

# Recovering from a Failed GIS Project

## How to Evaluate Existing Investments, Preserve Valuable Data, and Get Back on Track

### Introduction

A failed GIS project does not mean everything was lost.

Your agency may still have valuable:

- GIS data
- Maps
- Databases
- Asset information
- Work-order history
- Documents and photographs
- Software
- Employee knowledge
- Consultant work

**Do not start over until you know what you already have.**

The recovery process is simple:

**Preserve → Assess → Prioritize → Simplify → Rebuild → Measure**

---

### 1. Stop and Protect What You Have

Before making major changes, preserve the existing investment.

#### Immediate checklist

-  Back up all GIS databases
-  Preserve maps and drawings
-  Preserve spreadsheets and asset lists
-  Preserve photographs and documents

- ☐ Preserve work-order and inspection information
- ☐ Preserve system documentation
- ☐ Preserve custom scripts and configurations
- ☐ Document current users and access
- ☐ Review vendor contracts
- ☐ Confirm who owns the data

### **Critical question**

**“If we stopped using this system tomorrow, what information would we lose?”**

Make sure the answer is clear before changing anything.

---

## **2. Determine Why the Project Failed**

Do not assume the software is the problem.

Check the problems that apply:

- ☐ Employees do not use the system
- ☐ The system is too difficult
- ☐ GIS data is inaccurate
- ☐ GIS data is outdated
- ☐ Important data is missing
- ☐ The system costs too much
- ☐ The system requires too much staff time
- ☐ Field employees cannot use it
- ☐ GIS does not integrate with other systems
- ☐ Employees use spreadsheets or paper maps instead
- ☐ Only one employee understands the system

- ☐ The system does not support actual workflows

Complete this sentence:

**Our GIS project failed because \_\_\_\_\_.**

If you cannot complete it, keep investigating.

---

### **3. Separate the Software from the Data**

A failed GIS application may contain valuable data.

Evaluate them separately.

#### **Software**

- ☐ Does it still meet our requirements?
- ☐ Is it supported?
- ☐ Is it secure?
- ☐ Is it affordable?
- ☐ Can employees use it?
- ☐ Can it integrate with required systems?

#### **Data**

- ☐ Is it accurate?
- ☐ Is it complete?
- ☐ Can assets be located?
- ☐ Are asset IDs reliable?
- ☐ Are important attributes present?
- ☐ Can the data be exported?
- ☐ Is the data documented?

#### **Remember**

**Do not discard good data because you dislike the software.**

---

#### **4. Find Your “Shadow GIS”**

A failed GIS often creates unofficial systems.

Employees may maintain information in:

-  Spreadsheets
-  Paper maps
-  CAD files
-  Personal databases
-  Shared folders
-  Email
-  Employee notebooks
-  GPS files

Ask:

**“Where do employees go when they need information quickly?”**

That answer may reveal what the official GIS is missing.

---

#### **5. Identify What Is Worth Saving**

Evaluate each major dataset.

| Dataset    | Condition | Action                  |
|------------|-----------|-------------------------|
| Water      | ___       | Keep / Repair / Replace |
| Sewer      | ___       | Keep / Repair / Replace |
| Stormwater | ___       | Keep / Repair / Replace |
| Parcels    | ___       | Keep / Repair / Replace |
| Addresses  | ___       | Keep / Repair / Replace |

| Dataset     | Condition | Action                  |
|-------------|-----------|-------------------------|
| Facilities  | ___       | Keep / Repair / Replace |
| Work orders | ___       | Keep / Repair / Replace |

Rate each dataset:

**5 — Excellent**

**4 — Good**

**3 — Usable with cleanup**

**2 — Major cleanup required**

**1 — Rebuild required**

**Do not automatically rebuild everything.**

If existing data is usable, **clean it and preserve it.**

---

## 6. Return to the Business Problem

Forget the technology for a moment.

Ask employees:

**“What information do you need to do your job that is difficult to find today?”**

Then identify the most important problems.

### Prioritize

#### Must Have

- ☐ Asset locations
- ☐ Asset information
- ☐ Searching
- ☐ Field access
- ☐ Basic reporting

#### Should Have

-  Work-order integration
-  Inspections
-  Maintenance history
-  Documents
-  Dashboards

#### Later

-  Advanced analytics
-  Additional integrations
-  Automated workflows

#### Rule

**Build what employees need. Do not build complexity simply because it is available.**

---

### 7. Rebuild Around Workflows

The GIS should support actual work.

Choose your highest-value workflows:

-  Find an asset
-  Inspect an asset
-  Repair an asset
-  Create a work order
-  Update an asset
-  Respond to an emergency
-  Prepare a project
-  Produce a management report

For each workflow, define:

**Current problem:** \_\_\_\_\_

**Desired process:** \_\_\_\_\_

**Success measure:** \_\_\_\_\_

---

## **8. Rebuild in Small Steps**

Do not attempt another massive implementation.

### **Phase 1**

- ☐ Reliable base map
- ☐ Critical infrastructure
- ☐ Asset searching
- ☐ Basic asset information

### **Phase 2**

- ☐ Field access
- ☐ Inspections
- ☐ Work orders
- ☐ Maintenance history

### **Phase 3**

- ☐ Dashboards
- ☐ Advanced reporting
- ☐ Utility tracing
- ☐ Additional integrations

**Each phase should provide useful value before the next phase begins.**

---

## **9. Measure the Recovery**

Establish measurements before making changes.

## Measure

-  Time to find an asset
-  Time to produce a map
-  Data accuracy
-  Data completeness
-  Number of GIS users
-  Field usage
-  Time required to update data
-  Number of shadow systems
-  Work-order efficiency

## Example

**Before:** Asset search takes 15 minutes

**Target:** Asset search takes 2 minutes

**Before:** GIS updates take 60 days

**Target:** GIS updates take 14 days

The exact targets will vary.

The principle does not:

**Measure before. Measure after.**

---

## 10. Prevent Another Failure

Before approving the recovery project:

-  Define the scope
-  Define deliverables
-  Define acceptance criteria
-  Confirm data ownership

-  Require data export capability
-  Require documentation
-  Establish backup procedures
-  Establish security requirements
-  Establish training requirements
-  Establish maintenance responsibility
-  Establish support procedures
-  Establish measurable results

**Ask any new GIS provider:**

**“What can you preserve from our existing investment?”**

Then ask:

**“What would you replace, and why?”**

A good provider should be able to answer both questions.

---

## **The 90-Day Recovery Roadmap**

### **Days 1–30: Assess**

-  Back up everything
-  Inventory the system
-  Evaluate data
-  Interview users
-  Identify shadow systems
-  Review contracts
-  Identify critical problems

**Deliverable:** A clear assessment of what to keep, repair, replace, or discard.

### **Days 31–60: Plan**

-  Define business requirements
-  Prioritize data
-  Define workflows
-  Establish success measures
-  Define implementation phases
-  Establish budget
-  Select implementation approach

**Deliverable:** A practical recovery plan.

### **Days 61–90: Begin**

-  Recover priority data
-  Clean critical datasets
-  Configure the core GIS
-  Test priority workflows
-  Train initial users
-  Begin field testing
-  Establish maintenance procedures

**Deliverable:** A working GIS that provides measurable value.

---

### **The Five Questions to Ask Before Spending More Money**

- 1. What exactly failed?**
- 2. What do we already have that is valuable?**
- 3. What do our employees actually need?**
- 4. What is the simplest solution that will solve those problems?**

## 5. How will we know the recovery succeeded?

---

### **Final Thought**

Do not throw away valuable data because the previous GIS failed

Do not spend more money simply because money has already been spent

Do not rebuild technology before understanding the problem

Instead:

**Preserve what you have.**

**Determine what has value.**

**Understand what went wrong.**

**Simplify the requirements.**

**Build around real work.**

**Measure the results.**

The goal is not to rescue the old GIS.

**The goal is to recover the value your agency expected from GIS in the first place.**