

# Effective Management of Technology Implementation

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**S**ometimes, adopting technology seems an attractive option for those of us who are faced with an improvement challenge. For example, we purchase more state-of-the-art devices if we deem them to be the solution to our ineffective processes and systems. However, technology is not a panacea for the skills we lack or for every improvement issue we encounter. Instead, it is a tool that complements our abilities, allowing us to do more and to become more productive. Because technology can cause as many problems as it solves, we need to carefully consider these important factors:

- Is this the right technology for our needs?
- What training are we providing to users?
- Are employees adaptable and versatile?

Once we determine that new technology is indeed the answer to our needs, we can move on to the next steps. This column is about using effective management techniques, involving those who will use and interact with the technology, to implement technology. Such management prevents us from going from poor manual processes to poor computerized processes.

## **THE RIGHT TECHNOLOGY FOR THE NEEDS**

The first step in considering the application or adoption of technology is to determine the specific need or purpose for that technology. For example, if we were to apply technology in the central supply department, the following might be a list of identified needs:

- accurately link supply costs with charges, and charge the right amount to proper charge codes;
- maintain an accurate master index and inventory count sheets;
- flag for expired stock;
- flag for unused stock;
- flag for too much or too little stock based on usage trends;
- flag purchases off the item master list;

- manage the location of stock, and serve as a location-identification tool for after-hours access;
- reduce time for stocking and checking deliveries;
- reduce time needed to conduct the annual inventory and account for issues to departments;
- provide departments/units/clinics with information on their usage and costs to assist with planning and managing decisions;
- identify trends and usage patterns to assist with budgeting and cost-reduction strategies;
- manage desired par levels;
- enable staff to electronically send requisitions from the hospital floor, perhaps using wireless handheld devices; and
- add barcode scanning capabilities to par areas and central supply storage areas to improve the efficiency and accuracy of counting and item selection.

### **The Project Team**

A project team, which includes end users and representation from departments affected by the technology, can help ensure successful implementation. The project team can also establish and facilitate an effective communication strategy. In our central supply department example, an appropriate project team may include representatives from information technology, accounting, billing, registration, central supply, nursing, and other key departments.

As the leaders of change, the project team will want to assess the processes and identify important linkages with other existing systems. Observing how work is done to identify duplicative, redundant, and unnecessary steps is a start. But discussing hand-off information with others in the organization is also important, especially if maximizing the opportunities for efficiency is a goal. Once the project team understands how the central supply department interacts with other functions, such as registration, order entry, requisition, accounts payable, budgeting, and billing, efforts to organize the workplace and workflow can follow.

The project team should consider using tools such as process mapping and flow charting to help them lay out not only the current processes but also the desired system using the new technology. These tools can also help the project team identify blind spots early on and determine if the latest and greatest technology is truly appropriate for the department's needs.

In many cases, new technology demands far more change and work from staff than most leaders are willing to acknowledge or admit. Without involvement of people who actually do the work, the project team is likely to miss important blind spots, such as hand-offs and subprocesses. Involving those who actually perform the work leads to much smoother implementation and allows those employees to develop ownership of the technology.

## THE RIGHT TRAINING FOR USERS

Providing users with sufficient and appropriate education and training on the new technology is important for ensuring sustainable adoption. Management should not assume that employees have (or do not have) the necessary skills to apply the technology to their work. Just because an employee is younger does not mean he or she is more technology savvy; conversely, do not think that because an employee has been with the organization for many years, that person does not have the instincts to learn and apply the technology. Therefore, assessing the needs of each employee who will interact with the technology is also important.

One way to identify education and training needs is to have employees complete a self-assessment by surveying or conducting individual or group interviews. Once the project team has assessed the staff's knowledge and capabilities, employees can be divided into teams based on their self-reported abilities and needs. Faster learners, or those who are already confident of their computer skills, should be trained first, and one or two of them should be identified as "super users." These super users are crucial because they understand the processes, are capable of applying the technology, and can assist those employees who need more support and guidance. Once the super-user group has been trained, move on to those with less confidence or skills and train this group, providing more support. Additionally, assign a super user to those who seem to be struggling for ongoing coaching and monitoring.

Staff from other departments/units will also have to be trained. The project team can identify these individuals, who will serve as their department's super-user, trainer, and the point of contact for communications.

## ADAPTABILITY OF STAFF

The current trend in information technology is twofold: there is a need for employees who are adaptable and versatile (or multifaceted), and there is a need for management to develop this versatility among its employees and to recruit people who are capable of versatility. In his book *The World Is Flat*, Thomas Friedman (2005) describes a new social contract between employers and employees. It is based on the concept that as long as employees give their employer their best work or labor, the employees are guaranteed career advancement and training that will enable employees to be more employable/marketable and more versatile.

Implementation of technology requires staff who can adapt to the injection of technology and who can change the way they apply their labor. The previous section described how the project team can assess and predict the adaptability and versatility of users. However, the project team will also want to continually monitor the ability of staff to use the technology and identify and address problematic issues during the early stages of the implementation process. The project team will want to continually plan, implement, monitor, and adjust to ensure that desired goals are attained.

Throughout the implementation process, effective management means supporting the project team, selecting the right technology, and designing and providing appropriate training. Again, an important factor in implementation is to have employees who are adaptable and versatile. This will ensure that the new technology will complement existing processes and systems and will allow more productivity throughout.

**Reference**

Friedman, T. L. 2005. *The World Is Flat: A Brief History of the Twenty-First Century*. New York: Farrar, Straus and Giroux.

<p>For more information on the concepts in this column, please contact Ms. Thielst at <a href="mailto:cthienst@cox.net">cthienst@cox.net</a>.</p>
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