



# Horizon 2020 Energy Efficiency Call for Proposals 2020 General Call Presentation

#H2020Energy  
info days

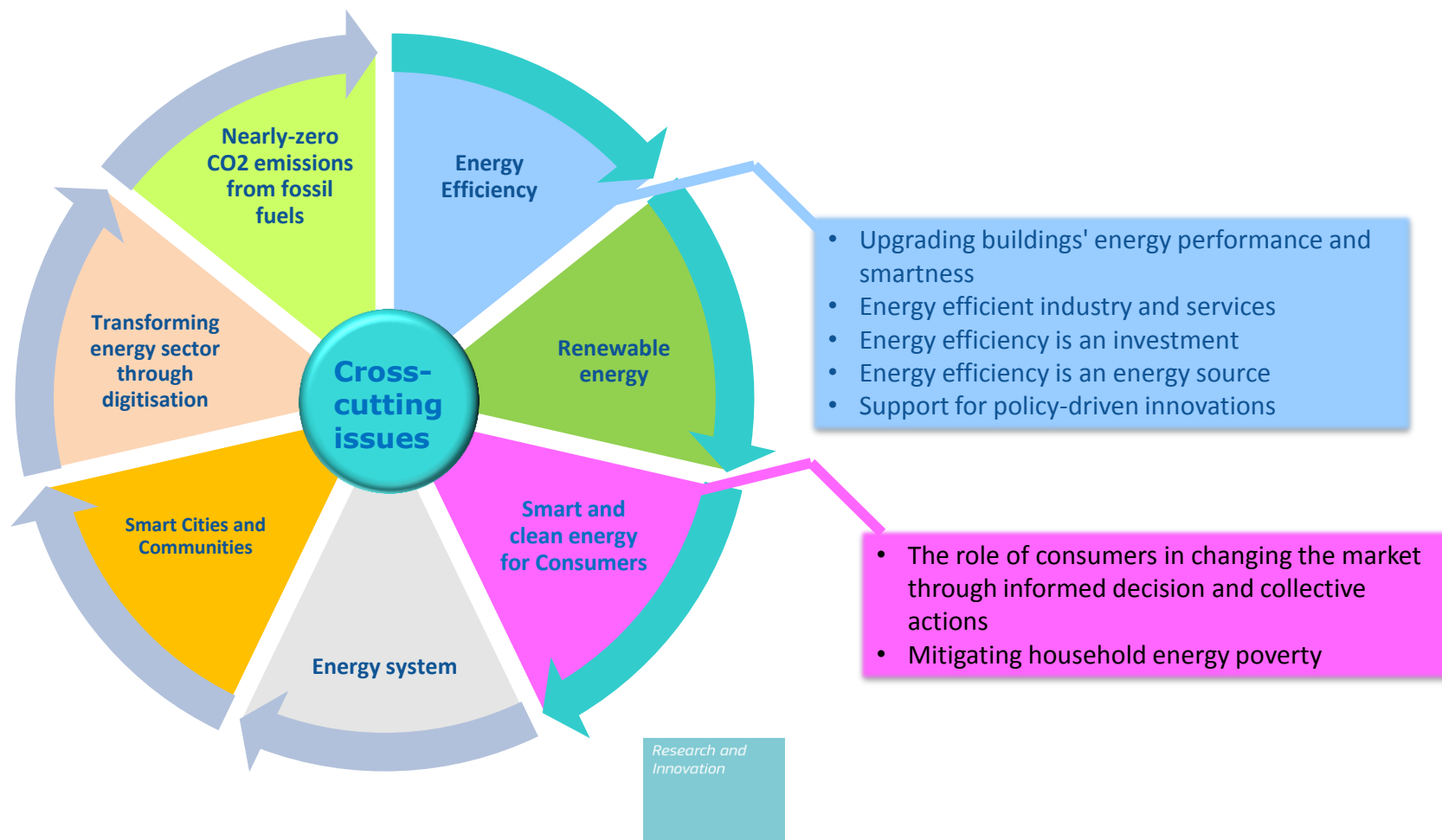
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*H2020 Energy Unit - EASME*

Research and  
Innovation



- Overview of Horizon 2020 Energy Efficiency
- Overview of topics open in 2020
- Focus on Energy Efficiency in Buildings
- Focus on Financing Energy Efficiency
- Insights and guidance for your participation

## Overview- H2020 Societal Challenge 3 Secure, clean and efficient energy



# Energy Efficiency – sub-areas

Upgrading  
buildings' energy  
performance and  
smartness

Energy efficient  
industry and  
services

Energy efficiency  
is an investment

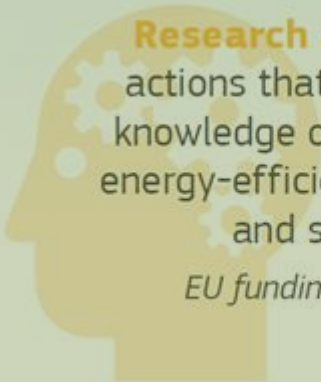
Energy efficiency  
is an energy  
source

Support for  
policy-driven  
innovations

Smart and clean  
energy for  
consumers

## H2020: Main type of actions in Call 2018/19

### RIA



**Research & innovation**  
actions that establish new  
knowledge or develop more  
energy-efficient technologies  
and solutions.

*EU funding rate: 100%.*

3 beneficiaries

### IA



**Innovation**  
actions that demonstrate the  
viability of new technologies and  
solutions or support their first  
deployment in the market.

*EU funding rate: 70%.*

*\* 100% for non-profit  
legal entities*

3 beneficiaries

### CSA



**Coordination & support**  
actions\* that improve skills,  
mobilise large-scale investments  
or facilitate EU policy  
implementation.

*EU funding rate: 100%.*

3 beneficiaries  
(except B4E-12 and B4E-13)



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## Today's focus

**18** Topics

**117.5** million EUR

**60+** projects to be funded  
(success rate: **25%** last year)

Two Deadlines:  
**15 January & 10 September  
2020**

Call managed by EASME  
Energy Unit

## Call 2020 on Energy Efficiency

- Building in energy transition (B4E)
- Smart and clean energy for consumers (EC)



## Overview of the Call 2020 topics



Consumers  
& Services



Financing  
Energy  
Efficiency



Public  
Authorities  
& Policy Support



Buildings



Industry

### Innovation Actions

EU Support: 70%  
3 to 4 M€ / project

### Coordination & Support Actions

EU support: 100%  
0.5 to 2 M€ / project

B4E-10

B4E-3  
B4E-5  
B4E-6  
B4E-8

EC-1  
EC-2  
B4E-14

B4E-11  
B4E-12  
B4E-13

EC-5

B4E-1  
B4E-2  
B4E-4  
B4E-7  
B4E-9

EC-4  
(RIA @100%)

Minimum 3 entities from 3  
countries per proposal,  
**\*except for B4E-12 and B4E-13**



## Call 2020: consumers & services



Consumers  
& Services



Financing  
Energy  
Efficiency



Public  
Authorities  
& Policy Support



Buildings



Industry

Coordination  
& Support  
Actions  
(Deadline 10/9/2020)

- The role of consumers in changing the market (EC-1-2020)
- Mitigating household energy poverty (EC-2-2020)
- Next-generation of smart energy services (B4E-14-2020)

Innovation  
Actions  
(Deadline 15/1/2020)

- Self-assessment and self-optimisation of buildings and appliances (B4E-10-2020)

## Call 2020: financing energy efficiency



Consumers  
& Services



Financing  
Energy  
Efficiency



Public  
Authorities  
& Policy Support



Buildings



Industry

Coordination  
& Support Actions  
(Deadline 15/1/2020)

- National roundtables (B4E-12-2020)

Coordination  
& Support Actions  
(Deadline 10/09/2020)

- Smart Finance (B4E-11-2020)
- National roundtables (B4E-12-2020)
- Project Development Assistance (B4E-13-2020)

## Call 2020: public authorities & policy support



Consumers  
& Services



Financing  
Energy  
Efficiency



Public  
Authorities  
& Policy Support



Buildings



Industry

Coordination  
& Support  
Actions  
(Deadline 10/9/2020)

- Supporting public authorities in driving the energy transition (EC-5-2020)

Research  
& Innovation  
Actions  
(Deadline 15/1/2020)

- Socio-economic research: non-energy impacts and behavioural insights (EC-4-2020)

## Call 2020: buildings (1)

1<sup>st</sup> Deadline:  
15 January 2020



Consumers  
& Services



Financing  
Energy  
Efficiency



Public  
Authorities  
& Policy Support



Buildings



Industry

Innovation  
Actions  
(EeB PPP: see  
conditions)

- Integrated design concepts for energy-efficient ICT in buildings (B4E-5-2020)
- Big data for buildings (B4E-6-2020)
- Heating, cooling, and DHW in multi-apartment residential buildings (B4E-8-2020)

Coordination  
& Support  
Actions

- Towards highly energy efficient and decarbonised buildings (B4E-1-2020)
- European building stock data 4.0 (B4E-7-2020)
- Support for a European smart buildings innovation community (B4E-9-2020)

## Call 2020: buildings (2)

2<sup>nd</sup> Deadline:  
10 September 2020



Consumers  
& Services



Financing  
Energy  
Efficiency



Public  
Authorities  
& Policy Support



Buildings



Industry

Innovation  
Actions  
(EeB PPP: see  
conditions)

- Increase buildings smartness through legacy equipment (B4E-3-2020)

Coordination  
& Support  
Actions

- Stimulating demand for sustainable energy skills in the building sector (B4E-2-2020)
- Next-generation of Energy Performance Assessment and Certification (B4E-4-2020)



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## Challenge

European  
Commission

Type of action: IA (70%)

Opening: 5/3/20 - Deadline: **10/9/20**

- Changing role of buildings from consuming energy to distributed energy **generation**, energy **storage**, smart **charging of EVs**, smart metering, load reduction and load shifting through **demand response**
- Innovative technologies will enable smart buildings to **interact with their occupants and the grid** in real time
- Smart upgrade of **building systems** (such HVAC, DHW), is more difficult due to higher costs of replacement and longer lifecycles, however remains highly relevant for buildings interactions with the energy system

## Scope

European  
Commission

- Develop and demonstrate cost-effective low-carbon **technological solutions** to manage energy within existing buildings and interact with the grid providing energy efficiency, flexibility, generation and storage
- The solutions should focus on **cost-effectiveness** and **user-friendliness**
- Pilots to involve appliances and technical building systems
  - with longer lifecycles (boilers, radiators, DHW, ventilation, lighting etc.) and
  - with shorter lifecycles (dryers, washing machines, fridges, etc)
- **Business model** development and a clear **path to finance** and deployment



## Impacts

European  
Commission

- Primary Energy savings triggered by the project (in GWh/year)
- Investments in sustainable energy triggered by the project (in m€)
- Upgrade of existing buildings to higher smartness levels
- Reduction in energy consumption and costs, exceeding the additional consumption from IT and its cost



## Challenge

European  
Commission

Type of action: IA (70%)

Opening: 16/7/19 - Deadline: **15/1/20**

- **ICT sector** in general (including data centers) generating up to 2% of global CO2 emissions, and its carbon footprint is growing significantly
- Demand for **data processing** growing fast with emergence of edge computing, IoT, and faster communication networks
- Improve energy efficiency of **small data centers or server rooms** within buildings
- **Integration** of these systems with building energy systems, renewables, heating and cooling systems, etc.



## Scope

European  
Commission

- Optimal energy performance of design concepts for **small DC or server rooms** (maximum 250kW per pilot)
- At least **3 pilots** in **3 different countries** and climatic conditions
- **Integration** with buildings energy systems and renewable energy sources
- Minimising total **waste heat** production and valorising of waste heat
- Geographical and temporal **workload balance**
- Elimination of unnecessary power conversions (**AC/DC**)
- Operation of **ICT equipment** in a wider range of temperatures

## Impacts

European  
Commission

- Demonstration and dissemination of innovative optimal design concepts
- Guidelines and good practices for server rooms and small data centers in buildings
- Evidence of lower environmental impacts, reduced energy consumption and CO2 emissions through the life cycle
- Power Usage Effectiveness (PUE) lower than the best performing small data centre solutions in a given location
- Market uptake of innovative solutions and technologies

## Challenge

European  
Commission

Type of action: IA (70%)

Opening: 16/7/19 - Deadline: **15/1/20**

- Buildings are becoming a factor in the generation of renewable energy and energy storage, but are not generally applied to their full potential
- The high potential of renewable system applications in multi-apartment residential buildings is demonstrated
- **Renewable** energy supply system application is a great opportunity to reduce fossil fuel consumption for **existing multi-apartment** residential buildings
- **Cost** of heating and cooling energy should be reduced to optimal levels

## Scope

European  
Commission

- A need to demonstrate the **cost-effective heating and DHW units** installed in multi-apartment residential buildings
- The proposed solutions with all support systems should already have been **validated** in an operational environment
- The **competitiveness** in the building value chain and its position in growth markets should be elaborated
- The **costs** and **energy benefit** calculations should be developed in a user-friendly manner suitable for convincing potential end users
- The system should be **scalable** for different types of multi-apartment residential buildings

## Impacts

European  
Commission

- Renewable energy production (in kWh /year),
- Primary energy savings and GHG emission savings triggered by the proposed solutions (compared to best available solution existing today),
- Competitiveness of the heat delivered by the proposed solutions (compared to best available solution existing today),
- Scale of the replicability and scalability potential of the proposed solutions,
- Reduction of pay-back time



## Challenge

European  
Commission

Type of action: CSA (100%)

Opening: 16/7/19 - Deadline: **15/1/20**

- The revised Energy Performance of Buildings Directive requires the establishment of a **Smart Readiness Indicator** (SRI) for buildings
- The SRI will allow for rating the ability of buildings to adapt their operation to the needs of the occupant and to signals from the grid, and overall to optimise energy performance
- Since 2014, the EU has been supporting at least 64 projects relevant to this new definition of smart buildings
- Most **challenges faced by smart buildings are common**, such as engaging building occupants, connecting and managing various devices and systems, achieving optimal building operation, or integrating buildings to energy markets.



## Scope

European  
Commission

- Facilitate the **flow and exchange of information** between EU-funded projects in the field of smart buildings
  - Map out the European smart buildings innovation community
  - Coordinate communication, contribution and participation of the community
  - Encourage and support the promotion, and roll-out of the SRI in the EU
  - Suggest priorities for EU support to research, innovation and market uptake in the field of smart buildings
- Focus on efficiency in **breaking silos and bridging the gaps** between innovation, markets and policy

## Impacts

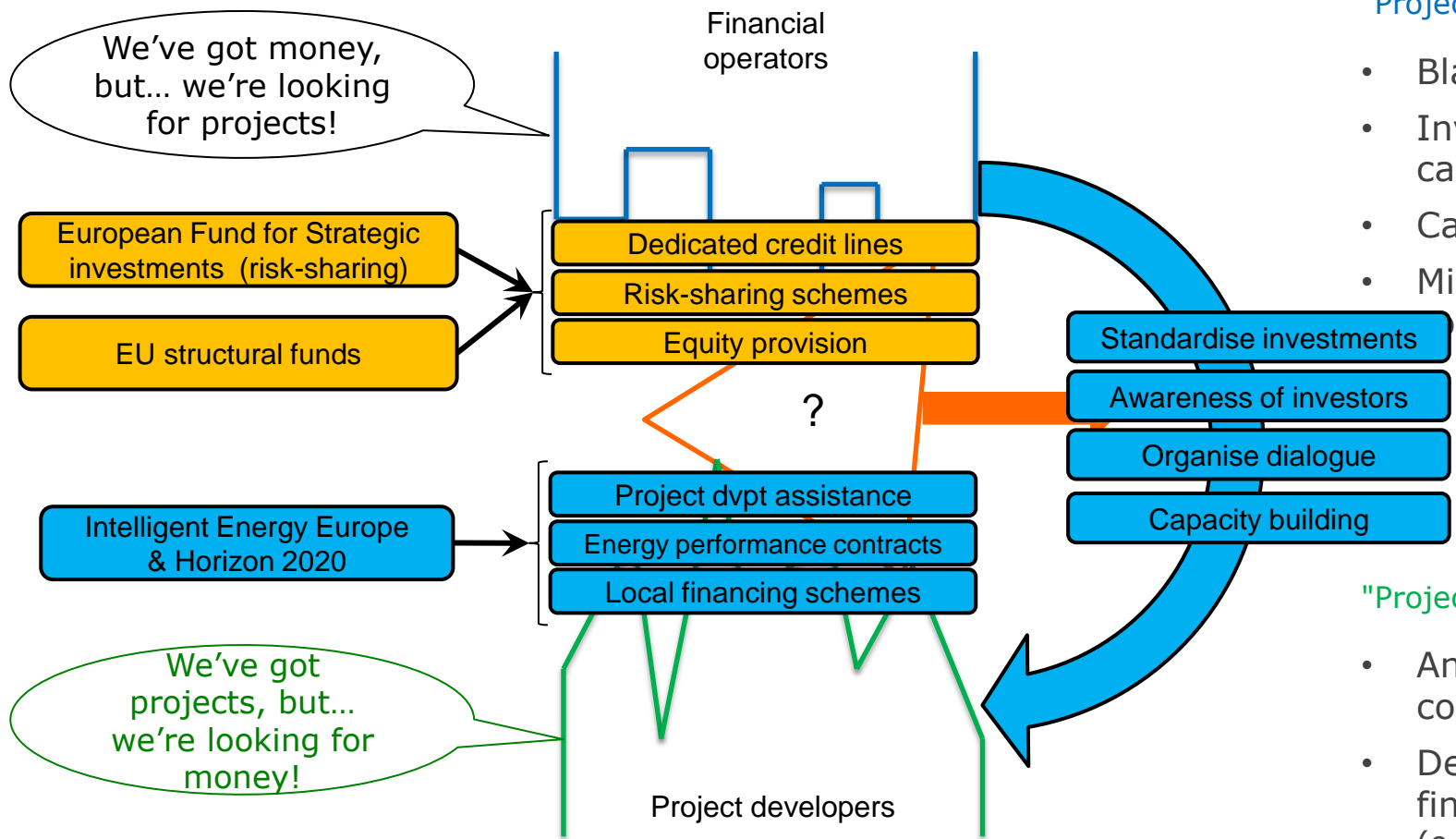
European  
Commission

- An overview of the main stakeholders of the EU smart buildings innovation community
- Organise at least 6 workshops to facilitate the exchange of information between R&I and market uptake projects
- Participate in at least 6 major events to increase visibility of innovation in the field of smart buildings
- Coordinate contributions of the EU smart buildings innovation community to the SRI promotion and to other policy or technological initiatives.





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"Project" for (most) financiers:

- Black box / standardised products
- Investment needs and associated cash flows
- Calculable profitability and risks
- Minimum size to cover transaction costs

**What? Why?**

- Standardise investments
- Awareness of investors
- Organise dialogue
- Capacity building

"Project" for (most) project developers:

- Answer to a need, facing physical constraints
- Design driven by technology rather than financing (e.g. use of state-of-the-art technology?)
- "no financing" or "no subsidy"?

# B4E-11: Financing for energy efficiency investments

## Scope b: Innovative financing for energy efficiency investments

- **Set-up new** innovative, operational **financing schemes**
  - *e.g. dedicated credit lines, guarantee facilities, on-bill or on-tax financing, etc.*
- **Replicate** previously successful **solutions**
  - *e.g. developed/implemented under various PDA facilities*
- **Establish** regional/national **aggregators** able to develop large (standardized) project pipelines

Deadline: **10 sept. 2020**

# B4E-11: Financing for energy efficiency investments

## Scope a: Mainstreaming energy efficiency finance

- Frameworks for the **standardisation and benchmarking** of energy efficiency 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** and adapted financial offer
- ...

Deadline: **10 sept. 2020**

## B4E-13: Aggregation - Project Development Assistance

- **Build** technical, economic and legal **expertise** needed for project development
- **Develop organisational innovations** and minimise transaction costs
- High degree of **replicability**
- **Remove** legal, administrative and other market **barriers**
- **Aggregate** (pooling, bundling) **projects** to reach critical size
- **Mobilize private finance**
- **Investments launched** before end of the action! (1:15 leverage ratio)
- **Single entity eligible**

Deadline: **10 sept. 2020**

## B4E-12: National roundtables to implement SF5B initiative

- Set-up national roundtables focused on energy efficiency investment
  - *permanent multilateral discussion forums gathering the relevant stakeholders.*
  - *Analyse best practices, propose legal & regulatory improvements, develop guidance and templates,...*
- Focus on existing private and public buildings, industry and SME's (but not exclusive)
- Proposals involving only one country are eligible
- Proposals should build on the activities of the Sustainable Energy Investment Forums initiative

Deadline: **15 jan. 2020**  
**10 sept. 2020**





## More information

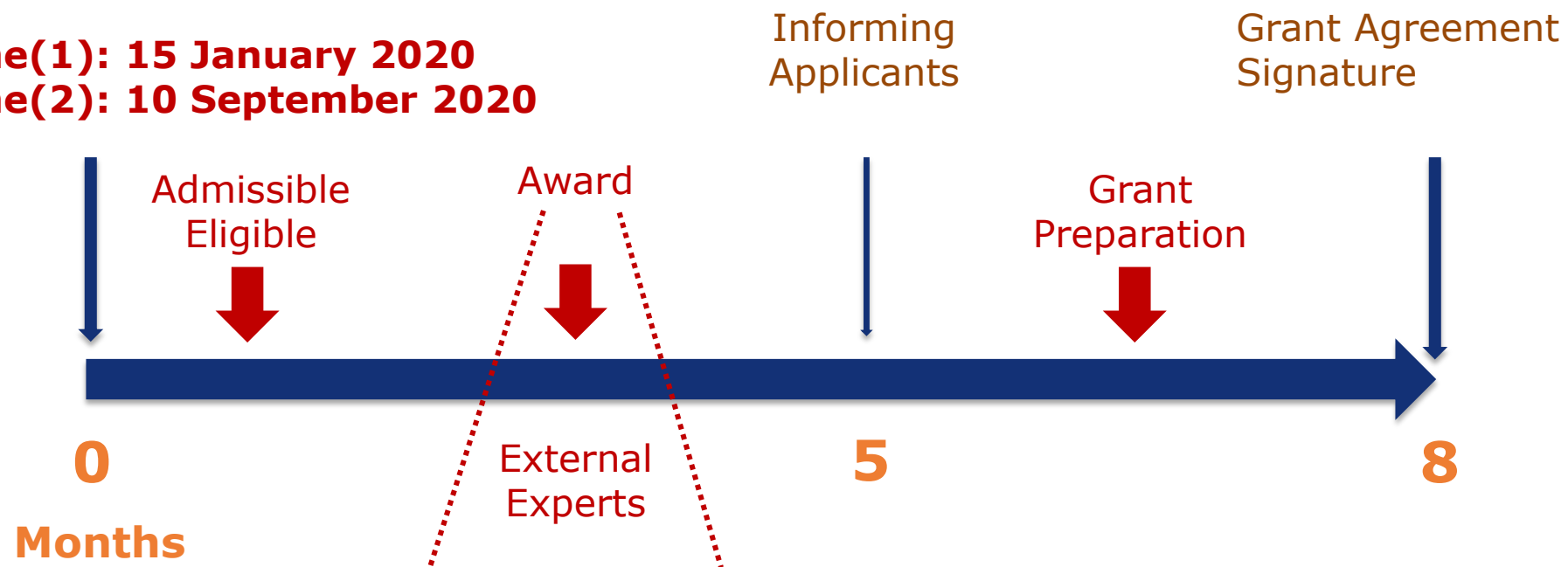
- H2020 participant portal
  - **Topic descriptions**
  - H2020 Online Manual: <http://bit.ly/H2020-manual>
- Webinars
  - Energy Efficiency Finance webinar: <http://bit.ly/eef-300419>
- Energy Efficiency info day: <http://bit.ly/sc3-infoday>
- SEI Forums Webpage: <http://bit.ly/seif-home>
  - Proceedings from all events
  - Webinar: “Financing Home Renovation in Europe”: <https://youtu.be/ktCjLOv9qeE>
  - Webinar: “Home renovation in Europe: The User Perspective”: <https://youtu.be/7UDRBeusABs>
- Questions & Answers: [EASME-Energy@ec.europa.eu](mailto:EASME-Energy@ec.europa.eu)



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# By when to apply?

**Deadline(1): 15 January 2020**  
**Deadline(2): 10 September 2020**



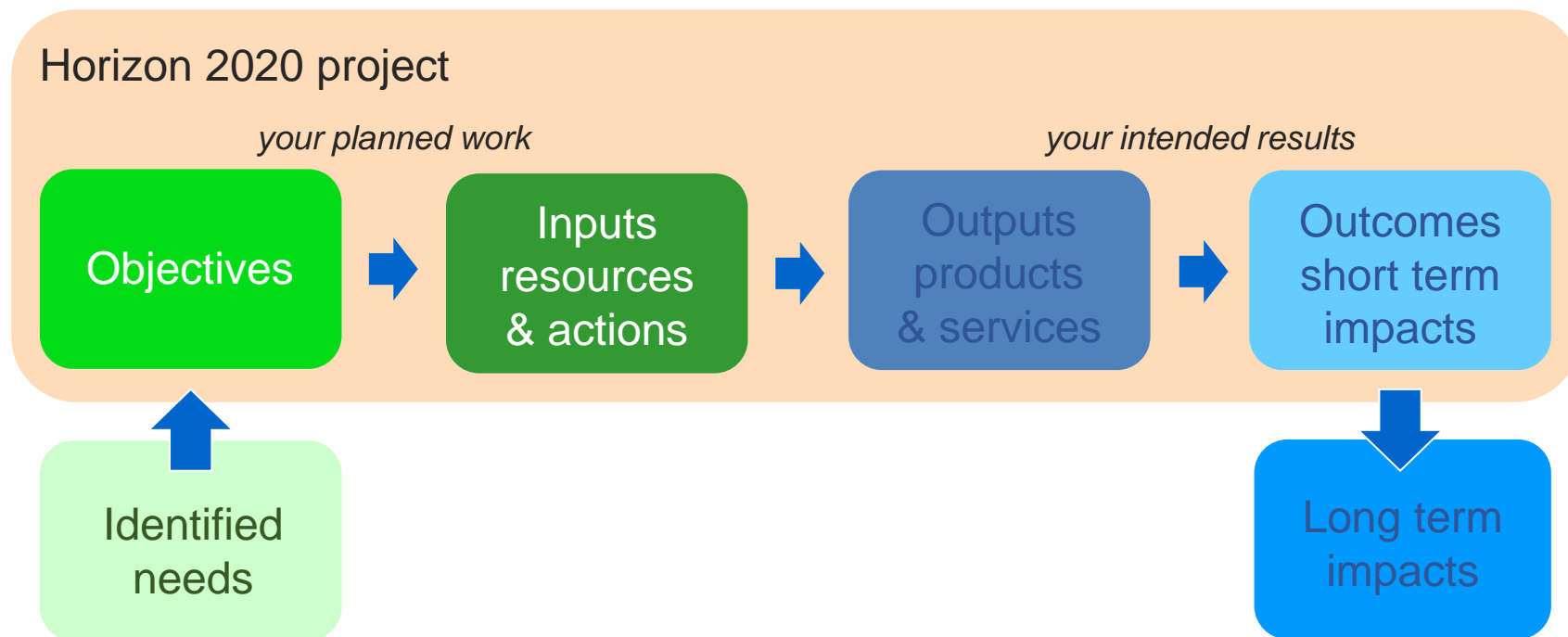
# What are the evaluation criteria?

- **Excellence**
- **Impact**
- **Implementation**



- ✓ Detailed aspects to be taken account of for each of the main criteria
- ✓ Self-evaluation form available
- ✓ No negotiation takes place -> only the very best are selected

## Impact – The logical conclusion of your activities





## How do we brief the experts?

- Experts are briefed to understand the Call text, the evaluation criteria - and their mandate
- **Only the best proposals should be selected – not requiring any negotiations**
- **Only evaluate the proposal, no other source**
- **Clear drive towards tangible impact (Topic in Work Programme, application form)**
- Evaluate individually 7-9 proposals, half day per proposal



European  
Commission

# TIPS TO SUCCEED

## Read the relevant information

- Energy Challenge **Work Programme** 2018-2020
- **General annexes** to the Work Programme: list of countries, eligibility and admissibility conditions, evaluation criteria and procedure, scoring and thresholds, etc.
- **Submission forms and templates:** essential forms and guides to draw up and submit your proposal
- Participant Portal H2020 **Online Manual**





# Choose your idea, structure it well and stick to it!

**Ask yourself** if you have:

- a clear project **objective**?
- a clear **understanding** of the current (research or market) situation and your starting point
- a clear (set of) **target group(s)**?
- a clear set of **partners** – are they the voice of the market?
- a clear path to **make a difference** – what impact do you want to have?



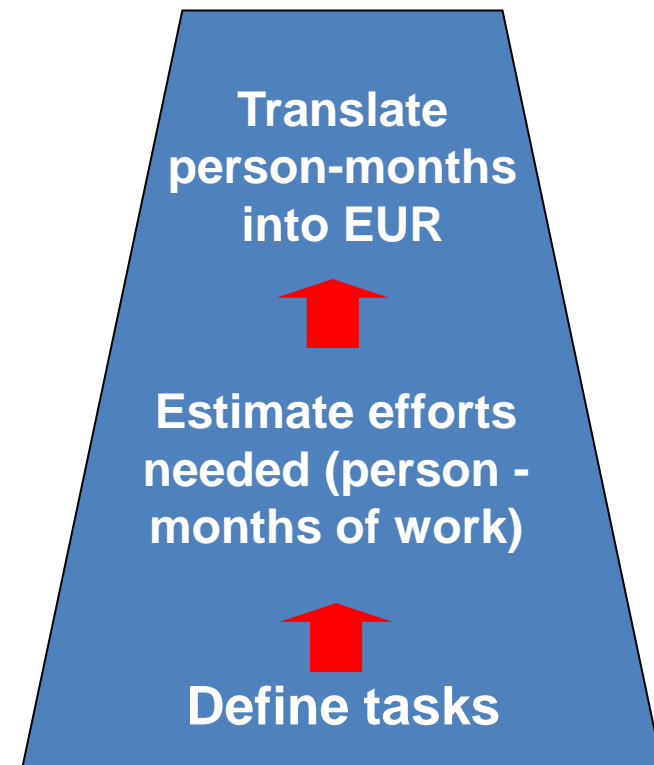
## Build a good consortium

- Be **consistent** – remain relevant to your objective & target group
- Be **adaptable** - be ready to renounce a country if you do not secure the right partner
- **Choose well your partners** – with diverse competences
- **Involve partners** in the preparation – avoid surprises after submission
- **Keep consortium motivated** - agree a working method for the proposal phase, make a plan for their contributions
- **Do not cover the EU map artificially**



## Create a budget

- Define your budget 'bottom-up'
- First describe the tasks – then define the budget
- Check consistency regularly while advancing on with your Work Plan:
  - share of resources;
  - appropriate levels between partners;
  - appropriate weight of person-months between major work steps





# Write your proposal

- **Fine-tune** your objectives and your target group
- Take your time to decide the best **methodology** to be applied – can it deliver? Think **impact!**
- Define your **main working steps**
- Follow the guidance in the **application forms & proposal template**
- Keep strictly within the **number of pages**
- **Communication & dissemination:** what, for whom, how, how often, for what purpose you do it?
- Outline your **exploitation strategy**, even using results internally.

**Communication**  
promoting the action  
itself and its results

**Dissemination**  
public disclosure of the  
results

**Exploitation**  
utilisation of results

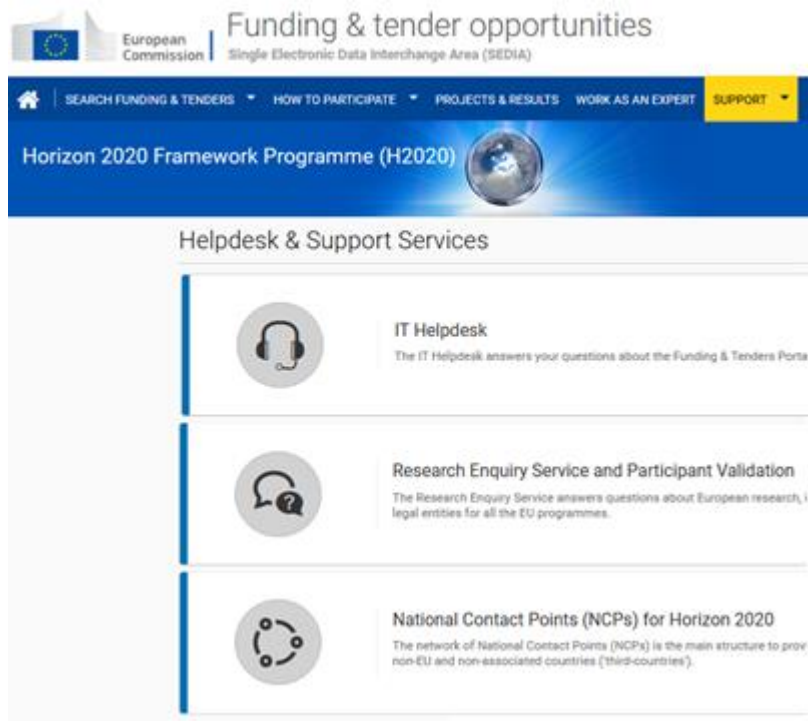
- ... in research.
- ... in creating/offering a product,  
process or service.
- ... in standardisation activities.

## Do not forget about final polishing

- Check the completeness of the proposal
- Check consistency of your description of activities and budget
- Ask an 'informed outsider' for critical reading and feedback
- If you have the chance, have a native speaker check the English



## Information sources and support



European Commission | Funding & tender opportunities  
Single Electronic Data Interchange Area (SEDIA)

SEARCH FUNDING & TENDERS | HOW TO PARTICIPATE | PROJECTS & RESULTS | WORK AS AN EXPERT | SUPPORT

Horizon 2020 Framework Programme (H2020)

### Helpdesk & Support Services

- IT Helpdesk**  
The IT Helpdesk answers your questions about the Funding & Tenders Portal
- Research Enquiry Service and Participant Validation**  
The Research Enquiry Service answers questions about European research, legal entities for all the EU programmes.
- National Contact Points (NCPs) for Horizon 2020**  
The network of National Contact Points (NCPs) is the main structure to provide support to non-EU and non-associated countries ("third-countries").

as well as...

### Project databases

- CORDIS for H2020
- Intelligent Energy Europe (IEE)

### Information portals

- BUILD UP, ManagEnergy, ...

### EASME's H2020 Energy Efficiency newsletter

- Register for updates and success stories



European  
Commission

The EASME Energy Unit is  
here to assist you



Research and  
Innovation



*Thank you!*



**#H2020Energy**

**EU Funding & Tenders Portal**

[www.ec.europa.eu/research/participants](http://www.ec.europa.eu/research/participants)