SOCIETY OF ACTUARIES

Article from:

The Stepping Stone

November 2013 – Issue 52

Lessons Learned in Systems Project Management

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Y2K. ICD-10. Health care reform. Actuaries, as business professionals, are involved with and impacted by system development projects large and small. As financial stewards, no matter what our involvement in such projects, we have the opportunity to provide guidance that at least anticipates, if not avoids, unexpected negative outcomes. When building our financial models we often draw on past experience to project forward. Yet somehow too many managers, including actuaries, continue to be surprised by system development projects—they take longer or cost more or don't quite deliver what was expected. Can we do better? I believe so, if we are willing to learn from past experience just as we often do in our financial modeling.

LESSON 1: SET REASONABLE EXPECTATIONS AND ANTICIPATE RISKS.

Setting reasonable rather than stretch goals may seem to be operating as less than the demanding business managers we should be. We are the customers. IT should deliver functionality that exceeds our expectations at a price below our expectations. Right?

Unfortunately, I have not seen this occur generally. Instead, my experience has shown that business management is generally frustrated by IT delivering less than expected and/or at a cost higher than expected. Even worse is that sometimes business plans are put in place relying on IT delivering full functionality at the expected price and when that doesn't occur, there is an inevitable scramble to try to somehow still make plan. Sometimes an unhealthy pattern exists where this is repeated year after year.

How do we learn from this experience to improve our performance going forward? Should we make changes so that IT has a better chance of delivering the desired functionality at the estimated cost? Yes, absolutely, and I'll discuss that more below.

The first step is to set realistic expectations and even then to anticipate contingent outcomes where the project delivery might fall short. We also need to take care to avoid expanding scope without a corresponding increase in cost or timeline. I know actuaries should strive to avoid being pessimists, but if someone isn't pointing out the risks, it is likely that the plan will fail to be met. The most effective planning includes understanding risks and negative outcomes and adjusting for them as soon as they occur. As actuaries we should be another voice pointing this out, not just for financial risks, but for project management risks as well.

With one project I witnessed, actuarial managers had asked for scope additions expecting that IT could fit them in but then endured delays and cost overruns for the project. With the next project the same actuarial management insisted on more

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thorough initial requirements definition and IT cost estimation. On the basis of that, management decided that pursuing the second project was not worth the cost. By learning to trust IT estimates, they avoided a costly mistake.

LESSON 2: HELP IT WITH COST ESTIMATES.

Given that we pride ourselves in our ability to estimate costs in the absence of complete information, this lesson may seem like an obvious statement. However, we do tend to think that IT should know their work better than we do and be able to estimate how much their work will cost. Some IT professionals are very good at this; but whereas they have the technical knowledge and experience, we bring an ability and experience at dealing with uncertainty that may help with the estimation process.

- We need to be careful not to infringe on what IT rightly views as their professional stewardship; but where there is discomfort to produce an estimate in light of uncertainty, we can bring our professional training and experience to bear.

- Where there is a resistance to publish a cost estimate, we can help IT work through how to account for the uncertainty or how to present different scenarios or ranges.

- In extreme cases, where lack of an estimate is keeping management from approving a project from even starting, we can offer our own estimates, clearly identifying that IT is not the source of the estimates.

One example of the above situation occurred early on with health care reform (HCR). In order to provide enough lead time for system development, HCR system enhancement requirements were developed even before regulations were finalized. Because of the uncertainty around the requirements, IT was not completely comfortable in publishing delivery time estimates. This jeopardized timely senior management approval to move forward, so I worked with IT to publish what I clearly labeled as business estimates of the timelines. This gave senior management the comfort they needed to move forward without IT having to take greater accountability than they were willing to.

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LESSON 3: THINK BROADLY ABOUT BUSINESS REQUIREMENTS.

Sometimes actuaries and sometimes others narrow the role of the actuaries to pricing or reserves or other traditional actuarial specialties. We should strive to make a larger contribution.

- First, actuaries are business professionals with specialized but also broad and deep business knowledge.

- Second, actuaries, even in traditional actuarial specialties, have to work with systems and workflows and business partners outside of their particular specialty.

Given that, we should be able to define business requirements for not only pricing or reserves but also for how information should flow into and out of those areas. Further, we can bring insight into system flows and workflows end to end in the organization.

Of course, there are other experts who should have the authority to define requirements for their particular area. However, I believe actuaries' training and experience brings a broad perspective that can add value for the end-to-end business requirements for any system enhancement.

HCR requires end-to-end changes including the flow of data such as census information from quoting through operations and back for renewal, which previously wasn't captured. I've seen actuaries very effectively providing detailed direction to operations managers and technical architects on how data repositories in operations, data warehouses, etc. should be structured to ensure that all business needs are met in the most effective manner.

Related to this lesson, we should work to remind both ourselves and others not to work only for narrow department-specific interests but for broader company-wide interests.

LESSON 4: EXPAND BEYOND A BUSINESS ROLE.

In addition to breadth and depth on the business side, many actuaries can also contribute significantly

on the technical side of system development projects. Again, we need to balance our efforts to contribute with our IT partners' own expertise and desire to set technical direction. However, if we can foster a collaborative working relationship, there are technical areas where actuaries can make significant contributions.

For example, actuaries deal with internal and external auditors on a regular basis. With that background, actuaries can help their IT partners set standards for level of documentation that not only define business requirements, but also satisfy any audit or regulatory requirements.

Another example is system design. The knowledge of the end-to-end business process that actuaries bring to the table includes significant understanding of the data flows. That can be very helpful to a technical architect trying to ensure that all the system components work together.

Going a step further, because of their broad business background, actuaries seeking a nontraditional role, with some additional training, could effectively participate in overall IT governance. This is equally true of other technical professionals. I know one former underwriter who pursued additional schooling and is now a very effective technical architect due to his business background.

I believe if actuaries do not limit ourselves, or allow others to limit us, and if we work in a collaborative way, we can make significant contributions to executing system enhancements, delivering better, more robust or cost-effective systems solutions than would be delivered in absence of our involvement.

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