



9th International Masonry Conference 2014
Guimarães, July 7-9

Promoting Change in the Construction Sector

Vítor Córias



GECORPA – Grémio do Património



Industrial Challenges Session's scope

Discuss the main trends and challenges to the masonry industry

Promote the communication between industry and academia

GECORPA's Objectives:

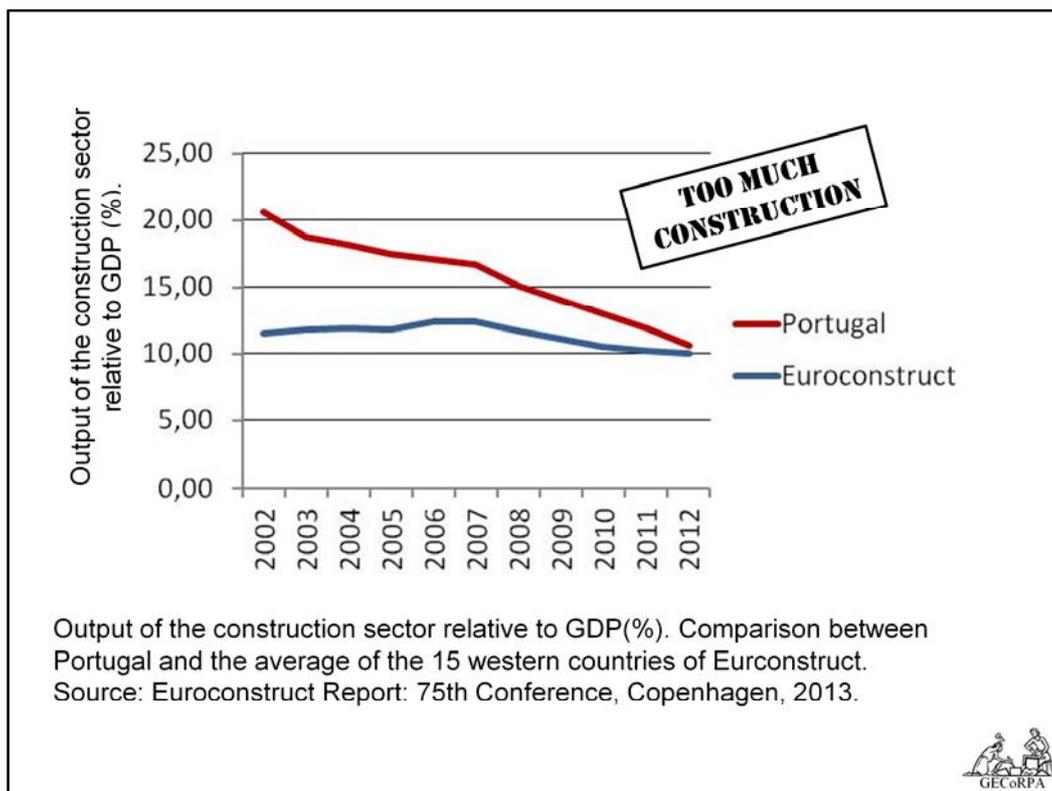
What is GECORPA – Grémio do Património – Portuguese Heritage Guild:

Non-profit association rallying companies and professionals from four areas of activity related with built infrastructure rehabilitation and Heritage conservation (design, I&T, execution, products).

GECORPA's objectives:

- I) Promote the maintenance and rehabilitation of the built infrastructure at large, and the valorization of the Built Cultural Heritage, thereby contributing to a sustainable development;
- II) Ensure the quality of interventions in this area of activity by spreading good practice and specialized training, promoting the qualification of professionals and enterprises and defending their interests;
- III) Contribute to the improvement of the construction sector regulation and to the enhancement of its role in the economy and in society.

The market



During the last two decades of the twentieth century and the first years of 2000, Portugal, along with Spain and a few other peripheral European countries, harboured a notorious boom of new construction, particularly in the residential and commercial building segments. The construction industry is now going through a painful adjustment process.

This chart, based on data collected by Euroconstruct, shows that, in Portugal, the gross production of the construction sector relative to GDP has been substantially **above** the average of the 15 western european countries afiliated in Eurconstruct.

Portugal has leveled out with the 15 western countries of Euroconstruct in output of construction relative to GDP in 2012.

(In 2011:
Western Europe: 10,5%
Portugal: 12,4%.

In 2013:
Western Europe: 9,7%
Portugal: 9,1%)

Portugal x 15 Western countries of Euroconstruct

Construction Jobs relative to Employment
(x 1000, total and % of Employment)

Western Europe		Portugal	
11349	6,2	301	6,6

STILL TOO MANY CONTRACTORS

Construction enterprises relative to GDP
(x 1000, total and per bln. € GDP)

2473	203,4	51	314,8
------	-------	----	-------

Productivity of the construction sector
(Output of construction/Jobs x 1000 €/Job)

LOW PRODUCTIVITY

100,8	39,9
-------	------

Sources:

GDP, Employment: Eurostat - Basic figures on the EU (2013)

Output, Enterprises, Jobs: FIEC - Key Figures 2014 - Activity 2013



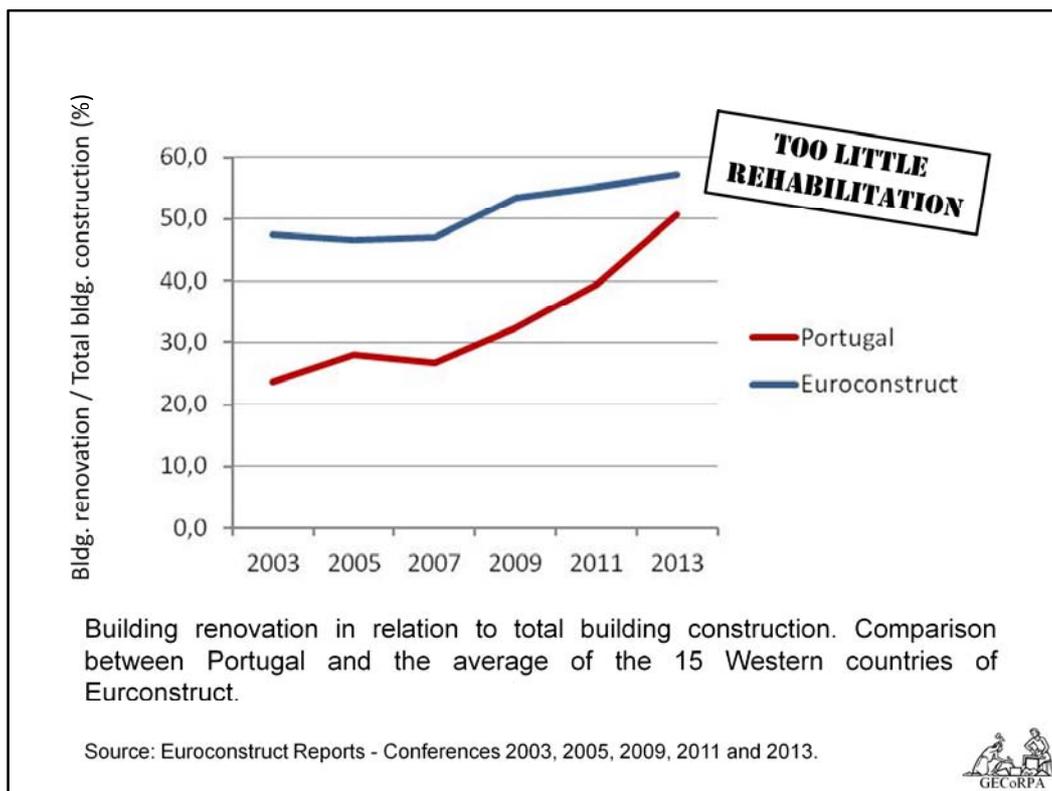
This table compares Portugal with the 15 western countries of Euroconstruct.

First row shows that Portugal is now levelling out with Western Europe in employment in construction relative to total employment.

Second row shows that Portugal is still high in number of construction enterprises relative to GDP. It now ranks 3rd highest among 14 western countries of Euroconstruct (data on Norway not available).

Third row shows that the productivity of the Portuguese construction sector is well below the average of Western Europe. According to FIEC's figures, it has the lowest productivity among the Western countries of Euroconstruct.

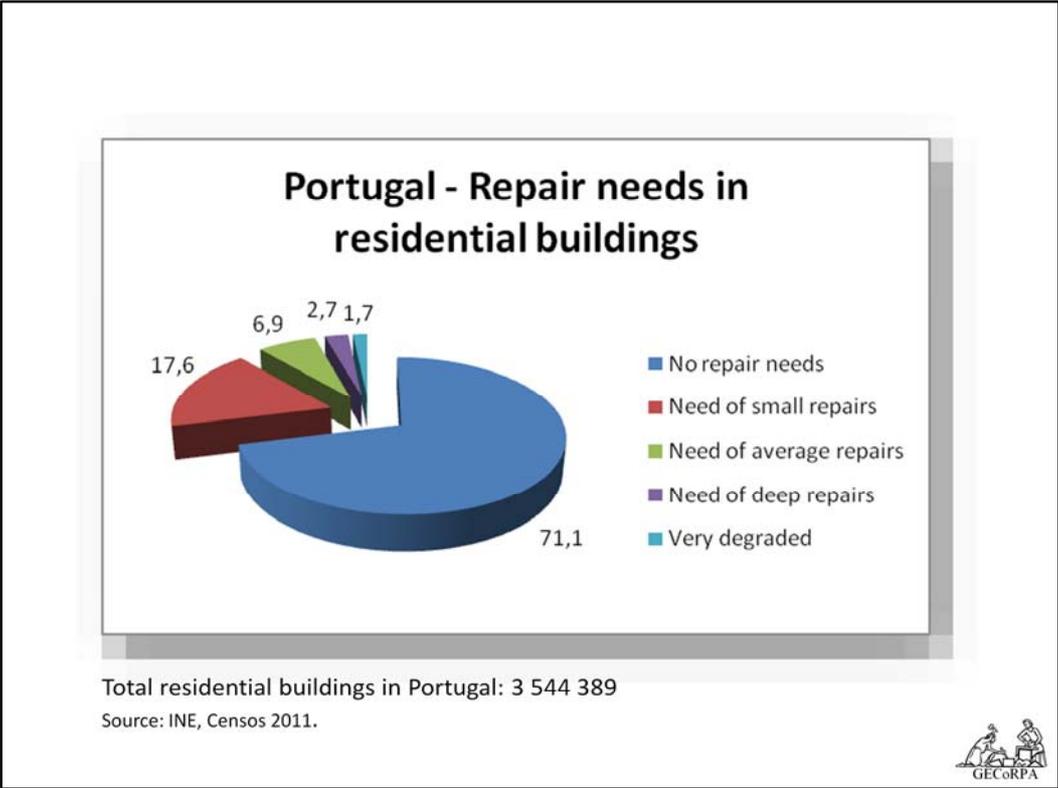
(FIEC - Fédération de l'industrie européenne de la construction)



In parallel with too much emphasis in new construction, care of the existing building stock and the old city centres lagged behind.

This chart shows that, in Portugal, the production of the construction sector in building renovation has been substantially **below** the average of the western countries of Euroconstruct.

Source: Euroconstruct Reports
 2003 e 2005: 62nd Conference, Munich, 2006
 2007: 68th Conference, Zurich, 2009
 2009, 2011 e 2013: 75th Conference, Copenhagen, 2013



A relevant part of the building stock of Portugal requires attention. Altogether, around some 350 000 buildings are in need of significant repairs. Monuments, historical buildings and old city centers, which make up the built Heritage, require not only interventions regarding their conservation, but also their valorization as assets relevant to the competitiveness of cities and regions.

Financial resources needed

- Rehabilitation of residential buildings:
€75 000 million

Source “O Mercado da Reabilitação Enquadramento, Relevância e Perspetivas”, AECOPS, 2009.



Globally, the funds required to rehabilitate the building stock are extremely high and very difficult to raise. The financial resources allocated to this end must therefore be applied in quality interventions, in terms of effectiveness and durability, and must take into account the limitations of the existing buildings, particularly those with cultural value or located in historical city centres, thereby preserving their character.

The quality of these interventions depends on the QUALIFICATION of professionals and enterprises who conceive, design, execute and inspect them.

However, the present legal framework regulating construction activity has three main limitations:

1. It's too lenient in particular for private contracts;
2. It has been conceived for new construction;
3. Does not take into account the qualification of the personnel actually involved in front-end execution – the foremen and craft workers - when assessing contractors' technical capabilities;
4. Does not cover the other two groups of agents relevant to building rehabilitation : the companies in charge of the design and consultancy and the suppliers of inspection and testing services.

Difficulties encountered



Financial

Political

Educational and Cultural

Financial

- Investment and spending restrictions imposed by the “Memorandum of Understanding”.



Financial:

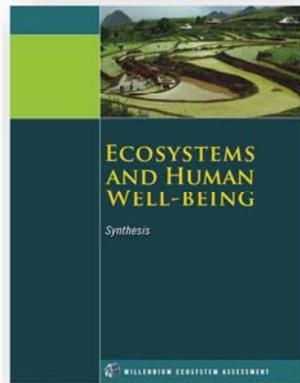
The onset of the international financial crisis triggered the burst of the construction and real estate bubble and near collapse of the Portuguese economy, cutting short either public and private investment, including that allocated to Heritage conservation, to old city centres rehabilitation and to renovation of the building stock at large. Private investment ground to a halt as real estate assets devaluated and investors shied away.

Since May 2011 Portugal is bound to a “Memorandum of Understanding” and under supervision of the Troika (European Commission; European Central Bank; International Monetary Fund).

In spite of the inherent limitations, the current situation contains the potential for the deep structural changes badly needed by the country in general and the construction sector in particular.

Political

“Government policies are extremely permeable to organized interests, particularly associated to the construction sector.”



10



Political:

Past growth of the economy was too much dependent on construction. There was too much emphasis on home property instead of rental, too much investment in infrastructure, particularly in motorway and roadway construction.

According to the evaluation for Portugal in the Millennium Ecosystem Assessment promoted by the United Nations, the construction sector played (and still plays) a disproportionate role in economic activity.

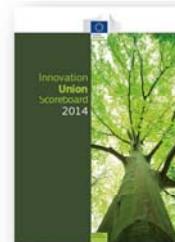
...This gives the sector disproportionate political power, allowing it to influence legislation on land planning and to lead the government to invest heavily in infrastructure. This adds up to fast urban and infrastructure growth (e.g highways).

“government policies are extremely permeable to organized interests, particularly associated to the construction sector.” P. 22

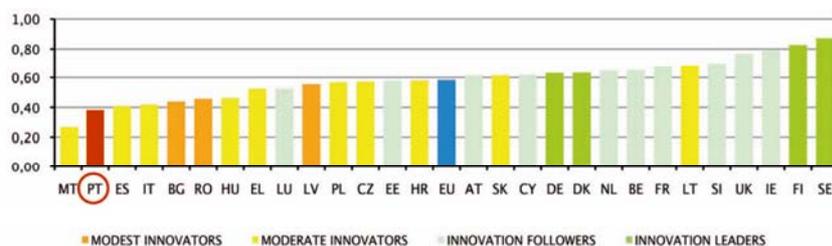
Source: Henrique Miguel Pereira, et al. – Ecosistemas e bem-estar humano. Avaliação para Portugal do Millennium Ecosystem Assessment. Escolar Editora, 2011. p. 75 e seguintes (A contribution to the Millennium Ecosystem Assessment, prepared by the Portugal Sub-Global Assessment Team).

A relevant threat resides in the fact that old guard construction corporations tend to look at the now priority investment in the rehabilitation of the building stock as no more than a life-saver.

Educational and Cultural



Member States' performance in Human resources



Source:
Innovation Union Scoreboard 2014. European Commission.

11



Educational and Cultural:

Lack of a high skilled and educated workforce. Features of the local “Southern European” culture making it difficult to implement mindset changes.

“*Human resources*” is one of the 3 Enablers, which capture the main drivers of innovation performance external to the firm (along with ‘*Open, excellent and attractive research systems*’ and ‘*Finance and support*’). ‘*Human resources*’ includes 3 indicators and measures the availability of a high skilled and educated workforce. The indicators capture New doctorate graduates, Population aged 30-34 with completed tertiary education and Population aged 20-24 having completed at least upper secondary education.

Source:
Innovation Union Scoreboard 2014. European Commission

Achievements

...too few to mention.



Priority to rehabilitation (GECORPA's **first objective**) has been recognised. But too late: 700 thousand vacant houses: twice those of Lisbon!

The **second objective** (quality assurance in rehabilitation and qualification of professionals and firms), and the **third objective** (improve the sector's regulation and its role in the economy and in society) are far from being reached.

"Simplifications" have even justified steps in the wrong direction, like the deregulation of access to exert a profession and the recent Troika inspired deregulation of contractor access private contracts

The second, however, will be fostered by the proposal of a system for the qualification of enterprises and professionals for building rehabilitation and heritage conservation.

GECORPA is actually "Work in Progress", trying to influence policy makers and stakeholders at large. For that purpose, GECORPA has cooperation agreements with a significant number of government agencies, professional associations and NGOs. It has been called upon by these entities, city councils and parliamentary groups in matters relates to its scope.

Example: Cooperation with the Lisbon City Council in the design of the city's strategy for the EU framework program 2014 – 2020.

R&D needs



Project RehabToolBox



POR LISBOA



UNIVERSIDADE DE LISBOA
CENTRO DE INVESTIGACAO E INOVACAO



União Europeia
Fundo Europeu de Desenvolvimento Regional



The market is in need of technology, products and systems for the rehabilitation of masonry structures, enabling effective, durable and inexpensive interventions, capable of improving them and extending their useful life.

Example: Engineered systems designed to strengthen masonry members with glass and/or carbon fiber grids in inorganic matrices coupled with through ties. Pictures refer to a recently concluded R&D project involving one GECORPA associate and the university, and show preparation and testing of large masonry specimens.

Main challenge to industry and academia: Exploitation: evolve from creativity to innovation, by bringing effective, durable and inexpensive rehabilitation solutions to the market.

Vision

A highly qualified and socially responsible construction sector, contributing to sustainable development



Construction is a human activity with one of the highest economical, social and environmental impact...

Sustainable development is not possible if construction itself is not sustainable.

The sustainable use of the building stock and infrastructure should be promoted, and the construction sector should be prepared to contribute.

Vision...

The “New Builder” will mostly “build with the built”:

- Improving of the performance of existing buildings in various strands: comfort and liveability, accessibility, energy, fire safety, structural safety (earthquake, wind);
- Maintaining and improving of existing infrastructure;
- Decommissioning and removing obsolete or with high negative impact buildings and infrastructure.

There will still be new construction, but dealing mostly with:

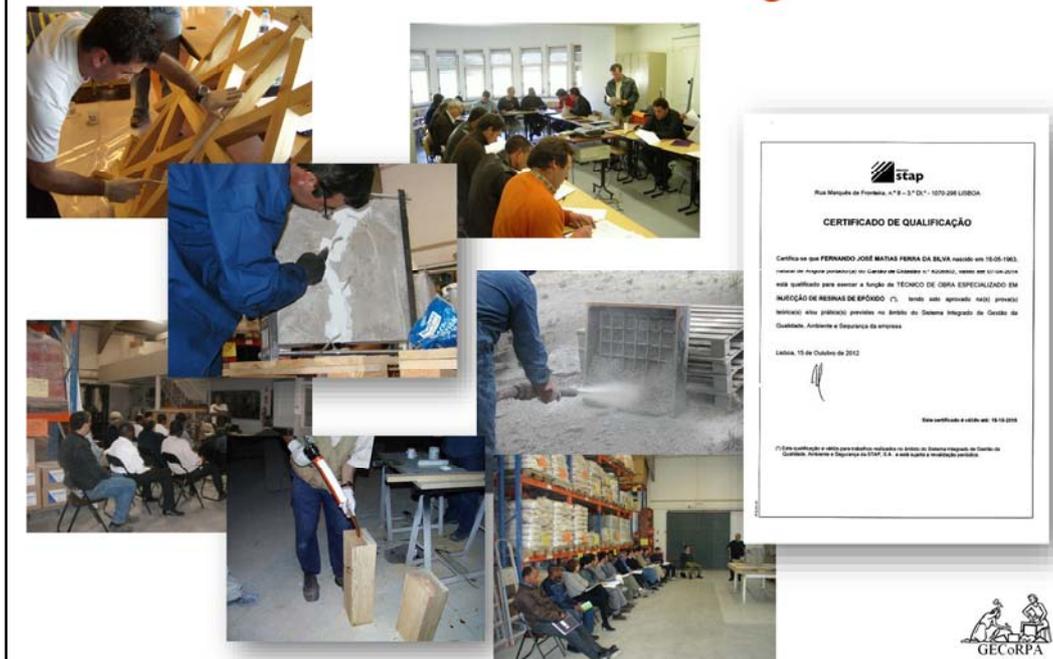
- Replacement of end of life buildings and infrastructure;
- Decontamination and remediation of soils, rivers and coastal areas and ecosystem regeneration;
- Defence works (infrastructures like groynes and barriers), adaptation (infrastructure adjustment), displacement or removal of settlements and infrastructures along the coast, stuarries and other tidal areas, interventions that will be required to cope with rising sea level associated to climate change (2).



Qualification of enterprises and professionals is the strategy to accomplish this vision.

Low qualification of enterprises = ineffective and low durability interventions, which turn out expensive.

Education and Training



Qualification through education and training of workers and staff at all levels, either internally or externally, in collaboration with training entities is essential.

However, enterprise qualification is not enough. Education and training is also necessary for:

- Owners, promoters and managers of buildings and infrastructure, public or private;
- Users of buildings and infrastructures;
- Supervising and regulatory bodies.



GECORPA – Grémio do Património

Thank you.

The unabridged version of this presentation will be available
by the end of this week at

www.gecorpa.pt

17

