



Test is an integral and crucial part in the software lifecycle. Therefore, it must be integrated properly into communication and process flows. Agile or iterative development projects cannot be successful without integrating the ALM and test solutions.

**Gateways to ALM**

Software test has two connecting points within the ALM:

- Prior to test case definition, application requirements specifications need to be imported from the requirement and/or change management systems.
- After test execution, any errors discovered must be submitted to the bug or defect tracking systems.

TOSCA TestSuite™ provides these capabilities with bidirectional interfaces to requirements management as well as to defect tracking systems.

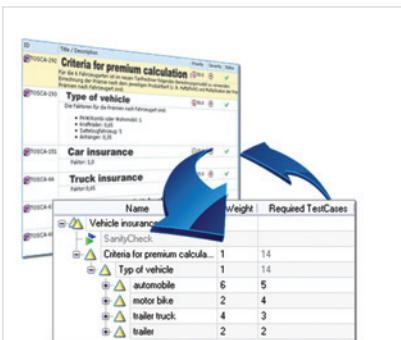


Figure 1: After the synchronization, the requirements are available in TOSCA TestSuite™

TOSCA's powerful AddIn concepts even enable the integration of proprietary requirements and/or defect management systems within days.

**Test coverage and risk-based testing**

TOSCA can import application requirements/specifications from and synchronize them with the ALM tools in use.

Risk-weighted requirements (a capability offered by TOSCA) provide the basis for the design of test cases with the TOSCA TestCase-Design AddIn. This AddIn supports users

by applying industry standard approaches (equivalence classes, boundary analysis, and combinatory analysis) and thus allows the generation of methodologically sound test cases.

Modified application specifications may be propagated to TOSCA at any time via its synchronization mechanisms. This is of prime importance in agile software development projects. Test cases are linked with requirements by drag & drop.

**Transparency through traceability**

In software development projects, the various stakeholders demand full transparency, from the specification of the requirements to the test cases and their execution results and finally to the status of the reported defects – and vice versa. Transparency is accomplished through traceability, for which TOSCA offers a truly unique solution (see Figure 3). By linking the imported/synchronized requirements with test cases and execution results, real-time traceability can be displayed in both TOSCA and the integrated ALM systems.

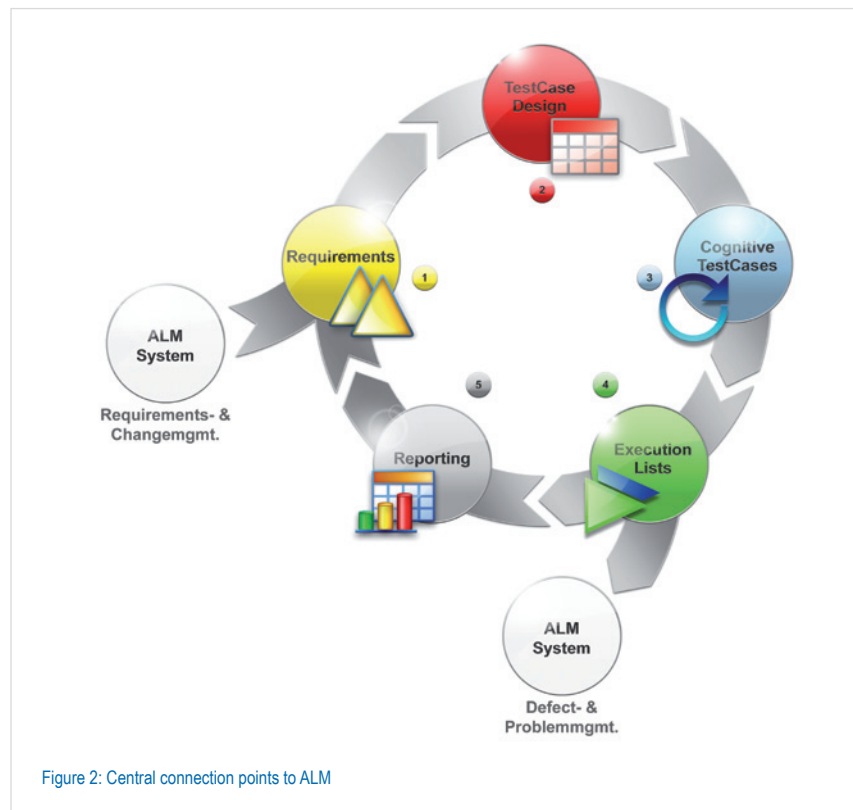


Figure 2: Central connection points to ALM

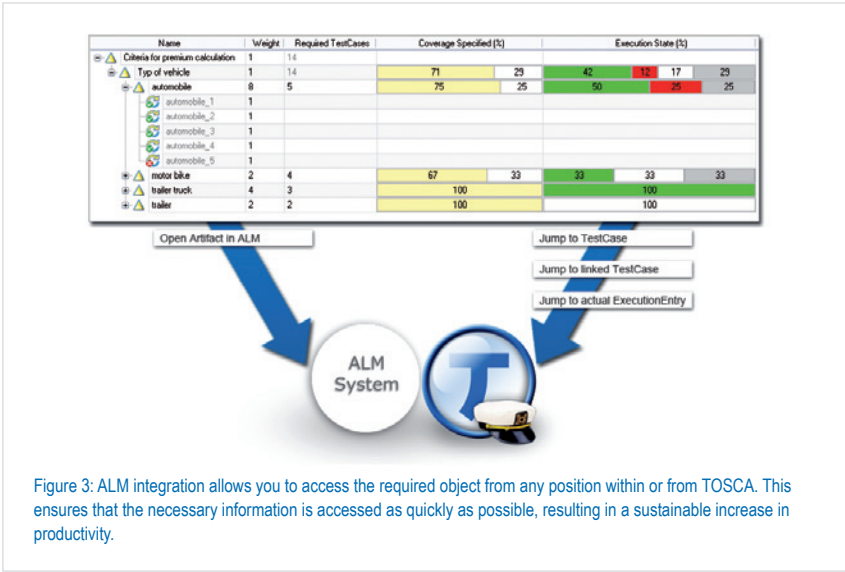


Figure 3: ALM integration allows you to access the required object from any position within or from TOSCA. This ensures that the necessary information is accessed as quickly as possible, resulting in a sustainable increase in productivity.

**TRICENTIS**

TRICENTIS Technology & Consulting GmbH has its roots in the services sector. TRICENTIS now sees its core competence in software quality assurance and has been committed to this segment since 1997. With TOSCA TestSuite™ the company developed the most innovative solution for test management and test automation available on the market.

The tenfold increase of TOSCA licenses sold between the beginning of 2006 and mid-2009 and the rapid growth of the company from 20 employees in 1997 to more than 100 by the end of 2010 demonstrate our outstanding success.

Currently, TRICENTIS has an active presence, with employees and subsidiaries in Austria, Germany, Switzerland, UK and Australia.

**Metrics for software test**

The bidirectional integration of TOSCA with ALM systems allows, besides increased transparency and efficiency, the derivation of various key metrics. These key metrics provide management with important data for taking decisions. Some examples:

- Progress of test execution in absolute numbers as well as relative to the total business risk that needs to be covered
- Various other metrics, related to defects (quantity, status, resolution times, etc.) by linking the reported defects to test execution, the corresponding test cases and the business requirements.
- Progress in test case specification as a %-figure of the business risk covered by existing test cases

**Integration of ALM systems and TOSCA**

For the integration of third-party systems, TOSCA offers the XML-based interface "XTC" and a powerful AddIn concept. The latter provides a framework for creating specific AddIns for bidirectional integration with third-party systems, within very short time frames. Generic AddIns have already been developed for a number of requirements management as well as bug tracking tools. These AddIns can be deployed in customerized environments with slight adaptations.

For detailed information about ALM tools already integrated, please contact your sales representative or send an email to office@tricentis.com .

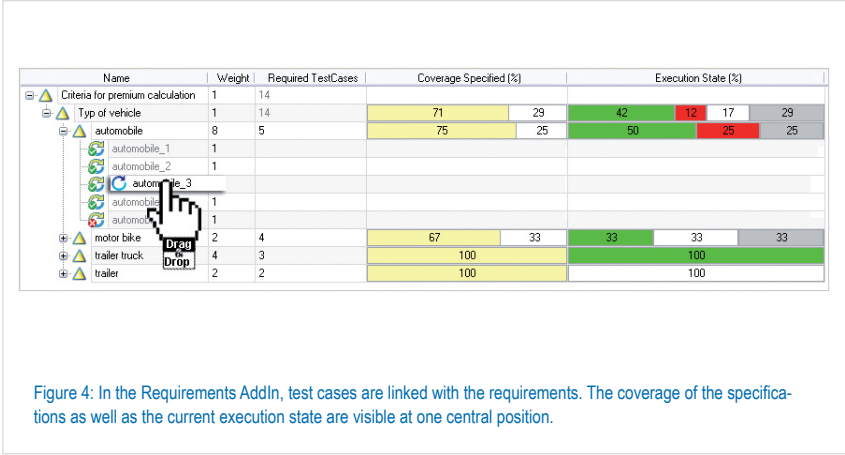


Figure 4: In the Requirements AddIn, test cases are linked with the requirements. The coverage of the specifications as well as the current execution state are visible at one central position.

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