

Oportunidades de Financiamento no H2020



Desafio Societal 4 - *Transportes Inteligentes, Ecológicos e Integrados*

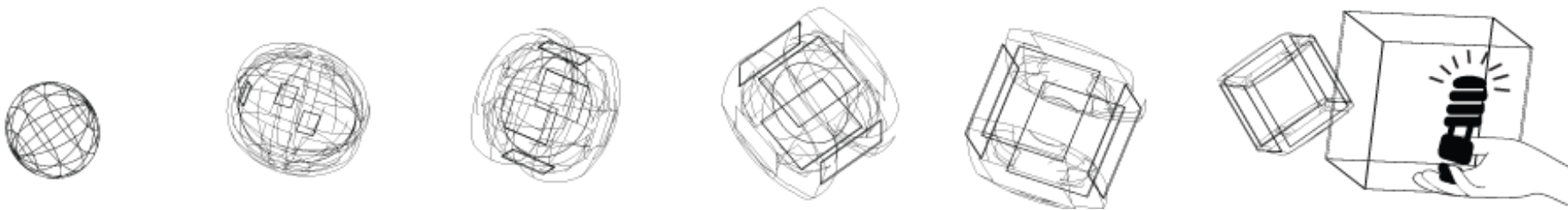
Ana Raposo (ana.raposo@gppq.fct)

Índice

- Enquadramento Geral
- Resultados da participação nacional no H2020 (2014 & 2015)
- Programa de Trabalhos 2016/2017 de Transportes

O que é o Horizonte 2020 ?

- Principal instrumento de financiamento para apoiar investigação e inovação (2014-2020)
- Orçamento de 77 mil milhões €



Horizonte 2020 (2014-2020) – Estrutura Geral

Excellent Science ~ 24 400 M€

- **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

Bottom up

Industrial Leadership ~ 17 800 M€

- **Leadership in enabling and industrial technologies**
ICT, NMBP (nanotechnologies, advanced materials, biotechnology, manufacturing), Space *Top down*
- **Access to Risk finance**
Leveraging private finance and venture capital for research
- **Innovation in SMEs**
Fostering all forms of innovation in all types of SMEs

Societal Challenges ~ 29 700 M€

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

Top down

European Institute of Innovation and Technology (EIT) (~2700 M€)

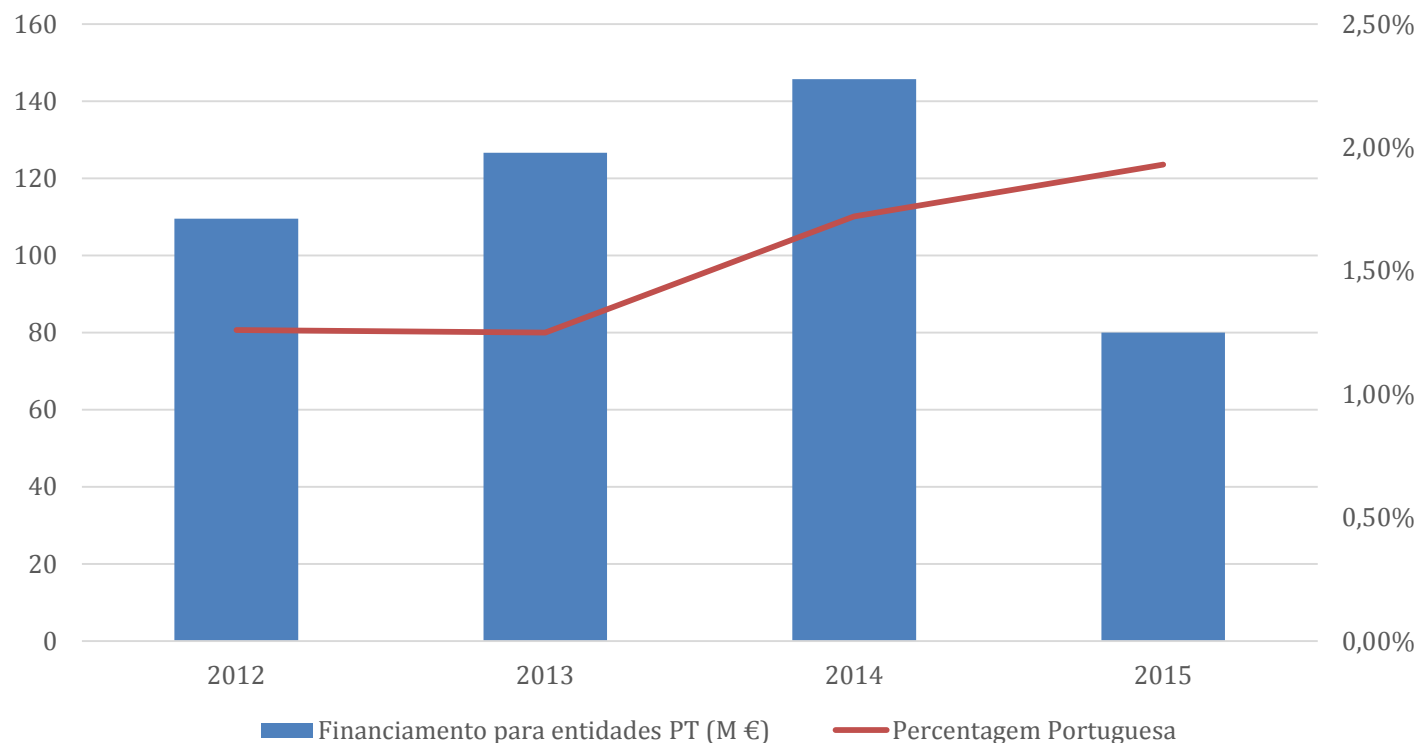
Spreading Excellence and Widening Participation (~1900 M€)

Science with and for Society (~1600 M€)

Joint Research Centre (JRC)

Resultados Globais da Participação Nacional 2014/2015

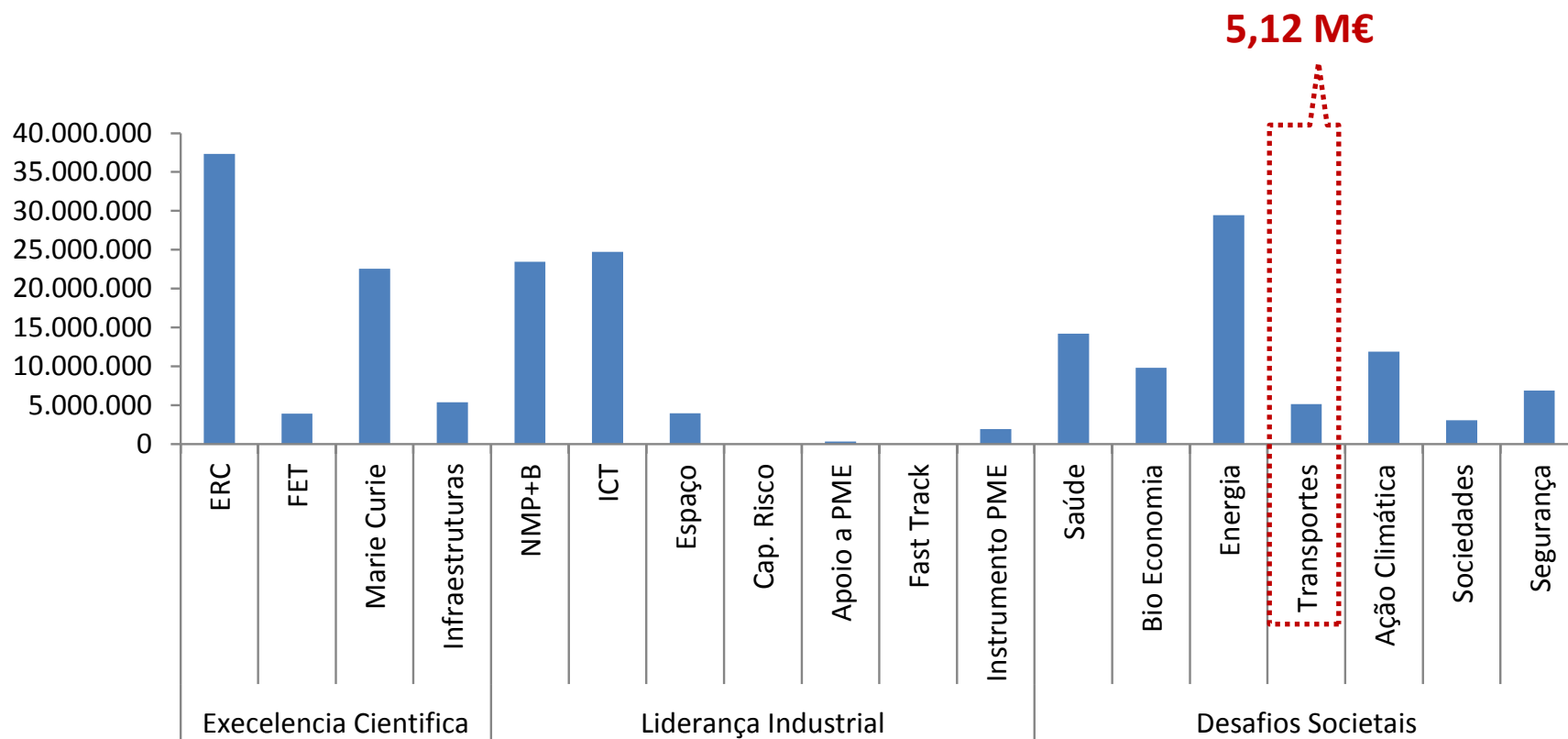
Financiamento PT



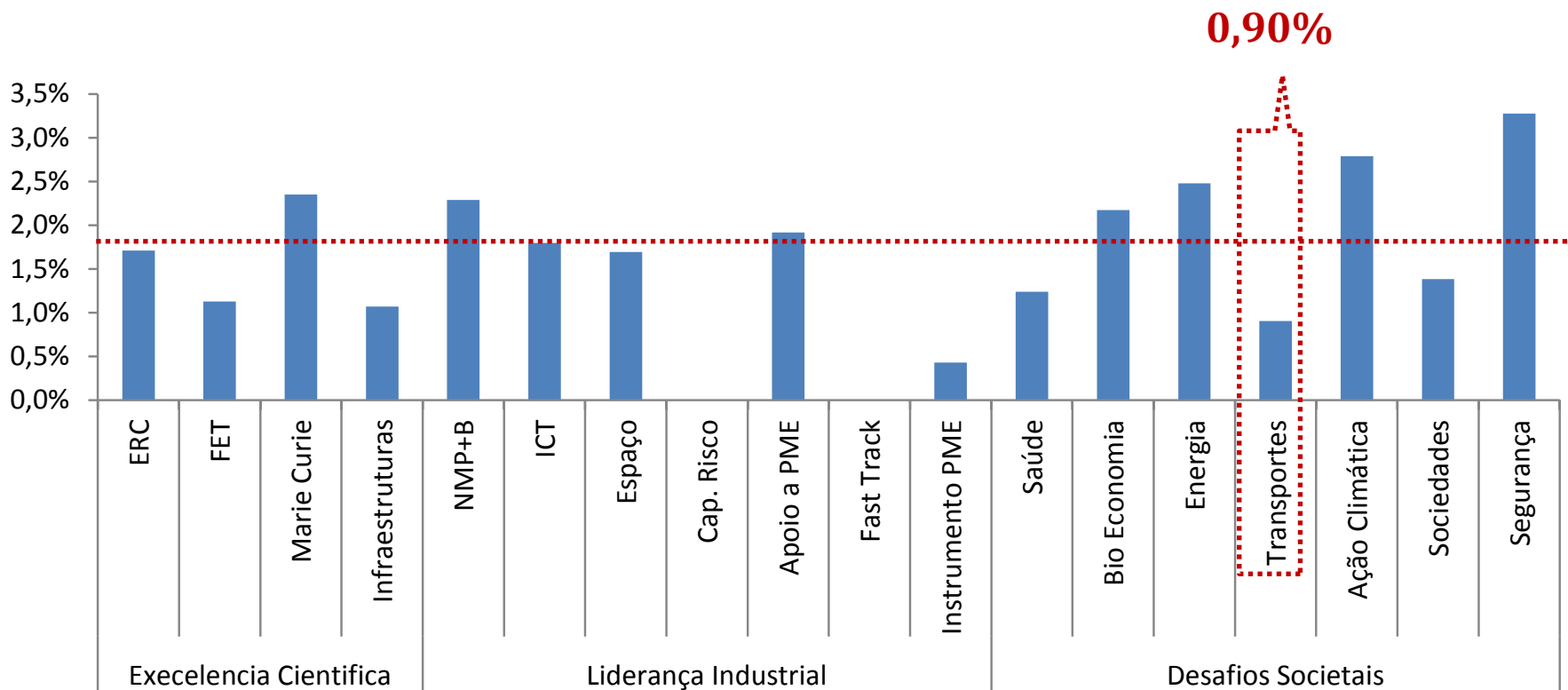
2015 – valores relativos a ca. 50% do orçamento de 2015.

Resultados da Participação Nacional 2014/2015 no DS Transportes

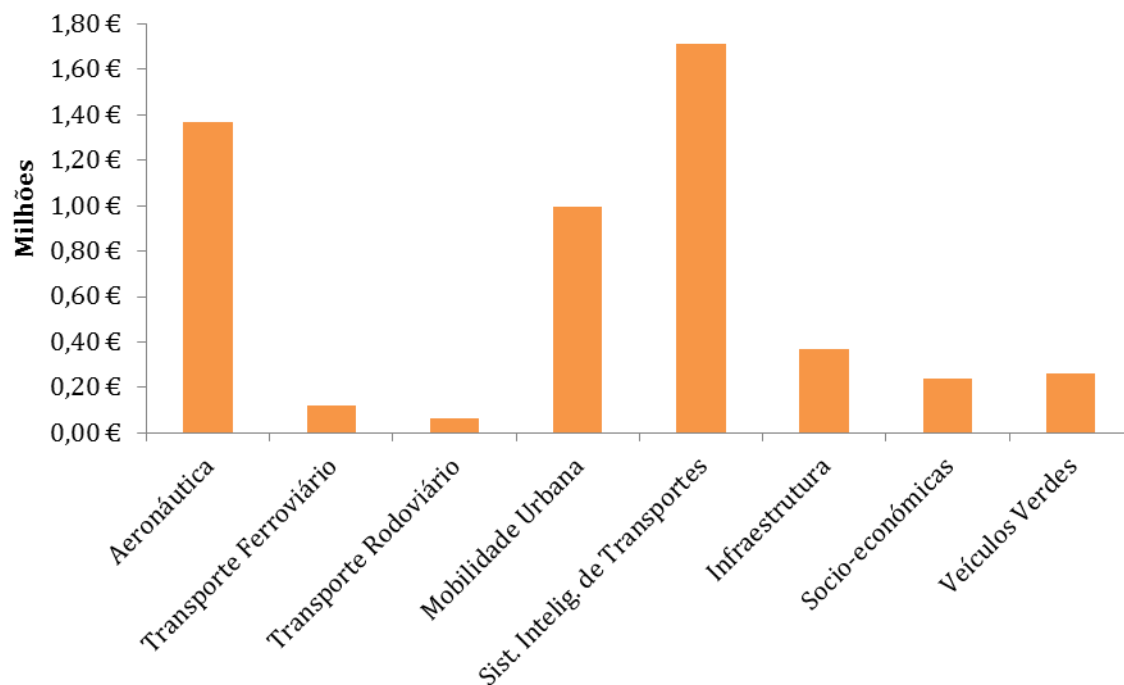
14 projetos | 22 participações
1 coordenação nacional



Resultados da Participação Nacional 2014/2015 no DS Transportes



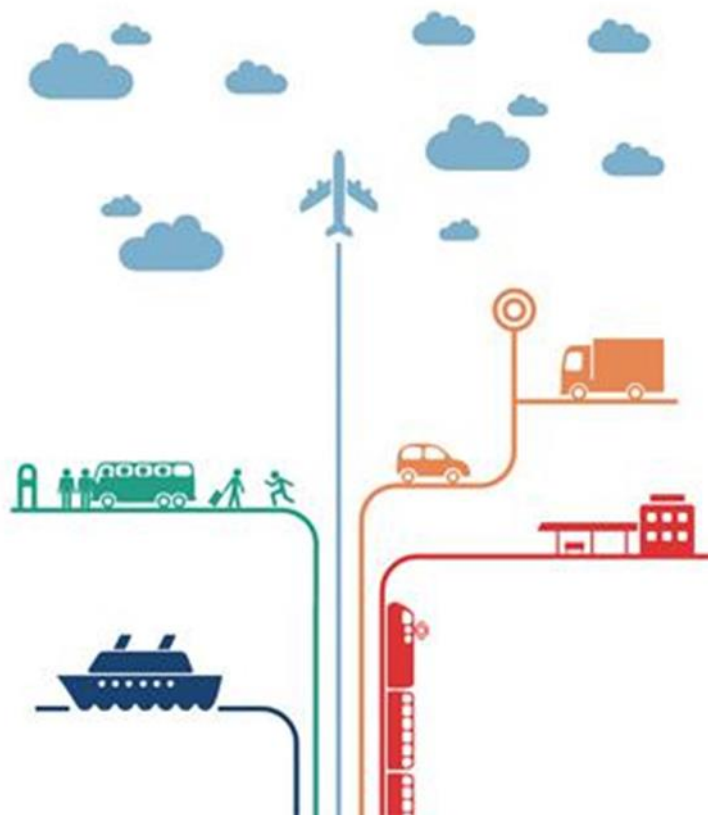
Resultados da Participação Nacional 2014/2015 no DS Transportes - Áreas



Call 2014 & 2015 do DS4

- 14 projetos financiados (10 RIA + 3 CSAS + 1 IA) + SME instrument
- 1 coordenação nacional
- 5,1 M€
- 0,89% taxa de retorno (no 7ºPQ foi 1,37%)
- Áreas sem projectos com participação PT: Transporte marítimo e Logística

Nota: dados de 2015 correspondem a cerca de 1/3 dos concursos apurados. Os restantes concursos irão ficando disponíveis até ao final do ano)



Programa de Trabalhos 2016/2017

DS4 - Transportes Inteligentes, Ecológicos e Integrados

Participant Portal - Programa de Trabalhos Transportes

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

RESEARCH & INNOVATION
Participant Portal

HOME FUNDING OPPORTUNITIES HOW TO PARTICIPATE EXPERTS SUPPORT Search PP LOGIN REGISTER

H2020 Online Manual
Reference Documents
Beneficiary registration
Financial Viability Self-Check
SME Participation

Reference Documents

This page includes all the H2020 & FP7 reference documents starting with legal documents and the Commission work programmes for research and innovation up to model grant agreements and guides for specific actions and horizontal issues. The documents are grouped by categories. It also includes reference documents of other EU programmes, as 3rd Health, Consumer, COSME and Research Fund for Coal and Steel programmes. To access a document:

- Click on a folder
- Click on ARROW to have more information about the document and its available translations

You can search a specific H2020 or FP7 document on the [Europa Search](#) service.

H2020 Other EU programmes FP7

- Legal basis
 - Framework programmes (EC-Euratom)
 - Rules for participation
 - Specific programme
 - European Institute of Innovation and Technology (EIT)
- Model grant agreement
 - General Grant Agreement
 - European Research Council (ERC)
 - Marie-Skłodowska-Curie (MSC)
 - SME Instrument
 - ERANET Cofund
 - Pre-Commercial Procurement (PCP)/Public Procurement of Innovative Solutions (PPI) Cofund
 - European Joint Programme Cofund
 - Framework Partnerships
 - Lump sum
- H2020 Grants Manual
 - Section on beneficiary registration, validation and financial viability check
 - Section on proposal submission and evaluation
 - Guidance on evaluation of some H2020 aspects
 - Section on grant agreement preparation
 - Annotated Model Grant Agreement
 - Horizontal issues

RESEARCH & INNOVATION
Participant Portal

HOME FUNDING OPPORTUNITIES HOW TO PARTICIPATE EXPERTS SUPPORT Search PP LOGIN REGISTER

EU Programmes 2014-2020

Search topics

Updates

H2020
Research Fund for Coal & Steel

3rd Health Programme

Promotion of Agricultural Products

Consumer Programme

COSME

Justice Programme

FP7 & CID Programmes 2007-2013

Other Funding Opportunities

Calls for Proposals

Horizon 2020
Advanced search for topics
Calls for tenders on TED

- 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
- Europe in a changing world - Inclusive, innovative and reflective societies
- Secure societies - protecting freedom and security of Europe and its citizens
- Spreading excellence and widening participation

Status Calls with forthcoming topics Calls with open topics Calls with only closed topics

Sort by Call title Call identifier Publication date Filter a call FILTER

Societal Challenges SESAR2020 IR-VLD Wave 1 H2020-SESAR-2015-2 Publication date: 22 October 2015	Societal Challenges Clean Sky 2 Call for Core partners Wave 3 H2020-CS2-CPW03-2015-02 Publication date: 23 October 2015	Industrial Leadership Applications in Satellite Navigation - Galileo - 2017 H2020-GALILEO-GSA-2017 Publication date: 14 October 2015
Societal Challenges 2016-2017 Mobility for Growth H2020-MG-2016-2017 Publication date: 14 October 2015	Societal Challenges 2016-2017 Green Vehicles H2020-GV-2016-2017 Publication date: 14 October 2015	Societal Challenges 2016-2017 Automated Road Transport H2020-ART-2016-2017 Publication date: 14 October 2015
Societal Challenges GREEN VEHICLES 2014-2015 H2020-GV-2014-2015 Publication date: 11 December 2013	Societal Challenges Clean Sky 2 Call for Core Partners Wave 1 H2020-CS2-CPW01-2014-01 Publication date: 09 July 2014	Societal Challenges Clean Sky 2 Call for Proposals 02 H2020-CS2-CPW02-2015-01 Publication date: 23 July 2015

→ Work Programme SC 4

→ SC4 → Smart, Green and integrated transport

Desafio Societal Transportes – Estrutura dos Tópicos



Os **TÓPICOS** refletem a abordagem baseada em desafios no H2020

Specific Challenge

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

Scope

Delineação do problema, especificação do enfoque e das fronteiras de ação, mas sem detalhar as possíveis abordagens

Expected Impact

Descrição dos elementos-chave a alcançar no desafio em questão

EE 1 – 2017: Waste heat recovery from urban facilities and re-use to increase energy efficiency of district or individual heating and cooling systems

Specific challenge: Europe is not recovering enough of its waste energy. A vast amount of waste heat is produced in urban areas from a range of local sources (e.g. from metros, large buildings, extensive ventilation systems) and from urban waste or waste water systems. Data centres are another rapidly growing sector generating heat that could potentially be recovered and reused for heating or cooling buildings.

Thermal energy captured can be supplied through individual central heating and cooling systems or distributed through district heating and cooling networks to multiple buildings. In some cases, it might be needed to combine the recovery of waste heat with different technologies, (e.g., heat pumps) in order to bring the temperature level of the waste heat to those matching the existing heating and cooling applications addressed in the proposal.

Scope: Demonstrate waste heat and waste water heat recovery in urban areas, in services sector and transport system facilities and their connection and integration into the existing heating and cooling supply systems in buildings/facilities or district heating/cooling systems. Focus should be given to **replicability**, scalability and modularity that facilitate application and rapid deployment. Develop sustainable business models and organisational, managerial, and financial solutions for deployment of the proposed technological solutions in the EU, with due regard to the legislative framework.

Projects should build on previous projects supported under FP7 and Horizon 2020. The activities are expected to be implemented at Technology Readiness Level (TRL) 6-8 (please see part G of the General Annexes).

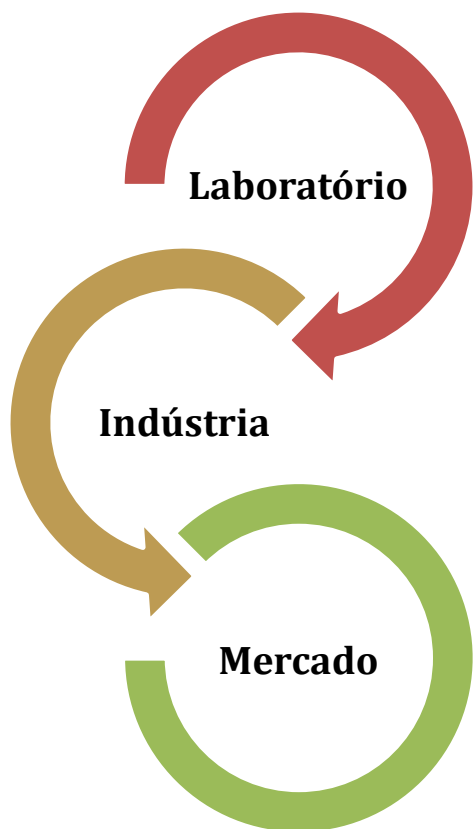
The Commission considers that proposals requesting a contribution from the EU of between EUR 3 and 4 million would allow this challenge to be addressed appropriately. This does not preclude submission and selection of proposals requesting other amounts.

Expected impact: Proposals are expected to demonstrate the impacts listed below, using quantified indicators and targets wherever possible:

- Primary energy savings and GHG emission savings triggered by the proposed actions (compared to best available solution existing today);
- Increase in share of waste heat captured and utilised in urban areas;
- Scale of the **replicability** potential of the proposed solutions.

Type of action: Innovation Actions

Aspectos Práticos – Technology Readiness Level



TRL 1 – Princípio básico observado

TRL 2 – Conceito tecnológico formulado

TRL 3 – Prova de conceito experimental

TRL 4 – Tecnologia validada no laboratório

TRL 5 – Tecnologia validada em ambiente relevante

TRL 6 – Tecnologia demonstrada em ambiente relevante

TRL 7 – Demonstração do Protótipo do Sistema em ambiente operacional

TRL 8 – Sistema completo e qualificado

TRL 9 – Sistema Real Comprovado em ambiente operacional

Transportes

Horizonte 2020 – Informação Geral

- ✓ **Concursos:** 2014 & 2015 já fecharam (1º ano do H2020)
Em Out de 2015 abriram os primeiros concursos para 2016
- ✓ Programas de Trabalho **Bienais** (2014/2015; 2016/2017)
- ✓ Projetos em colaboração (**min. 3 entidades de 3 EM ou EA diferentes**)
- ✓ Países **elegíveis:** Estados-Membros (EM), Estados Associados(EA), Países em desenvolvimento, Entidades internacionais de interesse europeu;
- ✓ Países **não-elegíveis automaticamente:** BRIC, EUA, México, Japão, Austrália, Canadá, ... (isto é, podem participar, mas sem receberem financiamento)
- ✓ **Concursos temáticos** mas também **com muitas interações entre temas nos pilares dos Desafios Societais e da Liderança Industrial** (TICs, Nanociências, aspetos sócio-económicos, sustentabilidade, etc...,.)
- ✓ Tópicos **mais abertos** e com possibilidade para **diferentes tipos de abordagem**

Horizonte 2020 - Tipologia de Projecto

ORÇAMENTO: pagamento baseado no tipo de projeto e não no tipo de participante

Research and Innovation Action [RIA] → 100% custos diretos + 25% custos indiretos Investigação básica e aplicada; Desenvolvimento de tecnologia e de integração;

Teste e validação de um protótipo em pequena escala, em laboratório ou ambiente simulado

Innovation Action [IA] → 70% custos diretos + 25% custos indiretos, mas instituições sem fins lucrativos (e.g., universidades, organismos públicos) podem receber a 100%.

Protótipos, testes, demonstradores, pilotos; Validação do produto em grande escala e replicação no mercado

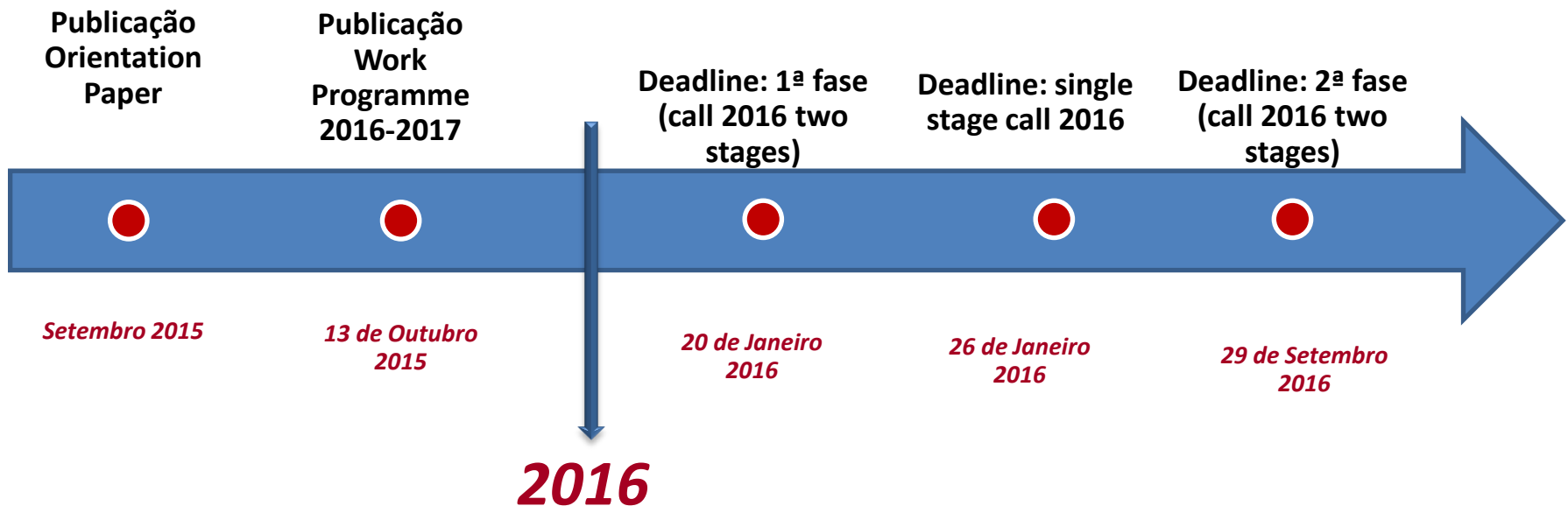
Coordination and Supporting Action [CSA] → 100% custos diretos + 25% custos indiretos

Criação de redes de coordenação ou de apoio; Diálogo político e exercícios mútuos de aprendizagem incluindo os estudos de conceção de novas infraestruturas;

Uniformização, divulgação, sensibilização e comunicação

Pela 1ª vez , o IVA não recuperável é um custo elegível

Calendário do Programa Transportes 2016




Concursos do Programa de Trabalhos Transportes 2016-2017



Smart, green and integrated transport

Call	2016 (M€)	2017 (M€)
Mobility for Growth	210,10	225,5
Automated Road Transport	64	50
Green Vehicles	78,5	128
SME Instrument	57,57	61,23
Fast Track to Innovation	14,65	
<i>Other actions (e.g. tenders; ELENA)</i>	<i>16,95</i>	<i>14,05</i>
TOTAL	450,77	486,78

Contexto Político – Estratégias e novidades de apoio ao desafio Transportes no Horizonte 2020

- 
- *Em linha com a estratégia do Livro Branco dos Transportes (targets 2030 e 2050)*
 - *Agendas estratégicas das plataformas tecnológicas europeias*
 - *Cooperação internacional (EUA, China, Brazil, África)*
 - *Open research data pilot*

Estrutura do Programa de Trabalhos Transportes 2016-2017

- ***Calls for proposals***

- Mobility for Growth (Aviation, Waterborne, Safety, Urban Mobility, Logistics, ITS, Infrastructure, Socio-economics)
- European Green Vehicles Initiative
- Automated Road Transport

- ***Other actions***

- Inducement prize

- ***Contributions to other calls***

- Smart Cities & Communities with Nature-based Solutions
- SME instrument

Programa de Trabalhos de Transportes 2016-2017

MOBILITY FOR GROWTH – 36 TÓPICOS



GREEN VEHICLES – 12 TÓPICOS

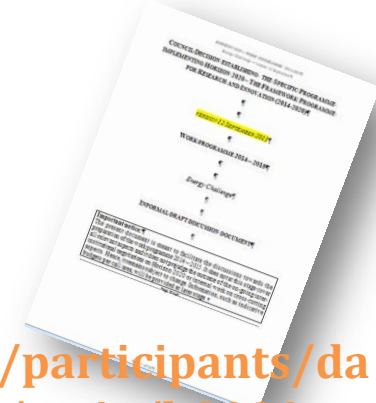


*Work Programme
2016-2017
– Smart, Green
and Integrated
Transports*

AUTOMATED ROAD TRANSPORT– 7 TÓPICOS



SME INSTRUMENT– 1 TÓPICO



http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-transport_en.pdf

Call Mobility for Growth - 64 M€ (2016) | 50 M€ (2017)

Aumentar a competitividade e sustentabilidade, melhorar a mobilidade e o impacto económico

- ✓ Infraestruturas conectadas, transportes de passageiros e pessoas
- ✓ Otimização da mobilidade porta a porta, segurança, diminuir o impacto ambiental
- ✓ Melhorar os equipamentos e tornar os sistemas mais inteligentes, limpos, eficientes e silenciosos e reduzir a dependência dos combustíveis fósseis



Call Mobility for Growth - Transporte Marítimo - 38 M€



2 - WATERBORNE TOPIC	Type of scheme	EC Contribution
MG-2.2-2016. Development, production and use of high performance and lightweight materials for vessels and equipment	IA	7-9M€

Keywords: vessel efficiency, design, construction, production of composites and new advanced materials

MG-2.3-2016. New and improved transport concepts in waterborne transport	RIA	6-12M€
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Keywords: automation of waterborne transport, multimodal transport or energy supply, SMES

* Two Stage

Call Mobility for Growth – Segurança – 37 M€



3 - SAFETY

TOPIC

Type of scheme

EC contribution

MG-3.3-2016. Safer waterborne transport and maritime operations

RIA

5-7 M€

*Keywords: improve new operational and **traffic management approaches** (incl. extreme conditions), reduce environment measures, new and improved vessel and equipment design*

MG-3.4-2016. Transport infrastructure innovation to increase the transport system safety at modal and intermodal level

RIA

2-5M€

Keywords: improve new designs and upgradings of infrastructures at safety level, maintenance methods, adaptation to V2I/I2V (Internacional Cooperation USA)

MG-3.5-2016. Behavioural aspects for safer transport

RIA

4-9M€

Keywords: key factors that influence safe transport user behaviour: distraction, social and demographic factors, conditions, measures to modify behaviour

MG-3.6-2016. Euro-African Initiative on road safety and traffic management

CSA

2,5-3M€

Keywords: dialogue platform involving Africa and EU national authorities; promote the adoption of innovative solutions to address road safety

Call Mobility for Growth - Mobilidade Urbana – 12 M€



4 – URBAN MOBILITY	TOPIC	Type of scheme	EC Contribution
MG-4.4-2016.	Facilitating public procurement of innovative sustainable transport and mobility solutions in urban areas	CSA	0,6 – 1M€

Keywords: public procurers, market consultations, smart mobility solutions, exchanging experience in procurement

MG-4.5-2016.	New ways of supporting development and implementation of neighbourhood-level transport innovations	RIA	2-4M€
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Keywords: new forms of mobility solutions, new type of innovation, tools and approach

Call Mobility for Growth

Logística – 14 M€



5 - LOGISTICS	TOPIC	Type of scheme	EC Contribution
MG-5.1-2016.	Networked and efficient logistics clusters	RIA	4-6 M€

Keywords: more efficient and sustainable freight transport, specialised logistics clusters including sharing of resources, modular load units, automated handling and high load factors

MG-5.3-2016.	Promoting the deployment of green transport, towards Eco-labels for logistics	CSA	1-2M€
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Keywords: Carbon footprint calculation, transport supply chain, standardization, eco-labelling certification

Call Mobility for Growth

Sistemas Inteligentes de Transportes – 30 M€



6 – ITS	TOPIC	Type of scheme	EC Contribution
MG-6.1-2016.	Innovative concepts, systems and services towards 'mobility as a service'	RIA	3-5M€
<i>Keywords: steer users to choose smart mobility: traffic management, information, planning systems at multi-modal level, preferences behaviour, acceptance factors, framework requirements, business models</i>			
MG-6.2-2016.	Large-scale demonstration(s) of cooperative ITS	IA	11-13M€
<i>Keywords: different settings (urban, highway, long distance), partnerships of multi-stakeholders, sharing data</i>			
MG-6.3-2016.	Roadmap, new business models, awareness raising, support and incentives for the roll-out of ITS	CSA	1-2M€
<i>Keywords: tools and guidance to support stakeholders to develop efficient policies of C.-ITS, financing measures, education and training practices.</i>			

Call Mobility for Growth Infraestruturas



Não há tópicos abertos em 2016



Gabinete de Promoção dos Programa Quadro ID&I



Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR



AGÊNCIA NACIONAL
DE INOVAÇÃO

Call Mobility for Growth

Questões Socioeconómicas e
comportamentais – 5,1 M€



8 – SOCIO-ECONOMIC AND BEHAVIOURAL	TOPIC	Type of scheme	EC Contribution
MG-8.1-2016.	Research, technology development and market trends for the European transport manufacturing industries	CSA	0.5-1.5 M€
<i>Keywords: picture of the research and technology development capacities, innovation challenges and market; enable stakeholders and policy makers to identify possible gaps.</i>			
MG-8.3-2016.	Assessing future requirements for skills and jobs across transport modes and systems	RIA	2-3M€
<i>Keywords: new and advanced skills and competences in engineering, training methods and tools</i>			
MG-8.6-2016.	Innovation awards for students and researchers in the context of the Transport Research Arena conference - TRA 2018	CSA	0.4-0.6M€

Keywords: prepare competition for students and researchers in transport sector

Call Automated Road Transport - 64 M€ (2016) | 50 M€ (2017)

- ✓ Aumentar a segurança, eficiência, confiança do utilizador
- ✓ Cumprir o desafio da competitividade: liderança industrial , crescimento e emprego
 - ✓ Sistemas automáticos
 - ✓ Infraestruturas digitais
 - ✓ Sistemas de cooperação e conectividade



Call Automated Road Transport - 50 M€



AUTOMATED ROAD TRANSPORT	TOPIC	Type of scheme	EC Contribution
ART-02-2016.	Automation pilots for passenger cars	IA	18-36 M€
<i>Keywords: integrate and test enabling technologies for automation level 3 , FOT in 3 MS, active involvement of all stakeholders</i>			
ART-04-2016.	Safety and end-user acceptance aspects of road automation in the transition period	RIA	3-6 M€
<i>Keywords: safe vehicles; driver expectations, safety driving in traffic conditions ; international cooperation)</i>			
ART-05-2016.	Road Infrastructure to support the transition to automation and the coexistence of conventional and automated vehicles on the same network	RIA	2-5 M€
<i>Keywords: interaction with conventional and automated vehicles ; international cooperation</i>			
ART-06-2016.	Coordination of activities in support of road automation	CSA	0.5-3 M€

Keywords: create a solid knowledge bases at european and international level; stakeholders forum; FOT platform

Call Green Vehicles - 78, 5M€ (2016) | 128 M€ (2017)

- ✓ Aumentar a competitividade e o crescimento da indústria europeia
- ✓ Transporte limpo, descarbonização do setor dos transportes
 - ✓ Eficiência energética, utilização de novas fontes de energia não convencionais (electricidade, CNG, LNG) combustíveis alternativos e interface veículo - carregamento
 - ✓ Reduzir poluição, ruído, impactos na saúde
 - ✓ Melhoria dos motores, processo de fabrico



Call Green Vehicles - 78,5M€



GREEN VEHICLES INITIATIVE	TOPIC	Type of scheme	EC contribution
GV-02-2016.	Technologies for low emission light duty powertrains	RIA	5-10M€

Keywords: new generation of non-hybrid engines; future combustion engines for electric powertrain; reduction of emissions

GV-03-2016.	System and cost optimised hybridisation of road vehicles	IA	7-10 M€
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Keywords: hybridised road vehicles (internal combustion and electric motors); advanced solution to reduce the cost and the complexity of hybrid, plug in hybrid and electric vehicles

GV-11-2016.	Stimulating European research and development for the implementation of future road transport technologies	CSA	2-3,5M€
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Keywords: Assist ERTRAC to define the research needs; research agendas and roadmaps; multiannual implementation plans

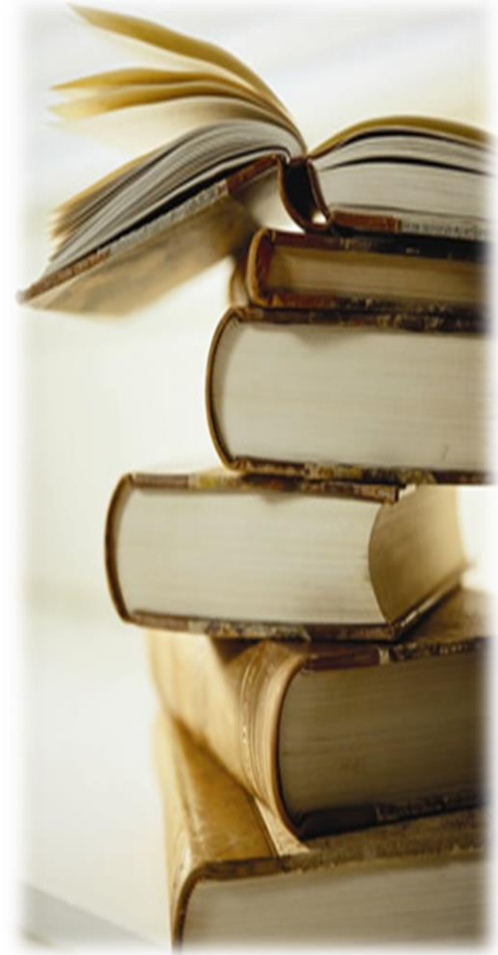
Call Deadlines 2016

Mobility for Growth	Single stage 26/01/2016	First stage 20/01/2016	Second stage 29/09/2016
Automated Road Transport	Single stage 26/01/2016	First stage 20/01/2016	Second stage 29/09/2016
Green Vehicles	Single stage 26/01/2016		

Antes de começar – Documentos chave

<http://ec.europa.eu/research/participants/portal/>

- **“Desafio Societal Transportes” - Programa de Trabalhos** – enquadramento, tópicos e orçamento
- **Anexos gerais aos programas de trabalho** – lista de países, elegibilidade e condições, critérios de avaliação, procedimento e classificação.
- **Formulários de Submissão e Templates** – formulários essenciais e guias para escrever e submeter a proposta
- **Guia de Submissão e processo de avaliação**



Publicações & Websites

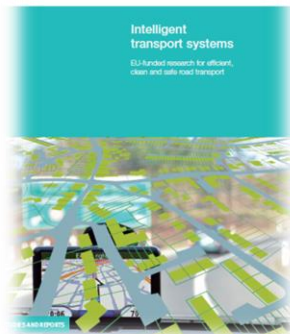


Automated Driving Roadmap (ERTRAC)



Transport Research Innovation Portal - <http://www.transport-research.info/web/>

ERTRAC / Automated Driving Roadmap / Roadmap



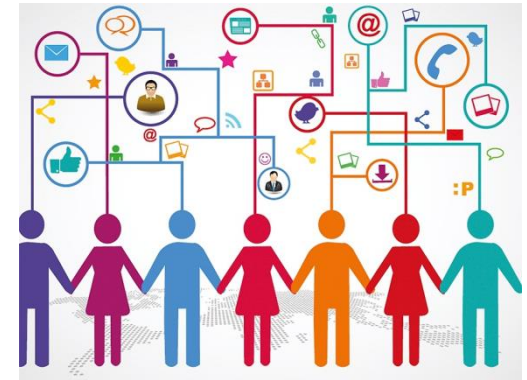
Intelligent transport systems EU-funded research for efficient, clean and safe road transport



ETNA - <http://www.transport-ncps.net/services/partner-search/partner-search.html>

Eventos

- **Sessões Horizonte 2020** promovidas pelo GPPQ – consulte o nosso calendário de eventos - www.gppq.pt
- **Infoday Transportes & BE** – Bruxelas, 5 de Novembro de 2015
<http://ec.europa.eu/research/index.cfm?pg=events&eventcode=D7185674-DE6C-2C3A-6BFC1426216A4F51>
- **Infoday Smart and Sustainable Cities**- Bruxelas, 6 de Novembro de 2015 -
<http://ec.europa.eu/research/index.cfm?pg=events&eventcode=8BDC94AA-B603-4E55-36835522D7C0CD08>
- **Automated Road Transport** – Bruxelas, 6 de Novembro de 2015 -
<http://www.ertrac.org/infoday-automation>



Contactos

Contactos NCP no tema DS4 - Transportes Inteligentes, Ecológicos e Integrados

Energia | Transportes

Fusão
FCH-JU



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