

Method for Enhancing the Process of Software Tool Evaluation and Selection: COTS, Heritage, and Custom Software Reviewed

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For many organizations today, software evaluation and selection to meet the computing needs of that organization is critical. In recent years, the role of software has become essential to the integration of hardware systems of greater and greater complexity. As a result, the choice to purchase Commercial Off-The-Shelf software (COTS), adapt existing heritage or legacy software, or to develop custom software can mean literally the success or failure of project. Yet frequently this decision is delegated to an individual who is not in alignment with the system or organization as a whole. Decisions are too often based solely on personal preference, familiarity and experience with one product with little regard for peripheral information. So how does a project effectively evaluate the software available? What are the factors and criteria that a decision maker should focus on and understand to make the most logical and strategic choice for software solutions? These fundamental challenges can be found throughout organizations of any business in nearly every industry. As software becomes increasingly complex with advancements in Information Technology, the need for accurate tools, which will help decision-makers faced with this decision, also increases. Additionally, as standardization becomes more mainstream, companies in all industries are looking to COTS systems to cut costs, meet demanding schedule needs, and increase robustness. These espoused capabilities of COTS software can give organizations a competitive advantage but only if implemented in the appropriate way, at the appropriate time and with the appropriate resources. However, if a software selection and implementation strategy is executed without proper understanding of the project as a system, then any software decision can lead to cost overruns, delays in the schedule and even project failure. In today's competitive market place, this risk is unacceptable.

Through interviews with software decision-makers and managers, this paper has captured both successful empirical methods and lessons-learned from previous software selection processes. This paper concludes with a cost-effective and strategic approach via template for establishing accurate software selection criteria. With this template, decision-makers will be better prepared to make informed and comprehensive software decisions for specific systems, subsystems, and interfaces. Ultimately, by adopting this methodology, organizations will be able to achieve a Return-On-investment (ROI) through accurate and effective software selection processes.