

Australian/New Zealand Standard™

**Software engineering—Software
measurement process**

AS/NZS 15939:2003

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-015, Software Engineering. It was approved on behalf of the Council of Standards Australia on 3 February 2003 and on behalf of the Council of Standards New Zealand on 5 March 2003. It was published on 25 March 2003.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-015, Software Engineering. This Standard is identical with and has been reproduced from ISO/IEC 15939:2002, *Software engineering—Software measurement process*.

The objective of this Standard is to identify the activities and tasks that are necessary to successfully identify, define, select, apply, and improve software measurement within an overall project or organizational measurement structure.

The terms ‘normative’ and ‘informative’ are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

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INTRODUCTION

Software measurement supports the management and improvement of software processes and products. Measurement is a primary tool for managing software life cycle activities, assessing the feasibility of project plans, and monitoring the adherence of project activities to those plans. Software measurement is also a key discipline in evaluating the quality of software products and the capability of organisational software processes. It is becoming increasingly important in two party business agreements, where it provides a basis for specification, management, and acceptance criteria.

Continual improvement requires change within the organisation. Evaluation of change requires measurement. Measurement itself does not initiate change. Measurement should lead to action, and not be employed purely to accumulate data. Measurements should have a clearly defined purpose.

This International Standard defines a software measurement process applicable to all software-related engineering and management disciplines. The process is described through a model that defines the activities of the measurement process that are required to adequately specify what measurement information is required, how the measures and analysis results are to be applied, and how to determine if the analysis results are valid. The software measurement process is flexible, tailorable, and adaptable to the needs of different users.

AUSTRALIAN/NEW ZEALAND STANDARD

Software engineering — Software measurement process

1 Scope

1.1 Purpose

This International Standard identifies the activities and tasks that are necessary to successfully identify, define, select, apply, and improve software measurement within an overall project or organisational measurement structure. It also provides definitions for measurement terms commonly used within the software industry.

This International Standard does not catalogue software measures, nor does it provide a recommended set of measures to apply on software projects. It does identify a process that supports defining a suitable set of measures that address specific information needs.

1.2 Field of application

This International Standard is intended to be used by software suppliers and acquirers. Software suppliers include personnel performing management, technical, and quality management functions in software development, maintenance, integration, and product support organisations. Software acquirers include personnel performing management, technical, and quality management functions in software procurement and user organisations.

The following are examples of how this International Standard can be used:

- By a supplier to implement a software measurement process to address specific project or organisational information requirements.
- By an acquirer (or third-party agents) for evaluating conformance of the supplier's software measurement process to this International Standard.
- By an acquirer (or third-party agents) to implement a software measurement process to address specific technical and project management information requirements related to the acquisition.
- In a contract between an acquirer and a supplier as a method for defining the software process and product measurement information to be exchanged.

1.3 Tailoring this International Standard

This International Standard contains a set of activities and tasks that comprise a software measurement process that meets the specific needs of software organisations and projects. The tailoring process consists of modifying the non-normative descriptions of the tasks to achieve the purpose and outcomes of the software measurement process. All normative clauses shall be satisfied. New activities and tasks not defined in this International Standard may be added as part of tailoring.

1.4 Conformance

Conformance to this International Standard is defined as satisfying the purpose and outcomes of the measurement process and all of the normative clauses within the tasks in Clause 5. Any organisation imposing this International Standard as a condition of trade is responsible for specifying and making public all task-specific criteria to be imposed in conjunction with this International Standard.