Practical Software and Systems Measurement

A foundation for objective project management

PSM

Specification Workshop
Thursday, July 17, 2003
8:30AM – 12:00 noon
PSM 7th Annual Users' Group Conference
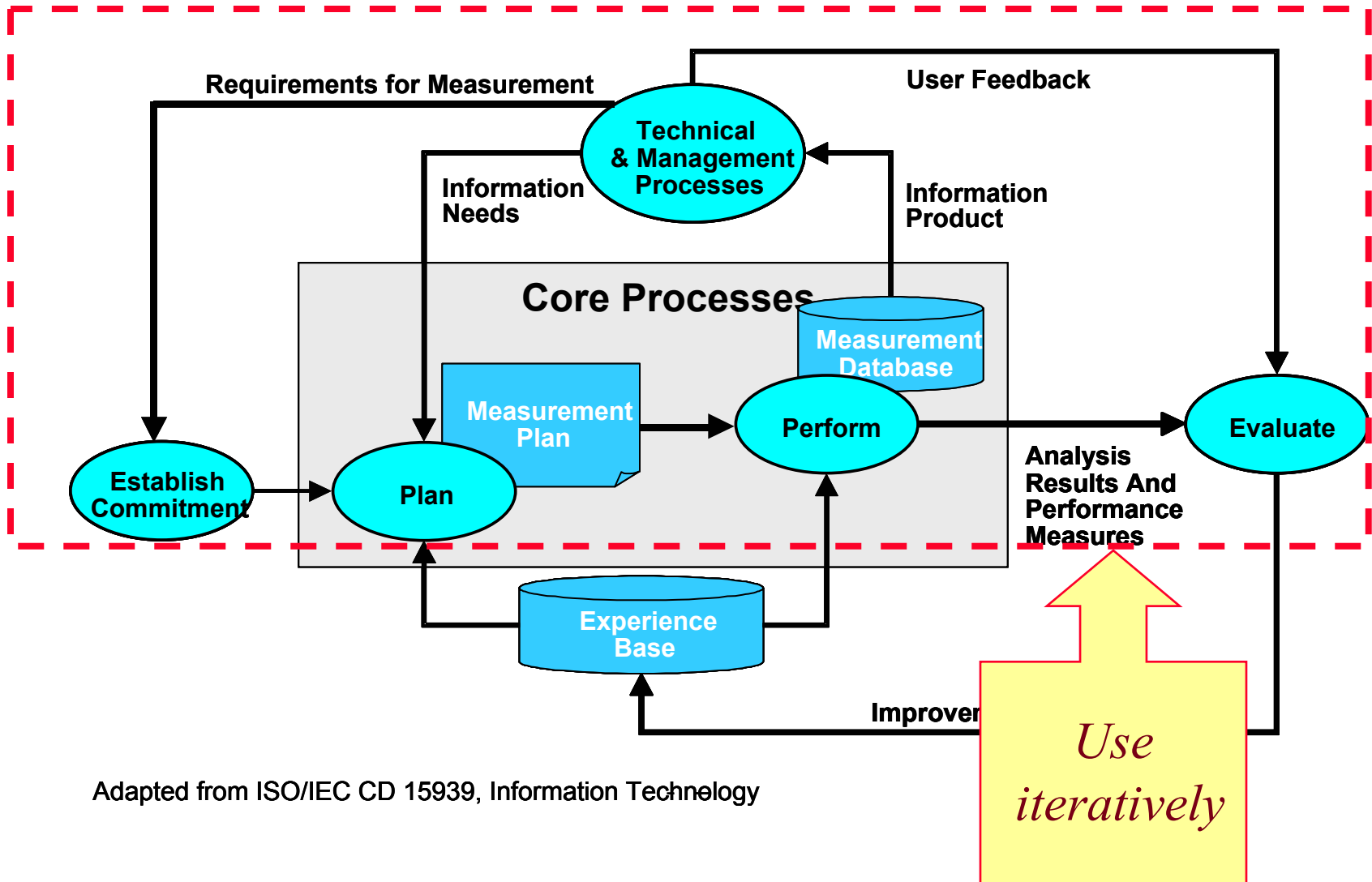
Bob MacIver, Betsy Clark

Workshop Participants
Leads: Bob MacIver, Betsy Clark

- *Duane Tant*
- *Mal Davis*
- *Molly Campbell*
- *Randy Janka*
- *Janice Day*
- *Elliott Troy*
- *Keith Kratzert*
- *Joe Lindley*
- *Agnes Nanu*
- *Dennis Goldenson*
- *Rick Holcomb*

- *Marsha Davis*
- *Don Metheny*
- *Bill Criss*
- *Phil Flora*
- *Mauricio Aguiar*
- *Doug Ishigaki*
- *Mary Ann McGarry*
- *Thomas Solosky*
- *Diane Reiss*
- *Al Amlani*
- *George Georgaras*

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Objectives of the Workshop

- *Discuss and compare people's experiences in implementing PSM, focusing on methods used to improve the delivery of effective measures to decision makers*

- *Arrive at a list of recommended best practices for expediting the implementation and use of well defined measures*

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Requirements for Measurement

User Feedback

Technical & Management Processes

Information Needs

Information Product

Core Processes

Measurement Database

Measurement Plan

Perform

Evaluate

Establish Commitment

Plan

Analysis Results And Performance Measures

Experience Base

Improvement

Use iteratively

Adapted from ISO/IEC CD 15939, Information Technology

Workshop Output

- *Characterize when we can write detailed specs early on and when we can't*
- *Provide additional information and guidance to determine time and effort to stabilize measures*
- *Recommended PSM process changes*
- *Recommended additional specification content*

Sample of Problems Identified

- *If people can't understand information model, needs to be simplified*
- *Specifying too much detail at once*
- *Poor understanding of effort involved/ commitment required*
- *Lack of commitment below top level*
- *You're the measurement expert; You tell us what we should collect*
- *What are your information needs?*
    - *"I don't know"*
    - *"I don't need to do this"*
- *How to sell measurement to middle management*
- *Collect data/develop relationships with managers; Share with them first*

Discussion

- *Identified factors that influence effort to implement measurement program*
  - *Maturity of processes and measurement*
  - *Level of focus (project, organizational, enterprise)*
  - *Ability to use existing measures*

Objectives for Recommendations

- *Goal: Measure the right things in the right way so we can trust data and do it more quickly*

- *What information should we include in a spec that will help drive effective implementation?*

- *How can the PSM process be improved?*

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Recommendations

- *Specification templates are useful but need to more clearly define terminology*

- *Don't want to fill in template all at once – evolutionary adding of detail*

  - *as measurement program evolves, so do specs*

  - *Provide guidance about what to fill in on first iteration, what on second… so that the specification guides implementation (follow up activity)*

- *Start with existing data, link to business/ information needs*

More Recommendations

- **Address how to get PSM implemented successfully**
  - *Senior management support/involvement*
  - *How to justify measurement*
  - *Middle management, supervisors*
  - *Change management*
  - *Stories/examples of classic problems and solutions and how to categorize them*
  - *Provide a recommended set of basic measures to help program get started*
  - *Get decision maker to list attributes of a good information product*

Recommendations - continued

- *Issue -> When using existing data*
  - *Can you trust it?*
- *"Middle-out" implementation*
  - *Not really top-down or bottom-up*
  - *Start with what you have*

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Recommendations

- *Bob presented an example specification used to guide implementation*
  - *Priority of the information need*
  - *Is measure*
    - *New?*
    - *Existing and can be used as is?*
    - *Existing but needs rework?*
  - *Estimate of effort to rework or use existing measures*

Workshop Background

- *PSM emphasizes precision in the definition of measures*
  - *Information Model*
  - *Measurement Construct*
  - *Individual measurement specifications*
- *While thorough, the process is often difficult and time consuming, delaying the ability to get usable measures to those who need them for business decisions*
- *People often cannot clearly articulate their information needs and indicators*
  - *("I'll know it when I see it")*

Workshop Background

- *In many situations, it is counterproductive to spend a lot of effort in defining something that is likely to change*
  - *Need to let people experiment and tune the measures first*
- *Need to increase the speed of implementing measures*
  - *Get some early successes to show the benefits*
  - *Begin changing the culture*
- *Some organizations have had better success by:*
  - *concentrating first on establishing a usable set of measures*
  - *piloting, adjusting and evaluating them prior to writing the detailed measurement specifications*

Conclusions, Recommendations, and Results

- *Listed numerous problems, challenges, barriers associated with implementing measurement program*

Next Steps/Action Items

- *Bob and Betsy will draft a strawman set of implementation guidelines and/or recommendations to be reviewed at the TWG*