

PSM Training Course

Course Description

A sound measurement process provides organisations with the objective information they need to effectively manage and control complex projects and, on a broader scale, to direct organisational- and enterprise- level initiatives. This workshop will provide an overview of the best software and systems measurement practices from the US Department of Defense, government & industry. It includes practical, hands-on exercises in measurement selection, definition, & analysis.

Practical Software and Systems Measurement (PSM) was developed to meet today's software and system technical and management challenges. It describes an open information-driven measurement process that will address the unique technical and business goals of your organisation. The guidance in PSM represents the best practices used by measurement professionals within the software and system acquisition and engineering communities.

- PSM is sponsored by the US Department of Defense and recommended as best practice by the UK MoD. The goal of the project is to provide project managers with the objective information needed to successfully meet cost, schedule, and technical objectives for programmes and organisations.
- PSM is based on the combined measurement experience from Government, Academia and Industry. Measurement professionals from a wide variety of organisations participate in the project. PSM represents the best measurement practices used within the software and system acquisition and engineering communities.
- PSM treats measurement as a flexible process - not a pre-defined list of graphs or reports. The process is adapted to address the specific software and system information needs, objectives, and constraints unique to each programme. The PSM measurement process is defined by a set of nine best practices, called measurement principles.
- PSM integrates the measurement requirements into the software and system processes. The measurement set is tailored for each programme or organisation to ensure that the measurement process is not only cost effective, but also that the measures provide meaningful and usable results.
- PSM defines an information-driven analysis approach which helps managers make informed software and system decisions.
- The PSM analysis approach incorporates the use of multiple measures and non-quantitative programme data to identify and evaluate information needs, including issues, risks and problems.
- PSM provides a basis for enterprise level management. PSM is designed to help put measurement into practice at the project level, thereby providing the data required to address enterprise-level performance, process improvement, and business-related questions. PSM also supports Information Technology (IT) performance measurement requirements.
- PSM is currently being used by the MoD, DoD, Government, and Industry. The PSM methodology is also being adopted by government and industry organisations.
- PSM is compatible with the ISO/IEC 15939 standard, *Software Engineering - Software Measurement Process*. This international standard defines a measurement process for software development and systems engineering.

The Practical Systems and Software Measurement (PSM) initiative provides managers with the objective information needed to successfully meet cost, schedule, and technical objectives on software intensive/system development programs. PSM defines an issue-driven analysis approach to help engineers

and managers make more informed decisions and represents best practice from government, academia and industry.

Being effective in today's businesses and project environments requires that decisions be made quickly, based on the best information available. Organisations face decisions like: what improvement initiative is providing the best result, which projects should be funded, and will we be shipping the products we promised on time this quarter? Project teams are concerned about issues such as their ability to meet schedules with all customer requirements satisfied. In this workshop, participants use a structured process to define measures that help with their decision-making.

The workshop uses a practical step-by-step process that helps the participants choose appropriate types and levels of measures. It is based on the industry standard for measurement found in the ISO software measurement standard (15939), the Measures and Analysis Process Area of the CMMI and the Practical Software and Systems Measurement (PSM) approach. The process is supplemented by guidance and examples from about 50 organisations.

In guided exercises, workshop participants identify their primary information needs, describe the reports and indicators that help with decision-making, determine what measures are required, and identify the sources and methods to gather the data needed.

Format

This two-day course describes the PSM issue-driven measurement process and includes practical “hands-on” tailoring and application exercises. This course teaches delegates the basic skills needed to select and apply software measures at the program level.

Benefits

Upon completion of this course, attendees will understand:

- How measurement can be used to help manage software intensive systems
 - Be able to define the characteristics on an effective measurement process
 - How to identify and define measures
 - How to implement a measurement programme
- Objective insight into issues and processes
- Early detection and resolution of problems
- Objective team and organisational communications
- Ability to objectively defend and justify decisions

Audience

Managers, measurement specialists, and software and systems engineers responsible for defining a measurement programme for their organisations and projects.

Course Outline

- Background, Adoption & Application of PSM
- PSM Principles and Concepts
- Information Needs of Project Managers
- Relationship to Enterprise Measurement
- Applications of Management Information and Process Models to support project decision making.

Format

2-day course

The course will be led by Dr. Antony Powell, a recognised UK specialist in the measurement and management of complex projects.