Understanding Stakeholder Perceptions and Steps for Project Measurement
Topics

- The Measurement Problem
- Perceptions on Measurement
- Measurement Considerations:
  - Industry Model Guidance for Measurement
  - Measurement Success Factors
  - How to Select Measures?
  - The Measurement Life Cycle
  - Sample Measures for Projects
- Summary.
The Measurement Problem

Struggles for effective measurement programs:

- What should we measure?
- Do we have the infrastructure and tools to collect data?
- Do we have the skills to analyze the data?
- Can we transform the data into meaningful information?
- Are resources allocated to maintain the measurement process?
- Stakeholders ask, What do I do with the reports?
- Is the information used appropriately to better the organization?
- How do I evolve the ongoing measurement program?

Many programs fail for lacking clarity related to one or more of the above.
Why should you measure?

- Improve Portfolio & Project Management
- Globalization
- Improve Productivity
- Improve Product Quality
- Reduce Waste
- Recognize Improvement Opportunities
- Improve Customer Relationships
Tale: Elephant & the Blind Men

- The first man touched the leg, and said it was a pillar.
- The second man touched the tail, and said it was a rope.
- The third man touched the trunk, and said it was a tree branch.
- The fourth man touched the ear, and said it was a fan.
- The fifth man touched the belly, and said it was a wall.
- The sixth man touched the tusk, and said it was a pipe.

Moral:
- Everyone has a valid perspective
- Everyone wants input and needs an understanding of the bigger picture.
Senior Management Perception

Concerns:
- Am I meeting my shareholders’ and customers’ expectations?
- Can I deliver projects on time, within budget, scope and promised quality?
- What issues are getting in the way of delivery?

Challenges:
- Selecting measures is easy, just collect what is available.
- Providing expected information on the reports.
- Reports should be easy to get with limited effort.
- Once reports are produced, the job is done.

Solution:
- Obtain commitment to be involved in selecting measures that align with business goals and identifying reporting needs.
- Facilitate report requirements using a proven approach: G/Q/M.
- Obtain commitment to resources and the plan to build the infrastructure.
- Be prepared to educate how to use the reports – cultural change, plan for adoption and maintenance.
Project Manager & Team Perception

Concerns:
• Getting projects delivered on time, within budget, scope and promised quality
• Being recognized for doing a good job
• How the data will be used?

Challenges:
• Why do I need to provide all these measures?
• This is more work and I don’t have time for it.
• I didn’t plan to collect the data and I don’t have it.
• What am I getting out of the extra effort to provide the data?

Solution:
• Educate and communicate on:
  ▪ The alignment of measures to organizational goals
  ▪ Planning for data collection
  ▪ Integrating the data collection into daily processes
  ▪ Reviewing results for lessons learned, using the data to improve work products and to make your job easier.
Middle Management Perception

Concerns:
• Ensuring day to day operations are running smoothly and resolving issues
• What actions do I need to take from the reports?

Challenges:
- This is more work and I don’t have time for it.
- What do I do with this report?
- Using data to penalize individual performance.

Solution:
- Educate and communicate on:
  - The alignment of measures to organizational goals
  - Role expectations for data collection, use of reports, and process improvements
  - Using data to evaluate process improvement, not individual performance.
Industry Model Guidance

What do they have in common?
- Identify measures that align with the business needs
- Build the infrastructure to collect, analyze, and report information to stakeholders
- Centrally collect measures to contribute to organizational learning and improvement
- Identify the common causes of variation and root causes of defects
- Document a repeatable process for measurement.

Models:
- CMMI
- ITIL
- IEEE
- PMBOK
- Lean Six Sigma

Pick a model that will fit your organization.
Measurement Success Factors

- Obtain Sponsorship
  - Recognize key stakeholders
- Align IT priorities, decision making and measures with the Business Goals.
  - Where are we today?
  - Where do we want to go?
  - What steps need to be taken?
  - Are we moving in the right direction?
- Develop a Measurement Plan
  - Ensure information collected is objective and adds value
  - Obtain resources and build the measurement infrastructure
  - Establish an ongoing measurement function.
- Obtain Measurement Expertise
Measurement Selection

Adapted from V. Basili, “The Goal Question Metric Paradigm”
The Measurement Life Cycle

1. Measurement Planning
   - Engage Stakeholders to Align Measures to Information Needs
   - Plan the Project
   - Establish & Communicate the Measurement Framework

2. Measurement Design & Development
   - Identify Current Measures
   - Recognize & Address the Gaps
   - Establish Metric Profiles & Tools
   - Establish Communications & Training

3. Measurement Integration
   - Communicate & Train
   - Collect & Analyze the Data
   - Prepare Reports for Various Stakeholders
   - Present Reports with Action Steps

4. Measurement Validation & Improvement
   - Check for Measurement Effectiveness
   - Validate Measures with Goals
   - Improve the Process

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Project Data Collection Timeline

Project Management

Initiating
Planning
Executing
Monitoring & Control
Closing

Project Life Cycle

Feasibility
Requirements
Design
Code
Test
Implement
Support

Project Attributes
Project Metrics

Metric Collection

Estimates: effort, size, cost, duration
Time Tracking
Defect Tracking

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Sample View – Project continued

**Goal:**
- Use “all” pieces of information to understand the various aspects of the project: scope, effort, cost & quality
- Collect and analyze project data to manage trade-offs.
- Provide project data to be leveraged on future projects.

**Some Questions to Consider:**
- Are the right # of resources allocated?
- Can the promised functionality be delivered?
- Will the project meet the expected target date?
- Will the budget cover the project costs?
- What is the quality of the product and what risks are foreseen?
- What trade offs need to be made?
- At the end:
  - What did you learn?
  - What would you have done differently?
Sample View - Organizational

Average Project Performance Variances

- Plan to Final
- Rent's to Final
- Design to Final

Variance %

Phase Check Points

Effort
Cost
Schedule
Size
Quality

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Goal:

- Use “all” pieces of information to understand the organizational picture of project and process health
- Collect and leverage project and process trends to improve predictions and better manage commitments.

Some Questions to Consider:

- Does the Portfolio allocation align with the goals?
- Are the staff focused in the right projects?
- Are we as productive as we could be?
- Are projects delivering on time, within budget, with promised functionality and desired quality?
- What trade offs need to be made?
- At the end:
  - What did you learn?
  - What changes need to occur?
Summary

- Identify stakeholders perspectives and challenges
- Select metrics to meet informational needs and goals
- Understand the Measurement Life Cycle
  - Develop a plan, work the plan
  - Define, integrate and report information to stakeholders
  - Understand the industry best practices
- Periodically, review the effectiveness of measures for:
  - Alignment to business needs
  - Process improvements.

Moral:
- Truth lies in an individual perspective
- Greater truth lies in a collective perspective.
What Questions Do You Have?

References:

Mary DeFoe, CSQA, a Principal of Integral Process Solutions, has 25 years of information technology experience. The last 13 years have been in Management, Project Management, and leading PMO’s, Process Improvement initiatives and Quality Assurance & Quality Control organizations.

Ms. DeFoe has multiple years of hands on experience in a variety of industries (Retail, Insurance, Financial, Legal). She has successfully managed and prepared organizations to achieve CMMI Levels 2 / 3 and is a CMMI enthusiast. In addition, she has successfully established infrastructures for PMO’s, Quality Process Teams, Testing Center functions and Software Measurement Programs. Also, she has consulted and trained over 500 students on project management and quality principles.

Academically, Ms. DeFoe has a BA in Management Information Systems, a Masters in Project Management and is a Certified Software Quality Analyst. She is also a member of the Software Engineering Institute, the Project Management Institute, American Society for Quality and the MN Twin Spin.

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