



Fundação para a Ciência e a Tecnologia  
MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

# **Apresentação Geral do Programa Horizonte 2020**

**Ana Raposo ([ana.raposo@fct.pt](mailto:ana.raposo@fct.pt))**

**Porto, 15 de Setembro de 2014**

## Horizonte 2020 - Novidades



- Um único programa que reune três iniciativas/programas \*
- Acoplar a investigação à inovação – todas as formas de inovação
- Focalizado em Desafios Societais que afetam a sociedade Europeia e.g. saúde, energia limpas, alterações climáticas,
- Acesso simplificado a todas as empresas, universidades e institutos dentro e fora da Europa

\*The 7th Research Framework Programme (FP7)



+

Competitiveness and Innovation Framework Programme (CIP)

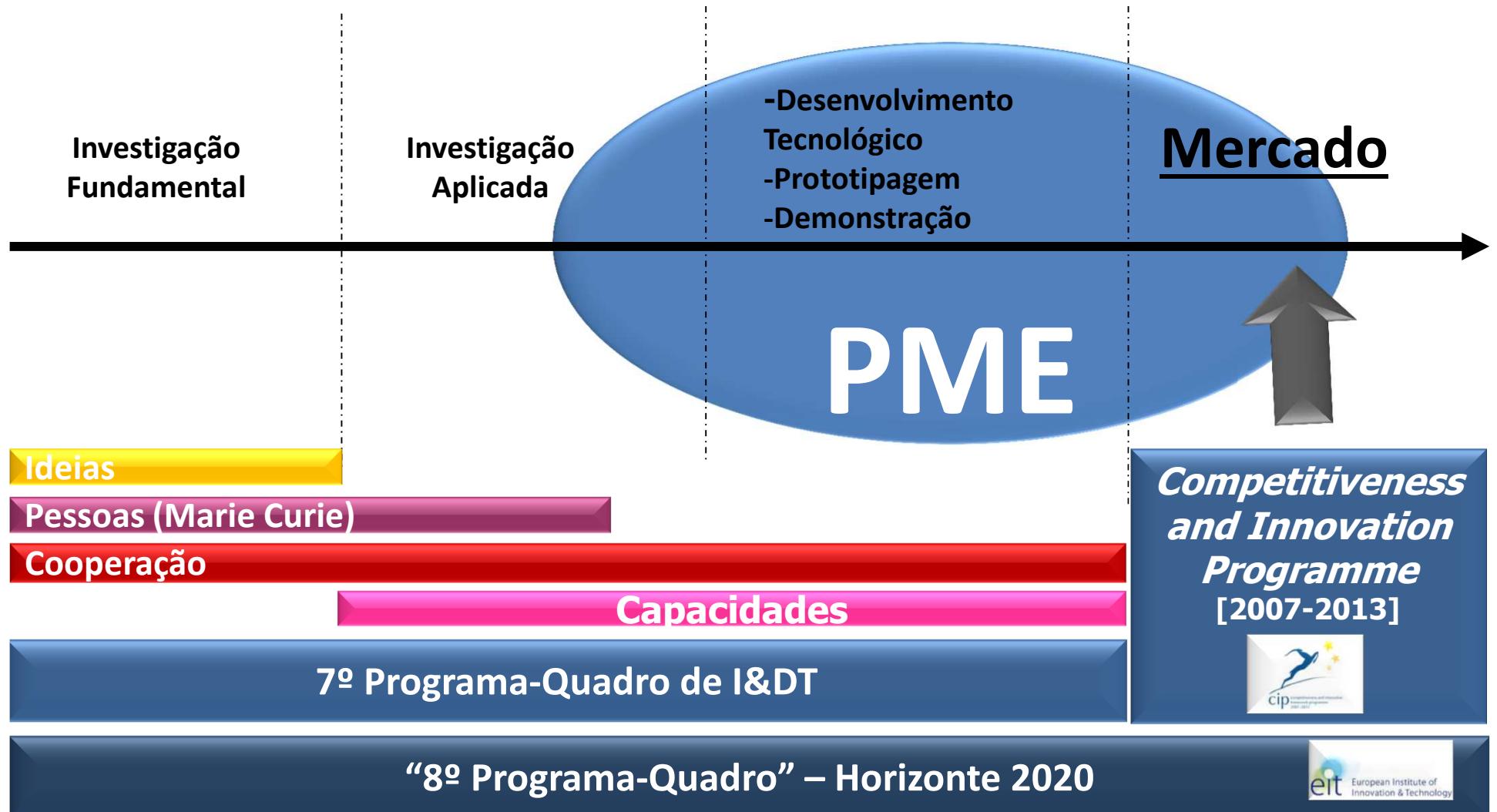


+

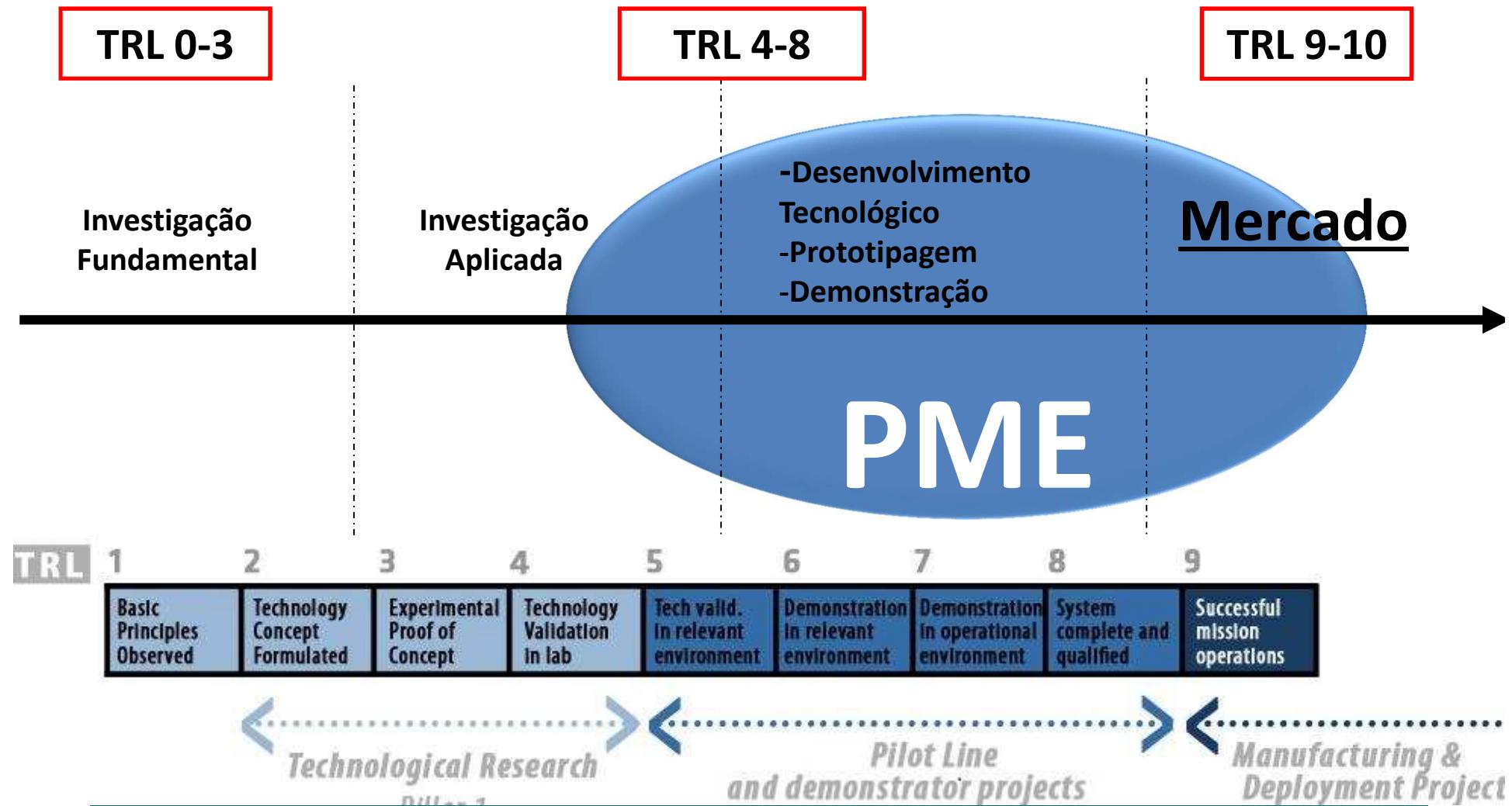
European Institute of Innovation and Technology (EIT)



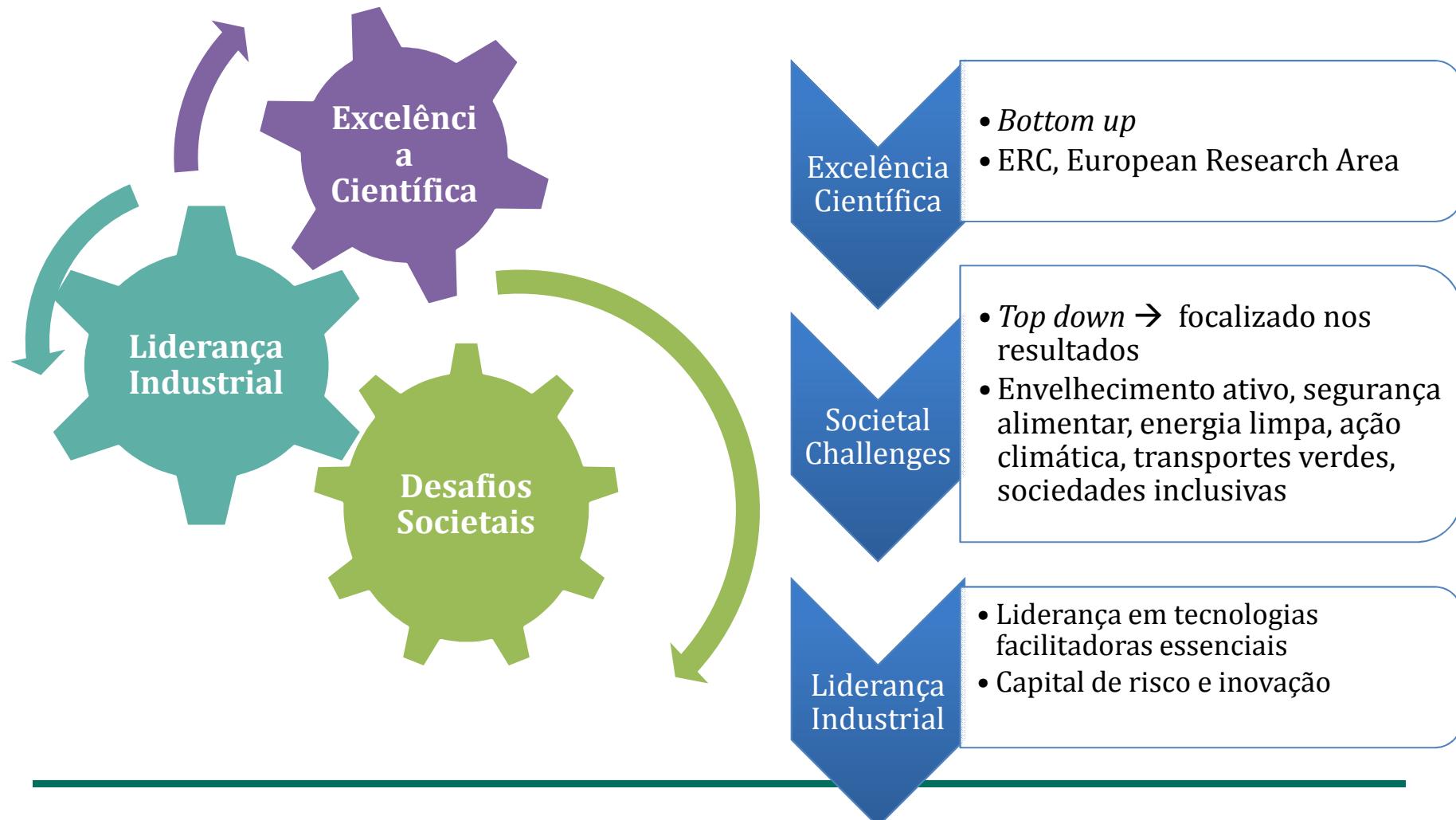
## *Horizonte 2020 – abordagem integrada a todo o ciclo de I&I*



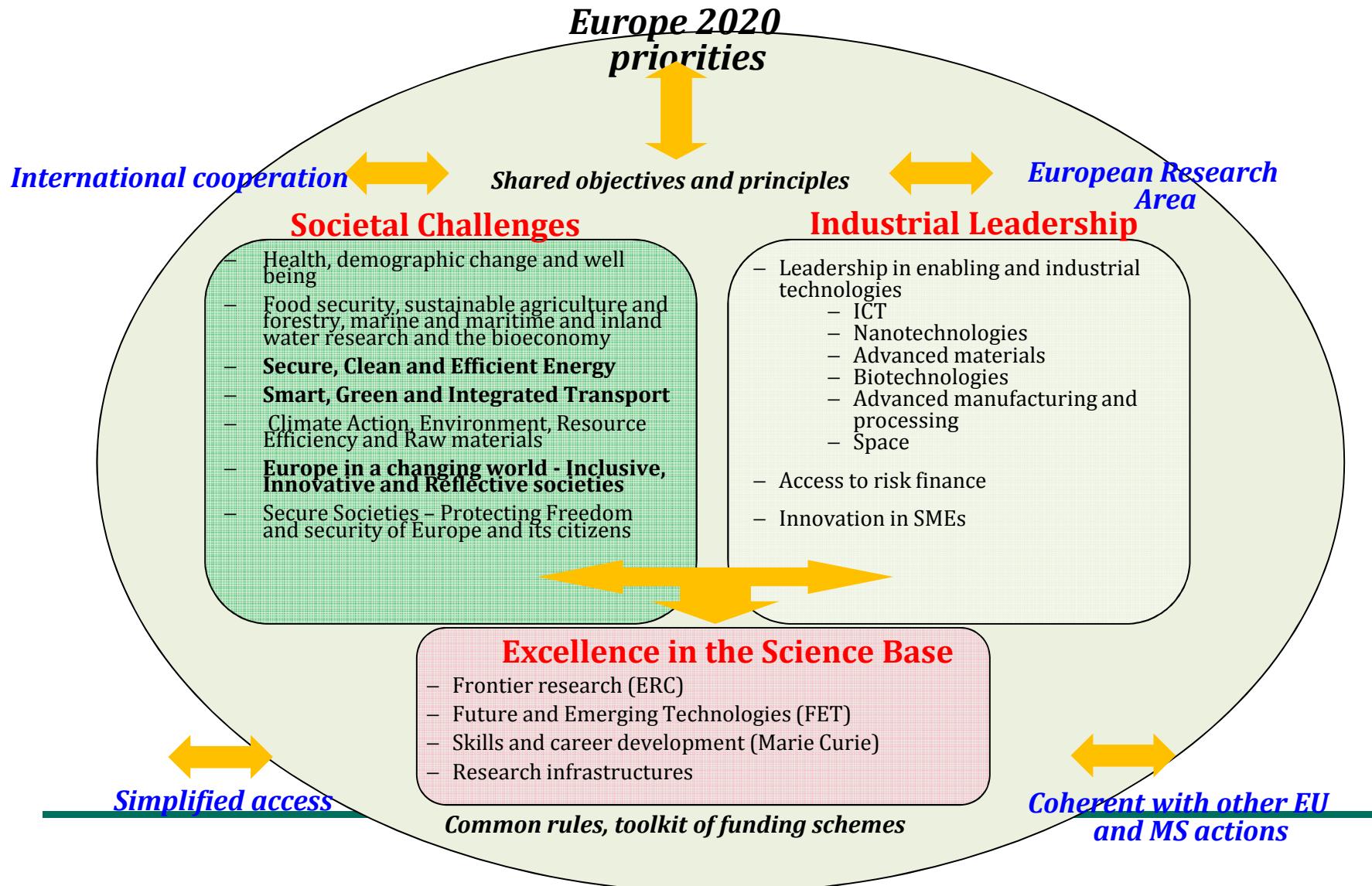
## *Horizonte 2020 – abordagem integrada a todo o ciclo de I&I*



## Horizonte 2020 – 3 pilares



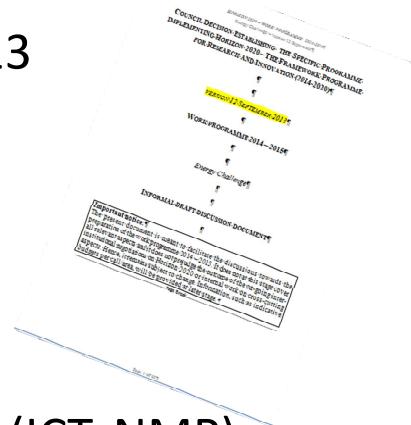
## Horizonte 2020 – 3 pilares



## ***Horizonte 2020 - Programa de Trabalhos – Informação Geral***

---

- **Data de lançamento dos concursos : 11 de Dezembro de 2013**
- Programa de Trabalhos **Bianual (2014 /2015)**
- Baseado num abordagem **integrada e por desafios**
- Abordagem Transversal com outros partes do Horizonte 2020 (ICT, NMP)
- Projetos em colaboração (min. 3 entidades de 3 Estados Membros ou Países associados)
- **Avaliação das Calls – single-stage & two stage evaluations**



## *Programa de Trabalhos – Estrutura dos Tópicos*

### **Specific Challenge:**

Estabelece o contexto, os problemas a resolver, a necessidade da intervenção

### **Scope:**

Delineação do problema, especificação do enfoque e das fronteiras da ação, mas sem detalhe sobre as possíveis abordagens

### **Expected impact:**

Descrição dos elementos-chave a alcançar no desafio em questão

Referência do tópico  
e ano de financiamento

**BG 6 - 2014: Delivering the sub-sea technologies for new services at sea**

#### ***Specific challenge***

The development of a new maritime economy necessitates tackling a range of challenges. One such challenge is the ability to remotely execute underwater operations ranging from simple observation / data collection and transmission of information to more complex industrial operations. Technologies derived from marine research (Remotely Operated Vehicles - ROVs, Autonomous Underwater Vehicles - AUVs) must be further improved, industrialised, i.e. made more robust, cost-effective, reliable and sophisticated (in terms of operating capabilities) and with increased autonomy. Another challenge is the ability to operate at even higher depths (down to 6,000m), and in extreme conditions (e.g. Arctic regions, with corrosive products, heavy / viscous liquids, high pressure - high temperature systems, etc.). The control of the potential impact on the environment of these activities is also important.

#### ***Scope***

Projects should address the innovative design of new underwater vehicles and robots and/or their main components required to work undersea. If relevant, proposals could go to the stage of demonstrators or prototypes. The areas of interest are the following:

- Remotely Operated Vehicles and Subsea Construction systems;
- Specialised 'Robots' and Autonomous Underwater Vehicles, deployment, recovery and docking systems;
- Subsea 'factory' Machineries.

Where relevant, activities should cover the development of European standards.

The Commission considers that projects requesting a contribution from the EU in the range of EUR ~~XX~~ 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***

sustainable and safe offshore operations by European industries in extreme conditions (deep sea areas, Arctic conditions, corrosive products, high pressure and temperature...);

- Increase cost-effectiveness and competitiveness of the existing and new offshore economy (including marine renewable energy);
- Improve the scientific capacity to observe and understand the water column, the deep sea environment and their resources.

#### ***Type of action***

Research and innovation action

*The conditions related to this topic are provided along with the general conditions for this call. [Link to end of the description of the call]*

## Programa de Trabalhos – Regras de Participação

**Pagamento por tipo de atividade e não por tipo de entidade participante**

TIPO DE AÇÃO	FINANCIAMENTO	OBJETIVO
<b>Projetos em Colaboração</b> <b>Ações de Investigação &amp; Inovação</b> (RIA, <i>Research &amp; Innovation Actions</i> )	100%	Para estabelecer novos conhecimentos ou para explorar a viabilidade de uma nova tecnologia, produto, processo, serviço ou solução
<b>Projetos em Colaboração</b> <b>Ações de Inovação</b> (IA, <i>Innovation Actions</i> )	70% (exceto Inst. Públicas e IPSFL=100%)	Para elaboração de planos e dispositivos ou a conceção de produtos, processos ou serviços novos, alterados ou melhorados.
<b>Ações de Coordenação e Suporte</b> (CSA, <i>Coordination and Support Actions</i> )	100%	Medidas de acompanhamento
<b>Instrumento para as PME</b> (SME instrument)	70% (exceções possíveis)	Para apoiar PME inovadoras

**Taxa única de reembolso para os custos indiretos: 25% dos custos diretos menos subcontratação**  
**O IVA (não recuperável) é um custo elegível**

## ***Programa de Trabalhos – critérios de avaliação***

### **EXCELÊNCIA**

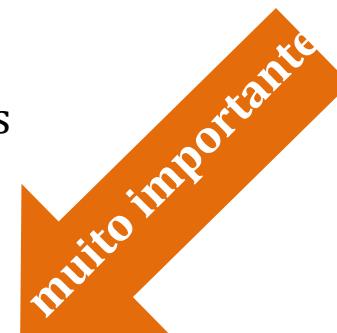
- Clareza dos objetivos
- Solidez do conceito, incluindo considerações transdisciplinares
- Credibilidade da abordagem proposta
- Progresso para além do estado da arte

### **IMPACTO** ...contribuição para:

- Impacto expectável evidenciado no Programa de Trabalhos
- Aumentar a capacidade de inovação e a integração de conhecimento novo
- Fortalecer a competitividade e o crescimento das empresas através do desenvolvimento de inovação que vá de encontro às necessidades dos mercados Europeu e global
- Medidas para disseminar e explorar os resultados (disseminação, comunicação, exploração dos resultados,...)

### **IMPLEMENTAÇÃO**

- Coerência e efetividade do plano de trabalhos (incluindo a descrição das work packages)  
... alocação de tarefas, recursos
- Competência, experiência e complementaridade dos participantes e do consórcio
- Adequabilidade das estruturas e procedimentos de gestão ... gestão de risco e planos de contingência



## ***Participants Portal – nova imagem e novas funcionalidades***

The screenshot shows the homepage of the European Commission's Research & Innovation Participant Portal. At the top, there is a logo for the European Commission and the text "RESEARCH & INNOVATION" and "Participant Portal". Below this, the breadcrumb navigation shows "European Commission > Research & Innovation > Participant Portal > Home". The main menu includes links for "HOME", "FUNDING OPPORTUNITIES", "HOW TO PARTICIPATE", "EXPERTS", "SUPPORT", "LOGIN", and "REGISTER". The main content area is titled "Research and Innovation Funding" and contains text about finding funding for EU programmes (2014-2020 Horizon 2020 and 2007-2013 FP7 and CIP). It also provides links for "Non-registered users" and "Registered users". Below this, there are six cards with icons and titles: "WHAT'S NEW?", "FUNDING OPPORTUNITIES", "HOW TO PARTICIPATE", "WORK AS AN EXPERT", "MY PERSONAL AREA", and "INFORMATION AND SUPPORT".

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

# **Participants Portal – Manual online**

The screenshot shows the Participant Portal H2020 Online Manual interface. At the top left is the European Commission logo. To its right, the text "RESEARCH & INNOVATION" and "Participant Portal H2020 Online Manual" are displayed. On the left, a sidebar menu lists various sections: "H2020 Online Manual" (with sub-links for user account, login, roles, grants, funding application, organization registration, proposal submission, evaluation/grant signature, and grant management); "From evaluation to grant signature"; and "Grant management". The main content area is titled "Grants" and contains three horizontal arrows: "Applying for funding" (Find a call, Find partners, Register an organisation, Submit a proposal), "Evaluation & Grant signature" (Evaluation of proposals, Grant preparation, Grant signature), and "Grant management" (Reports, Dissemination of results, Amendments, Audits & certifications). Below these are sections for "Working as an expert" (Expert registration, Contracting & payment, Expert roles & tasks) and "Cross-cutting issues" (International cooperation, Regional aspects, Ethics, Intellectual property, Gender, SMEs).

## *Participants Portal – concursos abertos*

The screenshot shows the European Commission's Research & Innovation Participant Portal. At the top, there is a logo for the European Commission and a navigation bar with links for (A-Z) Sitemap, About this site, Contact, Legal Notice, Search, and English language selection. Below the header, the page title is "RESEARCH & INNOVATION" and the sub-page title is "Participant Portal". The breadcrumb navigation shows European Commission > Research & Innovation > Participant Portal > Calls.

The main content area is titled "Horizon 2020". On the left, there is a sidebar with sections for "Horizon 2020" (Calls, Call Updates), "Other EU Programmes 2014–2020" (Research Fund for Coal & Steel, COSME, 3rd Health Programme, Consumer Programme), and "FP7 & CIP Programmes 2007–2013" (Calls, Call Updates). A red circle highlights the "Calls" button under the Horizon 2020 section.

The central area displays a list of "Societal Challenges" for Horizon 2020:

- Health, demographic change and wellbeing
- Hood security, sustainable agriculture and forestry, marine and maritime and inland water research
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, environment, resource efficiency and raw materials
- Europe in a changing world - inclusive, innovative and reflective Societies
- Secure societies - Protecting freedom and security of Europe and its citizens

Below the challenges, there are buttons for "Filter a call" and "FILTER". A note says: "Filters only programme and call titles and IDs, for extended search go to the [Search Topics page](#)".

On the right, there are filters for "Type" (Proposal, Tender) and "Status" (Forthcoming, Open, Closed). A red circle highlights the "Secure, clean and efficient energy" checkbox under the challenges.

At the bottom, there are three cards showing specific call details:

- Societal Challenges FCH2 JU call for proposals 2014**  
H2020-JTI-FCH-2014-1  
Deadlines: 06/11/2014  
Planned Opening Date: 08/07/2014
- Societal Challenges CALL FOR COMPETITIVE LOW-CARBON ENERGY**  
H2020-LCE-2015-1- two-stage  
Deadlines: 03/09/2014  
Planned Opening Date: 10/12/2013
- Societal Challenges CALL FOR COMPETITIVE LOW-CARBON ENERGY**  
H2020-LCE-2014-2  
Deadlines: 10/09/2014  
Planned Opening Date: 10/12/2013

In addition to the search facilities, the full list of H2020 Calls can be found [here](#).

At the bottom, there are links for HORIZON 2020, RESEARCH ON EUROPA, CORDIS, OLAF, and European Communities.

## *Participants Portal – procura de tópicos*

The screenshot shows the European Commission's Research & Innovation Participant Portal. The top navigation bar includes links for (A-Z), Sitemap, About this site, Contact, Legal Notice, Search, and English. Below the header, there are sections for European Commission, Research & Innovation, Participant Portal, and Cells. A red circle highlights the "Horizon 2020" section, which contains a "Search Topics" button. The main content area shows a search result for "H2020-LCE-2015-1-two-stage". It displays 4 results with the following details:

Topic	Description	Status	Deadline
<a href="#">Highly flexible and efficient fossil fuel power plants:LCE-17-2015</a>	Specific challenge: The share of energy produced from renewable resources is growing rapidly. The	Open	03-09-2014
<a href="#">CALL FOR COMPETITIVE LOW-CARBON ENERGY</a>	Cell identifier: H2020-LCE-2015-1-two-stage	Open	03-09-2014
<a href="#">Enabling decarbonisation of the fossil fuel-based power sector and energy intensive industry through CCS:LCE-15-2015</a>	Specific challenge: The EU is committed to an overall reduction of greenhouse gas emissions of at	Open	03-09-2014
<a href="#">CALL FOR COMPETITIVE LOW-CARBON ENERGY</a>	Cell identifier: H2020-LCE-2015-1-two-stage	Open	03-09-2014
<a href="#">Developing next generation technologies for biofuels and sustainable alternative fuels:LCE-11-2015</a>	Specific challenge: Europe has limited biomass and land resources to cope with an increased demand	Open	03-09-2014
<a href="#">CALL FOR COMPETITIVE LOW-CARBON ENERGY</a>	Cell identifier: H2020-LCE-2015-1-two-stage	Open	03-09-2014
<a href="#">Developing the next generation technologies of renewable electricity and heating/cooling:LCE-02-2015</a>	For 2015, the following technology-specific challenges have to be addressed:	Open	03-09-2014
<a href="#">CALL FOR COMPETITIVE LOW-CARBON ENERGY</a>	Cell identifier: H2020-LCE-2015-1-two-stage	Open	03-09-2014

## Participants Portal – concursos abertos

The screenshot shows the European Commission's Research & Innovation Participant Portal. The main content area displays the 'CALL FOR COMPETITIVE LOW-CARBON ENERGY' (LCE-19-2014). Key details include:

- Planned Opening date: 11-12-2013
- Publication date: 11-12-2013
- Deadline Date: 10-09-2014 17:00:00 (Brussels local time)
- Total Call Budget: €26,000,000
- Main Pillar: Societal Challenges
- Status: Open
- Call reference: CJ C881 of 11 December 2013
- Topic: Supporting coordination of national R&D activities - LCE-19-2014

The 'Topic Description' section outlines the challenge: "Without a technological shift in our current energy system, the EU will fail in its 2020 ambitions to largely decarbonise the energy and transport sectors. The EU needs to accelerate innovation in cutting edge low-carbon technologies and innovative solutions, and bridge the gap between research and the market. A European approach is essential to realise the ambition of scaling low-carbon technologies effectively developed in view of bringing them to the market: it allows key players to come together on a continental scale; it helps to identify and to tackle the barriers holding back innovative products and services in the single market; and it allows different sources of private and public funding to be brought together. Today, EU funding remains a limited part of the overall funding across Europe. Implementation needs to be increasingly based on partnerships that build the necessary scale and scope, and achieve greater impact from scarce public and private resources. The challenge is to drive synchronization of funding processes by fostering cross-border cooperation among partners supported by national projects and programmes."

The 'Goals' section specifies that the scope will be on the areas and challenges targeted in the 'Competitive low-carbon energy' call. Research and innovation activities in the proposals should focus on bringing technology solutions from TRL 3 to TRL 5 (please see part G of the General Annexes). Activities should focus on supporting either:

- The transfer of knowledge among participants and other dissemination activities, activities to foster the use of research outcomes by industry of a project resulting from synchronised funding processes of at least three Member States, or
- The coordination of call for proposals of at least three Member States, for instance, through support to networking activities of public funding bodies, leading to the promotion of the use of single peer-reviewed evaluations, development and use of harmonised monitoring and review methodologies, support to the preparation of high risk, high cost large scale pilots for joint actions with or without EC funding, linking national research programmes and other funding mechanisms and building partnerships with the necessary scale and scope etc.

The Commission considers that proposals requesting a contribution from the EU of between EUR 0.1 to 0.5 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:**

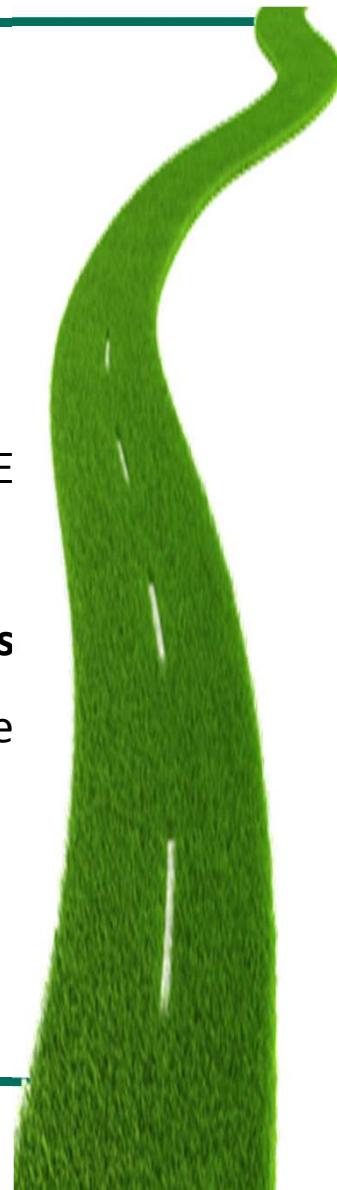
- Reinforcing the European dimension of multinational projects resulting from synchronised funding processes of at least three Member States,
- Increasing coordination and alignment of national research and innovation programmes, overcoming gaps, duplication and fragmentation, creating a leverage effect, enhancing coherence and efficiency of energy research in Europe,

**Type of action:** Coordination and Support Actions

## ***Potencie o networking e as relações com potenciais parceiros***

---

- Quem são os atores chave?
- Quem tem estado envolvido em **projetos anteriores/grupos de interesse?**
- Como é que pode conhecer os atores chave?
- Participando em **eventos nacionais/internacionais**
- Inscrevendo-se na **base de dados de avaliadores** da UE  
(<http://ec.europa.eu/research/participants/portal/page/experts>)
- Associar-se às **Plataformas Tecnológicas Europeias**  
(<http://cordis.europa.eu/technology-platforms/>) ou a outros grupos de interesse relevantes como as Parcerias Europeias de Inovação (EIP)
- Posicione-se como um **parceiro chave**



## Plataformas Tecnológicas Europeias



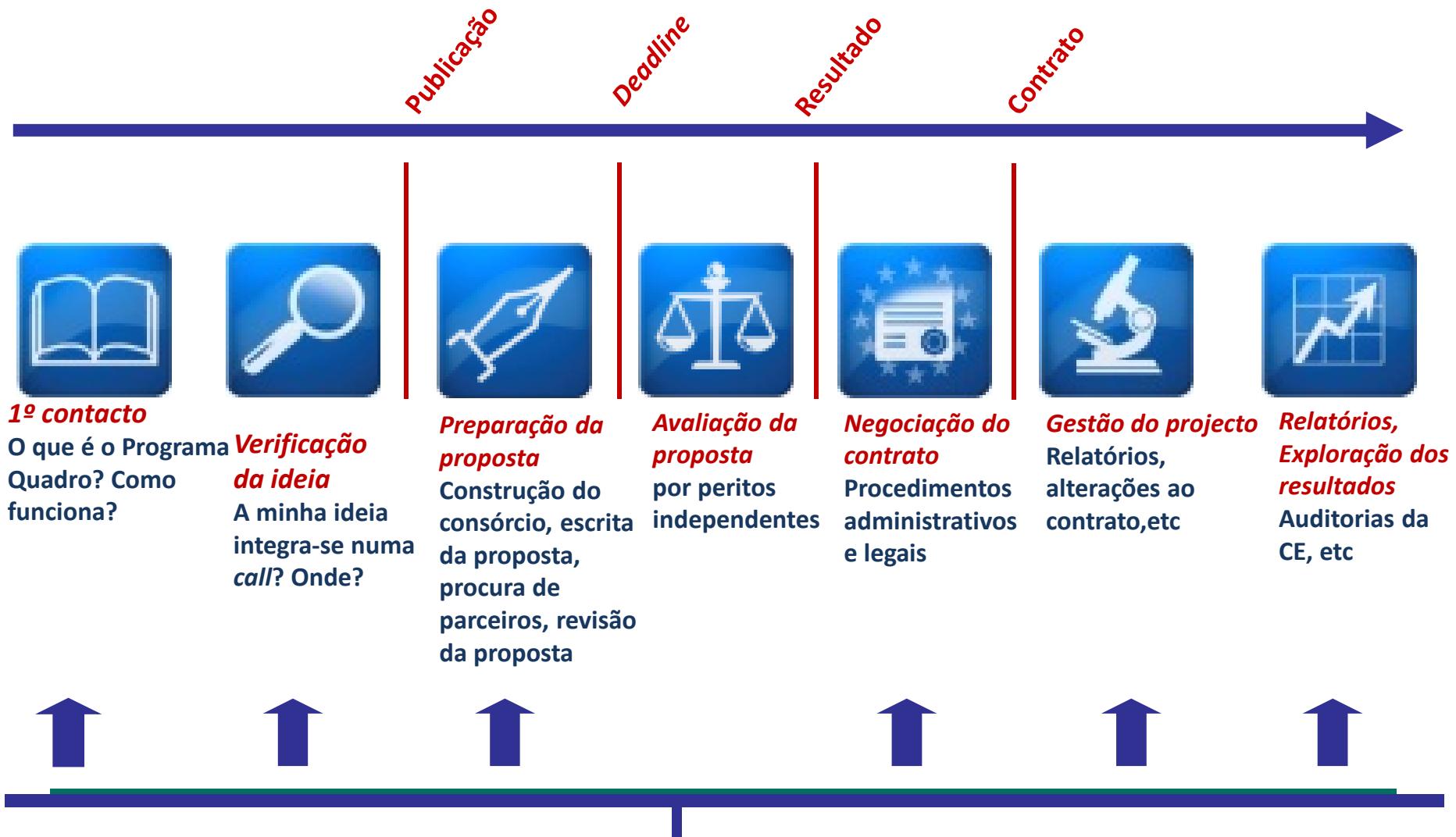
As Plataformas Tecnológicas Europeias são grupos de stakeholders, lideradas pela indústria para definir as agendas estratégicas de investigação e planos de ação em diferentes áreas tecnológicas

Bio-based economy	Energy	Environment	ICT	Production and processes	Transport
EATIP	Biofuels	WssTP	ARTEMIS	ECTP	ACARE
ETPGAH	EU PV TP		euRobotics	ESTEP	ERRAC
Food for Life	TPWind		ETP4HPC	EuMaT	ERTRAC
Forest-based	RHC		ENIAC	FTC	Logistics
Plants	SmartGrids		EPoSS	SusChem	Waterborne
FABRE TP	SNETP		ISI	Nanomedicine	
TP Organics	ZEP		Net!Works	ETP-SMR	
			NEM	Manufuture	
			NESSI		
			Photonics 21		
Cross ETP Initiatives					
Nanofutures					
Industrial Safety					
PROSUMER.net					

- Desempenhar um papel ativo nas plataformas ou espaejar pelo lançamento dos concursos.

[http://cordis.europa.eu/technology-platforms/home\\_en.html](http://cordis.europa.eu/technology-platforms/home_en.html)

## *Apoio à Comunidade Nacional*



## Primeiros resultados dos concursos 2014

### Resumo Global de 2014

	Desafios Sociais							
	DS1 Saúde	DS2 Bio	DS3 Energia	DS4 Transp	DS5 Alt Clim	DS6 SSH	DS7 Sec	GLOBAL
<b>Propostas Apresentadas UE</b>	95		64	55	161			375
<b>Propostas Apresentadas PT</b>	16		12	25	32			85
<b>Propostas Coordenadas PT</b>	3		1	5	4			13
<b>Projectos Aprovados UE</b>	23		4	8	30			65
<b>Projectos Aprovados PT</b>	7		2	2	13			24
<b>Projectos Coordenados PT</b>	2		0	0	0			2
<b>Número de Participações PT em (proj. aprovados)</b>	Ensino Superior Empresas Centros de Investigação Outros <b>Total</b>	3 0 1 4 8		1 1 0 1 3	1 1 1 1 4	5 5 3 9 22		10 7 5 15 37
<b>Financiamento UE (MEuro)</b>	139,34		22,50	23,50	112,93			298,27
<b>Financiamento PT (MEuros)</b>	3,65		0,42	1,04	4,07			9,18
<b>Taxa de Sucesso UE</b>	24,2%		6,3%	14,5%	18,6%			17,3%
<b>Taxa de Sucesso PT</b>	43,8%		16,7%	8,0%	40,6%			28,2%
<b>Percentagem de financiamento para Portugal em cada tema</b>	2,62%		1,88%	4,41%	3,60%			3,08%

## **Gabinete de Promoção do Programa-Quadro**

### **Mandato do GPPQ**

- Promoção da participação portuguesa no PQ
- Veículo de informação entre a Comissão Europeia e as entidades nacionais
- Apoio à participação nacional (participação nas redes europeias, divulgação, formação, etc.)
- Acompanhamento da participação nacional nos projectos em curso
- Coordenação da rede de **Pontos de Contacto Nacionais (NCP)**
- *Helpdesk*



**[www.gppq.fct.pt](http://www.gppq.fct.pt)**

## *Desafios no Horizonte 2020*

---

- Projetos de grande escala - Enfoque industrial
  - Projetos interdisciplinares e multi-setoriais
  - Grande número de iniciativas Público – Privadas, incluindo 6 JTIs no Horizonte 2020
    - Exemplo: BioBased Industries, CleanSky2, FCH-JU2,
  - Presença pouco regular de entidades nacionais nos grandes grupos de influência dos Programas de Trabalho
    - Plataformas Tecnológicas Europeias
    - Peritos em Grupos de Trabalho
-



Fundação para a Ciência e a Tecnologia  
MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

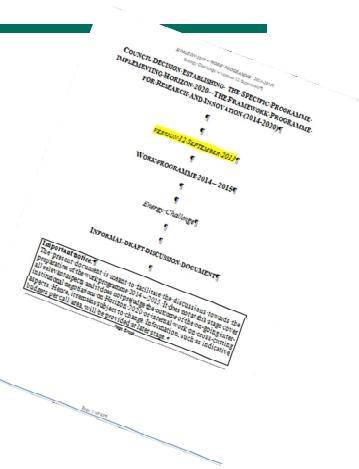
## Oportunidades de financiamento nas áreas de energia e transportes nos concursos 2015 do H2020

Ana Raposo ([ana.raposo@fct.pt](mailto:ana.raposo@fct.pt))

15 de Setembro de 2014

## Programa de Trabalhos – Informação Geral

- Data de lançamento dos concursos : 11 de Dezembro de 2013
- Programa de Trabalhos **Bianual** (2014 /2015)
- Baseado num abordagem **integrada e por desafios**
- Abordagem Transversal com outros partes do Horizonte 2020 (ICT, NMP)
- Projetos em colaboração
- Definição dos níveis de TRL para algumas atividades
- Indicação do orçamento do projeto
- Assinatura do Grant Agreement 8 meses após o encerramento do concurso
- One project = one single rate



## Horizonte 2020 - Estrutura

# 3 prioridades



# *DS 3 – Secure, clean and efficient energy*



## ***Contexto Político – Estratégias e Iniciativas Europeias de apoio ao desafio Energia no Horizonte 2020***



- *Climate and Energy Package*
- *Strategic Energy Technology Plan (SET-Plan) | Energy technologies and Innovation Communication*
- *Energy Roadmap*
- *European Innovation Partnership (EIP) - Smart Cities and Communities → forte influência na definição de prioridades de I&I no horizonte 2020*



## *Implementação* **Horizonte 2020 – Programa de Trabalhos Energia 2015**

### **ENERGY EFFICIENCY – 16 TOPICS**

*Call: H2020-EE-2015 - 98,15 M€*



### **LOW CARBON ENERGY – 15 TOPICS**

*Call: H2020-EE-2015 - 382,67 M€*



### **SMART CITIES AND COMMUNITIES – 2 TOPICS**

*Call: H2020-SCC-2015 – 107,18 M€*



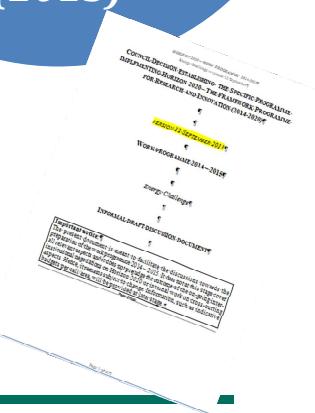
### **SMES & FAST TRACK INNOVATION – 2 TÓPICOS**

*Call: H2020-SIE-2015 - 50,96 M€*



**Work Programme  
2014-2015  
– Secure, clean  
and Efficiency  
Energy**

**638,96 M€  
(2015)**



## ***Call Energy Efficiency***



**A – Buildings and Consumers** - reduzir o consumo de energia nos edifícios através de: aumentar taxa, qualidade e eficácia da renovação dos edifícios , comportamento dos consumidores (gestão consumo, smart metering)



**B- Heating and cooling** - Sistemas de aquecimento e arrefecimento renováveis, com soluções integradas (ao nível da conceção, tecnologia, construção e mudança comportamental)



**C – Industry and products** - Tecnologias de eficiência energética em termos de processos e da industria transformadora



**D – Finance for sustainable energy** - Criação de instrumentos financeiros e parcerias com a banca para apoio de serviços/projetos inovadores de eficiência energética



## ***Energy Efficiency - Buildings & Consumers***

### **EE 2 – 2015: Building design for new highly energy performing buildings**

- **Scope:** Demonstration projects where buildings are active contributors to production and environmental quality (e.g. for new districts planned), etc.
- **Impact:** Increase the number of 'nearly zero-energy' buildings.

**IA | Contr. CE: 3-5 M€/projeto | TRL 5-7**

**PPP EEB**

### **EE 5 – 2015: Increasing energy performance of existing buildings ... and creating a market for deep renovation**

- **Scope:** Development, testing and/or implementation of regulations, decision-making tools for renovation strategies, quality standards and enabling conditions to finance deep renovation of buildings, etc.
- **Impact:** e.g. renovation of existing buildings towards high energy performance, should result in energy savings of at least 25 GWh/year per million EUR of EU support

**CSA | Contr. CE: 1.5-2M€/projeto**



## **Energy Efficiency - Buildings & Consumers**

### **EE 6 – 2015: Demand response in blocks of buildings**

- **Scope:** Cost effective, real time optimisation of energy demand, storage and supply in blocks of buildings with the help of intelligent energy management systems.
- **Impact:** Demonstrate demand response at the level of blocks of buildings, quantify energy, cost saving, etc.

**IA | Contr. CE: 3-5M€/projeto | TRL 6-7**

### **EE 9 - 2015: Empowering stakeholders to assist public authorities in the definition and implementation of sustainable energy policies and measures**

- **Scope:** Projects to target specific actors among stakeholders (utilities, industry, financing institutions, non-gov. org., consumer associations, interest groups, trade unions...). Large scale capacity building or engagement activities.
- **Impact:** e.g. influence hundreds of stakeholders playing a key role in the definition and successful implementation of national, regional or local policies.

**CSA | Contr. CE: 1,5-2M€/projeto**



## **Energy Efficiency - Buildings & Consumers**

### **EE 10 – 2015: Consumer engagement for sustainable energy**

- **Scope:** Reducing market barriers through changing behaviour of consumers using market segmentation and focus on "action"
- **Impact:** e.g. each million € of EU support expected to deliver annual energy savings of around 10% for at least 5,000 households (around 8 GWh/year of savings ).

**CSA | Contr. CE: 1-1,5M€/projeto**

### **EE 11 – 2015: New ICT-based solutions for EE.**

- **Scope:** Projects to target specific actors among stakeholders (utilities, industry, financing institutions, non-gov. org., consumer associations, interest groups, trade unions...). Large scale capacity building or engagement activities.
- **Impact:** e.g. influence hundreds of stakeholders playing a key role in the definition and successful implementation of national, regional or local policies.

**RIA | Contr. CE: 1,5-2M€/projeto**



## ***Energy Efficiency - Heating & Cooling***

---

### **EE 13 – 2015: Technology for district heating and cooling**

- **Scope:** Develop, demonstrate and deploy a new generation of highly efficient, intelligent district cooling and heating systems. Reduce distribution losses. Develop optimisation, control, metering, planning and modelling tools. New solutions for low temperature heat recovery and recirculation.
- **Impact:** e.g. reduce the energy consumption of space and water heating by 30 to 50% compared to today's level.

**RIA | Contr. CE: 1,5-2M€/projeto | TRL 4-6**

### **EE 14 – 2015: Removing market barriers to the uptake of efficient heating and cooling solutions**

- **Scope:** Innovative measures to accelerate the replacement of old, inefficient pace heaters and packaged cooling systems with products having A+++ to A+ energy labels. Inspection of heating and cooling systems.
- **Impact:** e.g significant impacts should also be measured in terms of investment made by stakeholders in sustainable energy.

**CSA | Contr. CE: 1,5-2M€/projeto**

---



## ***Energy Efficiency - Industry & Products***

---

### **EE 15 – 2015: Ensuring effective implementation of EU product efficiency legislation**

- ***Scope:*** Building up monitoring, verification and enforcement of the EU's related products policy.
- ***Impact:*** e.g. every million Euro of EU support is expected to generate at least 15 GWh/year of energy losses avoided from non-compliance.

**CSA | Contr. CE: 1,5-2M€/projeto**

### **EE 16 - 2015: Organisational innovation to increase energy efficiency in the industry**

- ***Scope:*** Removing market barriers like lack of expertise and information on energy management. Uptake of cross-cutting innovative technologies. Industrial systems efficiency benchmarking. Sector specific technology pathways. ***Energy management in SMEs and industry.*** Human and organisational change.

- ***Impact:*** e.g. every million Euro of EU support is expected to result in savings of at least 25 GWh per year.

**CSA | Contr. CE: 1,5-2M€/projeto**

---



## ***Energy Efficiency - Industry & Products***

---

### **EE 17 – 2015: Driving energy innovation through large buyer groups**

- **Scope:** Actions where groups of buyers can set higher-than-available performance levels which manufacturers of sustainable energy products are called to meet through product innovation.
- **Impact:** New energy-using or -producing products with at least 25% better performance than the best available products

**CSA | Contr. CE: 1,5-2M€/projeto**

### **EE 18 - 2015: New technologies for utilization of heat recovery in large industrial systems...,**

- **Scope:** Research and demonstration of technologies to recover waste heat from industrial processes. Validation at real production conditions with demo sites, testing in industrial facilities.
- **Impact:** e.g. viable solutions and technologies allowing recovering at least 15% of process heat, etc

**CSA | Contr. CE: 3-4M€/projeto | TRL4-7**

---



## ***Energy Efficiency - Finance for Sustainable energy***

**EE 19 – 2015: Improving the financeability and attractiveness of sustainable energy investments**

**CSA | Contr. CE: 1,5-2M€/projeto**

**EE 20 - 2015: Project development assistance for innovative, bankable and aggregated sustainable energy investment schemes and projects**

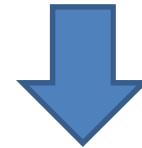
**CSA | Contr. CE: 0,5-2M€/projeto**

**EE 21 – 2015: Development and market roll-out of innovative energy services and financial schemes for sustainable energy**

**CSA | Contr. CE: 1-1,5M€/projeto**

## Call Energy Efficiency: Deadlines

---



Topics*	2015
EE2, EE18	04/02/2015
EE5, EE6, EE7, EE9, EE10, EE11, EE13, EE14, EE15, EE16, EE17, EE19, EE20, EE21	04/06/2015



## ***Call Competitive Low Carbon Energy***



***Renewable electricity and heating/cooling*** - redução dos custos da produção de energia renováveis, eficiéncia dos recursos e impacto ambiental, cadeia de oferta e processos de fabrico competitivos. **Tecnologias:** Fotovoltaico, Solar Concentrado, Eólica, Oceanos, hídrica, geotérmica, Aquecimento/arrefecimento

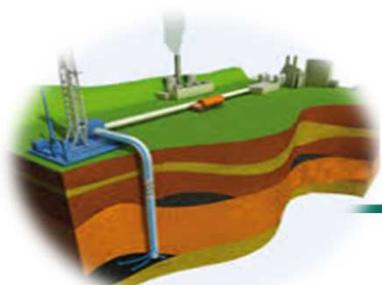


***Modernising the single European electricity grid*** - Rede elétrica europeia inteligente, envolvendo grandes inovações tecnológicas para transmissão, distribuição e armazenamento a todos os níveis.



***Sustainable biofuels and alternative fuels for the European transport fuel mix***

- Desenvolvimento de biocombustíveis avançados, e combustíveis alternativos



***Enabling the sustainable use of fossil fuels in the transition to a low carbon economy*** - Descarbonização do sector energético

## ***Low Carbon Energy - Renewable electricity and heating/cooling***

---

### **LCE 3 – 2015: Demonstration of renewable electricity and heating/cooling**

- ***Specific Challenges:*** Photovoltaics, CSP, Wind Energy, Ocean Energy, Heating and Cooling, Geothermal
- ***Scope:*** Proposals should address one or more technologies-specific challenges TRL 6-7. Technical issues, synergies between technologies, socio-economic and environmental aspects (incl. public acceptance, business cases, pre-normative and legal issues, pollution and recycling).
- ***Impact:*** increase technology performance, reducing life-cycle environment impact, improving EU energy security, reducing renewable energy technologies installation time and costs,etc

**IA | Contr. CE: 5-20 M€/projeto | TRL 6-7**

### **LCE 4 - 2015: Market uptake of existing and emerging renewable electricity, heating and cooling technologies**

- ***Scope:*** Ensuring sustained public acceptance, ensuring speedy and user friendly permitting procedures, energy policies, codes and legislations, regulation, facilitating the deployment of improved business models and innovative financing schemes for mobilising investments
- ***Impact:*** substantial and measurable reductions in the transaction costs for project developers

**CSA Contr. CE: 1-2 M€/projeto**

---



## **Low Carbon Energy – Electricity Grids**

### **LCE 5 – 2015: Innovation and technologies for the development of meshed off-shore grids**

- *Scope: first phase for deployment of innovative components of interoperable meshed off-shore HVDC network technologies, services and tools architectures. It is expected that the projects will cover TRL6 or 7, bringing them to TRL 8.*
- *Impact: accelerating the deployment of meshed HVDC off-shore grids, ensuring plug-and-play compatibility ; facilitating the efficient connection of off-shore wind resources to on-shore load*

**IA | Contr. CE: 30-40 M€/projeto | TRL 6-7**

### **LCE 6 - 2015: Transmission grid and wholesale market**

- *Scope: Integrating and validating solutions to grid challenges, concentrating on field demonstration of system integration, up-scaling at industrial scale and supporting R&D. Preparing first replication of the solutions, appropriate market models, business cases, user and general public acceptance, regulatory, market up-take, social, environmental and resource efficiency aspects should be included*
- *Impact: substantial and measurable reductions in the transaction costs for project developers*

**IA /RIA | Contr. CE: 12-17 M€/projeto**



## **Low Carbon Energy – Storage**

---

### **LCE 9 – 2015: Large Scale Energy Storage**

- *Scope: The activities must address the interfaces for integrating storage in grid management. Demonstration proposals should include market uptake measures for integrating energy storage in the electricity network and power system management.*

**IA | Contr. CE: 20-25 M€/projeto | TRL 6-7**





## **Low Carbon Energy – Biofuels and alternative fuels**

### **LCE 12 –2015: Demonstrating advanced biofuel technologies**

- *Scope:* Proving that advanced biofuels and bioenergy carriers technologies, are technically viable, environmentally and socially sustainable, and potentially cost-competitive at commercial scale; Developing logistic systems for a sound, safe and sustainable feedstock supply.
- *Impact:* testing advanced fuel technologies at large industrial scale to obtain data and experience require for a first-of-a-kind, commercial scale industrial demo projet

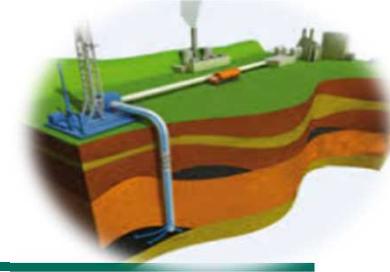
**IA | Contr. CE: 5-20 M€/projeto | TRL 6-7**

### **LCE 14 –2015: Market uptake of existing and emerging sustainable bioenergy**

- *Scope:* Encouraging the EU farmers and foresters to produce also energy and energy intermediaries; Setting up or strengthening sustainable local bioenergy supply chains ; Development of methodologies for the traceability of biomass feedstocks.
- *Impact:*

**CSA | Contr. CE: 1-2M€/projeto**

## ***Low Carbon Energy - Sustainable Use of Fossil Fuels***



**LCE21 – 2015: Modelling and analysing the energy system, its transformation and impacts**

**RIA | Contr. CE: 2-4 M€/projeto**

## Call Low Carbon Energy: Deadlines



Topics*	2015
LCE3, LCE12, LCE19, LCE21 LCE4, LCE5, LCE6, LCE9, LCE14	05/05/2015

## ***Call Smart Cities and Communities***

---



- ✓ Acelerar a implementação de tecnologias inovadoras, soluções organizacionais e económicas para aumentar significativamente os recursos e a eficiência energética, melhorar a sustentabilidade dos transportes urbanos e reduzir drasticamente as emissões de gases de efeito estufa em áreas urbanas.

### **Foco / atividades principais:**

- ✓ Investigação e desenvolvimento de soluções tecnológicas avançadas
- ✓ Validação de novos casos de negócios e modelos de financiamento, standardização, escala e replicabilidade das soluções, a aceitação dos utilizadores e compromisso
- ✓ Intensificação através de parceiras estabelecidas na EIP Smart Cities: **EIP Smart Cities - <http://ec.europa.eu/eip/smartercities>**

## ***Call Smart Cities and Communities***

---

### **SCC 1 – 2015: Smart Cities and Communities solutions integrating energy, transport, ICT sectors through lighthouse (large scale demonstration - first of the kind)**

- *Scope (...) creating partnerships between industries, academics and cities, empower citizens and ensure the replicability of the solutions. Therefore each project should: (...) include **industry, city planning authorities** which should also reflect the view of the consumer organisations, research community, **local Small and Medium Size Companies (SMEs)**.*

**IA | Contr. CE: 18-25M€/projeto**

### **SCC 3 – 2015 Development of system standards for smart cities and communities solutions**

- *Scope (...) through standardisation the solutions identified by smart cities and communities can envisage costs reductions. (...) industries cities and communities (...) in cooperation with the European Standardisation Organisations (...) and Standard Developing Organisations (SDOs).*

---

**CSA | Contr. CE: 0,5 - 1 M€/projeto**

## *Call Smart cities & communities: Deadlines*



Topics*	2015
SCC1, SCC3	05/05/2015



## *DS 4 – Smart, Green and Integrated Transports*

# *Estrutura do Programa de Trabalhos Transportes 2015*

## MOBILITY FOR GROWTH – 13 Tópicos

Call: H2020-MG-2015 - 184 M€



## GREEN CARS – 2 Tópicos

Call: H2020-GC-2015 – 30M€



## SMALL BUSINESS & FAST TRACK

### INNOVATION – 1 Tópico

Call: H2020-IT-2015 - 38 M€



*Work Programme  
2014-2015  
– Smart, Green  
and Integrated  
Transports*

Transport Work Programme available:

[http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014\\_2015/main/h2020-wp1415-transport\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-transport_en.pdf)

## *Estrutura do Programa de Trabalhos Transportes 2015*

---

### **Modos específicos de transporte:**

- Ferroviário, marítimo e rodoviário
- Call "Green Vehicles" H2020-GV-2015

### **Integração de transportes**

- Mobilidade Urbana, Logística, Sistemas inteligentes de Transportes e Infraestrutura

### **Áreas Transversais**

- Questões socioeconómicas e comportamentais e definição de políticas

## ***Call Mobility for Growth***



***Aviation*** - Ações para melhorar as competências e conhecimento no sector da aviação, apoiar a política de investigação e Inovação e criar ligações duradouras em colaborações com parceiros internacionais. Impacto na eficiência dos recursos, mobilidade e competitividade



***Rail*** - Progresso nos serviços, custos, interoperabilidade, capacidade, redução de ruído e competitividade. Novos negócios, soluções organizacionais e soluções de logísticas, novas parcerias com serviços e prestadores de tecnologia. Novas tecnologias em todos os segmentos do ferroviário serviços e infraestrutura - > **NO TOPICS FOR 2015**



***Road*** - sistemas de combustão interna, apoio à política da qualidade do ar, segurança no transporte rodoviário, produção de tecnologia, desenvolvimento de novos conceitos para veículos rodoviários e para transporte urbano



***Waterborne*** - transporte marítimo mais moderno, seguro e eficiente em recursos : utilização de fontes de energia, minimização dos impactos ambientais

## ***Call Mobility for Growth***



***Urban Mobility*** - Inovação em tornar os recursos eficientes e aumentar a competitividade na mobilidade urbana e no transporte (Civitas 2020): mobilidade urbana e transportes mais eficientes e limpos

Projeto  
Larga escala  
(12-18M€)



***Logistics*** - Aumentar a eficiência e a sustentabilidade na cadeia de procura no setor logístico, remover a comunicação e as barreiras entre os stakeholders, melhor o potencial de colaboração, utilização de equipamento e conectividade em todos os modos de transporte



***Intelligent Transport Systems*** - aumentar a segurança, redução do congestionamento; tornar o transporte mais sustentável. Contribui ainda para a descarbonização do setor dos transportes e contribuição para o target de “Zero acidentes rodoviários”



***Infraestructures*** : tornar a infraestrutura mais resiliente, de acordo com os níveis de mobilidade e necessidades das pessoas e negócios, reduzir o impacto da infraestrutura no ambiente e manutenção das infraestruturas



## **Aviation**

---

### **MG.1.2-2015 Enhancing resource efficiency of aviation**

*Scope:* (...) target the **reduction of emissions and noise at the source**, i.e. accelerating the development of green technologies for the aircraft and its engines, including the impact of the use of alternative

*Impact:* To reduce CO<sub>2</sub> by 75%, NOx and particles by 90% (per passenger and per kilometre), perceived noise by 65% in 2050; To contribute to reduce the impact of Europe's air transport

**RIA | Contr. CE: 5-8 M€/projet | TRL 1-6**

### **MG.1.8; 1.9; 1.10. International cooperation in aeronautics with Japan, Canada and China**

**RIA | CSA | Contr. CE: 1.3-1.8M€/project**

---

## Road



### **MG.3.6-2015. Safe and connected automation in road transport**

#### **Scope:**

##### **RIA – deadline 23/04/2015 (first stage)**

- ✓ Supporting technologies for individual pre-emption or compensation of human errors, (...) vehicle control in case of imminent collision.
- ✓ Novel transport, service and mobility concepts in real-life situations enabled by automated driving and connectivity

##### **CSA – deadline 15/10/2015 (one single stage)**

- ✓ Dissemination and take-up of results, including the development and consensus building on business models to progress towards full automation in road transport.
- ✓ Liability and standardisation policy and regulatory framework recommendations

#### **Impact:**

- ✓ Reduction of the automated driving systems' development costs,
- ✓ Enhanced robustness and performance of sensor and data analysis systems
- ✓ Improved efficiency, safety and traffic flow

**RIA/CSA | Contr. CE: 5-10 M€/projeto**

## Waterborne



### ***MG.4.3-2015. System modelling and life-cycle cost and performance optimisation for waterborne assets***

- ***Scope:*** New design and mathematical modelling tools and paradigms; A comprehensive and detailed approach to system integration and optimisation for vessels; A large scale virtual demonstrator for smart, adaptive and multi-material complex ships and structures.
- ***Impact:*** cost reductions in design, production and lifetime maritime asset management; shorter time for assessment and integration of sub-systems on board vessels and a better integration of complex systems

**RIA | Contr. CE: 5-8 M€/project**

## ***Urban Mobility***



### ***MG.5.4-2015. Strengthening the knowledge and capacities of local authorities***

- ***Scope:*** Promoting take up of the innovative concept of Sustainable Urban Mobility Plans (SUMPs) Or Enhancing the capacities of local authorities and other stakeholders to successfully plan and implement innovative sustainable mobility measures, technologies and tools, on the basis of reliable data and analysis.
- ***Impact:*** generate a high leverage factor, especially in regions and cities where take up is so far low and the impacts from transport are severe

**RIA | Contr. CE: 2-4M€/project**



## ***Urban Mobility***

---

### ***MG.5.5-2015. Demonstrating and testing innovative solutions for cleaner and better urban transport and mobility***

- *Scope: city-led consortia, composed of four to five cities. They should cover an appropriate sub-set of the eight ‘CIVITAS measure categories’: collective passenger transport; demand management strategies; mobility management and travel awareness; safety and security; urban freight logistics; information systems and services; and clean fuels and low emission vehicles; car-independent lifestyles (RIA)*

*Or Communication and dissemination strategy to maximise impact and ensure the continuity of the ‘CIVITAS Secretariat’ as well as links with the CiVi-Net networks (CSA)*

- *Impact: produce added-value inputs to the development of European knowledge base on the effectiveness and impacts of innovative mobility solutions.*

**RIA/CSA | Contr. CE:12-18M€/project**

---

## ***Logistics***

---

### ***MG.6.3-2015. Common communication and navigation platforms for pan-European logistics applications***

- ***Scope:*** *solutions to enable actors to take fast and well-informed decisions inside and cross-companies. This implies that information with the right quality, reliability and content is made available to concerned actors and shared between them.*
- ***Impact:*** *Cloud-based data and services infrastructure, underpinned by common information models, will give all logistic stakeholders opportunities to collaborate on both an operational and strategic level.*

**RIA | Contr. CE:16-18M€/project**



## **Socio-economic and behavioral research**

### **MG.9.1-2015. Transport societal drivers**

- **Scope:** A *forum for communication, collaboration, relationship-building* should develop multi-stakeholder interactions and produce an action plan for innovative solution/options for transport and mobility to advance the agenda of the transport sector and society at large.
- **Impact:** Ensure an inclusive approach in providing a comprehensive overview of new forms of mobility and transport, and their implications for users, the environment, society as a whole and policy makers, better target transport policies

**CSA | Contr. CE:1-1,5M€/project**

## ***Call Green Vehicles***

---



✓ investigação, desenvolvimento tecnológico, inovação e demonstração como forma de apoiar melhorias na eficiência energética dos veículos de transporte rodoviário e à utilização de novas fontes de energia não convencionais para o transporte rodoviário, tais como eletricidade, CNG e LNG, combustíveis renováveis , etc

### **Foco / atividades principais:**

- ✓ incluem tecnologias aplicadas aos motores, nova concepção de veículos, redução de peso, melhoria na aerodinâmica e resistência ao rolamento.
  - ✓ Implementação da PPP Green Vehicles
-

## **Call Green Vehicles**



### **GV.6-2015. Powertrain control for heavy-duty vehicles with optimised emissions**

**Scope:** Methods how to optimise the control of powertrains taking into account specific transportation tasks. This can be achieved by using the **information provided by new generation navigation systems and emission sensors**

**Impact:** A reduction of fuel consumption of at least 20% on the same vehicle with conventional control

**IA | Contr. CE:5-7M€/project**

### **GV.8-2015. Electric vehicles' enhanced performance and integration into the transport system and the grid**

**Scope:** reduce complexity and the number of components and interconnections, whilst improving energy efficiency, functionality and modularity; BMS research; Integration of the overall cycle of EV energy management into a comprehensive EV battery and ICT-based re-charging system management

**Impact:** Improvements in the cost-performance ratio of EV contributing ; Enhancements to vehicle range and/or weight, battery life and reliability; Standardised BMS, etc

**RIA | Contr. CE:5-10M€/project**

## *Datas de encerramento - tópicos 2015*

MG.1.8(RIA part), MG.1.9, MG.1.10  MG.9.1, MG.9.5	<b>Single stage</b> <b>23/04/2015</b>	
MG.3.6(CSA part)  MG.5.5(CSA part)  MG.8.3, MG.8.4(CSA part)		<b>Single stage</b> <b>15/10/2015</b>
MG.1.2  MG.3.6(RIA part)  MG.4.3  MG.5.4, MG.5.5(IA part)  MG.6.3  MG.8.4(RIA or IA part)	<b>First stage</b> <b>23/04/2015</b>	<b>Second stage</b> <b>15/10/2015</b>
GV.6, GV.8		<b>Single stage</b> <b>15/10/2015</b>

## ***ETNA + European Transport Network Alliance***

---

**ETNA Plus IS AN FP7 COORDINATION ACTION  
AIMED AT IMPROVING THE OVERALL QUALITY OF NCP  
SERVICES ACROSS EUROPE IN THE AREA OF TRANSPORT**



**MAKING H2020 CALLS MORE ACCESSIBLE  
FOR ALL STAKEHOLDERS AND CONTRIBUTE TO  
AN IMPROVEMENT IN THE AVERAGE QUALITY  
OF PROPOSALS SUBMITTED**



## ***ETNA + European Transport Network Alliance***

### **What are we doing?**

- ✓ SINGLE ENTRY POINT WEB-BASED TOOL TO EUROPEAN TRANSPORT R&I INITIATIVES AND SOURCES OF PUBLIC AND PRIVATE SECTOR FUNDING
- ✓ BROKERAGE EVENTS AND PARTNER SEARCH ACTIVITIES TO FIND SUITABLE PARTNERS TO APPLY TO HORIZON 2020 CALLS FOR PROPOSALS
- ✓ FACTSHEET ON HORIZON 2020 PROGRAMME AVAILABLE ON THE WEBSITE
- ✓ E-TRAININGS/WEBINARS
- ✓ ETNA<sub>PLUS</sub> ACADEMY: PILOT TRAINING FOR EU12 POTENTIAL COORDINATORS



**[www.transport-ncps.net](http://www.transport-ncps.net)**

# Horizonte 2020 – Como Participar?

**Identificar a call**

Um potencial participante tem **2 formas de se envolver numa candidatura:**

- Partir de uma ideia própria, **como coordenador**
- **Unir-se a um consórcio** em formação, liderado por terceiros

**Consultar os documentos**

- Texto do WP e tópicos
- Regras de participação e disseminação
- Anexos do WP 2014/15
- *H2020 Grants Manual*

**Preparar a proposta**

- Reunir consórcio
- Definição e repartição de tarefas
- Preparação da informação administrativa e técnica
- Revisão da proposta

**Submeter**

**Promova o networking!**  
**Torne-se visível e atraente para os parceiros internacionais**



## Próximos Eventos

- **Sessões Horizonte 2020 promovidas pelo GPPQ – Setembro e Outubro**
- **AIRDAYS – Lisboa, 6 a 8 de Outubro de 2014**
- **Infoday Transportes – Bruxelas, 2 de Fevereiro de 2015**

## Contactos

# GPPQ Gabinete de Promoção do Programa-Quadro

Av. D. Carlos I, nº126, 4º  
1249-074 Lisboa - Portugal

[www.gppq.fct.pt](http://www.gppq.fct.pt)

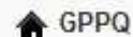
ENERGIA | TRANSPORTES (INCLUINDO AERONAUTICA)

Fusão:

INICIATIVA CONJUNTA PARA HIDROGÉNIO E PILHAS DE COMBUSTÍVEL



Ana Raposo



Av. D. Carlos I, nº126, 4º andar  
1249-074 LISBOA

[ana.raposo@fct.pt](mailto:ana.raposo@fct.pt)

+351 21 391 76 38



Fundação para a Ciência e a Tecnologia

MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

**EXCELÊNCIA | CONHECIMENTO | IMPACTO**

**[www.fct.pt](http://www.fct.pt)**