Practical Software and Systems Measurement

A foundation for objective project management

Improving and Extending the SE Leading Indicators Thurs (7/27) - Outbrief

Chris Miller / Garry Roedler

PSM Users Group Conference
24-28 July 2006
Vail, Colorado

Improving and Extending the SE Leading Indicators - Background

- The SE Leading Indicator Guide was released in Beta Version in Dec 2006
  - Contains 13 leading indicators covering five generic life cycle phases
- Now conducting pilots to validate the technical content of this guide
  - Need several major aerospace or defense contractors to participate in a six month pilot
  - The purpose of the piloting activity:
    - Investigate the validity of the leading indicators
    - Understand degree of tailoring necessary for broad deployment
    - Capture challenges associated with implementation
    - Identify any additional indicators used successfully in industry
- Also interested in any other feedback from users
- Feedback will be applied to a revision to produce a formal release version in early 2007

Workshop Participants

- Garry Roedler – Lockheed Martin EPI
- Chris Miller – Systems and Software Consortium
- Greg Niemann – Lockheed Martin EPI
- Raymond Johnson – Countrywide
- Bill Marksteiner – Raytheon
- Val Gertzen – GDC
- C. Patrice Roseland – Lockheed Martin STS
- Tom Papin – US Army, Ft. Monmouth
- Mark Smith – Raytheon NCS
- John Rieff – Raytheon
- Stacy Gore – Raytheon
- Timmie McArthur – Aerospace Corp.
- Betsy Legg – Tecolote Research
- Gordon Baughman – BAE Systems
- Paul Wojtaszck – Raytheon
- Benjamin Levitt – Raytheon
- Mei Chen – Lockheed Martin SSC

Restatement of Workshop Objectives

- Explore and review the experiences of the pilots and potential user community
- Collect lessons learned and experience for these indicators
- Identify deficiencies and improvements for the indicators
- Identify new indicators that are needed by the user community
- Establish recommendations to the piloting procedure
- Identify additional candidate pilot organizations
- Establish a process for communicating ongoing feedback

Summary

- Overall – great participation!
- Reviewed background of the SE Leading Indicators project
- Reviewed set of SE Leading Indicators
- Discussed lessons learned from applying SE Leading Indicators
- Performed Walk-through of Beta Guide
  - Included in-depth look at an example indicator specification to understand content and structure
- Discussed plan and progress for pilots
- Derived content of feedback/survey form

Conclusions, Recommendations, and Results

- Consensus that the set of indicators appear to be useful and information reviewed was acceptable
  - More detailed review need for specifics
  - Action given to review indicator specifications and provide comments for improvement
- Lessons Learned - Only a few identified due to small usage to-date
  - Need to have clear definitions of what data is collected, counted, etc.
  - Predictive portion of indicator may be done through best curve fit
  - Requirements trends may need to be applied on an increment basis
    - Requirements change is a part of today's environment
    - Expect requirements to change often in life cycle

Conclusions, Recommendations, and Results

- Pilot of Indicators does not need to provide data, just feedback per form that will be provided
  - Lockheed Martin will provide survey form in development as starting point
  - Defined key information to request in form
    - Is the indicator used? Or planned to be used?
    - Value/utility of indicator to provide leading insight
      - Query usage for leading insight - What predictions do you make about downstream consequences/impacts?
    - Usage on project or in organization
      - For queries about usage of the indicators, include "tailored" in addition to "yes" and "no" (and how it is tailored)
    - If not currently used, would the indicator be useful for the project?
    - How could the indicator be improved?
    - Challenges and lessons learned of the guide and indicators

Next Steps

- Plan
  - Validation through pilots
    - Seek pilots in various stages of the lifecycle
    - Objective is to complete pilots/reviews by end of 2006
  - Create a pilot users group and email forum
  - Define a Masters or Doctoral project to coordinate pilots and analyze effectiveness
    - Leverage NDA's with LAI to do data analysis
  - Results briefing
  - Revise document based on feedback – 1Q07

Action Items

- Review SE Leading Indicators guide and provide comments for improvement to Garry Roedler
  - Focus on Indicator descriptions and specifications (sections 3 and 4)
  - Provide example graphics, where possible
- Complete and submit call for pilot participation – provide to Chris Miller
  - Identify which indicators will be piloted or analyzed
- Complete feedback/survey form for applicable indicators – provide to Chris Miller