GES 678: Week 1

Syllabus Week

2025-08-27

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Assignments

Reading Assignments

- Questions and Discussions about weekly readings, due at 6pm weekly

Final Exam

- Presentation, on December 15

Textbook

Thinking about Geographic Information Systems for Managers, 4th ed. (Tomlinson, Esri Press)

Lecture

Planning is the key to success:

Planning provides purpose and direction to the program.

Why GIS?

- Is GIS the solution to a problem?

    - Does GIS actually fit into the need? Is it the best tool for the job?
    - *e.g.* you would't use GIS for accounting, or for HR.

- Does GIS address an organizational need?
- Are there other solutions that better fit?

    - Excel is likely better for accounting.
    - Work order system maybe better for asset management

- Is GIS being used successfully elsewhere in the organization?

    - It's a hard sell to start using GIS, and you don't want to duplicate efforts.
    - To build databases, datasets, repositories, it helps to have all GIS users collaborating.

Barriers to using GIS:

- No time
- No budget
- No staff
- No management support or understanding
- Already have an older (maybe deprecated or outdated) plan

Key reasons to plan:

- No existing plan
- Current plan out of date
- Current plans do not address GIS development, may only focus on technical aspects, etc.
    - Could there be an older plan, which has been dropped, which can be revived?

How to make a plan to implement GIS:

- Give purpose and direction to the program
- Establish a framework for success and a metric to measure against
- Establish the program
    - Should it be centralized? Should other departments or entities have their own GIS specialists?
- Align program to the organization's mission.

5 Ws:

- Who
- What
    - Info products
    - Data
    - Soft/hardware
    - Procedures
    - People
- Where
    - Are the workers physically on-prem?
- When
- Why

- – How does this align with the organization's goals?
- – Why use GIS to address the organizational problems?

Planning Steps (Tomlinson)

1. Strategic Purpose
2. Building the Foundation
3. Technology Seminar
4. Describe Information Products
5. Data Design
6. Logical DB Design
7. System Requirements
8. Cost/Benefit, Mitigation, Risk (disaster recovery) analysis

   - Could the project lose funding every year?
   - Could software updates cause issues?

9. Plan the implementation

Strategic Planning

- Strategic purpose of the organization
- Mission statement
- Strategic purpose of the GIS program, specifically

Planning Document – Strategic Plan

- Current state of affairs
- Vision of the program
- Measurable goals and objectives (SMART goals?)
- Actions to move forward with timetables
- Directly identifies people, resources, and equipment

All of the above must be done in context of the organizational framework, and incorporated into the overall business strategy.

Elements of a Plan

- Mission Statement

  - – Big Picture: why does your organization exist? *e.g.* Dept of Commerce has **COMMERCE** written on their building
  - – Different statements can exist for different entities in an organization.

            ∗ If so, it should tie into the overall statement
- – Connected to a mandate
- – Vision Statement
  - ∗ Extension of mission statement into the future

Mission Statement Examples:

"USGS monitors, analyzes, and predicts current and evolving Earth-system interactions and delivers actionable information at scales and timeframes relevant to decision-makers."

"The Census Bureau's mission is to serve as the nation's leading provider of quality data about its people and economy."

"MD State Geographic Information Ofice's mission is to 1. Improve the quality and lower the cost of government services, through collective investment in and effective application of geospatial data and systems and 2. Reach beyond government by making data freely and publicly available to the fullest extent possible in consideration of privacy and security."

Guiding Principles

- Organizational values
- Behavior of the organization
- *How* you want to achieve the mission

Guiding principles are often too vague and generic (e.g. Google wants to change the world)

NOTE: computer died here, but most of the rest of the discussion revolved around the upcoming assignment.