

Creating a PRM is a natural and logical part of project. It provides the project manager with four major benefits. Can you think what they might be?

The PRM helps you to plan the project, communicate its scope to others and clarify issues. It also gives you greater insight into areas that need adjustment.

Look at the next slide to find out more about the benefits of creating a PRM.

Benefits of creating a PRM:



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Planning

It helps you to plan and budget. You think through the project logically, identifying things that you might otherwise miss.

Communicating

It's a great communication tool, helping everyone understand what's involved and showing the effect of the project on the organization.

Benefits of creating a PRM: (cont'd)



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Clarifying

It gives you an opportunity to clarify your assumptions before it's too late.

Adjusting

As a result of the insights you gain into the project, you may adjust parts of it, like adding an activity or modifying the scope.

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◎ *Personnel Resources Matrix: Summary*

A personnel resources matrix clarifies the personnel requirements of your project.

Activities	Project manager	Product experts	Marketing director	Web designer	Graphic artist	Programmer
Create content	40	20	20	5	0	5
Design site	15	0	0	50	0	0
Create graphics	3	0	0	5	0	75
Create code	2	0	0	5	240	0
Debug site	20	0	0	30	100	0
Review/finalize	30	20	5	5	20	10
Total person-hours	110	40	25	100	360	90

© *Personnel Resources Matrix: Summary (cont'd)*

There are four steps you should follow in order to create a PRM.

1. List the project activities down the left-hand side of the matrix.
2. List the people required across the top of the matrix.
3. Enter the effort required of each person to complete the activity.
4. Review the PRM with the people who will do the work and their supervisors.

◎ *Estimating Project Costs*

Objective:

After completing this topic, you will be able to:

Identify three strategies for estimating project costs.

Benefits of cost estimation:



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Better planning

Everyone in the organization can use the estimates to plan. For example, a department head will be able to plan the use of her personnel if she knows how many of her staff will be working on someone else's project.

Clear assumptions

Cost estimate forces people to become clearer about their assumptions. It helps people to understand why each other's estimates for the project component may differ.

Increased credibility

James's credibility will increase over time if he consistently completes projects within estimated time and budget.

Benefits of cost estimation: (cont'd)



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No over-
budgeting

You won't be accused of padding the budget to be safe or using resources inefficiently by tying them down to a project even if they are not required.

Decision
to proceed

Wrong estimates could lead to the project being implemented when it should have been scrapped because the cost of the project exceeded the potential benefits.

There are three estimation strategies that James could use:

- Top-down estimation
- Bottom-up estimation
- Parametric modeling

Deciding on an appropriate strategy depends on the project but it's a good idea to use more than one strategy, if possible. Estimating from different perspectives helps you to be more certain of your final numbers.



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You apply the *top-down strategy* by comparing your project to a similar completed project with known costs.

It is called "top-down" because costs are estimated by starting with a single overall cost figure and working down to greater levels of detail.

This strategy is also called *analogous estimation*.

top-down strategy



You apply the *bottom-up strategy* by starting from the other end.

It is called “bottom-up” because costs are estimated by starting with calculating the costs of the smallest individual elements of a project.

Then sum them up for an overall total - the top-level estimate.

bottom-up strategy

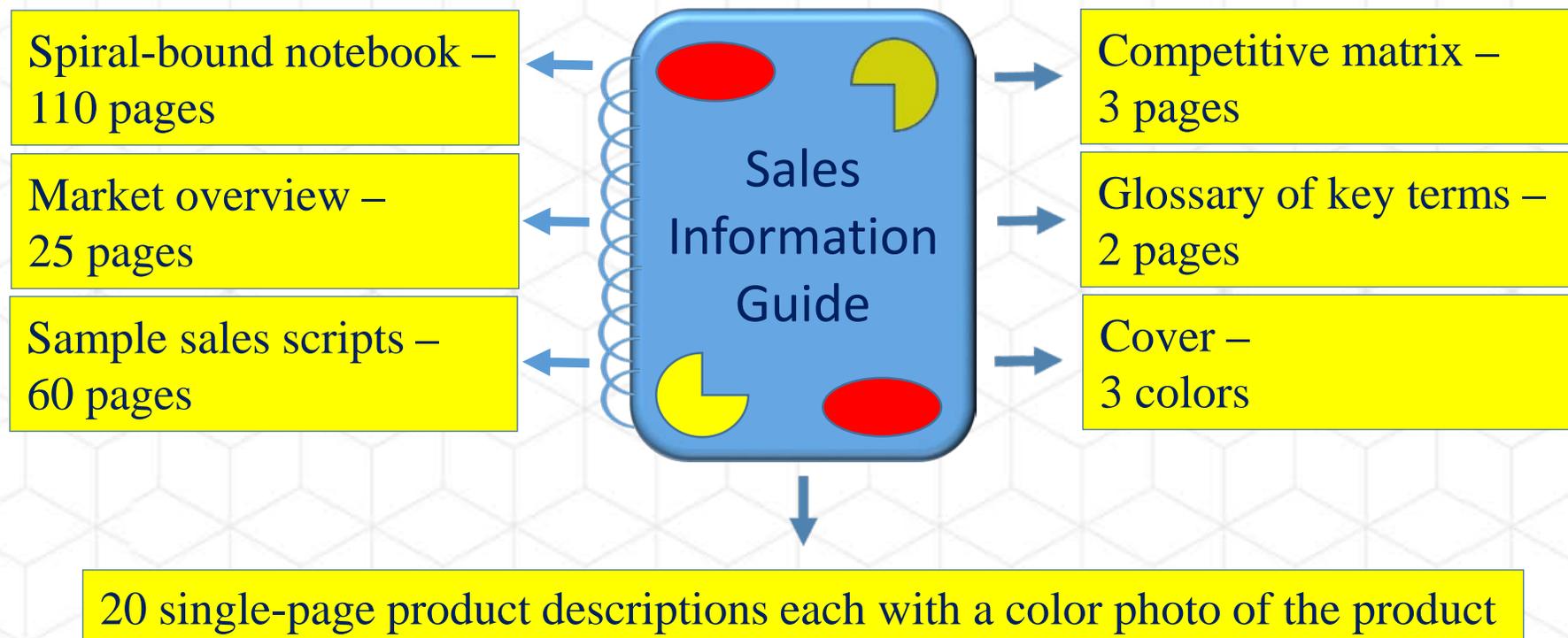


The third strategy is *parametric modeling*. It's an estimate made by applying a standard formula to known project elements.

Identify a mathematical model based on a large amount of historical data showing average costs for various project components. Make your calculations based on these figures, with any necessary adjustments.

Example: A rough estimate of the cost of a building could be calculated by multiplying the number of square feet within the building times the industry average cost per square foot of buildings of that type.

Square feet of building x Average cost per square foot = Total cost of building



◎ *Estimating Project Costs: Summary*

There are three different strategies for estimating project costs:

- Top-down strategy
- Bottom-up strategy
- Parametric modeling

All strategies are equally valid. It is a good idea to use more than one to check the consistency of your estimates.

◎ *Creating a Budget*

Objective:

After completing this topic, you will be able to:

List the steps in creating a budget.

The budget that will satisfy the VP can be constructed in six steps:

1. List the work packages down the left-hand side of the matrix
2. List cost account categories across the top
3. List the estimated costs for each category beside each work package
4. Add indirect costs
5. Add contingent and management reserves
6. Validate the budget

Apart from pleasing the VP, Chris realizes that there are four other advantages to listing the costs for each category.



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Accurate
estimates

It helps you to think more precisely about the costs that go into each work package. As a result, your estimates are likely to be more accurate.

Easy for you to
validate

Having the costs broken down helps you to analyze the validity of your budget and persuade others of its validity.

Internal budgets

Listing the costs for each category helps to relate your project costs to the internal budgeting and accounting systems in your organization.

Easy for others
to validate

It makes it easier for others to help you validate your budget.



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Reserves are calculated in two ways. They can be a percentage of some or all of project costs or based on the nature of the specific project and its environment.

*View how the complete **Project budget matrix** will look like on the next slide.*

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Work packages	Total cost	Internal personnel	Contracted services	Travel/ Entertainment	Reserves
Promotional content	100,000	20,000	80,000		
Market tests	90,000	60,000		30,000	
Agreements with airports	125,000	30,000		95,000	
Installation	75,000	15,000		60,000	
Total direct costs	390,000	125,000	80,000	185,000	
Indirect cost (32%) of personnel	40,000	40,000			
Reserves: Contingent reserves	25,000				25,000
Management reserves	50,000				50,000
Total cost	\$505,000	165,000	80,000	185,000	75,000

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Contingent reserves are the funds set aside to cover *known uncertainties* in the project budget.

These costs are *included* in the project *baseline* because they reflect a known cost factor that must be planned for - even if the exact amount is unknown.

They are generally under the control of the project manager.

Management reserves are funds set aside for unknown, unpredictable events.

These costs are *not included* in the project *baseline* because no anticipated reasons for their use exist.

They are controlled by the authorizing stakeholder, not the project manager.

◎ *Creating a Budget: Summary*

1. List the work packages down the left-hand side of the matrix
2. List cost account categories across the top
3. List the estimated costs for each category beside each work package
4. Add indirect costs
5. Add contingent and management reserves
6. Validate the budget



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Work packages	Cost account categories
	Estimated costs
Indirect costs	
Reserves	
Total costs	

A large green checkmark is positioned to the left of a yellow oval containing the word "Approved" in red text, which is overlaid on the bottom-right corner of the table.



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