

Know Your Knowledge Risks

When it comes to managing knowledge during an IT project, most project managers hide their heads in the sand. Knowledge management is a complex topic and most projects are already tough enough.

Yet Dr. Blaize Horner Reich's research reveals that managing knowledge is important if the project has a high level of uncertainty, is particularly large or long, or is a critical part of the organization's strategy.

Reich, of Simon Fraser University, and her colleagues have been investigating knowledge management – or its lack - in IT projects for the past three years. They have identified four kinds of knowledge that are important to IT projects and 10 knowledge risks to manage. They have also developed practical guidelines and practices for these 10 knowledge risks. (see follow-up PMPerspectives article called **Managing Knowledge Risks**)

“Many project managers say they routinely face knowledge-based risks but lack a formal process for acknowledging or mitigating these risks,” says Reich. “Our goal is to help project managers identify and manage them.”

During her research, Reich interviewed 15 senior project managers in Canada and New Zealand. She also took her findings on the road, presenting them to several academic, practitioner and CIO groups.

One finding was a lack of common understanding about the meaning of knowledge management within a project context. She suggests that knowledge management has three parts: creating and integrating knowledge, minimizing knowledge losses and filling knowledge gaps throughout a project's duration.

Reich's research reveals four types of knowledge that are important to IT project success:

- 1) Process – knowledge about the project structure, methodology, tasks and time frames. “This knowledge allows a team member to understand his or her part in the overall project, to understand what is expected and when it is to be delivered. It also allows a team or sub-team to self-organize.
- 2) Domain – knowledge of the industry, firm, current situation, problem/opportunity and potential technical solutions. This knowledge is spread widely within and outside the project team.
- 3) Institutional – knowledge of the history, power structure and values of the organization _ “what is really going on” — which is transferred by means of stories or anecdotes by organization insiders or observers.
- 4) Cultural – knowledge of how to manage team members of different cultures or from many disciplinary groups such as web designers, IT architects or organizational development experts.

Finally, Reich's research revealed 10 knowledge risks to watch for:

- 1) Lessons not learned.

Few projects, says Reich, use the lessons learned from prior projects.

2) Team selection is flawed.

While project managers may know the kinds of skills they want to hire for, they often have difficulties meeting those requirements. “When the team selection process is flawed,” says Reich, “the project manager will not know what the team knows collectively or, more importantly, what it doesn’t know.”

3) Volatility in the governance team

During a project, there is gradual knowledge-building among the key stakeholders. The loss of any of these governance members results in a knowledge loss that may severely impact the project’s ability to succeed.

4) Lack of role knowledge among the governance team

Many senior executives do not have the experience or the training needed to function as project sponsors and champions.

5) Inadequate knowledge integration

Integrating knowledge between the technical and business team members is important because together, they can create knowledge that is greater than the sum of the parts: a new idea, a shared understanding or an integrative model. Often, says Reich, one group may not know what the other is doing or what it knows.

6) Incomplete knowledge transfer

Knowledge transfer, often from vendor or consultant to the internal project members, is critical. Reich notes that although project managers may include in the project plan activities to support knowledge transfer, they often have no objective way to measure how effectively these activities were performed.

7) Exit of Team Members

While all project managers know that losing team members results in knowledge gaps, few create a plan to mitigate such losses.

8) Lack of a knowledge map

People on a team need to have a “map” of each other’s skills and knowledge, so they can get help and give help when needed.

9) Loss between phases

Team composition often changes from phase to phase. This generates significant risk that knowledge from one phase won’t be adequately transferred to the next phase.

10) Failure to learn

Lessons learned during a project are rarely satisfactorily captured, either during or at the end of a project. This topic is covered in another PMPerspectives article, called *Applying Lessons Learned to a Project*.

“By sharing this information,” says Reich, “we aim to empower project managers to better manage these knowledge risks and improve IT project performance and organizational project competence.”

Source: Reich, B.H. "Managing Knowledge and Learning in IT Projects - A Conceptual Framework and Guidelines for Practice", Project Management Journal, 38:2, June 2007, pp. 5-17. (Winner, Best Paper of 2007 from PMJ.)

PMPerspectives.org is a website which connects project managers and sponsors with project management researchers. Our mission is to understand and improve project management practices. The research team comprises Dr. Blaize Horner Reich and Dr. Andrew Gemino from Simon Fraser University, Canada and Dr. Chris Sauer from Oxford University, UK.

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