

# FEUP: Strategies to Integrate and attract International (European) research and innovation activities



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👉 <b>Total Number of Students (FTE)</b>	<b>8 583</b> (women: 27,8%)
👉 <b>Following Degree courses</b>	<b>7 366</b>
• - BSc's	<b>164</b>
• - Integrated Master Courses (5 years)	<b>5 887</b> (women: 24,4%)
• - Independent Master Degrees ( 2nd cycle)	<b>437</b> (women: 49,1%)
• - PhD programmes	<b>878</b> (women: 34,3%)
👉 <b>Life long learning</b>	<b>1 217</b>

## 1<sup>st</sup> Cycle

CIVIL ENGINEERING

MECHANICAL ENGINEERING

CHEMICAL ENGINEERING

INDUSTRIAL ENGINEERING AND MANAGEMENT

ELECTRICAL ENGINEERING AND COMPUTERS

METALLURGICAL AND MATERIALS ENGINEERING

ENVIRONMENT ENGINEERING

INFORMATICS ENGINEERING AND COMPUTING

BIO-ENGINEERING \*

MINING ENG. AND  
GEOENVIRONMENT

INFORMATION SCIENCE \*

COMMUNICATION SCIENCE \*

## 2<sup>nd</sup> Cycle

BIOMEDICAL ENGINEERING

MINING ENG. AND  
GEOENVIRONMENT

INFORMATION SCIENCE \*

MULTIMEDIA \*

INDUSTRIAL DESIGN

SAFETY AND OCCUPATIONAL  
ENGINEERING

INNOVATION AND TECH  
ENTREPRENEURSHIP

SERVICES ENG. AND MANAGEMENT

## 3<sup>rd</sup> Cycle

PHYSICS

APPLIED MATHEMATICS

CIVIL ENGINEERING

TRANSPORT MANAGEMENT

MECHANICAL ENGINEERING

LEADERS FOR TECHNICAL INDUSTRIES \*

CHEMICAL AND BIOLOGICAL ENG.

INDUSTRIAL ENG. AND MANAGEMENT

ELECTRICAL AND COMPUTERS ENG.

TELECOMMUNICATIONS \*

SUSTAINABLE ENERGY SYSTEMS

METALURGICAL AND MATERIALS ENG.

ENVIRONMENT ENGINEERING

INFORMATICS ENG. AND COMPUTING

INFORMATICS \*

BIO-ENGINEERING \*

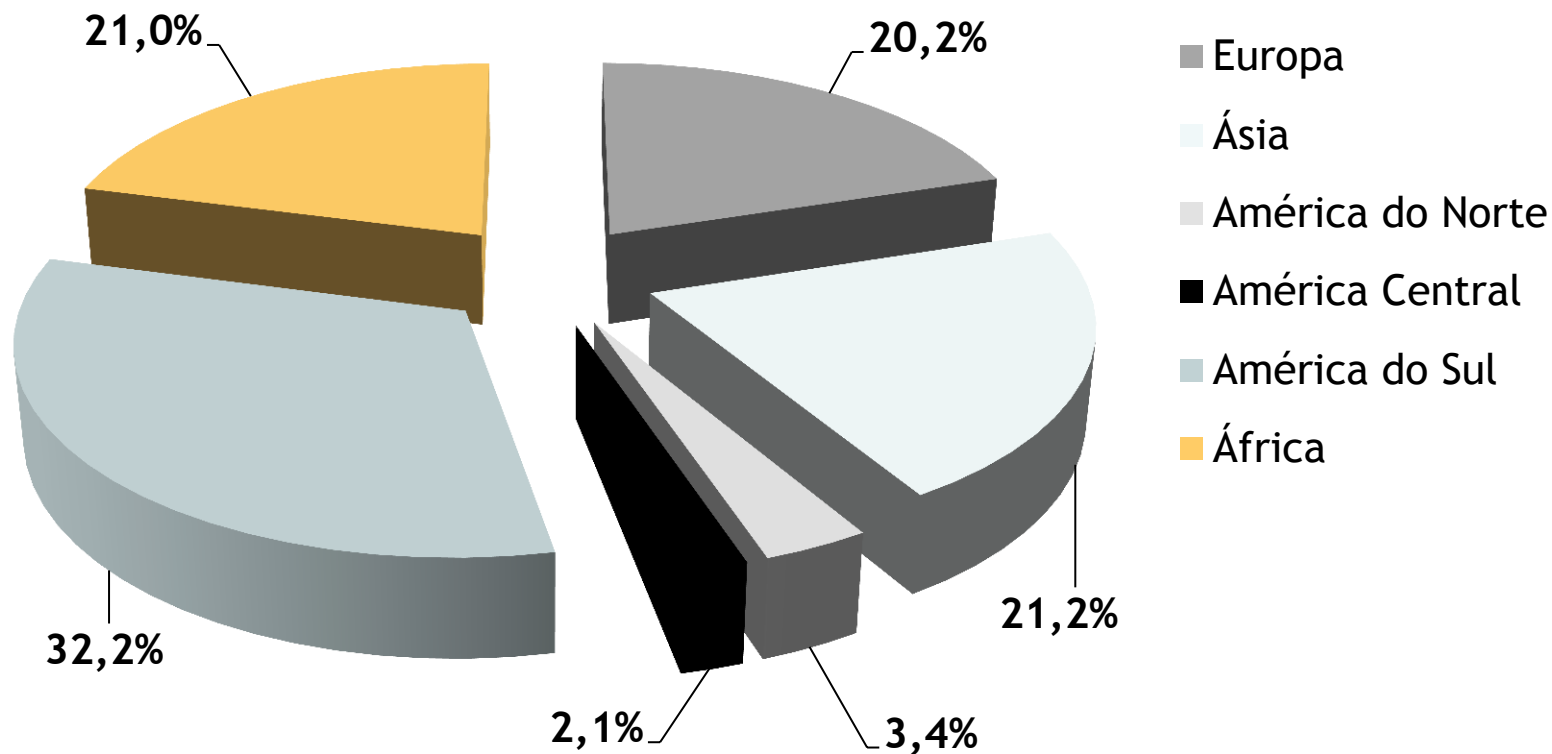
BIOMEDICAL ENGINEERING

MINING ENG. AND GEOENVIRONMENT

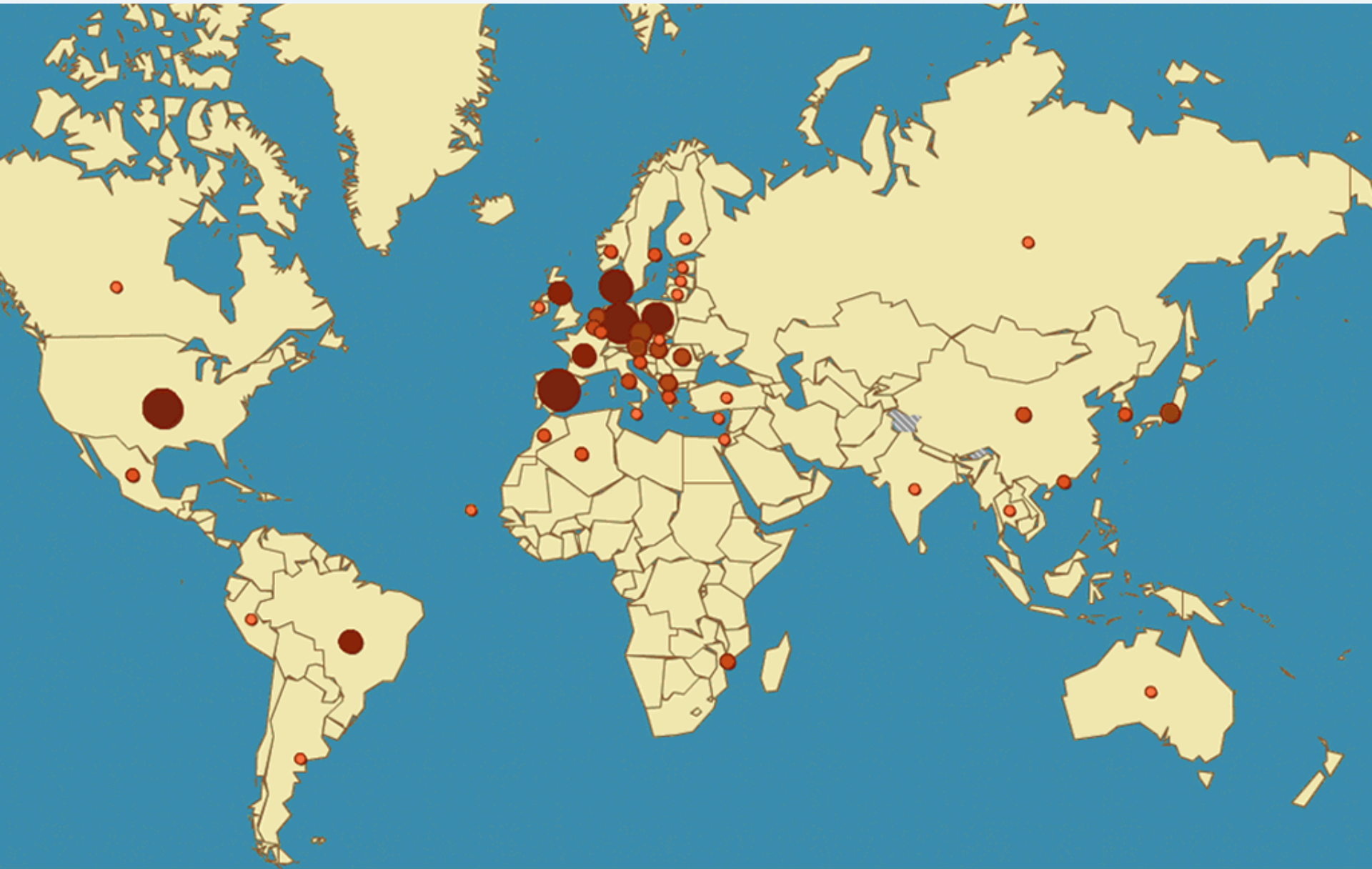
\* in cooperation

# FACTS & FIGURES – INTERNATIONALIZATION

## – FOREIGN STUDENTS 2011-2012



# Industrial training 2005-2010: 172 activities in 47 countries



## Main co-operation poles

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- **European Co-operation**
  - **Wide co-operation network within ERASMUS**
  - **Co-operation in European R&D programmes**
  - **Agreements with European Research Institutes**
- **Co-operation with Portuguese speaking countries**
  - **Angola**
    - **Universidade Agostinho Neto – Luanda**
    - **Universidade José Eduardo dos Santos – Huambo**
    - **Universidade de Katyavala Bwila – Lobito/Benguela**
  - **Mozambique**
    - **Universidade de Eduardo Mondlane – Maputo**
  - **Brazil**
  - **CAPES, CNPq, USP**
  - **This year 2012/2013 CSF programme involves several hundred students**

## Cooperation with U.S.A.

FEUP has been a proud partner of several top, world class, education institutions to offer innovative postgraduate courses:

**CMU | Portugal**

Information and Communication Technologies Institute

**MIT | Portugal**

**UT Austin | Portugal**

INTERNATIONAL COLLABORATORY FOR EMERGING TECHNOLOGIES, CoLAB



**IBM Centers for Advanced Studies**





## Cooperation U.Porto- - Zhejiang University

### R&D Project

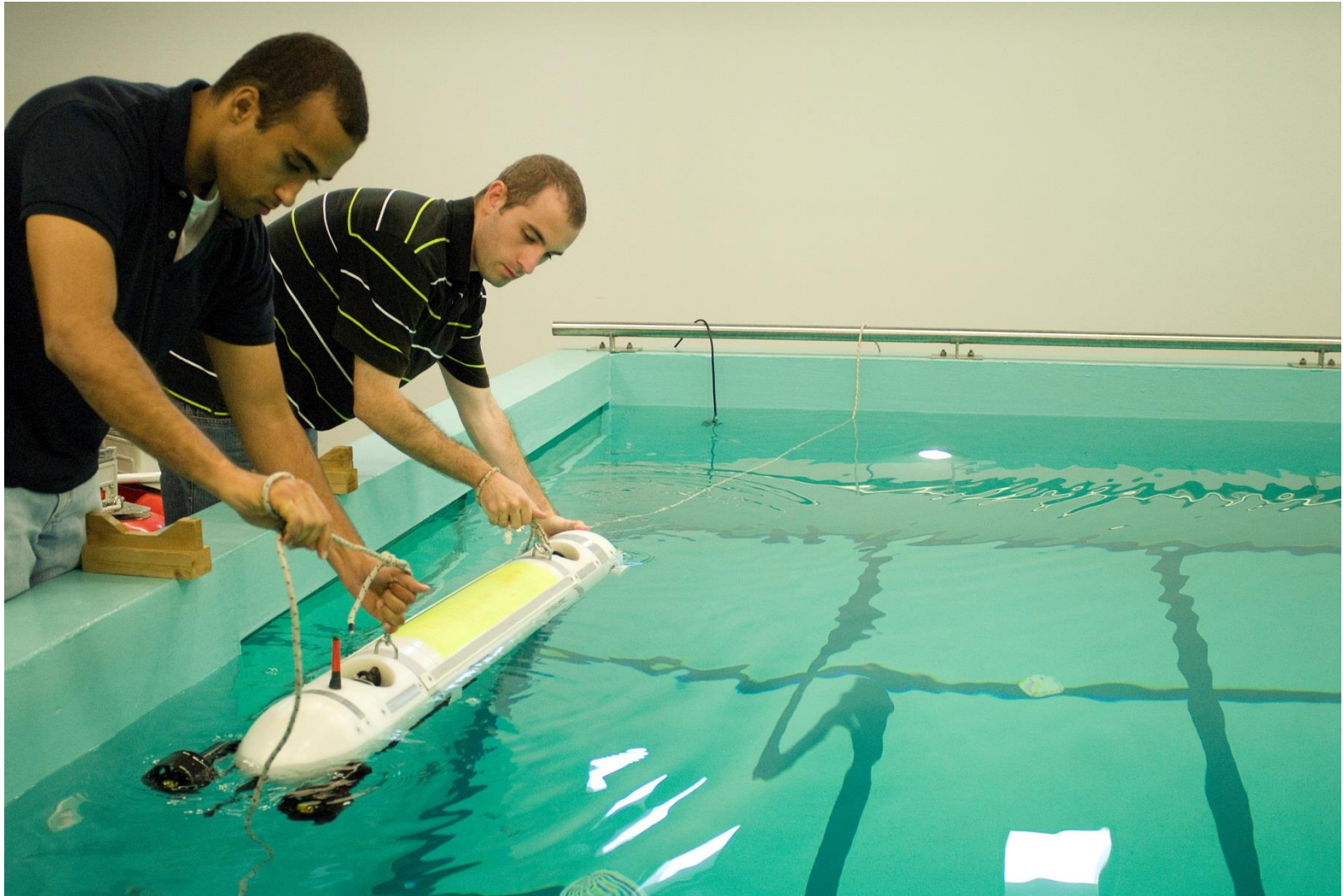
Sustainable Urban Metabolism for Europe (civil eng.) ... with  
Institute of Automation Chinese Academy of Sciences



Cooperation U.Porto- U.Porto and Macao Polytechnic Institute  
and University of Macao



# FACTS & FIGURES – R&D



## R&D centres located at FEUP

CEC Centre of Building Research Studies

CEFT Centre of Transport Phenomena Research

CEsA Research Centre for Wind Energy and Atmospheric Flows

CIGAR Research Centre of Geo-environmental and Resources

CITTA Research Centre for Territory, Transportation and Environment

ISRPorto Institute of Systems and Robotics - Porto

LABEST Laboratory of Concrete Technology and Structural Behaviour

LEPAE Laboratory of Process, Environment and Energy Engineering

LSS Laboratory of Signals and Systems

### LSRE/LCM (Associated lab)

LSRE Laboratory of Separation and Reaction Engineering

LCM Laboratory of Catalysis and Materials

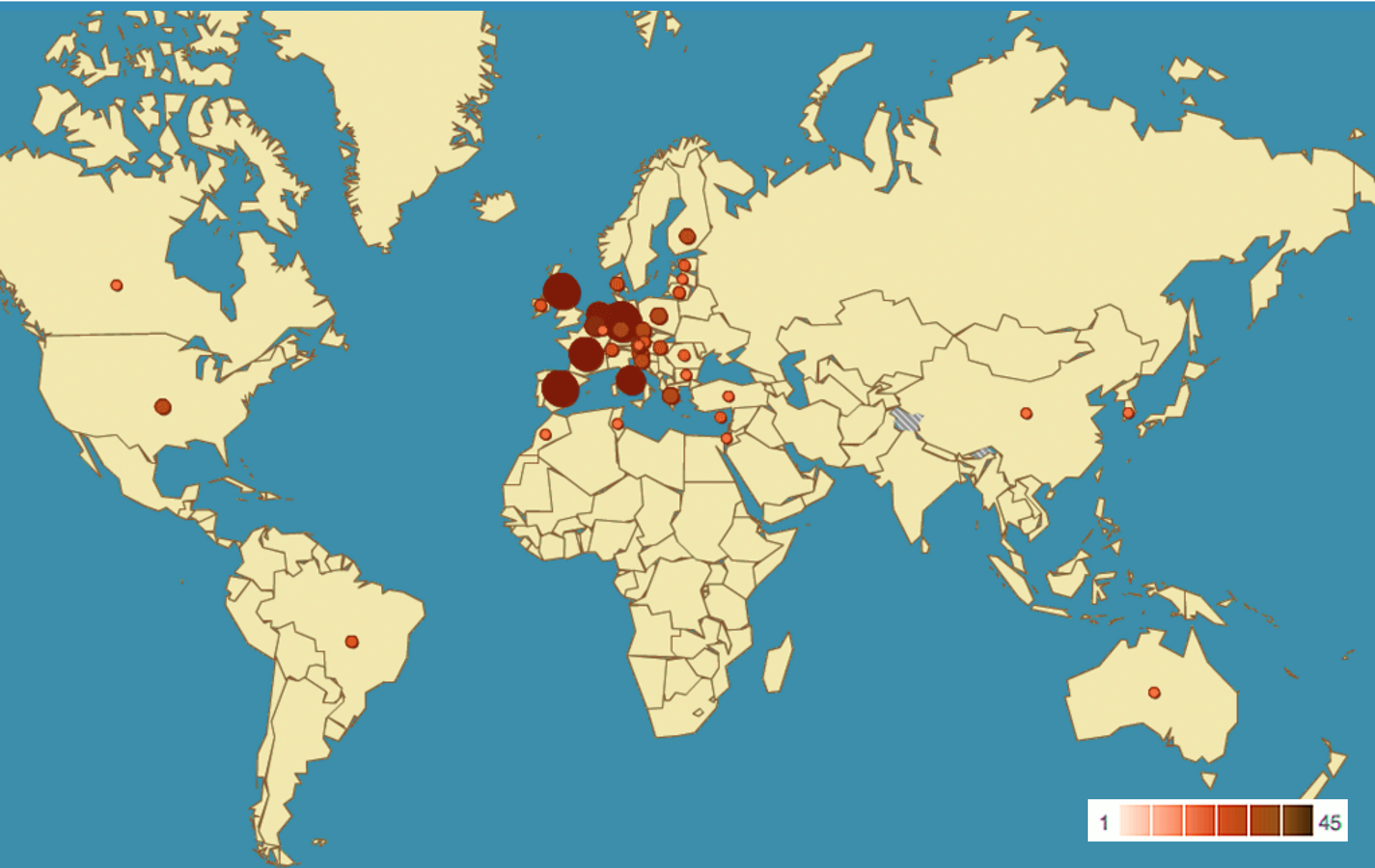
## R&D Interface Units

<u>IC</u>	<u>Institute for Building</u>
<u>IDIT</u>	<u>Institute for Development and Technological Research</u>
<u>IDMEC</u>	<u>Institute of Mechanical Engineering</u>
<u>IHRH</u>	<u>Institute for Hydraulics, Water Resources and Environment</u>
<u>INEB</u>	<u>Institute for Biomedical Engineering (located at IBMC/INEB)</u>
<u>INESC Porto</u>	<u>Institute for Systems and Computer Engineering of Porto</u>
<u>INEGI</u>	<u>Institute for Mechanical Engineering and Industrial Management</u>
<u>ISR</u>	<u>Institute for Systems and Robotics</u>
<u>LEMC</u>	<u>Laboratory for Testing Building Materials</u>


### -Other R&D centres

<u>ARCP</u>	<u>Association of Competence Network in Polymer</u>
<u>CERUP</u>	<u>Risk Center, University of Porto</u>
<u>FEUP CIQS</u>	<u>Centre of Innovation in Software Quality</u>
<u>NIAR</u>	<u>Laboratory of Distributed Artificial Intelligence and Robotics</u>
<u>SIM</u>	<u>Laboratory of Systems, Instrumentation and Modelling in</u>
<u>Science and Technology for Environment and Space - FEUP Polo</u>	
<u>DESIGN Studio</u>	

# R&D 2006-2011: 77 INTERNATIONAL PROJETS, 358 PARTNERS, 33 COUNTRIES

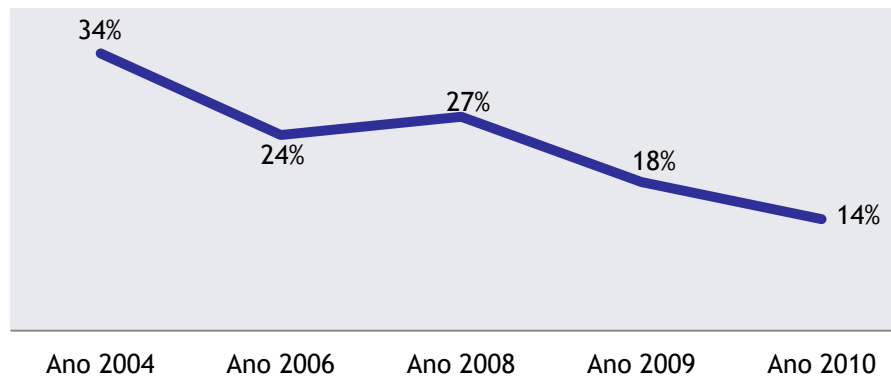


# Financing research: FCT vs 7th FP

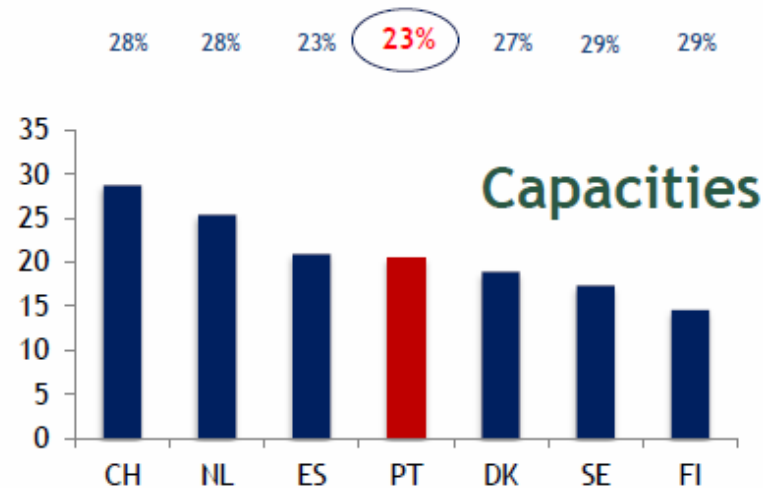
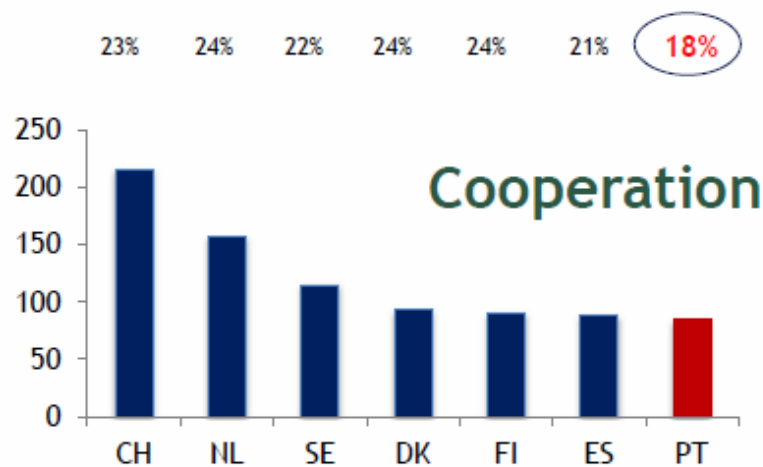
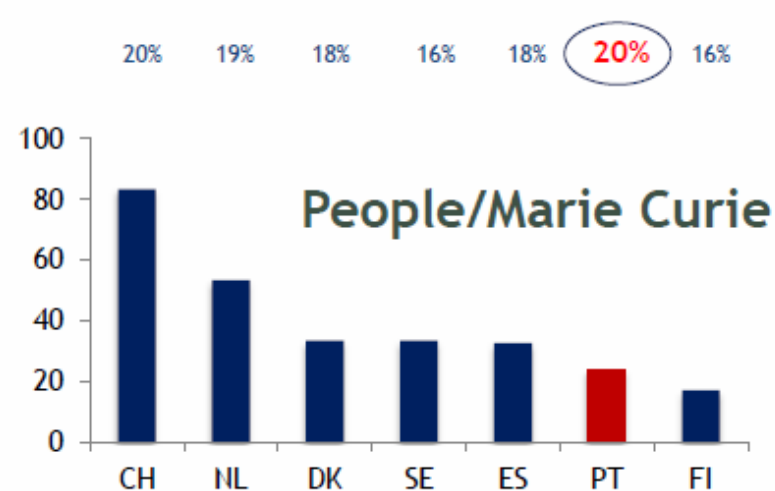
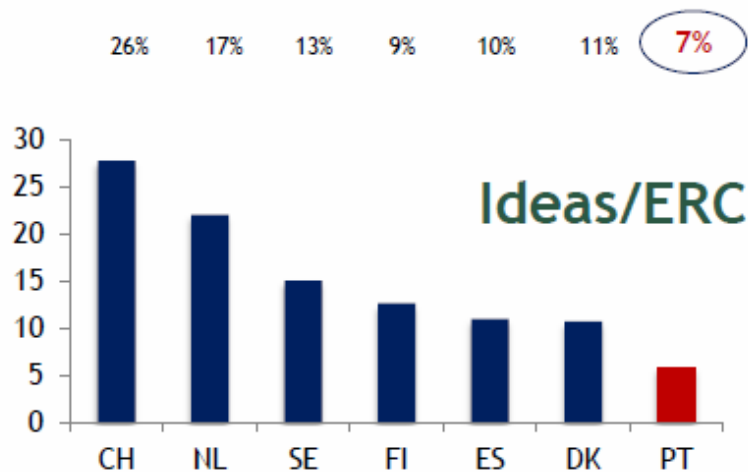
	<b>FCT</b> [2006-2011]	 SEVENTH FRAMEWORK PROGRAMME
Approval rate	21%*	22%
Average FEUP budget per project	85 m €	300 m €
Total FEUP Budget (approved)	13,7 M €	14,5 M €
Cash advances	15%	60-80%
% of Overheads over Direct costs	20%	60%
Human resources Imputation	No	Yes

(\*) - the approval rate in FCT calls has been decreasing considerably with time

FCT calls approval rate

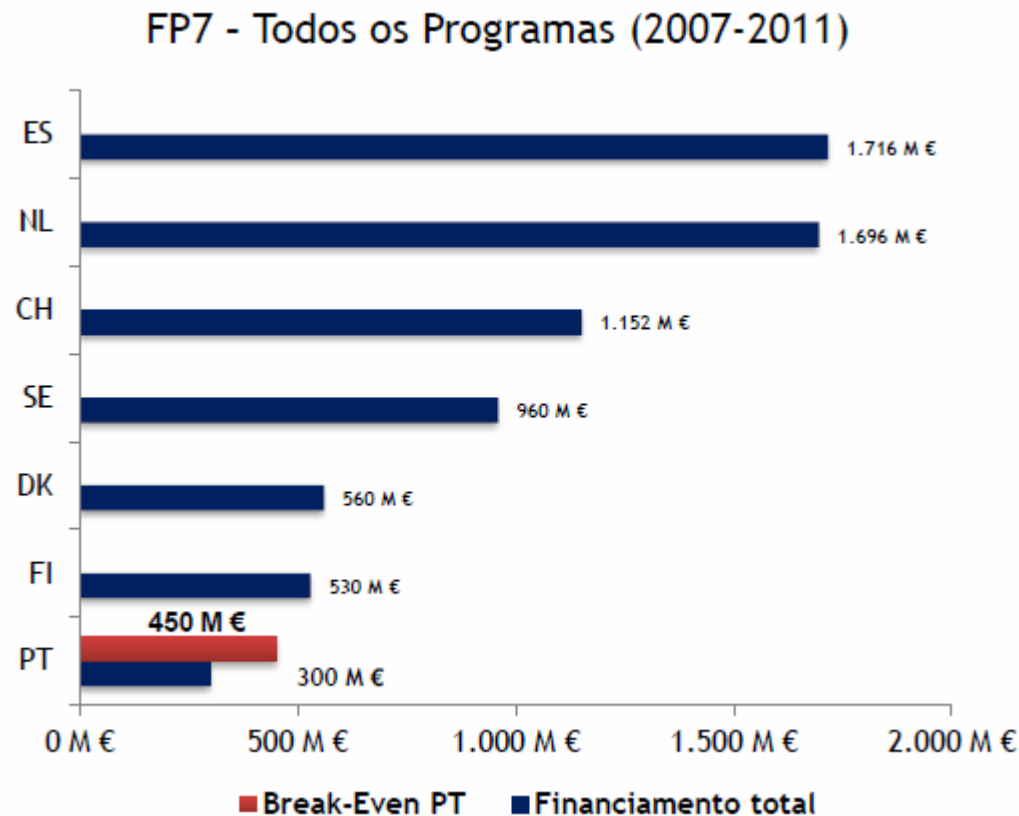


# Número de candidaturas / 1000 investigadores e taxas de Aprovação (2007-2011)



Fonte: GPPQ

# Financing research: FCT vs 7th FP



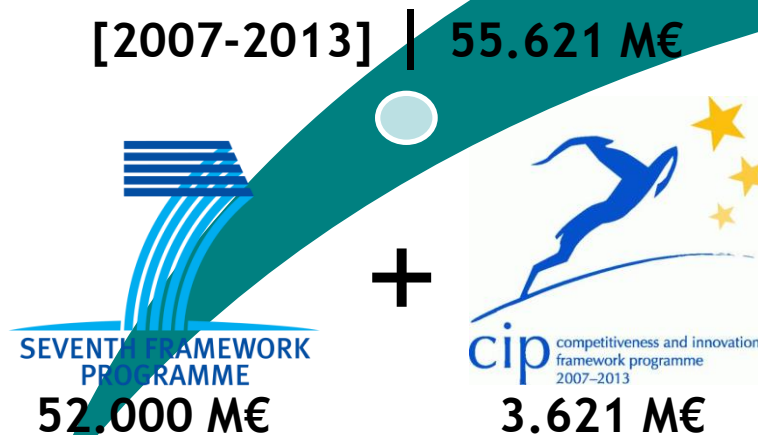
Portugal obtained 300 M€, corresponding **only to 65% of the national contribution to the programme**

Source: GPPQ

# Opportunities: Horizon 2020



Proposal [2014-2020]:  
E.P. | 100.000 M€  
E.C. | 87.400 M€



between 2000 e 2007, FCT supported 5188 projects with 218,5 M€.



## Presence in European Networks

Structure	Type of FEUP participation	Representative at FEUP
PTE - NanoMedicine	Member	Manuel Coelho (DEQ)
PTE - SmartGrids	“Mirror Group” SmartGrids	João Peças Lopes (INESC-P)
PTE - ENIAC	National Representative in the management committee of ENIAC Technological Initiative	José Silva Matos (INESC-P)
PTE - ARTEMIS	National Representative in the management committee of ARTEMIS Technological Initiative	José Silva Matos (INESC-P)
Software Engineering Institute	Member	Raul Vidal (DEI)
European Software Institute	Member	Raul Vidal (DEI)
EERA - European Energy Research	Partner in the joint programme on wind energy	José Laginha Palma (DEMec)

**European projects at FEUP:**

**FP7 and Horizon 2020- Task Forces to prepare proposals for the different calls**

**Connecting with local and international industrial partners**

**Involving the “centres of competence” to generate “critical mass” of expertise to be able to apply, be involved and be leader in the larger and more important programmes in **Horizon 2020****

- Centers of Competence
  - Cener
  - Future Cities
  - Product & Service Design
- R&D Nuclei
- Presence in National Clusters:
  - TICE
  - Health Cluster Portugal
  - Oil Technology and Refining
  - Creative Industries
- Promoting European Framework Programmes:
  - Info Days (in house)
  - Training (non teaching staff and Researchers)
  - Promote international collaboration (p.ex. BIN@PORTO)
  - E.C. and E.P. presence at FEUP to promote and discuss FP7 and Horizon 2020 (seminars; workshops; meetings; ...)

# FEEDING INNOVATION

UPTEC

Parque de Ciência e Tecnologia  
da Universidade do Porto

107 start-ups  
100 % occupancy rate

UPTEC  
PINC

31

UPTEC  
TECH

58

UPTEC  
BIO

10

UPTEC  
MAR

8

5



31



2



2



Total: 40  
37%

FEUP

FACULDADE DE ENGENHARIA  
UNIVERSIDADE DO PORTO

MIETE MESTRADO  
EM INOVAÇÃO E  
EMPREENDEDORISMO  
TECNOLÓGICO



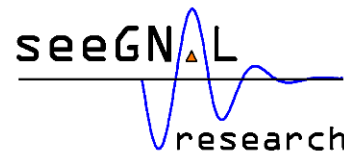
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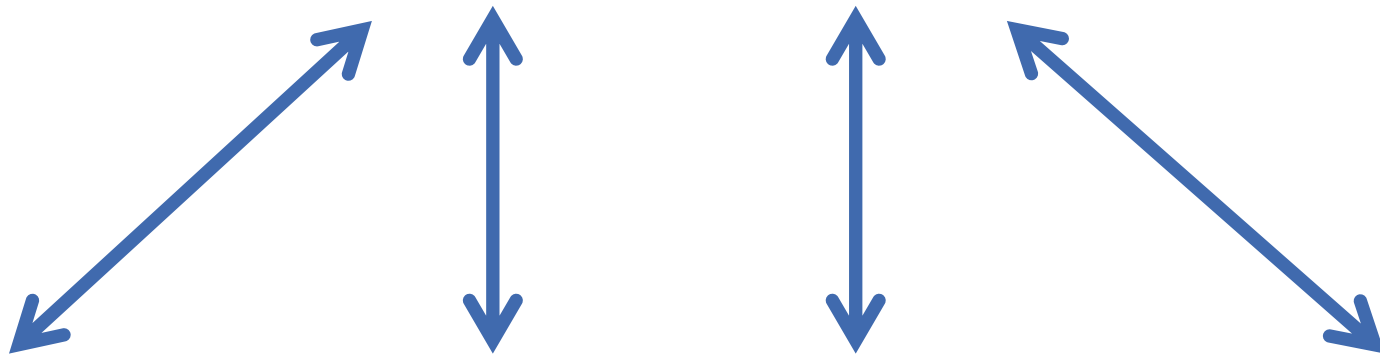


Palcos da Realidade



# UTEN Portugal

University Technology Enterprise Network



**UPIN**  
UNIVERSIDADE DO PORTO INOVAÇÃO



**FEUP** FACULDADE DE ENGENHARIA  
UNIVERSIDADE DO PORTO



**U. PORTO**

# R&D AND “THIRD MISSION” POLICIES

- 
- **Developing Centers of Competence on strategic areas of R&D (Sustainable Energy; Cities of the Future; Innovation and Design of Systems and products)**
  - **Implementing competitive international cooperation with major international players**
  - **Provision of PhD programmes namely in collaboration with industry and/or with international partners.**
  - **Implementing cooperation protocols with the entrepreneurs and with economic major players**
  - **Promoting entrepreneurship, namely through ‘spin-offs’ and sharing initiatives with the entrepreneurial community**





# BIN@<sup>TM</sup>

BUSINESS & INNOVATION NETWORK



**International brokerage events** facilitating discussion and co-operation, and aligning science and innovation with real global challenges.

**Events hosted by academia** - showcasing the benefit of interdisciplinary co-operation, the value and potential of knowledge exchange, and provide evidence of the impact of research and academia's vital role in driving economic recovery and growth.

**Themed workshops (Think / Action Tanks)** bringing together industry, academia and the public sector to explore key economic or societal challenges in an open and supportive environment, promoting discussion, identifying synergies and opportunities that can support collaboration and may translate research into value.



Connected  
Universities



Triple Helix

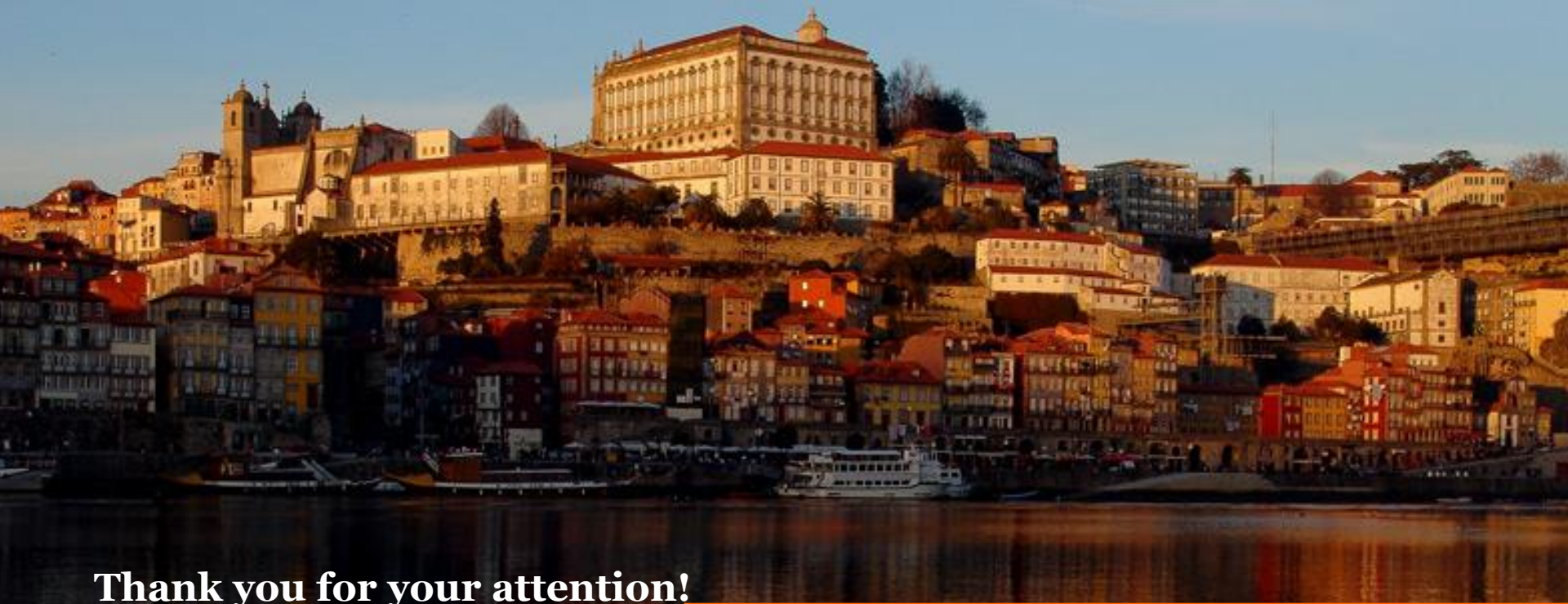


**BIN**@<sup>TM</sup>**PORTO**  
BUSINESS & INNOVATION NETWORK

Venue: FEUP

24-26 October 2012

[www.fe.up.pt/binporto2012](http://www.fe.up.pt/binporto2012)



Thank you for your attention!

PORTO – World Heritage (UNESCO)

