An Evaluation of Enterprise Architecture Frameworks for E-Government

Abstract

E-government development has been facing with many challenges, including agency coordination, agility, and implementation cost. The lack of integrity, needs for modifications, and waste in expenses and cost, caused many challenges in various types of government programs. Moreover, selecting the ideal Enterprise Architecture Framework (EAF) to overcome the obstacles is necessary. Using a proper EAF would provide growth and development, increased profit, optimal solutions, and reduced costs. An ideal EAF should be consistent, eliminate enterprise complexities, repeat the use of related services, propagate knowledge and share experiences. It also should be aligned with commercial goals. This study tries to conduct a detailed evaluation of a set of candidate EAFs for e- government implementation. Although some researches are evaluated common EAFs from some aspects, there is no detail and comprehensive evaluation of EAFs. In this study, in order to evaluate EAFs comprehensively, first a set of criteria is selected for the evaluation in such a way that all the important aspects of a EAF be covered. Then, an appropriate questionnaire is designed based on the criteria where for each criterion a set of questions are designed. The questionnaire then is filled by experts that have practical experience in the field of EAFs and e- government. Finally, an appropriate process is suggested to analyze the raw information gathered through the questionnaire and produce proper representative information for EAF evaluation. Federal Enterprise Architecture Framework (FEAF), The Open Group Architecture Framework (TOGAF), Gill, frameworks as three common EAFs are selected for evaluation. 17 criteria are selected, and 186 questions are designed for the criteria. Based on the evaluation method presented in this paper, TOGAF acquired 83% of the score and selected as the best EAFs, while Gill and FEAF acquired 80% and 66% of the maximum score respectively.