INNOVATION AND TECHNOLOGY

Recovering high-tech projects

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New project management theories help keep high-tech jobs alive

Todd Williams
eCameron Inc.

According to industry experts, between 60 and 80 percent of projects fail because deliverables are not completed on time, the budget is overrun or customer expectations are not met. There are as many reasons for this as there are failed projects. But solutions can be found in applying the correct methodology, improving communication channels and employing strong leadership.

With the growth of manufacturing and high tech in Clark County, nonconstruction projects are on the rise. Many organizations manage dozens, even hundreds of projects for New Product Development or Information Technology software development each year.

There are many theories on how to run a project. Two of the newer theories—Critical Chain and Agile or Lean Project Management—can help keep projects on track and out of the red.

Agile Project Management follows the same principles as agile and lean manufacturing: Reduce overhead and focus on the value to the customer. These projects have short iterative development cycles that evolve the product to its final state. By using short, such as 30-day, cycles to develop demonstrable product, there is a reduction in the level of documentation and an increase in input from the customer through earlier access to the product. This provides quicker feedback to the development team allowing them to make adjustments to the product to better meet the customer's needs, therefore increasing value. Agile methodology is best used when developing innovative products with new technologies or if the customer's requirements are not well defined. Using this methodology can also greatly reduce risk in projects with a high degree of unknowns.

Projects that have a well defined and static set of requirements might best use the Critical Chain method of management. Critical Chain is similar to standard Project Management practices, but focuses on three factors. These factors are 1) removing time padding from tasks and moving that buffer of time to the end of the project, 2) identifying the critical path and providing time buffers on tasks feeding the critical path and 3) identifying and resolving resource constraints such as double-booking of people, equipment and the like.

Both of these methodologies have shown a 20 to 40 percent reduction in project cost and time to completion. Using experienced resources to apply these methodologies can solve a myriad of issues with a troubled project.

One of the key components in both of these styles of management is improving communication. In the high-tech world where a product's effective life may only be a few months, a failure to communicate can be devastatingly costly. Improving communication with the customer, within the team and with stakeholders such as management, financiers, investors and so on will increase the likelihood that you get the proper functionality in the product within the constraints levied upon the project.

Piloting the project to a successful completion requires leadership. Leadership involves facilitating open and free communication while ensuring adherence to the budget and timeline defined by the methodology being used. Educating and empowering the team, rather than managing by edict, will lead the project to proper completion. Leadership is more than managing. It requires a clear vision of direction, collaborative decision processes, trust, accountability and ethics.

Implementing the right process for a company or a project takes planning, experience and insight. The rewards are faster time to market and a high return on your investment. Good methodology, leadership and communication create successful projects.

Todd Williams, President of eCameron Inc., has provided Information Technology and Manufacturing businesses with Project Management and Analysis/Design services for over 20 years. His firm specializes in managing and recovering high-risk projects. His monthly newsletter may be found at the company's Web site (www.ecaminc.com).