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Title of the presentation /Tutorial

Towards an Effective Process Improvement Platform: Spago4Q and the QEST *n*D Model

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Speaker(s)

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Category

- Getting Started Intermediate High Maturity
 Presentation Tutorial

Target Audience

- Senior Management IT Managers
 Project Leaders SEPG Leaders
 Practitioners Others:

Key Words

Open source, process analysis, Spago4Q, QEST *n*D

Abstract (maximum 250 Words)

The continuous improvement of software process has become a goal of paramount importance for organizations focused on software development; to achieve this goal, a number of commercial and open source frameworks has been developed and distributed implementing mathematical schema aimed at measuring process performance and suggesting process areas needing improvements.

Our work is aimed at showing the integration of QEST *n*D model (L. Buglione, and A. Abran. “*n-dimensional extension and generalisation of a Software Performance Measurement Model*”, available at [http://dx.doi.org/10.1016/S0965-9978\(01\)00050-3](http://dx.doi.org/10.1016/S0965-9978(01)00050-3)), a conceptual framework for measuring process performance based on multiple analysis dimensions (e.g. economic, social, and technological dimensions), and Spago4Q, the open source platform to measure, analyze and monitor quality of products, processes and services (www.spago4q.org).

The tight integration of the two frameworks allows the implementation of a complete and extensible multi-project multi-process performance evaluation environment combining the mathematical formalization of QEST *n*D model and facilities offered by Spago4Q. The system analyzes processes through the selected analysis dimensions by the implementation of metrics-sets focused on specific dimension's goals. The presented case study shows how analysis of reports provided by the tool allows managers to easy find out areas that need improvements and to check the current state of active projects.

The tests were performed on two pilot projects focusing the model on the economic, resource usage, technical, and customer dimensions. The first project showed an overall performance improvement of 8%. In particular, corrective actions were focused on the technical perspective, where a performance growth of about 6% was noted.

CV (200 words)

Ernesto Damiani is currently a Professor at the Università degli Studi di Milano and the director of the Università degli Studi di Milano's Ph.D. program in computer science. He has held visiting positions at a number of international institutions, including George Mason University in Virginia, LaTrobe University in Melbourne, Australia, University of Technology in Sydney, Australia and the Institut National des Sciences Appliquées (INSA) at Lyon, France.

Prof. Damiani leads the SESAR lab of the Università degli Studi di Milano, whose researchers have been involved in several projects funded by the EC under FP5 (FASTER), FP6 (PRIME) and FP7 (SecureSCM, PrimeLife). His areas of interest include business process representation, Web services security, processing of semi and unstructured information (e.g., XML), models and platforms supporting open source development, and semantics-aware content engineering for multimedia.

He is an Associate Editor of the IEEE Transactions on Service Oriented Computing, Area Editor of the Journal of System Architecture and a member of various editorial boards. He has published several books and about 200 papers and international patents. Prof. Damiani is a senior member of the IEEE and ACM Distinguished Scientist, and he received the Chester Hall Award for the best paper published in the IEEE Transaction on Consumer Electronics.

Photo



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CV (200 words)

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Dr. Buglione is a regular speaker at international Conferences on Software Measurement, Process Improvement and Quality. He is also the Vice-President of the Italian Software Metrics Association (GUFPI-ISMA), member of ISBSG Technical Advisory Group, IFPUG Education committee and ISO/IEC WG10 Study Group and other technical national bodies on such issues.

He developed and was part of ESPRIT and of Basque Government projects on metric programs, EFQM models, the Balanced IT Scorecard and QFD for software. He is also a reviewer of the SWEBOK project, co-authoring the proposal for a new Knowledge Area on Software Measurement for the upcoming 2010 edition.

He received a Ph.D. in Management Information Systems from LUISS Guido Carli University (Rome, Italy) and a degree cum laude in Economics from the University of Rome "La Sapienza", Italy. He achieved IFPUG CSMS (Certified Software Measurement Specialist), COSMIC, ITIL v3 and COBIT v4.1 Foundation certifications. Email: Luigi.buglione@eng.it

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