

Central Coast Joint Data Committee



GIS Basics Workshop

March 26, 2003

Building a Working Organizational GIS

Types of GIS Planning Activities:

1. GIS Strategic Planning

2. GIS Operational Planning

3. GIS Project Planning

4. Implementing GIS Into Existing Operations

Operations are ongoing and repetitive

a project is a temporary endeavor undertaken to create a unique product or service.

Strategic Planning is NOT...

Intended to determine the future

Intended to control behavior

**A static document (binder on the self
collecting dust)**

Going to provide answers to all emerging issues

*"Cycle of reacting to crises and committing no
time to planning creates crisis cycle."*

Strategic Planning and Goal Setting:

- 1. Executive Summary**
- 2. Mission Statement**
- 3. Descriptions of Existing GIS Operations**
- 4. Needs Assessment**
- 5. 1, 3 and 5 Year Goals**
- 6. Progress Reporting**

In the absence of strategic planning that forces proactive considerations of all aspects of implementation . Better Be Lucky!

Example Mission Statement:

The mission of _____ GIS is to promote and develop a shared geographic information system resource for staff, decision makers, and the general public.

In pursuing its mission, the GIS must be designed to:

- 1. Provide user_friendly access to all spatially referenced information.**
- 2. Protect sensitive and/or proprietary information.**
- 3. Be compatible with existing GIS within the region.**
- 4. Avoid duplication of effort, thus keeping costs down and saving money.**
- 5. Insure data maintenance and maximize data quality for system users.**
- 6. Develop work flows that include assembly and integration of spatial data.**
- 7. Provide on going GIS training and education for users.**

Descriptions of Existing GIS Operations

Technical Support / Training

Technical Support refers to answering calls from end users regarding the GIS software and data. This also includes installing and maintaining GIS software.

Training includes individual training and setting up formal training sessions.

This operation is ongoing and staff supporting it require a strong understanding of GIS software, existing custom applications, and data.

***The average time spent per week on this activity is approximately 20 hours.**

Needs Assessment:

- 1. Inventory/Interview Existing & Potential Users**
- 2. Identify Existing Data and Future Data Needs**
- 3. Develop Lists and Brief Descriptions of**
 - *Proposed Applications/Enhancements**
 - *Proposed Maps**

List of Proposed Applications:

Parcel Information: This would allow staff to type a parcel number or street address and have access all relative information. The map would zoom the selected parcel at a predefined scale and highlight it. This would speed up staff response time to external customers and centralize parcel level information.

Community Notification: Identify a parcel by address or APN and generate a mailing list for public hearing notification. This application could produce the location map sent with the notification showing the three hundred foot buffer and the notified properties. This would reduce staff time required to create mailing lists for public hearings.

Identify Building Site Location: Locate parcels with zoning, acreage, frontage and access requirements to met developers needs. This application could also respond to enquiries such as how many apartment complexes are located within the City or planning area or where can I locate a business that requires a 3 acre parcel with a C-2 zoning .

Document Management: Link parcels to digital files such as staff reports, newspaper articles, and scanned permits. This application should be piloted in a small area to show the functionality. Existing hard copy information would be scanned into the system. This would take a great deal of time and expense. Requiring digital data submission formats would allow new data coming in to be incorporated into the system.

Pavement Management System: Document age and condition of roadways. Coordinate road work with other infrastructure upgrades such as sewer/ water etc. This could be used to classify the roads and help develop a circulation plan.

Model Water/Wastewater Systems: This would develop an inventory which could identify maintenance scheduling. Static flow models could be developed to identify impacts of planned or emergency service interruptions. Cost projections for system expansion could be calculated.

Emergency Vehicle Routing System: Route emergency vehicles based on current locations and traffic patterns based on time of day.

Set 1, 3 and 5 Year Goals

- 1. Reference back to the needs assessment.**
- 2. Provide a decreasing amount of detail for each year (Year one is more detailed ...).**
- 3. Three and Five year goals: Best interest of organization based on needs, not current staff levels.**
- 4. Define Success!**

Example Year 1 Goals

GIS Goals and Objectives - 2003

Data Development:

1. Finnish cross referencing addresses to assessors parcel numbers.
2. Input the sewer and water distribution systems.
3. Extract and symbolize each map data layer.
4. Develop surface model.
5. Update land use codes for traffic model.

GIS Applications:

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Maps:

Zoning - Including addresses and APN's.

General Plan - Large with street names.

Progress Reporting

1. Reference Back to the Goals

2. Decide on Reporting Interval

3. Progress Reports Should Become Part of the Strategic Plan:

- *Reference Accomplishments**

- *Identify Current Activities**

- *Describe tasks for next reporting period**

- *Identify Issues / Barriers to Success**

4. Include Year End Summary

Example Quarterly GIS Status Report

October 1, 2001

Third Quarter 2001 Accomplishments:

- 1)..... General Plan designations coded in parcel layer.
- 2)..... Zoning coded in parcels layer.
- 3)..... Data Menu application completed and distributed.
- 4)..... Road labels layer developed in Geodatabase format and included in Data Menu.
- 5)..... City Boundary and Planning Area Boundary adjusted to match new parcel layer.
- 6)..... Draft Zoning Map plotted.
- 7)..... Map of Glenbrook basin showing parcels served by sewer plotted.
- 8)..... Map of Glenbrook basin showing annexation strategy and phasing plan.
- 9)..... Xtools downloaded and available for use.
- 10)..... Parking District, Downtown, and Redevelopment Agency layers created.

Current Projects:

- 1).....^o Labeling site addresses in parcel layer 1/3 completed.
- 2)..... Planning stage for pilot project which includes selecting a pilot area, closing the building polygons in the area, verifying addresses, scanning permits and AP maps.
- 3)..... Zoning and General plan designations need to be plot checked.

Outstanding Issues:

- 1)..... May need to upgrade video cards if RAM upgrade does not improve performance.
- 2)..... RAM upgrade required on computers that have Arcview.
- 3)..... Spatial Analyst extension for Arcview would benefit projects where slope and aspect are issues.
- 4)..... Need to develop a data update procedure with county relating to assessor s data imported into Govtech and GIS data.
- 5)..... Engineering Department currently not contributing to GIS development.
- 6)..... Windows 2000 not installed on Community Development Department Computers.
- 7)..... Individual training programs need to be created for community development staff.
- 8)..... Lack of comprehensive information management plan has resulted in fragmentation of data and barriers to GIS system development and implementation.

Summary-

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GIS Operational Planning

1. Identify Existing GIS Operations / Staffing

- *Map Production**
- *Technical Support**
- *Training**
- *Data Maintenance**
- *Application Maintenance**

2. Identify Customer or User base

3. Develop Methods of Tracking Success

4. Benchmarking

5. Develop Budget / Identify Ongoing Costs

- *Hardware and Software Needs**

Elements of a GIS Project Plan

1. Project Goal

*Concise, two-three sentences that describe reason for planning effort.

2. Project Background

*Provide enough detail to inform outside parties as to how current situation was arrived at.

3. Scope of Work

*Describe deliverables

4. Detailed Task List

When you eliminate the possible, only the impossible remains .

Planning for Implementing GIS into Existing Operations:

Requires same tools used in both operational and project planning

Document existing operation

- *Identify all data inputs and outputs**
- *Identify what works and what doesn't**

Document proposed operation (Design Specs)

- *Involve users from the beginning**

Develop a schedule for phasing out tasks

Additional Notes: Planning for Implementing GIS into Existing Operati

Complexity: Number of different items that must be dealt with at a given time

Uncertainty: Variability caused by materials or work procedures and ability to predict problems or procedures necessary to complete job

Interdependence: Change of state of one element affects others

The more complex and uncertain and interdependent the functions to complete a job, the harder it is to introduce new technology.

Additional Notes:

Planning for Implementing GIS into Existing Operations:

Training -

Start as early as possible.

Build into project schedule.

Summary:

- 1. GIS Strategic Planning**
- 2. GIS Operational Planning**
- 3. GIS Project Planning**
- 4. Implementing GIS into Existing Operations**

References

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Haack, 2002. "What's your plan? An argument for strategic planning"

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Huxhold & Levinsohn, 1995. "Managing Geographic Information Systems"

PMBOK — Project Management Body of Knowledge Various

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