ISACA Charlotte Chapter

Big Data & Data Analytics

Project Management Considerations for Data Analytics
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Big Date & Data Analytics

Project Management
Objectives

• Learn how to manage data analytic projects
• Learn the difference between a data analytic project and a fishing expedition
• Learn how to know when it’s time to stop the analysis
• Learn how project management can be used to sustain your data analytics capability
Typical Questions When Approaching Data Analytics

• What analytics can we perform?
• How can we use data analytics in this audit?
• What are other companies doing with data analytics?

What’s wrong with these questions?
What is Project Management?

“The application of knowledge, skills, tools, and techniques to project activities to meet the project requirements”

Project Management Institute (PMI.org)
5 Project Management Processes

- Initiating
- Planning
- Executing
- Monitoring & Controlling
- Closing
Initiate

• An idea for a project will be carefully examined to determine whether or not it benefits the organization.

• During this phase, a decision making team will identify if the project can realistically be completed.
Initiate – Data Analytic Project

✓ Defined audit objectives
✓ Identified audit approach to meet objectives
✓ Identified audit tests to be performed

❓ Can data analytics be used to perform the testing?
❓ Does the audit team have the resources (people, time, and technology) to perform the analytics?
❓ Is the data available?
Planning

- A project plan, project charter and/or project scope may be put in writing, outlining the work to be performed.

- During this phase, a team should prioritize the project, calculate a budget and schedule, and determine what resources are needed.
Planning – Data Analytic Project

- Clearly define requirements of analytics
- Identify data sources, criteria
- Create time estimates (budget) for each analytic objective
- Prioritize analytics
Planning - Tools

Objective Analysis

Objective 1 Analysis - Identify and evaluate transactions not reflected in the proper period
1. Extract journal entries that were made immediately following the end of the fiscal year.
2. Extract journal entries where there is a credit to an expense account and no corresponding debit to another expense account.
3. Evaluate the journal entries to determine if they are reasonable, properly supported by documentation, approved by a manager, and properly recorded in the GL (in the correct period, the correct account, and for the correct amount).
Note: Accounts payable can be understated by recording post-closing journal entries (i.e., writing off liabilities to income);

Objective 2 Analysis - Identify transactions with a non-standard description
2. Retrieve transactions with no journal description
3. Select a sample to manually examine

<table>
<thead>
<tr>
<th>Deliverables Description</th>
<th>Complexity</th>
<th>Effort Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Top Vendors Analytic</td>
<td>Low</td>
<td>6</td>
</tr>
<tr>
<td>2. Payments below $5000 Analytic</td>
<td>Low</td>
<td>4</td>
</tr>
<tr>
<td>3. Vendor Payment Inquiry (Interactive) Analytic</td>
<td>Med</td>
<td>10</td>
</tr>
<tr>
<td>4. Customer Credit Limit Changes</td>
<td>Med</td>
<td>6</td>
</tr>
<tr>
<td>5. Knowledge transfer</td>
<td>Low</td>
<td>incl</td>
</tr>
<tr>
<td>6. Correct AP04 Output (no additional charge)</td>
<td>Low</td>
<td>N/C</td>
</tr>
<tr>
<td>TOTAL EFFORT HOURS</td>
<td></td>
<td>26</td>
</tr>
</tbody>
</table>
Executing

- Resources’ tasks are distributed and teams are informed of responsibilities.
Executing - Data Analytics Project

- Retrieve data
- Validate data
- Code analytic routines – use scripts to capture logic and to allow for re-runs
- Confirm results
- Re-code as necessary
Monitoring & Controlling

- Project managers will compare project status and progress to the actual plan, as resources perform the scheduled work.
- During this phase, project managers may need to adjust schedules or do what is necessary to keep the project on track.
Monitoring & Controlling - Data Analytics Project

• Monitor completed objectives
• Monitor time budget
• Were additional areas to examine identified?
• Does it make sense to continue?
Closing

- After project tasks are completed and the client has approved the outcome, an evaluation is necessary to highlight project success and/or learn from project history.

- The overarching goal is typically to offer a product, change a process or to solve a problem in order to benefit the organization.
Closing - Data Analytics Project

- Have we met the defined objectives?
- Were additional areas to exam identified?
- What are our lessons learned?
- How did the analytic effort enhance the audit?
How Can Project Management Sustain your DA Capability?

• Structure promotes re-usability of scripts
• Defined objectives lead to clear success/failure measurement
• Lessons learned improves the overall process
Summary

A successful data analytic project must be

✓ Deliberate

✓ Controlled

Both can be accomplished by applying project management techniques to your data analytic project
Contact

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