H2020 – NMBP – EEB – 2019 – GA 869898

Highly advanced modular integration of insulation, energising and storage systems for

non-residential buildings

D9.4 Initial Data Management Plan

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Terms, definitions and abbreviated terms

EU	European Union
EC	European Commission
WP	Work Package
WPL	Work Package Leader
DMP	Data Management Plan
R&D	Research and Development
SC	Steering Committee
RTD	Research and Technical Development
DEB	Demonstration and exploitation board
IC	Industrial Committee
R&D&I	Research and Development and Innovation
TES	Thermal Energy Storage
IEF	Institute of Energy Futures
IGU	Insulated Glass Unit
PVD	Physical vapour deposition
CVD	Chemical vapour deposition
BMS	Battery Management System
GA	Grant Agreement
CA	Consortium Agreement
PC	Project Coordinator
PU	Public
CO	Confidential
RE	Restricted
HTML	Hypertext Markup Language
IPR	Intellectual Property Rights
JPEG	Joint Photographic Experts Group
JFIF	JPEG File Interchange Format
PNG	Portable Network Graphics
MPEG	Moving Pictures Expert Group HTML5
MIDI	Musical Instrument Digital Interface
WMV	Windows Media Video
WMA	Windows Media Audio
AVI	Audio Video Interleave

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ACC	Advanced Audio Coding
WAV	Waveform Audio File Format
ANSI	American National Standards Institute
OEM	Original Equipment Manufacturer
UTF	UCS Transformation Format
POSIX	Portable Operating System Interface
ATE	Automatic Test Equipment
STDF	Standard Test Data Format
ISSN	International Standard Serial Number
OA	Open Access
GDPR	General Data Protection Regulation
DPO	Data Protection Officer
PS+	POWERSKIN+ Project

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1.   EXECUTIVE SUMMARY

According to the Guidelines on Open access to Scientific Publications and Research Data for projects funded or co-funded under Horizon 2020, Europe 2020 strategy underlines the central role of knowledge and innovation in growth generation. For these reasons, the European Union strives to improve access to scientific information and to boost the benefits of public investment in the research funded under the EU Framework Programme Horizon 2020.

The present document constitutes the 1st issue of the Data Management Plan in the framework of the POWERSKIN+ project, dedicated to Task T9.2 Data Management under the work package WP9 Dissemination, communication and exploitation. The Data Management Plan (DMP) identifies the results that should be subject of POWERSKIN+ dissemination and exploitation and analyses the main data uses, users and explore the restrictions related to IPR according with the Consortium Agreement, defining the data assurance processes that are to be applied during and after the completion of the project. This document is prepared in compliance with the template provided by the Commission in Annex 1 of the "Guidelines on Data Management in Horizon 2020".

2.   INTRODUCTION

This document constitutes the 1st issue of the Data Management Plan (DMP) in the EU framework of the POWERSKIN+ project under Grant Agreement No. 869898. The objective of the DMP is to establish the measures for promoting the findings during the project's life and detail what data the Project will generate, whether and how it will be exploited or made accessible for verification and re-use, and how it will be curated and preserved. The DMP enhances and ensures relevant project´s information transferability and takes into account the restrictions established by the Consortium Agreement. The first version of the DMP is delivered at month 7. Later the DMP will be monitored and regularly updated up to the release of the D9.9 POWERSKIN+ Data Management Plan due month 45. It is acknowledged that not all data types will be available at the start of the Project, thus whenever important, if any changes occur to the POWERSKIN+ project due to inclusion of new data sets, changes in consortium policies or external factors, the DMP will be updated in order to reflect actual data generated and the user requirements as identified by the POWERSKIN+ consortium participants.

The overall goal of the POWERSKIN+ project is to develop and scale-up eco-innovative, cost-effective and smart material solutions to renovate existing facade systems of both double skin and advanced integrated curtain walls. It will smart integrate unprecedented highly innovative insulations and renewable energy technologies, with breakthrough features based on nano-formulated VIP, PCM, flexible thin glass perovskite solar cells and multi-functional nano-enabled coatings. Comprehensive POWERSKIN+ portfolio comprising off-site prefabricated modular "ready-to-buy" and 'easy-to-install' glazing and opaque elements, sustainable eco-designed connecting framings and a dedicated large capacity electric building storage system will be processed up to the final commercial end-products.

POWERSKIN+ project comprises 7 technical work packages (WPs) as follows:

- WP2 - Design and parametrization of energy smart materials and components
- WP3 - Materials for transparent module development
- WP4 - Materials for opaque module development
- WP5 - System production & integration
- WP6 - Simulation, Characterization and Validation
- WP7 - Environmental and economic analysis
- WP8 - Pilot demonstrations

To facilitate the technical work, there are 3 non-technical work packages to coordinate all the work packages, disseminate and communicate project results and to ensure compliance with the ethics requirements.

- WP1 - Project Management
- WP9 - Dissemination, communication and exploitation
- WP10 - Ethics requirements

This document has been prepared to describe the data management life cycle for all data sets that will be collected, processed or generated by the POWERSKIN+ project. It is a document outlining how research data will be handled during the project, and after the project is completed. It describes what data will be collected, processed or generated and what methodologies and standards are to be applied. It also defines if and how this data will be shared and/or made open and how it will be curated and preserved.

3.   OPEN ACCESS

Open access can be defined as the practice of providing on-line access to scientific information that is free of charge to the reader and that is reusable. In the context of R&D, open access typically focuses on access to "scientific information", which refers to two main categories:

- Peer-reviewed scientific research articles (published in academic journals).
- Scientific research data (data underlying publications and/or raw data).

It is important to note that:

- Open access publications go through the same peer-review process as non-open access publications.
- As an open access requirement comes after a decision to publish, it is not an obligation to publish, it is up to researchers whether they want to publish some results or not.
- As the decision on whether to commercially exploit results (e.g. through patents or otherwise) is made before the decision to publish (open access or not), open access does not interfere with the commercial exploitation of research results. [1]

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[1] *European Commission background note on open access to publications and data in Horizon 2020*

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Benefits of open access:

- Unprecedented possibilities for the dissemination and exchange of information due to the advent of the internet and electronic publishing.
- Wider access to scientific publications and data can help to accelerate innovation, foster collaboration and avoid duplication of effort, build on previous research results, involve citizens and society.
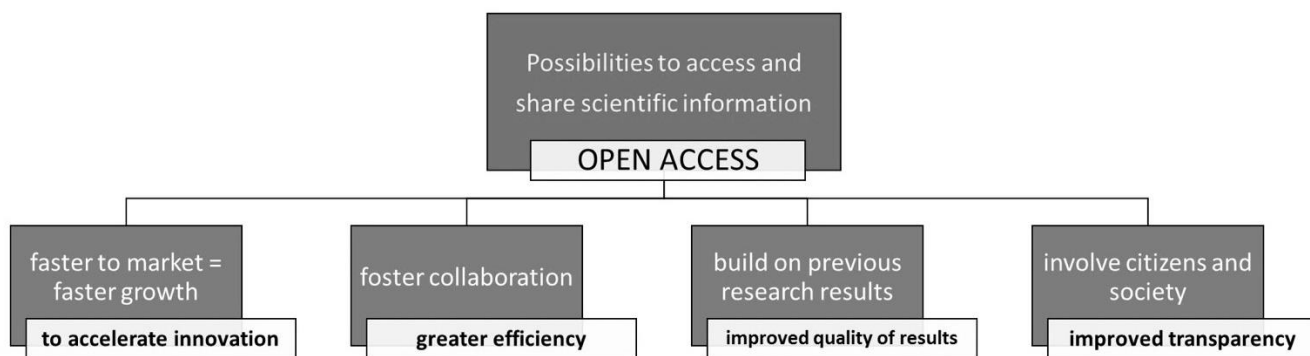
FIGURE 1: OPEN ACCESS BENEFITS

The EC capitalizes on open access and open science as it lowers barriers to accessing publicly funded research. This increases research impact, the free-flow of ideas and facilitates a knowledge-driven society at the same time underpinning the EU Digital Agenda (OpenAIRE Guide for Research Administrators - EC funded projects). The open-access policy of the European Commission is not a goal in itself, but an element in the promotion of affordable and easily accessible scientific information for the scientific community itself, but also for innovative small businesses.

3.1   Open Access to peer-reviewed scientific publications

Open access to scientific peer-reviewed publications has been anchored as an underlying principle in the Horizon 2020 Regulation and the Rules of Participation and is consequently implemented through the relevant provisions in the Grant Agreement.

More specifically, Article 29: "Dissemination of results, Open Access, Visibility of EU Funding" of POWERSKIN+ Grant Agreement establishes the obligation to ensure open access to all peer-reviewed articles produced by POWERSKIN+.

Article 29.2 Open access to scientific publications in POWERSKIN+ GA

Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.

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In particular, it must:

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;

Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited 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.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms "European Union (EU)" and "Horizon 2020";
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable;
- a persistent identifier.

3.1.1 Green open access

The green open access is also called self-archiving and means that the published article or the final peer-reviewed manuscript is archived by the researcher in an online repository before, after or alongside its publication. Access to this article is often delayed (embargo period). Publishers recoup their investment by selling subscriptions and charging pay-per-download/view fees during this period during an exclusivity period. This model is promoted alongside the "Gold" route by the open access community of researchers and librarians and is often preferred.

3.1.2 Gold open access

This type of open access is sometimes called open access publishing, or author pays publishing and means that a publication is immediately provided in open access mode by the scientific publisher. Associate costs are shifted from readers to the university or research institute to which the researcher is affiliated, or to the funding agency supporting the research. This model is usually the one promoted by the community of well-established scientific publishers in the business.

3.2 Open Access to research data

"Research data" refers to information, in particular facts or numbers, collected to be examined and considered and as a basis for reasoning, discussion, or calculation. In a research context, examples of data

include statistics, results of experiments, measurements, observations resulting from fieldwork, survey results, interview recordings and images. The focus is on research data that is available in digital form.

<u>Article 29.3 Open access to research data in POWERSKIN+ GA</u>

Regarding the digital research data generated in the action ('data'), the beneficiaries must:

    a)   deposit in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate — free of charge for any user — the following:
        i) the data, including associated metadata, needed to validate the results presented in scientific publications as soon as possible;
        ii) other data, including associated metadata, as specified and within the deadlines laid down in the 'data management plan' (see Annex 1 of POWERSKIN+ GA);
    b)   provide information — via the repository — about tools and instruments at the disposal of the beneficiaries and necessary for validating the results (and — where possible — provide the tools and instruments themselves).

This does not change the obligation to protect results in Article 27, the confidentiality obligations in Article 36, the security obligations in Article 37 or the obligations to protect personal data in Article 39, all of which still apply.

The beneficiaries do not have to ensure open access to specific parts of their research data if the achievement of the action's main objective, as described in Annex 1, would be jeopardized by making those specific parts of the research data openly accessible. In this case, the data management plan must contain the reasons for not giving access to third parties.

3.3   Dissemination & Communication and Open Access

For the implementation of POWERSKIN+ Project, there is a complete dissemination and communication set of activities scheduled, with the objectives of raising awareness in the research community, industry and wide public (e-newsletters, e-brochures, poster or events, are foreseen for the dissemination of POWERSKIN+ to key groups potentially related to the project results' exploitation). Likewise, POWERSKIN+ website, webinars, press releases or videos, for instance, will be developed for communication to a wider audience. Details about all those dissemination and communication elements are provided in the deliverable D9.3 Communication and Dissemination Plan. The Data Management Plan and the actions derived are part of the overall POWERSKIN+ dissemination and communication strategy, which is included in the above-mentioned D9.3.

4.   OBJECTIVES OF DATA MANAGEMENT PLAN

The purpose of POWERSKIN+ Data Management Plan (DMP) is to provide a management assurance framework and processes that fulfil the data management policy that will be used by the POWERSKIN+ project partners with regard to all the dataset types that will be generated by the POWERSKIN+ project. The aim of the DMP is to control and ensure the quality of project activities, and to effectively/efficiently manage

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the material/data generated within the POWERSKIN+ project. It also describes how data will be collected, processed, stored and managed holistically from the perspective of external accessibility and long-term archiving.

The content of the DMP is complementary to other official documents that define obligations under the Grant Agreement (GA) and associated annexes, and shall be considered a living document and as such will be the subject of periodic updating as necessary throughout the lifespan of the project.
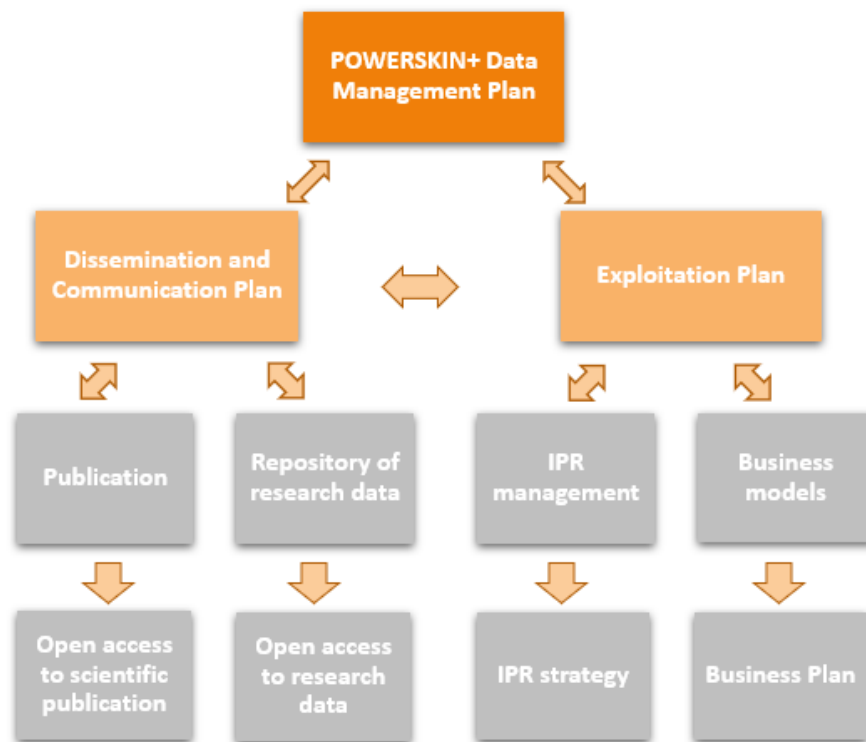
FIGURE 2: DATA MANAGEMENT PLAN OVERVIEW

5.   POWERSKIN+ PROJECT WEBSITE AND SERVER, STORAGE AND ACCESS

5.1   POWERSKIN+ project website

The POWERSKIN+ project website is used for storing only public documents related to the Project and dissemination. The website has been set up under the address www.powerskinplus.eu and has been launched in December 2019. The POWERSKIN+ website is meant to be functioning for the whole Project duration and a minimum of 2 years after the Project end. The website presents the first step in the partial objective of developing and deploying an awareness and dissemination plan.

Design of the website has been done by dissemination leader FENIX that is also in charge of website maintenance and regular update. As the Project website is not intended to be static, the news and events, as well as the rest of the content, will be once a month updated and managed throughout the duration of the Project based on the partner's inputs and Project evolution. Due to the expected impact on different audiences all around the world, it was designed to provide complete and technical information in a way that is accessible by a wide range of stakeholders. The website is available in English, but the translation to partners´ languages is considered as well in order to break the language barrier and enable wide and effective communication of Project results at the national level.

The site itself has only the public section, which is accessible to everyone and contains public deliverables, promo materials, presentations, newsletters, publications, papers and others.

To ensure the safety of the data, the partners will use their available local file servers to create backups of the relevant materials periodically. The POWERSKIN+ project website itself already has its own backup procedures. The Project Coordinator (IPN) along with the Dissemination and Exploitation Leader (FENIX) will be in charge of data management and all the relevant issues.
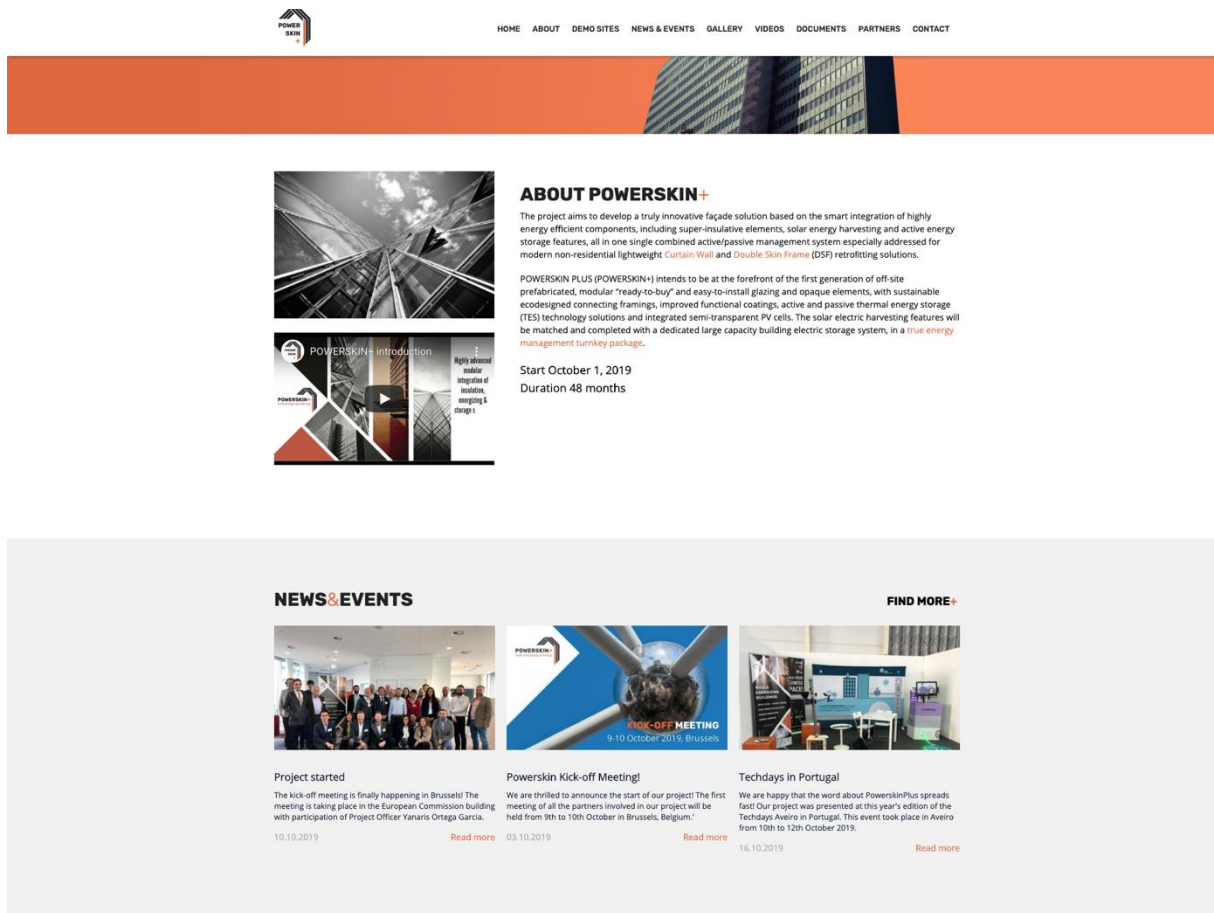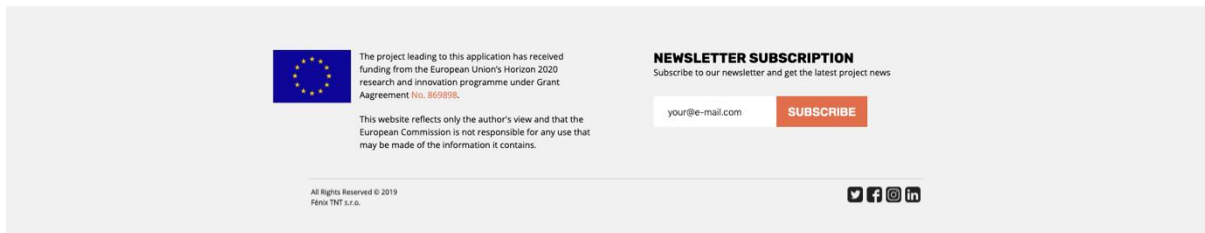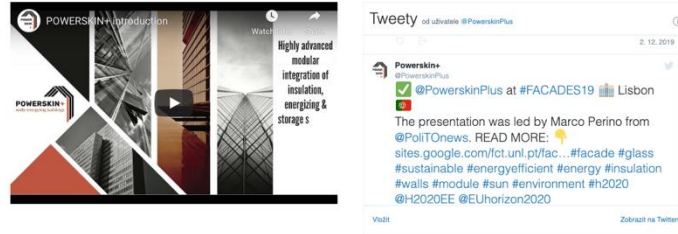
FIGURE 3: POWERSKIN+ WEBSITE

5.2   POWERSKIN+ data server

Confidential data will be kept in a server Seafile (https://cloud.ipn.pt) provided by Project Coordinator, accessible online to all partners (also throughout a username password protection system). The unexpected loss of all data (i.e. primary and anonymized), will be safeguarded by backup procedures, using physical media storage units (e.g. memory sticks or DVDs) These backup physical media will be safely stored in a vault at the Project Coordinator premises and be only available to authorised personnel of the organisation.

The Project Coordinator (IPN) is the administrator of the POWERSKIN+ server. The administrator is responsible for the server maintenance and for adding or removing users. The user's permissions are also handled by the administrator.

Grant Agreement and the Consortium Agreement set out rules for data handling and management. Distribution within a file share environment shall be limited to active participants from the consortium partners on a need-to-know basis. Confidential information shared through the POWERSKIN+ server may not be distributed outside the consortium. All Project partners shall take precautions to securely store data connected to the Project when downloading and locally storing files from the server.
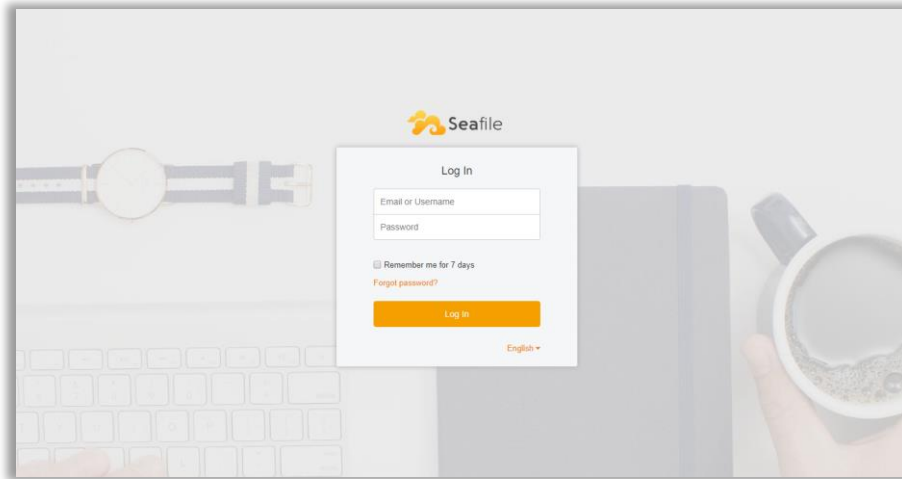
FIGURE 4: POWERSKIN+ SERVER WEB INTERFACE

6. DATA MANAGEMENT PLAN IMPLEMENTATION

POWERSKIN+ has set up a practical but solid organizational structure to pursue the project goals effectively, facilitate the work of the partners and fulfil the requirements of the Commission. Being composed of a large number of partners, the consortium has defined a set of tools and management procedures to follow the work plan closely and to ensure a close link between decision making, as well as effective communication of decisions to the Consortium during the project lifetime. The overall management structure is outlined in the next Figure.

FIGURE 5: MANAGEMENT STRUCTURE OF THE POWERSKIN+ PROJECT

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6.1   Steering committee (SC)

The project is administered by a Steering Committee (SC) acting as a Management Board, comprised of one representative from each of the partners and is chaired by the project Coordinator, IPN, in the person of Mr. Jorge Corker. The SC is the top-level decision making and arbitration body dealing with strategic issues.

6.2   RTD Board

A Research and Technical Development (RTD) task group was formed to oversee and manage the scientific and technical aspects of the project to ensure the R&D progress towards the goals and alongside the collective interests of the Consortium as an all. The RTD Board (RTDB) will report on the technical progress of the project and recommend any alterations to the work plan if needed. It is composed of the Academic/RTD partners and will meet when needed. The RTDB will be chaired by the Scientific Manager, Professor Marco Perino (POLITO).

6.3   Industrial Committee (IC)

While research and innovation are at their core for the project, the objectives are extended due to the envisaged applications to products and production technologies developed under project research. It is therefore vital that the progress and research outcomes are all time in line with the collective interests of the industrial partners. To address these issues, POWERSKIN+ has formed the Industrial Committee (IC). IC will be led by Mr Janez Navodnik from NAVODNIK. The main activity of this committee is the promotion and encouragement of collaborative development, training and transferring of R&D&I results within the consortium to generate business opportunities based in the knowledge being generated under project activities and according to the different partner interests.

6.4   Demonstration and exploitation board (DEB)

A Demonstration and Exploitation Board (DEB) has been formed, drawing on the expertise of the industrial partners and the technological capability and expertise of the RTD performers. The main activity of DEB will be the promotion and encouragement of collaborative development, training and transferring of R&D&I results within the consortium to generate business opportunities based on the knowledge created and on the project results according to the different partner interests. The DEB is chaired by the Board Manager, Ms. Petra Colantonio from FENIX TNT.

7.   RESEARCH DATA

"Research data" refers to information, in particular facts or numbers, collected to be examined and considered as a basis for reasoning, discussion, or calculation. In a research context, examples of data include statistics, results of experiments, measurements, observations resulting from fieldwork, survey results, interview recordings and images. The focus is on research data that is available in digital form.

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As indicated in the Guidelines on Data Management in Horizon 2020 (European Commission, Research & Innovation, October 2015), scientific research data should be easily:

1. DISCOVERABLE

The data and associated software produced and/or used in the project should be discoverable (and readily located), identifiable by means of a standard identification mechanism (e.g. Digital Object Identifier).

2. ACCESSIBLE

Information about the modalities, scope, licenses (e.g. licensing framework for research and education, embargo periods, commercial exploitation, etc.) in which the data and associated software produced and/or used in the project is accessible should be provided.

3. ASSESSABLE and INTELLIGIBLE

The data and associated software produced and/or used in the project should be easily assessable for and intelligible to third parties in contexts such as scientific scrutiny and peer review (e.g. the minimal datasets are handled together with scientific papers for the purpose of peer review, data is provided in a way that judgments can be made about their reliability and the competence of those who created them).

4. USEABLE

Beyond the original purpose for which it was collected The data and associated software produced and/or used in the project should be useable by third parties even long time after the collection of the data (e.g. the data is safely stored in certified repositories for long term preservation and curation; it is stored together with the minimum software, metadata and documentation to make it useful; the data is useful for the wider public needs and usable for the likely purposes of non-specialists).

5. INTEROPERABLE to specific quality standards

The data and associated software(s) produced and/or used in the Project should be interoperable, allowing data exchange between researchers, institutions, organizations, countries, etc.

Some examples of research data include:

- Documents (text, Word), spreadsheets
- Questionnaires, transcripts, codebooks
- Laboratory notebooks, field notebooks, diaries
- Audiotapes, videotapes
- Photographs, films
- Test responses, slides, artifacts, specimens, samples
- Collection of digital objects acquired and generated during the process of research
- Database contents (video, audio, text, images)

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- Models, algorithms, scripts
- Contents of an application (input, output, logfiles for analysis software, simulation software, schemas)
- Methodologies and workflows
- Standard operating procedures and protocols.

In addition to the other records to manage, some kinds of data may not be sharable due to the nature of the records themselves, or to ethical and privacy concerns (e.g. preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, communication with partners, etc.). Research data also do not include trade secrets, commercial information, materials necessary to be held confidential by the researcher until they are published, or information that could invade personal privacy. Research records that may also be important to manage during and beyond the project are: correspondence, project files, technical reports, research reports, etc.

8. POWERSKIN+ DATASETS

Projects are required to deposit the research data - the data, including associated metadata, needed to validate the results presented in scientific publications as soon as possible; and other data, including associated metadata, as specified and within the deadlines laid down in a data management plan (DMP).

At the same time, projects should provide information (via the chosen repository) about tools and instruments at the disposal of the beneficiaries and necessary for validating the results, for instance, specialized software(s) or software code(s), algorithms, analysis protocols, etc. Where possible, they should provide the tools and instruments themselves.

The types of data to be included within the scope of the POWERSKIN+ Data Management Plan shall as a minimum cover the types of data that are considered complementary to material already contained within declared project deliverables. In order to collect the information generated during the project, the template for data collection will be circulated periodically every 6 months. The scope of this template is to detail the research results that will be developed during the POWERSKIN+ Project detailing the kind of results and how it will be managed. The responsibility to define and describe all non-generic data sets specific to an individual work package is with the WP leader.

8.1 Data set reference and name

The identifier for the data set to be produced. All data sets within this DMP have been given a unique field identifier and are listed in Section 12 (Data summary of the POWERSKIN+ project).

8.2 Data Set Description

A data set is defined as a structured collection of data in a declared format. Most commonly a data set corresponds to the contents of a single database table, or a single statistical data matrix, where every column

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of the table represents a particular variable, and each row corresponds to a given member of the data set in question. The data set may comprise data for one or more fields. For the purposes of this DMP data sets have been defined by generic data types that are considered applicable to the POWERSKIN+ project. For each data set, the characteristics of the data set have been captured in a tabular format as enclosed in Section 12 (Data summary of the POWERSKIN+ project).

8.3   Standards & Metadata

Metadata is defined as "data about data". It is "structured information that describes, explains, locates, and facilitates the means to make it easier to retrieve, use or manage an information resource".

Metadata can be categorized into three types:

- Descriptive metadata describes an information resource for identification and retrieval through elements such as title, author, and abstract.
- Structural metadata documents relationships within and among objects through elements such as links to other components (e.g., how pages are put together to form chapters).
- Administrative metadata manages information resources through elements such as version number, archiving date, and other technical information for the purposes of file management, rights management and preservation.

There are a large number of metadata standards which address the needs of particular user communities.

8.4   Data Sharing

During the period, when the Project is ongoing, the sharing of data shall be defined by the configuration rules defined in the access profiles for the project participants. Each individual project data set item shall be allocated a character "dissemination classification" for the purposes of defining the data-sharing restrictions. The classification shall be an expansion of the system of confidentiality applied to deliverables reports provided under the POWERSKIN+ Grant Agreement.

- PU: Public
- CO: Confidential, only for members of the consortium; Commission services always included
- RE: Restricted to a group specified by the consortium

The three above levels are linked to the "Dissemination Level" specified for all POWERSKIN+ deliverables.

All material designated with a PU dissemination level is deemed uncontrolled. In case the dataset cannot be shared, the reasons for this should be mentioned (e.g. ethical, rules of personal data, intellectual property, commercial, privacy-related, or security-related).

Data will be shared when the related deliverable or paper has been made available at an open access repository. The expectation is that data related to a publication will be openly shared. However, to allow the

exploitation of any opportunities arising from the raw data and tools, data sharing will proceed only if all co-authors of the related publication agree. The Lead author is responsible for getting approvals and then sharing the data and metadata on Zenodo (www.zenodo.org), a popular repository for research data. The Lead Author will also create an entry on OpenAIRE (www.openaire.eu) in order to link the publication to the data.

OpenAIRE is an EC/funded initiative that implements the Horizon 2020 Open Access mandate for publications and its Open Research Data Pilot and may be used to reference both the publication and the data. A link to the OpenAIRE entry will then be submitted to the POWERSKIN+ Website Administrator (FENIX) by the Lead Author.
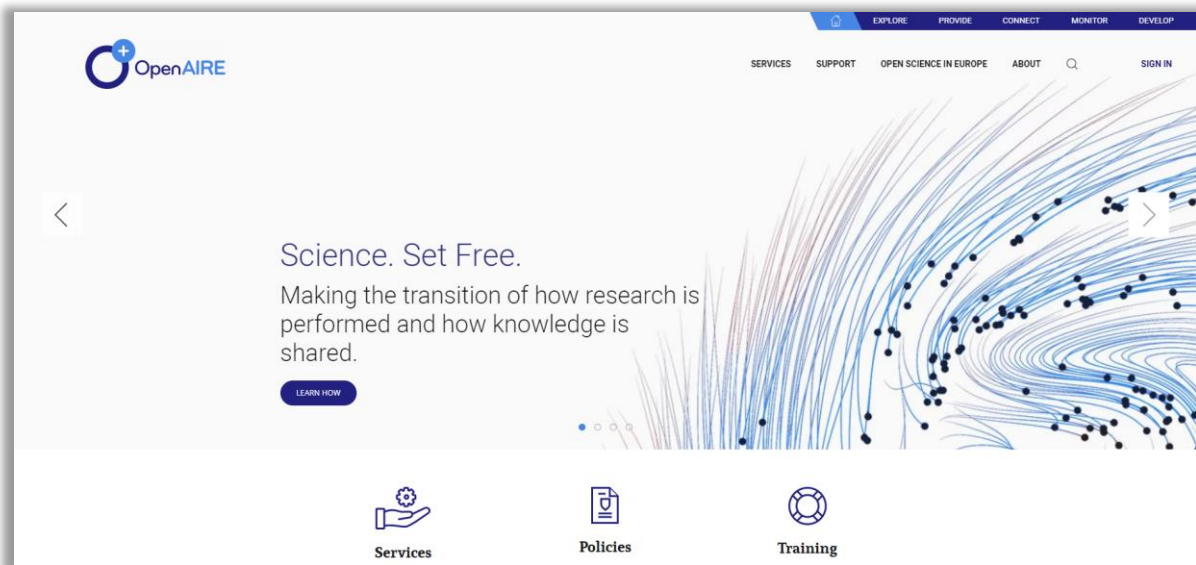
FIGURE 6: OPENAIRE WEBSITE
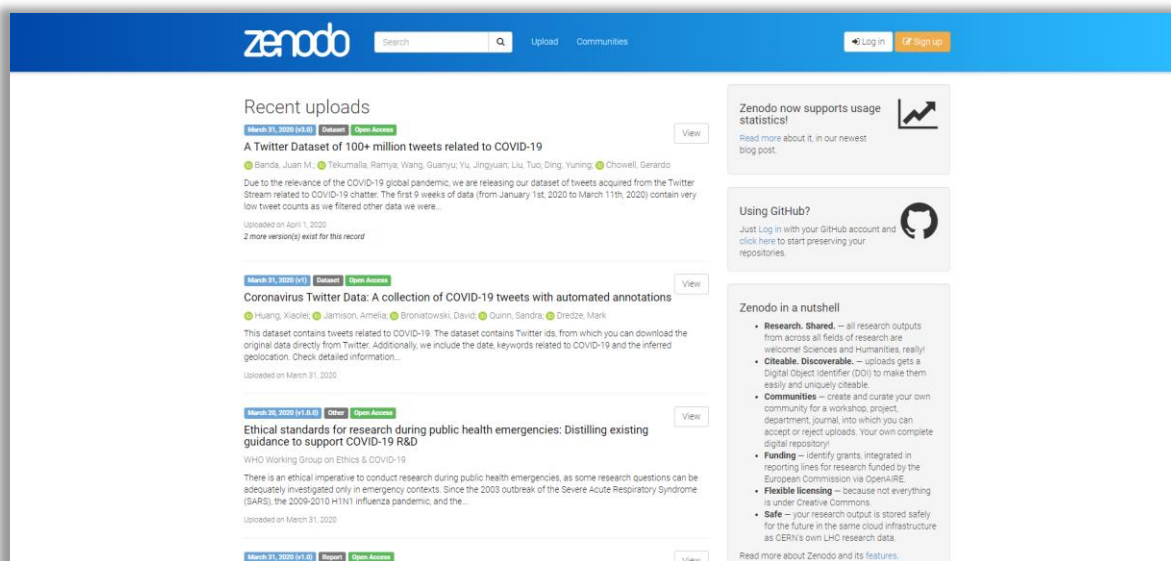
FIGURE 7: ZENODO REPOSITORY

8.5   Data archiving and preservation

Both Zenodo and OpenAIRE are purpose-built services that aim to provide archiving and preservation of long-tail research data. In addition, the POWERSKIN+ website, linking back to OpenAIRE, is expected to be available for at least two years after the end of the Project. All raw data collected will be stored on a secure server run by the Project Coordinator. These contributions will be accessible only by organisation team members, as well as be password secured, in line with the data protection rules in the EU and the Portuguese Data Protection Law. At the formal project closure, all the data material that has been collated or generated within the Project shall be copied and transferred to a digital archive (Project Coordinator responsibility). The length of data retention for the whole project has been set for a period of six years, to comply with the mandatory five years' period that, according to the GA, POWERSKIN+ partners must retain original documents related to the project. Also, all POWERSKIN+ partners must keep any data, documents or other material or information confidential, not only during the implementation of the project, but for four years after the termination of it, as per the GA.

9.   DATASETS TECHNICAL REQUIREMENTS

The applicable data sets are restricted to the following data types for the purposes of archiving. The technical characteristics of each data set are described in the following sections. The copyrights with respect to all data types shall be subject to IPR clauses in the GA, but shall be considered to be royalty-free. The use of file compression utilities, such as "WinZip" is prohibited. No data files shall be encrypted.

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9.1 Engineering CAD drawings

The .dwg file format is one of the most commonly used design data formats, found in nearly every design environment. It signifies compatibility with AutoCAD technology. Autodesk created .dwg in 1982 with the launch of its first version of AutoCAD software. It contains all the pieces of information a user enters, such as: Designs, Geometric data, Maps, Photos.

9.2 Static graphical images

Graphical images shall be defined as any digital image irrespective of the capture source or subject matter. Images should be composed such to contain only objects that are directly related to POWERSKIN+ activity and do not breach IPR of any third parties.

Image files are composed of digital data and can be of two primary formats of "raster" or "vector". It is necessary to represent data in the rastered state for use on computer displays or for printing. Once rasterized, an image becomes a grid of pixels, each of which has a number of bits to designate its colour equal to the colour depth of the device displaying it. The POWERSKIN+ project shall only use raster-based image files. The allowable static image file formats are JPEG and PNG.

There is normally a direct positive correlation between image file size and the number of pixels in an image, the colour depth, or bits per pixel used in the image. Compression algorithms can create an approximate representation of the original image in a smaller number of bytes that can be expanded back to its uncompressed form with a corresponding decompression algorithm. The use of compression tools shall not be used unless absolutely necessary.

9.3 Animated graphical images (videos)

Graphic animation is a variation of stop motion and possibly more conceptually associated with traditional flat cell animation and paper drawing animation, but still technically qualifying as stop motion consisting of the animation of photographs (in whole or in parts) and other non-drawn flat visual graphic material. The allowable animated graphical image file formats are AVI, MPEG, MP4, and MOV. The WP leader shall determine the most suitable choice of format based on equipment availability and any other factors. This is mainly valid for the POWERSKIN+ project promo video, which is expected to contain animated graphical images, infographics and on-site interviews.

TABLE 1: VIDEO FORMATS

Format	File	Description
MPEG	.mpg .mpeg	MPEG. Developed by the Moving Pictures Expert Group. The first popular video format on the web. Used to be supported by all browsers, but it is not supported in HTML5 (See MP4).

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AVI	.avi	AVI (Audio Video Interleave). Developed by Microsoft. Commonly used in video cameras and TV hardware. Plays well on Windows computers, but not in web browsers.
WMV	.wmv	WMV (Windows Media Video). Developed by Microsoft. Commonly used in video cameras and TV hardware. Plays well on Windows computers, but not in web browsers.
QuickTime	.mov	QuickTime. Developed by Apple. Commonly used in video cameras and TV hardware. Plays well on Apple computers, but not in web browsers. (See MP4)
RealVideo	.rm .ram	RealVideo. Developed by Real Media to allow video streaming with low bandwidths. It is still used for online video and Internet TV, but does not play in web browsers.
Flash	.swf .flv	Flash. Developed by Macromedia. Often requires an extra component (plug-in) to play in web browsers.
Ogg	.ogg	Theora Ogg. Developed by the Xiph.Org Foundation. Supported by HTML5.
WebM	.webm	WebM. Developed by the web giants, Mozilla, Opera, Adobe, and Google. Supported by HTML5.
MPEG-4 or MP4	.mp4	MP4. Developed by the Moving Pictures Expert Group. Based on QuickTime. Commonly used in newer video cameras and TV hardware. Supported by all HTML5 browsers. Recommended by YouTube.

9.4   Audio data

An audio file format is a file format for storing digital audio data on a computer system. The bit layout of the audio data (excluding metadata) is called the audio coding format and can be uncompressed, or compressed to reduce the file size, often using lossy compression. The data can be a raw bitstream in an audio coding format, but it is usually embedded in a container format or an audio data format with a defined storage layer. The allowable animated audio file formats are MP3 or MP4. This is mainly valid for the POWERSKIN+ Project promo video, which is expected to contain interviews with key partners, voice-over and music.

TABLE 2: AUDIO FORMATS

Format	File	Description
MIDI	.midi .mid	MIDI (Musical Instrument Digital Interface). The main format for all electronic music devices like synthesizers and PC sound cards. MIDI files do not contain sound, but digital notes that can be played by electronics. Plays well on all computers and music hardware, but not in web browsers.
RealAudio	.rm .ram	RealAudio. Developed by Real Media to allow streaming of audio with low bandwidths. Does not play in web browsers.
WMA	.wma	WMA (Windows Media Audio). Developed by Microsoft. Commonly used in music players. Plays well on Windows computers, but not in web browsers.
AAC	.aac	AAC (Advanced Audio Coding). Developed by Apple as the default format for iTunes. Plays well on Apple computers, but not in web browsers.
WAV	.wav	WAV. Developed by IBM and Microsoft. Plays well on Windows, Macintosh, and Linux operating systems. Supported by HTML5.

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Ogg	.ogg	Theora Ogg. Developed by the Xiph.Org Foundation. Supported by HTML5.
MP3	.mp3	MP3 files are actually the sound part of MPEG files. MP3 is the most popular format for music players. Combines good compression (small files) with high quality. Supported by all browsers.
MPEG-4 or MP4	.mp4	MP4. Developed by the Moving Pictures Expert Group. Based on QuickTime. Commonly used in newer video cameras and TV hardware. Supported by all HTML5 browsers. Recommended by YouTube.

9.5   Textual data

A text file is structured as a sequence of lines of electronic text. These text files shall not contain any control characters, including the end-of-file marker. In principle, the least complicated form of textual file format shall be used as the first choice.

On Microsoft Windows operating systems, a file is regarded as a text file if the suffix of the name of the file is "txt". However, many other suffixes are used for text files with specific purposes. For example, source code for computer programs is usually kept in text files that have file name suffixes indicating the programming language in which the source is written. Most Windows text files use "ANSI", "OEM", "Unicode" or "UTF-8" encoding.

Prior to the advent of Mac OS X, the classic Mac OS system regarded the content of a file to be a text file when its resource fork indicated that the type of the file was "TEXT". Lines of Macintosh text files are terminated with CR characters.

Being certified Unix, macOS uses POSIX format for text files. Uniform Type Identifier (UTI) used for text files in macOS is "public.plain-text".

9.6   Numeric data

Numerical Data is information that often represents a measured physical parameter. It shall always be captured in number form. Other types of data can appear to be in number form, i.e. telephone number. However, this should not be confused with true numerical data that can be processed using mathematical operators.

9.7   Process and test data

Standard Test Data Format (STDF) is a proprietary file format originating within the semiconductor industry for test information, but it is now a Standard widely used throughout many industries. It is a commonly used format produced for/by automatic test equipment (ATE). STDF is a binary format, but can be converted either to an ASCII format known as ATDF or to a tab-delimited text file. Software tools exist for processing STDF generated files and performing statistical analysis on a population of tested devices. POWERSKIN+ innovation development shall make use of this file type for system testing.

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9.8 Microsoft Office Application Suite

POWERSKIN+ Project partners shall use the currently MS supported operating system and convert from any previous obsolete releases.

The types of specific applications available within the current Microsoft Windows operating system shall be used to support all project activities in preference to any other software solutions. The data file types associated with these applications shall be saved in the default format and be in accordance with the file naming convention as specified in Section 10.

At the Microsoft Office Application-level the "file properties" shall be configured using the "document properties" feature. This is accessed via "Info" dropdown within the "File" menu. The "properties" of the document can be modified on the right side of the dialogue box, as shown in the picture below.
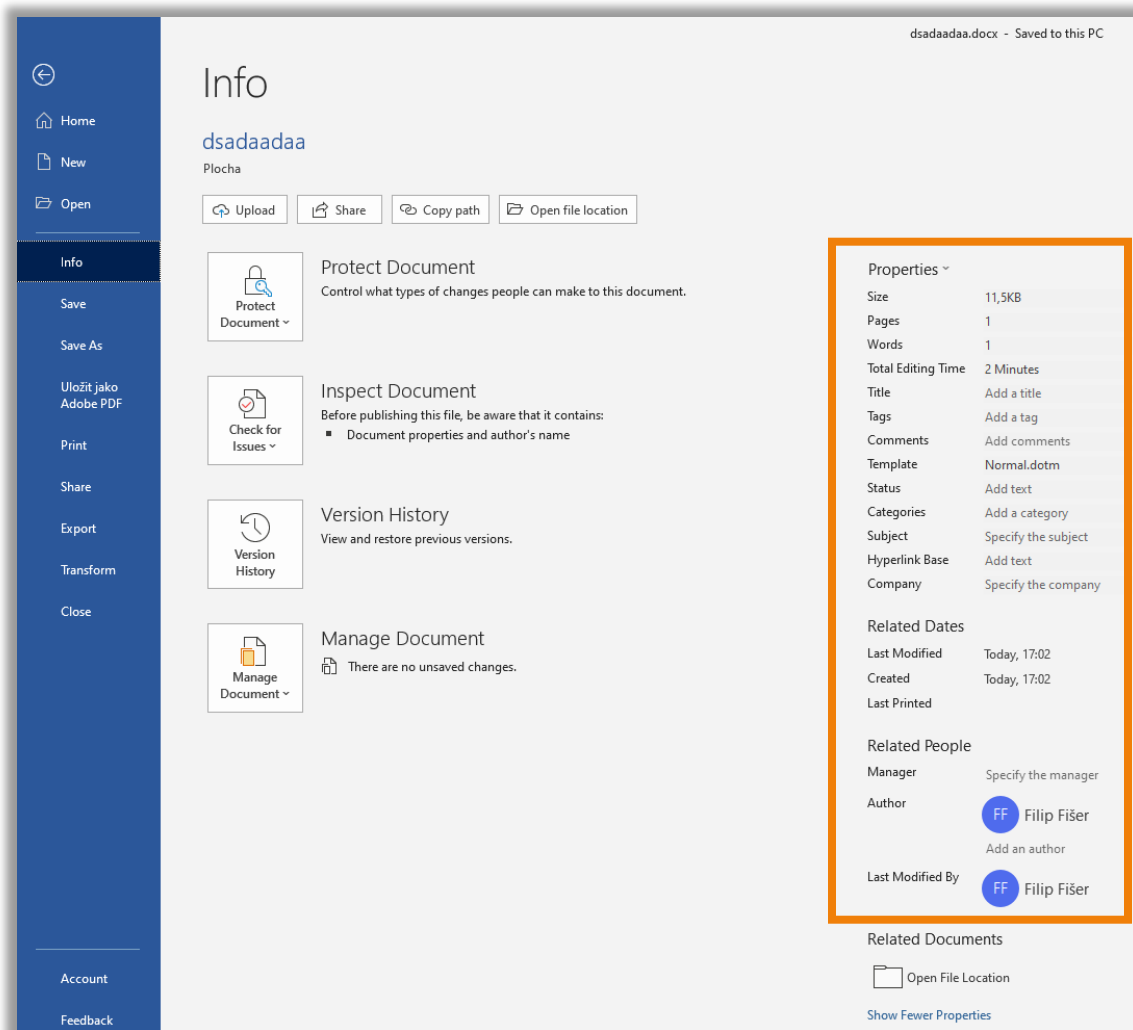
FIGURE 8: MS OFFICE "DOCUMENT PROPERTIES" FEATURE

- **Title:** Duplication of the name used for the data file name
- **Subject:** Identifier for POWERSKIN+ work package discrimination and shall be of the following format POWERSKINPLUS_WPxx.
- **Author:** Name of the person creating the document
- **Manager:** Name of the author's immediate line manager
- **Company:** Company name of the author to be stated as follows: companyname_POWERSKIN+ participant number
- **Tags:** Free format text and should contain keywords that would be relevant and useful to future data searches. The tags should all be in lower case and separated with commas
- **Comments:** Description of file contents in free format text
- **Hyperlink base:** Blank

9.9 Adobe Systems

Portable Document Format (PDF) is a file format developed by Adobe Systems for representing documents in a manner that is independent of the original application software, hardware, and operating system used to create those documents. A PDF file can describe documents containing any combination of text, graphics, and images in a device-independent and resolution-independent format. These documents can be one page or thousands of pages, very simple or extremely complex with a rich use of fonts, graphics, colour, and images. PDF is an open standard, and anyone may write applications that can read or write PDFs royalty-free. PDF files are especially useful for documents such as magazine articles, product brochures, or flyers in which you want to preserve the original graphic appearance online.

10. NAMING CONVENTION

All files irrespective of the data type are named in accordance with the following document file naming convention:

Deliverables: POWERSKINPLUS_869898_[DX.X]_ [X.X]_[PARTNER]_[YYYY-MM-DD]

Other documents: POWERSKINPLUS_869898_[TITLE]_[YYYY-MM-DD]

Where:

- [DX.X] is the POWERSKIN+ deliverable number as stated in the GA, with D as a prefix.
- [X.X] is the document version.
- [PARTNER] is the name of the project partner responsible for issuing the document
- [YYYY-MM-DD] is the date format.
- [TITLE] is the name of the document.

11. GDPR COMPLIANCE

At every stage, the POWERSKIN+ Project Management and Project Consortium will ensure that the Data Management Plan is in line with the norms of the EU and Commission [as expressed in the General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679)] and will promote best practice in Data Management. The GDPR came into force on 25 May 2018.

The responsibility of protection and use of personal data is on the Project partner collecting data. The questionnaire answers shall be anonymized in an early stage of the process, and data making it possible to connect the answers to individual persons shall be destroyed. The consent of the questionnaire participant will be asked in all questionnaires conducted within the POWERSKIN+ project. This will include a description of how and why the data is to be used. The consent must be clear and distinguishable from other matters and provided in an intelligible and easily accessible form using clear and plain language. It must be as easy to withdraw consent as it is to give it.

The questionnaire participants will not include children or other groups requiring a supervisor. Also, when asking for somebody's contact information, the asking party shall explain why this information is asked and for what purposes it will be used.

11.1 Controller and Processor

Controller means the natural or legal person, public authority, agency or other body which, alone or jointly with others, determines the purposes and means of the processing of personal data.

Processor refers to a natural or legal person, public authority, agency or other body which processes personal data on behalf of the controller.

11.2 Data Protection Officer

The Data Protection Officer (DPO) is responsible for overseeing data protection strategy and implementation to ensure compliance with GDPR requirements. Under the GDPR, there are three main scenarios where the appointment of a DPO by a controller or processor is mandatory:

- The processing is carried out by a public authority
- The core activities of the controller or processor of processing operations which require regular and systematic processing of data subjects on a large scale; or
- The core activities of the controller or processor consist of processing on a large scale of sensitive data or data relating to criminal convictions/offences.

Each POWERSKIN+ partner shall assess its own data processing activities to understand whether they fall within the scope of the requirements set out above. If they do, then it will be important to either fulfil the DPO position internally or from an external source. For those organizations to whom the requirements do

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not apply, they may still choose to appoint a DPO. If they choose not to appoint a DPO, then it is recommended to document the reasoning behind that decision.

11.3   Data protection

European citizens have a fundamental right to privacy. In order to protect this right of the individual data subject, the anonymization and pseudonymization can be used.

Anonymization refers to personal data processing with the aim of irreversibly preventing the identification of the individual to whom it relates. For the anonymized types of data, the GDPR does not apply, as long as the data subject cannot be re-identified, even by matching his/her data with other information held by third parties.

Pseudonymization refers to the personal data processing in such a manner that the data can no longer be attributed to a specific data subject without the use of additional information. To pseudonymize a data set, the additional information must be kept separately and subject to technical and organizational measures to ensure non/attribution to an identified or identifiable person. In other words, the pseudonymized data constitutes the basic privacy-preserving level allowing for some data sharing and represent data where direct identifiers (e.g. names) or quasi-identifiers (e.g. unique combinations of date and zip codes) are removed and data are mismatched with a substitution algorithm, impeding correlation of readily associated data to the individual's identity. For such data, GDPR applies and appropriate compliance must be ensured.

Due to the limited amount and less harmful nature of the personal data collected within the POWERSKIN+ project, neither pseudonymization nor anonymization will be used. Other means of data security will be used to protect data collected in the framework of the Project.

11.4   Breach Notification

Under the GDPR, breach notification will become mandatory in all member states where a data breach is likely to "result in a risk for the rights and freedoms of individuals". This must be done within 72 hours of first having become aware of the breach. Data processors will also be required to notify the data subjects and the controllers, "without undue delay" after first becoming aware of a data breach.

11.5   Right to be Forgotten

Also known as Data Erasure, the right to be forgotten entitles the data subject to have the data controller erase his/her personal data, cease further dissemination of the data, and potentially have third parties halt processing of the data. The conditions for erasure include the data no longer being relevant to original purposes for processing, or a data subjects withdrawing consent. It should also be noted that this right requires controllers to compare the subjects' rights to "the public interest in the availability of the data" when considering such requests. If a data subject wants his/her personal data to be removed from a questionnaire, the non-personal data shall remain in the analysis of the questionnaire.

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11.6   Data portability

GDPR introduces data portability, which refers to the right for a data subject to receive the personal data concerning them, which they have previously provided in a 'commonly use and machine-readable format' and have the right to transmit that data to another controller.

The personal data collected within the POWERSKIN+ project will be in electronic form, mostly in Microsoft Excel file forms .xls or .xlsx. In case the data subject requests to transmit his/her data to another controller, there should be no technical limitations for providing them.

11.7   Privacy by design and by default

Privacy by design refers to the obligation of the controller to implement appropriate technical and organizational measures, such as pseudonymization, which are designed to implement data protection principles, such as data minimization, in an effective manner and to integrate the necessary safeguards into the processing.

Privacy by default means that the controller shall implement appropriate technical and organizational measures for ensuring that only personal data which are necessary for each specific purpose of the processing are processed. That obligation applies to:

- the amount of personal data collected,
- the extent of personal data processing,
- the period of personal data storage, and
- the accessibility of personal data.

In particular, such measures shall ensure that by default personal data are not made accessible without the individual's intervention to an indefinite number of natural persons.

Personal data collected during the POWERSKIN+ project will be used only by project partners, including linked third parties, and only for purposes needed for the implementation of the project. Also, within the POWERSKIN+ project, if someone of the project consortium asks for personal data, the partner holding the data should consider whether those data are needed for the implementation of the Project. If personal data are provided, the data shall not be distributed further within or outside the Project.

11.8   Records of processing activities

Records of data processing and plans for the use of data will be kept by the WP Leaders of those work packages that collect personal data.

12. DATA SUMMARY OF THE POWERSKIN+ PROJECT

Expected research data of the POWERSKIN+ Project are listed in the table below. The table template will be circulated periodically in order to monitor the data sets and set the strategy for their sharing.

12.1 WP1: Project management

TABLE 3: DATA SUMMARY OF THE POWERSKIN+ PROJECT

WP lead	Dataset name	Dataset description	Format	Level
IPN	Grant Agreement-869898-POWERSKIN PLUS	Project Grant Agreement	PDF	CO
	Consortium Agreement-869898-POWERSKIN PLUS	Project Consortium Agreement	PDF	CO
	POWERSKINPLUS 869898_D1.1_1.0_IPN_2019-11-26	Report on baseline description and planning of the project actions and goals, partner's responsibilities and how the project will be reported, measured and communicated	PDF	CO
	POWERSKINPLUS 869898_[D1.3]_[X.X]_[IPN]_[YYYY-MM-DD]	Report on project risk log control and its intermediate assessment	PDF	CO
	POWERSKINPLUS_869898_[WPX progress report]_[YYYY-MM-DD]	Report on project work packages management and progress	PDF/ MS OFFICE	CO
	POWERSKINPLUS_869898_[MSX progress report]_[YYYY-MM-DD]	Report on project milestones management and progress	PDF/ MS OFFICE	CO
	POWERSKINPLUS_869898_[XXX meeting minutes]_[YYYY-MM-DD]	Minutes of consortium meetings	PDF/ MS OFFICE	CO
	POWERSKINPLUS_869898_[RPX report]_[YYYY-MM-DD]	Periodic and Final Reports (RP1, RP2 and RP3)	PDF	CO
	POWERSKINPLUS_869898_[Administrative track tool_ Partner XX]_[YYYY-MM-DD]	Administrative and financial track tools	MS OFFICE	CO
	POWERSKINPLUS_869898_[D1.2]_[X.X]_[IPN]_[YYYY-MM-DD]	Preliminary report on gender and ethical issues (report 1)	PDF	CO
	POWERSKINPLUS_869898_[D1.4]_[X.X]_[IPN]_[YYYY-MM-DD]	Final report on gender and ethical issues (report 2)	PDF	CO

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Data Sharing	All public documents will be shared on POWERSKIN+ project website and ZENODO, confidential reports on POWERSKIN+ server	Data Archiving and preservation	All data to be stored on a secure server run by the Project Coordinator (IPN)	Data management Responsibilities	Password secured data accessible only by authorised personnel. Project Coordinator (IPN) will be responsible for data management and in line with the data protection rules in the EU and the Portuguese Data Protection Law

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12.2 WP2: Design and parametrization of energy smart materials and components

WP lead	Dataset name	Dataset description	Format	Level
Fraunhofer	POWERSKINPLUS_869898_[Framework on energy efficient buildings]_[YYYY-MM-DD]	Database overview on current energy efficient buildings and façade systems	MS OFFICE	CO
	POWERSKINPLUS 869898_[D2.1]_[X.X]_[CVUT]_[YYYY-MM-DD]	Report on the framework overview on current energy efficient buildings and façade systems	PDF	PU
	POWERSKINPLUS_869898_[Material database]_[YYYY-MM-DD]	The dataset will contain the physical properties of each material that will be used for the simulation of the Powerskin+ opaque and transparent modules	MS OFFICE	CO
	POWERSKINPLUS 869898_[D2.2]_[X.X]_[Fraunhofer]_[YYYY-MM-DD]	Data report on materials development for the passive Powerskin+ façade elements	PDF	CO
	POWERSKINPLUS_869898_[Documentation of electrical measurements of refurbished Li-ion batteries]_[YYYY-MM-DD]	Documentation of disassembly of high current batteries. Results of electrical measurements of individual cells (relevant to IEE standard) – processed+ raw data. Characterisation of 18650 cells for small-scale demo	PDF/ MS OFFICE	PU
	POWERSKINPLUS_869898_[Customized high current cyclers and software]_[YYYY-MM-DD]	Technical documentation of high current cell cyclers for Li-ion cells. Software for high current cell cyclers	PDF/ Source code python	PU
	POWERSKINPLUS_869898_[Customized BMS and data recording system– raw data from small demo installation]_[YYYY-MM-DD]	Technical documentation, designs, algorithms, validated software codes. Selected, representative raw data will be uploaded to data repository after the completion of the field data collection from small demo	PDF/ source codes	CO
	POWERSKINPLUS_869898_[Requirements of energy-electronic unit documentation for non-residential building]_[YYYY-MM-DD]	Summary report from energy production/storage/consumption project including proposed solutions	PDF	PU
	POWERSKINPLUS 869898_[D2.3]_[X.X]_[WUT]_[YYYY-MM-DD]	Report on smart materials and components for insulation, energy harvesting and storage	PDF	CO
	POWERSKINPLUS_869898_[Fframework of simulation software]_[YYYY-MM-DD]	Tables of commercially available software for the simulation of envelope components and for the whole building simulation	MS OFFICE	CO
	POWERSKINPLUS_869898_[Dataset on POWERSKIN+ materials modelling and design]_[YYYY-MM-DD]	Dataset on Powerskin+ elements modelling, system design and performance simulation	MS OFFICE	CO
	POWERSKINPLUS 869898_[D2.4]_[X.X]_[POLITO]_[YYYY-MM-DD]	Preliminary report on Powerskin+ elements modelling, system design and performance simulation	PDF	CO

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Data Sharing	All public documents will be shared on POWERSKIN+ project website and ZENODO, confidential reports on POWERSKIN+ server	Data Archiving and preservation	All data to be stored on a secure server run by the Project Coordinator (IPN)	Data management Responsibilities	Password secured data accessible only by authorised personnel. WP leader (Fraunhofer/Christoph Mack) and Project Coordinator (IPN/Jorge Corker) will be responsible for data management

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12.3 WP3: Materials for transparent module development

WP lead	Dataset name	Dataset description	Format	Level
FSU JENA	POWERSKINPLUS 869898_[D3.1]_[X.X]_[FSU JENA]_[YYYY-MM-DD]	Report on Powerskin+ transparent module unit development	PDF	CO
	POWERSKINPLUS_869898_[D3.4]_[X.X]_[FSU JENA]_[YYYY-MM-DD]	Report on the 1st prototype of full-size Powerskin+ standard transparent module ready for add-ons combination and integration, including design models and technical data sheets	PDF	CO
	POWERSKINPLUS_869898_ POWERSKIN+ transparent module dissemination and communication materials_[X]_[YYYY-MM-DD]	Including physical full-size models and samples, static and animated graphical images, CAD drawings, presentation slides, etc.	Prototype specimens for demonstration/ JPEG/ MPEG-4/ DWG/ MS OFFICE/ PDF	PU
	POWERSKINPLUS_869898_[Solar cell integration and characterization]_[YYYY-MM-DD]	Optoelectronic characterization of solar cell parameters (Experimental characterization (J-V under AM1.5G conditions), Transmission (UV-Vis-IR), Temperature)	PDF/ TXT/ JPEG/ BMP/ TIFF	CO
	POWERSKINPLUS_869898_[Lamination of semi-transparent energy harvesting and energy storage elements]_[YYYY-MM-DD]	Transmission (UV-Vis-IR), Lamination process optimization, (Temp. vs Haze)	PDF/ TXT/ JPEG/ BMP/ TIFF	CO
	POWERSKINPLUS 869898_[D3.2]_[X.X]_[SRI]_[YYYY-MM-DD]	Report on Powerskin+ transparent module energy harvesting and storage add-ons development	PDF	CO
	POWERSKINPLUS_869898_[Data relevant to the development and characterization of functional glazing coatings]_[YYYY-MM-DD]	Refractive index, spectral properties, surface mechanical performance, self-cleaning, self-healing, photocatalytic, hydrophilicity/hydrophobicity etc. (graphs, photos, text, etc.)	MS OFFICE/ OPJ/ JPEG/ PNG	CO
	POWERSKINPLUS_869898_[Presentation of data relevant to the development and characterization of functional glazing coatings]_[YYYY-MM-DD]	Presentation of results in Consortium Meeting (text, graphs, photos in PowerPoint presentation)	MS OFFICE/ JPEG/ PNG/	CO
	POWERSKINPLUS 869898_[D3.3]_[X.X]_[POLITO]_[YYYY-MM-DD]	Report on the development of functional coatings for the Powerskin+ transparent module	PDF	CO

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Data Sharing	All public documents will be shared on POWERSKIN+ project website and ZENODO, confidential reports on POWERSKIN+ server	Data Archiving and preservation	All data to be stored on a secure server run by the Project Coordinator (IPN)	Data management Responsibilities	Password secured data accessible only by authorised personnel. WP leader (FSU JENA/Lothar Wondraczek) and Project Coordinator (IPN/Jorge Corker) will be responsible for data management

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12.4 WP4: Materials for opaque module development

WP lead	Dataset name	Dataset description	Format	Level
BUL	POWERSKINPLUS_869898_[D4.1]_[X.X]_[BUL]_[YYYY-MM-DD]	Report on Powerskin+ opaque module unit development	PDF	CO
	POWERSKINPLUS_869898_[D4.4]_[X.X]_[BUL]_[YYYY-MM-DD]	Report on the 1st prototype of full-size Powerskin+ standard opaque module ready for add-ons combination and integration, including design models and technical data sheets	PDF	CO
	POWERSKINPLUS_869898_ POWERSKIN+ opaque module test reports _[YYYY-MM-DD]	Powerskin+ standard opaque module prototype test reports	MS OFFICE	CO
	POWERSKINPLUS_869898_ POWERSKIN+ opaque module dissemination and communication materials_[X]_[YYYY-MM-DD]	Including physical full-size models and samples, static and animated graphical images, CAD drawings, presentation slides, etc.	Prototype specimens for demonstration/ JPEG/ MPEG-4/ DWG/ MS OFFICE/ PDF	PU
	Conference or scientific journal publication_[YYYY-MM-DD]	Papers reporting the formulation of VIP core, envelope and skin frame elements	MS OFFICE/ PDF	PU
	POWERSKINPLUS_869898_[D4.2]_[X.X]_[IPN]_[YYYY-MM-DD]	Report on Powerskin+ opaque module energy harvesting and storage add-ons development	PDF	CO
	POWERSKINPLUS_869898_ Powerskin+ opaque module energy harvesting and storage add-ons dissemination and communication materials_[X]_[YYYY-MM-DD]	Including physical models and samples, static and animated graphical images, CAD drawings, presentation slides, etc.	Prototype specimens for demonstration/ JPEG/ MPEG-4/ DWG/ MS OFFICE/ PDF	PU
	POWERSKINPLUS_869898_ POWERSKIN+ opaque module energy harvesting and storage add-ons technical data sheets_[YYYY-MM-DD]	Powerskin+ opaque module energy harvesting and storage add-ons technical data sheets	PDF	CO
	POWERSKINPLUS_869898_ POWERSKIN+ opaque module energy harvesting and storage add-ons test reports_[YYYY-MM-DD]	Powerskin+ opaque module energy harvesting and storage add-ons test reports	MS OFFICE	CO
	Conference or scientific journal publication_[YYYY-MM-DD]	Papers reporting the application of PCMs in the Powerskin+ opaque module	MS OFFICE/ PDF	PU

POWERSKINPLUS_869898_[D4.3]_[X.X]_[AMSOLUTIONS]_[YYYY-MM-DD]	Report on the development of functional coatings for the Powerskin+ opaque module	PDF	CO
POWERSKINPLUS_869898_ Dissemination and communication materials of multifunctional opaque protective coatings for Powerskin+ opaque modules _[X]_ [YYYY-MM-DD]	Including physical models and samples, static and animated graphical images, CAD drawings, presentation slides, etc.	Prototype specimens for demonstration/ JPEG/ MPEG-4/ DWG/ MS OFFICE/ PDF	PU
POWERSKINPLUS_869898_ Technical data sheets of multifunctional opaque protective coatings for Powerskin+ opaque modules _[YYYY-MM-DD]	Powerskin+ multifunctional protective opaque coatings technical data sheets	PDF	CO
POWERSKINPLUS_869898_ Test reports and relevant data on the development of multifunctional opaque protective coatings for Powerskin+ opaque modules _[YYYY-MM-DD]	Powerskin+ multifunctional protective opaque coatings test reports. Refractive index, spectral properties, surface mechanical performance, self-cleaning, self-healing, photocatalytic, hydrophilicity/hydrophobicity etc. (graphs, photos, text, etc.)	MS OFFICE/ OPJ/ JPEG/ PNG	CO
Conference or scientific journal publication_[YYYY-MM-DD]	Papers reporting the functional coatings of the opaque module	MS OFFICE/ PDF	PU
Data Sharing	All public documents will be shared on POWERSKIN+ project website and ZENODO, confidential reports on POWERSKIN+ server	**Data Archiving and preservation**	All data to be stored on a secure server run by the Project Coordinator (IPN)	**Data management Responsibilities**	Password secured data accessible only by authorised personnel. WP leader (BUL/Mizi Fan) and Project Coordinator (IPN/Jorge Corker) will be responsible for data management

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12.5 WP5: System production & integration

WP lead	Dataset name	Dataset description	Format	Level
FGS	POWERSKINPLUS_869898_[D5.1]_[X.X]_[Fraunhofer]_[YYYY-MM-DD]	Report on the framing structure development for the Powerskin+ modular integration	PDF	CO
	POWERSKINPLUS_869898_[D5.2]_[X.X]_[FGS]_[YYYY-MM-DD]	Report on the demonstrators of full scale and functional Powerskin+ upgrade kits	PDF	PU
	POWERSKINPLUS_869898_ POWERSKIN+ prototype module - dissemination and communication materials_[X]_[YYYY-MM-DD]	Including physical full-size models and samples, static and animated graphical images, CAD drawings, presentation slides, etc.	Prototype specimens for demonstration/ JPEG/ MPEG-4/ DWG/ MS OFFICE/ PDF	PU
	POWERSKINPLUS_869898_[D5.3]_[X.X]_[SAULE]_[YYYY-MM-DD]	Report on Powerskin+ energy harvesting and storing system customization developed solutions	PDF/ TXT/ JPEG/ BMP/ TIFF	CO
Data Sharing	All public documents will be shared on POWERSKIN+ project website and ZENODO, confidential reports on POWERSKIN+ server	**Data Archiving and preservation** — All data to be stored on a secure server run by the Project Coordinator (IPN)	**Data management Responsibilities** — Password secured data accessible only by authorised personnel. WP leader (FGS/ Stephan Witte) and Project Coordinator (IPN/Jorge Corker) will be responsible for data management		

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12.6 WP6: Simulation, Characterization and Validation

WP lead	Dataset name	Dataset description	Format	Level
POLITO	POWERSKINPLUS_869898_Models, algorithms, scripts _[X]_[YYYY-MM-DD]	Includes the model files used for simulation purposes in their relevant format for reproduction purposes	DSB/ ABQ	CO
	POWERSKINPLUS_869898_Methodologies and workflows_[X]_[YYYY-MM-DD]	Includes the information on the methodologies adopted which is also reported in the relevant deliverables	MS OFFICE/ PDF	CO
	POWERSKINPLUS_869898_Dataset of results_[X]_[YYYY-MM-DD]	Includes all the necessary information applied to the simulations as inputs	MS OFFICE	CO
	POWERSKINPLUS_869898_Contents of an application_[X]_[YYYY-MM-DD]	Application specific data (input, output, logfiles for analysis software, simulation software, schemas)	MS OFFICE	CO
	POWERSKINPLUS_869898_[D6.1]_[X.X]_[OBU]_[YYYY-MM-DD]	Report on Powerskin+ system integration, simulation and optimization of its operational features and control strategies	PDF	CO
	POWERSKINPLUS_869898_ Material and sub-components photographs and films_[X]_[YYYY-MM-DD]	Images and/or videos aimed at describing and document the measurement activities performed for the characterization of the materials the sub-components of the opaque and transparent Powerskin+ modules	JPEG/ PNG/ TIFF/ MP4/ AVI	CO
	POWERSKINPLUS_869898_Test specimens and samples_[X]_[YYYY-MM-DD]	Images of the samples tested in laboratory condition. Datasheet of characteristics of the façade samples produced	JPEG / PNG/ TIFF/ MP4/ AVI	CO
	POWERSKINPLUS_869898_ Material and sub-components test responses_[X]_[YYYY-MM-DD]	Documents containing the samples laboratory measured results	PDF/ TXT/ MS OFFICE	CO
	POWERSKINPLUS_869898_Standard operating procedures and protocols_[X]_[YYYY-MM-DD]	Documents that report the standard references adopted for the measurements and/or other methodologies/protocols developed to perform the sample's measurement	PDF/ MS OFFICE	CO
	POWERSKINPLUS_869898_[6.2]_[X.X]_[POLITO]_[YYYY-MM-DD]	Report on Powerskin+ material and sub-components (modules and add-ons) lab-scale characterisation	PDF	CO
	POWERSKINPLUS_869898_ Material and sub-components validation photographs and films_[X]_[YYYY-MM-DD]	Images and/or videos aimed at describing and document the experimental activities performed for the installation/characterization/demonstration of the full-scale prototypes	JPEG/ PNG/ TIFF/ MP4/ AVI	CO
	POWERSKINPLUS_869898_Test specimens and full-scale prototypes _[X]_[YYYY-MM-DD]	Images of the full-scale prototypes; Datasheet of characteristics of the monitored full-scale façade	JPEG/ PNG/	CO

				TIFF/ MS OFFICE	
	POWERSKINPLUS_869898_Validation test responses_[X]_[YYYY-MM-DD]	Documents containing the full-scale façade monitoring results		PDF/ MS OFFICE	CO
	POWERSKINPLUS_869898_Monitoring protocols_[X]_[YYYY-MM-DD]	A document that reports the reference standard adopted for the measurements and/or other methodologies/protocols developed to perform the monitoring activities		PDF/ MS OFFICE	CO
	POWERSKINPLUS_869898_[6.3]_[X.X]_[POLITO]_[YYYY-MM-DD]	Report on Powerskin+ modular system testing and qualification in outdoor laboratory testing facilities		PDF	CO
	POWERSKINPLUS_869898_BIM components catalogue _[X]_[YYYY-MM-DD]	Set containing necessary information about the life cycle phases: conceptual design, design, production, installation, operation/maintenance, dismantling and after-life management		DWG/ RFA/ DGN	CO
	POWERSKINPLUS_869898_POWERSKIN+ BIM components and modelling webpage_[X]_[YYYY-MM-DD]	A web page with front-end applications for the support of future investors, planner and designers to demonstrate the performances		HTML	PU
	POWERSKINPLUS_869898_[6.3]_[X.X]_[CVUT]_[YYYY-MM-DD]	Report on the development of BIM modelling tools and the establishment of guidelines for testing and analysing the performance of the full Powerskin+ façade system		PDF	CO
Data Sharing	All public documents will be shared on POWERSKIN+ project website and ZENODO, confidential reports on POWERSKIN+ server	**Data Archiving and preservation**	All data to be stored on a secure server run by the Project Coordinator (IPN)	**Data management Responsibilities**	Password secured data accessible only by authorised personnel. WP leader (POLITO/Marco Perino) and Project Coordinator (IPN/Jorge Corker) will be responsible for data management

12.7   WP7: Environmental and economic analysis

WP lead	Dataset name	Dataset description	Format	Level
OBU	POWERSKINPLUS_869898_Existing technologies dataset_[X]_[YYYY-MM-DD]	Spreadsheet: containing all the relevant existing technologies for benchmarking purposes. Environmental Product Declaration (EPD) of the existing technologies	PDF/ MS OFFICE	PU
	POWERSKINPLUS_869898_LCA_PS+ proposed components _[X]_[YYYY-MM-DD]	Spreadsheet: containing all the relevant technologies to the PS+ solutions. Spreadsheet: Containing all the Gabi files and LCA models of the PS+ solutions, which might also include models of the existing technologies where necessary	PDF/ MS OFFICE	CO
	POWERSKINPLUS_869898_[7.1]_[X.X]_[OBU]_[YYYY-MM-DD]	Report on the initial life cycle and cost assessment of Powerskin+ façade system	PDF	CO
	POWERSKINPLUS_869898_[7.2]_[X.X]_[OBU]_[YYYY-MM-DD]	Comprehensive report on the full life cycle assessment of Powerskin+ façade system	PDF	CO
	POWERSKINPLUS_869898_Existing technologies dataset _[X]_[YYYY-MM-DD]	Spreadsheet and reports: containing the cost data for all the relevant existing technologies and construction methods for benchmarking purposes	PDF/ MS OFFICE	PU
	POWERSKINPLUS_869898_LCC_PS+ proposed components _[X]_[YYYY-MM-DD]	Spreadsheet: containing all the cost data of the relevant technologies to the Powerskin+ solutions. This will include the cost investigation associated with an applied technology including the use phases	PDF/ MS OFFICE	CO
	POWERSKINPLUS_869898_[7.3]_[X.X]_[OBU]_[YYYY-MM-DD]	Comprehensive report on the full life-cycle cost analysis of Powerskin+ façade system	PDF	CO
	POWERSKINPLUS_869898_Social indicator sets_[X]_[YYYY-MM-DD]	Spreadsheet: this includes the relevant indicators and appropriate subcategories identified in the project as part of the SLCA	MS OFFICE	PU
	POWERSKINPLUS_869898_[7.4]_[X.X]_[OBU]_[YYYY-MM-DD]	Comprehensive report on the social performance assessment of Powerskin+ façade system, including its appraisal within a circular economy context	PDF	PU
	POWERSKINPLUS_869898_Assessment of dismantled components_[X]_[YYYY-MM-DD]	An overview of the component qualities after dismantling	MS OFFICE	CO
	POWERSKINPLUS_869898_BIM model information_[X]_[YYYY-MM-DD]	A set of information to be integrated into the BIM components database regarding the disassembly	MS OFFICE	CO
	POWERSKINPLUS_869898_[7.5]_[X.X]_[CVUT]_[YYYY-MM-DD]	A review of the disassembly process including recommended procedures to maximize the reuse of the components	PDF	CO

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Data Sharing	All public documents will be shared on POWERSKIN+ project website and ZENODO, confidential reports on POWERSKIN+ server	Data Archiving and preservation	All data to be stored on a secure server run by the Project Coordinator (IPN)	Data management Responsibilities	Password secured data accessible only by authorised personnel. WP leader (OBU/Shahaboddin Resalati) and Project Coordinator (IPN/Jorge Corker) will be responsible for data management

12.8   WP8: Pilot demonstrations

WP lead	Dataset name	Dataset description	Format	Level
CVUT	POWERSKINPLUS_869898_Initial pilot sites photographs_[X]_[YYYY-MM-DD]	Photographs of the pilot sites and buildings and their current systems	JPEG/ PNG/ TIFF/ MS OFFICE	CO
	POWERSKINPLUS_869898_Initial pilot sites questionnaires_[X]_[YYYY-MM-DD]	Documents informing the consortium on specific aspects of the pilot sites	MS OFFICE	CO
	POWERSKINPLUS_869898_Initial pilot sites technical drawings_[X]_[YYYY-MM-DD]	Drawings of the pilot site buildings and building systems	DWG/ DXF/ PDF/ JPEG	CO
	POWERSKINPLUS_869898_[8.1]_[X.X]_[CVUT]_[YYYY-MM-DD]	Report summarizing the current state of the pilot sites	PDF	PU
	POWERSKINPLUS_869898_Pilot sites baseline monitoring design of experiment_[X]_[YYYY-MM-DD]	A scheme of sensors used including specification, frequency of data logging and storing	PDF	CO
	POWERSKINPLUS_869898_Pilot sites baseline monitoring Measured data_[X]_[YYYY-MM-DD]	Data logged during the measuring period	MS OFFICE	CO
	POWERSKINPLUS_869898_Pilot sites baseline monitoring Photographs and videos_[X]_[YYYY-MM-DD]	Photographs and videos of the installation	JPEG/ PNG/ TIFF/ MPG4	CO
	POWERSKINPLUS_869898_[8.2]_[X.X]_[CVUT]_[YYYY-MM-DD]	Report summarizing the baseline monitoring period	PDF	PU
	POWERSKINPLUS_869898_Pilot sites installation Technical drawings_[X]_[YYYY-MM-DD]	Drawings used for production and installation of demos	DWG/ DXF/ PDF/	CO
	POWERSKINPLUS_869898_Pilot sites installation Bills of materials_[X]_[YYYY-MM-DD]	Lists of materials used with their amounts	MS OFFICE	CO
	POWERSKINPLUS_869898_Pilot sites installation Costs and assessment_[X]_[YYYY-MM-DD]	The estimation of commercial prices for installation. Report on time spent on installation	MS OFFICE	CO
	POWERSKINPLUS_869898_Pilot sites installation Photographs and videos_[X]_[YYYY-MM-DD]	Photographs and videos of the installation	JPEG/ PNG/ TIFF/ MPG4	CO
	POWERSKINPLUS_869898_[8.3]_[X.X]_[FGS]_[YYYY-MM-DD]	Report on the installation time, commercial costs estimation and materials used for LCA and LCC analysis	PDF	CO

POWERSKINPLUS_869898_pilots monitoring and validation design of experiment_[X]_[YYYY-MM-DD]	A scheme of sensors used including specification, frequency of data logging and storing	PDF	CO
POWERSKINPLUS_869898_pilots monitoring and validation Measured data_[X]_[YYYY-MM-DD]	Data logged during the measuring period	MS OFFICE	CO
POWERSKINPLUS_869898_pilots monitoring and validation Photographs and videos_[X]_[YYYY-MM-DD]	Photographs and videos of the installation	JPEG/ PNG/ TIFF/ MPG4	CO
POWERSKINPLUS_869898_[8.4]_[X.X]_[CVUT]_[YYYY-MM-DD]	Report on Powerskin+ modular system testing and performance qualification at the different demonstration pilot sites	PDF	PU
POWERSKINPLUS_869898_pilots plan of disassembly_[X]_[YYYY-MM-DD]	Plan for disassembly in order to avoid damage to elements	PDF/ DWG	CO
POWERSKINPLUS_869898_pilots disassembly measured data_[X]_[YYYY-MM-DD]	Subreport on the state of components after disassembly	PDF	CO
POWERSKINPLUS_869898_pilots disassembly Photographs and videos_[X]_[YYYY-MM-DD]	Photographs and videos of the disassembly	JPEG/ PNG/ TIFF/ MPG4	CO
POWERSKINPLUS_869898_[8.5]_[X.X]_[CVUT]_[YYYY-MM-DD]	Report summarizing the disassembly process including the information about the technology used, energy and time consumption	PDF	CO
Data Sharing	All public documents will be shared on POWERSKIN+ project website and ZENODO, confidential reports on POWERSKIN+ server	**Data Archiving and preservation**	All data to be stored on a secure server run by the Project Coordinator (IPN)	**Data management Responsibilities**	Password secured data accessible only by authorised personnel. WP leader (CVUT/Zdenko Malik) and Project Coordinator (IPN/Jorge Corker) will be responsible for data management

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12.9 WP9: Dissemination, communication and exploitation

WP lead	Dataset name	Dataset description	Format	Level
FENIX TNT SRO	POWERSKINPLUS_869898_Project website_[X]_[YYYY-MM-DD]	Project website design, main communication channel between the project and wide public, link to social network profiles, twitter feed online, e-newsletter subscription, project introduction, public documents, news&events, cluster projects, partners, contacts	HTML	PU
	POWERSKINPLUS 869898_D9.1_[1.0]_[FENIX]_[2019-12-20]	Report on the project website	PDF	PU
	POWERSKINPLUS_869898_Promo materials_[X]_[YYYY-MM-DD]	Promo materials including images, brochures, rollups, posters, project presentation designs, promo videos, images and logos from project partners, photos/videos from dissemination events, project promo videos consisting of animated graphical images, filming, voice-over and music, promo materials shared online, etc. *The owner gives permission to FENIX to use images for dissemination purposes of Powerskin+*	EPS/ JPEG/ PNG/ MPEG/ AVI/ MPEG-4/ PDF	PU
	POWERSKINPLUS 869898_D9.2_[1.0]_[FENIX]_[2019-02-27]	Report on Promo materialspurposes of Powerskin+	PDF	PU
	POWERSKINPLUS 869898_D9.3_[1.0]_[FENIX]_[2019-03-27]	Report identifying target audiences, key messages, communication channels, roles and timelines	PDF	PU
	POWERSKINPLUS_869898_Training Materials_[X]_[YYYY-MM-DD]	Datasheets, videos for training purposes (webinars, workshops, social profiles)	PDF/ MPEG-4	PU
	POWERSKINPLUS_869898_[D9.7]_[X.X]_[FENIX]_[YYYY-MM-DD]	Report on training materials	PDF/ MPEG-4	PU
	POWERSKINPLUS_869898_[D9.8]_[X.X]_[FENIX]_[YYYY-MM-DD]	Report - Final evaluation of the Communication and Dissemination plan workshops and awareness campaign	PDF	PU
	POWERSKINPLUS_869898_[D9.4]_[X.X]_[FENIX]_[YYYY-MM-DD]	Report analysing the main data uses and restrictions related to IPR according to the Consortium Agreement	PDF	PU
	POWERSKINPLUS_869898_[D9.9]_[X.X]_[FENIX]_[YYYY-MM-DD]	Report - Final version of the Data Management Plan (including open access publications)	PDF	PU
	POWERSKINPLUS_869898_[D9.5]_[X.X]_[FENIX]_[YYYY-MM-DD]	Report on potential social impact of the project and user's engagement	PDF	PU
	POWERSKINPLUS_869898_[D9.6]_[X.X]_[IPN]_[YYYY-MM-DD]	First version of Exploitation plan and IPR manual after the exploitation workshop organization	PDF	CO
	POWERSKINPLUS_869898_[D9.10]_[X.X]_[FENIX]_[YYYY-MM-DD]	Final version of Exploitation Plan and IPR strategy	PDF	CO
	POWERSKINPLUS_869898_[D9.11]_[X.X]_[FENIX]_[YYYY-MM-DD]	Business models based on demo results to build various business cases demonstrating the viability of the solutions	PDF	CO

Data Sharing	All public documents will be shared on POWERSKIN+ project website and ZENODO, confidential reports on POWERSKIN+ server	Data Archiving and preservation	All data to be stored on a secure server run by the Project Coordinator (IPN)	Data management Responsibilities	Password secured data accessible only by authorised personnel. WP leader (FENIX/Petra Colantonio) and Project Coordinator (IPN/Jorge Corker) will be responsible for data management

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12.10 WP10: Ethics requirements

WP lead	Dataset name	Dataset description	Format	Level
IPN	POWERSKINPLUS 869898_D10.1_1.0_IPN_2019-12-20	Report describing the procedures that shall be employed to ensure that the involvement of humans fully meets and respects the current ethics requirements for any H2020 research work program	PDF	CO
	POWERSKINPLUS_869898_ POWERSKIN+ demo installation information sheet _[YYYY-MM-DD]	Information sheet to be given to any participant involved in the Powerskin+ piloting activities	Printed paper/ PDF	PU
	POWERSKINPLUS_869898_ POWERSKIN+ demo installation informed consent form _[YYYY-MM-DD]	Informed consent form to be given to any participant involved in the Powerskin+ piloting activities	Printed paper/ PDF	PU
	POWERSKINPLUS_869898_ POWERSKIN+ demo installation informed consent dataset X _[YYYY-MM-DD]	Informed consent dataset complying with personal data GDPR national and EU legislation	Printed paper/ MS OFFICE spreadsheet database	CO
	POWERSKINPLUS 869898_D10.2_1.0_IPN_2019-12-28	Report describing the procedures to implement for Powerskin+ data collection, storage, protection, retention and destruction, in full complying with national and EU legislation	PDF	CO
	POWERSKINPLUS 869898_D10.3_1.0_IPN_2019_12_27	Report demonstrating that appropriate health and safety procedures and mitigation actions conforming to relevant local/national guidelines/legislation are followed for staff involved in the project	PDF	CO
	POWERSKINPLUS_869898_ POWERSKIN+ Health&Safety and Environmental survey_2019_11_19	Identification of Powerskin+ exposure-prone activities to nanomaterials made by consortium partners	MS OFFICE	CO
	POWERSKINPLUS_869898_ POWERSKIN+ Health&Safety and Environmental survey data_2019_12_13	Data on Powerskin+ exposure to nanomaterials scenarios	MS OFFICE/ PDF	CO
	POWERSKINPLUS_869898_ POWERSKIN+ guidelines on workplace nanomaterials safety_2019_12_27	Guidelines on nanomaterials handling, nanowastes storage and disposal and on emergency procedures while working with nanomaterials	PDF	CO
Data Sharing	All public documents will be shared on POWERSKIN+ project website and ZENODO, confidential reports on POWERSKIN+ server	**Data Archiving and preservation** — All data to be stored on a secure server run by the Project Coordinator (IPN)	**Data management Responsibilities** — Password secured data accessible only by authorised personnel. Project Coordinator (IPN/Jorge Corker) will be responsible for data management	

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13. PUBLICATIONS

The POWERSKIN+ Consortium is willing to submit papers for scientific/industrial publication during the course of the POWERSKIN+ Project. In the framework of the Dissemination and Communication Plan agreed by the GA, R&D partners are responsible for the preparation of the scientific publications, while the RTD Board is responsible for review and final approval.

As a general approach, the R&D partners are responsible for the scientific publications as well as for the selection of the publisher considered as more relevant for the subject of matter. Each publisher has its own policies on self-archiving:

Green open access: researchers can deposit the final version of their published article (peer-reviewed manuscript) into a subject-based repository or an institutional repository before, after or alongside its publication. Access to this article is often delayed (embargo period). Publishers recoup their investment by selling subscriptions and charging pay-per-download/view fees.

Gold open access: author pays publishing, a publication is immediately provided in open access mode by the scientific publisher. Associate costs are shifted from readers to the university or research institute to which the researcher is affiliated, or to the funding agency supporting the research. (e.g. http://www.springer.com/gp/, https://www.elsevier.com/, https://www.oasis-open.org/, http://www.sherpa.ac.uk/romeo/index.php)

After the paper is published and license for open access in obtained, R&D partner will contact Dissemination and Exploitation Leader (FENIX), who is responsible for POWERSKIN+ data management, and FENIX will upload the publication into POWERSKIN+ project website and deposit the publication in the OpenAIRE or Zenodo repository indicating the project it belongs to in the metadata.

For adequate identification of accessible data, all the following metadata information will be included:

- Information about the grant number, name and acronym of the action: **European Union (UE), Horizon 2020 (H2020), Research Innovation Action (RIA), POWERSKIN+ acronym, GA N° 869898.**
- Information about the publication date and embargo period if applicable: **Publication date, Length of the embargo period**.
- Information about the persistent identifier (for example a **Digital Object Identifier**, DOI), if any, provided by the publisher (for example an **ISSN number**).

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POWERSKIN+
walls energizing buildings

14. POWERSKIN+ DATA MANAGEMENT PLAN PROGRESS

The following table lists datasets shared publicly till month 6.

TABLE 4: POWERSKIN+ DATASETS SHARED PUBLICLY TILL MONTH 6

	Dataset name	Lead partner	Format	Type	Data sharing	Open access	DOI	Links
WP 9	POWERSKINPLUS 869898_D9.1_[1.0]_[FENIX]_[2019-12-20]	FENIX	PDF	Deliverable	POWERSKIN+ website public	yes	n/a	https://www.powerskinplus.eu/documents/deliverables
	POWERSKIN+.html	FENIX	HTML	Website	POWERSKIN+ website public	yes	n/a	https://www.powerskinplus.eu/home
	POWERSKINPLUS 869898_D9.2_[1.0]_[FENIX]_[2019-02-27]	FENIX	PDF	Deliverable	POWERSKIN+ website public	yes	n/a	https://www.powerskinplus.eu/documents/deliverables
	POWERSKINPLUS 869898_D9.3_[1.0]_[FENIX]_[2019-03-27]	FENIX	PDF	Deliverable	POWERSKIN+ website public	yes	n/a	https://www.powerskinplus.eu/documents/deliverables
	POWERSKINPLUS_869898_Presentation_[1.0]_[2019-20-12] POWERSKINPLUS_869898_Presentation_[1.1]_[2020-01-23]	FENIX	PDF	Promo material	POWERSKIN+ website public/ Zenodo	yes	DOI10.5281/zenodo.3737665	https://zenodo.org/record/3737665#.XoWkQ4gzaUI https://www.powerskinplus.eu/documents/promo-materials/presentations
	POWERSKINPLUS_869898_Introduction video_[1.0]_[2019-12-09]	FENIX	MP4	Promo material	POWERSKIN+ website public/ Zenodo / YouTube	yes	10.5281/zenodo.3737677	https://zenodo.org/record/3737677#.XoWkP4gzaUI
	POWERSKINPLUS_869898_Brand Manual_[1.0]_[2019-11-14] POWERSKINPLUS_869898_PowerSkin_squared_[1.0]_[2019-09-30] POWERSKINPLUS_869898_PowerSkin_[1.0]_[2019-09-30]	FENIX	PDF JPEG PNG EPS	Logo and brand manual	POWERSKIN+ website public	yes	n/a	https://www.powerskinplus.eu/documents/promo-materials/logos

	Dataset name	Lead partner	Format	Type	Data sharing	Open access	DOI	Links
Publication	POWERSKINPLUS_869898_PowerSkin_CMYK_[1.0]_[2019-09-30]							
	POWERSKINPLUS_869898_Leaflet_mini_[1.0]_[2019-10-14] POWERSKINPLUS_869898_Leaflet_[1.1]_[2020-01-21]	FENIX	PDF	Promo material	POWERSKIN+ website public	yes	n/a	https://www.powerskinplus.eu/documents/promo-materials/leaflets
	POWERSKINPLUS_869898_Roll up poster_[1.0]_[2019-10-14] POWERSKINPLUS_869898_Roll up poster_[1.1]_[2020-01-23]	FENIX	PDF	Promo material	POWERSKIN+ website public	yes	n/a	https://www.powerskinplus.eu/documents/promo-materials/posters
	POWERSKINPLUS_869898_Brochure_[1.0]_[2019-10-14]	FENIX	PDF	Promo material	POWERSKIN+ website public	yes	n/a	https://www.powerskinplus.eu/documents/promo-materials/brochures
	Dataset name	**Lead partner**	**Format**	**Type**	**Data sharing**	**Open access**	**DOI**	**Links**
	Advanced Integrated Facades: Concept Evolution and New Challenges	POLITO	PDF	Conference Paper	POWERSKIN+ website public/ Zenodo	yes	10.5281/zenodo.3768638	https://zenodo.org/record/3768638#.XqbYZWgzaUk

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15. CONCLUSION

This report contains the first release of the Data Management Plan for POWERSKIN+ project and it provides preliminary guidelines for the management of the project results during the project and beyond. The Data Management related to the data generation, storage and sharing have been addressed.

At month 6, more detailed information about the dataset description, sharing, archiving, preservation and responsibilities were updated by each WP leader and outcomes can be seen in Section 12. POWERSKIN+ data which were already shared publicly including data with open access are listed in table 5 (POWERSKIN+ Datasets shared publicly till month 6) with links where they can be accessed and downloaded.

The report will be subject to revisions as required to meet the needs of the POWERSKIN+ project and will be formally reviewed at month 18, 36 and at the end of the project to ensure ongoing fitness to the purpose.

16. REFERENCES

[1]   Guidelines on Data Management in Horizon 2020:
        https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf

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