



# Robotics in Horizon 2020: Rules for participation Tips for proposal writing

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# Outline

- **Who can participate? Eligibility Criteria?**
- **Types of action**
- **Definitions/Funding rates/size/Cascading**
- **Submission – Proposal content - Evaluation - tips**
- **Impact**

# Rules for participation: who?

→ Countries Eligible for funding (see Annex A):

- **Member States**

- **Countries Associated to H2020**

- Iceland, Norway, Albania, Bosnia and Herzegovina, The former Yugoslav Republic of Macedonia, Montenegro, Serbia, Turkey, Israel, Moldova

- **Note: Switzerland is not associated to LEIT (this part of H2020)**

- **Developing countries**

→ Others: participants cover their own costs.

- **Exceptions:**

- bilateral agreement

- participation **essential** → ASSESSED AT EVALUATION STAGE

# Horizon 2020

## Types of action

- **Research and Innovation Actions (RIA)**
- **Innovation Actions (IA)**
- **Pre-commercial Procurement (PcP)**
- **Coordination and Support Actions (CSA)**

# Horizon 2020 – Eligibility Criteria

Type of ACTION	Eligibility Criteria:
<b>RIA &amp; IA</b>	<ul style="list-style-type: none"><li>- At least 3 Independent legal entities</li><li>- From 3 different Member States (MS)/Associated Countries(AC)</li></ul>
<b>PcP</b>	Idem RIA + minimum 2 independent public procurers from 2 different MA/AC
<b>CSA</b>	CSA: at least 1 legal entities established in a MS/AC



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# DEFINITIONS OF ACTIONS

# Horizon 2020 – Types of action

- **Research and Innovation Actions (RIA)**
  - Actions primarily consisting of activities aiming to establish **new knowledge** and/or to explore the **feasibility** of a new or improved technology, product, process, service or solution.
  - May include basic and applied research, technology development and integration, testing and validation on a small-scale prototype in a laboratory environment



# RIA

TYPE	2016	2017
RIA	<ul style="list-style-type: none"> <li>▪ OPEN</li> <li>▪ Step change in prioritised techno</li> </ul>	<ul style="list-style-type: none"> <li>▪ OPEN</li> <li>▪ Step change in prioritised techno</li> </ul>
RIA	<ul style="list-style-type: none"> <li>▪ Dependability</li> <li>▪ Social Interaction Ability</li> <li>▪ Cognitive Ability</li> </ul>	<ul style="list-style-type: none"> <li>▪ Advanced perception</li> <li>▪ Decisional autonomy</li> <li>▪ Increasing dependability</li> <li>▪ Self-verifying &amp; Self-correcting systems</li> </ul>
RIA	<ul style="list-style-type: none"> <li>▪ Multiple-actor systems</li> </ul>	<ul style="list-style-type: none"> <li>▪ SME-based research</li> <li>▪ Benchmarking</li> </ul>



# Horizon 2020 – Types of action

- **Innovation Actions (IA)**

- Actions primarily consisting of activities directly aiming at producing plans and arrangements or designs for new, altered or improved **products, processes or services.**
- May include **prototyping, testing, demonstrating, piloting**, large scale product validation and market replication
- May include **limited research** and development activities



# IA / PcP / CSA

TYPE	2016	2017
IA	<ul style="list-style-type: none"> <li>▪ OPEN: end users driven</li> </ul>	<ul style="list-style-type: none"> <li>▪ OPEN: end users driven</li> </ul>
IA	<ul style="list-style-type: none"> <li>▪ System Development technology</li> <li>▪ Pilot installations - robot testing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Shared facilities for safety certification</li> </ul>
PcP		<ul style="list-style-type: none"> <li>▪ Smart city</li> </ul>
CSA		<ul style="list-style-type: none"> <li>▪ Non-technical barriers to robotics take-up</li> <li>▪ Standard &amp; Regulation</li> <li>▪ Community support and outreach</li> <li>▪ Competitions</li> </ul>

# Horizon 2020 – funding rates

- Research and Innovation Actions (RIA)
  - **up to 100%**
- Innovation Actions (IA)
  - **up to 70%**
  - **up to 100% (non-profit entities)**
- **Indirect Costs: 25%** of eligible direct costs less subcontracting

# Horizon 2020 – Size of projects

- Expressed in terms of indicative budget (requested funding)
- Specified for each sub-topic



# H2020 ICT-25-2016-2017

Advanced robot capabilities research and take-up  
2016: Call closes: 12/04/2016

RIA – 2016 - 15M€

a. Open, generic technical advances: all topics and disciplines  
Cross-cutting domains  
Project size: **2-4M€**

b. Step changes in capabilities: systems development, HRI, mechatronics, perception, navigation and cognition  
Project size: **2-4M€**

IA – 2016 - 15M€

c. End user-driven application development  
Areas with high market potential >TRL5\*  
non-tech output: operating parameters & reduce commercial risks  
Project size: **2-4M€**

\*Technology readiness level 5: validated in a relevant environment

d. End user-driven innovation actions v. market entry barrier  
Technical capability / system ability gap  
Project size: **2-4M€**

**!!! Identify center of gravity (RIA: a. or b. / IA c. or d.)**



# H2020 ICT-26-2016

System abilities, development and pilot installations  
2016: Call closes: 12/04/2016

## RIA – 2016 - €24M€

a. Prioritised Abilities:  
Dependability  
Social interaction  
Cognitive

Project size: **2-4M€**

b. Multiple-actor systems – end user driven  
robustness, different environments, autonomy, service level gains

Project size: **2-7M€**

## IA – 2016 - €18m

c. System development technology  
Tool chains and building block appli.

Project size: **5-8M€**

Min 50%: Financial Support to Third Parties  
(50-250k€ each)

d. Pilot installations for robot testing  
End-user driven / real world conditions / shared facility + support

Project size: **7-10M€**

Min 60%: Financial Support to Third Parties  
(50-150k€ each)



# H2020 ICT-26-2016

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Project size: 5-8M€  
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Project size: 7-10M€  
Min 60%: Financial Support to Third Parties (50-150k€ each)

## **Actions involving financial support to third parties (FSTP – Annex K)**

*Detail the **objectives** and the **results** to be obtained:*

- *list types of **activities***
- ***persons** or **categories** of persons which may receive financial support,*
- ***criteria** for awarding financial support*
- ***criteria** for calculating the exact amount of the financial support,*
- ***maximum amount** to be granted to each third party and the **criteria** for determining it.*





## Actions involving financial support to third parties (FSTP – Annex K)

- *must **publish** widely open calls*
- ***transparency, equal treatment, conflict of interest and confidentiality***
- *call -> clear **European dimension** – cross border experimentation or expanding the impact of local experiments to European scale.*



# **PROPOSAL: Submission, Content and Evaluation**

# Horizon 2020 – Proposal Submission

- **Admissibility Conditions (Annex B):**

- Submitted via the portal -  
<http://ec.europa.eu/research/participants/portal/>
- BEFORE DEADLINE:  
**12-04-2016 17:00:00 (Brussels local time)**

**TIP:** don't wait the last minute – already prepare draft in the system – PUSH SUBMIT BUTTON

- Readable/Printable
- COMPLETE:
  - Operational capacity
  - Draft plan for exploitation and dissemination of the results

# Horizon 2020 – Proposal Submission

- Part A of the proposal, administrative part + Budget
- Self-check of **SME status** & financial viability: do it carefully as might be very **critical** at a later stage
- **Page limit** for technical content in Part B (excluding partner descriptions and ethics)
  - **70 pages** (IA/RIAs)
  - Pages exceeding the limit will be ignored

## Horizon 2020 – EVALUATION

### ■ *Selection Criteria*

- *Coordinator – financial capacity -> self-assessment tool*
- *Operational Capacity (competence/experience)*

### ■ *Evaluation criteria*

- *3 criteria: **Excellence, Impact, Implementation***
  - **NOT ORTHOGONAL!!!**
- *Innovation aspect more strongly incorporated*
- *0-5 points, threshold 3 pts for individual criteria*
- *Overall threshold 10 points*
- *For Innovation Actions, weighting of **Impact 1.5***

## vs Evaluation Criterion (RIA/IA)

### 1. Excellence (! Relevant to the call)

- 1.1 Objectives
- 1.2 Relation to the work programme
- 1.3 Concept and approach
- 1.4 Ambition

#### Excellence

Clarity and pertinence of the objectives

Soundness of the concept, and credibility of the proposed methodology;

Extent that the proposed work is beyond the state of the art, and demonstrates innovation potential

Appropriate consideration of interdisciplinary approaches and, where relevant, use of stakeholder knowledge.

PROPOSAL

EVALUATION

## vs Evaluation Criterion (RIA/IA)

### 2. Impact

- **2.1 Expected impacts (incl. list in the workprogramme)**
- **2.2 Measures to maximise impact**
  - a) Dissemination and exploitation of results
  - b) Communication activities

#### Impact

- The expected impacts listed in the **work programme** under the relevant topic (*! Not all have to be addressed by each proposal*)
- 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;
- Quality of the proposed 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

PROPOSAL

EVALUATION

## vs Evaluation Criterion (RIA/IA)

### 3. Implementation

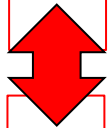
- 3.1 Work plan – Work packages, deliverables and milestones
- 3.2 Management structure and procedures
- 3.3 Consortium as a whole
- 3.4 Resources to be committed

#### Implementation

- 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.

PROPOSAL

EVALUATION





## Section 4: Members of the consortium

*Section is not covered by the page limit.*

*Information used to judge the operational capacity.*

- **4.1. Participants (applicants)**
- **4.2. Third parties involved in the project (including use of third party resources)**

## Section 5: Ethics

## Ethics Review

- *Goal: check:*
  - *compliance with ethical rules and std (National, EU, Intl)*
  - *authorizations and ethics approvals*
  - *proportionality of the research methods*
  - *applicants' awareness of the ethical aspects and social impact*

# Horizon 2020 – Proposal content

## few tips for proposers

- *No negotiation → proposal = final project work plan, not a sales brochure*
- *The maturity, specificity and completeness of the work plan will be taken into account at the evaluation stage → weaknesses will be penalised*
- *Specific well-defined and challenging yet realistic objectives and how they will be reached*
- *Great idea not enough → credible work plan essential*

## Basics

- *Read the call text*
- *70 pages is plenty provided you go to the point, and avoid repetition*
- *Be concrete – the milestones, if well described and measurable criteria attached to them, the reader should understand the project "scenario"*

## Myths

- *You need a partner from East West North South*
- *You need SME -> good but no artificial addition*
- *You need a consulting company -> only if more (cost) efficient*
- *You cannot have a partner with more than 30% of the budget*
- *A follow-up project gives you advantage -> must differentiate*
- *Declaring a re-submission is a bad thing -> freshly evaluated*

## Most common mistakes

- Explain the **what** but **not the how**
- Explain the **SoA** but do not **differentiate** from that
- Bring a partner that "**look good**", without clear added value
- Don't explain the **interdependencies** between WP/tasks
- Lack **concreteness**
- **Improvised Exploitation plan/Business case**
- Does not DEMONSTRATE the requested **expertise**
- **Lacking** or (excessive) **overlapping** expertise



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**IMPACT**

## Expected impact → check AGAINST WP TEXT

- *No single proposal is expected to address the whole list*
- *Check whether the proposal is **concrete and specific** about what the project results would **achieve** in the areas described in the Work Programme (section "Expected Impact"), during the project lifetime and beyond*
- *Which concrete actions will be carried out **during** the project to **achieve such impact**?*
- *Do the proposers stress their (**competitive**) **positioning** / technical advantage in possible future markets or applications?*
- *Assess the **need for industry participation** and provide evidence of their **commitment***



## Exploitation plan - Crucial

- *Concrete exploitation strategy:*
  - *well **thought-out** and properly **resourced***
  - *involvement of people with the right **expertise** (for technology transfer, patents etc.) is highly encouraged where appropriate*
  - *projects closer to innovation: describe the **path towards exploitation** (at **partner level** & **project level**).*
  - *Also projects with a **more scientific** approach have to make clear what the **eventual exploitation** outcomes and **impact** will be.*

## Measures to maximise impact – exploitation of results

- *Exploitation mechanisms – for example:*
  - *Potential **exploitable results***
  - *Target **users***
  - ***Mechanism** planned **DURING** the project for attracting them*
  - *Credible **business case***
  - *Analysis of current **market***
  - *Management of the **IPR***
  - *Analysis of existing **patents** – plans for patenting*

## Role of industries and end users

- *Industry has a far **greater role** to play in R&I than before. Involvement of industry as **manufacturers, system suppliers, integrators** or **users** is welcome, as appropriate, depending on the needs of the project and on the technology readiness level addressed.*
- *The involvement of **end users** in projects is **welcome, as appropriate**. In some projects, such as "**User driven IA**" and "**Pilot installation**", it is a **must**.*

## Dissemination/exploitation

- *If industrial dimensions -> not necessary to make all deliverables public. In that case, **justify** why and describe the plans to protect and exploit such results.*
- *H2020 rules on IPR assure that "Ownership of background is not affected by participation in a H2020 project", and "Results are owned by the beneficiary that generates them. "*
- **BUT DISSEMINATION -> DEMONSTRATE IMPACT OF THE FUNDING**

## Measures to maximise impact – dissemination of results

- *Concrete dissemination plan, scientific and non-scientific, with a coherent **vision**, not just a 'shopping list'*
- *Targeting **all types of** media channels and audiences (website, press releases, publications, exhibits at fairs, social media), **as relevant***

## Last but not least

### *Nothing artificial:*

- *Number of partners, geographic coverage, budget, types of partners (SMEs,...)*

**→ ANY CHOICE DICTATED BY THE PROJECT NEEDS**

*Extremely competitive*

**→ BE OUTSTANDING!**



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**THANK YOU!**