

Practical Use of COSMIC



Software Measurement Services Ltd.

Consultancy and training in the management of Information Systems.

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This course is designed to give participants a practical introduction to the COSMIC functional size measurement method.

COSMIC is the only software sizing method conceived and designed for both business and real-time software. It can be used to:

- ◆ improve capability for quantifying functional requirements;
- ◆ improve estimating
- ◆ improve control of project progress
- ◆ manage output-based software contracts.



This course will explain the COSMIC 3-Phase Measurement Process; discuss the applicability of the method, and some of the reasons why organisations choose to adopt it. Participants learn, through classroom examples and exercises, how to apply the method to various types of software systems, including systems with complex architectures.

Objectives

By participating in this formal class, participants learn the principles and steps of the COSMIC FSM Method. At the end of the class individuals will be able to apply the method to projects which develop new functional user requirements and/or modify software to enhance the functional user requirements supported by an existing system. Participants learn how to decompose functional user requirements to a consistent level of granularity so they can determine the functional size, in COSMIC Function Points, of an individual functional process. They also gain an understanding of valid ways of aggregating functional size measurements to determine the size of distinct software items and projects.

Who should attend?

This course is suitable for participants with experience of the software development process, irrespective of the kind of project or product life-cycle, whose role involves:

- ◆ Project management
- ◆ Requirements development and requests for change
- ◆ Quality assurance
- ◆ Architecture & design
- ◆ Programming and testing
- ◆ Business-side involvement in specifying, agreeing and procuring software.

Duration

The formal classroom course will typically take 2 days for a class size up to 8. In-house courses can be extended and specifically tailored to include client material on individual projects or processes as relevant.

Course Materials

Prior to the course, participants will find it useful to have read the “COSMIC Manual v3.0 Method Overview” document, which is available as an Adobe Acrobat pdf file for download from www.lrgl.uqam.ca/cosmic-ffp

Course participants will be provided with a reference manual that includes explanatory diagrams, case studies, exercises and worked solutions.

Syllabus

- ◆ **Introduction to Functional Size Measurement**
Aims of the class; the need for and purpose of functional size measurement.
 - ◆ **Overview of the COSMIC Method**
Applicability of the COSMIC method; pedigree of FPA; introduction to COSMIC models.
 - ◆ **The COSMIC Generic Software Model**
Functional user requirements (FUR); events; objects-of-interest; data groups; functional processes; data movements; persistent storage; functional processes.
 - ◆ **The COSMIC Software Context Model**
Multi-layered, multi-component architectures; layers and peer items; context diagrams.
 - ◆ **The COSMIC 3-Phase Process**
The Measurement Strategy Phase; The Mapping Phase; The Measurement Phase.
 - ◆ **The Measurement Strategy Phase**
Purpose, scope, Level of Granularity(LoG), functional users; aggregation strategy.
 - ◆ **The Mapping Phase**
Identifying functional processes, data movements; Data Movement Sequence Diagrams; identifying data groups; measuring new development; measuring modifications to legacy systems.
 - ◆ **The Measurement Phase**
Identify data movements; assign size units; aggregate results; aggregation principles.
- Summary**
Meta-model of COSMIC concepts. Conclusions, questions, answers and action plans.