

Consolidated product

Software Process Assessment – Part 9 : Vocabulary

Version 1.00

PREAMBLE

In January 1993 a program of work was approved by ISO/IEC JTC1 for the development of an international standard for software process assessment. In June 1993 the SPICE Project Organisation was established with a mandate from JTC1/SC7 to:

- assist the standardisation project in its preparatory stage by developing initial working drafts;
- undertake user trials in order to gain early experience data which will form the basis for revision of the Technical Report prior to publication as a full International Standard;
- create market awareness and take-up of the evolving standard.

The SPICE Project Organisation completed its task of producing the set of working drafts in June 1995. The SPICE user trials commenced in January 1995. The working drafts have now been handed over to JTC1/SC7 for the normal process of standards development, commencing in July 1995.

So far as can be determined, intellectual property rights for these documents reside with the individuals and organisations that contributed to their development. In agreeing to take part in the Project, participants agreed to abide by decisions of the Management Board in relation to the conduct of the Project. It is in accordance with this understanding that the Management Board has now agreed to release the baseline set of documents. This introductory statement sets out the terms and conditions under which this release is permitted.

The documents as released are available freely from the SPICE Project File Server, sisyphus.cit.gu.edu.au, by anonymous ftp, or from approved mirrors of the server. A hypertext version of the documents is also available on the World Wide Web at URL http://www-sqi.cit.gu.edu.au/spice/

TERMS AND CONDITIONS

These terms and conditions apply to the set of documents developed by the SPICE Project, and published within the Project as Version 1.0, with the following titles:

- Part 1: Concepts and introductory guide
- Part 2: A model for process management
- Part 3: Rating processes
- Part 4: Guide to conducting assessment
- Part 5: Construction, selection and use of assessment instruments and tools
- Part 6: Qualification and training of assessors
- Part 7: Guide for use in process improvement
- Part 8: Guide for use in determining supplier process capability
- Part 9: Vocabulary
- 1. You may copy and distribute verbatim copies of any or all of the Documents as you receive them, in any medium, provided that you conspicuously and appropriately publish with each copy a copy of these Terms and Conditions. You may charge a fee for the physical act of transferring a copy.
- You may copy extracts from these documents in materials for internal or public use, providing you provide clear acknowledgment of the source of the material, by citation or other appropriate means.
- 3. You may not copy, modify, sub-license, or distribute the Documents except as expressly provided under these Terms and Conditions.

Released on the Authority of the SPICE Management Board:

Project Manager Alec Dorling

Technical Centre Managers:

Europe Harry Barker

Canada, Central and South America Jean-Normand Drouin

USA Mark Paulk / Mike Konrad / Dave Kitson

Asia Pacific Terry Rout

Members: Catriona Mackie, Bob Smith, Emmanuel Lazinier, Jerome Pesant, Bob Rand,

Arnoldo Diaz, Yossi Winograd, Mary Campbell, Carrie Buchman, Ali Azimi, Bruce

Hodgen, Katsumi Shintani

Product Managers:

- Part 1 : Concepts and introductory guide

Product Manager: Terry Rout

- Part 2 : A model for process management

Product Managers: Al Graydon, Mark Paulk

- Part 3: Rating processes

Product Manager: Harry Barker

- Part 4: Guide to conducting assessment

Product Manager: Harry Barker

- Part 5: Construction, selection and use of assessment instruments and tools

Product Managers: Mary Campbell, Peter Hitchcock, Arnoldo Diaz

- Part 6: Qualification and training of assessors

Product Manager: Ron Meegoda

- Part 7 : Guide for use in process improvement

Product Managers: Adriana Bicego, Pasi Kuvaja

- Part 8 : Guide for use in determining supplier process capability

Product Manager: John Hamilton

- Part 9 : Vocabulary

Product Manager: Terry Rout

Acknowledgment:

Acknowledgment is made to all contributors of the SPICE project without whom the project could not have been conceived and carried through successfully.

Note on document formatting

Use the following margins for equivalent printing on A4 or US letter paper (these are NOT the SPICE standards)

Paper size	A4	US letter (imperial)
Top margin	34.1 mm or 1.34 inches	25.4 mm or 1.0 inches
Bottom margin	34.1 mm or 1.34 inches	25.4 mm or 1.0 inches
Left margin	25.4 mm or 1.0 inches	28.4 mm or 1.12 inches
Right margin	25.4 mm or 1.0 inches	28.4 mm or 1.12 inches

Vocabulary

Contents

Fo	Foreword1		
1	Scope	2	
2	Normative references	3	
3	Definitions	4	
	3.1General assessment concepts	4	
	3.2Process architecture concepts	4	
	3.3Process management terms associated with generic practices	5	
	3.4Process assessment terms	6	
	3.5Process rating concepts	8	
	3.6Assessment instrument concepts		
	3.7Assessors and assessor competence		
	3.8Process improvement concepts		
	3.9Process capability determination concepts		
4	Definitions arranged alphabetically	11	

Foreword

In June 1991, the fourth plenary meeting of ISO/IEC JTC1/SC7 approved a study period (resolution 144) to investigate the needs and requirements for a standard for software process assessment.

The results, which are documented in a Study Report (JTC1/SC7 N944R, 11 June 1992), came to the following major conclusions:

- there is international consensus on the needs and requirements for a standard for process assessment;
- there is international consensus on the need for a rapid route to development and trialing to provide usable output in an acceptable timescale and to ensure the standard fully meets the needs of its users;
- there is international commitment to resource the project with an international project team staffed by full time resource, with development being co-ordinated through four technical development centres in Europe, N America (2) and Asia Pacific;
- the standard should initially be published as a Technical Report Type 2 to enable the developing standard to stabilise during the period of the user trials, prior to its issuing as a full International Standard.

The new work item was approved in January 1993 by JTC1. In June 1993 the SPICE Project Organisation was established with a mandate from JTC1/SC7 to:

- assist the standardisation project in its preparatory stage to develop initial working drafts;
- undertake user trials in order to gain early experience data which will form the basis for revision of the published Technical Report prior to review as a full International Standard;
- create market awareness and take-up of the evolving standard.

The SPICE Project Organisation completed its task of producing the set of working drafts in June 1995. These working drafts have formed the basis for this Technical Report Type 2. The period of SPICE user trials commenced in January 1995 and is synchronised in phases to allow feedback to the stages of the technical work.

ISO/IEC Directives state that a Technical Report Type 2 may be used to publish a prospective standard for provisional application so that information and experience of its practical use may be gathered.

This Technical Report Type 2 consists of the following parts, under the general title *Software Process Assessment:*

- Part 1: Concepts and introductory guide
- Part 2: A model for process management
- Part 3 : Rating processes
- Part 4: Guide to conducting assessment
- Part 5: Construction, selection and use of assessment instruments and tools
- Part 6: Qualification and training of assessors
- Part 7: Guide for use in process improvement
- Part 8: Guide for use in determining supplier process capability
- Part 9: Vocabulary

1 Scope

This part of the International Standard defines the terms used throughout this International Standard.

The terms are first defined in logical groupings as an aid to understanding. The groupings are arranged to bring together terms which are related to each other. The same terms are then presented as an alphabetically ordered list for ease of reference.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated are current. All standards are subject to revision, and parties entering into agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of the IEC and ISO maintain registers of currently valid International Standards.

ISO 8402: 1993, Quality assurance - Vocabulary.

ISO 2382-1: 1982, Data processing - Vocabulary. Part 1 - Fundamental terms.

ISO 2382-20: 1990, Data processing - Vocabulary. Part 20 - System development.

ISO/IEC 12207-1: 1994, Software life cycle processes.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 8402, ISO 2382-1, ISO 2382-20 and ISO/IEC 12207-1 apply, together with the following definitions.

3.1 General assessment concepts

- **3.1.1 software process**: The process or set of processes used by an organization or project to plan, manage, execute, monitor, control and improve its software related activities.
- **3.1.2 process assessment**: A disciplined evaluation of an organization's software processes against the process model or variant model described in this International Standard.
- **3.1.3 process improvement**: Action taken to change an organization's processes so that they meet the organization's business needs and achieve its business goals more effectively.
- **3.1.4 process capability determination**: A systematic assessment and analysis of selected software processes within an organization against a target capability, carried out with the aim of identifying the strengths, weaknesses and risks associated with deploying the processes to meet a particular specified requirement.

3.2 Process architecture concepts

- **3.2.1** process: A set of activities [ISO/IEC12207-1]
- **3.2.2 process** (in this International Standard): A statement of purpose and an essential set of practices (activities) that address that purpose.
- NOTE 1: The processes described in part 2 of this International Standard are not full, formal process definitions. Rather, the statements express high level, abstract concepts without constraining how a process may be implemented.
- **3.2.3 practice**: A software engineering or management activity that contributes to the creation of the output (work products) of a process or enhances the capability of a process.
- **3.2.4 base practice**: A software engineering or management activity that directly addresses the purpose of a particular process and contributes to the creation of its output. A base practice is an essential activity of a particular process.
- **3.2.5 generic practice**: A process management activity that enhances the capability to perform a process. A generic practice supports the implementation or management of a process and may be applied to any process.

- **3.2.6 common feature**: A set of generic practices that address an aspect of process implementation or management.
- **3.2.7 capability level**: A set of common features (i.e. generic practices) that works together to provide a major enhancement in the capability to perform a process.
- **3.2.8 process category**: A set of processes addressing the same general area of activity. The process categories address five general areas of activity: customer-supplier, engineering, project, support, and organization.
- **3.2.9 process purpose**: A summary description of the intent or functional objectives of a process and its base practices.
- **3.2.10 extended process**: A process which differs from any process contained in part 2 of this International Standard, either by having additional base practices defined for an existing process or being an entirely new process. An extended process should conform to the requirements for laid down in Annex A in part 2 of this International Standard.

3.3 Process management terms associated with generic practices

- **3.3.1 defined process**: The operational definition of a set of activities for achieving a specific purpose. A defined process is characterized by standards, procedures, training, tools, and methods.
- NOTE 2: A defined process is developed by tailoring the organization's standard process to fit the specific characteristics of its intended use. (See *standard process*.)
- **3.3.2 well-defined process**: A process with inputs, entry criteria, tasks, validation, outputs, and exit criteria that are documented, consistent, and complete.
- **3.3.3 standard process**: The operational definition of the basic process that guides the establishment of a common process in an organization. It describes the fundamental process elements that is expected to be incorporate into any defined process. It also describes the relationships (e.g., ordering and interfaces) between these process elements. (See *defined process*.)
- **3.3.4 process capability**: The range of expected results that can be achieved by following a process. (See *process performance* for contrast.) [CMM Version 1.1 CMU/SEI-93-TR-25].
- **3.3.5 process performance**: A measure of the actual results achieved by following a process. (See *process capability* for contrast.) [CMM Version 1.1 CMU/SEI-93-TR-25].

3.4 Process assessment terms

- **3.4.1** (assessment) sponsor: The individual, internal or external to the organization being assessed, who requires the assessment to be performed, and provides financial or other resources to carry it out.
- **3.4.2** (assessment) owner: The management role that takes ownership of the assessment and the assessment output, and has the authority to make the assessment happen.
- **3.4.3 organizational unit**: That part of an organization that is the subject of an assessment. An organizational unit deploys one or more processes that have a coherent process context (q.v.) and operates within a coherent set of business goals.

NOTE 3:

An organizational unit is typically part of a larger organization, although in a small organization, the organizational unit may be the whole organization. An organizational unit may be, for example:

- a specific project or set of (related) projects;
- a unit within an organization focused on a specific lifecycle phase (or phases) such as acquisition, development, maintenance or support;
- a part of an organization responsible for all aspects of a particular product or product set.
- **3.4.4 assessment input**: The collection of information required before a process assessment can commence. This includes:
 - the assessment purpose;
 - the assessment scope;
 - the assessment constraints;
 - the assessment responsibilities, including at a minimum the identity of the qualified assessor;
 - the definition of any extended processes identified in the assessment scope;
 - the identification of any additional information required to be collected to support process improvement or process capability determination.
- **3.4.4.1 assessment purpose**: A statement, to be provided before an assessment is commenced, which defines the purpose of the assessment. The purpose may include:
 - to promote an understanding of the software process;
 - to support process improvement:
 - to support process capability determination.
- **3.4.4.2 assessment scope**: A statement, to be provided before an assessment is commenced, which defines:
 - which organizational unit processes are to be investigated;
 - the mapping from the organizational unit processes to the processes of this International Standard and extended processes that are to be assessed;
 - the identification of, and justification for, the process instance(s) selected;
 - the organizational unit that deploys these processes;
 - the process context.

- **3.4.4.3 process context**: Those factors that influence the judgement, comprehension and comparability of process ratings. These factors include at a minimum:
 - the application domain of the products or services;
 - the size, criticality and complexity of the products or services;
 - the quality characteristics of the products or services (see, for example, ISO 9126);
 - the size of the organizational unit;
 - the demographics of the organization unit.

NOTE 4: All of these factors influence the judgement of process ratings. However, it is largely the product related factors that influence the comparability of process ratings.

- **3.4.4.4 assessment constraints**: Restrictions placed on the freedom of choice of the assessment team regarding the conduct of the assessment and the use of the assessment outputs. Such restrictions may be positive (e.g. requiring that a specific group or individual provides information), or negative (e.g. requiring that a specific group or individual be excluded from providing information) and may include:
 - specific process instances to be included or excluded from the assessment;
 - the minimum, maximum or specific sample size or coverage that is required for the assessment;
 - ownership of the assessment outputs and restrictions on how they may be used;
 - controls on information resulting from a confidentiality agreement.
- **3.4.5 assessment output**: The formal output from an assessment consisting of the process profile and the assessment record.
- **3.4.5.1 process profile**: The actual and derived generic practice adequacy ratings, and the process capability level ratings for each process identified in the assessment scope.
- **3.4.5.2 assessment record**: Any information which is pertinent to the assessment. This includes at a minimum:
 - the assessment input;
 - the assessment approach;
 - the assessment instrument used;
 - the base practice ratings for each process instance assessed;
 - the date of the assessment:
 - the names of team who conducted the assessment;
 - any additional information required that was identified in the assessment input to support process improvement or process capability determination;
 - any assessment assumptions and limitations.

3.5 Process rating concepts

- **3.5.1 base practice adequacy**: A judgement, within the process context, of the extent to which the implemented base practice contributes to satisfying the process purpose.
- **3.5.2 base practice existence**: A judgement, within the process context, of whether a base practice is implemented and produces some output.
- **3.5.3 generic practice adequacy**: A judgement, within the process context, of the extent to which the implemented generic practice satisfies its purpose.
- **3.5.4 process instance**: A single instantiation of a process, where its purpose is fulfilled in terms of taking the process inputs, performing the set of base practices and producing a set of process outputs.
- **3.5.5** actual rating: A rating that has been determined by assessing a specific process instance.
- **3.5.6 derived rating**: A rating that has been determined by aggregating two or more actual ratings to derive an aggregate or average rating.
- **3.5.7 process capability level rating**: A representation of the extent to which a process achieves the set of capabilities represented by that capability level. A process capability level rating consists of an aggregation of generic practice adequacy ratings of the generic practices within a particular capability level.

3.6 Assessment instrument concepts

- **3.6.1 assessment instrument**: A tool or set of tools that is used throughout an assessment to support the evaluation of the existence or adequacy of practices within the scope of the assessment. It may provide assistance in collecting, recording, formalizing, processing, using, storing or retrieving information gathered during an assessment.
- **3.6.2 artefact**: A tangible output, such as a work product, produced from the execution of an implemented process.
- **3.6.3 work product**: An artefact associated with the execution of a practice (e.g., a test case, a requirement specification, code, or a work breakdown structure). The existence of the work product indicates that the practice is performed.
- **3.6.4 work product characteristic**: An attribute of a type of work product that indicates the adequacy of an implementation of a practice.

- **3.6.5 assessment indicator**: A key word or phrase that guides an assessor in recognizing characteristics of practice adequacy.
- **3.6.5.1 process indicator**: An assessment indicator that highlights base practices or work product characteristics. Process indicators help in substantiating the rating of base practice adequacy or base practice existence and are associated with the performance of a process.
- **3.6.5.2 process management indicator**: An assessment indicator that highlights characteristics of a particular generic practice. Process management indicators help in substantiating the rating of generic practice adequacy and are associated with the organization's ability to manage a process.

3.7 Assessors and assessor competence

- **3.7.1 competence**: The work performance that results from effectively applying skills, knowledge and personal attributes.
- **3.7.2 competency**: The skills, knowledge and personal attributes that enable effective work performance.
- **3.7.3 provisional assessor**: An assessor who has not yet demonstrated competence or obtained validation of the skills, education and training appropriate to conducting assessments in accordance with the provisions in part 6 of this International Standard.
- **3.7.4 qualified assessor**: An individual who has attained the qualifications for carrying out process assessments, as defined in part 6 of this International Standard.

3.8 Process improvement concepts

- **3.8.1 process improvement programme**: All the strategies, policies, goals, responsibilities and activities concerned with the achievement of specified improvement goals. A process improvement programme can span more than one complete cycle of process improvement.
- **3.8.2 process improvement project**: Any subset of the process improvement programme that forms a coherent set of actions to achieve a specific improvement.
- **3.8.3 process improvement action**: An action planned and executed to improve all or part of the software process. A process improvement action can contribute to the achievement of more than one process goal.

3.9 Process capability determination concepts

- **3.9.1 (process capability determination) sponsor**: The organization, part of an organization or person initiating a process capability determination.
- **3.9.2 target capability**: That process capability which the process capability determination sponsor judges will represent an acceptable process risk to the successful implementation of the specified requirement.
- **3.9.3 assessed capability**: The output of one or more recent, relevant process assessments conducted in accordance with the provisions of this International Standard.
- **3.9.4 constructed capability**: A capability constructed from existing organizational elements plus sub-contractors, consultants, partners etc.
- **3.9.5 enhanced capability**: A capability greater than current assessed capability, justified by a credible process improvement programme.
- **3.9.6 proposed capability**: The process capability that the organization proposes to bring to bear in meeting the specified requirement. For core process capability determination, the proposed capability is the organization's current assessed capability, whereas for extended process capability determination, the proposed capability is either an enhanced capability or a constructed capability.

4 Definitions arranged alphabetically

- **4.1 actual rating**: A rating that has been determined by assessing a specific process instance.
- **4.2 artefact**: A tangible output, such as a work product, produced from the execution of an implemented process.
- **4.3 assessed capability**: The output of one or more recent, relevant process assessments conducted in accordance with the provisions of this International Standard.
- **assessment constraints**: Restrictions placed on the freedom of choice of the assessment team regarding the conduct of the assessment and the use of the assessment outputs. Such restrictions may be positive (e.g. requiring that a specific group or individual provides information), or negative (e.g. requiring that a specific group or individual be excluded from providing information) and may include:
 - specific process instances to be included or excluded from the assessment;
 - the minimum, maximum or specific sample size or coverage that is required for the assessment;
 - ownership of the assessment outputs and restrictions on how they may be used;
 - controls on information resulting from a confidentiality agreement.
- **4.5 assessment indicator**: A key word or phrase that guides an assessor in recognizing characteristics of practice adequacy.
- **4.6 assessment input**: The collection of information required before a process assessment can commence. This includes:
 - the assessment purpose;
 - the assessment scope;
 - the assessment constraints;
 - the assessment responsibilities, including at a minimum the identity of the qualified assessor;
 - the definition of any extended processes identified in the assessment scope;
 - the identification of any additional information required to be collected to support process improvement or process capability determination.
- **4.7 assessment instrument**: A tool or set of tools that is used throughout an assessment to support the evaluation of the existence or adequacy of practices within the scope of the assessment. It may provide assistance in collecting, recording, formalizing, processing, using, storing or retrieving information gathered during an assessment.
- **4.8 assessment output**: The formal output from an assessment consisting of the process profile and the assessment record.
- **4.9 (assessment) owner**: The management role that takes ownership of the assessment and the assessment output, and has the authority to make the assessment happen.

- **4.10 assessment purpose**: A statement, to be provided before an assessment is commenced, which defines the purpose of the assessment. The purpose may include:
 - to promote an understanding of the software process;
 - to support process improvement;
 - to support process capability determination.
- **4.11 assessment record**: Any information which is pertinent to the assessment. This includes at a minimum:
 - the assessment input;
 - the assessment approach;
 - the assessment instrument used;
 - the base practice ratings for each process instance assessed;
 - the date of the assessment:
 - the names of team who conducted the assessment;
 - any additional information required that was identified in the assessment input to support process improvement or process capability determination;
 - any assessment assumptions and limitations.
- **4.12 assessment scope**: A statement, to be provided before an assessment is commenced, which defines:
 - which organizational unit processes are to be investigated;
 - the mapping from the organizational unit processes to the processes of this International Standard and extended processes that are to be assessed;
 - the identification of, and justification for, the process instance(s) selected;
 - the organizational unit that deploys these processes:
 - the process context.
- **4.13** (assessment) sponsor: The individual, internal or external to the organization being assessed, who requires the assessment to be performed, and provides financial or other resources to carry it out.
- **4.14 base practice**: A software engineering or management activity that directly addresses the purpose of a particular process and contributes to the creation of its output. A base practice is an essential activity of a particular process.
- **4.15 base practice adequacy**: A judgement, within the process context, of the extent to which the implemented base practice contributes to satisfying the process purpose.
- **4.16 base practice existence**: A judgement, within the process context, of whether a base practice is implemented and produces some output.
- **4.17 capability level**: A set of common features (I.e. generic practices) that works together to provide a major enhancement in the capability to perform a process.
- **4.18 common feature**: A set of generic practices that address an aspect of process implementation or management.

- **4.19 competence**: The work performance that results from effectively applying skills, knowledge and personal attributes.
- **4.20 competency**: The skills, knowledge and personal attributes that enable effective work performance.
- **4.21 constructed capability**: A capability constructed from existing organizational elements plus sub-contractors, consultants, partners etc.
- **4.22 defined process**: The operational definition of a set of activities for achieving a specific purpose. A defined process is characterized by standards, procedures, training, tools, and methods.
- NOTE 5: A defined process is developed by tailoring the organization's standard process to fit the specific characteristics of its intended use. (See *standard process*.)
- **4.23 derived rating**: A rating that has been determined by aggregating two or more actual ratings to derive an aggregate or average rating.
- **4.24 enhanced capability**: A capability greater than current assessed capability, justified by a credible process improvement programme.
- **4.25 extended process**: A process which differs from any process contained in part 2 of this International Standard, either by having additional base practices defined for an existing process or being an entirely new process. An extended process should conform to the requirements for laid down in Annex A in part 2 of this International Standard.
- **4.26 generic practice adequacy**: A judgement, within the process context, of the extent to which the implemented generic practice satisfies its purpose.
- **4.27 generic practice**: A process management activity that enhances the capability to perform a process. A generic practice supports the implementation or management of a process and may be applied to any process.
- **4.28 organizational unit**: That part of an organization that is the subject of an assessment. An organizational unit deploys one or more processes that have a coherent process context (q.v.) and operates within a coherent set of business goals.

NOTE 6:

An organizational unit is typically part of a larger organization, although in a small organization, the organizational unit may be the whole organization. An organizational unit may be, for example:

- a specific project or set of (related) projects;
- a unit within an organization focused on a specific lifecycle phase (or phases) such as acquisition, development, maintenance or support;
- a part of an organization responsible for all aspects of a particular product or product set.
- 4.29 owner: (See assessment owner).
- **4.30 practice**: A software engineering or management activity that contributes to the creation of the output (work products) of a process or enhances the capability of a process.

- **4.31** process: A set of activities [ISO/IEC12207-1]
- **4.32 process** (in this International Standard): A statement of purpose and an essential set of practices (activities) that address that purpose.
- NOTE 7: The processes described in part 2 of this International Standard are not full, formal process definitions. Rather, the statements express high level, abstract concepts without constraining how a process may be implemented.
- **4.33 process assessment**: A disciplined evaluation of an organization's software processes against the process model or variant model described in this International Standard.
- **4.34 process capability**: The range of expected results that can be achieved by following a process. (See *process performance* for contrast.) [CMM Version 1.1 CMU/SEI-93-TR-25].
- **4.35 process capability determination**: A systematic assessment and analysis of selected software processes within an organization against a target capability, carried out with the aim of identifying the strengths, weaknesses and risks associated with deploying the processes to meet a particular specified requirement.
- **4.36 (process capability determination) sponsor**: The organization, part of an organization or person initiating a process capability determination.
- **4.37 process capability level rating**: A representation of the extent to which a process achieves the set of capabilities represented by that capability level. A process capability level rating consists of an aggregation of generic practice adequacy ratings of the generic practices within a particular capability level.
- **4.38 process category**: A set of processes addressing the same general area of activity. The process categories address five general areas of activity: customer-supplier, engineering, project, support, and organization.
- **4.39 process context**: Those factors that influence the judgement, comprehension and comparability of process ratings. These factors include at a minimum:
 - the application domain of the products or services;
 - the size, criticality and complexity of the products or services;
 - the quality characteristics of the products or services (see, for example, ISO 9126);
 - the size of the organizational unit;
 - the demographics of the organization unit.

NOTE 8: All of these factors influence the judgement of process ratings. However, it is largely the product related factors that influence the comparability of process ratings.

- **4.40 process improvement**: Action taken to change an organization's processes so that they meet the organization's business needs and achieve its business goals more effectively.
- **4.41 process improvement action**: An action planned and executed to improve all or part of the software process. A process improvement action can contribute to the achievement of more than one process goal.

- **4.42 process improvement programme**: All the strategies, policies, goals, responsibilities and activities concerned with the achievement of specified improvement goals. A process improvement programme can span more than one complete cycle of process improvement.
- **4.43 process improvement project**: Any subset of the process improvement programme that forms a coherent set of actions to achieve a specific improvement.
- **4.44 process indicator**: An assessment indicator that highlights base practices or work product characteristics. Process indicators help in substantiating the rating of base practice adequacy or base practice existence and are associated with the performance of a process.
- **4.45 process instance**: A single instantiation of a process, where its purpose is fulfilled in terms of taking the process inputs, performing the set of base practices and producing a set of process outputs.
- **4.46 process management indicator**: An assessment indicator that highlights characteristics of a particular generic practice. Process management indicators help in substantiating the rating of generic practice adequacy and are associated with the organization's ability to manage a process.
- **4.47 process performance**: A measure of the actual results achieved by following a process. (See *process capability* for contrast.) [CMM Version 1.1 CMU/SEI-93-TR-25].
- **4.48 process profile**: The actual and derived generic practice adequacy ratings, and the process capability level ratings for each process identified in the assessment scope.
- **4.49 process purpose**: A summary description of the intent or functional objectives of a process and its base practices.
- **4.50 proposed capability**: The process capability that the organization proposes to bring to bear in meeting the specified requirement. For core process capability determination, the proposed capability is the organization's current assessed capability, whereas for extended process capability determination, the proposed capability is either an enhanced capability or a constructed capability.
- **4.51 provisional assessor**: An assessor who has not yet demonstrated competence or obtained validation of the skills, education and training appropriate to conducting assessments in accordance with the provisions in part 6 of this International Standard.
- **4.52 qualified assessor**: An individual who has attained the qualifications for carrying out process assessments, as defined in part 6 of this International Standard.
- **4.53 software process**: The process or set of processes used by an organization or project to plan, manage, execute, monitor, control and improve its software related activities.
- **4.54 sponsor**: (See assessment sponsor and process capability determination sponsor).

- **4.55 standard process**: The operational definition of the basic process that guides the establishment of a common process in an organization. It describes the fundamental process elements that is expected to be incorporate into any defined process. It also describes the relationships (e.g., ordering and interfaces) between these process elements. (See *defined process*.)
- **4.56 target capability**: That process capability which the process capability determination sponsor judges will represent an acceptable process risk to the successful implementation of the specified requirement.
- **4.57 well-defined process**: A process with inputs, entry criteria, tasks, validation, outputs, and exit criteria that are documented, consistent, and complete.
- **4.58 work product**: An artefact associated with the execution of a practice (e.g., a test case, a requirement specification, code, or a work breakdown structure). The existence of the work product indicates that the practice is performed.
- **4.59 work product characteristic**: An attribute of a type of work product that indicates the adequacy of an implementation of a practice.