The Four Horsemen of IT Project Doom:

Identify Early Earning Signs to Avoid Failure

By Leon A. Kappelman, Ph.D.

William Shedd, a noted American Presbyterian Theologian in the 1800s, once said, "A ship is safe in harbor, but that's not what ships are for." Almost 150 years later, modern businesses are finding the principles behind this saying still hold true. In fact, this same line of thinking can effectively be applied to many information technology (IT) projects today.

IT investments comprise over half the capital budgets of U.S. organizations, but in spite of the obvious importance placed on IT, many projects are cancelled outright, completed late, over budget, or fail to deliver the promised business capabilities and financial ROI. Given the magnitude of the resources utilized, the opportunity costs, and the risks involved, IT projects are clearly an issue that deserves executive-level attention in addition to that afforded it by the chief information officer at your company.

The planning and management of IT project investments is a material concern for those dealing with requirements of the Sarbanes-Oxley Act of 2002 (SOX), the Statement on Auditing Standards No. 70: Service Organizations (SAS 70), financial forecasts, SEC reports, and other regulatory and reporting requirements. Such concerns are not limited to U.S. companies and their foreign subsidiaries since these laws and standards potentially affect companies outside the U.S. as well.

The management of risk underpins the insurance industry, but it is the mastery of

continued on page 12

continued from page 10

risk that distinguishes modern times from the past. IT project management, despite the fact that it deals with "modern" technologies, is embarrassingly immature in the mastery of risks. Today, about 20 percent of IT projects are cancelled before completion, nearly half have cost or time overruns or fail to fully meet requirements, and only about a third are finished on-time, within budget, and with expected functionality. If the discussion is limited to larger and therefore riskier projects, the total failure or cancellation rate approaches 50 percent. Obviously, more effective risk management is needed to avoid troubled IT projects and make desirable risk taking possible.

IT spending is materially significant in the insurance industry, especially given its low-margin nature. Deloitte estimates insurance company margins to be only about 5 percent. Estimates indicate IT spending accounts for about 4 percent of insurance company annual revenues, or nearly 30 percent of operating expenses, notwithstanding annual, sector, and individual company variations. About 40 percent of that IT spending, or about 1.6 percent of insurance revenues, is investments in projects aimed at cutting costs, meeting regulatory requirements, improving customer services, delivering new products, improving security, and reducing fraud.

> ***"Estimates indicate IT spending accounts for about 4 percent of insurance company annual revenues, or nearly 30 percent of operating expenses, notwithstanding annual, sector, and individual company variations."***

It is estimated that in 2010 global GDP will approach $65 trillion USD and insurance premiums will reach nearly $5 trillion, or about 7.7 percent of global GDP. Using premiums as a surrogate for revenues, IT spending by insurance companies in 2010 may reach $200 billion and total IT project budgets should be in the $80 billion range (even higher by some estimates).

IT projects are often material and yet the nature and magnitude of their risks unnoticed. However, signs of trouble come in many shapes and sizes, including restatements of financial reports, bankruptcies, failure to deliver new or promised products, or products produced quickly that do not meet current customer needs. As noted previously, the insurance industry is certainly not exempt from such problems. The industry has had its fair share of troubled IT project too, often with dire consequences, including situations like these:

- Ongoing computer problems caused denial of coverage, overcharges, and cancellation of benefits so regulators banned a large health insurer from selling certain policies.
- Improperly tested software caused a privacy breach of the personal information of

The Early Warning Signs of IT Project Failure	The Four Horseman of IT Project Doom			
The Deadly Dozen EWSs	Stakeholders	Requirements	Processes	Team
People-Related Risks				
1. Lack of top management support.	X			
2. Weak project manager.				X
3. No stakeholder involvement.	X			
4. Weak commitment of project team.				X
5. Team members lack requisite knowledge and/or skills.				X
6. Subject matter experts overscheduled.	X			
Process-Related Risks				
7. Lack of documented requirements and/or success criteria.		X		
8. No change control process or change management.			X	
9. Ineffective schedule planning and/or management.			X	
10. Communication breakdown among stakeholders.			X	
11. Resources assigned to higher priority project.		X		
12. No business case for the project.		X		

several hundred thousand insurance company customers.

• The stock of an insurer dropped 60% due to billing system failures reportedly resulting in receivables write offs of more than $100,000,000 and multi-million dollar fines levied by government agencies.

Seek and You Shall Find

Warren Buffet once said, "Risk comes from not knowing what you're doing." It's not surprising to find that Buffet is right as usual. The post-mortem examination of failed IT projects reveals that long before the failure there were early warning signs (EWSs). Fortunately these signs are easily identified if you are paying attention. Further, once EWSs are identified, appropriate action can be taken to mitigate their impact.

To qualify as an EWS, the indicator must be identifiable in the first 20 percent of the project's original timeline. By focusing on EWSs instead of general IT project risks, CFOs, CIOs, project managers, and other stakeholders could potentially still take action while the project can be saved at a reasonable cost. Alternatively, a risk-reward determination may indicate the project is no longer needed or unlikely to deliver a sufficient ROI and should therefore be cancelled before further resources are wasted.

In order to identify the most important EWSs, a preliminary list was developed and then assessed by a panel of 19 IT project management experts who added and modified items. This process resulted in a list of 53 EWSs which were then ranked on a scale of 1 (extremely unimportant) to 7 (extremely important) by 138 experienced IT project managers. The results can provide much-needed insights to insurance company executives. By identifying the most important EWSs, CEOs, CFOs and CIOs gain the ability to take action.

The Four Horseman of IT Project Doom: The Deadly Dozen EWSs

IT project risks can be grouped into the three general categories of social, project management, and technical risks – or simply People, Process, and Product risks respectively. Interestingly, the 17 EWSs with average ratings above a 6 (on the aforementioned 7-point scale) belong only to the People and Process categories. This is not surprising since technology is almost never the root cause of IT project failure. Nevertheless, these technical risks can be mitigated with proper People and Process practices, just like genetic propensities to certain diseases can be mitigated with proper behaviors, nutrition, and medications. Risks cannot be eliminated, but they can be managed.

For the purpose of this discussion, the 17 highest-rated risks have been distilled into the 12 most dangerous EWSs of IT project failure, a.k.a. the Deadly Dozen. The Deadly Dozen can also be grouped into the four categories of the project's Stakeholders, Requirements, Management Processes, and Team, a.k.a. the Four Horsemen of IT Project Doom.

> ***"IT project success is critical to enterprise success, and to the career growth and success of CFOs, CIOs, CEOs, business unit executives, IT project managers, and project team members. Failed IT projects not only damage organizations they can also harm careers."***

What is interesting about the Deadly Dozen is that most relate to the governance, leadership, and management of IT investment activities. CFOs, CIOs, and CEOs should be deeply involved in leadership, governance, and risk management before and during the life of any significant IT investment. The basic questions of what, why, when, who, where, how, and how much should be addressed in the IT investment governance process before the investment is approved, and those answers refined and monitored during the on-going governance process over the life of the project. While weak project teams are definitely an EWS, even a strong project team may not be able to overcome shortcomings in leadership and governance at the enterprise level.

The six people-related EWSs of IT project failure center on five not altogether mutually exclusive groups of people: top management, project management, project team members, subject matter experts (SMEs), and stakeholders. The six process-related EWSs center on five project management processes and their associated deliverables that are essential to success: requirements (including a business case), change control, schedule, communications, and resources.

Takeaways for CFOS and CIOs

Successful management of IT projects is material to the accuracy of financial forecasts and regulatory reports, as well as for predicting enterprise capabilities in order to make viable plans and commitments. IT project success is critical to enterprise success, and to the career growth and success of CFOs, CIOs, CEOs, business unit executives, IT project managers, and project team members. Failed IT projects not only damage organizations they can also harm careers.

The Deadly Dozen risk indicators were found to be the most important, and most actionable, during the first 20 percent of an IT project's timeline. However, every project is unique, and so is every organization, so the relative importance of each EWS will be somewhat unique for every project. The three general risk categories, the Deadly Dozen and the Four Horseman of IT project risks do provide a valuable, quick, and easy starting point for knowing the risks of an IT project.

Knowing about and paying attention to these EWSs – the earlier in the life cycle of an IT project the better – increases the probability of a successful project outcome. Some IT projects should be stopped because circumstances have changed, it was a bad idea to start with, or it has become highly unlikely it will provide the promised business or financial benefits. Much like the warning lights and gauges on the dashboard of an automobile, paying attention to these warning signs in the beginning phases of an IT project can help avoid problems and help the enterprise and its leadership successfully reach the desired destination.

Leon A. Kappelman is a professor of information systems, director emeritus of the IS Research Center, and a fellow of the Texas Center for Digital Knowledge at the University of North Texas. He will be presenting an educational session during the 2010 IASA Annual Educational Conference & Business Show on "Reaching the Next Generation of Insureds." To learn more about Dr. Kappelman, his work and his writings, please visit http://courses.unt.edu/kappelman/.