a-leaf

An Artificial Leaf: a photo-electro-catalytic cell from earth-abundant materials for sustainable solar production of CO_2-based chemicals and fuels

Deliverable D6.2

Project Management Book

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EXECUTIVE SUMMARY

This document, D6.2 Project Management Book, is a deliverable of the **A-LEAF** Project, which is funded by the European Union's H2020 Programme under Grant Agreement No.732840. The Project Management Book identifies the main bodies of the project and establishes the decision-making procedures to be followed by the participants. Therefore, this document specifies the main guidelines for the execution, monitoring and control of the project. This as a living document, subject to formal change control.

List of acronyms and abbreviations

CA: Consortium Agreement

CFS: Certificate on Financial Statements

CRC: Carbon dioxide Reduction Catalyst

DESCA: Development of a Simplified Consortium Agreement

EC: European Commission

EDC: Exploitation and Dissemination Committee

FM: Financial Manager

GA: Grant Agreement

IPR: Intellectual Property Rights

MT: Management Team

OEC: Oxygen Evolution Catalyst

OER: Oxygen Evolution Reaction

PAB: Project Advisory Board

PC: Project Coordinator

PEC: Photo-Electro-Catalytic

PO: Project Officer

WP: Work Package

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1   PURPOSE OF THE PROJECT MANAGEMENT BOOK

The purpose of this Project Management Book is to provide a detailed description of the project structure and its delivery methods and controls to realise the project's defined objectives. The document includes definitions about how the project is going to be executed, monitored and controlled and it intends to be a working tool to provide context and guidelines to the partners for the successful conduct of the project. Accordingly, it will be maintained throughout the life of the project as a living document, subject to formal change control. Amendments will occur as needed and will be communicated to the Project Advisory Board (PAB) representatives to allow for objections and to pass them to the relevant people in their organisation.

The Project Management Book provides details about the organisation of the project, specifically:

- Project Scope overview
- Management structure and procedures
- Deliverables
- Reporting Periods
- Reference on plans related with Exploitation, Dissemination and Communication and Outreach
- Risk Management overview

Other project administrative documents that are relevant are:

- Grant Agreement (GA)
- Consortium Agreement (CA)

Both documents are available in the intranet project's website. In the event of a legal dispute, the CA and the GA will form the basis for the resolution of the dispute since these are signed by the partners' authorised representatives (note: the GA will take precedence over the CA). The GA is fixed at the project start and can only be amended by means of formal EC procedures.

2   PROJECT SCOPE

2.1. List of Participants

Participant No	Participant organisation name	Country
1 (Coordinator)	Institute of Chemical Research of Catalonia (**ICIQ**)	Spain
2	Eidgenössische Technische Hochschule Zürich (**ETHZ**)	Switzerland
3	University of Leiden (**UNILE**)	Netherlands
4	IMDEA Nanociencia (**IMDEA**)	Spain
5	École Polytechnique Fédérale de Lausanne (**EPFL**)	Switzerland
6	TU Wien (**TUWIEN**)	Austria
7	Universitat Jaume I (**UJI**)	Spain
8	Imperial College London (**ICL**)	UK
9	TU Darmstadt (**TUD**)	Germany
10	Forschungszentrum Jülich (**JÜLICH**)	Germany

11	University of Montpellier (**UM**)	France
12	Consorzio Interuniversitario Nazionale per la Scienza e Tecnologia dei Materiali (**INSTM**)	Italy
13	Covestro AG (**COV**)	Germany

A contact list including e-mail addresses of all the participants in the project can be found in the intranet section of the A-LEAF webpage.

2.2. Main Objectives and Milestones

The **Main Objective** of A-LEAF is develop a liquid/gas photo-electro-catalytic (PEC) cell for direct conversion of water and CO_2 into fuels (CO_2 reduction) and oxygen (water oxidation).

Other specific objectives are:

- To combine surface techniques and theoretical calculations to understand and optimize catalytic processes for OER and CRC using earth abundant catalysts

- Development of efficient photoelectrodes and silicon-based multijunction cells

- To follow efficiency, scalability and economic targets to implement in a final viable device

- To implement appropriate dissemination, exploitation and communication actions to attract and involve different stakeholders

- To promote multidisciplinary training to the young researchers involved in the project

The **Main Milestones** of the project are:

- Identification of optimum catalysts for oxygen evolution. Due: month 24.

- Identification of optimum catalysts for CO_2 reduction. Due: month 24.

- Identification of optimum working conditions. Due: month 30.

- Identification of boundary conditions and material's specifications for optimum solar to fuels conversion efficiency. Due: month 36.

- A first prototype of a solar to CO_2-based fuels device. Due: month 42.

2.3. Work Packages and Project Schedule

Project's work effort is divided in 5 technical work packages (WP) and 2 non-technical ones:

WP Title	Lead Beneficiary
WP1. Surface Science	EPFL
WP2. Electrochemistry	UJI
WP3. Computational Modelling	ICIQ
WP4. Photoelectrocatalysis	TUD
WP5. An Artificial Leaf	INSTM
WP6. Management	ICIQ
WP7. Dissemination, Exploitation and Communication	ICIQ

The basic timeline of the project can be seen in the following chart:

WP	Year 1	Year 2	Year 3	Year 4
WP1				
WP2				
WP3				
WP4				
WP5				
WP6				
WP7				

3 MANAGEMENT STRUCTURE AND PROCEDURES

The governance structure of A-LEAF has been conceived to ensure a fair and transparent project management and to grant partners an adequate level of representation and decision making. The organisation structure will be comprised by three Consortium Bodies: 1) The Management Team; 2) The Work Package Leaders; and 3) The A-LEAF Project Advisory Board. Additionally, there is an additional body, the Exploitation and Dissemination Committee.
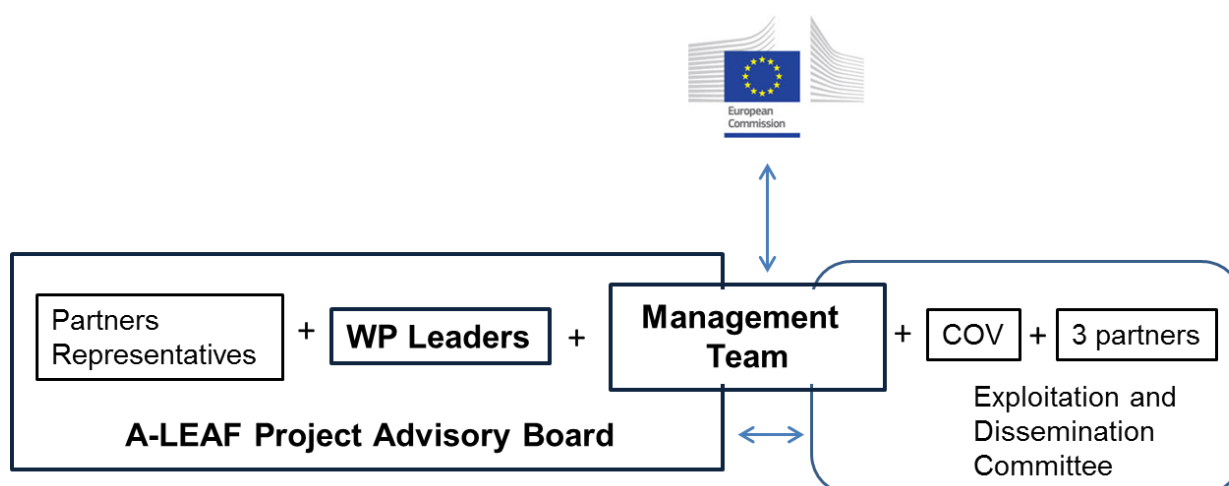
3.1. The Management Team

The Management Team (MT) reports to the European Commission (EC) and coordinates the overall running of the whole Project. The Team is composed by the Project Coordinator (PC) and the Financial Manager (FM).

- Project Coordinator: J. R. Galán-Mascarós (ICIQ)

The PC will take care of the day-to-day coordination and the monitoring of the project progress. His main tasks are:

- Monitor the progress of the scientific research and technological development of every WP

- Ensure timely and appropriate collection, dissemination and storage between partners of all the project information

- Review reports and deliverables and establish a quality control

- Be the consortium representative in the communications with the EC

- Keep a good communication and appropriate information sharing with all the partners and provide mechanisms for conflict prevention and resolution to be approved by the PAB

- Organise and chair the A-LEAF PAB meetings

- Propose, in both WP and PAB meetings, changes regarding scientific and technological implementation or adjusting the work plan to ensure the overall success of the project

- Ensure the liaison between A-LEAF and related projects, networks and research communities

- Coordinate the internal ICIQ team that will be giving support in the management, dissemination, exploitation, communication and administrative tasks of the project. Keep an efficient communication with the FM.

- Financial Manager: Eva Alcázar (ICIQ)

The FM will take care of budgetary management and coordination. The main tasks are:

- Financial responsibilities with regard to payment received from the EC

- Prepare budget tables registration, time sheets and relevant invoices required by partners

- To ensure that the required resources are provided by each partner and that their work is consistent with the expenses

- Follow up the project expenses and tracking deviations, ensuring that all appropriate changes suggested and/or approved by the PAB are recorded in the cost baseline

- Keep the PC informed about any budgetary issue and support him in report and deliverables collection and revision

3.2. The Work Package Leaders

The designed Work Package Leaders are:

WP Number	Organisation	Name
WP1	EPFL	Magalí Lingenfelder
WP2	UJI	Juan Bisquert
WP3	ICIQ	Nuria López
WP4	TUD	Wolfram Jaegermann
WP5	INSTM	Siglinda Perathoner
WP6	ICIQ	J. R. Galán Mascarós
WP7	ICIQ	J. R. Galán Mascarós

The main tasks of the WP Leaders are:
- Coordinate and monitor advances in each WP, including specific milestones and deliverables

- Be the first control unit for risk management, ensure timely tasks completion and point out deviations

- Prepare reports to be submitted to the MT

- Propose solutions for conflict resolution within the WP and report to the PC in the case of not reaching an agreement

3.3. The A-LEAF Project Advisory Board

The PAB will be the formal decision-making body of the Consortium. It will be chaired by the PC who will represent the MT and will also comprise the WP Leaders and one representative from each institution (except if already represented by WP Leaders).

The specific duties of the PAB are:
- Ensuring that the Consortium fulfils its contractual obligations

- Ensuring effective communication flow between partners and with the EU

- Deciding on proposed changes to work plan or resource allocations

- Requesting actions to rectify deviations from the work plan

Each PAB representative from A-LEAF partners will be responsible for the internal coordination of the project in their institution. They will identify a Local Project Manager, who will take charge of the administrative and financial issues; and a Local Technical Director, who will be in charge of supervising the research activities.

The members of the PAB were ratified at the A-LEAF kick-off meeting, as follows:

Members A-LEAF Project Advisory Board (PAB)		
Management Team (Chair)		JR Galán Mascarós
WP Leaders and **Partner Representatives**	ICIQ	Núria López
	ETHZ	Javier Pérez Ramírez
	UNILE	Marc Koper
	IMDEA	David Écija
	EPFL	Magalí Lingenfelder
	TUWIEN	Ulrike Diebold
	UJI	Juan Bisquert
	ICL	James Durrant
	TUD	Wolfram Jaegermann
	JÜLICH	Friedhelm Finger
	UM	Frédéric Jaouen
	INSTM	Siglinda Perathoner
	COV	André Rittermeier

3.4. The Exploitation and Dissemination Committee

The Exploitation and Dissemination Committee (EDC) will be chaired by the industrial partner, COV, and will comprise the MT and three other members, that were selected by the PAB in the A-LEAF kick-off meeting, as follows:

Members Exploitation and Dissemination Committee		
Chair	COV	André Rittermeier
Management Team	ICIQ	J. R. Galán Mascarós
3 Consortium Partners	INSTM	Siglinda Perathoner
	JÜLICH	Friedhelm Finger
	UM	Frédéric Jaouen

The main tasks of the EDC will be:

- Defining and implementing the Exploitation and Dissemination Plan

- Monitoring the assets generated during the project and taking the appropriate measures to exploit them, this might include delaying dissemination actions until the appropriate IP protection measures are taken.

- Identify and participate in relevant industrial fairs or other activities to promote the involvement of end-users and industry experts

3.5. Recruitment procedure

As stated in the GA (Art. 32.1) the recruitment procedures must be open, efficient and transparent according to the Code of Conduct for the Recruitment of Researchers [1].

New job positions will be communicated to the MT, who will be in charge of posting the advertisement in the A-LEAF web page. In addition, each partner should post the offer in their institutional web page and in Euraxess.

3.6. Progress monitoring

The main mechanisms that will be used for progress monitoring are:

- Progress reports: the PC will collect progress reports from each WP Leader and financial reports from each participant, every **6 months**, following the PAB meetings. These reports will be the main tool for internal monitoring and after revision and approval, they will be shared among the consortium in the internal intranet web page. In addition to the research advance, reports should also include information on dissemination, communication and outreach actions.

- Informative e-mails: the PC will circulate informative e-mails through the WP Leaders every **3 months**, normally following WP leaders meetings, reporting on the general project progress and other important information, including budget issues.

- Deliverables: deliverables and milestones will be of paramount importance for project monitoring and information sharing with the EC. The list of deliverables and the procedure to prepare them are described in the following point of this document.

- Reporting: the project is divided in three reporting periods (M12, M30 and M48). After each period, formal reports must be completed and progress meetings with EC representatives arranged (section 5 of this document).

- Meetings:

- <u>PAB Meetings</u>: the PAB meetings will take place **twice a year**, a tentative table can be found below. Additional meetings, including virtual ones, can be organized *ad-hoc* if special or urgent matters need to be discussed.

The PAB meetings will be chaired by the PC, who will be in charge of preparing the agenda, **minimum 15 days in advance,** and circulate it among the partners. The meetings will serve to oversee the general progress of the project and discuss any matters of the project in the presence of all partner's representatives.

Decisions in the PAB will be made on the basis of consensus, if not possible, a simple majority vote system will be used. Although ICIQ has two representatives in the PAB, they should agree in a single vote (1 vote per institution, equal value for all).

Minutes of each meeting will be taken and circulated by the PC among the partners and finally approved and uploaded in the intranet website.

Indicative Table PAB Meetings:

Meeting and place	Tentative Date	Participants	Specific Agenda
Kick-off Meeting ICIQ, Tarragona	February 2017 (Start)	PAB Members and other project participants	- Partners presentations - WPs and first deliverables overview - Main management aspects (including financial management) and Exploitation, Dissemination and Communication aspects - Appointment of Project Bodies (PAB and EDC)
PAB first 6 month meeting UNILE, Leiden	July 2017 (+6)	PAB Members and other project participants	To be agreed: - First results and first deliverables overview - Updates on management, exploitation, dissemination and communication aspects - Next actions
PAB meeting Place to be agreed	January 2018 (+12)	To be confirmed, at least PAB Members	To be agreed: - Progress assessment and updates - Verification of deliverables - Preparation of the 1st reporting period meeting and document - Next actions
PAB meeting Place to be agreed	July 2018 (+ 18)	To be confirmed, at least PAB Members	To be agreed: - Progress assessment and updates - Verification of deliverables - Next actions
PAB meeting ICIQ, Tarragona	January 2019 (+ 24)	To be confirmed, at least PAB Members	To be agreed: - Progress assessment and updates - Verification of deliverables and milestones - Next actions
PAB meeting Place to be agreed	July 2019 (+ 30)	To be confirmed, at	To be agreed: - Progress assessment and updates - Verification of deliverables and milestones

		least PAB Members	- Preparation of the official 2nd reporting period meeting and document - Next actions
PAB meeting Place to be agreed	January 2020 (+ 36)	To be confirmed, at least PAB Members	To be agreed: - Progress assessment and updates - Verification of deliverables and milestones - Next actions
PAB meeting Place to be agreed	July 2020 (+ 42)	To be confirmed, at least PAB Members	To be agreed: - Progress assessment and updates - Verification of deliverables and milestones - Next actions
Final Meeting INSTM, Università di Messina, Messina	December 2020 (+ 48)	To be confirmed, at least PAB Members	To be agreed: - Verification of deliverables and milestones - Preparation of the final reporting period meeting and final official reports - Closing the project and future opportunities

- <u>WP Meetings</u>: the WP meetings will be organized by each WP Leader as often as required, at least quarterly. Virtual meetings, using "Go to Meeting" programme (hosted by ICIQ), are encouraged. The usual attendees will be the WP Leader, the partners involved in the WP and the PC. Nonetheless, these meetings are also open to partners involved in other WPs. The PC and/or the WP leader will be in charge of collecting the minutes, circulate them among the attendees and share them in the intranet section of the project's website, after the approval.

- <u>EDC Meetings</u>: the EDC will serve as a consultant body for Exploitation and Dissemination aspects. The EDC members will take advantage of PAB meetings to discuss among them any Exploitation and Dissemination issue, and propose actions and solutions to the PAB for final decision. In addition, *ad-hoc* virtual meetings ("Go to Meeting") will be settled when needed, especially if IP issues arise. The PC will be in charge of collecting the minutes using the same procedure as for the WP Meetings.

3.7. Conflict Resolution, change control and formal amendments

<u>General conflict resolution</u>:

(1) Any possible issue will be discussed in WP meetings between the partners involved and the WP Leader. The first action will be to propose a solution within the WP participants.

(2) If it is not possible to reach an agreement within the WP participants, the PC, who may consult, if required, other partners of the consortium and/or the Project Officer (PO) or the EC designated expert, will propose a solution. In the case of conflicts related with IPR or publication issues, such as authorship, authorisation, payment, etc., advice from the Exploitation and Dissemination Committee should be requested. The proposed solution must be ratified by the PAB (by vote).

<u>Change control</u>**:**

(3) In the case that a conflict proposed solution or any other issue (such as a new identified risk) represents modifications to the Project Plan (project scope, schedule, workforce, budget, etc.), the PC

will propose changes to the related project documents, determine their associated impact and inform the PAB members, who should decide whether to approve or reject the changes and/or add further modifications. The discussion can have place either in person at the PAB meetings, through virtual meetings or just by e-mail, depending on the situation. Changes will be binding once they have the final PAB approval.

Formal Amendments**:**

(4) If the PAB approved changes require amendments to the GA, the MT will be in charge of requesting them to the EC (with supporting documents). The following table illustrates some possible changes and whether an amendment will be needed or not. Nevertheless, the MT will consult the PO in a case by case approach.

Change		Amendment needed?
Termination of participation of a beneficiary		YES (Art. 50)
Adding a new beneficiary		YES
Change of coordinator		YES
Change of name/address of beneficiaries/linked parties/bank		NO
Change of bank account for payments		YES
Change of the option for "authorisation to administer"		YES
Significant change of the action tasks (tasks are added/removed) or their division among the beneficiaries		YES
Changes concerning third parties tasks		YES
New subcontracts		YES (strongly advised)
Budget transfer	From one beneficiary to another	NO
	From one budget category to another	NO
	Transfer between forms of costs (actual costs, unit costs, etc.)	YES, when a new unit cost is introduced
	Transfer within personnel costs	NO

3.8. Scientific misconduct

As stated in the GA (Art. 34.1), A-LEAF partners are obliged to comply with ethical principles and research integrity. The consortium will follow the European Code of Conduct for Research Integrity [2].
The different tools for project monitoring, just described, together with the internal communication procedures will serve to detect any possible misconduct. If such a case is detected, the PC should be immediately informed (or any other WP Leader in case of conflict of interest), who will propose appropriate actions to the PAB members, which may include termination of a defaulting participant for severe cases.

4 DELIVERABLES

4.1. Deliverable List

Del. No.	Deliverable name	WP	Lead Partner	Type[2]	Dissemin. Level[1]	Date (month)
1.1	Report on the catalytic properties and active sites of transition metal oxides for OER as a function of geometry and composition	1	EPFL	R	CO	24
1.2	Report on the reactivity of catalyst nanostructures towards CO_2 as a function of island size and pH	1	EPFL	R	CO	24
1.3	Report on the effect of doping on the stability and reactivity of catalysts towards CO_2 in gas and liquid phase	1	EPFL	R	CO	30
1.4	Report on the properties of transition metal oxides on SiO_2/doped silicon substrates	1	EPFL	R	CO	32
1.5	Report on the optimal composition–structure-reactivity OEC and CRC materials	1	EPFL	R	CO	36
2.1	Report on the fundamental electronic and catalytic mechanisms of the developed catalytic electrodes leading to fuel production	2	UJI	R	CO	18
2.2	Report on the benchmarking of oxygen evolution and CO_2 reduction catalysts in optimized working conditions	2	UJI	R	CO	24
2.3	Volcano plots for optimized electrode architecture and working conditions	2	UJI	R	CO	30
3.1	Report on essential parameters to understand and optimize performance	3	ICIQ	R	CO	24
3.2	Report on the identification of reaction network, kinetic and thermodynamic parameters, and modifiers to increase the performance and selectivity towards the desired product.	3	ICIQ	R	CO	32
4.1	Definition and report on the needed component's properties	4	TUD	R	CO	30
4.2	Resulting working conditions for optimized device performance	4	TUD	O	CO	40
5.1	Report on device design with parts specifications	5	INSTM	R	CO	34
5.2	Tested parts delivered for final assembly	5	INSTM	D	CO	40
5.3	Report on advantages/disadvantages, strengths/weaknesses of the solar to fuel A-LEAF platform	5	INSTM	D	CO	48
6.1	Kick off meeting	6	ICIQ	O	CO	1
6.2	Project management book	6	ICIQ	R	PU	3
6.3	RP1	6	ICIQ	R	PU	14
6.4	RP2	6	ICIQ	R	PU	32
6.5	RP3: Final report	6	ICIQ	R	PU	50

7.1	A-LEAF Data Management plan and updates	7	ICIQ	O	PU	2,12,24,3 6
7.2	Web-Page and logo	7	ICIQ	O	PU	2
7.3	A-LEAF Dissemination and Exploitation plan and updates	7	ICIQ	O	PU	3,12,24,3 6
7.4	A-LEAF Communication and Outreach plan and updates	7	ICIQ	O	PU	4,12,24,3 6
7.5	Report on patentability and IP protection strategies	7	ICIQ	R	CO	42

4.2. Deliverable documents procedure

The general procedure to be followed for reporting deliverables is:

(1) The WP Leader assigns the partners responsible for drafting the deliverable according to the specific template (document templates are available in the intranet website), including a control system (responsible, version, reviewers and approval).

(2) Once the draft has been circulated, revised and approved by the WP participants, the WP Leader sends it to the MT (with enough time for revision).

(3) The MT will revise the document and suggest modifications. This will be an iterative process until the required quality standards are met.

(4) The MT will be responsible for submitting the final version of the deliverable, in due time, through the participant portal using the SyGMa system for continuous reporting.

Deliverables must be completed by the due date. If not, this could be financially penalised by the EC. In the case that any justified issue prevents to meet the deadline, the PC should be informed as soon as possible and he must contact the PO to find a possible solution (amendment, delivery of a draft instead of a final document, etc.).

5   REPORTING PERIODS

The project is divided in three reporting periods, covering different stages of the project:
- Reporting Period 1 (RP1): from M1 to M12
- Reporting Period 2 (RP2): from M13 to M30
- Reporting Period 3 (RP3): from M31 to M48

At the end of each reporting period there will be a review meeting between the PAB members (at least), the PO and the EC designed expert to discuss the advance of the project. In addition, **within 60 days** after the end of each reporting period, the MT must submit a full report to the EC (through the research participant portal). The full reports consist in two parts: Financial Report & Technical Report.

5.1. Financial Report

The Financial Report is called FORM C, it consists of:
- Detailed individual financial statement for each beneficiary

– Explanation of use of resources

Each partner must prepare its financial report, being each of them the only responsible of its content. The MT will check the consistency of the financial reports with the technical one and submit the full report.

5.1.1. Internal financial reports

To facilitate budget management, the MT will ask for internal financial reports every 6 months containing:

- Expenses incurred during the previous period

- Effort in each WP (person month used)

- Deviations occurred

- Future deviations envisaged (if any)

Any changes in the budget will be discussed during the PAB meetings.

5.1.2. Information on eligible costs and procedures

Direct costs must be justified based on the "*best value for money*" concept: complying with the principle of sound financial management, in particular regarding economy and efficiency. A summary of the eligible and non-eligible costs can be found in the following table:

Eligible Costs	Non-eligible Costs
• Direct Personnel costs • Subcontracting (not allowed between consortium partners) • Equipment costs (depreciation only for the project period) • Cost for consumables and supplies • Travel costs and related subsistence allowances (to apply the institution internal policy) • Dissemination costs (Gold Open Access) and Conference Fees • Costs related to IPR • Audit (Certificate Financial Statement) • Non-deductible VAT (the taxes that the institution is not allowed to deduct of project's related costs) • Translation costs (if needed for the action's implementation) • Internally invoiced costs (if their use for the action is specifically recorded and mentioned in the invoice)	• Costs related to return on capital • Debt and debt service charges • Provisions for future losses or debts • Interest owed • Doubtful debts • Currency exchange losses • Bank charges • Excessive or reckless expenditure • Deductible VAT (if the institution can deduct the VAT from specific invoices, following national laws, the deductible percentage cannot be charged to the project) • Costs incurred during suspension of the implementation of the action • Costs declared under another EU/Euratom grant (no double funding)

5.1.3. Audits

A Certificate on Financial Statements (CFS) per institution is needed if the total direct costs for that institution are higher than 325,000 €.

Although the CFS has to be submitted at the end of the project, it is strongly recommended, for each institution, to carry out an audit of costs at the end of each reporting period. Thus, the participants will be able to apply corrective measures if an error is detected.

5.2. Technical Report

– **Part A**: tables to be filled in the management system (SyGMa) with information about deliverables, milestones, publications, etc. The MT will update the needed tables.

– **Part B**: report containing an overview of the project's advance and the exploitation/dissemination results. The report must follow a specific template provided by the EC. The MT will be in charge of disposing the required template in the intranet website, so the involved partners can use it, and of ensuring compliance and on time delivery. The report will be based on the internal progress reports (every 6 months), and the general procedure for reporting deliverables will be followed for its preparation.

6 EXPLOITATION AND DISSEMINATION

6.1. Exploitation and Dissemination Plan

An Exploitation and Dissemination Plan will be drafted (Deliverable 7.3) to collect all the planned actions addressed to engage and involve different stakeholders with the project and to exploit the obtained results. The EDC will have a pivotal role in the definition, monitoring and updating of the plan. The main points of the document will be:

- Specific actions (publications, workshops, attendance to conferences and industrial fairs) to attract new players and stakeholders, including researchers, technologists, industrial actors and policy makers
- Related technological platforms and projects to be followed
- IPR Management, Knowledge Management and Protection Strategy

Therefore, the plan will contain specific guidelines for sensitive issues such as:

– **Intention of dissemination**: the Exploitation and Dissemination plan will describe the information that needs to be shared within the consortium before any dissemination of project's results is done. As stated in the CA, any partner wishing to disseminate results of the project must inform the other beneficiaries at least 21 days in advance and an objection can be done within 21 days of receiving notification.

– **Publications management**: the plan states how to deal with co-authorship, gold open access, repositories, publications after the end of the project, etc., in concordance with the guidelines described in the DMP.

– **IPR**: the consortium approach is based on the standard DESCA model. Specific description of the ownership of results is provided in the Exploitation and Dissemination Plan. In addition to the strategy defined in the plan, a specific report on patentability and IP protection strategies will be prepared (Deliverable 7.5) towards the end of the project focused on the expected final outcome, a working device. The report will have into account the previous protected results and the final design, cost and functionality characteristics that can be protected and further exploited after the end of the project.

6.2. Data Management Plan

This Project forms part of the Open Research Data (ORD) Pilot (FET projects are part by default), an H2020 tool aiming to make the research data generated within the project accessible with as few restrictions as possible, while at the same time protecting sensitive data from inappropriate access.

A Data Management Plan (DMP) is required for all the projects participating in the ORD pilot in order to make research data findable, accessible, interoperable and re-usable (FAIR). The DMP is a living document that will be continuously updated according to the project needs. The first version of the A-LEAF DMP corresponds to Deliverable 7.1 and has been published in month 2. Subsequent updates are schedules for M12, M24 and M36.

7   COMMUNICATION AND OUTREACH

7.1. Communication and Outreach Plan

A Communication and Outreach Plan (Deliverable 7.4) will be also drafted containing the consortium efforts towards the final aim of creating an appropriate innovation ecosystem to ensure the societal acceptance of this new technology. Therefore, several actions to reach general audience beyond the scientific and industrial communities, with particular emphasis on university and high school students will be carried out during the project. The plan will be periodically updated and will contain specific information and guidelines on the main initiatives to be carried out with the collaboration of all partners:

- A-LEAF web page (including the intranet tool)
- Social media
- A-LEAF newsletter
- Press desk
- Short videos
- Educational events

7.2. Internal Communication within the Consortium

The partners will have freedom of choice regarding the use of communication tools. The PC and the PAB in the last instance must encourage and facilitate efficient communication and information exchange among the partners. The main internal communication tools are:

- E-mail and telephone: will be normally used for informal day-to-day communication, urgent matters and to inform about new uploads in the intranet website.

- Teleconferences (Go to Meeting): this tool will be mainly used for informal and progress WP meetings, although visits to a partner's site can also be organised if needed.

- Intranet: the password protected part of the A-LEAF website will be restricted to the consortium partners use and will be the main tool for deposition and exchange of documents, in special confidential ones, such as:

    – Complete contact list including names and e-mail addresses of all the participants

    – Templates for word/pages documents, presentation slides, posters, etc.

    – Minutes of the meetings

    – Progress reports

    −   Deliverables

- Exchange of scientific staff: this tool will be mainly directed (but not only) towards the exchange of young researchers involved in the project. In this way, the consortium hopes to facilitate transfer of knowledge of technical procedures and information among the partners and to contribute to the holistic training of the participating researchers.

- PAB Meetings and workshops: in person encounters will serve to exchange information between the project participants both in an informal and formal way (decision-making body).

8   RISK MANAGEMENT

The main expected risks, both scientific and managerial ones, have already been defined in the proposal preparation phase and are described in the GA (Annex 1, part B). Appropriate mitigation measures have also been suggested. The WP Leaders will be in charge of monitoring those risks in the WP meetings and expected to apply mitigation measures if needed. In addition, any partner at any moment of the project may identify and report new unexpected risks. The new detected risks will need to be discussed with the WP partners to find appropriate mitigation and/or contingency measures. In any case, if substantial changes are needed, those will have to be approved by the PAB following the change control procedure.

A risk assessment section must be included in all the progress reports and discussed in PAB meetings in order to appropriately monitor the initial risks and the new encountered ones.

References:
[1] https://euraxess.ec.europa.eu/sites/default/files/am509774cee_en_e4.pdf
[2]
http://archives.esf.org/index.php?eID=tx_nawsecuredl&u=0&g=0&t=1487956863&hash=832bf0b18505cf804a3985bc684015a71934c49a&file=/fileadmin/be_user/CEO_Unit/MO_FORA/MOFORUM_ResearchIntegrity/Code_Conduct_ResearchIntegrity.pdf
[3] http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf