How to keep your Enterprise GIS Project on Track

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Execute and Control

• Execute
  - After planning
  - Before closing

• Control
  - Throughout
Execute versus Control

- **Execute**
  - Follow plans
  - Deliver

- **Control**
  - Track
  - Monitor
Business Rhythms

- Projects execute in rhythms
  - Monthly, weekly, daily, periodically
  - Project Manager orchestrates

- Scale appropriately
  - Project size
  - Contract type
  - Stakeholder expectations
Execute

• Manage Project Execution
  - Acceptance
• Manage Team
• Communicate
Manage Project Execution

• Perform project activities
  - Per schedule
  - Action items
  - Per plans
  - Ensure best practices

• Create deliverables

• Acceptance
Acceptance

- On each deliverable
  - Signed
- On tests
  - Prototypes
- Final acceptance
Manage Team

- Build the team
  - Sometimes continually
- Develop team members
  - Improved team members
- Manage team members
  - Individual performance
Communications

- Customers / Stakeholders
- Team
- Management
Communications – Customer / Stakeholders

- Maintain customer / stakeholder relationship
  - Beyond status reports
  - Peer to peer
- Know customer / stakeholder organization
  - Formal and informal
- Know customer / stakeholder policies
Communications - Team

- PM provides
  - Vision
  - Assignments
  - Coordination
- Team provides
  - Status
  - Issues escalated early
### Communications – Team Motivation

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Achievement</strong></td>
<td>Create environment where people can complete tasks</td>
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<tr>
<td><strong>Recognition</strong></td>
<td>Say thank you. Give credit in reports.</td>
</tr>
<tr>
<td><strong>The work</strong></td>
<td>Make sure team members know why. Make the work meaningful.</td>
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<tr>
<td><strong>Responsibility</strong></td>
<td>Delegate. Give responsibility so everyone feels accountable.</td>
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<tr>
<td><strong>Advancement</strong></td>
<td>Help team members gain skills. Provide positive reports.</td>
</tr>
<tr>
<td><strong>Growth</strong></td>
<td>Help team members get something out of the project personally.</td>
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Communications - Management

- Regular status and reviews
  - In depth when needed
- No surprises
Control
Control

- Scope Management
- Schedule Management
- Cost Management
- Performance Reporting
- Change Management
- Quality Management
- Risk Management
- Subcontractor Management
Scope Management

- Understand scope in detail
- Ensure team understands scope
- No unauthorized changes unless
  - They have good intentions
  - They advance technology
  - They are small
  - They are exciting
Schedule Management

• Work to the schedule
  - Must be kept up to date
  - Communicate to team often

• Adjustments
  - Resources, OT, parallel work
Status the Schedule

- Gather inputs to status
- Set Project Status Date
- Update Actual Start/Finish Dates
- Update % Completion
- Move incomplete work
Review the Schedule

- Re-analyze schedule
- Review resource allocations
- Review delays for risks and impacts
Cost Management

- Earned Value
- Rolling Wave planning
- Validate project charging
Earned Value

- Is this project on track? It looks to be **under** budget.

- When we look at Earned Value, it’s actually **over** budget and behind schedule!
Earned Value

- Earned Value measures progress
  - How many images have been processed?
  - What percent of new roads have been added?
  - How many locations have been analyzed?
  - Is the software designed, developed, tested?

- Earned Value is compared against actuals spent
  - Under or over run

- Earned Value is compared against the plan
  - Ahead or behind schedule
Earned Value

- What’s needed to measure Earned Value
  - Plan
    - Budget plans need to be time phased
    - How much work is expected to be accomplished per period
    - How much budget is allocated to each piece of work
  - Actuals
  - Earned Value
    - Quantifiable methods
      - Milestone
      - 0 – 100
      - 50 – 50
      - Percent complete
Performance Reporting

- Customer / Stakeholders
- Team
- Management
Change Management

• Change is likely
  - Depends on the ability to recognize it
  - Depends on a well defined baseline
  - Should be planned for (e.g., CCB)

• Change must be managed
  - Be clear about the consequences
  - Uncontrolled change can derail a project
Change Management

- Contract changes
  - Customer authorized scope changes
- Internal replanning
  - Internally planned changes within scope
- Formal reprogramming
  - Over target baseline / schedule
Change Management

- **Contract changes**
  - Scope Change?
  - Yes
  - Customer Baseline Change?
  - Yes
  - Internal Baseline Change?
  - Yes

- **Internal replanning**
  - Scope Change?
  - No
  - Customer Baseline Change?
  - No
  - Internal Baseline Change?
  - Yes

- **Formal reprogramming**
  - Scope Change?
  - No
  - Customer Baseline Change?
  - Yes
  - Internal Baseline Change?
  - Yes
Quality Management

- Testing
- Release Management
- Reviews
  - Requirements, design, code, documents
- Phase gates
  - E.g., Internal test complete, ready to ship/deploy
Risks

The user expected a different user interface.
The technical solution is unworkable.
The actual data is different than the sample.
We don’t know how to solve the new software bug.
The subcontractor can’t deliver on time.
The lead developer is sick.
The hardware hasn’t arrived.
The test equipment cost more than planned.
The customer/stakeholder hasn’t approved the design yet.
The test equipment cost more than planned.
We didn’t budget for the integration testing.
The actual data is different than the sample.
The lead developer is sick.
The hardware hasn’t arrived.
The customer/stakeholder hasn’t approved the design yet.
Risk Management

- Identify Risks
- Handle Risks
  - Avoidance
  - Mitigation
  - Transfer
  - Acceptance
- Contingency Plan
Subcontractor Management

- Maintain points of contract
  - PM, technical, manager
- Align schedules often
- Provide feedback often
- Require quantitative progress assessments
- Accruals
Closeout
Closeout

- Verify customer / stakeholder acceptance
- Assess customer / stakeholder satisfaction
- Document lessons learned
- Close project internally and, if applicable, contractually
- Archive, dispose, return materials
Questions?
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