



ORDEM
DOS
ENGENHEIROS

ECCE | OE CONFERENCE CHANGES IN CIVIL ENGINEERING

FRIDAY, 31ST MAY 2013

ORDEM DOS ENGENHEIROS, PORTUGAL



Innovation The Portuguese Construction Technology Platform

**Rita Moura
Teixeira Duarte - PTPC**



Mission



Promote the reflection and implementation of initiatives and research and development projects, leading to **innovation** in the construction industry, contributing to the increase of **competitiveness**, promoting the **cooperation** between different stakeholders.



Competitiveness



Characteristic or ability of an organization to **fulfill** its mission, more successfully than other competing organizations.

Ability to meet the needs and expectations of **customers**.

Business competitiveness - getting more **cost effective** than competing firms.

Competitive advantage - what customers are willing to pay: **cost leadership, differentiation.**



Innovation

Selecting the most appropriate opportunities -
strengths

Focus on the **market**

Cooperation and sharing - transmission of
knowledge

Interdisciplinary teams - new forms of dialogue

Open Innovation – use of external sources of
knowledge

Partnerships with technologically advanced
enterprises and entities



Innovation | The Portuguese Construction Technology Platform

NEWSLETTER
INFORMAÇÃO TECNOLÓGICA DA CONSTRUÇÃO

Âmbito Geral

 **OBSERVATÓRIO TECNOLÓGICO**
Newsletter de Informação Tecnológica da PTPC

Âmbito Observatório



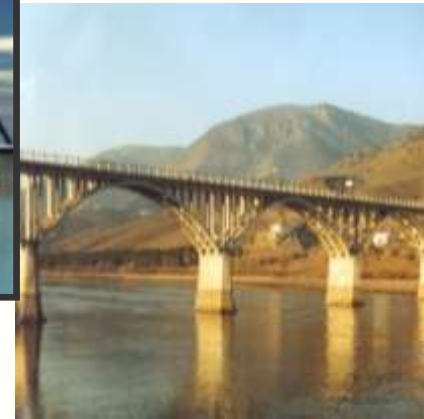
Innovationt



Innovation | The Portuguese Construction Technology Platform



Competitiveness
- High-Profit



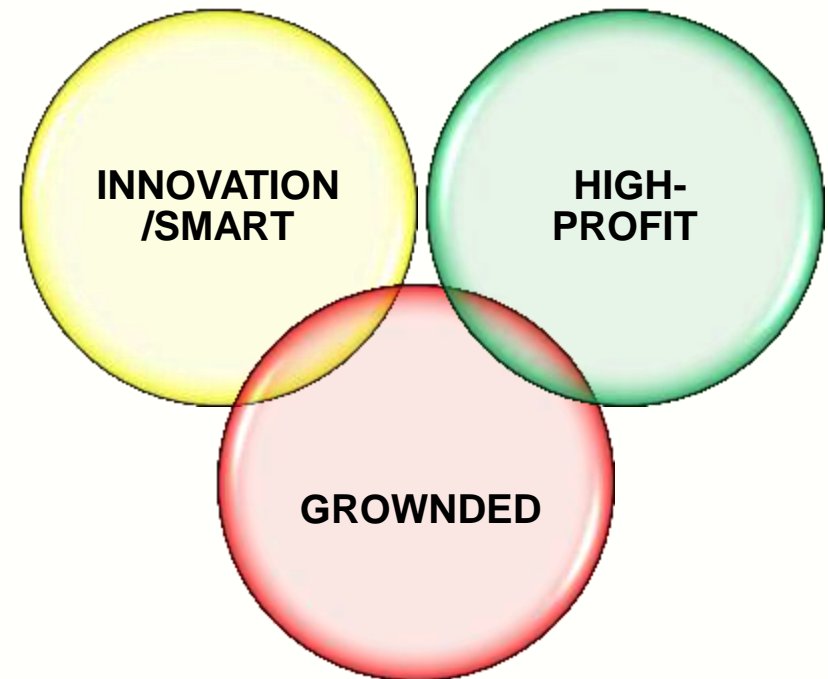
Quality – Durability – Heritage
Environment – Social Responsibility



Innovation | The Portuguese Construction Technology Platform



Competitiveness
Holistic approach



Innovation | The Portuguese Construction Technology Platform



MAIN GOALS



Promote Knowledge and Technology **Surveillance** through collaborative work between enterprises, universities and public entities.

Influence the agenda for Research & Development according to the actual **needs and challenges** of the Market;

Promoting Research & Development projects and help raising **funds**;

Influence policies related to the R&D Construction in Portugal and Europe through the European Construction Technology Platform – ECTP connection.



Interfaces

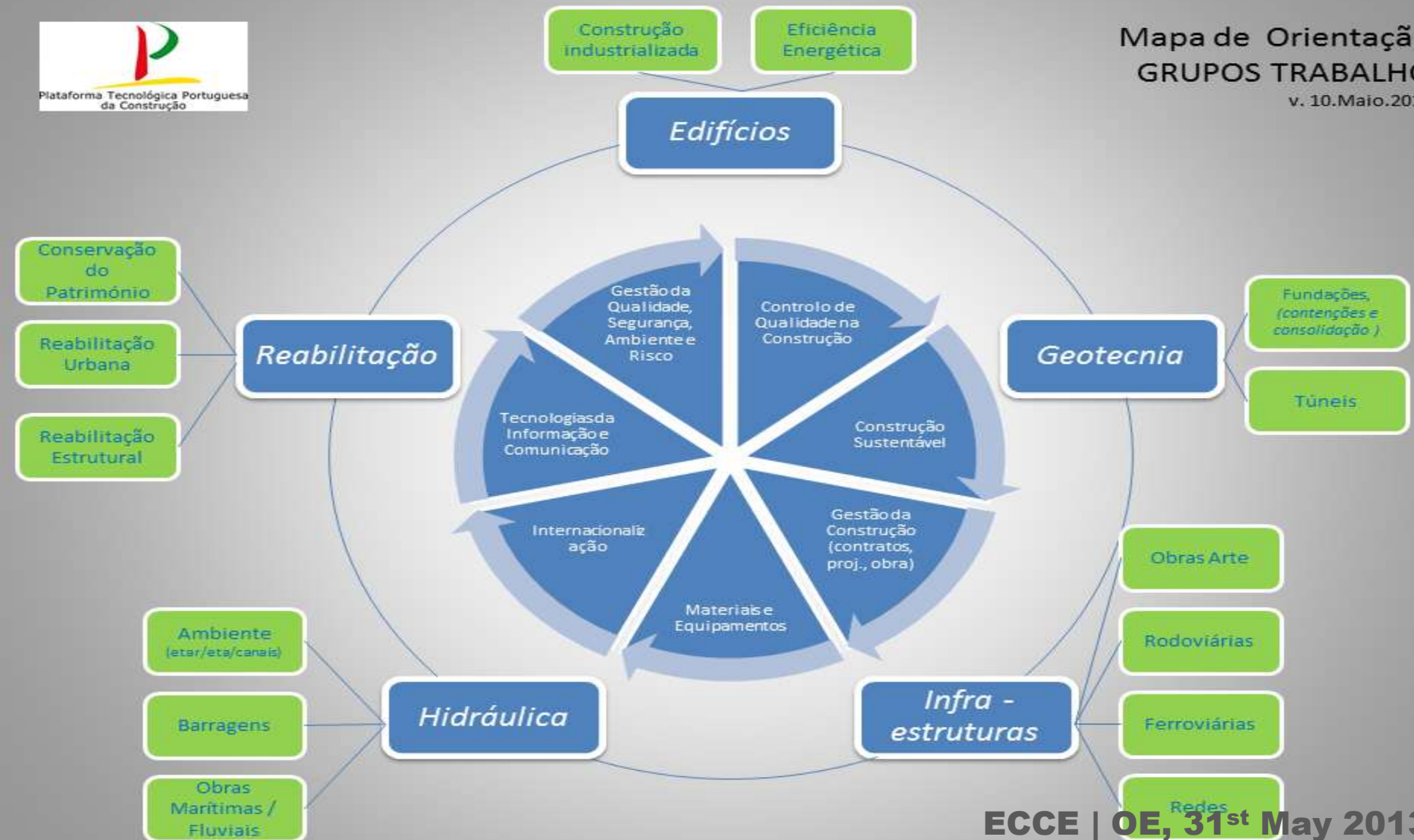


- Spanish Construction Technology Platform - PTEC
- European Construction Technology Platform – ECTP
- Research for Future Infrastructure Networks in Europe – ReFINE

Innovation | The Portuguese Construction Technology Platform



Mapa de Orientação
GRUPOS TRABALHO
v. 10.Maio.2012





Task Groups

- *BIM – Building Information Model*
- *Reabilitação*
- *Pavimentos Rodoviários*
- *Sistemas de Informação na Construção*
- *Barragens*
- *QSA – Qualidade, Segurança e Ambiente*
- *Geotecnia e Fundações*



Observatory



Technological **surveillance**

Selection and managing of the information

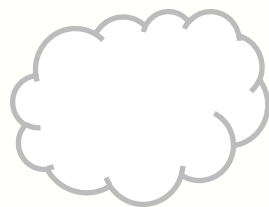
Dissemination of knowledge

R&D and Innovation Construction **Directory**

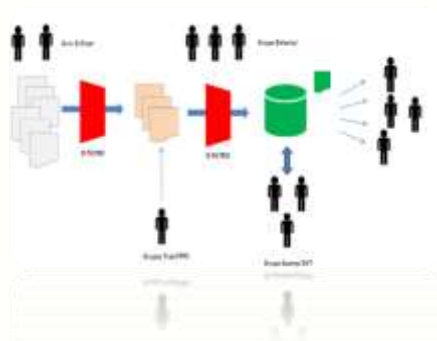


Observatório

Âmbito



Processo



Conteúdos



Meio



Innovation | The Portuguese Construction Technology Platform

Technological Observatory

Notícias

Informação de referência organizada



**OBSERVATÓRIO
TECNOLÓGICO**

- INÍCIO
- OBSERVATÓRIO
- NOTÍCIAS
- NEWSLETTERS
- BIBLIOTECA
- DIRETÓRIO IDI
- GRUPOS
- TESES
- REPOSITÓRIOS
- REFERÊNCIAS

Informação para associados

Autenticação

Utilizador

vania.silva

Senha

Memorizar ☐



(página em desenvolvimento)



Risco de queda de edifícios minimizado através de papel de parede antissísmico



Bloco para alvenaria gerado pela indústria de papel mais sustentável e económico



Sistema revolucionário permite ventilação natural em torre de 170 m de altura



Ciência e Engenharia de Materiais de Construção: um livro de referência



Compósitos de nanotubos de carbono podem substituir fibra de carbono no futuro



TECNOLOGIAS



ARTIGOS TÉCNICOS



PATENTES



EXPERIÊNCIAS

Conteúdos de vigilância tecnológica

Innovation | The Portuguese Construction Technology Platform

UNIVERSITY MODEL – “IDEA TO PAPER”

UNIVERSIDADE (FINANCIAMENTO – PROJECTO DE INVESTIGAÇÃO)

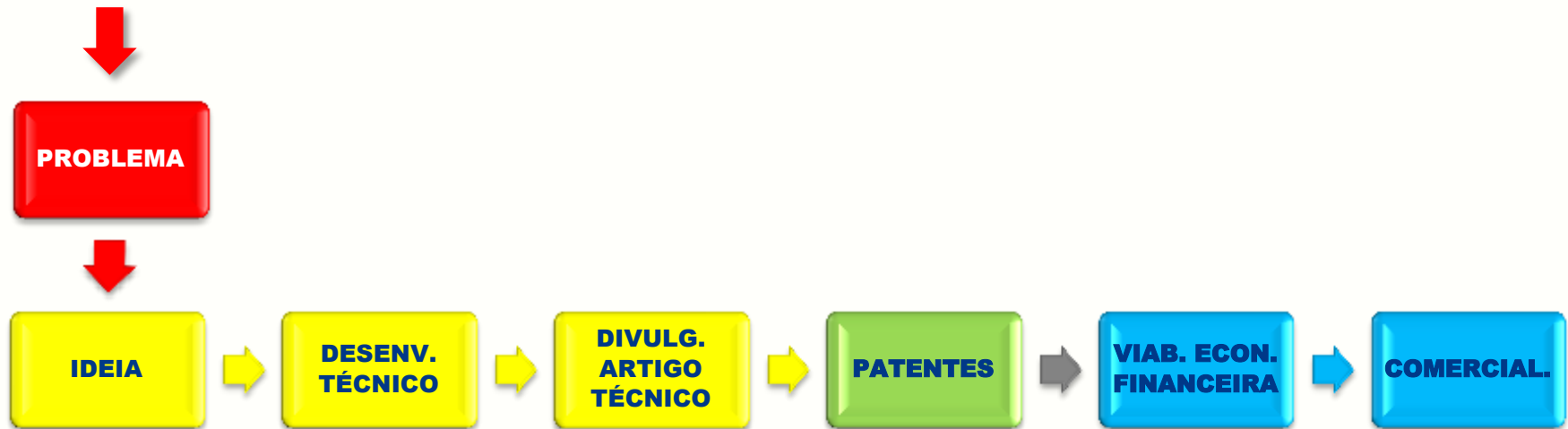


Innovation | The Portuguese Construction Technology Platform



UNIVERSITY / ENTERPRISE MODEL I – “IDEA TO BUSINESS”

UNIVERSIDADE (FINANCIAMENTO – PROJECTO DE INVESTIGAÇÃO)



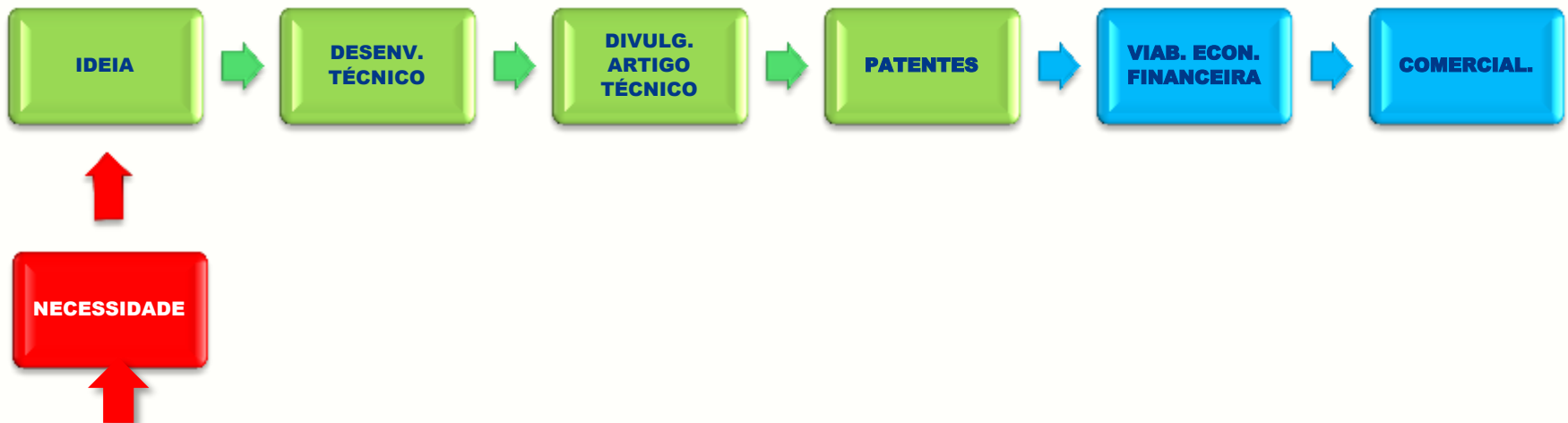
EMPRESA

Innovation | The Portuguese Construction Technology Platform



UNIVERSITY- ENTERPRISE - MODEL II – “IDEA TO BUSINESS”

UNIVERSIDADE



EMPRESA (FINANCIAMENTO - EMPRESA / PROJECTO DE INVESTIGAÇÃO)

Next PTPC Workshop (28th June 2013)

Innovative public procurement - Encourage Innovation and Development – allowing the presentation of alternative solutions VS enterprises accountability"

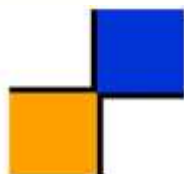
We intended to maximize the high technical value of our companies, **promoting innovation and development**, to the benefit of society, and discuss how to achieve a more profitable approach between public entities, associations and companies .

Innovation | The Portuguese Construction Technology Platform

PTPC - NETWORK



TEIXEIRA DUARTE
ENGENHARIA E CONSTRUÇÕES, S.A.



MOTAENGIL



TÉCNICO
LISBOA



LABORATÓRIO NACIONAL
DE ENGENHARIA CIVIL



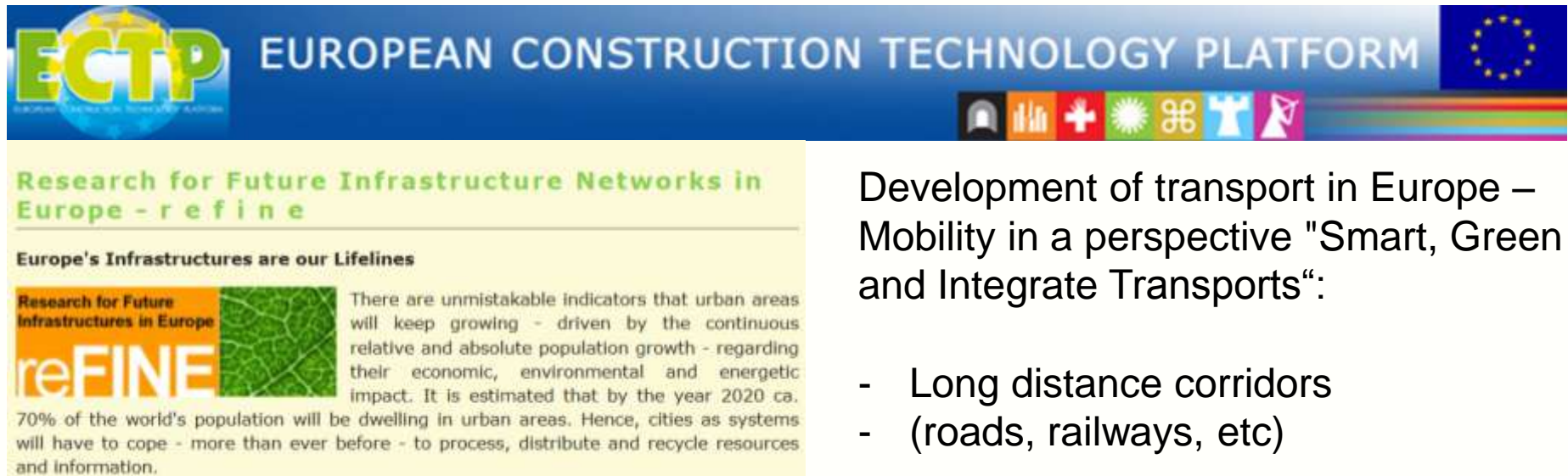
Universidade do Porto
Faculdade de Engenharia
FEUP



Universidade do Minho

Innovation | The Portuguese Construction Technology Platform

PTPC – Participation in reFINE project



The screenshot shows the ECTP (European Construction Technology Platform) website. The header features the ECTP logo and the text "EUROPEAN CONSTRUCTION TECHNOLOGY PLATFORM" next to the European Union flag. Below the header, there is a section titled "Research for Future Infrastructure Networks in Europe - refine". The main content area has the heading "Europe's Infrastructures are our Lifelines" and a sub-section "Research for Future Infrastructures in Europe reFINE". The text describes the reFINE project's focus on urban areas and population growth, mentioning that 70% of the world's population will be in urban areas by 2020. To the right of the text is a green leaf-like graphic.

Research for Future Infrastructure Networks in Europe - refine

Europe's Infrastructures are our Lifelines

Research for Future Infrastructures in Europe reFINE

There are unmistakable indicators that urban areas will keep growing - driven by the continuous relative and absolute population growth - regarding their economic, environmental and energetic impact. It is estimated that by the year 2020 ca. 70% of the world's population will be dwelling in urban areas. Hence, cities as systems will have to cope - more than ever before - to process, distribute and recycle resources and information.

Development of transport in Europe – Mobility in a perspective "Smart, Green and Integrate Transports“:

- Long distance corridors
- (roads, railways, etc)
- Nodal hubs (connections between airports, train stations, roads, ports, etc..)
- Urban mobility

Innovation | The Portuguese Construction Technology Platform



Participation of PTPC in REFINE Roadmap

TRANSVERSAL RESEARCH AREAS

		COMPLETE ONLY THE GREEN BOXES	COMPLETE ONLY
KEY RESEARCH AREAS	Importance	Topics	Timing
TRANSVERSAL RESEARCH AREAS	(H=High, M=Medium, L=Low)		(S=Short Term, M=Medium Term, L=Long Term)
RESEARCH AREA 1: FORESIGHT & ROADMAP	H	In order to define an pan-European futuristic vision towards "HLSI 2040", there is a need to:	
		<ul style="list-style-type: none"> Bring together all relevant stakeholders including buildings and infrastructure sector companies, process engineering specialists, equipment providers, RES providers and energy companies, ICT software companies, as well as local and regional authorities, to develop the notion of HLSI and the transition from current infrastructures to these drastically innovative concepts of HLSI in a holistic dimension; promote, through community building activities, a better understanding, a closer dialogue and a more active cooperation between researchers, end-users/practitioners, facilities owners, infrastructures builders as well as operators, technology-suppliers, software developers, etc., thus establishing multi-disciplinary and complementary communities for the evolution of the infrastructures domain towards a new generation of HLSI to be intensively deployed by 2040. 	
		The <u>FORESIGHT</u> activity in reFINE indeed plans to rely on a critical thinking and shared formal approach so as to shape the future of infrastructures and networks , aiming at visionary scenarios including prospective evolution and profound transformations of infrastructures, based on large-scale changes induced by society and sustainability, and influencing on the long term public policy and strategic management and business in	



Thank you

**Rita Moura
Teixeira Duarte - PTPC**

