Call: **H2020-ICT-2018-20 / H2020-ICT-2020-2**

Grant Agreement no. **101016726**

DELIVERABLE 6.1: Project Handbook

Start date of the project: 1st January 2021
Duration: 48 months
Project Coordinator: Cédric ALLIER - CEA
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Document Classification

Deliverable Number & Title	D6.1 Project Handbook
Work Package	WP6 – Project Management
Author(s)	P1 CEA – Cédric ALLIER
Delivery due date	2021-03-31
Type	Public
Dissemination Level	Report

Document History

Internal review	2021-03-30	P3.2 INSERM–Kiran PADMANABHAN
Contributions	2021-03-30	P1 CEA–Sophie MORALES
Validation	2021-03-30	Project Coordinator P1 CEA–Cédric ALLIER cedric.allier@cea.fr

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 101016726

Document abstract

The present deliverable D6.1 Project Handbook intends to collect and present in a comprehensive way any information that can help all beneficiaries in REVEAL project to carry out the work. All beneficiaries are therefore kindly invited to deal with the recommendations presented in this document, to follow the procedures and to be compliant with the quality assurance plan and the administrative and financial rules and deadlines.

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1 INTRODUCTION

What is this project handbook meant for?

- Support all participants in the REVEAL in achieving an efficient scientific and technical contribution to the action while complying with the legal and financial framework of EU funding and good management practice.
- Provide all participants with the minimal set of tools, models, protocols, rules and guidelines to operate consistently with the Grant Agreement signed with the European Commission and the Consortium Agreement signed between the participants.
- Collect and make available a set of tools, models, protocols, rules and guidelines reported in this Project Handbook that shall be considered as the Quality Assurance (QA) and Quality Control (QC) framework binding all participants and providing the reference ground for decision making by the decision bodies of the Project.

What is this project handbook not meant for?

- This Project Handbook does not provide any supplementary legal constraints to the Grant Agreement, the Consortium Agreement and their annexes.
- This Project Handbook does not supersede or modify the “Description of the Action (DoA)” (defined in Annex 1 to the Grant Agreement).

Who is concerned by this project handbook?

- All actors in the REVEAL project shall read and understand the contents of this Project Handbook and namely:
  - The technical staff members (scientists and technicians) of each participating organisation involved in the REVEAL project for all or part of their work.
  - The administrative and financial staff members in charge of providing support to the project participants.

> **Rule # 1**
>
> **Any remark and comment about the contents of the Project Handbook shall be addressed to the Project Manager or the Project Coordinator who shall decide whether such remark or comment should be forwarded to the Project General Assembly (PGA).**

How is this project handbook updated?

This Project Handbook shall be updated whenever:

- The regulations and rules decided by the European Commission are changed;
- The Consortium Agreement is modified;
- The Description of Action (DoA) is modified;
- The minimal set of tools, models, protocols and guidelines prove to be inadequate and are thus modified by decision of the Project General Assembly (PGA).

> **Rule # 2**
>
> **Changes to the Project Handbook shall be notified to all participants in the minutes of the meeting of the Project General Assembly (PGA) having made the relevant decision and the new version of the Project Handbook shall be amended within 2 months following that decision.**

2 PRESENTATION OF THE REVEAL PROJECT

2.1 Project synopsis

Full title	Neuronal microscopy for cell behavioural examination and manipulation
Grant Agreement Reference Number:	101016726
Starting Date:	01 January 2021
Ending Date:	31 December 2024
Maximum Grant Amount:	5,984,599.75€

The main goal and specific objectives of REVEAL:

The main goal of the REVEAL project is to install a novel microscope at the interface of instrumentation, machine learning and Biology. This new microscopy technique will rely heavily on neural networks to be able to perceive, interpret, conjecture, infer, anticipate and act. The present project intends to lay down the foundations of this 'neuronal microscopy' in the realms of 2D and 3D cell live imaging.

To achieve this goal, REVEAL will develop the necessary tools and the first instruments that will demonstrate the feasibility and the power of this new microscopy framework. In particular, the project will develop a 'cell picking neuronal microscope' that will allow to detect and collect different subtype of liver cells that are due to become tumoral and analyse them ahead of tumour manifestation. This analysis will help characterise the cellular heterogeneity known to exist at the origin of liver cancer. It will provide a direct mapping between cellular phenotypes observed under microscope and gene expression present in the early stages of liver cancer. Overall, REVEAL is thus defining a novel methodology, giving a central place to neuronal microscopy in the understanding of the cellular origin of the diseases.

2.2 Participating organisations

P1 COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (CEA)	25 RUE LEBLANC, 75015 PARIS 15, (FR)
P2 IPRASENSE (IPRASENSE)	AVENUE DE L'EUROPE CAP ALPHA 34830 CLAPIERS, (FR)
P3 ECOLE NORMALE SUPERIEURE DE LYON (ENS DE LYON)	PARVIS RENE DESCARTES 15 69342 LYON (FR)
P4 LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN (LMU MUENCHEN)	GESCHWISTER SCHOLL PLATZ 1 80539 MUENCHEN, (DE)
P5 FONDAZIONE IRCCS CA' GRANDA - OSPEDALE MAGGIORE POLICLINICO (IRCCS)	VIA FRANCESCO SFORZA 28 20122 MILANO (I)
P6 ALS AUTOMATED LAB SOLUTIONS GMBH (ALS)	OTTO-EPPENSTEIN-STRASSE 30 07745 JENA (DE)
P7 POLITECHNIKA WARSZAWSKA (WUT)	PLAC POLITECHNIKI 100 661 WARSZAWA (PL)

2.3 Consortium members list

The list below presents the consortium members involved in scientific activities.

Partner N°	Organisation	First name	Last name	Email address	WP Leader
1	CEA	Cédric	Allier	cedric.allier@cea.fr	Project Coordinator WP1 – WP3 WP6
1	CEA	Francis	Glasser	francis.glasser@cea.fr	
1	CEA	Sophie	Morales	sophie.morales@cea.fr	
1	CEA	Caroline	Desvergne	caroline.desvergne@cea.fr	
2	IPRASENSE	Geoffrey	Esteban	gesteban@iprasense.com	
3	ENS DE LYON	Victor	Van Gucht	victor.van_gucht@ens-lyon.fr	
3.1	CNRS	Cloe	Levointurier-Vajda	europe@dr7.cnrs.fr	
3.2	INSERM	Kiran	Padmanabhan	kiran.padmanabhan@ens-lyon.fr	WP4 – WP5
4	LMU MUENCHEN	Maria	Robles	charo.robles@med.uni-muenchen.de	
5	IRCCS	Luca	Valenti	luca.valenti@unimi.it	
5	IRCCS	Rossana	Carpani	rossana.carpani@policlinico.mi.it	
5	IRCCS	Alessandro	Cherubini	alessandro.cherubini@policlinico.mi.it	
6	ALS	Susanne	Freyberg	SusanneFreyberg@als-jena.de	WP2
6	ALS	Gerd	Bornmann	gb@als-jena.de	
6	ALS	Jens	Eberhardt	je@als-jena.de	
7	WUT	Malgorzata	Kujawinska	malgorzata.kujawinska@pw.edu.pl	
7	WUT	Wojciech	Krauze	wojciech.krauze@pw.edu.pl	

Table 1 : Consortium Members list

3 MANAGEMENT PROCESS

3.1 REVEAL organisational structure

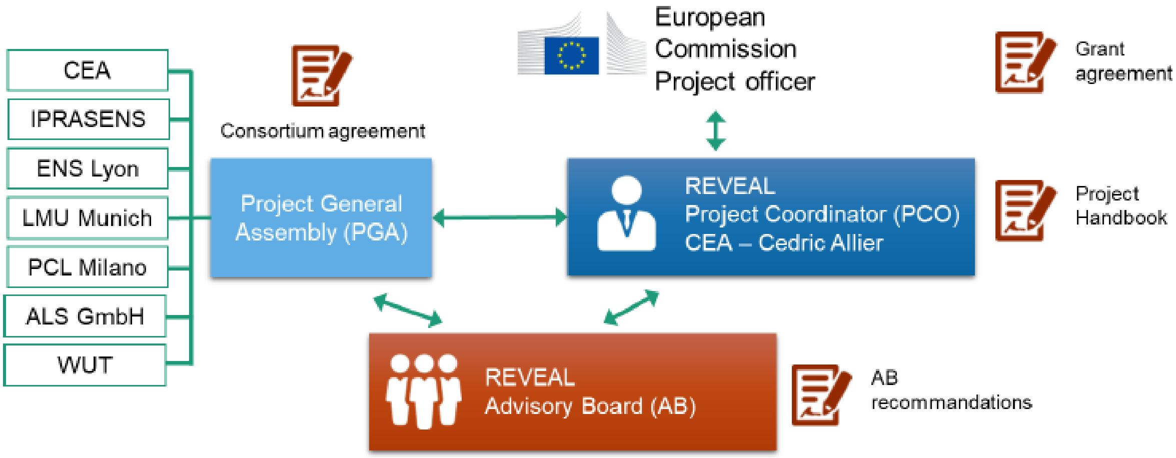

Figure 1 REVEAL organisation chart

3.2 Project bodies and key members

The Project Officer

Name:	John Magan
Address:	Communications Networks, Content and Technology (CNECT) B-1049 Brussels/Belgium
Email:	john.Magan@ec.europa.eu

The Project Officer (PO) is the representative of the European Commission vis-a-vis the Project Coordinator (PCO) and the Project General Assembly (PGA).

The Project Coordinator (PCO)

Coordinating Organisation:	CEA
Name of the Project Coordinator:	Cédric Allier
Address:	CEA Leti DTBS/LSIV Bât. 42 CEA-LETI, MINATEC 17 rue des Martyrs 38054 Grenoble Cedex 9 France
Tel:	(+33) (0)4 38 78 24 11 (+33) (0) 6 40 38 98 92
Email:	cedric.allier@cea.fr

The PCO is the legal entity acting as the intermediary between the Beneficiaries and the Commission. The PCO is responsible - among other tasks defined by the Grant Agreement and the Consortium Agreement - for:

- Chairing the Project General Assembly (PGA), and taking all necessary actions to enable proper decision making and execution by these bodies;
- Fostering the use of the communication and management tools in order to sustain operational consistency within the project;
- Ensuring smooth operation of the project and guaranteeing that all efforts are focused towards the objectives;
- Submitting all required periodic and final reports, deliverables and financial statements to the
- Commission;
- Transferring the advance payments and final payments to the Beneficiaries' respective financial officers as per the provisional budget and the actual expenses approved by the Commission;
- The PCO relies on the Project Manager.

> **Rule # 3**
> **The Project Coordinator is in charge of contacting the Project Officer in case of a major conflict which could not be solved by the Project decision making body.**

The Project Manager (PM)

Organisation:	CEA
Name of the Project Manager:	Cédric Allier
Address:	CEA Leti DTBS/LSIV Bât. 42 CEA-LETI, MINATEC 17 rue des Martyrs - 38054 Grenoble Cedex 9 France
Tel:	(+33) (0)4 38 78 24 11 - (+33) (0) 6 40 38 98 92
Email:	cedric.allier@cea.fr

The Project Manager provides the Beneficiaries with a professional managerial capacity to lead the actual implementation of the high-level strategic decisions of the PGA on a day-to-day basis. The Project Manager is acting in a consultative capacity for the PGA. The Project Manager is in close contact with all work package leaders in order to foster interactions between them.

The Project General Assembly (PGA)

The Project General Assembly (PGA) is the ultimate decision-making body of the consortium. The Project General Assembly (PGA) is composed of:

- The Project Coordinator;
- One representative from each Beneficiary (as shown in the list below).

CEA	Cédric Allier
IPRASENSE	Geoffrey Esteban
ENS DE LYON	Victor Van Gucht Kiran Padmanabhan (INSERM)
LMU MUENCHEN	Maria Robles
IRCCS	Luca Valenti
ALS	Susanne Freyberg
WUT	Malgorzata Kujawinska

- The Project Manager;

The Advisory Board (AB)

The Advisory Board (AB) plays the role of an ecosystem for providing inputs for running the project. The AB in essence provides feedback in order to help align the REVEAL project results and the expectations of the different communities (research community, industrials, Member State, Public). Additionally, the AB contributes to reaching a considerable visibility of the project results at the European level. The AB is currently composed of the following persons representing European or international organisations:

- George Themelis, advanced technology manager at LEICA Microsystems, Switzerland;
- Jean-Yves Tinevez, Head of Image Analysis Hub at Institut Pasteur, France;
- Andrew deLemos, MD, clinical associate professor, Liver transplant and Gastroenterology, ATRIUM Research, USA.

4 MEETINGS

4.1 Meeting organisation

All meetings are foreseen to be held in person or by web conference or, in the impossibility of access to a web conference tool, any other telecommunication means.

4.2 Project General Assembly meetings

The PGA meetings will be the major forum for reporting on the overall progress of the project and dealing with management issues. There will be at least one face-to-face PGA meeting every year. The meetings will be hosted by different beneficiaries. If necessary, extraordinary meetings could be called at any time upon written request of 1/3 of the Members of the PGA.

The PGA meetings will be chaired by the Coordinator.

The Project Manager will send a meeting invitation to all the participants (30 calendar days in advance for ordinary meetings and 15 calendar days for extraordinary ones) as well as the agenda (21 calendar days in advance for ordinary meetings and 10 calendar days for extraordinary ones). Each partner should participate to the PGA meetings. If he/she cannot, he/she should be replaced by another team member. And if not possible, he/she is still required to send contributions for the meeting date that will be presented by the concerned Work Package Leader.

The Work Package leaders are responsible for filling in the task progress (in a concise but precise way) through PowerPoint slides and to send them back to the Project Manager for archiving after the meetings. The Project Manager will send the slide deck template two weeks before the meeting.

4.3 Monthly web management meetings

There will be at least one web management meeting every six weeks.

The web management meetings will be chaired by the Coordinator.

Each partner should participate to the web management meetings. If he/she cannot, he/she should be replaced by another team member. And if not possible, he/she is still required to send contributions for the meeting date that will be presented by the concerned Work Package Leader.

The Work Package leaders are responsible for filling in the task progress (in a concise but precise way) through PowerPoint slides and to send them back to the Project Manager for archiving after the web meeting session. The Project Manager will send the slide deck template one week before the meeting.

4.4 Advisory Board meetings

In the course of the project, there will be at least two meetings with the AB members. The meetings will be organised at the initiative of the PCO, jointly with the yearly face-to-face meetings.

4.5 Side technical meetings

In order to start and guarantee optimal follow up of the technical activities, bilateral technical meetings will be organised between the work packages.

- Joint meetings WP1 & WP2 (CEA IPRASENSE ALS) - 1 meeting per month will be organised (develop imaging; integrate the imaging platform within the cell picking microscope). The other members of the consortium could join these meetings whenever necessary.

- Joint meetings WP1 & WP3 (CEA ENS WUT) - 2 meetings per month will be organised to start the activities; and then 1 meeting per month (validate the imaging platform; discussion about deliverables preparation progress). The other members of the consortium could join these meetings whenever necessary.
- Meetings WP4 (ENS DE LYON-LMU MUENCHEN-IRCCS) - 1 meeting per month will be organised (technical discussion related to biology tasks). The other members of the consortium could join these meetings whenever necessary.

4.6 Meeting summary of decisions and further actions

Face-to-face PGA meetings and web management meetings

The Project Manager is responsible for drafting the summary of decisions and further actions. The Project Manager will propose a first draft to the PCO. Once validated by the PCO, the document will be sent to the PGA meetings participants for review and approval within 10 days. After this time period, the summary of decisions and further actions will be considered as validated and will be archived on Project Netboard by the Project Managers.

Side Technical Meetings

The same process concerning the summary of decisions and further actions will be implemented by the organisers of side technical meetings.

5 REVEAL WORK PLAN

5.1 Work Packages

'Work Package' means a major sub-division of the whole project. The Project work packages and the lead beneficiaries in charge are listed below:

Work package N°	Work Package Title	Lead participant N°	Lead participant Short Name	Start month	End month
WP01	Development of a neuronal lensfree microscope	P01	CEA	1	48
WP02	Development of a cell picking neuronal microscope	P06	ALS	6	36
WP03	Development of a 3D neuronal microscope	P01	CEA	6	48
WP04	Application of neuronal microscopy to study cancer origins of hepatocellular carcinoma in murine models and clinical specimens	P03	ENS LYON	1	48
WP05	Dissemination & exploitation activities	P03	ENS LYON	1	48
WP06	Project management	P01	CEA	1	48

Table 2 : Work Packages list

5.2 Tasks

The **Project Tasks**, with their corresponding duration and lead Partner in charge are listed in the table below.

Task N°	Task Title	Work package N°	Lead participant N°	Lead participant Short Name	Start month	End month
T01.01	Implement a large surface scanning lensfree microscope	WP01	P02	IPRASENSE	1	12
T01.02	Develop a silico visual cortex for lensfree microscopy	WP01	P01	CEA	1	42
T01.03	Validation of the neuronal lensfree microscope	WP01	P01	CEA	18	48
T02.01	Imaging platform for cell picking inside incubator	WP02	P02	IPRASENSE	6	18
T02.02	Integration of the imaging platform and the cell picking module into a single instrument	WP02	P06	ALS	6	36
T02.03	Integration of the cell picking neuronal microscope into a controlled housing	WP02	P06	ALS	6	24
T02.04	Validation of the cell picking neuronal microscope in operational environment	WP02	P01	CEA	19	36
T03.01	Implement a large surface scanning 3D microscope	WP03	P01	CEA	6	30
T03.02	Develop the 3D visual cortex	WP03	P01	CEA	6	36
T03.03	Validation of the prototypes in laboratory	WP03	P07	WUT	22	48

Task N°	Task Title	Work package N°	Lead participant N°	Lead participant Short Name	Start month	End month
T04.01	Isolation of patient – derived cells and organoid development	WP04	P05	PCLM	1	36
T04.02	Development of murine cell and liver tumour models for imaging	WP04	P03	ENS LYON	1	36
T04.03	Transcriptomic analysis of selected single cells, clusters and organoids	WP04	P03	ENS LYON	6	42
T04.04	Tomographic analysis of selected single cells and clusters	WP04	P07	WUT	18	42
T04.05	Proteomic analysis of cell clusters and organoids	WP04	P04	LMU	6	42
T04.06	Integrative analysis of imaging with Omics and 3D tomography	WP04	P03	ENS LYON	13	48
T05.01	Dissemination activities	WP05	P03	ENS LYON	3	48
T05.02	Exploitation roadmap of the results and IPR	WP05	P02	IPRASENSE	10	48
T05.03	Innovation management and impact monitoring	WP05	P03	ENS LYON	1	48
T05.04	Stakeholder workshop	WP05	P01	CEA	42	46
T05.05	Education & training: pilot line	WP05	P07	WUT	6	48
T06.01	Strategic Decision Making	WP06	P01	CEA	1	48

Task N°	Task Title	Work package N°	Lead participant N°	Lead participant Short Name	Start month	End month
T06.02	Operational Management	WP06	P01	CEA	1	48

Table 3 : Tasks list

5.3 Milestones

'**Milestones'** means control points in the project that help to chart progress. Milestones may correspond to the completion of a key deliverable, allowing the next phase of the work to begin. They may also be needed at intermediary points so that, if problems have arisen, corrective measures can be taken. A milestone may be a critical decision point in the project where, for example, the consortium must decide which of several technologies to adopt for further development.

The Milestones, with their corresponding date of achievement and lead Partner in charge and relation with the work packages, are listed in the table below.

Milestone number	Milestone title	Work package N°	Lead beneficiary	Due date (in months)	Means of verification
M01	A functioning silico visual cortex	WP01	1 - CEA	12	Able to compute image formation and analysis in the framework of deep learning
M02	Prototype of a cell picking neuronal microscope ready for validation	WP02	1 - CEA	24	New instrument with fast scanning lensfree microscope, picking module and sterile environment with incubator function
M03	Operational joint software	WP02	1 - CEA	30	Imaging and picking software working together
M04	3D+time acquisition by means of 3D neuronal microscopy	WP03	1 - CEA	36	Conduct a 3D cell culture acquisition directly into the incubator over several days with the 3D neuronal microscope
M05	Image analysis of patient-derived	WP04	1 - CEA	24	Yield = 70% Purity = 90%

	human and murine tumour-initating cells				
M06	Integrated biological analysis	WP04	1 - CEA	44	Comparison between traditional biophysical features

Table 4 : Milestones list

5.4 Risks

'**Risk**' means uncertain events or conditions, relating to project implementation, that may lead to a situation where the stated project's objectives may not be achieved. Detail any risk mitigation measures. The table below provides a list of the critical risks identified and mitigating actions.

Description of risk	Work package N°	Proposed risk-mitigation measures
The inability to handle the large amount of generated data.	WP01	Build a farm of 10x GPU-based PC station to handle the large dataset
Fail in software communication	WP02	ALS has expertise in the cooperation of different scanning software and picking software. The picking software is able to process external coordinates.
Inaccuracy between picking module and image platform in cell position	WP02	- early merging of hardware - software-based correction algorithm and calibration procedure use of reference masks
Problems in cell picking	WP02	If there is a problem, it is possible to modify the protocol. Researchers involved in this project have advanced knowledge in cell picking, cell treatment and surface modification to ease cell picking
The inability to compute fast 3D reconstruction	WP03	The 3D reconstruction will not be computed in near real time (in between two consecutives acquisitions) but after the acquisitions on a farm of GPU-based PC stations
The inability to efficiently retrieve complex amplitude from intensity-only measurements in 3D microscope setup	WP03	The construction of the 3D microscope will be modified. A reference arm and coherent source will be added in order to make it

Description of risk	Work package N°	Proposed risk-mitigation measures
		easier to retrieve complex amplitude from each projection
The multiple scattering samples will be reconstructed with too low quality	WP03	The samples will be limited to mini-tumours
High heterogeneity in tumor samples from clinical or laboratory origin	WP04	The cells will be labelled with multiple markers or fractionated biochemically prior to FACS sorting
Noise in transcriptomic analyses	WP04	Biological and technical replicates and application of different analysis pipelines for identifying the best solution. In house expertise and collaborators are available as advisors on the project to deal with this situation
Noise in Proteomic analyses	WP04	If the abundance of the cellular proteomes would display large dynamic ranges, the single shot measurement method proposed will have limitations to quantify low abundant proteins in favour of high abundant. In that case we will introduce a step of peptide fractionation to reduce the complexity of the peptide mixture prior to MS measurement. This will increase the number of analysed samples but will improve the limitations, if the case, in identifying and quantifying low abundant proteins.
Risk in exploitation competition	WP05	CEA-Leti has invest in an aggressive patent policy with a portfolio of more than 3000 patents and 28 patents in the computational microscopy domain. We will be working with all the partners to pursue this patent strategy during the project

Table 5: Risks list

5.5 Deliverables

'Deliverable' means a distinct output of the project, meaningful in terms of the project's overall objectives and constituted by a report, a document, a technical diagram, a software etc.

The full list of deliverables, with their corresponding date of delivery and lead Partner in charge and relation with the work packages, are listed in the table below.

Deliverable Number	Deliverable Title	Work package N°	Lead beneficiary	Type*	Dissemination level **	Due date (in months)
D01.01	Neuronal lensfree microscope specifications	WP01	1 - CEA	R	CO	2
D01.02	Scanning lensfree microscope prototype	WP01	2 - IPRASENSE	DEM	CO	18
D01.03	Silico visual cortex	WP01	1 - CEA	OTHER	CO	18
D01.04	Neuronal lensfree microscope final prototype	WP01	2 - IPRASENSE	DEM	CO	48
D02.01	Imaging platform for cell picking inside incubator	WP02	1 - CEA	DEM	CO	9
D02.02	Definition of the cell picking neuronal microscope	WP02	6 - ALS	R	CO	12
D02.03	First prototype of the cell picking neuronal microscope	WP02	6 - ALS	DEM	CO	24
D02.04	Housing	WP02	6 - ALS	DEM	CO	24
D02.05	Final prototype of the cell picking neuronal microscope	WP02	6 - ALS	DEM	CO	36
D03.01	3D neuronal microscope specifications	WP03	1 - CEA	R	CO	8
D03.02	3D microscope prototype	WP03	1 - CEA	DEM	CO	12
D03.03	3D silico visual cortex for 3D	WP03	1 - CEA	OTHER	CO	12

Deliverable Number	Deliverable Title	Work package N°	Lead beneficiary	Type*	Dissemination level **	Due date (in months)
	optical diffraction tomography					
D03.04	3D neuronal microscope final prototype	WP03	1 - CEA	DEM	CO	48
D04.01	Patient derived cells, tumours, organoids	WP04	5 - IRCCS	R	CO	36
D04.02	Murine models, cell lines and derived cells	WP04	3 - ENS DE LYON	R	PU	36
D04.03	Normal and Tumour Transcriptomes	WP04	3 - ENS DE LYON	R	CO	42
D04.04	3D RI distribution in selected cells	WP04	7 - WUT	R	PU	42
D04.05	Normal and Tumour Proteomes	WP04	4 - LMU MUENCHEN	R	CO	42
D04.06	Integrative analysis of Omics and imaging	WP04	3 - ENS DE LYON	R	PU	48
D05.01	Project website and social network account	WP05	3 - ENS DE LYON	OTHER	PU	3
D05.02	Project Data Management Plan	WP05	3 - ENS DE LYON	R	PU	6
D05.03a	Plans for dissemination of the results	WP05	3 - ENS DE LYON	R	PU	12
D05.03b	Plans for dissemination of the results	WP05	3 - ENS DE LYON	R	PU	24
D05.03c	Plans for dissemination of the results	WP05	3 - ENS DE LYON	R	PU	36

Deliverable Number	Deliverable Title	Work package N°	Lead beneficiary	Type*	Dissemination level **	Due date (in months)
D05.04a	Plans for exploitation of the results	WP05	2 - IPRASENSE	R	CO	12
D05.04b	Plans for exploitation of the results	WP05	2 - IPRASENSE	R	CO	24
D05.04c	Plans for exploitation of the results	WP05	2 - IPRASENSE	R	CO	36
D05.05a	Impact assessment methodology	WP05	3 - ENS DE LYON	R	CO	12
D05.05b	Impact assessment methodology	WP05	3 - ENS DE LYON	R	CO	24
D05.06	Demonstrator workshop report	WP05	1 - CEA	R	PU	46
D05.07	Education and training report	WP05	7 - WUT	OTHER	PU	46
D05.08	Final impact assessment - Long-term impact roadmap	WP05	3 - ENS DE LYON	R	PU	48
D05.09	Final dissemination plan	WP05	3 - ENS DE LYON	R	PU	48
D05.10	Final exploitation plan	WP05	2 - IPRASENSE	R	CO	48
D06.01	Project handbook	WP06	1 - CEA	R	PU	3

Table 6: Deliverables list

Type*
R: Document, report (excluding the periodic and final reports)
DEM: Demonstrator, pilot, prototype, plan designs
OTHER: Software, technical diagram, etc.
ETHICS
Dissemination level**
PU = Public / CO = Confidential, only for members of the consortium (including the Commission Services).

6 DOCUMENT PREPARATION AND DELIVERY PROCEDURE

6.1 Deliverable writing process

The writing process of deliverables is coordinated between the **deliverable responsible partner** (**DRP**) and other beneficiaries if multiple actors are involved. The writing process includes but is not limited to: reminding the objectives of the deliverable, proposing a table of contents, gathering the contributions from the other beneficiaries whenever necessary and checking the coherency of the document. Every deliverable responsible partner is in charge of setting the right timing for receiving the various contributions from the other beneficiaries on time.

Step	Who	What	When
Deliverable due date reminder	Project Manager (PM) - (CEA)	The PM reminds the DRP about the deliverables due date during the PGA monthly calls	2 months before submission date
Deliverable writing	DRP	The DRP drafts the deliverable and if needed collect inputs from the contributors	Up to three weeks before submission date

> **Rule # 4**
> **Any difficulty in preparing, submitting a deliverable within the foreseen deadline must be immediately reported to the Coordinator and the Project Manager by the Lead Beneficiary.**

The due deliverables are specified in the table below. Deliverables are due at the end of the expired month. The type and dissemination level of the deliverable are specified with a code explained below.

6.2 Deliverable review process

As soon as the deliverable is completed, an internal review should be performed by **two reviewers in parallel**:

- **Reviewer # 1**: One neutral reviewer. Depending on the deliverable, the neutral reviewer is:
  - o The Work Package leader when the former one is not the deliverable leader
  - o If the Work Package leader is the deliverable leader, the neutral reviewer will be chosen (volunteer candidate) considering the deliverable outcomes.

- **Reviewer #2**: The Project Coordinator

It is highly recommended to plan at least two weeks for internal reviewing (prior to the submission date).

Step	Who	What	When
Review/Validation	PCO (CEA); & Neutral Reviewer	A pre-final version of the deliverable is sent to the two reviewers (PCO / Neutral Reviewer) by the DRP for review and validation. This step includes comments and recommendations for improvements according to the deliverables objectives and expectations set out in the Annex to the Grant Agreement. The PCO / Neutral Reviewer send their feedback to the DRP.	Between 3 weeks and 1 week before submission date
Submission	PCO / PM	After implementing the two reviewers' remarks and recommendations, the DRP sends the final version of the deliverable to the PM and PCO who perform the final checks and the final quality control of the document. The PCO submits the deliverable to the EU Participant Portal on the due date	The week of the submission date
Notification	DRP	The DRP informs the consortium members that the deliverable is available in Project Netboard	After submission by the PCO in the EU Participant Portal

6.3 Deliverable Quality Control

Quality Control (QC) aims to determine the quality of the work and the deliverables submitted to the European Commission. QC requires that the following rules and reference standards are fully applied by the appointed authors.

Document Layout and Format

Deliverables shall consist of three main parts:
Part 1 is a set of Standard Front Pages that has been designed for the Project
Part 2 is the Abstract of a maximum of one page of text only presenting an adequate description of the conclusions or results of the work but does not disseminate any confidential details.
Part 3 is a full description of the deliverable contents. A template for deliverable is provided in **Annex A** to the Project Handbook.

Language

The official language of the REVEAL project is English. All deliverables and reports shall be in English language.

File Name System

All deliverables (text, slides, spreadsheets, etc) shall have an identification reference that must be constructed as follows:

REVEAL_ DX.N_DDMMYY

Where:

X = Work package number (E.g., "2" stands for work package 2);

N= Indicates the deliverable number (E.g., "1" indicates the first deliverable planned under the WP);

vxx = may be used if we need to indicate the version of the document (in case of resubmission following EC request). By default, no version indication should appear on the deliverable number.

Example of the identification reference for the deliverable D6.1 Project Handbook:

REVEAL_D6.1_310321

7 DIGITAL TOOLS

7.1 Collaborative tools for consortium members

All members are responsible to ensure a regular communication by email and conference calls. In this respect, several cooperation tools have been set up in the REVEAL project to keep on track a good communication. Below are presented the two collaborative tools set up at this stage of the project, to ease the work between consortium members.

7.1.1 Document Exchange and Sharing System (Project Netboard)

A Document Exchange and Sharing System has been set up. This tool is the place to securely store and share files related to the project between the consortium members. The tool is accessible via private login details at https://projectnetboard.absiskey.com/ and no additional software or systems are required.

7.1.2 Web conferencing system

The REVEAL project beneficiaries use the GoToMeeting conferencing system or equivalent, to organise web conferences for technical or management meetings. Such web conferencing systems provide screen sharing facilities with voice over IP possibility. An invitation URL and international phone numbers will be sent prior the meeting by the meeting organisers.

7.2 Project Management tool

The reference management tool to be used by the participants is Project Netboard. This project management tool is accessible through the Internet and covers all the management requirements as stated by the Grant Agreement, the Consortium Agreement and the Financial Guidelines of the European Commission.

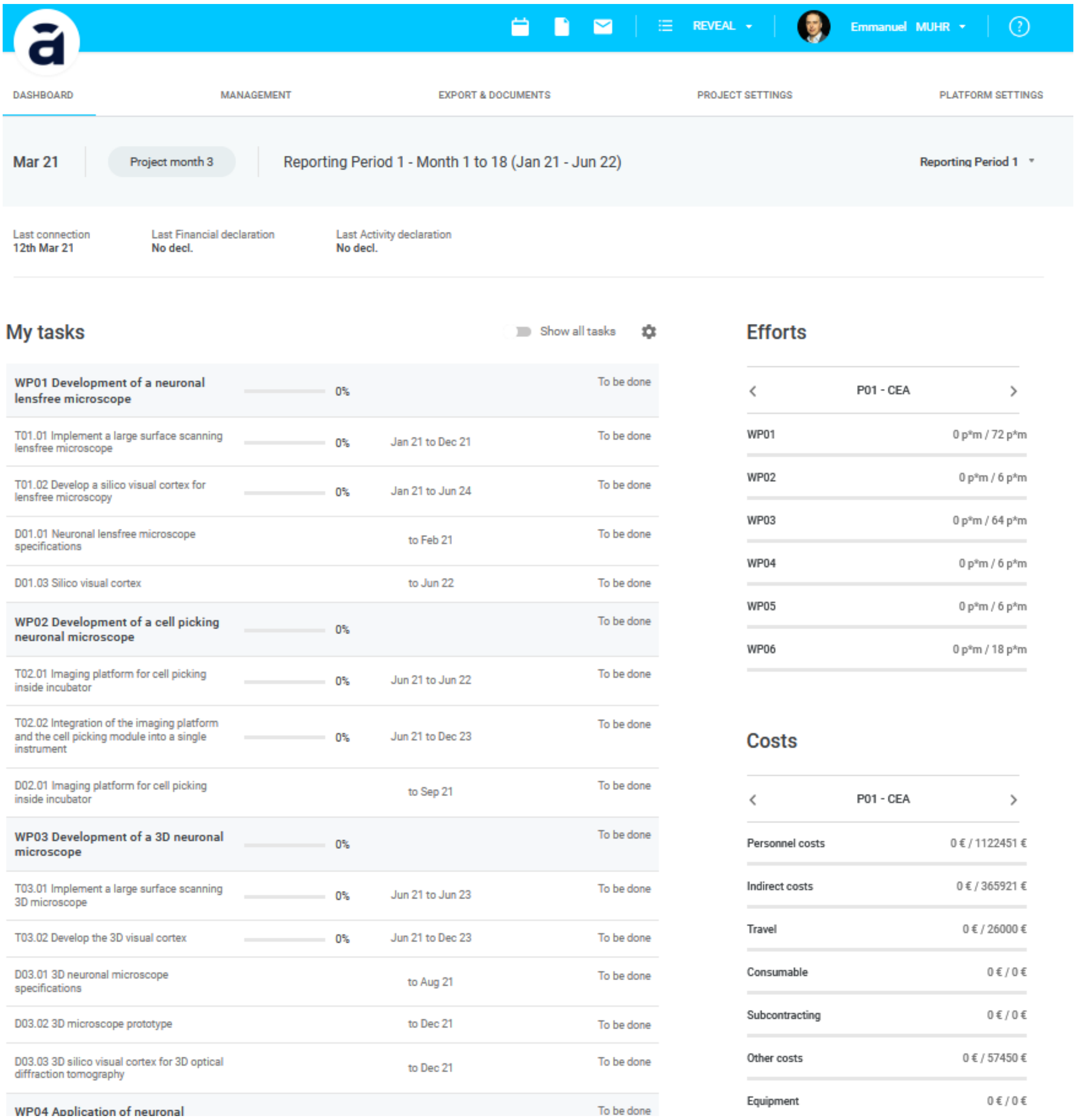

Figure 2: Project Netboard Dashboard

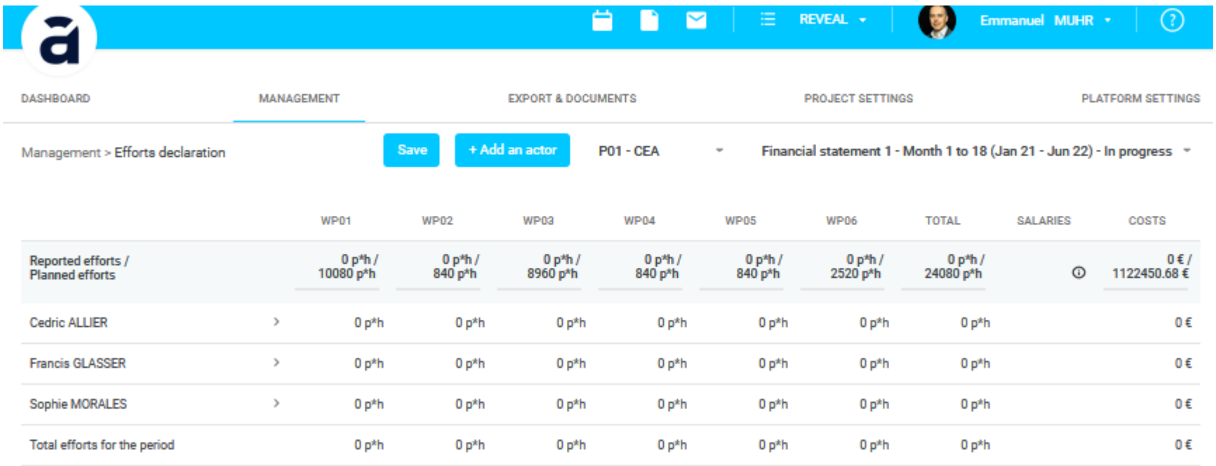

Figure 3: Project Netboard time record

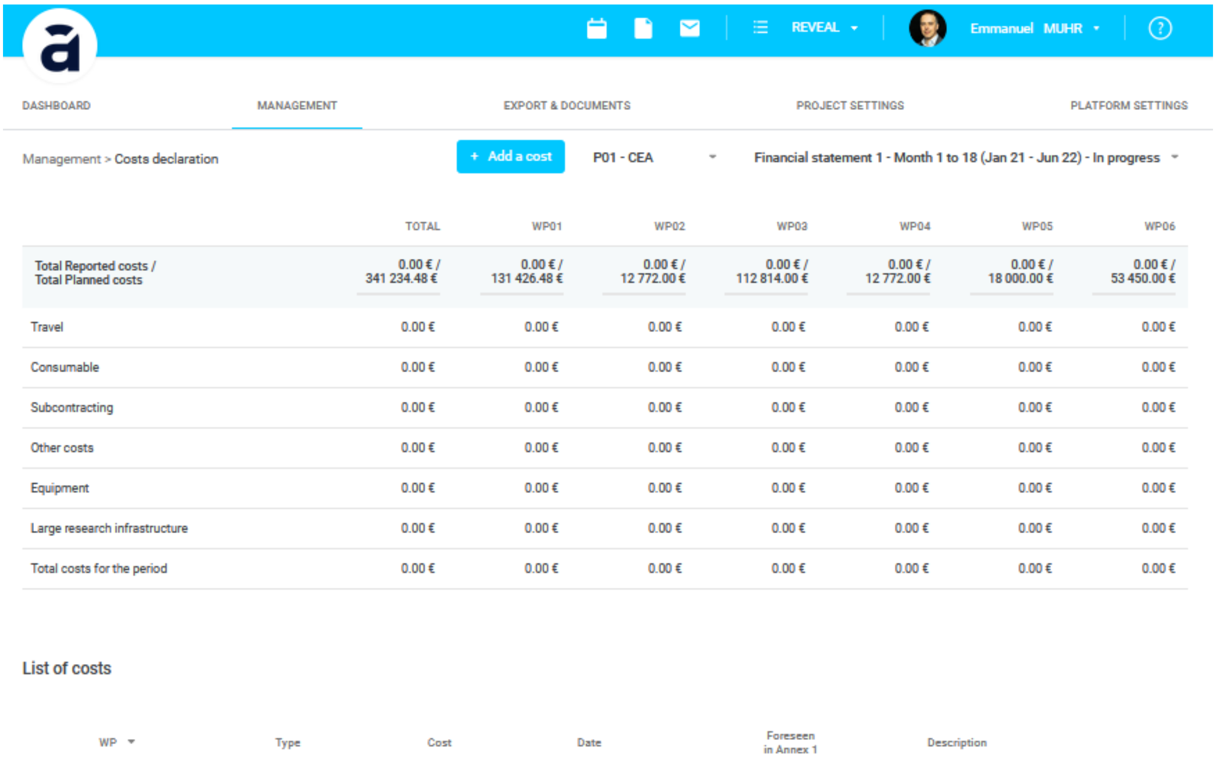

Figure 4: Project Netboard cost reporting

The purpose of using a project management tool like Project Netboard is:

- To ensure the follow-up of activities and the simultaneous management of the relevant costs;
- To compare data from the Grant Agreement with Beneficiaries achievements and their spending;
- To allow the completion of monthly time sheets;
- To provide periodical reports;
- To provide balance sheets.

Advantages of using Project Netboard:

- To monitor the advancement of scientific and technical activities and Project financial status;
- To provide a collaborative work platform easing in a significant way the Coordinator's and Beneficiaries' tasks;
- To automatically produce and edit all documents required by the Commission rules or auditors;
- To allow a transparent management of the Project, without any geographical constraints and with fast interaction;

7.2.1 Access to Project Netboard

- Access to Project Netboard is by direct connection to http://projectnetboard.absiskey.com
- Project Netboard’s first window will require to:
  - Enter a user name;
  - Enter a password;
  - Click on LOGIN.
- Username and password are created and sent individually to each user.

7.2.2 Access rights in Project Netboard

There are three main access levels for Project Netboard:

Coordinator access

- Coordinator means the Coordinator of the REVEAL Project;
- The Coordinator can:
  - Modify all the Project data;
  - Create accesses to Project Netboard for all Project Beneficiaries;
  - Restrict their access rights to any part of Project Netboard;
  - Create other user accounts for Project Netboard, with similar or restricted access rights.

Partner’s Contact Person access

- Partner’s Contact Person means the person responsible for the data on behalf of a Project Partner organisation;
- The Partner’s Contact Person can:
  - Modify his/her data according to the access rights given by the Coordinator;
  - Create accounts for other users at his/her organisation, with similar or restricted access rights.

Partner’s User access

- Partner’s User means an Actor working in the context of the Project or just a simple User of Project Netboard at the Partner organisation;
- A Partner’s User cannot create other user accounts with similar or restricted access rights.

Access rights summary

COORDINATOR	Views, creates, modifies all Project Beneficiaries data
PARTNER'S CONTACT PERSON	Views, creates, modifies all own Partner's User data and all Partner Departments User data
PARTNER'S USER	Views, creates, modifies own data

Rule # 5

Each Partner's Contact Person is in charge of the proper use of Project Netboard by the actors of his/her organisation.

Rule # 6

Project Netboard includes protected software, service and design which shall not be copied by users. Any infringement of the copyright or attempt to access the source code or access to the ABSISKEY servers other than through the given user name and password will definitely exclude the user from the Project Netboard services

7.2.3 Sections of Project Netboard

The **"PROJECT SETTINGS"** section used for preparing the project proposal and the Grant Agreement Preparation;

The **"MANAGEMENT"** section which enables the Coordinator and/or his representatives:

- To keep trace of the payments from the Commission to the Project and monitor the payments to the Beneficiaries;
- To facilitate all bank transfers and to adapt the payments to the justifications provided by the Beneficiaries;
- To validate all individual time sheets of the Project on a task per task basis;
- To collect all Project related events on a Partner-to-Partner basis;
- To trace the deliverables according to the Grant Agreement;
- To monitor the consortium expenses and efforts consumption;
- To prepare and edit different sections of the periodic reports.

All Partner's Responsible Persons and Members can access this module at any time:

- To enter their monthly time sheets;
- To contribute to the Project periodic reports;
- To report any related events;
- To provide feedback on any deviation from the workplan;
- To enter their expenses in the various cost categories;
- To control their costs along time consistently with their time sheets;
- To prepare and edit their financial statements in agreement with the Coordinator and/or his representative;
- To keep trace of their financial history and accounting;
- To keep trace of their figures as foreseen in the Grant Agreement.

Archives are automatically updated on a daily basis and will be maintained for five (5) years after the end of the Project.

The **“EXPORT & DOCUMENTS”**

From this section, all data related to the project (DoA data, Budget data and Financial Reporting data) may be exported in .docx or xlsx formats.

This section also embeds a files exchange and sharing system, where all information about the project can be shared between the consortium members according to the access rights granted.

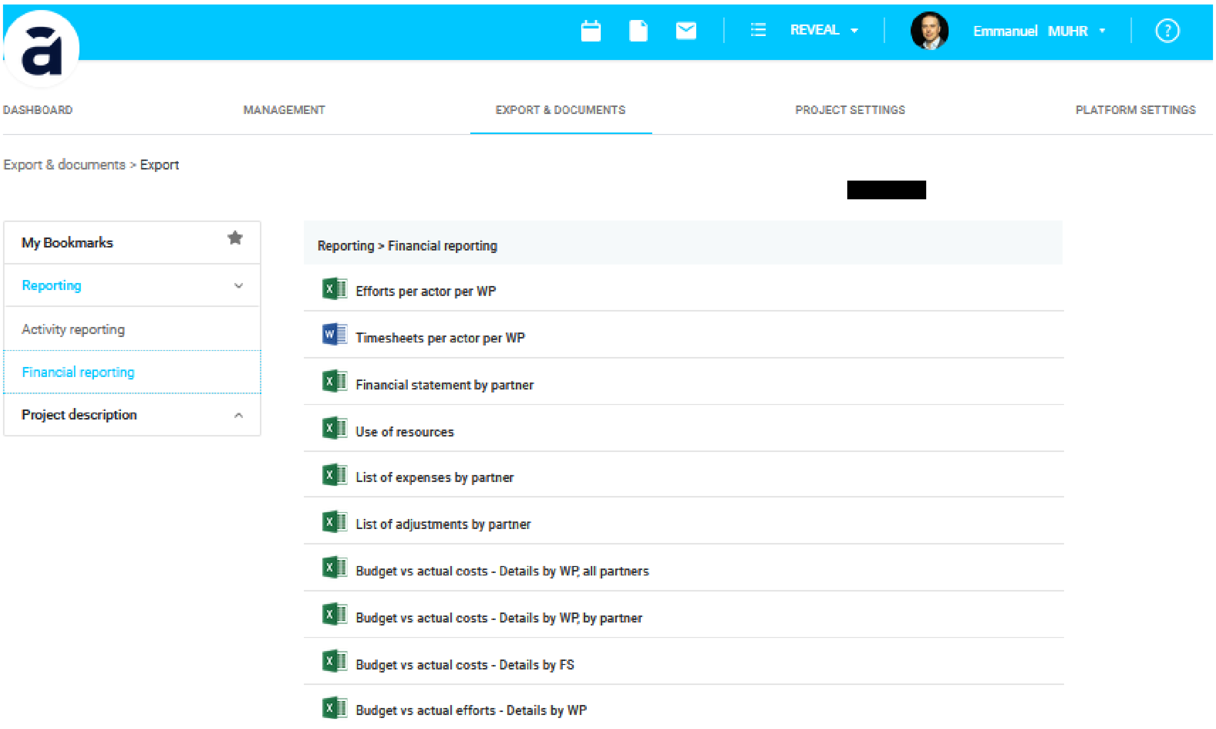

Figure 5: Project Netboard financial document export

[redacted]

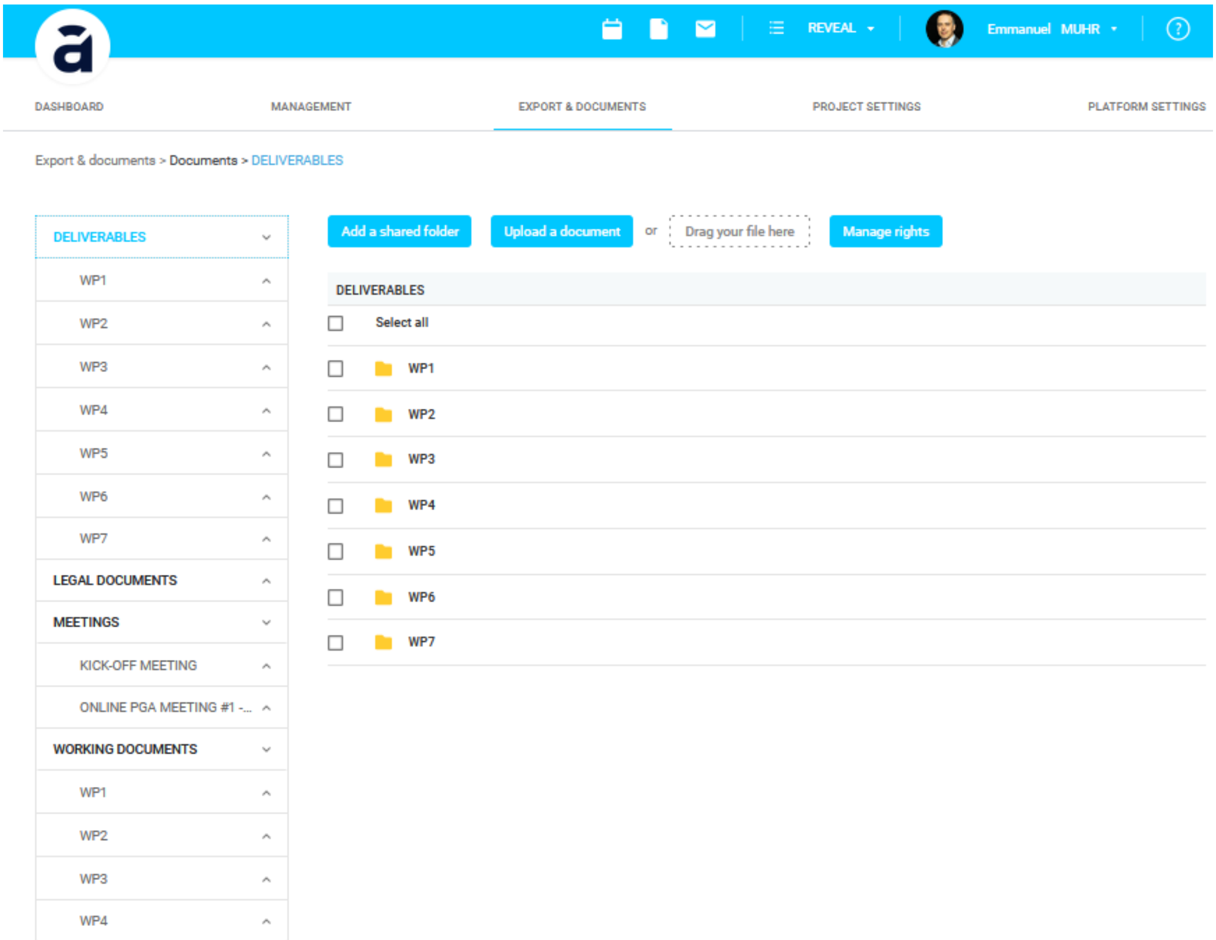

Figure 6: Document Exchange and Sharing System in Project Netboard

> **Rule # 7**
> **All Beneficiaries have agreed to use the Project Netboard tool to satisfy the requested control duties and get a permanent visibility of the project evolution.**

7.3 Project website and social media account

7.3.1 Project website

A website has been designed and set up as a "One Page" integrated website to serve as a key tool for external one-way communication of the project and dissemination activities.
The Web Site is fully open access and accessible at: http://reveal-h2020.ai/ and http://reveal-h2020.eu/

Special care was taken to provide good readability on mobile devices as well.

The 8 category sections that can be currently found on the website are in the following order:

1- Project;
2 - Partners;
3 - News;
4 - Figures;

5 - Events;
6 - Documents;
7 – Contacts us.
8 – PNB Login - private access to Project Management tool and Document Exchange and Sharing System (for consortium members only).

Website Administrators

The REVEAL Website Administrators and Web Content Editors are:

- Kiran PADMANABHAN (P3 ENS DE LYON) - kiran.padmanabhan@ens-lyon.fr

P3 ENS DE LYON is the partner in charge of WP5 Dissemination & exploitation activities and specifically the task related to dissemination activities (Task T5.1).

- Cédric ALLIER (P1 CEA) - cedric.allier@cea.fr

The Consortium members can contact them for any questions or comments.

Rule # 8

Any dysfunction of REVEAL Web Site shall be reported to the Web Site Administrators.

7.3.2 Social media

Both Twitter and LinkedIn were selected as social network platforms for REVEAL.

Figure 7 : Two selected Social Networks for REVEAL (Twitter-LinkedIn)

Administrators of the REVEAL LinkedIn and Twitter accounts

Both P3 ENS DE LYON and P1 CEA will administer the REVEAL Twitter account. After setting up the Twitter account, they will, centralise the information to be shared and communicate with the audience, including replying to messages.

Contributions

All Consortium members are welcome to contribute to the Twitter and LinkedIn account activities via, the Administrators.
However, to reach the widest possible audience, all REVEAL Consortium members who are already using social network are welcome to contribute (for example, retweet and share the project's posts and relevant article contents with the appropriate audiences).

Rule # 9

Any dysfunction of the REVEAL Web Site and the Twitter account shall be reported to the Web Site Administrator.

8 REPORTING DUTIES

8.1 Continuous reporting

As soon as the project starts, The Project Manager, based on the inputs from the beneficiaries, will contribute to the continuous reporting module open in the Participant Portal on an ongoing basis to:

- Submit deliverables
- Report on the progress in achieving milestones
- Provide updates to the publishable summary
- Provide response to critical risks
- Update the sections on publications, communications activities, IPR
- Answer to the questionnaire about the economic and social impact of the project.

All this information is automatically compiled in the Participant Portal and will go automatically into the Part A of the periodic and final reports.

8.2 Periodic and Final Reports

The Coordinator must submit the periodic and final reports within 60 days following the end of the reporting period or the action (M48).

The **periodic report** includes the following parts:

a) A '**periodic technical report**' containing:

an explanation of the work carried out by the beneficiaries during the reporting period;
an overview of the progress towards the objectives of the action, including milestones and deliverables identified in Annex 1 to the Grant Agreement "Description of the Action".

This report must include explanations justifying the differences between the work expected to be carried out in accordance with Annex 1 to the Grant Agreement and the one actually carried out.
The report must also detail the exploitation and dissemination of the results; a summary for publication by the Commission; the answers to the 'questionnaire', covering issues related to the action implementation and the economic and societal impact, notably in the context of the key performance indicators and the monitoring requirements of Horizon 2020 and the Commission;

b) A '**periodic financial report'** containing:

an 'individual financial statement' from each beneficiary and from each linked third party, for the reporting period.

The individual financial statement must detail the eligible costs (actual costs).
The beneficiaries and linked third parties must declare all eligible costs, even if — for actual costs — they exceed the amounts indicated in the initial estimated budget for the action (see Annex 2 to the Grant Agreement). Amounts which are not declared in the individual financial statement will not be taken into account by the Commission.
The individual financial statement must also detail the receipts of the action if any.
When preparing their individual financial statement, each beneficiary and each linked third party must certify that:

- The information provided is full, reliable and true;

- The costs declared are eligible (see Article 6 of the Grant Agreement);
- The costs can be substantiated by adequate records and supporting documentation that will be produced upon request by the Commission or in the context of checks, reviews, audits and investigations initiated by the Commission, and
- That all the receipts have been declared.

An explanation of the use of resources and the information on subcontracting and in-kind contributions provided by third parties from each beneficiary and from each linked third party, for the reporting period;
A 'periodic summary financial statement', created automatically by the Commission's electronic exchange system, consolidating the individual financial statements for the reporting period.

The **final report** includes the following parts:

a) a '**final technical report**' with a summary for publication containing:

1. an overview of the results and their exploitation and dissemination;
2. the conclusions on the action, and
3. the socio-economic impact of the action;

b) a '**final financial report'** containing:

1. a 'final summary financial statement' (see Annex 4 "Model for the financial statements" to the Grant Agreement), created automatically by the electronic exchange system, consolidating the individual financial statements for all reporting periods and including the request for payment of the balance and a 'certificate on the financial statements' (drawn up in accordance with Annex 5 "Model for the certificate on the financial statements" to the Grant Agreement) for each beneficiary *and for each linked third party*, if it requests a total contribution of EUR 325 000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices (see Article 5.2 and Article 6.2, Point A).

See **Annex B** to the Project Handbook for a complete model periodic report.

Rule # 10

It is essential to submit each Periodic and Final Report in due time (in the 60 days after the end of the period). The consequences of non-compliance with this deadline can delay payments by the Commission and this may, in the worst case, lead to termination of the Grant Agreement and recovery of the funds. By the Commission

8.3 Forms of costs eligible in REVEAL

8.3.1 Forms of costs overview

Direct costs

- Personnel costs
- Other direct costs (travels, equipment depreciation, goods and services…)
- Subcontracting costs

Indirect costs (overheads)

- 25% of the direct costs except subcontracting costs. No justification needs to be provided.

8.3.2 Direct Costs Eligibility[1]

General conditions for actual costs to be eligible

The costs must be:

- Purchased by the beneficiary;
- Purchased during the action duration (01/01/2021 – 31/12/2024);
- Necessary for the action;
- Indicated in estimated budget (Annex 2 to the Grant Agreement);
- Identifiable and verifiable, recorded in the beneficiary's accounts,
- Reasonable, justified, complying with the principles of sound financial management.

Personnel costs - Generalities

Personnel costs are the largest type of costs claimed and reimbursed under H2020.

- Only the cost of personnel (temporary or permanent, full-time or part-time employees) that have been assigned to the project can be claimed;
- The beneficiaries are expected to show the actual hours worked, with reliable time records (*i.e., time-sheets*) either on paper or in a computer-based time recording system;
- Time records must be dated and signed at least monthly by the person working for the Project and his/her supervisor;
- Efforts shall be reported as per the actual time spent on the project, per person and per work package.

Personnel costs in Project Netboard

Project Netboard is aligned with the Commission rules and accommodates automatically the determination of the amount of personnel costs[2] that must be calculated as follows:

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[1] More details can be found in the Annotated Model Grant Agreement: Article 6 – paragraph 6.1
http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

[2] More details can be found in the Annotated Model Grant Agreement – Article 6 – Paragraph 6.2:
http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf
http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-issues-list-countries_en.pdf

Hourly rate (*)
Multiplied by
Number of actual hours worked on the Project,
Plus (for non-profit legal entities):
additional remuneration to personnel assigned to the Project

(*) ***Calculation of the hourly rate***

1. For direct personnel costs declared **as actual costs**, the hourly rate must be calculated as follows:

Actual annual personnel costs (excluding additional remuneration) for the person
Divided by
Number of annual productive hours (**)

2. For direct personnel costs declared **as unit costs**, the hourly rate must be calculated in accordance with the Partner's usual cost accounting practices (i.e., average personnel costs). Beneficiaries may request the approval of the methodology used by them to calculate the personnel unit costs by submitting a certificate on methodology.

(**) ***Calculation of the number of annual productive hours***

The H2020 Grant Agreement provides the 3 following options to calculate the ***productive hours***:

1. **Fixed number of hours:** 1,720 hours for persons working full time (or the corresponding pro-rata for persons not working full time);

2. **Individual annual productive hours:** the total number of hours worked by the person in the year for the beneficiary, calculated as follows:

Annual workable hours (***) of the person (according to the employment contract, applicable collective labour agreement or national law)
Plus
overtime worked
Minus
absences (such as sick leave and special leave)

(***) Annual **workable hours means:** the period during which the personnel must be working, at the employer's disposal and carrying out his/her activity or duties under the employment contract, applicable collective labour agreement or national working time legislation.

Note: This option cannot be used if the contract (or applicable collective labour agreement or national working time legislation) does not allow to determine the annual workable hours.

3. **Standard annual productive hours:** the standard number of annual hours generally applied by the beneficiary for its personnel in accordance with its usual cost accounting practices. This number must be at least 90% of the 'standard annual workable hours.

Note: This option cannot be used if there is no applicable reference for the standard annual workable hours.

Notes:

- For all the options explained above: the actual time spent on parental leave by a person assigned to the Project may be deducted from the number of annual productive hours;
- The different options can be used for different types of personnel provided that the same option is applied consistently to each personnel group employed under similar conditions (e.g., same staff category or same type of contract);
- The same option(s) must be used for the full financial year;
- If in doubt, option 1 should be used (1 720 productive hours) — No documentation is required and the auditors will not challenge it;
- When reporting efforts in Project Netboard, the beneficiaries have three possible options for the reporting time units (person*hour, person*day and person*month);
- When reporting efforts in Project Netboard, the beneficiaries have the option to select a detailed (monthly) or simplified (periodic) effort reporting mode.

> **Rule # 11**
>
> **The beneficiaries shall be asked to report their efforts and costs spent on the project at least on a six (6)-monthly basis or whenever requested by the Project Coordinator;**

Travel costs

- Travel costs and related subsistence allowances are for actors taking active part in the project.

Goods and services

- Goods and services must be purchased specifically for the action.

Subcontracting

- Subcontracting costs must be identified in the Annex 1 Part B and Annex 2 to the Grant Agreement;
- For unforeseen subcontracting costs: An amendment to the Grant Agreement will be necessary. The Commission may however exceptionally approve costs related to subcontracts not included in Annex 1 and 2, without formally amending the Gant Agreement (Article 13.1, GA) – if the circumstances are properly explained and justified:
  - The tasks performed by the subcontractor are fully described;
  - The reasons why the use of a subcontractor is needed, taking into account the specific characteristics of the project;
  - The confirmation that the subcontractor was selected as offering the best value for money, if not the lowest price, and avoiding any conflict of interests.

8.4 Most common errors when claiming costs against H2020 projects

It is in the interests of beneficiaries and the Commission that there are as few errors as possible when claiming costs. A low error rate will:

- Strengthen the reputation of Horizon 2020
- Mean continued taxpayer support for science and innovation funding speeds up payments
- Lessen the administrative burden by preventing having to recover amountsunduly paid.

8.4.1 Most common errors found in H2020 projects

The most common errors made by audited beneficiaries are as follows:

Personnel costs

- Unreliable or missing timesheets, supporting documents or insufficient alternative evidence;
- incorrect time claimed;
- incorrect calculation of productive hours;
- ineligible remuneration costs included in the calculation of the hourly rates for both actual costs and for average personnel costs.

Subcontracting and other direct costs

- Subcontracting costs without valid supporting documents;
- Lack of adequate supporting documents for other goods and services;
- Errors in equipment costs due to no direct measurement of the costs;
- Travel costs not related to the action or missing supporting documents.

8.4.2 How to avoid the most common errors when claiming costs

Keeping records of personnel costs and time claimed

It is highly recommended to observe the following principles, when reporting time against the project.

- As a general rule, timesheets that comply with the minimum requirements[3] stipulated in the H2020 grant agreement must be kept.
- The beneficiaries should ensure that the total number of hours declared for a person for a year is not higher than the number of annual productive hours used to calculate the hourly rate.
- The total amount of personnel costs declared for a person for a year must also not be higher than the total personnel costs recorded in the beneficiaries' accounts (double ceiling).
- The beneficiaries should only claim hours actually worked on the project. As such, information included in timesheets must match records of annual leave, sick leave, other types of leave and work-related travel. Also, hours during absences (such as

[3] See [example of time sheet] prepared by the Commission

annual leave or sick leave) cannot be claimed.
- Remuneration must be in line with the beneficiaries' usual practice and supported by evidence (e.g., payroll, salary slips, employment contracts).
- Remuneration should be paid in accordance with national law, the collective labour agreement and the employment contract (or equivalent appointment act).

Claiming costs related to the action

- The beneficiaries should make sure that they can demonstrate a link to the H2020 action (e.g., travels for which costs are claimed must be necessary for the action).
- If it is normal practice for the beneficiaries to consider certain costs as indirect costs, the beneficiaries cannot declare them as direct costs.

Ensuring all costs are properly documented

- Costs claimed must be identifiable and verifiable. This means that they must be reconcilable with the beneficiaries' accounts and supported by documentation.
- The acquisition of goods and services (subcontracting or other direct costs) should comply with the 'best value for money' principle. To demonstrate best value for money, the beneficiaries must also document that the internal procedure was followed or that the subcontracted tasks were carried out.

Direct measurement of costs

- The beneficiaries should ensure that goods and services (e.g., consumables) charged as direct costs to the project are measured accurately and charged at cost basis. This implies that goods or services are not charged to the action using an apportionment method (approximation, distribution keys, etc.). In the absence of direct measurement, the beneficiaries cannot claim costs as direct costs. Such costs are considered as indirect costs, which are calculated using the 25 % flat rate in H2020.

9 AMENDMENTS TO THE GRANT AGREEMENT [4]

The Grant Agreement must be amended if there are any changes to:

- Its terms and conditions (e.g., data or options specific to that agreement);
- Its annexes.

The amended provisions of the Grant Agreement, when accepted by the Commission, become an integral part of the Grant Agreement.

9.1 Who can request an amendment to the Grant Agreement?

The Coordinator and the consortium members are free to propose amendments.

If the coordinator proposes the amendment:

- He/she must check that the consortium has reached agreement through an internal decision-making process, as set out in the consortium agreement;
- Sign & submit the amendment on its behalf.

The Commission can also propose amendments.

9.2 When can an amendment be requested?

Before the end of the project (i.e., the date given in Article 3 of the Grant Agreement)

Exception: In exceptional cases – e.g., if the bank account changes, or the coordinator responsible for paying the balance is replaced – once the project is completed.

9.3 When is an amendment necessary?

When one of the following changes applies:

- Changes involving beneficiaries & linked third parties
- Adding a new beneficiary;
- Deletion of a beneficiary whose participation has been terminated because:
    - it has not signed the grant agreement;

[4] For details on H2020 policy on amendments, see Article 55 of the Annotated Model Grant Agreement http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

- it has not provided a declaration on joint & several liability as requested for some other reason;
- Change of beneficiary due to 'partial takeover';
- Deletion or addition of linked third party (Article 14);
- Specific case: if a beneficiary's participation is terminated at the initiative of other beneficiaries (Article 50.2);
- Change involving the coordinator/principal beneficiary:
  - Change of coordinator;
  - Change in the bank account the coordinator uses for payments;
  - Change in the 'authorisation to administer' option.
- Changes affecting the project or its implementation:
  - Change to Annex 1 to the Grant Agreement;
  - Change in the title of the project or its acronym, starting date, duration or reporting periods;
  - Resumption of project activities after a temporary suspension (Article 49).
- Changes involving the financial aspects of the grant:
  - Change to Annex 2 or 2a to the Grant Agreement;
  - Change in the maximum grant amount, reimbursement rate(s), the estimated eligible costs of the project, the amount of pre-financing or the contribution to the Guarantee Fund;
  - Change concerning specific cost categories ('specific unit costs').

9.4 When is an amendment NOT necessary?

- For certain budget transfers;
- If the name or address of a beneficiary, linked third party or coordinator changes;
- If a universal takeover results in a change of beneficiary;
- If there is a change in the name of the bank or the address of the branch where the coordinator has an account, or in the name of the account holder.

Rule # 12

Any issue that is expected to cause a change in the Grant Agreement and its annexes must be notified without delay to the Coordinator and the Project Manager.

10 CERTIFICATES IN H2020[5]:

10.1 Certificate on the financial statement (CFS)

What?

Some beneficiaries/linked third parties must submit a certificate on the financial statement (CFS). Such a certificate is needed if the beneficiary/linked third party requests a total financial contribution of 325 000 € (or more) as reimbursement for actual costs and personnel costs declared on the basis of unit costs calculated according to its usual accounting practices (i.e., 'average personnel costs'). This means that costs based on lump sums, flat-rates (e.g., indirect costs) or unit costs (other than those for personnel costs calculated according to the beneficiary's usual cost accounting practices) are not counted for the EUR 325 000 threshold (and do not need to be covered by the certificate).
If a certificate is required, all costs declared as actual costs or average personnel costs must be covered by the certificate. Incomplete certificates will be returned for correction. Linked third parties must submit a certificate if it (on its own, without its beneficiary) reaches the 325 000 € threshold.
Certificates submitted before the EUR 325 000 threshold is reached will be rejected by the Commission.
Beneficiaries/linked third parties may submit either one certificate per reporting period or a single CFS for the whole action.

When?

In both cases, the certificate may only be submitted with the final financial report. The Commission will not accept certificates submitted at any other moment (and costs incurred for those certificates will not be considered eligible, because not necessary).

How?

The certificate must be issued by an external auditor, using the template in Annex 5 "Model for the certificate on the financial statements" to the Grant Agreement. Only qualified auditors may issue a certificate. 'Qualified' means qualified in accordance with national legislation implementing Directive 2006/43/EC43 (or any EU legislation that replaces this Directive). The auditor must certify that the costs declared in the financial statement are accurately recorded in the beneficiary's accounting system and eligible and that all receipts have been declared. If the auditor cannot confirm (for any reason), s/he must explain this in detail in the certificate. The Commission will consider the explanation in light of the facts provided by the auditor, and decide on steps to take.

Specific cases (certificates on the financial statements):

Public bodies — For public bodies, the certificate may be issued by an independent public officer with formal competence to audit the beneficiary/linked third party (instead of by an external auditor). International organisations — For international organisations, it can be an internal or external auditor that is appointed in accordance with the internal financial regulations and procedures of the organisation. Beneficiaries/linked third parties from a third country — Beneficiaries/linked third

[5] More details can be found in the Annotated Model Grant Agreement - Article 20 – Paragraph 20.4. Article 18 - Paragraph 18.1.2: http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

and in the participant portal:
http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management/checks-audits-reviews-investigations_en.htm

parties established in a third country must provide a certificate that complies with national regulations in the field.
Auditors qualified in the EU may provide certificates for beneficiaries established in third countries, if they are familiar with the relevant national regulations (national accounting rules) and comply with them when preparing the certification.

10.2Certificate on the Methodology (CoMUC)

What?

To get additional assurance, a beneficiary/linked third party may request that the Commission confirms that its cost accounting practices comply with the conditions set out in Article 6.2.A, by approving a certificate on its methodology (CoMUC).
Approval concerns the cost accounting practices described and certified in the certificate on the methodology.
If the Commission approves the CoMUC, it will not challenge the personnel unit costs (hourly rates) declared — unless information was concealed or fraud or corruption was used to obtain approval (or another methodology was applied).
Approval is valid for all personnel costs declared according to these cost accounting practices, including costs declared before the Commission approval (if the beneficiary can show that they were declared according to the approved practices).

Best practice: Beneficiaries should nevertheless keep detailed records and other supporting documents (to prove that their methodology complied with the rules, if necessary).
Approval is valid for all Horizon 2020 grants (i.e., for the beneficiary's usual cost accounting practices) and is not linked or limited to a specific grant. (It is NOT valid for FP7 grants and, conversely an FP7 certificates is NOT valid for Horizon 2020.).

When?

Beneficiaries may submit their requests for approval at any time — before or during the course of the grant.
If the beneficiary changes its cost accounting practices, it must obtain a new certificate and submit a new request for approval to the Commission.
If the beneficiary declares personnel costs according to the changed cost accounting practices before the new certificate is approved, it accepts to bear the risk that the changed practices are not compliant anymore and that the costs may be declared ineligible.

How?

The beneficiary must submit its certificate on the methodology to the Commission (via the following functional mailbox: EC-H2020-UNIT-COST-METHODOLOGY-CERTIFICATION@ec.europa.eu). The certificate should be drawn up by an independent auditor using the template in Annex 6 "Model for the certificate on the methodology "to the Grant Agreement (or an independent public officer, if the beneficiary is a public body).

11 CHECKS, REVIEWS AND AUDITS BY THE EUROPEAN COMMISSION

11.1 Checks

The European Commission may — at any moment and without any time-limit — check any aspect relating to the execution of the grant agreement.
The European Commission may ask the Coordinator or directly the beneficiaries for any additional information it needs to carry out a check[6]. All requested information must be provided within the given deadline.

The checks may also extend to third parties involved in the action (which is why beneficiaries must ensure that the European Commission can exercise its rights towards contractors, subcontractors, linked third parties or third parties providing in-kind contributions, by including appropriate clauses in their contracts with them;[7]. The European Commission may carry out checks remotely, based on documents it received beforehand.

If the check shows ineligible costs or the violation of 'other obligations' under the grant agreement, it may lead to the rejection of costs or a reduction of the grant and, if necessary, recovery. If a more in-depth examination is required, the Commission may start a review or audit.

11.2 Reviews

In the context of the REVEAL, 3 project reviews have been scheduled as follows:

Review number	Tentative timing	Planned venue
RV1	18	To confirm
RV2	36	To confirm
RV3	48	To confirm

Table 7 : Review meetings schedule

The European Commission may also — at any moment and up until 2 years after the payment of the balance payment — carry out a review.
Reviews normally concern mainly the technical implementation of the action (i.e., its scientific and technological implementation), but may also cover financial and budgetary aspects or compliance with other obligations under the GA.
They consist in an in-depth examination (often done with the help of independent experts) of the progress of the action, and in particular:

- The degree to which the work plan has been carried out and whether all deliverables were completed;
- Whether the objectives are still relevant and provide scientific or industrial breakthrough potential
- How resources were planned and used in relation to the achieved progress, and if their use respected the principles of economy, efficiency and effectiveness;

[6] See Article 17 of the Grant Agreement
[7] See Articles 10-14 of the Grant Agreement

- The management procedures and methods of the action;
- The beneficiaries' contributions and integration within the action;
- The expected potential scientific, technological, economic, competitive and social impact, and plans for using and disseminating results.

Reviews may also extend to third parties involved in the action (which is why beneficiaries must ensure that the European Commission can exercise its rights towards contractors, subcontractors, linked third parties or third parties providing in-kind contributions, by including appropriate clauses in their contracts with them;[8].
If the review shows improper implementation of the action, ineligible costs or the violation of 'other obligations' under the GA, it may lead to suspension, termination, rejection of costs, reduction of the grant and, if necessary, recovery [9]. If carried out during the implementation of the action, a review may also recommend reorientations to the action.

Procedure

The review will be initiated by a letter sent to the Coordinator (via the Commission electronic exchange system[10]). The letter will also mention the names of the independent experts that have been appointed (if any). The Consortium may object to an expert, but only on the grounds of commercial confidentiality.
The draft review report will be sent to the Coordinator for comments within 30 days ('contradictory review procedure').

11.3 Audits

The European Commission may — at any moment and up until 2 years after the payment of the balance — carry out an audit.
Audits normally concern mainly the financial implementation of the action by a beneficiary (i.e., financial and budgetary implementation), but may also cover technical aspects or compliance with other obligations under the grant agreement.
They consist in an in-depth examination (by professional (external or European Commission) auditors and according to the generally accepted audit standards) of the implementation of the action by the beneficiary.
They may also extend to third parties involved in the action and third parties receiving financial support or a prize (which is why beneficiaries must ensure that the European Commission auditors can exercise their rights towards contractors, subcontractors, linked third parties or third parties providing in-kind contributions, by including appropriate clauses in their contracts with them[11];
If the audit shows, ineligible costs, improper implementation of the action or the violation of 'other obligations' under the GA, it may lead to suspension, termination, rejection of costs, reduction of the grant and, if necessary, recovery[12].
In some cases, findings may result in the acceptance of previously rejected costs (if the beneficiary declared them).
In very serious cases, audit results may also lead administrative or financial penalties [13.]

[8] See Articles 10-14 of the Grant Agreement
[9] See Articles 42-44, 47-50 of the Grant Agreement
[10] See Article 52 of the Grant Agreement
[11] See Articles 10-15 of the Grant Agreement
[12] See Articles 42-44, 47-50 of the Grant Agreement
[13] see Article 45 of the Grant Agreement

Once an audit has started, the beneficiary must keep ALL the records and supporting documents until the audit procedure AND its follow-up (including procedure of extension of findings, rejection of costs, reduction of the grant, recovery and litigation) is completed.
Example*: If the beneficiary archives the paper copies of the original supporting documentation not on its premises, the documentation must be retrieved and sent there in time for the audit fieldwork.*

> **Rule # 13**
>
> **Once an audit has started, the beneficiary must keep ALL the records and supporting documents until the audit procedure AND its follow-up (including procedure of extension of findings, rejection of costs, reduction of the grant, recovery and litigation) is completed.**
>
> **Example: If the beneficiary archives the paper copies of the original supporting documentation not on its premises, the documentation must be retrieved and sent there in time for the audit fieldwork.**

Procedure

The audit will be initiated by a letter sent to the beneficiary concerned (via the electronic exchange system or by registered post with proof of delivery[14].
If the European Commission uses an external audit firm, this letter will mention its name. The beneficiary may object on grounds of commercial confidentiality (together with the reasons why) and — if justified — the European Commission may decide to appoint another external auditor (or, in exceptional circumstances, to carry out the audit itself).

The audit usually involves a desk review of the documents requested from the beneficiary and an on-the-spot visit (i.e., on the beneficiary's premises or on the site on which the action is being implemented). There may however also be audits that consist only in a desk review.
The auditors will request access to a wide range of records and documentation *(e.g., payslips, labour contracts, complete statutory accounts, etc.)* and will indicate how and when it must be provided (and in which format).
The beneficiary must provide the auditors with all requested information, records and supporting documents (in the format and within the deadline specified).
The audit procedure will be closed (by the European Commission auditors) with the 'letter of audit conclusions' (and the file will then be passed on to the operational services (authorizing officer) for audit implementation, if necessary).

[14] see Article 52 of the grant agreement

12 MANAGEMENT OF THE INTELLECTUAL PROPERTY (IP)

“Management of the IP” is one of the obligations governed by the Grant Agreement Article 23.a and additional provisions in the Consortium Agreement for all persons and participating organisations in the REVEAL Project. The concept and expectations are further described in the European Commission web site at https://www.iprhelpdesk.eu/

For stepwise elaboration of the Dissemination and Exploitation Plan the REVEAL Beneficiaries will follow the three stages below:

Stage 1 – Identification of the Results, ownership and protection;
Stage 2 – Dissemination of the Results;
Stage 3 – Exploitation of the Results.

12.1 Stage 1 – Identification of results, ownership and protection

The significant pieces of Results generated along time must be registered and considered with respect to the authorship, intellectual property rights and possible protection perspective with reference to the rules set for in the Grant Agreement and the Consortium Agreement.

A significant piece of Result, is a consistent set of information bits and links which can be communicated using a few statements standing by themselves and understandable by all the actors in the domain and even a broader audience. In the scientific area, a piece of Result could be figured out as the summary of a standard publication. A piece of Result must thus be accurate but neither too broad nor too narrow.

> **Rule # 14**
> **In the course of the project, each significant piece of Result shall be archived as soon as it has been identified in specific designed appropriate tools. Then, each piece of Result shall be added in section 6.3 of the periodic report - Intellectual property rights resulting from the project - (See Table 8 below).**

Type of IP Rights	Application reference	Date of the application	Official title of the application	Applicant(s)	Has the IPR protection been awarded?	If available, official publication number of award of protection
[Patent] [Trademark] [Registered design] [Utility model] [Other]	[Option for international applications of patents [insert IP international organisation code] [insert serial number]] [Option for national applications of patents [insert country code (two letters)] [insert serial number]] [Option for other registered IPR [insert application reference country code (two letters) or organisation code)] [insert alfa numeric identifier]]	[insert dd/mm/yyyy]	[insert title of the application]	[insert beneficiary(ies) name]	[YES] [NO] [No applicable]	[Option for patents [insert code (two letters referring to a country or organisation)] [insert serial number]] Option for rest [insert official publication number]]

Table 8: Intellectual property rights resulting from the project

Any identification of the Results can be modified and updated at will up to the release of the final version of the Dissemination and Exploitation Plan.

12.2 Stage 2 - Dissemination of the results

Unless it goes against their legitimate interests, the beneficiaries must — as soon as possible (but not before a decision on their possible protection) — disseminate their results (i.e., make them public).

NO dissemination at all may take place, if:

- The results need to be protected as a trade secret (i.e., confidential know-how) or
- Dissemination conflicts with any other obligations under the Grant Agreement *(e.g., personal data protection, security-related obligations, etc.)*.

The beneficiaries may choose the form for disseminating their results.

Classic forms of dissemination:

- Website;
- Presentation at a scientific conference;
- Peer reviewed publication.

> **Rule # 15**
>
> **The dissemination measures should be consistent with the "Dissemination and Exploitation Plan" and proportionate to the impact expected from the action.**
>
> **When deciding on dissemination, the beneficiaries must also consider the other beneficiaries' legitimate interests.**

Open access to scientific publications

What?

Beneficiaries must ensure open, free-of-charge access to the end-user to peer-reviewed scientific publications relating to their results.
'Peer-reviewed publications' means publications that have been evaluated by other scholars *(e.g., articles in scientific journals)*.
Open access means ensuring that, at the very least, such publications can be read online, downloaded and printed — via a repository for scientific publications.

Open access can be provided through:

a) '**Gold open access**' (also called '**open-access publishing**').

'Gold open access' means that open access is provided immediately via the publisher when an article is published, i.e., where it is published in open access journals or in 'hybrid' journals combining subscription access and open access to individual articles.
In gold open access, the payment of publication costs ('article processing charges') is shifted from readers' subscriptions to (generally one-off) payments by the author. Such author processing costs may be eligible — if incurred before the end of the action.

b) '**Green open access**' (also called 'self-archiving').
'Green open access' means that the published article or the final peer-reviewed manuscript is archived by the researcher (or a representative) in an online repository. Access to the article is often — but not necessarily — delayed (H2020 'embargo period' between 6 and 12 months; *see below*) as some scientific publishers may wish to recoup their investment by selling subscriptions and charging pay-per-download view fees during an exclusivity period.

How?

Open access to scientific publications involves four steps — which may or may not be taken at the same time:

Procedure for open access to scientific publications:

Step 1 — Deposit, in a repository for scientific publications, a machine-readable electronic copy of the published version of the publication (or the final peer-reviewed manuscript as accepted for publication).
This must be done as soon as possible (in some cases, the final version can be deposited before publication, *e.g., once accepted by the journal*) and at the latest on publication.

‘Machine readable copy’ means a format that can be used and understood by a computer; copies must be stored using text file formats that are either standardised or otherwise publicly known, so that anyone can develop new tools for working with them.

Step 2 — Provide open access to the scientific publication — either as ‘gold open access’ (i.e. via the publisher AND via the repository) or as ‘green open access’ (i.e., via the repository only).
Open access must be given:

- In case of ‘gold open access’: at the latest on publication;
- In all other cases: within 6 months.

Step 3 — Ensure open access, via the repository, to certain bibliographic metadata that identify the publication. This is needed for visibility, traceability and monitoring. It must be done in a standard format and include:

- 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 and
- A ‘persistent identifier’ *(e.g., a stable digital object identifier which identifies the publication and links to an authoritative version)*.

The metadata compliance of the repository can be checked using ***OpenAIRE.***
Step 4 — Aim to deposit at the same time, ideally in a data repository, the research data needed to validate the results in the deposited publication.
This is linked to rapid evolution of the concept of ‘publication’ in the digital era. The underlying data needed to validate the results presented in scientific publications is now seen as a crucial part of the publication and therefore an important element of scientific best practice.

Type of scientific publication	Title of the scientific publication	DOI	ISSN or eSSN	Authors	Title of the journal or equivalent	Number, date	Publisher	Place of publication	Year of publication	Releva nt pages	Public & private participation	Peer-review	Is/Will open access provided to this publication
[Article in journal] [Publication in conference proceeding/workshop] [Books/Monographs]	[insert title of the publication]	[insert DOI reference]	[insert ISSN or eSSN number]	[insert authors' name(s)]	[insert title of the journal]	[insert number of the journal] [insert month of the publication] [insert year of the publication]	[insert name of the publisher]	[insert place of publication]		[insert first page of the publication] - [insert last page of the publication]	[YES] [NO]	[YES] [NO]	[Yes - Green OA [insert the length of embargo if any]] [Yes - Gold OA [insert the amount of processing charges in EUR if any]] [NO]

Table 9: Scientific publications

Dissemination activities and visibility of EU funding

Any dissemination of results (in any form), even when combined with other data, must include the reference to EU funding set out in the GA, as follows.

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement N° 101016726

12.3 Stage 3 - Exploitation of the results

The Consortium should specify the exploitable Results and provide the plans for exploitation. It will be kept confidential and will be treated as such by the Commission.

> **Rule # 16**
>
> **Each application for patents, trademarks, registered designs, etc. shall be archived as soon as it has been identified in specific designed appropriate tools. Then, the information shall be listed according to the table: Intellectual property rights resulting from the project, in section 6.3 of the periodic report.**

13 Communication activities by the beneficiaries

13.1 Promoting the Project and its results

The beneficiaries must promote the action and its result, based on the project communication plan that defines clear objectives (adapted to various relevant target audiences). 'Promoting the action' means providing targeted information to multiple audiences (including the media and the public), in a strategic and effective manner and possibly engaging in a two-way exchange.

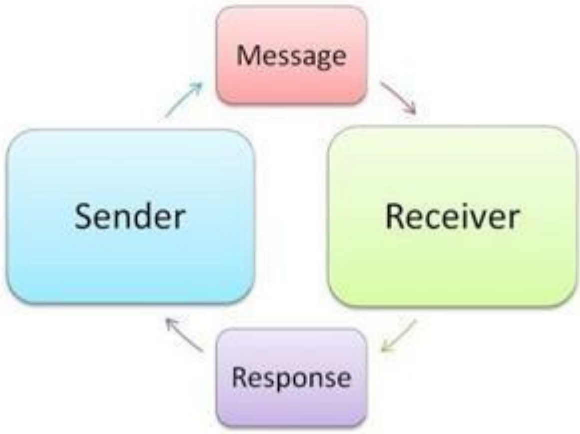

FIGURE 8: TWO-WAY COMMUNICATION PROCESS

Examples of action of promotion:

- A press release for the general public at the start of the action;
- An interview in the local radio station after a major achievement of the action;
- An event in a shopping mall that shows how the outcomes of the action are relevant to our everyday lives;
- Organising local workshops about the action, targeted at audiences for which the action is of interest;
- Producing a brochure to explain the action's work to school or university students to show how interesting this specific research topic can be.

The promotion activities must however:

- Be effective (i.e., suited to achieving the action's communication goals);
- Be proportionate to the scale of the action (e.g., activities carried out by a large-scale action with beneficiaries coming from several different countries and a large budget must be more ambitious than those of a sole participant of a mono-beneficiary grant);
- Address audiences that go beyond the action's own community (including the media and the public).

Dissemination of results cannot replace communication activities (or vice-versa). Moreover, the activities must make the research activities known to multiple audiences (in a way that they can be understood by non-specialists).

Rule # 17

Any communication activity that is expected to have a 'major media impact' (i.e., media coverage (online and printed press, broadcast media, social media, etc.) that will go beyond having a local impact and which could have the potential for national and international outreach) must be first notified to the Commission. Information given may NOT include classified (or otherwise restricted) results.

Type of audience reached In the context of all dissemination & communication activities ('multiple choices' is possible)	Estimated Number of persons reached
[Scientific Community (higher education, Research)] [Industry] [Civil Society] [General Public] [Policy makers] [Medias] [Investors] [Customers] [Other]	[insert number]

Type of dissemination and communication activities	Number
[Organisation of a Conference] [Organisation of a workshop] [Press release] [Non-scientific and non-peer reviewed publications (popularised publications)] [Exhibition] [Flyers training] [Social media] [Web-site] [Communication campaign (e.g radio, TV)] [Participation to a conference] [Participation to a workshop] [Participation to an event other than a conference or workshop] [Video/film] [Brokerage event] [Pitch event] [Trade fair] [Participation in activities organised jointly with other H2020 project(s)] [Other]	[insert number of activities]
Total funding amount	[insert amount in EUR]

Table 10: Dissemination and communication activities

13.2 Communication activities and visibility of EU funding

The beneficiaries must — during the action and afterwards — ensure the visibility of EU funding for any communication activity related to the action (including in electronic form, via social media, etc.) and on any infrastructure, equipment or major result (including prototypes) funded by the grant, by:

displaying the EU emblem and Including the following reference to EU funding:

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 101016726

14 CONCLUSION

The Project Handbook has been designed to support the REVEAL beneficiaries through the project's different activities and it complements the provisions of the Consortium Agreement as well as the Grant Agreement and its annexes. The document identifies the procedures related to project execution, project management and project reporting and dissemination and communication.

Annex A – Deliverable Template

Call: **H2020-ICT-2018-20 / H2020-ICT-2020-2**

Grant Agreement no. **101016726**

DELIVERABLE N.N : Title

Start date of the project: 1st January 2021
Duration: 48 months
Project Coordinator: Cédric ALLIER - CEA
Contact: Cédric ALLIER – cedric.allier@cea.fr

Document Classification

Deliverable Number & Title	Dn.n Title
Work Package	WPn – WP Title
Author(s)	Pn PARTNER ACRONYM – First name Last name
Delivery due date	YYYY-MM-DD
Type	Report: Document, report / Demonstrator: Demonstrator, pilot, prototype, plan designs / Other: Software, technical diagram, etc / Ethics
Dissemination Level	Confidential / Public / Classified

Document History

Internal review	YYYY-MM-DD	Pn PARTNER ACRONYM – First name Last name
Contributions	YYYY-MM-DD	Pn PARTNER ACRONYM – First name Last name
Validation	YYYY-MM-DD	Project Coordinator P1 CEA – Cédric ALLIER cedric.allier@cea.fr

Deliverable n.n
Title
2

Document abstract

Text XX

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 101016726

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3.1.1 Title 3

Text

4 CONCLUSION

Text

Annex B – Model Periodic Report

H2020 Programme

Periodic Report Template
(RIA, IA, CSA, SME instrument, MSCA)

Periodic Technical Report (parts A and B)
Periodic Financial Report

Version 2.1
19 December 2017

Disclaimer
This document is aimed at informing potential applicants for Horizon 2020 funding. It serves only as an example. The actual Web forms and templates, provided in the online reporting system under the Participant Portal, might differ from this example. Periodic and final reports must be prepared and submitted via the online reporting system under the Participant Portal.

Research and Innovation

Structure of the Periodic Report

The periodic report must be submitted by the coordinator within 60 days following the end of each reporting period. It contains the periodic technical and financial reports.

The **periodic technical report** consists of two parts:

- **Part A** of the periodic technical report contains the cover page, a publishable summary and the answers to the questionnaire covering issues related to the project implementation and the economic and social impact, notably in the context of the Horizon 2020 key performance indicators and the Horizon 2020 monitoring requirements. **Part A is generated by the IT system. It is based on the information entered by the participants through the periodic report and continuous reporting modules of the electronic exchange system in the Participant Portal.** The participants can update the information in the continuous reporting module at any time during the life of the project.

- **Part B** of the periodic technical report is the narrative part that includes explanations of the work carried out by the beneficiaries during the reporting period. Part B needs to be uploaded as a PDF document following the template of Part B Periodic Technical report.

The **periodic financial report** consists of:

- Individual financial statements (Annex 4 to the GA) for each beneficiary;
- Explanation of the use of resources and the information on subcontracting and in-kind contributions provided by third parties from each beneficiary for the reporting period concerned;
- A periodic summary financial statement including the request for interim payment.

Preparation and submission of periodic report

- **Continuous reporting functionality** in the participant portal: it is activated at the time the project starts and it is continuously open for the beneficiaries to submit deliverables, to report on progress in achieving milestones, to follow up of critical risks, ethics issues, publications, communications activities, and the answers to the questionnaire on horizontal issues.

- **Periodic reporting functionality in the participant portal**: following the end of each reporting period the functionality of periodic reporting in the Participant Portal will be activated. While the periodic reporting session is open in the electronic exchange system:

- each participant will be able to complete on-line their own Financial Statement (and the financial report of their Third Parties, if any) including the explanations on the use of resources;
- coordinator will be able to upload the Part B of the periodic technical report as a pdf document.

When the coordinator submits the periodic report, the IT tool will capture the information from the continuous reporting module in order to generate the Part A of the periodic technical report. The IT tool will consolidate the individual financial statements and it will generate automatically the report with explanations of the use of resources and the periodic summary financial statements, which corresponds to the request for payment.

⚠ The periodic technical report will be 'locked for review' by the coordinator before its submission. Make sure the information in the continuous reporting module is up-to-date before the periodic report is 'locked for review'. Updates entered after this step will be included in the periodic report of the following period.

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- Instructions and footnotes in blue will not appear in the text generated by the IT system.
- For options *[in square brackets]*: the option that applies must be chosen in the IT system. Options not chosen will automatically either not appear or appear as 'not applicable'.
- For fields in [grey in square brackets] (even if they are part of an option as specified in the previous item): enter the appropriate data in the IT system.
- Data in coloured fields will be prefilled by the IT tool.

PERIODIC REPORT

Grant Agreement number:	[insert Grant Agreement number]
Project[1] Acronym:	[insert acronym]
Project title:	[insert project title]
Start date of the project:	[insert dd/mm/yyyy]
Duration of the project:	[insert duration in months]
[Option for MSCA **Supervisor name:**	[insert name] *]*
[Option for MSCA **Researcher name:**	[insert name] *]*
Period covered by the report:	from [insert dd/mm/yyyy] to [insert dd/mm/yyyy]
Periodic report:	*[*1st*]* *[*2nd*]* *[*3rd*]* *[*4rd*]*
Date of submission of the periodic report:	[insert dd/mm/yyyy]
Version:	[insert number]
Project website[2] address:	[insert website address]
The report is elaborated on the basis of the:	- Original Grant agreement - Amended Grant Agreement through amendment n° [insert number]

(*)Table is completed automatically

[1] The term 'project' used in this template equates to an 'action' in certain other Horizon 2020 documentation
[2] The home page of the website should contain the European flag which are available in electronic format at the Europa website (European flag: http://eurooa.eu/abc/symbols/emblem/index_en.htm) and the Horizon 2020 programme name.

3

1. Summary for publication

This section is structured in three sub-sections that must be completed on-line with suitable quality to enable direct publication by the Commission/Agency. It should be easy to read i.e. written in a language easily understandable by a broader public, thereby promoting the dissemination and supporting the exploitation of EU funded results. It should preferably not exceed 7480 characters (equivalent to two pages of a text document). This part must not contain any confidential data. The summary for publication must be drafted as a "stand-alone" text. No references should be made to other parts of the report. References can be made only to publicly available information. Beside the summary filled within the tool, diagrams or photographs illustrating and promoting the work of the project can be provided (only as images)[3].

1.1 Summary of the context and overall objectives of the project

This section must be completed on-line (see above).

1.2 Work performed from the beginning of the project to the end of the period covered by the report and main results achieved so far

This section must be completed on-line (see above).

1.3 Progress beyond the state of the art, expected results until the end of the project and potential impacts (including the socio-economic impact and the wider societal implications of the project so far)

This section must be completed on-line (see above).

[3] Any rights of third parties must be cleared in advance in accordance with the GA.

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2. Deliverables

Del. no.	Deliverable name	WP no.	Lead beneficiary	Type	Dissemin. level	Delivery date from Annex 1	Actual delivery date	If deliverable not submitted on time: Forecast delivery date if appropriate	Status	Comments
[insert deliverable number]	[insert deliverable name]	[insert WP number]	[insert beneficiary short name]	/R/ /DEM/ /DEC/ /OTHER/	/PU/ /CO/ /CI/	[insert month number]	[insert dd/mm/yyyy]	[insert dd/mm/yyyy]	/Not submitted/ /Request for revision/ /Not assessed yet/ /Not valid/ /Accepted/	[insert comments]

(*) Data in coloured fields will be prefilled by the IT tool.

3. Milestones

Milest. no.	Milestone title	Related WP(s) no.	Lead beneficiary	Delivery date from Annex 1	Means of verification	Achieved	If not achieved Forecast achievement date	Comments
[insert MS number]	[insert milestone name]	[insert WP number]	[insert beneficiary short name]	[insert dd/mm/yyyy]	[insert means of verification as in Annex 1]	/YES/ /NO/	[insert dd/mm/yyyy]	[insert comment if needed]

(*) Data in coloured fields will be prefilled by the IT tool.

4. Ethical Issues (if applicable)

Ethic deliverables	Due date of the compliance of the ethic deliverables	Report of the independent ethics advisor/ advisory board if applicable	Comments
[insert requirement as in Annex I]	[insert dd/mm/yyyy]	/Not submitted/ /Submitted/	[insert comment

(*) Data in coloured fields will be prefilled by the IT tool.

5

5. Critical implementation risks and mitigation actions

At the end of each period beneficiaries should give the state of play of every risk identified in Annex 1 and if necessary give new mitigation measures.

Foreseen Risks

The following table lists the Risks identified in Annex 1. The table is read-only and it is provided as a reference for the State of Play table below.

Risk Number	Description of Risk	Work Packages Concerned	Proposed risk-mitigation measures
[insert risk number as in Annex 1]	[insert risk description as in Annex 1]	[insert WP number]	[insert mitigation measure as in Annex 1]

(*) Data in coloured fields will be prefilled by the IT tool.

Unforeseen Risks

Risk Number	Description of Risk	Work Packages Concerned	Proposed risk-mitigation measures
[insert unforeseen risk number]	[insert risk description]	[insert WP number]	[insert mitigation measure]

States of the Play for Risk Mitigation

Risk Number	Period	Did you apply risk mitigation measures?	Did your risk materialise?	Comments
[risk number]	[period number]	/YES/ /NO/	/YES/ /NO/	[insert comment if needed; mandatory if the risk mitigation measures have not been applied]

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6. Dissemination and exploitation of results

6.1 Scientific publications

Publications accessible via OpenAIRE will be displayed automatically. Beneficiaries will only need to check if the publications are linked to the project.

In case of publications not registered via OpenAIRE, the beneficiary encodes the Digital Object Identifier (DOI) and all the rest of information is complete automatically.

Type of scientific publication	Title of the scientific publication	DOI	ISSN or eSSN	Authors	Title of the journal or equivalent	Number, date	Publisher	Place of publication	Year of publication	Relevant pages	Public & private publication[4]	Peer-review	Is/Will open access provided to this publication
[Article in journal] [Publication in conference proceeding/workshop] [Books/Monographs] [Chapters in books] [Thesis/dissertation]	[insert title of the publication]	[insert DOI reference]	[insert ISSN or eSSN number]	[insert authors' name(s)]	[insert title of the journal]	[insert number of the journal] [insert month of the publication] [insert year of the publication]	[insert name of the publisher]	[insert place of publication]	[insert year of the publication]	[insert first page of the publication] - [insert last page of the publication]	[YES] [NO]	[YES] [NO]	[Yes - Green OA [insert the length of embargo if any]] [Yes - Gold OA [insert the amount of processing charges in EUR if any]] [NO]

(*) Data to be completed only if DOI not available.

[4] Both the joint publications coming from academic and corporate project participants as well as joint publications of project participants with academic/corporate organisations outside the consortium (as long as they are related to the funded project) should be reported.

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6.2 Dissemination and communication activities

List only activities directly linked to the project.

Type of dissemination and communication activities	Number
[Organisation of a Conference] [Organisation of a workshop] [Press release] [Non-scientific and non-peer reviewed publications (popularised publications)] [Exhibition] [Flyers] [Training] [Social media] [Web-site] [Communication campaign (e.g radio, TV)] [Participation to a conference] [Participation to a workshop] [Participation to an event other than a conference or workshop] [Video/film] [Brokerage event] [Pitch event] [Trade fair] [Participation in activities organised jointly with other H2020 project(s)] [Other]	[insert number of activities]
Total funding amount	[insert amount in EUR]

(*) One row per type of activity selected from the drop-down menu in the IT tool.

Type of audience reached **In the context of all dissemination & communication activities** ('multiple choices' is possible)	**Estimated Number of persons reached**
[Scientific Community (higher education, Research)] [Industry] [Civil Society] [General Public] [Policy makers] [Medias] [Investors] [Customers] [Other]	[insert number]

(*) One row per type of activity selected from the drop-down menu in the IT tool.

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6.3 Intellectual property rights resulting from the project

Type of IP Rights	Application reference	Date of the application	Official title of the application	Applicant(s)	Has the IPR protection been awarded?	If available, official publication number of award of protection
[Patent] [Trademark] [Registered design] [Utility model] [Other]	*[Option for international applications of patents* [insert IP international organisation code] [insert serial number]] *[Option for national applications of patents* [insert country code (two letters)] [insert serial number]] *[Option for other registered IPR* [insert application reference country code (two letters) or organisation code)] [insert alfa numeric identifier]]	[insert dd/mm/yyyy]	[insert title of the application]	[insert beneficiary(ies) name]	[YES] [NO] [No applicable]	*[Option for patents* [insert code (two letters referring to a country or organisation)] [insert serial number]] *Option for rest* [insert official publication number]]

(*) By encoding the application reference part of the data will be automatically completed.

6.4 Innovation

Explanation on the terminology used can be found in the Online Manual.

[Option for LEIT, and societal challenges, including FTI, JUs and SME Instrument Does the project include the following activities and if so how many of each?

Activities developed within the project	Number
Prototypes	[insert number]
Testing activities (feasibility/demo)	[insert number]
Clinical trials	[insert number]

Will the project lead to launching one of the following into the market (several possible):

New product (good or service)	[YES] [NO]
New process	[YES] [NO]
New method	[YES] [NO]

]

[Option for LEIT and societal challenges, including FTI, JUs and SME Instrument How many private companies in your project have introduced or are planning to introduce innovations (within the project lifetime or 3 years thereafter):

	Total Number of companies	Number of SMEs
Companies introducing innovation(s) new to the market	[insert number]	[insert number of SMEs]
Companies introducing innovation(s) only new to the company	[insert number]	[insert number of SMEs]

]

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7. Impact on SMEs

[Option for all projects with an SME

SME Name	Turnover of the company at the beginning of the project/most recent accountability period from the beginning of the project	Number of employees at the beginning of the project/ most recent accountability period from the beginning of the project	Turnover of the company at the most recent accountability period	Number of employees at the most recent accountability period
[insert name of SME]	[insert amount from database (pre-filled if information is available, otherwise the user will need to enter the information manually]	[insert amount from database (pre-filled if information is available, otherwise the user will need to enter the information manually]	[insert amount]	[insert number]

(*) Data in coloured fields will be prefilled by the IT tool.

]

[Option for SME Instrument only

Please fill in the table with your estimated forecasts for turnover and employment for the next 3 years (for the multi-beneficiaries project the coordinator should provide figures for the whole project consortium).

	1 year after project completion	2 years after project completion	3 years after project completion
Turnover (€)	[insert amount]	[insert amount]	[insert amount]
Employment (Headcounts)	[insert number]	[insert number]	[insert number]

]

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[Option mandatory for all projects not opting out of the extended 'Open research data pilot' (now covering all of Horizon 2020)

8. Open Research Data

More information on Data Management Plans (DMPs) in the Online Manual.

Digital Object Identifier, DOI (if available)	Title/Identifier (if no DOI available)	Is this dataset Openly accessible[5]?	Is this dataset re-usable[6]	If the dataset is linked to a publication, specify the DOI of the publication
[insert DOI reference]	[insert title or identifier]	[YES] [NO]	[YES] [NO]	[insert DOI reference of the publication]

]

[5] Accessible means Open Access defined as free of charge access for anyone via Internet. Answer "yes" if the open access to the data is already established or if it will be established after an embargo period.
[6] Re-usability has 2 aspects: 1) technical: the technical standards used are compatible 2) legal: the necessary rights are in place for other users to use the dataset.

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9. Gender

Gender of researchers and other workforce[7] involved in the project

Beneficiaries	Number Women researchers[8] (all levels, incl. postdocs and PhD students)	Number Men researchers[8] (all levels, incl. postdocs and PhD students)	Number Women in the workforce other than researchers	Number Men in the workforce other than researchers
[insert name of beneficiary]	[insert number]	[insert number]	[insert number]	[insert number]

(*) Data in coloured fields will be prefilled by the IT tool.

Gender dimension in the project

Does the project include a gender dimension in research content[9]? [YES]/[NO]

[7] Figures must be provided in Head Count.
[8] Researchers are professionals engaged in the conception or creation of new knowledge. They conduct research and improve or develop concepts, theories, models, techniques instrumentation, software or operational methods. (Frascati Manual (2015): §5.35).
[9] Gender dimension in research content means taking into account as relevant the biological characteristics and the social and cultural features of women and men in the content of the research itself. It does not refer to the gender balance in research team participating to the research project.

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[Option only available for projects under "Science with and for Society" (SWAFS)

10. Science with and for Society

More information on definition of "institutional change" and responsible research and innovation (RRI) approach in the Online Manual.

Institutional changes	Intended target of the project (multiple answers possible)	Beneficiaries
[Develop Gender Equality Plans / measures] [Develop material for integration of science and society in curricula (e.g. covering STEM, public engagement, ethics, gender)] [Help uphold human rights and high general ethical standards, by adoption, development and/or implementation of codes of conduct, ethical review, etc.] [Develop activities to anticipate the potential social, environmental, and economic impacts of research (e.g. risk assessment, TA, foresight, Impact assessment, gender analysis)] [Develop a Social Corporate Responsibility dimension to foster responsible innovation] [Help develop R&I standards that enhance social responsibility, inclusiveness, sustainability of R&I processes and products] [Enlarge the scope of R&I activities by fostering informal science education (museums, science centres), promoting citizen science, engaging civil society actors and citizens] [Engage with multiple stakeholders for R&I decision making at local, national, regional EU or global level] [Foster open science and open access to scientific results and data (e.g. on-line open notebooks, open educational resources, open data, etc.)] [Other [insert specification]]	[The project itself / the project's host] [Universities overall] [Research performing organisation] [Public authorities] [International organisations] [Researchers] [Businesses and Industry R&D] [Citizens and NGOs] [Other]	[insert name of beneficiary]

(*) One row per type of institutional change selected from the drop-down menu in the IT tool.

]

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[Option for Projects under societal challenge 3"Secure, clean and efficient energy"

11. Energy

Indicators	*Calls under Societal challenge 3 "Secure, clean and efficient energy"*	Results
[Option for projects under the calls "Energy efficiency" and "Smart cities and communities" only 1- Primary energy savings triggered by the project funded.*]*	*For projects under the call "Energy efficiency" and the call "Smart cities and communities" only.*	[insert amount (quantification (GWh/year per million €)]
[Option for projects under the calls "Energy efficiency" and "Competitive low-carbon energy 2- Total additional investments in sustainable energy triggered by the project within its duration. *]*	*Investments triggered by projects under the call "Energy efficiency" and investments triggered by projects under the call "Competitive low-carbon energy".*	[insert amount in Mio €]
[Option for projects under the call "Smart cities and communities" only 3- City investments - Total additional investment for prototypes or roll-out of innovative SCC concepts, business models, technologies and infrastructures (specifically in Follower Cities) triggered by the project.*]*	*For projects under the call "Smart cities and communities" only.*	[insert amount in Mio €]

]

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[Option for Projects on Infrastructures

12. Infrastructures

List of users

Researchers who have trans-national access to research infrastructures through Union support

Researcher			Employing organisation/Home institution			User-project acronym	Activity Domain (Discipline)	Installations used by the researcher (*)		
Name	Gender	Nationality	Name	Legal Status	Country			Infrastructure Short Name	Installation ID	Installation Short Name
[insert first name] [insert last name]	/M/ /F/	[insert nationality]	[insert name of organisation]	[UNI *University and other higher education organisations*] [RES *Public research organisation (including international research organisation as well as private research organisation controlled by a public authority)*] /SME/ /PRV *Other Industrial and/or profit Private organisation*] /OTH/	[insert country]	[insert acronym]	/Physics/ /Chemistry/ /Life Sciences & Biotech/ /Earth Sciences & Environment/ /Engineering & Technology/ /Mathematics/ /Information & Communication Technologies/ /Material Sciences/ /Energy/ /Social Sciences/ /Humanities/	[insert Short Name of the infrastructure (as in Annex I) to which the first installation used by the researcher belongs]	[insert ID of the first installation used by the researcher (as in Annex I)]	[insert Short Name of the first installation used by the researcher (as in Annex I)]
								(*) add as many rows as installations		

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Research infrastructures made accessible to all researchers in Europe and beyond through EU support and summary of trans-national access provision per installation per reporting period (RP)

Participant number	Organisation short name	Short name of infrastructure	Installation		Unit of access	Min. quantity of access to be provided in Annex I (A)	Access provided in RP1	Access provided in RP2	Access provided in RP3	Access provided in RP4	Total access provided (B)	Difference (B-A)
			Number	Short name								
[insert participant name]	[insert organisation short name]	[insert infrastructure short name as in Annex 1]	[insert installation number as in Annex 1]	[insert installation short name as in Annex 1]	[insert unit of access as in Annex 1]	[insert number as in Annex 1]	[insert number]	[insert number]	[insert number]	[insert number]	[insert TOTAL number]	[insert number]

(*) Data in coloured fields will be prefilled by the IT tool.

Researchers who have access to research e-infrastructures through Union support

e-infrastructure name	e-infrastructure service	Activity Domain (Discipline)	Maximum possible number of users	Nr of actual users by max possible number in P1 (%)	Nr of actual users by max possible number in P2 (%)	Nr of actual users by max possible number in P3 (%)	Nr of actual users by max possible number in P4 (%)
[insert e-infrastructure name]	[insert e-infrastructure service]	/Physics/ /Chemistry/ /Life Sciences & Biotech/ /Earth Sciences & Environment/ /Engineering & Technology/ /Mathematics/ /Information & Communication Technologies/ /Material Sciences/ /Energy/ /Social Sciences/ /Humanities/	[insert number]	[insert percentage]	insert percentage]	insert percentage]	insert percentage]

]

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Project[10] Number: [insert project reference number]

Project Acronym: [insert acronym]

Project title: [insert project title]

Periodic Technical Report

Part B

Period covered by the report: from [insert dd/mm/yyyy] to [insert dd/mm/yyyy]

Periodic report: *[1st] [2nd] [3rd] [4rd]*

[10] The term 'project' used in this template equates to an 'action' in certain other Horizon 2020 documentation

1. Explanation of the work carried out by the beneficiaries and Overview of the progress

- Explain the work carried out during the reporting period in line with the Annex 1 to the Grant Agreement.
- Include an overview of the project results towards the objective of the action in line with the structure of the Annex 1 to the Grant Agreement including summary of deliverables and milestones, and a summary of exploitable results and an explanation about how they can/will be exploited[11].

(No page limit per workpackage but report shall be concise and readable. Any duplication should be avoided).

1.1 Objectives

List the specific objectives for the project as described in section 1.1 of the DoA and described the work carried out during the reporting period towards the achievement of each listed objective. Provide clear and measurable details.

1.2 Explanation of the work carried per WP

1.2.1 Work Package 1

Explain the work carried out in WP1 during the reporting period giving details of the work carried out by each beneficiary/linked third party involved.

1.2.2 Work package 2

Etc.

1.3 Impact

Include in this section whether the information on section 2.1 of the DoA (how your project will contribute to the expected impacts) is still relevant or needs to be updated. Include further details in the latter case.

[Option for Projects on Access to Research Infrastructures

1.4. Access provisions to Research Infrastructures

If access to research infrastructures has been provided under the grant please include access provision activities.

Trans-national Access Activities (TA)

[11] Beneficiaries that have received Union funding, and that plan to exploit the results generated with such funding primarily in third countries not associated with Horizon 2020, should indicate how the Union funding will benefit Europe's overall competitiveness (reciprocity principle), as set out in the grant agreement.

Provide for the set of TA Work Packages, the integrated information described below.

Description of the publicity concerning the new opportunities for access

In the first periodic report describe the measures taken to publicise to research teams throughout Europe the opportunities for access open to them under the Grant Agreement. In the following periodic reports indicate only additional measures and changes.

Description of the selection procedure

In the first periodic report, describe the procedure used to select users: organisation of the Selection Panel, any additional selection criteria[12] employed by the Selection Panel, measures to promote equal opportunities, etc. Specify if feedback is given to rejected applicants and in which form. In the following periodic reports indicate only changes to the existing procedure.

The list of the Selection Panel members should be maintained and update when necessary in order to prove that the panel is composed following the conditions indicated in Article 16.1 of the GA[13]. The Commission reserves the right to request this list at any time.

Indicate number, date and venue (if not carried out remotely) of the meetings of the Selection panel during the reporting period.

Provide integrated information on the selection of user projects and on the scientific output of supported users. In particular indicate the number of eligible User projects submitted in the reporting period and the number of the selected ones taking into account only calls for which the selection has been completed in the reporting period. Indicate also the number of user projects, started and supported in the reporting period, which have a majority of users not working in an EU or associated country

Description of the Trans-national Access activity

Give an overview of the user-projects[14] and users supported in the reporting period indicating their number, their scientific fields and other relevant information you may want to highlight. You should maintain the list of the user-projects for which costs have been incurred in the reporting period. A user-project can run over more than one reporting period. In this case it should be inserted in the list of each concerned reporting period.

The list of user-projects must include, for each user-project, the acronym, objectives, as well as the amount of access granted to it on each installation used by the user-project in the reporting period. When the user-project is completed in the reporting period the list should also include a short description of the work carried out. The Commission reserves the right to request this list at any time.

In addition you must fill the following tables (in Part A to be filled in the IT tool):

- List of users: Researchers who have access to research infrastructures/installations (one or more) through Union support under the grant either in person (through visit) or through remote access;

[12] See article 16.1 of the Grant Agreement.

[13] The selection panel must be composed of international experts in the field, at least half of them independent from the beneficiaries, unless otherwise specified in Annex 1.

[14] A user-project is a proposal for access submitted by a user group to the consortium to be evaluated by the Selection Panel.

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- Research infrastructures made accessible to all researchers in Europe and beyond through EU support and summary of trans-national access provision per installation per reporting period indicate for each installation providing trans-national access under the project the quantity of access actually provided in the Reporting Period (expressed in the unit of access defined in Annex 1 for that specific installation).

Scientific output of the users at the facilities

Give highlights of important research results from the user-projects supported under the grant agreement. Indicate the number and the type of publications derived by user-projects supported under the grant taking into account only publications that acknowledge the support of this EU grant.

You should maintain a list of publications that have appeared in journals (or conference proceedings) during the reporting period and are resulting from work carried out under the Trans-national Access activity. List only publications that acknowledge the support of the European Community. For each publication indicate: the acronyms of the user-projects that have led to the publication itself, the authors, the title, the year of publication, the type of publication (Article in journal, Publication in conference proceeding/workshop, Book/Monograph, Chapters in book, Thesis/dissertation, whether it has been peer-reviewed or not, the DoI (Digital Object Identifier), the publication references, and whether the publication is available under Open Access or not. The Commission reserves the right to request this list at any time.

User meetings

If any user meetings have been organised in the reporting period, indicate for each of them the date, the venue, the number of users attending the meeting and the overall number of attendees.

Virtual Access Activities (VA)

Provide for the set of VA Work Packages, the integrated information described below..

Provide statistics on the virtual access in the period by each installation, including quantity, geographical distribution of users and, whenever possible, information/statistics on scientific outcomes (publications, patents, etc.) acknowledging the use of the infrastructure.

As indicated in Art. 16.2, the access providers must have the virtual access services assessed periodically by a board composed of international experts in the field, at least half of whom must be independent from the beneficiaries. In the first periodic report, describe how the virtual access providers will comply with this obligation. In the following periodic reports indicate only changes to the existing procedure.

When an assessment is scheduled under the reporting period, the assessment report must be submitted as deliverable.

1.5 Resources used to provide access to Research Infrastructures

For virtual or trans-national access costs reported as actual costs include, for each access provider, information on how many of the Person Months (PM) reported in the use of

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resources linked to the financial statements have been used to provide access and explain for which task (e.g. scientific support to users, …).

Beneficiary/Linked Third Party short name	Installation(s)	PM	Explanations of tasks

Information on individual subcontracts must be reported in the use of resources linked to the financial statements in the IT tool. Please mention in the comments field of each subcontract whether it is related to virtual or trans-national access. In addition, all other direct costs items related to virtual or trans-national access must be detailed in the use of resources linked to the financial statements in the IT tool, even if they do not exceed 15% of personnel costs.

]

2. Update of the plan for exploitation and dissemination of result (if applicable)

Include in this section whether the plan for exploitation and dissemination of results as described in the DoA needs to be updated and give details.

3. Update of the data management plan (if applicable)

Include in this section whether the data management plan as described in the DoA needs to be updated and give details.

4. Follow-up of recommendations and comments from previous review(s) (if applicable)

Include in this section the list of recommendations and comments from previous reviews and give information on how they have been followed up.

5. Deviations from Annex 1 and Annex 2 (if applicable)

Explain the reasons for deviations from the DoA, the consequences and the proposed corrective actions.

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5.1 Tasks

Include explanations for tasks not fully implemented, critical objectives not fully achieved and/or not being on schedule. Explain also the impact on other tasks on the available resources and the planning.

5.2 Use of resources (not applicable for MCSA)

Include explanations on deviations of the use of resources between actual and planned use of resources in Annex 1, especially related to person-months per work package.

Include explanations on transfer of costs categories (if applicable).

Include explanations on adjustments to previous financial statements (if applicable).

5.2.1 Unforeseen subcontracting (if applicable) (not applicable for MCSA)

Specify in this section:

a) the work (the tasks) performed by a subcontractor which may cover only a limited part of the project;
b) explanation of the circumstances which caused the need for a subcontract, taking into account the specific characteristics of the project;
c) the confirmation that the subcontractor has been selected ensuring the best value for money or, if appropriate, the lowest price and avoiding any conflict of interests.

5.2.2 Unforeseen use of in kind contribution from third party against payment or free of charges (if applicable) (not applicable for MCSA)

Specify in this section:

d) the identity of the third party;
e) the resources made available by the third party respectively against payment or free of charges
f) explanation of the circumstances which caused the need for using these resources for carrying out the work.

Periodic Financial Report

Individual financial statements (Annex 4 to the GA). More information in the Online Manual. The IT tool will show the applicable financial statement to your type of action.

ⓘ print format A4 landscape

MODEL ANNEX 4 FOR H2020 GENERAL MGA — MULTI

FINANCIAL STATEMENT FOR *[BENEFICIARY [name]/ LINKED THIRD PARTY [name]]* FOR REPORTING PERIOD [reporting period]

	Eligible[1] costs (per budget category)														Receipts				Additional information
	A. Direct personnel costs				B. Direct costs of subcontracting	*[C. Direct costs of fin. support]*	D. Other direct costs			E. Indirect costs[2]	*[F. Costs of …]*			Total costs	Receipts	Reimbursement rate %	Maximum EU contribution[3]	Requested EU contribution	Information for indirect costs :
	A.1 Employees (or equivalent) A.2 Natural persons under direct contract A.3 Seconded persons *[A.6 Personnel for providing access to research infrastructure]*		A.4 SME owners without salary A.5 Beneficiaries that are natural persons without salary			*[C.1 Financial support]* *[C.2 Prizes]*	D.1 Travel D.2 Equipment D.3 Other goods and services	*[D.4 Costs of large research infrastructure]*	D.5 Costs of internally invoiced goods and services		*[F.1 Costs of […]]*		*[F.2 Costs of […]]*		Receipts of the action, to be reported in the last reporting period, according to Article 5.3.3				Costs of in-kind contributions not used on premises
Form of costs[4]	Actual	Unit	Unit		Actual	Actual	Actual	Actual	Unit	Flat-rate[5] 25%	Unit		*[Unit][Lump sum]*						
	a	Total b	No hours	Total c	d	*[e]*	f	*[g]*	Total h	i=0.25 x (a+b+c+f+*[g]*+h+*[j1]*[6]+*[j2]*[6]-p)	No units	Total *[j1]*	Total *[j2]*	k = a+b+c+d+*[e]*+f+*[g]*+h+i+*[j1]*+*[j2]*	l	m	n	o	p
[short name beneficiary/linked third party]																			

The beneficiary/linked third party hereby confirms that:
The information provided is complete, reliable and true.
The costs declared are eligible (see Article 6).
The costs can be substantiated by adequate records and supporting documentation that will be produced upon request or in the context of checks, reviews, audits and investigations (see Articles 17, 18 and 22).
For the last reporting period: that all the receipts have been declared (see Article 5.3.3).

ⓘ Please declare all eligible costs, even if they exceed the amounts indicated in the estimated budget (see Annex 2). Only amounts that were declared in your individual financial statements can be taken into account lateron, in order to replace other costs that are found to be ineligible.

[1] See Article 6 for the eligibility conditions

[2] The indirect costs claimed must be free of any amounts covered by an operating grant (received under any EU or Euratom funding programme; see Article 6.2.E). If you have received an operating grant during this reporting period, you cannot claim indirect costs unless you can demonstrate that the operating grant does not cover any costs of the action.

[3] This is the *theoretical* amount of EU contribution that the system calculates automatically (by multiplying the reimbursement rate by the total costs declared). The amount you request (in the column 'requested EU contribution') may be less.

[4] See Article 5 for the form of costs

[5] Flat rate : 25% of eligible direct costs, from which are excluded: direct costs of subcontracting, costs of in-kind contributions not used on premises, direct costs of financial support, and unit costs declared under budget category F if they include indirect costs (see Article 6.2.E)

[6] Only specific unit costs that do not include indirect costs

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Report on Explanations on the use of resources (not applicable for MCSA)

A report on explanations on the use of resources per beneficiary. The report is generated automatically with the information inserted by the beneficiary at the time the financial statements are completed in the IT tool.

Project Number	[project number]
Acronym	[acronym]
Period Number	[1st] [2nd] [3rd] [4rd]
Period covered	From [dd/mm/yyyy] to [dd/mm/yyyy]

Beneficiary Number	[beneficiary number]
Beneficiary Short Name	[beneficiary short name]

Direct personnel costs

1. Direct personnel costs declared as actual costs (When direct personnel costs are reported in the financial statement, a pop-up window will appear in the IT tool requesting to give information of the amount on person months per WP).

Person months	Associated WP
[insert number pm]	WP1
[insert number pm]	WP2
[insert number pm]	WP3
[insert number pm]	(etc.)

2. Direct personnel costs declared as unit costs (When direct personnel costs are reported as unit costs, including unit costs for SME owners without a salary and beneficiaries that are natural persons without a salary, in the financial statement, a pop-up window will appear in the IT tool requesting to give information on the amount of person months per WP).

Person months	Associated WP
[insert number pm]	WP1
[insert number pm]	WP2
[insert number pm]	WP3
[insert number pm]	(etc.)

3. Use of in kind contribution from third party (When direct personnel costs are reported – as actual or unit costs - in the financial statement, the pop-up window used to give information on the amount of person months per WP will also request details about the use of in kind contribution from third party: the costs, the name and type of the third party and whether the costs were foreseen in Annex 1 or not. Further explanations are mandatory if costs were not foreseen in Annex 1).

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Third Party name	Type	Foreseen in Annex 1	Explanations (if not foreseen in Annex 1)	Costs
[insert name]	[Free of charge] [Against payment]	[YES] [NO]	[insert comment]	[insert amount in EUR]
One row per third party				
TOTAL				[insert amount in EUR]

Direct costs of subcontracting

(When subcontracting costs are reported in the financial statement, a pop-up window will appear in the IT tool requesting to give information on the costs, description of the subcontract and if the subcontract was foreseen in Annex 1 or not. Further explanations are mandatory if subcontract not foreseen in Annex 1).

Description	Foreseen in Annex 1	Explanations (if not foreseen in Annex 1)	Costs
[insert comment]	[YES] [NO]	[insert comment]	[insert amount in EUR]
One row per subcontract			
TOTAL			[insert amount in EUR]

Direct costs of providing financial support to third parties

(When direct costs of financial support to third parties (cascade funding) are reported in the financial statement, a pop-up window will appear in the IT tool requesting to give information on the costs and their description).

Description	Costs
[insert comment]	[insert amount in EUR]
One row per item.	
TOTAL	[insert amount in EUR]

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Other direct costs: 1. explanation of major actual cost items if the amount exceeds 15% of personnel costs; 2. Unit costs for internal invoicing

1. Other direct costs declared as actual costs: If actual costs declared under "other direct costs" are equal or less than 15% of claimed personnel costs for the beneficiary in each reporting period, no need to give any detail.

If actual costs declared under "other direct costs" are higher than 15% of claimed personnel costs for the beneficiary in each reporting period, major direct costs items need to be recorded in the pop-up window within the IT tool. The record of items must be up to the level that the remaining costs are below 15% of personnel costs, starting from the cost items of highest value in terms of cost amount. If costs were foreseen in the Annex 1 no further explanation is needed. If costs were not foreseen in Annex 1, further explanations are needed.

Short description	Category	Associated WP	Foreseen in Annex 1	Explanation (if not included in Annex 1)	Costs
[insert comment]	[Travel] [Equipment] [Other goods & services]	[insert WP number]	[YES] [NO]	[insert comment]	[insert amount in EUR]
One row per item					
TOTAL					[insert amount in EUR]

2. Other direct costs declared as unit costs (When unit costs for internally invoiced goods and services are reported in the financial statement, a pop-up window will appear in the IT tool requesting to give information on the costs and their description)..

Short description	Associated WP	Foreseen in Annex 1	Explanation (if not included in Annex 1)	Costs
[insert comment]	[insert WP number]	[YES] [NO]	[insert comment]	[insert amount in EUR]
One row per item				
TOTAL				[insert amount in EUR]

Other direct costs reported as use of in kind contribution from third party

Third Party name	Type	Category	Associated WP	Foreseen in Annex 1	Explanations (if not foreseen in Annex 1)	Costs
[insert name]	[Free of charge] [Against payment]	[Travel] [Equipment] [Other goods & services] [Internal invoicing]	[insert WP number]	[YES] [NO]	[insert comment]	[insert amount in EUR]
One row per item						

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TOTAL	[insert amount in EUR]

HISTORY OF CHANGES		
VERSION	PUBLICATION DATE	CHANGE
1.0	15.07.2015	Initial version
1.1	14.09.2015	Table on section 12 on Research infrastructures has been corrected.
1.2	08.08.2016	Simplification of the question on energy. Question on gender: distinction between researchers and other work force. Corrections for MSCA.
1.3	27.03.2017	Modification of Part B for Research Infrastructures (RI) actions to include a table with the resources used to provide access to RI.
2.0	19.09.2017	Revision to include the new cost category in MGA v4.0 (other direct costs declared as units costs for internally invoiced goods and services)
2.1	19.12.2017	Update of part B of the template to include explanations on adjustments to financial statements declared on previous periods.