Project management failures in the capital equipment industry

Project Managers (PMs) deliberately place themselves in the middle, between their own organizations and suppliers. They become the linchpins holding the entire project mechanism in place... or if you prefer, the fulcrum upon which the whole project balances. Regardless of analogy, PMs are indispensable.

Yet there are many examples of poorly and even negligently mismanaged projects.

Having spent considerable time observing numerous projects, ranging from barely completed to completely surpassing expectations, I've noticed several ways in which a PM can prevent failure when implementing projects.

Communication (more accurately, lack thereof)
Likely the most important aspect of all projects in all industries, communication is especially key before and during a project.

Step outside our industry for a moment and you'll find lack of communication one of the most common reasons for malpractice claims against both lawyers and doctors. If it's a big issue for them it's also a big issue for you.

Prevent aggravation by asking questions and affirming that everyone involved knows what is happening, what is expected of them, and what is supposed to happen next. Never assume others already know. In the words of a famous presidential speech writer: *"Trust, but verify."*

Communication includes documentation. Back up everything verbal with email, text messages, and electronic documents that are easily accessible and converted to hard copies.

Managing expectations
Since every individual has different mental images of the project, their duties and the outcome, miscommunication is common – even among those who speak the same language.

Technological, situational, performance, and interpersonal expectations are four types associated with capital equipment projects.

Avoid all types of unrealistic expectations from the start by setting clear priorities, milestones, reporting processes, and authority hierarchy.

Supply Chain Management

The success or failure of your project depends on your network of individuals, organizations, resources, activities and technologies.

Maintaining control over all aspects of your network not only ensures satisfactory completion of your project; it also lessens the possibility of unexpected delays and their associated costs.

Note the advice from a coordinator of the largest network of people and technology ever assembled: General Omar Bradley, who said *"Amateurs talk about strategy; professionals talk about logistics."*

Long lead time articles

Lead time is typically defined as, "the time elapsed between a customer placing an order and receiving the product ordered." With software, lead time is, "the time elapsed between the identification of a requirement and its fulfillment."

Both of those definitions include shipping time. Once machinery or components are received, additional lead time is necessary for a company to process and ready the component or machinery for manufacturing. Also remember to budget time for employee training.

Proving out 3rd party purchases

Building automation requires you to buy precision technologies and machines. Despite claims made by marketing brochures and salespeople, integrating a third-party machine or machine subcomponent is rarely "seamless", and must be qualified.

When your new million-dollar machine is sitting idle while awaiting integration of a hundred thousand-dollar component from a third party, you'll regret not having managed third-party purchases more carefully.

Examine the third party's reputation for delivering quality. Determine whether the third party will commit personnel to the integration, and who they are. For example, did the senior integrator recently depart, leaving a newly hired person in charge? Or maybe the manufacturer trusts yet another party with installation; one with a great reputation for integrating its products.

Change orders management

Easily responsible for delaying project completions and increasing costs, change orders include design modifications, site condition variations, and schedule modifications.

While everybody wants change orders processed timely, fairly, and equitably, each party's ideas of what constitutes "fairly" and "equitably" may differ. Undisputed change orders are agreed upon, while disputed change orders can become legal claims.

Handling change orders involves ensuring undelayed access to the site, providing resources as agreed, and not rejecting a contractor's work inappropriately.

Profit and margin

Profit is not a dirty word, despite those who claim otherwise. It's okay to profit; in fact, according to law, corporations exist to provide profit to shareholders.

Likewise, budget is not a dirty word. Budget surprises however, are welcome only when they are less than called for.

If one party has underestimated costs or time required to complete the project, the project manager must resolve the issue(s).

To help you get the most from your projects, the Project Management Institute (PMI) publishes project management standards, as decided by volunteer committees and interested members of the public: *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*