

Data Management Plan - Initial

Deliverable D_{1.2}

Version N°1

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1 Disclaimer

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2 Project information

| Grant Agreement | n°101138672 |
|---------------------|--|
| Project Title | Future-proofing Heritage Townhouses by Optimising Comfort and Energy in Time and Space |
| Project Acronym | HeriTACE |
| Project Coordinator | Arnold Janssens, Ghent University |
| Project Duration | 1 January 2024 - 31 December 2027 (48 months) |

3 Deliverable information

| Related Work Package | WP1 Project Management |
|-------------------------|------------------------------------|
| Related Task(s) | T1.3 Knowledge and data management |
| Lead Organisation | Ghent University (UGent) |
| Contributing Partner(s) | All Partners |
| Due Date | 30/06/2024 |
| Submission Date | 26/06/2024 |
| Dissemination level | Public |

3.1 History

| Date | Version | Submitted by | Reviewed by | Comments |
|------------|---------|----------------|--|-----------------|
| 21.06.2024 | N°1 | Klaas De Jonge | Marianne Lancker, Lieve Helsen, Filip Jorissen | Initial version |



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5 Executive Summary

This deliverable is the initial data management plan (DMP) developed within the first 6 months of the project. An update to this document will be made twice, once during the project and once at the end.

This initial DMP outlines the general principles that will be used within the heriTACE project with regards to the public deliverables. To adhere to the FAIR data principles, all public deliverables will at least be shared on the Zenodo platform following a specific naming convention and linked to the "HorizonEU-heriTACE" community on Zenodo. Finally, this document outlines the data management responsibilities of each project partner, including general arrangements for if personal data is gathered.

5.1 Abbreviations and acronyms

| Acronym | Description |
|---------|---------------------------------------|
| DMP | Data Management Plan |
| R | Report |
| DEM | Demonstrator (pilot, prototype) |
| DEC | Websites, patent filings, videos, etc |
| PU | Public |
| SEN | Sensitive |



6 Deliverables

The heriTACE project will generate 37 Reports, do 4 demonstrations, make a website and other dissemination material, generate 3 versions of this data-management plan (initial-update-final), models and algorithms. An overview of the deliverables is provided in Table 1 with an indication of the dissemination level, "openness", of the deliverable. In line with the FAIR principles, the majority of the deliverables are public and only exceptionally deliverables are treated as sensitive and thus not public.

Abbreviations used in the overview:

Types

R Report, DocumentDMP Data Management Plan

DEM Demonstrator, pilot, prototypeDEC Websites, patent filings, videos, etc

- OTHER Other than listed above

Dissemination Level

PU PublicSEN Sensitive

Table 1 - Overview of deliverables of the heriTACE project

| WP | Deliverable Number | Deliverable name | Short description | Туре | Diss |
|----|-----------------------|-----------------------------------|---|------|------|
| 1 | D1.1 | Project Management Plan | To ensure project execution of the highest quality, a variety of standardised procedures, templates and instructions related to the management will be established and documented in the Project Management Handbook. (Task 1.) | R | PU |
| 1 | D1.2 | Data Management Plan (initial) | The data Management Plan outlines how data will be collected/handled/stored according to the FAIR principles.(Task 1.3) | DMP | PU |
| 1 | D1.3 | Data Management Plan (update) | The data Management Plan outlines how data will be collected/handled/stored according to the FAIR principles.(Task 1.3) | DMP | PU |
| 1 | D1.4 | Data Management Plan (final) | The data Management Plan outlines how data will be collected/handled/stored | DMP | PU |



| WP | Deliverable Number | Deliverable name | Short description | Туре | Diss |
|----|-----------------------|---|--|-------|------|
| | | | according to the FAIR principles.(Task 1.3) | | |
| 2 | D2.1 | Building envelope characteristics | Report and data on the analysis of the building envelope characteristics (Task 2.1) | R | PU |
| 2 | D2.2 | Energy Conservation measures inventory | Longlist and shortlist of energy conservation measures for the building envelope (Task 2.2) | R | PU |
| 2 | D2.3 | ETICS solution for plastered masonry walls | Prototype of ETICS solution for plastered masonry walls - tested in lab, simulated (Task 2.3) | DEM | SEN |
| 2 | D2.4 | Future-proof concept for interior retrofitting of wooden facades | Prototype of insulation solutions for wooden facades in changing Nordic climates - measured in test building, simulated (Task 2.4) | DEM | PU |
| 2 | D2.5 | Improved historical window systems | Prototype of energy-efficient historical window systems - tested in lab and using new pulse test protocol (T2.5) | DEM | PU |
| 3 | D3.1 | HVAC-concepts for heritage buildings | Longlist and shortlist of HVAC concepts for heritage buildings (Task 3.2.1). | R | PU |
| 3 | D3.2 | Comfort and IAQ in heritage townhouses | Report and data on the analysis of IEQ and HVAC in existing heritage townhouses (Task 3.1); | R | PU |
| 3 | D3.3 | Baseline BES- models | Models of the baseline scenarios validated using measurement data from case- study monitoring (Task 3.2.2) | OTHER | PU |
| 3 | D3.4 | Smart ventilation strategies reducing moisture risks | Ventilation strategies specifying new control methods reducing moisture risks in wooden heritage townhouses (T3.3.1) | R | PU |
| 3 | D3.5 | Performance-based ventilation and control strategies | Validated concepts and control logics, selection matrix (T3.3.2) | R | PU |



| WP | Deliverable Number | Deliverable name | Short description | Туре | Diss |
|----|-----------------------|--|--|------|------|
| 3 | D3.6 | Ventilative cooling guide | Decision guide for ventilative cooling potential (T3.3.3) | R | PU |
| 3 | D3.7 | Smart hybrid heating concepts | Tested hybrid heating concepts, based on new sizing method (T3.4) | R | PU |
| 3 | D3.8 | Performance assessment of building envelope and HVAC concepts in heritage townhouses (initial) | Quantified performance and design decision guidelines, T3.5 (version 1) | R | PU |
| 3 | D3.9 | Performance assessment of building envelope and HVAC concepts in heritage townhouses (final) | Quantified performance and design decision guidelines, T3.5 (final version) | R | PU |
| 4 | D4.1 | R ² ES-based energy supply concepts for heritage buildings in historical neighbourhoods | Longlist and shortlist of R ² ES based energy supply concepts incl. heritage constraints logbook (T4.1 and T4.2) | R | PU |
| 4 | D4.2 | Prototype BIPV integrated in roof tiles | Product description and testing results of the prototype BIPV (T4.3.1) | DEM | SEN |
| 4 | D4.3 | Feasibility of heat recovery from unharvested local sources in heritage environments | Report of the feasibility study on heat recovery from unharvested local sources (T4.3.2) | R | PU |
| 4 | D4.4 | MPC Calibration method | Report on the MPC calibration method, incl. calibrated parameters (T4.3.3) | R | PU |
| 4 | D4.5 | MPC demonstration in historic building | Results on the demonstration of MPC in historic building, including logbook of faults (T4.3.3, T4.3.4) | R | PU |
| 4 | D4.6 | Building block MPC extensions | Report on the virtual MPC development and simulation-based demonstration for a | R | PU |



| WP | Deliverable Number | Deliverable name | Short description | Туре | Diss |
|----|-----------------------|--|--|-------|------|
| | | | historical building block (Task 4.3.5) | | |
| 4 | D4.7 | Performance assessment of R ² ES concepts in heritage townhouses in historical neighbourhoods (initial) | Quantified performance, sizes and gains (T4.4 and T4.5, first version) | R | PU |
| 4 | D4.8 | Performance assessment of R ² ES concepts in heritage townhouses in historical neighbourhoods (final) | Quantified performance, sizes and gains, and design recommendations (T4.4 and T4.5, final version) | R | PU |
| 5 | D5.1 | Case-study selection at building and neighbourhood levels | Representative selection of case-study historical townhouses and neighbourhoods (T5.0) | R | PU |
| 5 | D5.2 | Cultural heritage analysis and value assessment | Compilation of cultural heritage values based on the cultural heritage analysis; (T5.1.1) | R | PU |
| 5 | D5.3 | Cultural heritage building user and owner perspectives | Qualitative and quantitative empirical findings from interviews and survey (T5.1.2) | R | PU |
| 5 | D5.4 | Baseline scenarios | Definition and characteristics of the Pre-renovation and renovation baseline scenarios (T5.2) | R | PU |
| 5 | D5.5 | Map of KPI | Definition of KPI, metrics and assessment methods (T5.2) | R | PU |
| 5 | D5.6 | Visualisation model to assess the visual impact of energy retrofitting solutions on the building heritage value | Algorithm of the visualisation model, including documentation and application example (T5.3.1) | OTHER | PU |



| WP | Deliverable Number | Deliverable name | Short description | Туре | Diss |
|----|-----------------------|--|---|------|------|
| 5 | D5.7 | Multidimensional model for the holistic and multi- scale assessment of heritage buildings | Report of the model and the description, (Task 5.3) | R | PU |
| 5 | D5.8 | Validation of the holistic and multi- scale assessment model | Population and validation of the holistic and multi-scale assessment model on 3 case- studies (T5.4) | R | PU |
| 6 | D6.1 | Transdisciplinary processes for the holistic future-proofing of heritage buildings in neighbourhoods | Scripts for the standardized transdisciplinary processes and recommendations for the improvements of standards (T6.1) | R | PU |
| 6 | D6.2 | Policy advice report | Local policy Advise reports, including vision and plans for future-proofing of the local case-studies (T6.1) | R | PU |
| 6 | D6.3 | Customer services for early-stage design of neighbourhood energy systems | Description of the customer services and the test of the customer process (T6.1.1) | R | PU |
| 6 | D6.4 | Integrated and balanced design guidelines for heritage townhouses | Tools and guidelines (T6.2) | R | PU |
| 6 | D6.5 | Early design tools for the feasibility assessment of innovative HVAC and energy solutions | Technical system design tools (T6.2.1) | R | PU |
| 6 | D6.6 | Technical guidelines for building the building envelope solutions | Technical documentation for building professionals (T6.2.2) | R | PU |



| WP | Deliverable Number | Deliverable name | Short description | Туре | Diss |
|----|-----------------------|--|--|-------|------|
| 6 | D6.7 | Exploitation plan (initial version) | Exploitation strategies (T6.3) | R | SEN |
| 6 | D6.8 | Exploitation plan (final version) | Exploitation strategies (T6.3) | R | SEN |
| 7 | D7.1 | Communication and Dissemination plan (version 1) | Integrated Plan for communication and dissemination that will determine actions and define responsibilities and timelines to communicate and disseminate widely the results of the work carried out (Task 7.1) | R | PU |
| 7 | D7.2 | HeriTACE Visual Identity | Project Visual identity (T7.2) | OTHER | PU |
| 7 | D7.3 | Website and social media | Project website and community building via social networks (T7.3) | DEC | PU |
| 7 | D7.4 | Communication and Dissemination plan (version 2) | Communication & dissemination strategies (T7.1) | R | PU |
| 7 | D7.5 | Communication and Dissemination plan (version 3) | Communication & dissemination strategies (T7.1) | R | PU |
| 7 | D7.6 | Online and offline dissemination material (version 1) | Leaflet, poster, video etc. (T7.4) | DEC | PU |
| 7 | D7.7 | Communication and Dissemination plan (final version) | Communication & dissemination strategies (T7.1) | R | PU |
| 7 | D7.8 | Online and offline dissemination material (version 2) | Leaflet, poster, video etc. (T7.4) | DEC | PU |
| 7 | D7.9 | Guidelines for designers and architects | Technical brochures (T7.5) | R | PU |



7 FAIR data

The 'FAIR' principles: Findable, Accessible, Interoperable and Re-usable are applied for all final public research datasets in this project. The open-access repository Zenodo (www.zenodo.org) will be used to acquire this goal. The Zenodo repository is developed following the best practice FAIR principles. The general implementation of the FAIR principles can be visited on: https://about.zenodo.org/principles/.

Using Zenodo, all public research datasets will be attributed a persistent identifier, namely a Digital Object Identifier (DOI) if they have not been appointed a DOI elsewhere.

The following procedure will be used in this project for the final public research deliverables:

| Files | Upload the final version of the files in Zenodo |
|--|--|
| Communities | Specify the community "HorizonEU-heriTACE" |
| | opening the community mentality mentality |
| | https://zenodo.org/communities/heritace/ |
| Upload Type | Select the correct upload type. |
| 9 10 10 10 10 10 10 10 10 10 10 10 10 10 | For complete project deliverables, choose "Publications" > |
| | "Project deliverable" |
| Digital Object Identifier | Include the doi of the dataset, or ask Zenodo to register a doi |
| | for your dataset. |
| Title | For deliverables: |
| | "DX.X Title of the deliverable (DX.X_Type)" |
| | For datasets: |
| | "Title of the dataset (DX.X_dataset##)" |
| | For models: |
| | "Title of the model (DX.X_model##)" |
| | For Algorithms: |
| | "Title of the algorithm (DX.X_algorithm##)" |
| | For video/audio/image/poster/presentation etc.: |
| | "Title of media (DX.X_media##)" |
| | |
| | X.X is the deliverable number |
| | ## is a sequential number (starting at 01) |
| | Type is the abbreviation for the type of deliverable as listed in |
| | Section 6 of this document. For the 'OTHER' types, a short |
| D. I. I. D. | description is used (e.g. 'Model') |
| Publication Date | Fill in the date of first publication. |
| | |
| Creators | Add the authors. |
| Description | The description (abstract) shall describe the content of the |
| | dataset in layman's terms, including the type of data points |
| | and their general application. The abstract shall be between 250 and 500 characters long (including spaces). |
| | The description ends with the following paragraph: |
| | "This project has received funding from the European Union's |
| | Horizon Europe research and innovation programme (project: |
| | 101138672), call HORIZON-CL5-2023-D4-01" |
| | |



| Licenses | All PU datasets: |
|--------------|--|
| | Select an open-access license that allows the deliverable to be read by all without geographic limitations . Further restrictions can be given in agreement with the partners involved in the deliverable. All partners are encouraged to share with limited restrictions. At the least, derivations and sharing alike should be permitted for non-commercial use . |
| | An example of such a license is the CC-BY-NC-SA license. To use this license: |
| | Press the "Add custom" button. Fill in the following: Title: CC BY-NC-SA 4.0 Creative Commons Attribution-Noncommercial-Sharealike 4.0 International Description: Attribution – You must give appropriate credit , |
| | provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. NonCommercial – You may not use the material |
| | for commercial purposes . ShareAlike – If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions – You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. |
| | https://creativecommons.org/licenses/by-nc-sa/4.0/ |
| | Link: https://creativecommons.org/licenses/by-nc-sa/4.0/legalcode.en |
| | An example of a license that allows re-use more freely is the CC-BY license. To use this license: |
| | Press "Add standard" and select "Creative Commons Attribution 4.0 International" |
| | All SEN datasets: optional |
| Contributors | Here you can add contributors that are not authors of the dataset. |
| Keywords | Include at least following keywords: "heriTACE", "Horizon" "EU" It is recommended to add more keywords to the upload's |
| | visibility. |
| Languages | Add the languages. This should be English. |



| Publisher | Add the name of the publisher if this is different from Zenodo. | |
|-----------------------|---|--|
| Funding: Awards | Select "European Commission" and grant number "101138672" or search for "heriTACE" (the system automatically identifies the heriTACE project) | |
| Alternate identifiers | Add other identifiers if the deliverable would have one. | |
| Related works | Here you can link the dataset to related publications or datasets. For datasets please do link the dataset to the deliverable (upload the deliverable as a separate upload in the system). Partners are free to link the dataset to other identifiers as well (e.g. publications, other datasets or materials). | |
| Visibility | All PU datasets: "Public" All SEN datasets: "Restricted", optionally with an embargo period | |
| All other fields | Optional | |



8 Responsibility

Each project partner bears the responsibility to ensure the correct management and security of the datasets they generate and to ensure compliance with the grant agreement, privacy legislation, GDPR and/or other legislation. If several partners are involved in generating a deliverable, the final responsibility will fall upon the lead beneficiary of the deliverable to manage the overall datasets, unless otherwise agreed upon among the partners involved. Table 2 lists the project deliverables and the responsible partner.

In its capacity of project lead, Ghent University will support the project partners where possible on request.

Table 2 - Responsible partner for each heriTACE deliverable

| Deliverable | Responsible partner |
|---|---------------------|
| D1.1 Project Management Plan | UGent |
| D1.2 Data Management Plan (initial) | UGent |
| D1.3 Data Management Plan (update) | UGent |
| D1.4 Data Management Plan (final) | UGent |
| D2.1 Building envelope characteristics | TALTECH |
| D2.2 Energy Conservation measures inventory | TALTECH |
| D2.3 ETICS solution for plastered masonry walls | TALTECH |
| D2.4 Future-proof concept for interior retrofitting of wooden facades | SINTEF |
| D2.5 Improved historical window systems | UGent |
| D3.1 HVAC-concepts for heritage buildings | ZH |
| D3.2 Comfort and IAQ in heritage townhouses | ZH |
| D3.3 Baseline BES-models | UGent |
| D3.4 Smart ventilation strategies reducing moisture risks | SINTEF |
| D3.5 Performance-based ventilation and control strategies | UGent |
| D3.6 Ventilative cooling guide | EURAC |
| D3.7 Smart hybrid heating concepts | UGent |
| D3.8 Performance assessment of building envelope and HVAC concepts in heritage townhouses (initial) | UGent |
| D3.9 Performance assessment of building envelope and HVAC concepts in heritage townhouses (final) | UGent |



| Deliverable | Responsible partner |
|--|---------------------|
| D4.1 R ² ES-based energy supply concepts for heritage buildings in historical neighbourhoods | SWECO FI |
| D4.2 Prototype BIPV integrated in roof tiles | ZH |
| D4.3 Feasibility of heat recovery from unharvested local sources in heritage environments | SWECO BE |
| D4.4 GPU-based MPC solver | Builtwins |
| D4.5 MPC demonstration in historic building | Builtwins |
| D4.6 Building block MPC extensions | KU Leuven |
| D4.7 Performance assessment of R ² ES concepts in heritage townhouses in historical neighbourhoods (initial | KU Leuven |
| D4.8 Performance assessment of R ² ES concepts in heritage townhouses in historical neighbourhoods (final) | KU Leuven |
| D5.1 Case-study selection at building and neighbourhood levels | UGent |
| D5.2 Cultural heritage analysis and value assessment | NIKU |
| D5.3 Cultural heritage building user and owner perspectives | NIKU |
| D5.4 Baseline scenarios | UGent |
| D5.5 Map of KPI | SINTEF |
| D5.6 Visualisation model to assess the visual impact of energy retrofitting solutions on the building heritage value | SINTEF |
| D5.7 Multidimensional model for the holistic and multi-scale assessment of heritage buildings | SINTEF |
| D5.8 Validation of the holistic and multi-scale assessment model | UGent |
| D6.1 Transdisciplinary processes for the holistic future-proofing of heritage buildings in neighbourhoods | POLIMI |
| D6.2 Policy advice report | POLIMI |
| D6.3 Customer services for early-stage design of neighbourhood energy systems | SWECO FI |
| D6.4 Integrated and balanced design guidelines for heritage townhouses | UGent |
| D6.5 Early design tools for the feasibility assessment of innovative HVAC and energy solutions | SWECO BE |
| D6.6 Technical guidelines for building the building envelope solutions | TALTECH |
| D6.7 Exploitation plan (initial version) | LGI |



| Deliverable | Responsible partner |
|--|---------------------|
| D6.8 Exploitation plan (final version) | LGI |
| D7.1 Communication and Dissemination plan (version 1) | ACE |
| D7.2 HeriTACE Visual Identity | LGI |
| D7.3 Website and social media | LGI |
| D7.4 Communication and Dissemination plan (version 2) | ACE |
| D7.5 Communication and Dissemination plan (version 3) | ACE |
| D7.6 Online and offline dissemination material (version 1) | ACE |
| D7.7 Communication and Dissemination plan (final version) | ACE |
| D7.8 Online and offline dissemination material (version 2) | ACE |
| D7.9 Guidelines for designers and architects | ACE |

9 Personal Data

Researchers will continuously monitor their activities with regards to compliance with all relevant privacy legislations, especially when data is gathered based on questionnaires or personal interviews.

If personal data is collected, an informed consent will be agreed upon between the partner(s) collecting the data and the subject.

The general principle proposed to be used by the partners of the heriTACE project when drafting the informed consent forms is that personal data is safely and securely stored by the partner that collects the data. As such, access to personal data is limited to a minimum. Data-sharing within the heriTACE project is only done after carefully filtering out the personal data or anonymizing/pseudonymising the dataset. Figure 1 illustrates the approach.



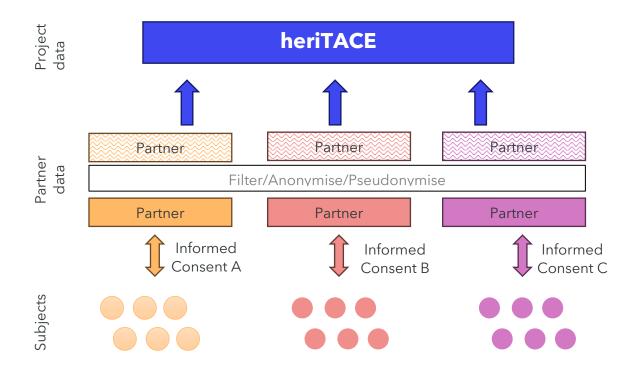


Figure 1 - General principle of personal data collection provisions