

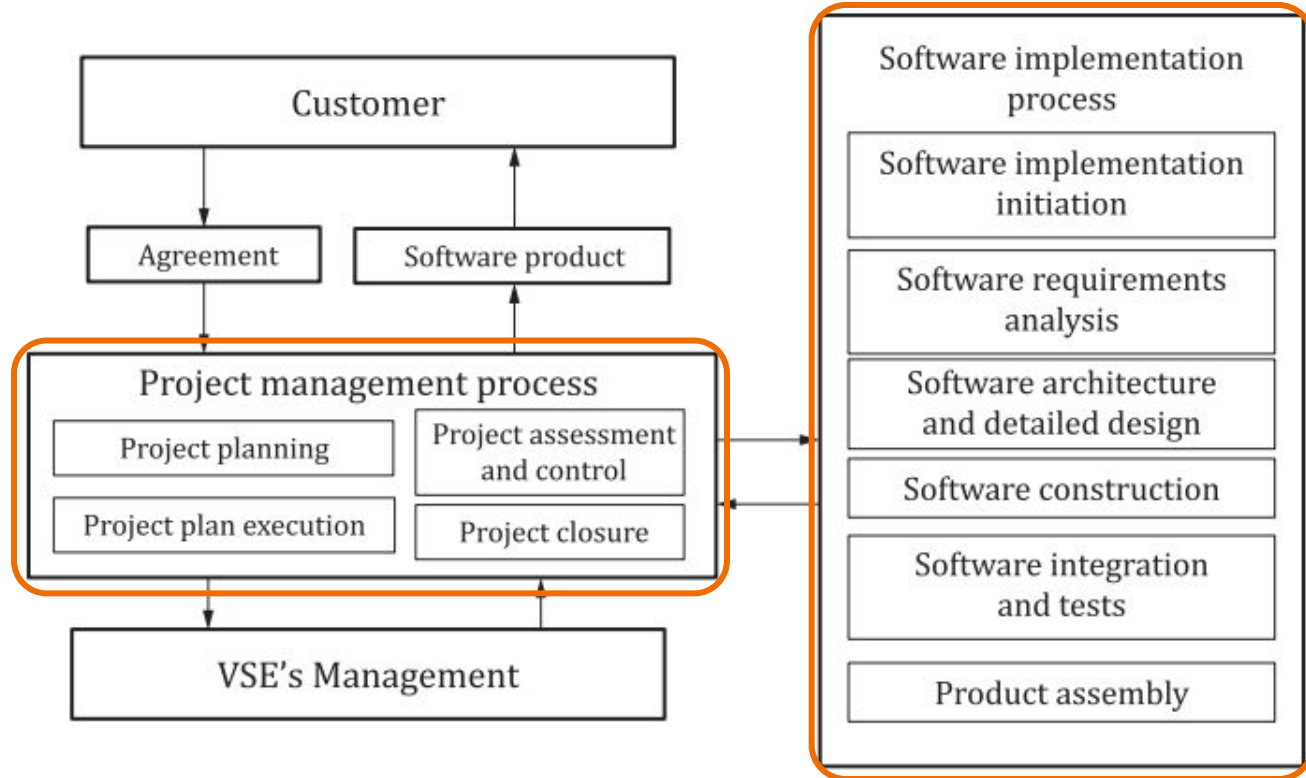


ISO/IEC 29110-5-1-2:2025

Systems and software engineering – Life cycle profiles for very small entities (VSEs) –

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Process and activities of the software basic profile



WP.01 - Acceptance Record

WP ID	Name	Source
WP.01	Acceptance record	Project management
<p>Description</p> <p>Documents the customer acceptance of the deliverables (i.e. list of work products to be delivered to customer) of the project.</p> <p>It may have the following characteristics:</p> <ul style="list-style-type: none"> — Record of the receipt of the delivery — Identifies the date received — Identifies the delivered elements — Records the validation of any customer acceptance criteria defined — Identifies any open issues (if applicable) — Signed by customer and project manager <p>The applicable states are: initiated and signed.</p> <p>NOTE 1 The acceptance record includes the “acceptance criteria”.</p> <p>NOTE 2 The development team asks for clarification if needed.</p>		

WP.02 - Agreement

WP ID	Name	Source
WP.02	Agreement	Customer Project management
<p>Description Description of work to be done related to software development. It may Include:</p> <ul style="list-style-type: none"> — Product description — Purpose — General customer requirements — Scope description of what is included and what is not included — Objectives of the project — List of work products to be delivered to customer (i.e. deliverables) — Signed by customer and project manager <p>The applicable states are: approved, reviewed and baselined.</p>		

WP.03 - Change Request

WP ID	Name	Source
WP.03	Change request	Software implementation Customer Project management
<p>Description</p> <p>Identifies a software, or documentation problem or desired improvement, and requests modifications. It may have the following characteristics:</p> <ul style="list-style-type: none"> — Identifies purpose of change — Identifies request states (e.g. initiated, evaluated, accepted and rejected) — Identifies requester contact information (e.g. customer, project manager) — Impacted software product, component — Impact to operations of existing software defined — Impact to associated documentation defined — Criticality of the request, date needed <p>The applicable states are: initiated, evaluated, accepted and rejected.</p>		

WP.04 - Correction Register

WP ID	Name	Source
WP.04	Correction register	Project management
<p>Description</p> <p>Identifies activities established to correct a deviation or problem concerning the accomplishment of a plan. It may have the following characteristics:</p> <ul style="list-style-type: none"> — Identifies the initial problem — Defines a solution — Identifies corrective actions taken — Identifies the person responsible for completion of defined actions — Identifies the open date and target closure date — Contains a state indicator — Indicates follow up actions <p>The applicable states are: initiated, approved and completed.</p>		

WP.05 - Implementation Environment

WP ID	Name	Source
WP.05	Implementation environment	Software implementation
Description Describes the tools selected (e.g. compilers, design tools, construction and tests) for the project. The applicable state is: established		

WP.06 - Maintenance Documentation

WP ID	Name	Source
WP.06	Maintenance documentation	Software implementation
<p>Description</p> <p>Describes the software product and the environment used for development and testing (e.g. compilers, design tools, construction and tests).</p> <p>It may have the following characteristics:</p> <ul style="list-style-type: none"> — Includes or refers to all software product elements developed during implementation — Identifies environment used for development and testing (e.g. compilers, design tools, construction and tests tools) <p>It is written in terms that maintenance personnel can understand.</p> <p>The applicable states are: validated and baselined.</p>		

WP.07 - Meeting Record

WP ID	Name	Source
WP.07	Meeting record	Project management
<p>Description</p> <p>Records the agreements established with customer and/or work team.</p> <p>It may have the following characteristics:</p> <ul style="list-style-type: none"> — Purpose of meeting — Name of attendees — Date, place held — Reference to previous minutes — What was accomplished — Identifies issues raised — Any open issues — Agreements — Next meeting, if any. — Signed by customer and project manager <p>The applicable state is: approved.</p>		

WP.08 - Product Operation Guideline

WP ID	Name	Source
WP.08	Product operation guideline	Software implementation
<p>Description</p> <p>Contains the necessary information to install and manage the software. It may have the following characteristics:</p> <ul style="list-style-type: none"> — Criteria for operational use — A description of how to operate the product including: <ul style="list-style-type: none"> — Operational environment required — Supporting tools and material (e.g. user manuals) required — Possible safety warnings — Start-up preparations and sequence — Frequently asked questions (FAQ) — Sources of further information and help to operate the product — Certification and safety approvals — Warranty and replacement instructions <p>It is written in terms that the personnel responsible for the operation can understand.</p> <p>The applicable states are: verified and baselined.</p>		

WP.09 - Progress Status Record

WP ID	Name	Source
WP.09	Progress status record	Project management
<p>Description</p> <p>Records the status of the project against the project plan. It may have the following characteristics:</p> <ul style="list-style-type: none"> — Status of actual tasks against planned tasks — Status of actual results against established objectives/goals — Status of actual resource allocation against planned resources — Status of actual cost against budget estimates — Status of actual time against planned schedule — Status of actual risk and mitigation against previously identified — Record of any deviations from planned tasks and reason why. — Signature of the project manager <p>The applicable state is: published.</p>		

WP.10 - Project Plan

WP ID	Name	Source
WP.10	Project plan	Project management
<p>Description</p> <p>Presents how the project processes and activities are executed to assure the project's successful completion, and the quality of the work products to be delivered according to the schedule.</p> <p>It includes the following elements which may have the characteristics as follows:</p> <ul style="list-style-type: none"> — Product description <ul style="list-style-type: none"> — Purpose — General Customer requirements — Scope description of what is included and what is not included — Objectives of the project — Development cycle selected (e.g. waterfall, iterative, incremental, evolutionary, agile) — Deliverables - list of work products to be delivered to customer 		

CONT.

WP.10 - Project Plan

- Tasks, including verification, validation and reviews with customer and work team, to assure the quality of work products. tasks may be represented as a work breakdown structure (WBS).
- Estimated duration of tasks
- Resources (humans, materials, standards, equipment and tools) including the required training, and the schedule when the resources are needed.
- Composition of work team
- Schedule of the project tasks, the expected start and completion date for each task, and the relationship and dependencies of the tasks.
- Estimated effort and cost

WP.10 - Project Plan

- Identification of project risks
- Version control strategy
 - Work product repository tools or mechanism identified
 - Location and access mechanisms for the repository specified
 - Version identification and control defined
 - Description of the baselines selected for the project: e.g. requirements baseline (i.e. agreement), design baseline and product baseline
 - Backup and recovery mechanisms defined
 - Storage, handling and delivery (including archival and retrieval) mechanisms specified

WP.10 - Project Plan

- Delivery Instructions
 - Elements required for product release identified (i.e. hardware, software, documentation, etc.)
 - Delivery requirements
 - Sequential ordering of tasks to be performed
 - Applicable releases identified
 - Applicable media identified (e.g. paper, electronic)
 - Identifies all delivered software components and work products (e.g. software user documentation) with version information
 - Identify any necessary backup and recovery procedures

Signed by customer and project manager.

The applicable states are: validated, accepted, updated and reviewed.

WP.11 - Project Repository

WP ID	Name	Source
WP.11	Project repository	Project management
<p>Description</p> <p>Electronic container to store project work products and deliverables. It may have the following characteristics:</p> <ul style="list-style-type: none"> — Stores project work products — Stores released work products — Storage and retrieval capabilities — Ability to browse content — Listing of contents with description of attributes — Sharing and transfer of work products between affected groups — Effective controls over access — Maintain work product descriptions — Recovery of archive versions of work products — Ability to report work products status — Changes to work products are tracked to change requests <p>The applicable states are: recovered and updated.</p>		

WP.12 - Project Repository Backup

WP ID	Name	Source
WP.12	Project repository backup	Project management
Description Repository used to back up the project repository and, if necessary, to recover the information. The applicable state is: recovered		

WP.13 - Requirements Specification

WP ID	Name	Source
WP.13	Requirements specification	Software implementation
<p>Description</p> <p>Provides the software requirements such as functions, performance, design constraints, and attributes. It may have the following characteristics:</p> <ul style="list-style-type: none"> — Introduction – general description of software and its use within the context of the customer. — Requirements description: <ul style="list-style-type: none"> — Functional suitability – Degree to which a product or system provides functions that meet stated and implied needs when used under specified conditions: <ul style="list-style-type: none"> — Functional completeness (i.e. degree to which the set of functions covers all the specified tasks and user objectives) — Functional correctness (i.e. degree to which a product or system provides the correct results with the needed degree of precision) — Functional appropriateness (i.e. degree to which the functions facilitate the accomplishment of specified tasks and objectives. As an example: a user is only presented with the necessary steps to complete a task, excluding any unnecessary steps) 		

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WP.13 - Requirements Specification

- Performance efficiency - Performance relative to the amount of resources used under stated conditions (e.g. time behaviour, resource utilisation, capacity)
- Compatibility - Degree to which a product or component can exchange information with other products, systems or components, and/or perform its required functions, while sharing the same hardware or software environment (e.g. co-existence, interoperability)
- Usability - Degree to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use (e.g. appropriateness recognizability, learnability, operability, user error protection, user interface aesthetics, accessibility)
- Reliability – Degree to which a product or component performs specified functions under specified conditions for a specified period of time (e.g. maturity, availability, fault tolerance, recoverability)
- Maintainability – Degree of effectiveness and efficiency with which a product can be modified by the intended maintainers (e.g. modularity, reusability, analysability, modifiability, testability)

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WP.13 - Requirements Specification

- Portability – Degree of effectiveness and efficiency with which a product, or component can be transferred from one hardware, software or other operational or usage environment to another (e.g. adaptability, instability, replaceability)
- Security - Degree to which a product protects information and data so that persons or other products or systems have the degree of data access appropriate to their types and levels of authorization (e.g. confidentiality, integrity, non-repudiation, accountability, authenticity)
- Design and construction limitations/constraints – needs imposed by the customer
- Legal and regulative – needs imposed by laws, regulations, etc.

Each requirement is identified (e.g. Req. #01), unique and it is verifiable or can be assessed.

The applicable states are: verified, validated and baselined.

WP.14 - Software

WP ID	Name	Source
WP.14	Software	Software implementation
<p>Description Software item (e.g. software source and executable code) for a customer, constituted by a collection of integrated software components.</p> <p>The applicable states are: tested, corrected and baselined.</p>		

WP.15 - Software Components

WP ID	Name	Source
WP.15	Software components	Software implementation
Description A set of related code units. The applicable states are: unit tested, corrected and baselined.		

WP.16 - Software Design

WP ID	Name	Source
WP.16	Software design	Software implementation
<p>Description</p> <p>Textual and graphical information on the software structure. This structure may include the following parts:</p> <ul style="list-style-type: none"> — Architectural or high-level software design <ul style="list-style-type: none"> — Describes the overall software structure: — Identifies the required software components — Identifies the relationship between software components — Consideration is given to any required: <ul style="list-style-type: none"> — Software performance characteristics — Hardware, software and human interfaces — Security characteristics — Database design requirements — Error handling and recovery attributes 		

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WP.16 - Software Design

- Low-level or detailed software design - includes details of the software components to facilitate its construction and test within the programming environment:
 - Provides detailed design (i.e. can be represented as a prototype, flow chart, entity-relationship diagram, pseudo-code, etc.)
 - Provides format of input/output data
 - Provides specification of data storage needs
 - Establishes required data naming conventions
 - Defines the format of required data structures
 - Defines the data fields and purpose of each required data element
 - Provides the specifications of the program structure

The applicable states are: verified, approved.

WP.17 - Software Product

WP ID	Name	Source
WP.17	Software product	Software implementation
<p>Description</p> <p>Provides a uniquely identified and consistent set of software products including:</p> <ul style="list-style-type: none"> — Requirements specification — Software design — Traceability record — Software components — Software — Test cases and test procedures — Test report — Product operation guideline — Software user documentation — Maintenance documentation <p>The applicable states are: delivered and accepted.</p>		

WP.18 - Software Documentation

WP ID	Name	Source
WP.18	Software user documentation	Software implementation
<p>Description</p> <p>Describes the way of using the software based on the user interface.</p> <p>It may have the following characteristics:</p> <ul style="list-style-type: none"> — User procedures for performing specified tasks using the software — Installation and de-installation procedures — Brief description of the intended use of the software (the concept of operations) — The supplied and required resources — Needed operational environment — Availability of problem reporting and assistance — Procedures to access and exit the software — Lists and explains software commands and messages to the user — As appropriate for the identified risk, it includes warnings, cautions, and notes, with corrections — It includes troubleshooting and error correction procedures. <p>It is written in terms understandable by users.</p> <p>The applicable states are: preliminary, verified and baselined.</p>		

WP.19 - Test Cases and Test Procedures

WP ID	Name	Source
WP.19	Test cases and test procedures	Software implementation
<p>Description</p> <p>Provides elements needed to test code.</p> <p>Test cases may include:</p> <ul style="list-style-type: none"> — Identifies the test case — Test items (unit test cases, integration tests) — Input specifications — Output specifications — Environmental needs — Special procedural requirements — Interface dependencies <p>Test procedures may include:</p> <ul style="list-style-type: none"> — Identifies: test name, test description and test completion date — Identifies potential implementation issues — Identifies the person who completed the test procedure — Identifies prerequisites — Identifies procedure steps including the step number, the required action by the tester and the expected results <p>The applicable states are: verified and baselined.</p>		

WP.20 - Test Report

WP ID	Name	Source
WP.20	Test report	Software implementation
<p>Description Documents the tests execution. It may include:</p> <ul style="list-style-type: none"> — A summary of each defect — Identifies the related test case — Identifies the tester who found each defect — Identifies the severity for each defect — Identifies the affected function(s) for each defect — Identifies the date when each defect originated — Identifies the date when each defect was resolved — Identifies the person who resolved each defect <p>The applicable states are: initiated, [defects] corrected, baselined.</p>		

WP.21 - Traceability Record

WP ID	Name	Source
WP.21	Traceability record	Software implementation
<p>Description</p> <p>Documents the relationship between the requirements included in the requirements specification, software design elements, software components, test cases and test procedures.</p> <p>It may include:</p> <ul style="list-style-type: none"> — Identification of the individual requirements of the requirements specification to be traced — Provides forward and backward mapping of requirements to software design elements, software components, test cases, test procedures and test results. <p>The applicable states are: verified, baselined and updated.</p>		

WP.22 - Validation Record

WP ID	Name	Source
WP.22	Validation record	Software implementation
<p>Description</p> <p>Documents the validation execution. It may include the record of:</p> <ul style="list-style-type: none"> — Participants — Date — Place — Duration — Validation checklist — Passed items of validation — Failed items of validation — Pending items of validation — Defects identified during validation — Signature of project manager — Signature of customer <p>The applicable states are: initiated, approved.</p>		

WP.23 - Verification Record

WP ID	Name	Source
WP.23	Verification record	Project management Software implementation
<p>Description</p> <p>Documents the verification execution. It may include the record of:</p> <ul style="list-style-type: none"> — Participants — Date — Place — Duration — Verification checklist — Passed items of verification — Failed items of verification — Pending items of verification — Defects identified during verification — Signature of author <p>The applicable states are: initiated, approved.</p>		

FURTHER INFORMATION



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