Turkey in Horizon 2020 Focused Group Training on H2020 Energy Call topics

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Agenda - Day 1 - 29/05/2019

Session 1 Understanding the basics behind H2020 Energy calls (Chaired by Nikolaos Floratos, Training Coordinator)		
09:00- 10:30	Introduction to the training and to the H2020 Energy call • Welcome Message • Route de Table – Short introduction by each participant • Introduction to the H2020 Energy call topics and how to read a work programme call topics • Detailed presentation of some representative ones for each collaborative project type (RIA, IA, CSA), (Key words, EC expectations, TRLS required, their challenge, scope, expected impact, type of actions and statistics of success based on previous related calls if applicable)	• TUBITAK representative • All participants • H2020 Energy Trainer/Expert
10:30-11:00	*Coffee/tea Break	
11:00 – 12:30	• Familiarisation with key documents for preparing successful H2020 Energy proposals (Templates, LoS, GA, CA, EC Policy documents, Impact Assessment Reports, Roadmaps, etc)	• Energy Trainer/Expert • All participants
12:30 – 13:30	Lunch	

Agenda - Day 1 - 29/05/2019

Session 2 **Engaging with key actors in H2020 Energy (Chaired by Nikolaos Floratos, Training Coordinator)**		
13:30-15:00	• Who are the key actors (EC officers, experts, successful applicants, etc) in H2020 Energy calls and how to engage with them	• H2020 Energy Trainer/Expert • All participants - Hands-On Practice, Assisted by the trainer
15:00 – 15:30	*Coffee/tea Break	
	Session 3 **How to impress the evaluators (Chaired by Nikolaos Floratos, Training Coordinator)**	
15:30 – 17:00	• Familiarisation with Evaluation Process and what makes a winning proposal based on examples from ESRs (tips and tricks based on evaluators comments, common mistakes)	• H2020 Energy Trainer/Expert

Who we are?

STRATEGIC INNOVATION PARTNERING

Across instruments and time

10 YEARS OF EU PROJECT EXPERIENCE

and a network of over 600 organizations

MULTI-DISCIPLINARY STAFF

Working commercially in the areas where we innovate

WE CUSTOMIZE OUR OFFER AND APPROACH

to your needs and ambitions

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What do we do in EU H2020 program?

FROM IDEA TO PROPOSAL

Technology Scouting – Patent Analysis – Funding Program Identification – ECAS Registration – Consortium Building – Budget Construction – Proposal Development Support

FROM PROPOSAL TO PROJECT

Company Validation – Grant Agreement Negotiation Support – Consortium Agreement Best Practices – Internal Systems to be Research Funding Compliant – Project Management Planning – Cost Claiming Support – Technical Reporting Support – Handling Problems

FROM PROJECT TO MARKET

Joint Ownership Agreements, Licensing, Strategic Alliances, Joint Ventures, Technology Transfer, Reseller Agreements, Company Valuations, Valley of Death Fundraising, Business Model Development, Developing Clear Product/Service Offerings and the Dissemination, Communication and Marketing strategies to support them

OUR 576 PARTNER NETWORK IN NUMBERS

229 SME – Small Medium Enterprises

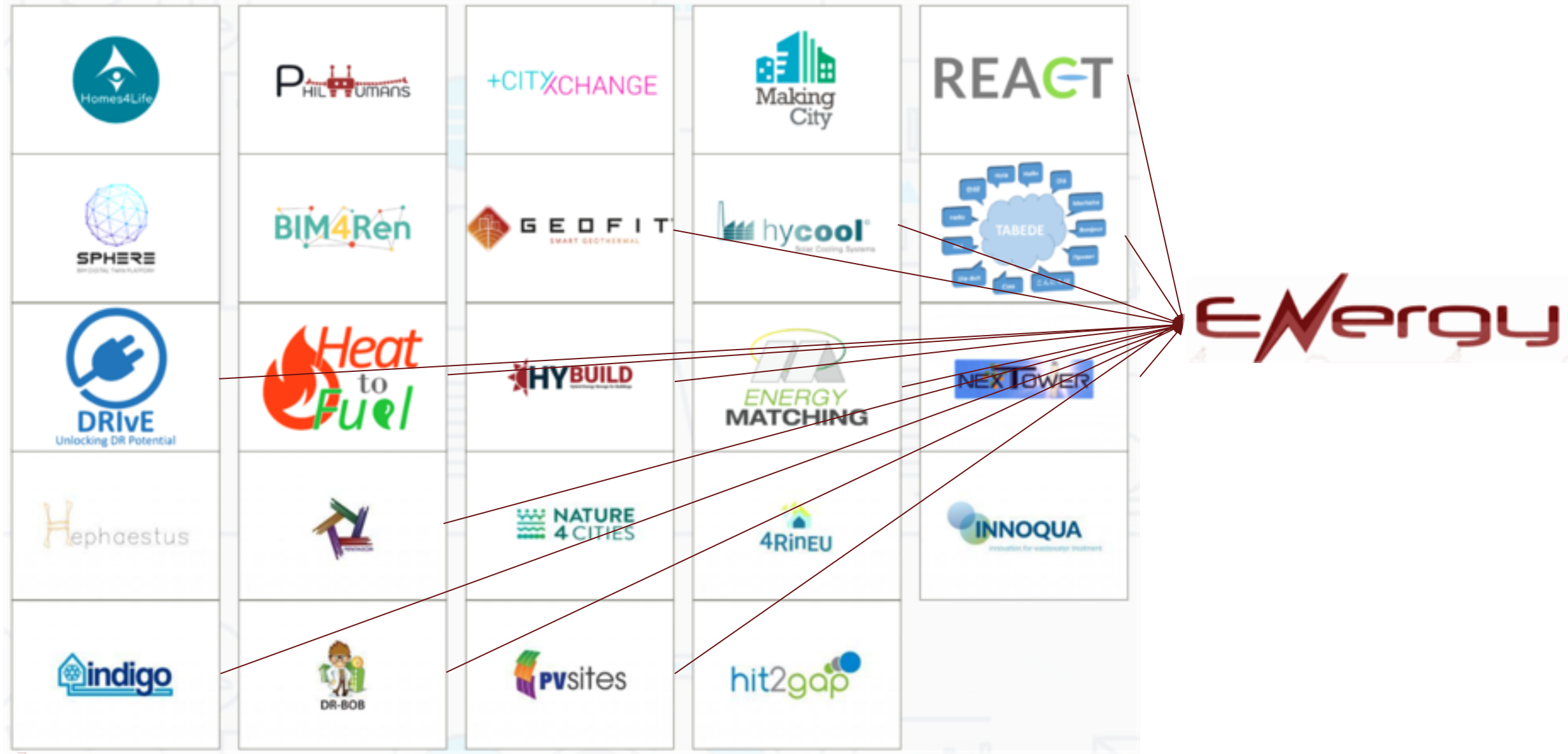
104 RTO – Research & Tech. Organizations

78 ASS – Associations MU – Municipalities PRIV – Private

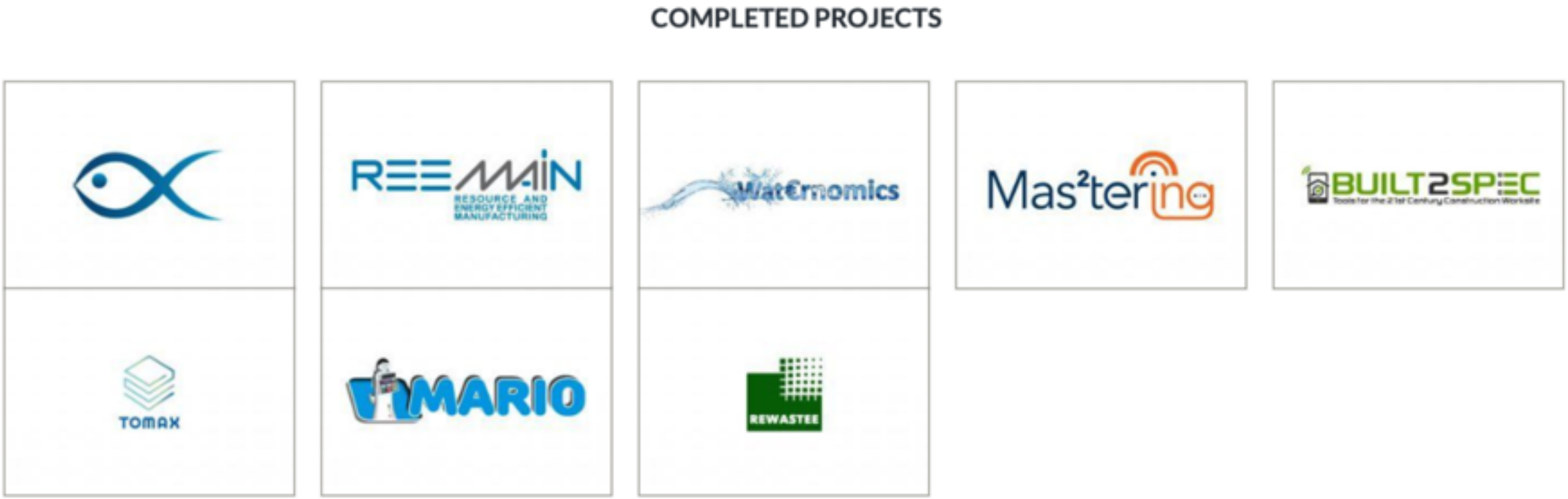
92 UNIV – Universities & Schools

73 LE – Large Enterprises

Our H2020 projects



Our FP7 & H2020 completed projects



Keeping score – Impact Slide

EU Project	R2M Post Project Exploitation Activity	Impact
PVsites	*Exclusive distributor for Onyx Solar Energy BIPV in Italy and France*  	• *Quotations into approximately 100 projects* • *1M€ Sales* • *Advocacy, training, dissemination*
REEMAIN RESOURCE AND ENERGY EFFICIENT MANUFACTURING	*Exclusive distributor for IESVE in Italy (Dynamic Energy Simulation Software - excellent for LEED)* 	• *2017 Most Active EU reseller for IES* • *Portfolio of 10 firms using software* • *Introduction of software into University Curricula / training partnerships*
hit2gap	*Exclusive Italian distributor for the ZUTEC construction management platform* 	• *Platform customized to Italian reality* • *First platform sales* • *Used to make tender bids more competitive* • *Advocacy, marketing, training*
BUILT2SPEC Tools for the 21st Century Construction Worksite	*Launch of series of digitalization and technology services for construction sites*   	• *Drone service line + sales* • *Matterport service line + sales* • *Air Pulse Market Pathways into Italy* • *License Agreement! Italian ITACA protocol using B2S for documentation management*
MARIO	*Distributorship for Zora Robots into Italy* 	• *Environment translated* • *Seminars and events* • *Marketing and advertising*

Multi-year efforts. Access to the Italian market would be impossible for some of our partnerships. Exploitation may start with existing commercial products to build client base for entry of new innovative launches on the backend of research.

Putting it together in integrated business models

The product

Putting it together in integrated business models

The product

Impact of product on building

Monitoring of performance

Management of the construction process

Putting it together in integrated business models

The product

LEED
The Certification

Impact of product on building

Monitoring of performance

Management of the construction process

Putting it together in integrated business models

The product

LEED
The
Certification

Impact of product on building

Monitoring of performance

Management of the construction process

Funding the retrofit

Session 1

Understanding the basics behind H2020 Energy calls

Main H2020 Financing Instruments

- Research and Innovation Action (RIA)
- Innovation Action (IA)
- Coordination and Support Action (CSA)
- SME Instrument
- Fast Track to Innovation Pilot

Research & Innovation Action (RIA)

- **Objective:** Funding for research projects tackling clearly defined challenges, which can lead to the development of **new knowledge or a new technology.**

- May include fundamental or applied research, technological development and integration, testing and validation of a small-scale prototype in a laboratory or simulated environment.

- **Financing**: Up to **100% of eligible costs**

- **Eligibility criteria:** Three legal entities independent, established in 3 Member States or countries different associates.

Innovation Action (IA)

- **Objective:** Funding is more focused on **closer-to-the-market activities**. For example, prototyping, testing, demonstrating, piloting, scaling-up etc. if they aim at producing new or improved products or services.

- **Financing:** Up to **70% of eligible costs** (up to and including **100% for non-profit organizations**)

- **Eligibility criteria:** Three legal entities independent, established in 3 Member States or countries different associates.

Coordination and Support Actions (CSA)

- **Objective:** Accompanying measures such as **standardization, dissemination, awareness and communication, creation of networks, coordination or support services, policy dialogues and exercises and learning studies mutual**, including design studies of new infrastructures and can also include activities complementary strategic planning, creation of networks and coordination between programs in different countries.

- **Financing:** Up to **100% of eligible costs**

- **Eligibility criteria:** A legal entity established in a Member State or associated country.

SME Instrument

- **Description:** The SME instrument is aimed at all types of innovative SMEs that show a strong ambition to **develop, grow and internationalize**. It provides support that covers the entire innovation cycle in three phases, complemented by a "mentoring" and "coaching" service.
- **Financing:** Up to **70% of eligible costs**

- Phase-1 Lump Sum of **50 k € and duration 6 months**

- Phase-2 **0.5-2.5 M €** EC requested and duration **up to 2 years**

- Phase-3 Marketing No funding and only support (mentoring, training, EEN network ...)

- **Eligibility criteria:** SMEs for profit. Only accept applications from SMEs established in EU Member States or partners.

NB: Multiple closing dates. Consult the work program.

SME Instrument

The SME Instrument will be replaced by EIC Accelerator. EIC accelerator begins in the call in Oct 2019. Key changes:

- Only one step (there is not going to be Ph1 and ph2 anymore. Phase 1 is removed).

- The biggest novelty is that applicants can choose between only grant (up to 2.5MM€, like SME Inst ph2) or blended finance (grant+equity). The maximum equity will be 15MM€.

- THE TEMPLATE WILL CHANGE as well as the evaluation criteria (new template expected by 5th of June)

- Likely the the European Investment Fund will create a pot for financing < 25% of equity up to 15MM€

-Definition of the program rules are expected to be released along this summer.

Fast Track to Innovation (FTI)

- **Description:** Small collaborative projects (3-5 partners and about ≈2M € EC requested) with the idea of bringing an innovative and multidisciplinary solution to market in less than 3 years. No investigation, but innovation, development, integration, validation and real-scale testing, Approach to the market (end user). Important business weight.

Start TRL ≥ 6 Final TRL = 9

- **Financing:** Up to **70% of eligible costs** (100% for non-profit entities)
- **Eligibility criteria:** Any public or private participant. At least 3 entities established in 3 Member States of the EU or different associates. At least **60% of the budget allocated to industry**. Coordinator NO startup (economic validation).

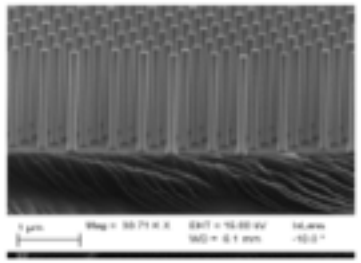
NB: 3 closing dates per year. Consult the work program.

Today we will focus on RIAs, IA and CSAs

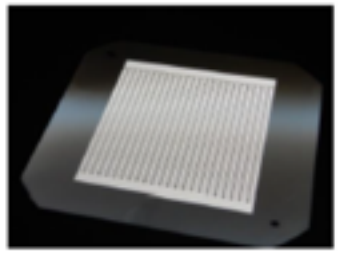
RIA: 100% funded

IA: 70% funded

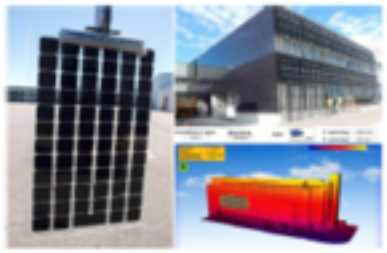
TRL 1-2	TRL 3-4	TRL 5-6	TRL 7-8	TRL 9
Principles formulation	Proof of concept and validation	Validation in real environment	Prototype demo and completion	Proven and operational
Basic Research	Applied Research	Prototype	Scale-up	Pilot	Demonstration	Deployment



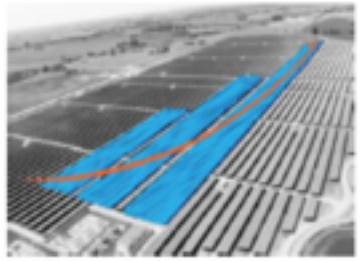
NanoTandem
Nanowire based tandem PV cells



NextBase
Interdigitated back-contacted silicon heterojunction solar cells and modules



PVSITES
Building Integrated PV technologies and systems for large-scale market deployment



PV FINANCING
Innovative business models and financing schemes for PV systems

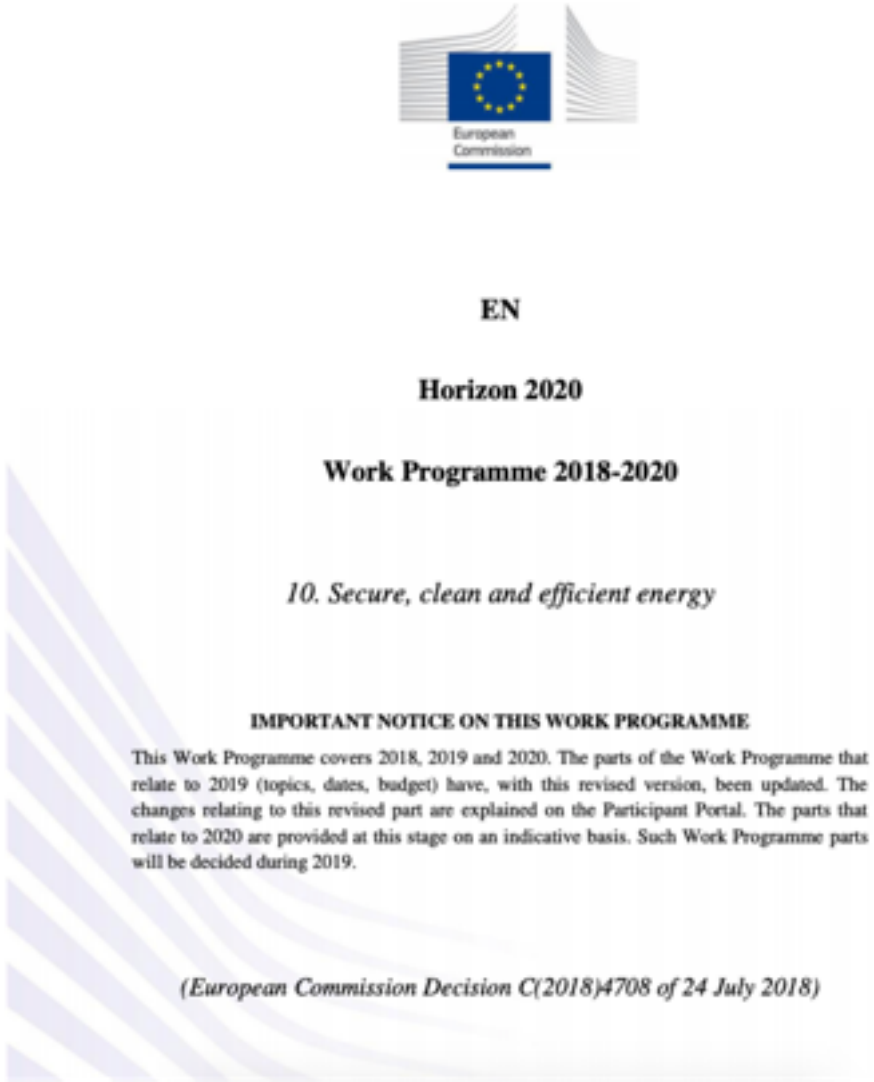
Coordination and Support Actions (CSA): coordination and networking of research and innovation projects

25% flat rate for indirect costs

Funding rates at glance

Project type	Direct costs (€)	Indirect costs (€)	Total costs (€)	Funding rate	Grant amount (€)
Research and Innovation Actions (RIA); **Coordination and Support Actions (CSA)**	100,-	25,-	125,-	100 %	**125,00**
Innovation Actions (IA) – regular rate	100,-	25,-	125,-	70 %	**87,50**
Innovation Actions (IA) – rate for non-profit organisations	100,-	25,-	125,-	100 %	**125,00**

Work Programme 2018-2020
10. Secure, clean and efficient energy



European Commission

EN

Horizon 2020

Work Programme 2018-2020

10. Secure, clean and efficient energy

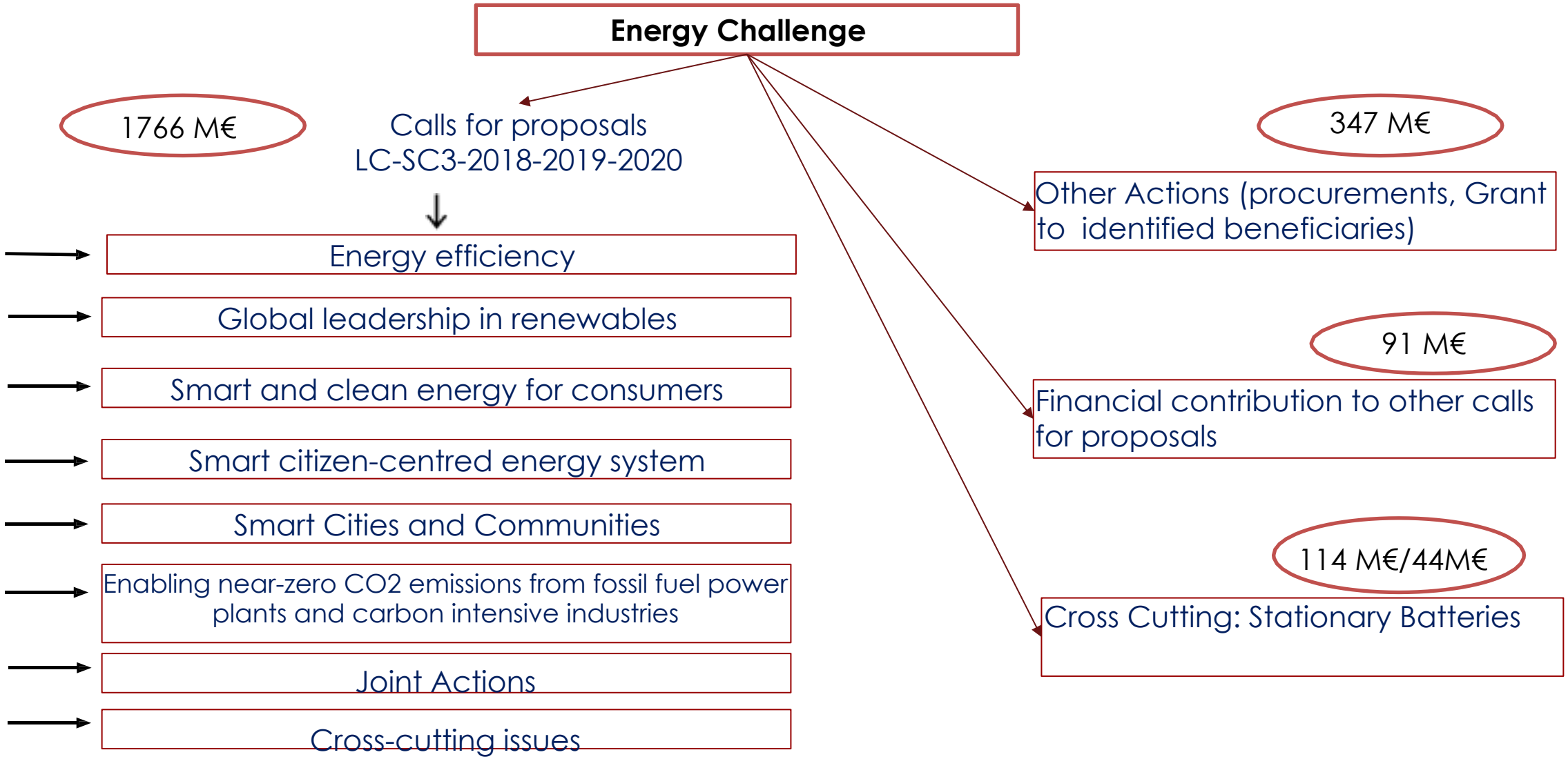
IMPORTANT NOTICE ON THIS WORK PROGRAMME

This Work Programme covers 2018, 2019 and 2020. The parts of the Work Programme that relate to 2019 (topics, dates, budget) have, with this revised version, been updated. The changes relating to this revised part are explained on the Participant Portal. The parts that relate to 2020 are provided at this stage on an indicative basis. Such Work Programme parts will be decided during 2019.

(European Commission Decision C(2018)4708 of 24 July 2018)

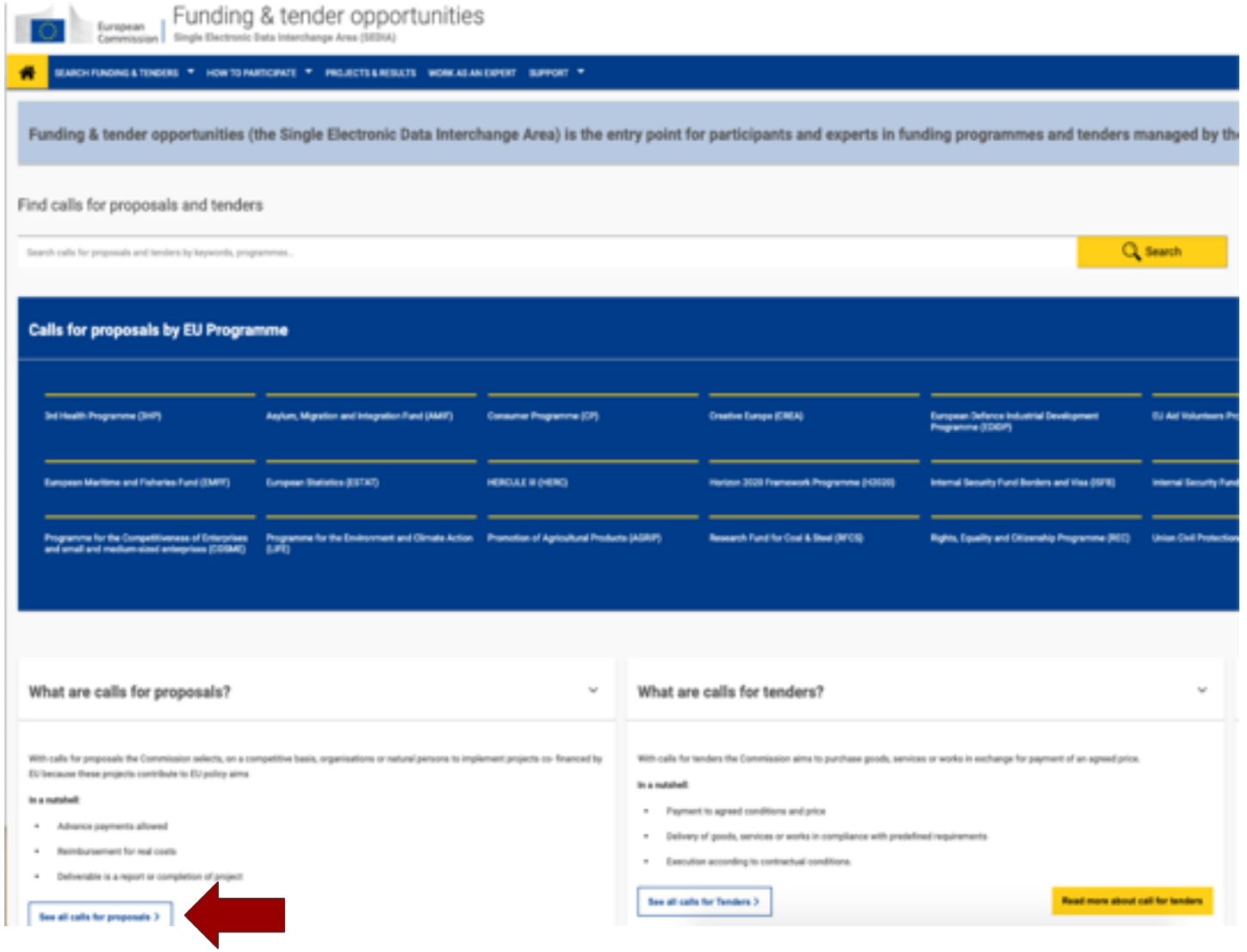
http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-energy_en.pdf

Societal Challenge 3 - Secure, clean and efficient energy

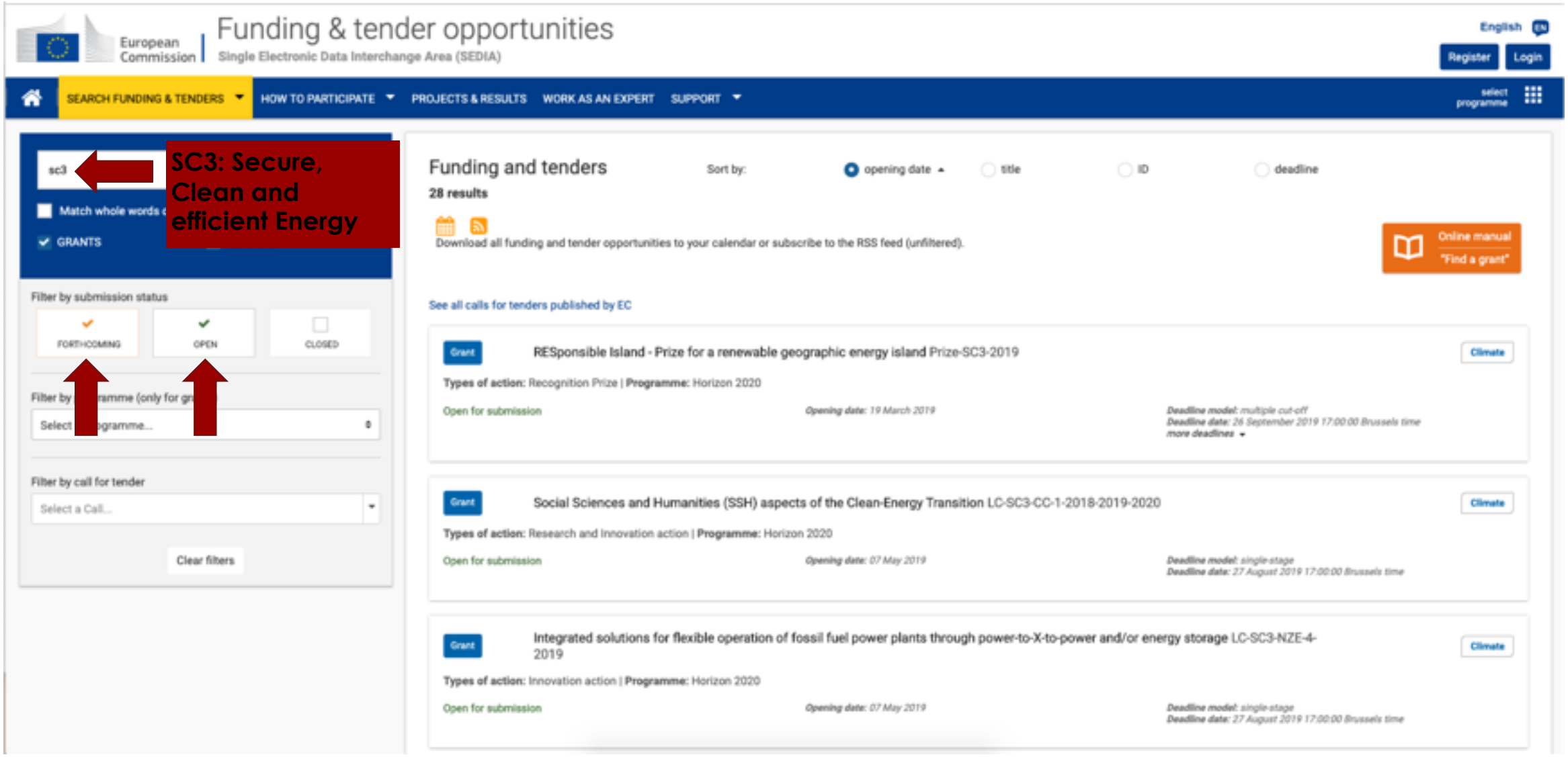


Finding a call topic

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



Finding a call topic



Example of RIA Energy call topic 2019
Renewable energy solutions at district level and for industrial processes
LC-SC3-RES-7-2019

Large potential of applying solar energy for industrial purposes Industrial processes might need to be adapted Limited installation, O&M requirements - easy to operate

From TRL 4 to 5

RIA

EUR 3 to 5 million

- Cover the **highest possible share of the heating and/or cooling demand** of one or more industrial processes by means of solar thermal energy
- In the case of **heating**, the process **temperature shall be higher than 150°C**
- **Individual industrial sites and/or industrial parks** (coupled to a district heating and/or cooling network) are in scope
- Contribution to relevant BREFs under the Industrial Emissions Directive

Expected Impact:

- Increased decarbonisation of the industrial sector → **tons of CO2**
- Reduced dependency on fossil fuels → **TWh**
- Reduction of emission of air pollutants are expected → **NH3, SO2, NOx, NMVOCs, PM2.5**
- Visibility to the potential of applying solar thermal energy in industrial processes → **Dissemination plan**

Cross-cutting Priorities:

- Contractual Public-Private Partnerships (cPPPs)
- SPIRE → https://www.spire2030.eu
- Clean Energy

Example of IA Energy call topic 2019
Decarbonisation of the EU building stock: innovative approaches and affordable solutions changing the market for buildings renovation
LC-SC3-EE-1-2018-2019-2020

The market for deep renovation of buildings needs to be transformed in terms of technologies, processes and business models.

Achieve TRL 8 to 9

IA

EUR 3 to 4 million

2018 Call
Total budget: **€ 12M**
Proposal presented: **24**
Funded Proposals: **2**

- Innovations can be right across the value chain, during **any stages** of design or construction
- **Building fabric, technical systems, links to DHC** are all relevant
- Address the **drivers to renovate** buildings
- Address how **consumers** & others can use measured data
- Multiple **benefits** of energy efficiency (**high performance, cost, time, rate…)**

Expected Impact:

- Primary **energy savings** triggered by the project **(in GWh/year)**;
- **Investments** in sustainable energy triggered by the project **(in million Euro)**;
- **High energy performance** in the renovated buildings;
- Measurable **cost reduction** compared with a typical renovation
- **Reduction of time** needed on site for renovation works by 20%
- Demonstration of the effectiveness and **replicability** of the proposed solutions to lead to an increased rate of renovation for defined building typologies **in several districts/cities/regions**.

Cross-cutting Priorities:

- Clean Energy
- Contractual Public-Private Partnerships (cPPPs)
- EeB

Example of CSA Energy call topic 2019
Mainstreaming energy efficiency finance
LC-SC3-EE-10-2018-2019-2020

CSA

EUR 1 to 1,5 million

Energy efficiency needs to become as normal as a car loan!

Proposals should focus **at least one** of the following issues:

- Development, demonstration and promotion of frameworks for the **standardisation and benchmarking** of sustainable energy investments;
- **Capacity building** for banks and investors at the national and local level, in particular on underwriting sustainable energy investments;
- Gathering, processing and disclosing **large-scale data** on actual financial performance of energy efficiency investments;
- Further integration of **non-energy benefits** in project valuation, in particular in the building sector;
- Targeting **institutional investors** (e.g. public pension schemes) in order to increase the share of their funds invested in energy efficiency, or to develop specific funds or investment products.
- Exploring the impact of **revised risk ratings** and requirements for energy efficiency on financial regulations (Basel III, Solvency II).

Example of CSA Energy call topic 2019
Mainstreaming energy efficiency finance
LC-SC3-EE-10-2018-2019-2020

Expected Impact:

Proposals are expected to demonstrate, depending on the scope addressed, the impacts listed below, using **quantified indicators and targets** wherever possible:

- Number of financial institutions and other stakeholders reached as well as their **potential volume of investment concerned**;
- Frameworks, standardisation, benchmarking, standardised descriptions and data evidence of financial **returns of energy efficiency investments** agreed and accepted by the market;
- Higher allocation of institutional investments to energy efficiency; standardisation of assets enabling securitisation; development of a secondary market for energy efficiency assets **(in million Euro of investment within 5 years after the end of the project)**;
- **Primary energy savings** triggered by the project **(in GWh/year)**;
- Investments in sustainable energy triggered by the project **(million Euro)**.

Additional positive effects can be quantified and reported when relevant and wherever possible:

- Reduction of the greenhouse gases emissions **(in tCO2-eq/year)** and/or air pollutants **(in kg/year)** triggered by the project.

2018 Call

Total budget: **€ 6M**

Proposal presented: **10**

Funded Proposals: **4**

The proposed methodology is credible as it is based on a thorough analysis of the market needs. The 37 Letters of Support from banks, asset managers and project developers show interest of the key stakeholders, who will provide input and feedback throughout the project.

Read the call topic carefully

Demonstration of plug and play solutions for renewable off-grid electricity
LC-SC3-RES-30-2019

Topic conditions and documents

1. Eligible countries: described in Annex A of the Work Programme.
A number of non-EU/non-Associated Countries that are not automatically eligible for funding have made specific provisions for making funding available for their participants in Horizon 2020 projects. See the information in the Online Manual.

2. Eligibility and admissibility conditions: described in Annex B and Annex C of the Work Programme.

Due to the specific challenges associated with this topic (in case of topic LC-SC3-ES-6-2019 this refers only to sub-topic 4) and the international focus of the Mission Innovation initiative, in addition to the minimum number of participants set out in the General Annexes, proposals shall include at least one participant from a non-EU/Associated country member of Mission Innovation (i.e. Australia, Brazil, Canada, Chile, People's Republic of China, India, Indonesia, Japan, Mexico, Republic of Korea, Saudi Arabia, United Arab Emirates, United States). Standard rules on eligibility for EU funding apply.

Proposal page limits and layout: please refer to Part B of the proposal template in the submission system below.

Evaluation Summary Report

Evaluation Result

Status: Ineligible

2018 Call
Total budget: **€ 10M**
Proposal presented: **7**
Funded Proposals: **0!!**

Read the call topic carefully

Decarbonising energy systems of geographical Islands
LC-SC3-ES-4-2018-2020

Proposals should include a task on the analysis of obstacles to innovation under the current context and foresee the coordination on policy relevant issues (e.g. regulatory framework, business models, data management, consumer engagement) with similar EU-funded projects through the BRIDGE initiative[1]. An indicative budget share of at least 2% is recommended for the research work associated with these issues and an additional 2% for the coordination effort are recommended.

Criterion 3 - Quality and efficiency of the implementation

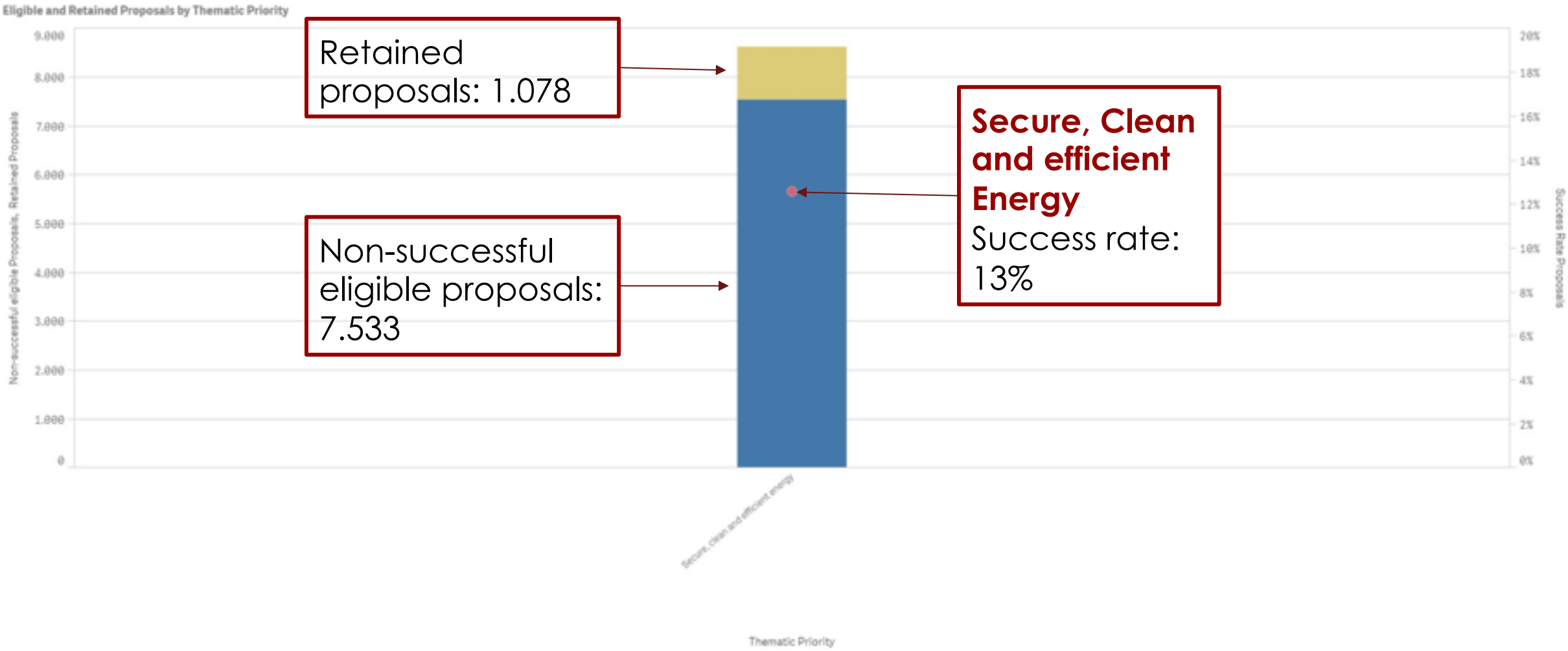
Score: **5.00** (Threshold: 3/5.00 , Weight: -)

The following aspects will be taken into account:
Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables

The quality and effectiveness of the work plan is excellent.
The structure of the work packages is highly effective, logical and coherent with the objectives and deliverables. Task content is comprehensive and convincing, as it relates credibly to the objectives. Milestones are fully appropriate to allow effective monitoring of project progress. Deliverables are well formulated and totally appropriate in number and content. The distribution of resources in terms of person-months (PM) and budget is fully in line with their objectives.
Coordination with similar EU-funded projects through the BRIDGE initiative is included under Tasks 8.6 (dissemination) and Task 9.3 (Coordination).

The proposal includes sufficient budget (4% of the total) envisaged for the research and coordination effort associated with obstacles for innovation. This is excellent. A specific task (8.4) in the work plan will establish synergies with the "Clean Energy for EU islands" initiative.

H2020 Secure, Clean and efficient Energy Statistics



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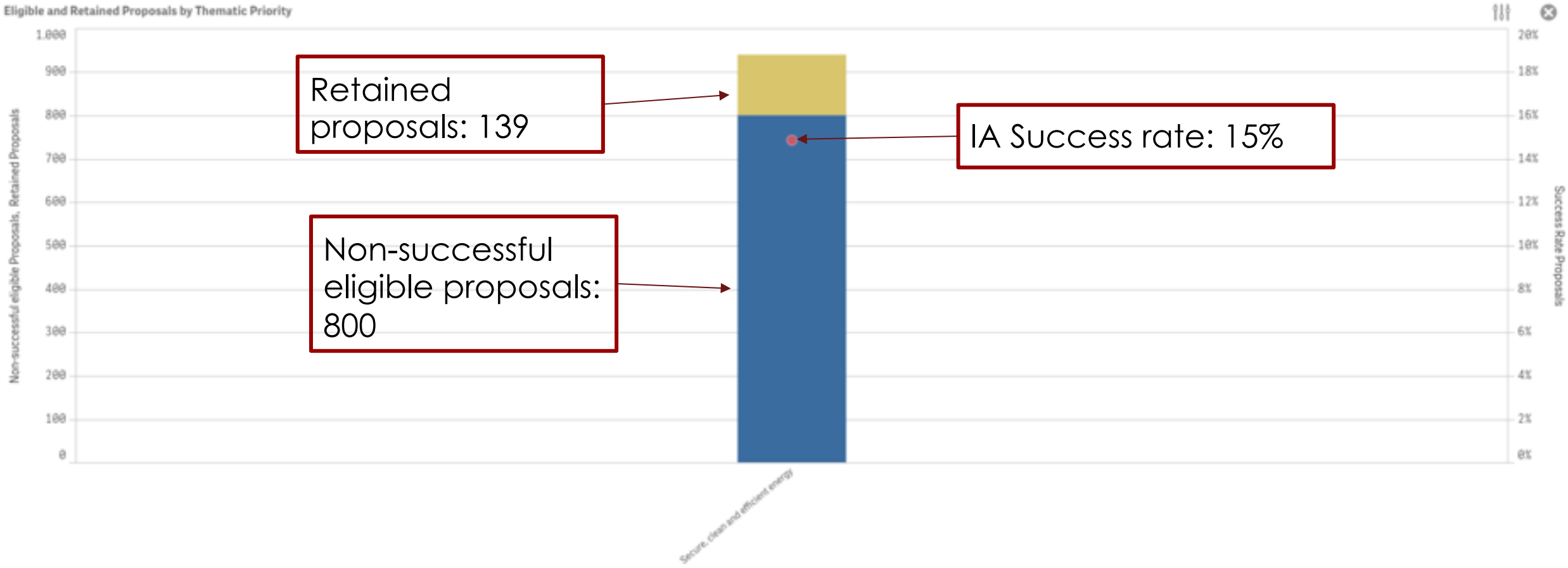
H2020 Secure, Clean and efficient Energy Statistics
IA Success rates



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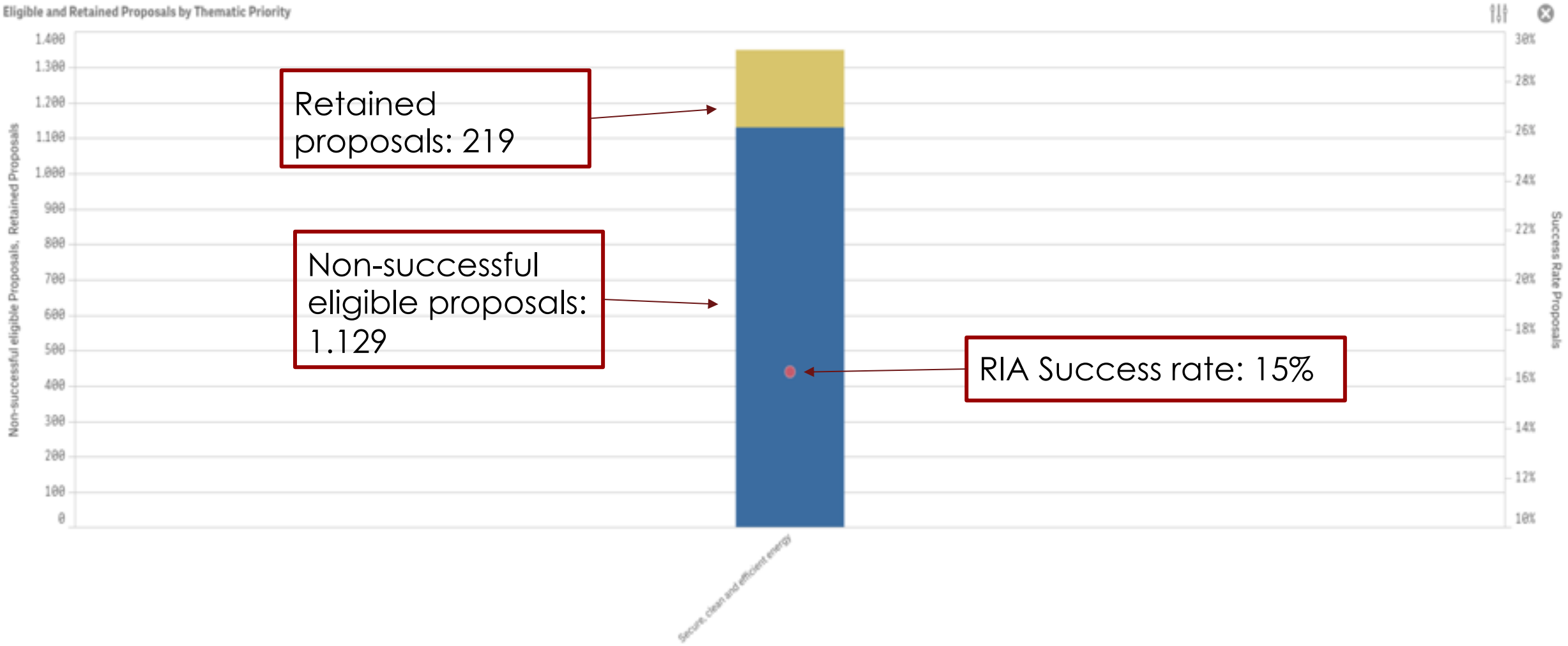
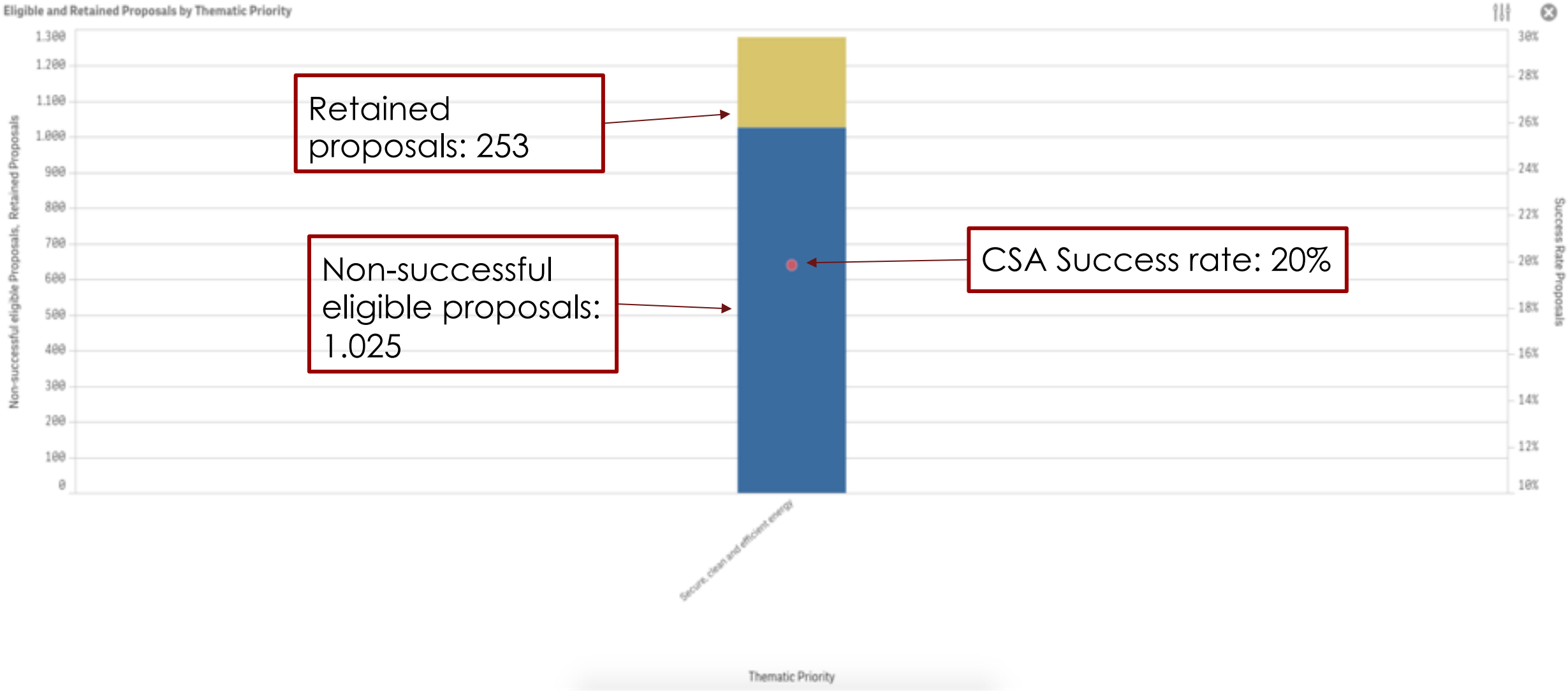
H2020 Secure, Clean and efficient Energy Statistics
RIA Success rates



https://webgate.ec.europa.eu/dashboard/sense/app/93297a69-09fd-4ef5-889f-b83c4e21d33e/sheet/erUXRa/state/analysis

H2020 Secure, Clean and efficient Energy Statistics
CSA Success rates



SC3 statistic on 2018 calls

Topic	No. of proposals submitted in 2018(1)	No. of proposals in 2018 above threshold >10 or >12 for EE-1 and EE-6(2)	2018 Actual Success Rate (3)=(2)/(1)	No. of proposals funded 2018 (4)	2018 Official Success Rate (5)=(4)/(1)	2018 Final Score of last in the ranking proposal funded
Smart and clean energy for consumers						
LC-SC3-EC-1-2018-2019-2020: The role of consumers in changing the market through informed decision and collective actions (CSA)	10	3	30%	2	20%	11/15
LC-SC3-EC-2-2018-2019-2020: Mitigating household energy poverty (CSA)	20	4	20%	2	10%	12,5/15
Energy efficiency						
LC-SC3-EE-1-2018-2019-2020: Decarbonisation of the EU building stock: innovative approaches and affordable solutions changing the market for buildings renovation (IA)	24	5	20%	2	8,3%	13/15
LC-SC3-EE-2-2018-2019: Integrated home renovation services (2019 CSA)	15	8	53%	4	26%	12/15
LC-SC3-EE-5-2018-2019-2020: Next-generation of Energy Performance Assessment and Certification (2018 - CSA) (2019 - IA)	9	5	55%	2	22%	14,5/15

SC3 statistic on 2018 calls

Topic	No. of proposals submitted in 2018(1)	No. of proposals in 2018 above threshold >10 or >12 for EE-1 and EE-6(2)	2018 Actual Success Rate (3)=(2)/(1)	No. of proposals funded 2018 (4)	2018 Official Success Rate (5)=(4)/(1)	2018 Final Score of last in the ranking proposal funded
Energy efficient industry and services						
LC-SC3-EE-6-2018-2019-2020: Business case for industrial waste heat/cold recovery (2018 - IA) (2019 - CSA)	14	4	28%	2	14%	13,5/15
LC-SC3-EE-8-2018-2019: Capacity building programmes to support implementation of energy audits (CSA)	21	8	38%	4	19%	11,5/15
Energy efficiency is an investment						
LC-SC3-EE-9-2018-2019: Innovative financing for energy efficiency investments (CSA)	11	6	54%	3	27%	12,5/15
LC-SC3-EE-10-2018-2019-2020: Mainstreaming energy efficiency finance (CSA)	10	4	40%	4	40%	10,5/15
LC-SC3-EE-11-2018-2019-2020: Aggregation Project Development Assistance (CSA)	11	7	63%	6	54%	11/15

SC3 statistic on 2018 calls

Topic	No. of proposals submitted in 2018(1)	No. of proposals in 2018 above threshold >10 or >12 for EE-1 and EE-6(2)	2018 Actual Success Rate (3)=(2)/(1)	No. of proposals funded 2018 (4)	2018 Official Success Rate (5)=(4)/(1)	2018 Final Score of last in the ranking proposal funded
Energy efficiency is an energy source						
LC-SC3-EE-13-2018-2019-2020: Enabling next-generation of smart energy services valorising energy efficiency and flexibility at demand-side as energy resource (2018-CSA) (2019-IA)	12	5	41%	2	16,6%	12/15
LC-SC3-EE-14-2018-2019-2020: Socio-economic research conceptualising and modelling energy efficiency and energy demand (RIA)	9	6	66,6%	2	22%	11/15
LC-SC3-EE-16-2018-2019-2020: Supporting public authorities to implement the Energy Union (CSA)	20	12	60%	4	20%	11,5/15

SC3 statistic on 2018 calls

Topic	No. of proposals submitted in 2018(1)	No. of proposals in 2018 above threshold >10 or >12 for EE-1 and EE-6(2)	2018 Actual Success Rate (3)=(2)/(1)	No. of proposals funded 2018 (4)	2018 Official Success Rate (5)=(4)/(1)	2018 Final Score of last in the ranking proposal funded
Additional Call topics including cross-cutting ones						
LC-SC3-RES-28-2018-2019-2020: Market Uptake support - General(CSA)	13	5	38,46%	3	23,07%	11,5/15
LC-SC3-RES-28-2018-2019-2020: Market Uptake support - Bioenergy (CSA)	6	3	50%	3	50%	12,5/15
LC-SC3-EC-1-2018-2019-2020: The role of consumers in changing the market through informed decision and collective actions (CSA)	9	3	33,33%	2	22,22%	11/15
LC-SC3-EC-2-2018-2019-2020: Mitigating household energy poverty (CSA)	20	4	20%	2	10%	12,5/15
LC-SC3-ES-3-2018-2020: Integrated local energy systems (Energy islands) (IA)	23	6	26,08%	4	%17,39	13/15
LC-SC3-ES-4-2018-2020: Decarbonising energy systems of geographical Islands (IA)	22	4	18,18%	2	9,09%	13,5/15

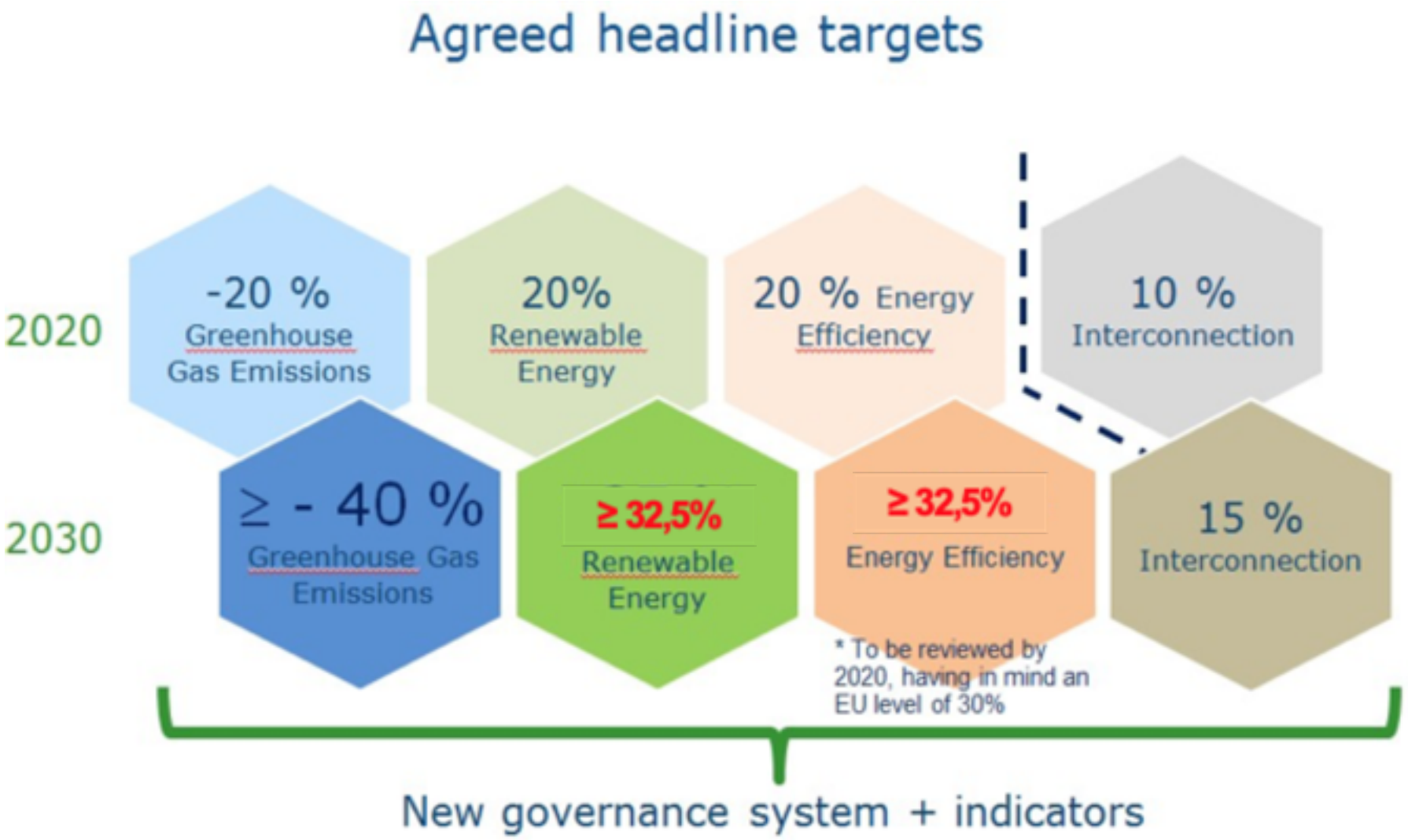
SC3 statistic on 2018 calls

Topic	No. of proposals submitted in 2018(1)	No. of proposals in 2018 above threshold >10 or >12 for EE-1 and EE-6(2)	2018 Actual Success Rate (3)=(2)/(1)	No. of proposals funded 2018 (4)	2018 Official Success Rate (5)=(4)/(1)	2018 Final Score of last in the ranking proposal funded
Additional Call topics including cross-cutting ones						
LC-SC3-SCC-1-2018-2019-2020: Smart Cities and Communities (IA)	8	3	37,5%	2	25%	12/15
LC-SC3-JA-2-2018-2019: Support to the realisation of the Implementation Plans of the SET Plan (CSA)	6	6	100%	6	100%	10/15
LC-SC3-CC-1-2018-2019-2020: Social Sciences and Humanities (SSH) aspects of the Clean-Energy Transition (RIA)	22	5	22,72%	3	13,63%	13/15

Session 1

Familiarisation with key documents for preparing successful H2020 Energy proposals

EU Energy Political context: UE: 2030 Framework for Climate and Energy



EU Energy Political context: Energy Union

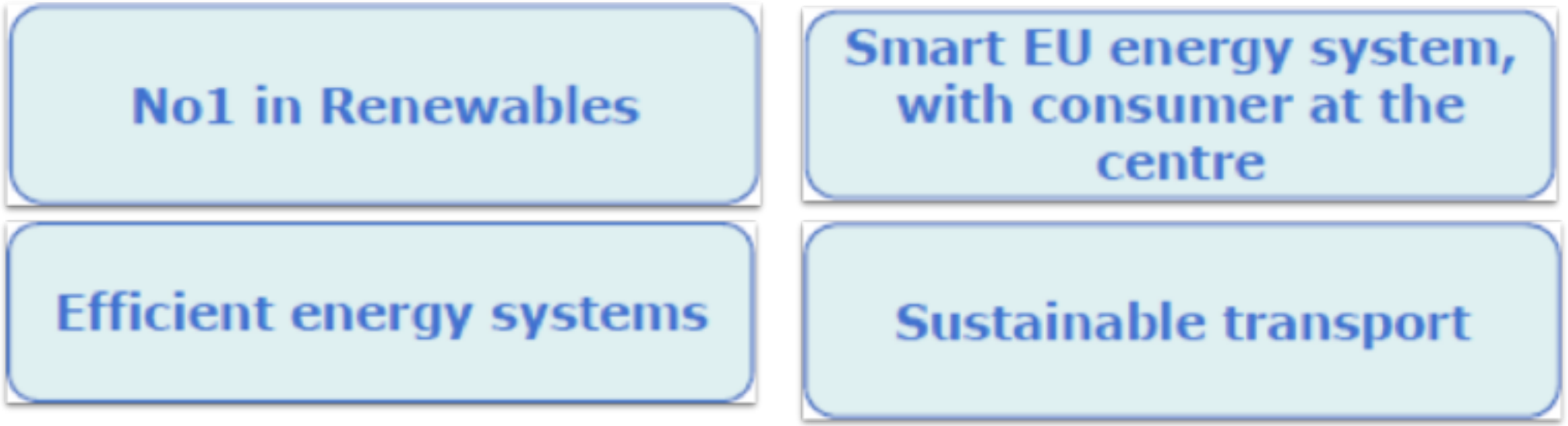
- *Energy **security**, solidarity and trust*
- *A fully **integrated** internal energy market*
- ***Energy efficiency** first*
- *Transition to a **low-carbon** society*
- *An Energy Union for Research, Innovation and Competitiveness*

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2015:80:FIN

EU Energy Political context: Energy Union Priorities

Communication on Integrated SET-Plan (COM[2015]6317)

https://setis.ec.europa.eu/system/files/Communication_SET-Plan_15_Sept_2015.pdf



EU Energy Political context

Overall objective: Accelerating the development and **deployment of low-carbon technologies through cooperation among EU countries, companies, research institutions, and the EU itself**, based on common priorities and targets.
https://setis.ec.europa.eu/actions-towards-implementing-integrated-set-plan

Priority Actions:

1+2. Improving performance and reducing cost of renewable energy (Action 1, 2)

3.Smart solutions for consumers

4.Smart Resilience and Secure Energy System

5.Energy Efficiency in Buildings

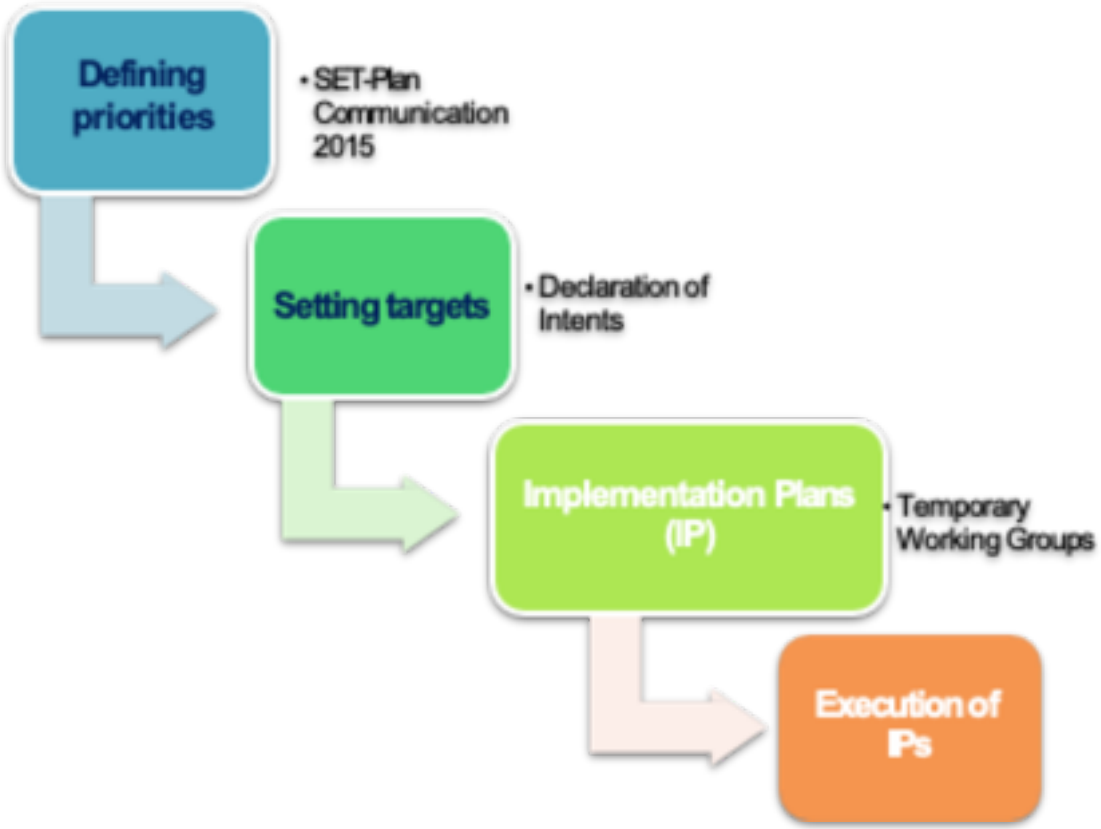
6.Energy Efficiency in Industry

7.Batteries and e-Mobility

8.Renewable Fuels and Bioenergy

9.Carbon Capture Utilisation and Storage

10.Nuclear Safety



 https://setis.ec.europa.eu/low-carbon-energy-technologies

EU Energy Political context

Paris Agreement

"Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to ***limit the temperature increase to 1.5°C*** *above pre-industrial levels"*

"Accelerating, encouraging and enabling innovation is critical for an effective, long-term global response to climate change and promoting economic growth and sustainable development."

http://unfccc.int/paris_agreement/items/9485.php

http://mission-innovation.net/

EU Energy Political context

Technology Collaboration Programmes (TCPs) :

- Efficient end-use (buildings, electricity, industry, transport)
- Cleaner fossil fuels (greenhouse-gas mitigation, extraction, supply, transformation)
- Renewable energy and hydrogen (technologies and policies for deployment)
- Cross-cutting issues (modelling, technology transfer, project financing)
- Fusion power (safety, physics, materials, technologies).

https://www.iea.org/tcp/

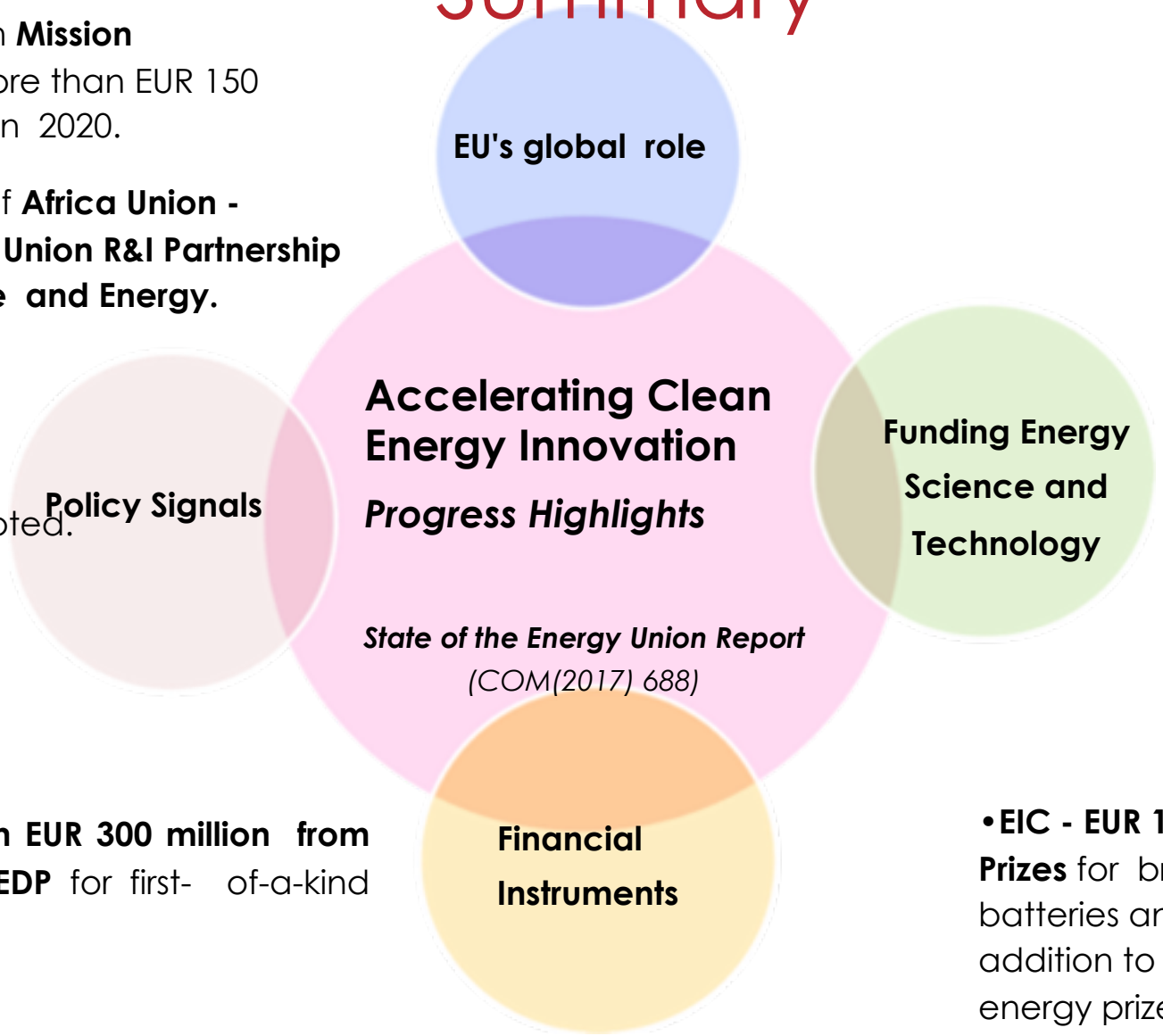
EU Energy Political context

"Clean Energy for all Europeans“

- *Putting energy efficiency first*
- *Demonstrating global leadership in renewables*
- *Delivering a fair deal for consumers*

https://ec.europa.eu/energy/en/news/commission-proposes-new-rules-consumer-centred-clean-energy-transition

EU Energy Political context Summary



- Leadership on **Mission Innovation:** more than EUR 150 million in Horizon 2020.
- Launch of **Africa Union - European Union R&I Partnership on Climate and Energy.**

- **SET Plan**: Seven Implementation Plans adopted.
- **Mobility package**.

More than EUR 300 million from InnovFin EDP for first- of-a-kind projects

- **> EUR 2 billion in H2020 (2018-2020) on:**
- Energy Efficiency in buildings
- Renewables
- Energy storage - **Affordable and Integrated energy storage**
- E-mobility

- **EIC - EUR 15 million Horizon Prizes** for breakthrough in batteries and photovoltaics (in addition to the 3 on-going energy prizes)

Proposal Basics

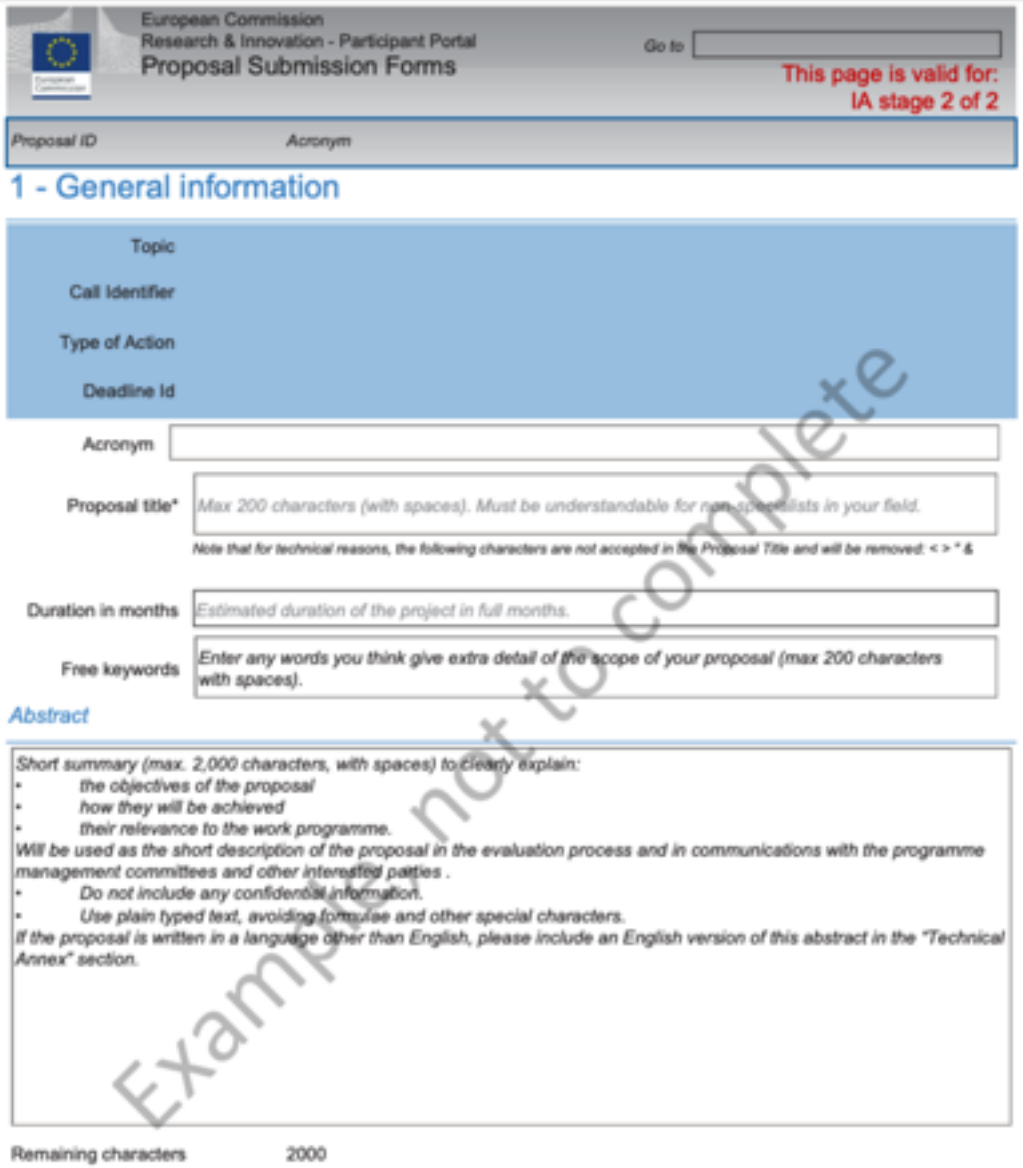
PART A ***ADMINISTRATIVE INFORMATION***

- General information
- Participant information
- Budget

PART B ***TECHNICAL INFORMATION***

- in PDF format
- The sections follow the **evaluation criteria**
- **Part B** 70 pages long (sections 1-3)
- No page limits (sections 4-5)

1. General Information



European Commission
Research & Innovation - Participant Portal
Proposal Submission Forms

Go to

This page is valid for:
IA stage 2 of 2

Proposal ID Acronym

1 - General information

Topic

Call Identifier

Type of Action

Deadline Id

Acronym

Proposal title* Max 200 characters (with spaces). Must be understandable for non-specialists in your field.

Note that for technical reasons, the following characters are not accepted in the Proposal Title and will be removed: < > " &

Duration in months Estimated duration of the project in full months.

Free keywords Enter any words you think give extra detail of the scope of your proposal (max 200 characters with spaces).

Abstract

Short summary (max. 2,000 characters, with spaces) to clearly explain:
- the objectives of the proposal
- how they will be achieved
- their relevance to the work programme.

Will be used as the short description of the proposal in the evaluation process and in communications with the programme management committees and other interested parties .
- Do not include any confidential information.
- Use plain typed text, avoiding formulae and other special characters.

If the proposal is written in a language other than English, please include an English version of this abstract in the "Technical Annex" section.

Remaining characters 2000

Example not to complete

This info is completed in the EU portal

The abstract is the key to catch the attention of the evaluator!.
Avoid copy and pasting directly from the proposal and using confidential information. Tell the evaluator **concisely** what are you objectives and how you want to achieve them and how they address the call topic

2. Participant information

Partner administrative information for H2020 Proposals

Aimed topic:

Please fulfil and send back to:

Partner Short Name	**R2M Solution Spain SL**
PIC (Personal Identification number)	**926493949**
Profit or Non Profit?	**Profit**
Person Month cost (€/PM)	

In case of not having a PIC or not remember it, please go to the following link to obtain one as it is mandatory to introduce your data in the system

- H2020 Online Manual: http://ec.europa.eu/research/participants/portal4/desktop/en/funding/guide.html
- Organisation Register: https://webgate.ec.europa.eu/cas/eim/external/register.cgi

Contact Point			
Person in Charge of the proposal			
Last name	Espeche	Gender	Male
First Name(s)	Juan Manuel		
Title[1]	Mr.		
E-Mail	juan.espeche@r2msolution.com		
Position in the organisation	Innovation Manager		
Department/Faculty/Institute/Laboratory name/...	Innovation Division		
Phone number (1)	+393881118128	Phone number (2)	
Fax number			
Web Page	www.r2msolution.com		
Address (if different from the legal address)	Street name	CALLE CERVERA	
	Number	59 1D	
	Postal code / Cedex	28033	
	Town	Madrid	
	Country	Spain	
Other Contact Person			
First Name	Raymond	Last Name	Sterling
E-Mail	raymond.sterling@r2msolution.com	Phone	+34 622 73 80 61
First Name		Last Name	
E-Mail		Phone	

When coordinating a proposal you have 2 options:

1. Ask each partner to fill in this info in the EU portal
2. Send a template (usually asking also the partner description for Section 4-PART B)

2. Participant information (Part B) **Don't exaggerate!**

B – DESCRIPTION OF PARTICIPANT (Section 4-5)

Partner	R2M Solution Spain SL		
Short Name	R2M	**Type**	SME
Role	Participant	**Country**	Spain
Website	www.r2msolution.com		

Brief Description

R2M Solution Spain SL. is an integrated and multi-disciplinary entrepreneurial innovation company that aggressively targets filling the gap between research activities and market implementation across the fields of Innovation, Engineering, Energy Services & Sustainability and ICT/Automation. R2M is a strategic innovator itself and as part of its business model helps organizations and projects plan and execute the strategic use research funding carried out over a comprehensive development strategy from idea to market. In doing so, R2M provides leadership, links high performance exploitation-oriented networks, and leverages public and private funding instruments.
In its sustainability consulting activities, R2M conducts ISO50001 consulting, LEED certification, sustainable design consulting for retrofits and new construction, renewable energy system design, building energy simulation, fault detection and diagnosis and IPMVP planning and assessment.

Main tasks and responsibilities within the project

Leader of WP8 – Exploitation activities and innovation manager

Main relevant networks and experience in National and European Projects

- ***Mas2tering**, Multi-Agent Systems and Secured coupling of Telecom and EnErgy gRIds for Next Generation smart grid services. Multi-Agent-Systems underpinning a secure ICT platform for the Flexibility Management of the Smart Grid*
- ***DR BOB**, Demand Response in Blocks of Buildings. Demonstration of the benefits of demand response in blocks of buildings across building sites covering 274,665m2 involving 47,600 occupants*
- ***Hit2Gap**, Highly Innovative building control Tools Tackling the energy performance gap coupling monitoring data to modelling environments and fault detection techniques. New generation of building monitoring and control tools based on advanced data treatment techniques.*
- ***PENTAGON** (H2020): Unlocking European grid local flexibility trough augmented energy conversion capabilities at district-level. Innovating the local energy network through a decentralized grid management system and boosting the efficiency of the power to gas technology.*
- *DRIVE (H2020): Demand Response Integration technologies: unlocking the demand response potential in the distribution grid*

Publications, services and patents related to the project

- *Smart Grid Futures: Perspectives on the Integration of Energy and ICT Services by Monjur Mourshed, Sylvain Robert, Andrea Ranalli, Thomas Messervey, Diego Reforgiato, Régis Contreau, Adrien Becue, Kevin Quin , Yacine Rezgui, Zia Lennard. Volume 75, August 2015, Pages 1132–1137. Clean, Efficient and Affordable Energy for a Sustainable Future: The 7th International Conference on Applied Energy (ICAE2015)*
- *Use Cases and Business Models of Multi-Agent System (MAS) ICT Solutions for LV Flexibility Management by Juan Manuel Espeche, Thomas Messervey, Zia Lennard,*

Sell your company, match it with your activities within the proposal.

Explain your role in the project

Show as much as possible that you have past experience and strong network in national and EU project related to the call topic

If you have publications, IP or commercial services related to the topic, here you can show them!

2. Participant information

Principal Team Members involved in the project

Mr. Juan Manuel Espeche (M) holds an MSc degree in Electronics and Telecommunications from Polytechnic of Turin (Turin, Italy) and a II MSc degree in Renewable Energy coordinated by the Association of European Renewable Energy Research Centers (EUREC). He has a specialization in Grid Integration and Distributed Generation from the University of Zaragoza, Zaragoza, Spain. During his specialization, he has worked on Smart Grids, Demand Side Management and Energy Efficiency. He worked in Telecom Italia as a telecommunication engineer, specialized in the test and validation field. He is a senior innovation engineer who leads the exploitation, business modelling and dissemination activities of research and innovation projects in different fields. He has actively participated in the creation of start-ups such as Think AM, R2M Energy, ProAir, TIFEO.

Dr. Raymond Sterling (M) has a double degree in Electrical (2009) and Systems (2008) Engineering from the Central University of Venezuela and University of Rome "La Sapienza", Italy, respectively obtaining first class honours are graduating as first of his class. He pursued and completed in 2010 a postgraduate Masters of Science in Intelligent Systems in the University of Salamanca, with a dissertation on Neural Network Control of HVAC Systems. Between October 2010 and February 2011 he participated in the traineeship program of the European Commission, providing technical and logistic support to the Industrial Technologies Directorate within the Research and Innovation Directorate General. Between September 2011 and May 2015 he pursued a PhD within the IRUSE group at NUIG being his research focus on the development of artificial intelligence based methodologies for control and decision support for energy efficiency in buildings. From June 2015 he has continued as a post-doctoral researcher within the IRUSE group focused on the development and implementation of energy management and decision support systems. From August 2015 he is office Direct of R2M Solution Spain as part of the innovation division team focusing on developing new research opportunities and new markets and services for R2M offerings.

Ms. Tatiana Loureiro(F), is a lawyer and holds a LL.M degree in European Union Studies from University of Salamanca, Spain, and a second LL.M. degree in Fundamental Rights from Universidad Carlos III, Madrid, Spain. She also holds a Postgraduate Certificate in Intellectual Property from Bournemouth University, UK. She has experience in the private sector, working at an important law firm in Venezuela, in the public sector, both in Venezuela (Town Hall of Baruta) and in Spain (Ministry for Foreign Affairs and Cooperation), as researcher (Universidad Central de Venezuela) and in NGOs. She is passionate about International Law, the EU, exploitation, marketing, and the linkage with IP rights. She has experience in H2020 EU funded projects: INDIGO and Heat-to-Fuel, as WP leader on dissemination and communication activities; and NEXTOWER, as exploitation and business developer.)

Ms. Eleonora Nicolazzi (F) holds an MSc degree in Building System Engineering from Polytecnic of Milan (Milan, Italy). She worked in several energy consulting companies and an Energy Service Company (ESCo) for civil and industrial sector. She is an Energy Management Expert focus on Energy Audits (EA) and Energy Management Systems (EMS) implementation, energy efficiency and feasibility studies for building-plant system with technical-economic analyses with the aim to reduce operative costs, carbon impact and increase asset profitability and value. She is keen interest in renewable energies and green technology.

Significant Infrastructures and/or relevant information to the proposal

A description of any significant infrastructure and/or any major items of technical equipment, relevant to the proposed work

OPTIONAL. Any other supporting info

Any other supporting documents specified in the work programme for this call.

Short CV of your team. **Related experience!. Gender Balance!**

Infrastructure to be used in the project

2. Participant information

This information will be used to complete the point "***B.4.2.Third parties involved in the project (including use of third party resources)***" of the proposal

Does the participant plan to subcontract certain tasks (please note that core tasks of the project should not be sub-contracted)	NO
If yes, please describe and justify the tasks to be subcontracted:	
Does the participant envisage that part of its work is performance by linked third parties?[2]	NO
If yes, please describe the third party, the link of the participant to the third party, and describe and justify the foreseen tasks to be performed by the third party:	
Does the participant envisage the use of contributions in kind provided by third parties (Articles 11 and 12 of the General Model Grant Agreement)	NO
If yes, please describe the third party and their contributions:	

Subcontracting (ONLY IF NEEDED!!), If applicable justify it well to avoid losing time during GA preparation!

Third link party (More flexible), you'll need to demonstrate the relation between the companies

3. Budget of the proposal

3 - Budget for the proposal

No	Participant	Country	(A) Direct personnel costs/€	(B) Other direct costs/€	(C) Direct costs of sub-contracting/€	(D) Direct costs of providing financial support to third parties/€	(E) Costs of inkind contributions not used on the beneficiary's premises/€	(F) Indirect Costs / € (=0.25(A+B-E))	(G) Special unit costs covering direct & indirect costs / €	(H) Total estimated eligible costs / € (=A+B+C+D +F+G) BENEFICIARY	(I) Reimburse-ment rate (%) BENEFICIARY	(J) Max.EU Contribution / € (=H*I) BENEFICIARY	(K) Costs of third parties linked to participant THIRD PARTIES	(L) Max.EU Contribution / € THIRD PARTIES	(M) Total Costs for BENEFICIARY & THIRD PARTIES (=H+K)	(N) Max.EU Contribution / € BENEFICIARY & THIRD PARTIES (=J+L)	(O) Requested EU Contribution / € BENEFICIARY & THIRD PARTIES
1			0	0	0	0	0	0,00	0	0,00	100	0,00	0	0	0,00	0,00	0,00
	Total		0	0	0	0	0	0,00	0	0,00		0,00	0,00	0,00	0,00	0,00	0,00

- **Personnel costs (being the main segment of most projects):**

  – ***Calculation of personnel costs*.** When calculating the personnel costs, the EC (and therefore us) is interested in the **average monthly cost of employment of the personnel that is expected to participate in the project of each partner. This should be presented in EURO per person-month. The average monthly cost of employment should include the salaries alongside any additional employer's payments (such as social benefits, pension, etc.)**. There is no need to get into the fine details of all salaries and additional payments. The main focus here is the average cost. Normally, it is up to the financial department of the partner's institution to provide these required figures.

3. Budget of the proposal

Personnel costs (being the main segment of most projects):

– ***Allocation of person-months per work package*.** In this process, each partner should estimate how many person-months it should allocate per task. These allocations are then add up to the total amount of person-months per partner.

- **Travel costs:**

  – Travel costs can be associated with specific tasks or work packages, although it is not a must. It is perfectly fine to present a general travel budget (per partner) for the entire project.

  – That being said, we recommend having some kind of breakdown. Since it is hard to predict the exact costs of future travel expenses, we recommend using an **average cost of travel and multiplying it with the expected number of trips** planned during the project. The average travel cost should include transport, accommodation and subsistence per person, for a period of 2-3 days.

  – Travel is of course expected when implementing a Horizon 2020 project. Still, **we recommend not to overdo it**. It is essential to keep the travel budget realistic and appropriate to the amount of involved personnel (per partner) and associated tasks.

3. Budget of the proposal

- **Equipment costs:**

  – Any equipment required for the direct execution of the project is eligible for funding.

  – Horizon 2020 equipment budget requests should be claimed based on their **depreciation value according to the local tax laws of each partner**. The financial department in each institution should be able to assist in this regard.

- **Other goods and services costs:**

  – Any goods and/or services required for the direct execution of the project can be added to the requested budget.

  – In case a **partner's total budget surpasses €325,000, a Certificate on Financial Statements (CFS)** is required to be submitted once the project ends. The cost of producing the CFS is eligible and should be included in the partner's budget estimation under this category.

- **Sub-contracting and 3rd parties:**

  – Any cost that might be directed towards sub-contractors and involved 3rd parties should be included in the requested budget. Any external services that are performed outside of the consortium should be **used only if essential and justified**.

  – Keep in mind that subcontracting costs are **not eligible for the 25% flat-rate addition of indirect costs**.

3. Budget of the proposal

Consolidating the Horizon 2020 budget

Add up all costs (per category) declared from all partners. This will reveal what the total project budget has amounted to. If the total budget is within the expected range of the requested EC contribution for this project (as mentioned in the call text), the following step can be to draft the budget description in section 3.4 of the template.

If the total budget significantly exceeds the expected requested contribution, it is necessary to revisit the input from the partners and consult with them regarding the reduction of the budget. The budget cut could be surgical (per partner) or horizontal (be that it is mutually agreed on).

The unwritten rules of budget consolidation

When consolidating the Horizon 2020 budget, we recommend to attend to the following unwritten rules and suggestions, based on our experience and feedback from reviewers:

- **Avoid allocating more than 30% of the overall budget to a single partner (Coordinator included)**
- **Avoid allocating more than 40% of the overall budget to a single country (all partners from the same country put together)**
- **The budget allocated for coordination and project management activities (mostly by the coordinator) should range between 5% to 5.5% of the overall budget. In the past, the bar was set at 7%, however today we know that the expectation of coordination costs is lower.**
- **Avoid allocating coordination and project management activities to other partners, except for dedicated management partners**

Proposal template - Part B Excellence

⚠ *Fill in the title of your proposal below.*

TITLE OF THE PROPOSAL

⚠ *The consortium members are listed in part A of the proposal (administrative forms). A summary list should also be provided in the table below.*

List of participants

Participant No. *	Participant organisation name	Country
1 (Coordinator)		
2		
3		

* Please use the same participant numbering as that used in the administrative proposal forms.

1. Excellence

Your proposal must address a work programme topic for this call for proposals.

⚠ *This section of your proposal will be assessed only to the extent that it is relevant to that topic.*

1. Objectives

- Describe the overall and specific objectives for the project[1], which should be clear, measurable, realistic and achievable within the duration of the project. Objectives should be consistent with the expected exploitation and impact of the project (see section 2).

2. Relation to the work programme

- Indicate the work programme topic to which your proposal relates, and explain how your proposal addresses the specific challenge and scope of that topic, as set out in the work programme.

3. Concept and methodology

(a) Concept

- Describe and explain the overall concept underpinning the project. Describe the main ideas, models or assumptions involved. Identify any inter-disciplinary considerations and, where relevant, use of stakeholder knowledge. Where relevant, include measures taken for public/societal engagement on issues related to the project. Describe the positioning of the project e.g. where it is situated in the spectrum from 'idea to application', or from 'lab to market'. Refer to Technology Readiness Levels where relevant. (See General Annex G of the work programme);
- Describe any national or international research and innovation activities which will be linked with the project, especially where the outputs from these will feed into the project;

(b) Methodology

- Describe and explain the overall methodology, distinguishing, as appropriate, activities indicated in the relevant section of the work programme, e.g. for research, demonstration, piloting, first market replication, etc.
- Where relevant, describe how *the gender dimension, i.e.* sex and/or gender analysis is taken into account in the project's content.

⚠ *Please note that this question does not refer to gender balance in the teams in charge of carrying out the project but to the content of the planned research and innovation activities . Sex and gender analysis refers to biological characteristics and social/cultural factors respectively. For guidance on methods of sex / gender analysis and the issues to be taken into account, please refer to http://ec.europa.eu/research/swafs/gendered-innovations/index_en.cfm?pg=home*

4. Ambition

- Describe the advance your proposal would provide beyond the state-of-the-art, and the extent the proposed work is ambitious.
- Describe the innovation potential **(e.g. ground-breaking objectives, novel concepts and approaches, new products, services or business and organisational models)** which the proposal represents. Where relevant, refer to products and services already available on the market. Please refer to the results of any patent search carried out.

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

Proposal template - Part B
Impact

2. Impact

1. Expected impacts

⚠ *Please be specific, and provide only information that applies to the proposal and its objectives. Wherever possible, use quantified indicators and targets.*

- Describe how your project will contribute to:
  - each of the expected impacts mentioned in the work programme, under the relevant topic;
  - any substantial impacts not mentioned in the work programme, that would enhance innovation capacity; create new market opportunities, strengthen competitiveness and growth of companies, address issues related to climate change or the environment, or bring other important benefits for society
- Describe any barriers/obstacles, and any framework conditions (such as regulation, standards, public acceptance, workforce considerations, financing of follow-up steps, cooperation of other links in the value chain), that may determine whether and to what extent the expected impacts will be achieved. (This should not include any risk factors concerning implementation, as covered in section 3.2.)

a) Dissemination and exploitation[2] of results

- Provide a draft '**plan for the dissemination and exploitation of the project's results**'. Please note that such a draft plan is an admissibility condition, unless the work programme topic explicitly states that such a plan is not required.

  Show how the proposed measures will help to achieve the expected impact of the project.

  The plan, should be proportionate to the scale of the project, and should contain measures to be implemented both during and after the end of the project. For innovation actions, in particular, please describe a credible path to deliver these innovations to the market.

⚠ *Your plan for the dissemination and exploitation of the project's results is key to maximising their **impact**. This plan should describe, in a concrete and comprehensive manner, the **area** in which you expect to make an impact and **who** are the potential users of your results. Your plan should also describe **how** you intend to use the appropriate channels of dissemination and interaction with potential users.*

⚠ *Consider the full range of potential users and uses, including research, commercial, investment, social, environmental, policy-making, setting standards, skills and educational training where relevant.*

⚠ *Your plan should give due consideration to the possible **follow-up** of your project, once it is finished. Its exploitation could require additional investments, wider testing or scaling up. Its exploitation could also require other pre-conditions like regulation to be adapted, or value chains to adopt the results, or the public at large being receptive to your results.*

- Include a business plan where relevant.
- As relevant, include information on how the participants will manage the research data generated and/or collected during the project, in particular addressing the following issues:
  - What types of data will the project generate/collect?
  - What standards will be used?
  - How will this data be exploited and/or shared/made accessible for verification and re-use? If data cannot be made available, explain why.
  - How will this data be curated and preserved?
  - How will the costs for data curation and preservation be covered?

⚠ *Actions under Horizon 2020 participate in the extended 'Pilot on Open Research Data in Horizon 2020 ('open research data by default'), except if they indicate otherwise ('opt-out').[3] Once the action*

Proposal template - Part B Implementation

3. Implementation

1. Work plan — Work packages, deliverables

Please provide the following:

- brief presentation of the overall structure of the work plan;
- timing of the different work packages and their components (Gantt chart or similar);
- detailed work description, i.e.:
  - a list of work packages (table 3.1a);
  - a description of each work package (table 3.1b);
  - a list of major deliverables (table 3.1c);
- graphical presentation of the components showing how they inter-relate (Pert chart or similar).

⚠ *Give full details. Base your account on the logical structure of the project and the stages in which it is to be carried out. The number of work packages should be proportionate to the scale and complexity of the project.*

⚠ *You should give enough detail in each work package to justify the proposed resources to be allocated and also quantified information so that progress can be monitored, including by the Commission*

⚠ *Resources assigned to work packages should be in line with their objectives and deliverables. You are advised to include a distinct work package on 'management' (see section 3.2) and to give due visibility in the work plan to 'dissemination and exploitation' and 'communication activities', either with distinct tasks or distinct work packages.*

⚠ *You will be required to include an updated (or confirmed) 'plan for the dissemination and exploitation of results' in both the periodic and final reports. (This does not apply to topics where a draft plan was not required.) This should include a record of activities related to dissemination and exploitation that have been undertaken and those still planned. A report of completed and planned communication activities will also be required.*

⚠ *If your project is taking part in the Pilot on Open Research Data, you must include a 'data management plan' as a distinct deliverable within the first 6 months of the project. A template for such a plan is given in the guidelines on data management in the H2020 Online Manual. This deliverable will evolve during the lifetime of the project in order to present the status of the project's reflections on data management.*

Definitions:

'Work package' means a major sub-division of the proposed project.

'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.

Management structure, milestones and procedures

- Describe the organisational structure and the decision-making (including a list of milestones (table 3.2a))
- Explain why the organisational structure and decision-making mechanisms are appropriate to the complexity and scale of the project.
- Describe, where relevant, how effective innovation management will be addressed in the management structure and work plan.

⚠ *Innovation management is a process which requires an understanding of both market and technical problems, with a goal of successfully implementing appropriate creative ideas. A new or improved product, service or process is its typical output. It also allows a consortium to respond to an external or internal opportunity.*

- Describe any critical risks, relating to project implementation, that the stated project's objectives may not be achieved. Detail any risk mitigation measures. Please provide a table with critical risks identified and mitigating actions (table 3.2b)

Definition:

'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.

Consortium as a whole

⚠ *The individual members of the consortium are described in a separate section 4. There is no need to repeat that information here.*

- Describe the consortium. How will it match the project's objectives, and bring together the necessary expertise? How do the members complement one another (and cover the value chain, where appropriate),?
- In what way does each of them contribute to the project? Show that each has a valid role, and adequate resources in the project to fulfil that role.
- If applicable, describe the industrial/commercial involvement in the project to ensure exploitation of the results and explain why this is consistent with and will help to achieve the specific measures which are proposed for exploitation of the results of the project (see section 2.2).
- **Other countries and international organisations**: If one or more of the participants requesting EU funding is based in a country or is an international organisation that is not automatically eligible for such funding (entities from Member States of the EU, from Associated Countries and from one of the countries in the exhaustive list included in General Annex A of the work programme are automatically eligible for EU funding), explain why the participation of the entity in question is essential to carrying out the project

Resources to be committed

⚠ *Please make sure the information in this section matches the costs as stated in the budget table in section 3 of the administrative proposal forms, and the number of person months, shown in the detailed work package descriptions.*

Please provide the following:

- a table showing number of person months required (table 3.4a)
- a table showing 'other direct costs' (table 3.4b) for participants where those costs exceed 15% of the personnel costs (according to the budget table in section 3 of the administrative proposal forms)

Proposal template - Part B
Implementation Tables

Tables for section 3.2

Table 3.2a: List of milestones

Milestone number	Milestone name	Related work package(s)	Due date (in month)	Means of verification

KEY

Due date
Measured in months from the project start date (month 1)

Means of verification
Show how you will confirm that the milestone has been attained. Refer to indicators if appropriate. For example: a laboratory prototype that is 'up and running'; software released and validated by a user group; field survey complete and data quality validated.

Table 3.2b: Critical risks for implementation

Description of risk (indicate level of likelihood: Low/Medium/High)	Work package(s) involved	Proposed risk-mitigation measures

Definition critical risk:
A critical risk is a plausible event or issue that could have a high adverse impact on the ability of the project to achieve its objectives.

Level of likelihood *to occur:* **Low/medium/high**
The likelihood is the estimated probability that the risk will materialise even after taking account of the mitigating measures put in place.

Table 3.1c: List of Deliverables[7]

Deliverable (number)	Deliverable name	Work package number	Short name of lead participant	Type	Dissemination level	Delivery date (in months)

KEY

Deliverable numbers in order of delivery dates. Please use the numbering convention <WP number>.<number of deliverable within that WP>.

For example, deliverable 4.2 would be the second deliverable from work package 4.

Type:
Use one of the following codes:
R: Document, report (excluding the periodic and final reports)
DEM: Demonstrator, pilot, prototype, plan designs
DEC: Websites, patents filing, press & media actions, videos, etc.
OTHER: Software, technical diagram, etc.

Dissemination level:
Use one of the following codes:
PU = Public, fully open, e.g. web
CO = Confidential, restricted under conditions set out in Model Grant Agreement
CI = Classified, information as referred to in Commission Decision 2001/844/EC.

Delivery date
Measured in months from the project start date (month 1)

Proposal template - Part B
Other direct cost

Table 3.4b: 'Other direct cost' items (travel, equipment, other goods and services, large research infrastructure)

Please complete the table below for each participant if the sum of the costs for 'travel', 'equipment', and 'goods and services' exceeds 15% of the personnel costs for that participant (according to the budget table in section 3 of the proposal administrative forms).

Participant Number/Short Name	Cost (€)	Justification
Travel		
Equipment		
Other goods and services		
Total		

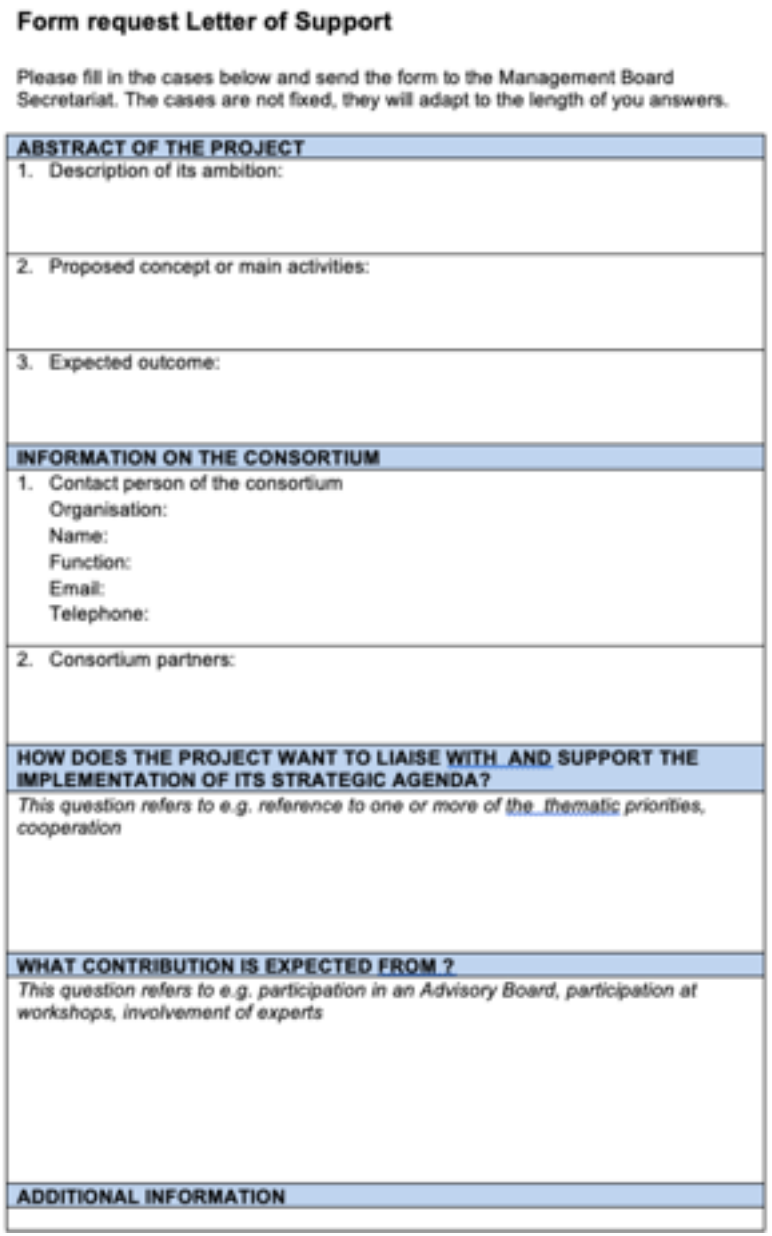
Please complete the table below for all participants that would like to declare costs of large research infrastructure under Article 6.2 of the General Model Agreement[8], irrespective of the percentage of personnel costs. Please indicate (in the justification) if the beneficiary's methodology for declaring the costs for large research infrastructure has already been positively assessed by the Commission.

Participant Number/Short Name	Cost (€)	Justification
Large research infrastructure		

Letter of Support request

The following information has to be provided:

- Abstract of the project describing its ambition, proposed concept or main activities, expected outcome
- Information on the consortium
- Information on how the project wants to liaise and support the implementation of its strategic agenda
- Information on what contribution is expected (e.g. participation in an Advisory Board, participation at workshops, involvement of experts,…)



Form request Letter of Support

Please fill in the cases below and send the form to the Management Board Secretariat. The cases are not fixed, they will adapt to the length of you answers.

ABSTRACT OF THE PROJECT
1. Description of its ambition:
2. Proposed concept or main activities:
3. Expected outcome:
INFORMATION ON THE CONSORTIUM
1. Contact person of the consortium Organisation: Name: Function: Email: Telephone:
2. Consortium partners:
HOW DOES THE PROJECT WANT TO LIAISE WITH AND SUPPORT THE IMPLEMENTATION OF ITS STRATEGIC AGENDA?
This question refers to e.g. reference to one or more of the thematic priorities, cooperation
WHAT CONTRIBUTION IS EXPECTED FROM ?
This question refers to e.g. participation in an Advisory Board, participation at workshops, involvement of experts
ADDITIONAL INFORMATION

Letter of Support template

Headed paper of the supporting organization

Coordinator name
Coordinator company/university/RTO
Coordinator Address
To be sent by mail in pdf format to:

Object: Letter of support to the project

Hereby, ORGANISATION NAME would like to express its interest in supporting the H2020 project XXX

In line with our Organization needs and interests, the support to the Project will result in one or more of the following activities:

- Receiving the PROJECT XXX newsletter and news;
- Answering to the Call for practices: inform on our own participatory experience in sustainable energy
- Consulting the PROJECT XXX Database: learn from other European participatory practices in sustainable energy ;
- Attending the Deliberative event, with the goal of discussing pitfalls and successes of the participatory practices and the corrective actions (adopted or envisaged) to tackle problems and obstacles identified
- Test the PROJECT XXX
- Host a communication event on the PROJECT XXX findings (starting).

Signing this letter and supporting the PROJECT XXX project is free of charge.

Best regards,

Place, Date

Signature

General agreement

The Grant Agreement (GA) is the funding agreement concluded between the European Commission/funding agency and the project participants and specifies the rights and obligations of the contracting parties. It contains important provisions for the implementation of the project such as criteria for the eligibility of costs and provisions for handling intellectual property rights.

Structure and key points of the General Grant Agreement

- Preamble – Participants
- Chapter 1 – General
- Chapter 2 – Action (name, acronym, start and duration of project etc.)
- Chapter 3 – Grant (max. amount and calculation of grant, funding rate(s), eligible costs)
- Chapter 4 – Rights and obligations of the parties (e.g. third party costs, documentation obligations, reporting and payments, checks/reviews/audits and management of intellectual property)
- Chapter 5 – Division of roles and responsibilities (within the consortium)
- Chapter 6 – Rejection of costs, reduction of the grant etc.
- Chapter 7 – Final provisions

The Grant Agreement includes the following Annexes:

- Annex 1 – Description of the action (DoA)
- Annex 2 – Estimated budget for the action
- Annex 3 – Accession Forms
- Annex 4 – Model for the financial statements
- Annex 5 – Model for the certificate on the financial statements (CFS)
- Annex 6 – Model for the certificate on the methodology (CoMUC)

General agreement info

All actual costs must …

1. **be actually incurred by the participant** (no estimated/imputed/budgeted costs),
2. **be incurred in the project period** (exception: travel costs for kick-off meeting; costs of final report submitted within 60 days of the end of the project),
3. **be included in the budget** (indicated in the estimated budget of the GA; for more information see budget transfers),
4. be incurred in **connection with the action** and **necessary for its implementation**,
5. **be identifiable and verifiable** and recorded in the beneficiary's accounts in accordance with the applicable accounting standards and **usual cost accounting practices**,
6. comply with the applicable national laws on taxes, labour and social security, and
7. **be reasonable and justified** and comply with the principle of sound financial management (in particular regarding **economy and efficiency**).

The **financial report** consists of three parts:

1. the **individual financial statements** of all beneficiaries and linked third parties,
2. the associated **explanation on the use of resources** with detailed explanations on the eligible costs and
3. the **summary financial statement** (generated automatically) of all beneficiaries, including the **request for interim/balance payment**.

Payment	Date of payment
Pre-Financing	Within 30 days of the entry into force of the GA or 10 days prior to the starting date of the action (whichever is the latest)
Interim Payment(s)	Within 90 days of submission of the interim report
Balance Payment	Within 90 days of submission of the final report

The following costs are not eligible:

- **provisions** for future losses or debts
- **interest owed**
- **currency exchange losses**
- **deductible VAT**

Consortium agreement

The Consortium Agreement specifies the rights and obligations of the project partners. A Consortium Agreement is obligatory for most projects and should be signed prior to the Grant Agreement.

The **consortium is solely responsible** for the preparation of the Consortium Agreement. The **CA must not contradict the GA**. The information provided by the project partners in the **Description of the Action** (Annex 1 of the GA) are therefore binding for the Consortium Agreement.

Consortium Agreements typically specify the following topics:

- **General provisions**: definitions, entry into force, duration, applicable law (often: Belgian law) etc.
- **Obligations of partners**: compliance with deadlines for deliverables and reports, information obligations, participation in meetings etc. and consequences of non-compliance
- **Internal organisation and decision-making**: composition and duties of bodies (corresponding to the size of the consortium), meetings, voting rules etc.
- **Financial provisions**: allocation of funding and transfer to the partners (e.g. payment of pre-financing in instalments), handling of receipts and financial losses etc.
- **Provisions on the handling of intellectual property rights**: more detailed information about the consortium's ability to specify the handling of intellectual property rights, access rights and project results can be found in the documents available in the Download Center.
- **Other issues**: liability, non-disclosure, dispute resolution …

Download template:

Session 2

Who are the key actors in H2020 Energy calls and how to engage with them

Key actors in the **Secure, Clean and Efficient Energy** thematic priority
Overall top 15 EU participations

n.	Legal Name	Country	City	H2020 Participations	H2020 Net EU Contribution
1	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	DE - Germany	MUNCHEN	72	€ 47.586.180
2	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	FR - France	PARIS 15	51	€ 30.877.315
3	Teknologian tutkimuskeskus VTT Oy	FI - Finland	ESPOO	46	€ 27.505.748
4	FUNDACION TECNALIA RESEARCH & INNOVATION	ES - Spain	DERIO BIZKAIA	46	€ 24.131.095
5	DANMARKS TEKNISKE UNIVERSITET	DK - Denmark	KGS LYNGBY	44	€ 18.106.828
6	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO	NL - Netherlands	DEN HAAG	33	€ 18.000.089
7	AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE	IT - Italy	ROMA	32	€ 6.615.869
8	AALBORG UNIVERSITET	DK - Denmark	AALBORG	31	€ 13.938.928
9	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	EL - Greece	THERMI THESSALONIKI	30	€ 15.148.898
10	POLITECNICO DI MILANO	IT - Italy	MILANO	30	€ 8.801.301
11	CONSIGLIO NAZIONALE DELLE RICERCHE	IT - Italy	ROMA	29	€ 10.584.647
12	CENTRE FOR RENEWABLE ENERGY SOURCES AND SAVING FONDATION	EL - Greece	PIKERMI	28	€ 4.195.950
13	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS	FR - France	PARIS	26	€ 11.157.329
14	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE	CH - Switzerland	LAUSANNE	26	€ 6.765.981
15	FUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y CONSUMOS ENERGETICOS	ES - Spain	ZARAGOZA	25	€ 8.946.924

https://webgate.ec.europa.eu/dashboard/sense/app/93297a69-09fd-4ef5-889f-b83c4e21d33e/sheet/PbZJnb/state/analysis

Key actors in the **Secure, Clean and Efficient Energy** thematic priority
Overall top SMEs participations

n.	Legal Name	Country	City	H2020 Participations	H2020 Net EU Contribution
1	WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG	DE - Germany	MUENCHEN	24	€ 6.842.323
2	ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)*	DE - Germany	FREIBURG	17	€ 4.653.264
3	ZABALA INNOVATION CONSULTING, S.A.	ES - Spain	MUTILVA ALTA NAVARRA	12	€ 3.070.159
4	R2M SOLUTION SRL	IT - Italy	PAVIA	12	€ 2.693.706
5	SEVEN, THE ENERGY EFFICIENCY CENTER Z.U.	CZ - Czech Republic	PRAHA	12	€ 1.603.463
6	SOLIDPOWER SPA	IT - Italy	MEZZOLOMBARDO TN	10	€ 10.166.968
7	SUNFIRE GMBH	DE - Germany	DRESDEN	10	€ 14.147.669
8	HYPERTECH (CHAIPERTEK) ANONYMOS VIOMICHANIKI EMPORIKI ETAIREIA PLIROFORIKIS KAI NEON TECHNOLOGION	EL - Greece	CHALANDRI ATHINA	10	€ 4.787.413
9	HYGEAR TECHNOLOGY AND SERVICES BV	NL - Netherlands	ARNHEM	10	€ 2.298.719
10	EUROHEAT & POWER	BE - Belgium	BRUXELLES	10	€ 1.416.388
11	HyGear Fuel Cell Systems B.V.	NL - Netherlands	ARNHEM	10	€ 923.631
12	FUNDACION CENER-CIEMAT	ES - Spain	SARRIGUREN	9	€ 4.481.069
13	HYGEAR BV	NL - Netherlands	ARNHEM	9	€ 3.035.897
14	WAVEC/OFFSHORE RENEWABLES - CENTRO DE ENERGIA OFFSHORE ASSOCIACAO	PT - Portugal	LISBOA	9	€ 2.987.322
15	VAASAETT LTD AB OY	FI - Finland	HELSINKI	8	€ 1.664.479

Key actors in the **Secure, Clean and Efficient Energy** thematic priority
Overall top for profit participations

n.	Legal Name	Country	City	H2020 Participations	H2020 Net EU Contribution
1	WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG	DE - Germany	MUENCHEN	24	€ 6.842.323
2	RINA CONSULTING SPA	IT - Italy	GENOVA	19	€ 7.943.261
3	ELECTRICITE DE FRANCE	FR - France	PARIS 08	17	€ 10.326.833
4	KRAJOWA AGENCJA POSZANOWANIA ENERGII SPOLKA AKCYJNA	PL - Poland	WARSZAWA	14	€ 1.359.146
5	ENEL GREEN POWER SPA	IT - Italy	ROMA	13	€ 16.391.018
6	ZABALA INNOVATION CONSULTING, S.A.	ES - Spain	MUTILVA ALTA NAVARRA	12	€ 3.070.159
7	R2M SOLUTION SRL	IT - Italy	PAVIA	12	€ 2.693.706
8	ACCIONA CONSTRUCCION SA	ES - Spain	ALCOBENDAS	11	€ 4.751.627
9	SOLIDPOWER SPA	IT - Italy	MEZZOLOMBARDO TN	10	€ 10.166.968
10	SUNFIRE GMBH	DE - Germany	DRESDEN	10	€ 14.147.669
11	ETRA INVESTIGACION Y DESARROLLO SA	ES - Spain	VALENCIA	10	€ 7.986.288
12	ENGINEERING - INGEGNERIA INFORMATICA SPA	IT - Italy	ROMA	10	€ 5.094.215
13	HYPERTECH (CHAIPERTEK) ANONYMOS VIOMICHANIKI EMPORIKI ETAIREIA PLIROFORIKIS KAI NEON TECHNOLOGION	EL - Greece	CHALANDRI ATHINA	10	€ 4.787.413
14	HYGEAR TECHNOLOGY AND SERVICES BV	NL - Netherlands	ARNHEM	10	€ 2.298.719
15	EUREC EESV	BE - Belgium	BRUXELLES	10	€ 1.413.413

Key actors in the **Secure, Clean and Efficient Energy** thematic priority
2017/2018/2019 top 15 participations

n.	Legal Name	Country	City	H2020 Participations	H2020 Net EU Contribution
1	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	DE - Germany	MUNCHEN	34	€ 22.884.323
2	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	FR - France	PARIS 15	28	€ 19.333.681
3	Teknologian tutkimuskeskus VTT Oy	FI - Finland	ESPOO	25	€ 16.020.656
4	FUNDACION TECNALIA RESEARCH & INNOVATION	ES - Spain	DERIO BIZKAIA	20	€ 9.262.183
5	DANMARKS TEKNISKE UNIVERSITET	DK - Denmark	KGS LYNGBY	20	€ 8.094.853
6	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	EL - Greece	THERMI THESSALONIKI	18	€ 9.580.331
7	CONSIGLIO NAZIONALE DELLE RICERCHE	IT - Italy	ROMA	16	€ 5.609.664
8	SINTEF AS	NO - Norway	TRONDHEIM	16	€ 11.343.706
9	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE	CH - Switzerland	LAUSANNE	16	€ 6.765.981
10	AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE	IT - Italy	ROMA	15	€ 3.056.161
11	AALBORG UNIVERSITET	DK - Denmark	AALBORG	15	€ 9.262.099
12	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO	NL - Netherlands	DEN HAAG	14	€ 8.492.009
13	FUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y CONSUMOS ENERGETICOS	ES - Spain	ZARAGOZA	13	€ 5.068.670
14	POLITECNICO DI MILANO	IT - Italy	MILANO	12	€ 3.527.136
15	WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG	DE - Germany	MUENCHEN	12	€ 3.447.803

Key actors in the **Secure, Clean and Efficient Energy** thematic priority
2017/2018/2019 top SMEs participations

n.	Legal Name	Country	City	H2020 Participations	H2020 Net EU Contribution
1	WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG	DE - Germany	MUENCHEN	12	€ 3.447.803
2	ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)*	DE - Germany	FREIBURG	9	€ 2.126.663
3	ZABALA INNOVATION CONSULTING, S.A.	ES - Spain	MUTILVA ALTA NAVARRA	8	€ 1.765.284
4	HYPERTECH (CHAIPERTEK) ANONYMOS VIOMICHANIKI EMPORIKI ETAIREIA PLIROFORIKIS KAI NEON TECHNOLOGION	EL - Greece	CHALANDRI ATHINA	7	€ 3.264.413
5	R2M SOLUTION SRL	IT - Italy	PAVIA	7	€ 1.674.473
6	ETA - ENERGIA, TRASPORTI, AGRICOLTURA SRL	IT - Italy	FIRENZE	7	€ 1.336.113
7	SUNFIRE GMBH	DE - Germany	DRESDEN	6	€ 5.802.526
8	VAASAETT LTD AB OY	FI - Finland	HELSINKI	6	€ 1.276.361
9	EUROHEAT & POWER	BE - Belgium	BRUXELLES	6	€ 937.063
10	HYGEAR TECHNOLOGY AND SERVICES BV	NL - Netherlands	ARNHEM	6	€ 715.085
11	SOLIDPOWER SPA	IT - Italy	MEZZOLOMBARDO TN	5	€ 3.290.994
12	B.T.G. BIOMASS TECHNOLOGY GROUP BV	NL - Netherlands	ENSCHEDE	5	€ 2.623.323
13	HYGEAR BV	NL - Netherlands	ARNHEM	5	€ 1.801.644
14	FAHRENHEIT GMBH	DE - Germany	MUNCHEN	5	€ 1.862.188
15	MERIT CONSULTING HOUSE	BE - Belgium	UCCLE	5	€ 1.737.421

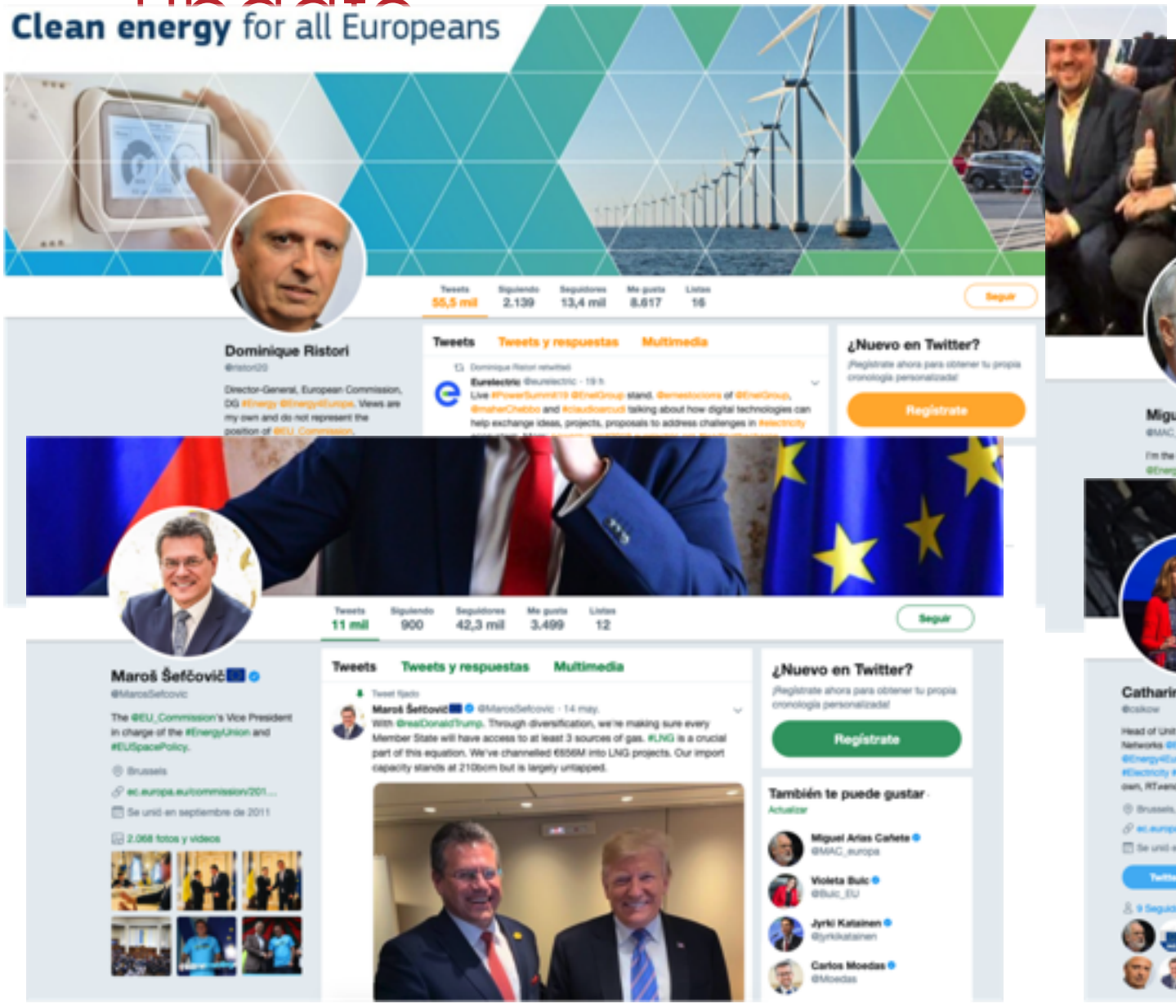
Key actors in the **Secure, Clean and Efficient Energy** thematic priority
2017/2018/2019 top for profit participations

n.	Legal Name	Country	City	H2020 Participations	H2020 Net EU Contribution
1	WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG	DE - Germany	MUENCHEN	12	€ 3.447.803
2	ELECTRICITE DE FRANCE	FR - France	PARIS 08	12	€ 8.806.103
3	RINA CONSULTING SPA	IT - Italy	GENOVA	11	€ 5.799.075
4	ZABALA INNOVATION CONSULTING, S.A.	ES - Spain	MUTILVA ALTA NAVARRA	8	€ 1.765.284
5	KRAJOWA AGENCJA POSZANOWANIA ENERGII SPOLKA AKCYJNA	PL - Poland	WARSZAWA	7	€ 790.688
6	ENEL GREEN POWER SPA	IT - Italy	ROMA	7	€ 11.529.358
7	R2M SOLUTION SRL	IT - Italy	PAVIA	7	€ 1.674.473
8	ETA - ENERGIA, TRASPORTI, AGRICOLTURA SRL	IT - Italy	FIRENZE	7	€ 1.336.113
9	ETRA INVESTIGACION Y DESARROLLO SA	ES - Spain	VALENCIA	7	€ 4.893.391
10	HYPERTECH (CHAIPERTEK) ANONYMOS VIOMICHANIKI EMPORIKI ETAIREIA PLIROFORIKIS KAI NEON TECHNOLOGION	EL - Greece	CHALANDRI ATHINA	7	€ 3.264.413
11	EUREC EESV	BE - Belgium	BRUXELLES	7	€ 1.040.888
12	VAASAETT LTD AB OY	FI - Finland	HELSINKI	6	€ 1.276.361
13	SUNFIRE GMBH	DE - Germany	DRESDEN	6	€ 5.802.526
14	HYGEAR TECHNOLOGY AND SERVICES BV	NL - Netherlands	ARNHEM	6	€ 715.085
15	SOLIDPOWER SPA	IT - Italy	MEZZOLOMBARDO TN	5	€ 3.290.994

Key actors in the **Secure, Clean and Efficient Energy** thematic priority
Top Turkey particpations

n.	Legal Name	Country	City	H2020 Participations	H2020 Net EU Contribution
1	MIDDLE EAST TECHNICAL UNIVERSITY	TR - Turkey	ANKARA	5	€ 1.254.376
2	DE SURDURULEBILIR ENERJI VE INSAAT SANAYI TICARET LIMITED SIRKETI	TR - Turkey	USKUDAR	3	€ 957.203
3	TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU	TR - Turkey	ANKARA	3	€ 239.656
4	Turkiye Petrol Rafinerileri Anonim Sirketi	TR - Turkey	KOCAELI	2	€ 1.096.375
5	KADIR HAS UNIVERSITESI	TR - Turkey	ISTANBUL	2	€ 287.688
6	ELEKTRIK DAGITIM HIZMETLERI DERNEGI(ELDER)	TR - Turkey	CANKAYA	2	€ 260.625
7	JEOTERMAL ELEKTRIK SANTRAL YATIRIMCILARI DERNEGI	TR - Turkey	IZMIR	2	€ 188.518
8	TEPEBASI MUNICIPALITY	TR - Turkey	ESKISEHIR	1	€ 3.785.614
9	ANTALYA METROPOLITAN MUNICIPALITY	TR - Turkey	ANTALYA	1	€ 2.792.615
10	Sampas Bilisim Ve Iletisim Sistemleri Sanayi Ve Ticaret A.S.	TR - Turkey	ISTANBUL	1	€ 1.046.938
11	DEMIR CANER	TR - Turkey	ISTANBUL KADIKOY	1	€ 447.125
12	OLCSAN CAD TEKNOLOJILERI YAZILIM DONANIM DANISMANLIK SANAYI VE TICARETANONIM SIRKETI	TR - Turkey	MECIDIYEKOY SISLI ISTANBUL	1	€ 384.169
13	CIMSA CIMENTO SANAYI VE TICARET ANONIM SIRKETI	TR - Turkey	USKUDAR ISTANBUL	1	€ 302.875
14	ENERGON ENERJI VERIMLILIGI DANISMANLIGI HIZMETI VE TICARET LIMITED SIRKETI	TR - Turkey	ATASEHIR ISTANBUL	1	€ 302.346
15	SABANCI UNIVERSITESI	TR - Turkey	ISTANBUL	1	€ 300.000

Key actors in the EU energy politics: Stay update



How to engage with SC3 key actors

I want to promote my idea and coordinate a proposal

1. Create a document (**Concept note**) to *capture the key actors on the value chain of your concept*
2. Develop a structured *set of questions* to **gather the key information** on what they are doing or how they are feeling, what they may be concerned about and what their expectations are.
3. ***Analyse the information*** gained against what you want levels of engagement you require and **what you want them to be doing in your proposal**. Be as specific as possible.
4. Develop a *persuasive* ***stakeholder engagement strategy*** that uses visual tools and story-telling capability to involve, interest, motivate, inspire and retain them.

Coordinating a proposal does not mean to coordinate the project

How to engage with SC3 key actors: Concept note

3. Demand-response: tools and technology validation for demand response forecast, profiling, segmentation, load forecasting, innovative and user-friendly services for customers based on smart metering; inclusion of Virtual Power Plant and microgrid as active balancing assets; associated innovative market and business models; secure data handling;

Supporting projects:

DR-BOB

TABEDE

PENTAGON

Mas²tering

General idea: Mas2tering provides a MAS-based ICT solution for the management of flexibility at LV level. The project has provided for the design of a local flexibility market, where a Local Flexibility Aggregator (LFA) manages flexibility provided by end user within a Local Energy Community (LEC). Three steps of optimization are included: 1) In-home optimization 2) LEC optimization 3) LVGrid optimization. The third step involves the DSO as buyer of flexibility to cope with local congestions and other grid issues. The solution aligns with USEF and also extends it. However it only targets the planning and validating phases. The solution plans future use of flexible appliances based on consumption and RES generation forecasting. The operative phase (i.e. the real-time control of the grid) is not included.

The idea for LCE01 is 1)to extend Mas2tering to the MV grid. This would involve:

- *Integrating more assets (including medium size RES connected to the MV grid, Blocks of Buildings, storage systems other than domestic, EV charging stations, generation systems other than RES, cogeneration and trigeneration plants);*
- *Passing from a radial grid to a meshed or partially-meshed grid, increasing grid configuration management capabilities;*
- *Further integrating the market mechanism proposed in Mas2tering into USEF;*

How to engage with SC3 key actors: Concept note

2) Increase the number of services provided, supporting the complete development of local energy and flexibility markets and extending use of DR to ancillary services at local level

- *DR Services already defined in Mas2tering, but integrated at MV (wholesale market and intraday markets) – PLAN & VALIDATE*

Plan use of flexible load to maximise user's cost-savings and revenue (implicit and explicit DR) for the prosumer

- *Voltage control – PLAN & VALIDATE*

Plan use of flexibility to avoid the occurrence of over-voltages due to RES generation

- *Controlled islanding (included in USEF, but not yet designed) – PLAN & VALIDATE*

Isolate portion of the grid to deal with grid issues or to minimise losses

- *Redundancy (n-1) support – PLAN, VALIDATE & OPERATE (limited)*

Use DR to reduce load when a local generation systems is disconnected (either for maintenance or for an emergency situation). This type of control (called primary control or frequency control) is normally done at high-voltage level in an autonomous way. The proposition is to act locally to mitigate risks at higher level. This is more a real-time control!

- *Power quality support - PLAN & VALIDATE*

Customer	Ref	Service	USEF scope	Relevant phases	2015 coverage
DSO	D2	Voltage control	Y	C-P-V-O-S	N
DSO	D4	Controlled islanding	Y	C-S	N
DSO	D5	Redundancy (n-1) support	Y	C-S	N
DSO	D6	Power quality support		N	-

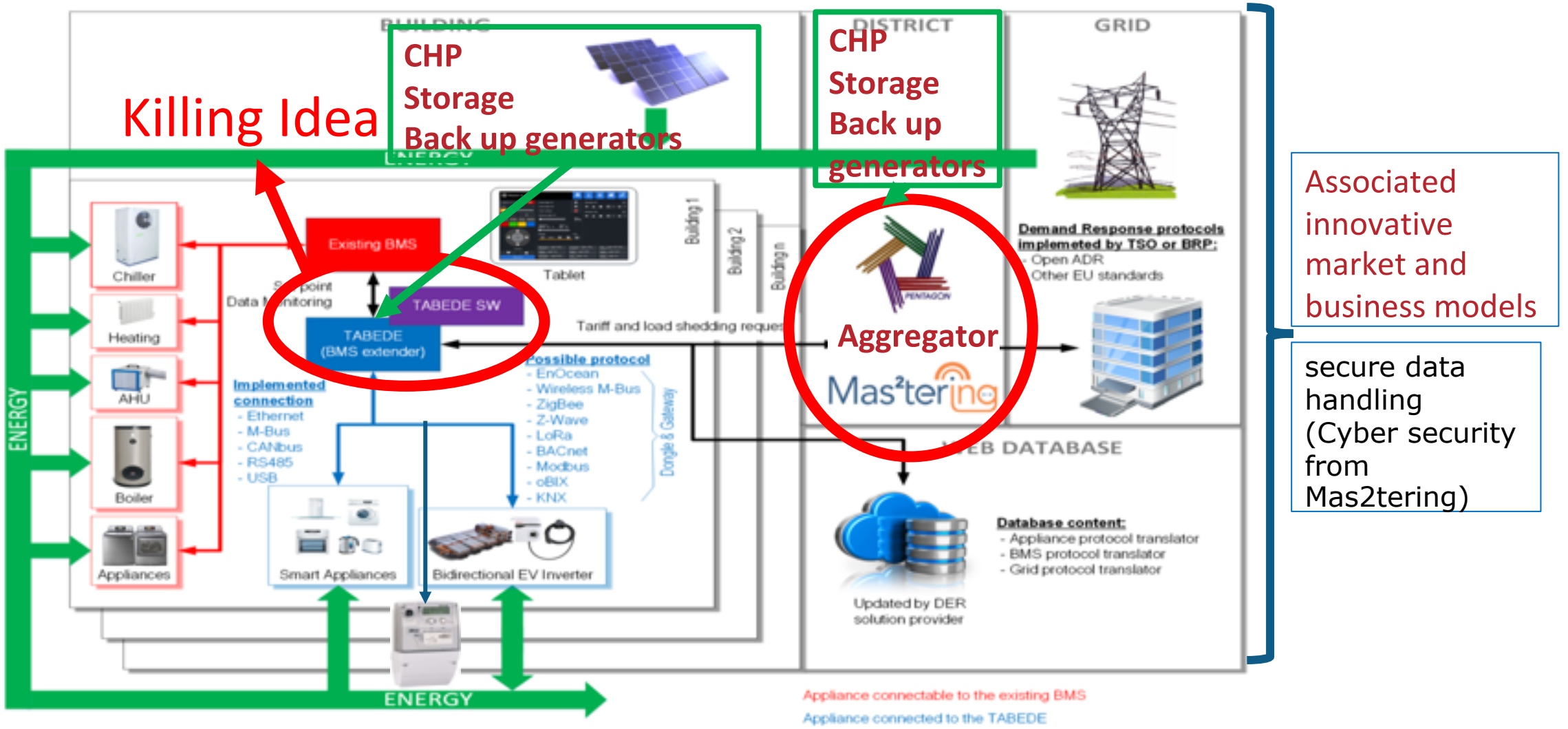
How to engage with SC3 key actors: Concept note

Other services/ areas of interest

- Use of DR for grid self-healing (techniques to include DR margin during the planning phase for use in the operative phase when required)
- Design of the Communication between the DSO and the TSO, i.e. synergistic combination/connection between local markets (day-ahead, intraday, ancillary services) and HV ones (day-ahead, intraday, ancillary services) [huge potential impact]
- Energy vectors management (involving more energy vectors and not just electricity) – Similar to PENTAGON
- Enhanced forecasting services
- Cyber security services

Killing Idea → Low Cost add on compatible with all the building assets and DR schemes to be connected to BMS or Energy box (in residential can work as an standalone device) for load optimization (MAS and MPC) and participate in the DR Market (with possibility to participate as a virtual power plant)

Supported by → Aggregator platform based on mas2tering and pentagon capable of providing to DSOs the services described before



Associated innovative market and business models

secure data handling (Cyber security from Mas2tering)

Tools and technology validation for demand response forecast, profiling, segmentation, load forecasting

Innovative and user-friendly services for customers based on smart metering;

Inclusion of Virtual Power Plant and microgrid as active balancing assets;

compatibility with current regulations, available or emerging standards and interoperability issues applying to their technologies

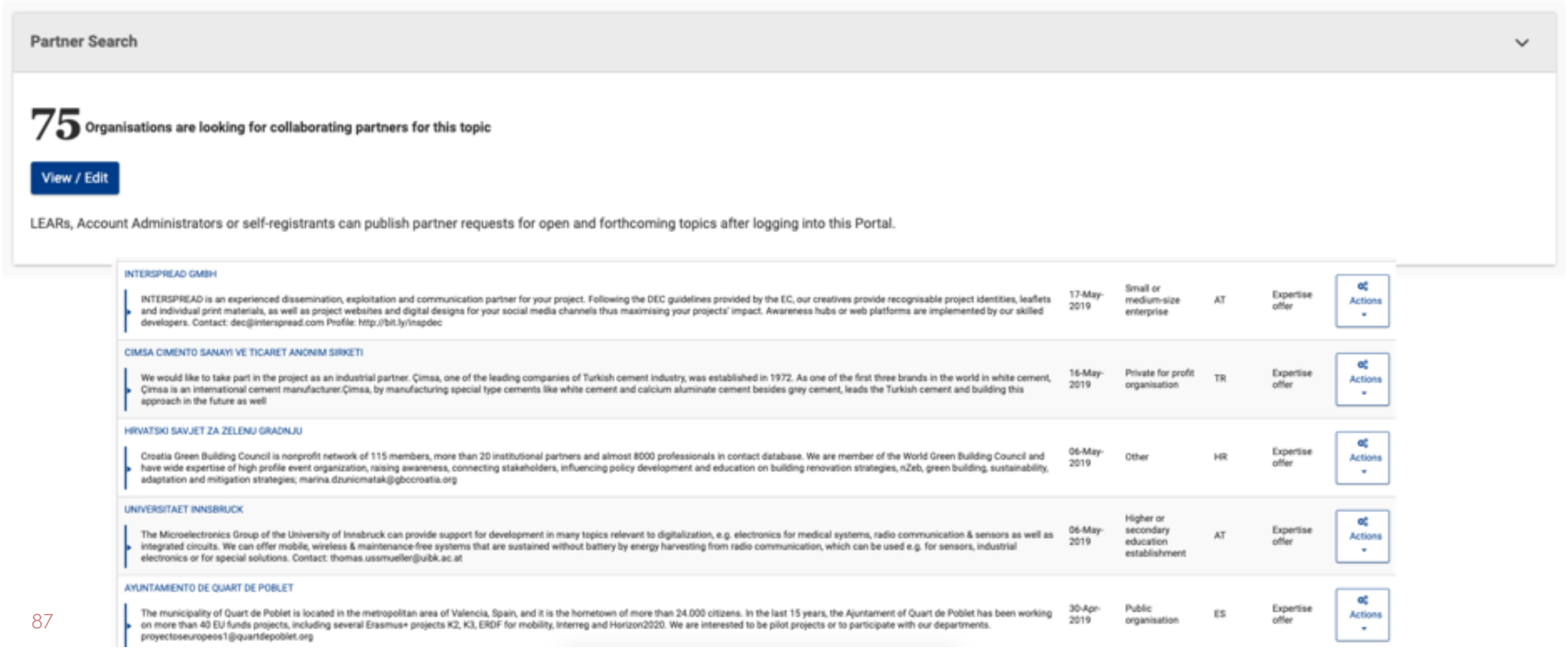
How to engage with SC3 key actors: Concept note

n.	Consortium	Potential partner (examples)
1	ICT developer	CEA/Fraunhofer/CNR
2	Aggregator	kiwipower/energy pool
3	Forecasting tool	Cardiff Uni/IREC
4	Utility	A2A/Iberdrola
5	DSO	ENEL/ENDESA/EDF
6	BRP	SCHOLT
7	ESCOs	R2M Energy
8	Consumer engagement	Alborg Uni/CSCP
9	Demos	City of xx/microgrid
10	Exploitation and dissemination	R2M Solution

How to engage with SC3 key actors

I want to promote my skills and be a partner of a proposal

1. Use the partner search in call topic



How to engage with SC3 key actors

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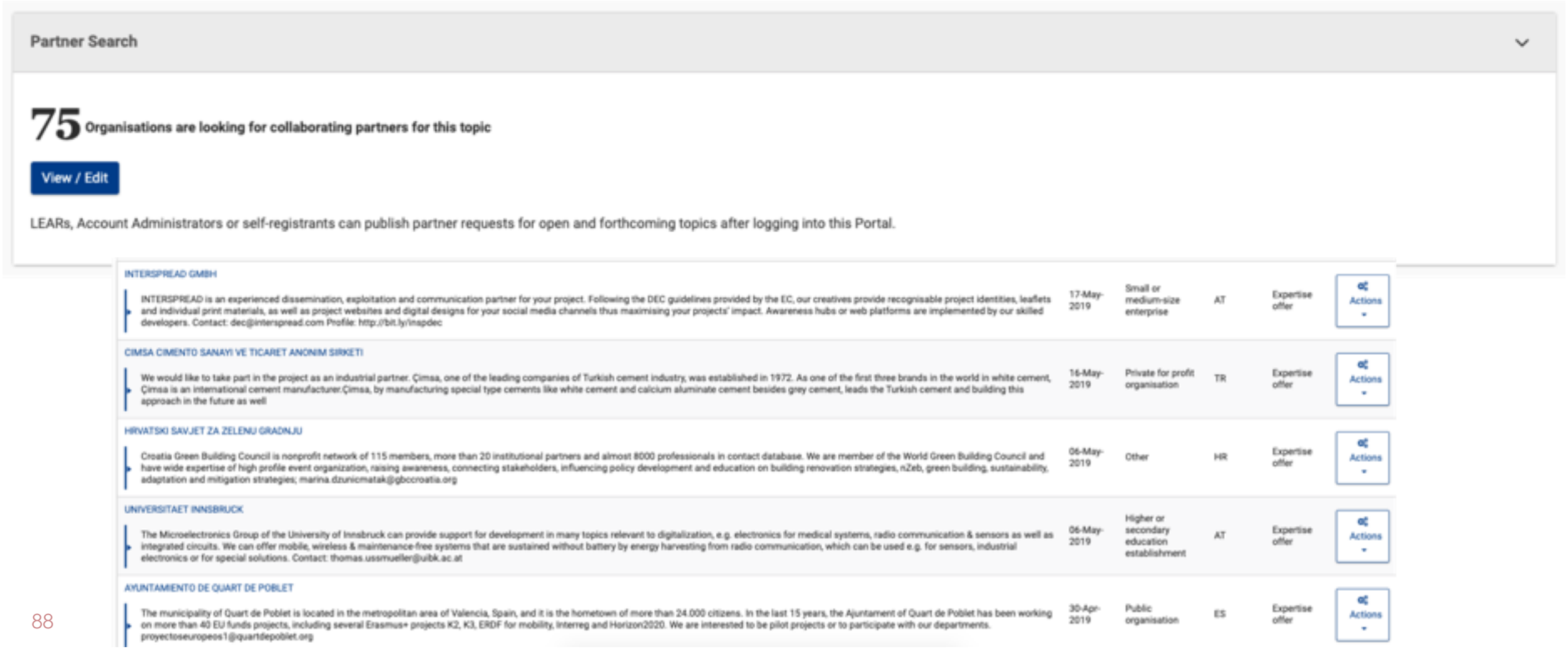


How to engage with SC3 key actors

I want to promote my skills and be a partner of a proposal

2. Attend to the H2020 EU Energy Info days - Use it for networking

Horizon 2020 Energy Info Days: 25-27 June 2019, Brussels

Interested in funding opportunities for research, innovation and market uptake projects on clean energy? Then mark in your agenda this year's Horizon 2020 Energy Info Days which will take place **on 25-27 June in Brussels**. Energy efficiency call will be covered on 27 June. Registrations will open in April.

Dates	Tuesday, 25 June, 2019 - 09:00 to Thursday, 27 June, 2019 - 18:00
Section	Horizon 2020 Energy Efficiency
Location	Charlemagne building, Rue de la Loi 170, 1000 Brussels, Belgium

How to engage with SC3 key actors

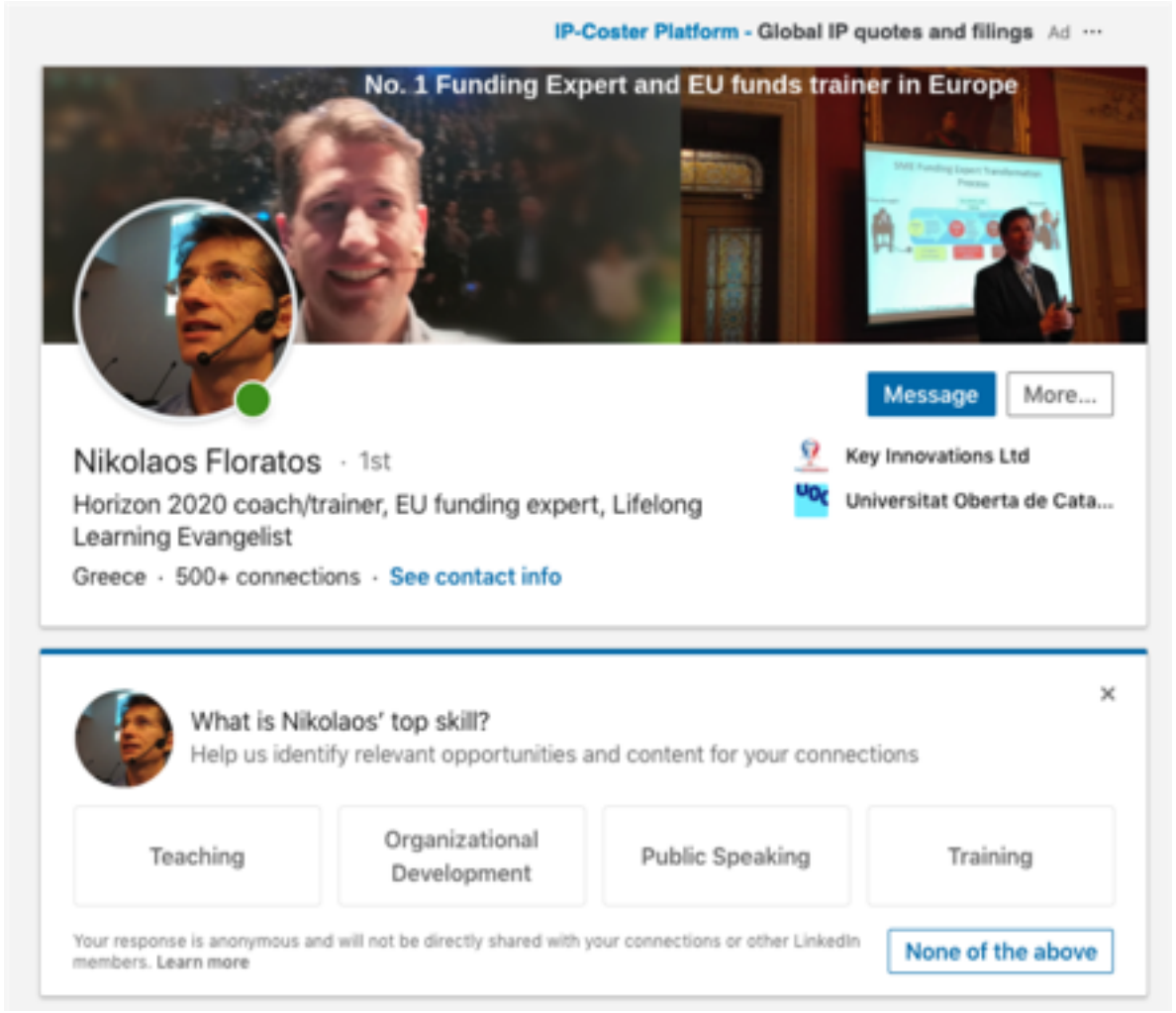
I want to promote my skills and be a partner of a proposal

2. Attend to the European utility week 12 - 14 November 2019 Paris Expo

How to engage with SC3 key actors

I want to promote my skills and be a partner of a proposal

3. From the previous list of top participants - contact them through email/linkedIn

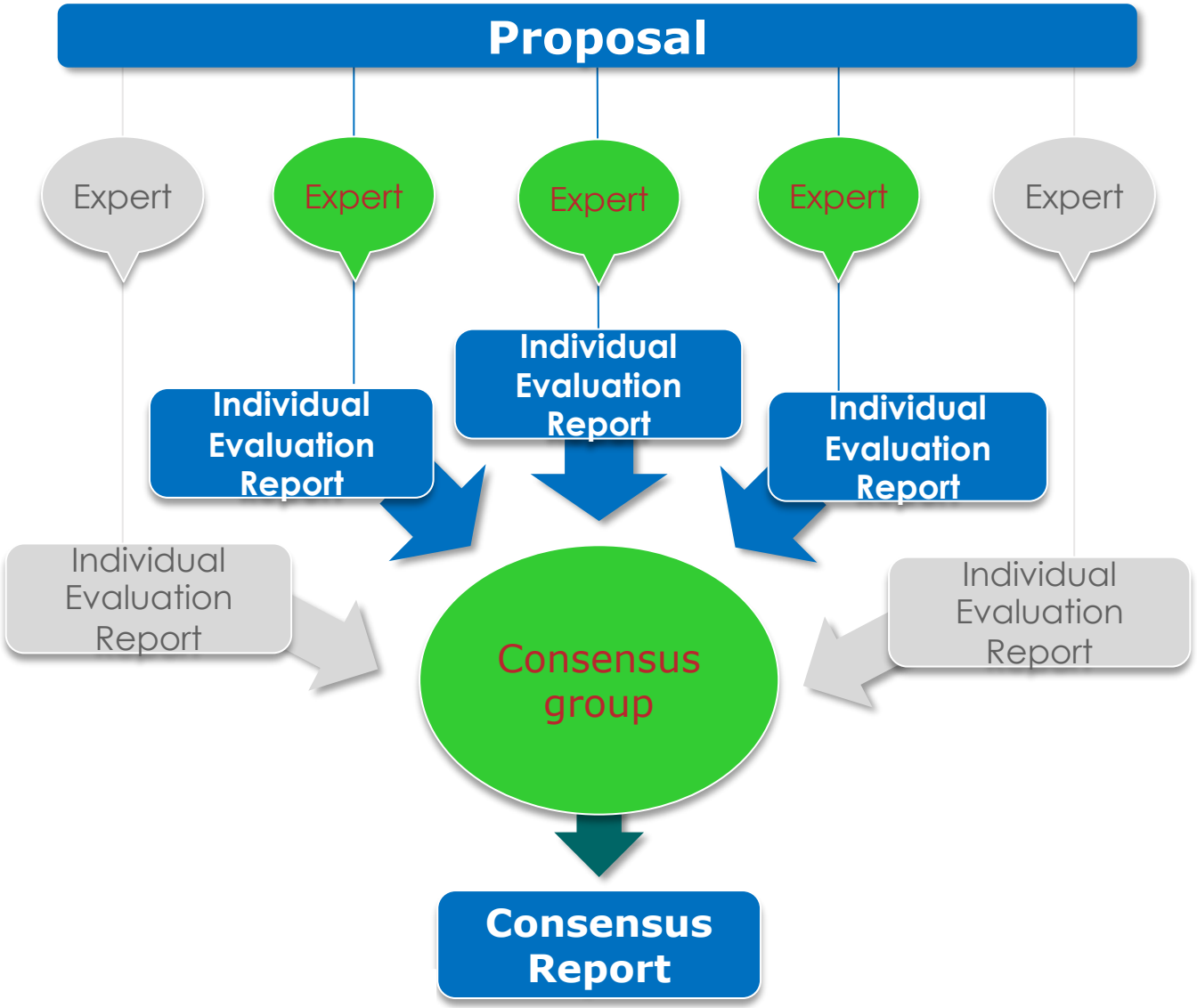


Personalize the message
Standard messages = SPAM

Session 3

How to impress the evaluators

Evaluation Process



Eligible proposal

Minimum 3 experts
… but can be more

Individual evaluation

Consensus

Individual evaluation

- **You read the proposal and evaluate it against the evaluation criteria**
  - Without discussing it with anybody else
  - As submitted - not on its potential if certain changes were to be made
  - Do not penalise applicants that did not provide detailed breakdown costs – they are not required
- **You disregard excess pages marked with a watermark**
- **You check to what degree the proposal is relevant to the call or topic**
- **You complete an Individual Evaluation Report (IER)**
  - Give your view on operational capacity
  - Give comments and scores for all evaluation criteria (scores must match comments)
  - Do not recommend substantial modifications
- **You then submit the form and sign in the electronic system**

Look at the substance: Some proposals might be handicapped by language difficulties, other deceptively well written

Elements to be reflected in the evaluation

If a proposal

- **Is only marginally relevant in terms of its scientific, technological or innovation content relating to the call or topic addressed, you must reflect this in a lower score for the "Excellence" criterion**
  - No matter how excellent the objectives, approach, !
- **Does not significantly contribute to the expected impacts as specified in the WP for that call or topic, you must reflect this in a lower score for the "Impact" criterion**
- **Would require substantial modifications in terms of implementation (i.e. change of partners, additional work packages, significant budget or resources cut…), you must reflect this in a lower score for the "Quality and efficiency of the implementation" criterion**

Consensus group

- **It usually involves a discussion on the basis of the individual evaluations**
  - It is not just a simple averaging exercise
- **The aim is to find agreement on comments and scores**
  - Agree comments before scores!
  - If an applicant lacks basic operational capacity, you make comments and score the proposal without taking into account this applicant and its associated activity(ies)
- **"Outlying" opinions need to be explored**
  - They might be as valid as others – be open-minded
  - It is normal for individual views to change
- **Moderated by Commission/Agency staff (or an expert in some cases)**
  - Manages the evaluation, protects confidentiality and ensures fairness
  - Ensures objectivity and accuracy, all voices heard and points discussed
  - Helps the group keep to time and reach consensus

Consensus report

- **The *rapporteur* is responsible for drafting the consensus report (CR)**
  - Including consensus comments and scores
  - In some cases, the rapporteur does not take part in the discussion
- **The quality of the CR is paramount**
  - It often remains unchanged at the panel stage
- **The aim of the CR is to give:**
  - A clear assessment of the proposal based on its merit, with justification
  - Clear feedback on the proposal's weaknesses and strengths
- **Avoid:**
  - Comments not related to the criterion in question
  - Comments that are too short or too long or use inappropriate language
    you should explain what you mean in an adequate length and clear manner
  - Categorical statements that have not been properly verified e.g. "The proposal doesn't mention user requirements" – when there is a short reference…
  - Scores that don't match the comments
  - Marking down a proposal for the same critical aspect under two different criteria

The panel review

- **Consists of experts from the consensus groups and/or new experts**
- **Ensures the consistency of comments and scores given at the consensus stage**
- **Resolves any cases where a minority view is recorded in the CR**
- **Endorses the final scores and comments for each proposal**
  - Any new comments and scores (if necessary) should be carefully justified
- **Prioritises proposals with identical total scores, after any adjustments for consistency**
- **Recommends a list of proposals in priority order**

Proposals with identical total scores

- For each group of proposals with identical total scores, the panel considers first proposals that address topics that are not already covered by more highly-ranked proposals
- The panel then orders them according to:
  - First, their score for Excellence, and second, their score for Impact
  - Except for Innovation action, first their score for Impact and second their score for Excellence
- If there are ties, the panel takes into account the following factors:
  - First, the size of the budget allocated to SMEs
  - Second, the gender balance of personnel carrying out the research and/or innovation activities
- If there are still ties, the panel agrees further factors to consider:
  - e.g. synergies between projects or contribution to the objectives of the call or of Horizon 2020
- The same method is then applied to proposals that address topics that are already covered by more highly-ranked proposals

Key points about the review process

1. **The reviewers are not direct extensions of the EC and its point of view.** Because of this, reviewers do not directly reflect the mindset of the funding authorities, as many believe. While instructions for evaluation exist, we know from experience that there is an undocumented policy whereas reviewers can evaluate based on their interpretation of the call and requirements. As well, we've also heard of some reviewers who did not receive briefing for evaluation. Our experience enables us to know how to attend to such gaps and potential discrepancies in the review process.
2. **The reviewers are limited in time when reviewing your application.** It is reasonable to assume that they have more than one proposal to evaluate on the same day (it may even be 2-6 proposals per day). Generally – their motivation is to complete their proposal review tasks as soon as possible.
3. **Reviewers may experience an "emotional feedback" when reviewing your grant proposal**. It is important to remember – reviewers are only human. They approach a grant review process with a personal track record, unique experience and past in the field they are required to review. Whether consciously or subconsciously, this can lead them to feel positive or negative emotions towards the applications they are reviewing. Once there, positive emotions can lead them to look for and highlight positive aspects to support an overall positive decision. In contrast, negative emotions will do the opposite, resulting with a negative overall review. It is our experience that generally a reviewer's starting point is always positive when reviewing new applications. Therefore, our motivation is to keep this "emotional feedback" positive, rather than turn it into a negative one. A sharp, crisp concise and well written application can tremendously help!

Key points about the review process

4. The reviewers may not actually read your entire proposal text. Given the time constraints, reviewers typically do not read everything. They read what they have to in order to complete their evaluation task and look for answers in specific places in the proposal (which means knowing where to provide information is crucial). This brings us to the final point…

5. During the review process, the reviewers receive a list of pre-defined questions to answer in an electronic form. They are required to provide a mark per question and a short feedback text. This means they may be satisfied by looking for specific answers to the specific questions in specific places in your application.

Self-Evaluation Forms

- This form is made available to applicants who may themselves wish to arrange an **evaluation of their proposal** (e.g. by an impartial colleague) prior to final editing, submission and deadline.
- The aim is to help applicants **identify ways to improve** their proposals. The forms used by the experts for their evaluation reports will be broadly similar, although the detail and layout may differ.
- These forms are based on the standard criteria, scores and thresholds. **Check whether special schemes apply** to the topics of interest to you. The definitive evaluation schemes are given in the work programme.
- A self-evaluation, if carried out, is **not to be submitted to the Commission**, and has no bearing whatsoever on the conduct of the evaluation.

https://ec.europa.eu/research/participants/data/ref/h2020/call_ptef/ef/2018-2020/h2020-call-ef-ria-ia-csa-2018-20_en.pdf

Self-Evaluation Forms

1. Excellence

Note: The following aspects will be taken into account, to the extent that the proposed work corresponds to the topic description in the work programme:

- **Clarity and pertinence of the objectives**
- **Soundness of the concept, and credibility of the proposed methodology**
- **Quality of the proposed coordination and/or support measures**

Comments:

Score 1:
Threshold 3/5

2. Impact

Note: The following aspects will be taken into account:

- **The extent to which the outputs of the project would contribute to each of the expected impacts mentioned in the work programme under the relevant topic**
- Quality of the propsed measures to:
  - exploit and disseminate the project results (including management of IPR), and to manage research data where relevant
  - communicate the project activities to different target audiences

Comments:

Score 2:
Threshold 3/5

3. Quality and efficiency of the implementation*

Note: The following aspects will be taken into account:

- Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables
- Appropriateness of the management structures and procedures, including risk and innovation management
- Complementarity of the participants and extent to which the consortium as whole brings together the necessary expertise
- Appropriateness of the allocation of tasks, ensuring that all participants have a valid role and adequate resources in the project to fulfil that role.

Comments:

Score 3:
Threshold 3/5

Total score (1+2+3)
Threshold 10/15

Proposal Evaluation: Common Mistakes - Excellence

Score: 1.50 (Threshold: 3/5.00 , Weight: -)

The following aspects will be taken into account, to the extent that the proposed work corresponds to the topic description in the work programme:

Clarity and pertinence of the objectives

The objectives of the proposal are clear.

The pertinence of the objectives to the topic is good. The proposal focuses on cost efficiency of the whole capture process. **However, a significant proportion of the objectives focus on the development of renewable heat rather than on the core capture technology.** This is a shortcoming.

It focuses more on developing a technology which was not the main topic of the call

Soundness of the concept, and credibility of the proposed methodology

The concept is not sound because the development gap is too large between the two technologies, which is not convincing. This is a significant weakness.

The credibility of the methodology is poor, because the CSP part of the proposed system is emulated in the pilot capture system, rather than demonstrated. This is serious inherent weakness.

In trying to mix technologies, the risk is that the end result will not be credible

If it's an IA asking for real demonstrators don't try replace for simulation or emulation. you can complement them.i.e Digital twins

Proposal Evaluation: Common Mistakes - Excellence

Extent that proposed work is beyond the state of the art, and demonstrates innovation potential (e.g. ground-breaking objectives, novel concepts and approaches, new products, services or business and organisational models)

The progress is not significant, as calcium looping is a well established technology and its advancement is minimal. The CSP component, which is a core technology in **the concept, will be validated only at the lab scale and corresponds to TRL 4, which is not in line with the call text.** This is a significant weakness.

FOLLOW the call topic requests regarding TRL level!!!

- **The proposal provides a limited description of the state of the art. Furthermore, the progress beyond the state of the art is not sufficiently**
- **Scientific references are not sufficiently included with regard to the core technological components of the project.**
- **The S/T methodology as presented is generic and lacks sufficient detail.**

It is also not adequately demonstrated that **households would be prepared to accept** remote intervention in the management of their household appliances or whether they are willing to **make the initial investment** in a "smart home" to potentially reduce their annual consumption of electrical energy.

CONSUMER ENGAGEMENT BECAME CRUCIAL IN SC3 CALLS!!

Proposal Evaluation: Common Mistakes - Impact

1. It is not well demonstrated how the targets would be reached
2. The proposal gives an insufficient outline of the barriers that could limit the impact
3. Impacts are not convincingly substantiated by relevant standards, indicators and metrics.
4. Failing to meet the target.
5. Outlook on market penetration is not very realistic.
6. Missing clear exploitation plan (individual and Joint)
7. Communication and Dissemination is not addressing all stakeholders
8. Not considering scalability and replicability plan
9. No business model supporting the solution
10. Unique selling points with respect to the competition are not justified by sufficient technical data

Proposal Evaluation: Common Mistakes - Implementation

1. Task description lack details, the allocation of resources among participants is inadequately elaborated in work packages and the involvement of partners in the different activities is not sufficiently clear, justified nor balanced.
2. In several work packages, all partners have resources, but their role is not evident
3. Timing of several tasks is inconsistent
4. Important risks related to the difficulties on ensuring the case studies demonstration are not sufficiently considered
5. Deliverables lack specific performance goals and therefore are not developed to form a measurable outcome of a successful execution
6. The milestones and deliverables do not match.
7. Not clear how the existing expertise and infrastructure will be used for delivering the innovation to the market
8. The risks in relation to the technical performance of the product are not sufficiently addressed.
9. Engagement of subcontractors in the tasks and their selection procedure are not explained
10. Other direct cost are not justified

ESR of successful proposals - Excellence

1. The concept is particularly adapted for large-scale deployment
2. The project will credibly contribute to the development of the solution
3. Complementary tools are convincingly addressed in the proposal
4. Regulatory, legal, data security and socio-economic aspects have dedicated tasks
5. Includes an Environmental impact assessments
6. Credibility is excellent because it follows R&D + Integration + Validation in REAL demo sites
7. Ad-hoc indicators are convincingly introduced into the project and will credibly allow the monitoring of progress towards objectives.
8. It is convincing that the system and all core components of the project are developed from TRL5 to TRL6/7 or from TRL6/7 to TRL8, which is fully in line with the call.
9. The consideration of interdisciplinary approaches is excellent because it combines engineering, business, law and data science and social sciences in an interactive manner from the outset.
10. The use of stakeholder knowledge is excellent because use of relevant stakeholder knowledge (e.g., utilities, energy consumers) is integrated into the project concept.
11. The gender dimension in the research and innovation content is explicitly and convincingly addressed.

ESR of successful proposals - Impact

1. The proposal present quantifiable KPI to assess the impact requested in the call topic
2. The proposal convincingly justifies how the results will be achieved
3. The replicability to other similar demo sites is highly convincing (3 demos + 5 followers)
4. The proposal includes a convincing business case and strategy for the consortium to exploit the project outputs, highlighting key exploitable results and individual exploitation strategies for each type of partner organisation
5. The management of IPR is well addressed, comprehensive and convincing, covering all necessary issues
6. The dissemination plan is effective, concise and stakeholder-oriented and includes an ambitious plan for workshops, conferences and extensive networking.
7. The proposal identifies relevant target audiences such as citizens, media consumers, prosumers, and various media channels including a website, social networks, media and press releases.
8. The proposal present related impacts, social, environmental, economic, political, etc

ESR of successful proposals - Implementation

1. Task content is comprehensive and convincing, as it relates credibly to the objectives
2. Deliverables are well formulated and totally appropriate in number and content.
3. The distribution of resources in terms of personmonths(PM) and budget is fully in line with their objectives.
4. Roles and responsibilities are comprehensively defined and allocated, including an external advisory board with named members.
5. Procedures are defined including all relevant aspects (decision making, monitoring, reporting, conflict resolution).
6. Risk management is adequately addressed, covering technical, operational and management risks, including suitable mitigation measures.
7. The complementarity of the participants is excellent, because the consortium is composed of relevant complementary partners from different relevant sectors, such as local authorities, utilities, technology providers. There is no unnecessary duplication of competences.
8. The appropriateness of the allocation of tasks and resources is excellent. The resources have been convincingly explained and justified. All the participants have a valid role and adequate resource to fulfil their tasks.
9. The proposal includes sufficient budget (4% of the total) envisaged for the research and coordination effort associated with obstacles for innovation. This is excellent. A specific task (8.4) in the work plan will establish synergies with the "Clean Energy for EU islands" initiative.

Agenda - Day 2 - 30/05/2019

Session 4 **Writing Successful Proposals in H2020 Energy calls (Chaired by Nikolaos Floratos, Training Coordinator)**		
09:00 – 10:30	• How to write part per part the EXCELLENCE section in an H2020 Energy grant application with emphasis on examples from winning projects	• H2020 Energy Trainer/Expert
10:30-11:00	*Coffee/tea break	
11:00 – 12:30	• How to write part per part the IMPACT section in an H2020 Energy grant application with emphasis on examples from winning projects	• H2020 Energy Trainer/Expert
12:30 – 13:30	Lunch	
13:30 -15:00	• How to write part per part the IMPLEMENTATION section in an H2020 Energy grant application with emphasis on examples from winning projects	• H2020 Energy Trainer/Expert
15:00-15:30	*Coffee/tea Break	

Agenda - Day 2 - 30/05/2019

15:30 – 17:00	Participants will form groups or work individual and select **one** of the following to work with: ● Develop an idea aligned with an Energy call topic ● Prepare/Finalise an action plan for contacting key players for a specific H2020 Energy call-topic ● Develop/Finalise a pitching email for selling their expertise to key actors in H2020 Energy calls ● Develop a proposal concept (summary) ● Prepare any subsection based on the grant application template and their familiarisation with the three sections in the proposal template (Excellence, Impact, Implementation) ● Open: Any other topic they may wish to work with…	● Hands on Practice on various elements, Group work ● Assisted by the Energy H2020 Trainer and Training Coordinator

Session 4

How to write part per part the EXCELLENCE section in an H2020 Energy grant application with emphasis on examples from winning projects

Proposal Basics - Part B

01	Excellence	• Objectives • Relation to the WP • Concept and Methodology • Ambition

02	Impact	• Expected Impacts
		• Measures to Maximise Impacts
		  ○ Dissemination & Exploitation of results
		  ○ Communication

03	Implementation	• Work-plan - work packages and deliverables • Management, milestones and procedures • Consortium as a whole • Resources to be committed

04	Members of the Consortium	• Member of the Consortium
		  ○ Participants
		  ○ Linked Third Parties

05	Ethics	• Ethics • Security

70 pages

Part B Section Goals

Excellence

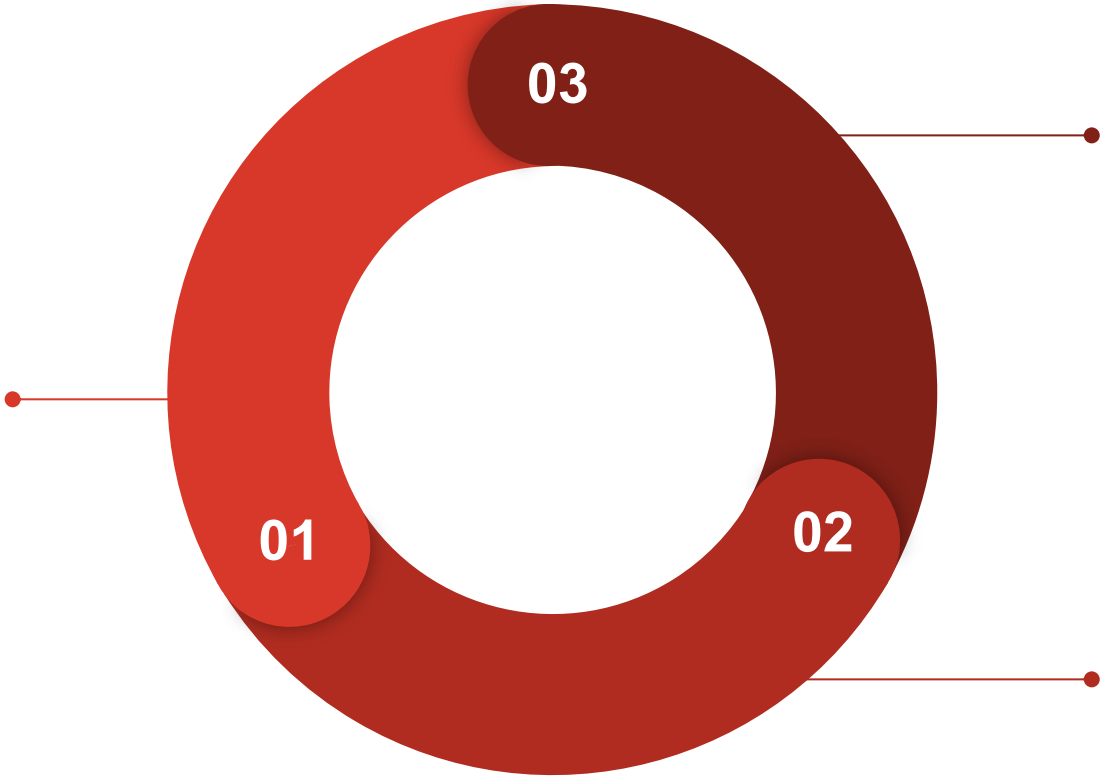
What are the drivers?

What is your motivation?

What is your vision?

What are your objectives?

What are the basis?



Implementation

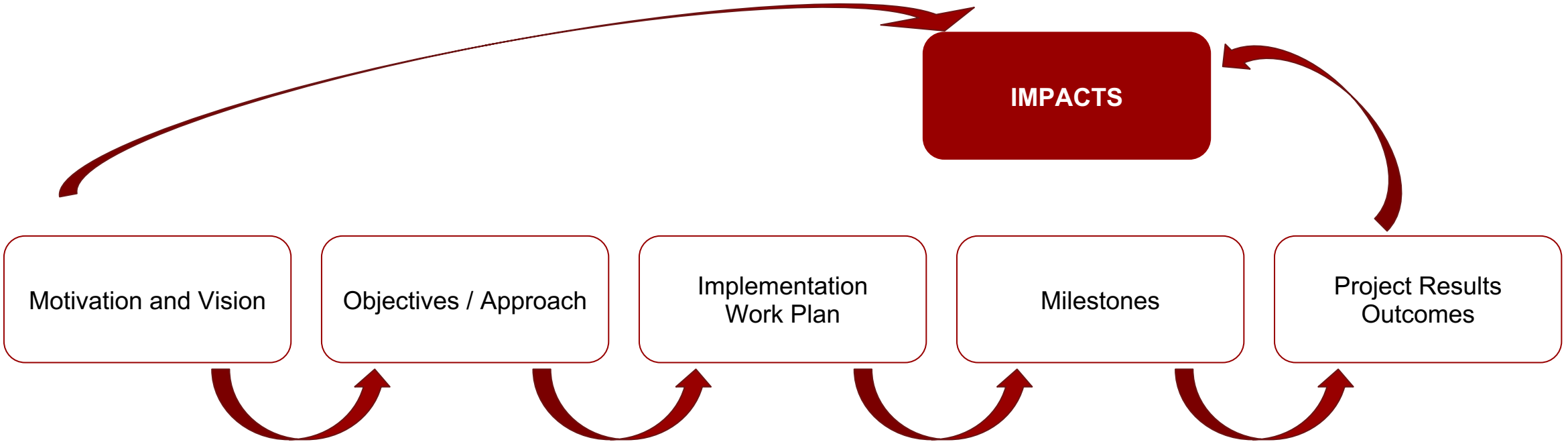
How will the project be executed?

Impact

What will be the benefits of during the projects and beyond?

How will the project ensure these results improve society?

Coherence of the entire proposal



Selecting a project title and acronym

Project Title: One-sentence describing the project. Normally easy to produce once the concept is clear

Project acronym: often using an acronym generator and choosing a word. Else anything memorable related to the concept

Proposal Full Title: Built to Specifications – Tools for the 21st Century Construction Site

Proposal Acronym: Built2Spec

Title of Proposal: Advanced materials solutions for next generation high efficiency concentrated solar power (CSP) tower systems

Acronym: NEXTOWER

INDIGO 696098

Biorefinery combining HTL and FT to convert wet and solid organic, industrial wastes into 2nd generation biofuels with highest efficiency

New generation of Intelligent & Efficient District Cooling systems

HEAT-TO-FUEL

EXCELLENCE SECTION

Excellence - The First Page

- Put yourself on the shoes of the evaluator
- Evaluators may have broad expertise but not specific
- Evaluators are human beings
  - They may be reviewing your proposal at 5pm on a Friday,
  - They might be tired,
  - They might have only 10 min left to assess your proposal.
  - Do not annoy them further in a situation like this by poor formatting, typos or not following the requested template.
  - **Make it easy for them to find the key points!!!!**

- **So in the first page do answer**
  - What problem the project solves? Why is of EU relevance?
  - What is the competition, how does the project assess against it?
  - What is the impact?
  - Why is the consortium the best?
  - Present the concept with an image

Example First Page

Problem

Solution

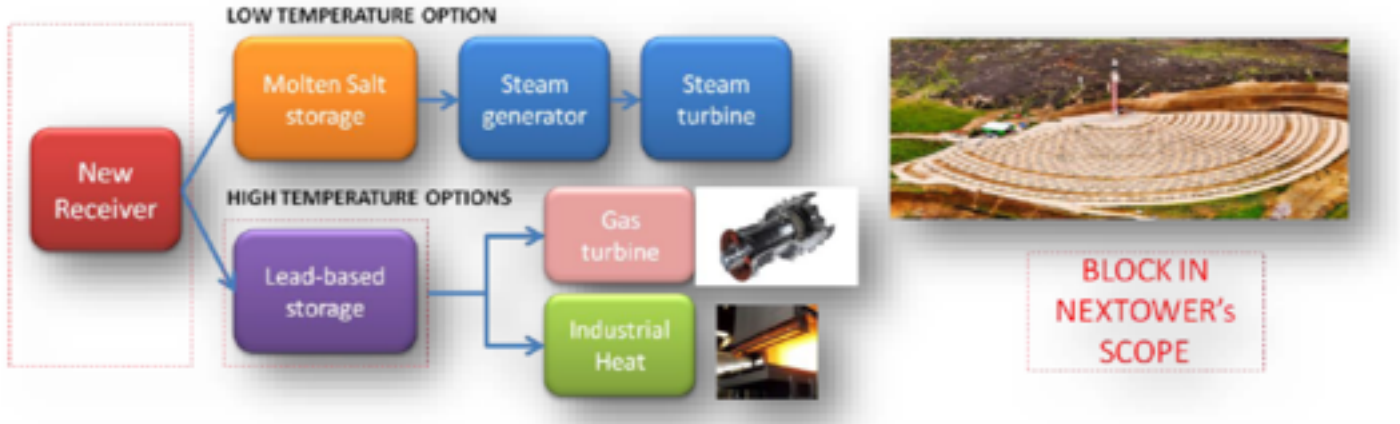
Impact

1. EXCELLENCE

At a glance. NEXTOWER aims at demonstrating high-performance durable materials for the next generation of concentrated solar power (CSP) air-based tower systems, making them commercially competitive in the energy market beyond 2020. While CSP towers are socially and technically appealing, for their great environmental sustainability and the potential for electrical and thermal power generation, their industrial exploitation has been significantly slowed down by the materials used for the core component (i.e. the high temperature solar receiver) which is affected by limitations in maximum working temperatures and in-service overall durability, mainly due to failure by thermal cycling.

NEXTOWER responds by taking a comprehensive conceptual and manufacturing approach that starts by optimizing for durability the ceramic materials to achieve 20-25 years of maintenance-free service receiver components, while increasing their operating temperature for thermodynamic efficiency at the system level and possible unprecedented applications downstream, such as the direct interfacing with a Brayton cycle or the supply of zero-emission heat for industrial/chemical processing. The actual exploitation of the hotter air (up to 800°C) is then crucially tied to the development of a high-temperature thermal storage, here inspired by nuclear fission GEN-IV technology and based on liquid lead by means of new corrosion resistant steels.

NEXTOWER 's methodology is market/industry-oriented, focusing on the usage of materials solutions from global market suppliers (with appropriate manufacturing capability) and leveraging their **standardization and field validation in a new full scale demonstrator called SOLEAD** (Solar tOwer LEAd Demo) (the first of its kind) to be built at the Mersin plant of GCSP in Turkey . The NEXTOWER approach is portrayed in Figure 1.



Example First Page

Problem

Solution

Concept

THE HARP in a NUTSHELL

Consumers do not think about heating until their system breaks down. When it does, the replacement is always an urgent process, hindering the possibility to look for the best solutions in the market and making smarter choices regarding a heating system that will likely be in operation for the next 20 years. In Europe there are more than 300 million heaters (space, water or combi) that have, on average, been installed more than 20 years ago. Considering the heating energy label framework, market assumptions are that more than 50% of these equipment's perform as C or lower. Old and inefficient, this is the status of the installed heating stock. Now is the time to act and raise consumers' awareness about the opportunities of a planned replacement. Taking advantage of the energy label for space and water heating, we can mainstream the labelling concept to the installed heating stock, allowing to use a well-known support decision tool to communicate and motivate the consumer to replace its heating system with modern high-efficiency and renewable solutions.

HARP accompanies the consumer decision process, providing an impartial message, based on the energy label and presenting the market solutions that respond to the consumer's heating needs, providing a quantified approach for economic and non-economic benefits and bridging the gap with the market providers and available national incentives. **HARP** is promoted by key knowledgeable partners in the fields of consumer behaviour, energy efficiency, heating solutions and business models, working directly with the consumer, or indirectly via professionals who are critical multiplying agents. Promoting dynamic efficient heating communities, where all the agents, from the supply to the demand side are committed to an efficient heating market, supporting the consumer to make smarter choices.

This allows **HARP** to build a solid concept that will succeed in the participating countries and within the EU reach.

Figure 0a. HARP project in a NUTSHELL

Example First Page

make the system cost efficient. This need is further reinforced by the fact that in DC systems the daily load variation is rather large and the consumer profile is much more commercial than residential implying harsher supply requirements.

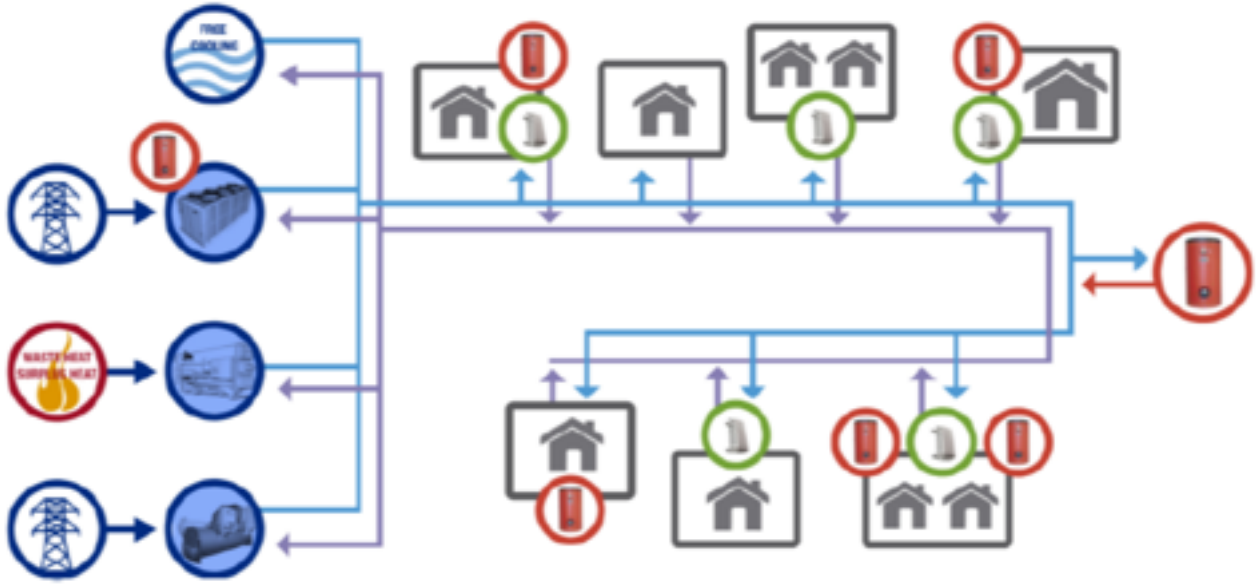
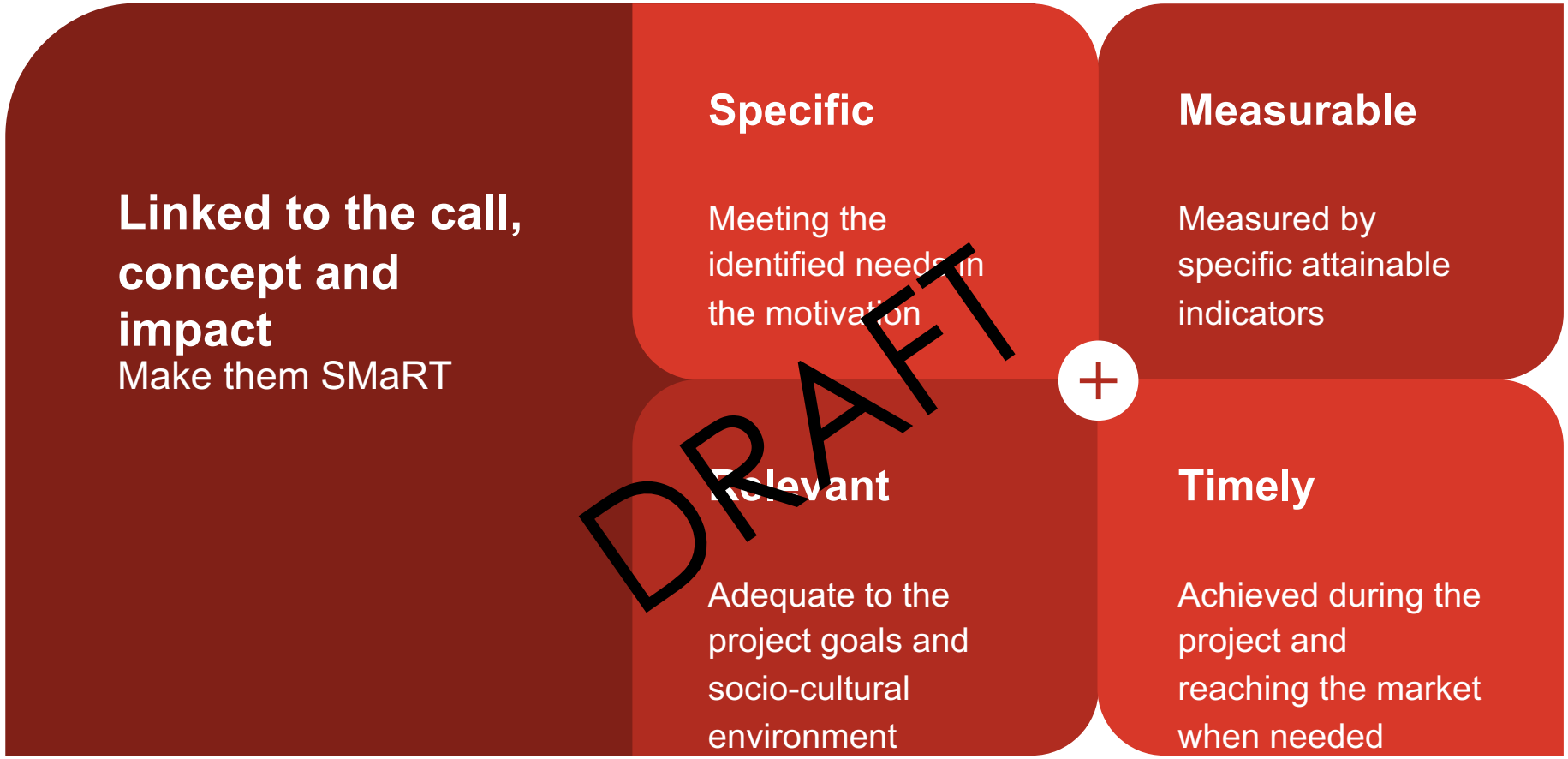


Figure 2 DC system components (generation, distribution, storage and consumption)

Besides, DC systems generation equipment are different from those at DH systems, especially from the point of view of dynamic behaviour. Moreover, it is very common in DC systems the integration of free and non-manageable energy sources such as free cooling (use of low external air/water temperatures to assist in chilling water). All this makes that in DC systems different controllers and control strategies are required than those needed in DH systems.

The INDIGO project aims to overcome these challenges by pushing DC technology one step further. The main objective of INDIGO proposal is the **development of a more efficient, intelligent, and cheaper generation of DC systems by improving system planning, control, and management**.

Excellence - Objectives



Excellence - Objectives

Objectives ≠ activities!

- The right question: – What do I plan to achieve?

- The wrong question: – What am I going to do?

Objectives examples

1.1 Objectives

Aim: TABEDE aims to allow all buildings equipped with Energy Management Systems to integrate energy grid demand response schemes, independently of communication standards.

TABEDE aim is translated into the following objectives, as illustrated in Figure 1.

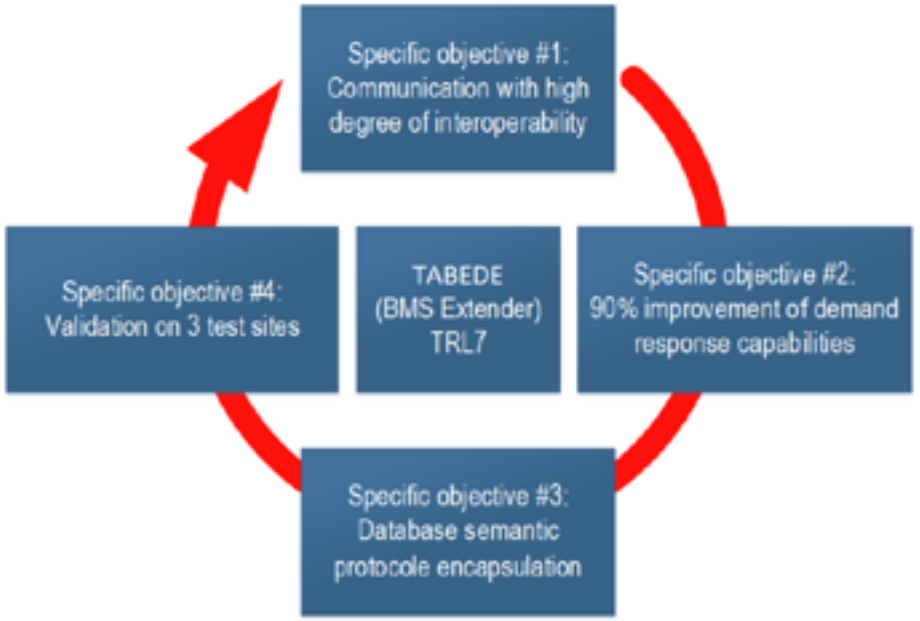


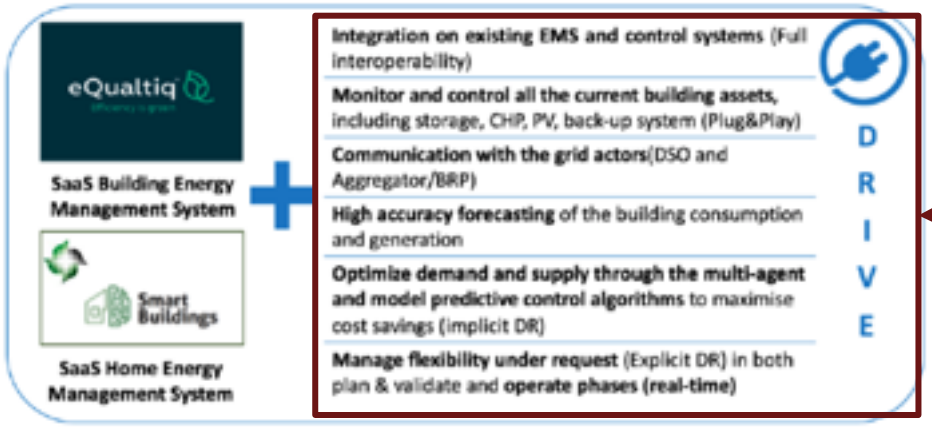
Figure 1: TABEDE specific objectives

Clear and concise aim of the project

Objectives Overview

Objectives examples

Objective 1: Unlock DR potential in residential and tertiary buildings through low cost solutions that are universally interoperable, integrating innovative load prediction and optimization algorithms



A fully developed Demand Response market is highly dependent on the end user participation in DR programs. Currently there is a lack of simple, interoperable and low cost technologies that allow buildings to communicate with the energy grid and participate in DR markets. In order to overcome these issues, DRIvE will improve the existing SaaS EMS **Smartbuildings®** (for residential buildings) and **eQualtiq** (for tertiary ones) making them fully-interoperable with Building HEMS/BEMS or directly with building assets and substantially enhancing their Demand Response capabilities. This will result in low-cost and fast penetration in the building sector. In addition, both solutions will be integrated with **innovative high accuracy load forecasting** capabilities, built on the state-of-the-art **Computational Urban Sustainability Platform (CUSP)**, developed by CU as part of previous projects FP7 MAS²TERING and PERFORMER, and further refined in H2020 projects PENTAGON and THERMOSS. The focus of extending CUSP in DRIvE will be the integration of significant advances in computational intelligence techniques for fast, high-accuracy data-centric segmentation and time-series forecasting of loads, generation, flexibility, and profiles—to make significant advances in terms of **temporal** (minutes to hours and days) **and spatial accuracy** (individual buildings to neighbourhoods and cities), which will go beyond the conventional static customer segmentation (e.g. ELEXON profile classes) currently used by DSOs and TSOs, to unlock demand-response potential from individual buildings and VRES generation assets. DRIvE forecasting will also incorporate customer demographics and their socio-behavioural characteristics—the importance of which in improving forecasting accuracy was identified first[8] in MAS²TERING but will be extended to include geographical distribution of socio-economic indicators. DRIvE DR optimisation and decision support will be enabled by an innovative **Model Predictive Control (MPC)** which integrates the building inertia as a flexible load, and by the **MAS optimization algorithms for buildings,** that enables decentralized optimization between building assets (including generation and storage) to maximise energy cost-saving and/or comply with the external DR request coming from the DRIvE aggregator platform (Objective 2). It is expected that the **DRIvE DR solutions will unlock up to 20% of building DR potential and allow up to 30% cost-saving in tertiary buildings and up to 25% in residential ones**.

Unique selling points

Quantifiable

Objectives examples

Objective 4: Engage and stimulate customers to participate in DR programs through a consumer portal

- Control and program building assets remotely
- Show the current status of the building (consumption and generation)
- Allow to set comfort values and reward flexibility
- Receive offers from the district platform to participate in district DR programs

Figure 5: DRIvE customer portal services

DRIvE's DR-enabling solutions are connected with smart metering and building assets in a

Objective 3: Demonstration of secure communication through the design & development of cyber-security components for Smart Grids

The implementation of DRIvE involves deeper collection and exploitation of consumer data, which triggers privacy, confidentiality and data integrity concerns. It also exposes distribution networks to cyber-attacks for which early warning, detection and reaction capabilities are required. A considerable challenge will be to manage and maintain the security level of a wide and heterogeneous system in a context where ICT and energy components have totally mismatching life-cycles. **The new components developed by DRIvE will be secured from the design phase, integrating novel machine learning based algorithms for built-in cyber-security mechanisms to prevent attacks.** DRIvE cybersecurity services are shown in Figure 4.

Include hot topics in the energy field:

- User engagement
- Blockchain
- Cybersecurity

Objectives examples

OBJ. 2: ECONOMIC OBJECTIVES

2.1. Compliance with strict cost-effectiveness and performance targets.

Glazed crystalline silicon BIPV module technologies:

- **Target price**: 175-300€/m² by year 2018 for PV laminates and insulating glazing units. 175-200 €/ m² by year 2021.
- **Cost with respect to equivalent non-PV systems** at same passive property performance ratio: maximum 100 €/m² overcost.
- **Performance target**: 100 - 160 W/m² module efficiency target depending on specific technology.
- **Payback time**: 5-7 years maximum, depending on business model, climatic conditions, etc.

Clear Targets

Objectives examples

STO6: Development of effective business models ready for large-scale replication. REACT will through dedicated project activities prepare the ground and raise awareness for business opportunities and large-scale replication, involving relevant stakeholders such as island communities, technology providers, DSOs, ESCOs, etc.

Taking the energy supply chain already as a business model *per se*, REACT will ensure that involved parties (such as grid operators and end consumers) benefit from provided services in different ways. Furthermore, having in mind its scalable nature and replicability, REACT will create new business opportunities at the grid level owing to the economical savings achieved by optimal management of underlying RES and storage assets. This will provide benefits for grid operators and island residents. REACT will develop replication plans based on the lessons learned from the pilot implementation. Dissemination and communication activities will promote REACT in EU and beyond.

Main indicators for STO6		
Action and project outcomes	**Key Performance Indicators**	**Targeted Metrics**
• Business model validation at project demo islands • Exploitation plans for "followers" • Promote the project results at REACT workshops and beyond	• Business model demonstration • Economical savings for end-consumers • Dissemination activities (workshops, publications, etc.)	• Validation at 3 demo and plans for 5 "follower" islands • 60% energy cost savings • 6 workshops organized, 6 journal publications, etc.
Related WPs: WP7 (T7.2, T7.3, T7.4), **WP8** (T8.1, T8.2, T8.3, T8.4)		

KPIs matching WPs and tasks!

Excellence - Relation to the Work Programme

Indicate the work program topic to which your proposal relates, and explain how your proposal addresses the specific challenge and scope of that topic, as set out in the work programme.

Excellence - Relation to the Work Programme

- Mention the call identifier
- Explain how the project addresses the specific challenge and scope
  - Use a table
  - Link to Objectives and WPs (if possible to tasks)
  - Link to impacts

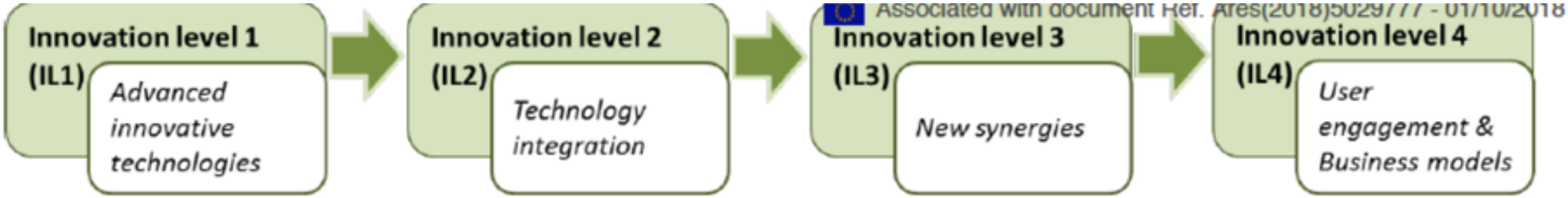
1.2 Relation to the work programme LC-SC3-ES-4-2018

Explicit links from Work Programme with REACT STOs and its Work Plan (work packages and tasks) are:

Work Programme	Contribution by React	Tasks & STOs
Achieve high levels of local renewable energy sources penetration	• Supported [redacted]	**WP1** (T1.1, T1.3) **WP2** (T2.2, T2.3, T2.4)
	• Deployment and integration [redacted]	**WP3** (T3.2-T3.4) **WP5** (T5.3, T5.4, T5.5)
	• REACT will [redacted]	**STO1, STO2, STO3**
Achieve highly integrated and digitalised smart grids based on high flexibility services	• Leveraged by concept [redacted]	**WP3** (T3.5) **WP5** (T5.1, T5.2, T5.3)
	• Long-term [redacted]	**WP6** (T6.2, T6.3, T6.5)
	• Improved interoperability through [redacted]	**STO1, STO2**

Excellence - Concept

- Describe and explain the **overall concept** underpinning the project. Describe the **main ideas, models or assumptions** involved. Identify any inter-disciplinary considerations; **where relevant, use of stakeholder knowledge**
- Describe the **positioning** of the project e.g. where it is situated in the spectrum from 'idea to application', or from 'lab to market'. Refer to **Technology Readiness Levels** where relevant.



Excellence - Concept

- The right question:
  - **How am I going to reach my goals?**

- The wrong question:
  - **What exactly am I going to do when?**

Excellence - Concept

- the concept should be based on a certain model/ hypothesis/ assumption that should be clearly stated and elaborated….(best if the hypothesis is based on findings of consortium members!)
- …some facts/figures/numbers to the current situation
- this section is still quite general, not too much methodological detail with regards to the „how“

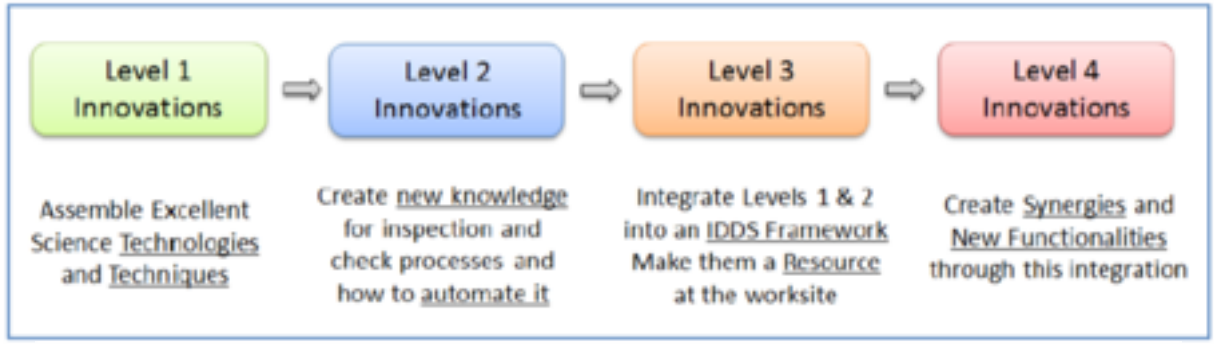
Show that you build on existing knowledge

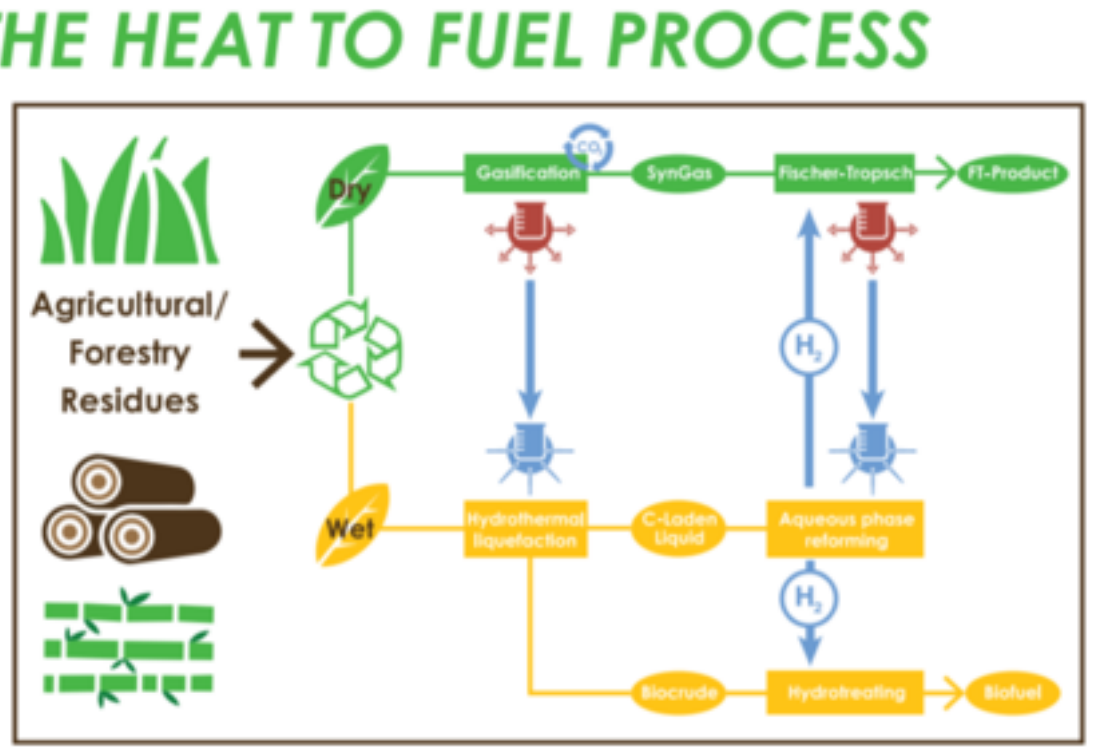
Excellence - Concept

- Simply show the evaluators how your project connects to the rest of the world, and that you are aware of ongoing projects in the same field
- **Don't overdo it**, don't write 7-10 pages full of references or links

Excellence - Concept

- Describe the concept
- Describe the assumptions and i
- Identify interdisciplinarity conside
- Use stakeholder knowledge





Excellence - Concept Example

Research & Innovation Level 2 - Demand Response enabling technologies for buildings

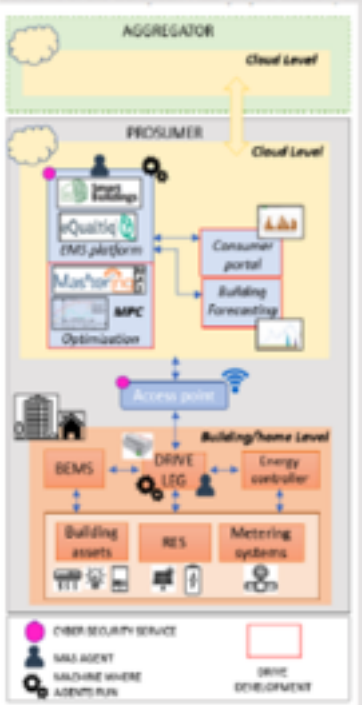
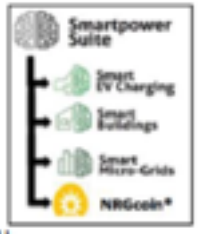


Figure 10: DRIvE solution high-level architecture at prosumer level

eQualtiq SaaS



enabled per project/customer. Some examples i

consumption. The core of the platform is built upo
learning focussed) which have the potential to be t

efficient energy performance
ions at the lower cost. Through
ponent of the DRIvE flexibility
of controllable assets and
llers, plus integrating new
nces it will be able to offer.

(part of SmartPowerSuite®

table.

Upgrade 1 – Enable full interoperability and full operability of DRIvE DR-enabling base technologies in buildings

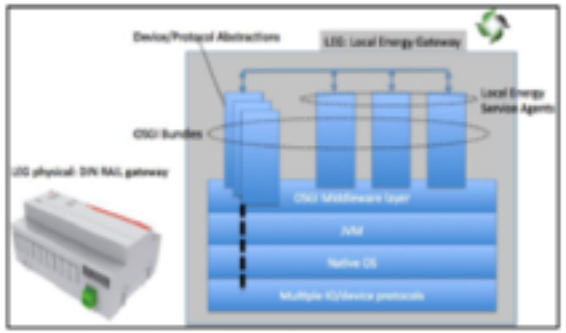


Figure 11: Local Energy Gateway Layered Stack

Upgrade 2 – Integration with enhanced forecasting techniques, RES control, predictive management and building optimization strategies

Upgrade 3 – Integration with MAS-based algorithm framework for in-building optimization

Excellence - TRL Positioning

Describe the positioning of the project in the spectrum from 'idea to application' or from 'lab to market' & use TRL **exactly** as in the call.

Main results	Current state	After INDIGO
MPC for HVAC systems	The use of MPC-s has rarely been applied to HVAC systems. Application of the technology for HVAC-s is still at research level with reduced size test cases being reported in the scientific literature. TRL4	MPC controllers will be implemented in several buildings, in a large scale testing site (11 buildings and 5MW cooling power installed for HVAC systems) TRL5

	Project development materials	Current TRL	TRL to achieve
1	**Ceramic receiver ("All-SiC" design)**, based on commercial SiC filters for diesel engines by LIQ (formerly Cometas), delivers a super strong and super thermally conductive SiC honeycomb structure. The design has been upgraded to create a recrystallized SiC monolithic component by a special joining of SiC at 2500°C (see Section 1.4.1).	5	6-7

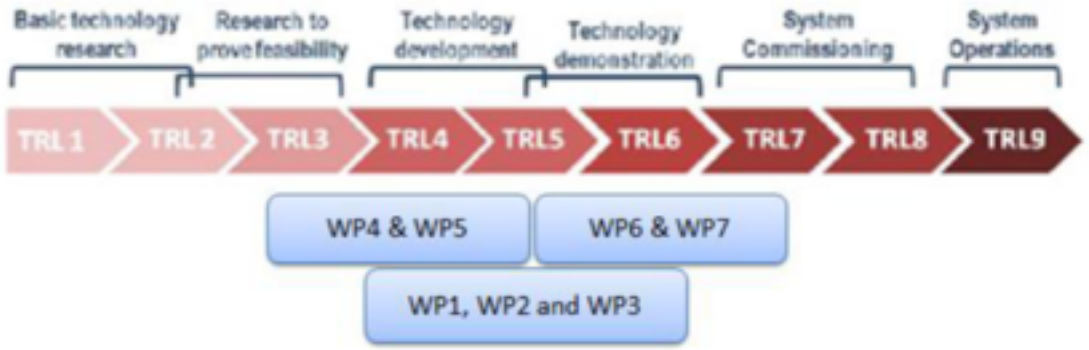


Figure 5. RTD and DEMO WP Mapping to TRL

Positioning of the project. The targeted call LCE17 -2017 specifies that Activities are expected to focus on Technology Readiness Levels 5-7 which according to the guidelines given in annex G of the work program correspond from validation and demonstration of technologies in relevant environments to demonstration of system prototype in operational environment. The positioning of GEOFIT is best described with respect to the four innovation levels. The four levels themselves consist of individual efforts that range with respect to their TRL. The TRLs of the individual technologies and their evolution during the project span are provided in Section 1.4.

Energy Demand Calculation Engine (EDCE)- From TRL5 to TRL7

Excellence - TRL Positioning

1.3.5 *Positioning of the project*

DRIvE will be validated at component level in laboratory and, as system, in simulation using real test case data. DRIvE **aims at reaching at system level a TRL 6.**

Table 5: Status improvement

Main results	Current status at component level	At the delivery of DRIvE (integrated system level)
Technologies		
DRIvE HEMS & DRIvE BEMS	SmartBuildings® is the platform that will integrate DRIvE algorithms and framework. SmartBuildings® is the SaaS platform of the ENERVALIS SmartPowerSuite® dedicated to residential buildings. Currently it is TRL8-9, already deployed in different projects on pre-commercial level with different services enabled per project/customer. The basic BEMS platform in which DRIvE is based, eQualtiq, was developed within the BEEST project, finalized in December 2016. The current TRL of eQualitq with its basic capabilities for grid communication and HVAC optimization is TRL8.	After the 3-years project period the DRIvE HEMS and BEMS will integrate: • DR capabilities • Hybrid forecasting • MAS system optimization • DR customer portal These upgrades are in the range of TRL 3-5 and with the integration needed the DRIvE HEMS and BEMS will achieve TRL 6-7.
Management platform		
DRIvE platform	CEA-LIST has developed a Multi-Agent System platform for the optimal management of energy systems and currently at TRL4-5. It allows for the implementation of flexible distributed multi-sided optimisation schemes, particularly fitted to demand response energy programs.	In DRIVE, this platform will be extended in order to: • Participate in a transparent way to multiple DR schemes • Support the management of flexibility for MV assets (e.g. virtual power plants, storage, …) • Provide new ancillary services (such as power quality and voltage services) to DSO during the Plan&Validate phase • Integrate home heating as an active load through the MPC module • Interface with the real-time management components that intervene in the Operate phase The aim will also be to develop the required interfaces to integrate with the other DRIVE components (simulation tools, model predictive thermal control module) targeting **TRL6** at project end.
Simulation tools		
Computational Urban Sustainability Platform (CUSP)	CUSP is a semantic-based district energy forecasting and simulation environment, first developed by CU in the context of the FP7 RESILIENT project. The unique platform is underpinned by a district energy ontology developed on the IFCs (leading BIM standard). It provides seamless interfacing through a dedicated API, implemented via web-services, to leading energy simulation tools, including EnergyPlus, as well as to (a) time series data (i.e. sensor nodes at building and district level), (b) weather and (c) district GIS information.	CUSP, currently at TRL 3-4, will be first, **enhanced to attain TRL 6**, and, in a second stage, **developed further** to (a) **deliver advanced predictive** and (near) **real-time control and energy management** algorithms for multi-vector energy systems and (b) **achieve closer coupling and integration with finer grained building energy considerations**. It will provide a simulation capability of power and thermal demand as well as supply generation potential to deliver a better understanding of the impact and interactions across different climatic, socio-economic, and technological DRIvErs of power or/and thermal energy demand.

Excellence - Linked Projects

Describe any national or international research and innovation activities which will be linked with the project, especially where the outputs from these will feed into the project;

- Are there synergies or complementarities?
- How do you ensure an exchange with these
- projects/results?
- What is the state-of-the-art? Are there previous results you build on (e.g. publications, **patents**, previous EU project)?

Related national and international research and innovation activities		
EUROPEAN PROJECTS		
Project	Aim of the project	Outputs for INDIGO
STORM	Development and demonstration of a generic district heating and cooling (DHC) network controller, to increase the use of waste heat and renewable energy sources in the DHC network.	Results related to management, self-learning algorithms and global control strategies (only those related the cooling part) will be welcomed in order to compare them with INDIGO approach

RELATED NATIONAL AND INTERNATIONAL RESEARCH AND INNOVATION ACTIVITIES			
PROJECT	AIM OF THE PROJECT	OUTPUTS FOR REACT	PARTNER
EUROPEAN PROJECTS			
FP7 EPIC-HUB (Pr. No.: 600067)	EPIC-HUB developed a new methodology, an extended architecture and services to improve the energy performance of districts, while considering their energy infrastructure.	Energy dispatching and DR strategy optimisation algorithm in REACT will be leveraged upon an Integrative energy optimiser which was result of the EPIC-HUB.	PUPIN, TEK

Excellence - Methodology

Explain the overall methodology

- Methodology is not Work Plan (many proposals use a PERT, is OK)
- Include demonstration strategy

Describe if the project considers genders issues **during** the research (here is not if the consortium in gender balanced)

1.3.6 Demonstration Pilots General Information

To demonstrate the full potential of REACT solution and approach, **three project demo sites, i.e. demo islands, were preselected on which REACT will be deployed and validated as part of the project activities**. Demo sites were intentionally chosen at different geographical locations and climatic zones, having different underlying energy systems, different energy requirements, population densities, thus providing a diversity of opportunities for project demonstration. Moreover, **all three demo sites were chosen to be similar in size (smaller islands to achieve the meaningful impact), but which differ in the extent of already deployed RES based systems at the site** (in terms of RES based supply share in satisfying the total energy demand), which sets the perfect test-bed for deployment and validation of REACT solution. Relevant preliminary pilot information is listed in the following tables.

DEMO 1 GENERAL INFORMATION	
Project pilot location	[redacted]
Focus area for project demonstration	
Number of buildings/households involved in the project demonstration	
Potential outreach immediately after REACT (in number of buildings/households)	
Designated partners	
DEMO 1 DESCRIPTION	
Demo overview	**Demo site photos**
[redacted]	

Overall approach and methodology

GEOFIT will use a 48-month work program and 11 work packages to develop, integrate and demonstrate the diverse technology assets, skills, and capabilities of the consortium in a logical evolution of the work packages that leads to the successful achievement of the project Macro and S&T objectives.

GEOFIT' strategy for Technology development. GEOFIT strategy is to begin with users and their requirements to set a common baseline across this large consortium of exciting but complex activities by setting a new IDDS framework for the proper management of Geothermal based retrofitting projects in WP1). Following this, GEOFIT attain-in parallel- the development and testing at TRL6 the Level 1's innovations (ICT tools for viable and cost-effective geothermal retrofitting) and Level 2 (Technologies and Techniques enabling urban geothermal retrofitting) reaching TRL6.

1.3.7 Sex and Gender Analysis

REACT beneficiaries considered the issues of sex and gender about the proposed solution. No evidence was found to either confirm or disprove that the proposed solution might be affected by gender and/or sex of the involved stakeholders (end users, customers, technical or business professionals). Nevertheless, REACT will follow the 'Design for All' principles and guidelines with the aim that everyone, including future generations, regardless of age, gender, background, can benefit from the REACT development with equal opportunities. 'Design for All' relies on

For guidance on methods of sex / gender analysis and the issues to be taken into account, please refer to: http://ec.europa.eu/research/science- society/gendered- innovations/index_en.cfm

Excellence - Validation and Demo sites

- Be credible! Show the evaluator how you will demonstrate your solution
- Be elegant in presenting it
- Comply with the call topic requests
- If you have real demo sites MAKE IT COUNT!

Excellence - Validation and Demo sites

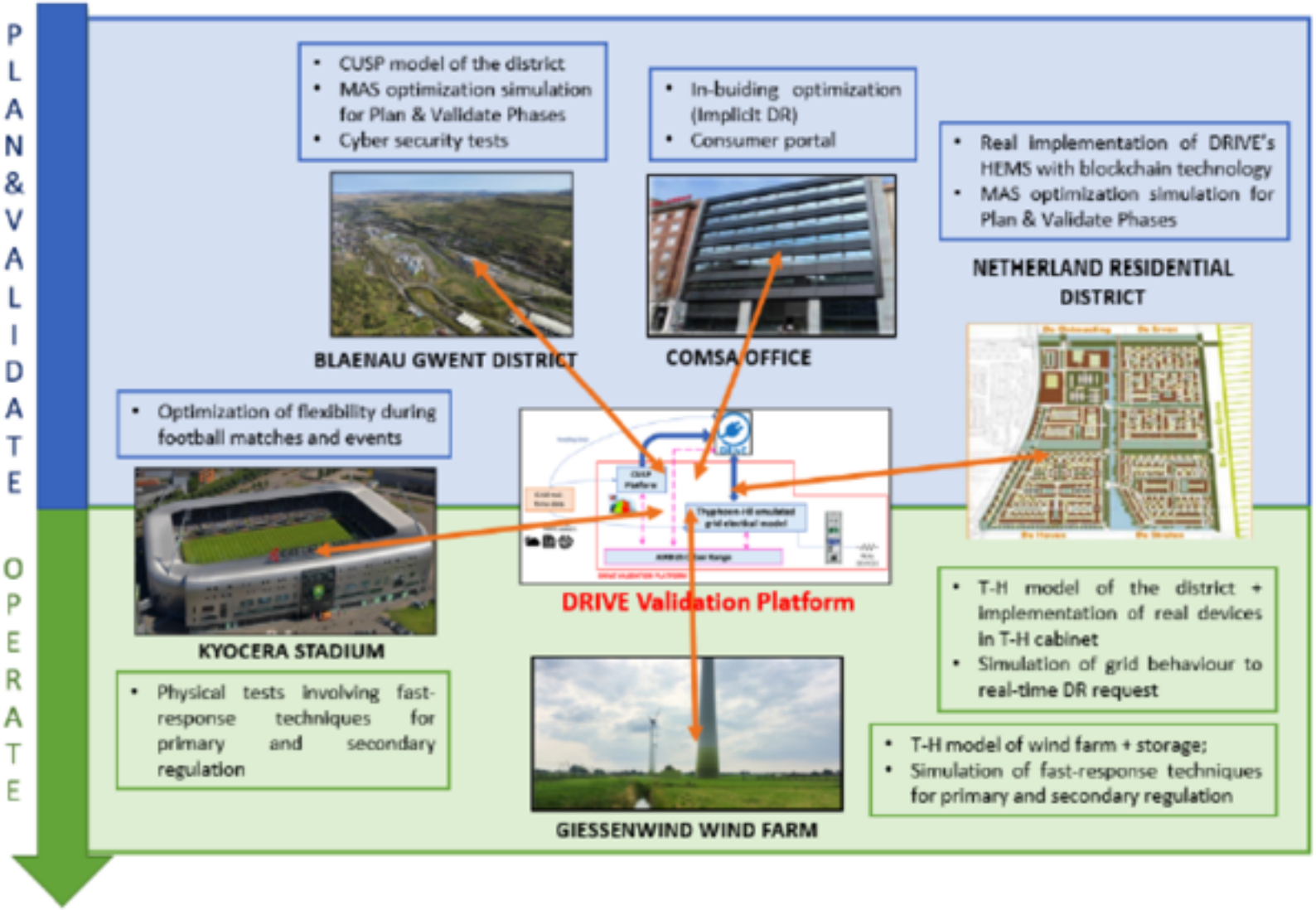


Figure 26: Map of the validation activities

Excellence - Validation and Demo sites

DEMO 3 GENERAL INFORMATION	
Project pilot location	
Focus area for project demonstration	
Number of buildings/households involved in the project demonstration	
Potential outreach immediately after REACT (in number of buildings/households)	
Designated partners	

DEMO 3 DESCRIPTION	
Demo overview	Demo site photos
The Aran Islands are located approximately 10 nautical miles from County Galway on the West Coast of Ireland. There are 3 islands in total Inis Mór, Inis Meáin, Inis Oírr comprising a total population of approximately 1,225 inhabitants (this doubles during the Summer months from tourist activity). The climate is temperate with average temperature ranges of 14°C in summer to 6°C in winter. The prevailing winds are West/South West. In 2008 (baseline year), the total annual electrical energy consumption for all 3 Islands was approximately 3,942kWhr, which is provided via a 3MW cable connection to the mainland. The energy demands for the Islands in 2008 are 64% Heating (space and water), 23% electricity and 13% transport. Between 2008 and 2015, Aran Islands embarked on ambitious program to reduce the three island's dependency on fossil fuels, thereby reducing the dependency in energy imports by 84% from the 2008 levels. The technologies chosen to reduce the dependency on fossil fuels included increased levels of insulation (23%), electrification of the heating and transportation requirements (48%) and an increase of wind energy capacity to 1.8MW (13%).	 

DEMO 3 SPECIFIC FEATURES	
Area, number of residents, climate	
RES generation available on site	
RES harvesting potential	
Storages available on site	
Conventional energy generation on site	
RES share in total energy demand	
Heating & cooling system	
Mainland connection	
Identified issues & regulatory constraints	

Excellence - Methodology - TIPS

- This is the chance to demonstrate the **excellence of the consortium…**list all excellent/ ground breaking technologies you will be applying …and why you have composed it this way

Excellence - Methodology - TIPS

- Where relevant, describe how **sex and/or gender analysis** is taken into account in the project's content.
- *NOT: how many women and men work in your project*
- **BUT:** Differences in your research area between female and males, and how do you address these differences in your project design?

Excellence - Ambition

Describe the **innovation potential** (e.g. ground-breaking objectives, novel concepts & approaches, new products, services or business and organizational models) which the proposal represents.

Where relevant, refer to **products and services** already available on the market. Please refer to the **results of any patent search** carried out.

Excellence - Ambition - TIPS

- Possible to break down into several subareas:

What is the state of the art in this field?

- How does your project go beyond this state of the art?
- Don't write endless pages on the state of the art – stay reader friendly! Focus on YOUR project

Stress the AMBITION of the project!

But: don't be overambitious and unrealistic!

Excellence - Ambition - TIPS

- Where/What is your innovation? (sometimes difficult ….overlaps with ambition in previous subchapter…)
- Prove your "freedom to operate" and that you know the market
- Are there existing similar patents in this field?
- Would this hinder your project freedom?
- Or do you own the patents yourself?

Excellence - Ambition

1.4 Ambition

1.4.1 *Enhanced HEMS and BEMS*

Existing state-of-the-art	Proposed progress beyond state-of-the-art
Interoperability and assets monitoring and control: Interoperability between standards for information modelling lies at the heart of DR integration. The IEC 61970 TC57 Common Information Model (**CIM**)[29] comprises three-layered parts as a reference UML model, facilitating a diverse range of systems and processes including the management of network, outage, work, and assets; compliance checking, business process, and customer data, among others. **OpenADR**[30] (Open Automated Demand Response) standard, comprising a profile specification and schema, targets the interoperation and automation of applications, focussing on the integration of consumer, supplier and aggregator demand and response (of electrical energy supply) information to manage the resources from different perspectives such as cost, business models, and availability. The **energy@home**[31] data model specifies a representation model for home area networks, based on CIM (through its evolution into the SEP2 model), and is broadly aligned with OpenADR. On the other hand, the Universal Smart Energy Framework (**USEF**) a set of specifications, designs, and implementation guidelines that enable you to establish a fully functional smart energy system. Despite wider industry support and implementation attempts, **none of the key standards on their own cover the spectrum of semantics involved in a flexible urban energy network**, covering homes and	Based on the experiences in developing building and district level models of energy systems in EU projects, MAS²TERING and RESILIENT, DRIvE will **develop an ontology based semantic data model** to: (a) **create a meta-model for seamless integration** between CIM, OpenADR and energy@home, while **implementing USEF components** (the interaction model, market-based control mechanism, grid operations, smart energy services, privacy and security and ICT architecture) and being extensible for integrating future standards, and (b) **capture and model new entities related to thermal devices and transactive energy** that are lacking or poorly implemented in existing standards. The ability for machine interpretation and the re-use of up- and down-stream ontologies from other relevant domains will offer new advantages for the industry in terms of reduced development time and cost, and scalability. In particular, the DRIvE semantic model will deliver and ensure the following specific features from objectives 1, 2 and 5: • **Seamless transfer of information** between the grid, buildings, and business processes and actors;

Session 5

How to write part per part the IMPACT section in an H2020 Energy grant application with emphasis on examples from winning projects

key strategies for making your impact competitive

- **Ensure the project will meet each of the "expected impacts"** outlined in the call text (how to do this is explained in the next section)
- **Identify further impacts not outlined within the call**, which complement or extend the expected impacts and can easily be achieved within budget (e.g. that would enhance innovation capacity, create new market opportunities, strengthen competitiveness and growth of companies, or address environmental or social issues linked to your research). Consider also identifying intermediate impacts that will arise during your pathway to impact e.g. conceptual, attitudinal, cultural or capacity building impacts, upon which you would build more instrumental expected impacts
- **Make sure your proposal is challenge-led and links to the expected impacts for your call throughout the proposal,** not just in the sections dedicated to impact. Make sure that each of the impacts is linked to research in your work programme
- **Make your impact goals specific and measurable by identifying indicators** that will demonstrate progress towards and/or achievement of each impact goal. It is common for researchers to identify indicators of progress towards impact that reflect the success of activities designed to generate impact, but that do not actually say anything about whether or not the expected impact has been achieved. Make sure you have the means of measuring each indicator, including time, expertise and resources, and budget accordingly. Make sure indicators are robust and reliable, and will convincingly demonstrate causality, showing conclusively that your research contributed to the impacts observed. Consider identifying baselines and milestones. Link indicators to goals in a table.

Guidelines

Only information that applies to the proposal and its objectives

Use quantified indicators and targets.

Describe how your project will contribute to:

- Strengthening the competitiveness and growth of companies by developing innovations meeting the needs of European and global markets
- The expected impacts set out in the work programme, under the relevant topic
- Any other environmental and socially important impacts
- Improving innovation capacity and the integration of new knowledge

Describe any barriers/obstacles, and any framework conditions

Determine whether and to what extent the expected impacts will be achieved

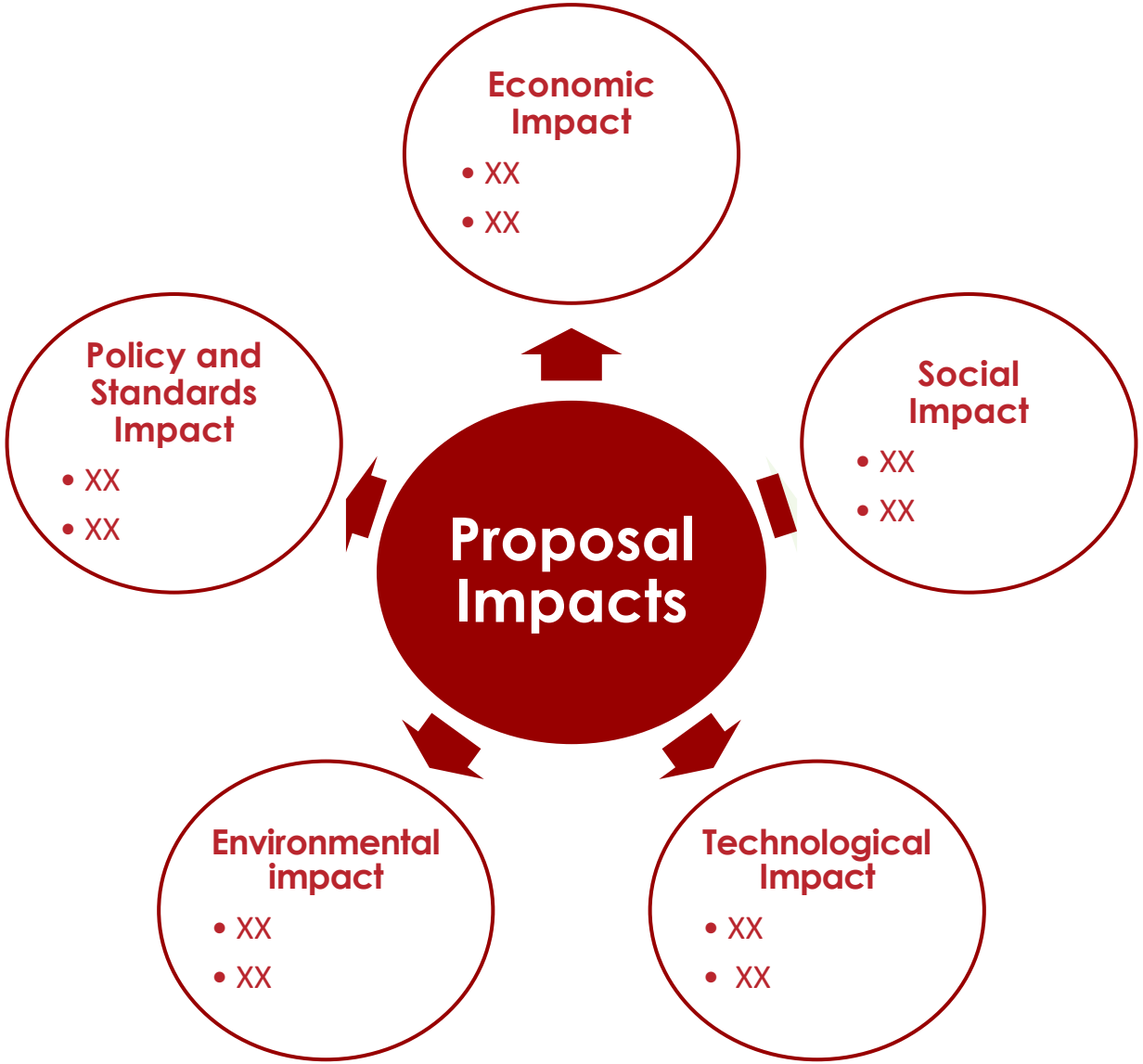
Impact- Methodology

Our approach to the impact is based upon:

- Creating a coherent "red thread" between the scientific and technical objectives (Excellence), the expected impacts (Impact) and work program tasks and WPs (Implementation).
- Having worked examples, tables with data and KPIs that are clear, specific, measurable and verifiable
- Developing initial individual and joint exploitation plans coupled to exploitation channels and levers to multiply impact
- Generating strong communication and dissemination plans that leverage consortium, EU and external resources

Ensuring all three sections of the proposal work together also with respect to IMPACT

Impact - Intro



Impact - Intro - Example

Impact - Expected Impacts

- Being as specific as possible
- Relation to the impact from the call
- Include substantial impacts not from the call

SUMMARY OF CALL EXPECTED IMPACTS AND RELATED PROJECT ACTIONS

Call expected impacts	How the proposal addresses the impact	Corresponding deliverable and Work Package	Partner(s) that will benefit	Concrete ways in which the benefit will materialise
The supported projects are expected to reduce costs and improve performance of renewable fuels for aviation and shipping regarding the efficiency, the environment and society				
The proposed solution is expected to contribute to achieving European leadership in this area.				

Impact - Expected Impacts

IMPACT	CONTRIBUTION BY REACT	TARGETS
Developing **RES-based systems** (including heating and cooling and storage) **that are cheaper than diesel generation**;	In order to increase the penetration of RES into the energy systems of geographical islands, REACT will develop dedicated hybrid RES/storage based systems targeted to satisfy different types of energy demand (including heating, cooling and electricity load) and deployed at the community level. To maximize the exploitation of deployed RES based systems, REACT will integrate with underlying energy infrastructure through the holistic strategy for optimal control of RES generation/storage units supported by both automated and manual community DR programs. By ensuring the optimal control strategy, REACT will be cost effective and cheaper on the mid- and long-term against the conventional diesel generation systems, and delivered with the clear business model for both grid operators and end consumers. At the same time, the optimal planning and sizing of the RES hybrid system and the easy integration with the existing energy infrastructure and systems, will drastically reduce the initial investments required for the solution.	• **Energy cost savings of at least 60%** based on optimal control and DR incentives • Validated at **3 demo islands** under relevant operation scenarios

Impacts not in the call

Main **QUANTIFIABLE** proposal impacts, highly related to the KPI defined in the dedicated task

KEY EXPECTED IMPACT 1
Description, references to proposal STOs and Tasks, graphs
KEY EXPECTED IMPACT 2
Description, references to proposal STOs and Tasks, graphs
KEY EXPECTED IMPACT 3
Description, references to proposal STOs and Tasks, graphs

Improving innovation capacity and the integration of new knowledge

Strengthening the competitiveness and growth of companies

Impacts not in the call - Example

DRIvE KEY IMPACT 6 – Contribute to a selection of standardization actions aimed at the design of future energy market, leveraging existing DRIvE consortium and stakeholder community.

There is growing consensus among policy makers and market participants that Demand Response is a critical requirement for achieving the integration of a large share of renewable energies and a low carbon efficient electricity market at a reasonable cost. This is reflected strongly within the European Network Codes, the Energy Efficiency Directive and the European Commission's Energy Union Communication. **DRIvE will deliver, as indicated in the previous impact, technologies to address EU requirements, by unlocking residential and tertiary building's flexibility and optimizing its management at district level.** The impact of these technologies will be multiplied by the **enablement of innovative local flexibility management business schemes**, that will bring one step further European electricity markets. The main focus on standardization efforts in DRIvE to enable and boosts the local flexibility markets are shown in Figure 34.

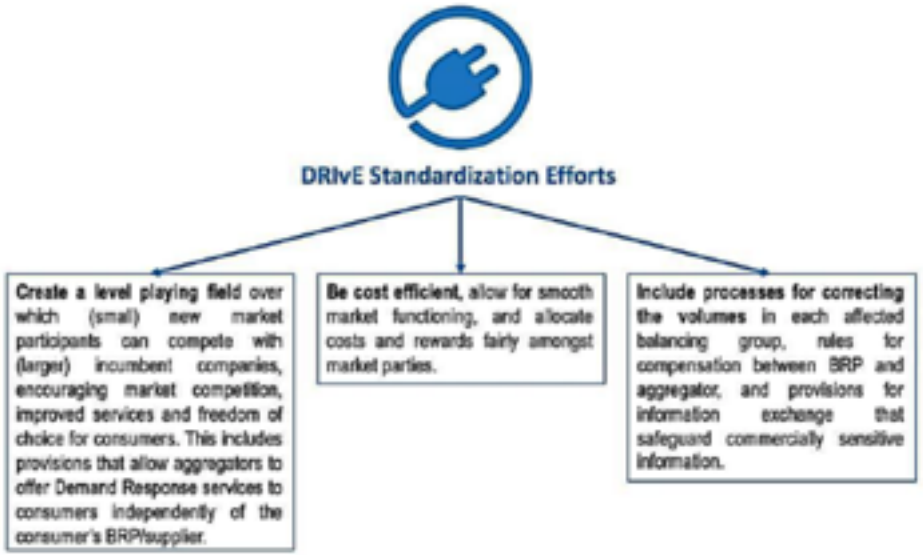


Figure 34 DRIvE standardization efforts

In order to properly frame these efforts, DRIvE will establish strong connections with European and international standardization bodies. These connections will rely both on the project stakeholder community (which will include representatives for standardization bodies) and on DRIvE partners, e.g. ENERVALIS and R2M Solutions, who are involved in the ongoing developments of the USEF (Universal Smart Energy Framework), one of the most active European standardization action on energy flexibility market design, and in the IEEE standardization project P2030.6 that aims at the provision of guidelines for the Benefit Evaluation of Electric Power Grid Customer Demand Response.

Key Performance Indicators of Impact progress

DRIvE specific objectives	Performance Indicator
Unlocked flexibility in residential and tertiary building	**Amount of power (kW) available to participate in DR programs**
Building energy bill saving (up to 30%)	**Building energy bill savings (€)** before and after the implementation of DRIvE
Reduced DSOs CAPEX & OPEX	**Cost saving (€) of avoided maintenance innervations and switch off time**
Higher penetration of distributed renewable energy (up to 25%)	**Evaluation of power quality** (continuity of service, variations in voltage magnitude) before and after DRIvE deployment for different shares of renewables. Power quality will be assessed thanks to simulations/emulation and physical tests.
Revenues generated from district flexibility to increase by 15 to 20%.	**Evaluation of revenues generated (€)** by flexibility trading based on the assumptions from the Blaenau Gwent smart district project use case.
Increase load and generation forecasting accuracy	**Forecasted error (%)** before and after the implementation of DRIvE forecasting algorithms
Support 90% of the current protocols and standards of building's assets and DR response schemes	**Number of communication and control protocols of building's devices and DR protocols** successfully supported and tested through real deployment and simulations.

Impact - Barriers to achieve impacts

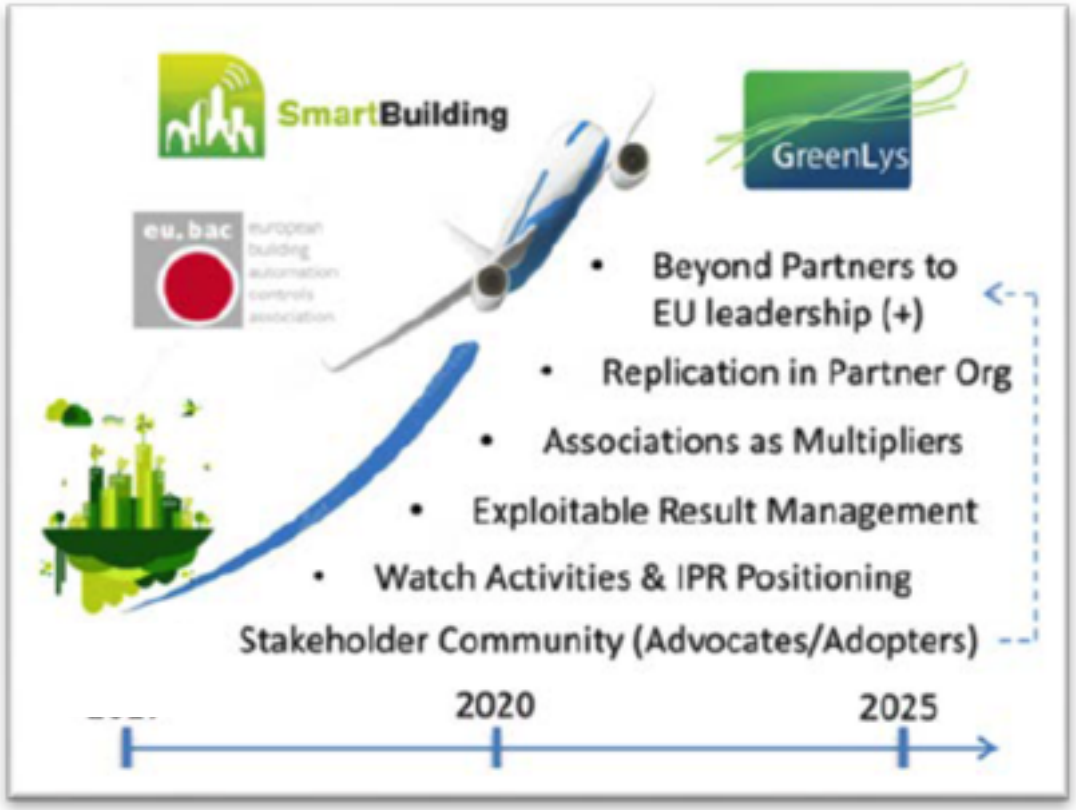
Impact - Barriers to achieve impacts - Example

Barriers/Obstacles/Regulations/Standards

DRIvE PEST Analysis	
Political Factors	**Economic Factors**
Lack of standardization and regulatory effort or slow progress The development of smart grids and DR in Europe is tied with the development of adequate Standards and Regulation. Lack of supporting regulations is the main reason for low penetration of explicit DR schemes in countries like Italy and Spain. Although DRIvE is designed to adapt to different market maturity conditions and is adopting USEF, which supports and accelerate the development of smart grid Standards, slow progresses in the development of Standards and Regulation may limit the exploitation potential of the DRIvE solution. To cope with this, part of the dissemination strategy includes a mutually-beneficial collaboration with members of USEF and members of the Smart Grid Task Force. **Misperceptions of information about DR market evolution** Misinterpretation of the DR market evolution in Europe has the potential risk to create an obstacle for the exploitation of the DRIvE solution. To account for this, DRIvE includes within the consortium partners from different EU countries with policy-making influencing capacities and currently working at different levels in the energy value chain. Furthermore, as part of the project activities, great efforts will be allocated to market analysis and watch activities, seeking for the most suitable environment for the penetration of the DRIvE solution across Europe.	**Minimal financial incentives** - Incentives for market players are not always well aligned to ensure that the most efficient, flexible solution is chosen, while the financial incentives offered to customers in exchange for changes to the way they consume electricity are not big enough. **Missing Markets** - New forms of flexibility offer benefits to many actors in the energy system, but these benefits are not all monetized. This means providers of flexibility do not realize their full value, undermining their investment business case. In addition, there can also be challenges in capturing the value of flexibility in existing markets. **Cost Reflectivity** - Consumers / generators are not always exposed to the true whole system costs of energy generation, transport and consumption which may weaken the case for them adopting more flexible solutions or realising their existing flexibility. **Market Power** - Existing energy market players have significant influence through existing policy and regulatory processes which may make introducing new business models and ways of doing things more challenging. DRIvE will address these challenges building innovative business models based on the consortium value chain experience with the main criteria of creating fair opportunities of the involved stakeholder.
Social Factors	**Technological Factors**
Difficulty to reach customers and stakeholders, especially in partially-developed DR markets Profitability of the DRIvE solution depends on number of DR services available in a given country and willingness of building managers and occupants to participate in DR programs. In countries with not developed DR markets the limited profitability of the DRIvE solution may result in longer paths to market and difficulties in reaching determined customer segments (in particular residential ones). To mitigate this risk, as part of WP7 DRIvE will develop a concrete Plan for the Exploitation and Dissemination of Results (PEDR) with the inclusion of an exploitation roadmap and business plan for the DRIvE solution targeting specifically this issue.	**Technical barriers and cost overrun** DRIvE aims at providing a low-cost solution for implementation in commercial and residential buildings. The project addresses all the possible technical challenges: cost-effective solutions for DR automation, good practices for DR technology deployment in the building, user engagement incentives, building's comfort characterization, flexibility management, hierarchical, modular, plug and play, multivendor, interoperable and standard compatible solution. Although the solution is based on existing technologies provided by industrial partners, unexpected technical barriers may arise when integrating the solution and implementing it in new and variegated contexts. A careful planning of implementation activities (data collection, detailed use-cases definition, pre-testing) and

Impact - Measures to Maximise Impact

PATH TO MARKET



Impact - Measures to Maximise Impact

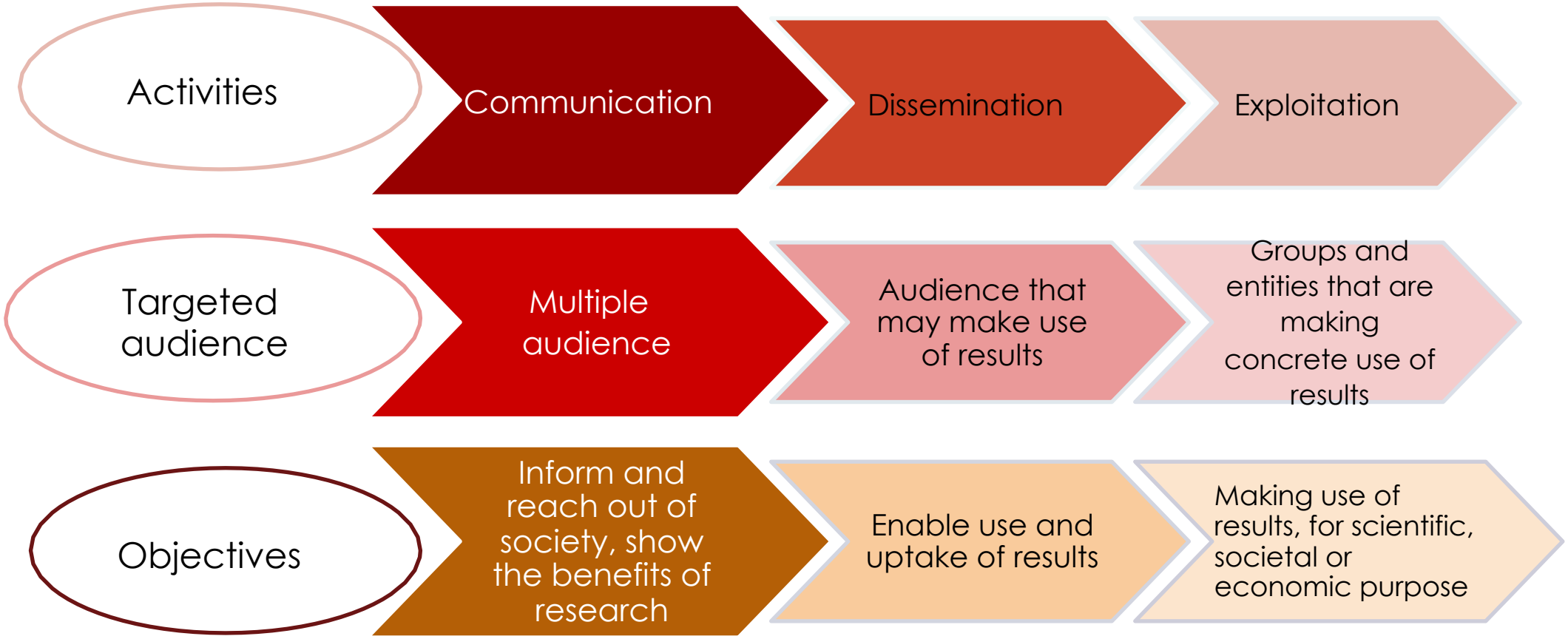
Stakeholder Analysis

Table 6. Identified stakeholder and dissemination tools to reach them.

Stakeholder groups	Strategic objective / expectations	Dissemination tool
Professionals (designers, ICT installers, energy advisors)	Knowledge about how their businesses can incorporate GSHP technology and/or innovative H/C solution in retrofitting projects (i) expand its services offer to customers; (ii) improve efficiencies and reduce costs, (iii) ensure customer satisfaction via innovative programs and tools; (iv) improve customer retention and revenue streams	Demonstration cases: demo visits, training, conferences, demo of specific technology; Networking activities: Workshops /Events in general; Web Platform: project website including tools, assessments and guidelines. E-learning lecture: An open access e-learning lecture for installers and planners will be provided over the AIT E-learning platform.
Construction and engineering companies	Increase knowledge of innovative hybrid ground-source heating and cooling technologies and possible applications; awareness of different H/C technologies; increased offering for retrofitting; new business models for nZEB retrofitting selling flexibility services	Demonstration cases, Web Platform, Dissemination network Events: presentation of GEOFIT results, fairs.

Impact - Measures to Maximise Impact

Communication and Dissemination Planning



Impact - Measures to Maximise Impact

Description of the preliminary exploitation vision of each partner

Exploitable Result

ER Manager

Why is it innovative?

Exploitation vision

UNIVERSITIES
(knowledge, education, training and academic dissemination)

RESEARCH TECHNICAL ORGANISATIONS
(close to market solutions development, technology transfer and consulting support focus)

TECHNOLOGY PROVIDERS
(ICT, smart devices, blockchain, app developers)

END USERS
(ESCOs, ENgineering Companies, etc.

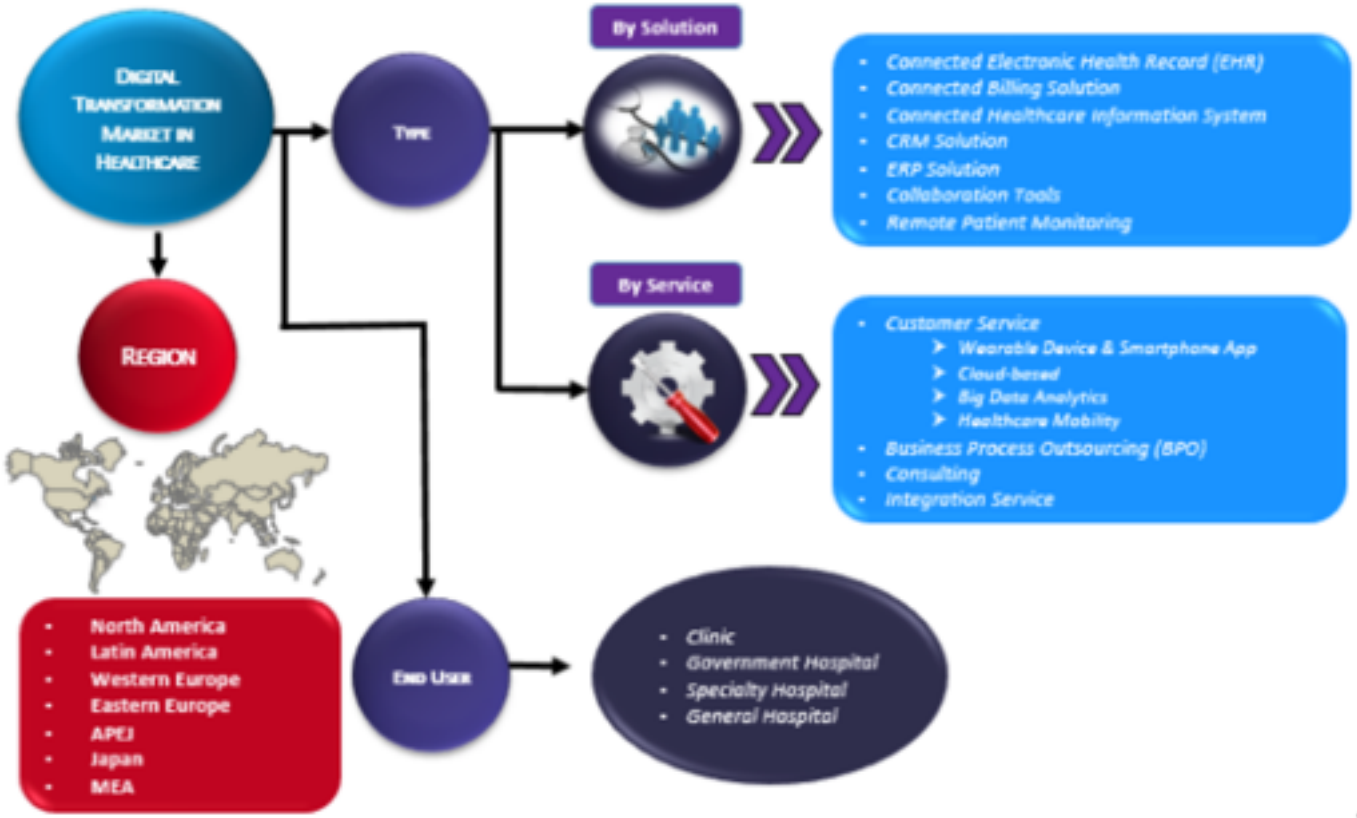
Project Level & Joint Exploitation Planning

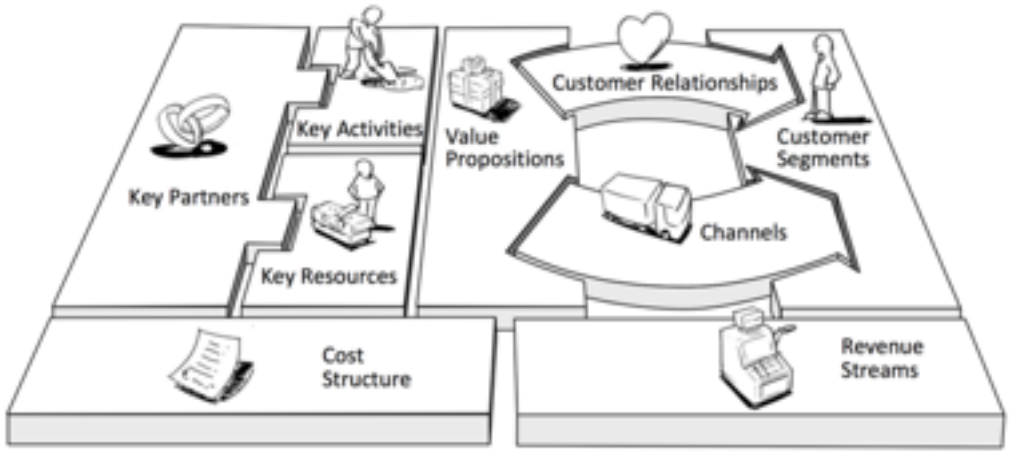
Impact - Measures to Maximise Impact

	Identified result	Owners	Others Involved	Output	Application	IPR strategy	END USER
8	Consultancy Services for the enablement DR services in residential and tertiary buildings	R2M		Service	The consultancy targets Energy Service Companies (ESCOs), energy suppliers, public administration and emerging aggregators, for all of them could potentially use this business model. R2M is became an ESCO and will use this Exploitable Result internally to start offering energy management services to districts.	Consultancy service Training	DSOs, Utilities, aggregators, ESCOs Building managers

Impact - Measures to Maximise Impact

Market Analysis and Business Modelling





Impact - Measures to Maximise Impact

Market Analysis and Business Modelling

TABEDE pre-market analysis

TABEDE solution market is known as the Building Automation and Control System (BACS) Market. According to the new market research report on BACS, **the building automation and control system global market is expected to reach EUR 100.60 billion by 2022, at a CAGR of 10.6% between 2016 and 2022**[61]. The ability of the building automation system to increase the energy efficiency and enhance the security and safety in buildings is one of the major driving factors for the market. Moreover, the advancements in the wireless communication technologies and convergence of IoT and building automation further drive the growth of the building automation system market. Within this market, Europe has the highest market share with 39% of the BACS product market, as shown in Figure 23 .

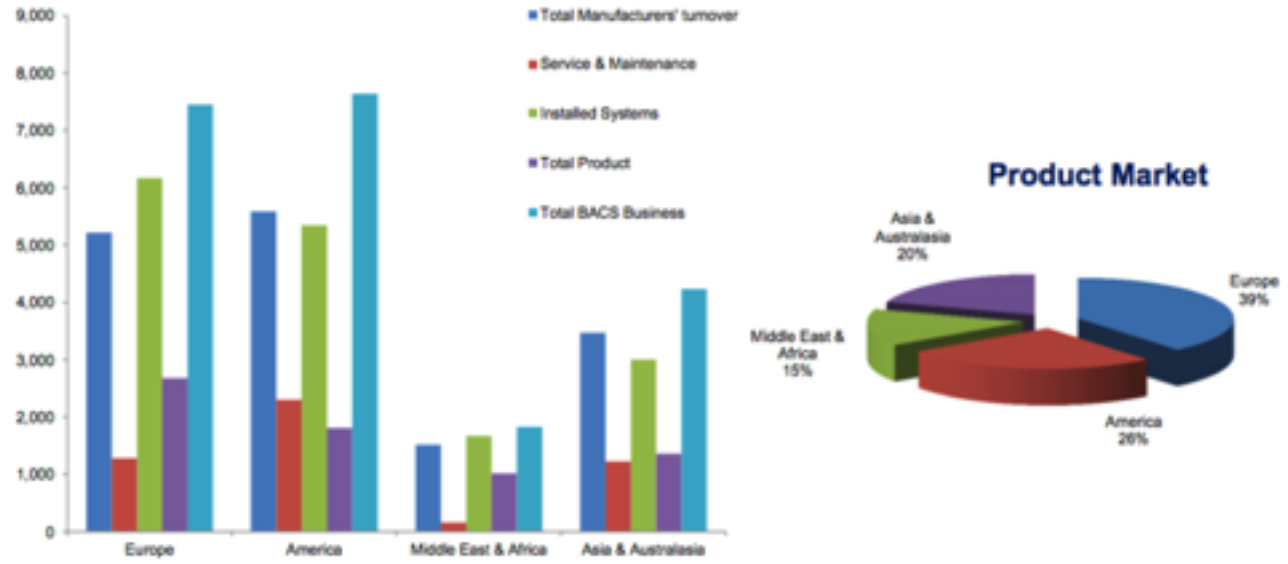


Figure 23 BACS global market share [52]

Impact - Measures to Maximise Impact

Market Analysis and Business Modelling

TABEDE Cost Benefit Analysis

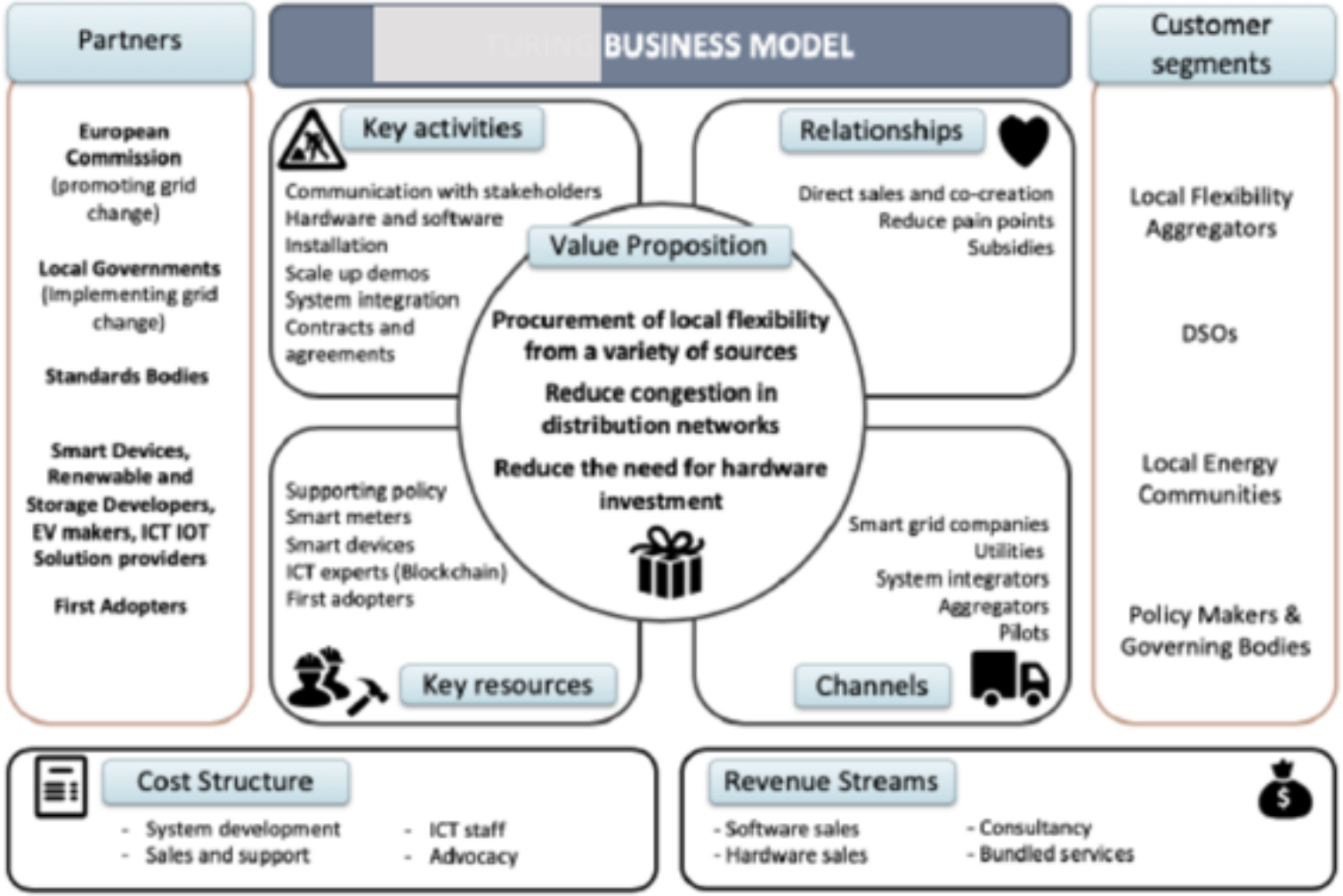
As it was mentioned before, TABEDE aims at introducing to the market a low-cost solution that will enable customers to reduce their energy bill among many other advantages. In order to address the needs and the potential investment from the residential and the tertiary building market, TABEDE price will vary with the size of the building. The following Cost-Benefit Analysis (CBA) is based on the Industrial partners (SCHN, SEI) experience in the building control and automation market and its value chain costs. Table 20 presents the target of TABEDE production costs (assumption of 10.000 products per year). The highest expenditures are the hardware components (dependent on the building size) and production value chain structure (building, energy, manpower, etc.). Due to the difference in the complexity of the residential and tertiary buildings, a complexity cost must be considered related to extra hardware (processors, memory, etc.) and software (capabilities) that is needed.

Table 20 Estimated costs of TABEDE solution based in a preliminary assessment

Type of Cost	Estimated Costs (€/year)
Capital Costs: *Hardware* *User interface*	5.000.000 (500 per unit)
Running Cost: *Facility* *Energy*	250.000
Manpower	350.000
Distribution Costs	100.000
R&D Costs	100.000
Total per year	5.800.000
Production cost per unit	580
Added value due to complexity	1 €/m²

Impact - Measures to Maximise Impact

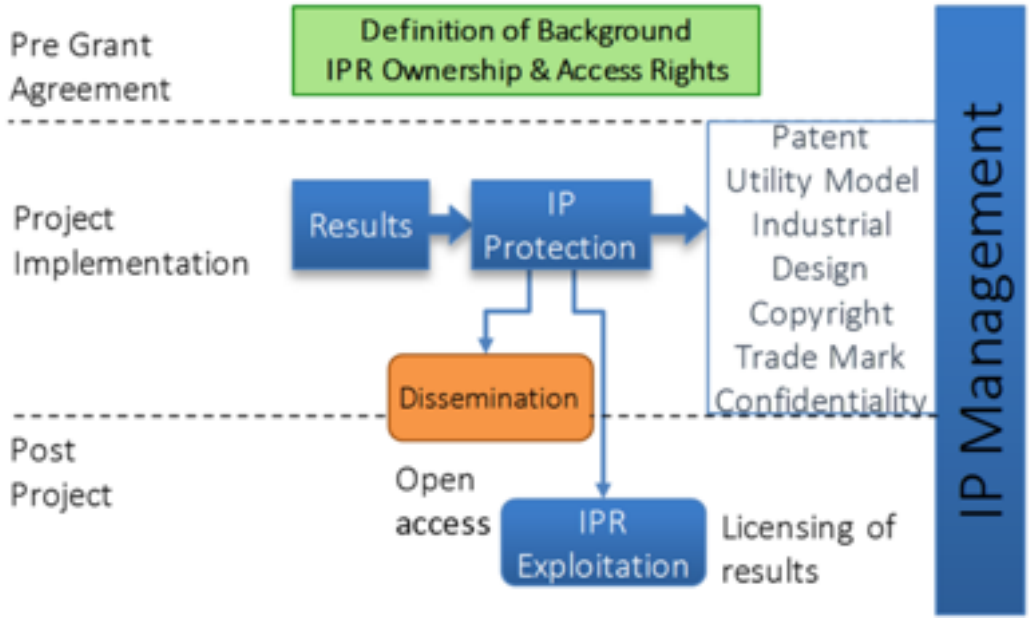
Market Analysis and Business Modelling

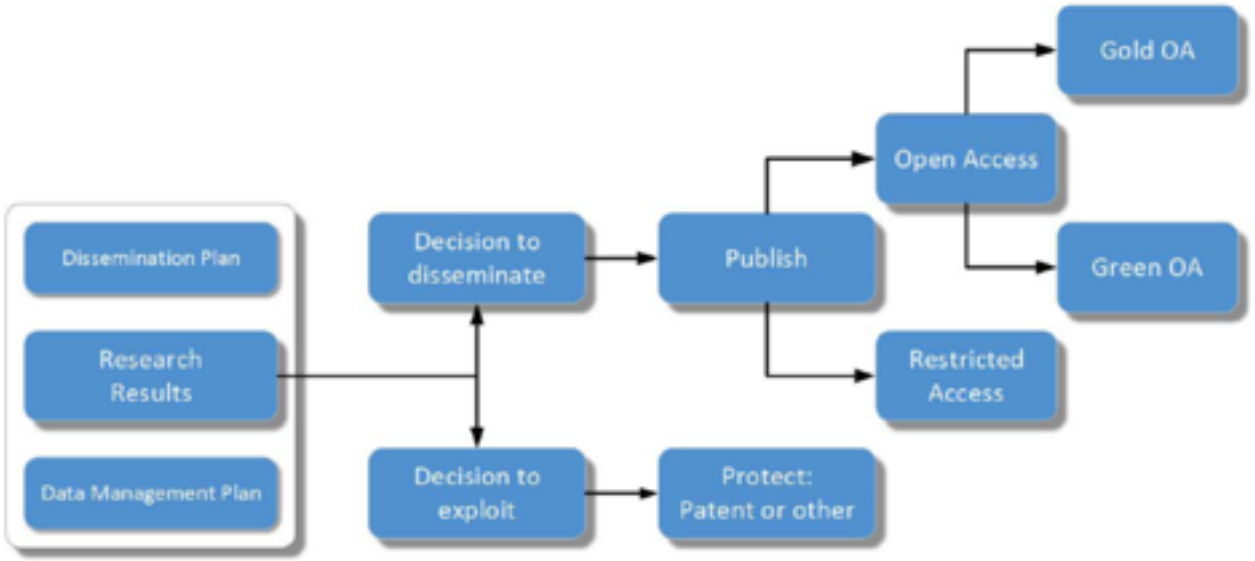


Impact - Measures to Maximise Impact

IPR Management and Data Management

- Guidelines on Open Access to Scientific Publications and Research data in Horizon H2020
- Guidelines on IPR management





Impact - Measures to Maximise Impact

Communication and dissemination activities

- Description of the main channels and strategies for a highly impact communication and dissemination activities

Website

Social Media

Partner Dissemination Channels and Events

Use of the Stakeholder Community and its Network

Traditional Media (TV, Radio, Press)

Marketing and Community Events

Impact - Measures to Maximise Impact

Communication and dissemination activities

- Description of the main channels and strategies for a highly impact communication and dissemination activities

Joint workshops and clustering activities

Scientific publications

School visits and engineering exhibition

Portraits and Testimonials

Take home messages

For 2.1:

- What is the benefit of your project? (the benefit for SMEs becomes more and more important!)
- Think about the expected impact in the topic text / work programme
- Who are the users of your results?
- How will your project/results strengthen the competitiveness?
- What is the social / societal benefit?
- How will the project support EU-policies?

Take home messages

For 2.2:

- Adapt your dissemination strategy to the different needs of your target groups (be creative!)
- For exploitation planning: include your business partners / dissemination experts
- Don‘t forget about IP-protection and data-management
- Think about an appropriate communication concept!

Tips for your proposal

1. Be Relevant

Read the call text carefully and deliver what they are asking for. This cannot be stressed enough (it is already mentioned in some of our other blog posts!). This is not just in terms of science or methodology but also when writing the impact section of the proposal. Use the words from the text to show that you have read and understood what challenges you should be tackling. "Community building", "stakeholder engagement" and "Open Source" are not just buzzwords you should include in your proposal text, but have meaning behind them. This can be different for different projects; a healthcare project may want to form patient focus groups and a Big Data project may make provide training to end-users of the data to be able to use it. These are both forms of stakeholder engagement (with some community building and Open Source relevant here too!).

2. The "Just-Right" Rule

Even though you may desire to demonstrate your stupefying and inordinate penchant for superfluous vocabulary to assert your mastery of the principal impact challenges specified by the H2020 call transcription, this would ultimately impair the statement that you are endeavouring to make.

The opposite is true too.

The two juxtaposed examples above are the "don'ts" in writing the impact section. Language too complicated or sentences too simple will not convey your message in the way that will result in a successful project. A happy medium is what is called for: language that is simple yet conveys impact and excellence of your project.

Tips for your proposal

3. Convince your evaluator

Be assertive. Your impact will "make a difference in (insert relevant field here)". Your methods of achieving impact are "beyond state-of- the-art". Back these assertive statements up with proof and you have now confidently presented your work. This assurance in the quality of your impact conveyed in the proposal will show the evaluator that you (and your consortium) really believe in your project.

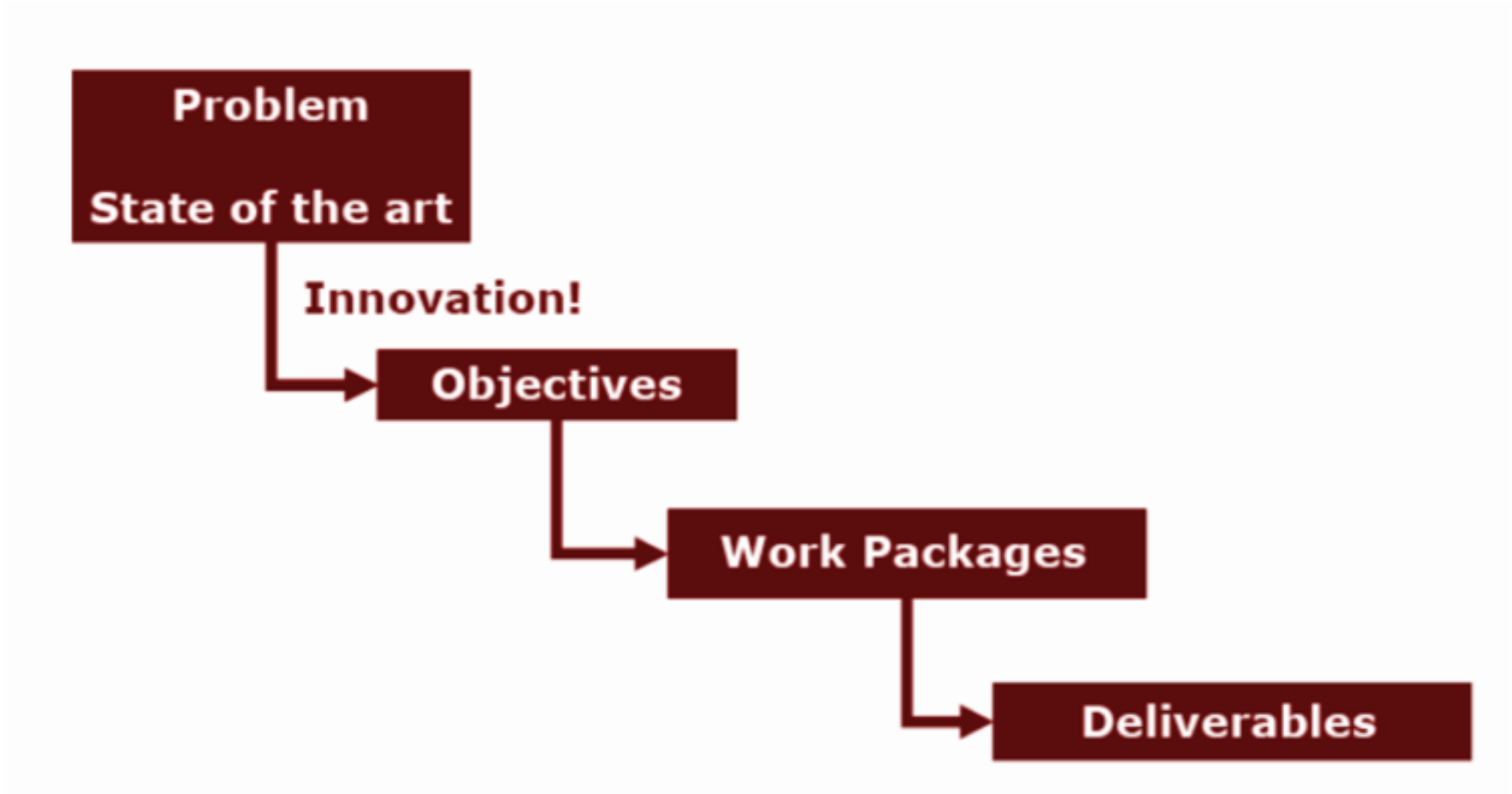
4. Don't Exaggerate

This is a caveat to the point above. No your project won't make everyone understand how to code by 2020. It probably won't get every single person to believe in climate change at the end of the project either. There is no point in exaggerating or inflating the claims that you are making for your project or impact. The evaluator is an expert in the scientific or societal field[2] : they know exactly what impact can and cannot be achieved in the timeframe and the methodology you are using.

Session 6

How to write part per part the IMPLEMENTATION section in an H2020 Energy grant application with emphasis on examples from winning projects

Line of reasoning



Work plan – work packages, deliverables and milestones

Expectations of the EC

- Brief presentation of the overall structure of the work plan

Timing of the different work packages and their components (Gantt Chart)

- Detailed work description
  - A description of each work package (table 3.1a)
  - A list of work packages (table 3.1b)
  - A list of major deliverables (table 3.1c)
- Graphical presentation of the components showing how they inter-relate (Pert Chart)

Gantt Chart

WP	Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP1	**Coordination and Project Management**	**WP LEADER APRE**																																			
	Task 1.1 Consortium Management	M					SC						M						SC						M						SC						M
	Task 1.2 Technical Management			D																																	
	Task 1.3 Project Administration																		D																		D
WP2	**Creation of the framework**	**WP LEADER WEcR**																																			
	Task 2.1 Review on barriers and opportunities for the development of bio-based value chains				D																																
	Task 2.2 Stakeholders (quadruple helix) interests' and motivations' identification					D																															
	Task 2.3 Mapping bio-based products (applications) based on stakeholders' interests							D																													
	Task 2.4 Guidelines for the design of the BIOVoices MML approach									D																											
WP3	**Bio-based Community building**	**WP LEADER CE**																																			
	Task 3.1 Classification of stakeholders groups			D																																	
	Task 3.2 Creation of the stakeholders' database																																				D
	Task 3.3 Focus group with the initial												D																								
	Task 3.4 BIOVoices methodological approach for MML to foster bio-based value chains														D																						
WP4	**Creation of the on line BIOVoices social platform and on line mutual learning activities**	**WP LEADER FVA**																																			
	Task 4.1 Design and implementation of a sustainable BIOVoices multi-stakeholder on line social platform						D																											D			
	Task 4.2 Population of the BIOVoices multi-stakeholder on line platform with contents											D																									D
	Task 4.3 Animation of the multi-stakeholders Platform																								D												D
	Task 4.4 Social Media innovative engagement and animation																		D						D												D
WP5	**BIOVoices Mobilisation and Mutual Learning Events**	**WP LEADER PEDAL**																																			
	Task 5.1 BIOVoices European MML																								D												D
	Task 5.2 BIOVoices National MML																																				
	Task 5.3 BIOVoices Local/Regional MML																																				
	Task 5.4 Action Plan to raise citizen's awareness and foster collaboration among stakeholders																																			D	
WP6	**BIOVoices Dissemination, Communication and Exploitation**	**WP LEADER LOBA**																																			
	Task 6.1: Strategy for Impact, Dissemination and Communication				D																																
	Task 6.2: Execution of the Dissemination and Communication Plan		D	D									D												D												D
	Task 6.3 Exploitation and Sustainability						D																														D
	Task 6.4 BIOVoices final event																																				D

Work plan – work packages, deliverables and milestones

Table 3.1a: Work package description (For each work package):

Work package number		Start Date or Starting Event					
Work package title							
Participant number							
Short name of participant							
Person/months per participant:							
Objectives							
Description of work (where appropriate, by participants							
Deliverables (brief description and mo							

Objectives
- clear and **comprehensible**
- **realistic** and **feasible** (personnel, technical equipment, financially, in time) **(SMART)**
- Sub-objectives of main objective (project)

Tasks
- **Detailed description** of what you want to do to achieve the projects objectives: Result: **Deliverables**

Deliverables
- Results of WP
- Coherent labelling: e.g. D 4.2

Work plan – work packages, deliverables and milestones

It is widely recognised that increasing flexibility is key for the reliable operation of future power systems with very high penetration levels of Variable Renewable Energy Sources (VRES).1 Flexibility is the ability of a power system to maintain continuous service in the face of rapid and large swings in supply or demand. This WP will develop activities in order to…..

WP4 focuses on the design and implementation of an ICT platform for demand response at district level. This general objective translates into the following sub-objectives:

. To design the multi-agent district management platform for demand response, considering the outcomes of WP2
. To implement implicit DR protocols for community energy management
. To implement explicit DR protocols to provide different ancillary services (frequency, voltage, reactive power, energy balance) to the DSO

Implementation - WPs and Deliverables

WPs and Tasks:

- Break down project into smaller components
- Can be divided by activity of s a project management approach (e.g. Plan - Do - Check - Act)
- Do not include concept items in tasks.
- Avoid lengthy tasks
- Include partners roles in the task (short sentence)

Deliverables:

- Consistent with the work performed
- Timely scheduled. Avoid high peaks of deliverables (e.g. all in M18)
- Provide short description

Work plan – work packages, deliverables and milestones

- Definition: **Deliverable**
- Distinct output / concrete result of the project
- Necessary to complete a task / WP
- meaningful in terms of the project‘s overall objectives
- constituted by a report, a document, a technical diagram, software etc
- Every deliverable has to be delivered

Work plan – work packages, deliverables and milestones

List of deliverables

Deliverable Number[14]	Deliverable Title	Lead beneficiary	Type[15]	Dissemination level[16]	Due Date (in months)[17]
D8.1	DRIvE Stakeholder Community	8 - R2M	Report	Confidential, only for members of the consortium (including the Commission Services)	10

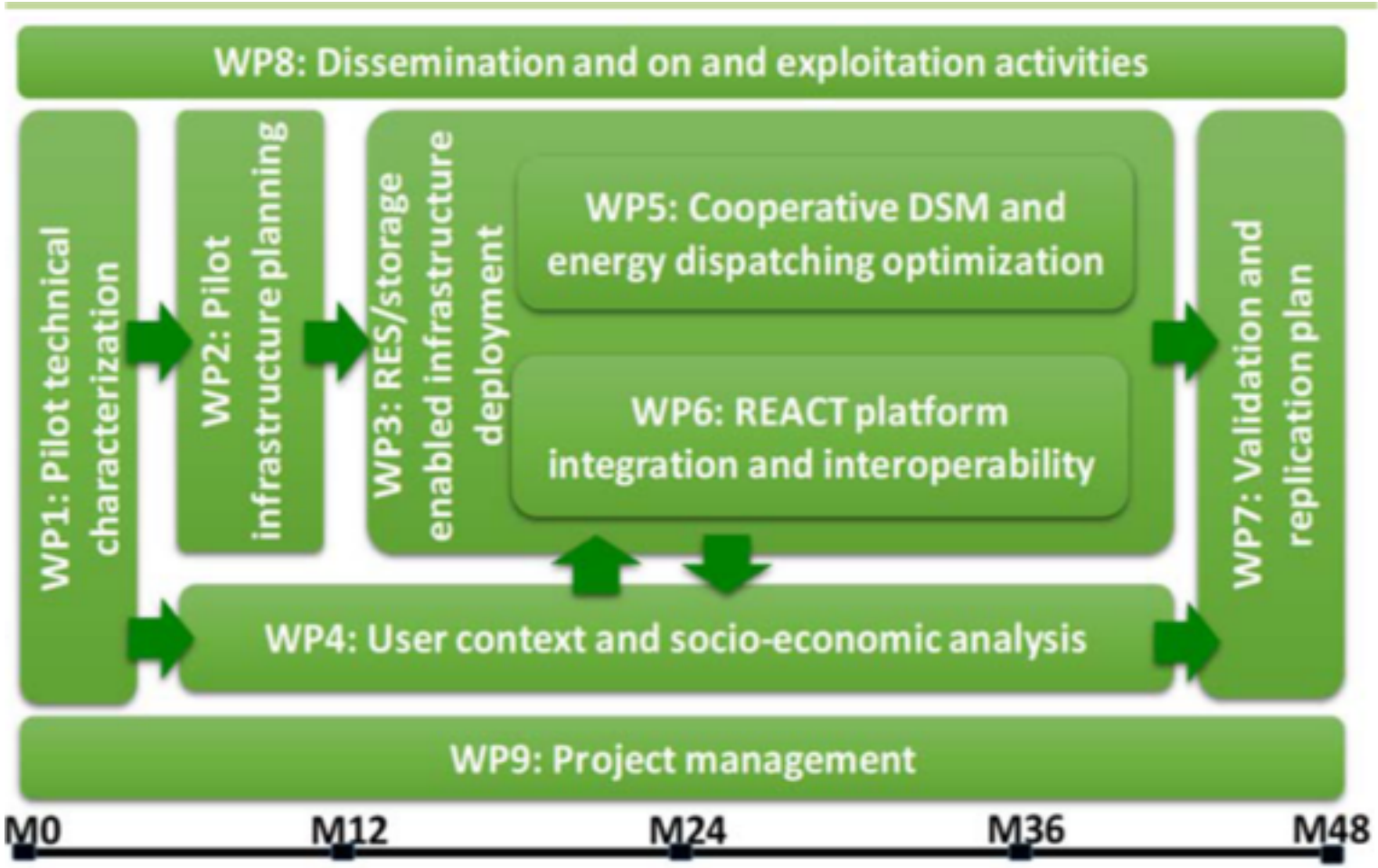
Description of deliverables

D8.1 : DRIvE Stakeholder Community [10]

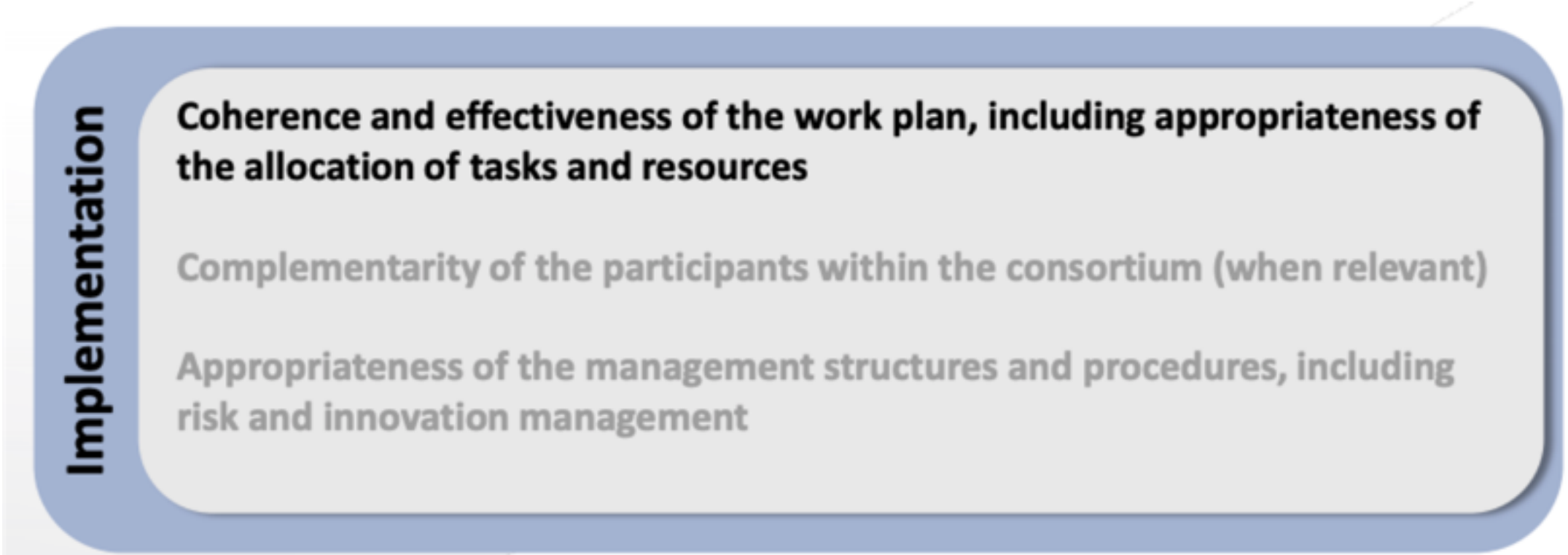
Database of project stakeholders to view, map and manage communication and exploitation channels in a strategic way. An update will be included within each periodic report. (T8.1)

Implementation - PERT and GANTT

Provide a PERT diagram



Implementation - Evaluation Criteria



Implementation - Evaluation Criteria

- There are only weak links between the objectives and the workplan. In some cases it does not become clear how the objectives will be addressed in each of the work packages.
- WPs are structured more as a single partners effort rather than a consortium effort.
- The budget is disproportionately distributed among partners.

Expectations of the EC

Describe any organizational structure and the decision-making

(including a list of milestones)

3.2 Management structure and procedures

- Clearly define: Who is responsible for what?
- Who will decide what, how and when?
- How effective will the innovation management be addressed in the
- management structure and work plan?
- What will happen in case of conflict?
- What will happen, if there won't be any agreement on something?
- Who will decide then? Veto right?

Implementation - Management structure

Description on how the project will be managed, experience of the leaders

Decision making structure

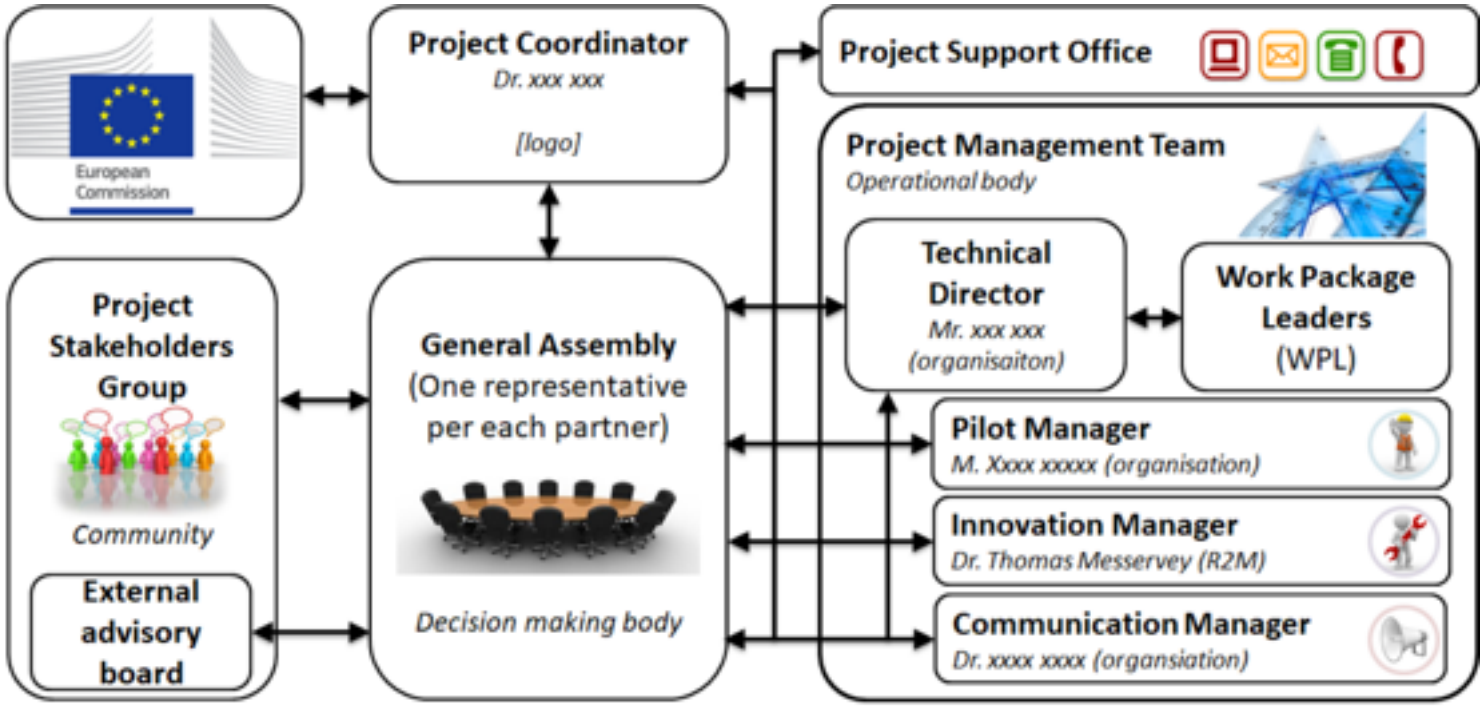
Internal Communication

Quality control measures

Conflict resolution measures

Reporting

Planning and project monitor



Implementation - Milestones and Risks

Milestones

- Control points where go/no-go decisions are made
- Measurable and quantifiable
- Adequate in number to the project. Never too many

Milestone	Odds	Severity	WP	Means of Verification
MS4	DRIvE stakeholder community reaches 100 relevant members across Europe	WP8	8 - R2M	13	List of DRIvE stakeholders made available to consortium (M12 GA)

Implementation - Milestones and Risks

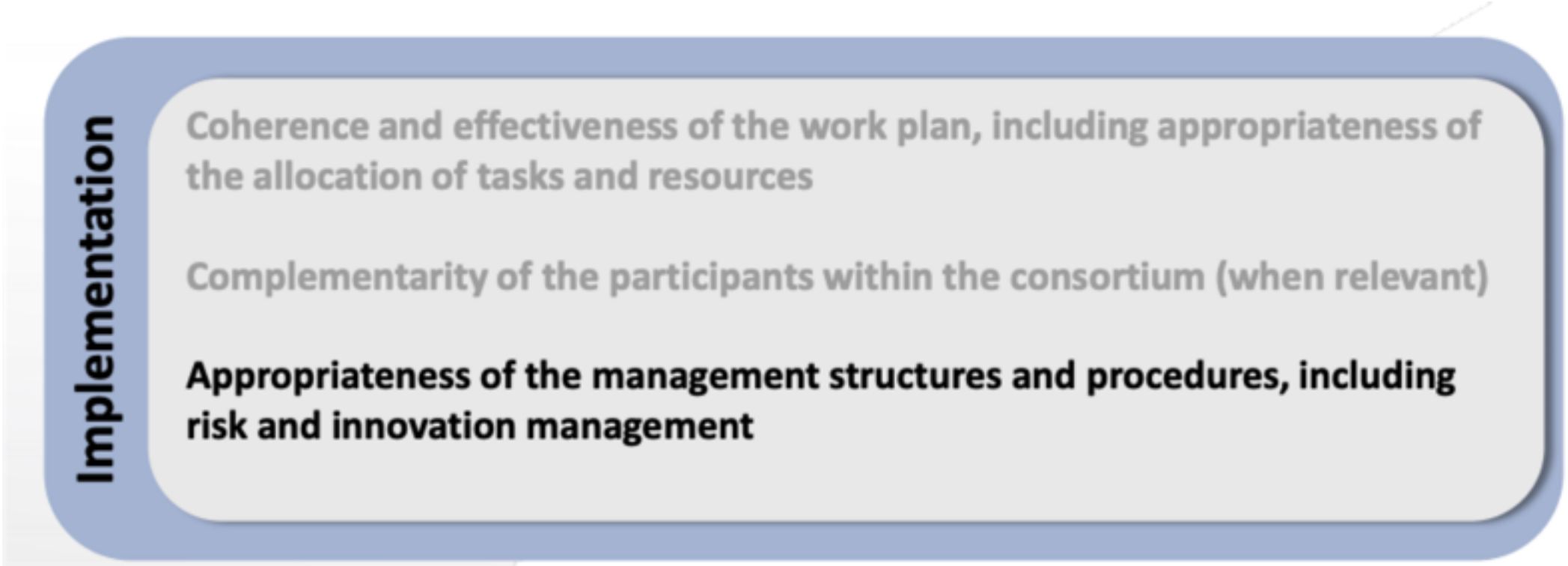
Risks

- Issues that may harm project implementation
- Risk reduction measures need to be planned
- Typical risks categories:
  - Management
  - Technical
  - Visibility and Communication/Dissemination
  - Business

1.3.5. WT5 Critical Implementation risks and mitigation actions

Risk number	Description of risk	WP Number	Proposed risk-mitigation measures
1	Delay in achieving milestones / Need for assignment of unanticipated tasks.	WP1	Flexible planning of interim milestones and constant review of progress based on internal draft deliverables release.
2	Communication problems among partners. Disagreement among consortium partners	WP1	Reporting on communication healthiness as part of task/WP/Project monitoring.
3	Losing critical staff or partners at crucial point of the Project.	WP1, WP2, WP3, WP4, WP5, WP6, WP7, WP8	Consortium has been built in order to ensure some level of overlapping in competencies. Most critical skills (e.g. grid simulation) are available in at least two partners.

Implementation - Evaluation Criteria

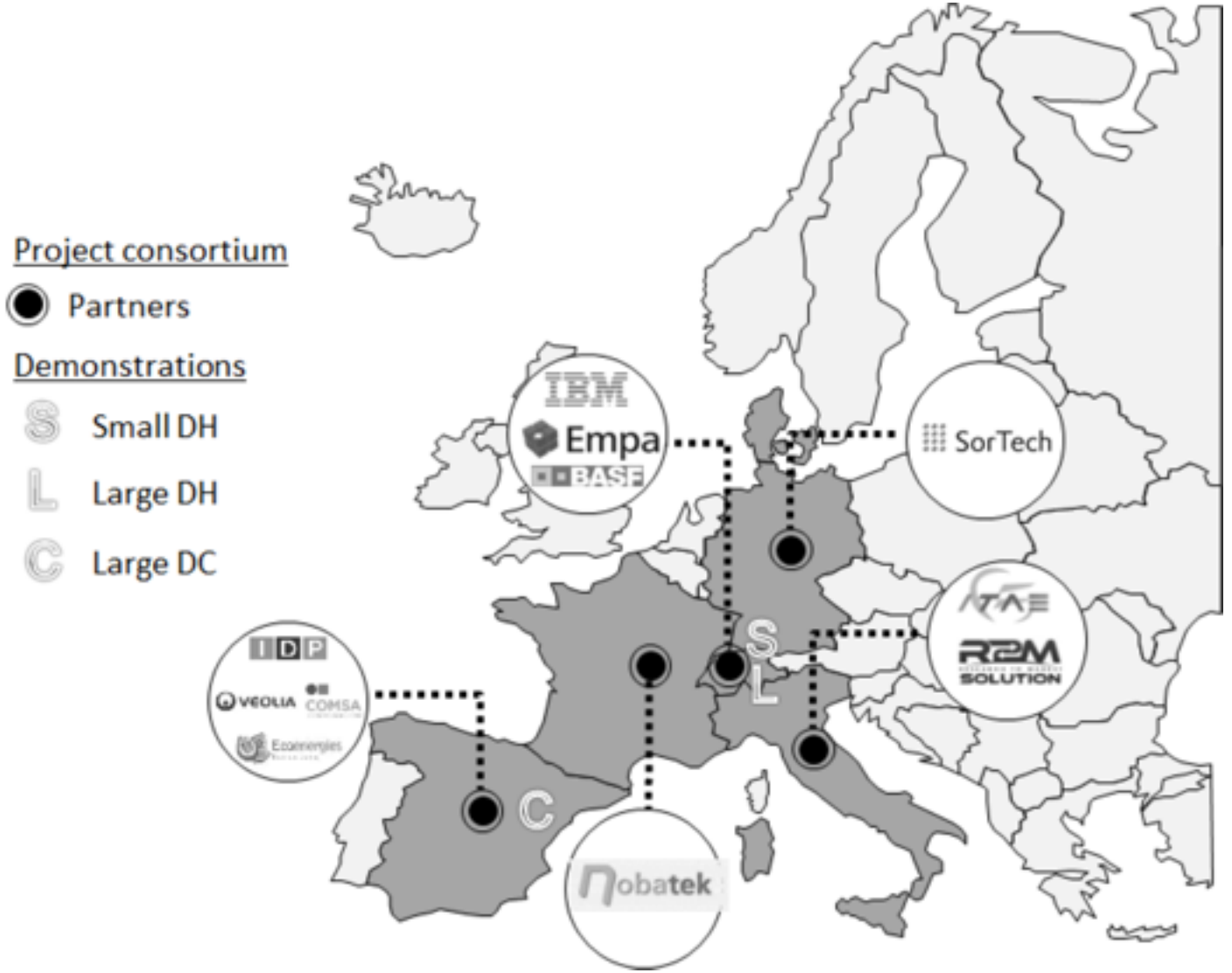


Reviewer‘s comments

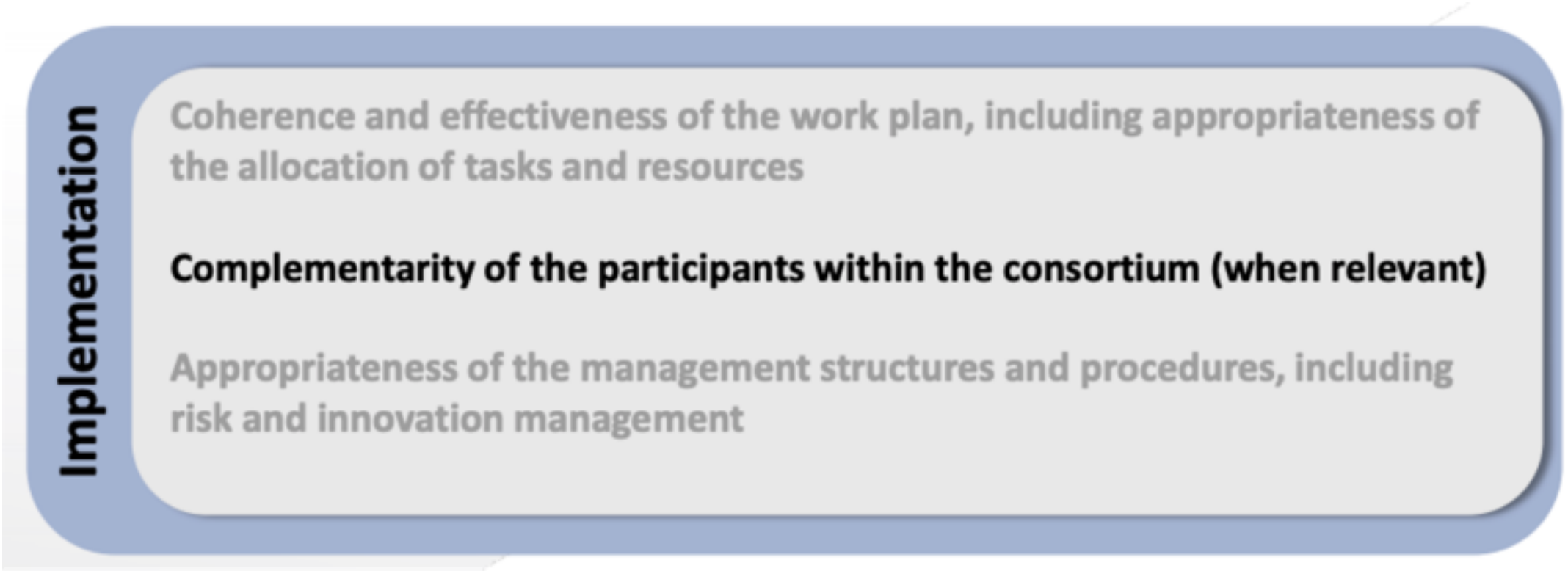
- Aspects of decision-making processes and conflict resolution mechanisms are not clear
- The structure would be strengthened by an external independent input (external advisory board) for the decisions
- A risk management section has been included into the proposal; however, it appears to have limited detail to address the potential problems that could occur.

Implementation - Consortium as a whole

- Demonstrate all necessary skills are present
- Demonstrate all impacts can be reach given partners expertises
- Show what every single partner has to contribute to the project
- Demonstrate the right balance between RTOs, Academia, Industry, SMEs, and public organisation according to project goals



Implementation - Evaluation Criteria



Reviewer‘s comments

- The roles of partners 6 and 8 appear overlapping
- More representatives from industry, regulatory authorities and patent groups would be desirable
- There is no partner with strong competence in XXX
- The coordinator seems to play a predominant role and the scientific integration of other partners in the proposal is not sufficiently demonstrated

Implementation - Resources to be Committed

- Demonstrate how the resources are used in terms of:
  - Effort
  - Money
- If any partner has 'Other Direct Costs' higher than 15% of the Personnel Costs, a table detailing these 'OTH' needs to be introduced

14/R2M	Cost (€)	Justification
Travel	9 100	8 consortium meeting travels (€700 per travel) + 3 workshop trips (€700 per trip) + 2 dissemination events
Equipment		
Other goods and services	8 000	Dissemination material, consumables
Total	17 100	

Members of the consortium

4.1 Participants

4.2 Third parties involved in the project (including use of third party resources)

Members of the consortium

4.1 Participants

Expectations of the Commission

- a **description of the legal entity** and its **main tasks**, with an explanation of how its profile matches the tasks in the proposal (include partner number)
- **a curriculum vitae or description of the profile of the people**, including their gender, who will be primarily responsible for carrying out the proposed research and/or innovation activities;
- **a list of up to 5 relevant publications, and/or products, services** (including widely-used datasets or software), or other achievements relevant to the call content;
- a list of up to **5 relevant previous projects or activities**, connected to the subject of this proposal;
- a description of any **significant infrastructure and/or any major items of technical equipment**, relevant to the proposed work;

Members of the consortium

4. Members of the consortium

4.2 Third parties

Beneficiaries: appropriate resources to implement the action

Third Parties – legal entity not signing the grant agreement

- Making available resources by means of contributions in kind
- By carrying out part of the work itself (should not be core tasks of research)

Members of the consortium

4. Members of the consortium

4.2 Third parties

- Contracts to purchase goods, works and services (Art. 10)
- Use of in-kind contributions provided by third parties against payment (Art. 11)
- Use of in-kind contributions provided by third parties free of charge (Art. 12)
- Subcontracting (Art. 13)
- Linked third parties (Art.14)

More reviewer's comments

- The proposal describes a management structure that itself is complex and not that easy to follow.
- The staff allocation versus justification of costs needs clarification.
- It was also pointed out by the reviewers that IPR management could have been described in more detail.
- The panel noted that not all the partners are represented in the steering committee. An appropriate representation of all the partners in a decision making body should be sought.
- The gender aspect should have been better addressed, and should be considered in the negotiation phase.

More reviewer's comments

- However the management structure is somewhat too briefly mentioned in the proposal and a standard graphical representation and definitions of decisive positions including concrete names would have been useful.
- The plan for managing Intellectual Property and innovation-related activities arising from the project is fairly addressed. Whilst an IP manager has been appointed, new IP will be submitted to the General Assembly, where only industrial partners have voting rights.
- There is a significant weakness regarding the co-ordinating partner track record (recently founded) and as to whether they have the experience, capacity, capability and the necessary expertise to carry out their tasks and to act as project leader.
- The experience of the coordinator to lead international projects could have been better documented.

More reviewer's comments

- The industrial participant plays a specific technical role, but should also be encouraged to play a stronger role in the strategic planning of the project.
- The sub-contracting costs appear high as they represent 20% of the project costs and should be better justified.
- The panel expressed some concern whether sufficient funds were allocated to the management of IP strategy.
- The resources for XXX are high in relation to the other partners and the rationale for this was lacking
- The time estimated for the computational part output seems significantly underestimated.

More reviewer's comments

- According to the panel opinion, the conflict resolution scheme was not sufficiently addressed.
- The consortium as a whole is composed of a wide set of suitable partners. However, some topic related expertise - as an example science of physical activity - is not fully evident from the proposal.
- The budget allocation appears unbalanced.
- Milestones and deliverables in some cases overlap.
- A very complex management structure has been proposed and described with abundance of details. However, the concern is that the related complexity will have a negative impact on the timely flow of the project.
- The SMEs focus on very specific tasks with little relation to the other work packages.

Take home messages

- Remember to write the proposal for the reviewers - **convince them!**
- Take the reader by the hand and guide him / her
- Create a logical link between objectives, workpackages and deliverables – **very important!**
- Do not work to fill the 70 pages! Work to get your ideas across!
- Use the Self-evaluation form for RIA / IA

Thank you

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