH website, e.g. public deliverables.
Other data will be stored on the Consortium Teams, e.g. sensitive deliverables, Data Management Plans of the WPs, or at the internal Teams of the project coordinator, e.g. Data Sharing Agreements of the focus companies, Ethical forms

Have you explored appropriate arrangements with the identified repository where your data and other (research) outputs will be deposited? Indicate yes or no and describe.

Not applicable.

Does the repository ensure that the data and other (research) outputs are assigned an identifier? Will the repository resolve the identifier to a digital object?

Not applicable.

Is an embargo applied to give time to publish or seek protection of the intellectual property (e.g. patents)? Indicate yes or no.

Not applicable.

If an embargo is applied, specify why and how long this will apply, bearing in mind that research data should be made available as soon as possible.

Not applicable.

Will the data and other (research) outputs be accessible through a free and standardized access protocol? Indicate yes or no and describe.

Not applicable.

If there are restrictions on use, how will access be provided to the data, both during and after the end of the project?

Not applicable.

How will the identity of the person accessing the data be ascertained?

Not applicable.

Is there a need for a data access committee? Indicate yes or no and describe.

No.

Will metadata be made openly available and licensed under a public domain dedication? If not, please clarify why.

Not applicable.

Will metadata contain information to enable the user to access the data? Indicate yes or no and describe.

Not applicable.

How long will the data remain available and findable? Will metadata be guaranteed to remain available after data is no longer available?

Not applicable.

Will documentation or reference about any software needed to access or read the data be included? Will it be possible to include relevant software (e.g. in open source code)?

Not applicable.

FAIR data

Making data interoperable

What data and metadata vocabularies, standards, formats or methodologies will you follow to make your data interoperable to allow data exchange and reuse within and across disciplines? Will you follow community-endorsed interoperability best practices? Which ones?

Deliverable files will be in digital format making interoperability easy.

In case it is unavoidable that you use uncommon or generate project-specific ontologies or vocabularies: Will you provide mappings to more commonly used ontologies? Will you openly publish the generated ontologies or vocabularies to allow reusing, refining or extending them?

Not applicable.

Will your data and other (research) outputs include qualified references to other data (e.g. other data from your work package, or datasets from previous research)? Indicate yes or no and describe.

Not applicable.

FAIR data

Increase data reuse

When will the data be made available for reuse? How long is it intended that the data remains reusable?

Public deliverables will be made available on the aWISH website after the submission deadline and during the lifetime of the project.
Data are also stored on the Consortium Teams and available for all aWISH partners during the lifetime of the project.
Knowledge, expertise and work flows will be shared when asked for.
Knowledge, expertise and work flows will be shared when asked for.

How will you provide documentation needed to validate data analysis and facilitate data reuse?

Not applicable.

Will your data and other (research) outputs be made freely available in the public domain to permit the widest reuse possible? Will your data and other (research) outputs be licensed using standard reuse licenses, in line with the obligations set out in the Grant Agreement?

Not applicable.

Will the data and other (research) output produced in the work package be useable by third parties, in particular after the end of the project? Indicate yes or no and explain.

Not applicable.

Will the provenance of the data and other (research) outputs be thoroughly documented using the appropriate standards?

Not applicable.

Describe all relevant data quality assurance processes.

Not applicable.

Other research output

Do you have any additional information, that was not addressed in the previous sections, which you wish to provide regarding other (research) outputs that are generated or reused throughout the project?

No.

Allocation of resources

What will the costs be for making data and other (research) outputs FAIR in your work package?

Not applicable.

How will these be covered?

Not applicable.

Who will be responsible for data management in your work package?

Anneleen De Visscher

How will long-term preservation be ensured?

Not applicable.

Data security

What provisions are or will be in place for data security?

All documents will be made available and stored on the Consortium Teams and/or aWISH website and/or internal Teams of the coordination team.

Will the data be safely stored in trusted repositories for long-term preservation and curation? Indicate yes or no and describe.

Not applicable.

Ethics	Are there, or could there be, any ethics or legal issues that can have an impact on data sharing? Indicate yes or no and describe. Yes, for audio and video recordings the consent will be asked at the beginning of the meeting/discussion. Will informed consent for data sharing and long-term preservation be included in questionnaires dealing with personal data? Indicate yes, no or not applicable and explain. No.
Other issues	Do you, or will you, make use of other national/funder/sectorial/departmental procedures for data management? If yes, which ones? Please list and briefly describe them. No.