

AUTOMOTIVE SPICE® PAM, VERSION 1.5

AUTOMOTIVE SOFTWARE REQUIREMENTS PROCESS IMPROVEMENT AND CAPABILITY DETERMINATION

Automotive SPICE v2.3

ORGANIZATIONAL Life Cycle Processes

PRIMARY Life Cycle Processes

SUPPORTING Life Cycle Processes

Management Process Group (MAN)

MAN.3 Project management

- The purpose of the Project management process is to identify, establish, plan, coordinate, and monitor the activities, tasks, and resources necessary for a project to produce a product and/or service, in the context of the project's requirements and constraints.
- BP1 **Define the scope of work**
Define the mission to be taken by the project, and confirm that the goals of the project are feasible with available resources and constraints.
 - BP2 **Define project life cycle**
Define the life cycle for the project, which is appropriate to the scope, context, magnitude and complexity of the project.
 - BP3 **Determine and maintain estimates for project activities**
Identify and maintain estimates for project activities.
 - BP4 **Define project activities**
Plan project activities according to defined project life cycle and estimates. Define and monitor dependencies between activities.
 - BP5 **Identify skills needed**
Identify required skills needed for the project and allocate them to individuals and teams.
 - BP6 **Define and maintain project schedule**
Allocate resources to activities and determine schedule for each activity and for the whole project.
 - BP7 **Identify and monitor project interfaces**
Identify and monitor interfaces of the project with other (sub) projects, organizational units and other stakeholders and monitor agreed commitments.
 - BP8 **Establish project plan**
Collect and maintain project master plan and other relevant plans to document the project scope and goals, resources, infrastructure, interfaces and communication mechanisms.
 - BP9 **Implement the project plan**
Implement planning activities of the project.
 - BP10 **Monitor project attributes**
Monitor the defined project attributes and document significant deviations of the project.
 - BP11 **Review and report progress of the project**
Regularly report and review the status of the project against the project plans to all affected parties. This includes reports to the car producer. Regularly evaluate the performance of the project.
 - BP12 **Act to correct deviations**
Take action when project goals are not achieved, correct deviations from plan and prevent recurrence of problems identified in the project. Update project plans accordingly.

Process Improvement Process Group (PIM)

PIM.3 Process improvement

- The purpose of the Process improvement process is to continually improve the organization's effectiveness and efficiency through the processes used and aligned with the business needs.
- BP1 **Establish commitment**
Commitment is established to support the process group, to provide resources and further abilities (trainings, methods, infrastructure, etc.) to sustain improvement actions.
 - BP2 **Identify issues**
Processes and interfaces are continuously analyzed to identify issues arising from the organization's internal / external environment as improvement opportunities, and with justified reasons for change. This includes issues and improvement suggestions addressed by the customer.
 - BP3 **Plan process changes**
Analysis of the current status of the existing process is performed, focusing on those processes from which improvement should arise, resulting in improvement objectives for the processes being evaluated.
 - BP4 **Prioritize improvements**
The improvement objectives and improvement activities are prioritized.
 - BP5 **Define and maintain project schedule**
Consequent changes to the process are defined and planned.
 - BP6 **Implement process changes**
The improvements to the processes are implemented. Process documentation is updated and people are trained.
 - BP7 **Confirm process improvement**
The effects of process implementation are monitored, measured and confirmed against the defined improvement goals.
 - BP8 **Establish customer satisfaction**
Knowledge gained from the improvements and progress of the improvement implementation is communicated outside of the improvement project across relevant parts of the organization and to the customer (if appropriate).
 - BP9 **Evaluate the results of the improvement project**
Evaluate the results of the improvement project to check whether the solution was successful and can be used elsewhere in the organization.

Engineering Process Group (ENG)

ENG.1 Requirements elicitation

- The purpose of the Requirements elicitation process is to gather, process, and track evolving customer needs and requirements throughout the life of the product and/or service so as to establish a requirements baseline that serves as the basis for defining the needed work products.
- BP1 **Obtain customer requirements and requests**
Obtain and define customer requirements and requests through direct solicitation of customer input and through review of customer business proposals (where relevant), and requests and business environment, and other documents bearing on customer requirements.
 - BP2 **Understand customer expectations**
Ensure that both supplier and customer understand each requirement in the same way.
 - BP3 **Agree on requirements**
Obtain an explicit agreement from all relevant parties to work to these requirements.
 - BP4 **Establish customer requirements baseline**
Formulate the customer's requirements and requests as a baseline for project use and monitoring against customer needs. The supplier should determine the requirements not stated by the customer but necessary for specified and intended use and include them in the baseline.
 - BP5 **Manage customer requirements change**
Manage all changes made to the customer requirements against the customer requirements baseline to ensure enhancements resulting from changing technology and customer needs are identified and that those who are affected by the changes are able to assess the impact and risks and initiate appropriate change control and mitigation actions.
 - BP6 **Establish customer-supplier quality communication mechanism**
Provide a means by which the customer can be aware of the status and disposition of customer requirements changes and the supplier can have the ability to communicate necessary information, including data, in a customer-specified language and format.

ENG.2 System requirements analysis

- The purpose of the System requirements analysis process is to transform the defined customer requirements into a set of desired system technical requirements that will guide the design of the system.
- BP1 **Identify System Requirements**
Use the customer requirements as the basis for identifying the requirements in system requirements specification.
 - BP2 **Analyze the identified system requirements in terms of technical feasibility, risks and usability**
Determine the interface between the system requirements and other components of the operating environment, and the impact that the requirements have on the system.
 - BP3 **Prioritize and categorize system requirements**
Prioritize and categorize the identified and analyzed system requirements and assign them to future releases of the system.
 - BP4 **Evaluate and update system requirements**
Identify appropriate strategies to identify risks, mitigate risks and set acceptability levels for each risk or set of risks, both at the project and organizational level.
 - BP5 **Identify test cases**
Identify test cases to the project both initially within the project strategy and as they develop during the conduct of the project, continuously looking for risk factors as any occurrence of technical or managerial decisions.
 - BP6 **Assess domain for potential reuse**
Assess each domain to identify potential use and applications of reusable resources and products.
 - BP7 **Assess reuse maturity**
Assess the maturity of the reuse readiness and maturity of the organization to provide a baseline and success criteria for reuse program management.
 - BP8 **Evaluate reuse proposals**
Evaluate suitability of the proposed reusable components and products to be proposed.
 - BP9 **Implement the reuse program**
Perform the defined activities identified in the reuse program.
 - BP10 **Get feedback from reuse**
Feedback, feedback, assessment, communication and notification mechanism to control the progress of reuse program.
 - BP11 **Monitor reuse**
Monitor the implementation of the reuse program periodically and evaluate its suitability to actual needs.

ENG.3 System architectural design

- The purpose of the System architectural design process is to identify which system requirements are to be allocated to which elements of the system.
- BP1 **Define system architectural design**
Identify the system architecture design that identifies the elements of the system with respect to the functional and non-functional system requirements.
 - BP2 **Allocate System Requirements**
Allocate all system requirements to the elements of the system architectural design.
 - BP3 **Define interfaces**
Identify, develop and document the internal and external interfaces of each system element.
 - BP4 **Develop verification criteria**
Define the verification criteria for each element of the system concerning the functional and non-functional requirements based on the system architectural design.
 - BP5 **Verify System Architectural Design**
Ensure that the system architecture meets all system requirements.
 - BP6 **Ensure consistency and bilateral traceability of system requirements to system architectural design**
Ensure consistency of system requirements including verification criteria to system architectural design including verification criteria. Consistency is supported by establishing and maintaining bilateral traceability between the software architectural design including verification criteria and software detailed design including verification criteria.
 - BP7 **Ensure consistency and bilateral traceability of software architectural design to software detailed design**
Ensure consistency of software architectural design including verification criteria to software detailed design including verification criteria. Consistency is supported by establishing and maintaining bilateral traceability between the software architectural design including verification criteria and software detailed design including verification criteria.

ENG.4 Software requirements analysis

- The purpose of the Software requirements analysis process is to establish the software requirements for the system.
- BP1 **Identify software requirements**
Use the system requirements and the system architectural design as the basis for identifying the functional and non-functional requirements of the software and document the software requirements in a software requirements specification.
 - BP2 **Determine the impact on the operating environment**
Determine the interface between the software requirements, system requirements and/or other components of the operating environment, and the impact that the requirements have on the system.
 - BP3 **Prioritize and categorize software requirements**
Prioritize and categorize the identified and analyzed software requirements and assign them to future releases of the system.
 - BP4 **Evaluate and update software requirements**
Identify appropriate strategies to identify risks, mitigate risks and set acceptability levels for each risk or set of risks, both at the project and organizational level.
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Identify test cases to the project both initially within the project strategy and as they develop during the conduct of the project, continuously looking for risk factors as any occurrence of technical or managerial decisions.
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Evaluate suitability of the proposed reusable components and products to be proposed.
 - BP9 **Implement the reuse program**
Perform the defined activities identified in the reuse program.
 - BP10 **Get feedback from reuse**
Feedback, feedback, assessment, communication and notification mechanism to control the progress of reuse program.
 - BP11 **Monitor reuse**
Monitor the implementation of the reuse program periodically and evaluate its suitability to actual needs.

ENG.5 Software design

- The purpose of the Software design process is to provide a design for the software that implements and can be verified against the software requirements.
- BP1 **Develop software architectural design**
Use the functional and non-functional software requirements to develop a software architecture that describes the top-level structure and all the software components including software components available for reuse.
 - BP2 **Verify integrated software**
Verify the integrated software against the test cases for software testing and according to the software test strategy.
 - BP3 **Record the results of software testing**
Document the results of software testing and communicate to all relevant parties.
 - BP4 **Ensure consistency and bilateral traceability of software requirements to software architectural design**
Ensure consistency of software requirements including verification criteria to software architectural design including verification criteria. Consistency is supported by establishing and maintaining bilateral traceability between the software architectural design including verification criteria and software detailed design including verification criteria.
 - BP5 **Ensure consistency and bilateral traceability of software architectural design to software detailed design**
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ENG.6 Software construction

- The purpose of the Software construction process is to produce verified software units that properly reflect the software design.
- BP1 **Define a unit verification strategy**
Develop a strategy for verification and re-verifying the software units. The strategy should define how to achieve the desired quality with the available and suitable techniques near the complete range of allowed application parameter combinations.
 - BP2 **Ensure consistency and bilateral traceability of system architectural design to system integration test specification**
Ensure consistency of system architectural design to system integration test specification including test cases. Consistency is supported by establishing and maintaining bilateral traceability between the system architectural design including verification criteria and system integration test specification including test cases.
 - BP3 **Prioritize and categorize software units**
Prioritize and categorize the identified and analyzed software units and map them to future releases.
 - BP4 **Develop software units**
Develop and document the executable representations of each software unit.
 - BP5 **Define and maintain verification criteria**
Develop and document verification criteria that verify that each software unit satisfies its design, functional and non-functional requirements over the complete range of allowed application parameter combinations.
 - BP6 **Verify software units**
Verify each software unit against the defined design according to the verification strategy and the unit verification criteria.
 - BP7 **Record the results of unit verification**
Document the results of unit verification and communicate to all relevant parties.
 - BP8 **Ensure consistency and bilateral traceability of software detailed design to software units**
Ensure consistency of software detailed design including verification criteria to software units including verification criteria. Consistency is supported by establishing and maintaining bilateral traceability between the software detailed design including verification criteria and software units including verification criteria.
 - BP9 **Ensure consistency and bilateral traceability of software units to test specification for software units**
Ensure consistency of software units including verification criteria to test specification for software units including test cases for software units. Consistency is supported by establishing and maintaining bilateral traceability between the software units including verification criteria and test specification for software units including test cases for software units.

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 - BP8 **Evaluate reuse proposals**
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 - BP9 **Implement the reuse program**
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Verify each software unit against the defined design according to the verification strategy and the unit verification criteria.
 - BP7 **Record the results of unit verification**
Document the results of unit verification and communicate to all relevant parties.
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ENG.7 Software integration test

- The purpose of the Software integration test process is to integrate the software units into larger assemblies, producing integrated software components with the software design and to test the interaction between the software items.
- BP1 **Develop software integration strategy**
Develop the strategy for integrating software items consistent with the release strategy and an order for integrating them.
 - BP2 **Develop test specification for software integration test**
Develop the test specification for software integration test including test cases, to be executed on each integrated software item. The test cases should demonstrate compliance with the software architectural design and software detailed design allocated to each software item.
 - BP3 **Verify the integrated software**
Verify the integrated software item against the test cases for software integration test according to the software integration test strategy.
 - BP4 **Record the results of software integration testing**
Document the results of software integration testing and communicate to all relevant parties.
 - BP5 **Ensure consistency and bilateral traceability of software architectural design and software detailed design to software integration test specification**
Ensure consistency of software architectural design and software detailed design to software integration test specification including test cases. Consistency is supported by establishing and maintaining bilateral traceability between the software architectural design and software detailed design to software integration test specification including test cases.
 - BP6 **Develop regression test strategy and perform regression testing**
Develop the strategy for re-testing the integrated system if a system element is changed. If changes are made to software items carry out regression testing as defined in the system regression test strategy, and record the results.

ENG.8 Software testing

- The purpose of the Software testing process is to confirm that the integrated software meets the defined software requirements.
- BP1 **Develop software test strategy**
Develop the strategy for software testing consistent with the release strategy.
 - BP2 **Develop test specification for software test**
Develop the test specification for software test including test cases, to be executed on the integrated software. The test cases should demonstrate compliance with the software requirements.
 - BP3 **Verify integrated software**
Verify the integrated software against the test cases for software testing and according to the software test strategy.
 - BP4 **Record the results of software testing**
Document the results of software testing and communicate to all relevant parties.
 - BP5 **Ensure consistency and bilateral traceability of software requirements to software test specification**
Ensure consistency of software requirements including verification criteria to software test specification including test cases. Consistency is supported by establishing and maintaining bilateral traceability between the software requirements including verification criteria and software test specification including test cases.
 - BP6 **Develop regression test strategy and perform regression testing**
Develop the strategy for re-testing the integrated software if a system element is changed. If changes are made to software items carry out regression testing as defined in the system regression test strategy, and record the results.

ENG.9 System integration test

- The purpose of the System integration test process is to integrate the system elements to produce an integrated system that will satisfy the system architectural design and the software requirements including verification criteria and software detailed design including verification criteria.
- BP1 **Develop system integration strategy**
Develop the strategy for integrating the hardware, mechanics and software consistent with the release strategy and the order for integrating them.
 - BP2 **Develop system integration test strategy**
Develop the strategy for testing the integrated system. Identify test steps according to the order of integration defined in the integration strategy.
 - BP3 **Develop test specification for system integration**
Develop the test specification for system integration, including the test cases, to be executed on the integrated system element. The test cases should demonstrate compliance with the system architectural design.
 - BP4 **Integrate system elements**
Integrate the system elements into an integrated system according to the system integration strategy.
 - BP5 **Verify the integrated system**
Verify the integrated system element against the test cases for system integration according to the system integration test strategy.
 - BP6 **Record the results of system integration testing**
Document the results of system integration testing and communicate to all relevant parties.
 - BP7 **Ensure consistency and bilateral traceability of system architectural design to system integration test specification**
Ensure consistency of system architectural design to system integration test specification including test cases. Consistency is supported by establishing and maintaining bilateral traceability between the system architectural design including verification criteria and system integration test specification including test cases.
 - BP8 **Develop regression test strategy and perform regression testing**
Develop the strategy for re-testing the system elements if changed hardware, mechanics and/or software items are introduced. If changes are made to system elements, carry out regression testing as defined in the system regression test strategy, and record the results.

ENG.10 System testing

- The purpose of the Systems testing process is to ensure that the implementation of each system requirement is tested for compliance and that the system is ready for delivery.
- BP1 **Develop system test strategy**
Develop the strategy for system testing consistent with the release strategy.
 - BP2 **Develop test specification for system test**
Develop the test specification for system test, including the test cases, to be executed on the integrated system.
 - BP3 **Verify integrated system**
Verify the integrated system against the test cases for system testing and according to the system test strategy.
 - BP4 **Record the results of system testing**
Document the results of system testing and communicate to all relevant parties.
 - BP5 **Ensure consistency and bilateral traceability of system requirements to the software units test specification**
Ensure consistency of system requirements to the software units test specification including test cases. Consistency is supported by establishing and maintaining bilateral traceability between the system requirements including verification criteria and software units including verification criteria.
 - BP6 **Develop system regression test strategy and perform testing**
Develop the strategy for re-testing the integrated system if a system element is changed. If changes are made to system elements, carry out regression testing as defined in the system regression test strategy, and record the results.

Acquisition Process Group (ACQ)

ACQ.4 Supplier monitoring

- The purpose of the Supplier monitoring process is to monitor the performance of the supplier against agreed requirements.
- BP1 **Agree on joint processes and joint interfaces**
Establish an agreement on joint processes and joint interfaces, responsibilities, type and frequency of joint activities, communications, meetings, status reports and reviews. Agree on processes and interfaces at least for change management, product management, quality assurance and customer acceptance.
 - BP2 **Exchange all relevant information**
Establish and maintain communications between customer and supplier for all agreed information, processes and interfaces.
 - BP3 **Review technical development with the supplier**
Review development with the supplier on the agreed regular basis, covering technical aspects, problems and risks.
 - BP4 **Review progress of the supplier**
Review progress of the supplier regarding schedule, quality and cost on the agreed regular basis, also tracking problems to successful completion and performing risk mitigation activities.
 - BP5 **Track open items**
Record open items found, pass them to the supplier and track them to closure.
 - BP6 **Act on correct deviations**
Take action when agreed targets are not achieved, to correct deviations from the agreed project plan and to prevent recurrence of problems identified.
 - BP7 **Agree on changes**
Change on agreed activities proposed by either party are negotiated and the results are documented in the agreement.

ACQ.1, ACQ.2, ACQ.3 are not shown in this poster

Supply Process Group (SPL)

SPL.1 Supplier tendering

- The purpose of Supplier tendering process is to establish an interface to respond to customer inquiries and requests for proposal, prepare and submit proposals, and confirm assignments through the establishment of a relevant agreement / contract.
- BP1 **Establish communication interface**
A communication interface is established and maintained in order to respond to customer inquiries or requests for proposal, prepare and submit proposals, and confirm assignments through the establishment of a relevant agreement / contract.
 - BP2 **Perform customer enquiry screening**
Screen customer enquiries to ensure validity of contact, ensuring the right person is quickly identified to process the lead.
 - BP3 **Establish customer proposal evaluation criteria**
Establish evaluation criteria to determine whether or not to submit a proposal and to approve or reject it.
 - BP4 **Evaluate customer request for proposal**
Evaluate customer request for proposal and determine if it is appropriate to respond.
 - BP5 **Determine need for preliminary pre-studies**
Determine need for preliminary pre-studies to ensure that a firm quotation can be made based on available requirements.
 - BP6 **Identify and nominate staff**
Identify and nominate staff with appropriate competence for the assignment.
 - BP7 **Prepare supplier proposal response**
A supplier proposal response is prepared in response to the customer request.
 - BP8 **Establish confirmation of agreement**
Formally confirm the agreement to protect the interests of customer and supplier.

SPL.2 Product release

- The purpose of Product release process is to control the release of a product to the intended customer.
- BP1 **Define the functional content of release**
Establish a plan for release that identifies the functionality to be included in each release.
 - BP2 **Define release products**
Define the products associated with the release are defined.
 - BP3 **Establish a product release classification and numbering scheme**
A product release classification and numbering scheme is established based upon the intended purpose and expectations of the release(s).
 - BP4 **Define the build activities and build environment**
A consistent build process is established and maintained.
 - BP5 **Ensure consistency**
Ensure consistency between software release number, paper label and EPROM label before release.
 - BP6 **Provide a release note**
A release note is provided to support the release in production, reviewed, approved and available.
 - BP7 **Deliver the release to the intended customer**
The product is delivered to the intended customer with positive confirmation of receipt.

Supporting Process Group (SUP)

SUP.1 Quality assurance

- The purpose of the Quality assurance process is to provide independent assurance that work products and processes comply with predefined provisions and plans.
- BP1 **Develop project quality assurance strategy**
A project level strategy for conducting quality assurance is developed. This strategy is consistent with the organizational quality management strategy.
 - BP2 **Develop and maintain an organization structure which ensures that quality assurance is carried out and report independently**
Quality assurance is carried out by a quality assurance organization independent of the project organization, it works independently from it.
 - BP3 **Develop and implement a plan for project quality assurance based on a quality assurance strategy**
Develop and implement a plan for project quality assurance based on a quality assurance strategy.
 - BP4 **Maintain evidence of quality assurance**
Maintain evidence of quality assurance that demonstrates that planned quality assurance activities have been implemented.
 - BP5 **Assess quality of work products**
Carry out the activities according to the quality assurance plan to ensure that the work products meet the quality requirements.
 - BP6 **Assure quality of process activities**
Carry out the activities according to the quality assurance plan to ensure that the processes meet the defined requirements of the project.
 - BP7 **Track and record deviations**
Regularly report performances, deviations, and trends of quality assurance activities to relevant parties for information and action.
 - BP8 **Ensure resolution on non-conformances**
Deviations or non-conformance found in process and product quality assurance activities should be analyzed, corrected and further prevented.
 - BP9 **Develop and maintain the escalation mechanism that ensures that quality assurance may escalate problems to appropriate levels of management to resolve them**
Develop and maintain the escalation mechanism that ensures that quality assurance may escalate problems to appropriate levels of management to resolve them.

SUP.2 Verification

- The purpose of the Verification process is to confirm that each work product of a process or project properly reflects the specified requirements.
- BP1 **Develop a verification strategy**
Develop and implement a verification strategy, including verification activities with associated methods, techniques, and tools, work product or processes under verification, degrees of independence for verification and schedule for performing these activities.
 - BP2 **Conduct verification**
Verify identified work products according to the specified strategy and to the developed criteria to confirm that the work products meet their specified requirements. The results of verification activities are recorded.
 - BP3 **Determine and track actions for verification results**
Problems identified by the verification activities are recorded in the problem resolution management process (SUP.9) to describe, record, analyze, resolve, track to closure and prevent the problems.
 - BP4 **Report verification results**
Verification results should be reported to all affected parties.

SUP.4 Joint review

- The purpose of the joint review process is to maintain a common understanding with the stakeholders of the progress against the objectives of the agreement and what should be done to help ensure development of a product that satisfies the stakeholders. Joint reviews are at all project management and technical levels and are held throughout the life of the project.
- BP1 **Define review elements**
Based on the needs of the project, identify the schedule, scope and participants of management and technical reviews, agree all resources required to conduct the reviews (this includes personnel, location and facilities) and establish review criteria for problem identification, discussion and agreement.
 - BP2 **Establish a mechanism to handle review outcomes**
Procedures to ensure that review results are made available to all affected parties, that problems detected during the reviews are identified and recorded, and that action items raised are recorded for action.
 - BP3 **Prepare joint review**
Collect, plan, prepare and distribute review material in appropriate preparation for the review and technical reviews as planned. Record the review results.
 - BP4 **Distribute the results**
Document and distribute the review results to all the affected parties.
 - BP5 **Determine actions for review results**
Analyze the review results, propose actions for resolution and determine the priority for actions.
 - BP6 **Track actions for review results**
Track the actions for review results to ensure they are completed.
 - BP7 **Identify and record problems**
Identify and record the problems detected during the reviews according to the established mechanism.

SUP.7 Documentation

- The purpose of the Documentation process is to develop and maintain the recorded information produced by a process.
- BP1 **Develop a documentation management strategy**
Develop a documentation management strategy which addresses where, when and what should be documented during the life cycle of the product/service.
 - BP2 **Establish standards for documentation**
Establish standards for developing, modifying and maintaining documentation.
 - BP3 **Specify documentation requirements**
Specify requirements for documentation such as title, date, identifier, version history, identifier, reviewer, author, outline of contents, purpose, and distribution.
 - BP4 **Identify the relevant documentation to be produced**
For any given development life cycle, identify the documentation to be produced.
 - BP5 **Develop documentation**
Develop documentation in required process points according to established standards and policy, ensuring the content and purpose is reviewed and approved before distribution or release.
 - BP6 **Check documentation**
Check documentation for completeness, and authorize documentation as appropriate before distribution or release.
 - BP7 **Distribute documentation**
Distribute documentation according to determined policy of distribution via appropriate media to all affected parties, confirming delivery of documentation, where necessary.
 - BP8 **Maintain documentation**
Maintain documentation in accordance with the determined documentation strategy.

SUP.8 Configuration management

- The purpose of the Configuration management process is to establish and maintain the integrity of all the work products of a process or project and make them available to concerned parties.
- BP1 **Develop a configuration management strategy**
Develop a configuration management strategy, including configuration management activities and a life cycle model, responsibilities and resources for performing these activities.
 - BP2 **Identify configuration items**
Identify configuration items according to the Configuration management strategy that need to be stored, tested, reviewed, used, changed, delivered and / or maintained.
 - BP3 **Establish a configuration management system**
Establish a configuration management system, which provides an efficient means for handling the configuration items.
 - BP4 **Establish branch management strategy**
Develop a branch management strategy where applicable for parallel development efforts to use the same source base.
 - BP5 **Establish baselines**
Establish the internal and external delivery baselines according to the configuration management strategy.
 - BP6 **Maintain configuration item descriptions**
Maintain the information describing each configuration item.
 - BP7 **Control modification and release**
Check in/out, configuration item access permissions, version identification and change change controlling (configuration item handling control).
 - BP8 **Maintain configuration item history**
Maintain a history of each configuration item in sufficient detail to recover a previously baselined version when required.
 - BP9 **Report configuration item status**
Report status of each configuration item.
 - BP10 **Verify that the information about configured items, their structures and attributes is sufficient to support the configuration management and ensure the consistency of the terms and definitions**
Verify that the information about configured items, their structures and attributes is sufficient to support the configuration management and ensure the consistency of the terms and definitions.
 - BP11 **Manage the testing, storage, archiving, handling and delivery of configuration items**
Ensure the integrity and consistency of configuration items through appropriate scheduling and recording of backup, storage and archiving. Control the handling and delivery of configuration items.

SUP.9 Problem resolution management

- The purpose of the Problem resolution management process is to ensure that all discovered problems are identified, analyzed, managed and controlled to resolution.
- BP1 **Develop a problem resolution management strategy**
Develop a problem resolution management strategy, including problem resolution management activities and a life cycle model, responsibilities and resources for performing these activities.
 - BP2 **Establish a consistent problem resolution management procedure**
A problem resolution management procedure is established in order to ensure that problems are detected, described, recorded, analyzed, resolved and prevented in a consistent and traceable way based on the problem resolution management strategy.
 - BP3 **Identify and record the problem**
Identify and record the problem.
 - BP4 **Investigate and analyze the cause and the impact of the problem**
Investigate and analyze the cause and the impact of the problem in order to determine appropriate actions and provide classification.
 - BP5 **Establish a problem resolution management procedure**
Establish a problem resolution management procedure in order to ensure that problems are detected, described, recorded, analyzed, resolved and prevented in a consistent and traceable way based on the problem resolution management strategy.
 - BP6 **Take action to resolve the problem**
Take action to resolve the problem.
 - BP7 **Report and record the problem**
Report and record the problem.
 - BP8 **Take action to resolve the problem**
Take action to resolve the problem.
 - BP9 **Report and record the problem**
Report and record the problem.
 - BP10 **Take action to resolve the problem**
Take action to resolve the problem.
 - BP11 **Report and record the problem**
Report and record the problem.

SUP.10 Change request management

- The purpose of the Change request management process is to ensure that change requests are managed, tracked and controlled.
- BP1 **Develop a change request management strategy**
Develop a change request management strategy, including change request management activities and a life cycle model, responsibilities and resources for performing these activities.
 - BP2 **Establish a consistent change request management procedure**
A change request management procedure is established in order to ensure that changes are detected, described, recorded, analyzed and managed in a consistent and traceable way based on the change request management strategy.
 - BP3 **Identify and record the change request**
Identify and record the change request.
 - BP4 **Investigate and analyze the cause and the impact of the change request**
Investigate and analyze the cause and the impact of the change request in order to determine appropriate actions and provide classification.
 - BP5 **Establish a change request management procedure**
Establish a change request management procedure in order to ensure that changes are detected, described, recorded, analyzed and managed in a consistent and traceable way based on the change request management strategy.
 - BP6 **Take action to resolve the change request**
Take action to resolve the change request.
 - BP7 **Report and record the change request**
Report and record the change request.
 - BP8 **Take action to resolve the change request**
Take action to resolve the change request.
 - BP9 **Report and record the change request**
Report and record the change request.
 - BP10 **Take action to resolve the change request**
Take action to resolve the change request.
 - BP11 **Report and record the change request**
Report and record the change request.

GENERIC ELEMENTS

Level 1: Performed process	Level 3: Established process
<p>The implemented process achieves its process purpose.</p> <p>PA.1.1 Process performance attribute CP.1.1.1 Activate the process outcomes</p>	<p>The previously described Managed process is now implemented using a defined process capability defining its process outcomes.</p> <p>PA.3.1 Process performance attribute CP.3.1.</p>