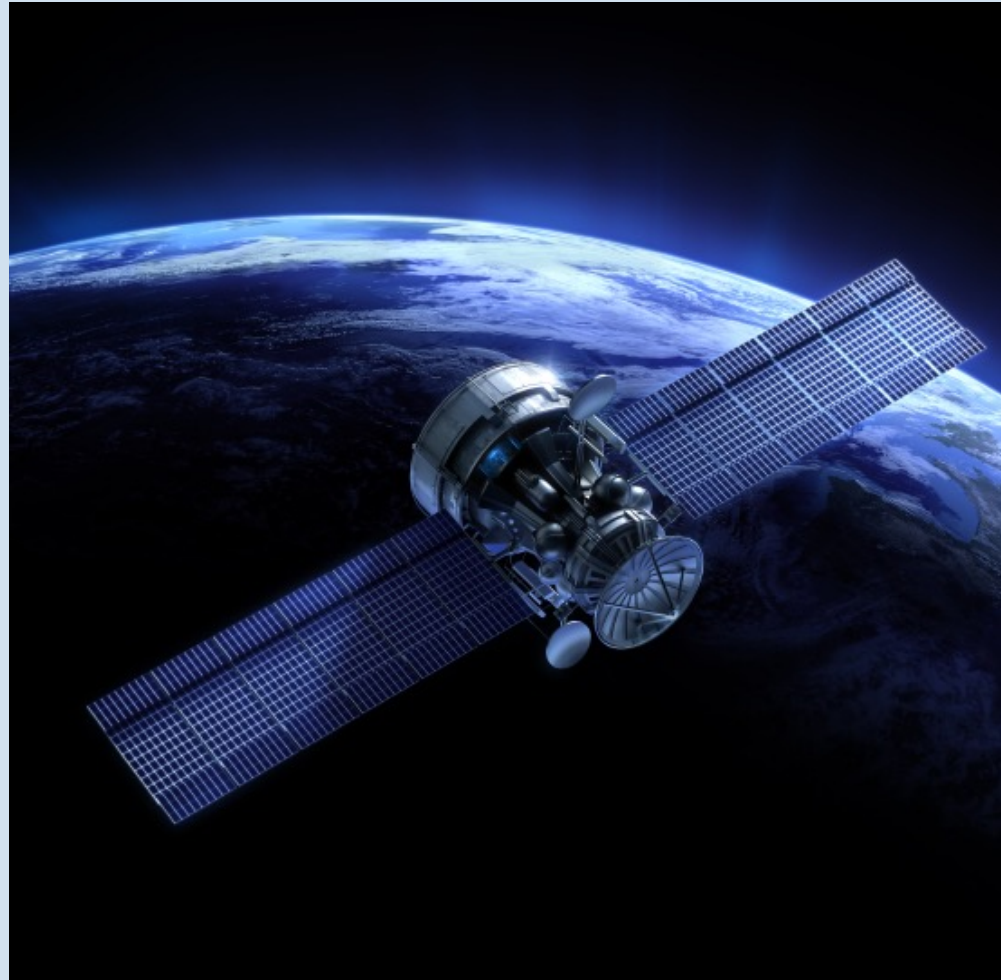


SEEDS within the H2020 context & project implementation guidelines

Monika KAÇIK
Research Executive Agency (REA)
B1 – Space Research Unit

CONFESS Kick-off meeting
19th January 2021

1. Introduction
2. **LC-SPACE-18-EO-2020:
Copernicus evolution –
Research activities in
support of the evolution
of the Copernicus
services**
3. Reporting and reviews
4. Avoiding financial errors
5. Dissemination &
communication





REA's Space Research Unit is responsible for the implementation of part of the Horizon 2020 Space work programme and of the FP7-SPACE work programme legacy. **As of 1 April 2021 (tbc) Space Programme moves to a newly created agency - European Health and Digital Executive Agency(HaDEA).**

The REA is in charge of:

- Organising the evaluation of proposals
- Grant agreement preparation
- Technical, legal and financial monitoring of projects

EU Space policy: **European Commission** (DG DEFIS: Defence Industry and Space) – including the H2020 work programmes.



Copernicus

COPERNICUS system

"Connecting the future"

Copernicus is a **unique programme** that uses cutting-edge **technology** to transform worldwide data and measurements into **valuable information** for **decision-makers** and **people...**

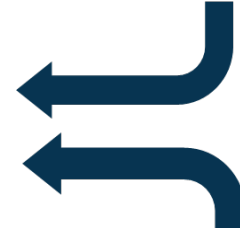


7 Copernicus Sentinels
...more to come



...to help address our societal challenges

Contributing satellite missions





Copernicus

What EVOLUTION means

- EVOLUTION of the SERVICES
- EVOLUTION of the SPACE COMPONENT

Based on

- Well identified user needs and requirements (UR study, consultation with Entrusted entities and users, workshops...)
- New emerging policies

anthropogenic CO₂
& GHGs emissions

changes in the
Arctic

land use & forestry

First request from the users: CONTINUITY!!

LC-SPACE-18-EO-2020: Copernicus evolution: Research activities in support of the evolution of the Copernicus services - Overview

Specific Challenge: Copernicus core services shall respond to emerging user requirements and EU policies

Scope: the proposal should tackle only one of the sub-topics (next slide).

The proposal should clearly identify one (or more) core product(s) to be developed as a completely new or improved product taking into account the **existing portfolio** of the services and clearly **define to what extent main model, algorithm, tool and technique should be improved to generate new or better products.**

- demonstrate the technical operational feasibility
- **proof-of-concept or a prototype modular and scalable** and should guarantee the expandability required for the integration of new data from potential space or non-space new mission/sensors.
- **New IT tools for a better data exploitation, processing and distribution**, e.g.: cloud and HPC computing, distributed computing, Artificial Intelligence, machine learning, ensemble modelling, model coupling & nesting, software as-a-service.
- At least **one proposal per sub-topic** shall be selected for funding

Expected Impact:

- Increased coverage of EU policies
- Integration of different observation capacities with a clear demonstration of an increase in the service performance
- The proposed proof-of-concept should clearly demonstrate an improvement of the Copernicus services

Copernicus R&D interests:

- **Copernicus Emergency Monitoring Service:** resilience to climate risk, population exposure risk (e.g. in coastal areas, flood prone areas, areas exposed to droughts...).
- **Copernicus Monitoring Atmosphere Service:** Up-to-date emissions of reactive gases and aerosol based on inverse modelling, Improve atmosphere monitoring using data assimilation and preparation for upcoming sentinels (with a focus on Sentinel-4), emission and deposition of atmospheric pollutants.
- **Copernicus Climate Change Service:** exploitation of seasonal forecasting systems, enhancement of predictive skills at seasonal timescales, consistent climate re-analysis, improvement in predicting variations of the climate system over the next few years and decades, link with extreme weather events (droughts, heat waves or floods)
- **Copernicus Marine Environmental Monitoring Service:** Advanced marine data assimilation techniques for physics, improvement of biogeochemical products for the carbon cycle (CO₂ ocean component), water quality and food security, improved biogeochemical models, coupled physics and biogeochemistry models and use of new in-situ observations (e.g. BGC Argo) to validate biogeochemical models
- **Copernicus Land Monitoring Service:** essential ecosystem variables for natural capital accounting, HRL for agriculture, and forest and urban, CLC+, environmental compliance, support to sustainable development goals, exploitation of mid and high resolution satellite combination for continuous environmental change monitoring.
- **Security** integration of relevant information derived from space or no-space sources to better support civil protection and security. New algorithms for automated monitoring and detection of changes and patterns of life, to bridge the gap between demand and supply



23 proposals submitted: 1 proposal (2 in CMEMS) per each service funded (*Total budget: 10 M€*)

□ CEMS - ECFAS - A PROOF-OF-CONCEPT FOR THE IMPLEMENTATION OF A EUROPEAN COPERNICUS COASTAL FLOOD AWARENESS SYSTEM

Starts 1st Jan 2021. Duration 24 months. Coordinator - Istituto Universitario di Studi Superiori di Pavia

CEMS - WQeMS - Copernicus Assisted Lake Water Quality Emergency Monitoring Service

Starts 1st Jan 2021. Duration 30 months. Coordinator - Centre for Research and Technology-Hellas (CERTH)

□ CAMS – SEEDS – Sentinel EO-Based Emission and Deposition Service

Starts 1st Jan 2021. Duration 36 months. Coordinator - NORISK INSTITUTT FOR LUFTFORSKNING STIFTELSE (Nilo)



- ❑ **C3S - CONFESS - Consistent representation of temporal variations of boundary forcings in reanalyses and seasonal forecasts**

Starts 1st Nov 2020. Duration 36 months. Coordinator – European Center for Middle Range Weather Forecast (ECMWF)

- ❑ **CMEMS - SEAMLESS - Services based on Ecosystem data AssiMiLation: Essential Science and Solutions**

Starts 1st Jan 2021. Duration 36 months. Coordinator - PLYMOUTH MARINE LABORATORY LIMITED

- ❑ **CLMS - RapidAI4EO - Advancing the State-of-the-Art for Rapid and Continuous Land Monitoring**

Starts 1st January 2021. Duration 27 months. Coordinator VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (VITO)

- ❑ **Security - ARCOS - Arctic Observatory for Copernicus SEA Service** *Starts 1st Dec 2020. Duration 30 months* Coordinator E-GEOS SPA

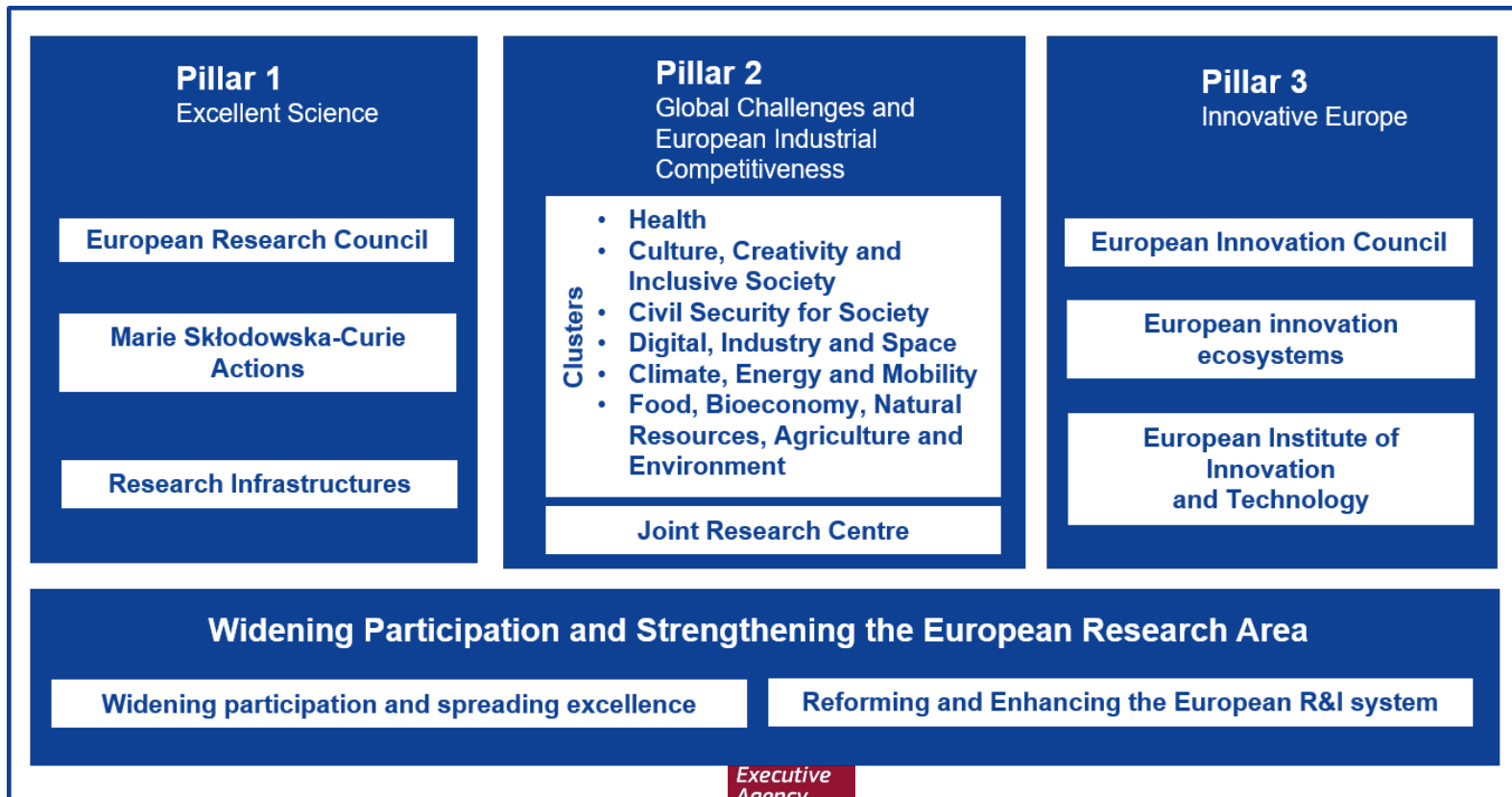
➤ Horizon Europe



- New EU research and innovation investment programme
- Covers period 2021–2027
- Started 1st January 2021

Budget:

- Currently €95.5 billion



Horizon Europe – Pillar 2



Pillar 2 - Clusters

Global Challenges & European Industrial

Competitiveness: boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals

Commission proposal for budget: € 52.7 billion



European
Commission

EU SPACE Programme: A financial envelope of €14.8 billion (current prices) has been set aside for the programme:

- (a) for Galileo and EGNOS: €9.01 billion;
 - (b) for Copernicus: €5.42 billion;
 - (c) for SSA and /GOVSATCOM: €442 million.
- (provisional agreement between the EU Council and European Parliament, December 2020)



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H2020 projects

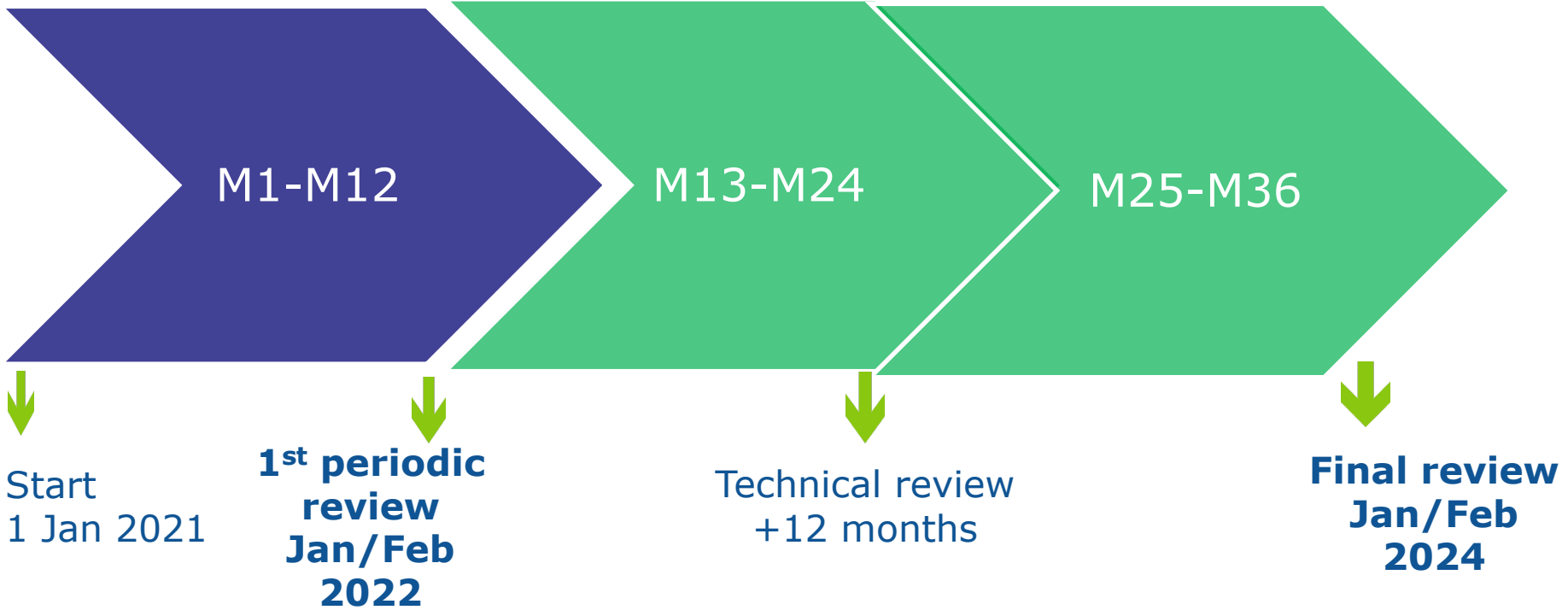
Reporting and reviews

REA B.1





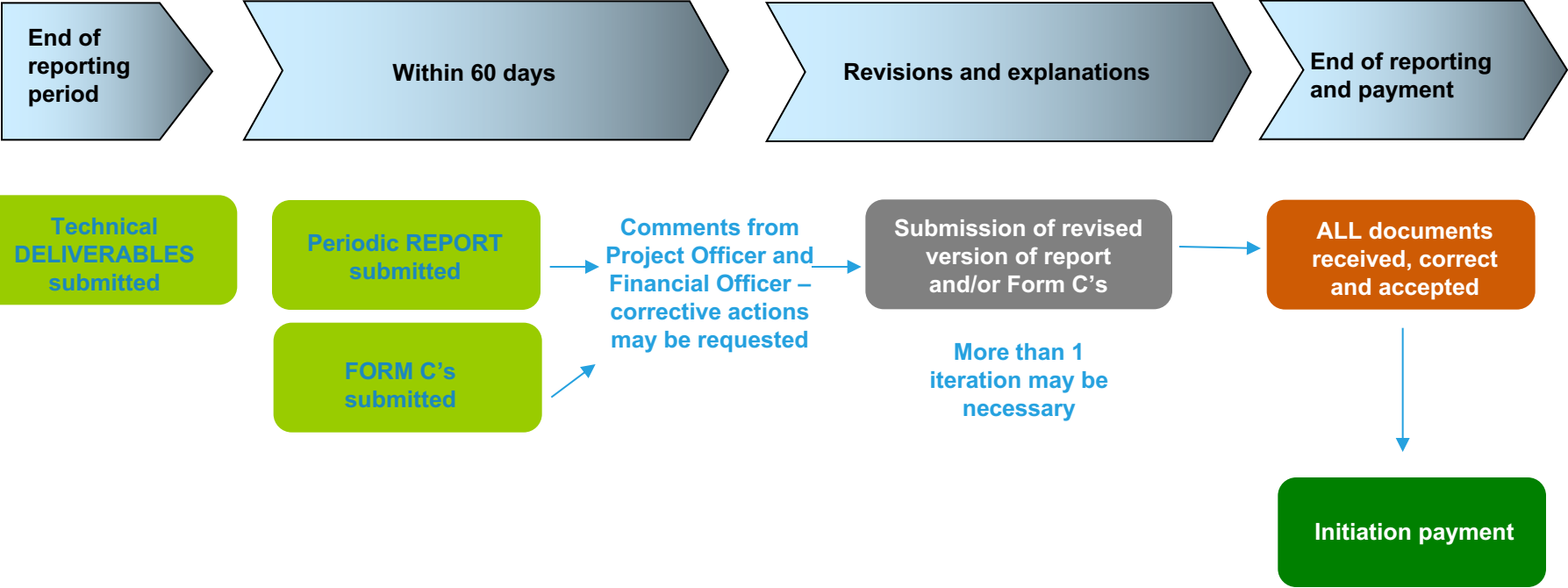
Review planning



Reporting and reviews



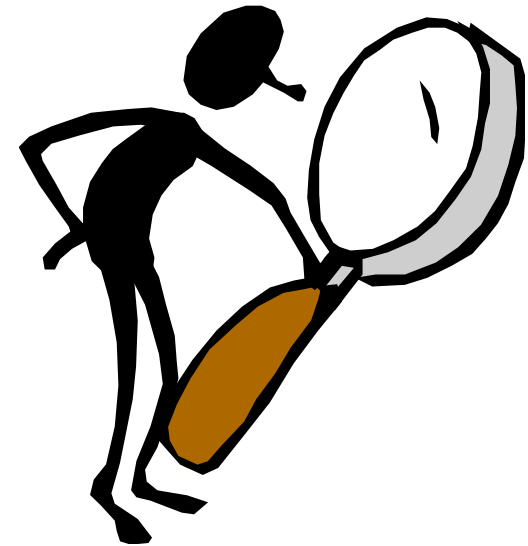
Reporting and reviews



Review meetings



- Planned at the end of each period
 - Combined with a project meeting, when possible
- Presentation of the work carried out, the main achievements and the use of the resources
 - Participation of the coordinator and usually the WP leaders (to be discussed on a case-by-case basis)
- Project Officer is assisted by 1 external reviewer
 - The reviewers need the relevant report and deliverables 2-3 weeks prior to the meeting



Periodic report - technical



Project Periodic Report													
Summary for publication	Deliverables Ethics, DMP, Other Reports	Milestones	Critical Risks	Publications	Dissemination Communica...	Patents (IPR)	Innovation	SME Impact	Open Data	Gender	Tech. Report (Part B)	Financial Statements	Documents
✓	i	i	✓	✓	✓	✓	✓	✓	i	✓	i	i	i

Technical report:

▪ Part A structured via tabs

- Cover page
- Summary for publication
- Deliverables (pre-filled based on submission data)
- Achievement of milestones
- Update of critical risks and mitigation measures
- Publications and Dissemination and communication activities
- Patents, Innovation, SME Impact
- Open research data
- Gender



The EU Framework Programme
for Research and Innovation

HORIZON 2020



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

Technical report:

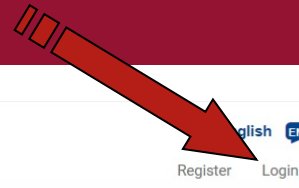
▪ Part B – to upload

- Work performed (by work package)
- Progress beyond the state of the art, expected results and potential impact
- Deviations: person-months
- Ethics issues



▪ **Periodic financial report:**

- individual financial statements for each beneficiary
- an explanation of the use of resources
- Periodic summary financial statement



The Funding & Tenders Portal is the entry point (the Single Electronic Data Interchange Area) for participants and experts in funding programmes and tenders managed by the European Commission and other EU bodies.

Feedback

Find calls for proposals and tenders

- What are calls for proposals? >
- What are calls for tenders? >
- How to participate in 5 steps >

Calls for proposals by EU Programme							
3rd Health Programme	Asylum, Migration and Integration Fund	Consumer Programme	Creative Europe	Erasmus+ Programme	European Maritime and Fisheries Fund	HERCULE III	Horizon 2020 Framework Programme
Internal Security Fund Borders and Visa	Internal Security Fund Police	Justice Programme	Pilot Projects and Preparatory Actions	Programme for the Competitiveness of Enterprises and small and medium-sized	Promotion of Agricultural Products	Research Fund for Coal & Steel	Rights, Equality and Citizenship Programme



1) Completing your Financial Statement

All beneficiaries must fill in their own financial statement, electronically sign it and submit it to the coordinator.

NB. Only the PFSIGN can electronically sign & submit the statement

2) Approving partners' reports

Coordinator - reviews and approves the periodic report. If needed, s/he can send it back to a partner for further changes, or unlock the technical part of the report for editing.

3) Submitting the report to REA

Coordinator - submit all parts of the report together, in a single transaction:

4) REA will either:

- accept the report and start preparing the interim payment or
- ask for changes to it - the process described above starts again.

Horizon 2020 Online Manual

https://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management/reports_en.htm



Publication of project deliverables

We will publish on your project page in CORDIS your project deliverables which are flagged with the dissemination level 'PUBLIC'.

In practical terms, once a public deliverable is approved by the Project Officer, the deliverable will be automatically sent to CORDIS for publication.

Notify your Project Officer if the dissemination level needs changing.



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H2020 projects

How to avoid financial errors in reporting and payments process

REA B.1



Any deviations in the number of person months used compared with the GA have to be explained in the technical periodic report.

Subcontracting – some tips

At grant signature:

- Foresee and justify all subcontracts in Annexes 1 & 2

During the grant execution:

- Ask for an amendment if new subcontracts needed
- Justify subcontracting costs in the technical reports

OTHER DIRECT COSTS

Explanation of major cost items is needed if the amount exceeds 15% of personnel costs

- If costs were foreseen in the Annex 1, a short description is needed but a detailed explanation is not needed.
- If costs were not foreseen in Annex 1, a description and detailed explanations are needed (*start with the most expensive items*).

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

OTHER – Travel Expenses

List of travels including for each event:

- conference or meeting **title**,
- **location** (city and country),
- **Date** (Day/Month/Year)
- **Purpose** of travel,
- Number of **attendees** from the beneficiary

Ex.

ESWW5, Bruges (BE), 29.11.2009, kick-off meeting, 1 person
Meeting at partner 4, Brussels (BE), 09.03.2011, to discuss
model development under WP4, 2 persons

Costs not foreseen in GA

If you plan to have costs for subcontracting, equipment, travel which were not foreseen in GA (especially travel outside EU), please get prior PO approval or request an amendment if needed.

A travel cost not foreseen should be linked to the project and needs to be supported by a proof of participation in the meeting, conference (slides or publications with project name and EU funding acknowledgement and emblem).

If there is any doubt about whether a cost is eligible or an amendment is needed the Coordinator should contact the PO.



Currency for financial statements and conversion into euro

Beneficiaries (and linked third parties) must always use EUR to report costs in their financial statements.

The rules on conversion (of costs incurred in other currencies into EUR) are explained in the annotated grant agreement.



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Dissemination/ communication

REA B.1



Research
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Agency



Why communicate?

- Promote your project activities and results
- Engage stakeholders
- Share best practice with other projects
- Generate market demand
- Expand your network
- Raise citizen's awareness of how their money is spent



**Article 38.1.1 of the grant agreement :
Obligation to promote the action
and its results**

The beneficiaries must promote the action and its results, by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner

Communication strategy

A comprehensive communication strategy is crucial in promoting your project and its results. Your plan should define clear objectives adapted to a range of target audiences. It should be proportionate to the scale of your project.

Let us know about any communication activity with media impact.



Acknowledge the EU funding

38.1.2 Information on EU funding — Obligation and right to use the EU emblem

Display the EU emblem + write:



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [number].

Download the EU emblem and read guidelines: <https://europa.eu/!Qg69gK>

Display the emblem and text correctly

- ① When displayed together with another logo, the EU emblem must have appropriate prominence.
- ② You can display the text to the right, left, up or down, depending on your needs.
- ③ Use one of the following fonts: Arial, Calibri, Garamond, Trebuchet, Tahoma, Verdana. **Do not use *Italic*, underlined variations or font effects.**
- ④ The colour of the font should be reflex blue (same as the EU flag), black or white depending on the background.



Yes



This project has received funding from the Horizon 2020 research and innovation programme under grant agreement No [number]



No



This project has received funding from the Horizon 2020 research and innovation programme under grant agreement No [number]

Read the full guide on Horizon 2020 project communication: <https://europa.eu/!Qf94Pu>

Publications



You must **ensure open access** (free of charge, online access for any user) to all peer-reviewed scientific publications.



Publications

This project does not currently have any scientific publication

Project publications (44 publications)

No.	Type	Title	Authors	Title of the Journal/Proc./Book	Number, date or freq. of the Journal/Proc./Book	Is Peer-reviewed?	Is Open Access?	DOI	Repository Link
1	Article in J	Spatial anomaly detection in sensor networks using neighbor	Hedde HWJ Bosman, Giovanni Iacc	Information Fusion	33	Yes	Gold	10.1016/j.inffus.2016.04.007	Link
2	Publication	Gaining Insight into Quality Diversity	Joshua E. Auerbach, Giovanni Iacc	Proceedings of the 2016 on Genetic and Evolu		Yes	Gold	10.1145/2908961.2931675	Link
3	Thesis/Diss	Anomaly detection in networked embedded sensor systems	H.H.W.J. Bosman			Yes	Gold		Link
4	Publication	Instinct-driven dynamic hardware reconfiguration: evolutionary	Hallawa, A., De Roose, J., Andrau	Proceedings of the Genetic and Evolutionary (Yes	Green		Link
5	Publication	Presenting the ECO: Evolutionary Computation Ontology	Yaman, A., Hallawa, A., Coler, M.,	European Conference on the Applications of E	2017, April	Yes	Green		Link
6	Publication	A framework for knowledge integrated evolutionary algorithms	Hallawa, A., Yaman, A., Iacca, G.,	European Conference on the Applications of E	2017, April	Yes	Green		Link
7	Publication	Multi-strategy differential evolution	Yaman, A., Iacca, G., Coler, M., Fl	International Conference on the Applications	2018, April	Yes	Green		Link

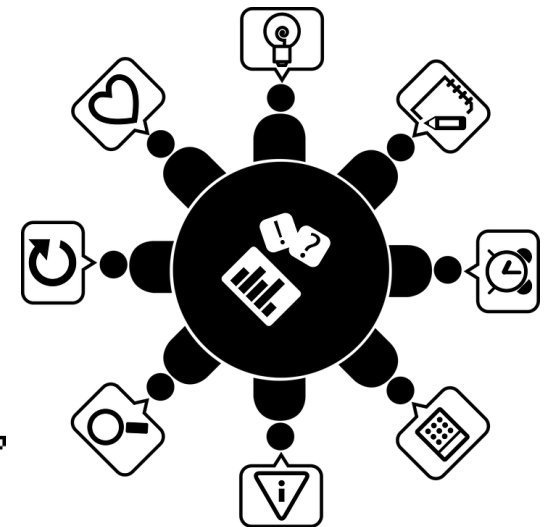
Each beneficiary must 'disseminate' its results.

Open access to data

if opting-in to the Open Research Data Pilot

Open access to publications

each beneficiary must ensure open access to all peer-reviewed scientific publications



Dissemination means sharing research results with potential users, contributing to the progress of science in general.

Open Research Europe (ORE) platform



- Additional open access publishing option for beneficiaries (publication optional)
 - Horizon 2020/ Horizon Europe funded research
- The publication costs are covered by the European Commission
 - Includes post-grant publications
- Eligibility
 - At least one of the authors is involved in a H2020/HE project
 - The publication needs to be a result of the project
 - Publication needs to be original, not to be considered for peer-review elsewhere
 - Publication needs to be in English
- Will help the projects to fulfil their open access obligations/Available and accepting submissions already

<https://open-research-europe.ec.europa.eu/>

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Additional info

Funding and Tenders Portal

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>

Find out more:



Horizon 2020 Annotated Grant Agreement

http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf



Horizon 2020 On-line Manual

https://ec.europa.eu/research/participants/docs/h2020-funding-guide/index_en.htm



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Research Executive Agency

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Follow



Apply now for the last [#H2020space](#) research call for project proposals!



12 available topics



Budget: €103.5 million



Deadline: 5 March 2020



europa.eu/!JC46Fg

