

## GOAL

Integration of electronic design automation tools with product lifecycle tools and support quick and reliable decision making in the semiconductor industry. Implementation of the use through the development of a standardised service layer for access, exchange and consumption of multidimensional data creating the proper connectors to enable an integrated and interoperable environment for continuous and collaborative engineering.

## Challenge

### Integration of electronic design automation tools with product lifecycle tools

The aim of the use case is to link a PCB design tool with tools that are used in the lifecycle of an embedded product (such as a requirement management tool, or an architecture design tool). The OASIS standard OSLC (Open Services for Lifecycle Collaboration) will be used to carry out this integration and exchange information within the designed toolchain. More specifically, an interoperable layer based on the OSLC principles, oriented to the market of developers of embedded systems, will be designed and implemented in the context of the project integration platform. This solution will help to integrate, reuse and recover traces between existing and new system artefacts generated during the development cycle.

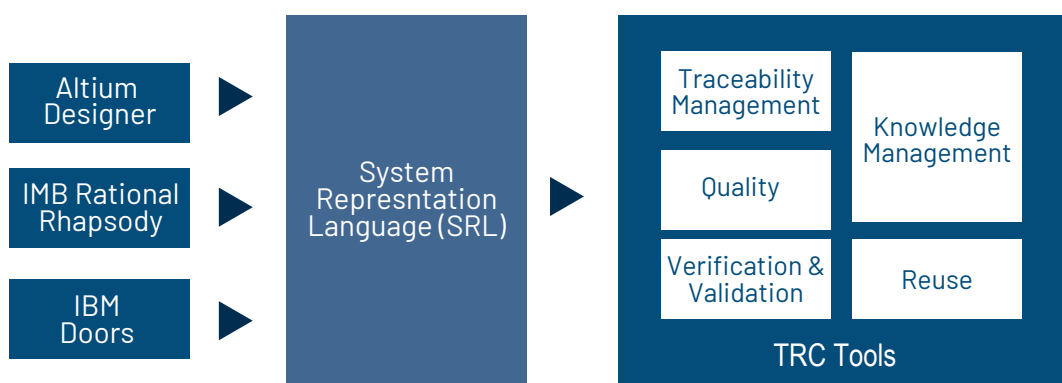
These technical innovations will also impact in terms of time and costs, better connectivity between tools and the possibility of applying reuse principles to the different system artefacts and the lifecycle of a product where PCB development is involved.

### Support quick and reliable decision making in the semiconductor industry

Integration of statistical, analytics and system quality analyser tools into the existing environment enabling an automated and digitalised usage to efficiently reduce various costs (saving of material, production steps, engineering costs) at an early stage. The outputs of the two decision making support tools need to be handled in an efficient way so that only valuable information is returned to the engineer.

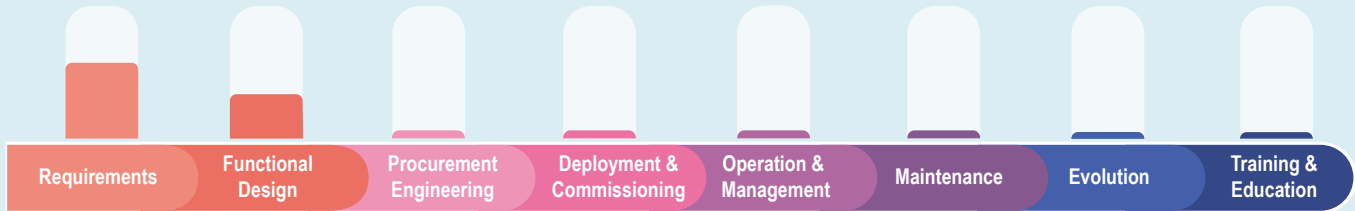
### If malfunctioning testing equipment is detected before it can cause any harm:

- Valuable testing time for subsequent products can be saved.
- Targeted maintenance can be performed.
- Generation of impure data sets, leading to possible misinterpretations, is avoided.





## Engineering Phases



## Results

### Dissemination

Knowledge Centric Solutions will use the following channels to disseminate the findings obtained during the project:

- Co-authorship in the preparation of two papers per year aimed to congresses with an industrial focus, where the achievements obtained shall be presented.
- Presentation of at least one webinar per year, where the new capabilities in the TRC tools achieved during the project are presented.
- Presentation to working groups such as INCOSE (RWG, MBSE WG, Ontologies WG...) on the new possibilities offered by TRC tools.
- Creation of dissemination materials within the framework of Knowledge Centric Solutions' such as: book covering the topics related to the project, publications on social networks, YouTube videos, among others.

### Exploitation

The implementation of some of the classical domains covered by the company (reuse, traceability management and quality management) through the collaboration in two use cases will widen the number of exploitation opportunities in the future and will also improve the skills that the Knowledge Centric Solutions staff have about these disciplines easing the future commercial strategy of the company towards these domains. The company also aims to extend the number of products, features and especially the number of connectors to extend the number of possible customers interested in the tools.

Considering that currently the TRC tools provide its clients with the possibility of processing logical model, the improvements achieved during the project will allow offering physical modelling processing capabilities. This will permit both, access to new working groups within current clients, as well as the possibility of obtaining new clients that use Altium Designer in their engineering processes. because of this, it is expected to have a 15 % growth in its turnover.

## Partner Data



THE  
**REUSE**  
COMPANY

*A Spanish company with over 20 years of experience in the fields of software and system engineering, quality management, artefacts reuse, traceability, requirements engineering, and knowledge management. Currently, they are commercializing the Systems Engineering Suite, based on its own knowledge-centric approach. This SE Suite includes products such as RQA-QUALITY Studio, the V&V Studio, the RAT-Authoring Tools, and the KM-Knowledge Manager, turning into a complete suite to manage the quality of any type of artifact, authoring of textual artifacts, traceability among the different artifacts involved in a project; knowledge bases, that are the key aspect of this advanced process are also managed within the SE Suite.*

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