

### Examples and Definitions of Typical WBS Levels

This section contains material contributed by ICS Group [www.icsgrp.com](http://www.icsgrp.com)

The following is one possible work breakdown approach starting with project lifecycle *phases* at Level 1, major *deliverables* of each phase as Level 2, and the activities, then tasks, to create each deliverable as levels 3 and 4.

<b>Phases</b>	Identify major phases of work (e.g. specify, design, build, test...)
<b>Major Project Deliverables and related milestones</b>	Identify the major component deliverables of work required (e.g., subsystems that must be designed, built, tested, during each phase.)
<b>Activities</b>	Identify the activities needed to create those deliverables. (Some interim, smaller deliverables such as documents may be involved.)
<b>Tasks</b>	Break the activities down to an appropriate level of task detail.

**Level 1 – Phases:** A project plan, or schedule, is made up of the deliverables and milestones of the project, and depending on the level of detail required, the activities/tasks. Typically, this information can be organized into a number of natural groupings. In project planning, each group is called a phase and a name is given to it for ease of communication and reporting.

**Level 2 – Deliverables & Milestones:** Deliverables are the clearly defined and recognizable results or tangible work products of successfully completed activities/tasks performed during the project. They appear on a project plan in the past tense, to represent the completed activity/task and the accomplished result.

“Receivables” should also appear on the project plan. They are deliverables owed to the project by others outside of the project (usually other project teams), and upon which the project is dependent.

Milestones are interim events or points in time during the project which identify the completion of a significant segment. They are most useful as measuring or tracking points to gauge the progress of the project.

Some milestones are “business-critical” milestones, in that they are not just a mechanism for giving the team interim targets; they have special significance, such as a contractual date with a customer.

Different individuals may identify different numbers of milestones based on their role in the project. For example, the project sponsor may identify three significant milestones as indicators of how the project is progressing, whereas a team leader may identify eight milestones or checkpoints within a particular phase.

A milestone should be identified to indicate the completion of each phase of the project.

**Levels 3 and 4+ – Activities & Tasks:** Each phase of a project is composed of a number of major activities that will lead to achieving one or more deliverables. Activities are composed of a series of tasks that are the lowest level of detail that can comfortably be managed. Team members who will be performing the tasks should be involved in the activity/task planning process. Estimates of time to complete each task should be based on typical work effort required and then may be adjusted to reflect “real world” conditions.

**Example 4: Website Development WBS****1. Website Project****1.1. Design****1.1.1. Web User Interface**

- 1.1.1.1. Functional Specifications
  - 1.1.1.1.1. Create User Interface Mock-ups
  - 1.1.1.1.2. Conduct Design Review
  - 1.1.1.1.3. Deliver Final Functional Specs
  - 1.1.1.1.4. Obtain User Signoff
- 1.1.1.2. Technical Specifications
  - 1.1.1.2.1. Develop Tech Specs
  - 1.1.1.2.2. Review Tech Specs with Project Team
  - 1.1.1.2.3. Obtain Team Signoff

**1.1.2. SQL Database**

- 1.1.2.1. Technical Specifications
  - 1.1.2.1.1. Develop Tech Specs
  - 1.1.2.1.2. Review Tech Specs with Project Team
  - 1.1.2.1.3. Obtain Team Signoff

**1.1.3. Interfaces**

- 1.1.3.1. Technical Specifications
  - 1.1.3.1.1. Determine data import/export elements
    - 1.1.3.1.1.1. Define User needs
    - 1.1.3.1.1.2. Define IT needs
  - 1.1.3.1.2. Design interfaces
  - 1.1.3.1.3. Obtain Team Signoff

**1.1.4. Reports**

- 1.1.4.1. Functional Specifications
  - 1.1.4.1.1. Collect User Requirements
    - 1.1.4.1.1.1. Define Data elements
    - 1.1.4.1.1.2. Define Frequency
    - 1.1.4.1.1.3. Define Audience
  - 1.1.4.1.2. Design Reports
  - 1.1.4.1.3. Review Report Design with Project Team
  - 1.1.4.1.4. Deliver Final Functional Specs
  - 1.1.4.1.5. Obtain User Signoff

**1.2. Development****1.2.1. Web Front End**

- 1.2.1.1. Code Web Pages
- 1.2.1.2. Conduct Unit Test
- 1.2.1.3. Review Web Page design/functionality
- 1.2.1.4. Obtain User Signoff

**1.2.2. SQL Database**

- 1.2.2.1. Identify table relationships
- 1.2.2.2. Build database tables
- 1.2.2.3. Review Tables with project team
- 1.2.2.4. Obtain Signoff

**1.2.3. Interfaces**

- 1.2.3.1. Build Interfaces
- 1.2.3.2. Conduct Unit test of import/export functionality
- 1.2.3.3. Obtain Signoff

**1.2.4. Reports**

- 1.2.4.1. Code Reports
- 1.2.4.2. Conduct Unit test
- 1.2.4.3. Review Reports with project team
- 1.2.4.4. Obtain Signoff

*Continued next page*

**Example 4: Website Development WBS (continued)****1.3. Quality Assurance****1.3.1. Web Front End**

- 1.3.1.1. Verify design and functionality
- 1.3.1.2. Perform Integration Test
- 1.3.1.3. Perform User Acceptance Test
- 1.3.1.4. Obtain User Signoff

**1.3.2. SQL Database**

- 1.3.2.1. Verify design/data elements
- 1.3.2.2. Verify relationships
- 1.3.2.3. Perform Integration Test
- 1.3.2.4. Perform User Acceptance Test
- 1.3.2.5. Obtain User Signoff

**1.3.3. Interfaces**

- 1.3.3.1. Verify design and functionality
- 1.3.3.2. Perform Integration Test
- 1.3.3.3. Perform User Acceptance Test
- 1.3.3.4. Obtain User Signoff

**1.3.4. Reports**

- 1.3.4.1. Verify design and functionality
- 1.3.4.2. Perform Integration Test
- 1.3.4.3. Perform User Acceptance Test
- 1.3.4.4. Obtain User Signoff

**1.4. Training****1.4.1. Create system documentation**

- 1.4.1.1. Assemble Tech Specs
- 1.4.1.2. Develop System Flowcharts
- 1.4.1.3. Deliver Source Code
- 1.4.1.4. Complete System Documentation manual

**1.4.2. Create training materials**

- 1.4.2.1. Assemble Functional Specs
- 1.4.2.2. Develop "As Is" and "To Be" documentation
- 1.4.2.3. Update Business Processes
  - 1.4.2.3.1. Write new business processes
  - 1.4.2.3.2. Obtain User Signoff
- 1.4.2.4. Complete User Training Manuals

**1.4.3. Train users**

- 1.4.3.1. Train IT Support Staff
  - 1.4.3.1.1. Identify trainees
  - 1.4.3.1.2. Identify trainers
  - 1.4.3.1.3. Construct training schedule
  - 1.4.3.1.4. Train users
- 1.4.3.2. Train Business Partners
  - 1.4.3.2.1. Identify trainees
  - 1.4.3.2.2. Identify trainers
  - 1.4.3.2.3. Construct training schedule
  - 1.4.3.2.4. Train users
  - 1.4.3.2.5. Verify user readiness

*Continued next page*

**Example 4: Website Development WBS (continued)****1.5. Implementation****1.5.1. Hardware**

- 1.5.1.1. Determine hardware needs
- 1.5.1.2. Make Hardware selections
- 1.5.1.3. Purchase hardware
- 1.5.1.4. Deploy
- 1.5.1.5. Perform System test
- 1.5.1.6. Verify production readiness and signoff

**1.5.2. Packaged Software**

- 1.5.2.1. Determine software needs
- 1.5.2.2. Make software selections
- 1.5.2.3. Purchase software
- 1.5.2.4. Deploy
- 1.5.2.5. Perform System Test
- 1.5.2.6. Verify production readiness

**1.5.3. Develop Implementation Plan**

- 1.5.3.1. Construct Timeline
- 1.5.3.2. Identify Team
- 1.5.3.3. Identify Components
- 1.5.3.4. Finalize Plan

**1.5.4. Installation**

- 1.5.4.1. Convert hardware to production-ready status
- 1.5.4.2. Convert packaged software to production ready status
- 1.5.4.3. Install new programs into production environment
- 1.5.4.4. Verify code
- 1.5.4.5. Initiate limited production run for user acceptance
- 1.5.4.6. Turn over system to users

**1.6. Post-Implementation****1.6.1. Verify System**

- 1.6.1.1. Obtain user acceptance of production system
- 1.6.1.2. Log issues

**1.6.2. Monitor system**

- 1.6.2.1. Verify performance
- 1.6.2.2. Verify functionality

**1.6.3. Project Wrap-up**

- 1.6.3.1. Obtain Final Project Signoff
- 1.6.3.2. Document and Review Lessons Learned