# TECHNICAL REPORT

**ISO/IEC**
**TR**
**29110-1**

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# Software engineering — Lifecycle profiles for Very Small Entities (VSEs) —

Part 1:
**Overview**

*Ingénierie du logiciel — Profils de cycle de vie pour très petits organismes (TPO) —*

*Partie 1: Aperçu général*

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# Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

In exceptional circumstances, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC TR 29110-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*.

ISO/IEC 29110 consists of the following parts, under the general title *Software engineering — Lifecycle profiles for Very Small Entities (VSEs)*:

⎯ *Part 1: Overview* [Technical Report]

⎯ *Part 2: Framework and taxonomy*

⎯ *Part 3: Assessment guide* [Technical Report]

⎯ *Part 4-1: Profile specifications: Generic profile group*

⎯ *Part 5-1-2: Management and engineering guide: Generic profile group: Basic profile* [Technical Report]

Entry profile, intermediate profile and advanced profile will form the subjects of future Parts 5-1-1, 5-1-3 and 5-1-4, respectively.

Parts 4 and 5 can be developed to accommodate new profile specifications and management and engineering guides as follows:

⎯ *Part 4-m: Profile specifications: Profile group aaaaa*

⎯ *Part 5-m-n: Management and engineering guide: Profile group aaaaa: Profile bbbbb* [Technical Report]

# Introduction

The software industry recognizes the value of Very Small Entities (VSEs) in contributing valuable products and services. For the purpose of ISO/IEC 29110, a Very Small Entity (VSE) is an entity (enterprise, organization, department or project) having up to 25 people. VSEs also develop and/or maintain software that is used in larger systems; therefore, recognition of VSEs as suppliers of high quality software is often required.

According to the Organization for Economic Co-operation and Development (OECD) SME and Entrepreneurship Outlook report (2005), 'SMEs constitute the dominant form of business organization in all countries world-wide, accounting for over 95 % and up to 99 % of the business population depending on country'. The challenge facing OECD governments is to provide a business environment that supports the competitiveness of this large heterogeneous business population and that promotes a vibrant entrepreneurial culture.

From studies and surveys conducted, it is clear that the majority of International Standards do not address the needs of VSEs. Conformance with these standards is difficult, if not impossible. Subsequently VSEs have no, or very limited, ways to be recognized as entities that produce quality software in their domain. Therefore, VSEs are often cut off from some economic activities.

It has been found that VSEs find it difficult to relate International Standards to their business needs and to justify the application of the standards to their business practices. Most VSEs can neither afford the resources, in terms of number of employees, budget and time, nor do they see a net benefit in establishing software lifecycle processes. To rectify some of these difficulties, a set of guides has been developed according to a set of VSE characteristics. The guides are based on subsets of appropriate standards elements, referred to as VSE Profiles. The purpose of a VSE Profile is to define a subset of International Standards relevant to the VSE context, for example, processes and outcomes of ISO/IEC 12207 and products of ISO/IEC 15289.

ISO/IEC 29110, targeted by audience, has been developed to improve product and/or service quality, and process performance. See Table 1. ISO/IEC 29110 is not intended to preclude the use of different lifecycles such as: waterfall, iterative, incremental, evolutionary or agile.

**Table 1 — ISO/IEC 29110 target audience**

| ISO/IEC 29110 | Title | Target audience |
|---|---|---|
| Part 1 | Overview | VSEs, assessors, standards producers, tool vendors, and methodology vendors |
| Part 2 | Framework and taxonomy | Standards producers, tool vendors and methodology vendors. Not intended for VSEs. |
| Part 3 | Assessment guide | Assessors and VSEs |
| Part 4 | Profile specifications | Standards producers, tool vendors and methodology vendors. Not intended for VSEs. |
| Part 5 | Management and engineering guide | VSEs |

If a new profile is needed, ISO/IEC 29110-4 and ISO/IEC TR 29110-5 can be developed without impacting existing documents and they become ISO/IEC 29110-4-*m* and ISO/IEC 29110-5-*m-n*, respectively, through the ISO/IEC process.

This part of ISO/IEC 29110 defines the business terms common to the ISO/IEC 29110 series. It introduces processes, lifecycle and standardization concepts, and the ISO/IEC 29110 series. It also introduces the characteristics and requirements of a VSE, and clarifies the rationale for VSE-specific profiles, documents, standards and guides.

ISO/IEC 29110-2 introduces the concepts for software engineering standardized profiles for VSEs, and defines the terms common to the ISO/IEC 29110 series. It establishes the logic behind the definition and application of standardized profiles. It specifies the elements common to all standardized profiles (structure, conformance, assessment) and introduces the taxonomy (catalogue) of ISO/IEC 29110 profiles.

ISO/IEC TR 29110-3 defines the process assessment guidelines and compliance requirements needed to meet the purpose of the defined VSE Profiles. ISO/IEC TR 29110-3 also contains information that can be useful to developers of assessment methods and assessment tools. ISO/IEC TR 29110-3 is addressed to people who have direct relation with the assessment process, e.g. the assessor and the sponsor of the assessment, who need guidance on ensuring that the requirements for performing an assessment have been met.

ISO/IEC 29110-4-*m* provides the specification for all the profiles in one profile group that are based on subsets of appropriate standards elements. VSE Profiles apply and are targeted to authors/providers of guides and authors/providers of tools and other support material.

ISO/IEC TR 29110-5-*m-n* provides an implementation management and engineering guide for the VSE Profile described in ISO/IEC 29110-4-*m*.

Figure 1 describes the ISO/IEC 29110 series and positions the parts within the framework of reference. Overviews and guides are published as Technical Reports (TR), and profiles are published as International Standards (IS).
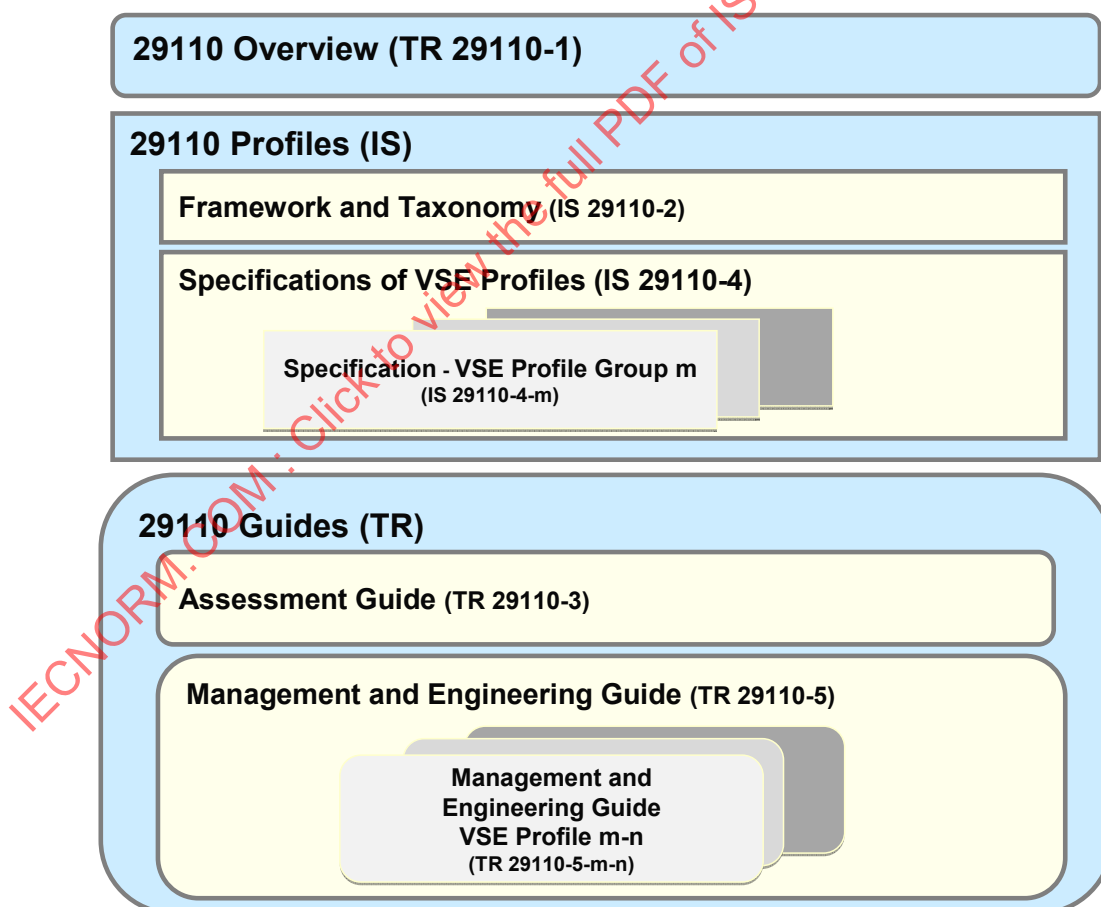


**Figure 1 — ISO/IEC 29110 series**

# Software engineering — Lifecycle profiles for Very Small Entities (VSEs) —

## Part 1:
## Overview

## 1   Scope

### 1.1   Fields of application

This part of ISO/IEC 29110 introduces the major concepts required to understand and use the ISO/IEC 29110 series. It introduces the characteristics and requirements of a Very Small Entity (VSE), and clarifies the rationale for VSE-specific profiles, documents, standards and guides.

It also introduces process, lifecycle and standardization concepts and defines the business terms common to the ISO/IEC 29110 series.

This part of ISO/IEC 29110 is applicable to VSEs. The lifecycle processes described in ISO/IEC 29110 are not intended to preclude or discourage their use by an entity that is larger than a VSE.

### 1.2   Target audience

This part of ISO/IEC 29110 is targeted both at the general audience wishing to understand the ISO/IEC 29110 series and more specifically at users of the ISO/IEC 29110 series. It is intended that it be read first when initially exploring VSE Profile documents. While there is no specific prerequisite to read this part of ISO/IEC 29110, it will be helpful to the user in understanding the other parts.

The lifecycle processes defined in ISO/IEC 29110 can be used by a VSE when acquiring and using, as well as when creating and supplying, software. They can be applied at any level in a software system's structure and at any stage in the lifecycle. They are not intended to preclude or discourage the use of additional processes that a VSE finds useful.

## 2   Terms and definitions

For the purposes of this document, the following terms and definitions apply.

**2.1**
**activity**
set of cohesive tasks of a process

[ISO/IEC 12207:2008]

**2.2**
**assessment indicator**
sources of objective evidence used to support the assessors' judgment in rating process attributes

EXAMPLE        Work products, practice, or resource.

[ISO/IEC 15504-1]

**2.3**
**assessor**
individual who participates in the rating of process attributes

[ISO/IEC 15504-1]

**2.4**
**baseline**
specification or product that has been formally reviewed and agreed upon, that thereafter serves as the basis for further development, and that can be changed only through formal change control procedures

[ISO/IEC 12207:2008]

**2.5**
**base standard**
approved International Standard or Telecommunication Standardization Sector of the International Telecommunications Union (ITU-T) Recommendation

[ISO/IEC TR 10000-1]

**2.6**
**competent assessor**
assessor who has demonstrated the competencies to conduct an assessment and to monitor and verify the conformance of a process assessment

[ISO/IEC 15504-1]

**2.7**
**customer**
organization or person that receives a product or service

NOTE      A customer can be internal or external to the organization.

[ISO/IEC 12207:2008]

**2.8**
**deployment package**
set of artefacts developed to facilitate the implementation of a set of practices of the selected framework

**2.9**
**generic profile group**
profile group applicable to VSEs that do not develop critical software products and have typical situational factors

**2.10**
**guide**
document published by ISO or IEC giving rules, orientation, advice or recommendations relating to international standardization

[ISO/IEC Directives, Part 2]

**2.11**
**international standard**
standard that is adopted by an international standardizing/standards organization and made available to the public

[ISO/IEC Directives, Part 2]

**2.12**
**standardized profile**
internationally agreed-to, harmonized standard which describes one or more profiles

NOTE      Adapted from the definition of "International Standardized Profile" in ISO/IEC TR 10000-1.

**2.13**
**lifecycle**
evolution of a system, product, service, project or other human-made entity from conception through retirement

[ISO/IEC 12207:2008]

**2.14**
**process**
set of interrelated or interacting activities which transforms inputs into outputs

[ISO 9000]

**2.15**
**process assessment**
disciplined evaluation of an organizational unit's processes against a Process Assessment Model

[ISO/IEC 15504-1]

**2.16**
**process assessment model**
model suitable for the purpose of assessing process capability, based on one or more Process Reference Models

[ISO/IEC 15504-1]

**2.17**
**process capability**
characterization of the ability of a process to meet current or projected business goals

[ISO/IEC 15504-1]

**2.18**
**process capability level**
point on the six-point ordinal scale (of process capability) that represents the capability of the process, each level building on the capability of the level below

[ISO/IEC 15504-1]

**2.19**
**process improvement**
actions taken to change an organization's processes so that they more effectively and/or efficiently meet the organization's business goals

[ISO/IEC 15504-1]

**2.20**
**process outcome**
observable result of a process

[ISO/IEC 15504-1]

**2.21**
**process profile**
set of process attribute ratings for an assessed process

[ISO/IEC 15504-1]

**2.22**
**process reference model**
model comprising definitions of processes in a lifecycle described in terms of process purpose and outcomes, together with an architecture describing the relationships between the processes

[ISO/IEC 15504-1]

**2.23**
**profile**
set of one or more base standards and/or profiles and, where applicable, the identification of chosen classes, conforming subsets, options and parameters of those base standards or standardized profiles necessary to accomplish a particular function

[ISO/IEC TR 10000-1]

**2.24**
**profile group**
collection of profiles which are related by composition of processes (i.e. activities, tasks) or by capability level, or both

**2.25**
**project**
endeavour with defined start and finish dates undertaken to create a product or service in accordance with specified resources and requirements

[ISO/IEC 12207:2008]

**2.26**
**record**
document stating results achieved or providing evidence of activities performed

[ISO/IEC 20000-1]

**2.27**
**report**
information item that describes the results of activities such as investigations, assessments, and tests

[ISO/IEC 15289:2006]

**2.28**
**repository**
collection of all software-related artefacts belonging to a system or the location/format in which such a collection is stored

[ISO/IEC/IEEE 24765]

**2.29**
**resource**
asset that is utilized or consumed during the execution of a process

[ISO/IEC 12207:2008]

**2.30**
**review**
process or meeting during which a software product is presented to project personnel, managers, users, customers, user representatives, or other interested parties for comment or approval

[IEEE Std 1028]

**2.31**
**software**
computer programs, procedures, and possibly associated documentation and data pertaining to the operation of a computer system

[IEEE Std 829]

**2.32**
**software component**
software system or element, such as module, unit, data, or document

[IEEE Std 1061]

**2.33**
**standard**
document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context

NOTE      Standards should be based on the consolidated results of science, technology and experience, and aimed at the promotion of optimum community benefits.

[ISO/IEC Directives, Part 2]

**2.34**
**taxonomy**
classification scheme for referencing profiles or sets of profiles unambiguously

[ISO/IEC TR 10000-1]

**2.35**
**Technical Report**
document published by ISO or IEC containing collected data of a different kind from that normally published as an International Standard or Technical Specification

[ISO/IEC Directives, Part 2]

NOTE      Such data may include, for example, data obtained from a survey carried out among the national bodies, data on work in other international organizations or data on the "state of the art" in relation to standards of national bodies on a particular subject.

**2.36**
**traceability record**
work product that

⎯  identifies requirements to be traced,

⎯  identifies a mapping of requirement to lifecycle work products,

⎯  provides the linkage of requirements to work product decomposition (i.e. requirement, design, code, test, deliverables, etc.),

— provides forward and backwards mapping of requirements to associated work products throughout all phases of the lifecycle

NOTE 1    This may be included as a function of another defined work product (example: A CASE tool for design decomposition may have a mapping ability as part of its features).

NOTE 2    Definition taken from ISO/IEC 15504-5:2006, Annex B.

**2.37**
**task**
requirement, recommendation or permissible action intended to contribute to the achievement of one or more outcomes of a process

[ISO/IEC 12207:2008]

**2.38**
**user**
individual or group that benefits from a system during its utilization

[ISO/IEC 12207:2008]

**2.39**
**validation**
confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled

[ISO 9000]

NOTE        Validation in a lifecycle context is the set of activities ensuring and gaining confidence that a system is able to accomplish its intended use, goals and objectives.

**2.40**
**verification**
confirmation, through the provision of objective evidence, that specified requirements have been fulfilled

[ISO 9000]

NOTE        Verification in a lifecycle context is a set of activities that compares a product of the lifecycle against the required characteristics for that product. This may include, but is not limited to, specified requirements, design description and the system itself.

**2.41**
**very small entity**
**VSE**
entity (enterprise, organization, department or project) having up to 25 people

**2.42**
**work product**
artefact associated with the execution of a process

[ISO/IEC 15504-1]

# 3   Conventions and abbreviated terms

## 3.1   Naming, diagramming and definition conventions

None.

### 3.2   Abbreviations

VSE        Very Small Entity

VSEs       Very Small Entities

## 4   VSE Characteristics and VSE Potential Benefits

### 4.1   General

A VSE is considered to be an entity that engages in software implementation activities regardless of its legal form. An entity can be an organization (registered or non-registered), a group within an organization, or a project within an organization. Organization can mean an independent partnership or linked organization having up to 25 people that is engaged in a software implementation project. Annex A provides more basic information.

### 4.2   VSE Characteristics

VSEs are subject to a number of characteristics, needs and desirable competencies that affect the contents, the nature and the extent of their activities. The VSE Profiles address VSEs which are described through the following characteristics, needs and desirable competencies, classified in four categories: Finance and Resources, Customer Interface, Internal Business Processes and Learning and Growth.

In some cases, a VSE is expected to perform limited missions in the entire software development lifecycle under the directions of either another company or consortium fulfilling contract or agreement requirements. These missions may be a part of the software implementation project according to the statement of work. The VSE is chosen by its own competencies or by a bid for the project. Amplification of these characteristics is provided in ISO/IEC 29110-4 set of documents.

### 4.3   VSE Potential Benefits

From the VSE perspective, some benefits considered for using the ISO/IEC 29110 series include good internal software management processes, greater customer confidence and satisfaction, greater software product quality, increased sponsorship for process improvement and decreased development risk. These benefits might also help with increased competitiveness and market share.

## 5   Lifecycle Process Concepts

### 5.1   Introduction

This clause provides lifecycle process concepts that are considered in the ISO/IEC 29110 series and are supportive of the potential coordinated use of ISO/IEC 12207 and ISO/IEC 15289. It will assist users in their management of information items as products of the system or software lifecycle.

### 5.2   Lifecycle Models and Stages

This sub-clause helps to establish a common framework for software lifecycle processes and in planning, producing, and evaluating the results of the lifecycle processes.

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**5.1.12   Life Cycle Models and Stages**

The life of a system or a software product can be modelled by a life cycle model consisting of stages. Models may be used to represent the entire life from concept to disposal or to represent the portion of the life corresponding to the current project. The life cycle model is comprised of a sequence of stages that may overlap and/or iterate, as appropriate for the project's scope, magnitude, complexity, changing needs and opportunities. Each stage is described with a statement of purpose and outcomes. The life cycle processes and activities are selected and employed in a stage to fulfil the purpose and outcomes of that stage. Different organizations may undertake different stages in the life cycle. However, each stage is conducted by the organization responsible for that stage with due consideration of the available information on life cycle plans and decisions made in preceding stages. Similarly, the organization responsible for that stage records the decisions made and records the assumptions regarding subsequent stages in the life cycle.

This International Standard does not require the use of any particular life cycle model. However, it does require that each project define a suitable life cycle model, preferably one that has been defined by the organization for use on a variety of projects. Application of a life cycle model provides the means to establish the time-dependent sequence necessary for project management.

[ISO/IEC 12207]

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## 5.3   Lifecycle Product Types

This sub-clause helps to clarify that information items are essential to preserving what transpired when using system lifecycle processes and be identified as deliverable documents. The result of a process shall be documented or may imply the need for a document (or information item) and often do not specify the contents.

The use of generic types simplifies the application of consistent structure, content, and formats for similar information items (records and documents), to support usability. ISO/IEC 29110 defines the lifecycle data of ISO/IEC 12207:2008 and ISO/IEC 15288:2008 by relating tasks and activities to the generic information item types given in Table 2.

**Table 2 — Lifecycle product types**

| Type | Purpose | Sample of recommended output information types |
|------|---------|------------------------------------------------|
| Record | Characterize the data an organizational entity retains. | Configuration record<br>Problem record |
| Description | Represent a planned or actual function, design, or item | High-level software design description |
| Plan | Define when, how, and by whom specific activities are to be performed. | Project management plan |
| Procedure | Define in detail when and how to perform certain activities or tasks, including tools needed. | Problem resolution procedure |
| Report | Describe the results of activities such as investigations, assessments, and tests. | Problem report<br>Validation report |
| Request | Record information needed to solicit a response. | Change request |
| Specification | Specify a required function, performance or process (such as, requirements specification, standard, policy). | Software requirements specification |

NOTE       Adapted from ISO/IEC 15289:2006.

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# 6 Process Improvement and Assessment Concepts

## 6.1 Process Improvement Concepts

The process improvement concept is to encourage a VSE's project teams to implement systematic approaches which allow for the repetition and realism in estimating and implementing a project. Periodic assessments and communication (internal and external) of the project progress will ensure customer satisfaction.

Process improvement concepts characterize all actions undertaken to improve an organization's processes to both increase their efficiency and meet the organization's business goals. Process improvement activities are addressed in ISO/IEC 15504 and ISO/IEC 29110-3.

Ideally, process improvement is driven by business goals such as increasing productivity, customer satisfaction or increasing market share. Several approaches start with business goals identification, followed by identification of potential problems preventing the realization of these business goals. From this diagnosis, corrections are identified and implemented.

It could be easy for a VSE to over commit to a specific customer project based on their limited resources. Periodic assessments and communication (internal and external) of the project progress will help ensure customer satisfaction.

## 6.2 Assessment Concepts

Assessment concept refers to the determination of the extent to which the organization's processes contribute to the achievement of its business goals and to help the organization focus on the need for process improvement. For example, the assessment can be either formal or informal, use an outside evaluator or an internal evaluator, use a standard checklist or personnel interviews, etc.

Traditional assessments can be very expensive. Pre-assessment activities such as preparation of documents to prove work has been done correctly, allotment of personnel time for review and internal management of the assessment can be a drain on resources in a VSE.

A simpler method for VSEs might be a combination of self-assessment and spot checks to verify actual practices followed, without having an independent assessor on site for a full assessment. However, a case can be made that the VSE needs to do an assessment to satisfy customer concerns regardless of whether a formal certification to a standard is sought.

# 7 Standardization Concepts

## 7.1 Introduction

Recognizing the limitations of VSEs resources, the need for minimum processes and practices are supported in the scope of ISO/IEC 29110. This will allow the VSE to be flexible and achieve its business goals without compromising software engineering processes.

NOTE    Rationale for defining each profile is in ISO/IEC 29110-2.

## 7.2 Standard

Software engineering standards are focusing on both processes and products aspects. They contain formal requirements developed and used to prescribe consistent approaches to develop software. Software Engineering Standards have several objectives:

— to provide a common framework and vocabulary for software project practitioners;

— to provide a framework for two party agreements;

—  to improve and evaluate software competence;

—  to facilitate software process or product evaluation.

Standards contain normative and, in some cases, informative parts. The normative part of standards is used as requirements for conformance evaluation. The informative part of standards contains information that either complements or facilitates the understanding of or the use of the normative part.

The need for process improvement should be a business issue, motivated by profitability. In large organizations, large quantities of data are tracked in sophisticated ways, including application of Lean and six sigma tools. In VSE's process improvement can be handled, more informally.

## 7.3   Technical Reports

Technical Reports are documents published by ISO/IEC JTC 1 containing collected data of a different kind from that normally published as an International Standard or Technical Specification. It contains information that helps in the understanding and use of the normative part of a standard.

In the scope of ISO/IEC 29110, Technical Reports are used to present the guidelines information about implementing the profile and assessing its implementation in a VSE.

Capability assessments were created to address the low confidence that acquirers of large systems had in software developers, i.e., governments purchasing large weapons systems. VSE's often have a domain specific product that is needed by a larger enterprise. Oftentimes these products are available as COTS products, proven by years of in-service history. Such history can be used in lieu of costly capability assessments.

## 7.4   Profile

A profile is a set of one or more base standards and/or standardized profiles, and, where applicable, the identification of chosen classes, conforming subsets, options and parameters of those base standards, or standardized profiles necessary to accomplish a particular function.

## 7.5   Profile Group

A profile group (PG) is a collection of profiles which are related either by composition of processes (i.e. activities, tasks), or by capability level, or both.  Amplification of these characteristics is provided in ISO/IEC 29110-2.

## 7.6   Generic Profile Group

The generic profile group is applicable to VSEs that do not develop critical software products. The generic profile group does not imply any specific application domain. Amplification of these characteristics is provided in ISO/IEC 29110-2.

## 7.7   Guides

Guides provide practical information to facilitate the implementation and the assessment of the implementation of the defined profiles. In accordance with JTC 1, guides are published as Technical Reports.

## 7.8   Use of Profiles

Profiles are designed to be used by a VSE to implement specific functionality through the use of guides published as Technical Reports. At a minimum, each Profile of the ISO/IEC 29110 series shall be linked to an Assessment Guide and one or more implementation guides.

Additional materials, such as a deployment package, a set of artefacts developed to facilitate the implementation of a set of practices of the selected framework, is available to further facilitate the implementation of Profiles by a VSE.

NOTE    Annex A of the Engineering and Management Guides (ISO/IEC 29110 TR 5-1-*n*) gives additional information about deployment packages.

Any document that has been developed from a profile shall reference the standardized profile they were derived from.

## 7.9   Conformance to Profiles

Conformance to profiles may be complete, when all the required elements of the profile are satisfied or partially satisfied when a selected subset is completed.

Conformance with a profile implies compliance with the selected components of the base standards.

For methodology related products and tools, conformance means that the proposed method or tools implements the required elements of the profile.

For the implementation of the required elements within a VSE, conformance means that actual performance of the processes can be evaluated through an assessment process.

These concepts provide the context and standardization details for the format and content of the product, as required to support the principles and classification schema selected for them. Conformance to a VSE Profile should be evaluated through an assessment defined in the assessment guide referenced by the VSE Profile.

Conformance to a VSE Profile is the way that VSEs show and document their use and understanding of International Standards. By conforming to the guidance of International Standards, the VSE shows that the content of their produced documents are compliant with the support the concepts required by these standards.

## 8   ISO/IEC 29110 series

### 8.1   Introduction

The ISO/IEC 29110 series is comprised of multiple documents with different purposes and audiences. Documents are grouped in three categories overview, profiles and guides. The overview document is the introductory document for the set of other documents. The profile documents are the technical specifications for the packaging of the various profile elements. The guide documents are the user oriented documents. Figure 1 identifies the major categories and the existing and planned documents.

### 8.2   Overview

The overview introduces all the major concepts required to understand and use the ISO/IEC 29110 series. It introduces the characteristics and requirements of a VSE, and clarifies the rationale for VSE-specific profiles, documents, standards and guides. It also introduces process, lifecycle and standardization concepts, and the ISO/IEC 29110 series. It is targeted both at a general audience interested in these documents, and more specifically at users of these documents. The overview document is identified as ISO/IEC 29110-1.

### 8.3   VSE Profiles

VSE Profiles are defined to formally package references to other documents and/or parts of other documents in order to adapt them to a VSE needs and characteristics. Preparing VSE Profiles is an ISO/IEC JTC 1 defined process. It involves producing two types of documents, the Framework and Taxonomy plus Profile Specifications.