

The Work Breakdown Structure

The Work Breakdown Structure

The Pivot Tool for Managing Projects

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The Work Breakdown Structure

Presentation Summary

- In this presentation, we will:
 - Relate the creation of the work breakdown structure to processes both preceding and succeeding project management processes
 - Describe the characteristics of the work breakdown structure
 - Illustrate the process for creating the work breakdown structure

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“The consultant will provide the scope of work that will be undertaken identified on a task-by-task basis, phases of work...the time allocation of each person related to the tasks to be performed...”

“What the proponent should provide:

- detailed list of the services necessary
- description of the deliverables
- outline action plan of the services...”

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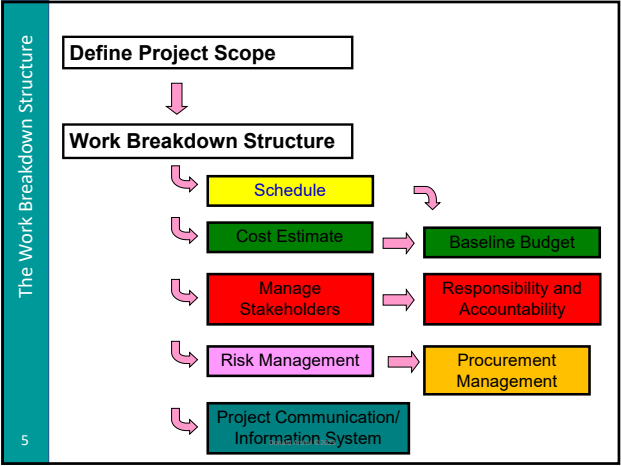
The Work Breakdown Structure

“NOTE:
 A WBS (Work Breakdown Structure) could be the technique that firms may choose to respond to this section, such as a schedule for the services and the major inputs/approvals by others, firm contract award through to completion of all services.”

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- What is a WBS”
 - Hierarchy of deliverables, tangible outcomes and services
 - Map of the project’s outcomes
 - Provides assurance that all work has been identified
 - Tool for integrating the work into the team organization
 - Becomes a basis for monitoring and control of project activities

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- What is a WBS”
- Hierarchy of deliverables, tangible outcomes and services

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The Program WBS

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Defining the Project

Step 1: Planning how project scope will be defined, managed and controlled

Step 2: Defining the scope; Establishing Project Priorities

Step 3: **Creating the Work Breakdown Structure** 

Step 4: Integrating the WBS with the Organization

Step 5: Coding the WBS for the Information System

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Understanding the Scope of Work

- Requires clear understanding of project objective
- Identify specific major end items such as Research Report, Design Drawings or Contract Documents
- Consider milestones such as submissions, reviews and approvals

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Example of a Work Breakdown Structure (WBS)

- Level 1 -Project end objective
 - Identifiable directly with organizational strategic plan
- Level 2 - Major product deliverables
 - Defined by phase, location or product systems
- Level 3 - Definable subdeliverables or subsystems
 - Distinct subsystems
- Level 4 and lower - Work packages or activities
 - Definable parcels of work for which one person is accountable

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Work Packages

- A work package is the lowest level of the WBS. It is output-oriented in that it:
 - Defines work (what).
 - Identifies time to complete a work package (how long)
 - Identifies a time-phased budget to complete a work package (cost)

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Work Packages (cont'd)

- A work package is the lowest level of the WBS. It is output-oriented in that it:
 - Identifies resources needed to complete a work package (how much)
 - Identifies a single person responsible for units of work (who)
 - Identifies monitoring points (milestones) for measuring success.

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Creating the WBS: Decomposing Work

1. Start with defined deliverables:
 - Research Report, Sketch Plan Design Report, Contract Documents, Specifications etc.
2. Decompose deliverables into component parts, for example Research Report:
 - Functional Program, Context Investigation, Site

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Creating the WBS: Decomposing Work

3. Continue decomposing subdeliverables, for example Context Investigation:
 1. Measured Drawings, Streetscape Analysis, Zoning Analysis, Building Condition Report
 2. Building Condition Report :
 1. Envelope, Structure, HVAC, Plumbing, Electrical, etc.
4. Each component must be logically distinct to communicate the outcome of the deliverable, subdeliverable or work package

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Creating the WBS: Decomposing Work

5. Decompose until you reach the lowest level of detail – the work package level
 - Sometimes referred to as Activity or Task Level
 - Accountability of completion of work package assigned to an individual
 - 1 to 10 days worth of work
 - time sheet reporting period
 - No system interfaces within package
6. Work package described in terms of verbs:
 - “Update architectural specifications”
 - Coordinate Architectural drawings with HVAC layouts”

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Templates

- Develop a standard approach to describe the work of projects using templates for the first three WBS levels
- Use RFP documents to establish the Deliverables and milestones of a project

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What next...Schedule

- Breakdown the **work packages** (resource consuming tasks) into **activities** (time consuming tasks)
- Develop a network diagram showing the sequence of activities and the critical path
- Estimate the durations of activities

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What next...Schedule

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What next...Cost

- Determine the resources required for each work package including the kinds of people and expertise levels
- Ask whether every person assigned to a task generates value ... value that the client appreciates
- Estimate the cost and level of effort of those resources

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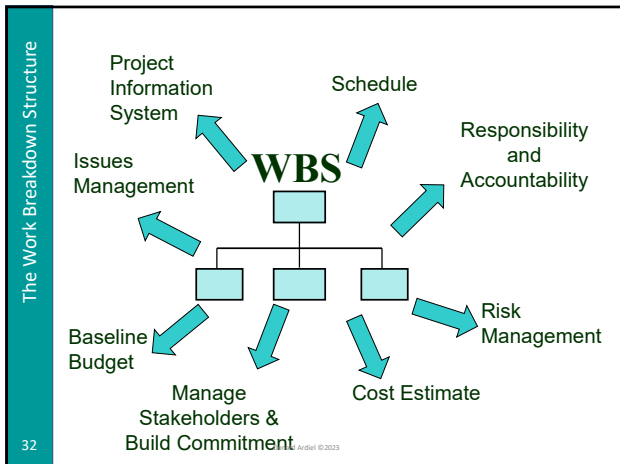
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What next...The Team

- Who is responsible for each aspect of each subdeliverable or work package?
- Develop a RASCI chart:
 - **R**esponsible for
 - Provides **A**pproval
 - **S**upports those responsible
 - To be **C**onsulted
 - To be **I**nformed

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