

Water infrastructure innovation and required evolution on national level: case Portugal

Pedro Amaral Jorge

Board Member at the



Portuguese Water Partnership

Portuguese Water Partnership



- What is PTPC and PWP
- Portuguese Case
 - Portuguese Strategic framework for the 2014 2020 horizon
 - Water Sector Institutional Organization
 - Infrastructure Accumulated investment
 - Water Coverage Evolution
 - Water Quality Control Evolution
 - Water Losses and Non Revenue Water in 2011
 - Water services economical sustainability in 2011
 - Challenges and Goals for the 2014 2020 horizon
 - Themes that require Innovation Development also in Portugal
 - First theme to be addressed and developed
 - Conclusions







FAD	Construction and Built Environment: Future Horizons					
LEGRAN CONSTRUCTION TECHNOLOGY PLATFORM		17-19 June 2014, Brussels	reFINE			
Organized by:		Supported by: Co-locate	d with: BUILDING			
Water Sector	Institutional Org	anization http://www.ectp	o.org/Conference2014.as			
Management Model	Operator	Description	Possibility of participation by Private Sector			
State owned systems						
Direct management	State	State is the operator itself (there is currently no case).	×			
Delegation	State-owned company	State is the owner but the entity has an independent management (EPAL is the only example).	*			
Concession	Multimunicipal concessionaire	State and municipalities participate in the capital of the concession.	*			
Municipal or Intermunicipal owne	ed systems					
Direct management	Municipal services	Services are directly managed by the Municipalities, having no administrative and financial autonomy.	×			
	Municipalized services	Services have administrative and financial autonomy and are managed by its Board of Directors but have no legal personality.	×			
	Association of municipalities (intermunicipalized services)	Collaborative public management body in which several municipalities take part.	×			
Delegation	State/ Municipality partnership	State and municipalities participate in the capital of the company.	×			
	Municipal owned company	One or several municipalities participate in the capital of the company (State is absent).	(Minority Stake)			
Concession	Municipal concessionaire	Concession by the Municipality to a third party, public or private, through a concession contract.	✓			
Source: ERSAR.			•			

Plataforma Tecnológica Portuguesa da Construção Portuguese Water Partnership



Infrastructure Accumulated investment

EU support approved for investment in the water and waste sector in the period 1993-2010							
(Source: IFDR, 2011)							
		Investment (M€)					
Fund	Period	Total	EU contribution / PIDDAC	Equity	Co-financing rates		
Coesion Fund I	1993 - 1999	1.989	1.548	441	78%		
ERDF - QCA II	1993 - 1999	945	673	272	71%		
Coesion Fund I	2000 - 2006	2.445	1.640	805	67%		
ERDF - QCA III	2000 - 2007	1.179	802	378	68%		
PIDDAC - APA	until 2008	218	44	175	20%		
PIDDAC - INAG	until 2009	205	72	133	35%		
ERDF - QREN	2007 - 2013	1.055	730	325	69%		
TOTAL		8.036	5.509	2.527	69%		





Infrastructure Accumulated investment



Portuguese Water Partnership

da Construção



Construction and Built Environment: Future Horizons



17-19 June 2014, Brussels





Supported by:



Co-located with:

n: BUILDING TEST EXPO

http://www.ectp.org/Conference2014.asp

Water coverage evolution

Evolution of water supply service coverage

(Source: INAG - National inventory,



Wastewater coverage evolution

Evolution of wastewater service coverage

(Source: INAG - National inventory, INSAAR 2010 - 2009 campaign and ERSAR, 2012













Plataforma Tecnológica Portuguesa da Construção

Water



Plataforma Tecnológica Portugue







Smart Metering

Water Energy Nexus

Services, Products and Systems development to increase efficiency on trenchless water and wastewater network rehabilitation





OTHER PROJECTS

Innovative solutions for periurban zones

Solar Sludge Drying: Development of a standard solution

Reuse of treated wastewater in agriculture





First Theme to be addressed and developed

LOSSES, LEAKS AND UNDUE INFLOWS, THE FIRST ISSUES THAT MUST BE ADDRESSED IN THE WATER AND WASTEWATER SYSTEMS IN PORTUGAL

Promoting greater efficiency of management and operation of water and wastewater systems Scope:

- Identification and characterization of **design and construction deficiencies**
- under the **holistic** hydraulic, mechanical, structural and environmental **perspectives**

to allow **correction and redefinition** of technical specifications on materials and equipment, construction processes and methodologies of quality control

participate on the **optimization** of solutions and traditional techniques and on the development of new techniques, newer and more effective,





Conclusions

- The construction sector must focus on water and wastewater sector from a different perspective (Portuguese Strategic framework for 2014 – 2020)
- Financial market must develop new products to finance water and wastewater infrastructure
- Innovation developments must:
 - Be achieved with cooperation between companies and R&D&I Institutions
 - Be market oriented for UE requirements and overseas applications
 - Be designed to:
 - Increase European companies competitiveness and differentiation
 - Increase European companies jobs creation
 - Increase European companies exports on:
 - Products
 - Services
 - Procedures and Systems





The End

Thank You

pajorge@indaqua.pt +351 91 3780120



