Robotics PPP SPARC, ICT23–, ICT24 – Robotics PANITI, Imre – MTA SZTAKI

Content

Results of the first H2020 Call – ICT23 Next Call – ICT24 – Robotics

Main source: Call for proposal: ICT24 – Robotics (Journée Robotique-Paris –16.01.2015) Cécile Huet, PhD Deputy Head of Unit A2 Robotics Directorate-General for Communication Networks, Content and Technology European Commission

Results of the first H2020 Call – ICT23

- 155 selected proposals,
 127 RIA + 28 IA; 13 RIA + 4 IA
- Selected proposals
 - industrial participation 34% (11% SMEs)
 - Funding: 26% (10% SMEs)

Success rate: 1:9 of proposals

-> target excellence

Results of the first H2020 Call - ICT23

 Coverage
 Manufacturing (1/3), Agriculture (1/5), Civil, Commercial, Healthcare

Increased industrial participation
 Most funded proposals involve at least one industrial partner

- Industrial coordinator: 29% of funded proposals
- Presenting the whole value chain
- $\cdot R&D + innovation$
- •70% of funded proposals involve end-users

Next Call - ICT24 - Robotics



http://sparc-robotics.eu/about/

Next Call - ICT24 - Robotics



SRA (Strategic Research Agenda) "stratégiai kutatási terv" MAR (Multi-Annual Roadmap) "*Többéves ütemterv"*

http://sparc-robotics.eu/wp-content/uploads/2015/02/Multi-Annual-Roadmap2020-ICT-24-Rev-B-full.pdf

Release B 06/02/2015

SPARC – Robotics PPP

- The call organisation and operations are run by the European Commission
- <u>The evaluation and selection of proposals does not</u> <u>involve the private side of the PPP</u> – it is done by the EC with the help of independent experts
- Proposers need not be PPP members
- PPP membership gives <u>no advantage or preferential</u> <u>treatment in evaluations</u>
- But <u>PPP membership gives an opportunity</u> to be involved in <u>shaping future funding directions</u>

Overview of ICT-24 Robotics

Roadmap-based R&I in Robotics Deadline: 14 April 2015	 ACTION TYPE Funding % Size 	€83m
ICT24.a – Research & Innovation Actions Priority market domains: healthcare, consumer, transport Advance key technologies for priority domains	RIA 100% Small/Large	€50m
ICT24.b - Technology transfer Industry-academia cross-fertilisation	IA 70% Large	€12m
ICT24.c - Technology transfer Robotics use cases	IA 70% Small/Large	€12m
ICT24.d - Pre-commercial procurement in robotics: especially healthcare	PcP 70% Large	€5m
ICT24.e - Community building and robotics competitions	CSA	€4m

Impact

- By coupling R&I, H2020 aims to drive economic growth and create jobs
- H2020 gives more weight to impact

For Innovation Actions (IA):

- Impact criterion weighted by a factor of 1.5
- Impact considered first when tied scores
- Make the robotics contribution to impact more direct and more explicit than in previous framework programmes.

Expected impact in the WP

- Increase Europe's market share in industrial robotics to one third of the market and maintain and strengthen Europe's market share of 50% in professional service robotics by 2020.
- Increase Europe's market share in domestic service robots to at least 20% by 2020.
- Improve the competitiveness of Europe's manufacturing sector, in particular SMEs, address pressing technological challenges and the effect of an aging workforce.
- Improve Technology Readiness Levels (TRLs) of robotics technologies.

Increase Industry-Academia cross-fertilisation and tighter connection between industrial needs and academic research via technology transfer, common projects, scientific progress on industry-driven challenges.

Expected impact in the WP

- **Deploy** robotics technologies in **new application** domains.
- Contribute to an inclusive society through robotic technologies (e.g. exoskeleton, advanced prosthesis).
- Address ethical, legal and societal issues and engage the wider public.
- Create and maintain world class research in Europe and achieve excellent standards of publications and research outputs.
- Ensure sufficient numbers of well-trained professionals required by the growth of the industry.
- Ensure wide use of shared resources.

Contribute to the **community building** of the European robotics community.

ICT 24.a Research & Innovation Actions (RIA) to advance key technologies relevant for industrial and service robotics

- Advance robotics abilities + key technologies and their combination
- market domains: healthcare, consumer, transport

and **enabling robotics** technologies for **disabled people**, esp. people with upper, lower-limb disabilities or amputees, allowing them to gain functionalities with exoskeletons or prostheses

 Demonstrate increased TRL (Technology Readiness Level) relevant for the market domains ICT 24.a Research & Innovation Actions (RIA) to advance key technologies relevant for industrial and service robotics

- Research results must be validated in realworld setting, demonstrating progress in abilities and technologies relevant to these market domains
- 100% funding >>> main focus on RTD, not innovation
- From basic research to more applied research (depending on TRL)





What do I find in the SRA and in the MAR?

- Detailed definition of Market domains, Technologies and Technology Combinations
- Mapping: application domains vs. abilities vs. technologies
 - Technology/ability gaps for specific application domains
 - Prioritised necessary step changes in technologies/abilities

Use SRA/MAR information to situate your project contribution

Recipe for a good proposal

MARKET DOMAIN ABILITY

• Step change: current vs. target

TECHNOLOGY/TECHNLOGY COMBINATION

- Step change: current vs. target
- How? Methodology VALIDATION

• Plans to demonstrate progress/step changes in abilities/ technologies RELEVANT to the selected market domain(s)

- Targeted improvements (TRLs), metrics, validation plans IMPACT
- Specific Objective(s)
- Concrete plans to reach the objective(s

ICT 24.b Innovation Actions (IA)

Technology transfer - industry-academia crossfertilisation

- Define joint industrially relevant scenarios, share research infrastructure, cluster activities
- Not limited to a particular market domain
- 1 or 2 Large project(s)
- May include open calls for small scale Industry– Academia experiments with industrial platforms
- Support to third parties can be given (Echord/EuRoc – but different administrative mechanism)

ICT 24.b Innovation Actions (IA)

- Financial support to third parties conditions in Annex K
- Proposals using this mechanism are to detail the objectives and results to be obtained and include the following:
- a closed list of the different types of activities that qualify for financial support
- the persons or categories of persons which may receive financial support
- the criteria for awarding financial support
- the criteria for calculating the exact amount of the financial support
- the maximum amount to be granted to each third party (may not exceed €60,000 for each third party, unless it is necessary to achieve the objectives of the action)

ICT 24.c Innovation Actions (IA) Technology transfer – Robotics use cases

- Proposals focusing on transferring latest research results from the laboratory to the industry/users
- The expertise covering the complete lifecycle must be present in proposal (from research to integration to users)
- Concrete plan to reach impact carefully explained
- Business case made
- User driven proposals and not technology push users needed in the consortium
- All market domains

ICT 24.d Pre-Commercial procurement (PcP)

- Demand driven innovation led by public procurers in areas of public interest, including pre-commercial procurement of innovative robotics solutions for the healthcare sector
- Gathering public procurers with common needs
- One large project (up to €5m) including 2 major components
- -Refining requirements; selection of suppliers and evaluation of progress
- -RTD work to be procured
- End-user integration absolutely essential
- Concept of PcP Pilots exists in ECHORD++
- More specific information on PCP: http://ec.europa.eu/research/participants/data/ref/h2020 /wp/2014_2015/annexes/h2020-wp1415-annex-einproc_en.pdf

ICT 24.e Coordination Actions (CSA) Community building and Robotic competitions

- Supporting the European robotics community
- Networking, education, outreach, public awareness, technology watch, standardisation, and industry– academia collaboration, links to national programmes and initiatives.
- Ethical, legal, societal and economical aspects
- International cooperation (intra or extra-EU)
- impact to be demonstrated, matching resources expected
- Coordinating work on the next generation of cognitive systems and robotics
- Robotic competitions: towards smarter robots
- budget for one competition

Proposals are not meant to cover all the points

Thank you!

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Background material: http://sparc-robotics.eu/