

Why Most GIS Projects Take Too Long

Many Delays Have Little to Do with Technology

Introduction

GIS projects often take longer than expected

The common explanation is that GIS is complicated

Sometimes it is

But many delays have little to do with technology

Projects usually slow down because:

- Decisions are delayed
- Data is not ready
- Responsibilities are unclear
- Requirements keep changing
- Staff are not available
- Integrations are overlooked
- Nobody clearly defines “done”

The good news is that most of these problems can be identified before they become expensive delays

1. Start With a Ready Agency

Before implementation begins, make sure the agency is prepared

Before the project starts

- Define the business objectives
- Identify the project owner
- Identify the decision-makers
- Identify required staff
- Inventory existing data
- Identify required integrations
- Establish the budget
- Establish the schedule
- Define what success means

Ask the vendor

“What do you need from us, and when do you need it?”

Put the answer into the project schedule

2. Give Someone Authority to Decide

Projects slow down when nobody can make a decision

A vendor asks a question

The question moves from employee to supervisor to manager to department head

The project waits

Establish responsibility for:

- Requirements
- Data
- Configuration
- Testing
- Scope changes
- Final acceptance

Each major decision should have **one responsible decision-maker**

Ask

“Who has the authority to make this decision?”

If the answer is unclear, expect delays

3. Control the Requirements

GIS projects often grow after they begin

A project that starts with mapping may quickly expand into:

- Work orders
- Inspections
- Billing
- Permitting
- Dashboards
- Mobile applications
- Customer portals
- Advanced reporting
- Multiple integrations

Some additions are worthwhile, too many additions can delay the entire project

Divide requirements into:

Must Have

Required for a successful launch

Should Have

Important, but can follow launch

Later

Useful enhancements that can wait

Before approving a new requirement, ask:

“Is this important enough to delay the project?”

4. Get the Data Ready

Data is one of the most common hidden causes of GIS delays

Your data may be:

- Incomplete
- Inaccurate
- Outdated
- Stored in several locations
- In different formats
- Missing important attributes
- Dependent on employee knowledge

Determine before implementation:

- What data exists
- Where it is stored
- Who owns it
- What condition it is in
- What must be cleaned
- What must be created
- What can be imported
- What must be converted

Critical question

“How much data preparation is required before the GIS can be used?”

Do not assume data cleanup will be quick

5. Make the Agency's Responsibilities Clear

A vendor cannot complete a project if the agency does not provide what is required

Common delays include waiting for:

- Data
- System credentials
- Decisions
- Approvals
- Testing
- Employee participation
- Information from another software provider

Track every action

Action	Owner	Due Date
Provide data	_____	_____
Approve configuration	_____	_____
Test system	_____	_____
Provide credentials	_____	_____
Approve results	_____	_____

Rule

Every action needs one owner and one due date

6. Protect Employee Time

The people who know the agency's operations are often the people with the least available time

GIS projects need their knowledge

Plan when employees will:

- Review requirements
- Review data
- Test workflows
- Verify field information
- Attend training
- Approve results

Ask

“How much staff time will this project require?”

Then put that time into the project schedule

Staff participation is a project resource, just like money and equipment

7. Treat Integrations as Separate Projects

GIS often connects to:

- | | |
|---------------|--------------------------------|
| • CMMS | • ERP |
| • Work orders | • Document management |
| • Billing | • CCTV |
| • Permitting | • Customer information systems |

An integration can delay the GIS if the other system is not ready

For each integration, identify:

- System owner
- Technical contact
- Required data
- Data format
- Testing requirements
- Approval process
- Maintenance responsibility
- Completion date

Important

Do not hide integrations inside the general GIS schedule

Give each important integration its own milestones

8. Do Not Build Everything at Once

A GIS can support many functions

That does not mean all functions should launch together

Consider a phased approach

Phase 1

- Base mapping
- Critical infrastructure
- Asset information
- Search

Phase 2

- Field operations
- Inspections
- Work orders
- Maintenance

Phase 3

- Dashboards
- Advanced reporting
- Additional integrations
- Advanced workflows

Rule

Get something useful working before adding something else

A useful system today is often better than a perfect system two years from now

9. Test Early

Do not wait until the end of the project to discover problems

Test representative examples early

Test:

- Sample data
- Common workflows

- Field devices
- Integrations
- Reports
- User permissions
- Data updates

Use actual employees

Technical testing can confirm that software works

User testing confirms that **people can use it**

Ask:

“Can the employee who performs this job complete the task without assistance?”

If not, fix the problem before moving forward

10. Define “Done”

A project cannot finish if nobody agrees on what completion means

Define acceptance criteria

For example:

- | | |
|-------------------------------------|---|
| • Critical data is loaded | • Training is complete |
| • Users can find assets | • Critical problems are corrected |
| • Required information is available | • Agency representatives approve the system |
| • Field users can access the system | |
| • Required integrations work | |

Put acceptance criteria in the contract

This reduces disagreements at the end of the project

11. Make Meetings Produce Results

A project does not move forward because meetings occur

Meetings should produce decisions and actions

Every project meeting should answer:

- | | |
|-----------------------|----------------------|
| • What was completed? | • What happens next? |
|-----------------------|----------------------|

- Who is responsible?
- What is blocking progress?
- What decisions are required?
- Are we still on schedule?

Every meeting should produce:

- Decisions
- Assignments
- Due dates
- Identified problems

If a meeting does not produce action, ask whether the meeting is necessary

12. Watch for Early Warning Signs

Small delays can become large delays

Watch these areas:

Area	Status
Data	_____
Configuration	_____
Integration	_____
Testing	_____
Training	_____
Acceptance	_____
Go-live	_____

Use three simple statuses

Green — On schedule

Yellow — Risk of delay

Red — Behind schedule

Do not wait for a red status to discuss a problem

13. The 30-Day Test

When an issue appears, ask:

“What happens if this is still unresolved 30 days from now?”

Then ask:

“What can we do today to prevent that?”

This forces the project team to address problems before they become schedule problems

14. The Fast-Track Checklist

Before the Project

- Objectives are defined
- Project owner is assigned
- Decision-makers are identified
- Data is inventoried
- Integrations are identified
- Responsibilities are documented
- Acceptance criteria are defined
- Schedule is approved
- Staff time is available

During the Project

- Decisions are made quickly
- Action items have owners
- Action items have due dates
- Scope changes are controlled
- Data preparation is monitored
- Integrations are tracked
- Users participate
- Testing begins early
- Schedule risks are reported

Before Launch

- Critical data is validated
 - Users complete testing
 - Field workflows are tested
 - Integrations are tested
 - Training is complete
 - Critical problems are corrected
 - Acceptance is documented
 - Ongoing maintenance is assigned
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15. Ten Questions Before You Begin

Answer these questions before signing the implementation agreement

1. Who owns the project?

2. Who can make decisions?

3. What must the GIS accomplish?

4. Is our data ready?

5. How much staff time is required?

6. What systems must be integrated?

7. What can wait until Phase 2?

8. What does “done” mean?

9. What is most likely to delay the project?

10. Who will maintain the GIS after launch?

Final Thought

Most GIS projects do not take too long because someone cannot make a map

They take too long because decisions, data, people, requirements, and dependencies are not managed effectively

A successful GIS implementation does not require eliminating every problem

It requires finding problems early and resolving them before they stop the project

The three most important rules are simple:

Make decisions quickly

Control the scope

Hold everyone accountable for their commitments

Technology matters

But when a GIS project takes twice as long as expected, **look at the process before blaming the software**