

Managing Small Projects - Five Critical Steps to Tech Success

by Elizabeth and Richard Larson, Co-Principals, Watermark Learning

Tired of being a hero? You know what we mean. Putting in long hours near a technology project deadline in order to complete it? Not having enough time or resources, and the deadline can't slip. We've been involved in projects like this, and there's a real adrenaline rush near the end. Often times, there are penalties, too. We've worked in companies that routinely "brought out the cots" or booked hotel rooms near the end of a systems project. People literally slept in or near the office during crunch time in order to complete a project.

Then, the reward for pulling off the technical miracle is getting to pull off another one. "The reward for work is more work." We're not sure who said that, but it's been one of our mantras our whole career. And, it doesn't seem to be limited to large projects, either. People working on smaller projects suffer the same fate, only quieter. The toll is just as real.

Before going further, let's define technology. Our view is that project management processes can be applied to any industry and to produce any product. With technology, the "product" we refer to is typically software. It could also be hardware or engineering-type products, but our main experience is with software development, so that is what we'll focus on here.

The Cost of Failure

If your company is like most others, 72% of your technology projects will fail this year. Failure is usually defined by studies in project success as being late or behind schedule, over budget, or delivered with wrong or insufficient features. Is your organization willing to lose over \$2 million this year due to failed projects? That's the average amount one study found that companies lose through not managing their projects effectively. Can you really afford that?

It's true that large project failures get most of the headlines, but projects of all sizes can and do fail. The net cost of small project failures would probably equal or exceed the waste of large ones if anyone bothered to measure them.

Most small projects suffer from some common ailments:

- 1) Not enough time to think and plan, which results in higher costs due to:
 - Rework from doing things wrong,
 - Wasted efforts doing the wrong things,
 - Missed requirements.
- 2) Deadlines get missed due to:
 - Underestimating the effort needed,
 - Not setting expectations accordingly,
 - Lack of rigor, including ignoring risks that could be costly.
- 3) Not communicating project status and results, which lead to:
 - The "forget" factor by project sponsors,
 - Sponsor disengagement from the project.
- 4) Tendency to not formally end projects
 - Inability to celebrate milestones and completion,
 - Missed opportunities to capture learning from successes/failures.

Getting Started

First, it helps to distinguish what constitutes a project, because not all work should be managed as projects. Unless the effort 1) needs stakeholder requirements, 2) involves something new or unique, or 3) has an element of risk, it may not need to be handled like a project. But, if any of these three are part of the picture, then you should manage it as a project. An example may help to clarify.

Research Report

Dr. Paul Dorsey, writing in the InterNETalia Forum, [Top 10 Reasons Why Systems Projects Fail](#), says "There do seem to be three factors that all successful projects have in common. Each of these factors is key to any project's success. Each project can be viewed as a tripod. All three legs must be in place for the tripod to stand sturdily. In a systems project, these "legs" or critical success factors consist of the following:

- Top management support
- A sound methodology
- Solid technical leadership by someone who has successfully completed a similar project

Without each of these solidly in place, the tripod will topple and the project will fail."

We mishandled an endeavor partly because we didn't recognize it as a project. A while back our Internet Service Provider (ISP) informed us they were canceling our service in a month because they were bankrupt. We went into major react mode. We quickly tried to find a new ISP and didn't plan enough. It had high risks for us, and was definitely something unique to handle; two out of the three guidelines for a project.

Because of the tight deadline, and lack of planning, we missed the main risk: the ISP terminated our service sooner than they "promised." Ouch. We lost all of our emails over a weekend, and our web site was down, too. It was stressful, and costly, and the pain could have been lessened with some project planning and execution.

Unfortunately, most project management methodologies and frameworks are typically designed for large projects. We've found through experience that trying to use these frameworks and methodologies for small projects doesn't work. In fact, they can be counter-productive. What most small projects need is a simple methodology to help guide them, not waste time with process overkill.

Managing Small Projects - 5 Steps

Once you've identified work that should be managed as a project, now it's time to start planning and executing the project. Our method for managing small projects involves 5 basic steps. It's derived from our own experience and based on the Project Management Institute's Body of Knowledge (PMBOK®). The five steps are project:

1. Sanctioning
2. Scope Definition
3. Scheduling and Estimating
4. Status Reporting/Executing
5. Success – Closing the project

1. Sanctioning

To be successful, all projects need to be sponsored and supported. The project sponsor owns it, and must approve its deliverables. Without this formal sanctioning of a project, it may be doomed to failure. The #1 contributor to project success, according to a recent Standish Group Report, is executive support. User involvement, experienced project managers, clear business objectives, and minimized scope are close behind as factors of successful projects.

Executive support for a project is documented through a project charter. A charter sanctions the project, and outlines what the sponsor expects the project to produce. It's meant to be a business document, not a technical one, and is designed to be short. Ideally, the sponsor should create it, but minimally they should sign off on it.

As frequent project sponsors ourselves, we have found that slowing down long enough to create a charter forces executives to think through the need and vision for a project. And, it often stops many a "good idea" from being delegated as a small project and forces the sponsor to justify the business need for the project. The graveyard of abandoned projects often comes from those good ideas that weren't thought through well enough, and the instigator has gone on to the next "big idea."

2. Scope Definition

The next step in managing a small project, and a natural follow-on to sanctioning it, is defining the scope. The scope statement defines the project's:

- business issues and their impact,
- objectives (what the project should accomplish for the business), and
- deliverables (including features in and out of scope).

In other words, it defines what is "in scope" for the project. The sponsor signs off on this document, too, and commits to it. Sponsors are responsible for and need to make the decisions about the extent of the project, while project managers are responsible for planning the project and reporting against the plan. It's a distinction we as project managers have learned the hard way, because it's easy for sponsors to abdicate and make project managers responsible for scope decisions, and then blame the project manager for expanding the scope and missing deadlines.

Another way to think about the scope is to think about it as the project manager's answer to the sponsor's charter. The scope statement interprets the business need and how the project will solve it. If it's done right, the

sponsor can use it to verify if and how their vision will be carried out through the project. We use a simple template for the scope statement and combine it with the rest of the project plan for simplicity.

3. Scheduling and Estimating

Before starting a project, you also need to estimate how long it will take to accomplish the project objectives. For small projects, we suggest taking each deliverable and breaking it down to determine the tasks needed to produce each one. The resulting list of tasks is called a Work Breakdown Structure (WBS). The WBS helps you plan all the necessary work, and *only* the necessary work needed to meet the project objectives. It's an essential tool for any size project. Breaking projects into smaller tasks makes it easier to estimate the time needed to perform the work, and it can be rolled up into an overall project estimate.

The project schedule guides the flow of work, to ensure things are done in the right order. Tasks for the schedule come from the WBS, and allow sequencing work so that:

- tasks will be done in the right sequence, reducing delays,
- tasks with no dependencies can be done in parallel with other project work, shortening the schedule, and
- the longest sequence of tasks (called the "critical path") will dictate how long the project will take.

Tools like Microsoft Project® provide valuable assistance in estimating and scheduling projects and in calculating the critical path. For projects without many dependencies, simple tools like Microsoft Excel® and Word® do a decent job of recording a schedule.

4. Status Reporting/Executing

This step is finally where project work begins. By now you've scoped out the project, divided it into deliverables, broken it into tasks, and created a schedule. It's time to work the plan.

On larger projects, experts say 90% of a project manager's time is spent communicating. For smaller projects, especially when the project manager is doing some or all of the work, the communication time is obviously much less. But, it is essential to communicate project status as it is executing. We suggest weekly status reports to the sponsor, describing:

- what has been accomplished since the last report,
- how much time and money have been spent,
- variations from the budget or schedule, and
- any project issues that have arisen.

5. Success – Closing the project

As each deliverable from the scope statement gets completed, take the opportunity to celebrate success. Of course, the sponsor should approve each deliverable first. After all deliverables have been approved, the project can be closed out. This step is important because it gives you one last chance to celebrate, and feel good about what the project has accomplished. It's a great morale boost that beats being rewarded by more work immediately!

As importantly, closing out a project is the time to do a "lessons learned" session with the project team. A lessons learned meeting recaps what went well on the project and what could be improved for the next one. Both are valuable for capturing knowledge acquired during the project, and can be built on in the future. The lessons learned can be listed on a close report, which is also useful for summarizing project time, cost, and variances from the budget and schedule.

Putting it All Together

At first, going through the steps feels a little awkward and unnatural. After one or two efforts, though, people usually start seeing the benefits and the awkwardness disappears. Then, a scary thing starts to happen. People hold off starting on work until they get a project charter. Or, team members look forward to lessons learned sessions and celebrating the end of a successful phase or project closeout. Then, you know you're on your way to "tech success" and can stop playing that hero role so much. You get more sleep and get to see your family more that way, too.

About the Authors

Elizabeth and Richard Larson, co-principals of Minnesota-based Watermark Learning, have over 25 years each of experience in business, project management, business analysis, and training/consulting. They have presented numerous workshops, seminars, and presentations to over 10,000 participants on project management, requirements analysis, and related subjects.

For a copy of any of the Managing Small Projects documents mentioned in this article, send an email to the authors from Watermark Learning. They can be reached at elarson@watermarklearning.com or rlarson@watermarklearning.com.