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SO16 4GU  
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## **Restructuring the Geographical Information Production and Dissemination at National Level – The Experience of Portugal**

Prof Dr R P Julião  
Vice President  
Portuguese Geographical Institute

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# Restructuring the Geographical Information Production and Dissemination at National Level – The Experience of Portugal

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## Introduction

Society is always in movement, constantly and rapidly changing, and it is necessary to adopt new ways for the process monitorisation and to help decision-makers to act. Necessarily it is mandatory to produce and disseminate geographical information to organisations and individuals, making them a critical piece of the process Information Society consolidation.

Of course Public Administration must also adopt new ways of considering its relationship with the citizen, creating infrastructures and modernizing its bodies.

The Portuguese Geographical Institute (IGP) results from political decision of reorganizing and modernizing the Portuguese Public Administration and it succeeds to the National Centre of Geographical Information and the Portuguese Institute of Cartography and Cadastre.

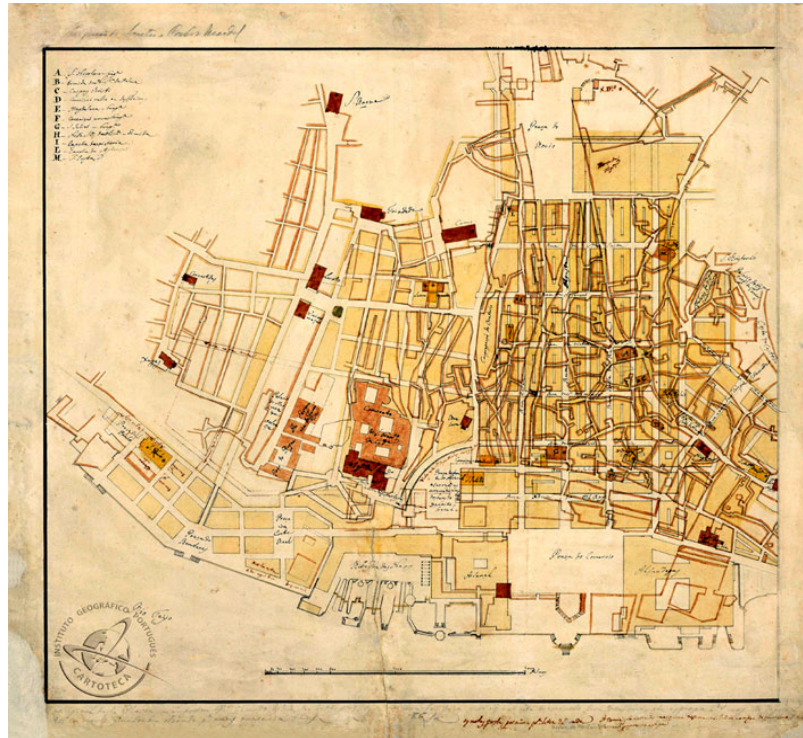
IGP mission is to exercise the function of national authority of cartography, to produce official geographical information, to develop and to coordinate the national system of geographical information, to promote the formation and the investigation in the domains of the sciences and geographical information technologies and to contribute for information society, being assumed as the responsible organism by the execution of the politics of geographical information.

This paper, after a brief presentation of IGP, will focus on three critical issues for Information Society that are related among them and that are a responsibility of our Institute: Cartography, Cadastre and Spatial Data Infrastructure.

## 1 Overview of the Portuguese Geographical Institute

In Portugal there is a long tradition related with geographical and cartographic information. Since remote ages, cartography was considered a very important way of knowledge, communication and a very useful decision support tool. Not only during the discovery ages where, without any doubt, Portuguese cartographers developed their roots, but also in the following periods till modern times.

Figure 1 – Lisbon's Reconstruction Plan



For instance, the above figure shows how cartography was used after 1755 Lisbon's earthquake to help the reconstruction process.

More recently, Portugal made also a giant step, related with Geographical Information, towards Information Society when, in 1995, decided to open the National Spatial Data Infrastructure (SNIG project) on the Internet. In fact Portugal was one of the first countries to support the development of a SDI and a pioneer regarding the use of Internet to implement data dissemination.

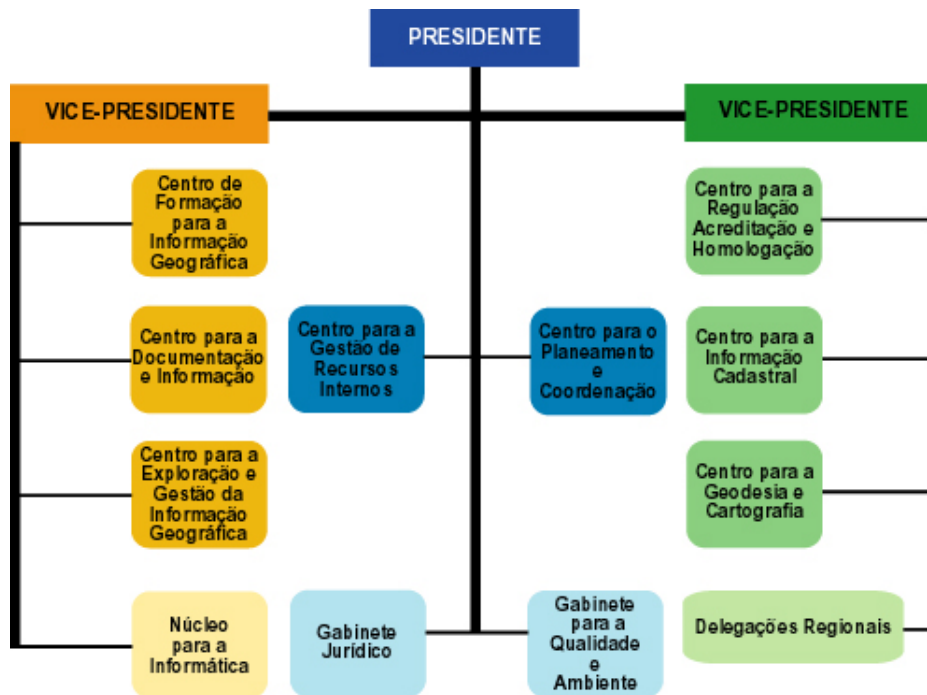
Looking forward to continuously better support the Geographical Information market and users, the Portuguese Government decided to restructure the Public Administration area of this sector in 2001, announcing the disappearance of the traditional National Mapping Agency (Portuguese Institute of Cartography and Cadastre – IPCC) and of the National Centre for Geographical Information (CNIG) and the creation of a single organization mixing and developing their roles.

So the Portuguese Geographical Institute (IGP), officially created in 2002, results from a political decision of reorganizing and modernizing the Portuguese Public Administration and it succeeds to the National Centre for Geographical Information and the Portuguese Institute of Cartography and Cadastre.

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The Institute has, more or less, 400 employees and it is structured according to the following figure.

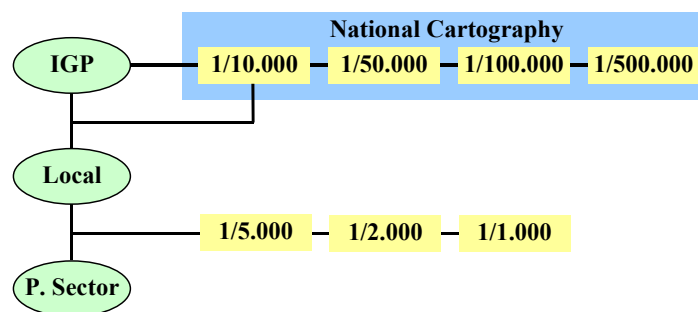
Figure 2 – IGP structure



## 2 Approaches to the Cartographic and Cadastral Systems

IGP is responsible for the Portuguese official cartographic production and also of the geodetic information.

Figure 3 – Approach the Cartographic System



IGP cartography is gradually being produced supported in partnerships with local authorities. This particularly important for the 1:10 000 scale cartography, that it is the first priority concerning information production.

In fact, the Portuguese government has a strong commitment in this process and is promoting the use and dissemination of this cartographic series as the reference for several public administration services.

The cooperation with local authorities and other partners is being very fruitful and, hopefully, during the next two years we will move from a 50% national coverage to a total coverage.

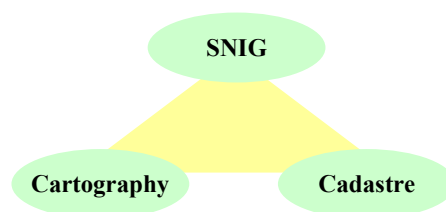
Regarding the cadastre the Portuguese situation is, like other countries using the Napoleonic data structure, not a very good one. In fact, more or less 50% of the territory does not have a land record system registry.

At the moment there is a high level of awareness regarding the importance of a good and efficient cadastre system and politicians are working in the necessary legislation for establishing the basis of the new cadastre system. It is envisaged that the cadastre can only be done with a strong commitment of all players, meaning, IGP, local authorities and financial offices.

### 3 Approach to the National Spatial Data Infrastructure

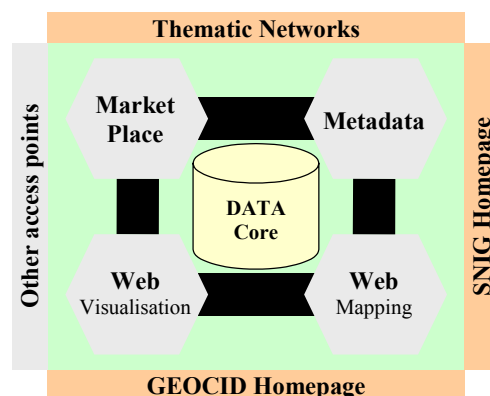
The National Spatial Data Infrastructure is the third element of IGP strategy for geographical information production and dissemination.

Figure 4 – The three systems



Being SNIG the National SDI role is clearly on the dissemination part and this is done through several components.

Figure 5 – SNIG Structure



The inner components are four systems supported by a data core:

- Metadata system – to help locating and characterising the information needed
- Web mapping – for online data manipulation
- Web visualisation – for online data visualisation
- Market place – for databases of products, services and projects, and also marketing

Surrounding the four main components there are the access points:

- SNIG homepage – for professional users (<http://snig.igeo.pt>)
- GEOCID homepage – for commons citizen (<http://geocid-snig.igeo.pt>)
- Thematic networks for professional users of a specific thematic like Earth Observation (<http://snig.igeo.pt/Portugues/RedesTematicas/Rot/>) and Risk (<http://scrif.igeo.pt/>).