



Regione Umbria

Direzione Ambiente, Territorio e Infrastrutture
Servizio Informatico/Informativo: geografico, ambientale e territoriale

Web GIS 2.0 for the Umbri@Geo geographical infrastructure

Organizational model and technological choices

ESRI EMEA User Conference 2010

Rome, October 27th 2010



Arch. Ambra Ciarapica, Dott. Paolo Tamagnini



Legislation

L.R. 26/6/2009, n.13, art. 23:

Establishment of the Regional Environmental and Territorial Information System (SIAT):
a widespread system of territorial and environmental knowledge

Functions

Coordination with the national bodies responsible for defining the technical requirements

Participation in the implementation of the National and the European Union Spatial Data Infrastructure (Directive INSPIRE)

Creation, implementation and updating of the regional geographical data repository with statistical processing

Online publication of the regional geographical data and metadata through ISO and OGC services

Development of regional infrastructure "UmbriaGeo" for the diffusion of geographical knowledge and information

Actions

Standard setting

Geodatabase

Data sharing & WebGIS



Geographic information: providers and users

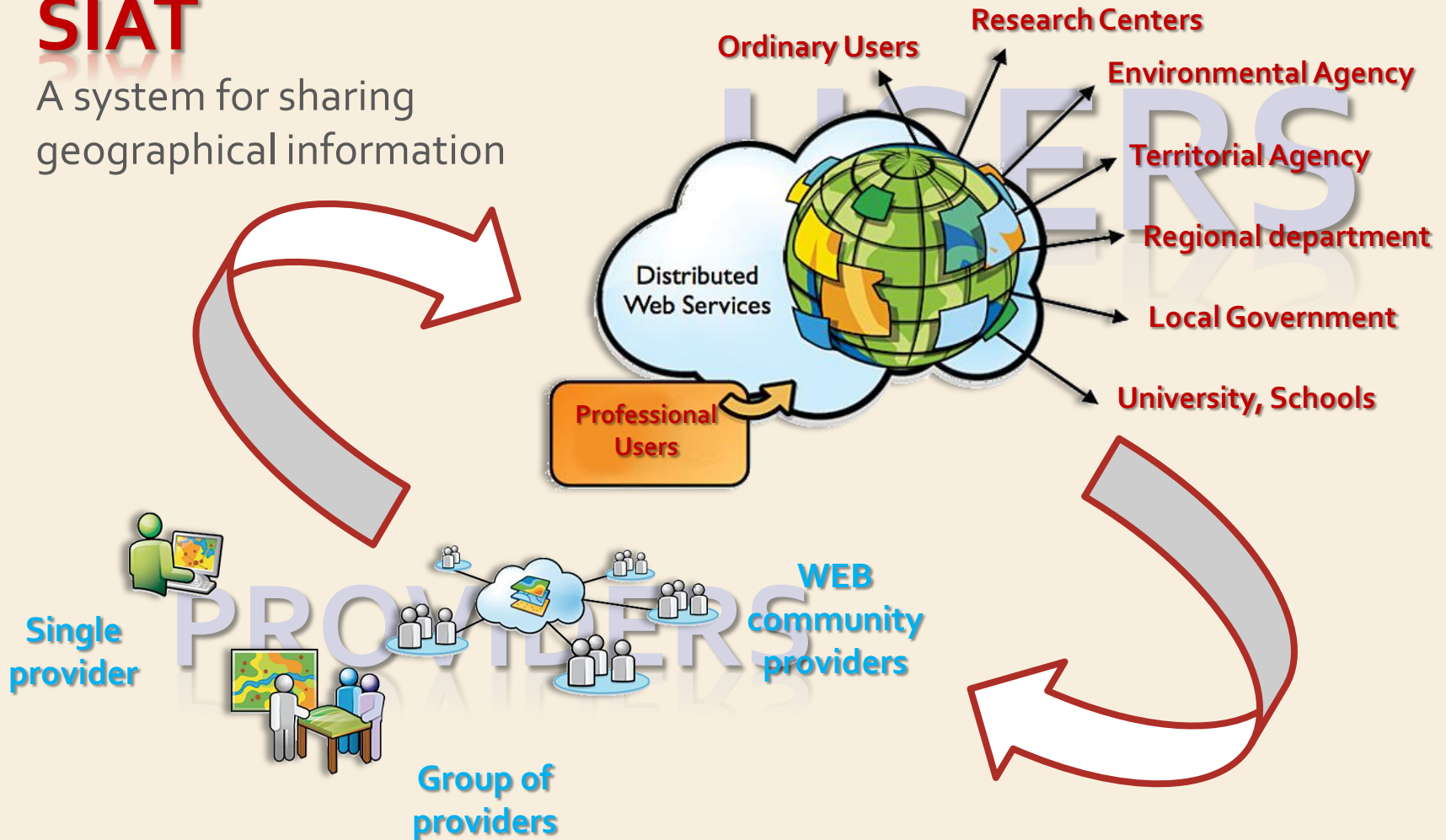


Umbri@Geo

Regione Umbria

SIAT

A system for sharing geographical information





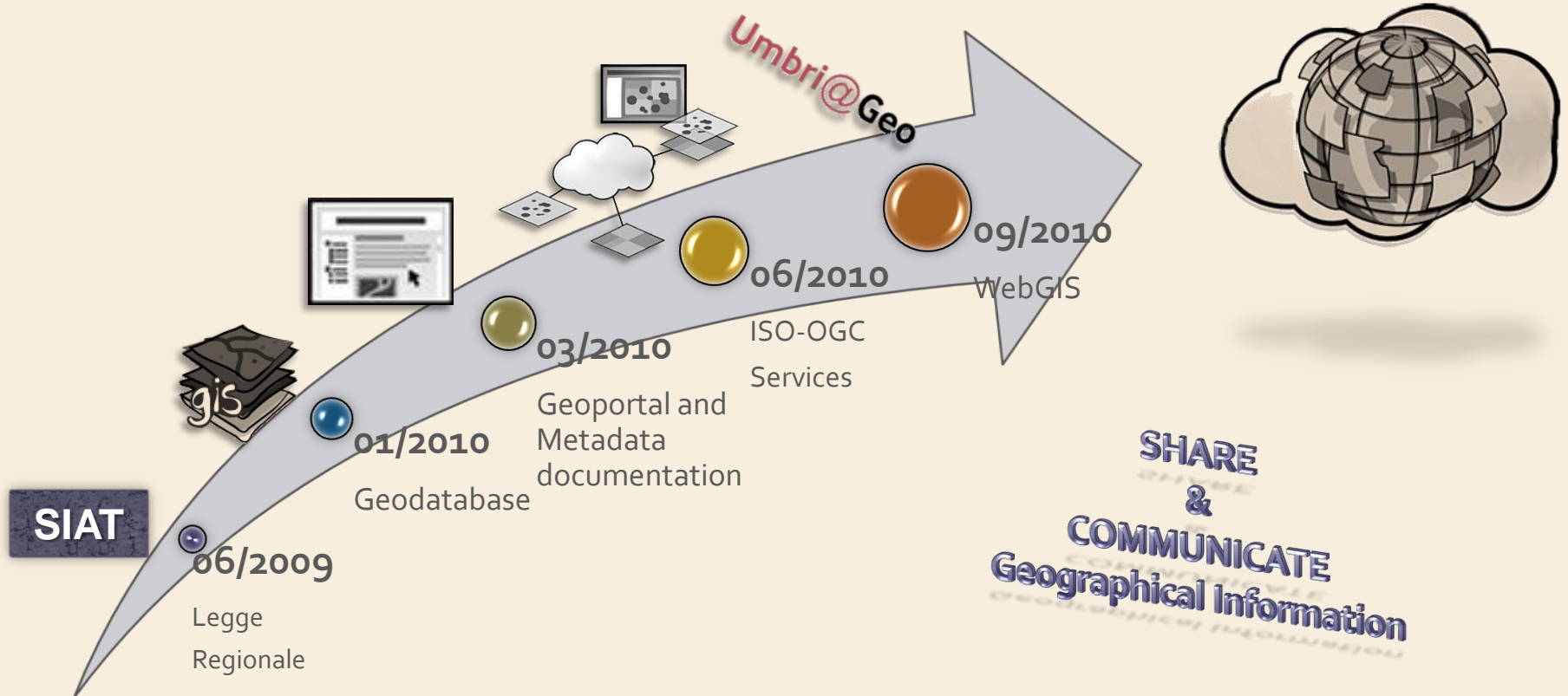
Enterprise GIS (EGIS): the road map



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Regione Umbria

- EGIS is a system of integrated components and consists of several functions used to collect, organize, analyze, display and disseminate geographic information through a distributed network architecture (GIS Dictionary)





Strategic choice

- No outsourcing
- Provide training support to regional human resources through a partnership of expertise team (ESRI Italia)

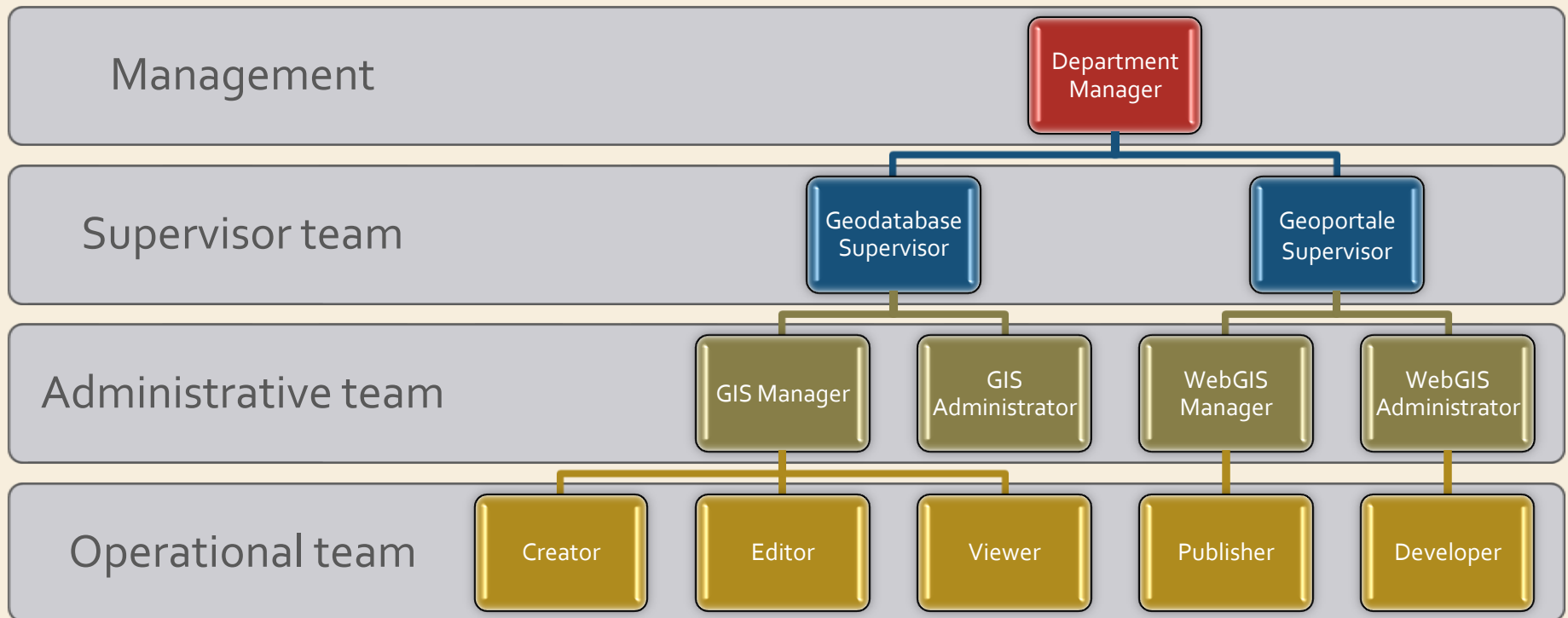
Things done

- definition of the conceptual data model
- optimization of map production
- creation of the catalog metadata
- deployment of map services (ISO and OGC)
- project and development WebGIS



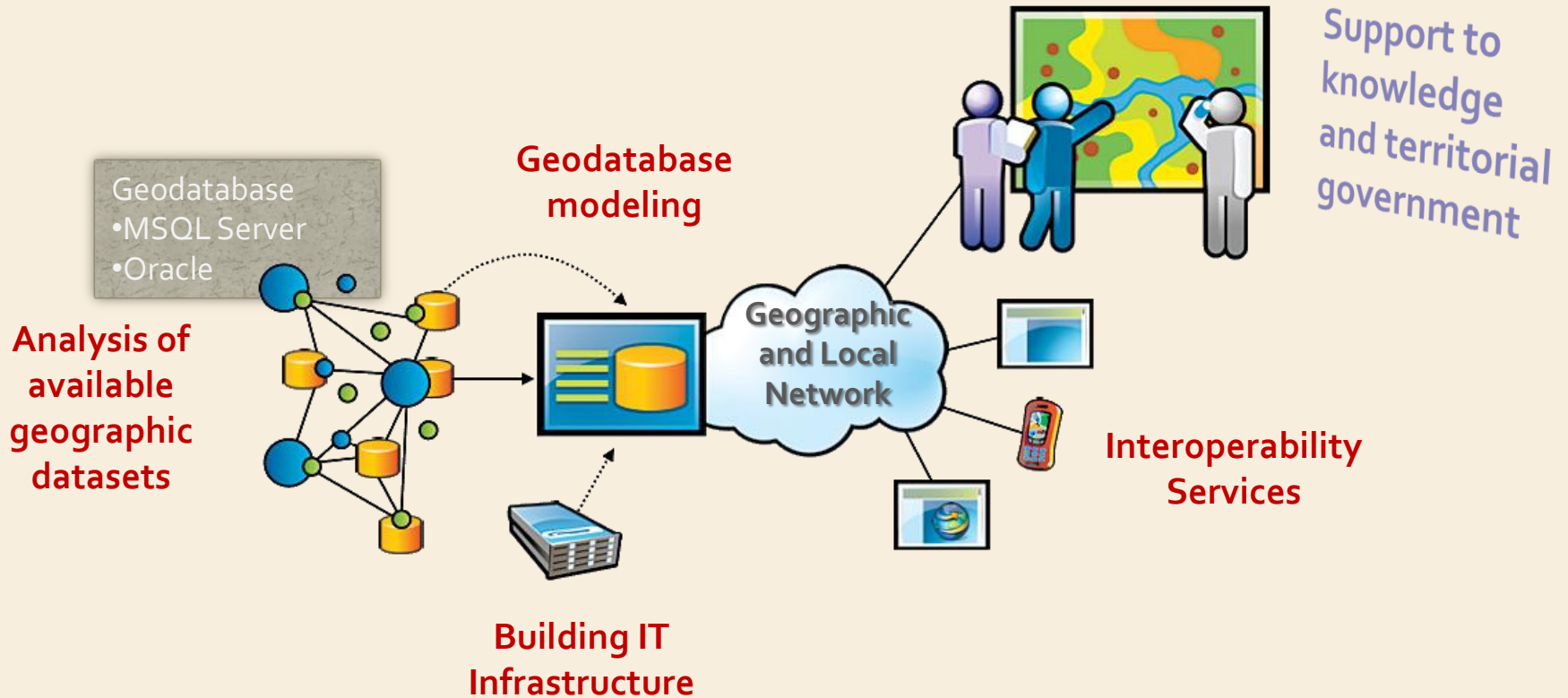


EGIS Staffing of SIAT





Back-office and front-office: from data input to services output



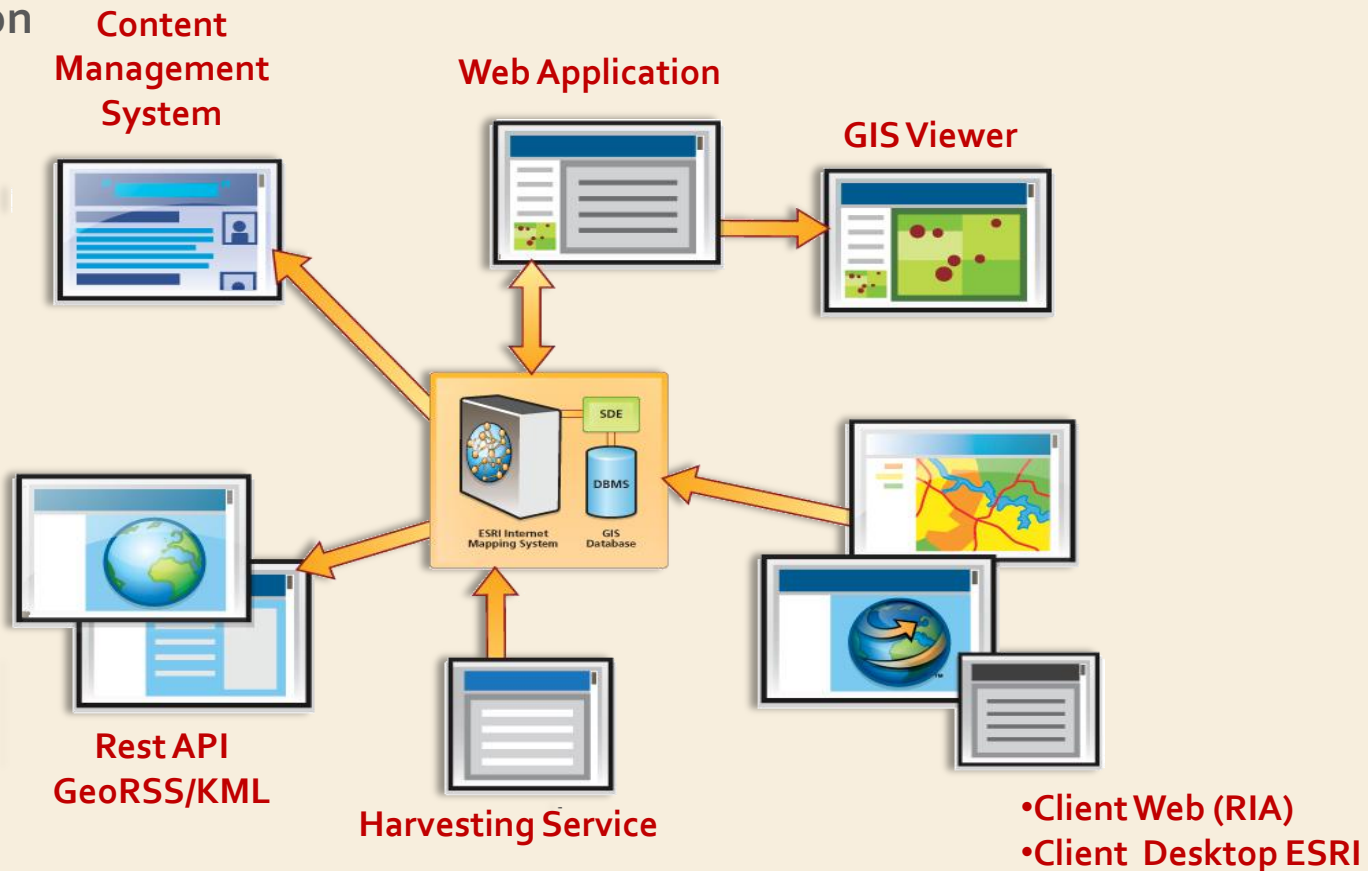


EGIS components



TOPIC

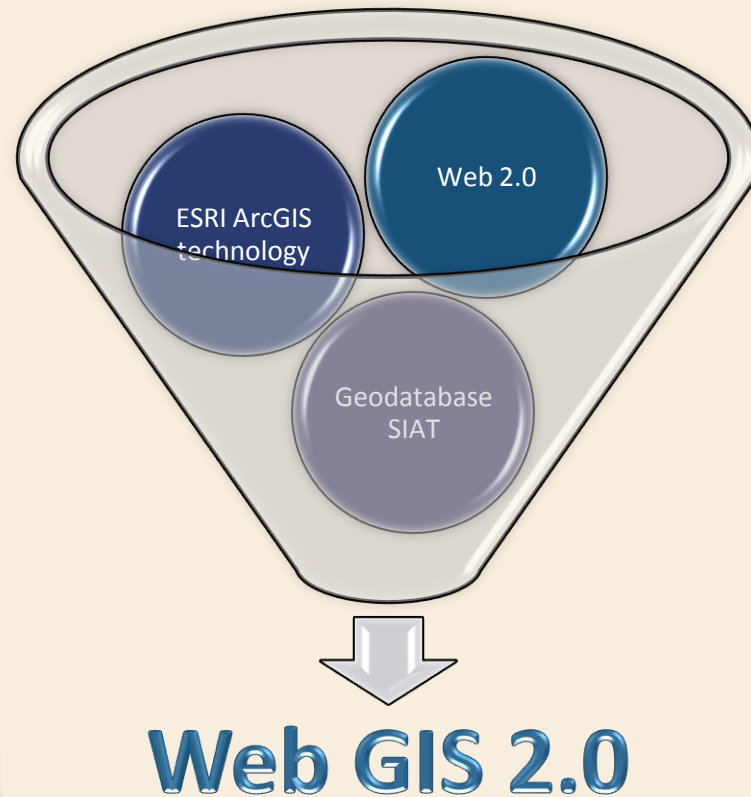
Harnessing the web and the power of gis going far beyond mapping and visualization





Why Web GIS 2.0?

WebGIS 2.0 was born from among the new features offered by Web 2.0 and the development of an Enterprise GIS platform based on ESRI ArcGIS Server technology





Web GIS 2.0 of Regione Umbria



Umbri@Geo

Regione Umbria

What is Web GIS 2.0 of Regione Umbria?

- It's a Rich Internet Application developed in Adobe Flex with Web API ESRI
- It's a Web Application for Publishing Web Services
- It's an interactive interface for the consultation and analysis of Umbria's geographic information

GIS Web Services
for the interoperability



Map Service (REST, SOAP)

KML - OGC





Web GIS 2.0 at work

Umbria@Geo



Regione Umbria

Regione Umbria
Web Gis 2.0 - BETA

CARTOGRAFIA STRUMENTI STATISTICHE AIUTO

Base Satellite

SR590

Perugia

SR385

SR444

SS9

Nocera Umbra

SR261

Assisi

SR147

Castelluccio

Torgiano

Bettona

Deruta

Spello

SS77

Castello del Piano

SR310

Montefalco

SR71

SR317

Marsciano

Collazzone

Gualdo Cattaneo

San Venanzo

Fratte Todina

Monte Castello di Vibio

Massa Maritima

SR110

Castel Ritaldi

Campello sul Clitunno

SR418

SR285

Vallo Di Nera

Santa Apollonia Di Narco

Scheggino

WGS84: 12.3663 43.1265

Xmin: 11.9119 Ymin: 42.8844 Xmax: 12.7450 Ymax: 43.3270

10 km

5 mi

Basiglio

Main features of Web Application

Widgets: configurable tools with specific functions and advanced features

Toolbars with navigation and printing functions

Tools for the reference to the location map (overview, bookmarks)

Tools for spatial and statistical analysis



Web GIS 2.0 at work

Umbri@Geo



Regione Umbria

Flexible and configurable Widgets

The screenshot displays the Umbri@Geo Web GIS 2.0 interface. At the top left, the Regione Umbria logo and 'Web Gis 2.0 - BETA' are visible. A navigation menu at the top includes 'CARTOGRAFIA', 'STRUMENTI', 'STATISTICHE', and 'AIUTO'. The main map area shows a street view with several widgets overlaid: 'Disegna' (Drawing) with various line and polygon tools, 'Trova Percorso' (Find Route) with options for 'Tempo' and 'Distanza', and a 'Mappe' dropdown menu. In the foreground, a collection of 3D-style red buttons represents various configurable widgets: Overlayer, Legend, Print, Overview, Bookmarks, Navigation, Misure, Sketch, Query, Statistics, Identify, Street View, Geo Addresses, Time slider, Webcam, and Projection. The map itself shows a street grid with labels like 'Via Aldo Capitini', 'Via San Prospero', and 'Via Bucaccio'.



Web GIS 2.0 at work

Umbri@Geo



Regione Umbria

Maps: basic and thematic services

Regione Umbria
Web Gis 2.0 - BETA

CARTOGRAFIA STRUMENTI STATISTICHE AIUTO

Base Satellite

BASIC SERVICES

- Geographical names and grids
- Official administrative units
- Census and statistical districts
- Terrestrial elevation
- Orthophoto-images
- Transport networks

THEMATIC SERVICES

- Buildings and Addresses
- Land Cover
- Regional Technical Map
- Vegetation and landscape diversity
- ...

Mappe

Servizi di base	Tematismi
Base Umbria	prima serie
Ortofoto Umbria	Ortofoto
Base ESRI	terza serie
Satellite ESRI	Ecografico Catastale
Navigation Charts	Ecografico Catastale
	quinta serie

WGS84: 12.3698 43.0991

Xmin: 12.3459 Ymin: 43.0718 Xmax: 12.3980 Ymax: 43.0995

0.5 km
0.5 mi



Web GIS 2.0 at work

Umbria@Geo



Regione Umbria

Regione Umbria
Web Gis 2.0 - BETA

Geoportal and Web GIS 2.0

CARTOGRAFIA STRUMENTI STATISTICHE AIUTO

Base Satellite

Geo Portale

1 documenti trovati

Carta Tecnica Regionale 10K

Mappe

Servizi di base

- Base Umbria
- Ortofoto Umbria
- Base ESRI
- Satellite ESRI
- Navigation Charts

Tematismi

- prima serie
- Ortofoto
- terza serie
- Ecografico Catastale
- Ecografico Catastale

Carta Tecnica Regionale 10K

La CTR occupa il posto preminente tra la cartografia regionale in quanto rappresenta la base conoscitiva fondamentale del territorio sia per i peculiari requisiti di ottima precisione metrica, sia per la completezza dei contenuti e dei dati tecnici parti...

Apri Visualizza

Dettagli Metadati

Aggiungi alla mappa

GEOPORTAL

- Querying on metadata catalog by data or spatial attributes

WEBGIS 2.0

- Viewing of related map services and exporting xml

WGS84: 12.6030° 43.1053°

Xmin: 12,5858 Ymin: 43,0925 Xmax: 12,6142 Ymax: 43,1075



Web GIS 2.0 at work

Umbria@Geo



Regione Umbria

The screenshot displays the Umbria@Geo Web GIS 2.0 interface. At the top left, the logo and text 'Regione Umbria Web Gis 2.0 - BETA' are visible. The main menu includes 'CARTOGRAFIA', 'STRUMENTI', 'STATISTICHE', and 'AIUTO'. The 'Statistiche' menu is active, showing a 'Statistic Widget' window titled 'Residenti'. The widget contains a 3D pie chart and text: 'Usare uno strumento grafico per definire la selezione in mappa:', 'Totale popolazione [7 Sezione/i]: 1,715', and a highlighted slice for '40-44 anni M: 2.3% (40)'. The map in the background shows a city street grid with various colored overlays. A semi-transparent box over the map lists 'Viewing charts' with the following features:

- Multiple series
- Interactive charts
- Pie charts, line charts, column charts
- Graphic tools for features selection

At the bottom of the map, WGS84 coordinates are displayed: Xmin: 12.5692, Ymin: 43.3423, Xmax: 12.5967, Ymax: 43.3522. A scale bar indicates 1000 ft and 400 m.



WebGIS 2.0 in Umbri@Geo infrastructure



Umbri@Geo

Regione Umbria

www.umbriageo.regione.umbria.it

Umbri@Geo

- is a web-space builded for the common and specialistic users of regional geographic information
- forming the regional infrastructure for the territorial and environmental data-sharing

The screenshot shows the Umbri@Geo website interface. At the top left is the logo and the text 'Umbri@Geo Infrastruttura geografica per l'ambiente e il territorio'. To the right is a search bar with a 'Cerca' button. Below this is a navigation menu with links: 'Chi siamo', 'Contatti', 'Siti utili', 'Informazioni', and 'Home'. A secondary menu contains: 'AEROFOTOTECA', 'GEODESIA', 'STATISTICHE', 'PIANIFICAZIONE', 'PROGETTI', 'COOPERAZIONE', and 'DOCUMENTI'. The main content area features a 'WEBGIS' button (circled in red) with a globe icon, and an 'ATLANTE' button with a map icon. Below these are two large images: a waterfall and a topographic map. Further down, there are three news or service tiles: 'Il SIAT per conoscere l'ambiente e il territorio', 'Sportello cartografico', and 'Umbri@Geo si presenta ad EMEA e ad ASITA'. At the bottom, there are three more tiles: 'PRODUZIONI' with a cube icon, 'SERVIZI' with a gear icon, and 'GEOLANDIA' with a colorful dot icon. The footer contains the text: 'Giunta Regionale - Direzione Ambiente Territorio e Infrastrutture - Servizio Informatico/Informativo: geografico, ambientale e territoriale' and 'Copyright 2010 - SIAT Sistema Informativo Regionale Ambientale e Territoriale'.