

Maintenance Measures and Measurement

The purpose of this workshop is to scope the measures needed to gain insight into Post Deployment Software Support efforts conducted to support DOD projects by a mix of government and contractor personnel.

Recent Army studies have shown that PDSS organizations do a lot more than just software maintenance. Besides generating the next release, these organizations typically perform sustaining engineering, IV&V/IV&T and oversight tasks in support of the Program Office. In other cases, they can develop new software products and enter the software business. Measurements are needed to provide stakeholders with insight into progress being made on such efforts. Such insight needs to respond to the constraints that PDSS groups operate under which are very different from those development organizations face.

This workshop will set a context for discussion by detailing the results of the Army study which looked in-depth at PDSS organizations. It will highlight the actual work performed by these groups and the constraints under which they operate. Workshop participants will then be asked to define the issues associated with getting the work done and the task priorities. From the issues lists, participants will next be asked to define specific measures which stakeholders can use to accomplish their goals. For example, they may suggest tracking backlog in an attempt to ensure that trouble reports carried from one release to another are closed out in a timely manner.

Maintenance Measures and Measurement: A PDSS Viewpoint



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Maintenance Measurement and Metrics

- Maintenance involves pursuit of the following tasks after the software is delivered to operations
 - New releases of operational code (28%)
 - Sustaining engineering activities (27%)
 - IV&V and IV&T (15%)
 - Acquisition management support (15%)
 - New software development (15%)
- Industry models exist, but are aimed at IT-based service level management (ITIL, etc.)
 - Service delivery and service support

Objectives of Workshop

- Define the information needs and potential set of measures/metrics that might be useful in this domain
 - Must relate these needs to the different types of work PDSS shops perform as each has a different set of stakeholders
 - Must propose something that makes sense, else development measures/metrics will continue to be applied
- Determine whether it makes sense to apply service management concepts in the PDSS arena
 - Concepts seem to make sense as most of work performed (with exception of new software developments) are viewed as services
- Begin the process, get the community engaged

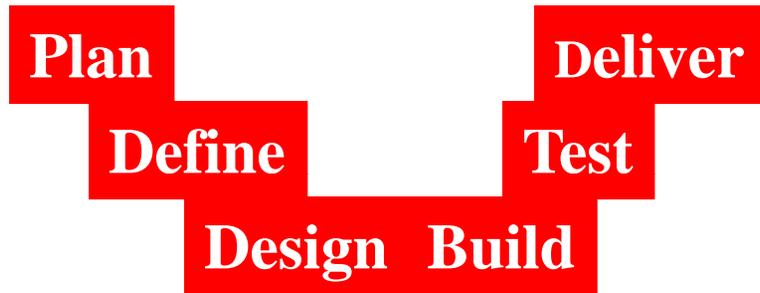
Workshop Agenda

1:30 - 2:00	Introductions – Participant analysis - Your experience in maintenance, role in your organization
2:00 – 3:00	Findings of our Army maintenance study - Work done during maintenance in the PDSS arena - Metrics/measurement needs expressed by stakeholders - Typical constraints placed on organization/projects
3:00 – 3:45	Common issues and information needs in maintenance shops - Brainstorming and discussion - Assessment from both customer and supplier viewpoints
3:45 – 4:30	Available measures and metrics that satisfy these needs - Identify candidates and provide assessment of experience - Discuss applicability of service management concepts
4:30 – 5:30	Drafting of ICM entries/measurement specifications - Breakout groups if appropriate by type of work performed

Maintenance in Context

CMMI World

“Build World Class Solutions”



ITIL

World

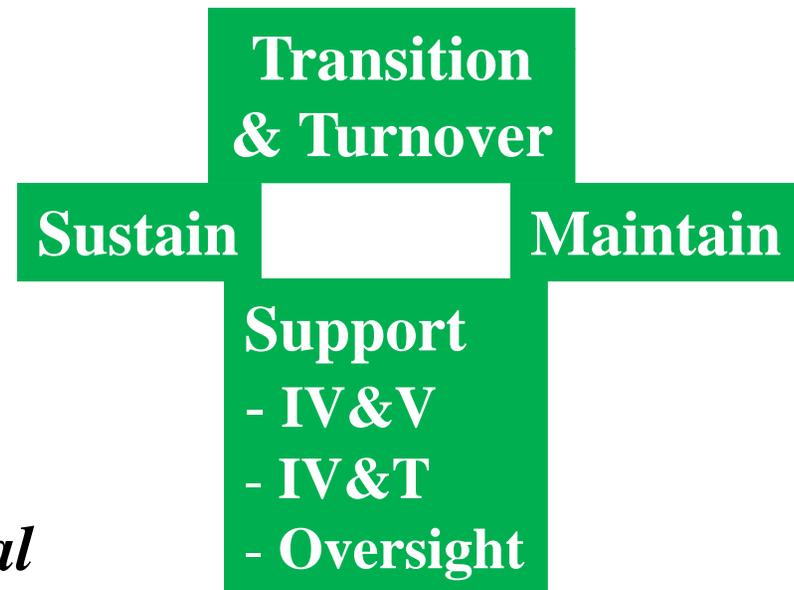
“Provide Exceptional Service”



PDSS

Maintenance World

“Support Warfighter Needs”

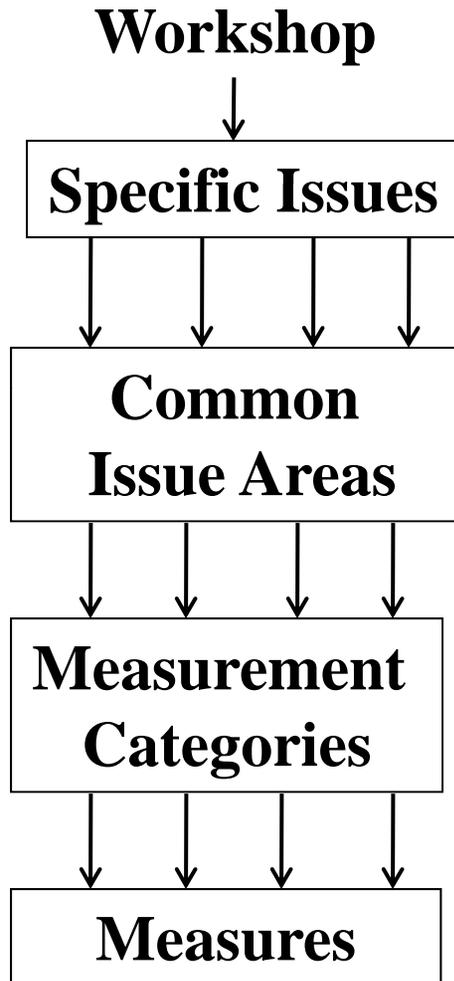


ALL - “Measure to Manage”

Some of the Insights Needed

- Maintenance
 - Transition readiness
 - Release content
 - Cost/schedule goals being satisfied
 - Backlog reduction
- Sustaining engineering
 - Operational readiness
 - Facility readiness
 - Test effectiveness
 - Backlog reduction
 - Budget satisfaction
- IV&V/IV&T
 - Operational readiness
 - Test effectiveness
 - Error reduction
 - Budget satisfaction
- Oversight
 - Operational readiness
 - Supplier performance
 - Budget satisfaction
- Software development
 - Normal agile measures
 - Others

Issue Mapping



Specific Issue	Common Issue Area
<ul style="list-style-type: none"> - Sustaining budgets provided LOE - One year money - Only one charge number 	Cost and schedule progress
<ul style="list-style-type: none"> - Never get to Cat. 3, 4 and 5 trouble reports - Cuts in budget handled by cuts in release scope 	Backlog management
<ul style="list-style-type: none"> - Transition neither planned nor adequately handled - First year devoted to finishing product 	Transition management
<ul style="list-style-type: none"> - Staff experience needed high - Staff retention low 	Human resources management

Workshop Participants

- Donald Reifer, Lead
- Others

Conclusions, Recommendations and Results

To Be Developed at Workshop

Candidate Measures

Common Issue Area	Management Category	Measure(s)
Schedule and Progress		
Resources and Cost		
Product Size and Stability		
Product Quality		
Process Performance		
Technology Effectiveness		
Customer Satisfaction		
Backlog		
Test Effectiveness		
Operational Effectiveness		

Next Steps/Action Items

To Be Developed at Workshop