Introduction to Horizon 2020

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Agenda

- **H2020 - Introduction**
- **Excellent Science Pillar**
  - Marie Curie Sklodowska Actions
  - European Research Council
  - Research Infrastructures
  - Future and Emerging Technologies - FET OPEN
- **Industrial Leadership Pillar**
  - Leadership in Enabling and Industrial Technologies
- **Spreading Excellence and Widening Participation**
  - Teaming
  - Twinning

H2020: the big challenge

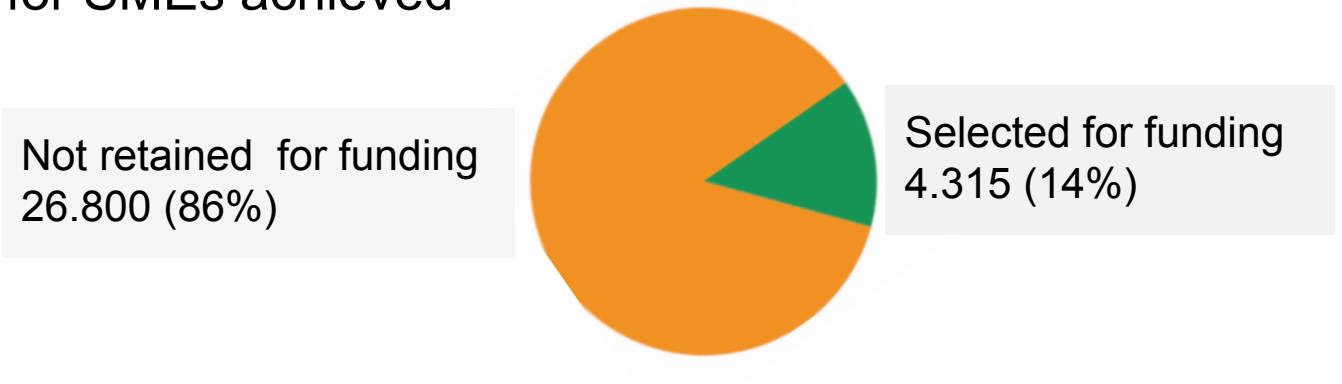
FP7	H2020
LINEAR THEMATIC CALLS	CHALLENGE BASED CALLS
ACADEMIA CENTERED	BUSINESS CENTRED
FOCUS ON R&D	FOCUS ON ADDED VALUE OF INNOVATION
SUPPLY-DRIVEN	DEMAND-DRIVEN
LINEAR APPROACH	SYNERGISTIC APPROACH
KNOWLEDGE ORIENTED	IMPACT ORIENTED

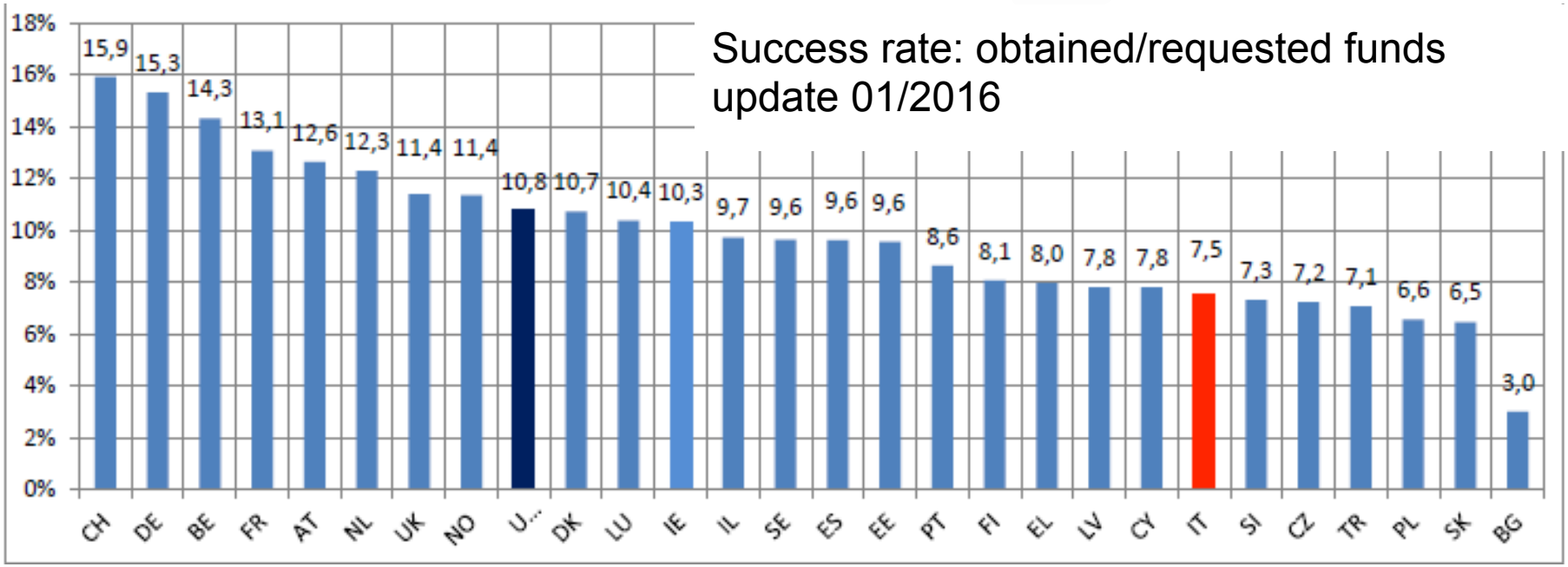
Un quadro strategico molto diverso dal passato e una sfida inedita rispetto a quella affrontata nel programma quadro FP7.

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-intro_en.pdf

H2020: the big challenge

- Overall success rate in FP7: **~20%.** Overall success rate of eligible full proposals (first 100 calls of H2020) **~ 14%**
- **38%** of successful applicants were newcomers (1.100 SMEs)
- **20%** budget target for SMEs achieved





Capire il contesto - *Ricerca & Innovazione*

Research	Kind of work	Product	Area
Basic	Experimental theoretical	New knowledge	Foundations of phenomena
Applied	Original investigation	New knowledge	Practical aim or objective
Experimental development	Systematic	Drawing on knowledge gained from research & practical experience: additional knowledge, new/improving existing products, processes	

Source: ODCE, Frascati Manual

Capire il contesto - *Ricerca & Innovazione*

Research	Product	Area	Results use, application, socio-economic benefits
Basic	New knowledge	Foundations of phenomena	 *Future applications possible*
Applied	New knowledge	Practical aim or objective	
Experimental development	Drawing on knowledge gained from research & practical experience: additional knowledge, new/improving existing products, processes		

➔ ***Key feature of Basic Research:***

"[...] without any particular application or use in view - no seeking economic or social benefits or making an active effort to apply the results to practical problems or to transfer the results to sectors responsible for their application."

Source: ODCE, Frascati Manual

Capire il contesto - *Ricerca & Innovazione*

Oriented basic research: expectation that it will produce a broad base of knowledge, basis of the solution to recognised or expected current or future problems

Innovation goes far beyond R&D*

It goes far beyond the confines of research labs to users, suppliers and consumers everywhere – in government, business and non-profit organisations, across borders, across sectors, and across institutions.

"There is a subtle distinction between entreprenurship or the innovation process and the process of science and discovery. [...] science moves from starting conditions toward unknown results whereas the innovation process starts with an anticipated intended result and moves toward the unknown starting conditions that will produce it." [Audretsch et al. 2002]

"Innovation is about satisfying needs and wants and delivering tangible benefits"
(Dr Sweeney, 2014)

*https://www.oecd.org/site/innovationstrategy/defininginnovation.htm

Horizon 2020

Excellent Science

European Research Council - ERC

Future and Emerging Technologies - FET

Marie Sklodowska Curie Actions - MSCA

Research Infrastructures (including e-infrastractures)

Industrial Leadership

Leadership in enabling &industrial technologies

- ICT
- Nanotechnologies, materials, biotechnologies ...
- Space
- Access to risk finance
- Innovation in SMEs

Societal Challenges

- Health, demographic change & wellbeing
- Food security, sustainable agriculture..
- Secure, clean. efficient energy
- Smart, green & integrated transport
- Climate action, resource efficiency, raw materials
- Europe in a changing world - inclusive, innovative, reflective societies
- Secure societies

European Institute of Innovation and Technologies (EIT)

Spreading Excellence Widening Participation | **Science With and for Society**

Joint Research Center | **Euratom** | **Fast Track to Innovation**

Cross - cutting activities (Focus Areas)

Horizon 2020, reading WPs

Excellent Science

European Research Council - ERC

Future and Emerging Technologies - FET

Marie Sklodowska Curie Actions - MSCA

Research Infrastructures (including e-infrastractures)

Proof-of-Concept:commercial or societal application of ERC projects results

Essential: “benefit for citizens, the economy and society, the early detection of promising new areas, developments”
Launchpad: entrepreneurial activities from FET OPEN

“Better prepare researchers for current and future societal challenges”

Industrial Leadership

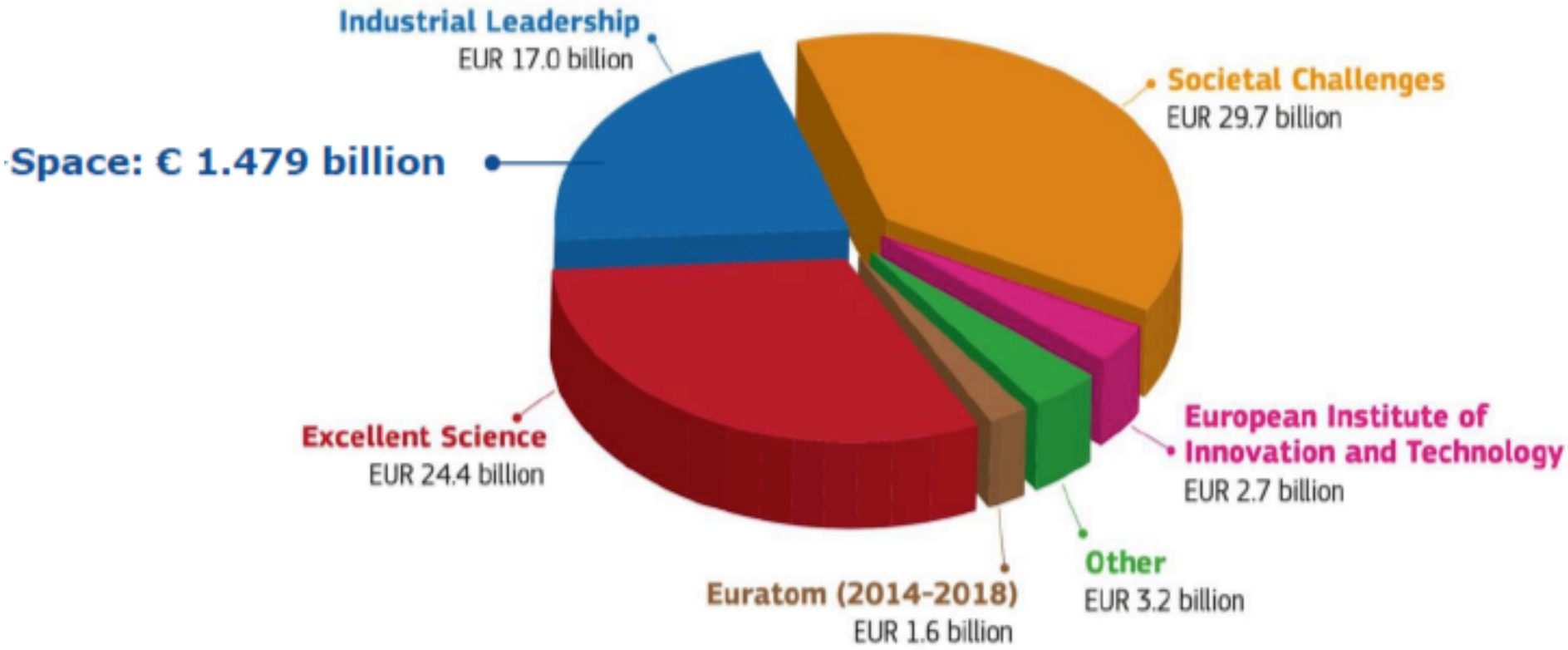
Leadership in enabling &industrial technologies

- ICT
- Nanotechnologies, materials, biotechnologies ...
- Space

[...]

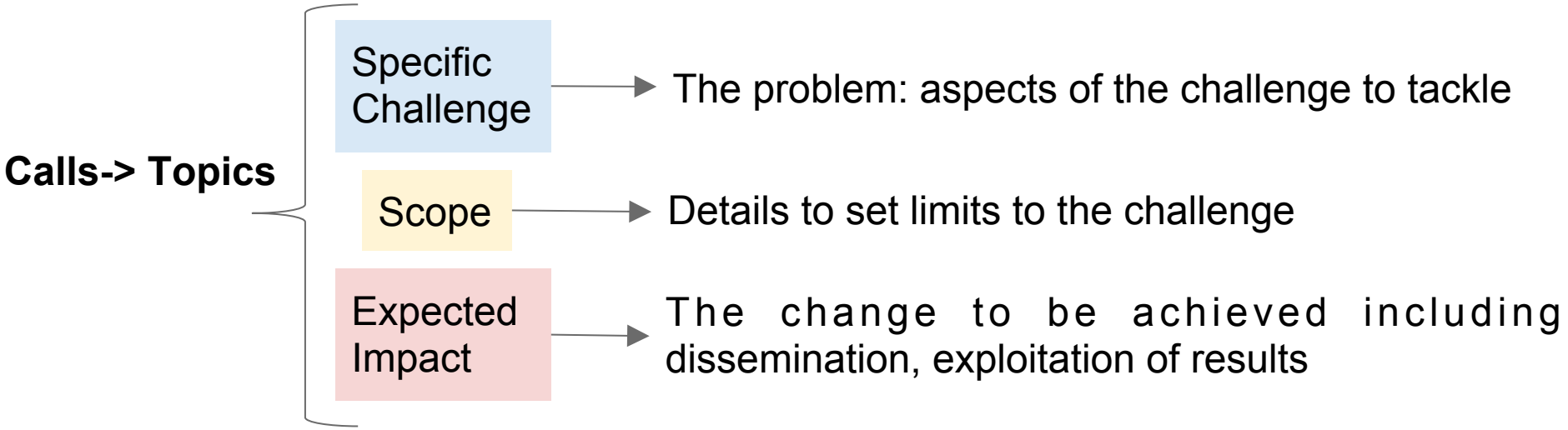
“The Societal Challenges and Leading and Enabling Industrial Technologies (LEITs) will contribute to the new skills and competences needed to deliver on innovation, growth and participation in a modern society.”

Horizon 2020 - Budget (current prices)



General information

- Biannual Work Programmes (exception European Research Council, annual WP)
- Implementation through calls for proposals: Bottom-Up / Top-Down approach



- N° of legal entities involved depending on the call (next slide)
- Single/Two stage submission
- Evaluation criteria: Excellence - Implementation - Impact (weigths depending on the call)
- Time-to-grant signature: max 8 months from the deadline for submission

Proposal is evaluated and funded as it is submitted

General information

Principal types of actions, funding rates and eligibility

RIA — **Research and innovation actions** (**Funding rate: 100%**): Projects aiming to establish new knowledge, new or improved technology by possibly including basic and applied research, technology development, testing and validation on a small-scale prototype.

IA — **Innovation actions** (**Funding rate: 70% - exception: 100% for non-profit legal entities**): Projects aiming to produce plans, arrangements or designs for a new or improved product, design, process or service by possibly including large-scale product validation and market replication.

CSA — **Coordination and support actions** (**Funding rate: 100%**): Projects consisting of accompanying/complementrary measures (standardisation, awareness-raising, communication, policy dialogues, networking, studies, etc.)

Eligibility conditions in brief

RIA, IA	**3 legal entities**; each of the three shall be established in a different Member State or associated country; all legal entities shall be independent of each other
CSA	**One legal enetity** established in a Member State or Associated Counrty

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Spreading Excellence Widening Participation

Marie Sklodowka Curie Actions - MSCA

2016 budget **759 M€** (∼2015)
2017 budget **841 M€** (∼10% ↑)

Mobility

Carreer development
Training

Innovation skills

Knowledge exchange

Bottom up Research & Innovation

International, interdisciplinary, intersectorial

Strong accent on industry, SMEs and non academia participation

MSCA - *Calls for proposal*

INDIVIDUAL FELLOWSHIP	Advanced training for Experienced Researchers undertaking international and intersector mobility
INNOVATIVE TRAINING NETWORKS	Joint research training and/or doctoral programmes for early stage researcher
RESEARCH & INNOVATION STAFF EXCHANGE	International & inter-sector collaboration through R&I staff exchanges; sharing of knowledge and ideas from research to market (and vice-versa)
COFUND	Co-financing fellowship or doctoral programmes with transnational mobility
EUROPEAN RESEARCHERS' NIGHT	Bringing researchers closer to the general public: public, media events for the promotion of R&I

MSCA - IF *carreer development*

Opening date: 12/04/2016
Deadline: 14/09/2016

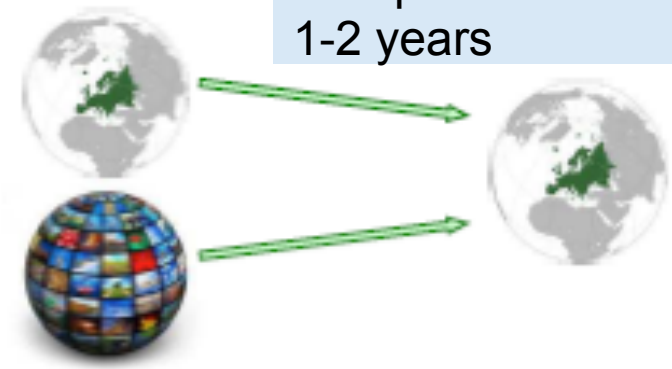
- Individual, trans-national fellowship
- Bottom-up, yearly call
- Mono-beneficiary action
- Single stage submission (jointly researcher+Beneficiary Institut.)
- Duration: 12-36 months

Obj.	Enhance the creative and innovative potential of experienced researchers. Diversify competence, skill acquisition: advanced training, international and intersectoral mobility. To acquire and transfer new knowledge, work on R&I
Who?	**Experienced researchers (ER)** → possession of doctoral degree/4 years full-time research at the deadline date. Mobility rule satisfied (next slide)
Whit whom?	Supervisor(s) at the Beneficiary Institution; Beneficiary recriuts the ER
What?	One proposal, max 10 pages (excluding ER's CV) including a Carreer development plan: Research or Innovation objectives, training and career needs including transferabke skills, publications, conferences

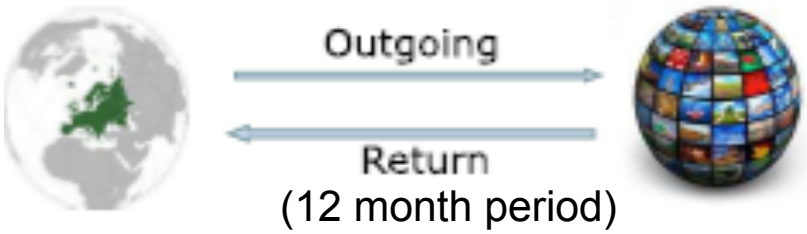
MSCA - IF *carreer development*

Mobility rule: applicants must not have resided or carried out their main activity in the county of the host organisation for more than 12 months in 3 years prior the deadline/ more than 3 years in the last 5 years for **CAR-RI-ST** panels

European fellowship (EF)
1-2 years



Global fellowship (GF)
2-3 years



Mobility rule applied to the 'outgoing phase' country

Panels beyond **Standard** (**ST**):

- ➔ **Carreer Restart** (**CAR**)--> at least 12 months carreer interruption @ the deadline
- ➔ **Reintegration** (**RI**): for nationals (MS/AC) or residents with at least 5 consecutive years of full time research in MS/AC
- ➔ **Society&Enterprise** (**SE**, new): R&I projects,non academic organisation. Enhance carreer outside academia

EF&GF allow 3 or 6 months secondment phase in Eu, notably in non- academic sector

MSCA - ITN *Innovation Skills*

Opening date:
15/09/2016
Deadline:
10/01/2017

- Joint research training and/or doctoral programmes
- Min 3 beneficiaries (2 for EID)
- Bottom-up, yearly call
- Single stage submission
- Duration: 48 months (including time for recruiting/selection)

Obj.	To **train** a new generation of creative, **entrepreneurial and innovative** early-stage researchers, able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit.
Who?	**Early Stage Researcher- ESR**: at the recriutment, < 4 years research (full-time equivalent) and not awarded doctoral degree
With Whom?	**Beneficiary institutions** host at their premises and supervise recruited ESR
What?	Max 30 pages excluding annexes, training to prepare ESR for an increased research collaboration and information-sharing (e.g. collaborative tools, open access, raw data, etc.); Carreer Development Plan

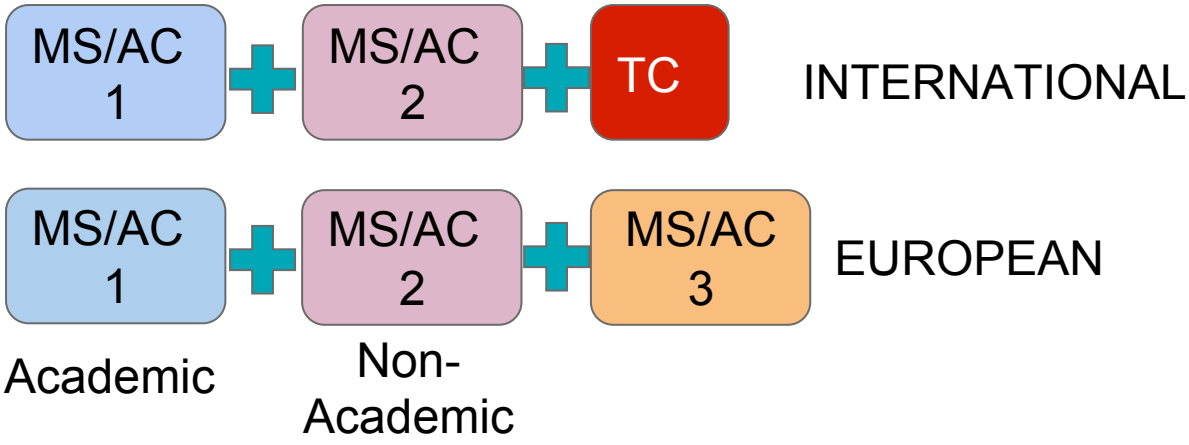
MSCA - ITN *Innovation skills*

	European Training Networks (ETN)	**European Industrial Doctorates (EID)**	**European Joint Doctorates (EID)**
Beneficiaries (independent entities)	Min 3, 3 countries (MS/AC)	Min 2 (MS/AC), 1 academic 1 non-academic	Min 3, 3 MS/AC all awarding doctoral degrees
Non-academic	Essential	Mandatory	Encouraged
Secondments	up to 30% of recruitment period	> 50% time at non academic sector	
Joint supervision	Encouraged	Mandatory	Joint governance
Budget/Country	Max 40%		Max 40%
Months/person	Max 540	2 beneficiaries:180 >2 beneficiaries:540	Max 540
Partners	Yes; Commitment	Yes; Commitment	Yes; Commitment

MSCA - RISE *Knowledge sharing*

Opening date: 01/12/2016
Deadline: 05/04/2017

- International and/or intersectorial collaboration
- Academic, non-academic in/outside Europe- strenghten interactions
- Duration: 48 months
- Staff members ESR/ER or administrative, managerial or technical staff supporting the R&I activities in the action
- Secondments not subject to mobility rule, 1-12 months (also several stays)



Secondments:

Between EU: only intersector
To third countries: intersector or not
Forbidden: between TCs or within same MS/AC

Common R&I project to share knowledge (intersector/international), acquire new skills through secondments, networking, workshops, conferences

MSCA - COFUND

Opening date: 14/04/2016
Deadline: 29/09/2017

- International, intersectoral and interdisciplinar research training, as well as transnational and crosssector mobility **cofunding new or existing regional, national and international programmes**
- Monobeneficiary action
- Duration: 60 months (including time for recruiting/selection)

➔ Doctoral Programmes (DP panel) → Early Stage Researchers
➔ Fellowship Programmes (FP panel)→ Experienced Researchers

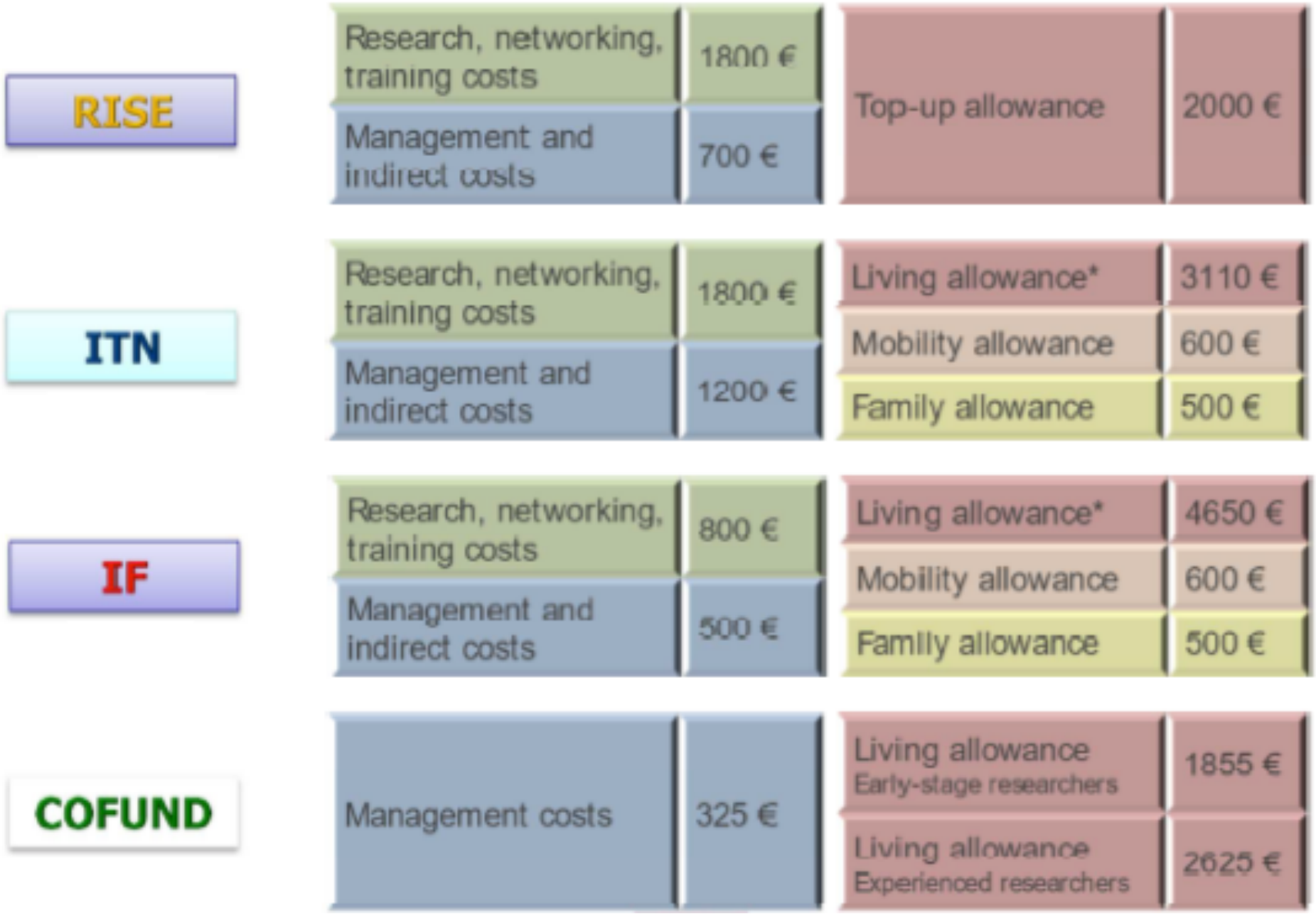
50% co-funding for established unit costs
Mobility rules apply
Recriutment/fellowship: minimum 3 months

MSCA - NIGHT

Coordination and support action
1 call in the WP 2016-2017, closed.

Closed

MSCA- Financial Overview (slide Lucchetti, REA)



MSCA- Financial Overview

Recruited Researcher

- **Living allowance:** monthly salary before any deductions;
- **Mobility allowance (N/A for RISE and COFUND):** for all recruited fellows Contribution to household, relocation and travel expenses to/from home country
- **Family allowance (N/A for RISE and COFUND):** All recruited fellows who have family at the time of recruitment,calculated on the family status at the time of recruitment to the project. It does not change.

Institutional Costs

Research, training and networking:
Training courses etc.
Research costs
Participation of researchers in training events and conferences
Secondments
Co-ordination between participants
Tuition fees (if applicable)

Management and indirect costs:
Preparation of the documents required by the REA (Declarations, deliverables, reports:1st year progress periodic and final)
Personnel costs of the Proj. Manager
Maintenance of the C.A.
Legal, ethical, financial, administrative management of the beneficiaries
Indirect costs of the beneficiaries

MSCA - Evaluation

EXCELLENCE (50%)

Research/Innovation: credibility, innovative/novelty

Training/knowledge sharing:innovative, transferable skills

Supervision, interactions between organisations

Inter/ multidisciplinarityinter sectoral, gender

Capacity of the researcher to reach/re-enforce professional maturity/independence

IMPACT (30%)

Career perspectives/employability of researchers and contribution to skills development

Dissemination of results/communication activities to target audiences

Contribution to strengthening EU innovation capacity (through new lasting collaborations)

IMPLEMENTATION (20%)

Work plan: coherence, effectiveness including allocation of task and resources

Management structure, quality and risk management

Organizations:competences,experience,complementarity, commitment, infrastructures and arrangements

European Research Council - ERC

Bottom-up

Unlocking brilliant ideas

High-risk/high gain projects

Pan-European COMPETITION

EXCELLENT AND INDEPENDENT researchers

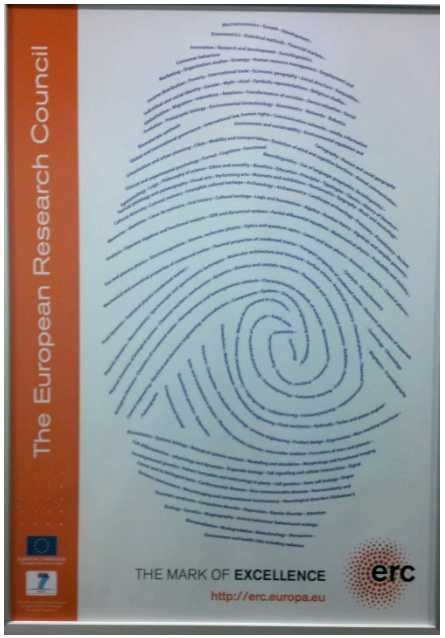
European Research Council

Established by the European Commission

FP7: 7.7 Billion Euro
H2020: 13 Billion Euro

"I fondi ERC finanziano il lavoro di alcune delle menti più brillanti, persone le cui scoperte possono avviare nuove industrie, nuovi mercati e contribuire al benessere del Pianeta". *Commissario Europeo alla Ricerca, Carlos Moedas*

ERC key features



- Long term individual grants
- One researcher , one host institution, one project
- No consortia, no co-financing
- Open to any field of research, no thematic priorities
- Ground-breaking, high-risk/high gain projects
- Host organisations based in an EU Member State, an Associated country, or an InternationalEuropean Interest Organisation - usually one Institution
- Sole evaluation criterion: scientific excellence (PI **and** proposal)
- International peer review evaluation process based on 25 different panels
- There are **restrictions on resubmission**: apply only if your project is ready
- Portability (possibile negoziare le migliori condizioni di lavoro con la Host Instit.)

ERC - calls

***Individual Grants*: Principal Investigators from anywhere in the world who demonstrate the *ground breaking nature*, *ambition* and *feasibility* of their scientific proposal**

STARTING GRANT (StG)	PI starting their own independent research team or programme,**from 2 to 7 years after completed PhD**
CONSOLIDATOR GRANT (CoG)	PI still consolidating their own independent research team or programme, **from 7 to 12 years after completed PhD**
ADVANCED GRANT (AdG)	Pis established research leaders with a recognised track record of research achievements in the **last 10 years.**
PROOF OF CONCEPT (PoC)	For **ERC grantees** (all categories): **commercial or societal application** of the results of their funded research. Up to 150k€/grant & 18 months

ERC PoC Grants maximise the value of ERC research to verify the innovation potential of ideas arising from ERC funded projects.

ERC - calls 2016

***Individual Grants*: Principal Investigators from anywhere in the world who demonstrate the *ground breaking nature*, *ambition* and *feasibility* of their scientific proposal**

STARTING GRANT (StG)	***Closed***
CONSOLIDATOR GRANT (CoG)	***Closed***
ADVANCED GRANT (AdG)	***Open: deadline 01/09/2016 Budget 540 M€***
PROOF OF CONCEPT (PoC)	***Open: next cutoff date: 04/10/2016 Budget 20M€ divided in three cutoffs***

ERC financial overview

Calls 2016	Starting	Consolidator	Advanced
Max EU contribut.[€]	1.500.000 (+500.000)*	2.000.000 (+750.000)*	2.500.000 (+1.000.000)*
Year max	5	5	5
Effort	min 50% > 50% in M.S. o A.C.	min 40% > 50% in M.S. o A.C	min 30% > 50% in M.S. o A.C

Max. EU contribution is intended pro rata

* **"start-up" costs (no pro-rata)** for PIs moving to the EU or an Associated Country from elsewhere and/or the purchase of **major equipment** and/or **access to large facilities**

Cost categories:

- ➔ Personnel costs (including PI);
- ➔ Travel;
- ➔ Equipment and Consumables;
- ➔ Subcontracting costs

ERC proposal

Scientific project + PI Curriculum and Track Record presented in two documents, both to be submitted at the deadline (B1 max 10 pag, and B2 max 15 pag)

The scientific idea alone is not enough. A project is needed, with all its elements, for example:

- A leader (the Principal Investigator) with a committed team
- A clear research plan, with definite objectives and well-thought,credible timeline
- Risks awareness, contingency actions
- A Host Institution with the best research environment available
- Resources allocation (who does what, in which time period and at which cost)
- [...]

The scientific idea has to explicitly address key points in the proposal (as they are evaluation elements)

- Novelty beyond state of the art, ambitious objectives
- High risk/high gain
- Feasibility
- Time and resources

ERC - bottom up ideas

25 Panels, organised in 3 Domains

- **Physical Sciences and Engineering** (**PE**)
- Life Sciences (LS)
- Social Sciences and Humanities (SH)

"*For the Starting, Consolidator and Advanced Grant calls an indicative budget will be allocated to each panel **in proportion to the budgetary demand of its assigned proposals***."

On average, 44% of the ERC budget goes to PE Domain (higher n° of proposals)

The Principal Investigator chooses the most suitable panel for his/her proposal. Here two examples:

PE2 Fundamental Constituents of Matter

Particle, nuclear, plasma, atomic, molecular, gas, and optical physics.

PE9 Universe Sciences

Astro-physics/chemistry/biology; solar system; stellar, galactic and extragalactic astronomy, planetary systems, cosmology, space science, instrumentation.

One stage submission, two step evaluation

ERC: evaluation of proposals and PI

One criterion: Excellence, peer-review evaluation

Principal Investigator. To what extent...

- ➔ has the PI demostrated the **ability to propose and conduct ground-breaking research**?
- ➔ does the PI provide **evidence of creative independent thinking**?
- ➔ have the **achievements** of the PI typically gone **beyond the state of the art?**
- ➔ has the PI demonstrated sound leadership in the **training and advancement of young scientists?**

Scientific proposal. To what extent...

- ➔ does the proposed research **address important challenges**?
- ➔ are the **objectives ambitious and beyond the state of the art** (e.g. novel concepts and approaches or development across disciplines)?
- ➔ is the proposed research **high risk/high gain**?

- ➔ is the outlined **scientific approach feasible** bearing in mind the extent that the proposed research is high risk/high gain?
- ➔ [...]

ERC - some notes

- Evaluation approximately half about CV+TR and hal about the scientific proposal
- Starting Grants and Consolidator grants require to demonstrate high scientific potential and independence (mobility, publications without the PhD supervisor etc., grants, prizes...)
- Advanced grant: more and more important the Supervision and mentoring activity
- Do not underestimate the challenge because of the “one evaluation criterion, excellence”: It is a very competitive grant.
- Difficult to find a balance between high/risk, high/gain and feasibility
- It takes time and, often, more than one application to succeed
- More than a project: students supervision, trust, outreach activities, international and interdisciplinary experience, patents…
- English effectiveness fundamental
- Exercise useful (National, regional, other international grants)

Research Infrastructures - RIs

Development

Reinforcement

Integration

Opening

Fostering the **innovation** potential of RIs and their **human resources**

Research Infrastructures - RIs

Definition of Research Infrastructures

Any facilities and resources that provide to the scientific community essential services needed **for the performance of leading edge research** in both an academic and/or industrial environment.

RIs may be '**single-sited**' (a single resource at a single location), '**distributed**' (a network of distributed resources), or '**virtual**' (the service is provided electronically).

Research Infrastructures should be **open to researchers**, to the scientific community and to the Industry and cover the whole range of scientific and technological fields.

Research Infrastructures - RIs

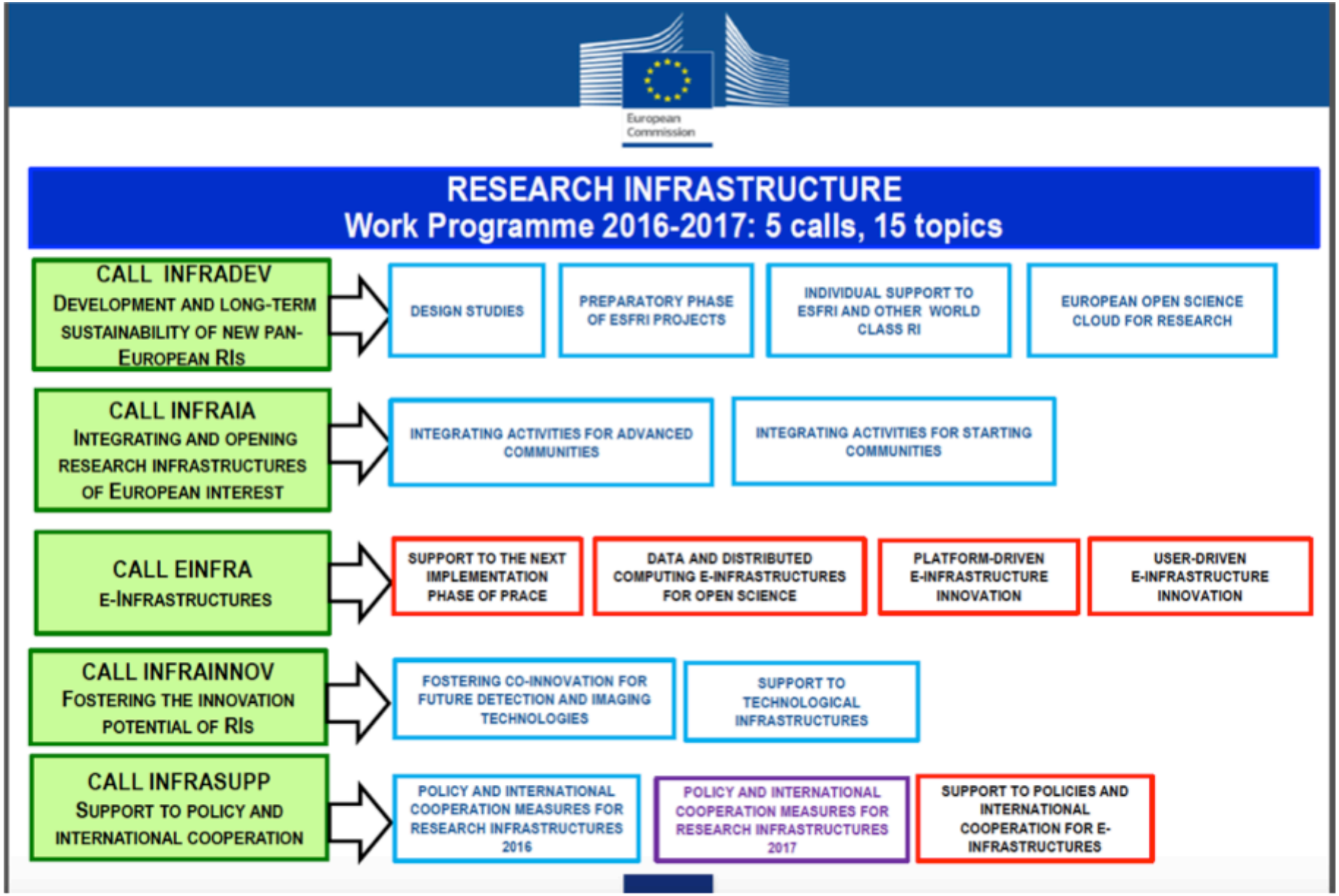
Why a EU approach?

- To **open access** to the research infrastructures existing in the individual Member State to all European researchers
- To avoid duplication of effort and to coordinate and **rationalize the use of these research infrastructures**
- To trigger the **exchange of best practice,** develop interoperability of facilities and resources, develop the training of the next generation of researchers
- To **connect national research communities** and increase the overall quality of the research and innovation
- To **help pooling resources so that the Union can also acquire and operate research infrastructures at world level**

RIs calls

Developing new world-class Research Infrastructures	*Developing new world-class research infrastructures: facilitate and support the implementation and long-term sustainability of RIs identified by ESFRI/ other world-class research infrastructures*
Integrating and opening research infrastructures of European interest	*Opening up key national and regional research infrastructures to all European researchers from both academia and industry as well as ensuring their optimal use and joint development.*
E-Infrastructures	*Support the European policies on open research data, data and computing intensive science, research and education networking, high-performance computing and big data innovation*
Fostering the innovation potential of Research Infrastructures	*Fostering the innovation potential of research infrastructures*
Support to policy and international cooperation	*Reinforcing European research infrastructures policy and international cooperation*

RIs calls


European Commission
RESEARCH INFRASTRUCTURE
Work Programme 2016-2017: 5 calls, 15 topics
CALL INFRADEV
DEVELOPMENT AND LONG-TERM SUSTAINABILITY OF NEW PAN-EUROPEAN RIS
DESIGN STUDIES
PREPARATORY PHASE OF ESFRI PROJECTS
INDIVIDUAL SUPPORT TO ESFRI AND OTHER WORLD CLASS RI
EUROPEAN OPEN SCIENCE CLOUD FOR RESEARCH
CALL INFRAIA
INTEGRATING AND OPENING RESEARCH INFRASTRUCTURES OF EUROPEAN INTEREST
INTEGRATING ACTIVITIES FOR ADVANCED COMMUNITIES
INTEGRATING ACTIVITIES FOR STARTING COMMUNITIES
CALL EINFRA
E-INFRASTRUCTURES
SUPPORT TO THE NEXT IMPLEMENTATION PHASE OF PRACE
DATA AND DISTRIBUTED COMPUTING E-INFRASTRUCTURES FOR OPEN SCIENCE
PLATFORM-DRIVEN E-INFRASTRUCTURE INNOVATION
USER-DRIVEN E-INFRASTRUCTURE INNOVATION
CALL INFRAINNOV
FOSTERING THE INNOVATION POTENTIAL OF RIS
FOSTERING CO-INNOVATION FOR FUTURE DETECTION AND IMAGING TECHNOLOGIES
SUPPORT TO TECHNOLOGICAL INFRASTRUCTURES
CALL INFRASUPP
SUPPORT TO POLICY AND INTERNATIONAL COOPERATION
POLICY AND INTERNATIONAL COOPERATION MEASURES FOR RESEARCH INFRASTRUCTURES 2016
POLICY AND INTERNATIONAL COOPERATION MEASURES FOR RESEARCH INFRASTRUCTURES 2017
SUPPORT TO POLICIES AND INTERNATIONAL COOPERATION FOR E-INFRASTRUCTURES

INFRADEV: Developing new world-class RIs

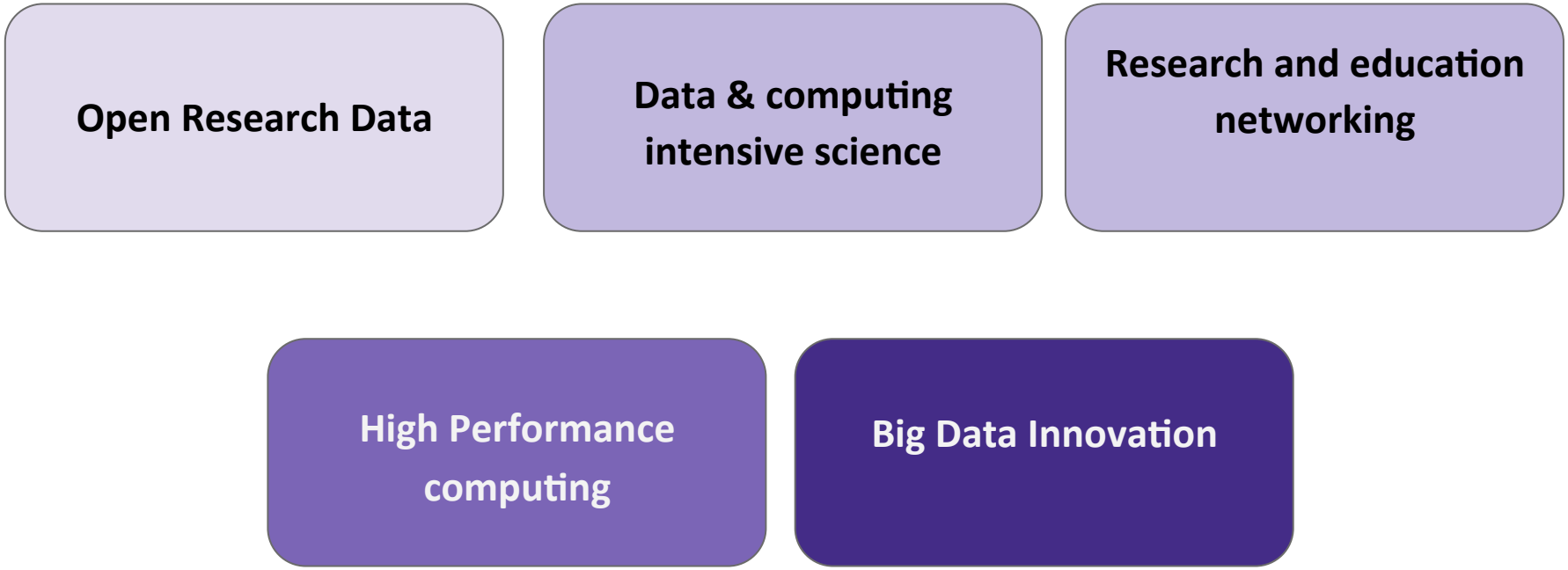
Design Studies	Support the conceptual & technical design of new RIs which are leading-edge user facilities of a clear European dimension and interest
Preparatory Phase	Support the preparatory phase of ESFRI projects
Individual support to ESFRI and other world-class research infrastructures	Facilitate & support long-term sustainability and efficient operation of the ESFRI & Other World-Class RIs (OWCRI)
European Open Science Cloud for Research	Pilot action to demonstrate how wide availability of scientific data & data-analysis services for EU researchers can be ensured through a cloud infrastructure

INFRADEV: Developing new world-class RIs

Design Studies	**INFRADEV-01-2017 -> Forthcoming (opening on 08-12-2016; closing on 29/03/2017) Budget: 20 M€; Budget per proposal: 1-3 M€**
Preparatory Phase	INFRADEV-02-2016 -> Open (closing on 22-06-2016)
Individual support to ESFRI and other world-class research infrastructures	INFRADEV-03-2016-2017 -> Closed
European Open Science Cloud for Research	INFRADEV - 04-2016 -> Open (closing on 22-06-2016)

EINFRA : E-INFRASTRUCTURES

e-Infratructures services enabling the open science vision



E-INFRASTRUCTURES: Theme1 & Theme 2

Theme 1 - Integration and consolidation of e-infrastructure platforms supporting EU policies and research and education communities

- Coordination of operations & funding (reginal, national & European levels)
- Exploiting synergies between operational e-Infrastructures
- Continuous upgrades of infrastructures without service disruption

Features:

- TRL8 or above
- Documentation of services on an open Service Catalogue
- Transnational & virtual access cost reimbursement

Theme 2 - Prototyping innovative e-infrastructure platforms and services for research and education communities, industry and the citizens at large

- Evolution through Innovative Actions
- Platform- driven Innovation -> Push from the supply side
- User - driven Innovation -> Pull from the demand side

Features:

- TRL6 at the beginning of the project -> TRL8 by the end

E-INFRASTRUCTURES: Theme1 Activities

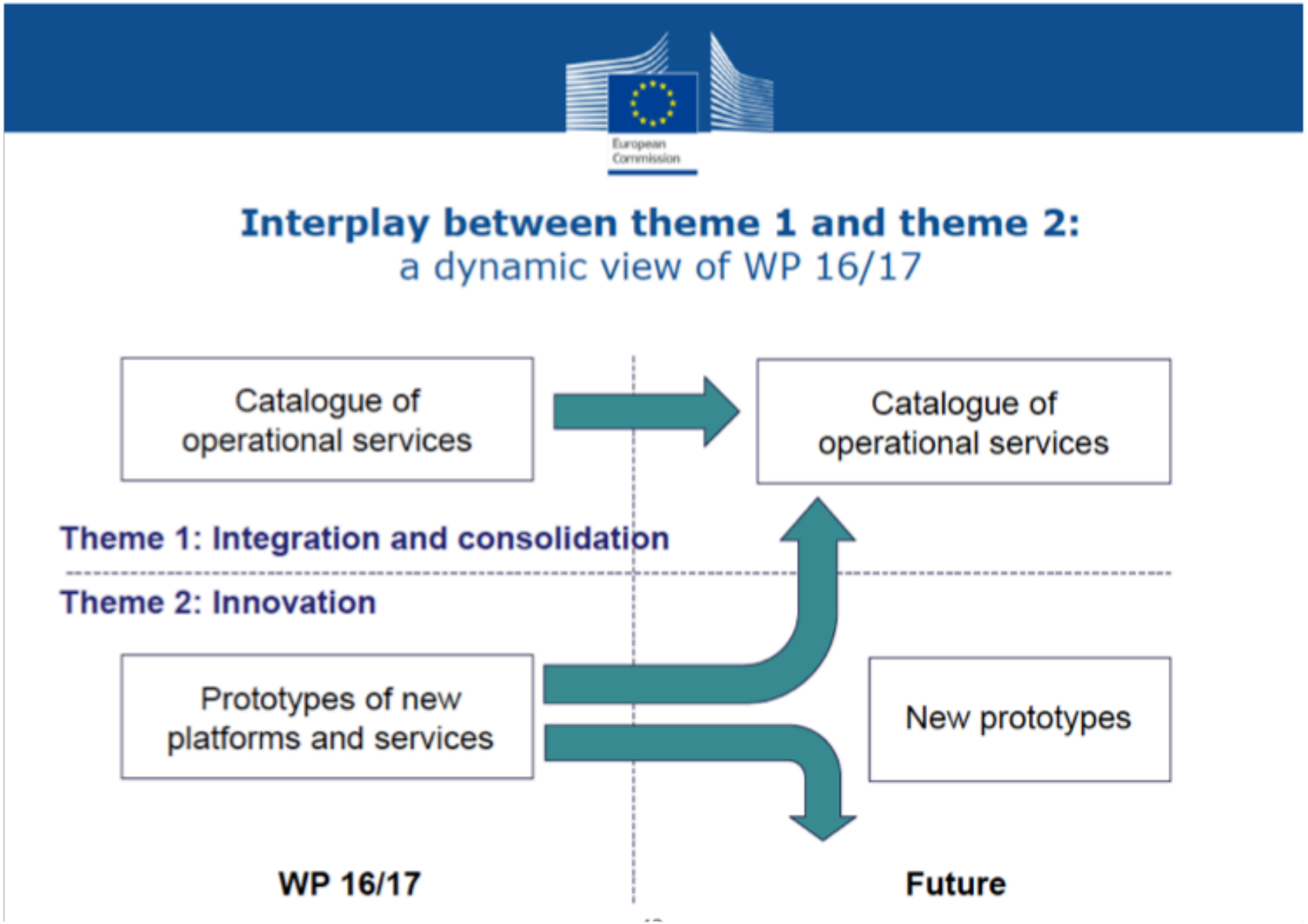
Networking (foster cooperation between project stakeholders/related projects)

- Joint Management of service provision & pooling of distributed resources
- Dissemination of project results/knowledge-> contribution to innovation
- Involvment/reinforcement of industrial partnerships
- Definition of common standards/protocols/interoperability; benchmarking
- Personnel training/exchange
- Definition of data management plans
- Coordination with related national/ international initiatives
- etc.

Services: description of services in the form of a catalogue -> based on at least TRL8 systems technologies-> compliant with model of transnational/virtual access costs

- **P**rocurement & upgrading of infrastructure, operation & end-to-end services
- Services deployed on the top of generic infrastructures to serve vistual communities in the various scientific domains
- Support of middleware component repositories
- Data & resources management
- Foster the effective use of distributed supercomputing facilities/federation of services/wide use of digital repositories
- Vertical integration in support of specific virtual research communities
- etc.

EINFRA : E-INFRASTRUCTURES



EINFRA : E-INFRASTRUCTURES

Theme 1 - Integration and consolidation of e-infrastructure platforms supporting EU policies and research and education communities

- EINFRA-11-2016 - > Closed
- **EINFRA-12-2017 -> Forthcoming (opening on 08-12-2016, closing on 29/03/2017)**

Budget: 40 M€;

Budget per proposal: 8-10 M€

Theme 2 - Prototyping innovative e-infrastructure platforms and services for research and education communities, industry and the citizens at large

- EINFRA-22-2016 - > Closed
- **EINFRA-21 -2017 -> Forthcoming (opening on 08-12-2016closing on 29/03/2017)**

Budget: 20M€;

Budget per proposal: 4-5 M€

Future & Emerging Technologies - FET

Radically new technologies

EU R&I Ecosystems

Competitiveness & Growth

Future Industrial Leadership

Pathfinding Europe's **technological future**

FET's Mission

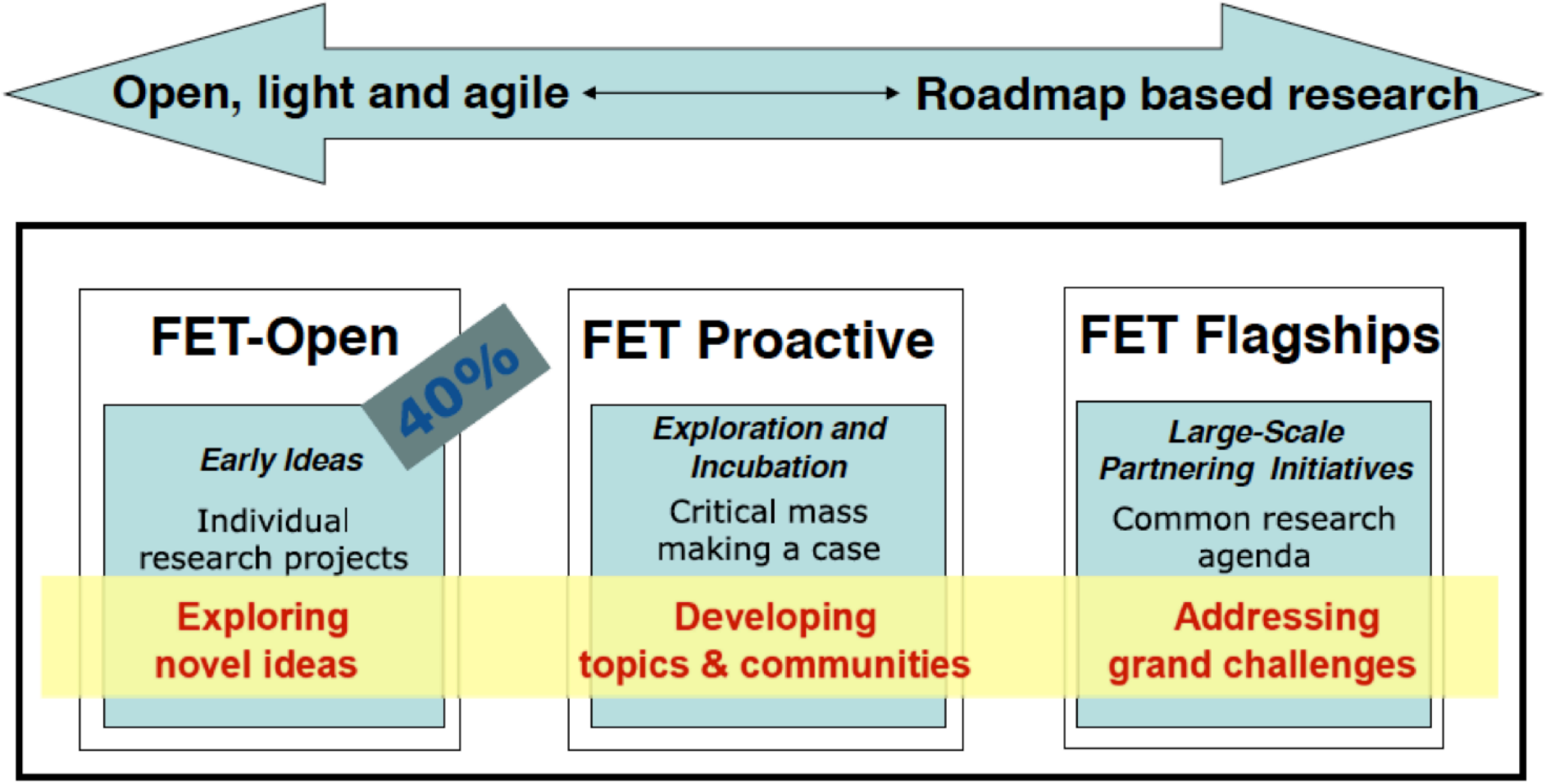
- To promote and support the emergence of **radically new technology areas** that will renew the basis for future EU **competitiveness & growth** and will make a difference for society in the decades to come

- To shape **EU leadership in R&I** on the most promising such future and emerging technologies, e.g. by tackling grand S&T challenges through a novel pan-european approach

- To turn Europe into the **best environment for responsible multidisciplinary collaborations** on such future and emerging technologies

- To initiate the development of **EU R&I ecosystems** around such future and emerging technologies, as seeds of **future industrial leadership**

FET: 3 complementary funding schemes



FET OPEN features

Next deadlines: 17/01/2017; 27/09/2017

- 'Open is open': all technologies, **no topical scope**.
- ***Bottom-up****, but targeted - not blue sky research*
- **40% of the FET budget** in H2020 (>1B€).
- An **end-to-end light and fast scheme**:
- *Deadline free (3 cut-off dates in each WP)*
- *15 page proposals 1 step submission, 1 stage evaluation 3 evaluation criteria*
- **Instruments: RIA** (100% funding) **CSA** (100% funding)

FET OPEN gatekeepers

FET gatekeepers define the kind of research that FET is looking for

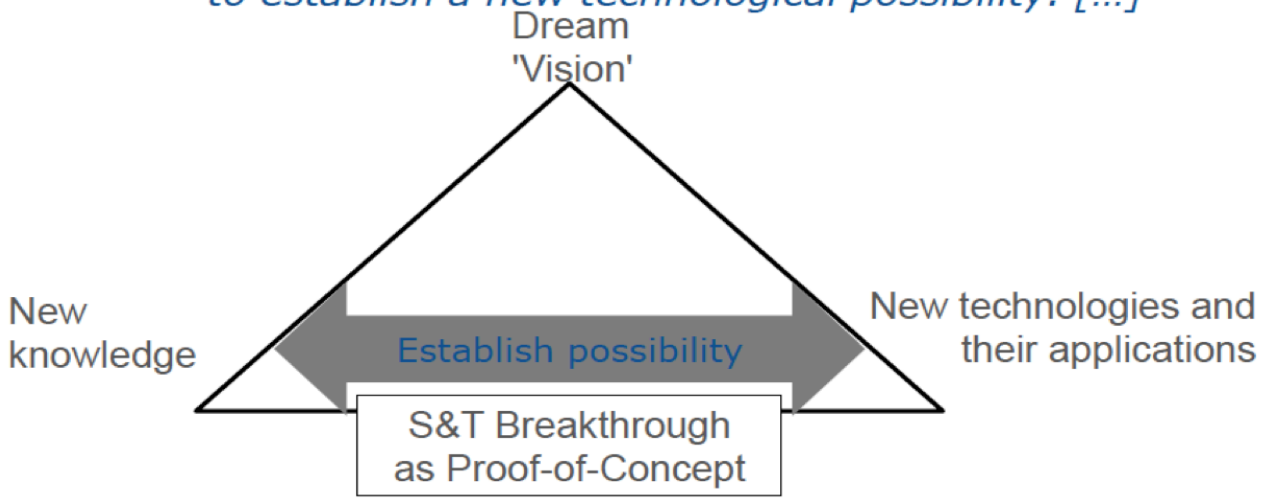
[…] Proposals are sought for collaborative research with all of the following characteristics ('FET gatekeepers'):

- Long-term vision
- Breakthrough scientific & technolical target
- Novelty
- Foundational
- high-rish
- interdisciplinary

FET OPEN: scope & Impact

Scope

This topic supports the early stages of research to establish a new technological possibility. […]



Impact

- Establish baseline of feasibility and innovation potential
- European thought-leadership and future leaders
- New R&I practices

FET OPEN -RIA

Conditions for the Call

- Single stage procedure
- Collaborative projects (RIA) -> standard minimum conditions for participation + industrial partners (advisable= mandatory)
- up to 4M funding (indicative) per proposal
- 1+15 pages

Evaluation procedure

Remote peer review -> 4 experts + Interdisciplinary final panel review

FET OPEN - RIA - Evaluation criteria

EXCELLENCE (60%)- > Threshold 4 / 5

- Clarity and novelty of long-term vision, and ambition and concreteness of the targeted breakthrough towards that vision
- Novelty, non-incrementality and plausibility of the proposed research for achieving the targeted breakthrough and its foundational character
- Appropriateness of the research methodology and its suitability to address high scientific and technological risks
- Range and added value from interdisciplinarity, including measures for exchange, cross-fertilisation and synergy

FET OPEN -RIA - Evaluation criteria

IMPACT (20%) ->Threshold 3,5/5

- Importance of the new technological outcome with regards to its transformational impact on technology and/or society
- Impact on future European scientific and industrial leadership, notably from involvement of new and high potential actors
- Quality of methods and measures for achieving impact beyond the research world and for establishing European though leadership, as perceived by industry and society

FET OPEN - RIA - Evaluation criteria

IMPLEMENTATION (20%) -> Threshold 3/5

- Soundness of the workplan and clarity of intermediate targets
- Relevant expertise in the consortium
- Appropriate allocation and justification of resources (person-months, equipment).

Are you ready for FET OPEN?

Key factors for success

- **FET is not ERC:** collaboration, science and technology, whole set of gatekeepers are all essential ingredients

- It is not because something **has not been done before** that it is sufficiently novel for FET

- An exciting long-term vision is essential, but also a **new and plausible idea** on how to get there

- For **"mature" technologies** check out LEIT and Societal Challenges work programmes

FET OPEN: towards Innovation

Innovation from a FET OPEN project?

- High risk projects -> intention is not always a concrete result
- Can always be done later, e.g., through follow-up projects but takes a long time (which may be needed)
- Innovation may be totally unexpected
- Innovation may happen at the fringes of a project (a tool, a technique)
- Only a part of the consortium may be interested – if any
- Partners may not be the optimal vehicles to exploit
- An SME may not exist yet, or may have been created in the course of the project only
- There may be enthusiasm to exploit, but zero experience to do so (e.g. a PhD student who wants to take something up but has no clue how to go about doing it)

-> FET Innovation Launchpad

FET Innovation Launchpad

New topic in WP2016-17 - CSA

"This topic aims at funding further innovation related work (i.e. activities which were not scheduled to be funded by the original project) to verify and substantiate the innovation potential of ideas arising from FET funded projects and to support the next steps in turning them into a genuine social or economic innovation"

-> ***Inspired by the successful ERC Proof-of-Concept (PoC) scheme***

II Pillar: Industrial Leadership

II Pillar: Industrial Leadership

Industrial Leadership

"New skills and competences needed to deliver on innovation, growth and participation in a modern society."

Leadership in enabling and industrial technologies (LEIT)

KETs (nanotechnologies, materials, biotechnology, manufacturing), **ICT**, **Space**

Access to risk finance

Leveraging private finance and venture capital for research and innovation

Innovation in SMEs

Fostering all forms of innovation in all types of SMEs

Leadership in enabling and industrial technologies (LEIT)

Why?

Europe needs to attract more private investment in research and innovation

Europe needs more innovative small and medium-sized enterprises (SMEs) to create growth and jobs

Strategic investments in key technologies(e.g. advanced manufacturing, micro-electronics) underpin innovation across existing and emerging sectors

Leadership in enabling and industrial technologies (LEIT)

What?

Key Enabling Technologies (KETs) and support to industry, to recover from economic crisis

Emphasis on R&D and innovation with strong industrial dimension

Activities primarily developed through relevant industrial roadmaps (ETPs, PPPs)

Involvement of industrial participants and SMEs to maximise expected impact => key aspect of proposal evaluation

Funded projects will be outcome oriented, developing key technology building blocks and bringing them closer to the market

Leadership in enabling and industrial technologies (LEIT)

How? (Main Funding schemes)

Innovation Actions (IA) - *Funding rate: 70% (100% for non- profit legal entities)*

Produce plans, arrangements or designs for a new or improved product, design, process or service by possibly including large-scale product validation and market replication.

*-> Impact criterion with **weight 1.5***

Fast Track to Innovation (FTI) - *Funding rate: 70% (100% for non- profit legal entities)*

Industry-intensive consortia from EU or Associated Countries meaning:

2 out of 3-4 partners are "industry" (= private for profit)

Or 3 out of 5 partners are private for profit

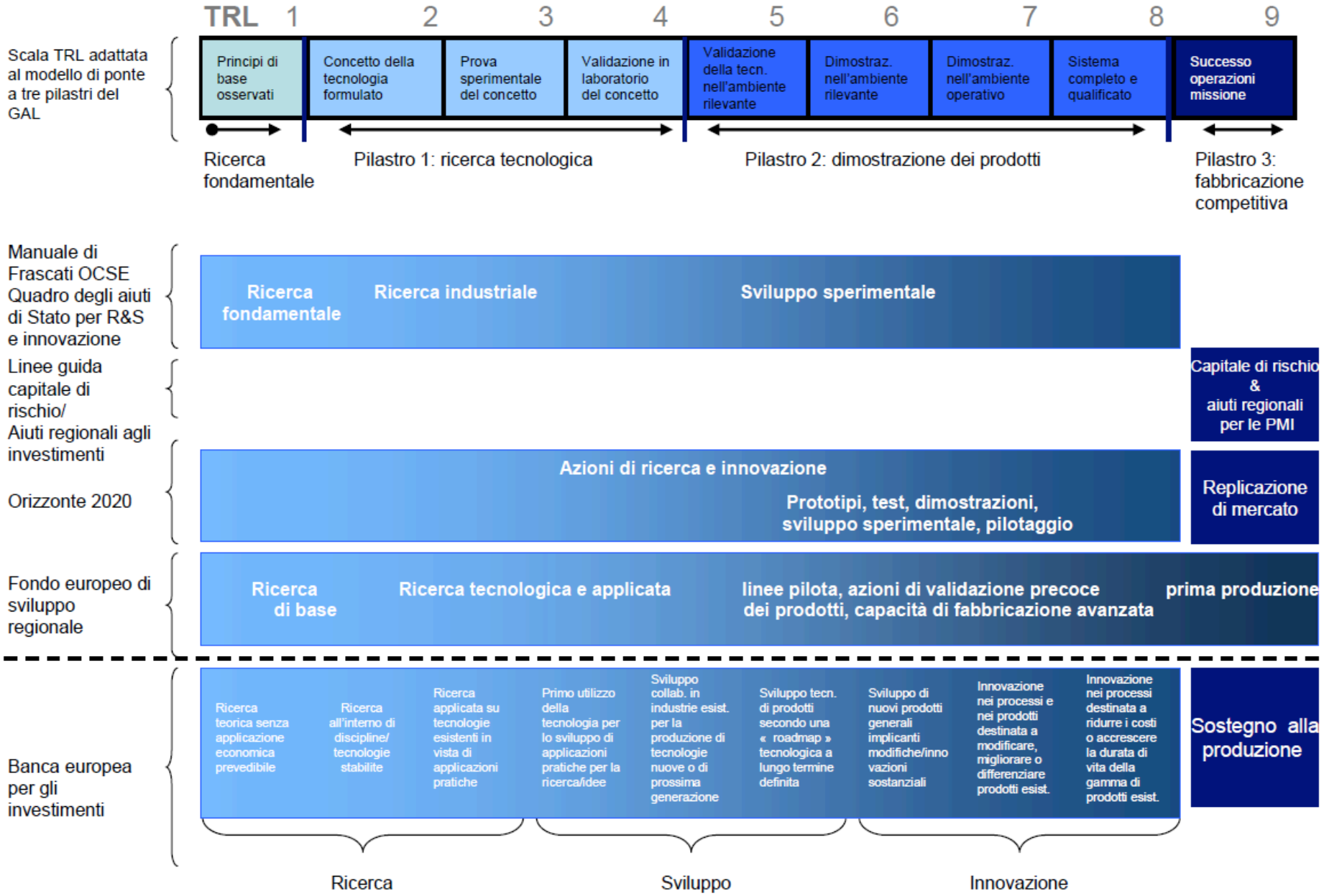
Or 60% of the budget is to be allocated to consortium partner(s) from industry

-> TRLs 5-8

Research and innovation actions (RIA) - *Funding rate: 100%*

Establish new knowledge, new or improved technology by possibly including basic and applied research, technology development, testing and validation on a small-scale prototype

-> TRLs 3-6


TRL 1 2 3 4 5 6 7 8 9
Scala TRL adattata al modello di ponte a tre pilastri del GAL
Principi di base osservati
Concetto della tecnologia formulato
Prova sperimentale del concetto
Validazione in laboratorio del concetto
Validazione della tecn. nell'ambiente rilevante
Dimostraz. nell'ambiente rilevante
Dimostraz. nell'ambiente operativo
Sistema completo e qualificato
Successo operazioni missione
Ricerca fondamentale
Pilastro 1: ricerca tecnologica
Pilastro 2: dimostrazione dei prodotti
Pilastro 3: fabbricazione competitiva
Manuale di Frascati OCSE Quadro degli aiuti di Stato per R&S e innovazione
Ricerca fondamentale
Ricerca industriale
Sviluppo sperimentale
Linee guida capitale di rischio/ Aiuti regionali agli investimenti
Capitale di rischio & aiuti regionali per le PMI
Orizzonte 2020
Azioni di ricerca e innovazione
Prototipi, test, dimostrazioni, sviluppo sperimentale, pilotaggio
Replicazione di mercato
Fondo europeo di sviluppo regionale
Ricerca di base
Ricerca tecnologica e applicata
linee pilota, azioni di validazione precoce dei prodotti, capacità di fabbricazione avanzata
prima produzione
Banca europea per gli investimenti
Ricerca teorica senza applicazione economica prevedibile
Ricerca all'interno di discipline/ tecnologie stabilite
Ricerca applicata su tecnologie esistenti in vista di applicazioni pratiche
Primo utilizzo della tecnologia per lo sviluppo di applicazioni pratiche per la ricerca/idee
Sviluppo collab. in industrie esist. per la produzione di tecnologie nuove o di prossima generazione
Sviluppo tecn. di prodotti secondo una « roadmap » tecnologica a lungo termine definita
Sviluppo di nuovi prodotti generali implicanti modifiche/innovazioni sostanziali
Innovazione nei processi e nei prodotti destinata a modificare, migliorare o differenziare prodotti esist.
Innovazione nei processi destinata a ridurre i costi o accrescere la durata di vita della gamma di prodotti esist.
Sostegno alla produzione
Ricerca
Sviluppo
Innovazione

Technology readiness levels - TRLs

TRL 1 – basic principles observed

TRL 2 – technology concept formulated

TRL 3 – experimental proof of concept

TRL 4 – technology validated in lab

TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)

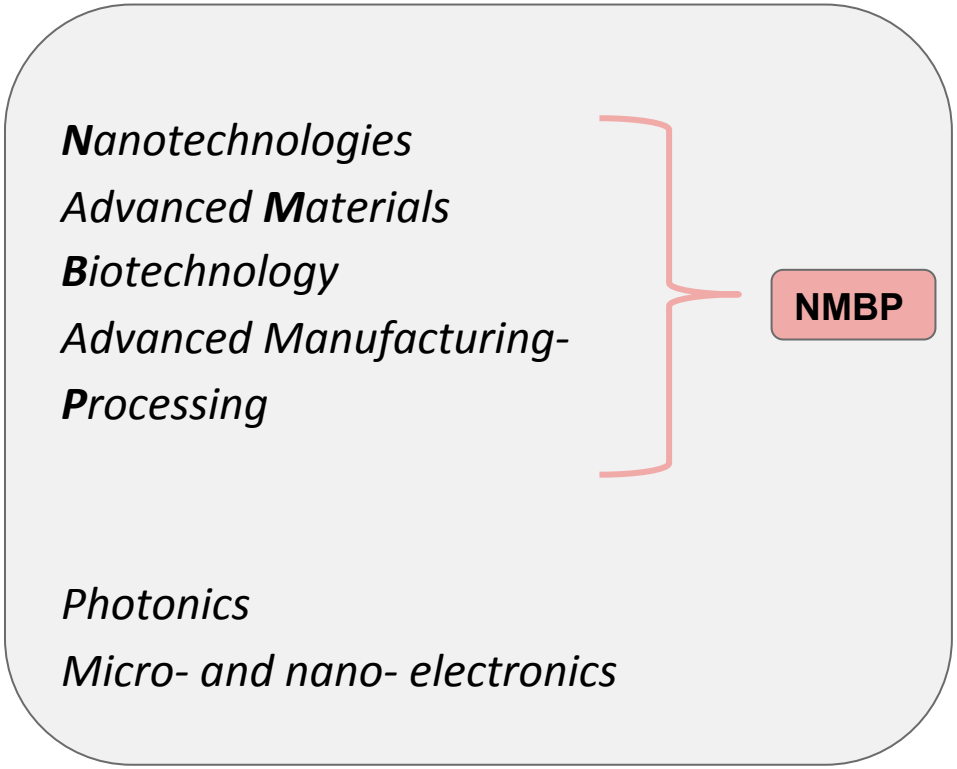
TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies

TRL 7 – system prototype demonstration in operational environment

TRL 8 – system complete and qualified

TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)

Key Enabling Technologies (KETs)



Six strategic technologies

Driving competitiveness and growth opportunities

Contributions to solving societal challenges

Knowledge- and Capital- intensive

Cut across many sectors

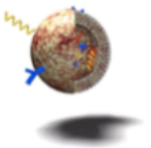
KETs Rationale: from Lab to Industry to Market

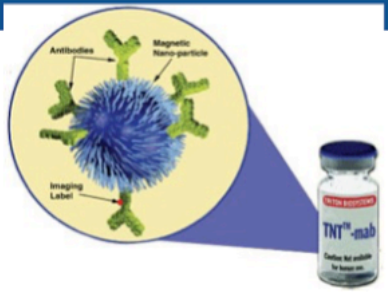
Priorities for KETs in LEIT

- Technology development and validation, aiming at industrial deployment of Key Enabling Technologies (KETs)
- Strategic research agendas, roadmaps and value chains (applications in several sectors)
- Industrial engagement / leverage
- Pilots and demonstrators
- Cross-cutting KETs (combinations of KETs), 30% of KET budget
- Enabling applications in societal challenges

European Commission

Example - combining several KETs for advanced products





Societal Challenge

Health

New nanotechnology-based diagnostics

New target drug delivery and release

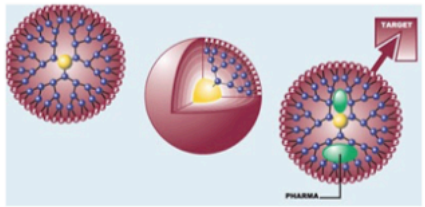
Regenerative medecine

Nanomedicine

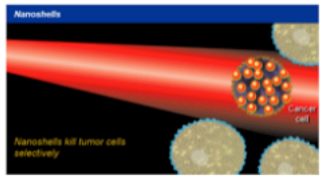
Advanced materials

Microelectronics

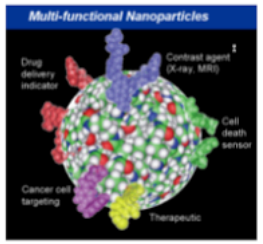
Nanotechnologies



Photonics



Biotechnologies



NMBP

- Support for 4 of the 6 Key Enabling Technologies (KETs): Nanotechnologies, Advanced Materials, Biotechnology, Advanced Manufacturing / Processing

- Technology Readiness Levels: Bridging TRLs from 3 to 6-7, *with emphasis on expected impact (business cases)*

- Focus on EU Manufacturing- *in the context of '4th industrial revolution'*
- Enhancing synergies with Societal Challenges / FETs ;

- Leveraging on:
  - Public investments: ESIF & EMPIR
  - Private investments: PPPs & JTIs (Factories of the Future -FoF; Sustainable Process Industries - SPIRE; Energy-efficient Buildings - EeB; Bio-based Industries JTI - BBI

ICT

- Supporting core ICT industries through roadmap-based PPPs -> Big data
- Facilitating disruptive innovation
- Introducing new cross-cutting actions & reinforcing large scale piloting in real world environments
- Ensure the supply of the future technological building blocks
- Reinforce the international dimension of LEIT-ICT
- Enhancing synergies with Societal Challenges / FETs /RIs

SPACE

- Enabling European competitiveness, non-dependence and innovation of the European space sector

- Safeguarding and further developing a competitive, sustainable and entrepreneurial space industry and research community and strengthen European non-dependence in space systems

- Boosting innovation between space and non-space sectors
  - Enabling advances in space technologies
  - Enabling the exploitation of space data
  - Enabling European research in support of international space partnerships

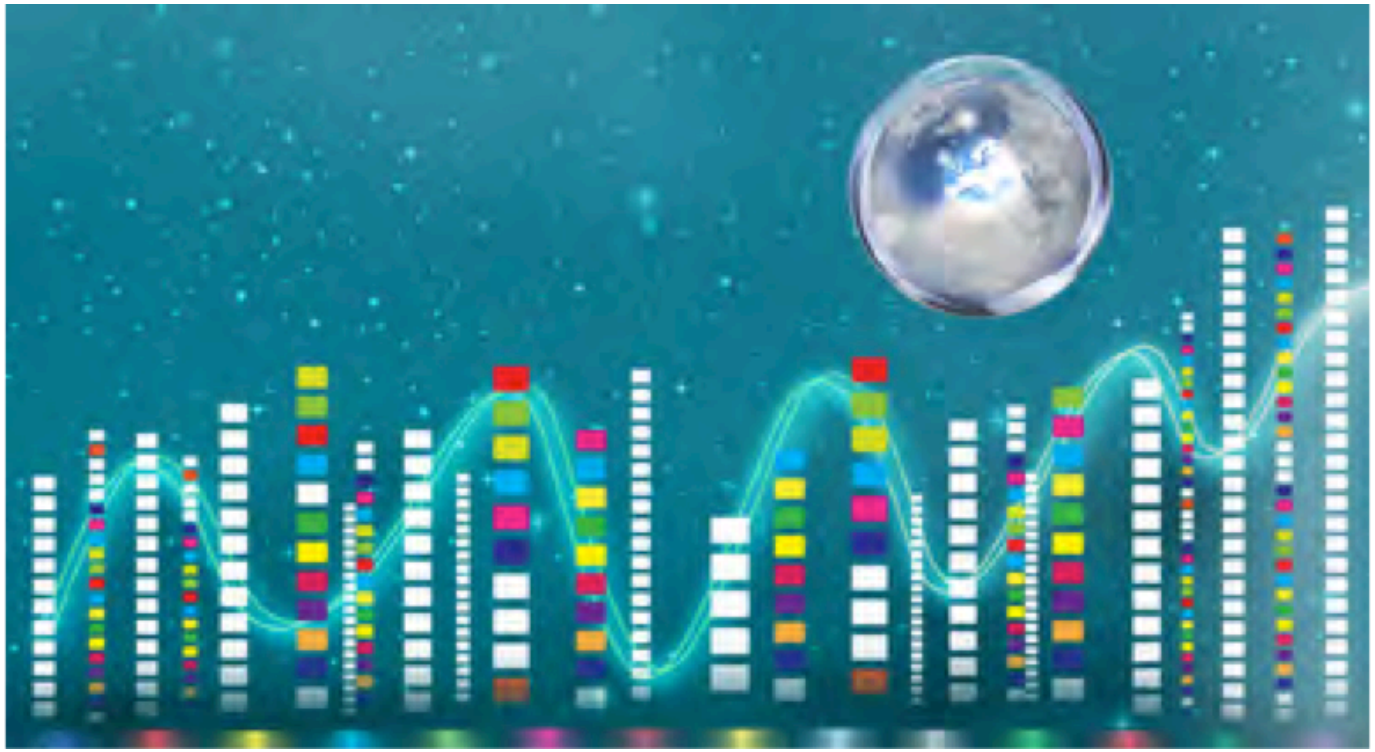
- Enhancing synergies with Societal Challenges / FETs

PPPs in Horizon2020

Public-Private Partnerships in Horizon 2020

Institutionalised PPPs	Contractual PPPs
• Innovative Medicines (IMI) • Clean Sky • Single European Sky ATM Research (SESAR) • Fuel Cells and Hydrogen (FCH) • Electronic Components and Systems (ECSEL) • Bio-based Industries (BBI) • Shift2Rail	• Factory of the Future (FoF) • Energy-efficient Buildings (EeB) • Sustainable Process Industry (SPIRE) • Green Vehicles (EGVI) • Future internet (5G) • Robotics • Photonics • High Performance Computing • Big Data

SPREADING EXCELLENCE & WIDENING PARTICIPATION



Spreading Excellence & Widening Participation

Background

- Currently national / regional disparities in research excellence and innovation performance, hamper competitiveness, business growth and employment creation
- A number of countries are experiencing low participation in the EU Framework Programmes
- Disparities due to structural issues, such as:
  - insufficient national RDI investment
  - lack of synergies between certain countries national research systems and EU research landscape
  - insufficient capacities
  - reduced access to international networks

Spreading Excellence & Widening Participation

Objective

Enhancing economic growth and competitiveness in Low Research & Innovation (R&I) Performing Countries.

Strengthening research organisations:

- Facilitating access to networks and partnering opportunities
- Providing technical assistance and expertise
- Increasing efficiency of the national research and innovation systems
- Improving Research & Innovation policies

-> FUNDING FOR 3-7 YEARS

Spreading Excellence & Widening Participation

Who can Benefit?

"low performing RDI Member States and regions"

- **Member States (MS):**
- Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia and Slovenia
- **Associated Countries (AC):**
- Albania, Bosnia and Herzegovina, Faroe Islands, Former Yugoslav Republic of Macedonia, Moldova, Montenegro, Serbia, Turkey and Ukraine

How does it work?

- Through cooperation with leading R&I performing EU Member States & Associated Countries.
- Cooperation is established through several actions:
- "**Teaming**", "**ERA-Chairs**", "**Twinning**", "COST" and more

Spreading Excellence & Widening Participation

Main programmes

Teaming of excellent research institutions and low performing RDI regions

… will invest in Europe's research and innovation potential through supporting the creation of new (or upgrading of existing) Centres of Excellence on the basis of partnerships with internationally leading institutions

Twinning of research institutions

… aims to build on the huge potential of networking for excellence through knowledge transfer and exchange of best practice between research institutions and leading partners.

-> Funding Instrument: CSA

Teaming

WIDESPREAD-04-2017 (Ph.1)

Opening 28/7/16;
closing on 15/11/16

What?

Creation of new (or significant upgrade of existing) Centres of Excellence in low performing Member States and regions

How?

Proposals: Need to demonstrate the long-term science and innovation strategy of the future Centre based on a SWOT analysis

Stage 1: Funding for the development of a Business Plan for the new Centre of Excellence facilitated by a teaming process with a leading counterpart in Europe (12 months). Budget: 12 M€; budget per proposal: max 400 k€

Stage 2: Subject to the quality of the Business Plan, and a commitment of the Member State (e.g. support via Cohesion Policy Funds), the Commission may provide further substantial financial support for the first steps of implementation of the Centre.
-> infrastructure costs are ineligible!

Teaming

Partnership

2 parties in each Teaming project:
(1) the participant organisation (**COORDINATOR**) from a low performing Member State (for example a research agency at national or regional level, or a regional authority);
(2) an institution of research and innovation excellence (public or private) or a consortium of such institutions (from all EU28 or AC);

Key Success Factors

- Well-chosen, carefully structured partnership & strong engagement from both parties
- Long term vision (at least 10-15 years) & long term financial commitment from the outset
- Coordinator: Both strong in project management & strong in mobilising national/ Cohesion funding

Teaming

Impact

Creation of new (or significant upgrades of existing) Centres of Excellence in "Widening" Countries through the Teaming partnerships is expected to:

- Increase their scientific capabilities and enable them to engage in a strategic growth path pointing to long-term opportunities for economic development. Potential links to innovative clusters would be an asset.
- Through improved scientific capabilities allow them countries to improve their chances to seek competitive funding in international fora
- over the medium to long term achieve a measurable and significant improvement in terms of research and innovation culture of those countries.
- The potential impact of the new/upgraded Centre of Excellence in terms of sustained excellence should be reinforced through projected measurable key performance and output related indicators.
- Benefits will also accrue to the institutions from the more intensive research and innovation performers, in terms of access to new research avenues, increased creativity and development of new approaches, as well as a source for increased mobility (inwards and outwards) of qualified scientists.

Twinning

WIDESPREAD-05-2017
Opening 11/05/17;
closing on 15/11/17

What?

Strengthening a defined field of research of a knowledge institution in a low performing Member State(MS) or Associated Country(AC) or region through linking with at least two internationally-leading counterparts in Europe.

How?

Proposals: Outline the scientific strategy for stimulating scientific excellence and innovation capacity in a defined area of research of the knowledge institution, as well as the scientific quality of the partners involved in the twinning exercise.
Budget: 20 M € ; Budget per proposal: max 1M€ for a 3 years project

Twinning

Partnership

- **ONE** institution located in a Low Performing MS/AC (COORDINATOR)
- A minimum of **TWO** additional partners from two different MS or AC

Key Success Factors

- Outline the scientific strategy for stepping up and stimulating scientific excellence and innovation capacity in a defined area of research as well as the scientific quality of the partners involved in the twinning exercise;
- Explain how the Twinning activity will contribute to the overall Smart Specialisation (or any other relevant thematic regional/national) Strategy of the specific location of the initiating institution;
- Include a comprehensive set of measures to be supported.

Twinning

Impact

- Measurable and significant improvement in the overall scientific and innovation capacity of the initiating institution in a particular area of research
- Linkages with research intensive counterpart institutions in other Member States
- positive impacts on the overall research and innovation potential of the Member State or the region the initiating institution is located in
- Improvement could be (e.g.) measured through increased peer-reviewed publications & impact factors in terms of citations etc.

Impact indicators

- Should reflect an increase in relative terms based on the situation before the project compared to the projected situation immediately after the project is completed, as well as within the foreseeable future after completion.
- Are important for determining the potential regional and national impact, as well as long-term sustainability and viability of the beneficiary organisations.

Twinning

Eligible Costs

Funding for

- Short term staff exchanges
- Expert visits and short-term on-site or virtual training
- Workshops ; conference attendance
- Organisation of joint summer school type activities
- Dissemination and outreach activities

Equipment & researchers' salaries will NOT be funded

- NO support to infrastructure and equipment
- NO support for hiring new permanent research staff

Horizon 2020 focus on participation and results

Veronica Valsecchi & Manuela Schisani
Servizio Coordinamento Fondi Esterni

Laboratori Nazionali di Frascati - 25 maggio 2016

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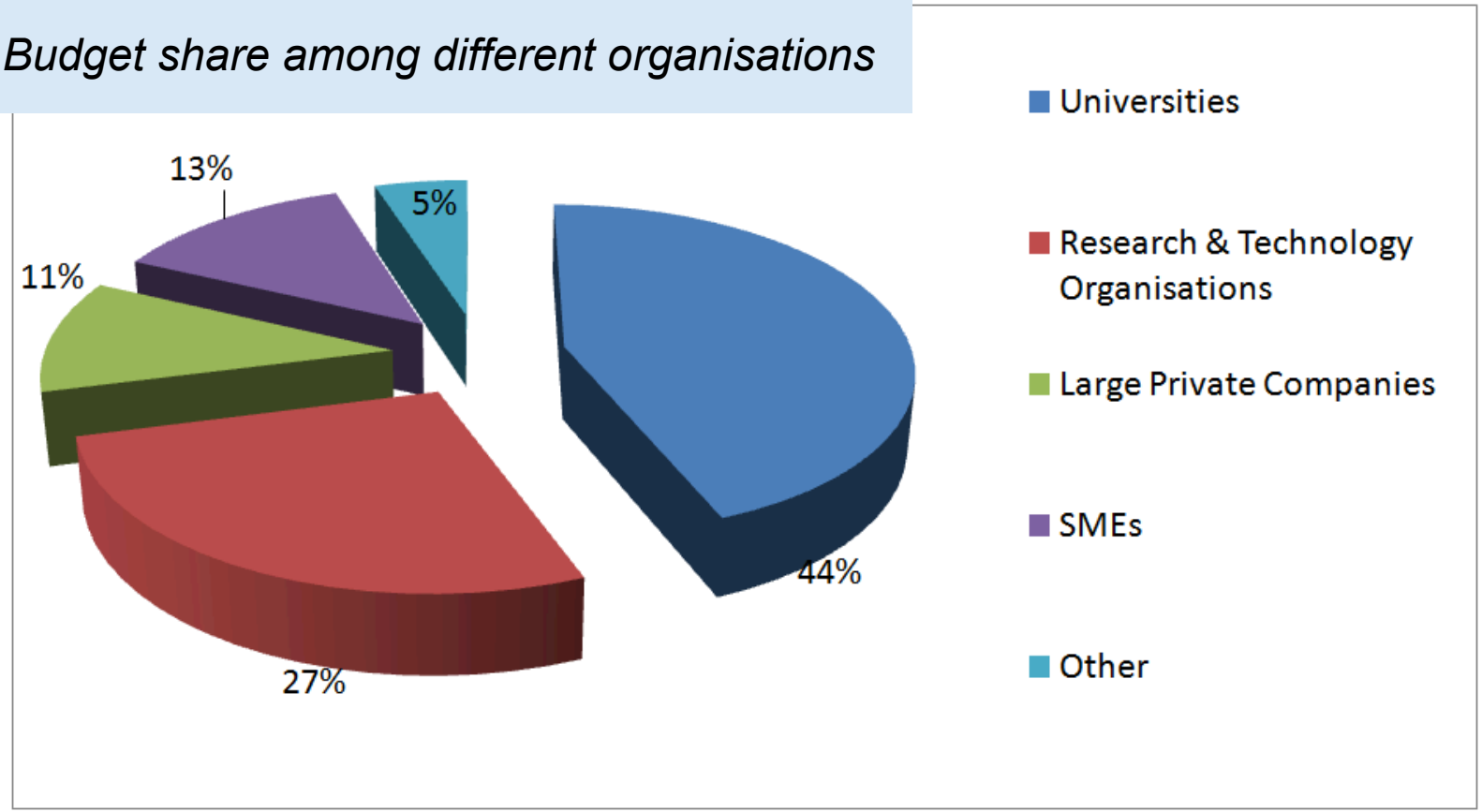
manuela.schisani@lnf.infn.it

Performance data from FP7: ex post evaluation

55 Billion euro (25% of competitive funding)
~140.000 research proposals
~25.000 projects funded involving
29.000 institutions → **3600 Research and Technology Organisations**

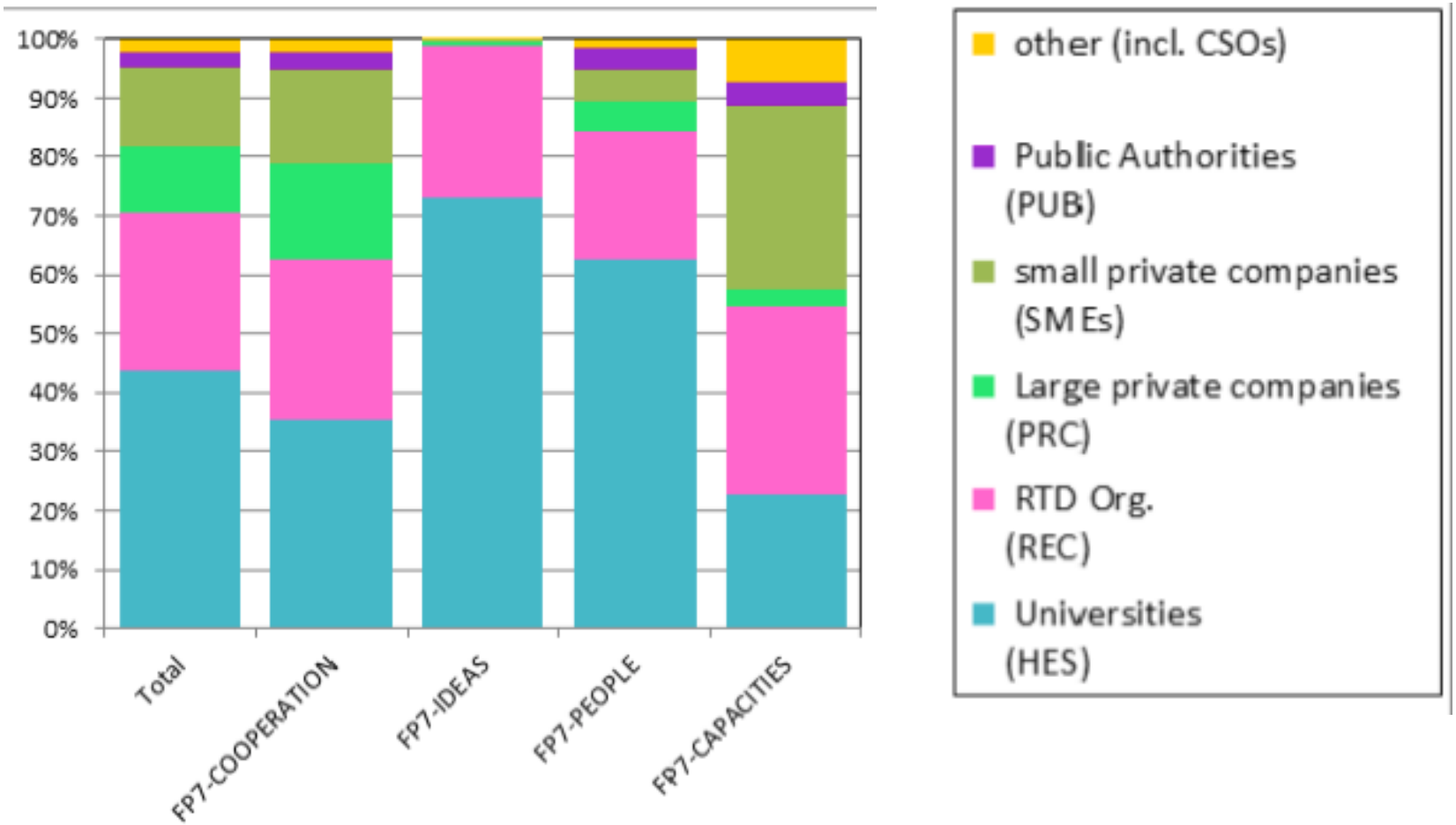
Budget share among different organisations



"Commitment and Coherence - Ex-Post Evaluation of the 7° EU Framework Programme"

Performance data from FP7: ex post evaluation

% EC contribution share by FP7-programme and type of institution



Research and Technology Organisations: players in Cooperation & Capacities
Universities: "Universities were central to the logic of FP7-Ideas programme, where 73% (5,6 Billion euro) of the funding went to universities."

Performance data from FP7: ex post evaluation

% EC contribution share by FP7-programme and type of institution

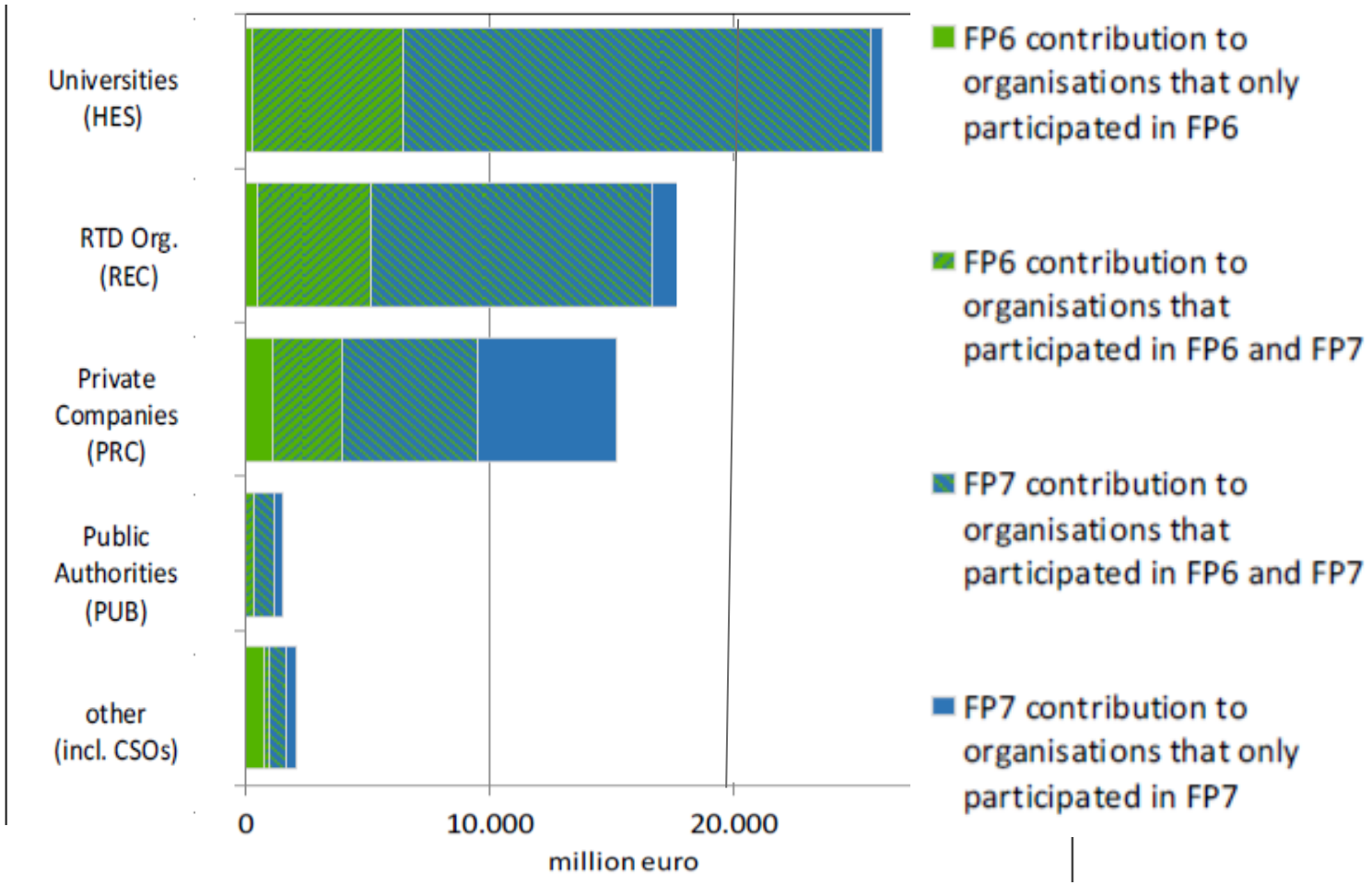
Collaborative Research
11 average participants/project
~7900 projects

Mono-partner frontier research
1,2 average participants/project
~4500 projects

FP7 key element: collaborative research **64%** (28 billion euro) research project funding allocated to FP7 Cooperation
FP7 new element: 17% of total EC contribution

Performance data from FP7: ex post evaluation

Strong continuity between Frameworks Programme (FP6/FP7) by EC contribution



85% of FP6 and 82% of FP7 funding:to organisations that participated in both FPs.
Highest EC funding continuity: universities (97%), RTD organisations (91%).

Performance data from FP7: ex post evaluation

Country performances

Country	FP7 total EC Contribution in M€	%	n° of researchers*	EC contribution per researcher per year
Italy	3.568	8%	104.121	4.895
UK	6.909	16%	254.879	3.873
France	5.059	11%	242.988	2.975
Germany	7.079	16%	327.258	3.090
Netherlands	**3.313**	7%	57.764	**8.194**

Netherlands:about half of Italian researchers, but the highest EC contribution per researcher per year, best performers for this indicator both in Cooperation and ideas programmes among the EU-15 countries. Average EU contribution per researcher per year: 3900 €

*Source: Eurostat, “Total R&D personnel and researchers by sectors of performance, sex and NUTS 2 regions” for years 2007−2013 (table code: rd_p_persreg)

Performance data from H2020

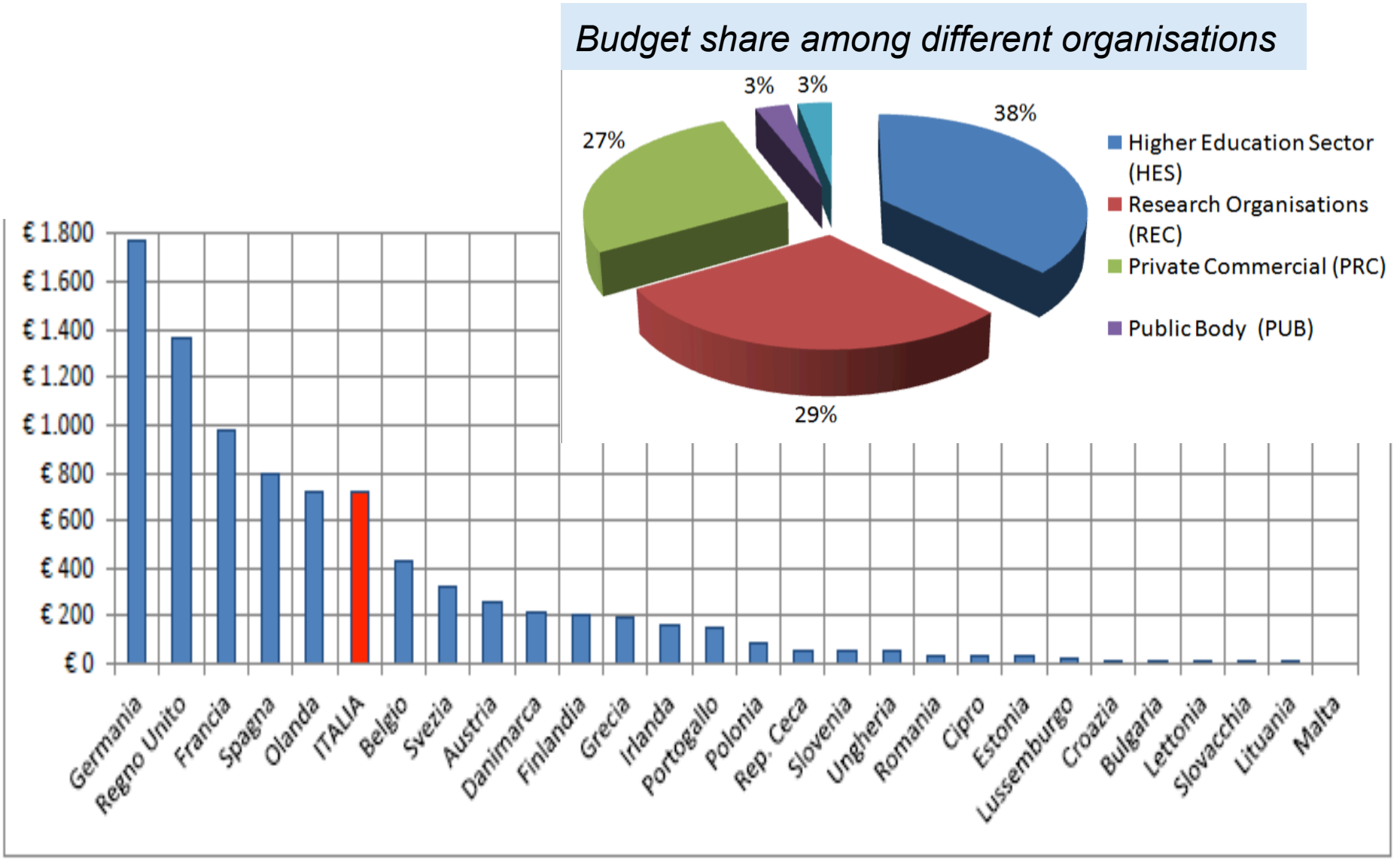
% financial contribution to the EU budget per country (average 2013-2014)	IT	DE	FR	UK	ES	NL
	11,6	**21,2**	16,0	15,0	7,9	4,8
Participants in proposals (%) (% among EU-28)	12,7	12,4	8,1	**13,4**	11,9	6,2

Italy participations in line with the relative contribution to the EU budget

BUT

Success rate n° participants in **projects**/ n° participants in **proposals**	**IT**	DE	FR	UK	ES	NL
	10,6	15,0	15,9	14,4	12,6	15,1
Participants in **projects** (% among EU-28)	**AND** **9,9**	14,5	9,7	14,3	11,1	7,0
Success rate Obtained funds/Requested funds	**MORE** **7,5**	15,3	13,1	11,4	9,6	12,3

Performance data from H2020



EU-28: Funding distribution by country of instituions. Values are in M€.

European Research Council - ERC

FP7 RESULTS	Tot	Funded	Above threshold, not funded	Below threshold	Inelegible/ withdrawn
Proposals	36.283	4.525	4.850	25.937	971
Requested contribution (M€)	67.650	7.673	10.209	48.284	1.483

SR: Funded/Tot n° of proposals	SR “adjusted”: Funded/above threshold
12,4%	48%

European Research Council - ERC

European Research Council
Established by the European Commission

Italian Performance -Data and figures *

- Tot. contribution: 1.352.517
- Tot. number of coordinated projects: 879

Coordinated projects: 5,1% - **45 proj.**
EC contribution: 4,7%
Success rate (participants): 5.1%

Coordinated projects: 22,5% - 198 proj.
EC contribution: 22,9%
Success rate (participants) : 12,5%

- Assigned (M€): 64.769
- IT Contribution in ERC(M€): 171.395
- Assigned-financed: **-106.625**

Highest IT loss in H2020

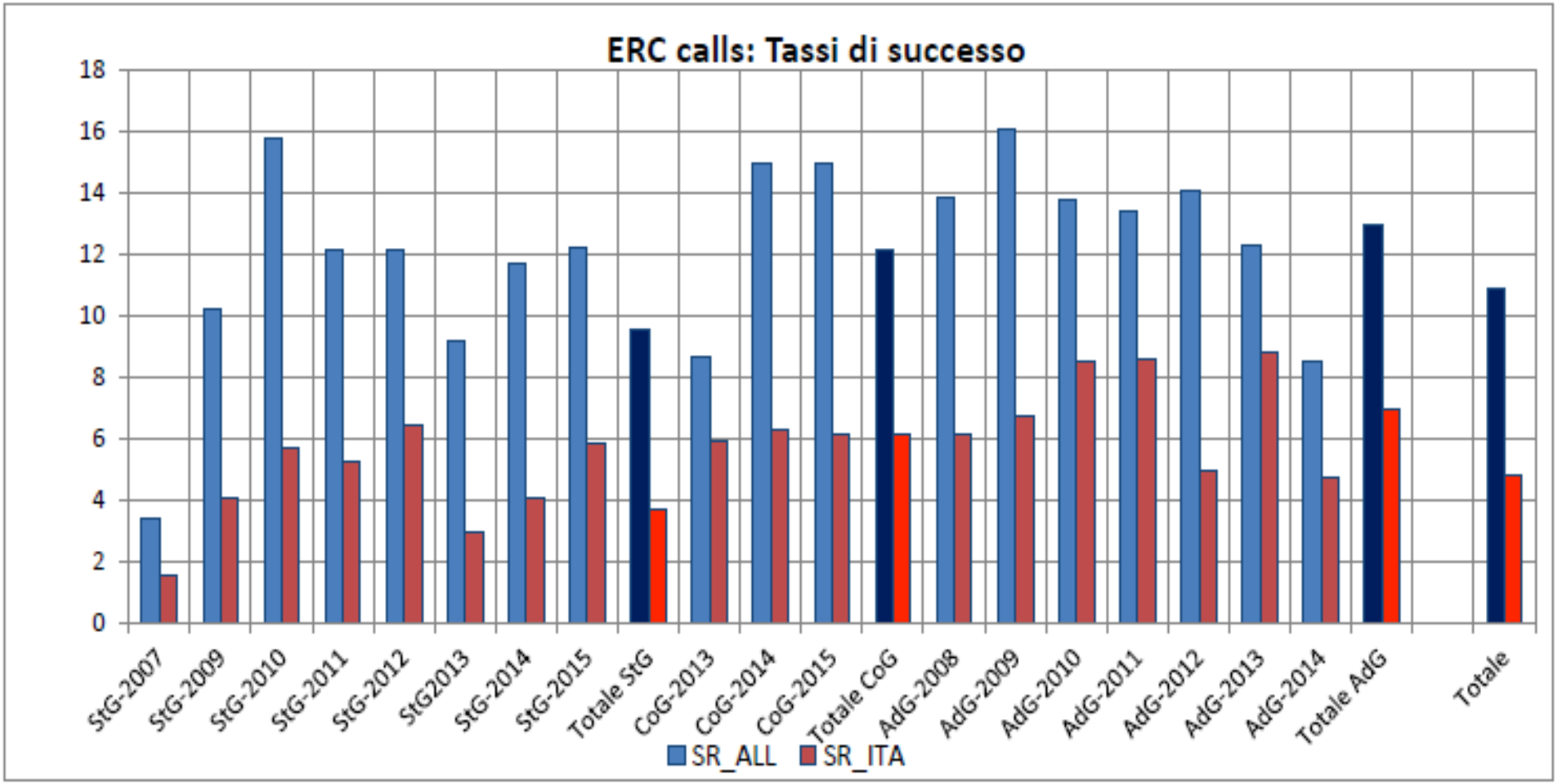
45 projects include:Starting & Consolidator Grants 2014-2015, Advanced Grant 2014 among all the three domains Physical Sciences and Engineering, Social Sciences and Humanities, Life Sciences

*Updated 25/01/2016 - Horizon 2020 data

European Research Council - ERC

European Research Council
Established by the European Commission

Fig. II.3.3.6 Tassi di successo di tutte le calls ERC StG, CoG e AdG dal 2007 al 2015 (esclusa la call AdG-2015).



(Fonte: https://erc.europa.eu/projects-and-results/statistics)

European Research Council - ERC

European Research Council
Established by the European Commission

	Proposal n°	Project n°[HI]	Success Rate
UK	9.496	1.297	13,7
DE	6.254	873	14,0
FR	4.857	762	15,7
NL	3.430	509	14,8
IT	6.839	330	**4,8**

ERC grants per country and success rate calls 2007-2015(StG, CoG, AdG active or closed at 04/2016; AdG-2015 excluded)

Panel PE2: average success rate 8,5%

Italy	Starting	Consolidator	Advanced	Tot
PE2	18	6	13	37

(AdG 2015 data included)

European Research Council - ERC

European Research Council
Established by the European Commission

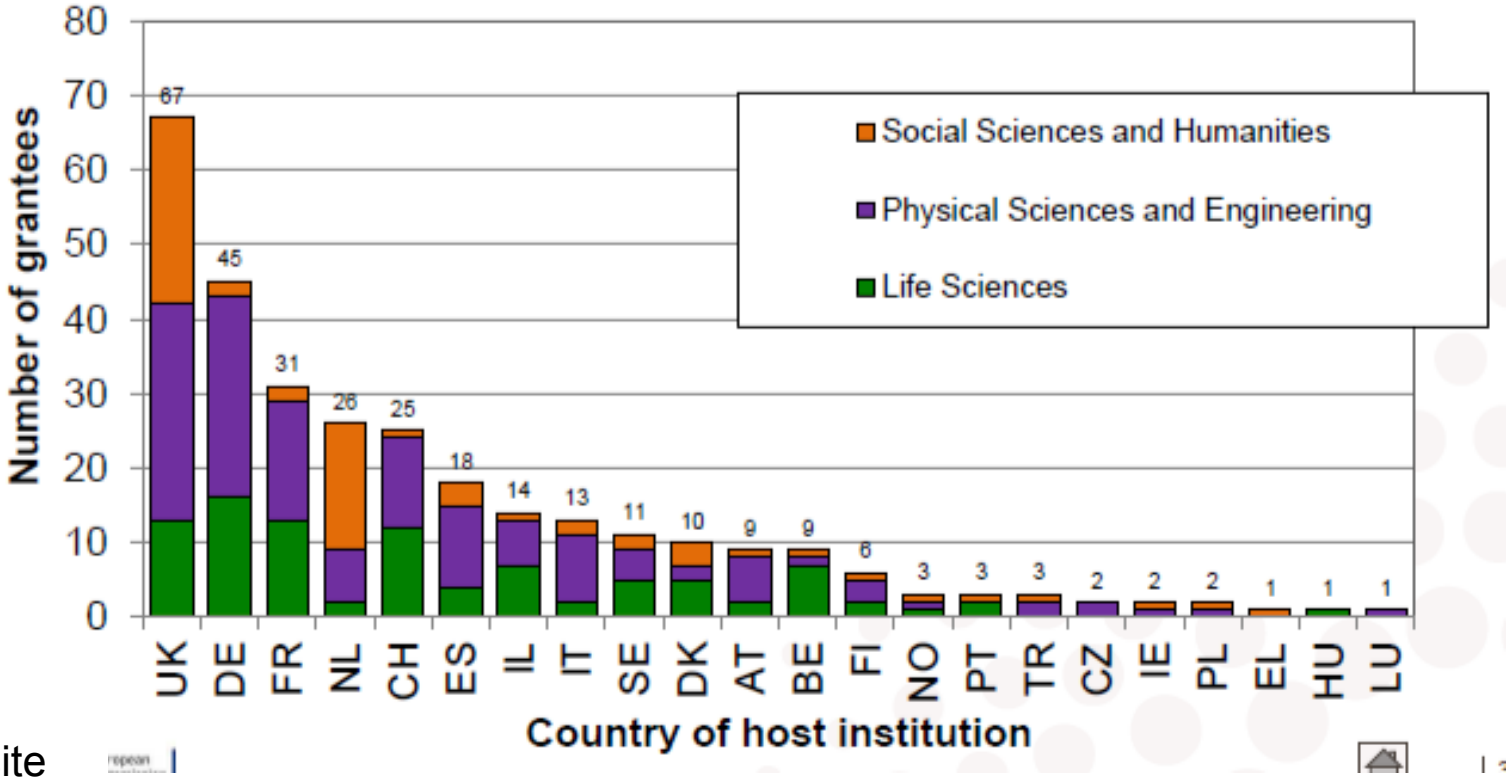
Host Institution	Tasso di successo	StG	CoG	AdG	PoC	Totale
Consiglio Nazionale delle Ricerche	4,5	16	5	4	1	**26**
Università degli Studi di ROMA "La Sapienza"	5,9	11	1	9	1	**22**
Università Commerciale "Luigi Bocconi" MILANO	20,3	10	2	9	0	**21**
Università degli Studi di TRENTO	7,5	10	2	5	3	**20**
Politecnico di MILANO	7,3	4	6	6	1	**17**
European University Institute	16,9	5	0	10	0	**15**
Università degli Studi di PADOVA	5,1	7	4	3	1	**15**
Scuola Internazionale Superiore di Studi Avanzati TRIESTE	18,2	4	2	8	0	**14**
Università degli Studi di ROMA "Tor Vergata"	8,8	4	0	8	1	**13**
Fondazione Istituto Italiano di Tecnologia	15,9	5	4	1	0	**10**
Università degli Studi di MILANO	3,7	5	2	3	0	**10**
Istituto Nazionale di Fisica Nucleare	5,2	3	2	4	0	**9**

European Research Council - ERC

Consolidator Grant 2015 - Results

European Research Council
Established by the European Commission

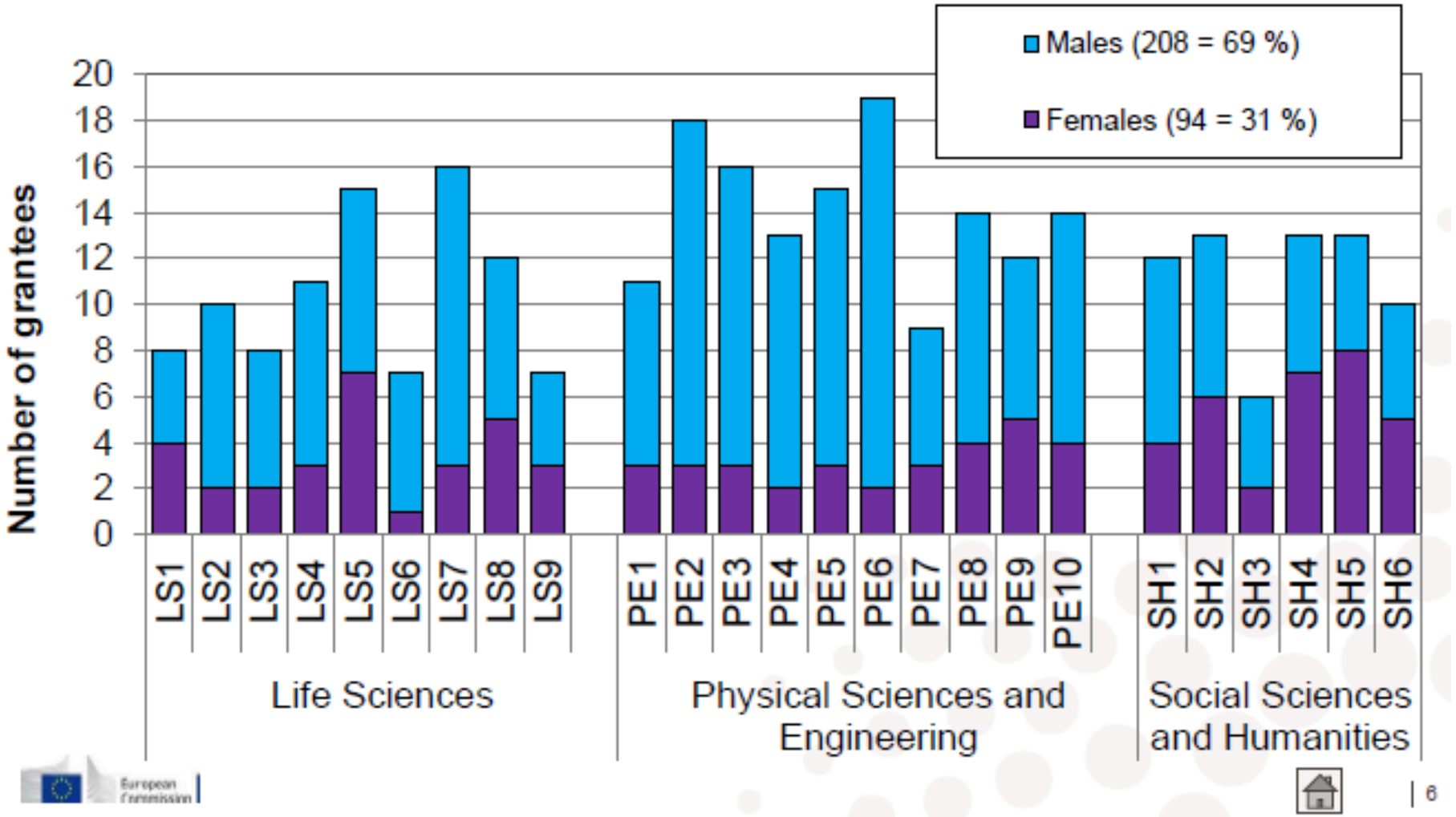
	Submitted	Selected
Life Sciences:	627	94
Physical Sciences &Engineering:	959	141
Social Sciences and Humanities:	465	67
Totale	2051	302



Source: ERC website

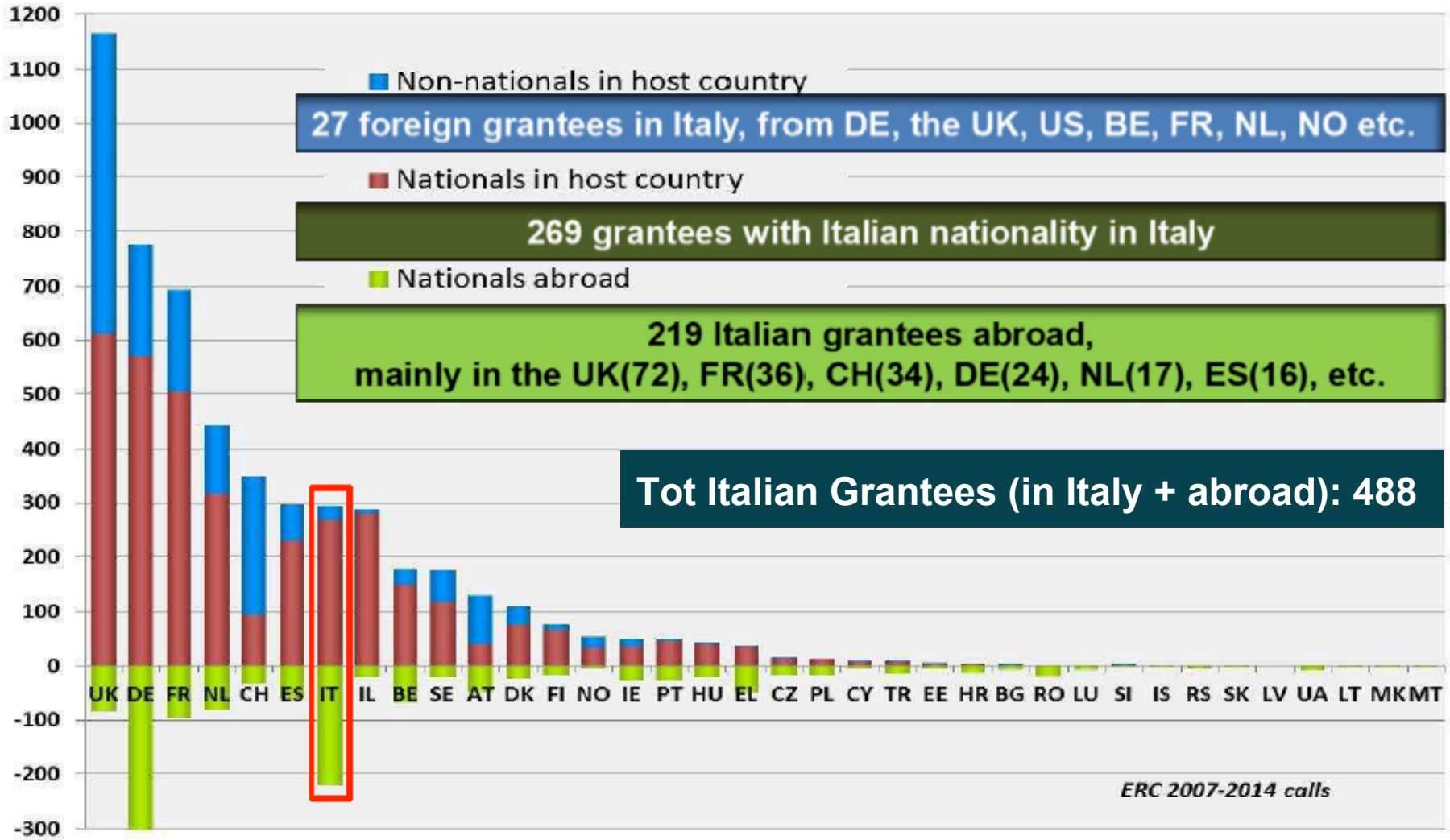
European Research Council - ERC

Consolidator Grant 2015 - Gender



Source: ERC website

Overall FP7 – H2020 ERC Calls
Grantees at Home and Abroad



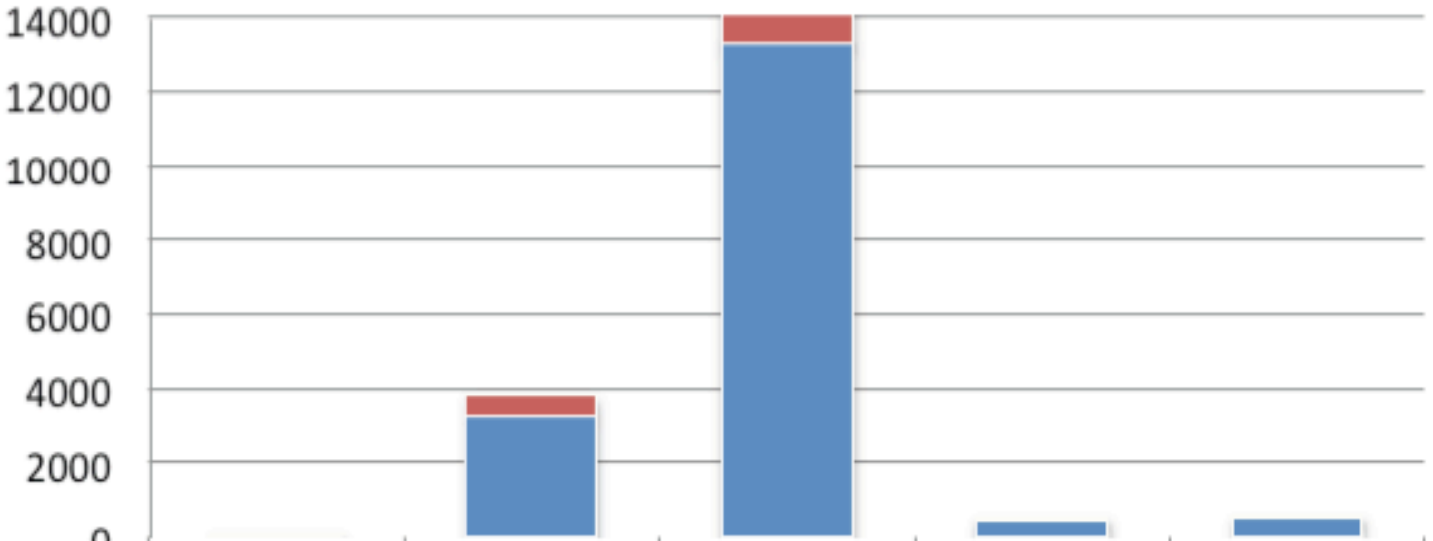
Slide: Daniela Corda

Marie Sklodowska Curie Actions - MSCA

Individual Fellowships 2014-2015

Participations by *type of organization*

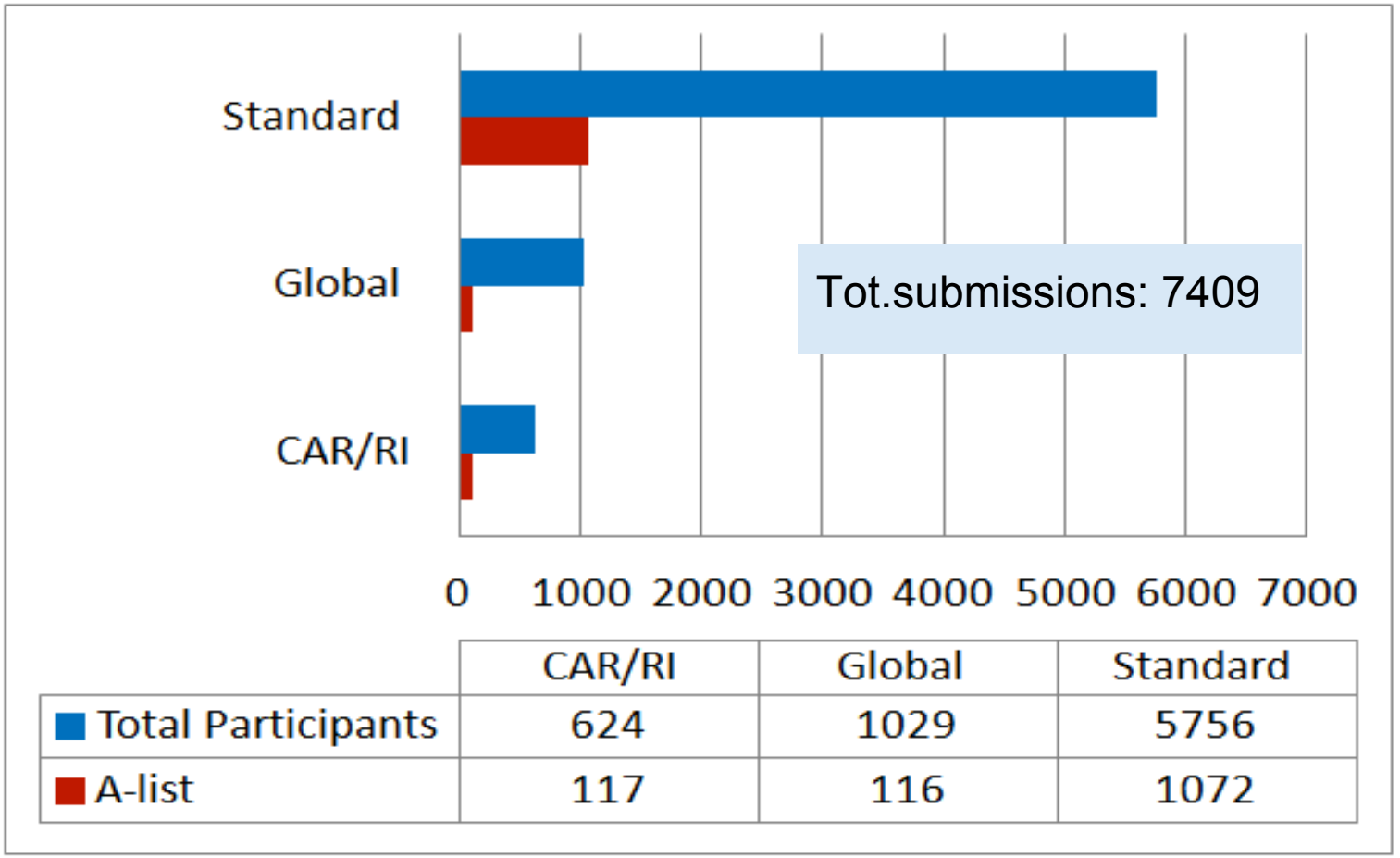
HES Total participants are about 10.000 more than the tot REC participants.
However the ratio: Participants in Retained proposals / Tot participants is near the same. HES: 15,2% vs. REC: 16,6%



	Public Body (excl. research and education)	Research Organisations	Higher or Secondary Education	Private for Profit (excl. education)	Others
Participants in Retained Proposals	7	551	2027	45	63
Total Participants	79	3312	13358	506	539

Marie Sklodowska Curie Actions - MSCA

IF 2014



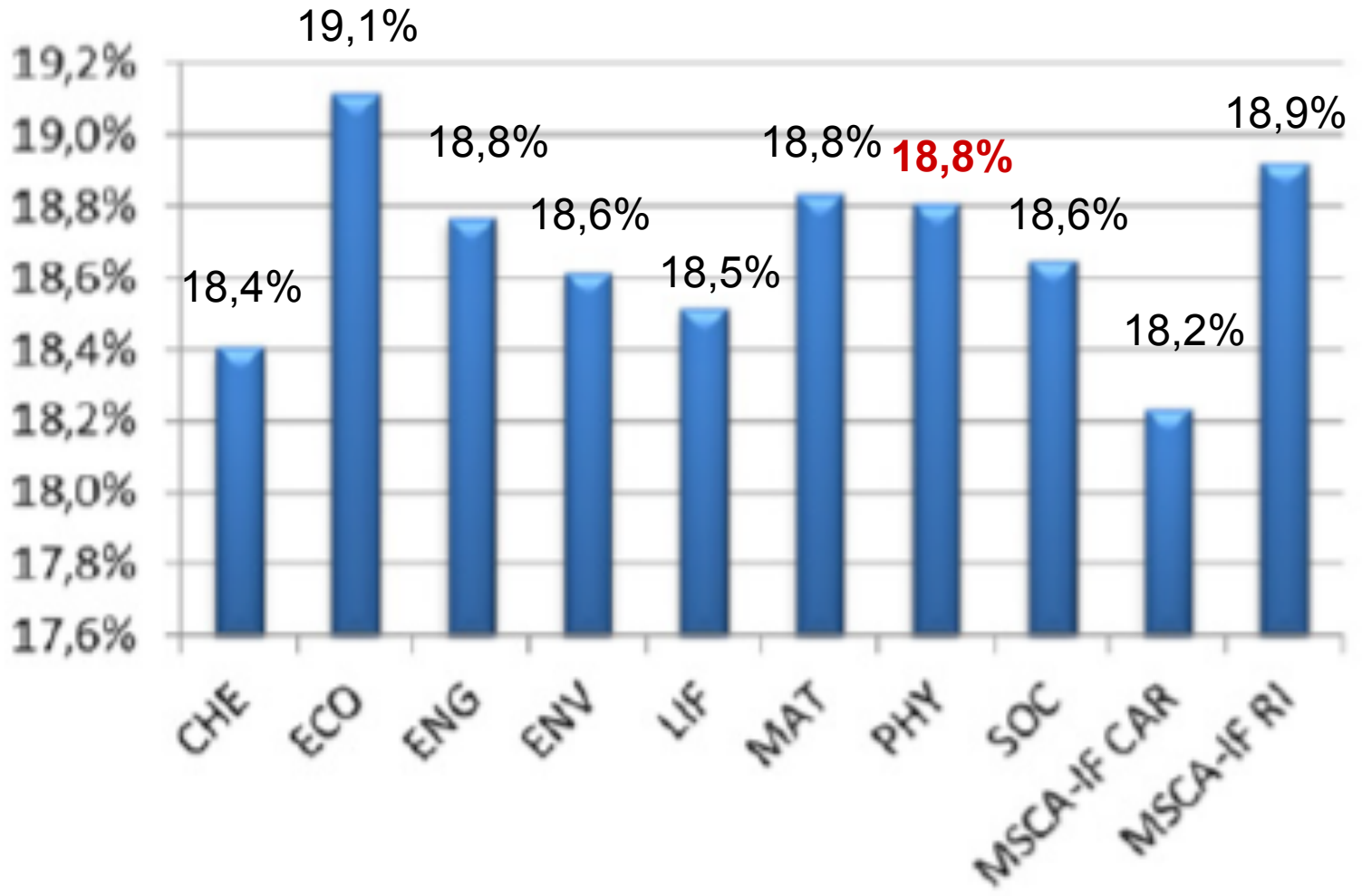
	CAR/RI	Global	Standard
Total Participants	624	1029	5756
A-list	117	116	1072

Success rate		
ST	CAR/RI	GF
18,62%	18,75%	11,27%

Marie Sklodowska Curie Actions - MSCA

Individual Fellowship 2014

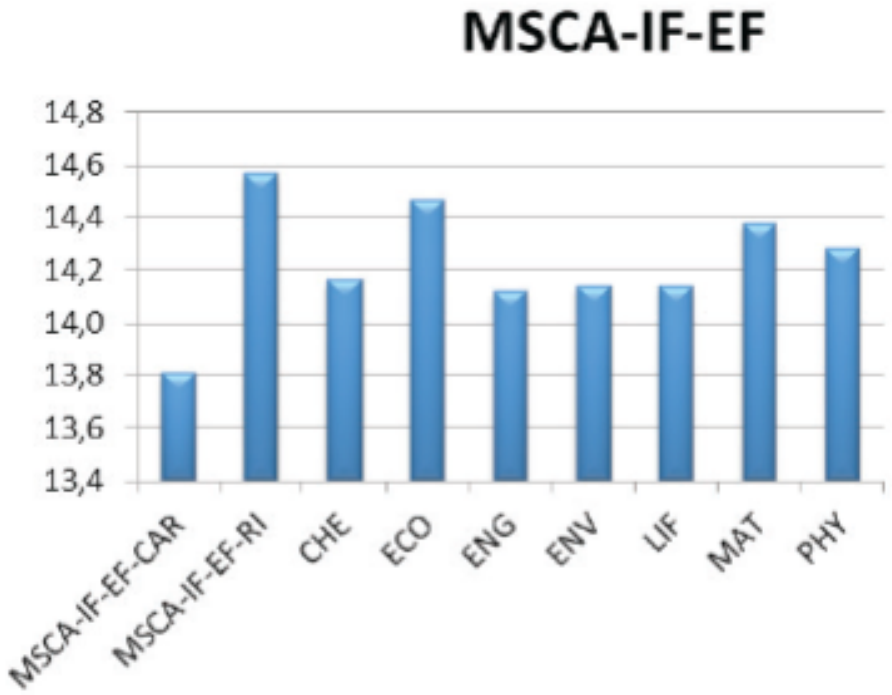
Success rate - EF panels

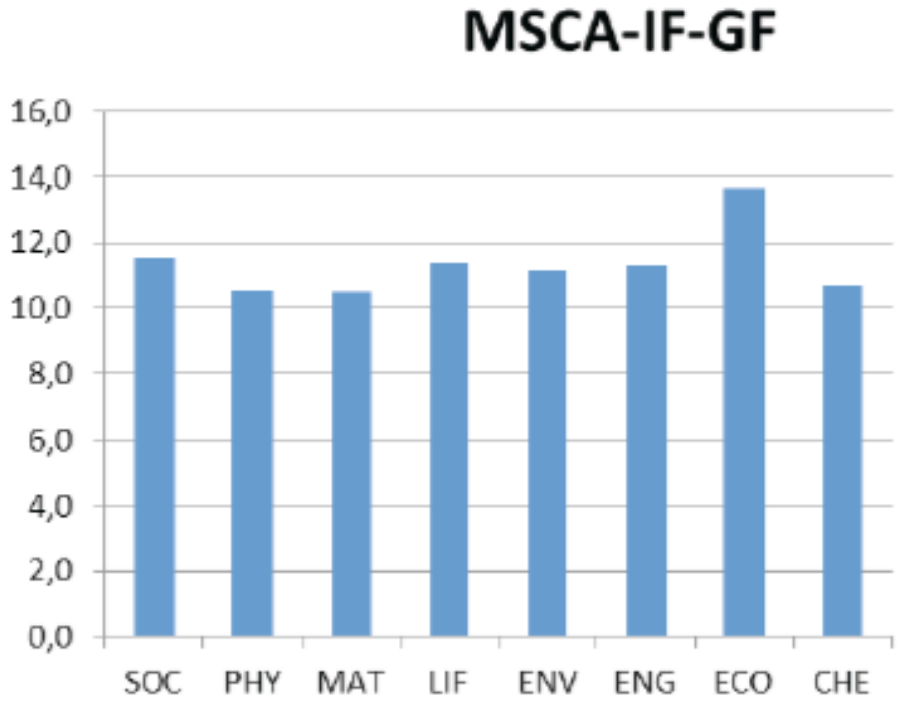


Marie Sklodowska Curie Actions - MSCA

Individual Fellowship 2015

Success rate - EF & GFpanels



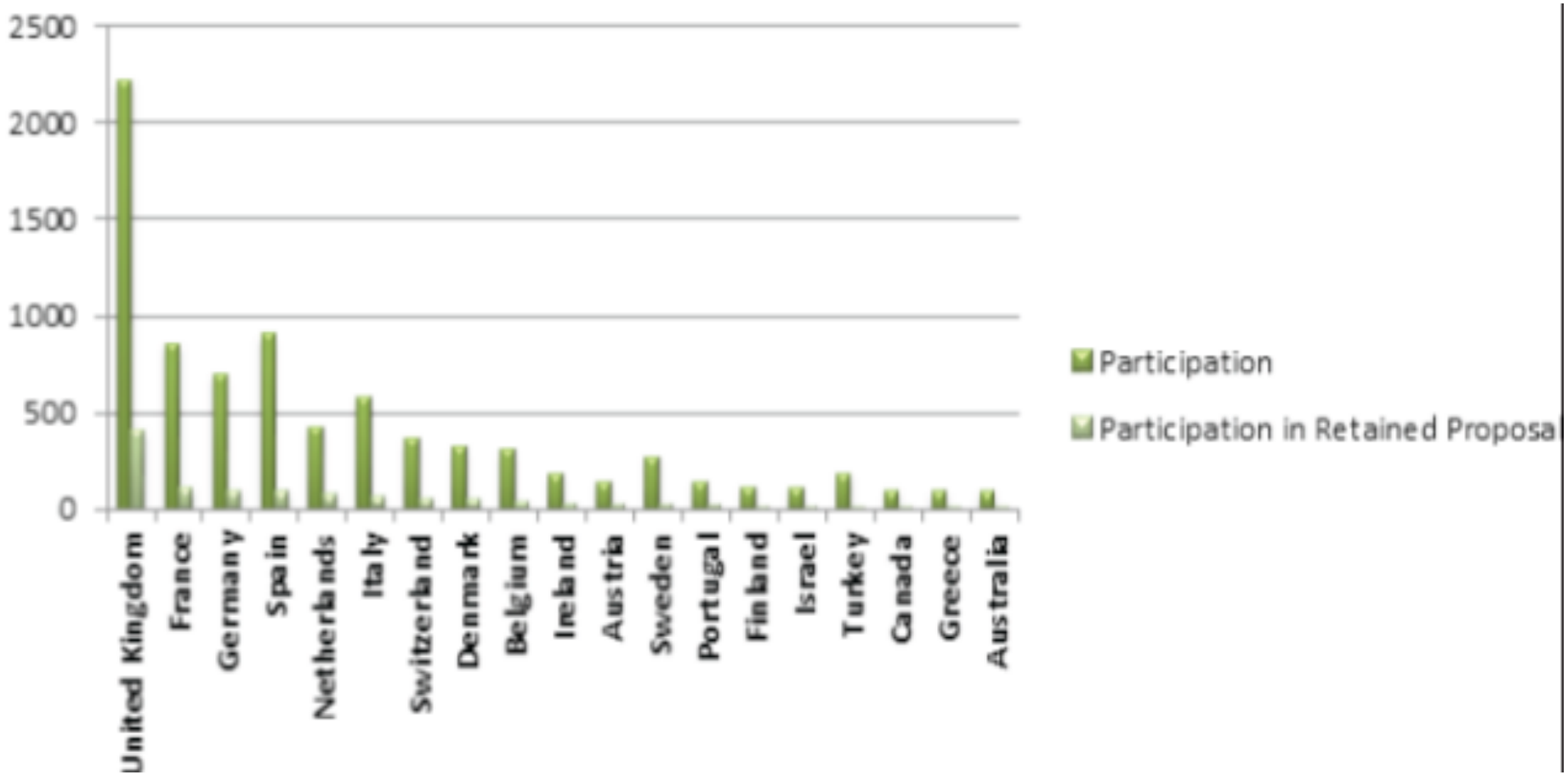


Tot. Submitted: 8380
Funded projects: 1163
SR tot.: 13,9%

Marie Sklodowska Curie Actions - MSCA

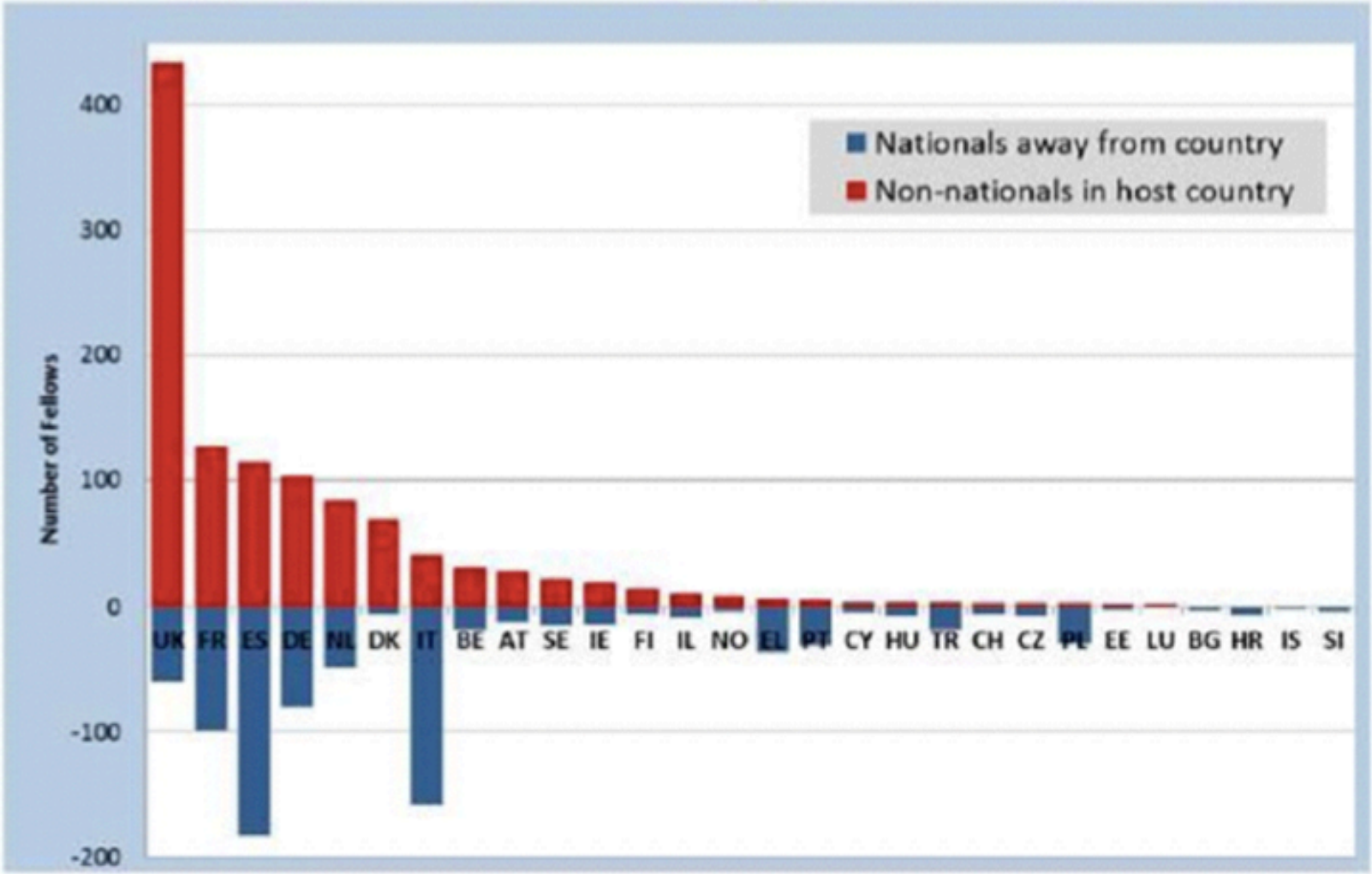
Individual Fellowship 2015

Italy: 61 projects funded
UK: 412 proects funded



Marie Sklodowska Curie Actions - MSCA

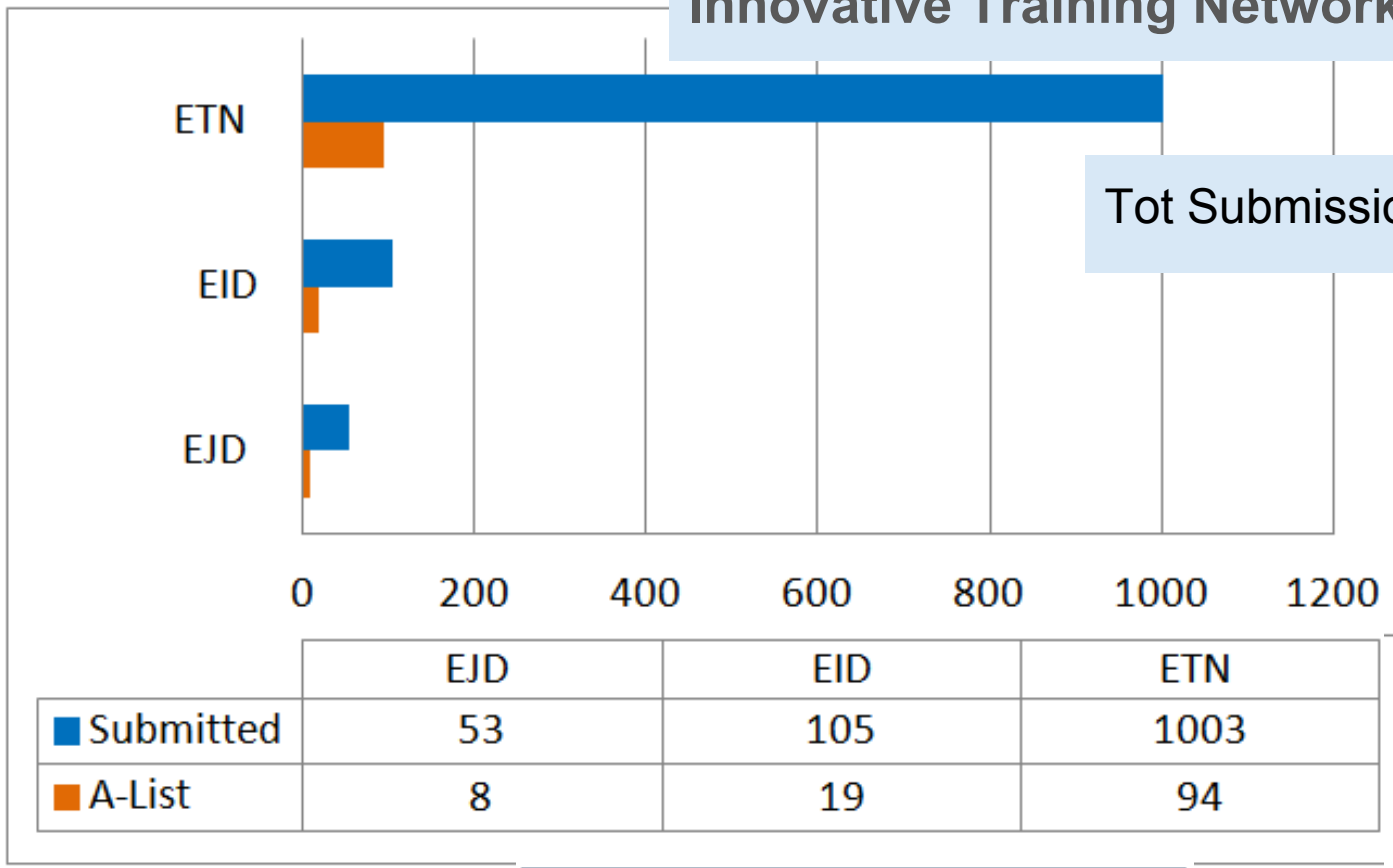
IF-EF 2014: Mobility of researchers



	UK	FR	ES	DE	NL	DK	IT	BE	AT	SE	IE	FI	IL	NO	EL	PT	CY	HU	TR	CH	CZ	PL	EE	LU	BG	HR	IS	SI
Non-nationals in host country	434	127	114	103	84	69	42	32	29	23	20	15	11	9	7	6	4	4	4	3	3	3	2	2	1	1	1	1
Nationals away from country	60	98	183	80	49	6	158	19	12	15	14	6	9	4	36	31	5	8	19	6	8	30	2	0	3	7	1	4

Marie Sklodowska Curie Actions - MSCA

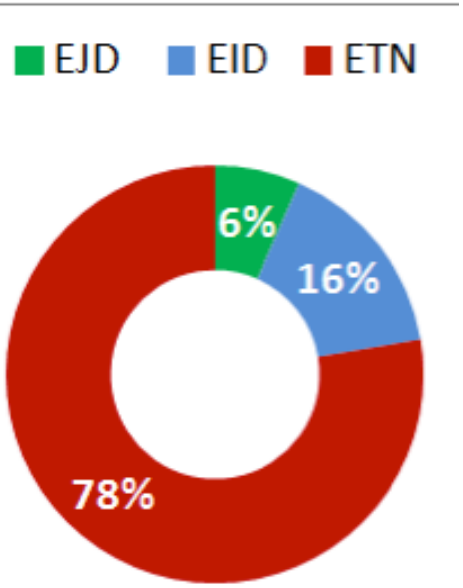
Innovative Training Networks 2014



Tot Submissions: 1161

	EJD	EID	ETN
Submitted	53	105	1003
A-List	8	19	94

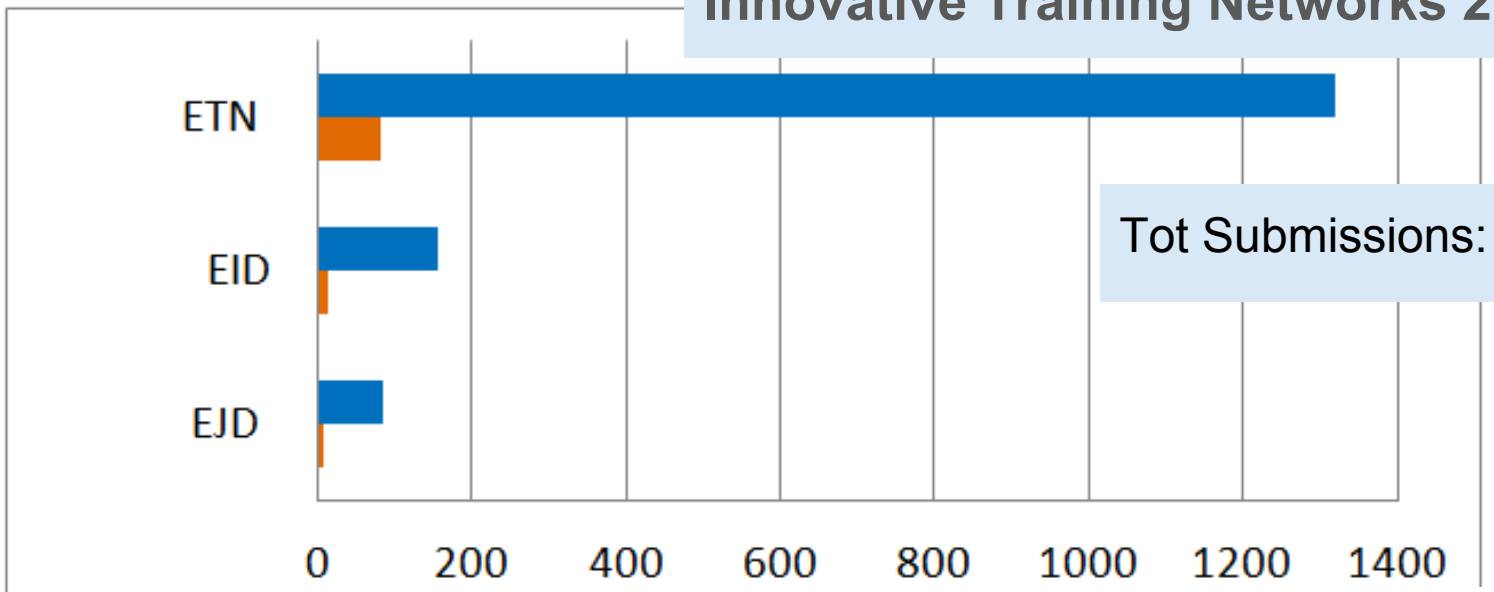
Success rate		
ETN	EID	EJD
9,4%	18,8%	15,4%



Italian coordination projects: 12 (ETN:9 - EID:1 - EJD:2)
Above threshold: 72

Marie Sklodowska Curie Actions - MSCA

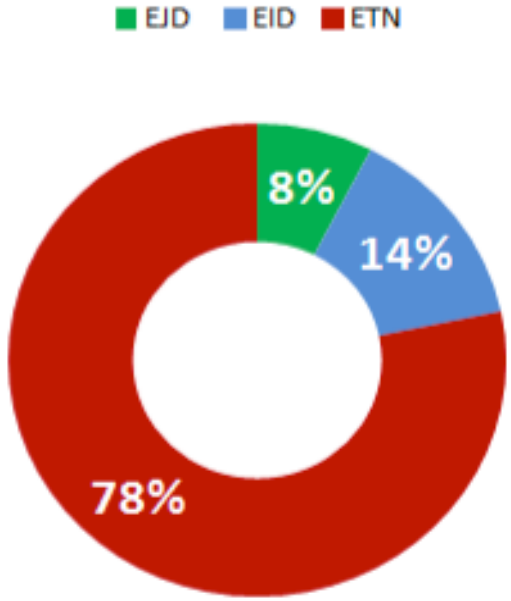
Innovative Training Networks 2015



Tot Submissions: 1563

	EJD	EID	ETN
Submitted	87	157	1319
A-List	8	15	83

Success rate		
ETN	EID	EJD
6,3%	9,6%	9,2%



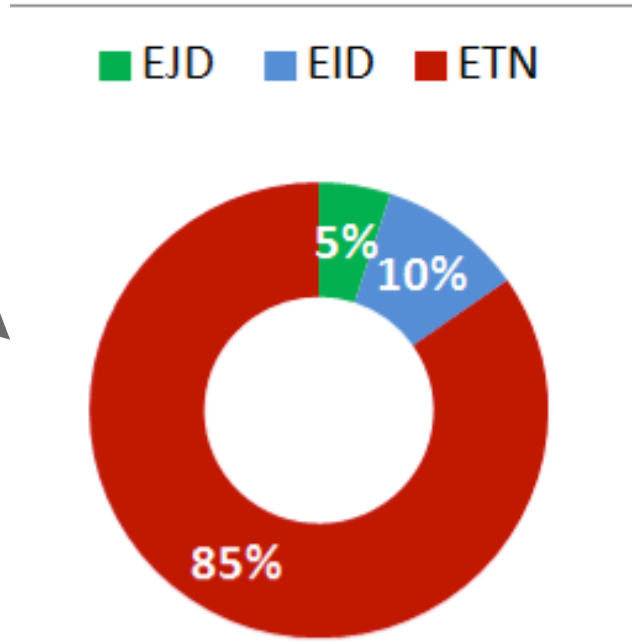
Italian coordination projects: 6 (ETN:4 - EID:1 - EJD:1)
Above threshold: 115

Marie Sklodowska Curie Actions - MSCA

Innovative Training Networks

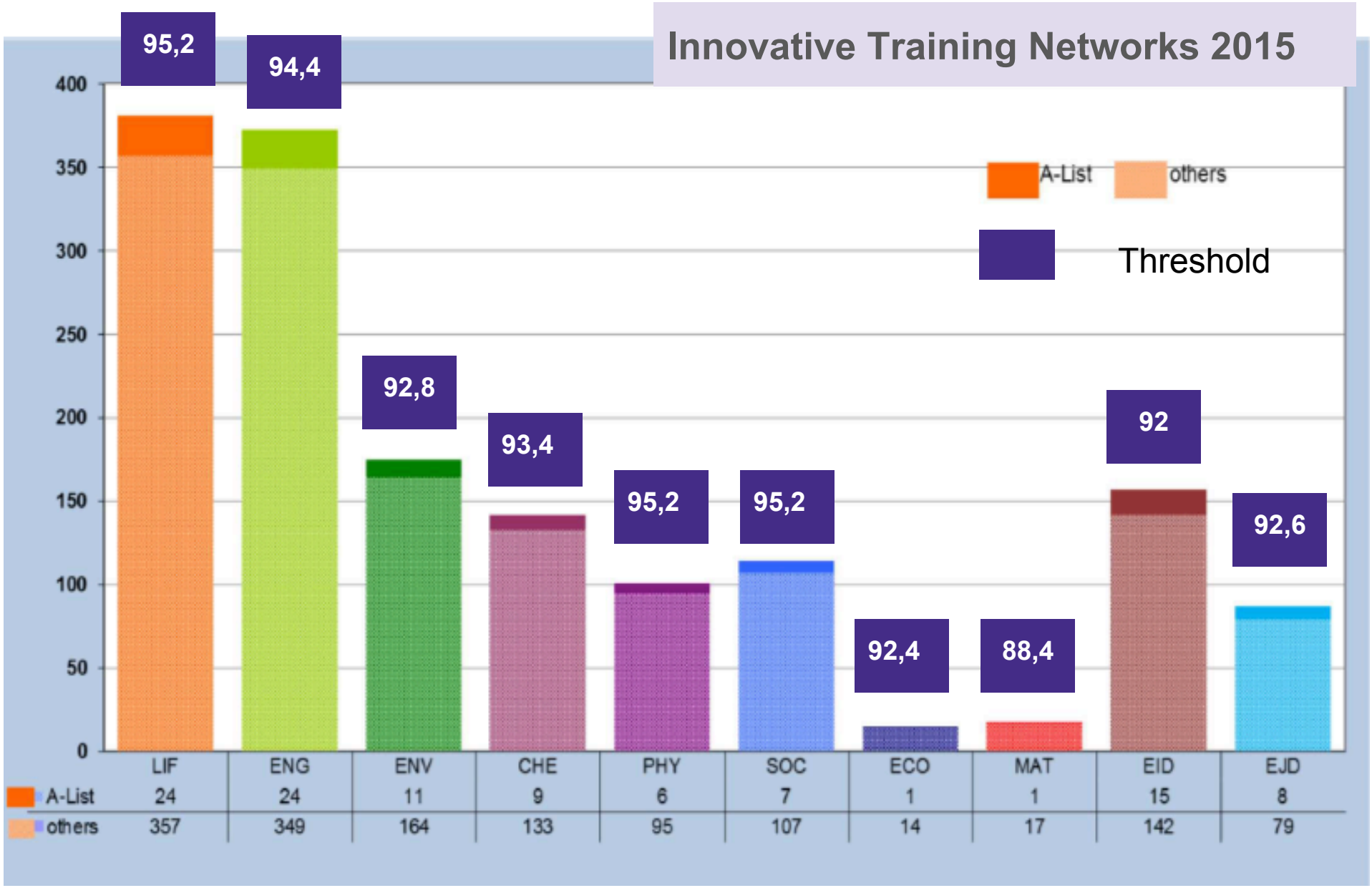
Increasing number of submissions comparing with 2014

2014	1161
2015	1563 (+402)
2016	1611 (+450)

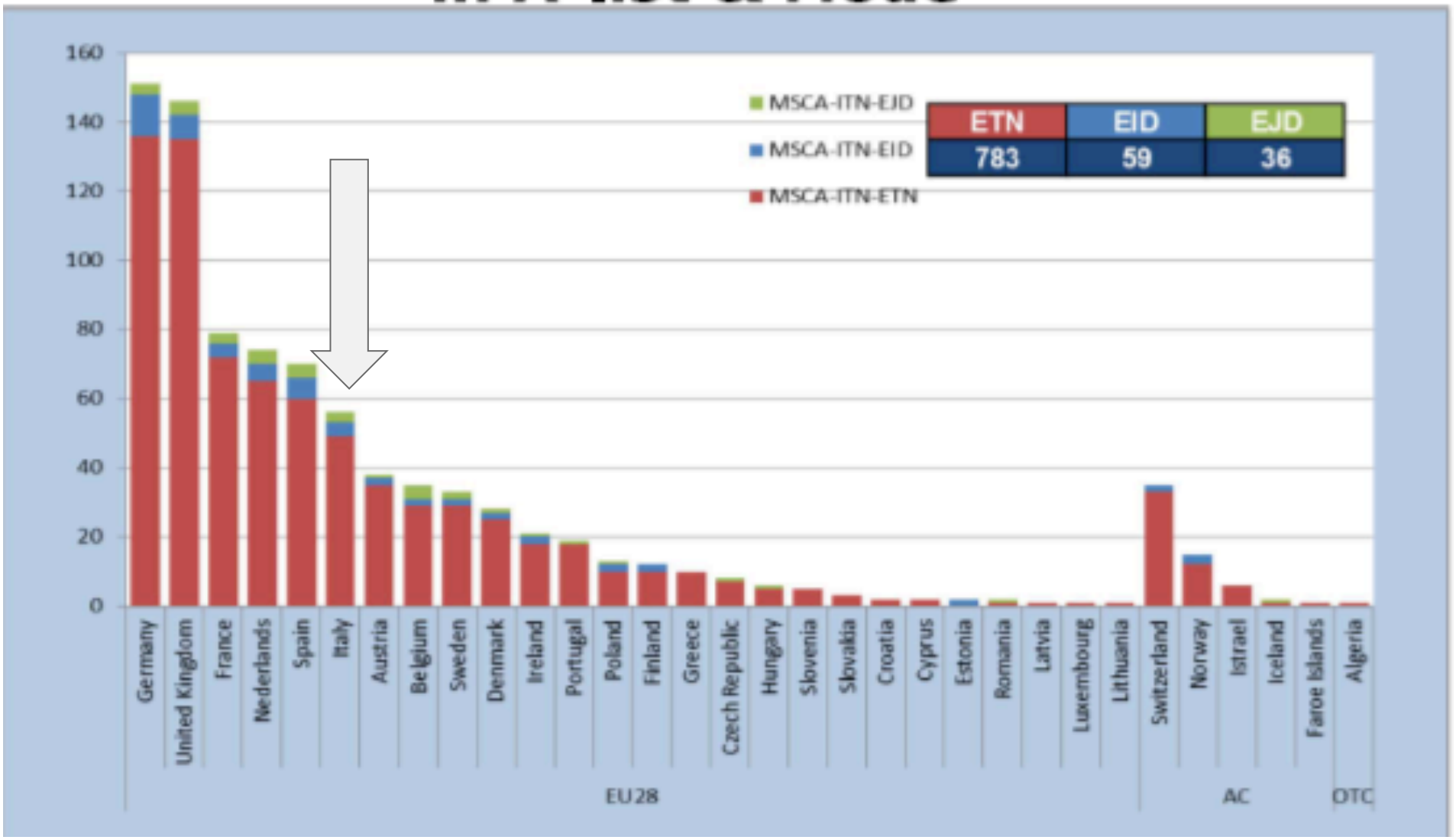


Submissions 2016

Marie Sklodowska Curie Actions - MSCA



ITN 2015: Number of beneficiaries in A-list & Mode



Marie Sklodowska Curie Actions - MSCA

RISE - Staff Exchanges

Call 2015: 363 proposals received → +79% (+160 proposals) with respect to 2014

Proposals/ panel	Tot.	%
CHE	37	10%
ECO	17	5%
ENG	114	31%
ENV	51	14%
LIF	52	14%
MAT	11	3%
PHY	41	11%
SOC	40	11%

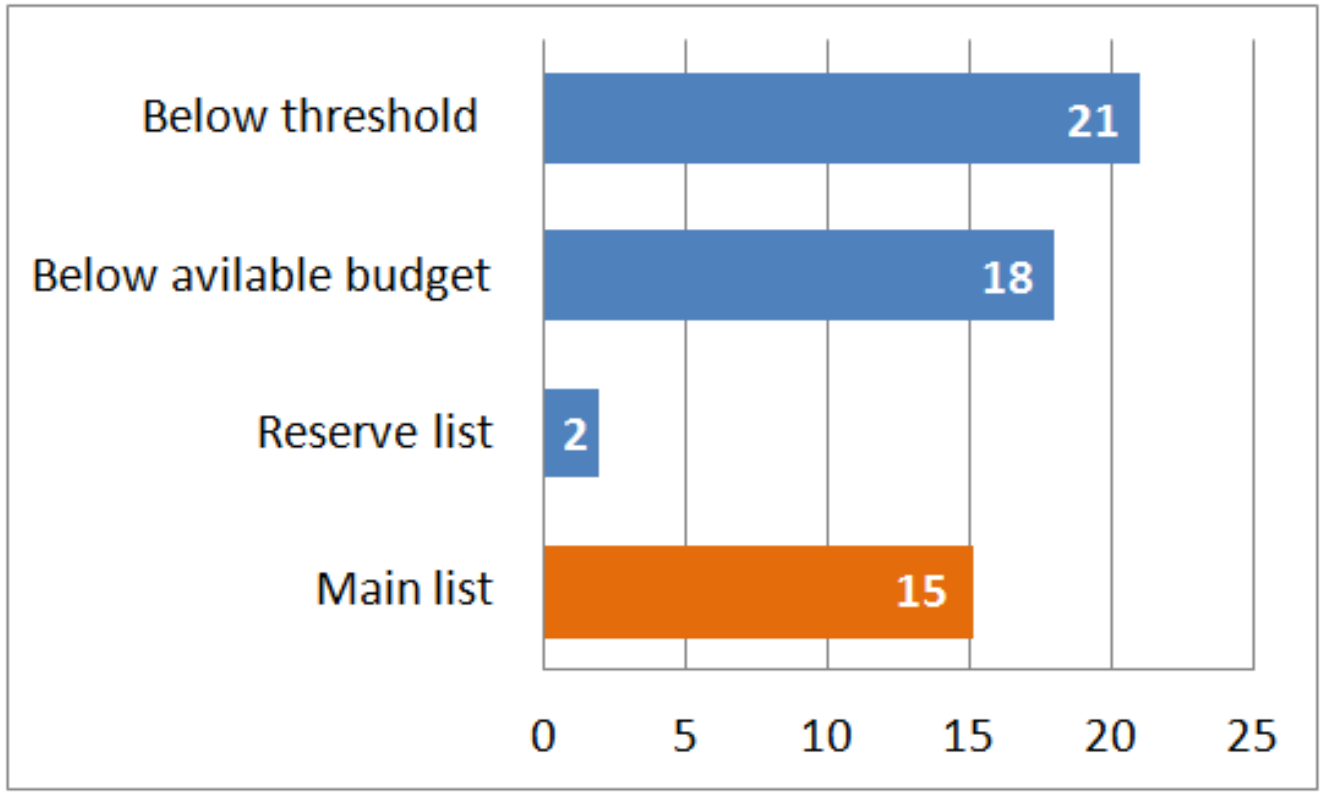
Retained for funding → 89
Success rate 2015 → 24,7 %
Successa rate 2014 → 42,0 %

n° of participations in evaluated proposals → 3124
Average number of participants per proposal: **9**

Marie Sklodowska Curie Actions - MSCA

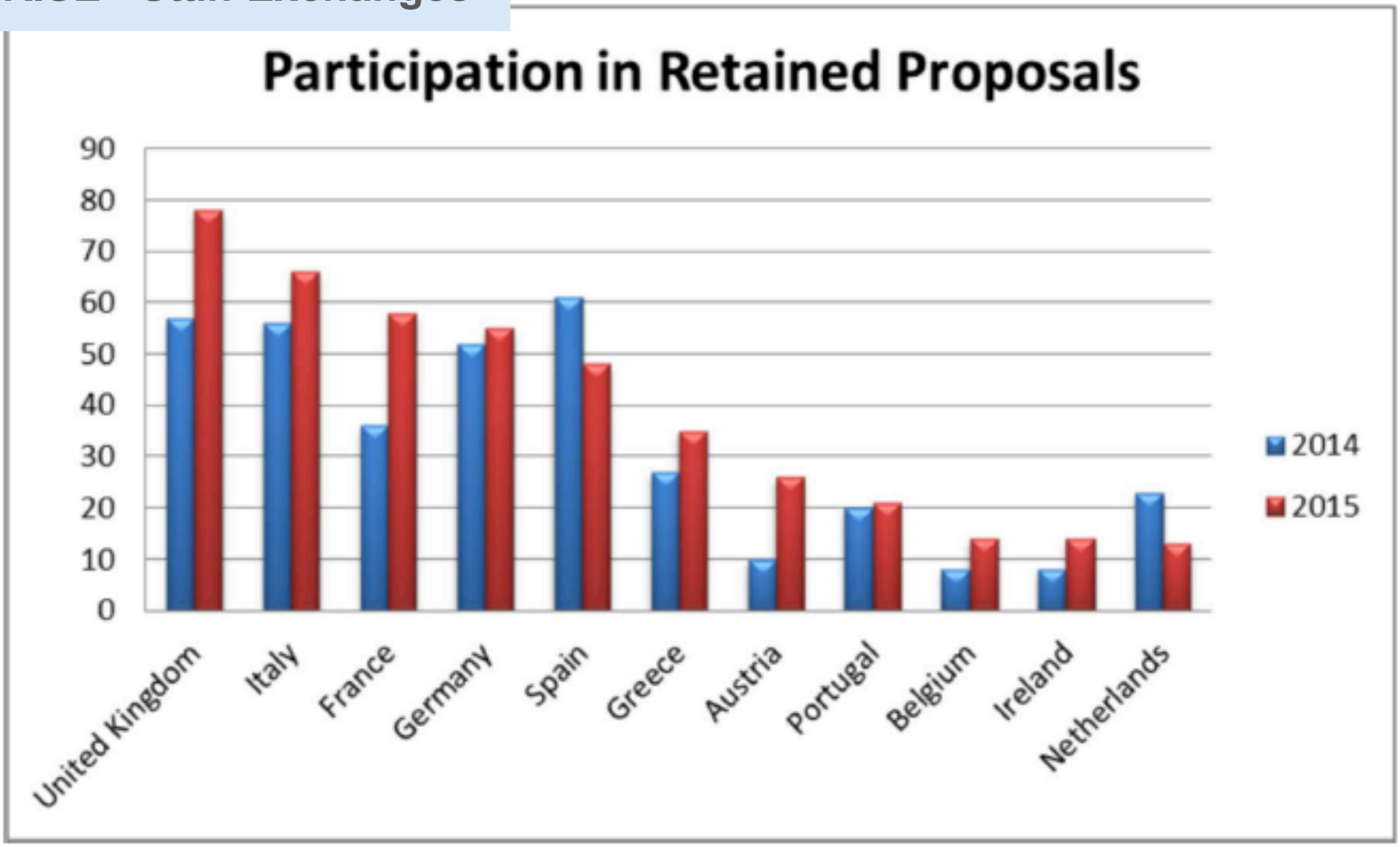
RISE - Staff Exchanges - 2015

Italian project **coordination**: 56 proposals evaluated, 15 funded → 26,7% S.R.



Marie Sklodowska Curie Actions - MSCA

RISE - Staff Exchanges



The first three positions are unchanged also considering the share of EU requested contribution in retained for funding proposals

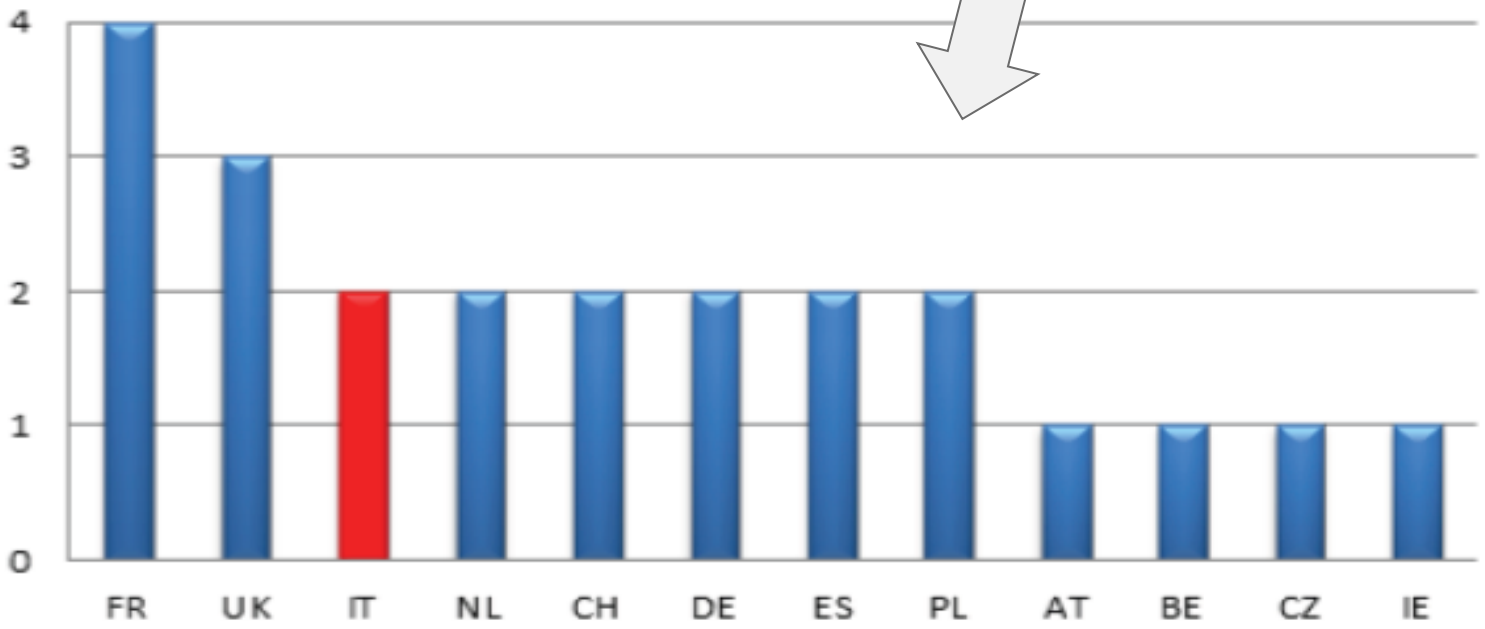
Marie Sklodowska Curie Actions - MSCA

COFUND		Evaluated	%	Retained	S.R.
2014	Doctoral	43	47,8%	11	25,6%
	Fellowship	47	52,2%	12	25,5%
	Tot.	90	100%	23	
2015	Doctoral	62	47,3%	11*	17,7%
	Fellowship	69	52,6%	13*	18,8%
	Tot.	131	100%	24 *	

*source cordis, signed G.A.

Marie Sklodowska Curie Actions - MSCA

COFUND		Evaluated	%	Retained	S.R.
2014	Doctoral	43	47,8%	11	25,6%
	Fellowship	47	52,2%	12	25,5%
	Tot.	90	100%	23	



Future and Emerging Technologies - FET

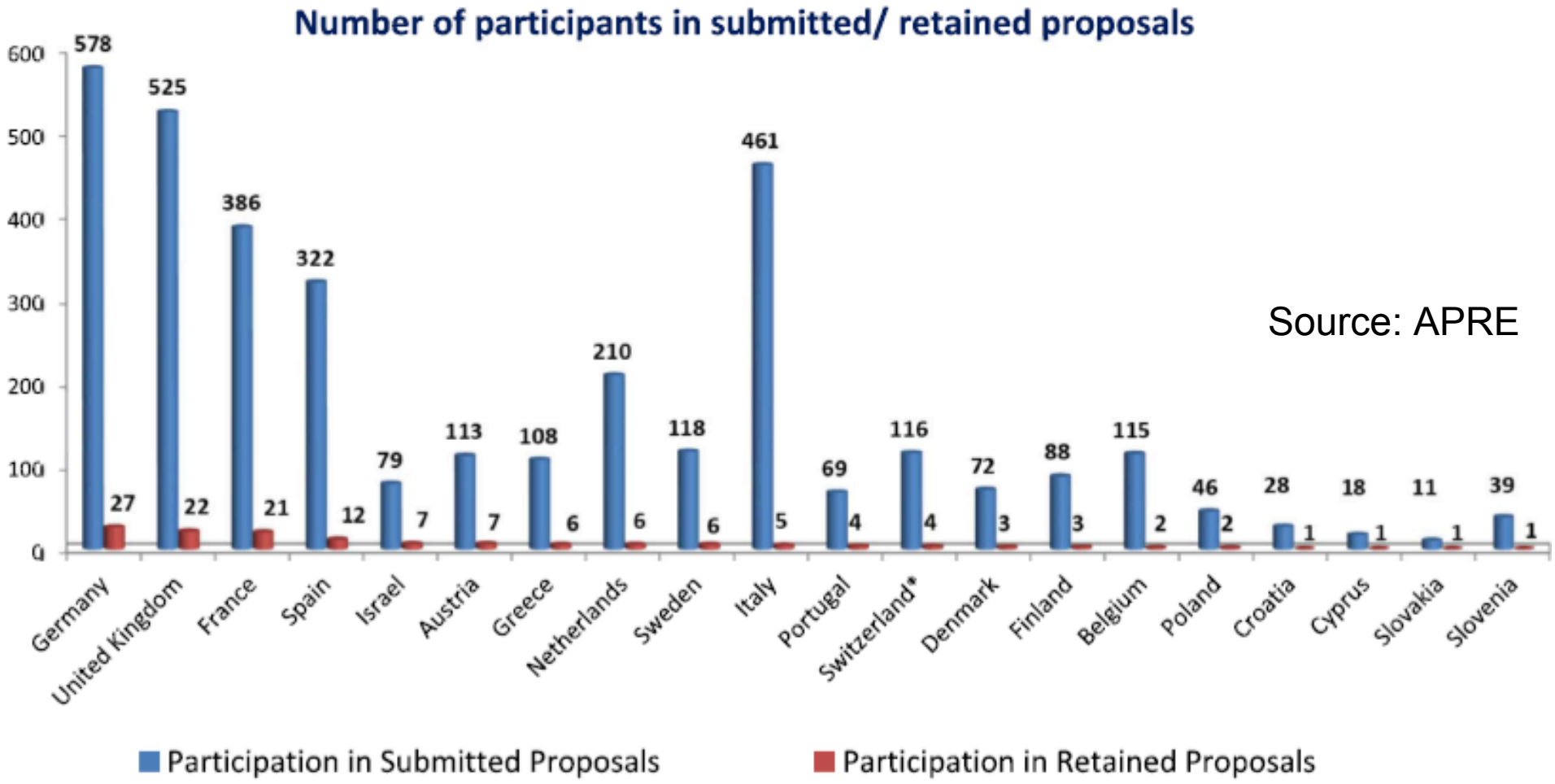
Research and Innovation Actions (RIA) 2014-2015

First Cutoff	Second Cutoff	Third Cutoff
78,1M€	38,5 M€	38,5 M€
643 Submitted	670 Submitted	800 Submitted
Retained 24	Retained 11	Retained 11
Below Threshold 389	Below Threshold 344	Below Threshold 454
Success rate: 3,7%	Success rate: 1,7%	**Success rate: 1,4%**
Cut 4,65	Cut 4,9	

Resubmission from cut-off 1: ~ 30%

Future and Emerging Technologies - FET

First Cutoff date

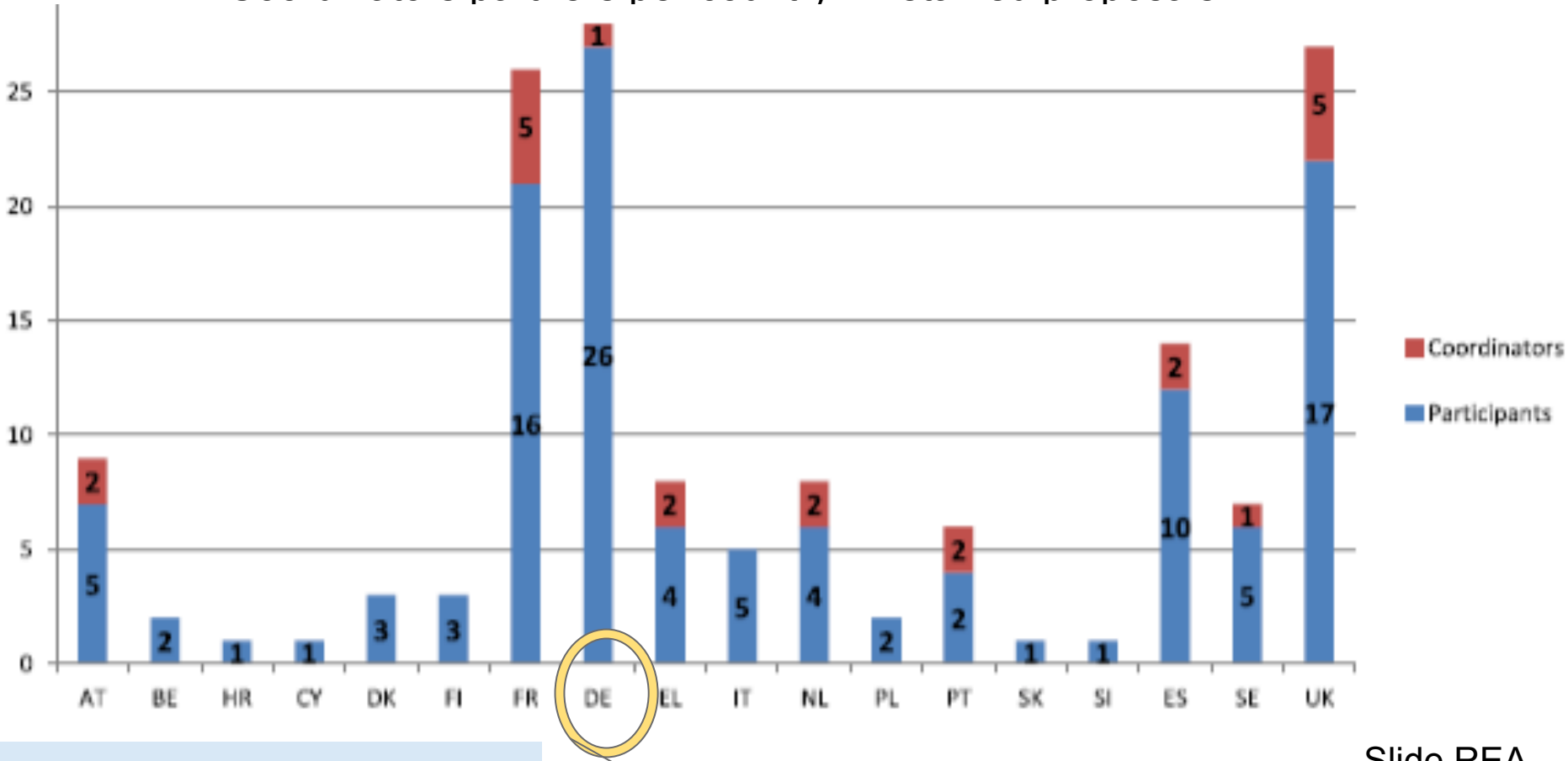


Source: APRE

Future and Emerging Technologies - FET

First Cutoff date

Coordinators/partners per country in retained proposals



FET collaborative dimension

Slide REA

DE case: high participation in retained proposals. Just 1 coordinated project among 27

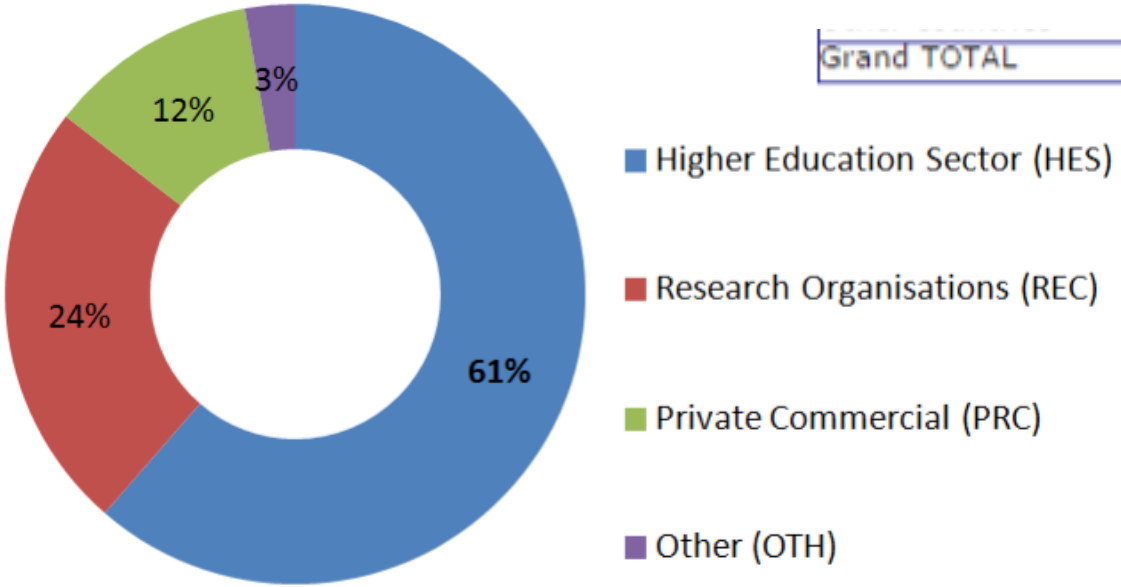
Future and Emerging Technologies - FET

First Cutoff date

A total of 145 participations in the 24 retained proposals

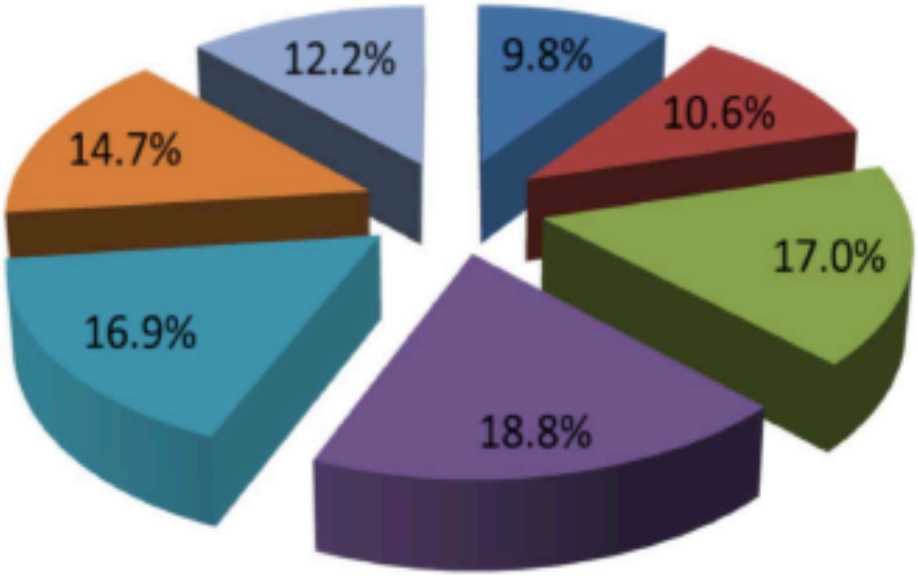
On average: 6 partners/project and 3,3 M€ average grant size

Country	Participation	Participation in Retained Proposals	%
Germany	578	27	4,7%
United Kingdom	525	22	4,2%
Italy	461	5	1,1%
France	386	21	5,4%
Spain	322	12	3,7%
Netherlands	210	6	2,9%
Sweden	118	6	5,1%
Switzerland	116	4	3,4%
Belgium	115	2	1,7%
Austria	113	7	6,2%
Greece	108	6	5,6%
Finland	88	3	3,4%
Israel	79	7	8,9%
Denmark	72	3	4,2%
[…]			
Grand TOTAL	3.952	145	3,7%



FET OPEN - overview of topics covered*

First Cutoff date



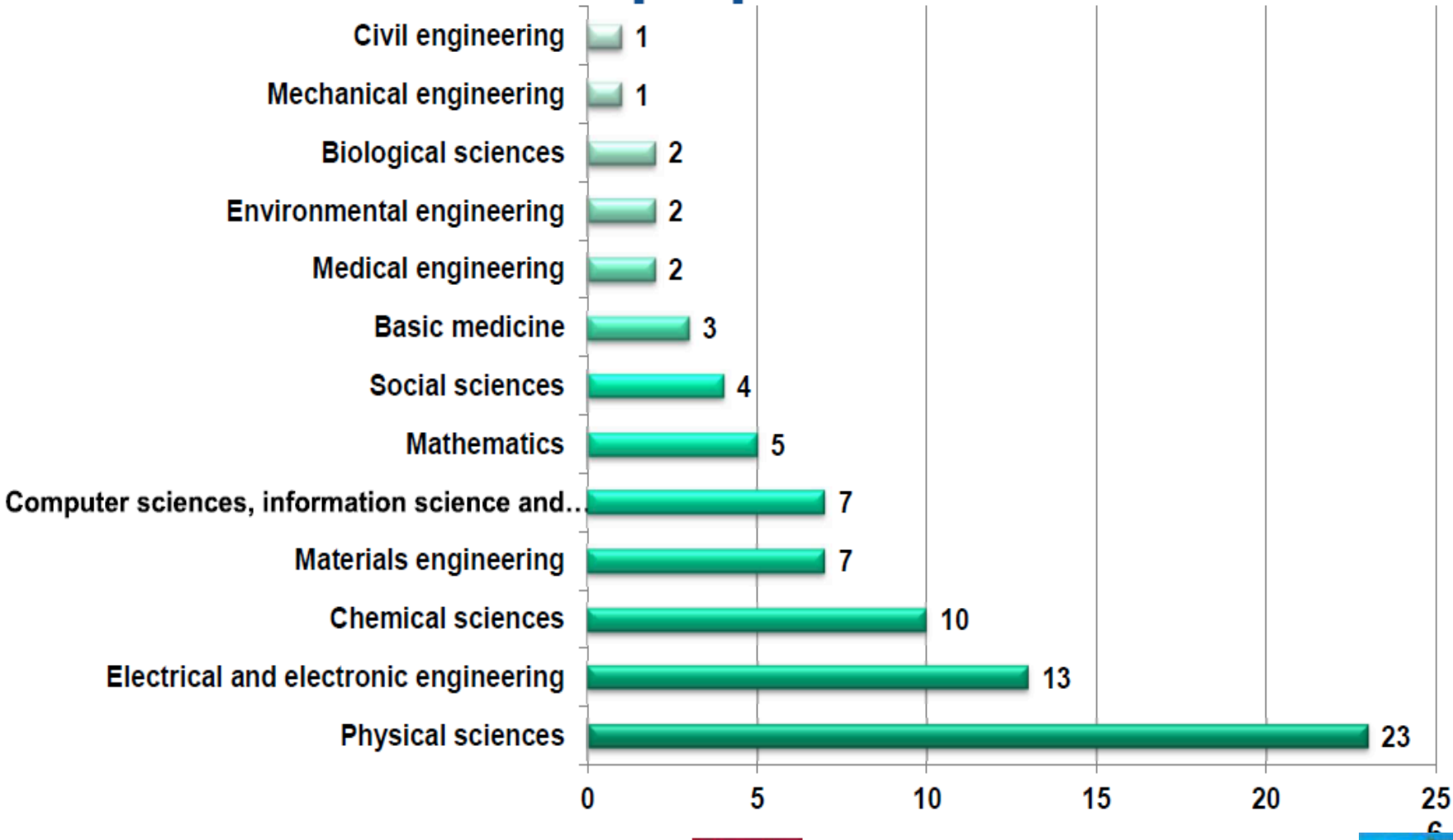
- Energy, Transport, Environment
- Bio-Robotics and HCI
- Life Science, Medicine, Biology, NeuroBio
- Electronics, Telecom, Optics, Hardware, Sensors, Devices
- Computer Science, Bio-informatics, Complexity, Data mining
- Nanoscience, Quantum Physics, Astrophysics
- Materials, Chemistry

*first cut-off in 2014: 640 eligible RIA proposals - 77M€ budget - success rate ~3,75%

Research Executive Agency

Slide REA

Disciplines addressed by RIA retained for funding proposals

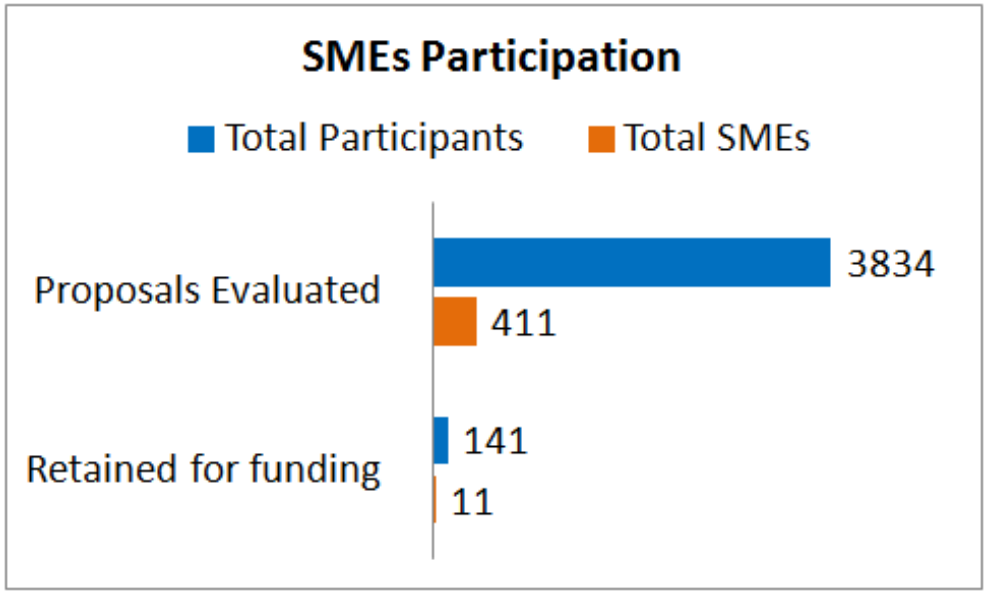


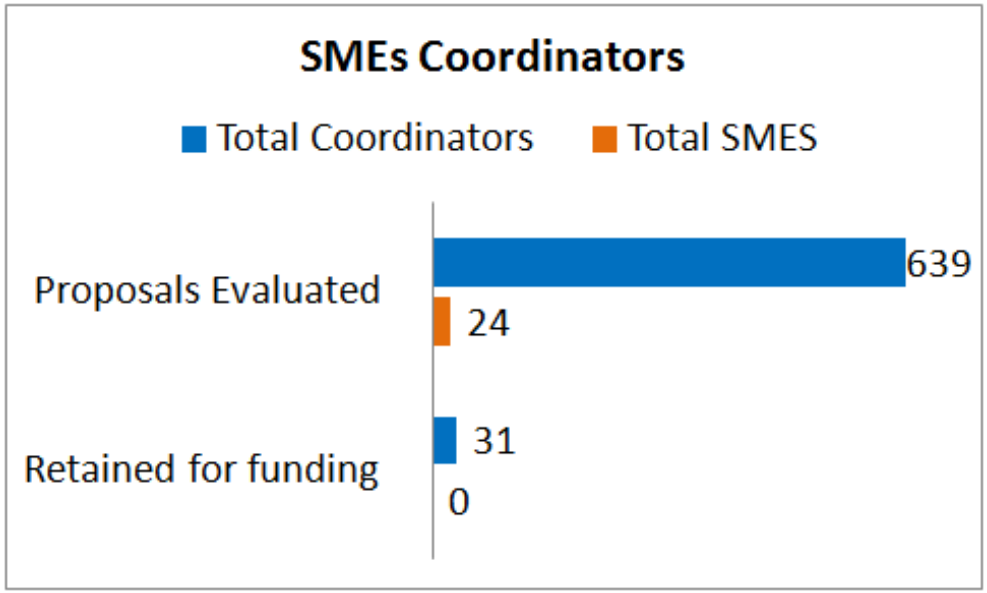
Research Executive Agency

Slide REA

Future and Emerging Technologies - FET

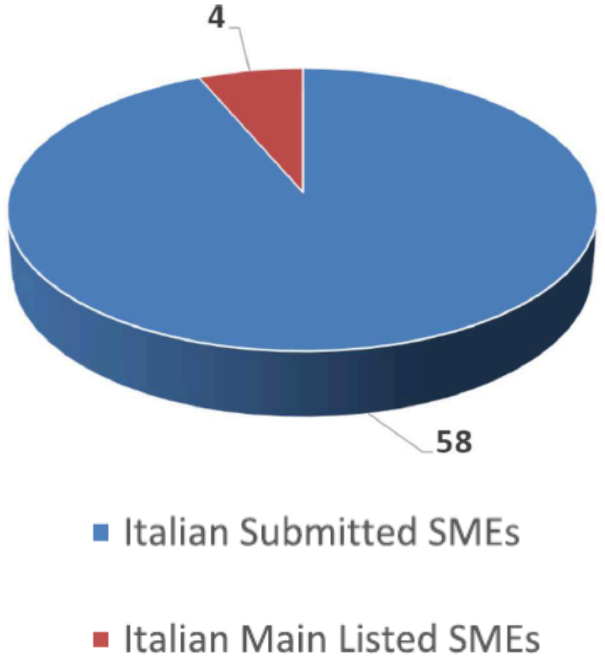
First Cutoff date - SMEs





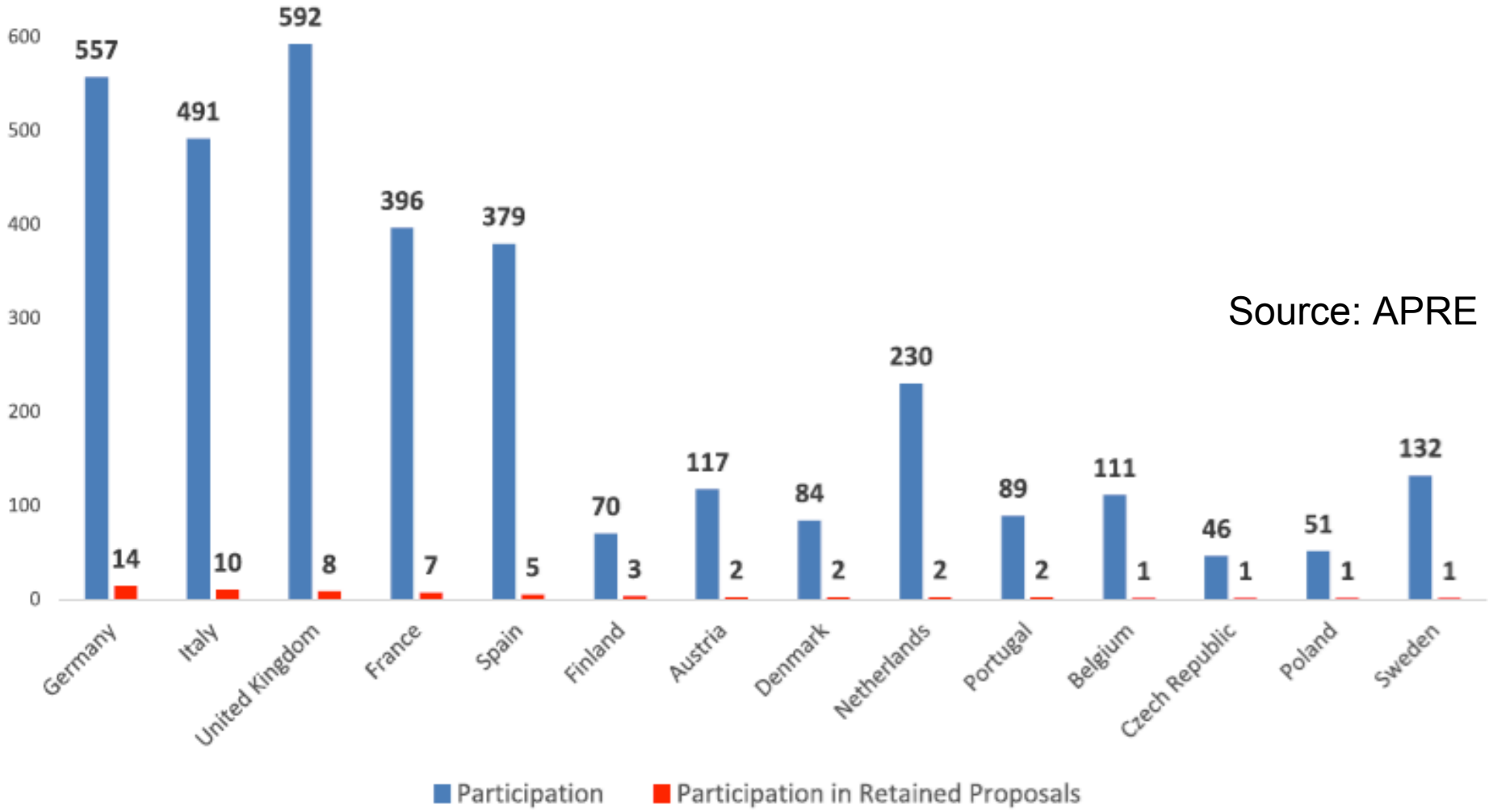
SMEs Participation in Second Cutoff:
511 evaluated, 14 Retained

Italian SMEs, 1st+2nd Cutoff



Future and Emerging Technologies - FET

Second Cutoff date

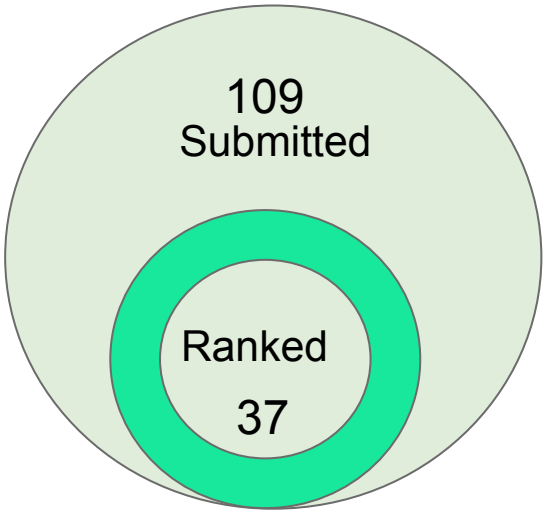
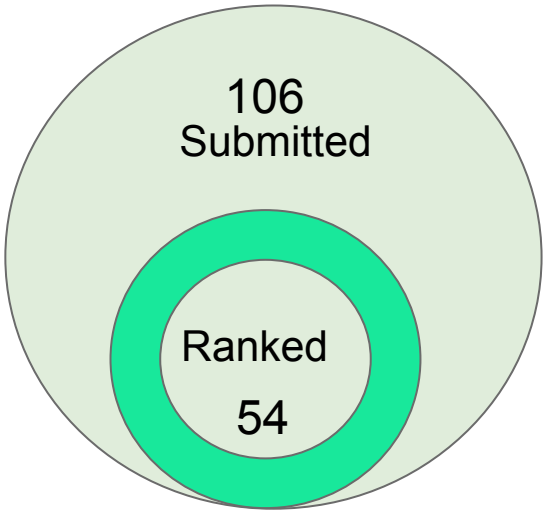


Source: APRE

Future and Emerging Technologies - FET

Italian Performance

Proposals with italian ***coordinators***

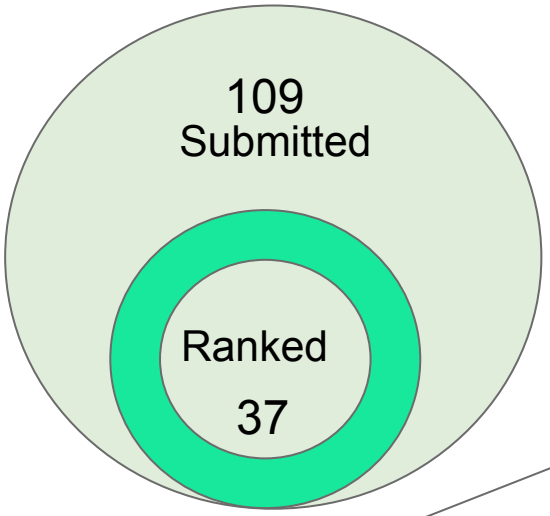
First Cutoff	Second Cutoff	Third Cutoff
		**2 Retained**
0 Retained 5/284 Retained with italian participants	**2 Retained** 6/303 Retained with italian participants	

Future and Emerging Technologies - FET

Italian Performance

Proposals with italian ***partners - first cutoff example***

First Cutoff



0 Retained
5/284 Retained with italian participants

Innosmart [Smart materials, coatings]
Seconda Università degli studi di Napoli

Voxel [Medical imaging]
CNR

HELENIC-REF [Energy/Renewable fuels]
Seconda Università degli studi di Napoli

QCUMbER [quantum communic.+metrology]
Università degli studi di Roma Tre

ULTRAQLC [THz lasers]
CNR

Future and Emerging Technologies - FET

Funded Projects - Italian Coordinator

IIT PROtein SEQuencing using Optical single molecule real-time detection

FBK All Solid-State Super-Twinning Photon Microscope

Second Cutoff

CNR Revolutionising Downstream Processing of Monoclonal Antibodies by Continuous Template-Assisted Membrane Crystallization

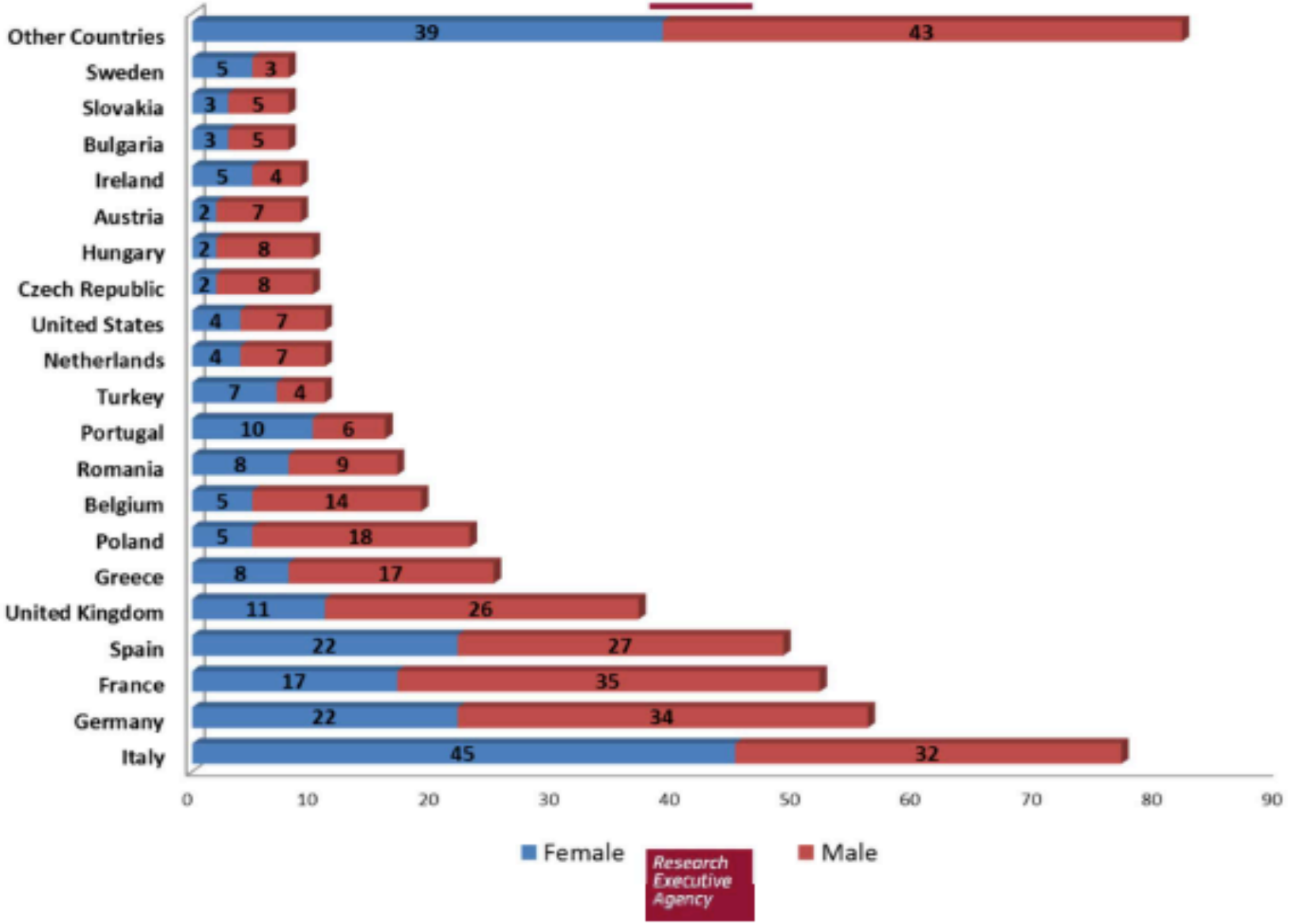
CNR Goal-based Open-ended Autonomous Learning Robots

Third Cutoff

Funded Projects - Other Examples

- Volumetric medical x-ray imaging at extremely low dose VOXEL (PT)
- Nanoscale Systems for Optical Quantum Technologies NanOTech (FR, CNRS)
- Innovative coarsening-resistant alloys with enhanced radiation tolerance and ultra-fine-grained structure for aerospace application ICARUS (ES)
- All-Phononic circuits enabled by opto-mechanics PHENOMEN (ES)
- Spintronic-Photonic integrated circuit platform for novel electronics SPICE (DK)

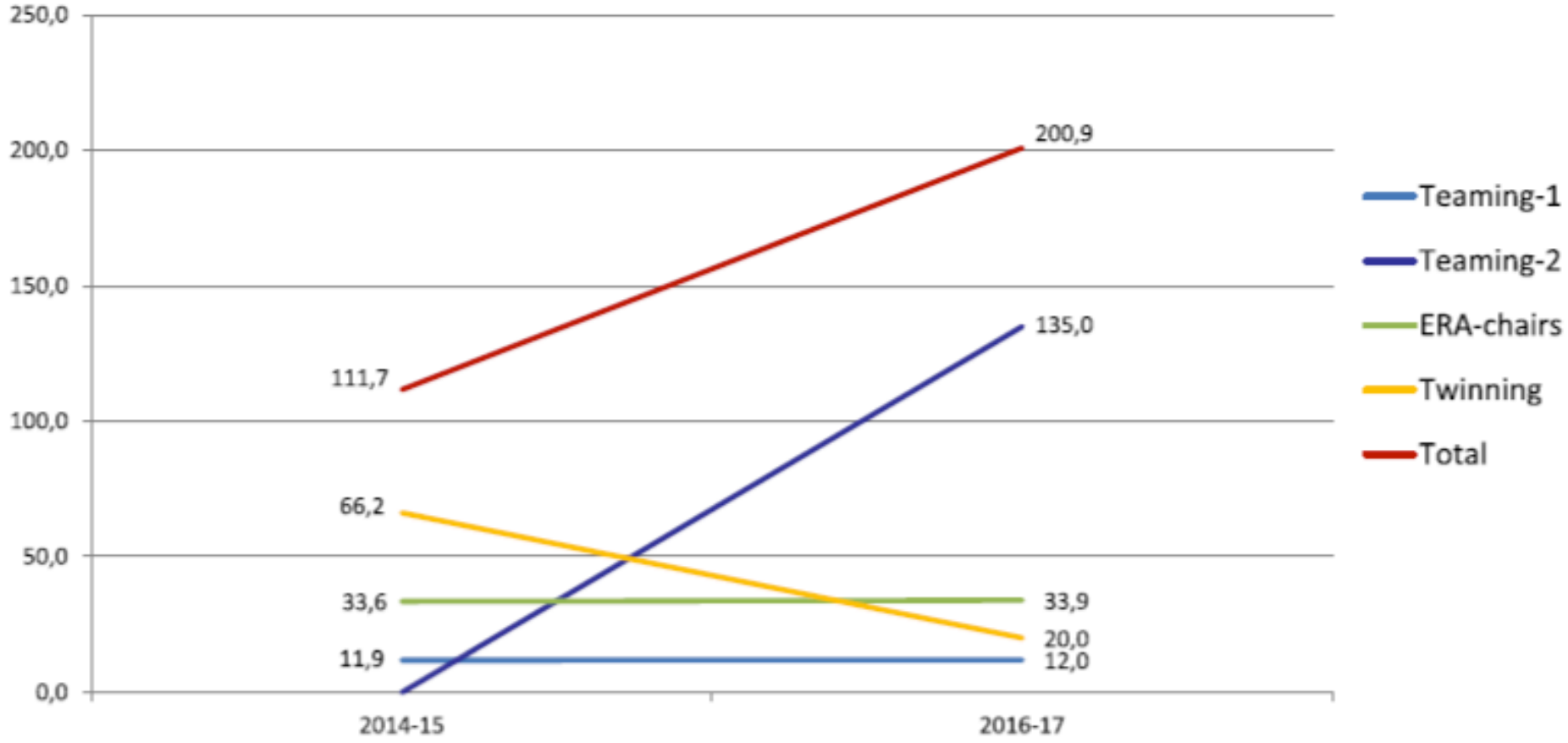
Geographic origin and gender of evaluators



Spreading excellence & widening participation

Budget 2014-2020: **816M€**
1,1% of the H2020 budget

Budget 2014/2015 versus Budget 2016/2017



Source: Peter van Der Zandt, REA

Spreading excellence & widening participation

Distribution/organisations	Tot	HES	REC	PRC	PUB	**OTH**
Assigned financing at 25/01/2016 - M€	97	25	20	1	2	**49**

HES= Higer Education Sector
PRC= PRivate Commercial
PUB=PUblic Body
REC= REsearCh organisations
OTH=Other

	IT	UK	**DE**	**FR**	ES	NL
% Participants in financed projects	3,4	4,1	**15,3**	**0,7**	1,0	3,7

Source: H2020_projects_opendata

Spreading excellence & widening participation
Teaming (institution building)

OVERVIEW	Type	Budget (M€)	Proposals	Projects	Success rate	Duration (months)
Teaming-1(2014)	FPA/CSA	14,2	169	31	18%	12
Teaming-2(2016)	CSA	135	31	9	29%	60-84

Teaming 2014: average requested EU contribution/proposal € 430.000; selected 31 proposals, from 14 “Widening Countries”.Principal areas of funded projects: Physics & Chemistry; Medicine & Life Sciences. Key points: clarify vision/integration with medium to long term growth strategies

DETAILS*							
	IT	UK	DE	FR	ES	NL	UE28
Success rate(%) - N° of participants	14,3	12,2	17,3	5,0	4,5	27,8	16,6
Success rate(%) - Financial contrib.	9,8	16,7	12,8	4,4	4,7	23,4	16,7

*Souce: H2020_proposals_ecorda - updated to 25/01/2016, not included teaming -2 (2016)

Spreading excellence & widening participation: *Teaming*

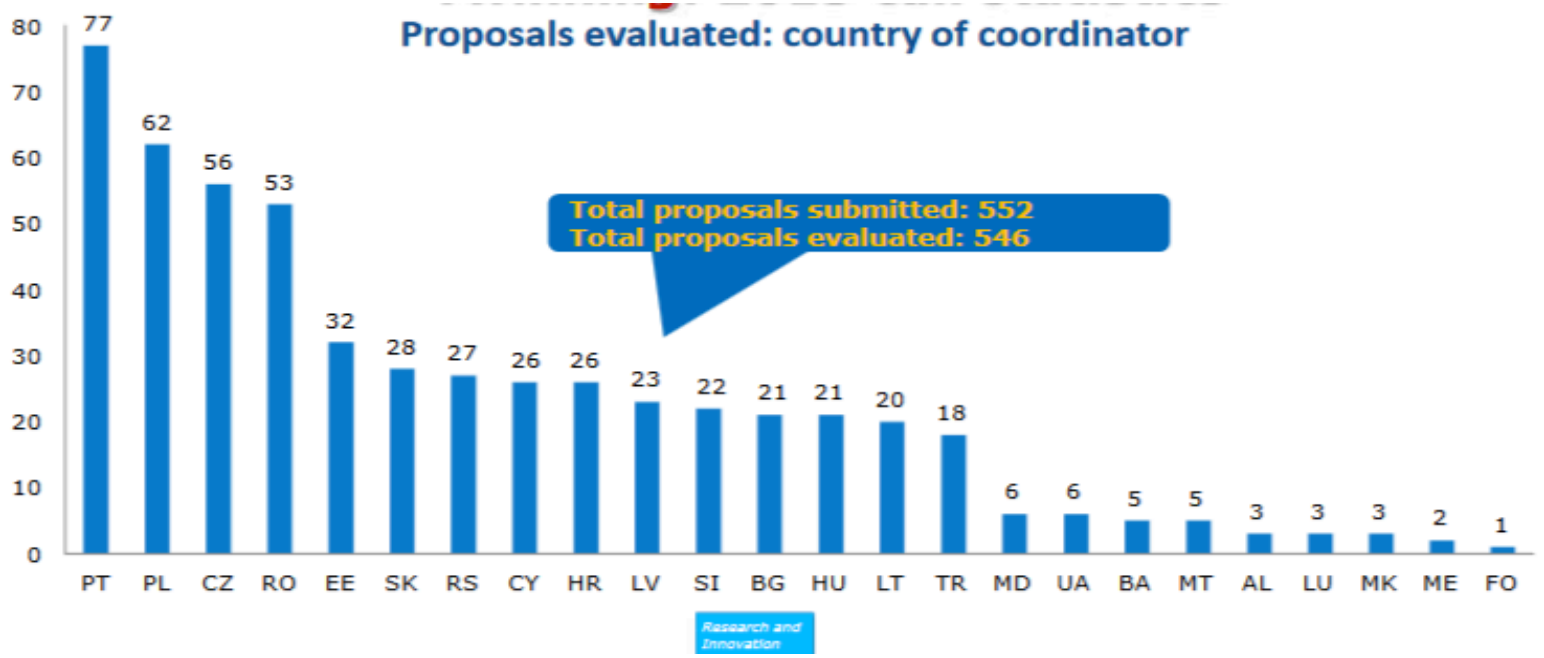
	Member States	Proposals received	Proposals funded	Advanced partners (proposals received)
1	Bulgaria	11	2	AT, BE, DE, DK, HR, HU, IL, IT, SE
2	Croatia	6	0	AT, BE, CH, DE, ES, FR, IT, NL, UK
3	Cyprus	14	3	AT, CH, DE, ES, EL, FR, IL, IT, NL, PT, SE, UK
4	Czech Republic	10	3	AT, DE, CH, IT, UK
5	Estonia	5	2	ES, FI, UK
6	Hungary	9	3	AT, BE, DE, ES, NL, UK
7	Latvia	7	1	AT, CH DE, DK, ES, FI, FR, IT, NL, SE
8	Lithuania	3	1	DE, DK, FR, FI, IE, SE, UK
9	Luxembourg	1	0	FR
10	Malta	5	1	DE, NL
11	Poland	19	3	BE, CZ, DE, DK, EL, FI, FR, LU, NL, SE, SL
12	Portugal	9	4	AT, BE, DE, NL, UK
13	Romania	24	1	AT, BE, CH, CZ, DE, DK, ES, IE, FR, IL, IT, HU, NL, PT, SE, UK
14	Slovakia	13	4	AT, BE, DE, EL, ES, IE, IT, FI, FR, NL, SK, UK
15	Slovenia	11	2	AT, CH, DE, ES, FR, IT, SE
	Total MS	**147**	**30**	
	Associated Countries			
1	Albania	1	0	ES
2	Faroe Islands	1	0	DE, UK
3	Montenegro	1	0	IT, SL, RS
4	Serbia	15	1	CZ, DE, EL, ES
5	Turkey	2	0	AT, DE, EL, IT
	Total AC	**20**	**1**	
	Grand Total	**167**	**31**	

Source: Telemachos Telemachou

Proposals from 20 Countries
Average n° of partners: 8
Average requested EU contribution/proposal: 430.000€
Countries with higest n° of funded proposals: Portugal, Slovakia

Spreading excellence & widening participation
Twinning (institutional networking)

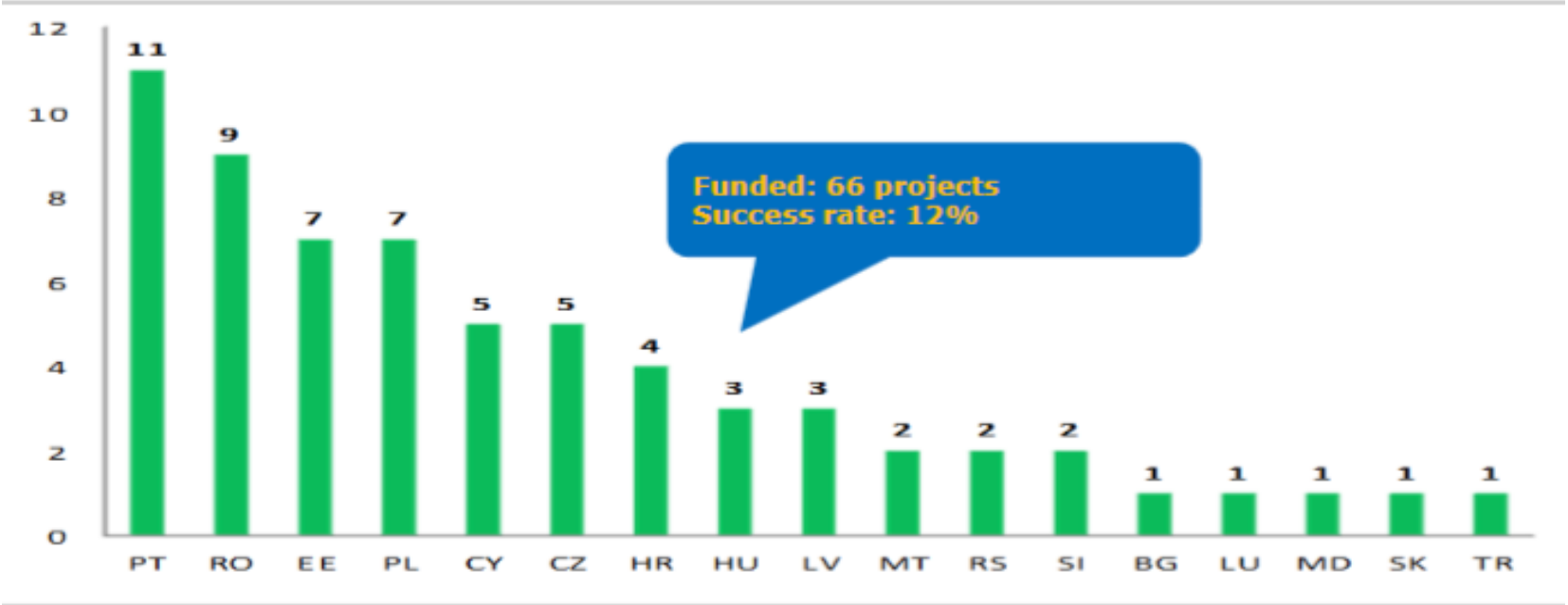
OVERVIEW	Type	Budget (M€)	Proposals	Projects	Success rate	Duration (months)
Twinning 2015	CSA	66,24	553	**66**	**12%**	**36**



Source: Telemachos Telemachou

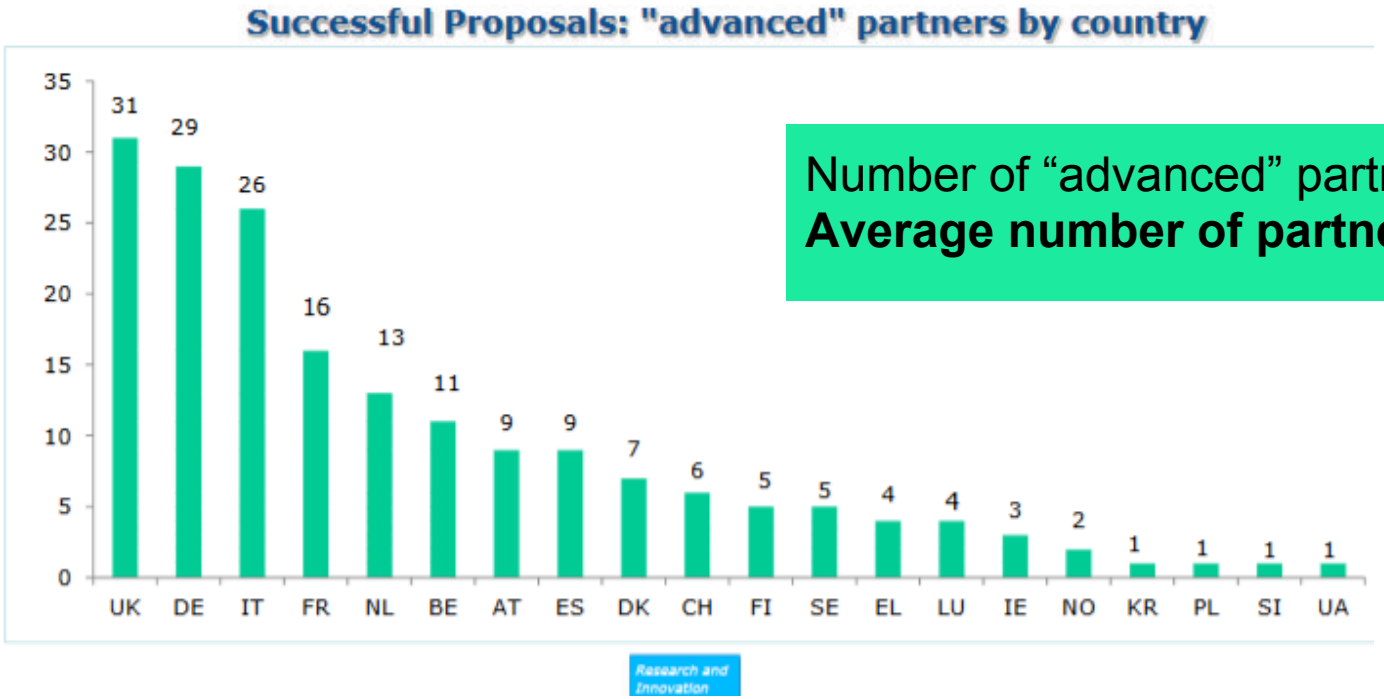
Spreading excellence & widening participation
Twinning (institutional networking)

OVERVIEW	Type	Budget (M€)	Proposals	Projects	Success rate	Duration (months)
Twinning 2015	CSA	66,24	553	**66**	**12%**	**36**



Source: Telemachos Telemachou

Spreading excellence & widening participation
Twinning (institutional networking)

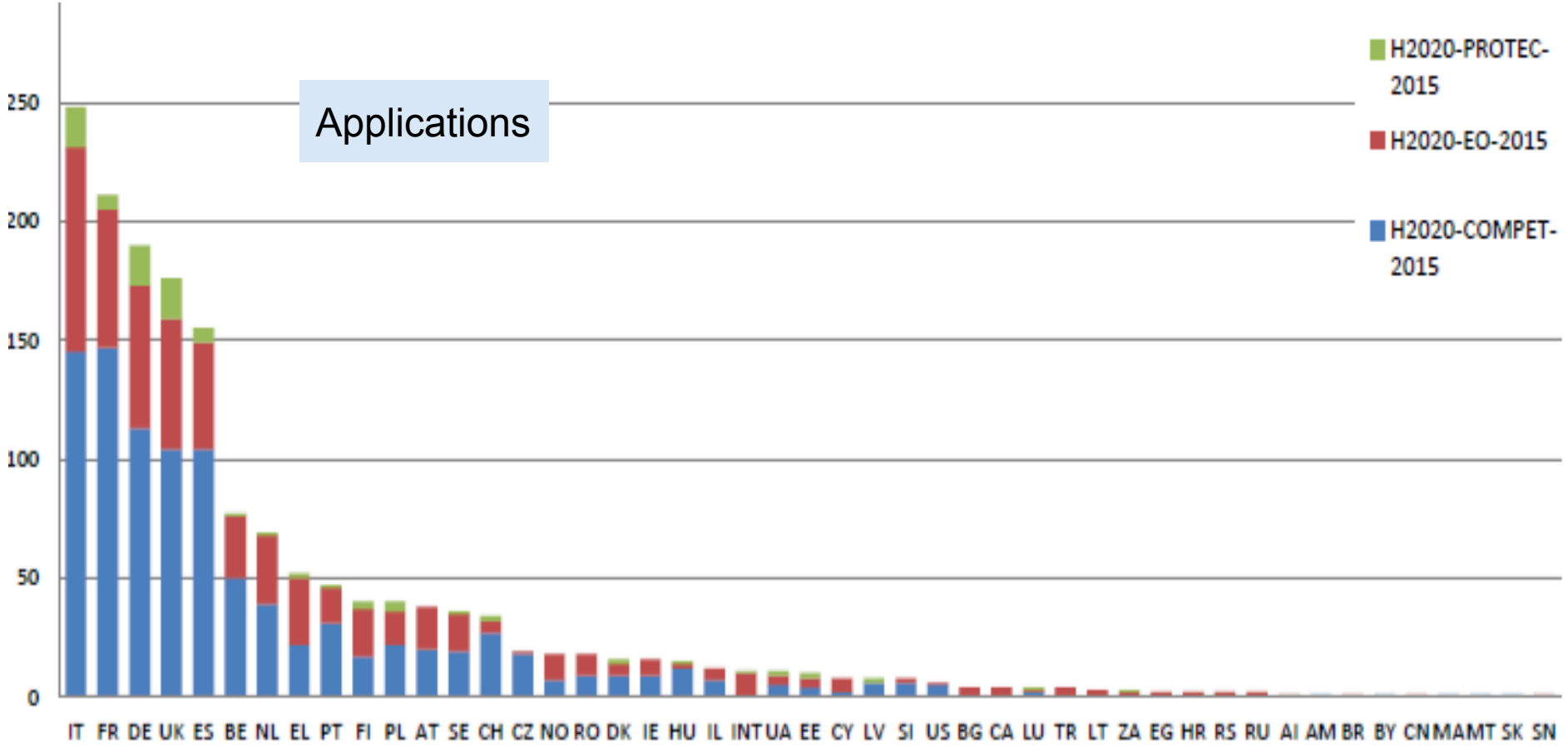


Number of “advanced” partners: 184
Average number of partners: 4

DETAILS*							
	IT	UK	DE	FR	ES	NL	UE28
Success Rate (%) - N° of participants	13,7	13,9	10,9	16,2	8,1	11,9	12,0
Success Rate(%) - Financial contrib.	13,9	13,8	11,1	12,2	7,6	12,2	12,4

Souce: H2020_proposals_ecorda

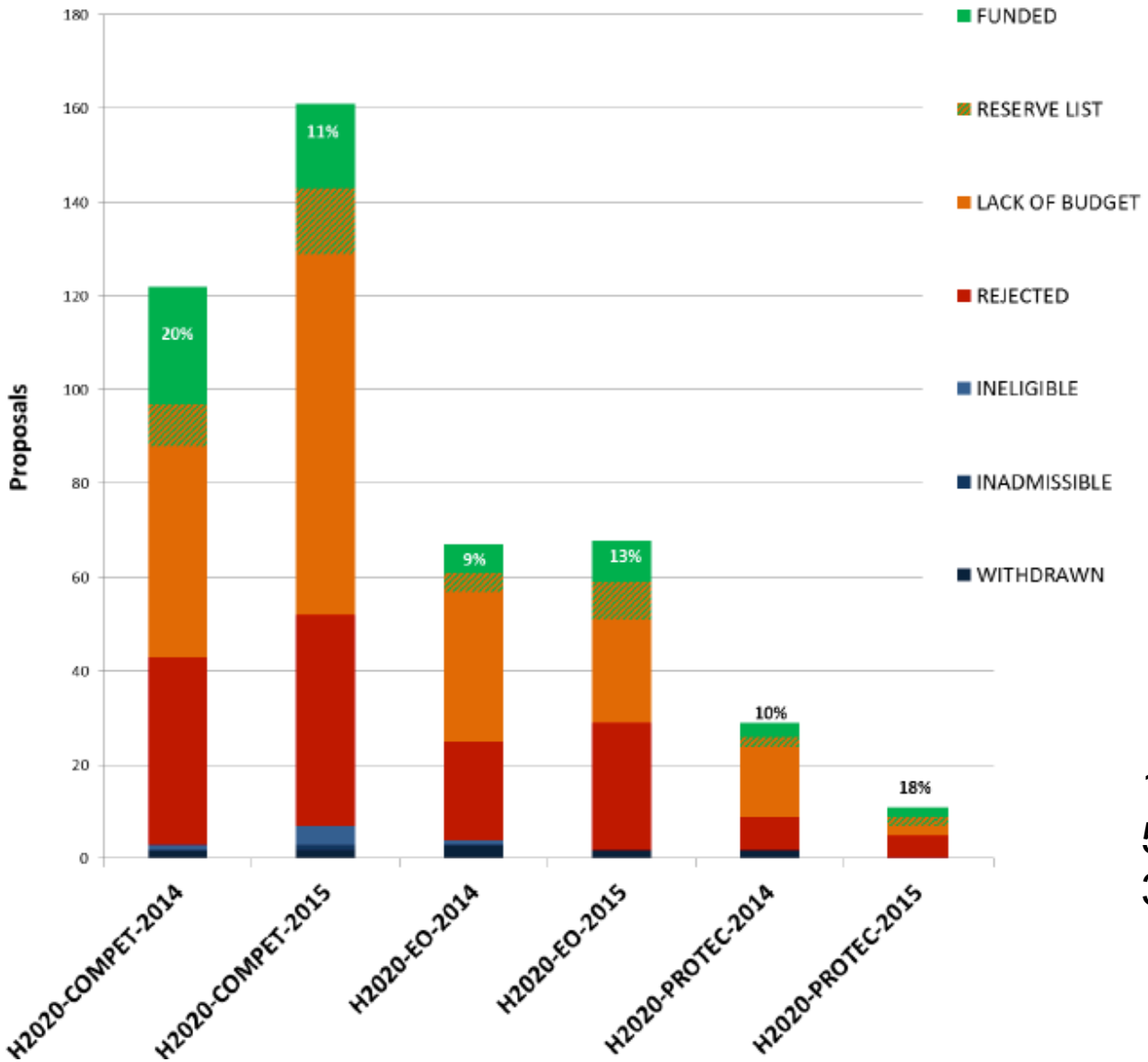
Leadership in enabling & industrial technologies
Space



Space - Participation	**IT**	UK	DE	FR	ES	NL
% Participants in proposals	**16,6**	10,2	12,7	12,2	12,8	4,5

*Updated at 25/01/2016

Leadership in enabling & industrial technologies
Space



Proposals evaluated:
211 (2014)
231 (2015)

Proposals funded:
34 (2014)
29 (2015)

On average:
14% proposals funded
51% qualified for funding
35% not qualified for funding

Leadership in enabling & industrial technologies Space

Success Rates	COMPET		EO		PROTEC	
	2014	2015	2014	2015	2014	2015
Projects funded	25	18	6	9	3	2
Projects submitted	122	161	67	68	29	11
Success rate	20%	11%	9%	13%	10%	18%

N° applicants	808	973	621	569	244	90
N° beneficiaries	198	120	66	69	27	23

Leadership in enabling & industrial technologies
Space

Success Rates							
	IT	UK	DE	**FR**	ES	NL	UE28
Success rate(%) - N° of participants	17,0	21,9	19,0	**24,6**	17,3	18,2	18,6
Success rate(%) - Financial contrib.	17,1	19,5	17,5	**28,8**	14,1	13,0	17,3

Financed proposals						
	IT	UK	DE	**FR**	ES	NL
% Participations in projects	13,7	13,2	14,1	**16,4**	10,5	3,0
% EU funding in projects	14,3	12,6	18,5	**18,7**	11,2	3,0

*Updated at 25/01/2016

Leadership in enabling & industrial technologies Space

COMMUNITY

LEIT-Space calls in 2014: 20 information days with 2.000 participants from 43 countries. Main Brussels event supported by national organisations and Space NCP network Cosmos 2020 with “matchmaking” sessions. Main Events:

- ❏ **"The Countdown to Horizon 2020 Space"** info days Brussels, December 2013
- ❏ **"Space and Security Conference"** Greek Presidency event, Athens June 2014
- ❏ “**3rd International Space Research Conference and and Horizon 2020 Space Info Day**", Italian Presidency event, Rome September 2014*

Last Event:

http://www.spaceinfoday.eu/h2020-space-infoday/pages/11915-information-day-ljubljana

Leadership in enabling & industrial technologies
Space

European Strategy 2014-2020

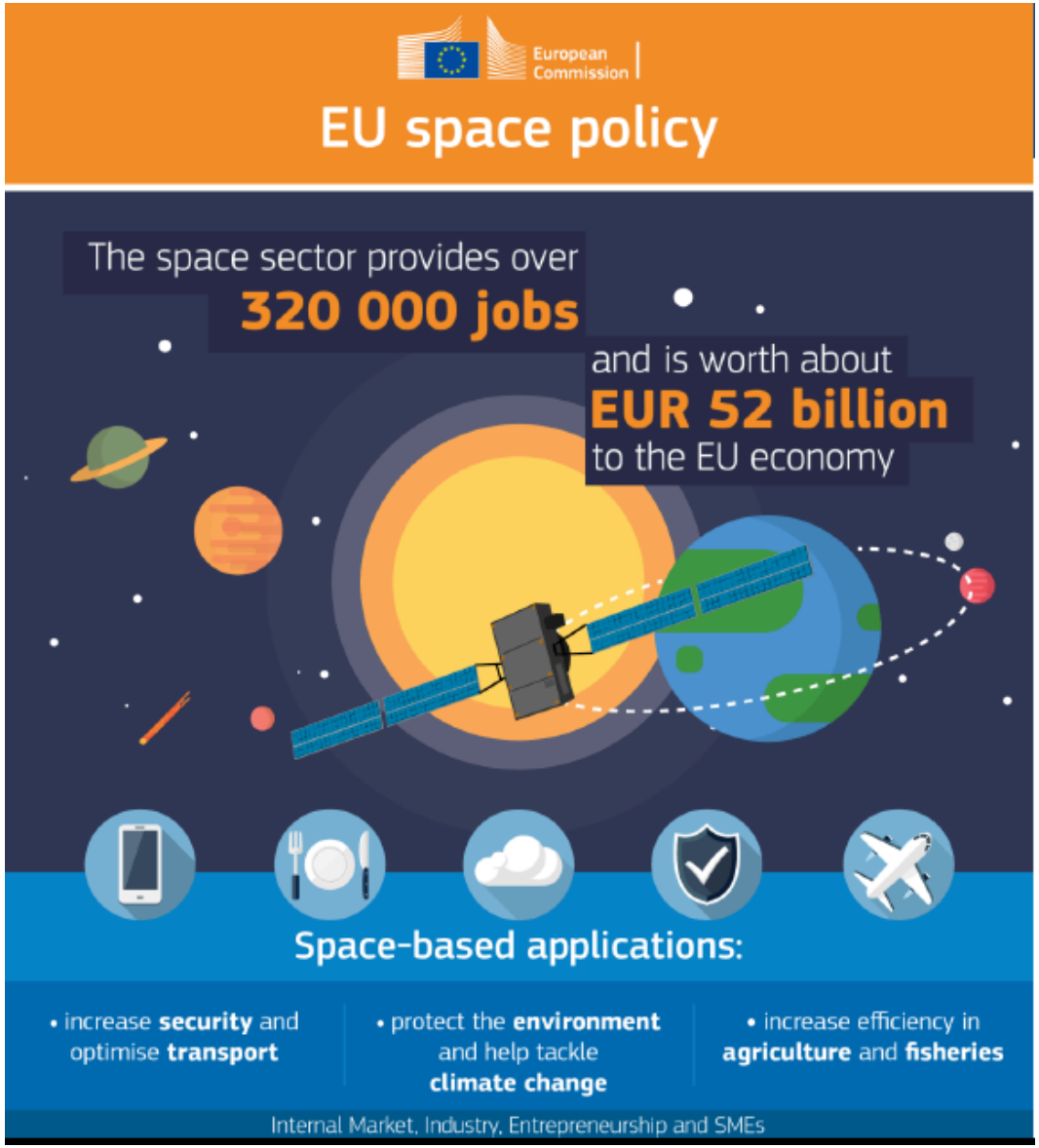
1.400M€

Copernicus
Europe's eyes on Earth

3.800M€

GALILEO EGNOS

6.300M€



Space Research – main actors

EO-PROTEC-COMPET

Research Executive Agency (REA) ⇧

Call handling, receipt of proposals, evaluation process, grant agreement preparation, grant agreements signature, receipt of reporting, reviews, payments, audits

New Mandate for Horizon 2020 and continued implementation of FP7 Space projects

European GNSS Agency (GSA) ⇨

Galileo

Executive Agency for SMEs (EASME) ⇩

ex-Executive Agency for Competitiveness and Innovation (EACI)

SMEs Inst

European Commission DG GROW: EU Space policy and Research and Copernicus

http://ec.europa.eu/research/horizon2020/index_en.cfm?pg=h2020-documents

Useful links

- List of research data repositories: http://www.re3data.org
- Data Management Plan: Digital Curation Centre
- https://dmponline.dcc.ac.uk/ http://www.dcc.ac.uk/resources/data-management-plans
- H2020 guidance: http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf
- http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf
- IPR helpdesk: https://www.iprhelpdesk.eu/
- Communication guidelines: http://ec.europa.eu/research/participants/data/ref/h2020/other/gm/h2020-guide-comm_en.pdf
- The guide "Innovation: how to convert research into commercial success story": http://ec.europa.eu/research/industrial_technologies/pdf/how-to-convert-research-into-commercial-story_en.pdf

Annexes

INFRADEV: Developing new world-class RIs

INFRADEV-01-2017: Design Studies

Challenge & Scope:
Support the conceptual & technical design of new research infrastructures, which are leading-edge user facilities of a clear European dimension and interest:

- Bottom-up call: identify the RIs with a concrete potential to become the next generation of EU world-class RI
- Leading to a "conceptual or technical design report through
  - Scientific & technical work: draft concepts & engineering plans for the construction; creation of prototypes; work to ensure the take-up and efficiency of the services provided to scientific communities

AND

- Conceptual work: plans to integrate the new RI into the European RI landscapr; estimation of budget for construction and operation; plans for an international governance structure; planning of research services to be provided; procedure and criteria to choose the RI site

Major upgrades of existing infrastructures may also be considered if the end result is intended to be equivalent to a new infrastructure.

Total call budget: 20 M€; budget per proposal: 1-3 M€
Funding scheme: RIA -single stage

Opening date:
08/12/2016
Deadline:
29/03/2017

EINFRA : E-INFRASTRUCTURES

EINFRA-12-2017: Data and Distributed Computing e-infrastructures for Open Science

(a)Secure and agile data and distributed computing e-infrastructures
(b) Access and preservation platforms for scientific information

Common challenge: make research data discoverable, accessible, assessable, intelligible, useable, and wherever possible interoperable

Grants awarded under this topic will be complementary between them on potential synergies, overlaps and gaps in the overall service offering. In addition, links should also be established with projects selected under topic INFRADEV-04-2016 (European Open science cloud for Research), to collaborate, exploit potential synergies and ensure complementarity.

Proposals will address part (a) or (b), but not both. At least one proposal for each part will be selected

Total call budget: 40 M€ -> (a) & (b) combined; budget per proposal 10-15 M
Funding scheme: RIA -single stage

Opening date: 08/12/2016
Deadline: 29/03/2017

EINFRA : E-INFRASTRUCTURES

EINFRA-12-2017: Data and Distributed Computing e-infrastructures for Open Science

(a)Secure and agile data and distributed computing e-infrastructures

Specific Challenge: fostering the integration of a secure, permanent, on-demand service-driven, privacy-compliant and sustainable e-infrastructure incorporating distributed databases, computing resources and software.

Scope:

- Seamless operation of highly scalable platforms & services dedicated to anlytics
- Integration of resources exposing them through a dynamic registry and catalogue services
- Data protection & privacy
- Adoption of standard based common interfaces (Open source)
- Promotion of open science message by engaging with user communities (Focus on the catalogue of services
- Interoperability of pan-European thematic e-infrastructures
- Data curation & Preservation
- Promoting interoperability with similar infrastructures and exploiting economies of scale

Impact:

- Equal opportunities for all EU researchers & educators in providing access to essential resources to express talent & creativity
- avoid the locking in to particular hardware/software platforms that would jeopardize the long-term planning for capacity upgrades
- Increase the incentives for scientific discovery & collaboration across disciplinary & geographical boundaries

EINFRA : E-INFRASTRUCTURES

EINFRA-12-2017: Data and Distributed Computing e-infrastructures for Open Science

(b) Access and preservation platforms for scientific information

Specific Challenge: supporting the integration and consolidation of e-infrastructure for reliable and permanent open access to digital scientific records, based on existing initiatives across Europe (institutional and thematic repositories, aggregators, etc.).

Scope:

- Deployment & maintenance of service-driven knowlege e-infrastructure
- Development of a coordinated architecture linking institutional & thematic repositories across Europe
- Support of publishing platforms & services for scientific information
- Collection of bibliometric data on publications, citations etc. on all H2020 scientific output. Delivery of standard & on-demand statistics
- Supporting global interoperability of open access data e-infrastructures

Impact: Make the intellectual capital of Europe available to researchers, business and citizens at large. Preserve it for further exploitation by future generations.

EINFRA : E-INFRASTRUCTURES

EINFRA-12-2017: Data and Distributed Computing e-infrastructures for Open Science

(a)Secure and agile data and distributed computing e-infrastructures
(b) Access and preservation platforms for scientific information

Activities:

- Networking
- Services

Specific evaluation points:

Excellence:

- TRL8 required before the start of the project
- Service activities excellence measured (among other criteria) on the quality of the catalogue of services & the KPI measurements and baseline

Impact:

- Potential to enhance the capacity for innovation & production of new knowledge

-> Joint evaluation of (a) & (b) proposals
-> Services to be assessed by an external board (approved by the EC)
-> Projects to conclude written collaboration agreements