Università degli Studi di Modena e Reggio Emilia

Modena, 18 Dicembre 2013

INDUSTRIAL LEADERSHIP

Il secondo pilastro di Horizon 2020

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Bioeconomy – NMP - ERC
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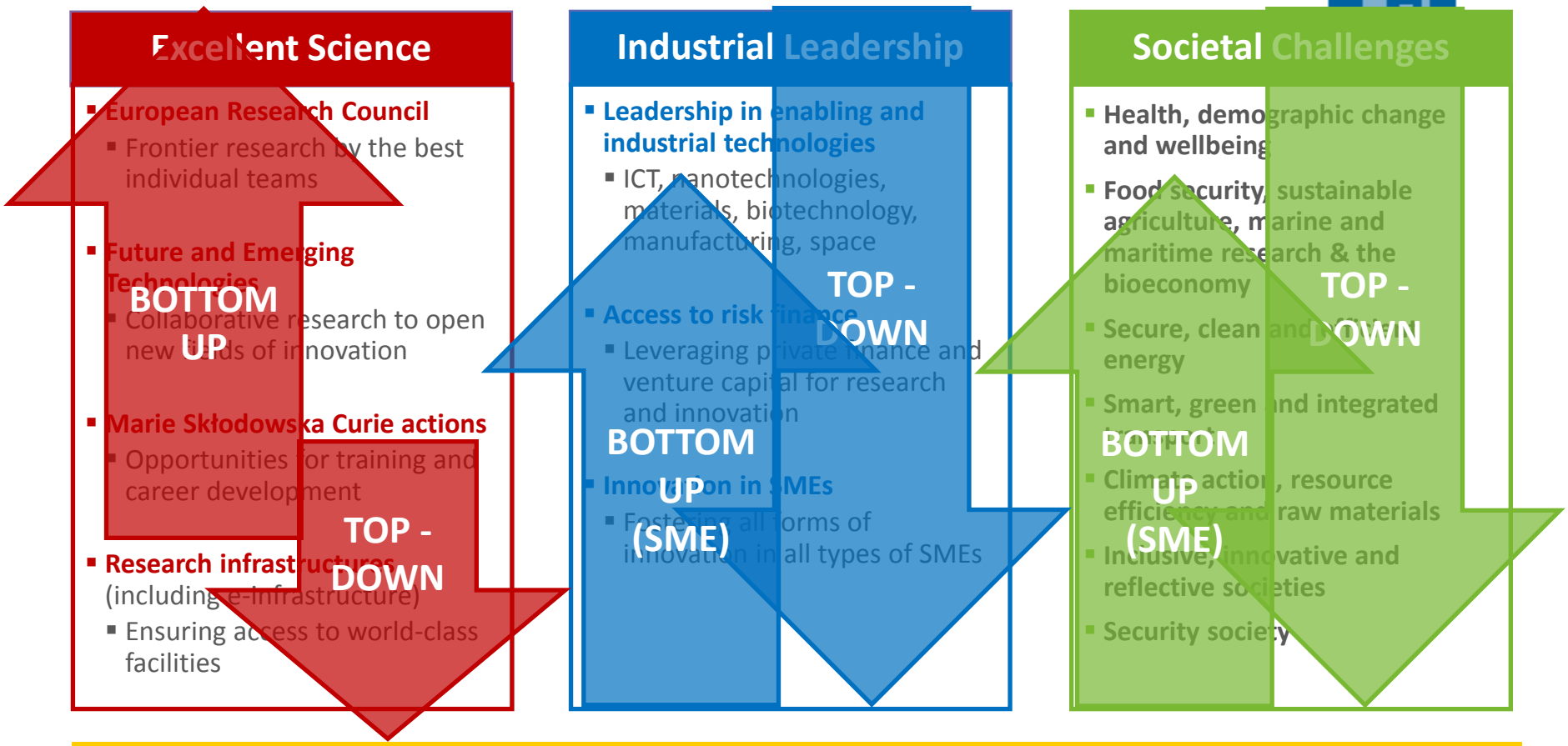
AGENDA

- Struttura del secondo pilastro
- Tematiche interessate
- Technology readiness level - TRL
- Tipologia di azioni
- Strumento PMI

Struttura del programma



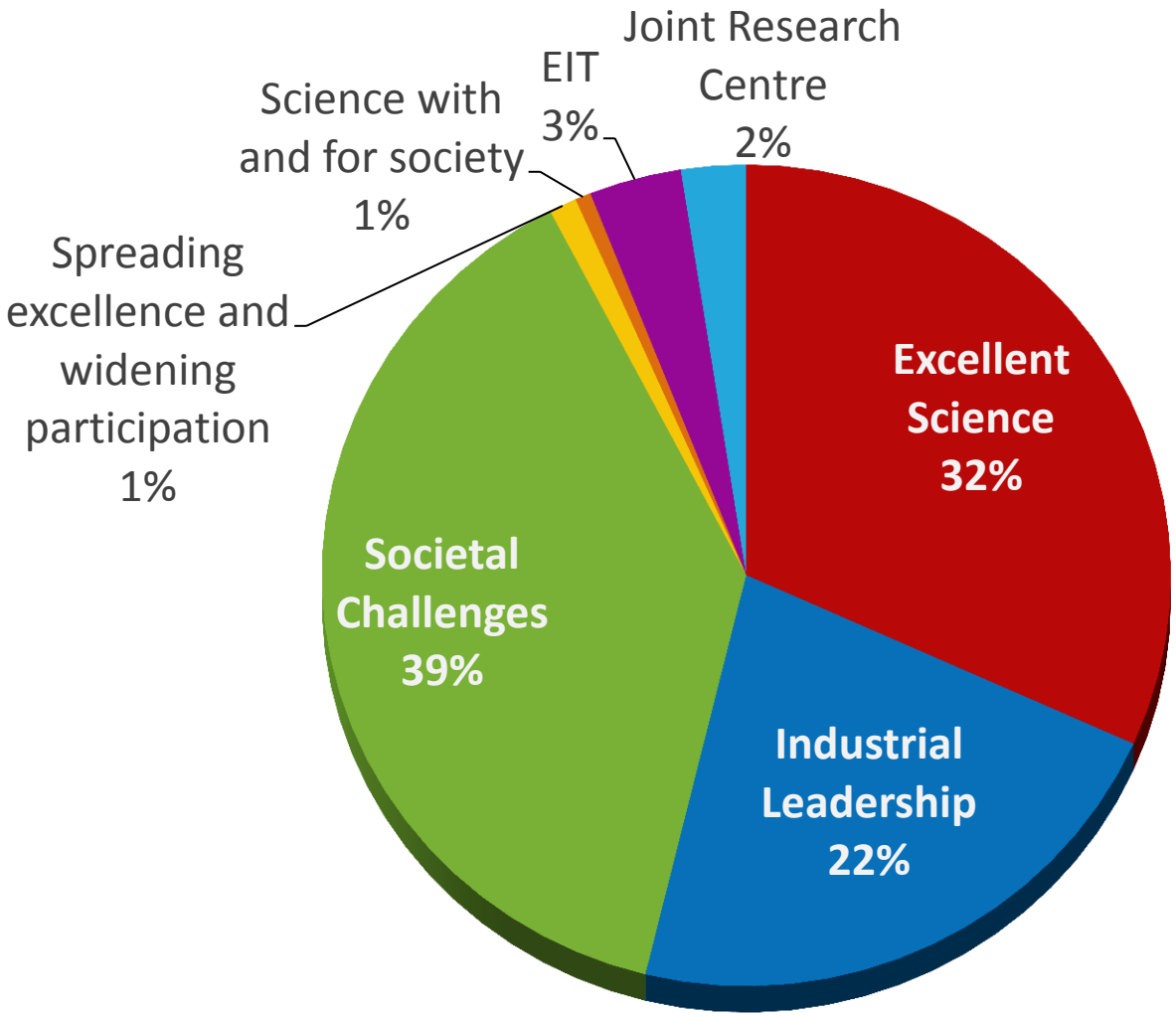
European Institute of Innovation and Technology (EIT)

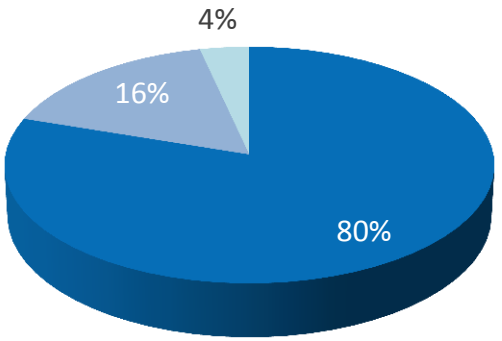
Spreading Excellence and Widening Participation

Science with and for society

Joint Research Center (JRC)

Ripartizione finanziaria

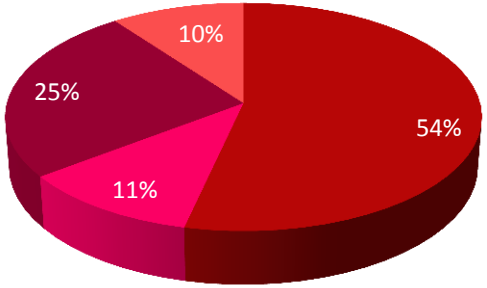




- Leadership in enabling and industrial technologies
- Access to risk finance
- Innovation in SMEs

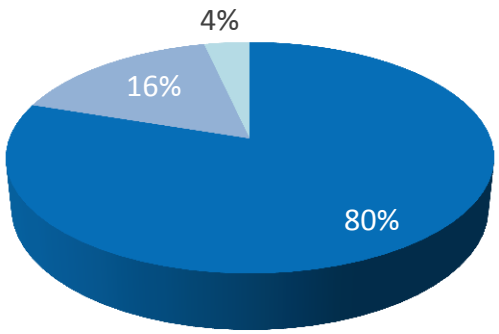
Il budget per le attività

Excellent Science



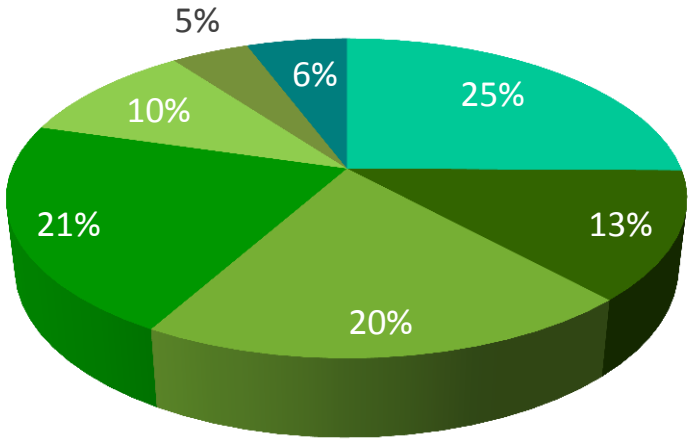
- European Research Council
- Future and Emerging Technologies
- Marie Skłodowska Curie Actions
- European Research Infrastructures (including eInfrastructures)

Industrial Leadership



- Leadership in enabling and industrial technologies
- Access to risk finance
- Innovation in SMEs

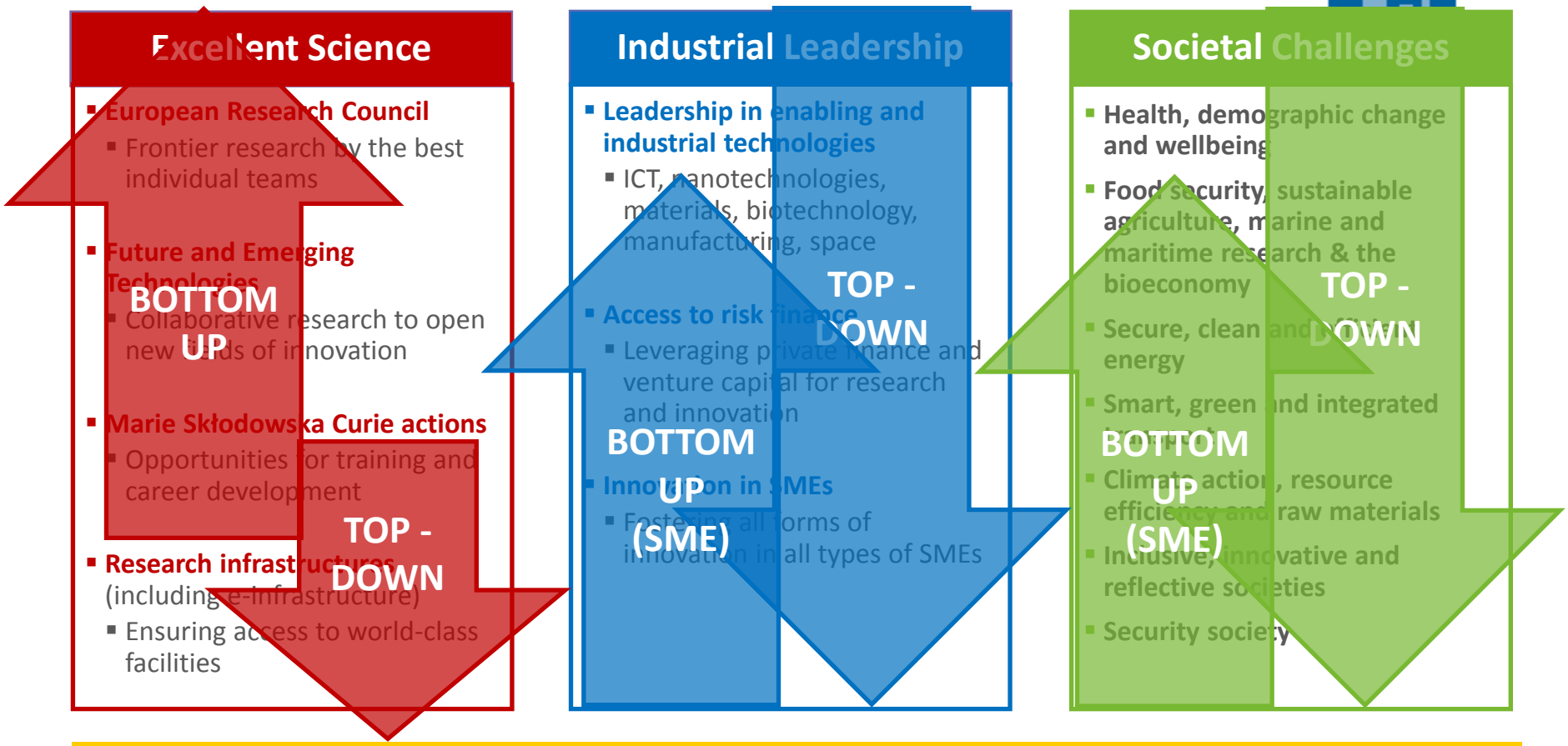
Societal challenges



- Health, demographic change and wellbeing
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy:
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, environment, resource efficiency and raw materials
- inclusive, innovative and reflective Societies
- Secure Societies

	Compromise % 27.06.13	Million € (current prices
I. Excellent Science, of which:	31,73%	24.441
1. ERC	17,00%	13.095
2. FET	3,50%	2.696
3. MS Curie Actions	8,00%	6.162
4. Research Infrastructures	3,23%	2.488
II. Industrial Leadership, of which:	**22,09%**	**17.016**
Leadership in Enabling and Industrial Technologies	**17,60%**	**13.557**
Access to Risk Finance	**3,69%**	**2.842**
Innovation in SME's	**0,80%**	**616**
II.I Societal Challenges, of which:	38,53%	29.679
Health, demographic change and well being	9,70%	7.472
Food security, sustainable agriculture, marine and maritime research & the bio economy	5,00%	3.851
Secure, clean and efficient energy	7,70%	5.931
Smart, green and integrated transport	8,23%	6.339
Climate action, resource efficiency and raw materials	4,00%	3.081
Europe in a changing world – Inclusive, innovative and reflective society	1,70%	1.309
Secure societies – Protecting freedom and security of Europe and its citizens	2,20%	1.695
Spreading Excellence and Widening Participation	1,06%	816
Science with and for society	0,60%	462
European Institute of Innovation and Technology - EIT	3,52%	2.711
JRC Non-nuclear	2,47%	1.903
Total EU REGULATION	100,00%	77.028

Struttura del programma



European Institute of Innovation and Technology (EIT)

Spreading Excellence and Widening Participation

Science with and for society

Joint Research Center (JRC)

Struttura del programma

Excellent Science

- **European Research Council**
  - Frontier research by the best individual teams
- **Future and Emerging Technologies**
  - Collaborative research to open new fields of innovation
- **Marie Skłodowska Curie actions**
  - Opportunities for training and career development
- **Research infrastructures** (including e-infrastructure)
  - Ensuring access to world-class facilities

Industrial Leadership

- **Leadership in enabling and industrial technologies**
  - ICT, nanotechnologies, materials, biotechnology, manufacturing, 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

Societal Challenges

- **Health, demographic change and wellbeing**
- **Food security, sustainable agriculture, marine and maritime research & the bioeconomy**
- **Secure, clean and efficient energy**
- **Smart, green and integrated transport**
- **Climate action, resource efficiency and raw materials**
- **Inclusive, innovative and reflective societies**
- **Security society**

European Institute of Innovation and Technology (EIT)

Spreading Excellence and Widening Participation

Science with and for society

Joint Research Center (JRC)

H2020

INDUSTRIAL LEADERSHIP

- ICT
- NANOTECHNOLOGIES
- ADVANCED MATERIALS
- MANUFACTURING
- BIOTECHNOLOGY
- SPACE

FP7

- COOPERATION - ICT
- COOPERATION - NMP
- COOPERATION - HEALTH
- COOPERATION - KBBE
- COOPERATION - SPACE

Industrial Leadership/1

Budget proposto (milioni di €)

15.507 M €

	EC	EP	Compromise - current -
Leadership in enabling and industrial technologies (ICT, nanotechnologies, materials, biotechnology, manufacturing, space)	15.580	13.781	13.557
Access to risk finance Leveraging private finance and venture capital for research and innovation	4.000	3.538	2.842
Innovation in SMEs Fostering all forms of innovation in all types of SMEs	700	619	616

Industrial Leadership/2

Rationale:

- Gli investimenti strategici nelle tecnologie-chiave (es. tecnologie industriali avanzate, microelettronica) rafforzano l'innovazione nei settori già maturi e in quelli emergenti

- L'Europa ha bisogno di attrarre ulteriori investimenti privati in ricerca e innovazione

- L'Europa necessita di un numero maggiore di PMI innovative capaci di stimolare la crescita e creare posti di lavoro

Industrial Leadership/2

Per incoraggiare investimenti in R&I in Europa, promovendo alcune priorità per ogni forma di business

- **Leadership in enabling and industrial technologies** - soprattutto Key enabling technologies (Information and Communication Technologies – **ICT**; Nanotechnologies, Advanced materials, Biotechnology, Advanced Manufacturing and Processing – **NMPB**; and **Space**

- **Access to finance** per aziende innovative, strumenti finanziari in partenariato con l'European Investment Bank; Debt instrument & Equity instrument

- **Innovation in SME**

  Support to innovative SMEs

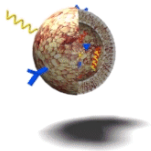
COSA SONO LE KET?
Key Enabling Technologies

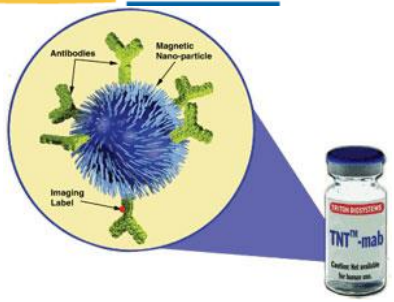
Tecnologie "ad **alta intensità di conoscenza** e associate ad elevata intensità di **R & S,** a **cicli d'innovazione rapidi**, a consistenti spese di investimento e a **posti di lavoro altamente qualificati**. Rendono possibile **l'innovazione nei processi, nei beni e nei servizi** in tutti i settori economici e hanno quindi rilevanza sistemica. Sono **multidisciplinari**, interessano tecnologie di diversi settori e tendono a convergere e a integrarsi. Possono aiutare i leader nelle tecnologie di altri settori a trarre il massimo vantaggio dalle loro attività di ricerca"

- Photonics
- Manufacturing
- Biotechnology
- Advanced Materials
- Micro/Nanoelectronics
- Nanotechnologies

*Current situation of key enabling technologies in Europe, SEC (2009)

Example - combining several KETs for advanced products





Societal Challenge

Health

New nanotechnology-based diagnostics

New target drug delivery and release

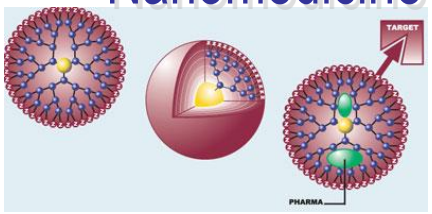
Regenerative medecine

Advanced materials

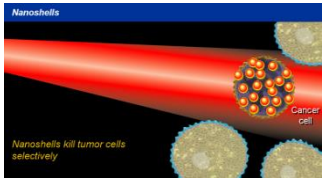
Microelectronics

Nanotechnologies

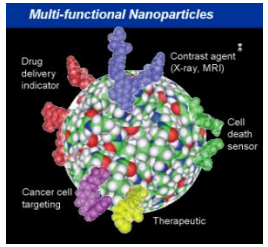
Nanomedicine

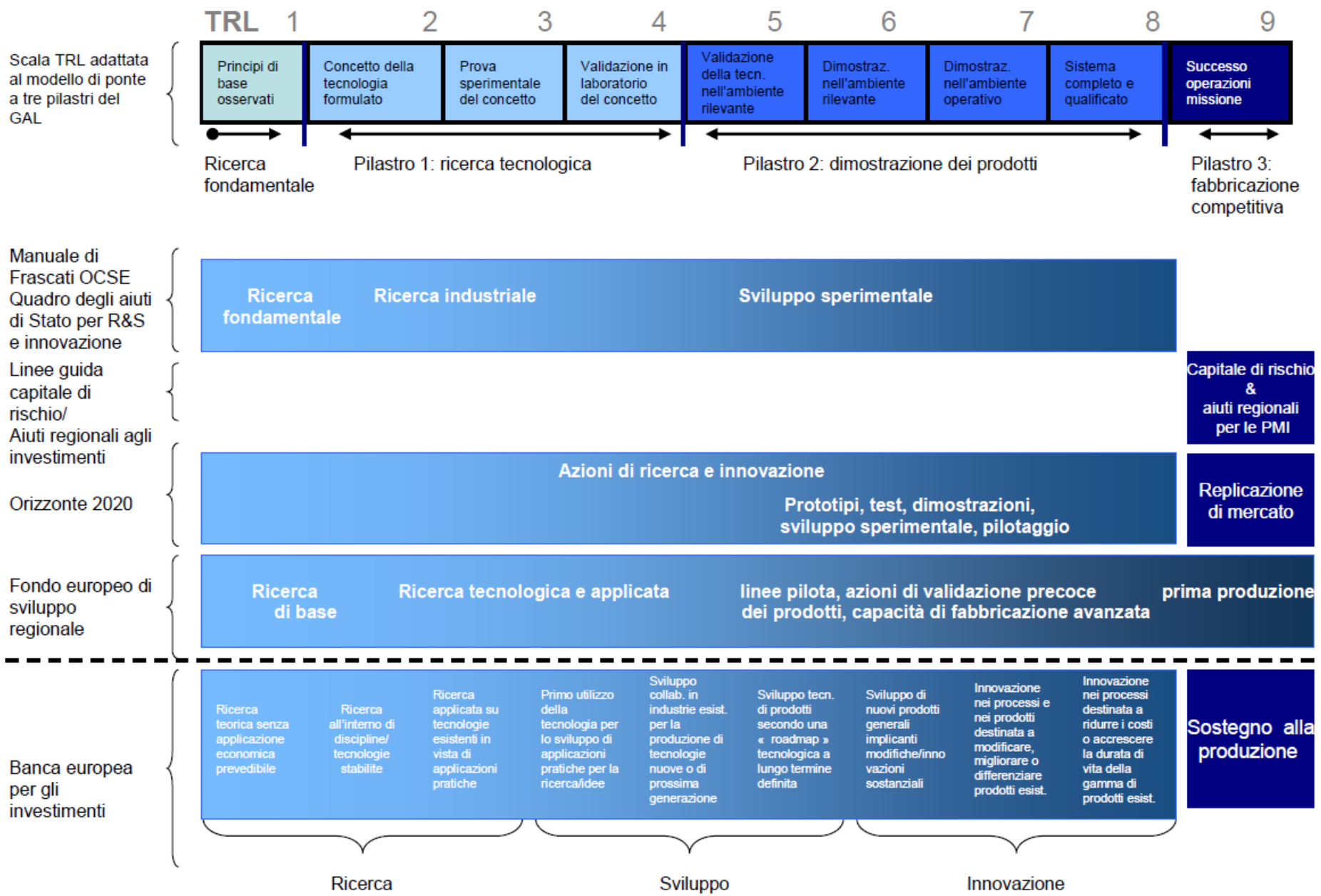


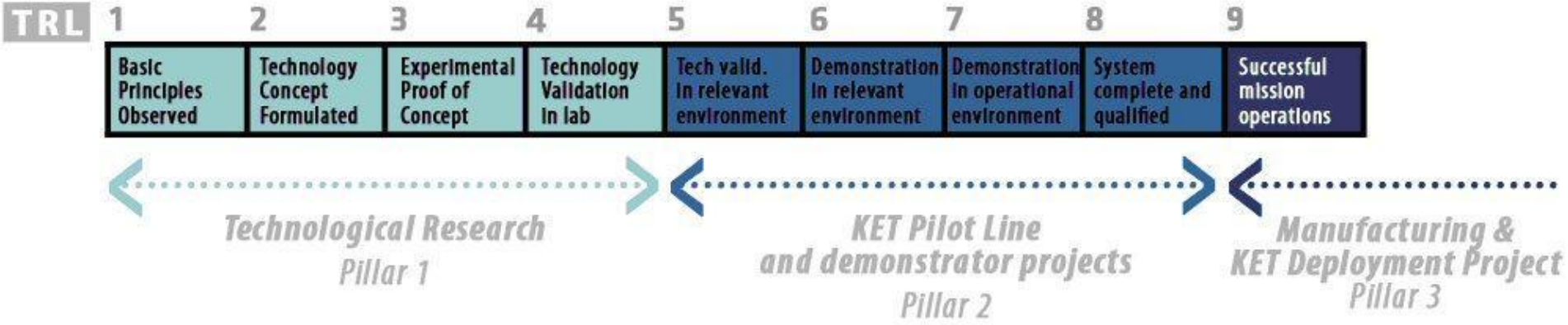
Photonics



Biotechnologies




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



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

NMP 11 – 2015: Nanomedicine therapy for cancer

Specific challenge: Promising pre-clinical nano-medicine proof-of-concepts have been developed for the therapy of cancer, but their translation into clinical therapies remains a major challenge. An important bottleneck is up-scaling under Good Manufacturing Practice (GMP) conditions for
scale to the quantity ne

Scope: The aim is to t
with pre-clinical proof
The project shall sta
efficacy and toxicity
ultimately new effecti
important aspect is th

nanomedicines and the quality control, taking into account GMP and medical regulatory requirements. Projects may include the later stages of pre-clinical testing and Phase 1 clinical testing, but the latter is not a requirement. Nanopharmaceuticals may be manufactured with either a top-down or a bottom-up approach, using for example self-assembling technology. Applicants must describe, according to industrial criteria, how the various barriers for advancing their new therapy to clinical application will be overcome, including technical, IPR, competitive, commercial and regulatory criteria, with efficacy and toxicity. Attention must be paid to clinical trial design and the foreseen research and commercial path to market introduction has to be well outlined.

The research is to be implemented from TRL 4/5 and target TRL 6/7. Implemented as cross-KET activities.

The Commission considers that proposals requesting a contribution from the EU between EUR 6 and 9 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected impact:

- Potential major improvement in clinical cancer therapy, thereby providing enhanced quality of life for patients (taking gender and other diversities into account).
- Potential reduced direct and indirect healthcare costs linked to the disease and its treatment.
- Accelerated introduction of new nanotechnology enabled cancer therapy, through robust manufacturing and quality control procedures for new nanotechnology enabled drugs.

Type of action: Research & Innovation Actions

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

Nanotechnologies

Next generation nanomaterials, -devices, -nanosystems

Ensuring safe development & application + societal dimension

Efficient synthesis and manufacturing of nanomaterials, - systems

Developing capacity-enhancing techniques, measuring methods

Advanced Materials

Materials development & transformation

Mgmt of materials components

Materials for sustainable and for creative industries

Metrology, characterisation, standardisation, quality control

Optimisation of the use / substitution of materials

Advanced Manufacturing & Processing

Factories of the future

Energy-efficient buildings

Sustainable technologies in energy-intensive process industries

New, sustainable business models

* Area attività: Proposta Commissione Europea

ICT

New generation components & systems

Next generation computing

Future internet

Content technologies & information mgmt

Advanced interfaces and robots

Biotechnology

Boosting cutting-edge biotech as future innovation drivers

Biotechnology-based industrial processes

Innovative and competitive platform technologies

Space

Enabling European competitiveness & independence in space activities

Enabling future space missions

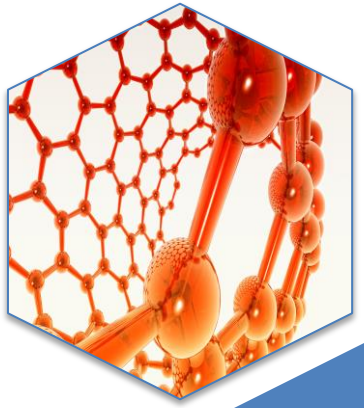
Enabling exploitation of space data

Enable European participation in global space endeavours

* Area attività: Proposta Commissione Europea

NMPB - Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing

Calls 2014/2015



NANOTECHNOLOGIES, ADVANCED MATERIALS AND PRODUCTION

BIOTECHNO-LOGIES

FACTORIES OF THE FUTURE

ENERGY-EFFICIENT BUILDINGS

SPIRE

DEADLINE

CALL1:
NANOTECHNOLOGIES, ADVANCED MATERIALS AND PRODUCTION

Topic identifier	Deadline	Deadline
NMP 1-2014 NMP 4-2014 NMP 5-2014 NMP 8-2014 NMP 9-2014 NMP 27-2014 NMP 31-2014 NMP 33-2014 NMP 34-2014 NMP 36-2014 NMP 37-2014 NMP 38-2014 NMP 39-2014	Single stage 06/05/2014	
NMP 10-2014 NMP 13-2014 NMP 18-2014 NMP 20-2014 NMP 21-2014 NMP 26-2014 NMP 28-2014 NMP 35-2014	First stage 06/05/2014 Second stage 07/10/2014	
NMP 2-2015 NMP 3-2015 NMP 6-2015 NMP 7-2015 NMP 32-2015 NMP 38-2015		Single stage 26/03/2015

DEADLINE

CALL2
BIOTECHNOLOGIES

Topic identifier	2014	2015
BIOTEC 1 – 2014 BIOTEC 3 – 2014 BIOTEC 4 – 2014	First stage 12/03/2014 Second stage 26/06/2014	
BIOTEC 2 – 2015 BIOTEC 6 – 2015		First stage 24/02/2015 Second stage 11/06/2015

Topic identifier	Deadline
FoF 1-2014 FoF 2-2014 FoF 3-2014 FoF 4-2014 FoF 5-2014 FoF 6-2014 FoF 7-2014	20/03/2014
FoF 8-2015 FoF 9-2015 FoF 10-2015 FoF 11-2015 FoF 12-2015 FoF 13-2015 FoF 14-2015	09/12/2014

CALL3: FACTORIES OF THE FUTURE

DEADLINE

CALL4: ENERGY-EFFICIENT BUILDINGS

Topic identifier	Deadline	Deadline
EeB 1-2014 EeB 2-2014 EeB 3-2014 EeB 4-2014	20/03/2014	
EeB 5-2015 EeB 6-2015 EeB 7-2015 EeB 8-2015		09/12/2014

CALL5: SPIRE

Topic identifier	Deadline	Deadline
SPIRE 1-2014 SPIRE 2-2014 SPIRE 3-2014 SPIRE 4-2014	20/03/2014	
SPIRE 5-2015 SPIRE 6-2015 SPIRE 7-2015 SPIRE 8-2015		09/12/2014

ICT – LEIT calls

1. Components and systems
2. Advanced Computing
3. Future Internet
4. Content technologies and information management
5. Robotics
6. Key Enabling Technologies: Micro- nano-electronics and photonics

+ Factory of the Future cPPP

+ International Cooperation actions (EU-Brazil, EU-Japan)

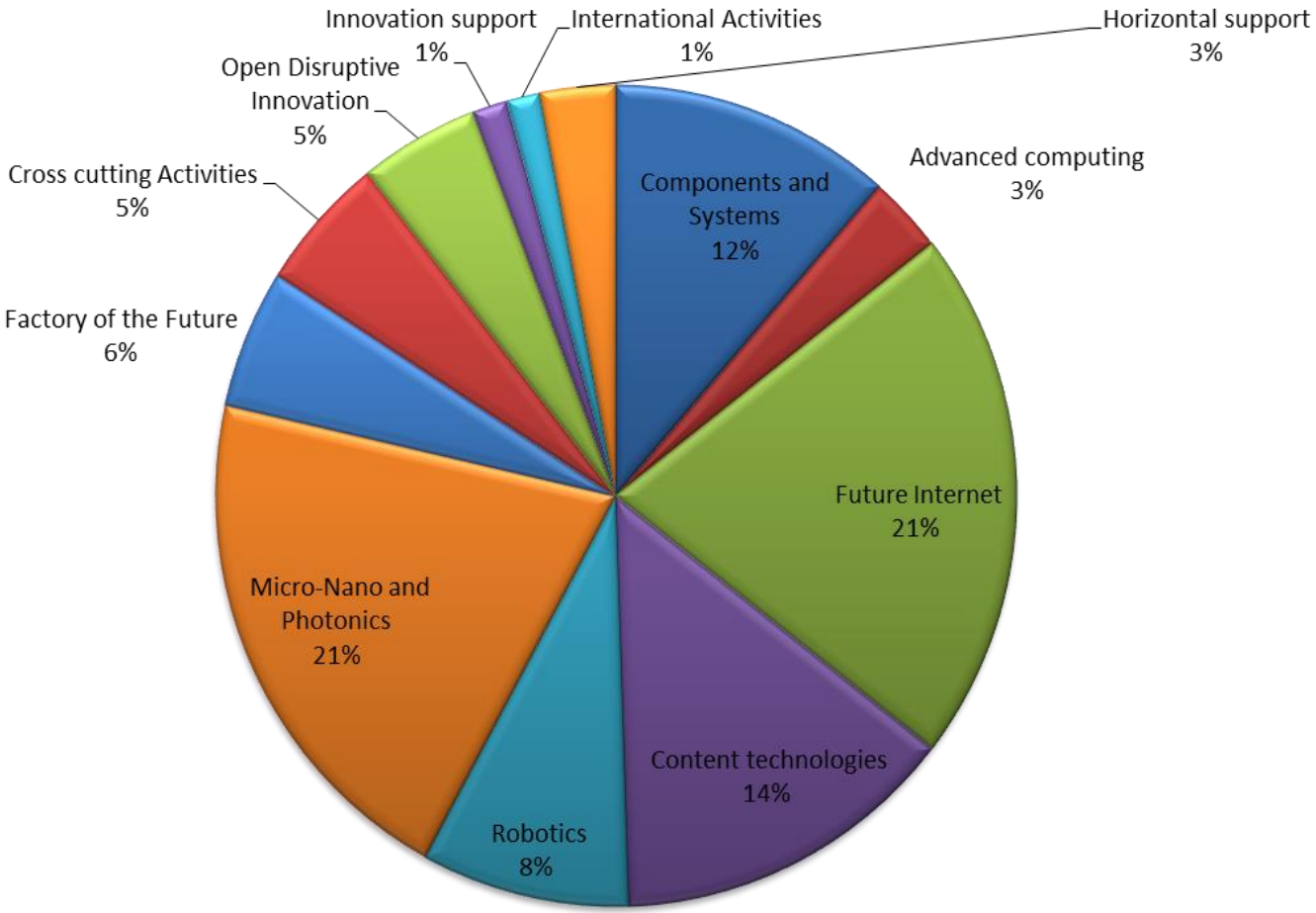
<u>ICT Cross cutting activities:</u>

- Internet of Things
- Human-centric Digital Age
- Cybersecurity
- Support to NCPs

ICT Innovation actions

- Access to finance
- Innovation policy support
- Open disruptive innovation scheme (SME instrument)

ICT – LEIT calls



ICT – DEADLINE

H2020-ICT-2014
Publication date: **11 December 2013**
Opening: 11 December 2013 except topic ICT37 that opens on 01/03/2014 for phase 1 and phase2 (SME INSTRUMENT) and topic ICT14 that opens on 15 July 2014.

Deadline(s):
24 April 2014 (All Topics except ICT14.a, ICT14.b, ICT14.c, ICT35)
25 November 2014 (ICT14a, ICT14.b, ICT14.c)

Overall indicative budget: EUR 703.5 million
Deadline(s): at 17.00.00 Brussels time on the following dates

SPACE

CALLS 2014/2015

APPLICA-TIONS IN SATELLITE NAVIGATION - GALILEO

EARTH OBSERVA-TION

PROTECTION OF EUROPEAN ASSETS IN AND FROM SPACE”

COMPETITIVENESS OF THE EUROPEAN SPACE SECTOR: TECHNOLOGY AND SCIENCE

DEADLINES SPACE

CALL 1: APPLICATIONS IN SATELLITE NAVIGATION - GALILEO – 2014 & 2015	GALILEO 1, 2, 3, 4 (2014)	03-04-2014 at 17.00.00 Brussels time
	GALILEO 1, 2, 3 (2015)	[04-02-2015]
CALL 2: EARTH OBSERVATION	EO 1,2,3	26-03.2014 at 17.00.00 Brussels time
CALL 3: PROTECTION OF EUROPEAN ASSETS IN AND FROM SPACE	Protect 1,2	26-03.2014 at 17.00.00 Brussels time
CALL 4: COMPETITIVENESS OF THE EUROPEAN SPACE SECTOR: TECHNOLOGY AND SCIENCE	COMPET 1,2,3,4,5,6,7,8,9,10,11	26-03.2014 at 17.00.00 Brussels time

Access to Finance

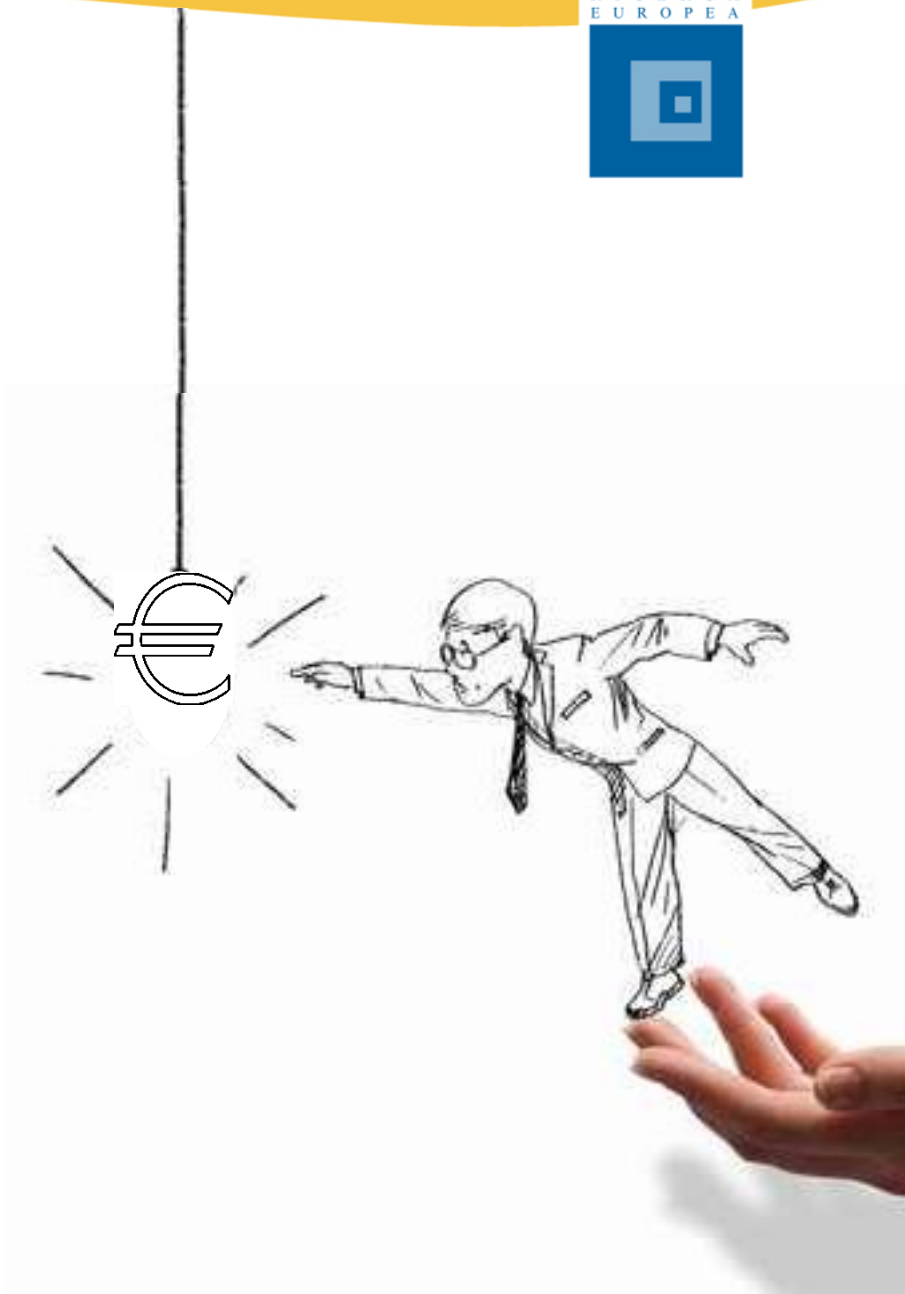
- Per aziende innovative
- Strumenti finanziari in partenariato con l'European Investment Bank
- Debt instrument & Equity instrument

€ 2.842 M€

Innovation in SME

- Eurostars
- EEN
- Azioni di coordinamento e supporto

€ 616 M €



TIPOLOGIE DI AZIONI

TIPOLOGIE AZIONI

Ricerca collaborativa

- Research and innovation action
- Innovation action
- Strumento PMI

Co –Fund

- Eranet
- Pre – commercial procurement (PCP)
- Pubblic Procurement of Innovative solution (PPI)

CSA

- Coordination and Support Action

(+)Innovazione

- Prize
- Fast track to innovation

TIPOLOGIE AZIONI

Ricerca collaborativa

- Research and innovation action
- Innovation action
- Strumento PMI

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CSA

- Coordination and Support Action

(+)Innovazione

- Prize
- Fast track to innovation

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, demostrating, piloting, large - scale product validation and market replication

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

a. Demostration or pilot

b. 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% (direct costs)

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.

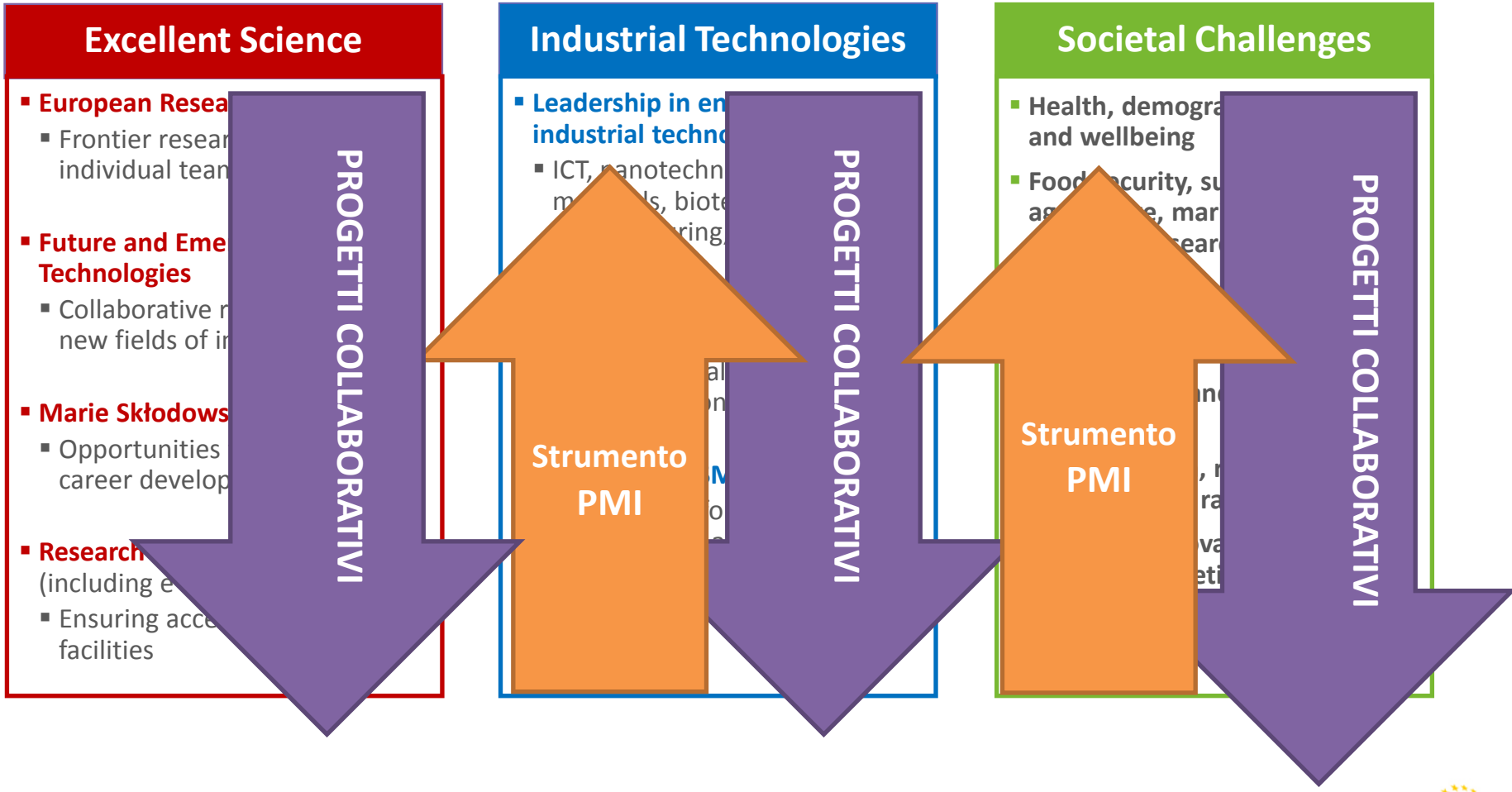
A **'demonstration or pilot'** aims to validate the technical and economic viability of a new or improved technology, product, process, service or solution in an operational (or near to
operational) environment, whether industrial or otherwise, involving where appropriate a larger scale prototype or 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% - direct costs (except for non-profit legal entities, where a maximum rate of 100%)

STRUMENTO PMI

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

Concept & Feasibility Assessment

Idea to concept, risk assessment, technological & commercial feasibility

Lump sum: 50.000 €

~ 6 mesi

Demonstration Market replication R&D

Demonstration, prototyping, testing , market replication, scaling up, miniaturisation, research

1-3 (5) M€ contributo CE

~ 12 to 24 mesi

Commercialisation

Pre-Commercial Procurement

SME window EU financial facilities

Quality label for successful projects, access to risk finance, indirect support

Nessun finanziamento diretto

Idea — Sostegno continuo per l'intera durata — Mercato

LE TRE FASI

Fase 1: concetto e valutazione della fattibilità

Input:
Idea/Concept in "**Business Plan I**"
(~ 10 pages)

Main Activities:

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

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.)

Main Activities:

Development Prototyping
Testing
Piloting
Miniaturisation
Scaling-up
Market replication

- Design & creation of innovative applications to foster the delivery of mobile public services
- New business model for SMEs in traditional sector to innovate

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

LO STRUMENTO PMI

- **SOLO PER PMI** (1 PMI o consorzio di PMI)
- **APPROCCIO BOTTOM UP** (più o meno generico) nei SC/LEIT
- **OPEN CALL**, organizzate in **3 FASI**
    1. lump sum per esplorare la fattibilità e il potenziale commerciale dell'idea progettuale
    2. Grant per attività di R&I con focus sulle attività dimostrative
    3. Misure di supporto e attività di networking per lo sfruttamento dei risultati
- Nessun obbligo per i partecipanti di coprire tutte e tre le fasi
- Combinanzione di attività di dimostrazione (test, prototipizzazione, …), e ricerca
- Gestione centralizzata **(EACI → EASME)**

DEADLINE

Publication date: 11/12/2013
Opening: 01/03/2014 for phase 1 and phase 2

Deadline(s):

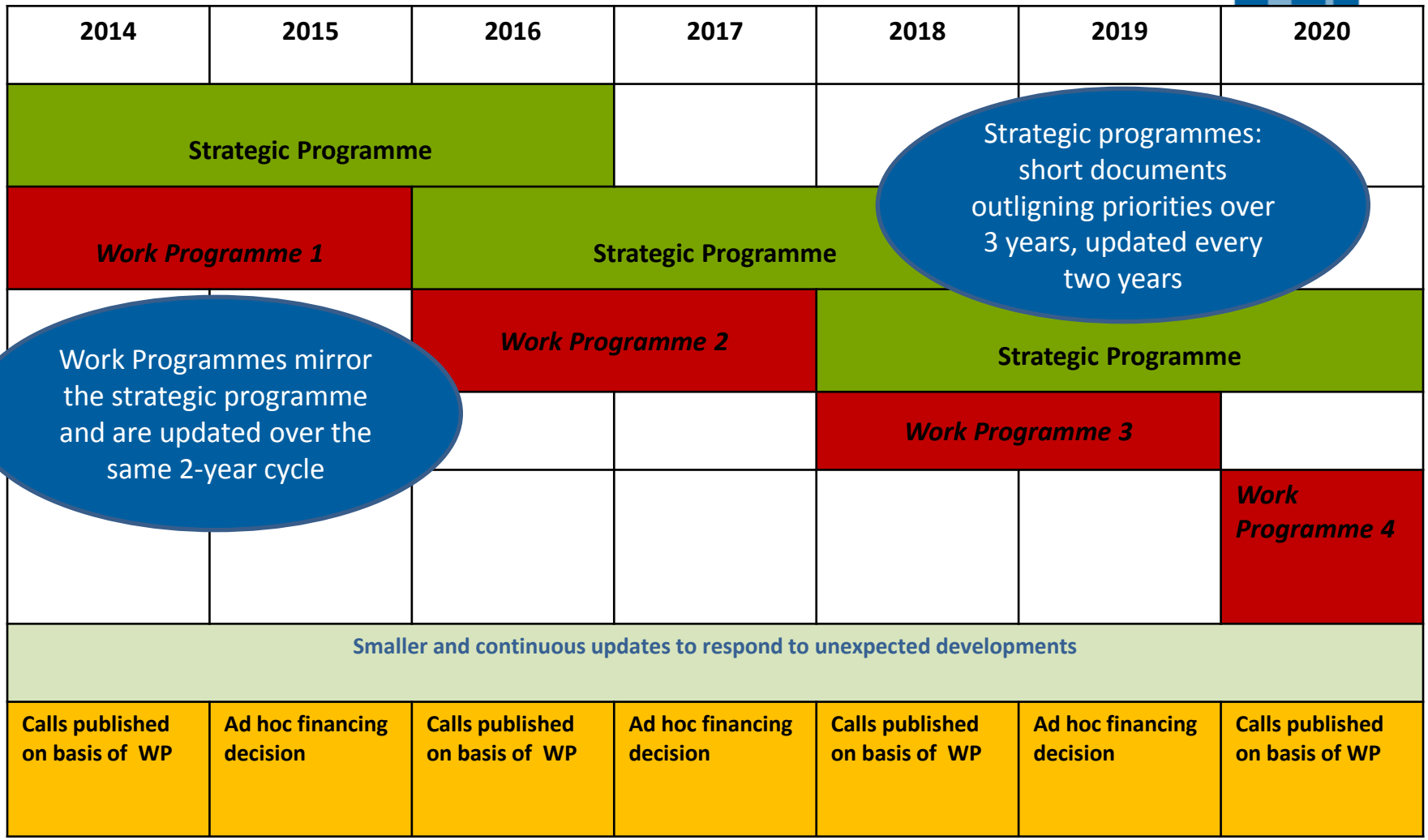
Topic identifier – Open call cut-off dates	Phase 1 18/06/2014 24/09/2014 17/12/2014	Phase 2 09/10/2014 17/12/2014	Phase 1 [18/03/2015 17/06/2015 17/09/2015	Phase 2 [18/03/2015 17/06/2015 17/09/2015

Overall indicative budget:

- EUR **251.02** million from the 2014
- EUR **264.57** million from the 2015.

Bando	Budget €	Budget %	Topic	Funding rate Phase 2
ICT	€ 45 million 2014 € 45 million 2015	5,5%	• ICT-37-2014/2015 Open Disruptive Innovation Scheme (implemented through the SME instrument)	70%
NMP + B	€ 21,80 million 2014 c 23,80 million 2015	4,5%	• NMP 25 – 2014/2015 Accelerating the uptake of nanotechnologies, advanced materials or advanced manufacturing and processing technologies by SMEs	70%
	€ 3,80 million 2014 € 2,80 million 2015		• BIOTEC 5 – 2014/2015: SME-boosting biotechnology-based industrial processes driving competitiveness and sustainability	70%
Space	€ 8,50 million 2014 € 8,75 million 2015	5%	• Call “SME Instrument” 2014 and 2015 (SME-SPACE-1-2014/2015)	Research and innovation actions (100%) and innovation actions (70%). Due to the nature of the topic it is expected that Phase 2 actions will mainly be innovation actions.

Strategic programming approach



Leitmotif of the first work programme is the

ECONOMIC CRISIS AND THE PATH TO SUSTAINABLE GROWTH

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 lighting[35]

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.

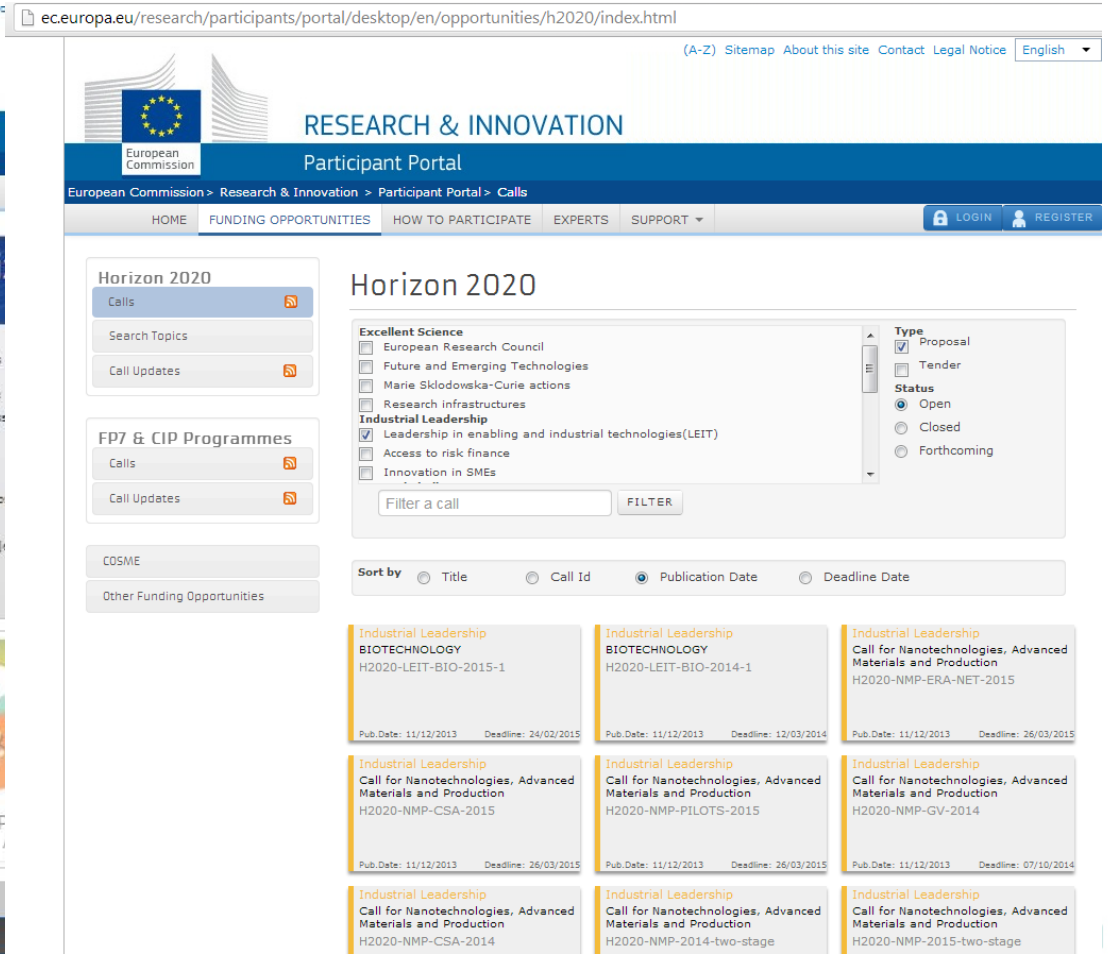
Type of Action:

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.

RESEARCH PARTICIPANT PORTAL

http://ec.europa.eu/research/participants/portal/page/home



GRAZIE PER L'ATTENZIONE!

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