# HYBUILD
### Hybrid Energy Storage for Buildings

Project Title:

## Innovative compact HYbrid electrical/thermal storage systems for low energy BUILDings

Project Acronym:

## HYBUILD

Grant Agreement N°: 768824

**Collaborative Project**

# Deliverable Report

Deliverable number:

# D8.2

Deliverable title:

# Data Management Plan (DMP)

| | |
|---|---|
| **Related task:** | 8.1 |
| **Lead beneficiary:** | R2M |
| **Authors and institutions:** | R2M – Régis Decorme, Thomas Messervey, Pascal Torres and contribution from all task leaders |
| **Due date:** | M6 – 30 March 2018 |

| DISSEMINATION LEVEL | | |
|---|---|---|
| PU | Public, fully open, e.g. web | X |
| CO | Confidential, restricted under conditions set out in Model Grant Agreement | |
| CI | Classified, information as referred to in Commission Decision 2001/844/EC. | |

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## Publishable executive summary

HYBUILD is a 6 M€ project supported by the European Commission under its Horizon 2020 programme – Energy-efficient Buildings Public-Private partnership. The project will develop two innovative compact hybrid electrical/thermal storage systems for stand-alone and district connected buildings.

This report is an initial Data Management Plan (DMP) report made public in month six (March 2018). It outlines how data are collected or generated by the HYBUILD project, in terms of how it will be organized, stored, and shared. It specifies which data will be open access and which will be confidential within the consortium, as far as it is possible to do so at this stage. The report has been developed following the Horizon 2020 guidelines (EC DG R&I, 2017) with additional guidance from the joint OpenAIRE and EUDAT webinar "How to write a Data Management Plan" (OpenAIRE and EUDAT, 2018).

Open access (OA) is understood as the free, online provision of re-useable scientific information to other users. There are many good reasons to make the data and findings from publically funded research openly available to the research community, the commercial sector and civil society. Much of the data gathered by the project is for the purpose of project management and delivery rather than new knowledge creation; it is therefore likely that much of the data is categorised as confidential (Consortium). However, the project will seek to openly disseminate its research findings, except in cases where there are defined exploitable outcomes, privacy concerns or there will be a high administrative burden for a dataset of limited worth to other users.

The initial HYBUILD DMP highlights that the most significant datasets identified are the Life Cycle Assessment results of the HYBUILD system (Task 5.1) and the energy performance results of the overall system (Task 6.4). It is these data that will validate the impact of the project and the conclusions drawn in scientific publications that arise. It is intended that where possible these data will be made available through open access repositories.

This Data Management Plan will have to be updated in conjunction with the progress of the research: datasets characterisation will be fine-tuned, and potentially their publication level will have to be adapted accordingly. An update of the various datasets is anticipated at M12 of the project, in conjunction with the release of the communication plan (D8.4).

Key words: H2020, open access, open data, metadata, data management, energy, built environment, demand response.

## Acronyms and Abbreviations

| | |
|---|---|
| **AA** | Acronyms and Abbreviations |
| **CA** | Consortium Agreement |
| **DL** | Deadline |
| **EC** | European Commission |
| **EU** | European Union |
| **GA** | Grant Agreement |
| **OA** | Open Access |
| **ORDP** | Open Research Data Pilot |
| **PC** | Project Coordinator |
| **PO** | Project Officer |

## Glossary

**Open Access** (OA): Open Access provides researchers, businesses and citizens with improved and free of charge online access to EU-funded research results, including scientific publications and research data. The objective of the open access policy is to optimise the impact of publicly-funded scientific research, both at European level Horizon 2020 and at the member state level.

**Open Data**: Open data refers to the idea that certain data should be freely available for use and re-use. Open data policy is linked with open research data policy since both are publicly funded data or their data results from public funding. Therefore, in principle, the data should be openly accessible and re-useable.

# 1 Introduction

## 1.1 Aims and objectives

HYBUILD is a H2020 funded innovation project which will develop two innovative compact hybrid electrical/thermal storage systems for stand-alone and district connected buildings. This Data Management Plan (DMP) outlines how data collected or generated by the HYBUILD project will be organised, stored and shared. It specifies which data will be open access and which will be confidential within the consortium, as far as it is possible to do so at this stage.

## 1.2 Relations to other activities in the project

All partners contribute to the implementation of the Data Management Plan across the other work packages according to their particular activities. For instance, Work Package 5 – *LCA, LCC and standardisation* - and WP6 – *Demonstration and Evaluation*, will collate and analyse the data generated by the development of the HYBUILD technologies in the other Work Packages, using the structures and standards described in the DMP.

## 1.3 Report structure

The report begins by outlining its purpose, intended audiences, and the process for ongoing development. Section 2 outlines the concepts of open access publishing and open access data in scientific research. Related issues such as a classification for project datasets and an overview of copyright licensing for open access are then discussed. Each project dataset is then described in detail in Section 3, using a standardised template. Finally, conclusions are drawn, and references presented.

## 1.4 Contributions of partners

As the dissemination and communication partner, R2M has drafted and elaborated the Data Management Plan document with input to the dataset descriptions from the respective Task Leaders (STRESS, EURAC, CNR-ITAE, AKG, CSEM, AIT, UDL, ENG, NTUA, NBK, R2M).

## 2 Approach to data management

This report has been developed following the Horizon 2020 guidelines (EC DG R&I, 2015) and the joint OpenAIRE and EUDAT webinar "How to write a Data Management Plan" (OpenAIRE and EUDAT, 2018).

### 2.1 Data availability and open access

Open access (OA) is understood as the free, online provision of re-useable scientific information to other users. There are many good reasons to make the data and findings from publically funded research openly available to the research community, the commercial sector and civil society.

As the "Guidelines to the rules on Open Access to Scientific Publications and Open Access Research Data in Horizon 2020" (EC DG R&I, 2017) outline, more open access to scientific publications and data serves a number of purposes. It will (i) improve the quality of research by building on a stronger body of existing work, (ii) increase efficiency of research by reducing duplication of effort, (iii) bring innovations to market quicker by reducing barriers to information flow, and (iv) enhance the transparency of scientific progress. There is also the economic and ethical principle that information that has been paid for with public money should not have to be paid for again when it is required for use by other researchers, industry, or citizens.
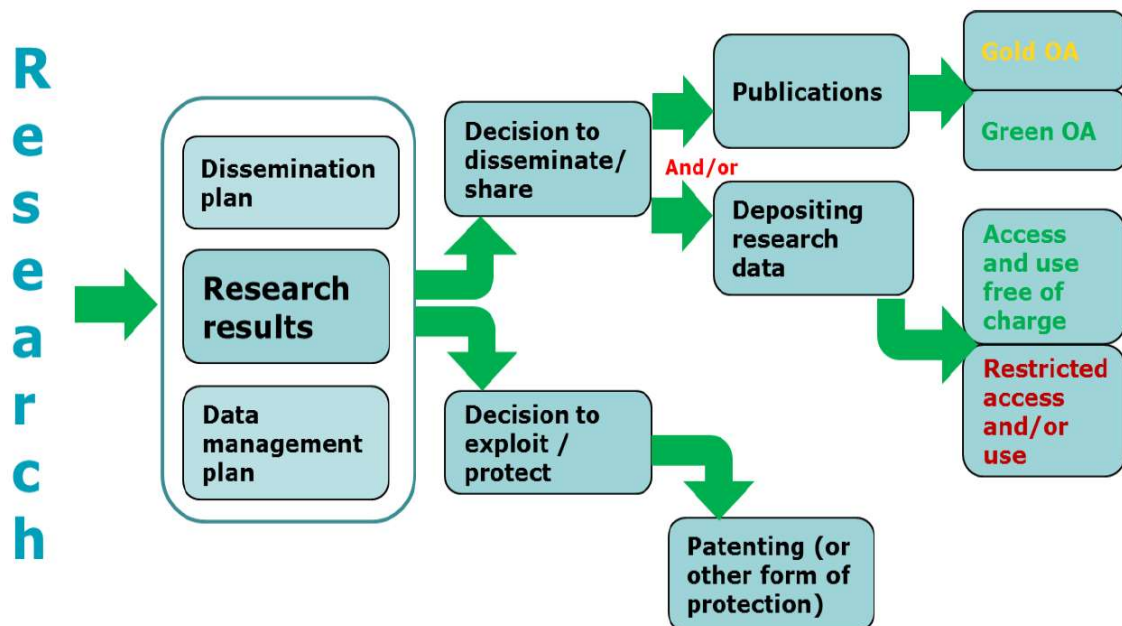


**Figure 1 Open access to scientific publication and research data in the wider context of dissemination and exploitation (Reproduced from EC DG R&I (2017) H2020 Programme Guidelines on Open Access to Scientific Publications and Open Access Research Data in Horizon 2020)**

As outlined above, the first decision to be made in research dissemination is whether to publish research findings or to protect some aspects for commercial exploitation. The datasets outlined in the next section of the report present outputs and processes that will determine the path for different aspects of the HYBUILD project. This work will have input from the dissemination and exploitation activities of Work Package 7, which is also led by R2M. The process will involve patent search, the clarification of each partners' legitimate interests in relation to the project outputs, and the introduction of IPR agreements between partners prior

to dissemination of findings. The Dissemination and Exploitation plan (D7.1, month 9) and Exploitable results table (D7.5, month 12) will clarify these findings and ultimately lead to the final Exploitation strategy which will include patent filings (D7.7), replication plan (D7.8), and partner exploitation agreement (D7.9) at the close of the project in month 48.

### 2.1.1 Classification of Data Availability

Data availability is therefore categorised at this stage in one of three ways:

| | |
|---|---|
| **Open** | Data that is shared for re-use or that underpins a scientific publication. |
| **Consortium** | Confidential data that is accessible to all partners and the Stakeholder Advisory Board (SHAB) but retained within the consortium and subject to the project Non-Disclosure Agreement (NDA) (to be signed with the SHAB – D7.6, month 12). |
| **Private** | Data that is maintained by an individual partner for their own purposes. |

Much of the data gathered by the project is for the purpose of project management and delivery rather than new knowledge creation; it is therefore likely that much of the data is categorised as Consortium. However, the project will seek to openly disseminate its research findings, except in cases where there are defined exploitable outcomes, privacy concerns or there will be a high administrative burden for a dataset or limited worth to other users. The two main aspects of this dissemination approach are open access to scientific publications and open access to research data. Each is considered in the following sections.

### 2.1.2 Open Access Publishing

Open access publishing is essentially defined as the free availability of peer-reviewed scientific publications for any user. There is no single legal definition in the context of H2020 but the HYBUILD Grant Agreement specifies that the project will:

*"(a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;*

*(b) ensure open access to the deposited publication — via the repository — at the latest: (i) on publication, if an electronic version is available for free via the publisher, or (ii) within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.*

*(c) ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication." (EC 2017, Article 29.2)*

To achieve this, we will use both "green" and "gold" open access routes. "Green" open access, or self-archiving, is the release of a final peer reviewed manuscript through an online repository, possibly after an embargo period, whereas "gold" open access relates to open access publishing.

University of Lleida, the HYBUILD technical coordinator, is committed to ensuring that the outputs of its research are readily accessible and has developed its online repository and portal (RepositoriObertUDL - https://repositori.udl.cat). This facility can host academic outputs, i.e. journal articles, conference papers and book chapters, authored or co-authored by UDL, indefinitely with a persistent identifier. It also facilitates to include journal articles, conference

papers and book chapters of partners in projects were UDL is coordinator (such as the case of HYBUILD, where it is technical coordinator).

### 2.1.3    Open Data

The HYBUILD project is committed to participate in the 'Pilot on Open Research Data in Horizon 2020'. The rationale is very similar to that related to open access of scientific publications; research integrity will be increased through transparency, impact will be greater through re-use, duplication of efforts will be reduced and civil society will benefit from better value from its financial contribution.

There are four main aspects of open data summarised in the acronym FAIR (Force 11, 2018):

| | |
|---|---|
| **F**indable | data has a unique, persistent ID, located in a searchable resource, and documented with meaningful metadata |
| **A**ccessible | data is readily and freely retrievable using common methods and protocols, metadata is accessible even if the data is not |
| **I**nteroperable | data is presented in broadly recognised standard formats, vocabularies and languages |
| **R**e-useable | data has clear licences, and accurate meaningful metadata conforming to relevant community standards and identifying its content and provenance |

The data management plan establishes how this approach will be realised in practice with the initial plan presenting an overview and greater detail provided in the interim and final reports as the work packages proceed.

Project datasets for dissemination will be open access by default, at the very least to validate scientific publications. However, not all of the project work packages will produce datasets that are intended for public dissemination; much of the data created and stored during the project is for internal management and communication within the consortium only. The distinction between datasets is clearly described in the dataset templates.

### 2.1.4    Copyright Licenses

When material is widely shared, copyright licences protect the authors of work and grant specific rights to publishers and others to use this work. The European Commission encourages authors to retain their copyright whilst disseminating it as open access. Creative Commons provides legal tools to enable open access in these circumstances, with CC-BY and CC0 enabling re-use by third parties (Creative Commons, 2018).

Where research findings are published in a journal or other scientific outlet there should be consideration of the copyright agreement with the publishers, which may involve an embargo period.

At this initial stage it is not possible to define the copyright arrangement for each project dataset. The most appropriate licensing arrangements for each of the project datasets will be investigated as they are better characterised by their respective work packages and the management of Exploitable Results in WP7. The data management plan will be updated to that effect.

## 2.2    Data Storage & Sharing

The project has five main data storage and sharing facilities according to the type of data and its intended accessibility.

**Private**        Stored locally on organisational networks and assets, subject to institutional back up practices.

**Consortium**   R2M IT teams have setup a dedicated ownCloud server which is secure, robust and accessible to all partners. Consortium data will be uploaded to this cloud storage for simple, secure access for all partners. Data is maintained with regular backups (see section 3.32 – Web-based platform).

**Open (i,ii,iii)**   Three facilities will be used during the project :

(i)        The project website [www.hybuild.eu](www.hybuild.eu), managed by R2M, will be the first point of contact for public dissemination. It will host project technical reports and other materials such as events listings, blog articles, images, videos, links to partner organisations and related projects.

(ii)      UDL open repository - RepositoriObertUDL - will make scientific publications indefinitely accessible and discoverable in the mode of "green" open access publishing.

(iii)     Large, re-useable data sets will be deposited in an open data repository, e.g. Zenodo, selected by the task leaders during the delivery of the relevant work packages.

# 3    Description of project datasets

Datasets are numbered according to their primary work package and task number, as laid out in the project Description of Action. For instance the "*Boundary conditions for the applicability of the HYBUILD solutions*" dataset, the first dataset of Task 1.1 from Work Package 1 is named "Dataset 1.1.1".

The description of the datasets below is based upon the Horizon 2020 Initial DMP template provided by the UK's Digital Curation Centre (DCC) via the web resource DMP Online [https://dmponline.dcc.ac.uk/](https://dmponline.dcc.ac.uk/)

## 3.1    Template: Dataset X.Y.Z

Information about each dataset has been collated by Task Leaders in the format presented below.

| | |
|---|---|
| **WP / Task & Data Manager** | Work Package and/or Task numbers related to the dataset, and the Data Manager who takes responsibility. |
| **Dataset reference / name** | Dataset number and name |
| **Availability** | Private, Consortium or Open |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |

| | |
|---|---|
| **Dataset Specific Metadata** | Keyword(s) that categorize data to make it linked/searchable |
| **Data set description** | Data description, origin, nature, scale, if it underpins a publication, who useful to, existence of similar data, possibilities for reuse. |
| **Standards** | Reference to existing standards in topic area governing data collection, aggregation, storage and sharing. |
| **Data sharing** | How the data will be shared, identification of repository, existence of embargo period if any, identification of software or tools necessary for reuse. |
| **Archiving and preservation (storage/backup)** | The procedure for long-term preservation, length of preservation, an estimation of costs and how this will be covered. |

## 3.2    Dataset 1.1.1 - Boundary conditions for the applicability of the HYBUILD solutions

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|---|---|
| **WP / Task & Data Manager** | Work Package 1, Task 1.1<br><br>Paola Robello (Rina C, LTP STRESS) |
| **Dataset reference / name** | 1.1.1 / Boundary conditions for the applicability of the HYBUILD solutions. |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Building typologies, Building classification, Climates considerations, Technological performance and/ or features |
| **Data set description** | This data set refers to Task 1.1 - *Specific climate considerations and Building typological classification*. It includes the characterization of a number of concerned climates in terms of monthly ambient air, air temperature distribution, ground temperature, Heating Degree Days, Cooling Degree Days, Humidity distribution, Monthly/MAX average Solar irradiation on a defined tilt angle / vertical, and other parameters to be defined.<br><br>The data set will also include parameters related to a number of selected building typologies (e.g. single-family house, multifamily house...), such as energy consumption, heating/cooling generation, information on insulation level and window types, and other parameters to be defined. |

| | |
|---|---|
| | The aforementioned data will be retrieved from INSPIRE database, Tabula, MetroNORM database.

Finally, data concerning the HYBUILD technology requirements (e.g. optimal functioning temperature, energy demand, number of modules necessary to cover a given energy demand) will be also included, in order to enable a preliminary evaluation of the boundary conditions for the applicability of the HYBUILD solutions. |
| **Standards** | No specific standards for the collection of these data. |
| **Data sharing** | Data format: .xls, .pdf

Information about climates and building typologies will be included in D1.1 - *Requirements: context of application, building classification and dynamic uses consideration*, which is public. Therefore, it will be publicly available on the HYBUILD project website.

An excel tool will be developed, based on existing ones, where it will be possible to find the above described data clustered according to different climates and building typologies. It will be possible to crosscheck the aforementioned data with HYBUILD technologies features in order to identify the boundary conditions for their applicability in specific contexts. The excel tool will be stored in the HYBUILD ownCloud Repository and in the Rina company repository.

In the framework of the project, the tool will be used as a starting point for the demonstration activities. It is to be evaluated the possibility to make the tool available also on the project website, so that all stakeholders interested in the HYBUILD solution can use it. |
| **Archiving and preservation (storage/backup)** | The excel tool will be created and stored by Rina in its own company repository and in the project ownCloud repository |

## 3.3    Dataset 1.2.1 – Technical codes

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|---|---|
| **WP / Task & Data Manager** | Work Package 1, Task 1.2

Paola Robello (Rina C, LTP STRESS) |
| **Dataset reference / name** | 1.2.1 / Technical codes |
| **Availability** | Open (i) |

| | |
|---|---|
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Technical codes, Legislation requirements |
| **Data set description** | This data set refers to Task 1.2 - *Technical and market codes*. It includes a review of the main technical codes related to the HYBUILD solution and technologies, for the following countries: Spain, Cyprus, France, Finland, Greece, Germany and Italy. |
| **Standards** | No specific standards for the collection of these data. |
| **Data sharing** | Data format: .pdf, .doc<br><br>Data will be made available on the HYBUILD website. |
| **Archiving and preservation (storage/backup)** | Data will be stored by Rina in its own company repository and in the project ownCloud repository |

### 3.4    Dataset 1.2.2 – Market codes

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|---|---|
| **WP / Task & Data Manager** | Work Package 1, Task 1.2<br><br>Paola Robello (Rina C, LTP STRESS) |
| **Dataset reference / name** | 1.2.2 / Market codes. |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Target Market, market trends, market drivers. |
| **Data set description** | This data set refers to Task 1.2 - *Technical and market codes*. It includes an analysis of the target markets where the HYBUILD solution is envisaged to be marketed, namely: Spain, Cyprus, France, Finland, Greece, Germany and Italy. The analysis will take into account the following aspects: market trends, market size, market drivers and other parameters to be defined. |
| **Standards** | No specific standards for the collection of these data. |
| **Data sharing** | Data format: .pdf, .doc<br><br>Data will be made available on the HYBUILD website. |

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|---|---|
| **Archiving and preservation (storage/backup)** | Data will be stored by Rina in its own company repository and in the project ownCloud repository |

## 3.5    Dataset 1.3.1 – Market codes

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|---|---|
| **WP / Task & Data Manager** | WP1, Task 1.3. Chiara Dipasquale (EURAC) |
| **Dataset reference / name** | 1.3.1 / User scenarios |
| **Availability** | Open (ii) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Load profiles, residential building demand, hourly, building modelling, dynamic simulation |
| **Data set description** | Data will include typical electrical and thermal load profiles of different building typologies in different European climates. In addition to internal gains, heating and cooling demands will be provided. Specific and annual energy or power values are already available in literature; hourly profiles are not openly available for the studied building typologies and climates. |
| **Standards** | Standard ISO 7730 for thermal internal gains; heating and cooling demands are based on simulation tools. |
| **Data sharing** | Data will be firstly shared within the consortium and stored on ownCloud. This data can be used with dynamic simulation tools for energy analysis as TRNSYS, Modelica, Energy +. Load profiles and building demands will be freely available. |
| **Archiving and preservation (storage/backup)** | Data will be stored in the project ownCloud repository. |

## 3.6    Dataset 1.4.1 – Certification strategies and related requirements

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|---|---|
| **WP / Task & Data Manager** | Work Package 1, Task 1.4 Paola Robello (Rina C, LTP STRESS) |
| **Dataset reference / name** | 1.4.1 / Certification strategies and related requirements |
| **Availability** | Open (i) |

| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
|---|---|
| Dataset Specific Metadata | Certification, standards, requirements. |
| Data set description | This data set refers to Task 1.4 - *Certification strategies and requirements*. It includes a review of the main certification systems, both at national and regional level, for the main countries identified, namely Spain, Cyprus, France, Finland, Greece, Germany, Italy. Certifications will be analysed referring to both the global HYBUILD system and the single components. |
| Standards | No specific standards for the collection of these data. |
| Data sharing | Data format: .pdf, .doc<br><br>Data will be made available on the HYBUILD website. |
| Archiving and preservation (storage/backup) | Data will be stored by Rina in its own company repository and in the project ownCloud repository |

## 3.7    Dataset 1.5.1 – KPIs

| WP / Task & Data Manager | WP1, Task 1.5.<br><br>Grazia Barchi (EURAC) |
|---|---|
| Dataset reference / name | 1.5.1 / KPIs |
| Availability | Open (i) |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | KPIs related to energy, economic, environmental, technology performances of the HYBUILD technology. |
| Data set description | The KPIs defined in T1.5 will be used in WP4 for simulation characterization and in WP6 to evaluate the performance of the installed solutions. |
| Standards | No dedicated Standard |
| Data sharing | Open – KPIs definition and description will be available on the corresponding deliverable which is public |
| Archiving and preservation (storage/backup) | Data will be stored in the project ownCloud repository. |

### 3.8    Dataset 1.6.1 – Technology cost and payback analysis

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|---|---|
| **WP / Task & Data Manager** | Work Package 1, Task 1.6<br><br>Paola Robello (Rina C, LTP STRESS) |
| **Dataset reference / name** | Technology cost and payback analysis |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Cost analysis, Payback analysis, Return of Investment |
| **Data set description** | This data set is related to Task 1.6 - *Cost and Technology Payback Analysis.* It includes the outcomes of a cost analysis performed on the technologies developed within the project in terms of cost of investment, cash inflow. |
| **Standards** | No specific standards for the collection of these data. |
| **Data sharing** | Data format: .pdf, .doc<br><br>Data will be stored by Rina in its own company repository and in the project ownCloud repository.<br><br>Data included in D1.4 - *Technology Payback Analysis* will be made publicly available on the project website. |
| **Archiving and preservation (storage/backup)** | Data will be archived by Rina in its own company repository and in the project ownCloud repository |

### 3.9    Dataset 2.1.1 – Development of adsorption module

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|---|---|
| **WP / Task & Data Manager** | WP2, Task 2.1.<br><br>Andrea Frazzica (ITAE) in cooperation with ITAE, FAHR, AKG, MIKR |
| **Dataset reference / name** | 2.1.1 / Development of adsorption module |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Adsorption, storage, heat exchangers, experimental data |
| **Data set description** | This data set relates to T2.1 - *Adsorber and integrated evaporator/ condenser*<br><br>It includes the data about the experimental testing of the |

| | developed adsorber and integrated evaporator/condenser, which can be used for the numerical modelling validation. |
| --- | --- |
| | These data are summarized in deliverable D2.1. |
| **Standards** | No specific standards for these data. |
| **Data sharing** | Data shared in spreadsheet, text and pdf format; Level of sharing: open through the corresponding public deliverable published on the project website www.hybuild.eu. |
| | Sharing through ownCloud server with the consortium. |
| **Archiving and preservation (storage/backup)** | The data will be stored on an ownCloud server hosted by R2M Solution. Uploaded files are mainly in spreadsheet format (e.g. .xls, .xlsx, .csv), text (e.g. .txt, .doc, .docx) and pdf formats. |

### 3.10   Dataset 2.2.1 – High and low temperature latent storage

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| **WP / Task & Data Manager** | WP2, Task 2.2. |
| | Andreas Strehlow (AKG) in cooperation with AIT, UDL |
| **Dataset reference / name** | 2.2.1 / High and low temperature latent storage |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Latent, storage, heat exchangers, experimental data |
| **Data set description** | This data set relates to T2.2 - *High and low temperature latent storage* |
| | It includes the data about the experimental testing of the developed latent storage for high and low temperature applications as well as the developed algorithms for the evaluation of the state of charge, state of health, etc. They can be used for the numerical modelling validation. |
| **Standards** | No specific standards for these data. |
| **Data sharing** | Data shared in spreadsheet, text and pdf format; Level of sharing: open through the corresponding public deliverable published on the project website www.hybuild.eu. Sharing through ownCloud server with the consortium. |
| **Archiving and preservation (storage/backup)** | The data will be stored on an ownCloud server hosted by R2M Solution. Uploaded files are mainly in spreadsheet format (e.g. .xls, .xlsx, .csv), text (e.g. .txt, .doc, .docx) and pdf formats. |

### 3.11 Dataset 2.3.1 – Simulation and experimental data about the DC controllers and electrical storage

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|---|---|
| **WP / Task & Data Manager** | WP2, Task 2.3. Pierre-Jean Alet (CSEM) in cooperation with ITAE |
| **Dataset reference / name** | Simulation and experimental data about the DC controllers and electrical storage |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Control algorithm in C Experimental data in csv format |
| **Data set description** | This data set relates to T2.3 - *DC bus controller modules for interconnection with compression HP and electrical storage.* It includes the data about the modelling, design and testing of DC bus controllers as well as the experimentally validated performance of the selected battery technology, including the power flows among units. The data will be used for the design of the system integration and testing with the heat pumps. |
| **Standards** | No specific standards for these data. |
| **Data sharing** | Data shared in spreadsheet, text and pdf format; Level of sharing: open through the corresponding public deliverable published on the project website www.hybuild.eu. Sharing through ownCloud server with the consortium. |
| **Archiving and preservation (storage/backup)** | The data will be stored on an ownCloud server hosted by R2M Solution. Uploaded files are mainly in spreadsheet format (e.g. .xls, .xlsx, .csv), text (e.g. .txt, .doc, .docx) and pdf formats. |

### 3.12 Dataset 3.1.1 – Model based design and control

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|---|---|
| **WP / Task & Data Manager** | WP3, Task 3.1 Andrea Frazzica (ITAE) in cooperation with AIT, NTUA, DAIK, AKG, OCHS |
| **Dataset reference / name** | 3.1.1 / Model based design and control |

| Availability | Open (i) |
|---|---|
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Simulation models of the hybrid sub-systems, Model based design |
| **Data set description** | This data set relates to T3.1 - *Model based design and control*<br><br>It includes the description of the models for the Continental and the Mediterranean and the results from the simulations and design optimizations. |
| **Standards** | No specific standards for these data. |
| **Data sharing** | Data shared in spreadsheet, text and pdf format; Level of sharing: open through the corresponding public deliverable.<br><br>Sharing through ownCloud server with the consortium. |
| **Archiving and preservation (storage/backup)** | The data will be stored on an ownCloud server hosted by R2M Solution. Uploaded files are mainly in spreadsheet format (e.g. .xls, .xlsx, .csv), text (e.g. .txt, .doc, .docx) and pdf formats. |

### 3.13 Dataset 3.2.1 – Installation and testing of the hybrid sub-systems in a thermally controlled infrastructure

| WP / Task & Data Manager | WP3, Task 3.2<br><br>Johann Emhofer (AIT) in cooperation with ITAE, NTUA, DAIK, SOR, AKG, OCHS, COMSA, NBK, FRESN, ALM, AGLA |
|---|---|
| **Dataset reference / name** | 3.2.1 / Installation and testing of the hybrid sub-systems in a thermally controlled infrastructure |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Experimental tests of the Mediterranean and Continental sub-systems, Experiments, Validation |
| **Data set description** | This data set relates to T3.2 - *Installation and testing of the hybrid sub-systems in a thermally controlled infrastructure* |

| | |
|---|---|
| | It includes the description of the methodology and the results of the experimental tests for the Continental and the Mediterranean hybrid sub-system. |
| **Standards** | No specific standards for these data. |
| **Data sharing** | Data shared in spreadsheet, text and pdf format; Level of sharing: open through the corresponding public deliverable. |
| | Sharing through ownCloud server with the consortium. |
| **Archiving and preservation (storage/backup)** | The data will be stored on an ownCloud server hosted by R2M Solution. Uploaded files are mainly in spreadsheet format (e.g. .xls, .xlsx, .csv), text (e.g. .txt, .doc, .docx) and pdf formats. |

## 3.14 Dataset 4.1.1 – Building typologies for performance tests

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|---|---|
| **WP / Task & Data Manager** | WP4, Task 4.1. |
| | Chiara Dipasquale (EURAC) |
| **Dataset reference / name** | 4.1.1 / Building typologies for performance tests |
| **Availability** | Consortium |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Building energy modelling, dynamic simulation, residential building, HVAC systems, control strategies |
| **Data set description** | The output data will consist on the development of the building typologies models further used for testing the performance of the system developed within the project. |
| **Standards** | No specific standards for these data. |
| **Data sharing** | Data will be shared within the partners involved in the simulation work. |
| **Archiving and preservation (storage/backup)** | Data will be shared through ownCloud in private folders with only those partners involved in simulations. |

## 3.15 Dataset 4.2.1 – Functional design of the system components

| WP / Task & Data Manager | Work Package 4, Task 4.2 |
| --- | --- |
| | Paola Robello (Rina C, LTP STRESS) |
| Dataset reference / name | 4.2.1 / Functional design of the system components |
| Availability | Open (i) |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | System Operation, system layout, system design |
| Data set description | This data set is related to Task 4.2 - *Operational function design* and contains a detailed design of the HYBUILD system. |
| Standards | TBD |
| Data sharing | Data format: .pdf (other to be defined, depending on the software that will be used) |
| | The full definition of the system performed in the framework of T4.2 will have, as main outcome, the development of engineering diagrams of the whole system. These diagrams will be included in D4.2 (public), and therefore made available on the project website. Data will be stored in Rina company repository and on the project ownCloud repository. |
| Archiving and preservation (storage/backup) | Data will be stored in Rina company repository and on the project ownCloud repository. |

### 3.16 Dataset 4.3.1 – Advanced control algorithms and results of lab and/or field tests

| WP / Task & Data Manager | WP4, Task 4.3 |
| --- | --- |
| | Luisa F. Cabeza (UDL) |
| Dataset reference / name | 4.3.1 / Advanced control algorithms, and results of lab and/or field tests |
| Availability | Open (ii) |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | Control prototyping, advanced algorithms, intelligent control |

| Data set description | This data relates to Task 4.3 – *Control prototyping with hardware in the loop*.<br><br>It includes the intelligent algorithms used in the control system, and the results of the tests performed. It may derive in publications in SCI journals. |
|---|---|
| Standards | No specific standards are required for these data. |
| Data sharing | Data shared in spreadsheet, text and pdf format.<br><br>Level of sharing: open.<br><br>Sharing through ownCloud server with the consortium. The scientific publications could be subject to an embargo period of up to 2 years. |
| Archiving and preservation (storage/backup) | The data will be stored on an ownCloud server hosted by R2M Solution. All data will also be stored on the UDL research group own server. Uploaded files are mainly in Microsoft Office (doc, docx, xls, xlsx, PPTX, etc.), ADOBE pdf format, and possibly code lines developed in Python, C, or C++. |

### 3.17   Dataset 4.4.1 – Project building management documentation

| WP / Task & Data Manager | WP4 – T4.4<br><br>Alessandro Rossi (ENG) |
|---|---|
| Dataset reference / name | 4.4.1 / Project building management documentation |
| Availability | Open (i, ii) |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | Technical reports, software accompanying reports, integration plan, performance analysis |
| Data set description | Data will consist in proper documentation that will explain how to design, develop, and integrate the management software of the project. This technical documentation will be created by the members of the consortium and addresses the building itself, its management, the environments into which is located, and the external as well as internal requests. Reports on the analyses on these aspects will be performed. |
| Standards | Specific standards could be adopted to describe optimisation approaches and software (to be defined |

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| | during the task lifetime) |
| **Data sharing** | Format : pdf (documentation), zip (source code) |
| | Level: public |
| | The results of the optimization performed within the pilots will be shared with the HYBUILD consortium for the analysis of the performances. |
| | In case of scientific relevance, part of the documentation could be submitted to Conferences and/or Journal for publications. |
| **Archiving and preservation (storage/backup)** | Data will be stored on either the dissemination web site or the UDL repository or portals like GitHub. |

### 3.18   Dataset 5.1.1 – Life Cycle Assessment

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|---|---|
| **WP / Task & Data Manager** | WP5, Task 5.1 |
| | Luisa F. Cabeza (UDL) |
| **Dataset reference / name** | 5.1.1 / Life cycle assessment |
| **Availability** | Open (ii, iii) - **Open Research Data Pilot (GA)** |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Life cycle assessment, environmental impact, benchmarking of building technical systems |
| **Data set description** | This data relates to Task 5.1 – *Life cycle assessment*. |
| | It includes the data regarding the environmental impact of all the materials used in the HYBUILD system. It also comprises a benchmarking against conventional products, and validation of the more sustainable building technical systems. It may derive in publications in SCI journals. |
| **Standards** | No specific standards are required for these data. |
| **Data sharing** | Data shared in spreadsheet, text and pdf format. |
| | Level of sharing: Open Research Data Pilot. Data will be stored in an open data repository. |
| | Sharing through ownCloud server with the consortium. The |

| | |
|---|---|
| | scientific publications could be subject to an embargo period of up to 2 years. |
| **Archiving and preservation (storage/backup)** | The data will be stored on an ownCloud server hosted by R2M Solution. Uploaded files are mainly in spreadsheet format (e.g. .xls, .xlsx, .csv), text (e.g. .txt, .doc, .docx) and ADOBE pdf format. All data will also be stored on the UDL research group own server. Data will also be deposited in an open data repository, e.g. Zenodo. |

### 3.19 Dataset 5.2.1 – Life Cycle Cost analysis

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|---|---|
| **WP / Task & Data Manager** | WP5, Task 5.2 <br><br> Sotirios Karellas (NTUA) |
| **Dataset reference / name** | 5.2.1 / Life Cycle Cost Analysis of the HYBUILD systems |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Life Cycle Cost Analysis, Decision Making, Environmental and Economic Impact, |
| **Data set description** | This data set relates to T5.2 – *Life Cycle Cost Analysis* <br><br> Life Cycle Cost Methodology based on referenced standards. Quantification of the LCC for input into a decision making or evaluation process. Examples of evaluations: <br>• Environmental Assessment <br>• Design Assessment <br>• Functionality Assessment <br>• Regulatory Compliance Assessment |
| **Standards** | Guidelines for life cycle cost analysis of products: ISO 15686–5, EN 15643-4, prEN 16627. |
| **Data sharing** | FORMAT: pdf; Level: Public; <br><br> The main LCC results will be shared with the HYBUILD consortium and on project website, social network profiles, videos on YouTube, thematic portals and at least one publication in international journals or/and conferences. This public report will be shared on HYBUILD public project website. |

| Archiving and preservation (storage/backup) | Regular backup of data on server, managed by IT departments. Data will be stored on the HYBUILD project website and ownCloud platform which already have their backup procedures. |
|---|---|

### 3.20   Dataset 5.3.1 – Social Life Cycle Assessment

| WP / Task & Data Manager | WP5, Task 5.3<br><br>Loredana Napolano (STRESS) |
|---|---|
| Dataset reference / name | 5.3.1 / Social Life Cycle Assessment of the HYBUILD systems report |
| Availability | Open (i) |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | Sustainability Assessment, Social impacts assessment (energy efficiency, indoor climate comfort, building/home security, health monitoring etc.) |
| Data set description | This data set relates to T5.3 - *Social Life Cycle Assessment*.<br><br><u>S-LCA analysis results (stakeholders feedback, questionnaire responses, etc.):</u> It includes the evaluation of the social aspects of the system, positive and negative impacts, along its life cycle. |
| Standards | Guidelines for social life cycle assessment of products, UNEP/SETAC (2009); ISO 14040 (2006); ISO 14044 (2006). |
| Data sharing | • FORMAT: pdf, spreadsheet; photos, etc.<br>• Level: Public<br>• The results and the report will be shared with the HYBUILD consortium through the ownCloud<br>• The results and the report will be shared with end-users through the project website www.hybuild.eu<br>• Data will be also stored in STRESS company repository |
| Archiving and preservation (storage/backup) | The data will be stored on an ownCloud server, on the HYBUILD project website, both hosted by R2M Solution, and on a STRESS repository. Uploaded files are mainly in Microsoft Office (doc, docx, xls, xlsx, PPTX, etc.), ADOBE pdf formats, Photos (JPG, PNG, BMP), etc . |

### 3.21 Dataset 5.4.1 – Standardisation overview and proposals

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|---|---|
| **WP / Task & Data Manager** | WP5, Task 5.4<br><br>Loredana Napolano (STRESS) |
| **Dataset reference / name** | 5.4.1 / Report on full standardization proposals, including the SOTA on existing standards and standardization landscape. |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Standards relevant for heating systems; Existing or new Standardization procedures. |
| **Data set description** | This data set relates to T5.4 - *Standardization*.<br><br>**Standardisation benchmark and proposals:** It includes the State-of-the-art analysis of all standards related to the HYBUILD systems and proposals on components to be standardized and procedures to standardized them during and after the project duration. |
| **Standards** | TBD (Existing standards relevant to heating systems) |
| **Data sharing** | • FORMAT: pdf; word; photos, etc. ;<br>• Level: Public;<br>• The results and the report will be shared with the HYBUILD consortium through the ownCloud;<br>• The results and the report will be shared with end-users through the project website www.hybuild.eu<br>• Data will be also stored in STRESS company repository |
| **Archiving and preservation (storage/backup)** | The data will be stored on an ownCloud server, on the HYBUILD project website both hosted by R2M Solution and on a STRESS repository. Uploaded files are mainly in Microsoft Office (doc, docx, xls, xlsx, PPTX, etc.), ADOBE pdf formats, Photos (JPG, PNG, BMP), etc.. |

### 3.22 Dataset 6.1.1 – Distributed monitoring system

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|---|---|
| **WP / Task & Data Manager** | WP6, Task 6.1<br><br>SAED RAJI (NBK) |
| **Dataset reference / name** | 6.1.1 / Design and development of a distributed monitoring system |

| Availability | Consortium |
|---|---|
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Identified KPIs, data capture strategies according to IPMVP guidelines. |
| **Data set description** | This data set relates to T6.1: *Design, measurement and evaluation plan for the real demonstration sites*. It includes the description of the monitoring plan of three demo sites. |
| **Standards** | International Performance Measurement and Verification Protocol (IPMVP) |
| **Data sharing** | <ul><li>FORMAT: pdf, spreadsheet;</li><li>The measurement results will be shared with the Hybuild consortium.</li></ul> |
| **Archiving and preservation (storage/backup)** | The data will be stored on an ownCloud server hosted by R2M Solution. Uploaded files are mainly in Microsoft Office (doc, docx, xls, xlsx, PPTX, etc.), ADOBE pdf formats, Photos (JPG, PNG, BMP). |

### 3.23 Dataset 6.2.1 – Energy Performance Analysis before intervention

| WP / Task & Data Manager | WP6, Task 6.2<br><br>Luisa F. Cabeza (UDL) |
|---|---|
| **Dataset reference / name** | 6.2.1 / Energy performance analysis before intervention |
| **Availability** | Consortium |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Monitoring data (according to data structure of the CONCERTO database), Data analysis, Energy performance analysis. |
| **Data set description** | This data set relates to T6.2: *Installation of the measurement system for the pre-intervention monitoring*. It includes the description of status of energy performance of three demo sites before intervention. |
| **Standards** | International Performance Measurement and Verification Protocol (IPMVP) |
| **Data sharing** | <ul><li>FORMAT: pdf, spreadsheet.</li><li>The measurement results will be shared with the HYBUILD consortium.</li><li>The monitoring measurements may be visualized through a private access on the project website.</li></ul> |

| Archiving and preservation (storage/backup) | The data will be stored on the ownCloud server hosted by R2M Solution. Uploaded files are mainly in Microsoft Office (doc, docx, xls, xlsx, PPTX, etc.), ADOBE pdf formats, Photos (JPG, PNG, BMP). |
|---|---|

### 3.24  Dataset 6.3.1 – Report commissioning tasks

| WP / Task & Data Manager | WP6, Task 6.3 SAED RAJI (NBK) |
|---|---|
| Dataset reference / name | 6.3.1 / Report of commissioning tasks |
| Availability | Consortium |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | Energy audits results |
| Data set description | This data set relates to T6.3 - *Installation and commissioning*, it includes the report on the definition and execution of the commissioning tasks in the demo sites. |
| Standards | No specific standards for these data. |
| Data sharing | <ul><li>FORMAT: pdf, spreadsheet; photos</li><li>The results and the report will be shared with the HYBUILD consortium</li><li>The monitoring measurements may be visualized through a private access on the project website</li></ul> |
| Archiving and preservation (storage/backup) | The data will be stored on an ownCloud server hosted by R2M Solution. Uploaded files are mainly in Microsoft Office (doc, docx, xls, xlsx, PPTX, etc.), ADOBE pdf formats, Photos (JPG, PNG, BMP). |

### 3.25  Dataset 6.4.1 – Energy performance analysis after intervention

| WP / Task & Data Manager | WP6, Task 6.4. Luisa F. Cabeza (UDL) |
|---|---|
| Dataset reference / name | 6.4.1 / Energy performance analysis after intervention |
| Availability | Open (ii, iii) - **Open Research Data Pilot** |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | Reported performance results, Systems operation analysis, Analysis of Energy efficiency and costs for demo sites. |
| Data set description | This data set relates to T6.4 - *Monitoring and evaluation after installation*. It includes the evaluation of the improvements in energy performance and calculation of energy savings. |

| Standards | No specific standards for these data. |
|---|---|
| Data sharing | Data shared in spreadsheet, text, photos, and pdf format.<br><br>Level of sharing: Open Research Data Pilot. Data will be stored in an open data repository.<br>Sharing through ownCloud server with the consortium. |
| Archiving and preservation (storage/backup) | The data will be stored on an ownCloud server hosted by R2M Solution. Uploaded files are mainly in Microsoft Office (doc, docx, xls, xlsx, PPTX, etc.), ADOBE pdf formats, Photos (JPG, PNG, BMP).<br><br>All data will also be stored on the UDL research group own server. Data will also be deposited in an open data repository, e.g. Zenodo. |

### 3.26   Dataset 7.1.1 – Dissemination and exploitation plan

| WP / Task & Data Manager | WP7, Task 7.1.<br><br>Régis Decorme (R2M) |
|---|---|
| Dataset reference / name | 7.1.1 / Dissemination and exploitation plan |
| Availability | Consortium. Other parties upon request |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | Dissemination, exploitation, stakeholders, targets |
| Data set description | This data set relates to T7.1 - *Development of a Dissemination and exploitation plan*.<br><br>It includes information on stakeholders, and target audiences, individual partner's exploitation plans, targeted journals for scientific publications, basic market analysis.<br><br>Other than project's partners it is useful to other H2020 projects for the purposes of reusing. |
| Standards | No specific standards for these data. |
| Data sharing | This dataset is stored on the ownCloud server hosted by R2M Solution in its Catania office. Uploaded files are mainly in Microsoft Office (.doc, .docx, .xls, .xlsx, etc.) and ADOBE pdf formats.<br><br>If it is deemed necessary to share any data with an external party the process for doing so will comply with conditions |

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| | set down in the CNIL (French Data Protection Authority) or equivalent European/national legislation; as well as HYBUILD Consortium Agreement |
| **Archiving and preservation (storage/backup)** | A daily backup of the ownCloud is performed by R2M on a secondary server which is also hosted by R2M in Catania. Copies are kept for each week. Then one copy per week is kept for each month for up to two months. |

### 3.27 Dataset 7.2.1 – Dissemination material

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|---|---|
| **WP / Task & Data Manager** | WP7, Task 7.2 <br><br> Luisa F. Cabeza (UDL) |
| **Dataset reference / name** | 7.2.1 / Dissemination material: scientific papers, posters, videos, etc. |
| **Availability** | Open (i, ii) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Dissemination, exploitation, scientific conferences, scientific publications, workshops |
| **Data set description** | This data relates to Task 7.2 – *Dissemination activities*. <br><br> It includes all relevant information about dissemination activities carried out once the Dissemination and exploitation plan is approved, such as presentation of results in scientific conferences, publication of joint scientific papers, participation in workshops, etc. |
| **Standards** | No specific standards are required for these data. |
| **Data sharing** | Data shared in spreadsheet, PPT presentations, text and pdf format. <br><br> Level of sharing: open. <br><br> Sharing through ownCloud server with the consortium. |
| **Archiving and preservation (storage/backup):** | The data will be stored on an ownCloud server hosted by R2M Solution. All data will also be stored on the UDL research group own server. Uploaded files are mainly in spreadsheet format (e.g. .xls, .xlsx, .csv), text (e.g. .txt, .doc, .docx), ADOBE pdf format, and photos (JPG, PNG, BMP). |

### 3.28 Dataset 7.3.1 – Technology and market watch

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|---|---|
| **WP / Task & Data Manager** | WP7, Task 7.3<br><br>Régis Decorme (R2M Solution) |
| **Dataset reference / name** | 7.3.1 / Technology and market watch |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Technology watch, market watch, energy storage, standard, innovation, flipboard |
| **Data set description** | This data relates to Task 7.3 – *Watch activities*.<br><br>It includes up-to-date information on the latest market and technological trends which are relevant to the HYBUILD project (energy storage, PV, BEMS, Energy Efficient Buildings, etc). |
| **Standards** | No specific standards are required for these data. |
| **Data sharing** | Data mainly consist in press articles and publications. They are shared on a dedicated online Flipboard magazine available at https://flipboard.com/@r2msolution/hybuild-nc7hv2vay<br><br>In addition, R2M shares a synthesis of the latest observed technological and market trends in its global email update to all partners (every 2 months) on dissemination and communication activities. |
| **Archiving and preservation (storage/backup)** | Data is stored on the HYBUILD Flipboard online service. |

### 3.29 Dataset 7.4.1 – Market analysis, business models, exploitation

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|---|---|
| **WP / Task & Data Manager** | WP7, Task 7.4 and 7.5<br><br>Régis Decorme (R2M Solution) |
| **Dataset reference / name** | 7.4.1 / Market Analysis & Business Models & Exploitation |
| **Availability** | Consortium |

| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
|---|---|
| Dataset Specific Metadata | Business model canvas, market analysis, exploitation, exploitable results, SHAB |
| Data set description | This dataset is cumulative through 2 tasks that relate to Market Analysis, Business Model Generation, and Exploitation activities. |
| | It includes gathered and processed data regarding global, EU and target countries energy storage markets (mainly existing publicly available data). |
| | It defines the list of Exploitable Results (ERs), the HYBUILD services and products to offer to market with financial and value flows among interested subjects, SWOT analysis and an identification of key relationships between parties. |
| | It provides the Stakeholder Advisory Board (SHAB) composition and role. |
| | It provides business models canvas, including cost-benefits assessment and a comprehensive set of value propositions. |
| Standards | No specific standards are required for these data. |
| Data sharing | Data will be stored on the project ownCloud space hosted by R2M in *.doc, *.docx, .xls and *.pdf formats. |
| Archiving and preservation (storage/backup) | Standard daily backup of the project ownCloud space (see Task 8.2) |

### 3.30  Dataset 7.6.1 – Decision support tool

| WP / Task & Data Manager | WP7, Task 7.6 |
|---|---|
| | Régis Decorme (R2M Solution) |
| Dataset reference / name | 7.6.1 / Decision making tools |
| Availability | Open (i) |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | Decision support tool |

| Data set description | This dataset relates to Task 7.6 - *Decision support tools & exploitation*. |
|---|---|
| | Decision-making tools (software and guidelines) that help answer the question of "what kind of benefit the system will generate for me." The guidelines will also help answer the question of "How can I evaluate the size of the storage?". This is an "audit plan" approach to the end-users systems and consumptions and is indispensable to analyse if a thermal storage system is useful for a variety of end users situations. |
| Standards | The tools will be web-based online questionnaires. |
| Data sharing | Tools will be made available through the HYBUILD public website |
| Archiving and preservation (storage/backup) | Standard backup of the project public website space (see Task 8.2) |

### 3.31  Dataset 8.1.1 – Internal and external communication strategy

| WP / Task & Data Manager | WP8, Task 8.1. |
|---|---|
| | Régis Decorme (R2M) |
| Dataset reference / name | 8.1.1 / Internal and external communication strategy |
| Availability | Open (i) |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | Communication |
| Data set description | This data set relates to T8.1 - *Development of the internal and external communication strategy*. |
| | It includes information on stakeholders and target audiences, project promotional material, social media channels, relevant press media contacts, etc. |
| | Other than project's partners, it is useful to other H2020 projects for the purposes of reusing. |
| Standards | No specific standards for these data. |

| | |
|---|---|
| **Data sharing** | This dataset is presented on the D8.1 report which is public and will be made available on the HYBUILD public website. |
| **Archiving and preservation (storage/backup)** | A daily backup of the ownCloud is performed by R2M on a secondary server which is also hosted by R2M in Catania. Copies are kept for each week. Then one copy per week is kept for each month for up to two months. |

### 3.32   Dataset 8.2.1 – Web-based platform

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|---|---|
| **WP / Task & Data Manager** | WP8, Task 8.2. <br><br> Régis Decorme (R2M) |
| **Dataset reference / name** | 8.2.1 / Web-based platform (public website and internal Owncloud communication platform) |
| **Availability** | Consortium |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Dissemination, communication, website, ownCloud |
| **Data set description** | This data set relates to T8.2 - *Development and management of a web-based platform*. <br><br> It includes the HYBUILD public website and the project internal ownCloud communication platform. <br><br> Other than project's partners, it is useful to other H2020 projects for the purposes of reusing. |
| **Standards** | No specific standards for these data. |
| **Data sharing** | The public website is hosted on an external server managed by Gandi and relying on a WordPress CMS. <br><br> Internal communication data is stored on an ownCloud server hosted by R2M Solution in its Catania office. Uploaded files are mainly in Microsoft Office (.doc, .docx, .xls, .xlsx, etc.) and ADOBE pdf formats. <br><br> If it is deemed necessary to share any data with an external party the process for doing so will comply with conditions set down in the CNIL (French Data Protection Authority) or equivalent European/national legislation; as well as |

| | |
|---|---|
| | HYBUILD Consortium Agreement |
| **Archiving and preservation (storage/backup)** | The public website can be restored through automated backups performed periodically by the Gandi hosting service. |
| | For the internal communication platform, a daily backup of the ownCloud is performed by R2M on a secondary server which is also hosted by R2M in Catania. Copies are kept for each week. Then one copy per week is kept for each month for up to two months. |

### 3.33    Dataset 8.3.1 – Communication plan

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|---|---|
| **WP / Task & Data Manager** | WP8, Task 8.3. |
| | Régis Decorme (R2M) |
| **Dataset reference / name** | 8.3.1 / Communication plan |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Communication, events, conferences, press media |
| **Data set description** | This data set relates to T8.3 – *Development of the Communication Plan*. |
| | This dataset includes the detailed communication roadmap and timeline to be implemented during the project, according to the communication strategy defined in T8.1. |
| **Standards** | No specific standards for these data. |
| **Data sharing** | The detailed communication timeline is advertised through specific articles on the HYBUILD public website – in its news section. The Communication Plan is stored in the ownCloud. |
| **Archiving and preservation (storage/backup)** | A daily backup of the ownCloud is performed by R2M on a secondary server which is also hosted by R2M in Catania. Copies are kept for each week. Then one copy per week is kept for each month for up to two months. |

### 3.34 Dataset 8.4.1 – Communication KPIs

| WP / Task & Data Manager | WP8, Task 8.4. Régis Decorme (R2M) |
|---|---|
| Dataset reference / name | 8.4.1 / Communication KPIs |
| Availability | Consortium |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | Communication, events, conferences, press media |
| Data set description | This dataset relates to T8.4 – *Implementation and evaluation of the Communication Plan*. This dataset includes KPIs used to assess the performance of communication activities implemented according to the communication strategy (T8.1) and plan (T8.3). |
| Standards | No specific standards for these data. |
| Data sharing | KPIs are stored in the ownCloud on an Excel spreadsheet and are regularly (every two months) shared through a global consortium email prepared and sent by R2M to update all partners on achieved communication activities. |
| Archiving and preservation (storage/backup) | A daily backup of the ownCloud is performed by R2M on a secondary server which is also hosted by R2M in Catania. Copies are kept for each week. Then one copy per week is kept for each month for up to two months. |

### 3.35 Dataset 9.1.1 – Project Gantt Chart

| WP / Task & Data Manager | WP9, Task 9.1. Merche Polo (COMSA) |
|---|---|
| Dataset reference / name | 9.1.1 / Project Gantt Chart with WPs, Tasks, Deliverables and Milestones. |
| Availability | Consortium |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824. |

| Dataset Specific Metadata | Dates, Project Work Packages, Project Tasks, Milestones, Deliverables (Title and Due date) |
|---|---|
| Data set description | This dataset relates to T9.1 – *Coordination of the project*. It includes the list of all the HYBUILD WPs, tasks, deliverables and milestones and their due date. It is useful for the Project Coordinator to ensure the adequate management of the project and to reach the objectives throughout the planned timeline. It will help to deliver high quality results and documents on time. |
| Standards | No specific standards for these data. |
| Data sharing | The data will be shared in the consortium repository, that is, ownCloud, in the format PDF. |
| Archiving and preservation (storage/backup) | All partners will have access to this document throughout the project in read-only mode. No modifications can be done. All the information has been extracted from the Grant Agreement, signed document by all partners. The dataset will be backed-up according to the ownCloud configuration, set by R2M. A daily backup of the ownCloud is performed by R2M on a secondary server which is also hosted by R2M in Catania. Copies are kept for each week. Then one copy per week is kept for each month for up to two months. |

### 3.36   Dataset 9.1.2 – Partners contact list

| WP / Task & Data Manager | WP9, Task 9.1. Merche Polo (COMSA) |
|---|---|
| Dataset reference / name | Partners contact list |
| Availability | Consortium |
| Mandatory Metadata | European Union; H2020; HYBUILD; GA768824 |
| Dataset Specific Metadata | Contact, e-mail addresses, communication |
| Data set description | This dataset relates to T9.1 – *Coordination of the project*. It includes the list of all the HYBUILD Partner's |

| | representatives, both technical and administrative, that are involved in the project together with their e-mail address and their phone number. |
|---|---|
| | It is useful for all the partners to quickly find the contact data of other representative involved in the projects. Furthermore, it is the source of the two-distribution list that have been created for the project for communication purposes: |
| | all_partners@hybuild.eu and technical_team@hybuild.eu |
| **Standards** | No specific standards for these data. |
| **Data sharing** | The data will be shared in the consortium repository, that is, ownCloud, in the format .xlsx. |
| **Archiving and preservation (storage/backup)** | Only authorized partners will be allowed to modify this document throughout the project upon request of the partners. Whenever the XLSX file is updated, the distribution lists will be also updated by the administrators. |
| | The dataset will be backed-up according to the ownCloud configuration, set by R2M. A daily backup of the ownCloud is performed by R2M on a secondary server which is also hosted by R2M in Catania. Copies are kept for each week. Then one copy per week is kept for each month for up to two months. |

### 3.37 Dataset 9.2.1 – Individual financial statements

| | |
|---|---|
| **WP / Task & Data Manager** | WP9, Task 9.2. |
| | Merche Polo (COMSA) |
| **Dataset reference / name** | 9.2.1 / Individual Financial Statements (for each partner) |
| **Availability** | Consortium |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824. |
| **Dataset Specific Metadata** | Financial Statement, Budget and Costs. Work performed. |
| **Data set description** | This dataset relates to T9.2 – *Management of the project*. |
| | It includes the individual financial statements filled by each partner each six month. The information is related to: |
| | • Financial Periodic Report per partner. |
| | • Detailed costs per partner |
| | • Work performed |

| | |
|---|---|
| | It is useful for all the WPs leaders, the Project Coordinator and the European Commission to quickly analyse the development of the project. It helps tracking each partner activities and costs to ensure a proper allocation of the resources. |
| **Standards** | No specific standards for these data. |
| **Data sharing** | The data will be shared in the consortium repository, that is, ownCloud, in the format .xlsx. |
| **Archiving and preservation (storage/backup)** | In order for the partners to upload their individual information for each period an online document will be created by the Project Coordinator to facilitate the data gathering. Once all the partners have completed the spreadsheet it will be stored in the ownCloud. The dataset will be backed-up according to the ownCloud configuration, set by R2M. A daily backup of the ownCloud is performed by R2M on a secondary server which is also hosted by R2M in Catania. Copies are kept for each week. Then one copy per week is kept for each month for up to two months. |

### 3.38   Dataset 9.3.1 – Sustainable long-term governance structure

| | |
|---|---|
| **WP / Task & Data Manager** | WP9, Task 9.3. <br> Régis Decorme (R2M Solution) |
| **Dataset reference / name** | Sustainable long-term governance structure |
| **Availability** | Consortium |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824. |
| **Dataset Specific Metadata** | Exploitation, governance, replication, post-project |
| **Data set description** | This dataset relates to T9.3 – *Preparing a sustainable long-term governance structure after the project period*. <br> It includes a discussion paper for the MB on how to administer the HYBUILD initiative after the project has ended in terms of management and coordination. |
| **Standards** | No specific standards for these data. |
| **Data sharing** | The data will be shared in the consortium repository, that is, ownCloud, in PDF format. |

| | |
|---|---|
| **Archiving and preservation (storage/backup)** | The dataset will be backed-up according to the ownCloud configuration, set by R2M. A daily backup of the ownCloud is performed by R2M on a secondary server which is also hosted by R2M in Catania. Copies are kept for each week. Then one copy per week is kept for each month for up to two months. |

### 3.39 Dataset 9.4.1 – Contact details of linked initiatives

| | |
|---|---|
| **WP / Task & Data Manager** | WP9, Task 9.4 <br><br> Luisa F. Cabeza (UDL) |
| **Dataset reference / name** | Contact details of other initiatives linked to HYBUILD: international organisations, policy makers and funders |
| **Availability** | Open (i) |
| **Mandatory Metadata** | European Union; H2020; HYBUILD; GA768824 |
| **Dataset Specific Metadata** | Synergies, collaboration, knowledge sharing, global initiatives |
| **Data set description** | This data relates to Task 9.4 – *Exploring synergies between HYBUILD and other global initiatives*. <br><br> It includes data regarding on-going global initiatives in this field, contact information, links to webpages of institutions and events. A paper outlining the options on the possible synergies between HYBUILD and international organisations will be delivered to the Management Board. We have to make sure NOT to include information that may infringe the legislation regarding data protection (e.g. email addresses of private companies, personal email addresses, etc.). |
| **Standards** | Data Protection Directives (Directive 95/46/EC, which will be replaced by Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016, the Organic law 15/1999 of December 13 about protection of Personal Data). |
| **Data sharing** | Data shared in spreadsheet, PPT presentations, text and pdf format. Level of sharing: open. <br><br> Sharing through ownCloud server with the consortium. |
| **Archiving and preservation (storage/backup)** | The data will be stored on an ownCloud server hosted by R2M Solution. All data will also be stored on the UDL research group own server. Uploaded files are mainly in spreadsheet format (e.g. .xls, .xlsx, .csv), text (e.g. .txt, .doc, .docx) and ADOBE pdf format. |

# 4    Conclusions

This initial HYBUILD DMP highlights that the most significant datasets identified are the Life Cycle Assessment results of the HYBUILD system (Task 5.1) and the energy performance results of the overall system (Task 6.4). It is these data that will validate the impact of the project and the conclusions drawn in scientific publications that arise. It is intended that where possible these data will be made available through open access repositories.

# 5   References

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