Quality Management Plan
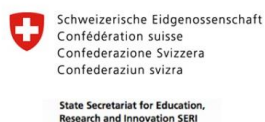## WP1 Project management and monitoring

DELIVERABLE 1.1

GRANT AGREEMENT 736351

STATUS: FINAL

PUBLIC

Emmanuel Stamatakis & George Sidiras

DIADIKASIA BUSINESS CONSULTING S.A.

Author printed in bold is the contact person/corresponding author

DOCUMENT CHANGE CONTROL

Version Number	Date	Author(s)	Brief Description of changes
1.1	10/07/2017	Emmanuel Stamatakis, DBC	

Table 1. Document Change Control

EXECUTIVE SUMMARY

This document describes the general operational structure of the project and the procedures to ensure quality control both internally among partners and externally towards the European Commission and the general public.

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1. OBJECTIVES

The objective of Deliverable 1.1 is to develop an effective and comprehensive administrative, financial and legal management to ensure the successful execution of the project.

The Quality Management will guarantee, among others, that all work packages are performing to budget, the adequacy of the technical progress, the constantly risk analysis and evaluation and review the state of the deliverables.

This plan includes also a Data Management Plan (DMP) in order to collect, organize, back-up and store the data which will be generated, following the guidelines for data management in Horizon 2020. This DMP remarks the great significance of the knowledge management and special procedures to make a proper use of the data.

The project data are being collected according to one or more specific template(s) (depending on the technology, TRL, etc.) to be made available by the FCH2 JU in a dedicated platform/tool accessible on-line and password-protected.

2. INTRODUCTION

This document epitomises the basic principles for the execution of the project and is accompanied by the following documents which are considered its integral parts.

1. Description of Work (DoW)

2. Consortium Agreement (CA)

3. Grant Agreement (GA)

2.1. Management structure

The management structure is designed to handle:

- Decision-making - Handling contractual issues (changes) in the contract and/or consortium agreement, project specification, budget and funds distribution policy, quality assurance policy, consortium structure (incl. new partners if necessary), publications and confidentiality issues.

- Technical and administrative management - Running the operation of the project, ensuring optimum communication and implementation of decisions taken by the decision-making bodies. Implementation will encompass follow-up of work done, provision of logistics for all coordination tasks, support of reporting, financial and administrative management.

- Advice and assessment - Advising the consortium on the way the project should evolve, according to results obtained and developments in the state-of-the-art.

To enable efficient communication with the Commission and effective decision-making processes, the consortium includes the following distinct functional entities, whose activities are described in detail in the DoW and CA:

♦ **Project coordinator**

Mr. ***Konstantinos Tsiakataras from DBC*** as the ***project coordinator*** will aim for early identification of any delays to any of the project's deliverables, milestones or reports. Additionally, the project coordinator will oversee the following activities:

i) legal, contractual, financial and administrative management of the consortium

ii) making sure the grant agreement is updated and managed when required

iii) organizing Project Steering Committee, Project Management and Exploitation meetings

iv) collection of all deliverables and milestones reports submitted to the EC and partners

v) collection of all costs statements and audit certificates and coordination of payments

vi) facilitating EC audits and overall liaison with the EC via the project's nominated scientific officer.

♦ **Technical Management**

The Technical Management of the project will be also supported by the Coordinating beneficiary (DBC). As this role requires experience on the technical tasks of the project and dealing with potential problems when arise, the consortium decided to appoint *Dr. Emmanuel Stamatakis from DBC as the Technical Manager* being the most experienced in this position. He will monitor the technical delivery of all work packages and monitor the day to day management of technical project activities and coordinate activities between WP Leaders. A risk log will be maintained and will be followed by milestone progress reports. In line with the EC definition, the consortium recognizes that management activities are above the technical management of individual WPs.

♦ **Project Steering Committee (PSC)**

- o All partners represented
- o Meets every six months
- o Supervisory body for day-to-day execution tasks
- o Monitoring progress of WPs
- o Coordinating preparation of all major deliverables
- o Solving disputes among consortium partners
- o Resolving technical, administrative or contractual issues

The project steering committee has been already formed and includes one representative from each organization participating in the consortium (see table below). Every member of the steering committee will have one vote and decisions will be made by majority voting. The representatives of the organizations in the steering committee will have the power to make decisions on behalf of their organizations.

Table 2. Project Steering Committee

Participant	Member of the steering committee
DBC	Mr. Konstantinos Tsiakataras
IHT	Mr. Franco Nodari / Mr. Nicola Zandoná (deputy)
FHA	Ms. Maite Imirizaldu / Mr. Jesús Simón (deputy)
MPEIS	Mr. Ewald Perwög
FEN	Mr. Ernst Fleischhacker
INYCOM	Mr. Marcos Rubio / Mr. Guillermo Matute (deputy)

♦ **Work Package Leaders (WPL)**

In the following table, it is presented the WP leader of each work package. The WP leaders were chosen due to their high experience and expertise in regards to the related WP. The WPL will be responsible for the appointment and frequency of WP team meetings. At least one WP team meeting will be appointed every three months either via physical attendance or teleconference. WPL will be responsible to integrate the results of the individual tasks and report them to the Technical Manager and Project Coordinator, who will circulate these reports to the PSC and incorporate them in periodic reports. Each WPL will be also responsible to disseminate the results of their activities to other WPLs. Particularly, the obligations of WPL are:

- o Day-to-day management of the corresponding WP
- o Quality management and quality control of the WP
- o Coordinate communication between partners within the same WP
- o Provide minutes taken during WP team meetings
- o Coordinate WP specific technical activities
- o Dictate workflow scheduling and work plan change control procedure
- o Review and manage the impact of economical and societal issues.

Table 3. Work Package Leaders

Work Package	Work Package Leader name
WP1	Mr. Emmanuel Stamatakis (DBC)

Work Package	Work Package Leader name
WP2	Mr. Pablo Marcuello (IHT)
WP3	Mr. Ewald Perwög (MPREIS)
WP4	Mr. Pablo Marcuello (IHT)
WP5	Mr. Ewald Perwög (MPREIS)
WP6	Mr. Georgios Sidiras (DBC)
WP7	Ms. Maite Imirizaldu Martínez (FHA)
WP8	Mr. Konstantinos Tsiakataras (DBC)

♦ **Dissemination and Communication Manager (DCM)**

The consortium has decided to appoint as *dissemination and Communication manager Ms Maite Imirizaldu Martínez from FHA*. She will be responsible to report to the Project Coordinator and the PSC and provide dissemination, exploitation and communication plans. Additionally, she will have to approve the dissemination material which will be developed during the project such as posters, conference presentations, flyers etc. and identify funding opportunities for the commercialization of the project results. The dissemination and exploitation manager will undertake the following activities:

- o Dissemination of the knowledge beyond the consortium

- o Management of knowledge acquired

- o Studies on socio economic aspects

- o Activities promoting the exploitation of the results

- o Transfer of best practices for the early use and exploitation of technologies

- o Absorption of the results by the participants

- o Dissemination and communication of results

- o Quality of provided services
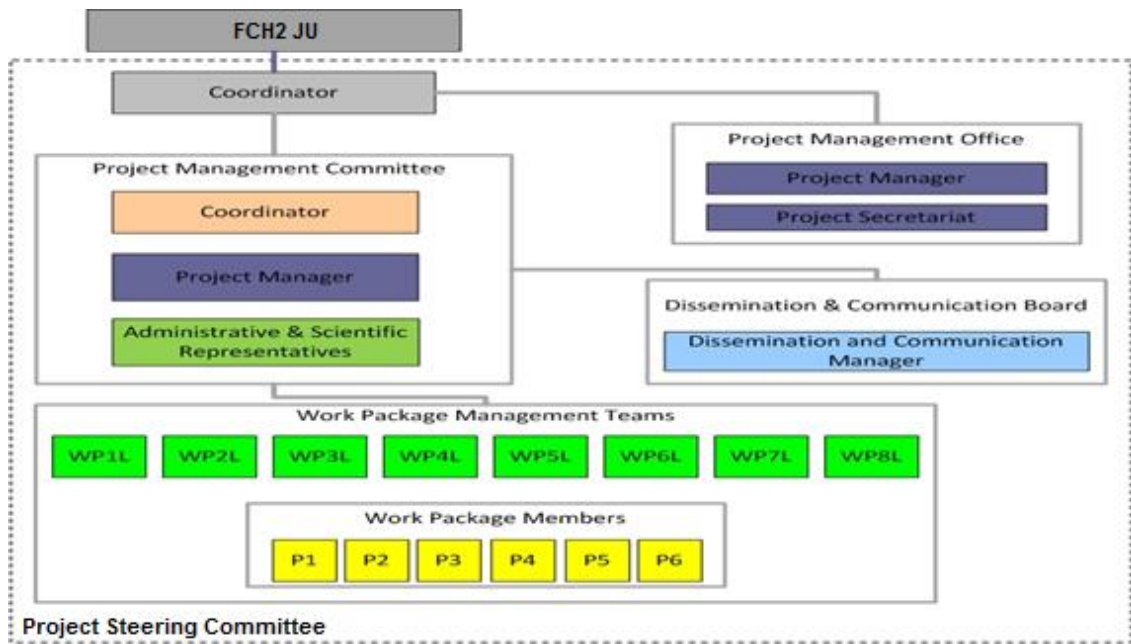
Figure 1. Project organisational structure and lines of communication.

Leading partners in the non-plenary bodies are shown in the next table.

Table 4. DEMO4GRID boards and leading partners

DEMO4GRID Boards	Acronym	Leading Partner(s)
Project Steering Committee	PSC	DIAD (Coordinator)
Work Package Leaders	WPL	DIAD, IHT, MPREIS, FHA
Dissemination and Communication Board	DCB	FHA

2.2. Resolution of disputes

The steering committee will have the power to make all decisions regarding the progress of the project. Each member of the consortium will have a vote in the decision making. However, if conflict arises through one of the processes, the procedure which will be followed is described below:

a.   The steering committee will be the only one with the power to resolve this issue of conflict between partners

b.   The partners will appoint a project steering committee meeting to agree consensually the best course of action

c.   If a consensus agreement cannot be made, the steering committee will use an independent professional consultant to contribute in resolving this matter. The consultant will be funded by the conflicted partners.

d.   In the unlikely case that a conflict cannot be resolved by all the aforementioned measures, the issue will be escalated to the European Commission for guidance and advice. In case that an activity in a work package is delayed and is running behind schedule, the technical manager will decide if a contingency plan is required. If so, the related WP leader is obliged to develop a contingency plan in one week time.

However, the *general principle* applied to the resolution of disputes is that steps to resolve any dispute should be taken at the lowest appropriate level, with escalation to the next highest level in the organisational structure only when a satisfactory resolution cannot be achieved. The sequence of escalation, in order of increasing importance is as follows:

1. Task Leader (TL)

2. Work Package Leader (WPL)

3. Project Steering Committee (PSC)

4. Fuel Cells & Hydrogen 2 Joint Undertaking (FCH2 JU) & Swiss State Secretariat for Education, Research and Innovation (SERI)
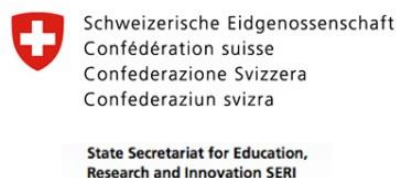
Figure 2. FCH2 JU & SERI logos

3. TIME PLAN

The time plan of the project in the form of a Gantt chart is shown in Annex I, with reference to the DoW for details. Deviations from the plan should be decided at the level of the project management committee and referred to for approval by the General Assembly. Then, approval by the FCH2 JU should be requested via a "change request" process.

4. QUALITY CONTROL AND REVIEW PROCESSES

Quality Assurance

The ISO project management system will be applied to this project and integrates Quality by establishing and following a set of procedures which ensure implementation according to the schedule, processes and standards defined in the current Project Quality Plan. Regarding project deliverables in particular, quality assurance can generally be described as a three-level filtering system, as shown in the figure below:

Figure 3. Demo4Grid Quality Assurance

This aim at ensuring that the outcome of DEMO4GRID remains consistent and conforms to high levels of quality and professional standards. The following steps are foreseen for the duration of the project:

4.1. DELIVERABLE DOCUMENTS

Step 1: Preparation of a Draft Document

The final author prepares the draft version of the document by using the appropriate document template (see **Annex II**).

Step 2: Quality Control

The draft document is reviewed by the corresponding WP Leader and the Workpackage Management Team. Should additional work be required, Steps 1 and 2 are repeated until consensus is reached.

Step 3: Document to Project Coordinator

The Project Coordinator reviews the document and either approves or rolls it back to Step 2. Should consensus be reached, the Coordinator asks for the subsequent approval of Project Steering Committee. The Committee may roll the document back to Step 2 until consensus is reached.

Step 4: Delivery

The document is moved to the "Delivered" folder and delivered to the Project Officer.

Step 5: Acceptance/rejection

The Project Coordinator receives comments and requests for modifications by the Project Officer:

➢ Should the document be met with approval, the document production phase is closed.

➢ Should modifications be requested, the document rolls back to Step 1, where the author performs the required modifications and the process starts again.

4.2. PUBLICLY AVAILABLE DOCUMENTS AND INFORMATION

Publicly available documents distributed either via the website or other media (printed matter, press announcements, electronic storage sticks, etc.) include:

Project-related documentation

– Deliverables as delivered or modified for publication

– Promotional material (logos, leaflets, text on the website)

– Presentations at events

– Publications

The following requirement ensures that quality and access control is maintained at all times:

➢ Everything published will meet with the approval of the Dissemination and Communication Board (DCB), itself under the approval of the Project Steering Committee (PSC).

Participation and/or presentation at events

- Participation at events can be initiated by any partner, under the approval of the DCB and, if needed, the PMC.
- Organisation of project events (workshops, Conference) will be led by the DCB and approved by the PMC.

Supervision by the FCH2 JU

- The Project Officer has the final approval on all of the above publicly visible actions.

4.3. VERSION CONTROL

The following document version numbering scheme will be used:

<Edition Number>.<Revision Number>

- The Edition Number is of one digit (version 0 is the initial draft version).
- The Revision Number is of two digits to be defined by the partner elaborating the document.

4.4. DOCUMENT DELIVERY SPECIFICATION

The delivered and circulated documents among participants will be in MS Word, Excel or Adobe PDF format and those for third parties and the Commission in the same formats, unless exceptional circumstances demand otherwise.

5. DATA MANAGENT PLAN

DEMO4GRID pilot site will implement novel processes for sustainability and economic viability. Data collected and services to be respectively drawn will be based on the needs of the demo. The DEMO4GRID consortium will ensure that as much as possible of the data collected and generated remains available to the public, provided that privacy laws and principles are not violated. Given that DEMO4GRID participates in the 'Pilot on Open Research Data', a preliminary Data Management Plan (DMP) will be drawn up by month 6 in order to guide partners and it will be continually revised throughout the project. The methodological approach is based on the 'Guidelines on FAIR Data Management in Horizon 2020', by DG Research & Innovation. The DMP will tackle issues such as 'Fair

Data' (making data findable, including provisions for metadata, openly accessible, and interoperable); increase of data re-use; allocation of resources; data security; ethical aspects and others.

Data produced will comprise:

- Data gathered (past, current and future) through the demo site and the partners' labs & facilities; and results arising from the use of these data, relevant to the underlying objectives of the project.

- Real-time monitoring of available measurements of sensors/process data in a variety of open data streams sources that may contribute to estimations of risk.

- Data from the participatory evaluation and assessment processes by all stakeholders for the resulting services in terms of performance, responsiveness, ease of use and effectiveness.

Data Curation: Collected and generated data will be curated and preserved in secure data repositories complying with quality, security, privacy standards of EU. Also, the OAIS [Open Archival Information System - ISO 14721:2012] will be used as a reference model for curation and preservation. Data management responsibilities will be allocated to specific members of the project team, where own resources may be allocated.

The DEMO4GRID platform will retain compatibility with all relevant current standards and with a number of best practices and guidelines for working with farming data and models. Guidelines and standards curated by organisations such as the Open Data Foundation; Open Knowledge International; Open Government Standards; OpenAIRE Project, will be taken into account for the open data format produced by the project.

Open access to peer-reviewed scientific publications

DEMO4GRID will follow the open access policy of Horizon 2020 by providing readers with free, reusable on-line access to scientific information. Such information covers peer-reviewed articles (published in scholarly journals), pre-print articles, conference papers, books and research data (data underlying publications, curated data and/or raw data). The consortium will use an Institutional Open Repository to store and provide access to scientific publication and researchers profiles. This repository will automatically feed OpenAIRE with articles to ensure the largest possible impact among researchers, policy-makers and businesses. Each partner will ensure open access to the deposited publication (via the repository) at the latest on publication, if an electronic version is available for free via the publisher, or within six months of publication (twelve months for publications in the social sciences and humanities) in any other case. Each consortium

partner will also ensure access to the bibliographic metadata that identify the deposited publication, while simultaneously retaining their copyright. Licences will be granted to publishers, based on 'Creative Commons' [i.e. retain copyright while allowing others to copy, distribute, and make some uses of their work - at least non-commercially; while the licensors get the credit for their work].

The following ***generic template*** will be used to develop the Data Management Plan (DMP) to accompany the current project. The notes (*in italics*) provide further context and guidance for its completion. ***Specific template(s)*** (depending on the technology, TRL, etc.) will be made available by the FCH2 JU to collect and entry project data on an annually basis to the TEchnology MONitoring and ASsessment tool (TEMONAS) for the evaluation of project results and technology achievements by FCH JU.

0. DEMO4GRID Data Management Plan (DMP)
Data Management Plan (DMP) in order to collect, organize, back-up and store the data which will be generated, following the guidelines for data management in Horizon 2020. This DMP remarks the great significance of the knowledge management and special procedures to make a proper use of the data.
1. Description of the data
1.1 Type of the Action(s) *Up to three lines of text that summarise the type the project and its specific Actions (Tasks) for which the data are being collected.* **1.2 Types of data** *Types of research data to be managed in the following terms: quantitative, qualitative; generated from surveys, experimental measurements, operating parameters, simulation tools, administrative records, images, samples, ...* **1.3 Format and scale of the data** *File formats, software used, databases,…. Do formats and software enable sharing and long-term validity of data?*
2. Data collection / generation

Make sure that DEMO4GRID justifies why <u>new</u> data collection or long term management is needed. Focus in this template on the good practice and standards for ensuring new data are of high quality and processing is well documented.

2.1 Methodologies for data collection / generation

How the data will be collected/generated and which research community data standards (if any) will be used at this stage.

2.2 Data quality and standards

How consistency and quality of data collection / generation will be controlled and documented, through processes of calibration, repeat samples or measurements, standardised data capture or recording, data entry validation, peer review of data or representation with controlled vocabularies.

3. Data management, documentation and curation

Keep this section concise and accessible to readers who are not data-management experts. Focus on principles, systems and major standards. Focus on the main kind(s) of project data. Give brief examples and avoid long lists.

3.1 Managing, storing and curating data.

Briefly describe how data will be stored, backed-up, managed and curated in the short to medium term. Specify any community agreed or other formal data standards used (with URL references). [Enter data security standards in Section 4].

3.2 Metadata standards and data documentation

What metadata is produced about the data generated from the research? For example descriptions of data that enable research data to be used by others outside of DEMO4GRID team. This may include documenting the methods used to generate the data, analytical and procedural information, capturing instrument metadata alongside data, documenting provenance of data and their coding, detailed descriptions for variables, records, etc.

3.3 Data preservation strategy and standards

Plans and place for long-term storage, preservation and planned retention period for the research data. Formal preservation standards, if any. Indicate which data may not be retained (if any).

4. Data security and confidentiality of potentially disclosive information

*This section MUST be completed if project's research data includes **personal data or any ethics requirements**. Information provided will be in line with the ethical review.*

4.1 Formal information/data security standards

Identify formal information standards with which the project is or will be compliant. If your organisation is ISO compliant, please state the registration number.

– DBC: **ISO 27001 *Information security management* (33/A.Π)**
– INYCOM: **ISO 27001 Information security management (SI-0014/2009)**

4.2 Main risks to data security

Summarise the main risks to the confidentiality and security of information related to project partners*, the level of risk and how these risks will be managed. Cover the main processes or facilities for storage and processing of personal data, data access, with controls put in place and any auditing of user compliance with consent and security conditions. It is not sufficient to write not applicable under this heading.*

4.3 Ethics requirements

The Consortium must confirm that the ethical standards and guidelines of Horizon2020 will be rigorously applied, regardless of the country in which the research is carried out.

The partners must provide details on the material which will be imported to/exported from EU and provide the adequate authorisations

5. Data sharing and access

Identify any data repository (-ies) that are, or will be, entrusted with storing, curating and/or sharing data from the project, where they exist for particular disciplinary domains or data types.

5.1 Suitability for sharing

Is the data you propose to collect (or existing data you propose to use) in the project suitable for sharing? If yes, briefly state why it is suitable.

If No, indicate why the data will not be suitable for sharing and then go to Section 6.

5.2 Discovery by potential users of the research data

Indicate how potential new users (outside Consortium) can find out about your data and identify whether it could be suitable for their research purposes, e.g. through summary information (metadata) being readily available on project's website or in other databases or catalogues. How widely accessible is this depository?

Indicate whether the policy or approach to data sharing is (or will be) published on project's website (or by other means).

5.3 Governance of access

Identify who makes or will make the decision on whether to supply research data to a potential new user.

Indicate whether the research data will be deposited in and available from an identified community database, repository, archive or other infrastructure established to curate and share data.

5.4 The study team's exclusive use of the data

What are the timescale/dependencies for when data will be accessible to others outside DEMO4GRID? Summarize the principles of the current/intended policy.

5.5 Restrictions or delays to sharing, with planned actions to limit such restrictions

Restriction to data sharing may be due to participant confidentiality, consent agreements or IPR. Strategies to limit restrictions may include data being anonymised or aggregated; gaining participant consent for data sharing; gaining copyright permissions.

Consent procedures should include provision for data sharing to maximise the value of the data for wider research use, while providing adequate safeguards for participants. As part of the consent process, proposed procedures for data sharing should be set out clearly and current and potential future risks associated with this explained to research participants.

5.6 Regulation of responsibilities of users

Indicate whether external users are (will be) bound by data sharing agreements, setting out their main responsibilities.

6. Responsibilities

- *study-wide data management*
- *metadata creation,*
- *data security*
- *quality assurance of data.*

7. Relevant institutional, departmental or study policies on data sharing and data security

Please complete, where such policies are (i) relevant to the project, and (ii) are in the public domain, e.g. accessible through the internet.

Add any others that are relevant

Policy	URL or Reference
Data Management Policy & Procedures	
Data Security Policy	
Data Sharing Policy	
Institutional Information Policy	
Other	

8. Author of this Data Management Plan (Name) and, if different to that of the Principal Investigator, their telephone & email contact details

6. OTHER ISSUES

For the purposes of configuration management, changes to the project with respect to the DoW, the Grant Agreement and the Consortium agreement will be first ratified by the Project Steering Committee. The final request formed in this way will be communicated to the Commission (FCH2 JU) for approval.

6. OTHER ISSUES

ANNEX I - DEMO4GRID GANTT CHART

WP/Task	Description	LEAD	Milestones & Deliverables
WP1	Management	DIAD	D1.2 D1.1 D1.4 D1.3 D1.6 M1.1 D1.5 D1.8 D1.10 D1.7 D1.9
1,1	Global management	DIAD	M1.2
1,2	Project meetings	DIAD	M1.3
1,3	Project activities	DIAD	
1,4	Financial docs & progress reports FCH-JU	DIAD	
1,5	External communications	DIAD	
1,6	Results verification, validation & implementation	DIAD	
WP2	Delivery of PAE and C&CS	IHT	M2.1 D2.1 D2.2 D2.3
2,1	Delivery of electrolyser	IHT	M2.2 M2.3 M2.4
2.1.1	Planning, procurement and engineering	IHT	
2.1.2	Manufacturing	IHT	
2,2	Delivery of Control&Communication system	INYCOM	
2.2.1	Grid technical requirements	INYCOM	
2.2.2	Forecasting models for optimal design	INYCOM	
2.2.3	Development of C&CS	INYCOM	
2,3	IHT Factory Acceptance Test & shipment	IHT	
WP3	Demo site preparation	MPREIS	D3.1 D3.2 D3.3 D3.4 D3.5
3,1	Analysis of technical requirements	MPREIS	M3.1 M3.2 D3.6
3,2	Analysis of RCS & safety assessment	FEN	D3.7
3,3	Construction of facilities & supply services	MPREIS	M3.3
3,4	Update of the business case	MPREIS	
3,5	Contractual arrangements	MPREIS	
3,6	Definition of the monitoring plan	INYCOM	
3,7	Definition SAT and GSPP	MPREIS	
WP4	Demo site commissioning	IHT	M4.1 D4.1
4,1	Commissioning	IHT	D4.2
4,2	Site Acceptance Test & test phase operation	IHT	
4,3	Grid Service Prequalification Procedure (GSPP)	MPREIS	
WP5	Demo site business operation	MPREIS	M5.1 D5.1 M5.2 D5.2 M5.3 D5.3
5,1	Business operation	MPREIS	
5,2	Assessment of technical operation results	IHT	
5,3	Assessment of business operation results	MPREIS	
WP6	Business operation & exploitation of results	DIAD	M6.1 D6.1 D6.2 M6.2 M6.3 D6.3 M6.4 D6.4 D6.5 D6.6
6,1	Assessment of market potential	DIAD	D6.7
6,2	Description and identification of new business models	DIAD	D6.8
6,3	Environmental LCA & LCI assessment	FHA	
6,4	Guidelines & recommendations	FHA	
6,5	Update exploitation plan beyond project	DIAD	
WP7	Dissemination and communication	FHA	M7.1 D7.1 D7.2 D7.3 D7.4 D7.5 D7.6 D7.7
7,1	Development & track of dissemination, comm. & awareness	FHA	M7.2 M7.3 M7.4
7,2	Dissemination tools, materials development & publication	FEN	
7,3	Workshops and stakeholders alignment	FHA	
WP8	Ethics requirements	DIAD	D8.1
8,1	Ethics requirements	DIAD	

Timeline: Months 1–60 (Y1: 1–12, Y2: 13–24, Y3: 25–36, Y4: 37–48, Y5: 49–60)

ANNEX II - DEMO4GRID TEMPLATE FOR DELIVERABLES

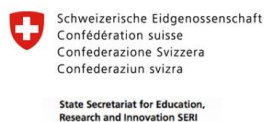## [Deliverable name]
WPX [WP full title]

DELIVERABLE X.X

GRANT AGREEMENT 736351

STATUS: DRAFT / FINAL DRAFT / FINAL

PUBLIC / CONFIDENTIAL

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

**State Secretariat for Education,
Research and Innovation SERI**

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Author 1 [1], Author 2 [2], Author 3 [3], …

[1] Name of 1st referenced beneficiary

[2] Name of the 2nd referenced beneficiary

…..

Author printed in bold is the contact person/corresponding author

DOCUMENT CHANGE CONTROL

Version Number	Date	Author(s)	Brief Description of changes

Table 5. Document Change Control

EXECUTIVE SUMMARY

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1. OBJECTIVES

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2. INTRODUCTION

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X. CONCLUSION

1. OBJECTIVES