

1. FINAL PUBLISHABLE SUMMARY

Service-oriented computing (SOC) is an evolving interdisciplinary paradigm arising from the idea that software applications can be constructed by composing and configuring software services. This paradigm poses novel challenges for research because of the way software applications are designed, architected, delivered and consumed. In particular, the development of this paradigm has given rise to a new area of study called Service-oriented Requirements Engineering (SoRE). Considering that the researcher must develop new methods for doing SORE and evaluate them in empirical contexts for key application domains, empirical evidence in the evaluation of SORE methods is severely lacking.

So, for the purpose of improving the spread of good practices in empirically evaluating SORE methods, within the Marie Curie Programme (Intra-European Fellowship), at the Information System group of University of Twente, Condori-Fernandez defined an empirical evaluation framework called EFRASYS. This framework is based on a mixed approach that combines theoretical and empirical approaches. It consists of three components: 1) a suitability evaluation method; 2) an algorithm based on Fuzzy Logic for managing the impact of changes on evaluation criteria (quality attributes); and 3) guidelines for supporting the design and report of empirical evaluations.

For evaluating the suitability of SORE methods to specific domains such as home-care, three issues were investigated from a theoretical approach: domain constraints, principles of service oriented paradigm, and generic evaluation criteria (see Figure 1). Moreover, considering the dynamicity of contextual conditions, an algorithm for managing the impact of changes on evaluation criteria was developed.

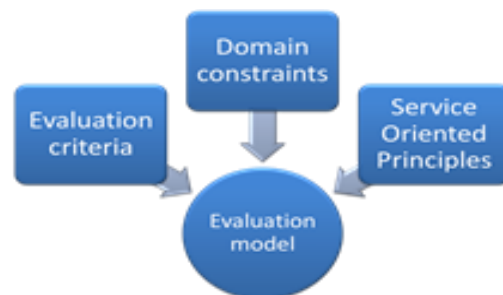


Figure 1. Elements of the evaluation method for services oriented methods

With respect to the third component (empirical approach) the guidelines proposed include a set of recommendations about which existing experimental platforms could be used for empirically evaluating SORE approaches (e.g. methods, techniques) on a large scale and in the long term. Moreover, the framework has also benefited from a unified checklist for designing and reporting observational and experimental studies, which was evaluated and adjusted within the EFRASYS project.

Although the EFRASYS components have been validated in the home care domain, we plan to concentrate on the evaluation of the integration of the three components in other domains.