

## **The Torino Geographic Data Service Centre**

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## **US National Spatial Data Infrastrucure**

### **Components**

- a digital catalogue of available spatial data accessible via Internet
- metadata
- the framework

## **US National Spatial Data Infrastructure**

### **Users**

GI trained professionals

- interested in spatial data not in information
- having their own hw e sw tools to manipulate downloaded data

## **Global Spatial Data Infrastructure**

### **Components**

- framework
- metadata
- catalogo dei dati
  
- webGIS (*on-line mapping*)

SDI Implementation Cookbook, 2001

# Global Spatial Data Infrastructure

## Users

- GI trained professionals interested in spatial data
- novice or browse users interested in information

*the SDI "can satisfy many of the needs of novice or browse users of data without requiring download of full data"*

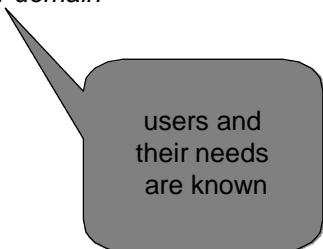
SDI Implementation Cookbook, 2001

## The Geospatial Data Service Centre (GDSC) concept

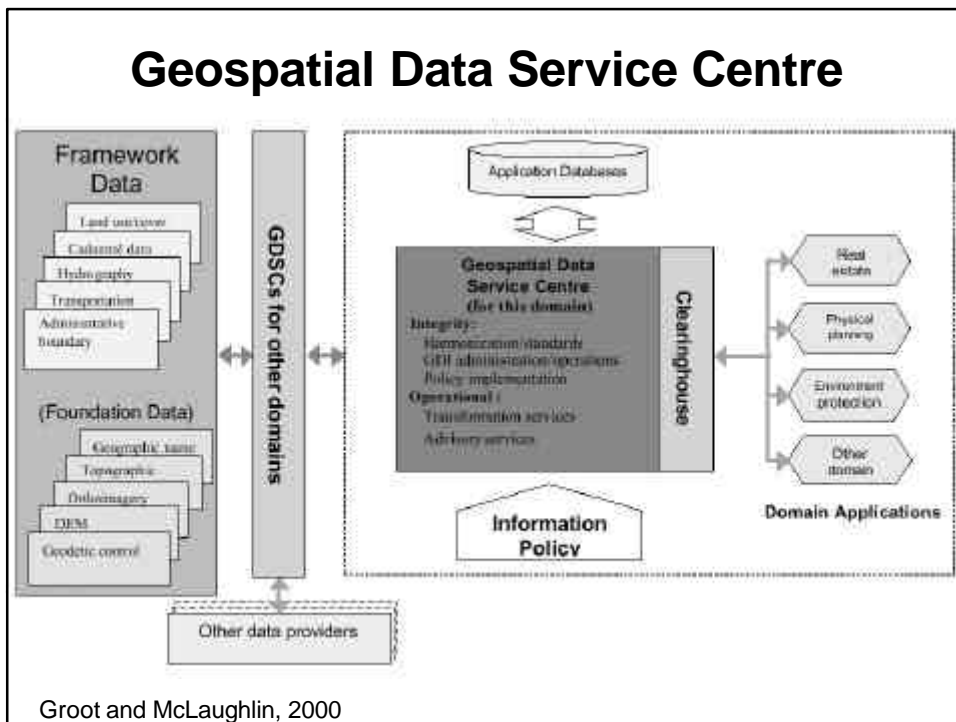
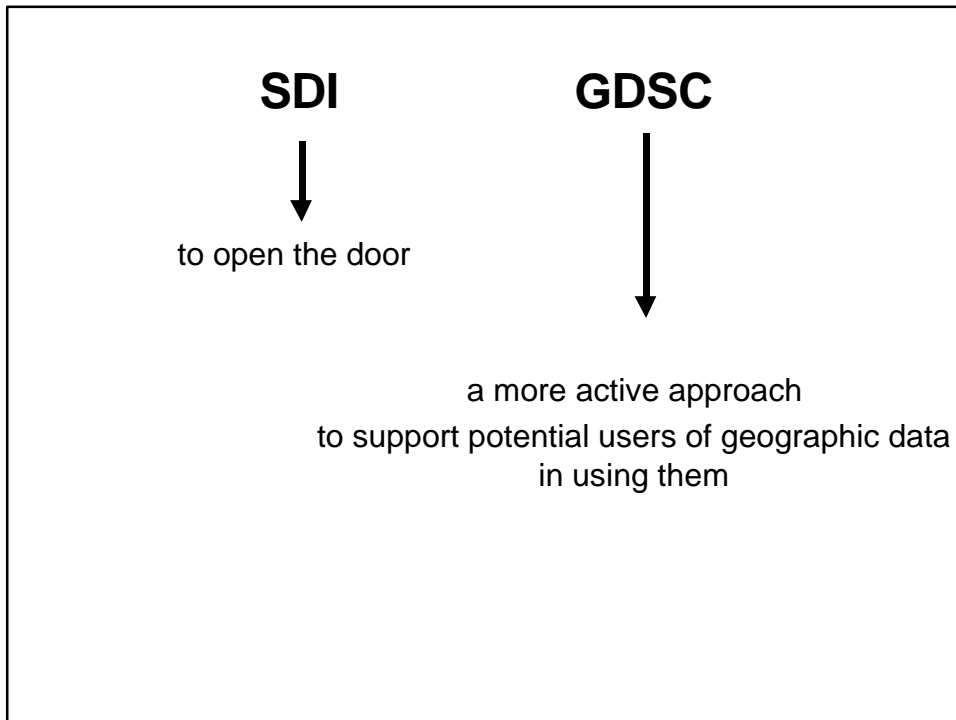
a step toward meeting GI users needs and supporting present and potential users of geographic data in using them

*"A Geospatial Data Service Centre (GDSC) is a facility or organisation which is intermediary ('broker') between data users and the suppliers for the application in the enterprise or domain"*

Groot and McLaughlin, 2000



users and their needs are known



## Evolutions of technological paradigms

*The Geography Network (g.net), is the result of a vision for sharing and directly using distributed geographic information services*

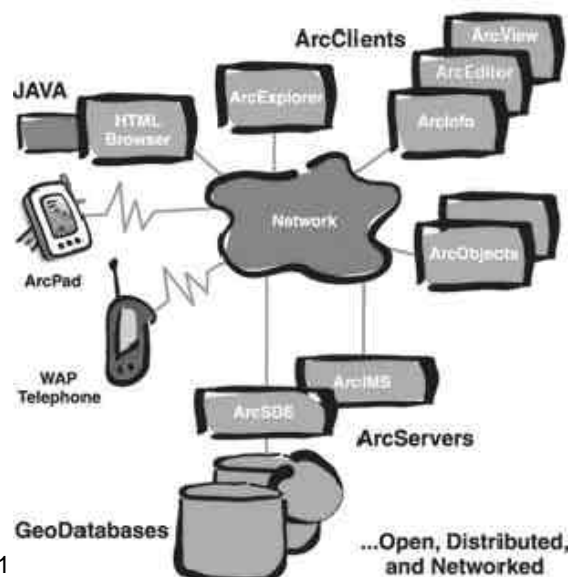
*It is an open, collaborative, and multiparticipant system that lets users publish, share, and use each other's services*

*Technologically, it is based on the open standards and "loosely coupled" architecture of the Internet*

*Key distributed subsystems include a metadata catalog service, distributed GIS data and application services, and GIS clients that directly use these services*

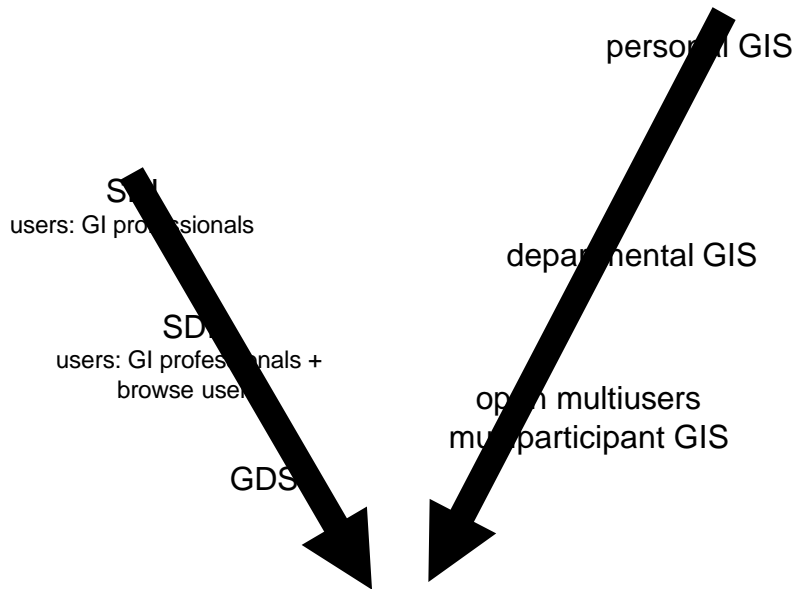
Dangermon, 2001

## SW vision of a "open, multiusers, multiparticipant" GIS architecture



Dangermon 2001

## The convergence



## Torino GDSC: background (1)

### Torino

- 900.000 inhabitants
- the central city of a 1,8 million inhabitants metropolitan area

### Torino Municipality

- 13.000 employees the second largest enterprise in Piedmont)
- 22 Departments and services

## **Torino GDSC: background (2)**

Municipal "GIS" = a "collective noun"

- a collection of procedures, data and people etc
- concepts, data etc are not always shared

What is lacking is the "system"

## **Torino GDSC: the proposal (1)**

a weak paradigm  
a less pervasive attitude  
an obstinate application of  
subsidiarity

in order to facilitate cooperation  
and reduce organisational  
problems and oppositions.

## Torino GDSC: the proposal (2)

### Steps

- to single out actors (geographic data producers, actual users, potential users)
- to locate and analyse available geographic data
- to interview potential users
- to list shareable data (core/reference data)
- to experiment GIS tools appropriate for various users (divided in two levels according to their skill)

## Torino GDSC proposal: strength

### Many elements already exist:

- a base map and geographically referenced data
- trained people
- appropriate sw, computer and communication facilities

### Other factors:

- the evolution of ICT leads some changes that cannot be stopped
- every year Municipal resources are devoted to production of geographic data
- some tasks (documentation on Municipal data) cannot be further delayed
- ...

the GDSC is not intrinsically expensive  
key issue is to keep and promote the GDSC vision,  
to raise and to diffuse awareness

## **Torino GDSC proposal: weakness**

- the political sponsorship was too weak, some key individuals changed
- the decision taken in 1997 to externalise the management of part of Municipal EDP to CSI-Piemonte.

## **Elements of a Torino future GDSC**

- “GIS on-line”
- Torino facile e-commerce website

## Torino "GIS on line"

### Keystones

- the official digital map at nominal scale 1:1000
- the addresses database
- several databases managed by various Departments

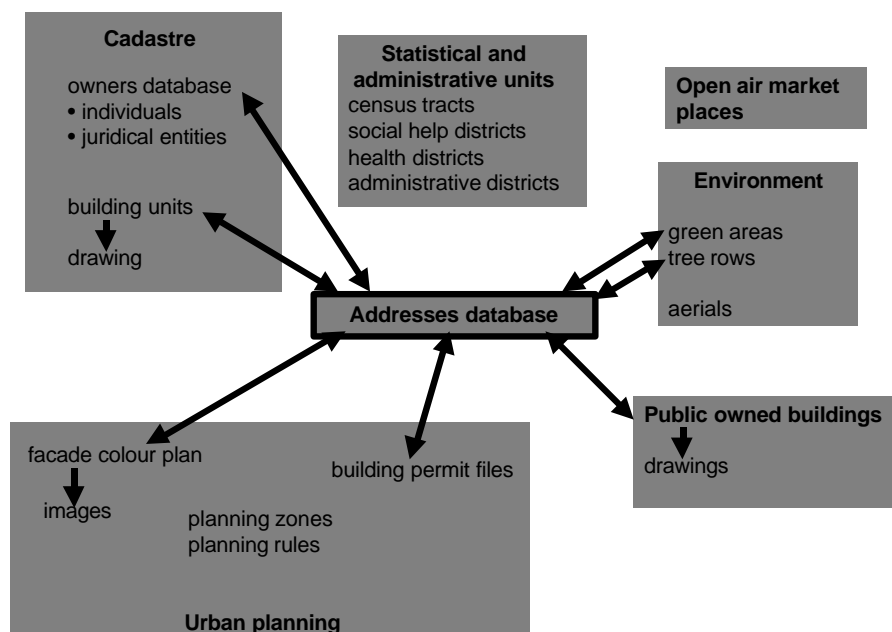
### Start thematic maps (11):

- base map
- urban planning map
- cadastre zones map
- public services map
- green areas map
- map of public owned buildings
- ...

### "Thematic channels":

- accessible dataset are +/- the same
- one extra is statistical data

## Torino "GIS on line": objects model











## **From local to global**

- in Italy most of geographic data are collected and managed at local level
- at municipal level, near 100% of data are geographic or geographically referenced
- cartographic and data derivation and generalisation can assure consistency from local to regional and national level

A set of common specifications through various levels, are to be established in advance

## **From global to local**

Initiatives at national, European, global level, in a local perspective, are useful also in order to promote the SDI vision and to raise awareness

A context of attention on GI infrastructure contributes in creating a favourable climate to development of a local SDI

**think globally, act locally**