

The city of Nice, France

Goals

- Provide one location for all data to be housed.
- Provide ease of access and integration between GIS and CAD data formats.
- Provide data via the Internet or Intranet.
- Improve data management and output capabilities.

Results

- A centralized database where data can be maintained or viewed
- Improved data reliability due to multiuser access
- Integrated GIS (raster and vector) and CAD data
- Improved output capabilities (including printing) through user access via the Internet or Intranet

An Enterprise GIS is Born

The city of Nice has been actively mapping its territory for nearly a century. Early on, in the 20th century, the city of Nice began using land survey techniques to develop its own high-precision topographic map (at a scale of 1:500). In the 1980s the city made its move into a digital graphic solution. This was based on the IBM® Graphic Program Generator product that was set up to handle all the city's maps along with speeding up the drawing and plotting processes involved. Because of the success of this product and the experience it brought, in 1991 the city of Nice decided to use a cartographic product (Geodis) to manage land use maps and digitize city information such as administrative perimeters. In the meantime, the GIS field evolved quickly and GIS software became more efficient and easy to use. Therefore in 1995, the city of Nice decided to launch a fully competitive request for proposal (RFP) to acquire an enterprise GIS solution. The city worked together with a consultant to identify the city's needs and developed a comprehensive RFP. The ESRI solution was chosen because it provided the best quality and price when compared to other solutions.

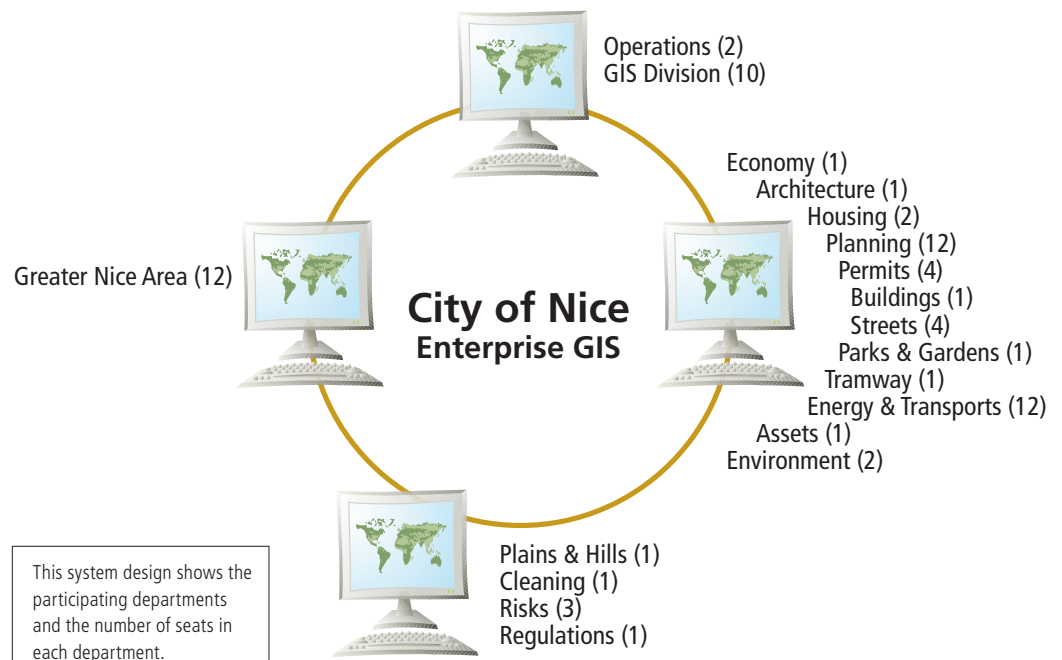
Organization

An enterprise GIS solution was implemented within the city that involved the collection and digitization of data, processing, analyzing, browsing, communication, and monitoring of the data and its system. It is maintained by those within the city's departments and accessed by the public for information.

The city's GIS is established within its own GIS department—one of the four main departments of the city's Department of Information and Telecommunications (DOIT). The DOIT has a transversal role and is part of the functional services of the city hall organization. A budget for the operation of the city's GIS is allocated at the beginning of each year, and its amount is determined according to the estimated GIS needs for the year, such as funding for new data, software and hardware upgrades, or maintenance costs and staff salaries, by a special budget commission.

The GIS department is composed of 24 individuals; however, there are approximately 150 people who contribute directly to the GIS. There are at least 30

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About the City

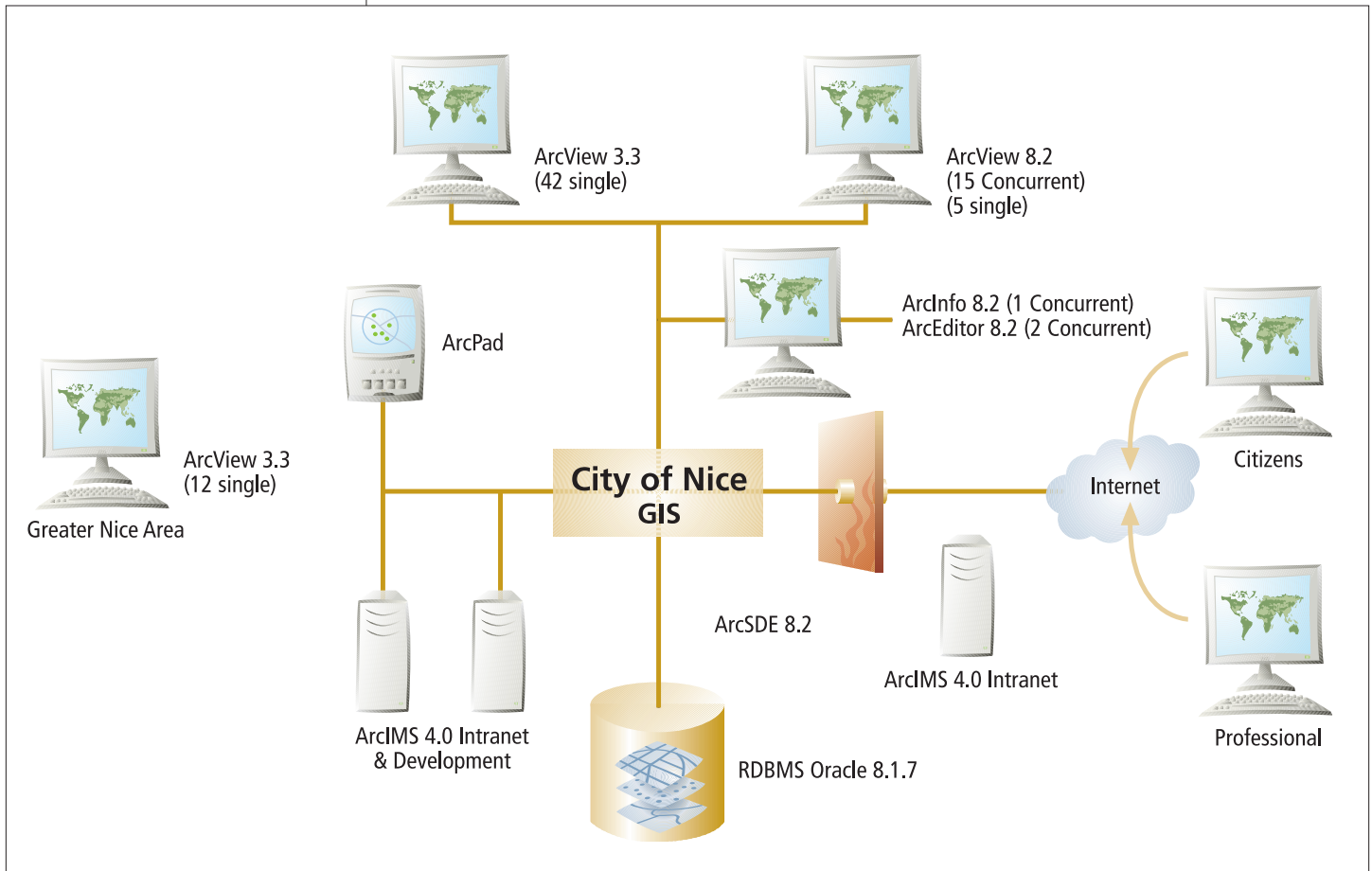
The city of Nice is located along the northern arch of the Mediterranean Sea, in what is known as the French Riviera—between Monaco and Cannes. Nice has a population of 350,000 (500,000 including the suburbs), and it occupies an area of approximately 72 square kilometers. The city has a town council composed of 69 elected members and is led by a mayor. To fulfill their commitments to the city of Nice, the mayor and town council rely on nearly 7,000 public service employees.

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departments within the city’s structure that rely on the operation of the GIS. These include facilities management departments, such as buildings, planning, water, and assets, along with other departments managing the city’s economy, sports, social, environmental, and urban activities. Each department contributes to the GIS by collecting and entering data, while taking advantage of it for management, analysis, and production uses.

There are approximately 500 layers in the city’s GIS including raster, vector, and CAD data. Through ESRI® ArcSDE®, this data is maintained in a central database, using Oracle® on a Windows® 2000 server. There are approximately 60 users who have access to the data; they do so using either ArcGIS® 8.x or ArcView® 3.x. Access to each layer is limited so only one person can edit a layer at one time.

ArcIMS® provides the city with the capability to serve chosen data sets to an estimated 500 people who need to regularly browse the data. Access is open to the public through the Internet where users can browse land use and tourist maps and identify locations. However, some data can be accessed only by professionals (e.g., providing professional surveyors with geodetic points over the land area of Nice). The Internet is also used to provide data only accessible to the city hall organization.



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Benefits

The greatest benefit of this enterprise GIS has been in efficiency. The city has the ability to more easily manage its data sets and the gathering of data. It can also provide better organized data for analysis, which has improved its output results and mapping capabilities. As well, it has provided improved communication between the departments and the community.

System Design

ESRI Software and Extensions

- ArcView 3.x (54)
- ArcGIS 8.x
- ArcView 8.x (20)
- ArcEditor™ 8.x (2)
- ArcInfo™ 8.x (1)
- ArcIMS 4
(3 installations; 350 users for browsing)
- ArcSDE 8.x (1)
- ArcPad® Software Developer Kit

DBMS: Oracle 8.1.7

Operating Systems: Windows 2000

ArcSDE Server Configuration:

2 GHz, 1GB RAM, Raid 5

ArcIMS Server Configuration (3):

1. For Intranet: 2 GHz, 1 GB RAM, Raid 5

2. For Internet: 1 GHz, 1 GB RAM, Raid 5

3. For Development: 512 MHz, 512 MB RAM, Raid 1

Number of Layers: 500 layers

Types of Data: Raster, vector, point, GIS/CAD

Size of Database: 20 GB of vector data

50 GB of raster files