

# An Enterprise Integration Project Management Framework

Ernest Cachia and Mark Vella

Software Engineering Process Improvement Research Group  
Department of Computer Science and Artificial Intelligence  
University of Malta  
Malta

**Abstract.** This paper is actually an adapted M.Sc. proposal. Work on this degree has only just start so there are no results to be presented. However, during the CSAW presentation further details will be given about research problems and how they will be solved.

## 1 Introduction

Software, is the brain behind today's computerized world. From the number crunching applications running on main frames in the 70s, to today's web applications driving massive data repositories, critical to the competitive advantage of an enterprise, software applications have gone a long way.

With many software systems still in use way beyond their expected lifetime, and automating nearly every aspect of an enterprise, these applications are victims of their own success, as the expectation from them could be more than they can handle. One modern approach taken to bridge this gap, is that of Enterprise Application Integration a fast growing software development approach, to aligning the existing independent vertical departmental software silos to the horizontal flows of business processes.

## 2 Research Question

Given the current available software project management methodologies or techniques for traditional software projects, and the feedback from the industry about the new nature and challenges project managers are encountering in EI projects during the first years of EI existence; is it possible to arrive to more rigorous EI project management framework, which could be proven to serve as the basis of more successful EI project life cycles, through the adoption of scientific identification of EI criteria and their subsequent classification and measurement of qualification attributes? If so, this scientific approach, would directly affect the quality of any associated deliverables in the applied business world.

## 3 Review of the relevant background research and theory to date

In his white paper for Wipro Technologies [3] makes a high-level overview of the EI challenges normally found throughout the life cycle of an EI project. [5] is a collection of EI principles from the EI methodology committee of the EI consortium, clearly showing the need of a more specific approach to EI rather than the available traditional methods. [4] and [2] present two attempts of presenting a complete project life cycle, specific for EI. [1] and [6] go further to propose attempts for process improvement and a capability maturity models for EI life cycles.

## 4 Tentative Research Procedure

The following is the research procedure as it is envisaged to proceed. Of course, this may be subject to change as different types of problems are encountered. One must keep in mind that this research procedure is based on a part-time commitment to the degree.

| Step   | Timeline |
|--|----------|
| What are the available traditional software management techniques? An indepth research of traditional software project management.   | 2 months |
| What unifies applications, and EI systems building blocks in general? A study on the nature of software, applications and more specifically business applications. An identification of the EI building blocks and their common attributes.                          | 3 months |
| What is the purpose of EI? A research on the need of EI, the solutions delivered by EI, existent EI case studies analysis, and a forward look on to what EI is evolving to.  | 2 months |
| What are the new challenges imposed by EI? A study of EI project industry reports, as well as the first existent attempts of addressing these challenges   | 3 months |
| Why traditional Project methodologies fall short/are not enough for EI projects? - A research of traditional project methodologies, and their analysis in an EI project context.   | 2 months |
| EI Management framework proposition Is it possible to bridge the gap between traditional software management methodologies and the new EI projects are posing?   | 4 months |
| Prove identified EI framework research results A proof of the results given in the previous step   | 2 months |
| How easy it is to build an automated management software tool with the identified EI management framework research results? Designing and building a software tool for helping project managers in the management of EI projects. Evaluation and testing of results. | 6 months |

## References

1. Braunstein J., "Integration Audit Methodology: A Primer on Assessing Integration", EAI Journal, 2005
2. Cummins F.A., An Architecture for Enterprise Application and Systems Integration, Wiley, 2002
3. Khanna R., "Top Challenges in Integration Projects", Wipro Technologies White Paper, 2005
4. Roch E., "A Software Development Methodology for EAI", EAI Journal, 2004
5. Schmidt, J., "EAI Principles" The Software Ecologist Column, EAI Journal, 2002
6. Schmidt, J., "EAI Lifestlye Evaluation", The Software Ecologist Column, EAI Journal, 2003