Practical Software and Systems Measurement

A foundation for objective project management

Measuring What Matters: Mission and Business Outcomes

July 17, 2008

Brad & Betsy Clark

PSM Users Group Conference
14-18 July 2008
Mystic, Connecticut

Workshop Participants

- Brad Clark*
- Betsy Clark
- Joe Seppy**
- Carlos Gonzales
- Cristina Ceballos
- George Evans
- Paul Silverman
- Linzsay Migala
- Shally Malhotra
- Mauricio Aguiar
- Irene Chan
- Dennis Goldenson
- Kevin Moondy
- Beth McColl
- Beth Leyman
- Tony Powell
- Peter Thomas
- Joe Lindley
- Sam Padgett
- Tim Addison
- Mike Aderg
- Jack McGarry
- Cheryl Jones
- Joe Dean

*Workshop Leader **Workshop Outbriefer

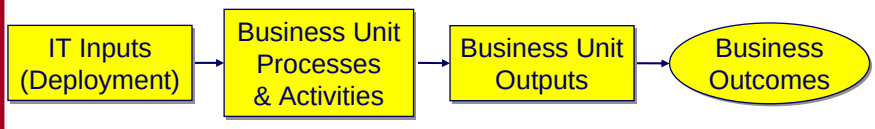
Enterprise* Goals

- *Outcome measures are established relative to enterprise goals, i.e.*
  - *How do you show that an Information Technology (IT) project is supporting something that the enterprise is trying to accomplish?*
- *We use a cause and effect chain to tell a story of how an IT project will support the goals of the enterprise, i.e.*
  - *Showing the positive impact of an IT project*

Note: *Enterprise: the aggregation of organizations, divisions, departments, or teams; an enterprise can be identified at different levels within a Business or Government entity

IT Outcome Measurement Approach

Cause and Effect Chain



IT Inputs (Deployment)	Business Unit Processes & Activities	Business Unit Outputs	Business Outcomes
IT products and services	Business Unit work done over time that utilizes the IT inputs to create outputs	Results produced by the Business Unit	Attainment of Business Goals

Examples of IT Products and Services

- System Development
- System Acquisition and Configuration
- Hardware and Software Maintenance
- Deployment of new systems and equipment
- Data Management
- Disaster Recovery
- Systems Security
- Systems Training
- Voice Communication Services
- E-Mail Services
- Wireless Connectivity
- Local Area Networks
- Wide Area Networks
- Call Center
- Field Support Representatives

IT Department's Context

- Enterprise can be comprised of multiple business units in which IT plays a supporting role:
  - Marketing/Sales (promoting the products and presence of the corporation, making large volume deals with wholesalers)
  - Engineering (improving products and correcting problems)
  - Manufacturing (product production)
  - Human Resources (people)
  - Finance (revenue and expenditures)
  - Distribution (shipping gadgets to wholesalers)
  - Information Technology (acquire, install, operate, and upgrade applications and platforms)

Summary

- ***The workshop explored the possibility of creating (by actually attempting to create) a PSM-style ICQ* table patterned after the presented Outcome Measurement Approach:***

*ICQ: Information Category (I) – Measurable Concept (C) – Questions (Q)

Conclusions and Recommendations

- ***PSM Information Categories (Issues Areas) are relevant for each component of the causal chain from It Inputs to Business Outputs***
  - ***Some tailoring will be necessary, e.g., Schedule and Progress becomes Cycle Time***
- ***It was agreed that specific measures would be difficult to identify because they would depend on the business context***
- ***An ICQ* table should be developed for each component of the causal chain***
- ***Need to test assumption against some example situations***

*ICQ: Information Category (I) – Measurable Concept (C) – Questions (Q)

Next Steps/Action Items

- Flesh out two case studies
  - Government study – mission
  - Business – profitability
- Report on the results of applying PSM Information Categories and Measurable Concepts to the case studies

- For more information, contact:
  - Brad Clark: brad@software-metrics.com