

Spago4Q: the open source solution supporting quality of software products, processes and services

*Davide Dalle Carbonare
Spago4Q Architect*

1. How does Spago4Q provide information about the quality of software products and processes?

First of all, I would like to say that Spago4Q is an open source platform, realized by Engineering and freely downloadable from the OW2 Consortium projects Forge, like the other products of the SpagoWorld family. Spago4Q offers an immediate and global view of the indicators according to a specific quality model. The information is collected by the users directly from the tools and, once the users have also defined the computational rules of the indicators, these are represented independently of the analytical context.

2. How can users gather data to perform the data analysis?

The data come from the tools that are used every day for the development of products and projects. For example, they come from software repositories, code analyzers or software to manage requirements, tests and services. The data are collected by Spago4Q with specific components for every tool and they are loaded in a non-invasive way, avoiding any human interaction, without changing the tool used to extract the data forms. The collected data are stored inside Spago4Q Data Warehouse, according to specific data interfaces that keep the extraction process and the analysis process separated. This again allows users to change data sources over time, keeping the analysis unchanged.

3. In which projects are you using this solution now?

Spago4Q is used in Engineering, within the portal that supports the projects development. Here it is used to evaluate the compliance of the developed projects with the ISO 9000:2008 and CMMI quality models. Spago4Q is also used in QualiPSO, a research project funded by the European Commission, within the activities of the sixth framework program. Here it is used to evaluate the quality of the developed project and their development processes, collecting information from different external tools and presenting them according to one of the many models that are defined inside the project. One of these is focused on the processes and is called Open Maturity Model.

4. You said that Spago4Q is also used to check the software management services compliance with the services levels, specified in the contract. Can you describe us this procedure?

A contract can specify a set of parameters inside the Service Level Agreement to be used to verify the compliance of the service itself and its quality. For example, the contract may require that a problem has to be solved within four hours. In this case, Spago4Q can provide specific information, like the average time for the responses or the number of responses that are not compliant with the Service Level Agreement.

5. Can you mention a reference case in this field?

Spago4Q has been adopted by Engineering within the DG REGIO project (the European Commission Directorate General for Regional Policy), whose main activity is to fund projects and programs all over Europe. Here, Spago4Q is used to evaluate the compliance of the provided services, which range from the analysis, development, maintenance and support for the information systems of DG REGIO, as well as to provide official reports periodically. Also in this case, Spago4Q extracts the information to compute the Key Performance Indicators (KPI) from the tools that support the activities of the DG-REGIO.