IT PROJECT MANAGEMENT

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Building Your Project Budget

Creating cost estimates

Creating procurement documents

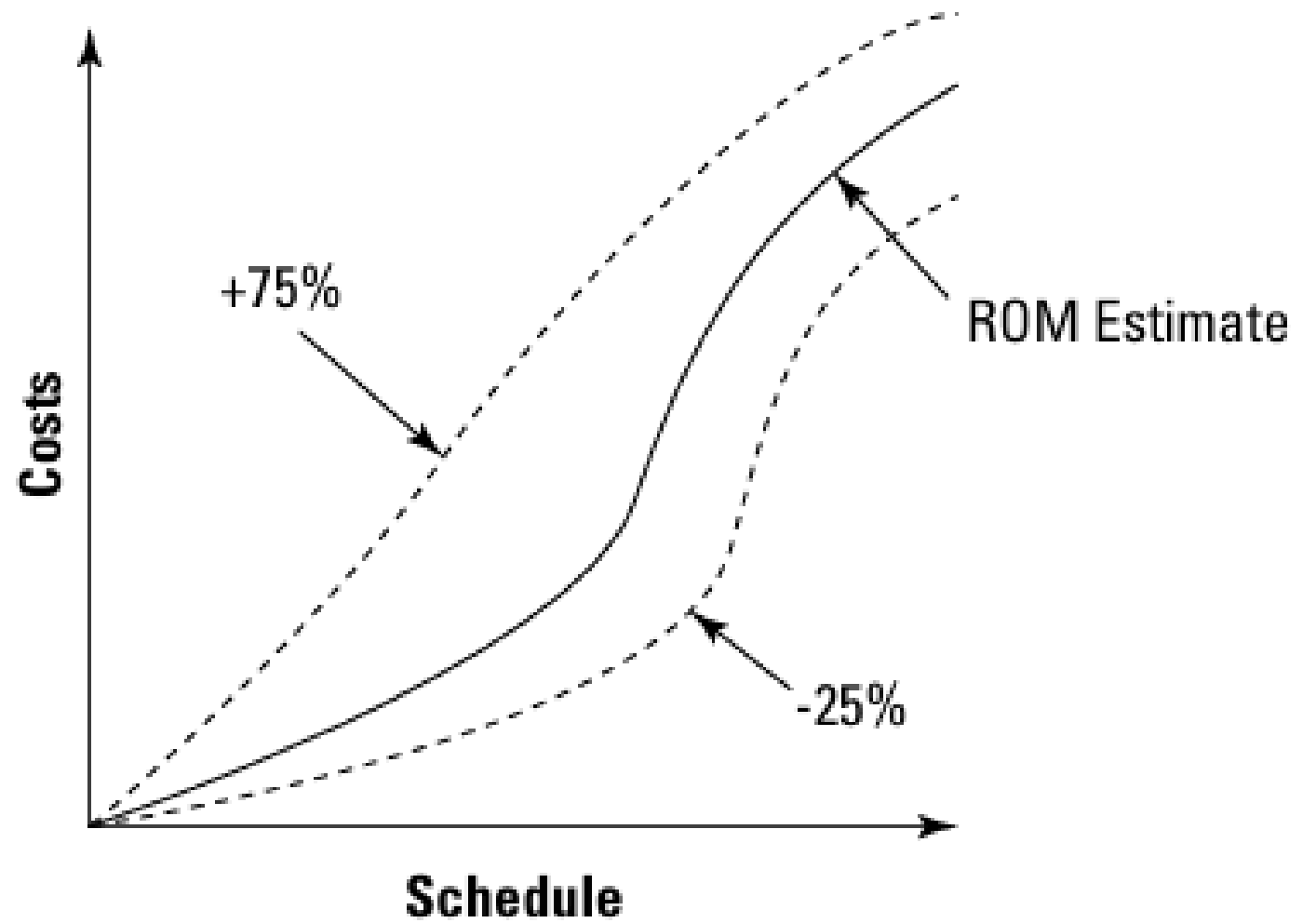Reducing the project scope

Obtaining additional budget dollars

USING THE RIGHT RESOURCES

Before you create an estimate you, should first know the rules of how your organization approaches estimating.

- **Do know your company's estimating policies.** You and the stakeholder must operate within the confines of your company's policy on cost estimating. Typically, these policies define the contracts and documents that need to be in place before you even create an estimate.

- **Do use cost estimating templates.** You should love templates. They save time and keep documents uniform across the company. A cost estimating template captures the most common elements, standardizes the project costs, and streamlines the estimating process.
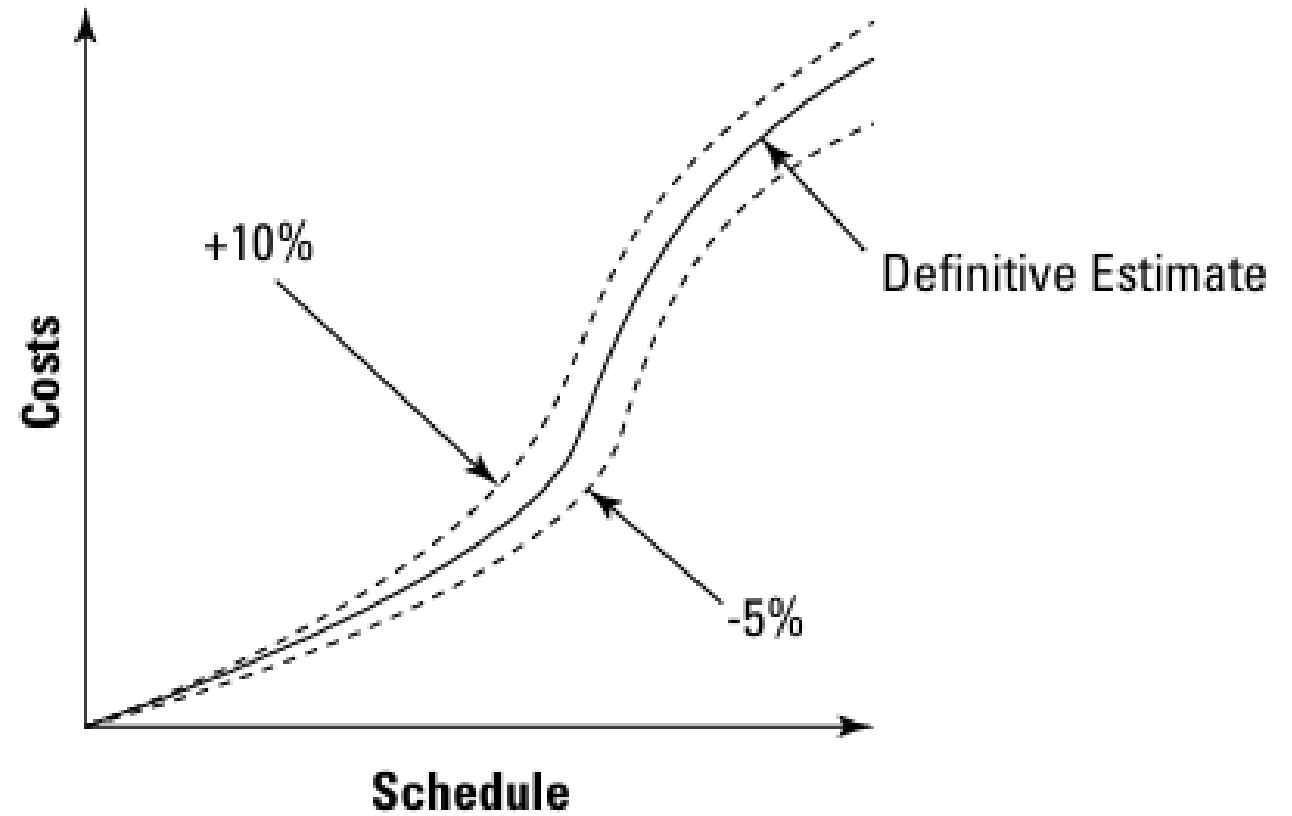
- **Don't ignore historical information.** History can be very helpful in cost estimating. Use any information within the organization that relates to the project scope or the product scope you're estimating.

- **Do get project team input.** Estimating is rarely a solo activity. You should rely on the input of your project team. Be aware, however, that team member recollections aren't as reliable as documented historical information.

- **Do speak with other project managers who have worked on similar projects.** Using lessons learned documentation is great, but you can also gain a lot by communicating with those who have gone down the same path that you're heading.

CREATING A ROUGH ESTIMATE

+75%

ROM Estimate

−25%

Costs

Schedule

CREATING A DEFINITIVE ESTIMATE

- Its qualifier is usually −5 percent to +10 percent.

- To create a definitive estimate, you need a work breakdown structure (WBS) in place. You must examine every deliverable within the WBS.

- You also must consider all the needed materials, labor, resources, and risks that may influence project costs, as well as all the other elements that contribute to the bottom line of the project.

- Because so much of software development is based on labor, you may find that you're building your project estimates using a parametric model.

CREATING AN ACCURATE ESTIMATE

- **Product scope:** The product scope documents the product requirements and the characteristics of the product (for example, a list of the software functionality). It includes thorough detail to facilitate further project planning.

- **Project scope:** The project scope describes the project deliverables and defines the work that will be accomplished. It includes product requirements, schedule milestones, WBS, assumptions and constraints, and methods of change control.

- **Assumptions:** You assume there won't be delays. You assume you'll have all the resources you need. You assume that this is an estimate, not a quote.

CREATING AN ACCURATE ESTIMATE

- **Constraints:** Any constraints that have been brought to the table at this point need to be documented. A constraint is anything that limits the project manager's options; examples can include
  - **Time constraints:** You must have the project done in four months.
  - **Resource constraints:** You can only use two developers on the project.
  - **Development environment restraints:** You must develop in Python.
  - **Budget restraints:** Your budget is capped at $250,000.
- **Timeframe:** Essentially, you need to let stakeholders know that this estimate is a limited-time offer that depends on currently available resources. If the stakeholders want to do this project in five months when all your developers are wrapped up in other projects, you might have different numbers.
- **Range of variance:** The range of variance describes the +/– every estimate should have.

CONSIDERING PROJECT PROFITABILITY

- If you're billing just for the developers' time, then you need to consider the resource rates for the programmers that will be working on the project.

- If your organization completes projects for other organizations, then you must consider the profit margin your project should create.

- If you're a software project manager completing internal projects, then you'll be considering the straight rate for the developers' time.

CONSIDERING PROJECT PROFITABILITY

Susan is a senior developer who earns roughly $50 per hour from your firm. Your company likely charges more than $50 an hour for her time.

- Now consider Sammy. Sammy earns roughly $30 per hour because he's less experienced than Susan.

- Some organizations bill more for Susan's time than for Sammy's time because of the difference in experience.

- Some organizations, however, don't differentiate between developers; they just offer an hourly rate for each developer's time.

CONSIDERING PROJECT PROFITABILITY

- If your company bills more experienced developers at a higher rate, you must examine whether it's more cost effective to utilize Sammy or more cost effective to pay more for Susan.

- For example, Sammy may take longer to complete a task than Susan would, but Susan could be better utilized on higher priority, more profitable activities.

- Making these decisions is called value engineering — determining which resource is best for the project activities and which resource is best for the project profitability.

PLANNING FOR CONTINGENCIES

Unfortunately, some problems may be unavoidable, but they can still devastate a budget:

- Errors and omissions in the product scope mean that the developers take longer than expected once they figure out what they've missed.

- Errors and omissions in the project work mean that tasks need to be performed that were never planned for.

- Miscommunications of all kinds can cause work to be undone and require reworking.

- Failure in user acceptability testing can mean you go back to the draw ing board.

PLANNING FOR CONTINGENCIES

- Failure in quality control may mean that you have to recode a bunch of stuff.

- A hard drive crashes during a routine backup, and some development work needs to be done.

- Poor requirements gathering means that your developers are working without all the necessary information.

- Project management errors mean that you spin your wheels a bit.

CONTROLLING PROJECT COSTS

UNDERSTANDING ACCOUNTING BLUE DOLLARS

In some organizations, everything you spend is blue dollars. Blue dollars describe the funds that are internal to an organization and just shift between departments — no one's writing a check for the project work.

UNDERSTANDING WORK-FOR-HIRE ACCOUNTING

If you're a project manager in an organization that completes projects for other companies, then you've got a more evident responsibility to guard the project costs: the project's profitability. A common reason that organizations lose money on projects is due to poor fiscal management on the part of the software project manager.

FOLLOWING SIMPLE STRATEGIES TO MANAGE PROJECT EXPENSES

GETTING A PLAN TOGETHER

- The first step in managing costs is to have an accurate and reliable project plan. Projects often fail at the beginning, instead of at the end. If your project plan is skewed, faulty, or half-cocked, the implementation will be as well.

- One of the components of the project plan is a cost management plan, which describes how you will plan, estimate, budget, and control your project costs. The more detailed and accurate these estimates are, the less likely you are to have budget surprises.

- Another component of the project plan is the human resources management plan, which details processes and policies regarding the members of the pro ject team, such as roles and responsibilities, reporting structures, improving project team members' skills and enhancing their knowledge, accepted hiring and firing considerations, and staffing plans.

REVIEWING COSTS AND PERFORMANCE

When you've got a solid plan, then you need a method to review costs and performance of the project team. This is vital in every software development project because the project is built on how efficiently project team members use their time. You need to track and measure the team members' time to complete the project activities.

CONDUCTING VARIANCE ANALYSIS

Any time you experience differences between what was planned and what was experienced, you have a variance. Variance analysis enables you to complete root cause analysis. Your goal is to find out why the actual project costs are differing from your estimates so that you can stop the bleeding. You can even correct the overruns if you're good at root cause analysis.