

Practical Software and Systems Measurement

Practical Software and Systems Measurement

A foundation for objective project management



Measuring Outcomes

July 26, 2007

Brad Clark, Betsy Clark

PSM Users Group Conference

23-27 July 2007

Golden, Colorado

Objectives of the Workshop

- ***Define “Outcome Measurement”***
- ***Discuss the implementation issues surrounding outcome measures***
- ***Should PSM develop guidance for outcome measurement?***

Workshop Background

- ***PSM history in this area***
 - ***PSM has primarily focused on project-level measures during development and maintenance***
 - ***Issues: meeting schedules, costs, technical and quality constraints***
- ***Outcomes focus on “what happened” once project is deployed***

Practical Software and Systems Measurement

Workshop Participants

- ***Brad Clark: co-lead***
- ***Betsy Clark: co-lead***
- ***Butch Bancroft***
- ***Trish Cavenee***
- ***Jerome Chik***
- ***Steve Coffman***
- ***Carole Doan***
- ***Rachel Friedland***
- ***Dennis Goldenson***
- ***Jack McGarry***
- ***Susanna Schwab***
- ***Joe Seppy***
- ***Elliot Troy***
- ***Joyce Lain Tracy***
- ***Debbie Yedlin***

Workshop Format

- ***Agenda***
 - ***Review of Tuesday's presentation:
"Measuring IT Program Outcomes"***
 - ***Workshop discussion of posed questions
on outcome measures***
 - ***Recommendations for PSM Guidance***

Workshop Questions

- 1. How do you define “Outcome Measurement” (who, what, when & why collected)?**
- 2. What is the purpose of collecting outcome measures?**
- 3. Is it possible to identify meaningful outcomes measures without mission or business goals?**
 - What do you do if there are conflicting goals?**
- 4. Is it possible to identify a set of generic outcomes measurement types (efficiency, effectiveness, accuracy, usability)?**

Workshop Questions (continued)

- 5. Is it possible to define a set of frequently used outcome measures?***
- 6. What is required to start measuring outcomes?***
- 7. Can you measure outcomes directly?***
- 8. Can you measure outcomes without any activity measures?***
 - Need activity measures to explain cause & effect upon the outcome measure***

Intended Output

- ***Workshop answers to questions***
- ***Recommendations for PSM Steering Group***

Practical Software and Systems Measurement

Summary

- *There were eight questions that participants discussed.*
- *The following slides summarize the answers to the questions*

Practical Software and Systems Measurement

Question 1

- *How do you define “Outcome Measurement” (who, what, when & why collected)?*
 - *Actual performance relative to enterprise goals and targets*
 - *Quantification of the desired result of implementing a task/project/program*
 - *Results of an action, measured by an accountable person for action and reporting*
 - *Can be a business value measure (not necessarily ROI) or a capability measure (the outcome is I can do “this” now)*
 - *An outcome measure is stated in the context of a goal, a change is made (there is a pre- and post-state) with a causal chain linking change to outcome*

Question 2

- ***What is the purpose of collecting outcome measures?***
 - ***Show a change from state-1 to state-2***
 - ***Show achievement of progress towards an objective***
 - ***Measure of a specific benefit***
 - ***Show evidence of a new capability***
 - ***Show the results of an investment: \$***

Question 3

- *Is it possible to identify meaningful outcomes measures without mission or business goals?*
 - *Yes: you can measure bad side effects*
 - *No: need to have a reason why you're measuring (an information need)*
 - *Need a model or process for going from "world peace" to a goal that is measurable*
 - *Cause and effect chain takes away the "shazam" effect*

Question 4

- *Is it possible to identify a set of generic outcomes measurement types, e.g. efficiency, effectiveness, accuracy, usability?*
 - *Domain dependent e.g. IT, Process Improvement*

Question 5

- *Is it possible to define a set of frequently used outcome measures*
 - *Different domains have different goals*
 - *Examples for each domain could be developed*
 - *Technology and activity measures can be leading indicators of outcomes*

Question 6

- *What is required to start measuring outcomes?*
 - *Prioritized list of strategic objectives*
 - *Breakdown of objectives to something that can be measured*
 - *Not all influences will be measured*
 - *Document expectations (targets)*
 - *Develop logical cause & effect relationships that go from input to output*
 - *Collect baseline data (actual data)*
 - *Collect outcome data and compare to baseline*

Question 7 & 8

- ***Can you measure outcomes directly?***
 - ***You can but it will not make sense in the absence of a measurable goal***
- ***Can you measure outcomes without any activity measures?***
 - ***You can but will not have the causal chain that helps you “tell the story”***

Practical Software and Systems Measurement

Conclusions, Recommendations, and Results

- ***Should PSM guidance be adapted to outcome measurement?***
 - ***Yes: at least provide hooks form PSM into creating Outcome Measures***
 - ***PSM provides the “best” practices foundation***