There is No Such Thing as a Bad Estimate!

Joseph A. Lukas
PE, PMP, CCE

There is No Such Thing as a Bad Estimate!

for
SCEA
The Society of Cost Estimating and Analysis

Washington Metro Chapter
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There is No Such Thing as a Bad Estimate!

 Presenter

 Joe Lukas, PMP, PE, CCE
 PMCentersUSA Vice President

 Presentation Topics

 • **Topic 1:** Barriers to accurate estimate preparation
 • **Topic 2:** Reasons why maintaining a dependable estimate over the project life is hard
 • **Topic 3:** Suggestions for preparing more accurate estimates and managing project team & client expectations

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Estimate Defined

- ‘Approximate calculation’
- Synonyms:
  - Approximation
  - Educated guess
  - Guesstimate

Topic 1

Barriers to Accurate Estimates

- #1: Lack of scope definition
- #2: Poor communications
- #3: Unrealistic client expectations
- #4: Optimistic team members
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#1: Lack of Scope Definition

Most project failures are caused by poor scope definition!

#1: Path to Good Estimates

Client Requirements

Major Deliverables

WBS Project Scope

Cost Estimate

Project Schedule

Staffing Plan
#2: Poor Communications

• Estimators are assumed to be mind readers!

• You can’t estimate what you don’t know!

• Communication barriers:
  ▪ Knowledge of the audience
  ▪ Right ‘amount’ of information
  ▪ Language skills
  ▪ Physical problems
  ▪ Misinterpretation
  ▪ Distortion
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#3: Unrealistic Client Expectations

- Customers expect the same accuracy whether the scope is 0% or 100% defined!

```
<table>
<thead>
<tr>
<th>Level of Project Detail</th>
<th>Estimate Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
```

#3: Estimate Accuracy

- Typical client expectation - the same level of accuracy no matter how many project details are known!
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#3: Dealing with Client Expectations

- Use imprecise terms until scope defined:
  - “Based on limited information…”
  - “My best guess at this time…”
- Don’t commit to a number early in the project!
- Use estimate ranges
- Educate clients on estimate accuracy

#4: Optimistic Team Members

- Estimators need to be careful in using inputs from project team members – don’t ‘blindly’ accept them!
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Topic 2

Issues in Managing Estimates

- #1: Inadequate contingency
- #2: Lack of estimator involvement
- #3: Scope creep and poor change management
- #4: Contractor claims
- #5: Project Plan changes

#1: Inadequate Contingency

- No process used, just a ‘guess’
- Can be ‘dictated’ by management
- **Best Practice**: Use a PERT analysis or Monte Carlo analysis to help determine how much contingency
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#2: Lack of Estimator Involvement

- Not involved in the execution phase
- Only brought in when a ‘problem is identified
- **Best Practice**: Estimator should be part of the project team during the entire project

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#3: Scope Creep

- Customers convince team to add scope after the final estimate
- Project teams will add extra items to the project to make it “work better” for the customer

*Many times the Estimator isn’t aware of this happening!*
#4: Contractor Claims

- Attempts to get extra $’s for work performed, even when minimal or no scope changes occur

#5: Project Plan Changes

- Estimator not informed
- Examples
  - Project team member change
  - Customer delay
  - Unexpected site condition
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#5: Project Plan Changes

- Track and manage changes as they occur!

Topic 3

Suggestions for Preparing More Accurate Estimates:

1. Align estimate to WBS
2. Watch for unrealistic optimism
3. Get multiple opinions
4. Use risk analysis
5. Watch your estimate precision
6. Document assumptions
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#1: Align Estimate to WBS

- Document the scope using a WBS
- List scope items excluded
- Match the WBS to the requirements document

#2: Watch for Unrealistic Optimism

- Don’t allow the customer and/or team members make you overly optimistic
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#2: Watch for Unrealistic Optimism

- Know the resources who will be working on the project

#3: Get Multiple Opinions

- Never estimate alone
- Have a consistent process for preparing estimates
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#4: Use Risk Analysis

- Use **Risk Analysis**: Talk in ranges instead of specifics

![Bar Chart](#)

- Use Risk Analysis to determine contingency

![Line Graph](#)
#5: Watch Estimate Precision

• Talk in vague terms until the scope is fully defined

#5: Watch Estimate Precision

• Watch your level of precision…
  ▪ Which of these numbers is more ‘precise’?
    $1,123,876 or $1.1 million
  ▪ Showing too exact a number implies a high level of precision, so round-off
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Document Assumptions

• Prepare a Basis of Estimate
• Include assumptions, exclusions and constraints

Conclusion

• ‘Bad’ estimates usually do not result from a problem with the estimating process
• Typical barriers
  ▪ Lack of scope definition
  ▪ Poor communications
  ▪ Unrealistic client expectations
  ▪ Optimistic team members
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Conclusion

• Managing estimates can be difficult over the life of a project
• Things to watch for
  ▪ Inadequate contingency
  ▪ Lack of estimator involvement
  ▪ Scope creep
  ▪ Contractor claims
  ▪ Project Plan changes

Conclusion

• Preparing more accurate estimates
  ▪ Align estimate to WBS
  ▪ Watch for unrealistic optimism
  ▪ Get multiple opinions
  ▪ Use risk analysis
  ▪ Watch your estimate precision
  ▪ Document assumptions, constraints and exclusions
Closing Thoughts

• Estimating: The only job where you are ‘wrong’ 99.999% of the time!

Questions???

Name: Joseph A. Lukas, PMP, PE, CCE
Email: joe.lukas@pmcentersusa.com
Phone: 609-575-9306