ARTC The Adoptable Repeatable Teachable and Costable Requirement of Methodologies

V01 09/1/2012

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Outline

This proposal is an outline of a research program intended to improve the general usability of methodologies such as those developed in Software Engineering research for use by IT professionals. It was developed in 2008 while the author was Visiting Researcher, University de Milano at Crema, and was the outcome of considering the way in which GQM (Goal Question Metric) should evolve to be come a "proper" methodology.

We suggest that a mature methodology needs to have the following properties[1]:-

1/ "Adoptability". It must be easily adopted by an experienced software process/project manager at a "cost" which is both definable and which ensures that there is a ROI.

2/ "Repeatability". It should be sufficiently well defined to ensure that multiple teams considering the same goals with respect to the same project will produce the same or recognizably similar designs or work products.

3/ "Teachablility". If possible, the method should be prescriptive enough to be taught to third or fourth year software engineering students.

4/ "Costability". A method of actually determining the cost of adopting the methodology, both in terms of planning and in terms of execution costs is needed. The costing strategy should include assessing and measuring savings made by using the new approach.

7. References

Basili, V. (1985). *Quantitative Evaluation of Software Methodology*,. Keynote Address, Proceedings of the First Pan Pacific Computer Conference, vol. 1 September 1985., Australian Computer Society.

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[1] We call these the ARTC (pronounced "Artsee" methodology properties).