

Practical Software and Systems Measurement

Objective Information for Decision Makers



Measurement for Agile Programs
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Measurement for Agile Programs

- ***More and more DoD programs using Agile***
- ***What is different about measurement for Agile***
- ***Measurement at different levels***
 - ***Team***
 - ***Program***
 - ***Enterprise***
- ***Strawman ICM table is available as a starter***

Objectives of the Workshop

- ***ICM Table for agile measurement that is ready to use***
- ***Outline and writing assignments for agile measurement guidance***
- ***Assignments for agile measurement specifications***

Workshop Format

- *Introduction*
 - *Round the room expectations*
- *Workshop use PSM approach*
- *Strawman ICM table*
- *Scope our work*
- *Agile Information Needs at different levels*
- *Map Information Needs to PSM categories*
- *Proposed measurement concepts*
- *Identify proposed measurement constructs*
- *Make specification and guidance assignments*

PSM Agile Workshop Action Items

- ***Review ICM table from PSM Proceedings***
- ***Provide feedback***
- ***Provide suggestions for empty cells in the ICM Table***
- ***Please suggest any additional table entries***

Intended Output

- ***Agile measurement guidance***
- ***Agile measurement ICM table***
- ***Assignments of measurement specifications***

Room Expectations

- ***Is it working better than before***
- ***Measures for different levels***
- ***Budget Estimation***
 - ***Is collecting agile metrics for a brand new program***
 - ***How do you size without requirements***
- ***Measures of Quality***
- ***What measures can be flowed upward for health and progress***
- ***Measure effort and Value produced***
- ***How can we objectively measure***
- ***“lightweight measurement” (Auto industry)***
- ***Trends and what’s important in the big picture***
- ***Systems of Systems***
 - ***Different organizations – how do you roll up across different organizations***



Room Expectations

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- ***How to measure customer satisfaction***
- ***Better way to measure Work in Progress determine good or bad status***
- ***Best practices and benchmarks***
- ***Cost Metrics Functions vs sizing***
 - ***Capture doneness***
- ***Measuring sprint to sprint***
 - ***Number of story points added or deleted***
- ***Prioritizing the metrics***
- ***Discuss PSM template for specs and how it is being used***
- ***Definition of done in Agile and how to measure***
 - ***What are the checkpoints***
- ***Agile Productivity***
- ***Iterative development***
 - ***Measures***
- ***objective measures of what you are getting for what you are spending***



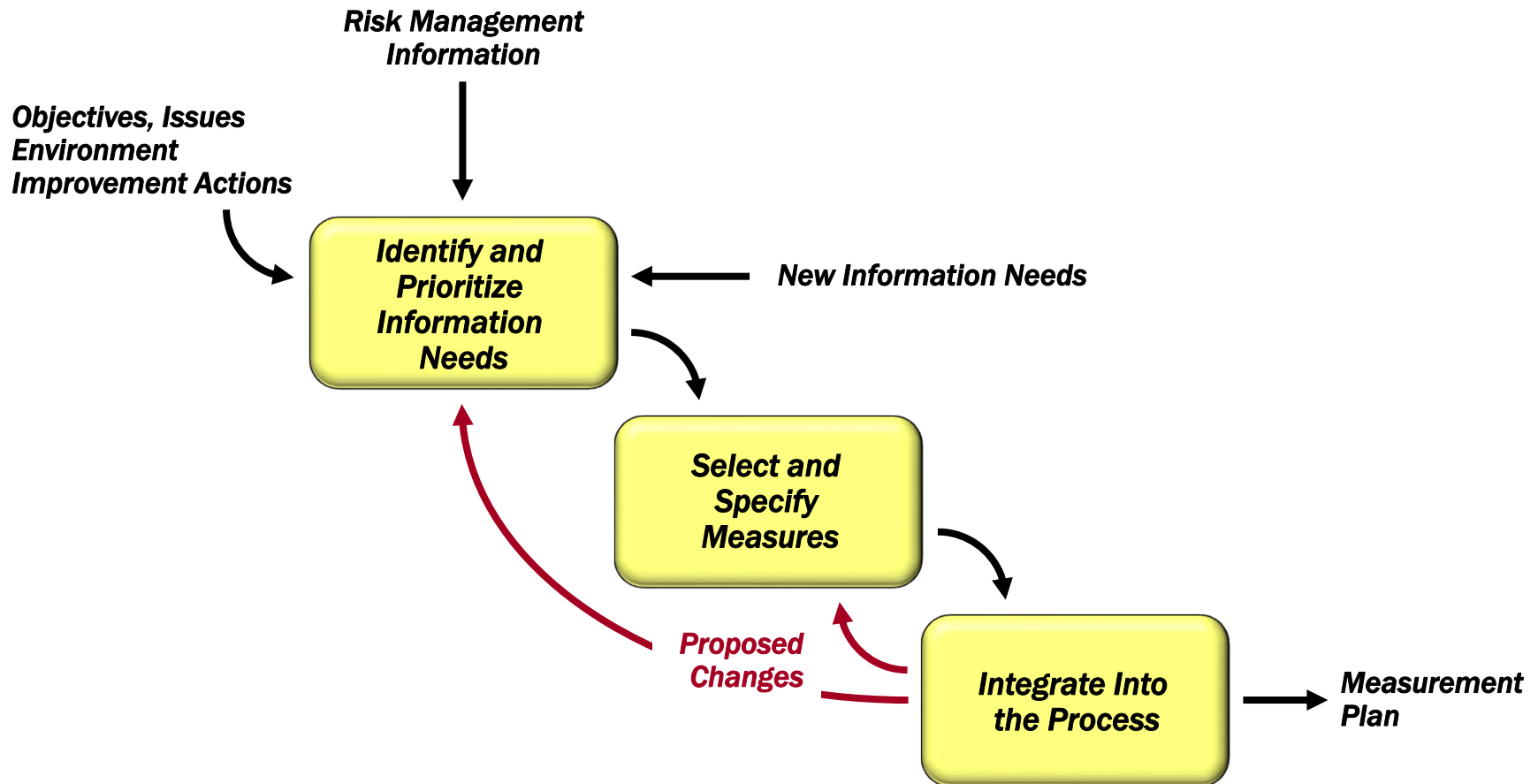
Room Expectations

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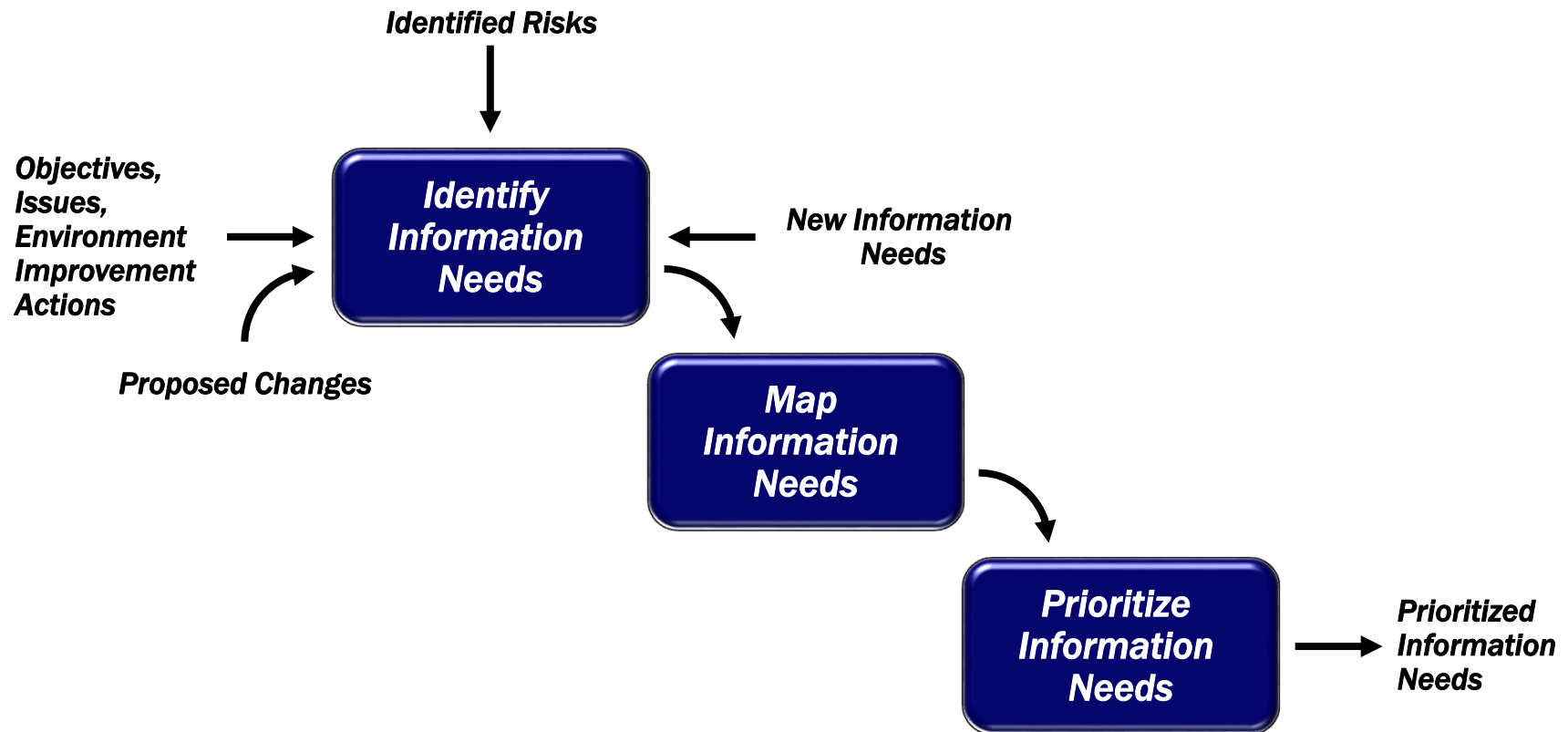
- ***What have other people learned from Agile Development***
- ***What velocity is appropriate for a particular team (Productivity)***



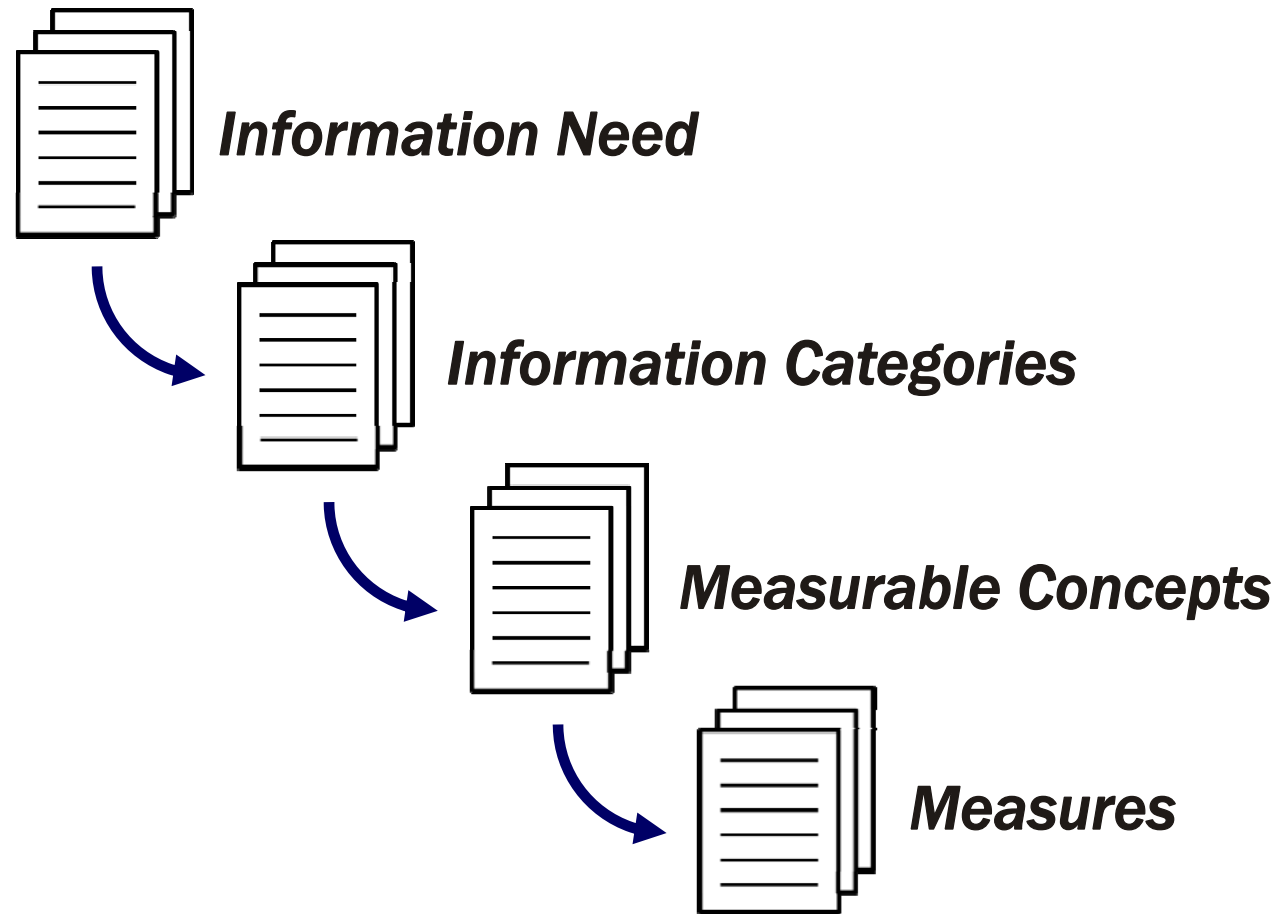
Plan Measurement



Identify and Prioritize Information Needs



Map Information Needs Using the PSM Measurement Hierarchy



Information Categories

Schedule and Progress

Provides insight into achievement of milestones or events within major project or enterprise activities

Resources and Cost

Provides insight into expenditure of resources, such as people, facilities, and equipment

Size and Stability

Provides insight into changes in product function and structure

Product Quality

Provides insight into the quality of the product

Schedule and Progress

Resources and Cost

Size and Stability

Product Quality

Process Performance

Technology Effectiveness

Customer Satisfaction

Process Performance

Provides insight into the maturity and capability of the technical and management processes

Technology Effectiveness

Provides insight into suitability, technical performance, and stability of technologies

Customer Satisfaction

Provides insight on how well the user's / customer's expectations have been met