



Portfolio-Engineering

the right projects, done right

Scope Planning, Scope Definition

Defining What the Project will Deliver

Version 1.00

Apr. 29, 2003

Scope Planning, Scope Definition

Prerequisites

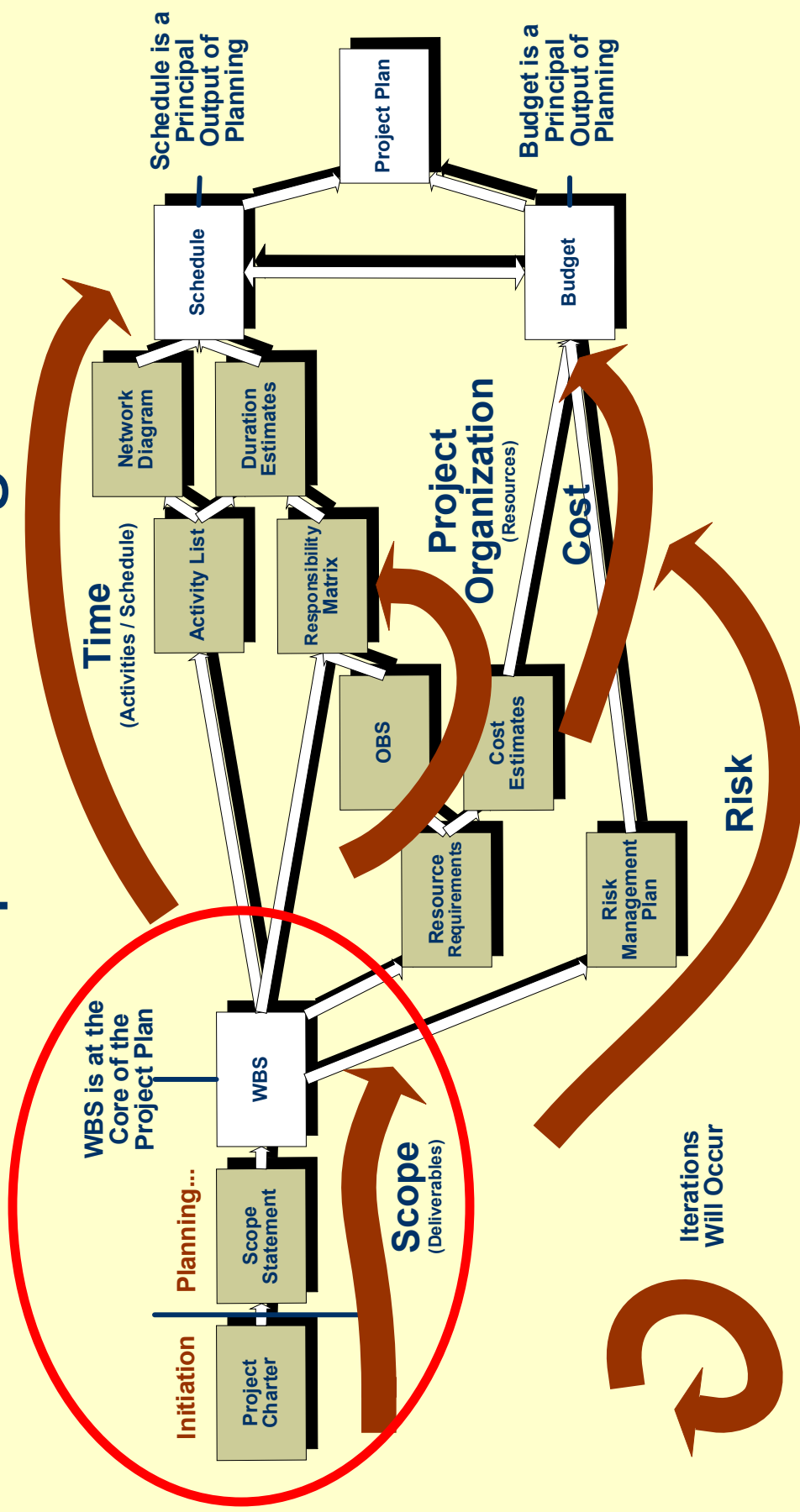
Portfolio-Engineering recommends reviewing the following materials before considering Initiating Processes Overview:

- Project Sponsor, Project Charter
- Importance of Project Planning
- Planning Processes Overview
- Introduction to the Project Log



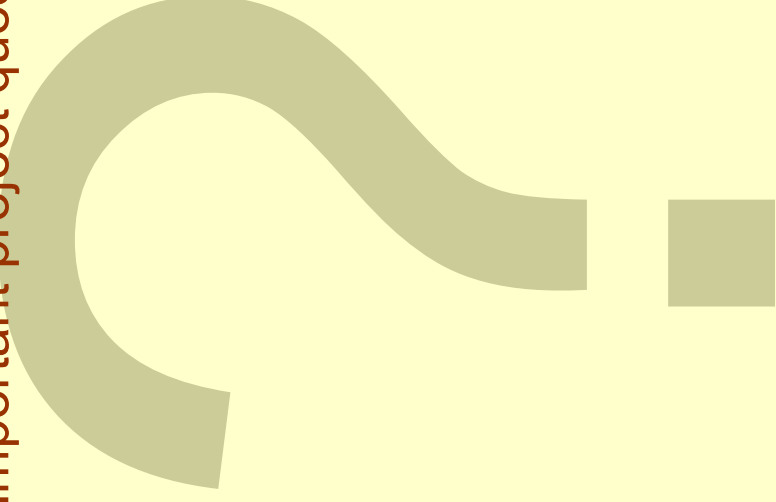
Scope Planning, Scope Definition

Context of Scope Planning & Definition



Scope Planning, Scope Definition Scope Statement

Answers, at a detailed-level, the important project question...



What



Scope Planning, Scope Definition

Scope

The sum and the boundaries of the deliverables which includes products, services, plans and processes (including qualitative and quantitative details, features and functions) to be provided through a project (project scope / work) or as a result of a project (product scope / work).

Deliverable

Any measurable, tangible, verifiable outcome, result, or item that must be designed, produced or procured to complete a project or a part of a project.

Scope Planning, Scope Definition

Final Deliverable

A final deliverable (external deliverable) is a deliverable that is to be provided to the customer and is subject to the approval (and acceptance criteria) of the customer and the sponsor. There are usually just one or two final deliverables.

Interim Deliverable

A deliverable that is created as part of the project management or product development life cycle. Interim deliverables are created to enable the development of the final deliverables.



Scope Planning, Scope Definition

Organizational Deliverable

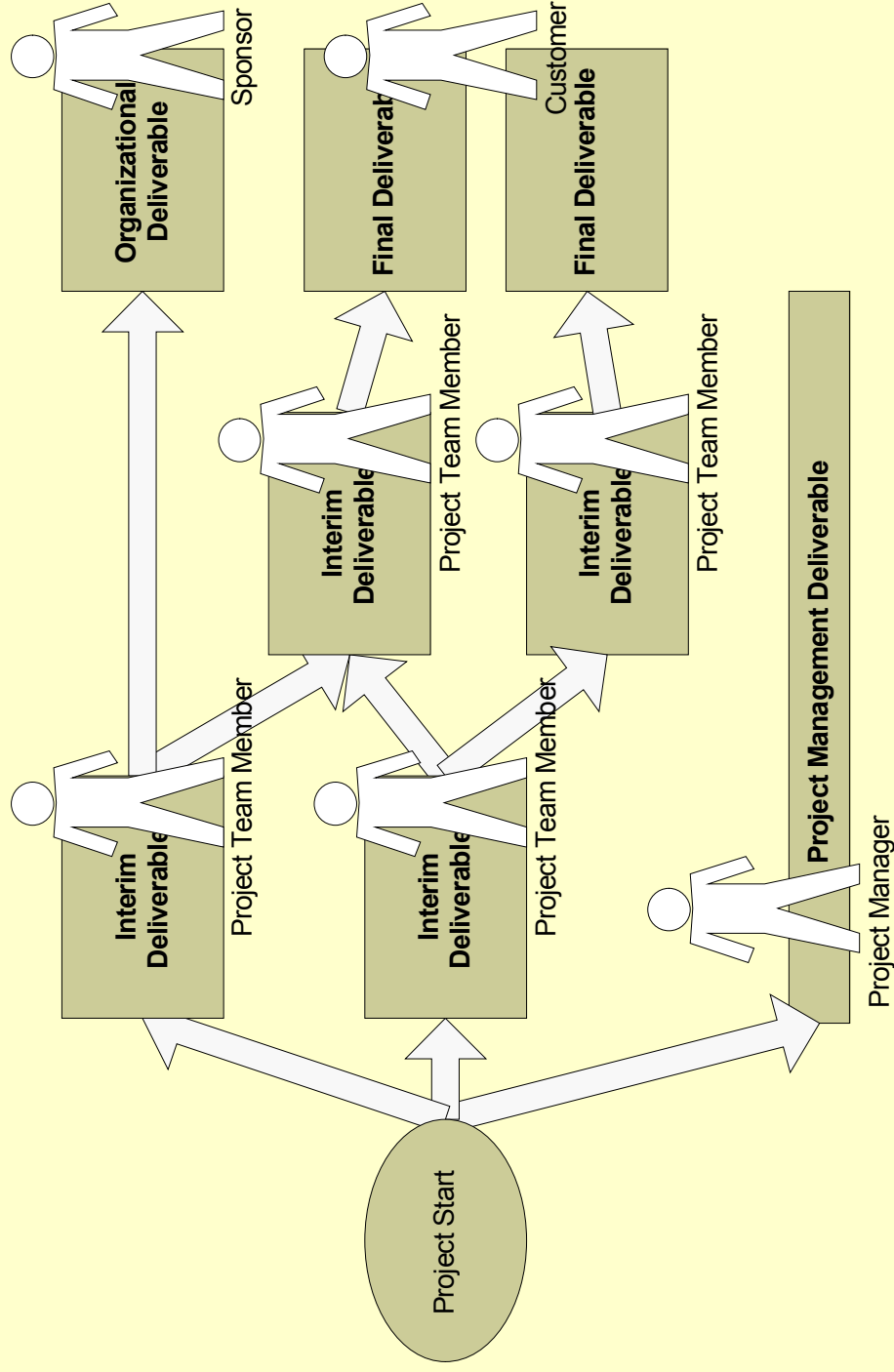
Deliverables expected by the sponsor or the organization executing the project (e.g. trained carpenters, reusable project documents). Often these deliverables are almost a by-product of the project.

Project Management Deliverable

Deliverables required to properly manage the project (e.g. project charter, project timeline, status reports).

Scope Planning, Scope Definition

Sample “Deliverable” Chain



Scope Planning, Scope Definition

Deliverables are “Gets” and “Gives”

- The customers know what they need to get from the project. These needs form the basis for the project requirements and become the final deliverables.
- The sponsor may have a slightly different agenda. The things (if any) they need to get from the project are called organizational deliverables.
- Team members may need to get something to be able to produce their work. When these are physical things (such as a permit, a design, construction materials or a document) they are known as interim deliverables.



Scope Planning, Scope Definition

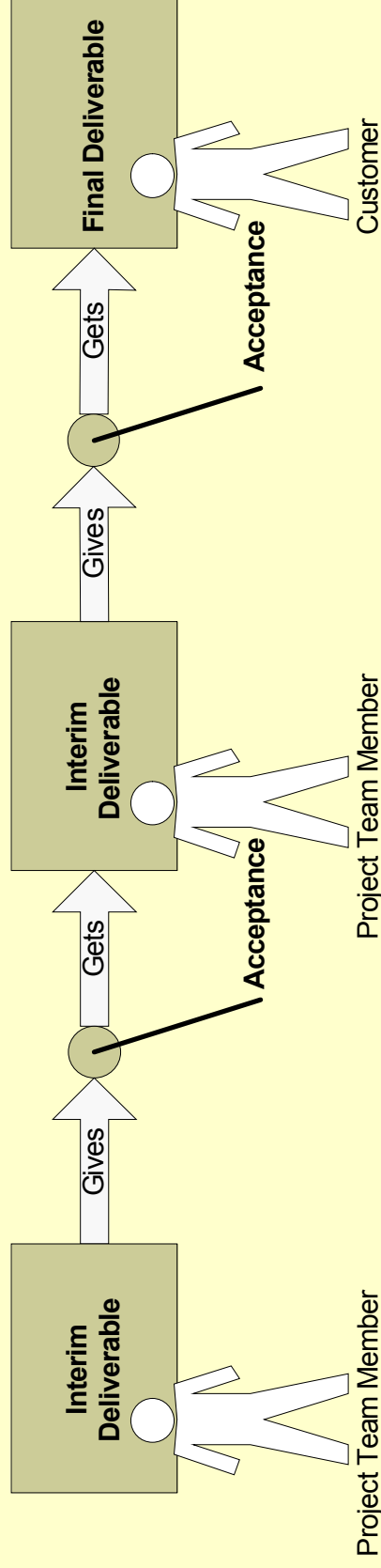
Deliverables are “Gets” and “Gives”

- Some **team members** give things to the project, perhaps to ensure quality. These things, (such as a defect list or review notes) may be **interim deliverables** or may show up as an adjective in the deliverable name implying a value-added process (e.g. *approved* blueprints, *tested* software or *edited* text).
- **Project managers create and maintain project management deliverables** to see that the project is planned, executed, controlled and closed with excellence.



Scope Planning, Scope Definition

Deliverables are Not Complete Until they Are Accepted (Inspected)



- Considering “acceptance criteria” may help you to discover new required deliverables or to qualify your deliverables (e.g. *approved budget, ISO certified materials*)



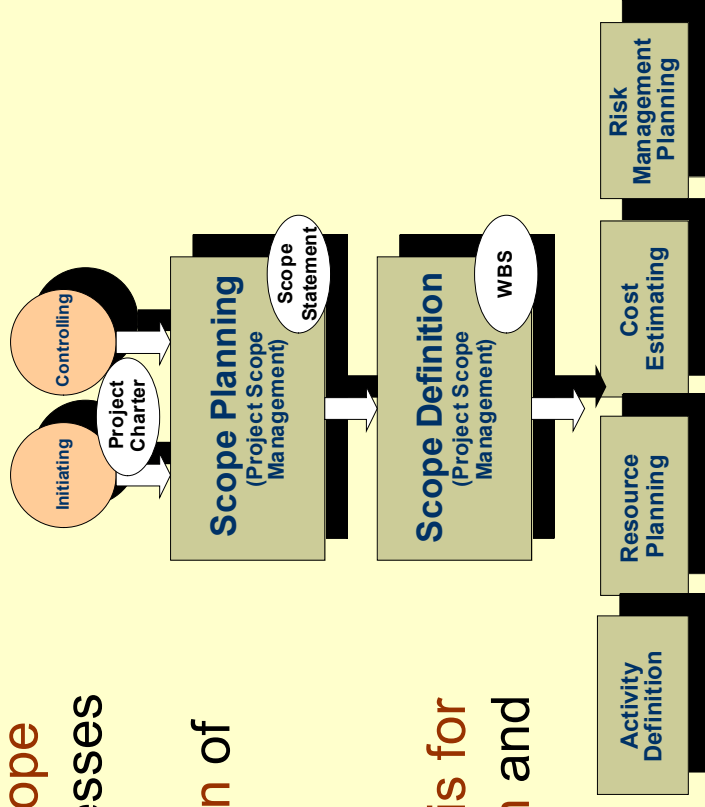
Scope Planning, Scope Definition

Scope Planning & Definition Processes

Once a new project or project phase is initiated, or should the controlling process identified the need to re-plan, the **Scope Planning** and **Scope Definition** processes lead the project team through the progressive elaboration and definition of the project scope (breadth) and the product scope (breadth).

The Scope Statement forms the basis for agreement between the project team and the customer and the foundation for project planning.

The WBS is the basis for project estimating, control and assignments.

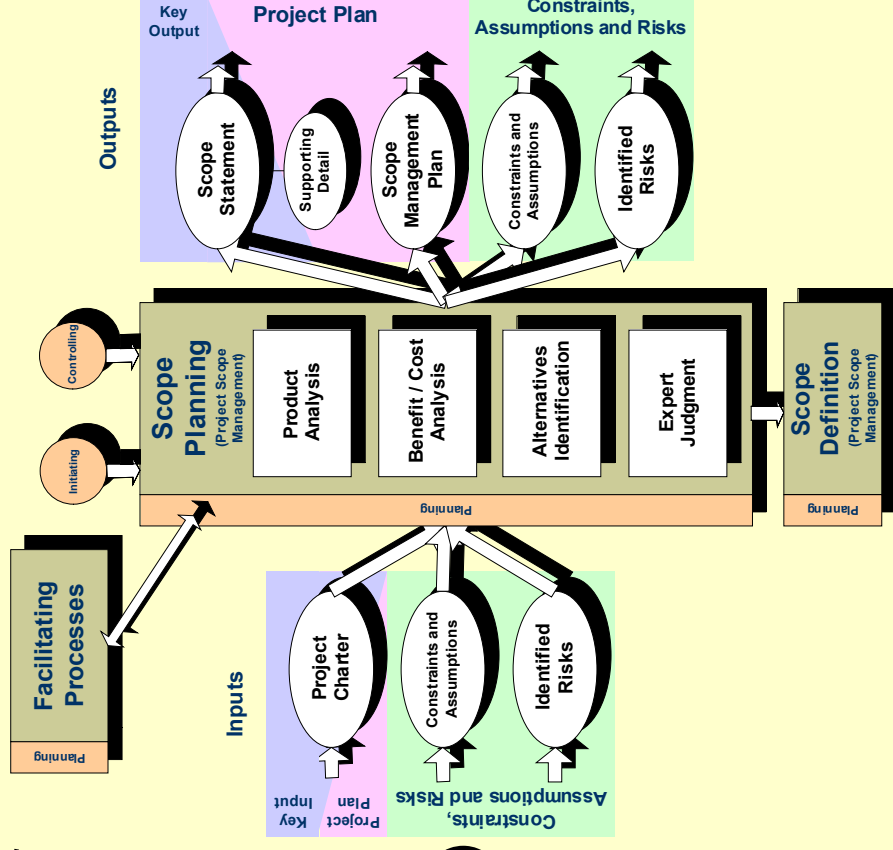


Scope Planning, Scope Definition

Scope Planning Process

Scope Planning is the process of elaborating and documenting the planned project and product deliverables (work) in the Scope Statement.

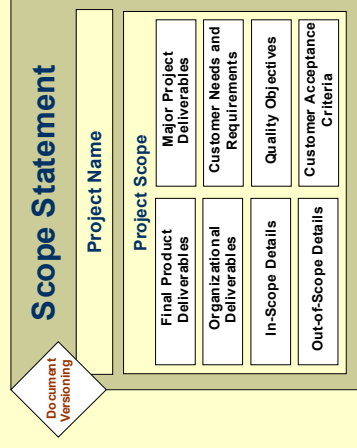
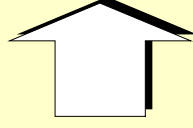
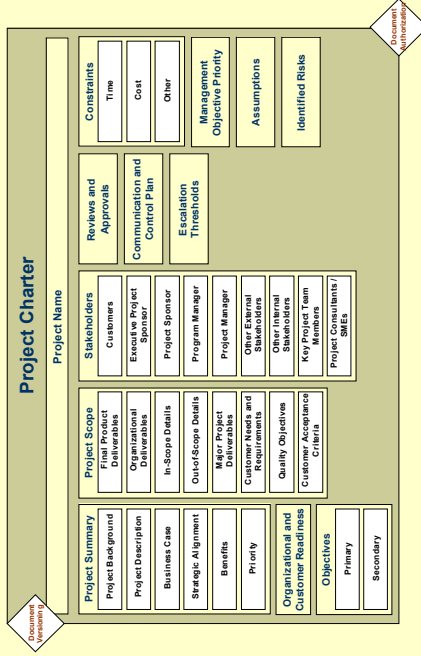
The Project Charter (which includes the Product Description) is the major input to Scope Planning. All scope details established prior to planning are copied into the Scope Statement and elaborated. Elaboration will not contradict, ignore or remove an established scope detail.



Scope Planning, Scope Definition

Project Charter and Scope Statement

- Project Charter is the Sponsor's document
- Describes the project objectives (and scope) at a high-level, from the key customer and stakeholder point-of-view
- Is drafted early, is broad, remains stable
- Scope Statement is the Project Team's document
- Records the latest project scope details as defined through progressive elaboration
- Starts off with the Charter content and then details it (but does not contradict it)



Scope Planning, Scope Definition

Scope Planning Process

- It is the goal of the process to define **all of the work of the project**. It will be used to ensure that the team does **only the work of the project**. It defines **how far the project team can and cannot go when planning**.
- **Scope Statement is an excellent place to define the project's place in a larger scenario**. If your scope is part of a larger project or program, the Scope Statement should be used to **record the relationship while defining your boundaries**.
- **Scope creep is project poison**. The Scope Statement is a primary tool to identify scope creep and manage it accordingly.
- **PMI strongly discourage “gold-plating” or providing unplanned project extras**. (This is open for debate – especially among IT professionals.)



Scope Planning, Scope Definition

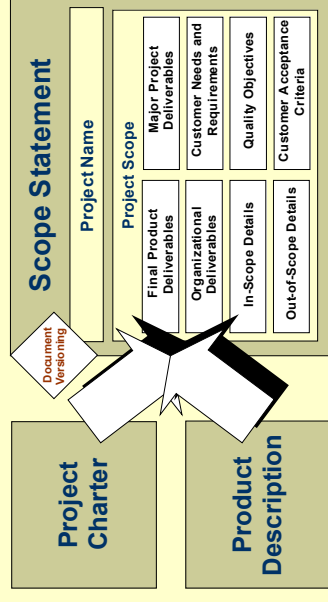
Scope Planning Process

The Project Charter and Product Description are important inputs into the process as they were created by or include input from key customers and stakeholders.

Pick through these documents and read every letter. Find:

- Missing or inaccurate information
- Conflicting information
- Vague descriptions
- Unrecorded or incorrect assumptions

If no Product Description (Requirements) was provided, then a Product Description should be the sole deliverable of the project.



Scope Planning, Scope Definition

Scope Planning Process

Many approaches and techniques are used to further define scope. Some are very broad, some are specific techniques. They include:

- **Product analysis**
 - Engineering and analysis techniques to develop a better understanding of the product
- **Benefit / cost analysis**
 - Identifying alternatives and evaluating them by comparing potential benefits (returns) to outlays (costs) using measures such as ROI or payback period
- **Alternatives identification**
 - Techniques such as brainstorming used to generate alternative project approaches
- **Expert judgment**
 - Involving SMEs to further define the scope



Scope Planning, Scope Definition

Scope Planning Process

Many application areas or management specialties dictate a certain, consistent project scope. Further, defined project life cycles include a standard set of deliverables (scope). Analyze these closely to determine your project scope.

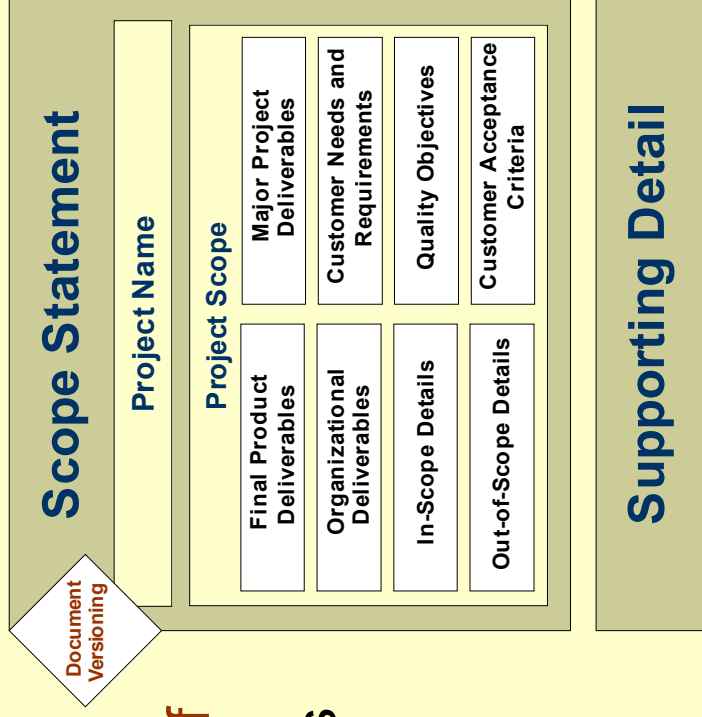
As an example, there are similarities of project scope among:

- Process Re-engineering Projects
- IT Systems Development / Network Engineering
- Construction and Engineering Projects
- New Drug Development Initiatives
- New Product Development and Marketing Projects



Scope Planning, Scope Definition Scope Planning Output - Scope Statement

The **Scope Statement** (and any relevant supporting detail) serves as a basis for the remaining planning processes and is an important part of the final Project Plan. It is the one place where the project team records scope details about the project and the product. It places well defined boundaries around the project work. When the Project Plan is approved, the Scope Statement is baselined and managed under the terms of the **Scope Management Plan**.

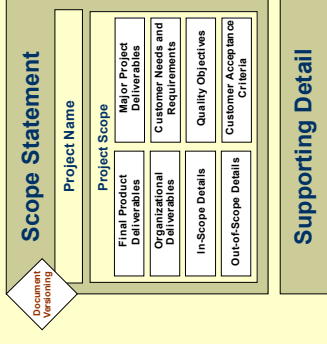


Scope Planning, Scope Definition

Scope Statement Content

Final Product Deliverables

- Each of the **final deliverables** to be provided (usually just 1 or 2) to the project's customers before the conclusion of the project are identified
- This scope addresses **scope breadth**
- A **description** of each of the deliverables outlines known **quantitative and qualitative attributes**
- In total, the final product scope must **satisfy the project's primary objectives**

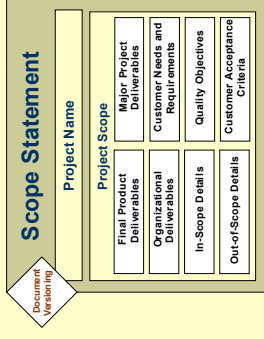


Scope Planning, Scope Definition

Scope Statement Content

Organizational Deliverables

- Each of the deliverables to be provided to the performing organization before the conclusion of the project
- This scope addresses scope breadth
- A description of each of the deliverables outlines known quantitative and qualitative attributes
- In total, the organizational deliverables must satisfy the project's secondary objectives



Supporting Detail

Scope Planning, Scope Definition

Scope Statement Content

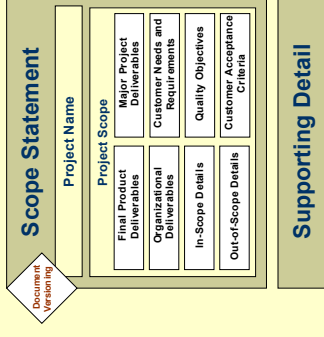
In-Scope Details

Known qualitative and quantitative scope details (features / functions), stakeholder scope expectations or scope boundaries are recorded to remove any possible:

- Ambiguity / Misunderstanding / Omission

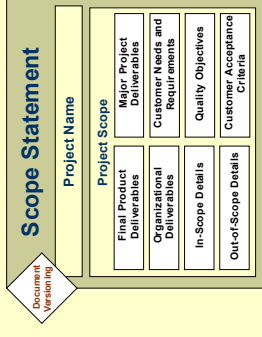
This scope begins to address scope depth. In-Scope details may refer to:

- Features / Functions / Components
- Business Processes / Data / Information
- Business Units / Organizations / Locations
- Technologies



Scope Planning, Scope Definition

Scope Statement Content



Out-of-Scope Details (Exclusions)

- Possible deliverables and/or qualitative and quantitative scope details, expectations or scope boundaries that will not be a part of the project deliverables
- Often as important as the in-scope details, out-of-scope details are recorded to document any possible stakeholder expectations that are intentionally and explicitly not being addressed by the project
- This scope begins to address scope depth

Supporting Detail

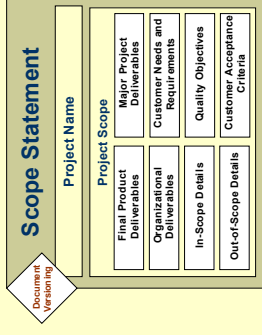


Scope Planning, Scope Definition

Scope Statement Content

Major Project Deliverables

- Any project-oriented deliverable to be created or process to be performed during the project to see that it is executed and controlled with an appropriate level of management attention
- A non-standard management methodology that may be required (perhaps as part of a contractual obligation)
- This scope addresses scope breadth



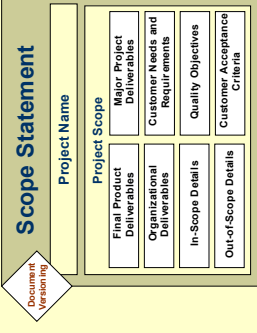
Supporting Detail



Scope Planning, Scope Definition

Scope Statement Content

Customer Needs and Requirements



Supporting Detail

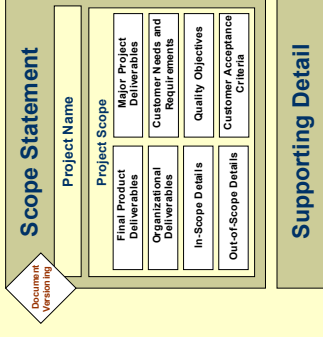
- Specific problems that the customer needs or wants to solve through a specific deliverable, function or feature of the project's product
- Customers basis for requiring the product
- If the customer is unaware of what they really want or is unable or unwilling to communicate their requirements in detail it will become the primary concern of the project team to clearly define requirements and surface unspoken expectations (usually as a stand-alone project)

Scope Planning, Scope Definition

Scope Statement Content

Quality Objectives

- Quality or regulatory related deliverables, objectives or processes to be satisfied by the project activities
- Will require quality assurance to see that each of these scope-related objectives are satisfied through the project activities
- This scope addresses both scope breadth and scope depth

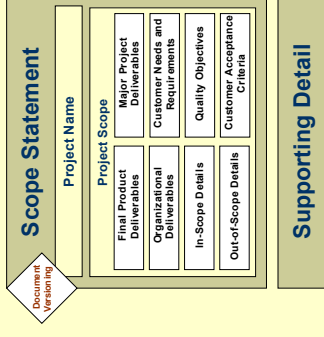


Scope Planning, Scope Definition

Scope Statement Content

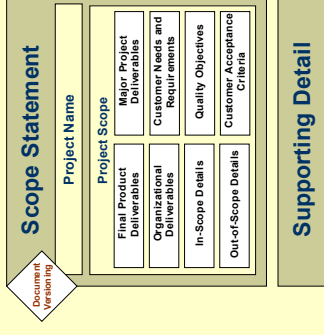
Customer Acceptance Criteria

- All known specifications, quality standards or conditions that must be met for the customer to accept the final deliverables
- Includes quantitative or qualitative details about the deliverables or the features and functions of the deliverables
- Project Sponsor often has acceptance criteria as well
- This scope addresses both scope breadth and scope depth



Scope Planning, Scope Definition

Scope Statement



When the Scope Statement is complete, it is wise to perform one last check against the planned scope of work:

- Does it meet the customer's needs? Match the Product Description?
- Does it fulfill the project objectives and purpose? Match the Project Charter?
- Does it complement the feasibility study, business case or other project justification that has been made?
- Should a cost / benefit analysis be performed on the detailed scope?
- Have appropriate SMEs given input into the scope? Is it technically feasible and reasonable?

Scope Planning, Scope Definition Scope Planning Output - Scope Management Plan

The Scope Management Plan details how the scope is recorded, verified, authorized, baselined and managed through change.

The Scope Management Plan is a subsidiary component of the final project plan.

The Scope Management Plan may be a simple, textual presentation of the relevant processes. This plan or process may be reused from project to project.

Scope Management Plan

Project Name

- Assessment of scope stability
- Scope baseline document(s) identification and description
- Scope verification process
- Authorization / baseline process
- Change request process (change identification and classification)
- Change analysis process
- Integrated change management process
- Configuration management process
- Change authorization process



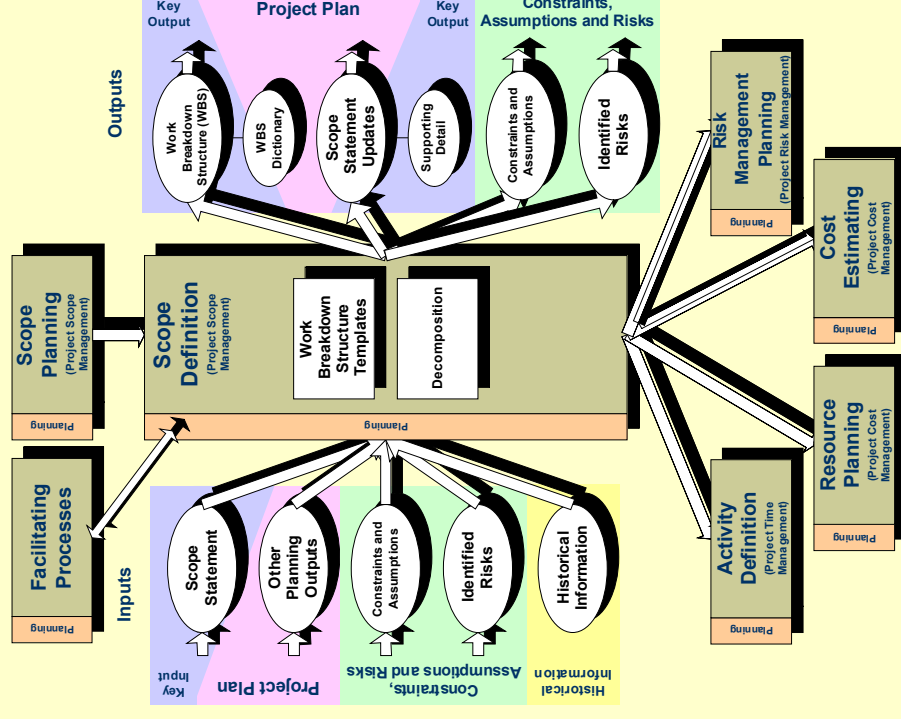
Scope Planning, Scope Definition

Scope Definition Process

Scope Definition is the process of subdividing or decomposing the major project deliverables into manageable components to facilitate:

- Accurate estimating
- Performance measurement
- Responsibility assignments

Work Breakdown Structure (WBS) is the technique used for definition.

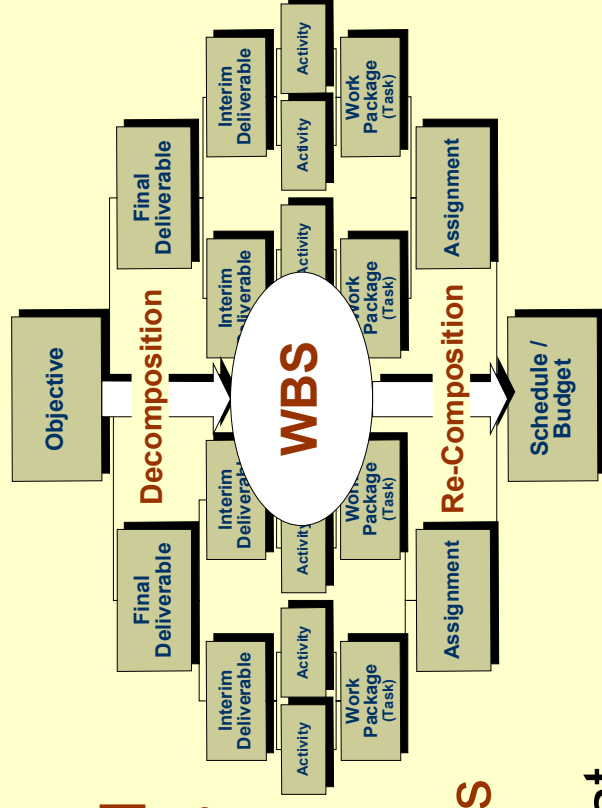


Scope Planning, Scope Definition

Work Breakdown Structure (WBS) is the Core of the Planning Process

WBS represents the complexity of the entire project in a detailed way. Using the WBS as a basis for planning and estimating is a bottom-up planning technique (as opposed to top down).

Bottom-up estimating techniques create the most accurate estimates and produce plans that allow for close project control.



Scope Planning, Scope Definition

Next Steps

For additional information, **Portfolio-Engineering** recommends reviewing the following related materials:

- Breakdown Structure Technique
- Work Breakdown Structure Technique
- Project Organization



Scope Planning, Scope Definition

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