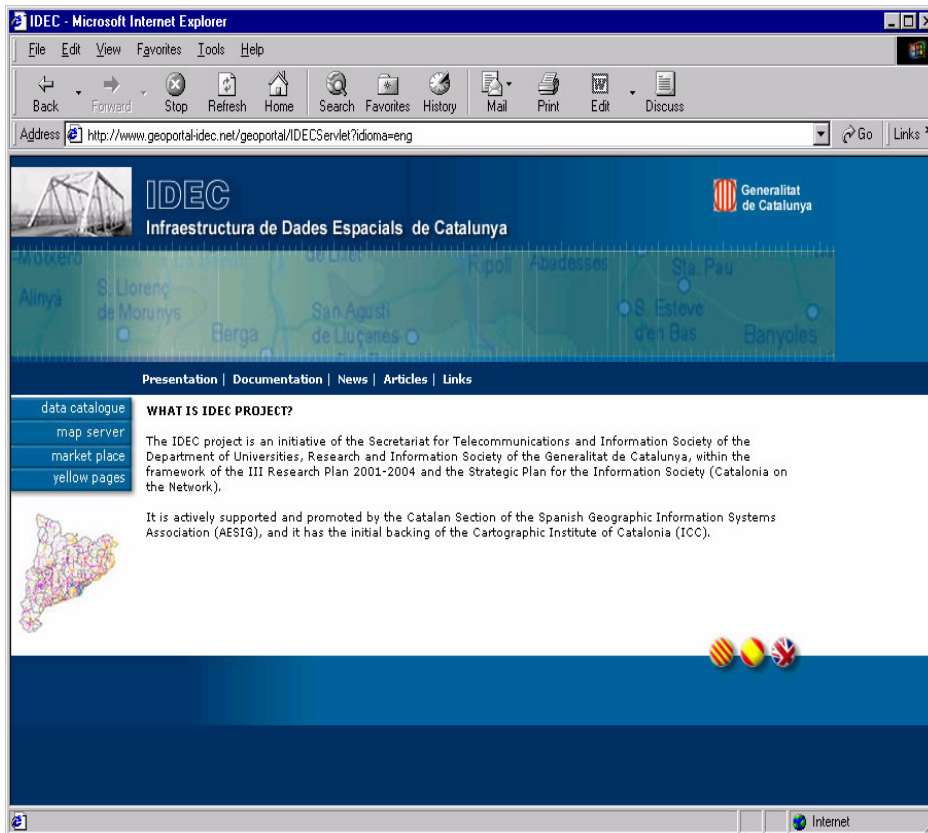# THE PROCESS OF CREATION OF THE SPATIAL DATA INFRASTRUCTURE OF CATALONIA (CSDI /IDEC): INERTIA AND SINERTIA

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CSDI / IDEC: PRESENT SITUATION

The best way to talk about the present situation is through the material results, reached at the end of the initial period (first year) of Infrastructure creation.

The **_Geoportal_** is the entrance door. For this reason, I mention it firstly (although it has not been, of course, the first elaborated or finalized product). It is a trilingual Geoportal and the language initially selected lead the user interface up the following steps.

Geoportal CSDI /IDEC contains, in addition to the usual web pages sections, the Catalog Server, a WMS and other services, like the yellow pages and the marke place

Pages

Fig. 1: The Geoportal CSDI / IDEC

The Geoportal contains the usual components in any corporate Web page (Documentation, Links, News....), and other ones, like *yellow pages* and *market place*, to facilitate contacts between offer and demand.

(I) The main service is the **Catalog Server (OGC)** which offers access to Metadata registries. This service has been adapted to linguistic requirements and we will continue improving it. By now it contains about 15,000 registries, coming from the Regional Mapping Agency and more than 30 departments, city councils, organizations and private companies. An important increasing of registries from the Local Administration is expected.

(II) In order to generate Metadata, a Metadata capture, an edition and export tool, has been developed, based on "core Metadata" ISO 19115, extended to some other fields (Profile CSDI / IDEC), which covers data descriptions including textual or tabular information (georeferenced alphanumerical data).

This is a free software (you can download it from our geoportal, choosing Catalan, Spanish or English language) which has been supervised by OGCE. OGCE made some recommendations and a favourable report about CSDI / IDEC Profile.
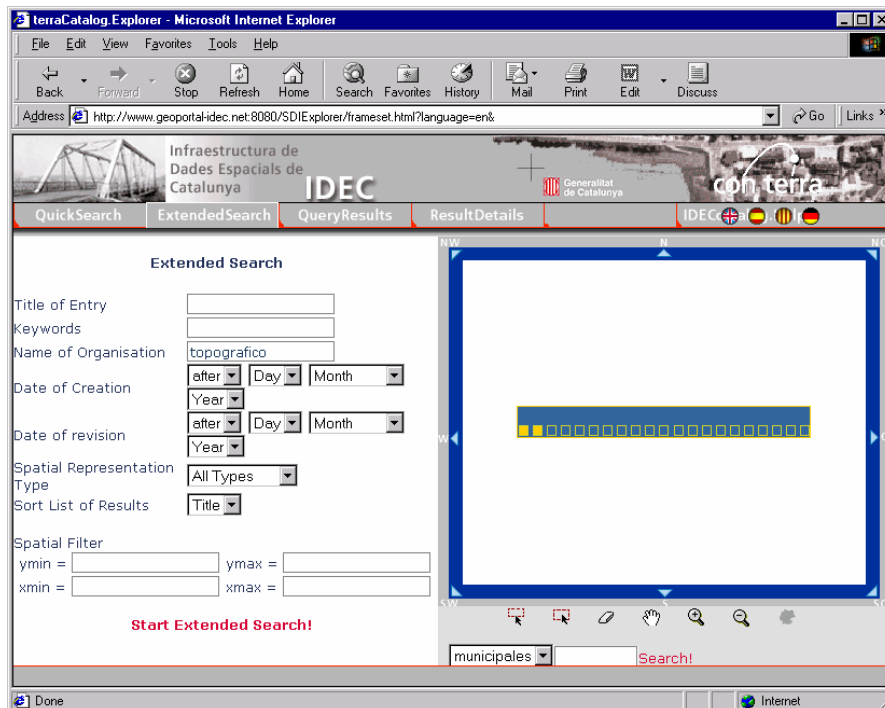

Fig. 2: Metadata Catalog on Geoportal

(III) Since the knowledge of available information is a basic element in any SDI, the purpose goes further on, to accede, through the network, to the data itself in a distributed environment.

In the WorkPlan 2002 a pilot experience of interconnection of WMS within the Public Administration Organizations was considered, so we developed a client application (you can manage a reduced version of it in the Geoportal as public and free information) that connects several servers, physically located in the Cartographic Institute of Catalonia (topographic data and orthophoto), with the Environment Department and several city councils.

Once initial difficulties have been overcome, technology has given the answer to expectations. This project will be extended progressively, incorporating new servers and data and It will be the basis of new interoperability Projects.
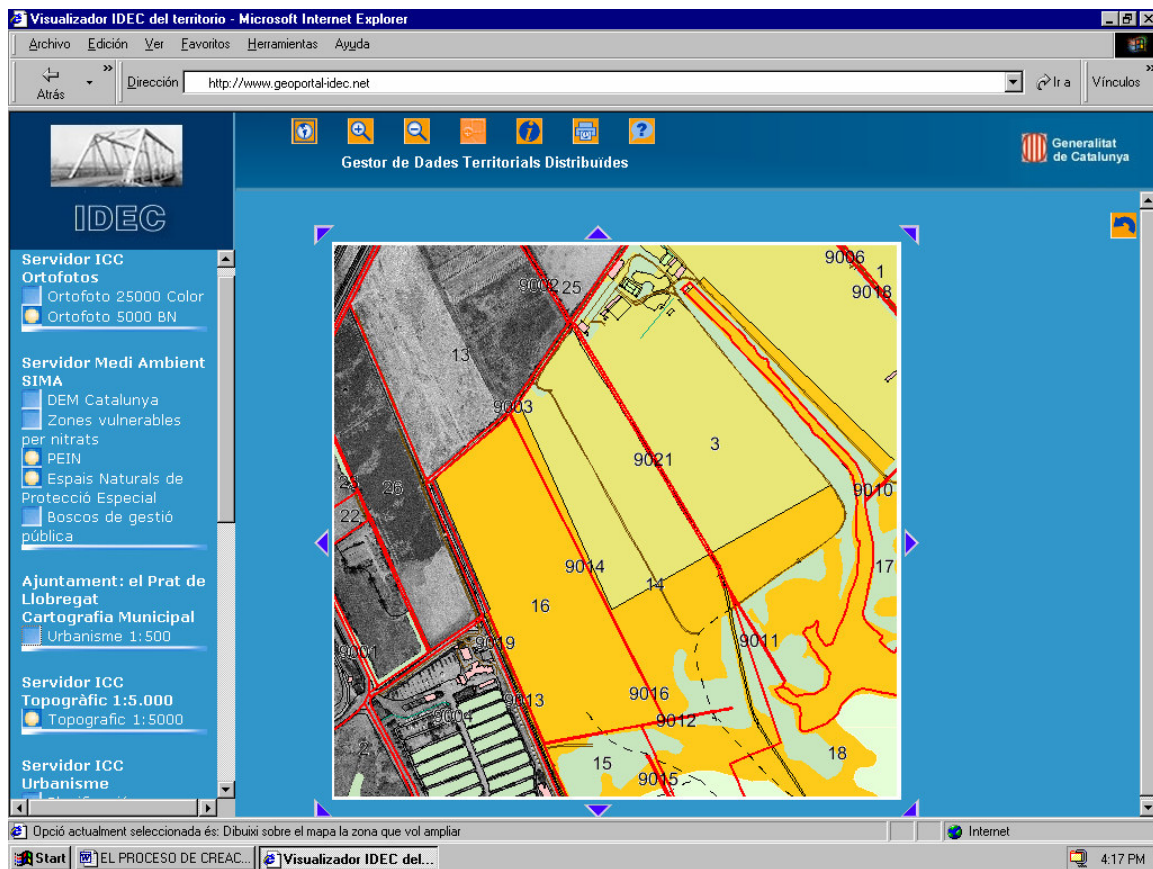

Fig. 3. *Image integrating topographic data, orthophoto, environmental and urban planning, from 3 different servers*

(IV) Apart from the mentioned technological aspects, the Project has important assets for the near future. Among them, to know the real share prospects through a GIS market survey in Catalonia made in collaboration with several Catalan Universities and the AESIG Catalan Section. After analyzing the suppliers, service companies, end users, Universities levels, etc., we have now a better knowledge of the real market.

A survey of the real technologies situation and geospatial information systems (TIG/SIG) in the Public Administration of Catalonia has allowed to have an inventory document with conclusions and proposals for strategies and policies in public services.

Summary of the of CSDI / IDEC present assets:

Geoportal
    Catalogue Server
    Metadata
    Metadata Capture Software

Pilot experience in Public Administration.

Client Applications and Distributed Territorial Information (Geodata) Manager

Market survey of GIS share

Spreading of Project knowledge (social marketing)

The way, its inertias (From February 2002 to February 2003)

To set up a regional SDI is a complex process. It is not a simple question of technology, but, mainly, of organization and systems approach, as interrelated elements must gear suitably and in the precise timing to make the project feasible.

We have learnt from other experiences, and we have considered some organizational models applied to other European regions.

So we considered several conditions which will contribute to manage the project:

- The GIS situation in the economic market share, the position of the Public Administration and the European environment will be known.

- It would be convenient the maximum participation of suppliers, companies, technicians, and users in the social, economic and institutional agents. The project development should be known and followed by all of them. And they will wait for results in a short term…!

- Evidently a determining factor is the institutional collaboration. Such a kind of project must be leaded initially by the Administration (which is the most important producer and at the same time the most relevant user of GI).

- The results approach should be applied and oriented to the end user (easy access to the information knowledge and to the information itself), short term projects and concrete applications...

- To launch the project implies to assure non-permanent financial resources for its maintenance and its self-financing future development.

Other aspects shall to be kept in mind and we have to emphasize some of them:

To generate Metadata is, usually, a process that is perceived like complex and boring even recognizing its necessity; the organizations' routines do not allow quick progress.

In order to overcome such circumstances, from CSDI / IDEC we have started giving initial support, even with human resources, on MD implementation in organizations and companies that have collaborated.

On the other hand, the Administration is usually reluctant to give its own information, including the data on this data (metadata).

Being conscious of an SDI necessity and admitting its benefits, advances in this field are under way. It requires convincing people introducing the project and its purposes, to reduce the reluctances that sometimes can appear, etc.
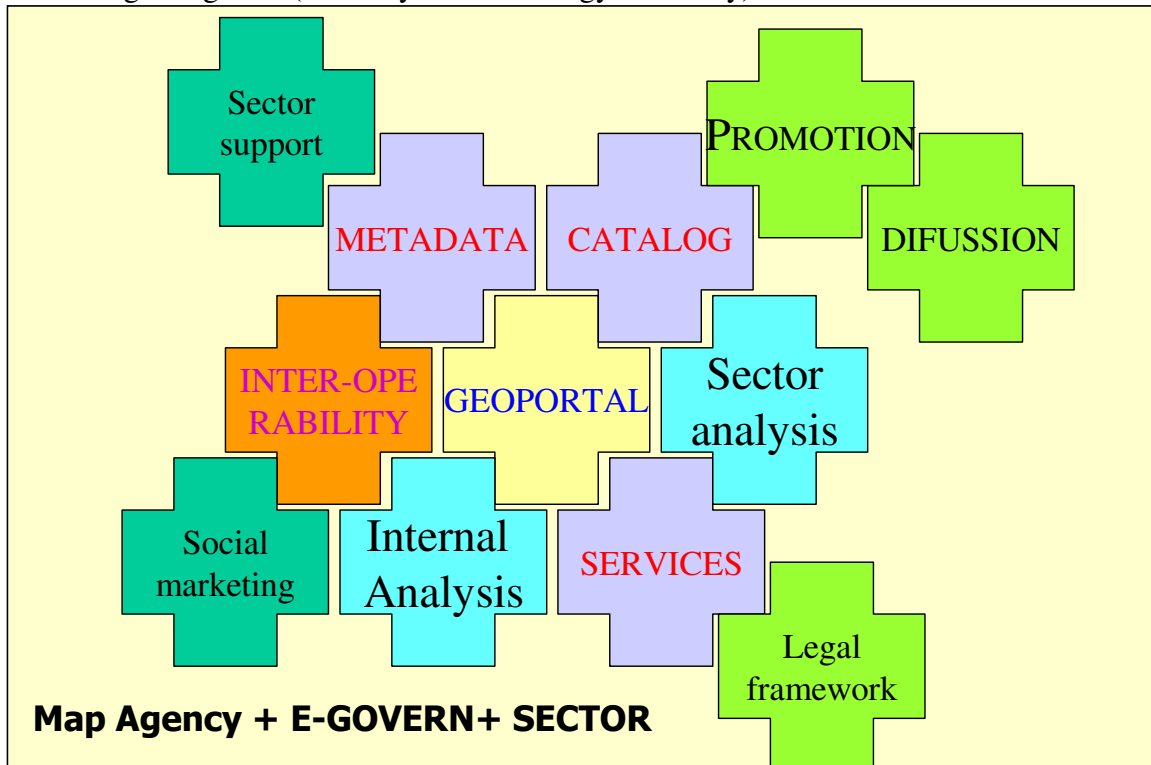
Summary:

Elements involved in a systems - engineering approach:

> *Share support*
> *Institutional support*
> *Social marketing: promotion and difusion*
> *Market share surveying, private and public situation*
> *Legal framework*
> *User - Results approach*
> *Technological aspects*

Necessary efforts for Metadata generation
Reaction to the spreading of available information
Problems of " adjust" between standard components
Problems of linguistic " adjust"
Added difficulties due to multilanguages

A systems-engineering approach: different elements shall to be combined and managed together (Not only the technology is the key)

Sinertias. The future

First steps are always difficult, the time pass slowly.... Anyway, once reached a situation like the described one, the projects that are outlined on the base of technologies on which SDI is based are more and more numerous. Our idea is to impel and to participate in projects based on the interoperability for different scopes, in public and private shares.

We are setting up some of these projects: The *Eurosion Specific SDI*, based on a European project that aims to facilitate the coast management, the *University Specific SDI*, which aims to describe and spread information about the geodata generated by research centres and other University services, and others. In all these cases, we will pay our attention to the development of client applications for specific users, acceding to multiple sources.

On the other hand, the development of initiatives around the electronic Government (e-Government) is going to be an important frame to develop and implement other type of applications. Our Project, or at least some of its aspects, is to create several lines of work within e-Government. A legal framework about the use of GI standards and the generation and publication of MD in all Departments of our Administration is going on.

The Project spreading will come from the hand of the Local Administration, so we are focussing our activity on its systems which own a lot of land information files at big scales and can be of great interest. The gathered experiences and the visualization of the first projects boarded by CSDI / IDEC will facilitate a fast diffusion and acceptance of the proposals in the Local Administration environment.

Our objectives for the present time and the near future can be summarized as follows,

- To continue with the work of generation and publication Metadata, especially from the organizations of Local Administration and private GI suppliers.

- To set up the Services description (Services Metadata) and to promote the availability and use of WMS as well as to make possible the information dissemination and servers connections.

- To promote specific SDI. (new projects based on interoperability)

- To arrange specific user applications, based on the adaptation of present standard products.

- To prepare Public Administrations for the adaptation of the European directive**s**, such as Inspire and ISP.

But new challenges will appear according to the project progress and possibilities, and we want to be successful. Once the project started, the end of the route (way) cannot be seen, yet…