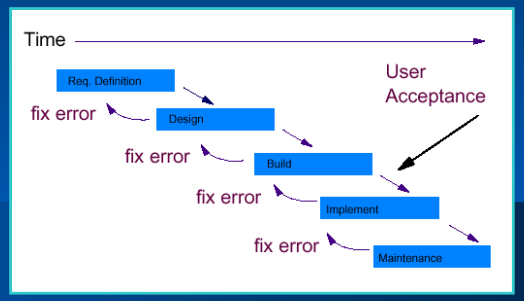
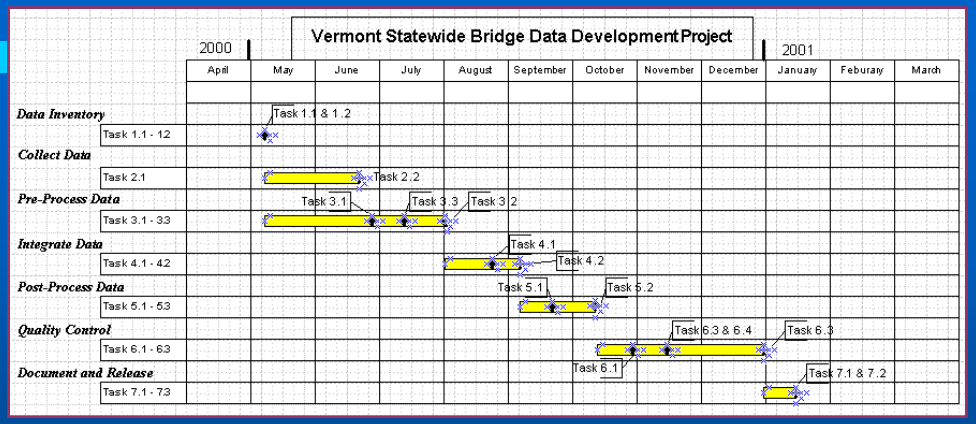
Successfully Managing Projects

BUDGET: COMPLETION OF BRIDGE PROJECT

LABOR	TIME ESTIMATE	TOTAL BUDGET
*QA/QC Bridge Point Locations**	160	$2,422.40
*Post Processing of Data***	60	$1,198.80
*Metadata***	6	$119.88
Fringe Benefits****		$1,511.40
Indirect Labor Charges *****		$5,132.76
TOTAL LABOR CHARGES	226	$10,385.24
UVM OCCUPANCY COSTS		$519.26
Contractual		$0.00
Supplies		$0.00
Travel		$0.00
Equipment		$0.00
Other Direct Costs		$0.00
TOTAL OTHER COSTS		$0.00
TOTAL BUDGETED COSTS		**$10,904.50**

* = Direct labor rate of 15.14
** = Direct labor rate of 19.98
*** = Fringe at 0.404
**** = Indirect at 1.372





Presenter: Steve Sharp, VCGI Senior Project Manager

Presentation Outline

- Fundamentals of Project Management
- Planning Your Project
- Managing Your Project
- Real-world GIS Project Management
- Resources

Scope of Presentation

- Addresses small to medium sized projects
  - Small projects are defined as anything over 100 hours
- Presented from a non-profit perspective, however, basic principles still apply

Fundamentals of Project Management

- **Murphy's Laws of Project Management**
  - No major project is ever installed on time, within budget, and with the same staff that started it. Yours will not be the first!
  - Projects progress quickly until they become 90 percent complete, then they remain 90 percent complete forever.
  - If project content is allowed to change freely, the rate of change will exceed the rate of progress.
  - No system is ever completely debugged. Attempts to debug a system inevitably introduce new bugs that are even harder to find.

Source

Fred Pryor Seminars: Project Management

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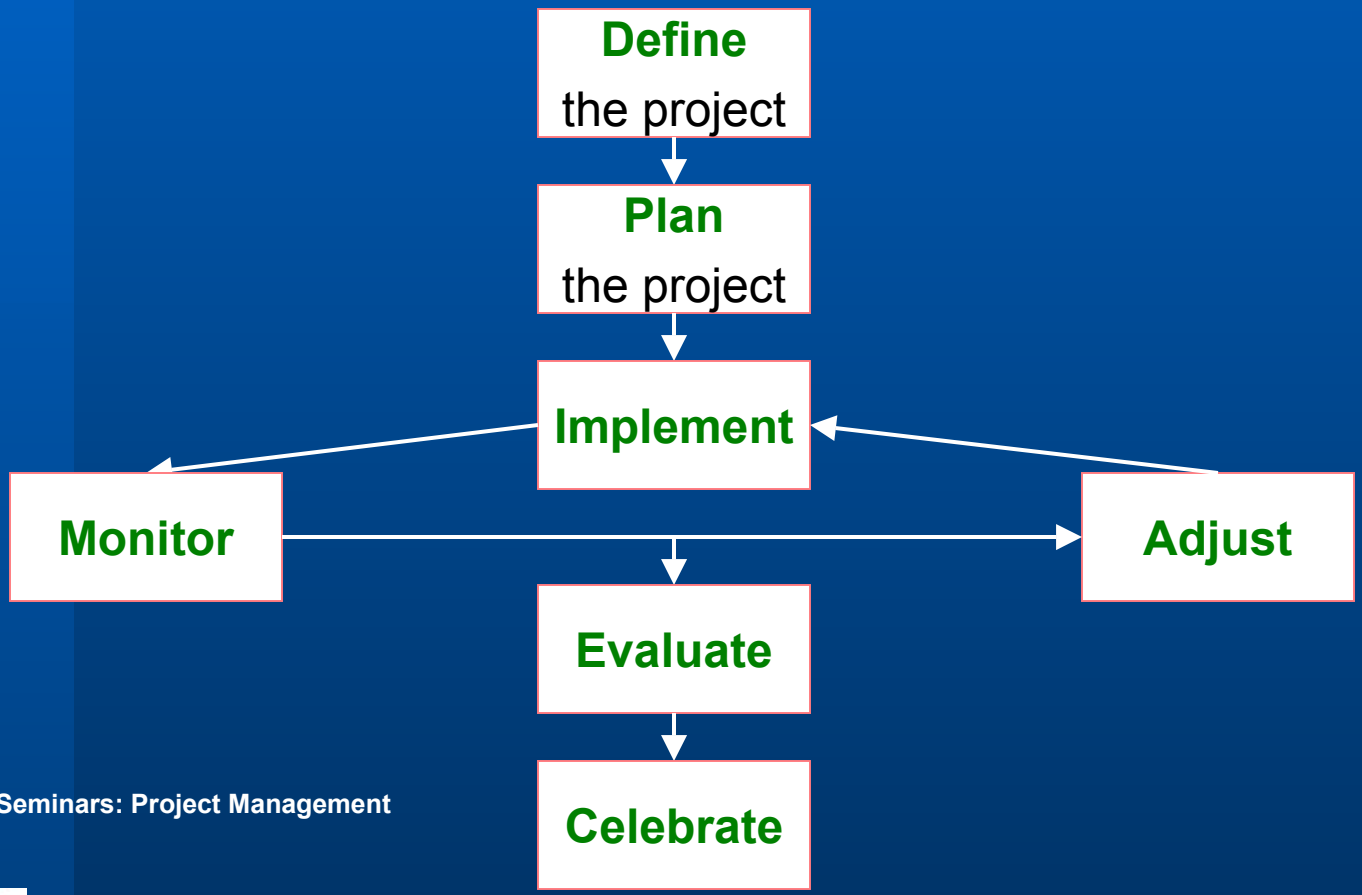
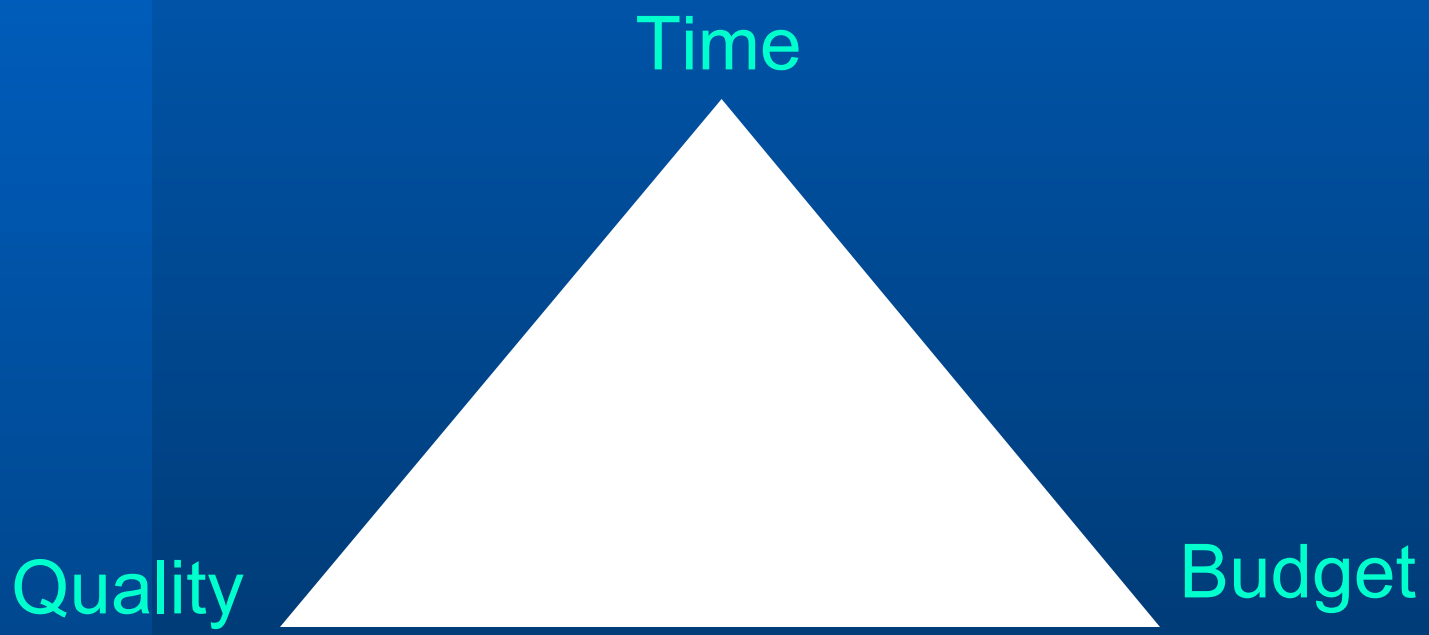
Fundamentals: Project Life Cycle



Source

Fred Pryor Seminars: Project Management

Fundamentals: The "Triple Constraints"



Which is the driver?

Fundamentals: Project Manager's Role

- Every project should have a lead Project Manager
  - * Do not spread the lead role between two or more people. The buck must stop with one person!
- What does the Project Manager do?
  - Translate customer demands into realizable and manageable product specifications;
  - Meet with client(s) and team members;
  - Makes detailed project plans;
  - Gives verbal and written reports to the management;
  - Looks at details without forgetting the big picture;
  - Meets predefined project objectives.

Source

(April 1997) J.G.A. Bestebreurtje, Manchester Metropolitan University

Planning Your Project: Preliminary Scoping

- Goals and Objectives of project
  - An easy to use web site that meets user needs,
  - Improved access to Vermont GIS data (data warehousing and interactive mapping),
  - A scalable, stable, and easy to maintain web architecture.
- Implementation options (quick look)
  - Modify existing web site
  - Build a completely new web site
- Resources (quick look)
  - Hardware, software, personnel, cost

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Planning Your Project: Project Initiation Document

- If the project is still a “go” after the *Initial Project Scoping* phase, you will need to draft a “Project Initiation Document” (PID)
  - The PID is a detailed plan
  - It describes the environment in which the project will take place, the objectives of the project, the business case, tasks and milestones, specifications, etc.

Source

(April 1997) J.G.A. Bestebreurtje, Manchester Metropolitan University

PID: Background

- **Background of the Project**
  - Provides a frame of reference .
  - The background, mission and objectives ensure that there is a shared vision among all involved.
  - This shared vision also helps to put all things which are being demanded from the organization and the project staff into the right perspective.

Source

(April 1997) J.G.A. Bestebreurtje, Manchester Metropolitan University

PID: Goals, Objectives, Strategy

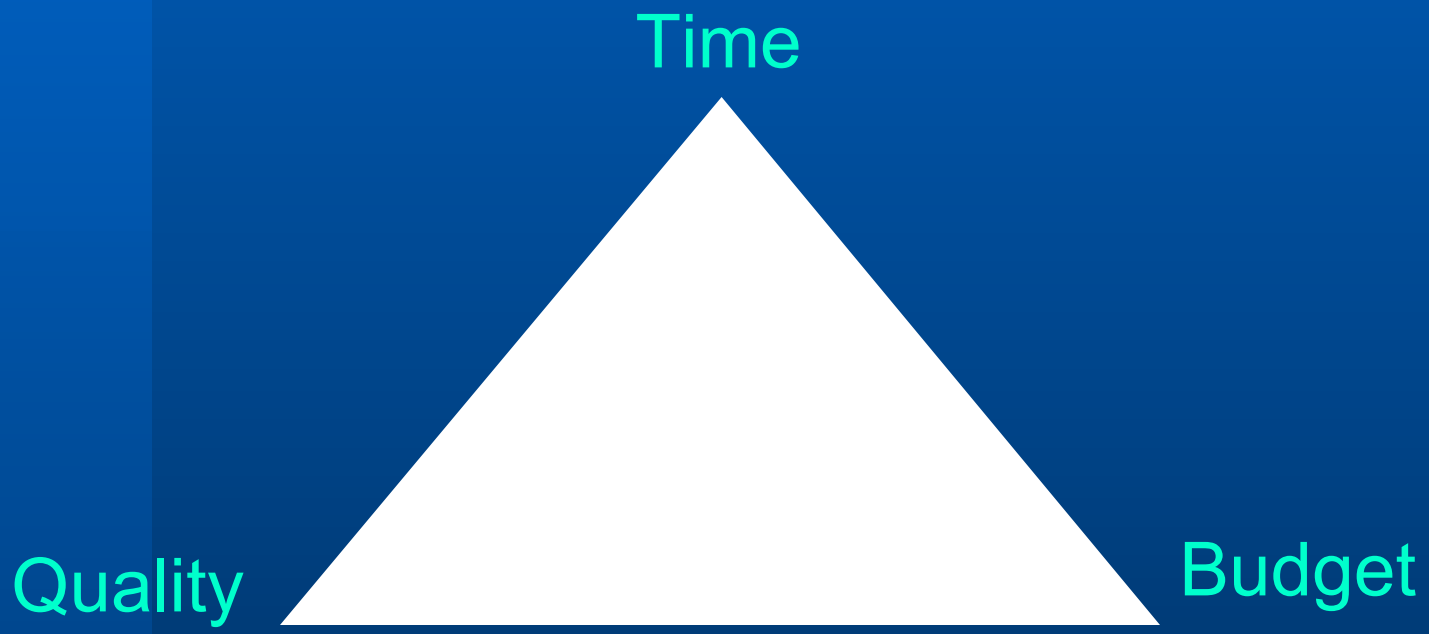
- Mission - Why are we doing this project?
- Objective - What will be done?
- Strategy - How we reach the objective?

* These items define the “scope” of the project. A clear scope helps to avoid “scope creep”.

Source

(April 1997) J.G.A. Bestebreurtje, Manchester Metropolitan University

PID: Contraints



Which is driver, middle, weak?

PID: Project Plan

- Major deliverables/milestones;
- Type of resources needed;
- Costs;
- Time estimates;
- Key assumptions ;
- Prerequisites;
- Risks;
- Quality Control.

Source

(April 1997) J.G.A. Bestebreurtje, Manchester Metropolitan University

PID: Deliverables, Milestones, Acceptance Criteria

- List/describe every deliverable.
  - Including functional requirements and specs
  - Make sure it is clear to everyone what has to be made.
- Create a deliverable flow chart (milestone chart).
- Define acceptance criteria
  - Ex: Must be delivered in shapefile format with FGDC metadata and meet VGIS standards, etc.

Source

(April 1997) J.G.A. Bestebreurtje, Manchester Metropolitan University

PID: Get Sign-off on PID and Kick-off Project

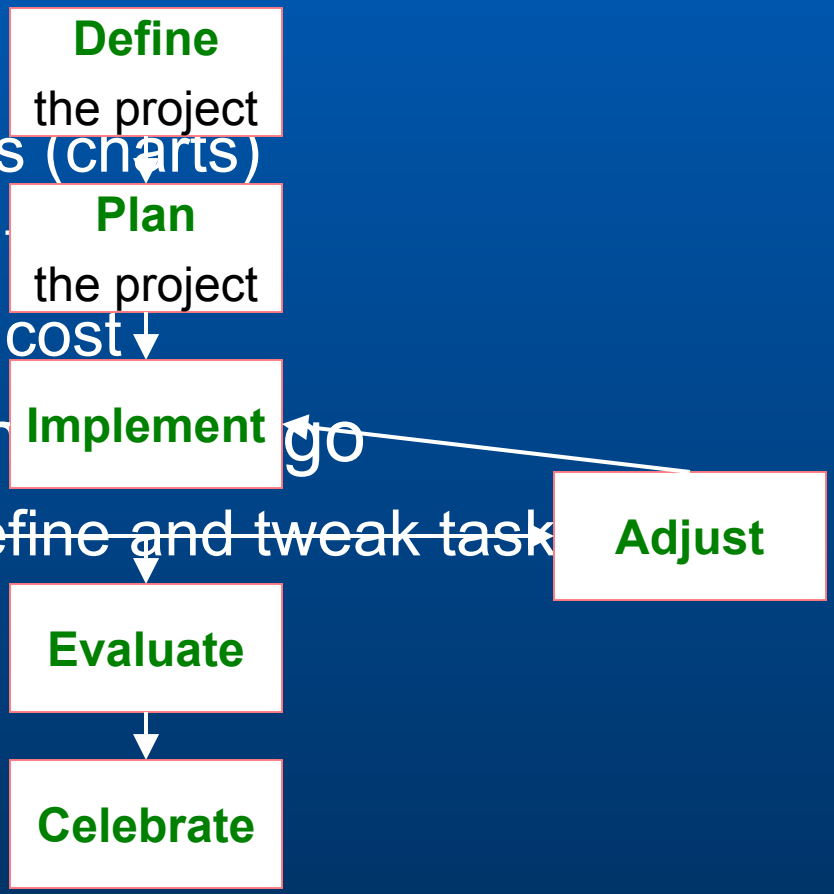
- The PID has to be presented to the client.
- The PID should be included as an attachment to any contract between a client and a consultant.
  - This is of the utmost importance since the PID is a major management tool for controlling the project.

Source

(April 1997) J.G.A. Bestebreurtje, Manchester Metropolitan University

Managing Your Project: Monitor & Adjust

- **Monitor Progress**
  - Use graphical tools (charts)
  - Planned vs actual
  - Planned vs actual cost
- Refine project plan as go
  - eed to refine and tweak task milestones as you



Managing Your Project: Client Relations

- **Keep the client in the loop**
  - Meet with client periodically
  - Discuss issues
  - Review status of project
  - Good to have deliverables scattered throughout every stage of the project so the client is able to see progress.
    - Identify any misunderstandings before it is too late.

Real-World GIS Project Management

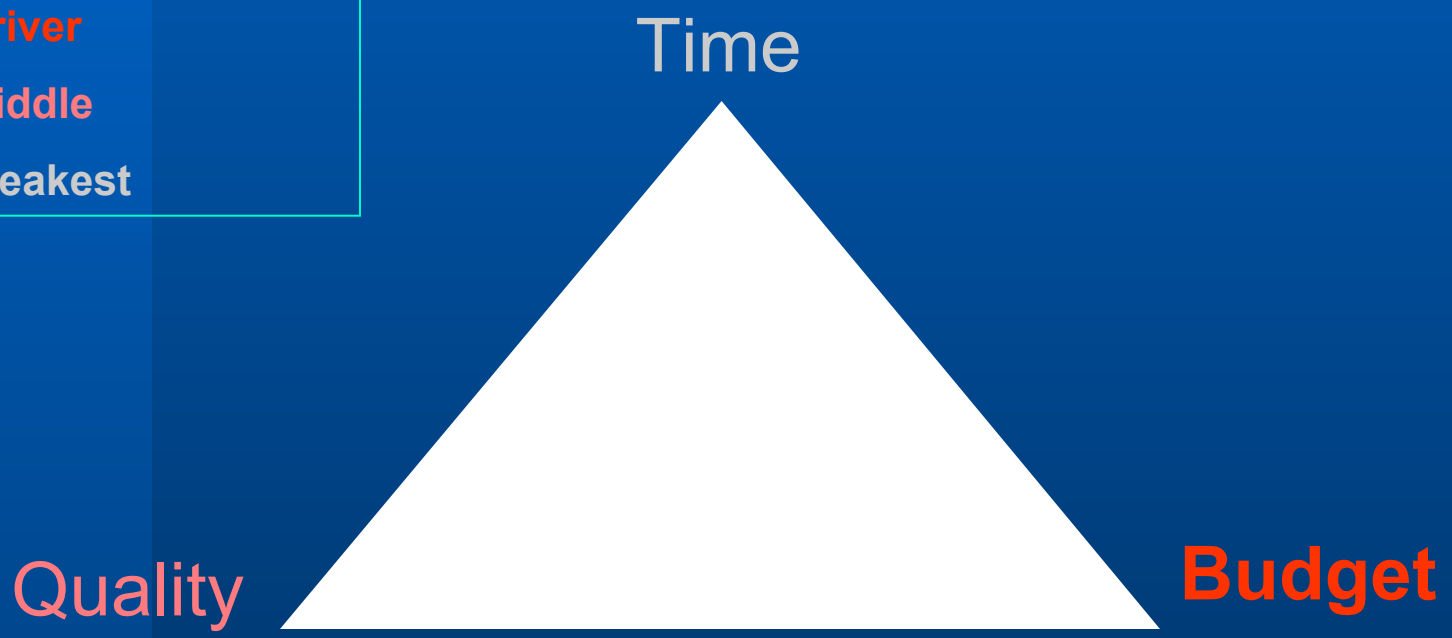
- VCGI – Statewide Bridge Data Development Project
  - Project Scoping
  - Project Initiation Document (workplan)
  - Managing project
  - Outcome

Bridge Project: Scoping

- Surveyed RPCs and VTrans to determine what kind of bridge data was available.
- Documented results of survey.
- Put together a proposal.
- Presented proposal to RPCs and Vtrans.
- Received feedback and support for project.

Bridge Project: Constraints

- Driver
- Middle
- Weakest

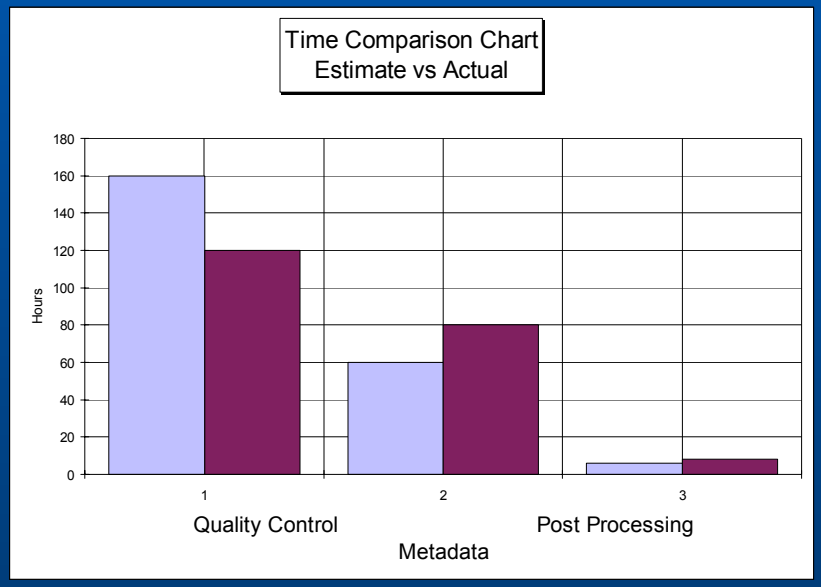


Bridge Project: Project Initiation Document

- Drafted PID (pdf)
  - Mission and Objectives
  - Deliverables and specifications
  - Tasks and Milestones
  - Budget
- Presented to VTrans
  - Signed contract
  - Initiated project

Bridge Project: Managing Project

- Track progress against milestone chart
- Check estimated time against actual time
- Check estimated cost against actual cost
- Don't wait until you're in trouble to adjust



Bridge Project: Results

- **Deliverables:**
  - Statewide bridge layer
    - **Over 7000 points**
    - **QA/QCed against 1:5000 orthos**
    - **Includes "Best available" data**
- **Project Management Results**
  - 6 months later than anticipated
  - Budget (5% over)
  - High quality data

Project Management Resources

- **VCGI Resources**
  - http://www.vcgi.org/project_management
- **Other Resources**
  - Project Management Institute
    - http://www.pmi.org

Contact Information

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Questions and Discussion

- Personal Experiences