Letter to the Editors

As a former director of the old Office of Development and Engineering, I read with interest the recent article, "Project Management Training at CIA," by Joe Keogh and Rich Roy (*Studies in Intelligence* 68, No. 2 [June 2024]). I have contributed to the CIA program management topic in the past. Ed Nowinski and I wrote an article entitled, "The Lost Art of Program Management in the Intelligence Community" (Vol. 50, No. 2, June 2006). ODE was known throughout the community for its ability to manage programs well, delivering programs on time and within budget. I suggest that training alone, while useful, is not all that is needed to produce effective PMs.

Keogh and Roy mentioned the KENNEN reconnaissance satellite project as an example of the very large programs that we managed, but they commented that these programs were different than the many small projects for which the Directorate of Science and Technology was responsible. Although ODE's major responsibility was the management of the space programs assigned to us by the National Reconnaisance Office, we also did what I would classify as medium-sized projects. some of which required as much "tradecraft" processes in concert with the Directorate of Operations as they did technology. All of these projects also delivered on time and within budget. The interesting question is why were ODE PMs so successful when none of us received any formal PM training? Here is my view:

- We had a structured program for managing people's careers. People were identified early in their career as somebody with management potential and they were given a series of assignments aimed at developing their capabilities.
- All our PMs had demonstrated leadership capabilities in previous jobs, the willingness to take responsible risks and the ability to give clear direction to staff and contractors.
- They had been successful as a chief system engineer on one of the projects.
- The PMs had developed a competent project staff, responsibilities and accountability were clear, and people were expected to do their job.
- They worked with contractor management to ensure that the right people were on the job from a contractor perspective. Underperforming contractor personnel (including their project manager) were removed and replaced.

Nearly every article on project management says something about system engineering. But often they do not discuss what system engineering is and what system engineers do. In simple terms, "System engineering is a methodical, disciplined approach to the design, realization, technical management, operations and retirement of a system. A system is a construct or collection of different elements that together produce results not obtainable by the elements alone."

Not every person can be a system engineer. One needs to be comfortable with dealing with technologies that they may not be familiar with; deal with contentious issues; negotiate the solution to different approaches to a project problem; and balance technical, cost, and schedule issues. Perhaps most important, system engineers are risk takers and able to bring creative solutions to difficult issues the project faces. This is an important skill that is often overlooked in project management training.

Project management is often seen as a process: contract rules and acquisition procedures that must be followed, project reviews and reports that need to be submitted. It is not that process is inherently bad, but it does not, of itself, produce good PMs. In a well-run project the PM has the following skills:

- Knows how to use the talents of the people assigned to the project and ensures that the right talent is assigned to the right job.
- Organizes the system engineering function is a way that reports to the PM and that the SE function has the responsibility to influence decisions.
- If possible, all elements of the project should report to the PM. This includes all technical responsibilities, contracts, security and finance. While not always possible these support functions need to understand that the PM is on charge.
- Has a clear understanding, with the customer, what the requirements are, what performance is expected and what latitude the PM has to trade performance with cost and schedule
- Has the ability to deal with unexpected problems and crisis, the ability to make critical decisions without a lot of agonizing.
- Can develop a set of management program processes that ensure documentation reviews and reporting are appropriate for that project.

A successful project needs a competent PM but also a thought-out program plan. With a complicated project like KENNEN, such a very detailed plan was essential. In smaller S&T projects a program plan of only a few pages might be adequate, but some version of a project plan is essential. The PM must think through, at the beginning, what resources, support, facilities, people, tools, etc., are needed to execute the project and meet the performance, cost, and schedule needs. The essence of what I mean here was stated by Gen. Eisenhower when he said, "Plans are worthless, planning is essential."

When training PMs it is important to emphasize why projects fail. While all projects are different, there are some similarities about why they fail:

- The project is underfunded at the beginning. Usually this is done in the process of "selling" the project as a way to get it approved.
- Instability on the project manager and or team. This can be an issue with long-term projects.
- Insufficient back-up for critical components. Often in high tech projects a given technology or part is risky. In such cases it is wise to procure from back-up vendors or technology.
- Gold-plated requirements. There is a tendency to want more out of a system than is needed.
- Picking the wrong contractor. Often the "winning" proposal is not the contractor who can do the project successfully. When you know who the right contractor is, go sole source.
- Insufficient margin. All programs need sufficient cost and schedule margin, not having such will lead to project problems.

I have nothing against project management training, and indeed the process described by Keogh and Roy is certainly through and, I suspect, has been useful. But, training alone is not enough. There is a philosophy of project management that is also important. This philosophy admits that here are certain aspects that are absolutely needed (discipline, planning, the right people, clear responsibilities, system engineering), but the "how to" in terms of process and management techniques is let to the PMs make decisions based on their view of programs' status, risks, and challenges.

We give the leader of a project the title "project manager," but the best PMs are project *leaders* not managers. It can be summed up by a quote from Peter Drucker, who said "Managers do things right, leaders do the right things." Leadership is hard to teach. ■

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