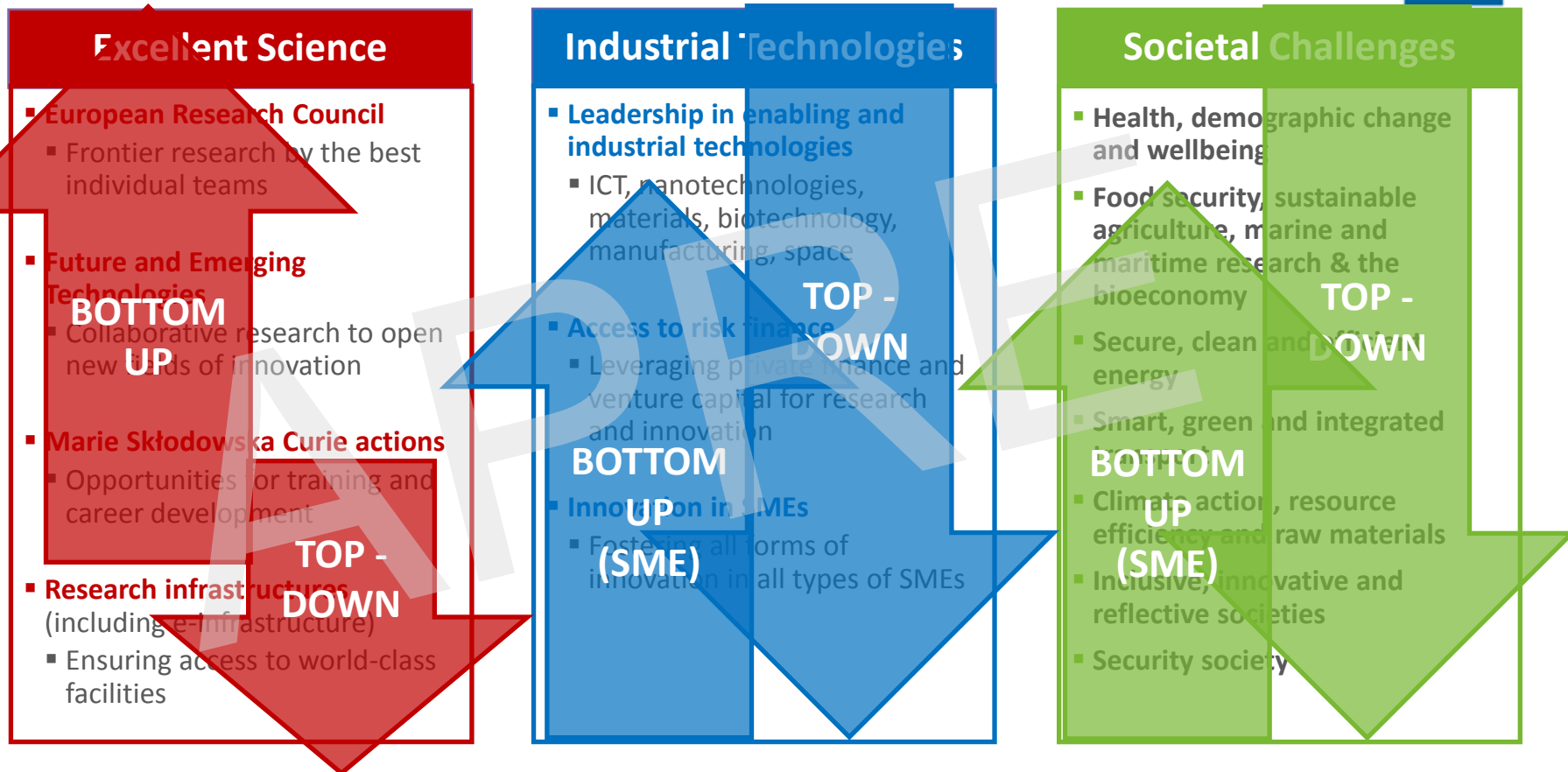


PARTE II



Struttura del programma



European Institute of Innovation and Technology (EIT)

Spreading Excellence and Widening Participation

Science with and for society

Joint Research Center (JRC)

Strategic programming approach

2014	2015	2016	2017	2018	2019	2020	
Strategic Programme					<div>Strategic programmes: short documents outlining priorities over 3 years, updated every two years</div>		
Work Programme 1	Strategic Programme						
<div>Work Programmes mirror the strategic programme and are updated over the same 2-year cycle</div>	Work Programme 2		Strategic Programme				
			Work Programme 3				
						Work Programme 4	
Smaller and continuous updates to respond to unexpected developments							
Calls published on basis of WP	Ad hoc financing decision	Calls published on basis of WP	Ad hoc financing decision	Calls published on basis of WP	Ad hoc financing decision	Calls published on basis of WP	

Leitmotif of the first work programme is the

ECONOMIC CRISIS AND THE PATH TO SUSTAINABLE GROWTH

A STRATEGIC PROGRAMMING APPROACH

- Work programme elaborato sulla base di una programmazione strategica
- Per aumentare l'impatto del finanziamento e per un maggiore approccio integrato
- 'Key drivers' usate per identificare le aree sulle quali le risorse e gli sforzi devono essere focalizzati per massimizzare il loro impatto

competitività
sostenibile,
l'innovazione e la
crescita;

coinvolgimento
dell'industria,
incluse le PMI;

accesso ai
finanziamenti;

sviluppo di nuove
conoscenze e
miglioramento
delle skills;

diffusione di
tecnologie
abilitanti;

misure per
affrontare il *divide*
tra ricerca e
innovazione;

sostegno forte
partnership con gli
Stati membri, e

approccio
strategico alla
cooperazione
internazionale.

Focus Area

A number of areas have been identified for special focus in the first H2020 Work Programme, on the basis that they hold significant potential to support the drivers. Each of these is embedded in the relevant parts of the Work Programme, covered by a specific call.

- Bring together activities from different challenges and enabling technologies
- Provide support across the innovation chain from research, to development, to proof of concept, piloting, demonstration projects, and to setting standards and policy frameworks.
- Make use of the full spectrum of funding schemes and types of action e.g. research and innovation actions, innovation actions, ERANets, SME instrument...
- Integrate different perspectives, including from the social sciences and humanities, gender perspectives, and international strategy

PERSONALISING HEALTH AND CARE

SC1 - Health
SC2 - Bioeconomy

SUSTAINABLE FOOD SECURITY

SC2 - Bioeconomy

BLUE GROWTH: UNLOCKING THE POTENTIAL OF THE OCEANS

SC2 – Bioeconomy
SC3 – Energy
SC4 – Transport
SC5 – Environment

SMART CITIES AND COMMUNITIES

SC3 – Energy
SC4 – Transport

COMPETITIVE LOW-CARBON ENERGY

SC3 – Energy

ENERGY EFFICIENCY

SC3 – Energy
SC5 – Environment

MOBILITY FOR GROWTH

SC4 – Transport

WASTE: A RESOURCE TO RECYCLE, REUSE AND RECOVER RAW MATERIALS

SC5 – Environment
SC2 – Bioeconomy
LEIT – NMPB

WATER INNOVATION: BOOSTING ITS VALUE FOR EUROPE

SC5 – Environment
SC2 – Bioeconomy
LEIT – NMPB

OVERCOMING THE CRISIS: NEW IDEAS, STRATEGIES AND GOVERNANCE STRUCTURES FOR EUROPE

SC6 – SSH

DISASTER-RESILIENCE: SAFEGUARDING SOCIETY AND ADAPTING TO CLIMATE CHANGE

SC7 – Security
SC5 – Environment

DIGITAL SECURITY

SC7 – Security

WORK PROGRAMME BIANNUALE



Work Programme TOPICS

Structure

SPECIFIC CHALLENGE

- sets the context, the problem to be addressed, why intervention is necessary

SCOPE

- delineates the problem, specifies the focus and the boundaries of the potential action BUT without describing specific approaches

EXPECTED IMPACT

- describe the key elements of what is expected to be achieved in relation to the specific challenge

TOPIC ICT

Esempio

ICT 29 – 2014 Development of novel materials and systems for OLED lighting³⁵

Specific Challenge: In the last 10 years, European industry (both SMEs and large companies) has made significant investments in OLED technologies, i.e., materials, devices and manufacturing processes. However, major S&T progress and research and innovation (R&I) investments are required in OLEDs, in particular for the realisation of flexible, high brightness light sources over large areas. The further technological development of OLEDs is expected to give Europe a leading position on the world general lighting market and create new manufacturing jobs for novel consumer products. Moreover, the move to OLEDs would help in reducing the amount of electricity consumed by lighting and limiting carbon dioxide emissions.

Scope:

Research & Innovation Actions should focus on materials, process and device technology for OLED lighting. The aim is to realise OLED devices over larger surfaces, with higher brightness, larger uniformity and longer lifetimes. A demonstrator should be provided at the end of every project. A specific target for OLED lighting is energy efficacy of above 100 lm/W, considering also improved out-coupling efficiency. The materials have to allow for a competitive lifetime for all colours and white light (lifetime of several hundred hours at 97% of the original intensity). Attention should be paid to recyclability issues and the environmental impact of the materials and systems as appropriate. Proposals should involve material suppliers, OLED manufacturers or suppliers and OLED system integrators.

Expected impact:

- Cost performance breakthroughs - lighting systems with production costs of 1€/100 lm.
- Secured and reinforced industrial technology leadership and substantially increased market presence in lighting.
- Improved business opportunities and value creation in Europe in lighting by reinforced cooperation along the value chain.

Type of Action:

Research & Innovation Actions – Proposals requesting a Small contribution are expected

The conditions related to this topic are provided at the end of this call and in the General Annexes.

TIPOLOGIE PROGETTI

Research and innovation action

Innovation action

Strumento PMI

Ricerca collaborativa

Eranet

Pre – commercial procurement (PCP)

Public Procurement of Innovative solution (PPI)

Co – Fund

CSA

Coordination and Support Action

Prize

Fast track to innovation

(+)Innovazione

Progetti collaborativi

R&I actions

Basic research, applied research, technology development and integration, and testing e validation on a small scale prototype in a laboratory or simulated environment

Funding rate: 100%
costi diretti, 25% costi
indiretti

I actions

Prototyping, testing, demonstrating, piloting, large - scale product validation and market replication

Funding Rate: 70%
costi diretti (100% no
profit); 25% costi
indiretti

1. Demonstration or pilot
2. Market replication

Research and Innovation Action

DESCRIPTION: Action primarily consisting of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution. For this purpose they may include basic and applied research, technology development and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment. Projects may contain closely connected but limited demonstration or pilot activities aiming to show technical feasibility in a near to operational environment.

FUNDING RATE: maximum 100%

Innovation Action

DESCRIPTION: Action primarily consisting of activities directly aiming at producing plans and arrangements or designs for new, altered or improved products, processes or services. For this purpose they may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

A **‘demonstration or pilot’** aims to validate the technical and economic viability of a new or improved technology, product, process, service or solution in an operational (or near to operational) environment, whether industrial or otherwise, involving where appropriate a larger scale prototype or demonstrator.

A **‘market replication’** aims to support the first application/deployment in the market of an innovation that has already been demonstrated but not yet applied/deployed in the market due to market failures/barriers to uptake.

FUNDING RATE: maximum 70% (except for non-profit legal entities, where a maximum rate of 100%)

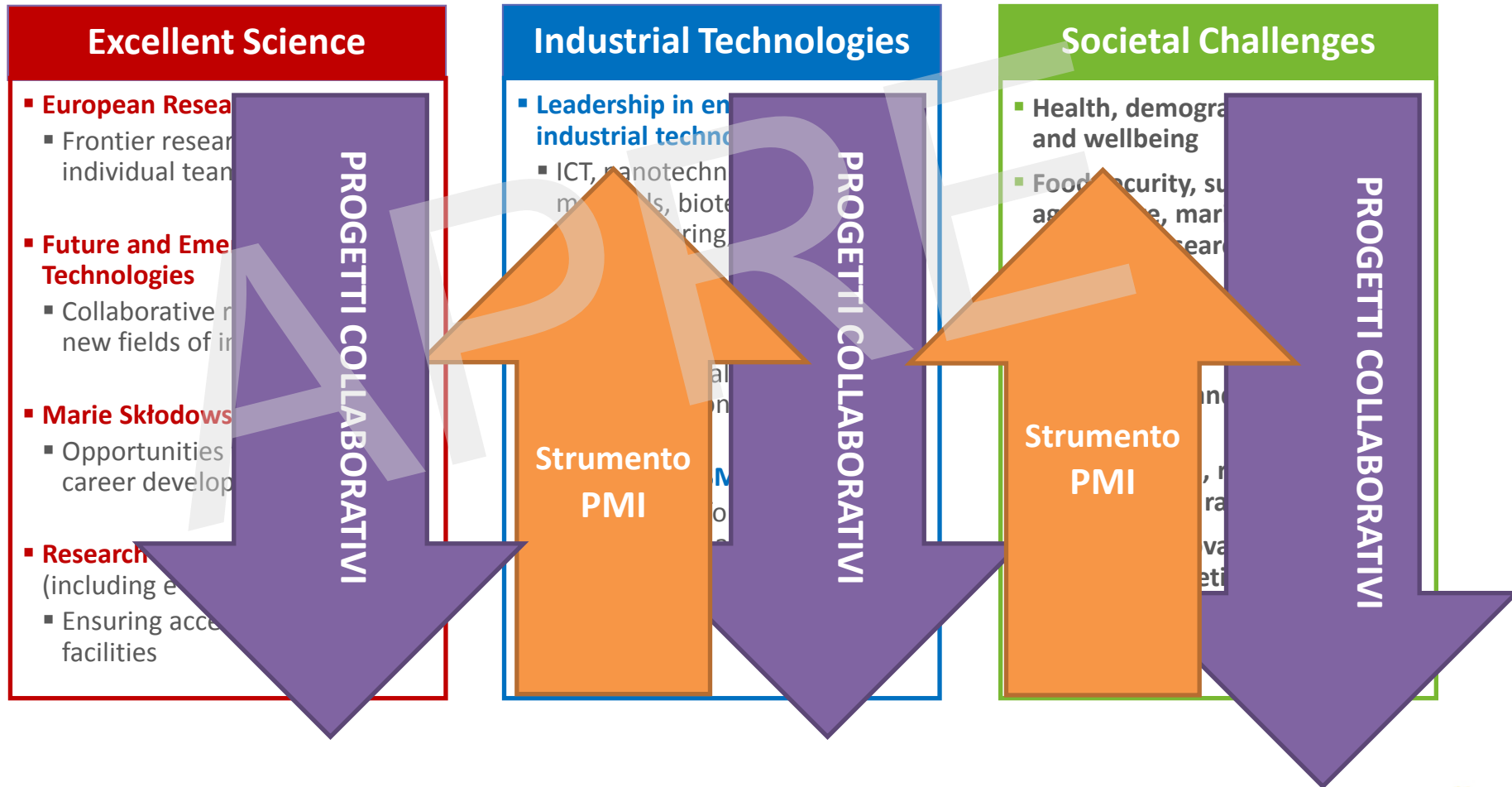
HORIZON 2020 : PMI



@APRE 2013



Struttura del programma



Approccio Integrato

**20 %
budget
LEIT + SC**

**Progetti collaborativi
13%**

**Strumento PMI
7%**

**LEIT:
'Innovation
in SMEs'**

Eurostars II
Enhancing Innovation Capacity
Market-driven Innovation

Access to Risk Finance



LO STRUMENTO PMI

dall'idea al mercato



IDEA

BUSINESS COACHING

durante il progetto

MERCATO

Lo strumento PMI: le tre fasi

Phase 3 & coaching ~ 2% budget

FASE 1: CONCETTO E VALUTAZIONE DELLA FATTIBILITÀ

Input:

Idea/Concept in "Business Plan I"
(~ 10 pages)
10% BUDGET

Main Activities:

Feasibility of concept
Risk assessment
IP regime
Partner search
Design study
Pilot application

~ 10% success

Output: elaborated "Business plan II"

Lump sum: around 50.000 €

~ 6 months

FASE 2: R&D, DIMOSTRAZIONE, MARKET REPLICATION

Input:

"Business plan II" + "Description of activities under Phase2" (~ 30 pp.)
90% BUDGET

Main Activities:

Development Prototyping
Testing
Piloting
Miniaturisation
Scaling-up
Market replication

~30-50% success

Output: investor-ready "Business plan III"

Output based payments:
1 to 2,5 M€ EU funding

~ 12 to 24 months

FASE 3: COMMERCIALIZZAZIONE

Input:

"Business plan III"
+

Opportunities:

'Quality label' for successful Phase 1 & 2

Easier access to private finance
Support via networking, training, coaching, information, addressing i.a. IP management, knowledge sharing, dissemination

SME window in the EU financial facilities (debt facility and equity facility)

No direct funding

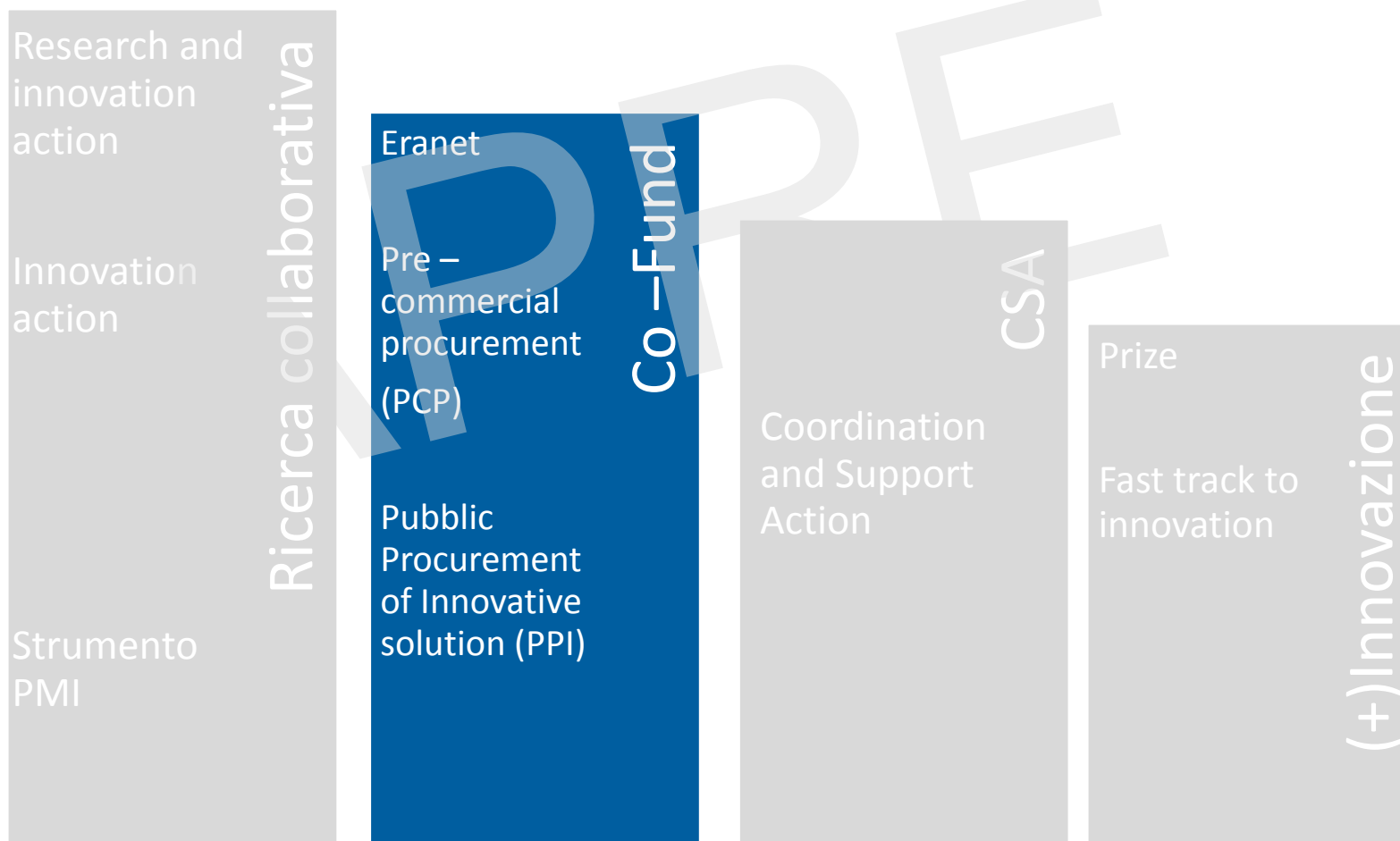


Caratteristiche dello strumento PMI

- Indirizzato a tutti i tipi di PMI innovative che presentino una forte volontà di crescere, svilupparsi e internazionalizzarsi
- Solo PMI potranno richiedere finanziamenti (sostegno a una sola impresa è possibile, ma collaborazione certamente consigliabile)
- Competitivo, dimensione EU → solo migliori idee accedono alla fase 1
- Orientato al mercato; attività close-to-market: finanziamento al 70%
- Costituito da 3 fasi – piu' il coaching
- Possibilità di entrare nella fase 1 e fase 2
- Applicato in tutte le 'societal challenges' e 'key enabling technologies'



TIPOLOGIE PROGETTI





ERANET

DESCRIPTION: ERA-NET Cofund under Horizon 2020 is designed to support public-public partnerships, including joint programming initiatives between Member States, in their preparation, establishment of networking structures, design, implementation and coordination of joint activities as well as Union topping-up of a trans-national call for proposals. It is based on the merger of the former ERA-NET and ERA-NET Plus actions and is implemented by using 'programme co-fund actions'. It allows for programme collaboration in any part of the entire research-innovation cycle.

The main and compulsory activity of the ERA-NET Cofund under Horizon 2020 is the implementation of the co-funded joint call for proposals that leads to the funding of transnational research and/or innovation projects.

FUNDING RATE: The Union contribution will be limited to a maximum of 33% of the total eligible costs of the action. The Union contribution to the costs for support to trans-national projects is limited to one call per grant agreement.

APPALTI PRE-COMMERCIALI (PCP) E APPALTI PUBBLICI DI SOLUZIONI INNOVATIVE (PPI)

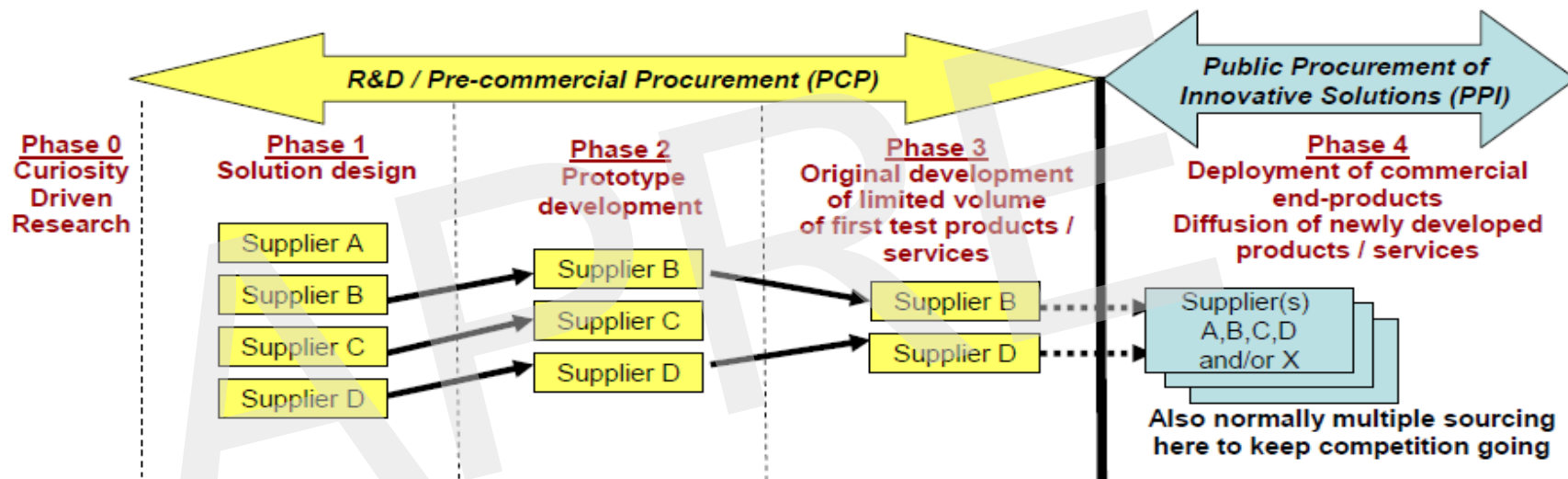
- Societal Challenges: riferimenti espliciti al sostegno per appalti R&D
- Industrial Leadership: sostegno a PCP e PPI quali aspetti essenziali per la competitività
- Sostegno ad attori delle infrastrutture di ricerca per permettere di adottare presto nuove tecnologie

APPALTI PRE-COMMERCIALI (PCP)

- The **OBJECTIVE** of a PCP action is to enable the public sector as a technologically demanding buyer to encourage research, development and validation of breakthrough solutions that can bring radical quality and efficiency improvements in areas of public interest.
- *'pre-commercial procurement'* is defined as procurement of research and development services involving risk-benefit sharing under market conditions, and competitive development in phases, where there is a clear separation between the procurement of the research and development services procured from the deployment of commercial volumes of end-products.
- **FUNDING RATE:** The EU contribution will take the form of a programme Cofund grant consisting of a reimbursement of maximum 70% of the eligible costs to implement the activities defined in the section 'eligible activities', on condition the joint procurement is executed in compliance with the 'Specific requirements for PCPs supported by Horizon 2020'

APPALTI PUBBLICI DI SOLUZIONI INNOVATIVE (PPI)

- The **OBJECTIVE** of a PPI action is to reinforce early deployment of innovative solutions that address challenges of public interest. The aim is to enable trans-national buyer groups of procurers to share the risks of acting as early adopters of innovative solutions and to overcome the fragmentation of demand for innovative solutions in Europe. Each PPI action focuses on one concrete unmet need that is shared by the participating procurers and requires the deployment of innovative solutions that are to a significant extent similar across countries and are therefore proposed to be procured jointly.
- **FUNDING RATE:** The EU contribution is a proportional contribution to the total investment made by the beneficiaries in the action. The EU contribution will take the form of a programme Cofund grant consisting of a reimbursement of maximum 20% of the eligible costs to implement the
- activities defined in the section 'eligible activities'



PRE-COMMERCIAL PROCUREMENT

A SOSTEGNO DEI BISOGNI DI R&S DELLA
P.A.

PUBLIC PROCUREMENT OF INNOVATIVE SOLUTIONS

A SUPPORTO DELL'ACQUISIZIONE
DI PRODOTTI/SERVIZI INNOVATIVI DA PARTE
DELLA P.A.

TIPOLOGIE PROGETTI



COORDINATION AND SUPPORT ACTION

- **DESCRIPTION:** Actions consisting primarily of accompanying measures such as standardisation, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies, including design studies for new infrastructure and may also include complementary activities of networking and coordination between programmes in different countries.
- **FUNDING RATE:** maximum 100%

STANDARD

- Societal Challenges: riferimenti espliciti a standard comuni e/o guidelines e interoperabilità
- Industrial Leadership: promuovere attività a sostegno di standard e interoperabilità, (sicurezza e attività di pre-regolamentazione)
- Attività di disseminazione per promuovere l'uso dei risultati conseguiti a livello europeo, nazionale e locale

TIPOLOGIE PROGETTI

Research and innovation action

Innovation action

Strumento PMI

Ricerca collaborativa

Eranet

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Co – Fund

CSA

Coordination and Support Action

Prize

Fast track to innovation

(+)Innovazione

PREMI

- Facile accesso a più partecipanti con minori ostacoli amministrativi (= semplificazione per beneficiari e amministrazioni)
- *Result-driven*: premiato solo chi ottiene risultati
- Effetto leva: stimolo degli investimenti privati calcolato in 10 – 20 volte il valore cash del premio
- Pubbliche relazioni: cattura l'interesse e l'attenzione del pubblico su un particolare aspetto sociale
- Commercializzazione: i premi pubblicizzano bene una innovazione e servono da stimolo per investitori e inventori a portare la soluzione creata al mercato

PREMI

- **RECOGNITION PRIZES**

- (*Nobel Prize, DG INFSO's "ICT Prize", ...*)= riconoscimento di meriti scientifici

- **INDUCEMENT PRIZES**

- competizione che attribuisce un premio al raggiungimento di un obiettivo specifico (*Ortieg Prize, Ansari X-Prize, ...*). L'importo del premio non è legato al costo di realizzo dell'obiettivo

FAST TRACK TO INNOVATION

- Increase the participation of industry, SMEs and first time applicants in Horizon 2020
- Stimulate private sector investment in research and innovation
- Promote research and innovation with a focus on value creation and accelerate the development of technologies into innovative products, processes and services

FAST TRACK TO INNOVATION

- **PROCEDURA PILOTA** (lancio **2015**)
- PER LE INNOVATION ACTION RELATIVE A QUALSIASI CAMPO TECNOLOGICO (in LEIT e SC)
- BANDI SEMPRE APERTI CON TRE SCADENZE PER ANNO
- 6 MESI TRA SCADENZA DEL BANDO E FIRMA DEL GA
- max. **3M €**
- max. **5 PARTECIPANTI**
- no APPROVAZIONE COMITATO

AZIONI ULTERIORI

Partenariati pubblico Privati
Cooperazione Internazionale



INIZIATIVE DI PARTENARIATO PUBBLICO PRIVATO

PUBLIC – PRIVATE PARTNERSHIP

PPP





IL PERCHE' DEI PARTNERNARIATI PUBBLICO PRIVATI

- Risolvere i problemi insieme all'industria
- Rafforzare la leadership industriale europea
- Facilitare la definizione delle priorità in R & I in linea con gli obiettivi di Europa 2020 e i bisogni dell'industria
- Effetto leva negli elementi di R&I
- Rafforzare gli impegni dell'industria verso obiettivi comuni



Le PPP in H2020

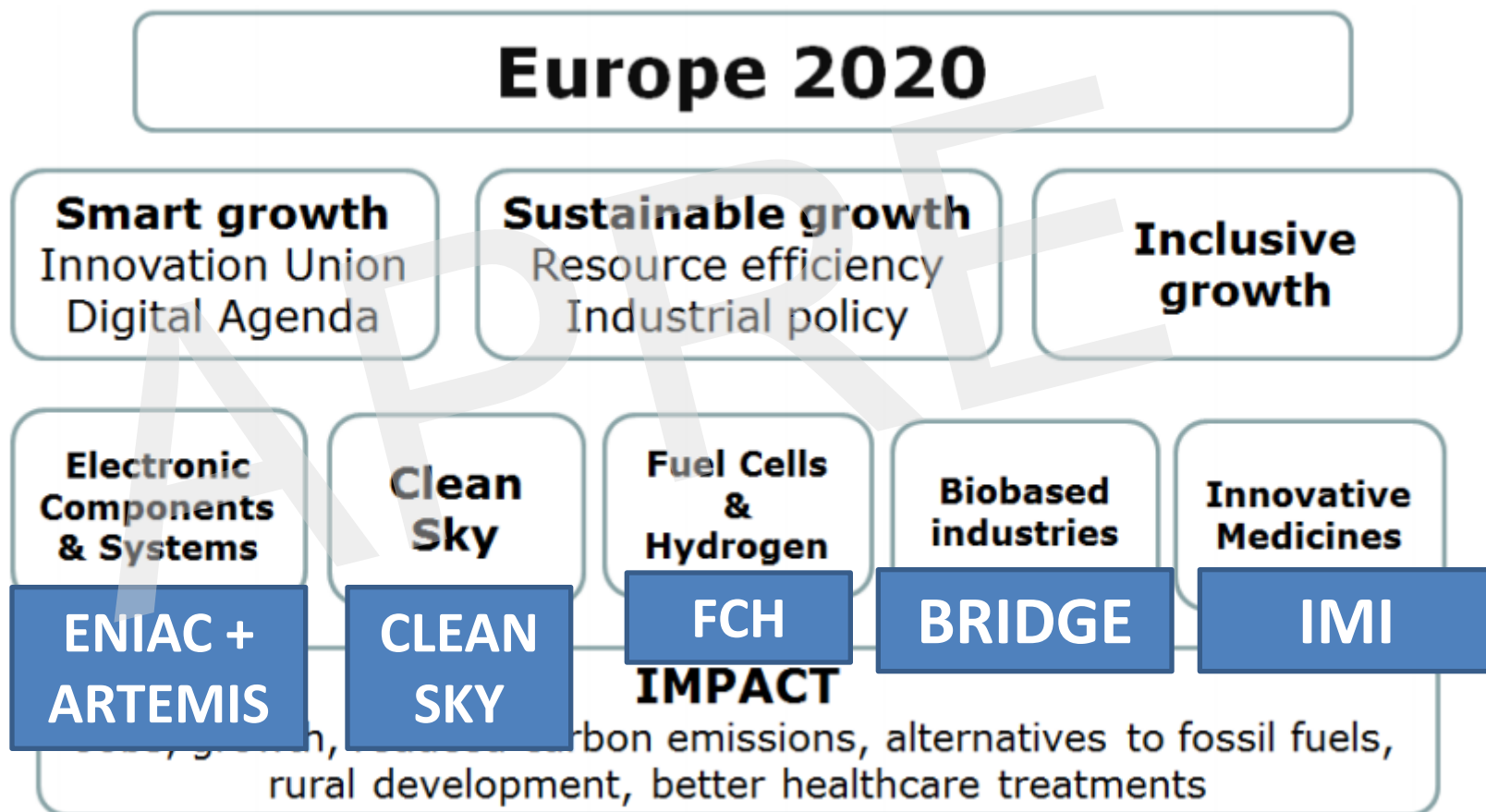
JTI o PPP istituzionali

- Innovative Medicines Initiative (IMI)
- Clean Sky
- Single European Sky ATM Research (SESAR)
- Fuel Cells and Hydrogen (FCH)
- **Electronic components and systems (ex ENIAC + ARTEMIS)**
- **Bio-based Industries (BRIDGE)**

PPP Contrattuali

- Factory of the Future (FoF)
- Energy-efficient Buildings (EeB)
- Green Cars (GC)
- Future internet (FI-PPP)
- **Sustainable process industry (SPIRE)**
- **Photonics**
- **Robotics**
- **High Performance Computing**

Strategia - JTI



*COM(2013) 494 final, *Public-private partnerships in Horizon 2020: a powerful tool to deliver on innovation and growth in Europe*, 10.07.2013, European Commission

Strategia - JTI

JTI	Investment in JTI (EUR)	
	from EU (Horizon 2020)	from industry partners and other sources
Innovative Medicines	1725 million	1725 million
Fuel Cells and Hydrogen	700 million	700 million ⁹
Clean Sky	1800 million	2250 million
Bio-based Industries	1000 million	2800 million
Electronic components and systems	1215 million	3600 million ¹⁰ (of which 1200 million from Member States)
Total	6440 million	9875 million from industry + 1200 million from Member States



PPP in H2020/1

Criteri per Public-Private Partnerships

(Articolo 19 della proposta Horizon 2020)

Public-private partnerships dovrebbe essere identificate in modalità aperta e trasparente, basandosi sui criteri che seguono:

- valore aggiunto dell'azione a livello europeo;
- impatto sulla competitività industriale, la crescita sostenibile e gli aspetti socio-economici
- impegno di lungo periodo da parte dei partner, basato su una visione condivisa e chiari e definiti obiettivi
- l'entità delle risorse coinvolte e la capacità di sfruttare ulteriori investimenti in ricerca e innovazione;
- una chiara definizione dei ruoli per ciascuno dei partner e accordo sugli indicatori chiave per misurare la performance



PPP in H2020/2

Article 187 PPPs - JTI

- Budget is fully earmarked
- Greater thematic visibility
- Higher ownership of industry partners
- Industry shares management costs
- There is no commitology
- Rules for community bodies apply
- Derogations of FP rules are needed

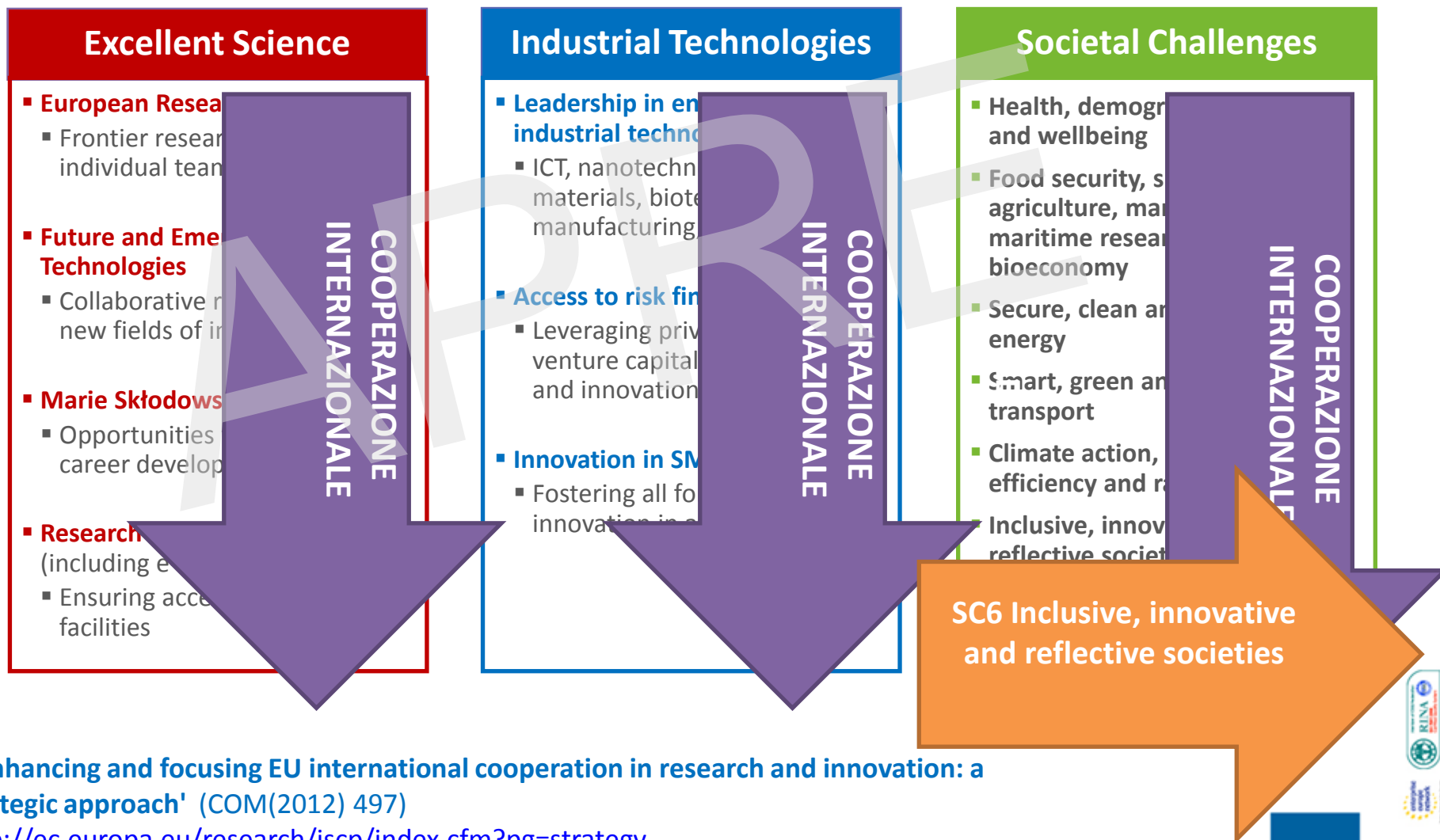
Contractual PPPs

- Earmarked budget is only indicative
- Industry proposes strategy and advises on WPs
- Commitology as usual under Horizon 2020
- Commission manages the programme
- Framework Programme rules for participation
- Industry commitment via Partnership Agreement

COOPERAZIONE INTERNAZIONALE



Struttura del programma



COOPERAZIONE INTERNAZIONALE

Communication entitled

**'ENHANCING AND FOCUSING EU
INTERNATIONAL COOPERATION IN
RESEARCH AND INNOVATION: A
STRATEGIC APPROACH'**

(COM(2012) 497)



<http://ec.europa.eu/research/iscp/index.cfm?pg=strategy>

COOPERAZIONE INTERNAZIONALE

Necessaria a EU per:

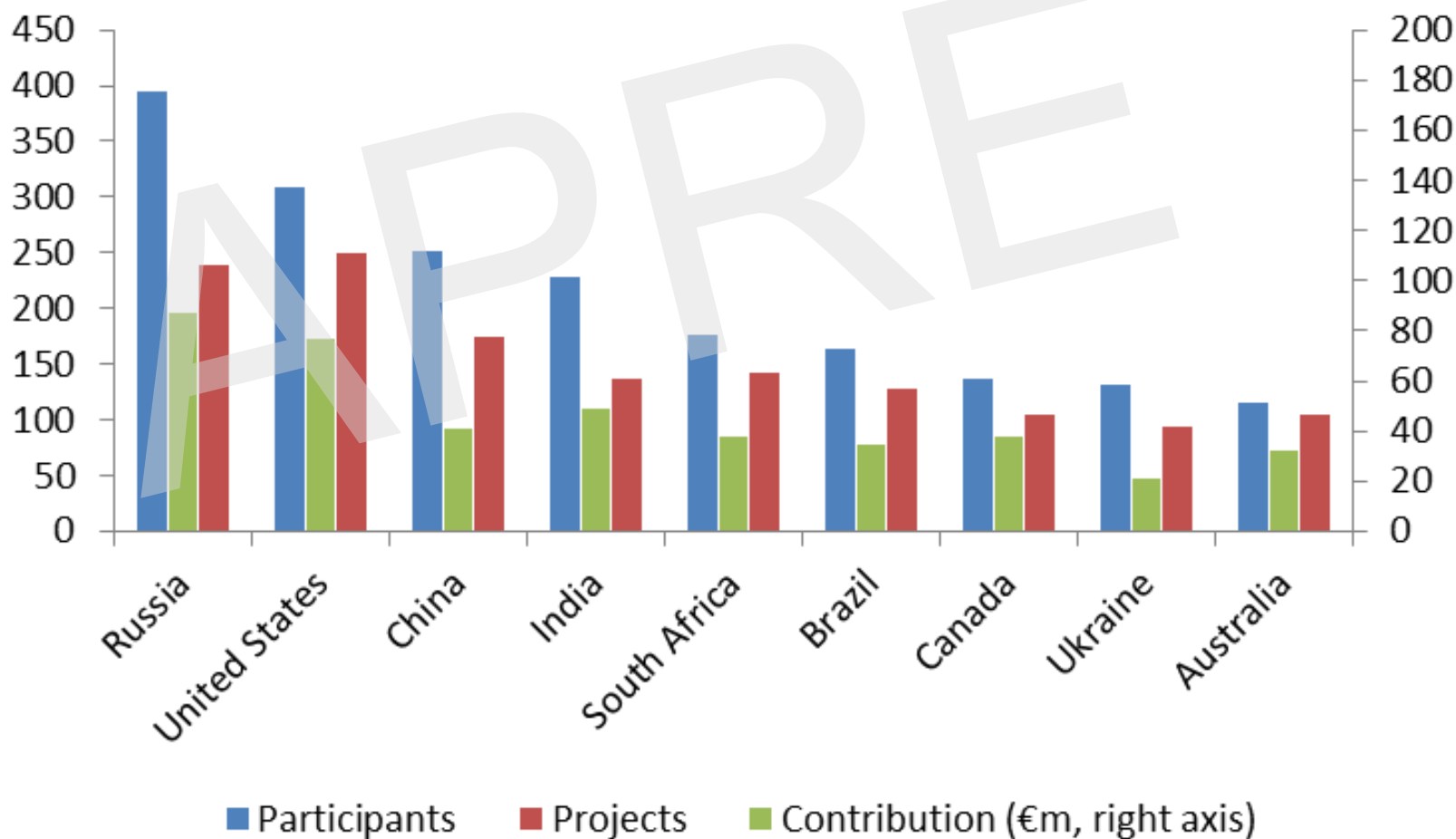
- accedere a nuova conoscenza fuori europa e ottenere l'ingresso in nuovi mercati
- promuovere Europa con un luogo e un partner attrattivo in ricerca e innovazione
- unire forze globalmente per affrontare le sfide sociali

14 Associated Countries

Regional agreements:
ASEAN, EaP, LAC, etc.

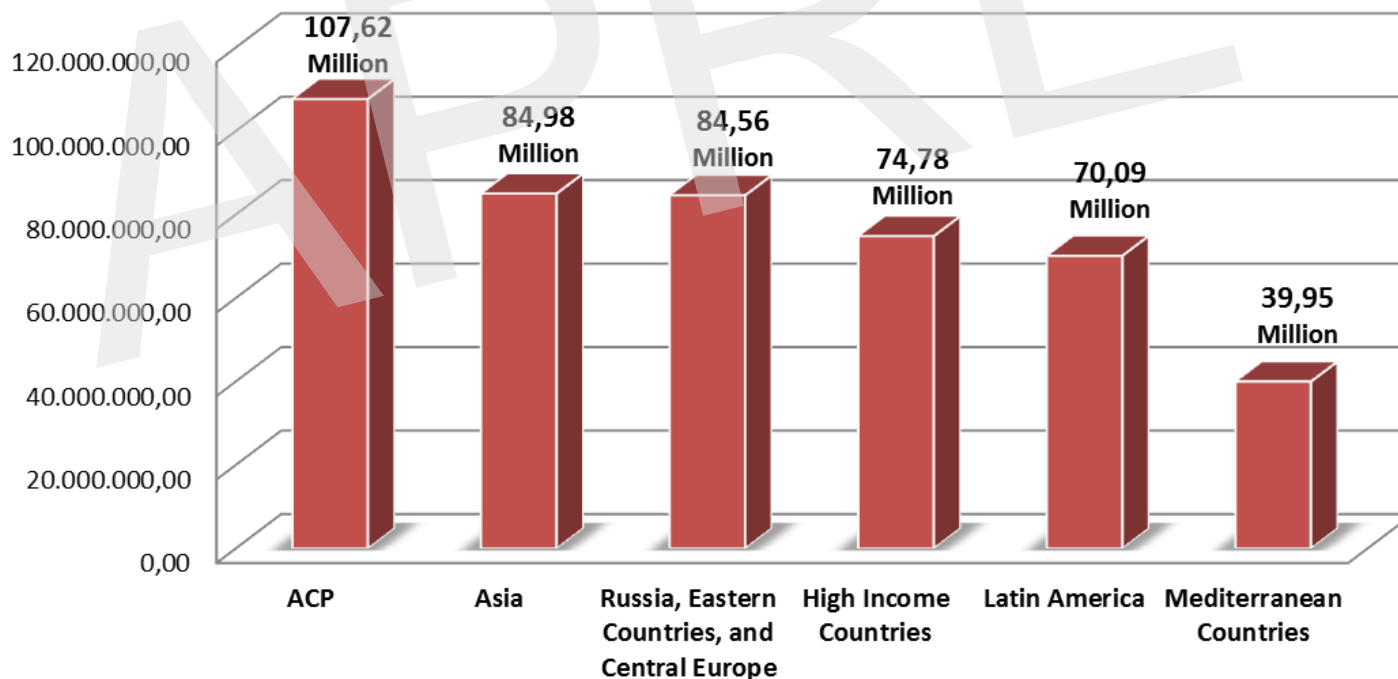
Science & Technology
Agreements

PAESI TERZI E PARTECIPAZIONE AL 7PQ



FINANZIAMENTI 7PQ IN COOPERAZIONE INTERNAZIONALE

**FP7 International Partners
EU Financial Contribution per Geographic Areas**



STRATEGIA DI IC VERSO H2020

EU ha bisogno di impegnarsi più attivamente e strategicamente nella cooperazione Internazionale

Tre obiettivi principali:

- Rafforzare l'eccellenza e l'attrattiva dell'Unione in ricerca e innovazione così come la sua competitività industriale ed economica
- Raccogliere le sfide sociali globali
- Supportare le politiche estere dell'Unione

COMBINARE AZIONI APERTE E AZIONI MIRATE

Openness:

Horizon 2020 apre alla partecipazione da tutto il mondo
Revisione della lista dei paesi che ricevono finanziamento automatico

Targeted actions:

1. *Tematico*: identificare le aree di cooperazione internazionale in abse all'agenda politica dell'Unione
2. Differenziazione per *paesi/regioni* nella definizione dei partner di cooperazione
➔ **multi-annual roadmaps** per la cooperazione con partner chiave

INTERNATIONAL COOPERATION IN H2020

- Attività mirate nei pilastri **SOCIETAL CHALLENGES E INDUSTRIAL LEADERSHIP**

 - Projects with required or preferential 3rd country participation
 - Joint calls, delegated management, ERA-NET

- **Pilastro EXCELLENT SCIENCE**

 - Marie Skłodowska-Curie Fellowships : strong international dimension
 - Development of global research infrastructures
 - ERC open to researchers from all over the world - research to be carried out mostly in Member States or Associated Countries

- **Azioni cross-cutting dedicate – INCLUSIVE, INNOVATIVE AND REFLECTIVE SOCIETIES CHALLENGE (6° CHALLENGE)**

 - Support for to policy dialogue
 - Networking and twinning activities
 - Coordination of EU and MS/AC international cooperation policies
 - Strengthening of European presence in international partner countries

MULTI-ANNUAL ROADMAPS

Enlargement and neighbourhood countries, and EFTA

- Focus su allineamento con ERA
- Supporto alle politiche di allargamento e vicinato (supporto nello sviluppare un comune 'Knowledge and Innovation Space')

Industrialised countries and emerging economies

- Focus su competitività
- Affrontare sfide globali
- Opportunità di business e accesso a nuovi mercati

Emergenti economies: Brasile, Russia, India, Cina + Messico

Developing countries

- Supportare politiche di sviluppo costruendo partnerships che contribuiscono allo sviluppo sostenibile
- Indirizzate a sfide rilevanti (e.g. poverty-related diseases, energy and food security, biodiversity)

AREE DI INTERESSE IDENTIFICATE IN BASE A :

- Capacità in R&I
- Contributo ai commitment internazionali

- Apertura del mercato
- Frameworks in atto per avviare una cooperazione

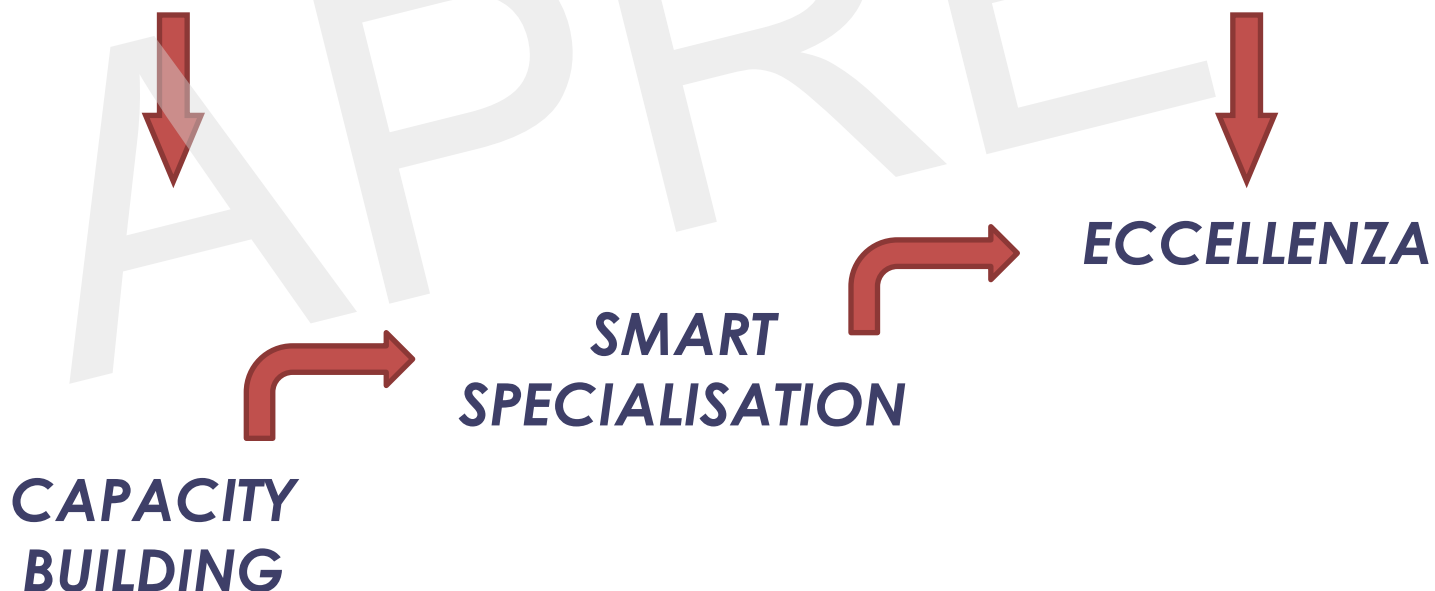
"STAIRWAY TO EXCELLENCE"

Fondi Strutturali

Pacchetti preassegnati di risorse a livello geografico per politiche di R&I locali

Horizon 2020

Call for proposal con progetti basati su merito, senza indicazione geografica



Per maggiori informazioni:

http://ec.europa.eu/research/horizon2020/index_en.cfm

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 **RESEARCH & INNOVATION**
Horizon 2020

European Commission > Research & Innovation > Horizon 2020 > Home

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COUNTDOWN
291 DAYS
Before Horizon 2020 launch

HORIZON 2020
THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

<p>What is Horizon 2020?</p> <ul style="list-style-type: none"> • The EU Framework Programme for Research and Innovation • Official documents • Questions & Answers 	<p>What's in Horizon 2020 for me?</p> <ul style="list-style-type: none"> • Excellent Science • Competitive Industries • Better Society 	<p>Why Horizon 2020?</p> <ul style="list-style-type: none"> • Europe 2020 • Public consultation • Successful EU research
<p>What's next?</p> <ul style="list-style-type: none"> • A time line for Horizon 2020 • Calendar of events • Experts for Advisory Groups NEW 	<p>What's your view?</p> <ul style="list-style-type: none"> • Video testimonials <p> Marinella Tabet</p>	<p>Press corner</p> <ul style="list-style-type: none"> • Press materials • Country profiles and featured projects • Videos by theme

