

GEOGRAPHICAL INFORMATION SYSTEMS

GIS Project Design and Management

by

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CHAPTER OUTCOMES

- By the end of this chapter, students should be able to:
 - ✓ Have the ideas the basic types of GIS projects
 - ✓ Explain and discuss the important steps/phases in designing/managing a GIS project

CONTENTS

- Introduction
- Types of GIS project
- Phases in development of GIS system

Introduction

- What causes the failure of a GIS project?
 - ✓ *Over budget*
 - ✓ *Over schedule*
 - ✓ *System fails to achieve the desired outcome*
 - ✓ *Scope is poorly defined*
 - ✓ *No quality standard*

Phases in GIS Project Development

- In developing a GIS system, SDLC (Software Development Life Cycle) can be used as a guide:

1) Requirement gathering

2) Design

3) Implementation

4) Testing

5) Deployment

6) Maintenance

Requirement gathering

- Identify the problems – what is/are the problems that need GIS as the solution?
- Who is the client?
- What are the final products? – map, reports etc
- What are the data needed? Where to get the data?
- What software can be used for the development?
- What specifications of hardware are needed for the GIS system?

Design

- Design the database
- Design the integration of database (spatial and non-spatial)
- Processing spatial and non-spatial data according to serve the needs of the system – data might need to be combined, merged, clipped etc.
- Verifying the coordinate systems
- Plan for the intended analyses
- Design the interface

Implementation

- Executing the system as a whole
- Integrating sub systems
- Manipulation of analysis to generate the intended products (as requested by client)
- Generating final products (such as reports and maps)

Testing

- Quality checking on the system
- Finding errors and fixing them
- Client and developer need to communicate a lot in this stage
- The testing result should be within the agreed scope (in the Requirement gathering phase)

Deployment

- System is fully delivered to client
- System should be working perfectly
- The errors found in testing phase should have been fixed before deployment

Maintenance

- After the GIS system is fully operational
- To ensure that the GIS system continues to perform efficiently (peak performance level)
- Includes fixing bugs from time to time
- Developer gives advice/suggestion when client faces certain problems with the system
- Includes updating versions (if relevant)

Think GIS way...

**In your opinion,
which step(s)
consume longest
time?**

