# *LouisianaMAP -* Louisiana Geographic Information & Services Portal

## QUICK SUMMARY

## UPDATE: APPROVED ON 3/22/02

**ABSTRACT:**

The Louisiana Geographic Information Systems Council in partnership with the Office of Electronic Services is submitting this request for *LouisianaMAP*, a project to revolutionize e-government in Louisiana by providing a reliable, consistent geographic information and services component.

**PROJECT SUMMARY:**

The *LouisianaMAP* portal project incorporates three integrated components:
- **I-Team Geospatial Data Framework Plan**
- *LouisianaMAP* **Geospatial Portal**
- *LouisianaMAP* **Academy**

The long-term outlook for the *LouisianaMAP* geospatial portal will be to provide single-source access to Louisiana's geospatial data assets, enabling all sectors of Louisiana government, businesses, and citizens to effectively and efficiently utilize geographic information and services in a meaningful way.

The strategy is to address the geographic process from an enterprise perspective through the three *LouisianaMAP* initiatives:
- **Planning**
- **Production**
- **Exploitation**

### 1. Planning
The Planning phase of the *LouisianaMAP* portal will utilize the Louisiana I-Team Geospatial Data Framework Plan (I-Team Plan). The objective of the I-Team Plan will be to establish a process for defining, implementing, and maintaining a geographic information framework & services.
- I-Team Plan will utilize a state-of-the-art *requirements management system* (RMS) to collect, organize and maintain the statewide needs for geographic information and services. RMS will be available as a web-based application based on a commercial software package and will be integrated as a service under the *LouisianaMAP* Portal.
- Based on the validated user needs and priorities, the plan will identify and clearly define the framework geographic data layers for Louisiana and will provide a suggested production and funding strategy for each layer.
- The plan will also identify geographic services required to validate user needs.

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## 2. Production

The Production phase of the *LouisianaMAP* portal will be implemented in an open, web-based infrastructure making it widely available resource to Louisiana communities of interest.

- Framework datasets identified in the I-Team Geospatial Data Framework Plan will be integrated within a database management system
- Clearinghouse technologies and distribution standards established by the federal government and the Open GIS Consortium (OGC) will be implemented, allowing users to draw upon a single interface for data search and acquisition.
- The Portal interface, customized to address the different needs of the geospatial community and the needs of Louisiana citizens, designed to provide meaningful access to the available data services based on user knowledge and skills:
  - Expert users will be able to directly incorporate data into their professional-level GIS applications for integration with their own data products.
  - Advanced users not requiring the advanced technology of professional GIS applications can search, identify, and display geospatial data directly to the desktop through a thin-client browser interface such as Internet Explorer or Netscape.
  - Basic Users can access *LouisianaMAP* services directly, using integrated components within the Info Louisiana portal.

## 3. Exploitation

In order to enable access to these resources, the *LouisianaMAP* Academy will be developed to orient and train portal clients. Topics covered will include requirements management, framework data definition and access, and use of portal services.

- Academy materials will be developed using web content management tools and hosted on the portal.
- The Academy will be presented in a classroom/laboratory setting on a regularly scheduled basis using the web-based content.
- The Academy will be supported as an extension of the Louisiana Geographic Information Center (LAGIC) component of LGISC.

## TECHNICAL APPROACH:

From a technical approach, the *LouisianaMAP* Portal will simplify and unify access to geospatial data in three distinct layers as shown in figure 1. The ***data layer*** will contain and manage the data contributed by external organizations as show in the figure, as well as all internally generated data and information. The ***user layer*** will provide an intuitive web-based interface for all portal services. The ***application layer*** will provide and manage the applications and utilities necessary to access the data and perform the services in support of user requests and system management.
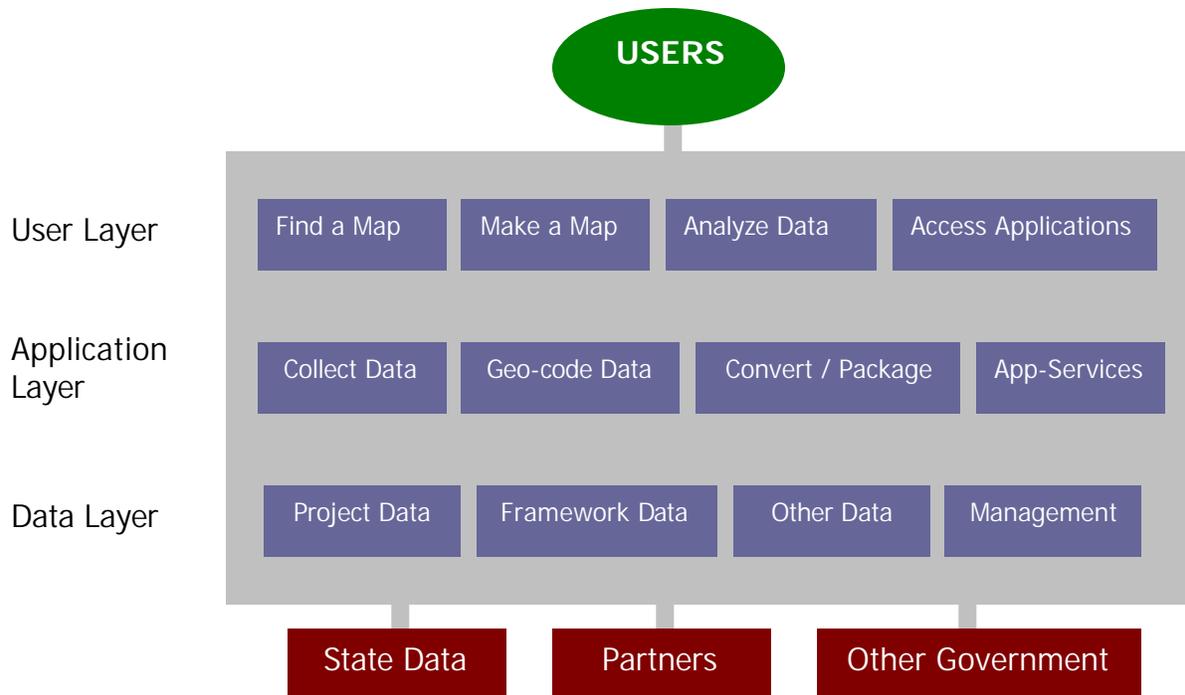
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Figure 1.  LouisianaMAP Portal Architecture

## 1. Data Layer

Data providers (state, partners, other governments, etc.) identified by the I-Team plan submit geospatial data for distribution via the *LouisianaMAP* portal.

- Data entities responsible for data development supply specific datasets to the Portal Administrator (LAGIC).
- Datasets may be identified by the I-Team plan as framework data, project specific data, or other data holdings identified as valuable for seamless data integration with Info Louisiana.
- All submitted data will be accompanied by Federal Geographic Data Committee (FGDC) standardized metadata record.

Submitted records will be incorporated into a database management system (DBMS) in such a way as to maintain spatial integrity and data fidelity.  The DBMS ensures centralized management and dissemination of the geospatial data, permitting system scalability and efficient and managed access to the data holdings.

## 2. User Layer

The user layer of the *LouisianaMAP* portal addresses how the user will search, display, and use requested geospatial data.  There are three primary categories of end-users, *basic*, *advanced*, and *expert* (see figure 2).

- Expert users will be able to directly incorporate data into their professional-level GIS applications for integration with their own data products.
- Advanced users not requiring the advanced technology of professional GIS applications can search, identify, and display geospatial data directly to the desktop through a thin-client browser interface such as Internet Explorer or Netscape.

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- Basic Users can access *LouisianaMAP* services directly, using integrated components within the Info Louisiana portal and a web browser.
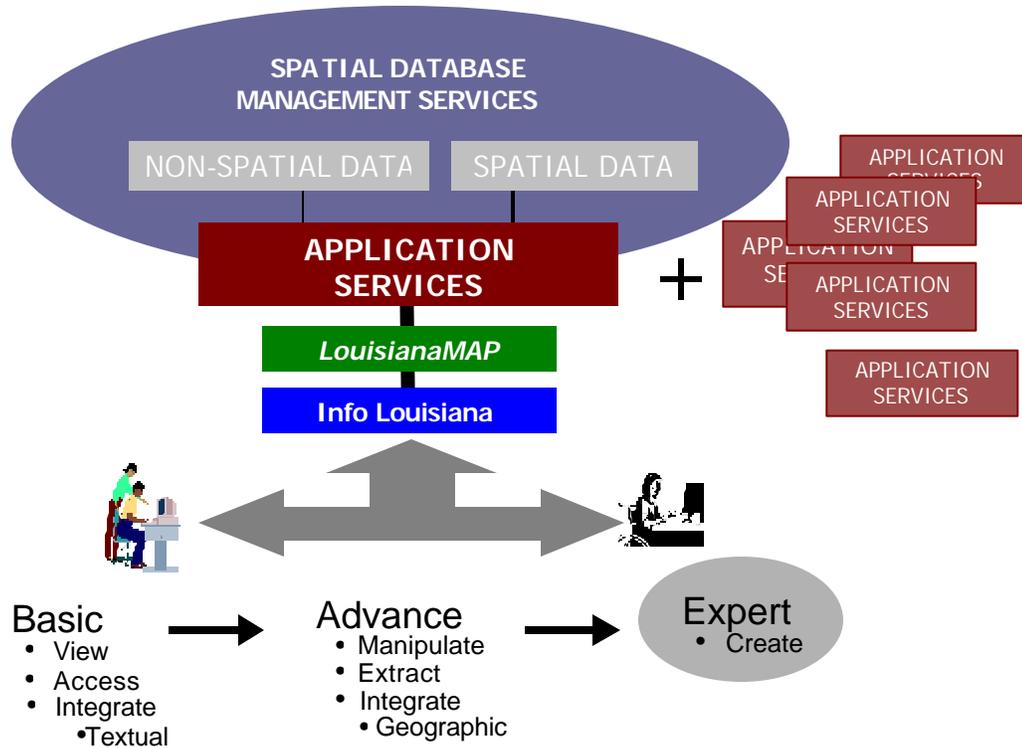


Figure 2. LouisianaMAP User Support Approach

### 3. Application Layer

As the middle tier of the *LouisianaMAP* functional architecture, the *Application Layer* integrates the data and production resources with user requests. The application layer manages all production services and user requests in a centralized location. The layer consists of *collection services*, *spatial services*, and *requirements services*. Multiple components make up the application layer architecture, ensuring scalability and performance.

### IMPLEMENTATION:

As mentioned above, *LouisianaMAP* consists of three complementary initiatives that all contribute to the common project objective of providing a reliable, consistent geographic information and services baseline for Louisiana.

1. The first initiative, the I-Team Geospatial Data Framework Plan, will define and activate the state's geographic acquisition and management approach.

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2. This initiative will drive the _LouisianaMAP_ Portal from a time-phased content perspective by specifying the data the _LouisianaMAP_ Portal will accommodate and the services that should be available to operate on the data.
3. Similarly, the Portal initiative will drive the content, timing, audience, and delivery methods for the _LouisianaMAP_ Academy.

The proposed implementation approach accommodates these and other relationships and dependencies (see schedule in TIF Proposal – page 12).

**Project Management:**
- I-Team Plan:  I-Team Coordinator & I-Team Steering Committee.
  a. Define priority Layers & Requirements
  b. Define Custodian of Data Layer
- _LouisianaMAP_ Portal:  LAGIC will produce the portal.
  a. Implement the portal in 3 phases over the next 2 years
- _LouisianaMAP_ Academy:  Content established by the I-Team Steering Committee
  a. Coordinated and Administered with LAGIC

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