

Solving Automotive SPICE open issues: an Italian Initiative

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Abstract

This paper presents the results of the ASAI (Automotive SPICE Assessors and Improvers) working group. The aim of the ASAI is to address open issues in the real application of the standard Automotive SPICE in the automotive industry. The outcomes of the ASAI activities are a set of guidelines on how some relevant open issues (expressed by means of questions) can be addressed and solved. These guidelines have been achieved by consensus after joint analysis and discussions. The purpose of this paper is to provide developers, assessors, improvers and, in general, the whole automotive software community, with a reference when specific decisions have to be taken for solving defined open issues in applying Automotive SPICE. Moreover, we hope this paper could be able to trigger a larger discussion for enhancing the uniformity and validity of Automotive SPICE assessments.

1. Introduction

Not many years ago, Information Technology made its first appearance in automobile functions control. Since then, technical solutions have run again through all the stages of the longer evolution of computer systems. Doubtfully accepted at first in a community of electrical engineers, in the form of program-control based devices, they have now boom-evolved into integrated networks of dozens and dozens of active nodes, each one performing complex, often time-constrained, functions. [1], [2].

Car makers have learned to face these challenges by addressing the software issues from the process and product perspective [3], [4]. In particular, the acquisition of software-intensive components from different suppliers has been identified as a prime source of problems. The need to select suppliers on the basis of reliable measures of the quality of their development process, the importance of monitoring and controlling the supplier's projects and the demand for a standard criteria for the automotive industry pushed the motor vehicle

manufacturers, like others in the defense and aerospace industries, to consider international standards for software process assessment, based on ISO/IEC 15504 (known also as SPICE) [5] and/or the Capability Maturity Model (CMMI) [6], as a mean to identify and control supplier related risks and to assess supplier's software capability [7], [8], [9].

On the other hand, suppliers of Electronic Control Units proved more inclined to welcome any standardized technical innovation aimed at serving multiple customers (such as, to a certain extent, AUTOSAR 14) and, more or less reluctantly, have accepted the OEM's-supported introduction of process-related standards, such as Automotive SPICE [11], [12], as an unavoidable way to market.

So there has been in the last years a considerable assessment and improvement activity in automotive processes, mainly under OEM's pressure. As we point out in the following sections, the effort has, at the end, been proved advantageous also to suppliers.

Other important actors on this stage, the community of assessors, have gained considerably good deal of experience in the job. In particular, results of assessing processes against Automotive Spice have been used by the OEM's to select and monitor suppliers and by suppliers themselves for improvement programs.

However, even in this gratifying scenario, problems were not missing, and in many cases some difficulty was evidenced, with different perspectives by different assessors and different OEM's, in applying the related standards to the activity of process assessment.

This paper aims at improving the uniformity (and consequently the repeatability) of process assessments and the validity of their results by providing some guidelines in approaching open issues in the application of Automotive SPICE. These guidelines have been prepared by a working group composed of experts with wide experience in process assessment and improvement initiatives in the automotive industry.

The paper is structured as follows: Section 2 provides a brief description of the initiative called Automotive SPIN Italia. Section 3 describes the ASAI-WG (Automotive SPICE Assessors and Improvers - Working Group) initiative, presenting the composition of the working group (WG), the activities done and the type of outcomes produced. Section 4 shows the results of the work done by ASAI-WG by providing the detailed agreed interpretation to the identified open issues. Finally, Section 5 provides conclusions for this work and discusses issues for next work..

2. Automotive SPIN Italia

The Automotive SPIN Italia is a non-profit organization founded in 2007 by joining the Software Engineering Institute initiative of the Software Process Improvement Network (SPIN) [13]. Today Automotive SPIN Italia has about 200 participants belonging from c.a. 60 different companies/organizations. The aim of Automotive SPIN Italia [15] is to serve as a forum for the free and open exchange of software and systems process improvement ideas, information, research results, and mutual support within the Italian automotive industry.

Automotive SPIN Italia represents a source of information and knowledge for its members, and, in general, for the software community.

Automotive SPIN provides its members with support for:

- Achieving higher process capability levels and quality of software
- Technology transfer
- Enforcing competitiveness

by networking people and organizing events and initiatives that represent improvement opportunities for attendants.

The Automotive SPIN Italia organisational structure is very lean: an elected management board coordinates the activities, membership is free and the principal way to promote and share its initiatives is its own website [15].

The workshops, organized twice a year by Automotive SPIN Italia, have proved to be very important and profitable events. These one-day workshops are precious opportunities to understand the open issues and the hot topics from the automotive community. Workshops are highly interactive events, organized as a mix of presentations on experience and lessons learned from the industry, invited speakers presentations and round tables and open discussions on key issues and topics in the automotive software domain.

During 2009 Automotive SPIN Italia supported the establishment of the Automotive SPICE Assessors & Improvers working group (ASAI-WG).

3. The ASAI-WG Initiative

The purpose of the ASAI-WG is to identify recurring issues and problems in the application of automotive SPICE in industry as well as achieving an agreed policy to address them in practice.

Experts from six different organizations (research institutions, industry and consultants) joined the ASAI-WG. All the participants in the ASAI-WG have deep knowledge and wide experience on Automotive SPICE either as qualified SPICE assessors or as improvers.

The authors of this paper are also the members of the ASAI-WG.

The activities of the ASAI-WG have been planned and scheduled into 5 different phases:

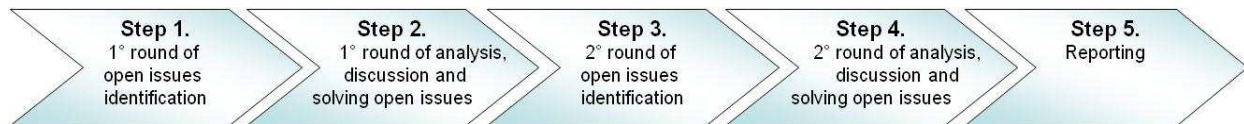


Figure 1: ASAI-WG phases

Phase 1: First round of open issues identification:

The purpose of this phase was to collect, organize and make available the contributions of the ASAI-WG members in identifying the open issues and problems they encountered in performing Automotive SPICE assessment or improvement initiatives.

The outcome of this phase was a document where the open issues (written in terms of questions) provided by the participants in the ASAI-WG were documented in a structured way.

Phase 2: First round of analysis, discussion and solving of the open issues:

The purpose of this phase was to analyze the open issues identified in Phase 1 and achieve an agreement on the way they can be solved/faced in practice. Each participant in the ASAI-WG proposed a personal solution of the open issues on the basis of his own experience; then the ASAI-WG coordinator collected and harmonized them in a specific working document. After that, a face-to-face, one-day meeting was been organized in order to

discuss and achieve an agreed solution for each open issue.

The outcome of this phase was a document where the open issues were described and related agreed solutions provided.

Phase 3: Second round of open issues identification:

Because additional open issues arose during discussions, another round of open issues identification has been made and managed similarly to Phase 1.

Phase 4: Second round of analysis, discussion and solving of the open issues:

In the same way as Phase 2, additional open issues were analysed, discussed and solved.

Phase 5: Reporting:

The final phase was the reporting. A final document has been produced containing the outcomes of phase 2 and phase 4. Such a document is a sort of Manual helping assessors and improves in facing common problems by providing a commonly agreed trustable way to solve them. A reduced freely available version of the Manual has been put on the Automotive SPIN Italia website.

In next section the outcomes achieved and included into the final report are presented. These outcomes may represent a sort of agreed guidelines for the members of ASAI-WG and a possible decision-aiding source for other assessors/improvers that experience similar problems and are looking a way for solving them.

4. Outcomes

In this section the open issues raised by the ASAI-WG members are described. They are grouped in two principal classes:

- *Process Model related Questions:*
the issues belonging to this class address problems related to the interpretation and mapping of the process descriptions in the Automotive SPICE Process Assessment Model in the real projects used as process instances at assessment time.
- *Assessment Process related Questions:*
the issues belonging to this class address problems related to the policies to be adopted in order to make assessments more reliable, repeatable and comparable.

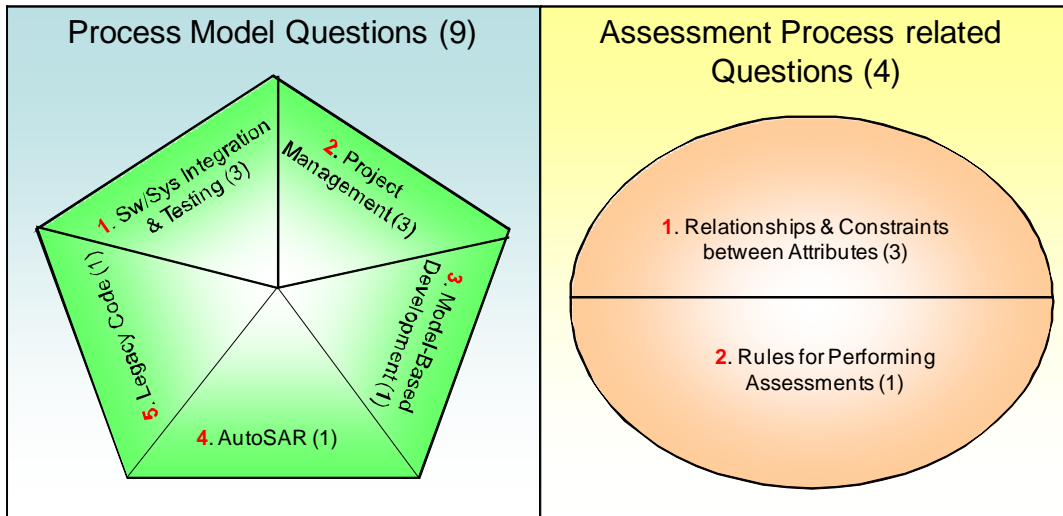


Figure 2: ASAI-WG: open issues classification

4.1. Process Model Questions

The questions belonging to this class have been further classified into 6 sub-classes. In the following they are presented just after a short discussion about the context they come from.

4.1.1 Software & System integration and Testing questions. It is often very difficult to map the Automotive SPICE processes while addressing testing in real projects. Reasons may be different:

- In simple Projects , it is reasonable to collapse software and system activities together.
- The testing environment is the target ECU both for software and system testing
- integration is done in only one step
- unit tests are not documented

The point is to be able to have general guidelines to face such very common situations. Today the assessor has to solve these problems without any established criteria. He/she can decide to put some processes out of the assessment scope (but in the case of “supplier

qualification” assessment it could not be acceptable) or to mapping and using the same evidences in different processes.

In the following the single questions belonging to this sub-class are presented along with the related answers the ASAI-WG members agreed. Each question is identified by a unique identifier for further references:

Question Id	PM.1.1
Question:	<i>Is it possible to assess both System and Software testing processes attributes on the basis of single system functional tests?</i>
Answer	<p>What distinguishes system and software testing are the requirements the test cases address. Wherever a test is executed (in the target environment, on the bench, in simulation) the same test can be considered as a software or system test (or both) depending on the requirements it verifies.</p> <p>Having system and software requirements not separated is unacceptable for an assessor. Performing only system testing for verifying the software part of the system determines a risk. In fact, a combined test (i.e. a test performed at system level but addressing both system and software requirements) may mask a software defect. For instance, if a sensor doesn't work properly, the sensor's failure can mask a software failure – two failures that for the specific test mask each other.</p> <p>As a minimum acceptable situation it has been agreed that for testing the following points shall be verified:</p> <ol style="list-style-type: none"> 1. Software requirements shall exist (no matter the format and the document where they are specified) 2. In the case tests are performed only at system level (combined tests): <ol style="list-style-type: none"> a. they shall be mapped on the software requirements b. the risk due to combined tests shall be managed c. the motivations that determined the project decision of performing combined tests shall be provided (on the basis of the project characteristics, why it has been decided to perform combined tests? Which data/measures have been used to support such a decision?). <p>It is important for the assessor to verify that the performance of combined tests is due to an explicit and well-pondered project choice.</p>
Related Questions	PM 6.1
Question Id.	PM.1.2
Question:	<i>What could definitely be lost if unit test is not performed? In which cases is unit test most important?</i>
Answer	<p>Unit testing is not the only way software units can be verified, in fact it may be substituted by formal code inspection.</p> <p>Unit test cannot be substituted by the mere MISRA C compliance verification.</p> <p>Often unit verification is performed in an informal way without direct evidences. In the case of informal unit verification (i.e. without direct evidences availability), indirect evidences shall be found. Example of indirect evidences are: personal effort data, number of versions produced before software unit release/baseline).</p>
Related Questions	PM 2.2
Question Id.	PM.1.3
Question:	<i>What could definitely be lost if integration test is not performed? In which cases is integration test most important?</i>
Answer	<p>Usually vertical integration (layer by layer, from the HW abstraction layer to application layer) is to be performed and consequently the vertical integration testing is required (i.e. incremental testing to verify the interaction between different layers).</p> <p>As a general policy for assessors, the software design architecture shall be considered in order to decide if the integration testing is necessary or not. In the case the software design shows that the software architecture is not trivial, it is necessary justify the decision of not performing integration</p>

	<p>testing (i.e. performing big-bang integration and testing only) and manage the related risks. In particular the big-bang testing can be acceptable for assessors when:</p> <ul style="list-style-type: none"> - the software architecture is very simple (in this case only the ENG.7 process can be considered as “Not Applicable”) - when there is evidence that some tests performed on the integrated software (big-bang strategy) are aiming at verifying internal/interface aspects of the software. <p>The considerations above can be applied to the software and system related processes (ENG.7 and ENG.9).</p>
Related Questions	PM.1.5; PM.2.2

4.1.2 Project Management. Sometimes the availability of a documented Project Plan including a Gantt diagram for the activities scheduling is not enough to be confident about Project management process. The

rational of the set of questions belonging to this sub-class is to point out some agreed indication for improving the assessors’ investigation ability and effectiveness.

Question Id.	PM.2.1
Question:	<i>How to evaluate the performance of initial project effort estimation based on experience instead of historical data or disciplined estimation methods and techniques?</i>
Answer	<p>If the organization claims that its estimations are only based on the experience of the project managers, then the assessor, in order to ensure assessment results confidence, should verify:</p> <ul style="list-style-type: none"> - that personnel performing the estimation is effectively experienced in project management (how many projects have they managed? Is it just one person performing the estimation or is the estimation reviewed by more than one expert?) - that the organization is able demonstrate that estimation based on experience has proved to be reliable in the past. (Do they keep records of past estimation and have they compared these estimation with actual results) <p>For the Project Management process (MAN.3) at capability level 3, the only experience-based estimations are not sufficient: updated historical data, methodologies and procedures (possibly based on quantitative data) for achieving estimations are needed.</p>
Related Questions	-

Question Id.	PM.2.2
Question:	<i>What should the assessor evaluation be when some activities are not performed (typically unit tests, integration tests, reviews ...) in the project but a risk analysis for the omission of those activities has been made?</i>
Answer	<p>On the basis of the ASAI-WG members’ experience two typical situations can be identified:</p> <ol style="list-style-type: none"> 1. The project has been planned excluding some typical development phases. In this case, an initial quality strategy shall be defined. According to such a strategy the decision of excluding some phases shall be documented and justified. Moreover the risks related to this decision shall be managed. 2. Some project activities initially planned have not been performed due to some problems during the project itself. In this case there should be evidence of a real re-planning to face the problems encountered along with the management of the related risks. If the re-planning and the risks management are performed then it is acceptable. <p>In the situations described above, the Project Management (MAN.3) and the Risk Management (MAN.5) processes should be assessed carefully. Anyway, in the situations above, processes belonging to the Engineering process group (ENG) possibly not performed are to be rated at level 0.</p> <p>Because a process instance is not a process, the assessor, in order to try to assess the processes not performed in the project anyway, should arrange the assessment so that additional process instances are considered.</p>
Related Questions	PM 1.2, PM 1.3

Question Id.	PM.2.3
Question:	<i>What are possible appropriate investigation approach to assess the planning and management of the project management process itself?</i>
Answer	If the project manager refers to an upper manager who plans, controls and adjusts the project managers' activity, the evidences shall be asked and found to the upper manager mainly. Otherwise, the evidences of management of the project manager's activity should be provided by the project manager itself (e.g. by means of indirect evidences as the working products produced by the project manager, the periodic effort reports, ...) In general, it is always recommended to cross-check project data with productivity data in order to evaluate the credibility of the project planning and consequently the validity of the assessment results.
Related Questions	-

4.1.3 Model-based Development. Adopting a Model-based approach in software development is more and more popular in the automotive industry. The processes of the Automotive SPICE PRM do not easily fit with the Model-based approach.

The assessor is requested to map the Automotive SPICE Software life cycle's processes with the typical Model-based life cycle's processes. The rational of the questions belonging to this sub-class is to provide guidelines to make such a mapping uniform.

Question Id.	PM.3.1
Question:	<i>In the case of Model-based Software Development, how should the Software Requirements Specification, Software Design (possibly multi-levelled) and Software Construction related processes be identified and mapped?</i>
Answer	The Software Requirements Specifications definition and analysis is not affected by the Model-based Software Development. The realization of Models is an activity that should be associated with the Software Design process. In fact, making the Models means to apply a rigorous software architecture design technique. Models are usually "tested" (i.e. the behaviour of the model is verified in simulation). This activity shouldn't be considered as covering the whole software testing. In fact, it is strongly recommended to test anyway the generated code, possibly re-using the "test cases" defined for the model verification. The lower-level model components (usually called "function box") can be considered as equivalent to the software units. If they are verified by means of Simulink (possibly following some coverage criteria allowed by existing tools) the 'traditional' unit testing on the source code modules can be considered performed.
Related Questions	-

4.1.4 AUTOSAR. AUTOSAR (AUTomotive Open System Architecture) [14] is an open and standardized automotive software architecture, jointly developed by automobile manufacturers, suppliers and tool developers. The technical goals of this initiative, started in 2002, is to provide a common software infrastructure for automotive systems of all vehicle domains based on standardized interfaces for the different layers of the software

architecture. In the last years many software suppliers developed AUTOSAR-compliant software architecture that is becoming a de-facto standard for automotive. Assessors often need to perform assessments in organization adopting AUTOSAR. The objective of this sub-class of questions is to achieve a common agreed understanding on what the AUTOSAR compliance is able to guarantee and what it isn't.

Question Id.	PM 4.1
Question:	<i>What is the impact of AUTOSAR compliance on the assessment of the design process?</i>
Answer	AUTOSAR shall be considered as a declared compliance and it shall be verified by the assessors. The only compliance declaration cannot substitute software design process evidences and work products.

	<p>AUTOSAR requirements shall be treated as design constraints.</p> <p>In terms of evidences to be collected at assessment time, generally no work product shall be missed in the case of declared AUTOSAR compliance.</p> <p>It is acceptable that references to AUTOSAR requirements in project’s documents are used in place of design requirements for those parts fully compliant with the AUTOSAR scheme.</p> <p>In the case of declared compliance with AUTOSAR, possible differences to AUTOSAR in specific projects shall be documented, justified and can be acceptable for the assessor.</p> <p>The assessor may not have the technical competencies for verifying the compliance between the AUTOSAR scheme and the technical project characteristics. In this case, the assessor should gather indirect evidences about (e.g. the existence of skills in the project, the application of the AUTOSAR scheme in different projects).</p> <p>Because the lower software design layers are strongly affected by the AUTOSAR requirements while the design of the application layer is mildly affected except for interfaces, it is recommended to achieve a preliminary agreement with the assessed organization to clearly define the scope of the project.</p>
Related Questions	-

4.1.5 Legacy Code. Often assessors have to perform assessment using process instances (i.e. projects) derived from previous projects not compliant with the required Automotive SPICE profile. The rationale of this sub-class

of question is to define some indications to give the assessor some useful hints when he/she has performs assessments in similar situations.

Question Id.	PM 5.1
Question:	<i>If a project is derived from a previous one already in production and not SPICE compliant, what kind of activities are required on the old parts to guarantee the SPICE compliance of the whole project?</i>
Answer	<p>The following considerations are valid:</p> <ul style="list-style-type: none"> - If the rate of legacy code is high, probably the project is not a significant instance of the organization’s process. - In the case of the use of legacy code is made on a regular basis, the Reuse process should be included in the assessment scope. - It is possible to decide that some software “proven in use” (i.e. not documented but extensively used without failures occurred) will be included in the released software without any modifications. That shall be defined and justified in the Quality Plan and Software Management Plan. - If the legacy code is slightly modified (or an additional part of software is added) and there are not requirements defined and documented, it is necessary to write requirements also for legacy software. In fact, also if a (small) part of software is added to the legacy one, the testing shall be made on the whole software and the software cannot be considered “proven in use” anymore. - Software design shall be partially produced <p><i>Recommendations for assessors:</i></p> <p>Particular attention shall be paid to legacy “hidden” (i.e. not shown at assessment time) code. To find out hidden legacy software the amount of effort (hours) spent should be carefully analysed and compared with the size of the whole software. Also the training of persons allocated to the project with respect the released technology.</p> <p>For each project, the existence of a Migration Strategy should be investigated. If such a migration strategy exists it is a good indication of good management of the legacy software.</p>
Related Questions	-

4.2. Assessment Process Questions

The issues belonging to this class address problems related to the policies to be adopted in order to make

assessments more reliable, repeatable and comparable. The questions belonging to this class have been further classified into 2 sub-classes. In the following they are provided along with the related answers.

4.2.1. Relationships and Constraints between Attributes The problem of the dependency among Process Attributes is open since the initial definition of the SPICE model. The Process Attributes are formally independent, but in practice a rating of a one of them does

determine some influence on the others. The rationale of this sub-class of question is to identify from a pragmatic point of view some connections between the ratings of different attributes.

Question Id.	AP 1.1
Question:	<i>Is it possible to rate capability level 2 Process Attribute much higher than the level 1 Process Attribute?</i>
Answer	<p>A relationship between PA 1.1 and PA2.2 can be found: Normally, PA2.2 is to be rated not higher than PA1.1. In fact, full evidences at capability level 1 guarantee the existence of all the necessary work products. If PA1.1 is not rated F very unlikely all the work products are available and then cannot be managed. A similar relationship between PA1.1 and PA2.1 cannot be found. Then it is not infrequent finding PA 2.1. rated higher than PA 1.1. As an example a typical situation that may lead to a rating of PA2.1 higher than PA1.1 is described in the following:</p> <ul style="list-style-type: none"> - a project is planned, performed and maintained till an event occurs. Such an event determines a loss of resources in the project. The project is then re-planned and adjusted in order to be completed but due to such a re-planning some development activities are cancelled. In such a situation a rating of the PA2.1 higher than the PA1.1 can be expected for some processes.
Related Questions	-

Question Id.	AP 1.2
Question:	<i>Can the 3.2 PA be rated higher than the PA 3.1?</i>
Answer	<p>PA 3.2 very unlikely can be rated higher than the PA 3.1. Such a situation is to be considered anomalous although not impossible. In the case of a preliminary rating of PA 3.2 higher than PA 3.1 the assessor is recommended to:</p> <ul style="list-style-type: none"> - verify that the evidences used to rate the PA 3.2 should be instead used to rate the PA 2.1. <p>In fact, the performance management of a project cannot be considered as a completion of an incomplete process definition. In other words, if a process is incompletely defined the deployment of that process is still incomplete, possible additional activities are project-specific and then addressing capability level 2 rating.</p> <ul style="list-style-type: none"> - Use additional instances of processes in order to corroborate the rating done. - In the assessment report the reasons of such anomaly should be explained and justified.
Related Questions	-

Question Id.	AP 1.3
Question:	<i>Should criteria to weigh such indicators be defined?</i>
Answer	<p>It is strongly recommended do not assign weights to indicators. Assigning weights doesn't provide more rigour to the assessment, and, in addition, it determines an automatic rating that is not recommended because the following aspects shall be taken into account by the assessor before assigning ratings:</p> <ul style="list-style-type: none"> - process purpose (in order to verify that the overall objective has been achieved) - process outcomes (in order to verify their real coverage by the evidences gathered) - organization's business goals (the processes evidences required shall be pondered on the basis of the organization's business goals) - evidences from related processes.
Related Questions	

4.2.2. Rules for performing Assessments In this section some exemplar, while quite usual, scenarios that an

Automotive SPICE assessor can encounter are considered. They are situations in which different

judgment can strongly impact on the validity and repeatability of the assessment. We provide a guideline

for the assessors on how to behave so that the rigour and uniformity among different assessment is increased.

Question Id.	AP 2.1
Question:	<i>What should be the assessor's judgment in the case of the defined process is not followed but there is an explicit agreement with the customer on the way the project will be conducted (i.e. the customer allows, for economic reasons, the supplier to have a bad process)? And what about if there is no evidence of such an explicit agreement?</i>
Answer	<p>In general, changes to the process on the basis of specific customer's requests is acceptable (it is a sort of tailoring). Nevertheless a very important aspect to be taken into account in this case is the customer awareness of such a simplified way to conduct the project. For this reason an agreement between customer and supplier is necessary. In addition, it should be requested the management of the risks associated to the way the project will be conducted. The risk shall be also shared with the customer.</p> <p>If possible, projects having similar characteristics should be avoided in the assessment sampling because they are not very significant process instances. Nevertheless, in the case a project with these characteristics is used as process instance, it is necessary to use also other more significant projects. If the tailoring, and the related risks, are well managed, having a project with this characteristics, along with other more "compliant projects", can be considered as an indicator of high maturity of the organization.</p> <p>In order to provide a schematic and practical indication of how such a situation should be addressed, in the following the typical cases are considered and discussed:</p> <ul style="list-style-type: none"> - the organization simply doesn't follow the defined process because the customer didn't required it. This situation is a indicator of very low maturity and shall result in low capability rating. - The organization is requested by the customer to adopt a simplified process and avoid some typical activities. In this case we can identify two scenarios: <ul style="list-style-type: none"> o BPs are not performed but alternative practices are adopted and the outcomes and purpose of the process are achieved. This is an acceptable situation. o Some activities are not performed at all but there is evidence of management of the risks related to these missing activities. In this case the overall rating of the capability of process can be high anyway if different process instances, more in line with the process definition, are also used in the assessment.
Related Questions	

5. Conclusions

Automotive SPIN Italia, an organization composed of Italian professionals acting in the automotive electronic field, promoted the Automotive SPICE Assessors and Improvers Working Group (ASAI-WG) with the aim of providing guidelines for solving common open issues encountered during the performance of Automotive SPICE assessments. The members of ASAI-WG, that are the authors of this paper, come from software industry, consulting companies and research.

The ASAI-WG identified first a set of important open issues and problems and then, produced guidelines to solve them. The approach followed in such an activity has

been to achieve agreement on the solutions by means of face-to-face meeting and discussions.

The guidelines associated to each open issue, can contribute in improving the uniformity and then the validity of the assessments made because they provide a way to solve situations in which the assessor, doesn't find sufficient support in the Automotive SPICE scheme, and then is obliged to take a personal decision with evident risks in terms of assessment repeatability and results validity.

Moreover, the ASAI-WG decided to publish a shorter version of the guidelines produced on the Automotive SPIN Italia website, in order to provide a service for all

the interested assessors and improvers worldwide and stimulate a debate in the Automotive SPICE community on them. ASAI-WG members are willing to receive feedbacks from the entire Automotive SPICE community so that a larger agreement on those open issues can be achieved.

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