

Practical Software and Systems Measurement

Slides #2-7 are introductions

Slides #8-13 is the outbrief

PSM 1

July 2008

Practical Software and Systems Measurement

***Practical Software and
Systems Measurement***

A foundation for objective project management



***Mapping Analysis
Techniques to Engineering
& Management Problems***

Joe Dean & Dennis Goldenson

PSM Users Group Conference

15 & 18 July 2008

Mystic, Connecticut

PSM 2

July 2008

Workshop Title

- *We just said that...*
- *Mapping Analysis Techniques to Engineering & Management Problems*

Objectives of the Workshop

- *Identify issues & problem areas that beg for better analysis*
- *Identify analytic techniques that are appropriate to address those issues & problem areas*
- *Clarify how best to communicate analytic results where they matter*

Workshop Format

- **Agenda: TBD ... Shall we do break out sessions???**
- **Techniques:**
 - **Round robin to identify workshop participants' hot spots ... & successes**
 - **Their issues & problem areas**
 - **Communicating successfully with engineers & management**
 - **Review analytic methods that may be helpful**
 - **Informed by ISO/IEC guidance**

Workshop Background

- **PSM history: Recognition over the past few years that measurement is ... or should be:**
 - **Informed by analysis**
 - **Appropriate to its intended use**
- **Where we're heading: Identifying analytic techniques that are**
 - **Understandable by the intended audience**
 - **& methodologically defensible**

Intended Output

- ***See the objectives...***
- ***Initial plans for the way forward for PSM***

Workshop Title

- ***Mapping Analysis Techniques to Engineering & Management Problems***
 - ***Workshop 15 July 2008***
 - ***Outbrief 18 July 2008***

Practical Software and Systems Measurement

Workshop Participants

Michael Aberg
Alejandro Bianchi
Irene Chan
Tom Conrad
Joe Dean
Bob Floyd
John Gaffney
Dennis Goldenson
Cheryl Jones
Joe Lindley
Shally Malhotra
Lindsay Migala
Sam Padgett
Lori Saleski
Joseph Seppy
Rosalind Singh
Mimi Trinh

PSM 9

July 2008

Practical Software and Systems Measurement

Summary

- ***Round robin re participants' experiences:***
 - ***Existing issues & problem areas where more advanced analytics may add value***
 - ***Methods in use to varying degrees***
 - ***Communicating results where they matter***
- ***Group discussion***
 - ***Statistical techniques identified in ISO 10017***
 - ***How & where they are used***
 - ***Issues & barriers to use***
- ***Briefly discussed next steps for PSM***

PSM 10

July 2008

Analytics: An ISO 10017 Starter Set

- *Descriptive statistics*
- *Design of Experiments*
- *Hypothesis testing*
- *Measurement analysis*
- *Process capability analysis*
- *Regression*
- *Reliability Analysis*
- *Sampling*
- *Simulation*
- *SPC charts*
- *Statistical tolerancing*
- *Time series analysis*

Conclusions, Recommendations, and Results

- *Useful initial discussions this year*
 - See the minutes ... in Excel workbook & Word
- *Build on them at future PSM conferences*
- *Enhanced by companion PSM presentations on experiences in use*
- *Full day Workshops*
 - *Amalgamated with the Lean Six Sigma Workshop*
 - *Perhaps in concert with SEI High Maturity Workshop series*

Next Steps/Action Items

- ***Solicit feedback/comments/additions from workshop participants***
- ***Solicit sample PSM specifications***
 - ***Cheryl to send out template, example & ask for volunteers***
- ***Consider how best to integrate with SEI work***
 - ***Cheryl, Dennis & Jim McCurley to coordinate with Bob Stoddard & Dave Zubrow***