# Defining Project Scope with an Effective WBS

**Business Challenges:**

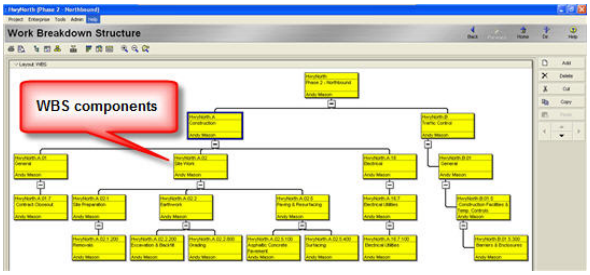
- Communicate project scope to team members and stakeholders
- Find a tool to enable better schedule development

The Project Management Institute states, "successful project management relies on thorough planning" (PMI, 2007). PMI further defines a WBS as "A deliverable-oriented hierarchical decomposition of the work to be executed by the project team to accomplish the project objectives and create the required deliverables" (PMI, 2007). The WBS or work breakdown structure is a globally recognized and proven project management tool used in a project's initiation and planning phase for defining project scope and should be an integral part of the project's CPM schedule.

What is a work breakdown structure and how can it used? A WBS is a graphical tool used to articulate the project scope. It is considered a critical project management component for things such as activity/task definition, project schedule network diagrams, performance reports and risk analysis just to name a few. The WBS is used in project management for things such as:

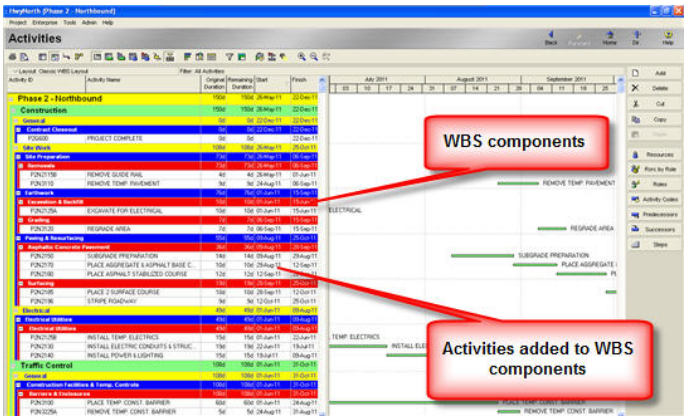
- Project scope definition which is broken out into deliverables and further decomposed into sub-deliverables.
- Providing a framework for project status and performance reporting.
- Establishing a communications tool for the project team and its stakeholders for information pertaining to schedule, performance, budget and risk data.

The work breakdown structure, as key tool used to identify project scope, is made manageable by decomposing or breaking it down into components and sub components. The structure defines work packages that are then completed by associated activities or tasks. The WBS is not a time-phased breakdown identifying the various project phases but a tool that defines the various project components in hierarchical fashion. The WBS defines **WHAT** the project objective is. It is not a description of a process that defines **HOW** or **WHEN** the deliverable will be built or produced.




A project's work breakdown structure should be started in the initiation phase of the project management lifecycle. It is used to define a clear definition of the scope of work for the project. It can also pave the way for effective scope definition and collaboration between owners, designers, and contractors. How you say? Owners and designers typically define and communicate the scope of a project using drawings and specifications. What if they also developed a deliverable-based work breakdown structure in Primavera P6 Professional that was then distributed with the drawings and specifications to the contractor.

A P6 project template can be made available to contractors bidding the project or at the project kick-off. Contractors can then decompose the work breakdown structure further into work packages and then into the supporting tasks. This enables contractors to build a schedule that more closely aligns to the owner's expectation of the project.




A WBS can be defined in any number of ways. It can be newly defined for each project, it can be assembled piece-meal from an existing WBS, it can be developed from a template or it can be constructed using predefined WBS standards set forth by the organization or the project contract. Regardless of the method used, the WBS evolves through an iterative process following the project scope. There are two methods for decomposing project scope into a work breakdown structure (WBS). Those methods are top-down and bottom-up. The most popular method of WBS creation is using the top-down method. The top-down WBS method is popular because it can be easily created by a project team that has little or no experience in developing a WBS. Some advantages associated with that method are:

- Structures project conveniently for status reporting
- Helps ensure projects are logically structured
- Valuable when brainstorming project scope
- Can accommodate additional deliverables as they are uncovered

The following steps can be used to develop a top-down WBS:

1. Identify the final products of the project-what must be delivered to achieve project success.
2. Define the project's major deliverables, which are unique to the project.

3. Decompose major deliverables to a level of detail appropriate for management and integration control. These WBS components are typically tied to clear and discrete stand-alone deliverable products.
4. Review and refine the WBS until project stakeholders agree that project planning can be successfully completed, and that execution and control will successfully produce the desired deliverables.

This is an overview of what a work breakdown structure is and how it can be created. Primavera P6 provides a valuable tool to develop a project's WBS. The WBS can be created by the design team to define the project scope and to ensure that it meets the owners project objectives. The WBS can be then be distributed to contractors by exporting the project as an XER file. The contractor can then either break the WBS down into additional detail or proceed to add tasks to the WBS components. As a globally recognized tool for project scope definition, work breakdown structure should be considered an integral part of every project schedule.