Hallmarks of Projects That Go and Symptoms of Those That Don’t

Best Practices in Project Management
Introduction

• Justin Price, P.E.
Why are We Here?

- Project Success Rate
- Review General Practices for Front-End Loading
- Influence Curves
- Perceived Project Risk
- Rethinking Project Risk
### 2014 Regular Season Batting Average

<table>
<thead>
<tr>
<th>RK</th>
<th>PLAYER</th>
<th>TEAM</th>
<th>AVG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jose Altuve</td>
<td>HOU</td>
<td>0.341</td>
</tr>
<tr>
<td>2</td>
<td>Victor Martinez</td>
<td>DET</td>
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<tr>
<td>3</td>
<td>Michael Brantley</td>
<td>CLE</td>
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<tr>
<td>4</td>
<td>Adrian Beltre</td>
<td>TEX</td>
<td>0.324</td>
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<tr>
<td>5</td>
<td>Justin Morneau</td>
<td>COL</td>
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<tr>
<td>6</td>
<td>Jose Abreu</td>
<td>CHW</td>
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<td>7</td>
<td>Josh Harrison</td>
<td>PIT</td>
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</tr>
<tr>
<td>8</td>
<td>Robinson Cano</td>
<td>SEA</td>
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<td>Andrew McCutchen</td>
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<tr>
<td>10</td>
<td>Miguel Cabrera</td>
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</tbody>
</table>

**OVERALL AVERAGE 0.321**

Are we completing our projects as well as the major league hitters?
Project Success Rate

- Over 66% of organizations had experienced at least one project failure
- Greater than 50% of respondents did not attempt to align their projects with corporate strategy
- 33% always prepared a business case for projects
- More than 50% of the survey respondents did not consistently achieve the intended project results
- Nearly 66% of those surveyed did not attempt to measure the return on their project investments
- More than 25% did not undertake any form of strategic reviews to track the resulting benefits achieved by the business

Source: Project Management Survey 2013, KPMG Advisory
Project Success Rate

Source: How Front-End Loading Creates Overconfidence and Causes Cost Overruns by Westney Consulting Group, Inc. April 2012
How Do We Improve?

We improve on the things we measure
What We Should Measure

- Scope
- Cost
- Schedule
- Business ROI/Benefit
### Review of Front-End Loading

- Concept development of projects
- Developing strategies for project goals
- Commonly divided the early stages of a project into multiple stages
- Can be measured by the PDRI

<table>
<thead>
<tr>
<th>FEL-1</th>
<th>FEL-2</th>
<th>FEL-3</th>
</tr>
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<tbody>
<tr>
<td>Material Balance</td>
<td>Preliminary Equipment Design</td>
<td>Purchase-Ready Major Equipment Specification</td>
</tr>
<tr>
<td>Energy Balance</td>
<td>Preliminary Layouts</td>
<td>Definitive Estimate</td>
</tr>
<tr>
<td>Project Charter</td>
<td>Preliminary Schedule</td>
<td>Project Execution Plan</td>
</tr>
<tr>
<td>Preliminary Estimate</td>
<td>Electrical Equipment List</td>
<td>Line List</td>
</tr>
</tbody>
</table>
Influence on the Project

• What happens during FEL phase greatly affects the cumulative Project Cost

• Generally accepted that the risk of cost overrun is directly related to the extent the front-end loading is completed
AACE (Association for the Advancement of Cost Engineering) has standardized practices for accuracy of the estimate (i.e. +/-10%).

General accepted that the greater the project definition, the more accurate the cost estimate.
Contingency Level Influence

- Contingency level is often associated with each estimate classification
- Best Practices require that an appropriate level of contingency be included in the project cost estimate
Rethinking Project Risk

• Project Definition is **not** the primary predictor of cost outcomes

• Risk Exposure is determined from other factors

• Risk Exposure should be viewed over the entire project life
Rethinking Project Risk

The amount of control

Compounding of risk during execution

Organizational and external sources
The Amount of Control

Traditional Definition

Potential Loss($) \times \text{Probability Occurrence} (%)

Consider this Definition

\[
\frac{\text{Potential Loss}($)}{\text{Probability Occurrence}} \times \text{Control Factor}
\]
Perceived Project Risk

Risk Exposure ($)
- Amount of Influence over Project Cost
- Amount of Risk of Cost Overrun
- Amount of Contingency Required

Perceived Risk

Project Sanction
- Mech. Comp.
- Turnover to Op.

Risk Exposure = Amount of Risk/Amount of Control

TRUE RISK
Organizational & External Risk

Project Risk
- Definition
- Execution

External Risk
- Economic Market
- Political Climate

Organizational Risk
- Owner Competencies
- Contractor Competencies
Perceived Project Risk

Source: How Front-End Loading Creates Overconfidence and Causes Cost Overruns by Westney Consulting Group, Inc. April 2012
Wrap-up

• Projects That Go
  • Focus on FEL and Scope Control
  • Identify the Risk to control Project Cost
  • Maintain Project Schedules
  • Manage Entire Project Risk
Questions?

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