

## *ARE WE PLAYING DICE WITH INFORMATICS PROJECTS?*

In response to Heisenberg's Uncertainty Principle, Einstein responded "God does not play dice with the universe." Quite often we launch informatics projects with significant costs and a great deal of uncertainty. Pharma and Biotech management in essence are playing dice with investments in informatics projects by selecting and implementing systems before understanding the underlying business processes. They continue to play dice by paying limited attention to informatics projects until very late in the project when it is often too late to do something about it.

New informatics initiatives often start without the planning and support necessary to ensure success. Projects teams are hastily assembled with lofty but ill-conceived goals. Requirements for large projects defined in 2-3 pages of bullets become the target for the project, but these do not begin to convey the changes in workflow that scientists will need to undergo.

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When informatics projects are successful, it is because management and project teams make the right investment. Requirements are carefully defined. Current processes are clearly documented. Future process changes are carefully understood and planned. Scientists and man-

agement are involved at all steps along the way to ensure that the organization is ready to integrate new informatics systems into the fabric of the R&D process.

### **So when are we playing dice?**

Since industry statistics indicate that only 16%<sup>1</sup> of informatics projects are successful, there are a lot of projects from which to learn. Every organization has its share and usually the projects are easy to pick out by asking a few simple questions:

- Is there a project manager?
- Is there a project team?
- Is there a plan? (Let me see it!)
- Does the project have a sponsor?

These questions challenge the organization and whether it is set up for success. Each of these questions can and should be probed to discern the effectiveness in each area. At one company, the plan for an electronic lab notebook consisted only of tasks for the next phase of the project. There was no big picture, no vision for all the work that had to be accomplished before the system could be productively deployed. Even that limited plan had no baseline, so as tasks delayed, there was no indication that things were slipping. How about these questions:

- What is the scope of the project?
- How were requirements defined?
- Were "as is" and "to be" workflows used to determine requirements?

Many projects fail because they are just not working on the right things. Bulleted lists of requirements do not give scientists enough insight into how work will be done before and after a system is in place. Requirements in the absence of workflows leave the scientist hoping that the system will make their work easier, but then

they'll believe it when they see it. One company implementing a LIMS found that scientists had no idea how to use the new system once it was deployed. They had not done enough diligence regarding the business processes upfront, so they left more work for themselves in the change management required to use the system productively.

- Is the plan being tracked?
- Is the project reviewed by the sponsor and management team regularly?
- Does the project team communicate progress including delays?
- Is there an escalation plan?

Even if all of the upfront organizing is done well, there are many opportunities for things to get off track. Organizational priorities shift. Team members change. Key scientists are suddenly unavailable. Others may fill-in but problems arise. Does management engage with problems to understand risks and alternatives, or is the team left to "figure it out." The latter rarely happens before projects stall. At one major Pharma company, management found out episodically that the project was in trouble based on major missed deadlines. Lots of help suddenly became available to get things back on track. However, there were no escalations; no management reviews; and very little communications in between episodes.

### **So what does Management need to do to be successful?**

Management controls priorities, resources, and mindset. Everything starts there. Is this initiative a priority? How does this initiative stack up

against other priorities? Am I willing to expend resources (people and budget) to get this done? Am I willing to expend my personal time to assure the success of this project? If all of the answers to these questions are positive, following the steps in the table below assures a successful informatics project.

#### *Steps of Successful Informatics Projects*

1. Organize the project team and demonstrate commitment
2. Assure an understanding of the business processes; then requirements
3. Clearly define the scope, timeline, and investment
4. Review the plan and performance against the plan regularly
5. Monitor the project team and stakeholder participation
6. Applaud success – Jump-in and micro-manage (potential or impending) failure
7. Don't lose sight of the finish and drive to get there!

The project team needs to be balanced with business and IT resources who will communicate across the organization, solicit input from other stakeholders, make decisions, and be dependable in completing tasks. Management needs to make the commitment upfront to the team by setting the tone, publicly supporting the project, and being open to issues that arise in the course of the project.

Workflows and business processes are really key for scientists. How they work and how they will work more effectively are the fundamental reasons for most system implementations. Without enough diligence here, requirements become dictated by the selected solution, instead of the other way around. In reality, it is a pay me now or pay me later proposition. Scientists will need linkage from their current way of work-

ing to the new - hopefully improved - process.

*Business processes are key for scientists to determine how they will work more effectively with the new solution in place.*

Solid processes and systems are not built in a day. It is important to define and control the scope of a new initiative. Phase the work. Account for other organizational priorities. Allow for shifting business needs through project change controls. Be realistic with the timeline and the investment of resources. If internal resources will be consumed with experiments and studies, bring in external resources who can move the project along.

Plan the entire project and conduct formal reviews of the plan. Detail will unfold as the project moves forward, but there should be a comprehensive plan, a living plan. Dwight Eisenhower once said, "Plans are nothing; planning is everything." Plans are evidence that planning has been done. Reviewing plans assures that organizational issues are all well considered as the next set of project activities efforts are launched.

Monitor the project team and the stakeholders to assure that the project is tracking. You clearly would not want to hear from a key stakeholder "we are going live next month and I have no idea how the system works." Assure that communications are happening - project information is going out through reports, status meetings, or other vehicles; and stakeholders are taking the time to hear it and assimilate the coming changes.

Applaud successes. People want to jump on success bandwagons. People also run away from failures. Projects are no different. One manager acknowledged

recently, "if I knew then what I know now, I would have stopped the project." So if a project is failing, management needs to jump in and change the dynamics with personal involvement and commitment regardless of the reason. That might mean weekly or even daily check-point project meetings to get everyone's attention. At the risk of being called a micro-manager, the project will get back on track.

To leverage a phrase from Steven Covey, end with the end in mind<sup>2</sup>. Many projects fail at the finish line. It takes a lot of energy right at the end of a project to complete the project and to adopt a new solution. Many projects get to the end only to have "same-old-way" lobbies start. Apply management energy and drive the project team and the organization to the finish line.

So rather than playing dice with your informatics projects, make the right investments. Launching a project and hoping for the best is a recipe for failure. Committing management and the organization to a well managed project increases the likelihood of success. Ultimately, informatics project success is measured by more productive and effective product development.

1 The Standish Group 1999

2 Steven Covey, "Seven Habits of Highly Effective People", 1989; "Begin with the end in mind."

Authored by Bob O'Hara, Managing Partner and Co-Founder of ResultWorks, LLC based in King of Prussia, PA.

For more dialogue on this topic and an approach to making it a reality, please contact Bob O'Hara via phone (610-688-5870) or email ( bob.ohara@resultworksllc.com).