Application of Method Engineering Principles in Practice: Lessons Learned and Prospects for the Future

Marko Bajec

University of Ljubljana, Faculty of Computer and Information Science
Head of the Laboratory for Data Technologies
Trzaska 25, 1000 Ljubljana, Slovenia
marko.bajec@fri.uni-lj.si

It seems that in IT sector we are all aware that for the development of non-trivial software the use of software methods is very important. They provides as with knowledge and guidance for the development process which otherwise might become too chaotic and out of control. It has been empirically proven that software development companies which have successfully established their software processes are more efficient, produce software of higher quality and have shorter time-to-market period; specifically if they are able to adapt their ways of working to specifics of a particular project.

In the research community Method Engineering (ME) principles have been promoted as a way to make software development methods agile and adaptable to particular circumstances, i.e. specifics of a development team and project. Unfortunately, however, ME have never been really accepted or widely used in practice. The reasons are several, not all are equally important.

At the University of Ljubljana we have done our own research to see what we can do to motivate software companies in employing ME principles. The research project was carried out under the umbrella of the Centre of excellence for "Information and Communication Technologies" with a mission to improve software development practice in Slovenian companies. The project was co-founded by the Slovenian Ministry of Higher Education, Science and Technology, European Commission and five participating Software Companies.

To reach the goal our idea was to facilitate the companies with a framework and tool-support for reengineering their ways of working, so that the gap between their official methods (documented methods they claim to follow) and the ways how they actually develop software would be as small as possible. As a part of this framework we have developed our own approach for process configuration (PCA) that suggests how to incorporate flexibility into formalised or documented methods, so that they could be adjusted to suite best to circumstances of a particular project. The PCA tells how to describe the ways of working in an organisation (organisation's base method) so that project-specific methods could be than created automatically by using appropriate tool-support.

It has been now three years after the participating companies incorporated the framework and supporting tools into their environments. In this talk I would like to provide the audience with more information on the research project that we have performed and share the lessons we have learned. Our findings lead us to not very enthusiastic conclusions and force us to look for different ways to tackle the problem.