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Knowledge management for space activities in the digital era (2)

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WHERE DID THAT EQUATION COME FROM? A LEAN AND AGILE APPROACH TO PRESERVING AEROSPACE KNOWLEDGE

Abstract

Small and limited scope knowledge management projects require fewer resources and are more likely to succeed in a resource-constrained environment. This paper examines the factors for success behind several such projects that were conducted at the NASA Johnson Space Center.

Simple projects focus on preserving knowledge of specific topics and do not attempt to perform knowledge capture and management across multiple organizations. Such projects require fewer resources and personnel and do not require buy-in from multiple organizations and levels of management. Faster decision making is facilitated by implementing a narrow scope, flexible guidelines, and minimal oversight and by avoiding a committee approach that requires a consensus. Management can protect the lean and agile nature of a project from attempts to impose unnecessary requirements and restrictions.

Projects are more likely to succeed when they avoid time-consuming advocacy and implementation of new policies and processes and the procurement of new software applications. Much can be accomplished by working smarter with resources that are already available. It is easier to get approval for projects if the organizers are only asking for the time to complete the project.

The most challenging problem is identifying and preserving knowledge in a manner that engages and informs. The steps of identifying subject matter experts and topics and creating and capturing content should be performed before identifying processes and technology for sharing knowledge. Subject matter experts and lower level management have little ability to influence or resolve the budget and policy issues associated with knowledge sharing processes and software procurement.

Effective knowledge capture is accomplished by creative subject matter experts who possess visual, verbal, inquiry, and written communication skills. Those who have been burned by corporate knowledge loss or who have benefitted from effective mentoring are more motivated to capture and share knowledge. They may produce the kind of documentation they wish they had been given earlier in their careers.

A professional editor or technical writer can improve the quality of deliverables and provide constructive input on realistic project guidelines, scope, expectations, selection of subject matter experts, skill sets required, and schedule.

It is important to limit the number of people working on a project to those who will contribute directly to the final product and are held accountable for its success or failure. Those who reserve the right to provide input should also provide expertise and resources that can be used to solve problems.