SD5953

Successful Project Management

Work Breakdown Structure

School of Design

The Polytechnic University of Hong Kong

IMPORTANT

Please sit with the members
of your final group project

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Work Breakdown Structure

Deconstructing and Organizing Atomic Tasks

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Wikipedia - Work Breakdown Structure

- A Work Breakdown Structure (WBS) is a mapping of the deliverable-oriented elements of a project down to the smallest feasible component. The WBS is used to help group and link the elements that compose a project, to expose their underlying relations.

- The WBS supports further Project Management refinment and development such as cost estimating, schedule development, task structuring, task sequencing and project control.

- A WBS element may relate to a product, data or a service.

http://en.wikipedia.org/wiki/Work_breakdown_structure

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The Work Breakdown Structure

- A WBS helps to decompose a project into a hierarchy of phases, deliverable networks and work packages. Ultimately, it is a tree-like structure that clearly shows the relationships and subdivisions of the inputs required to achieve the Scope.

- A WBS is arrived upon by successively decomposing the project Scope into ever more specific and granular phases and steps.

- Once a WBS Element cannot be decomposed any further, the WBS has arrived at the Work Package or ATOMIC Task level.
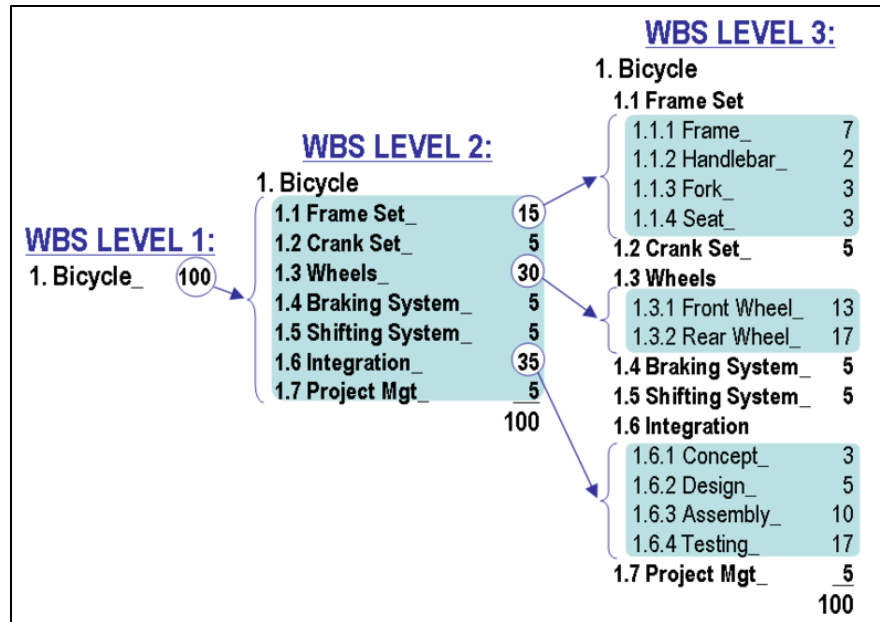
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WBS Coding Schemes

- It is common for a WBS element to have a systematic number.

- This comes from the fact that the WBS was developed by a large, highly structured organization (DoD). The purpose of the numbering is to provide a consistent way to use a WBS across systems regardless of vendor or service. It also aids in recognizing WBS elements appearing in any written context.

http://en.wikipedia.org/wiki/Work_breakdown_structure

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Example Coding – A Bicycle BOM

- <u>1.1.2 Handlebar</u> identifies that item as a Level 3 element. This information is **encoded**, because its name is composed of three numbers separated by a decimal point, implying that there are two more levels of components.

http://en.wikipedia.org/wiki/Work_breakdown_structure

WBS Misconceptions

A WBS is NOT a complete project document. It acts more like a <u>transitional</u> document, and input to later stages of work. A WBS is not a Project Plan because:

- It does not say WHO is to accomplish the tasks in the project.

- It does not specify WHEN the tasks in the project are done.

http://en.wikipedia.org/wiki/Work_breakdown_structure

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HR Example - "Layers"

80% of HR inquiries answered within 10 minutes			
A	**B**	**C**	**D**
95% of Performance Reviews (PR) meet new standard	90% of Quarterly reviews done by due date	Personnel system current to within 3 days	90% of HR staff score 90 or above on test of inquiries
(HR Director approves New PR standards)	Managers told of missing reviews within 24 hours of due date	Missing items identified in all employee's records	IT approves system training class curriculum
Mgt. Committee approves new PR standards	Manager's boss notified if review missing after 48 hours	Managers provide data for 90% of missing items	100% of HR staff attend class
95% of managers 80%+ on PR test	HR Director calls manager after 72 hours late	100% of HR actions in system within 24 hours of receipt	
HR grades PR tests within 5 days of submission			

A HORIZONTAL view is the "Layers" of the Project

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HR Example – "Pillars"

80% of HR inquiries answered within 10 minutes			
A	**B**	**C**	**D**
95% of Performance Reviews (PR) meet new standard	90% of Quarterly reviews done by due date	Personnel system current to within 3 days	90% of HR staff score 90 or above on test of inquiries
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95% of managers 80%+ on PR test	HR Director calls manager after 72 hours late	100% of HR actions in system within 24 hours of receipt	
HR grades PR tests within 5 days of submission			

A VERTICAL view is the "Pillars" of the Project

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WBS Element Attributes

Four attributes common to every WBS element are:

1.   It directly relates to the **Scope** of the project.

2.   It falls between the **Start** and **End** time of the project.

3.   It is paid for from the **Budget** of the project.

4.   It utilizes the **Resources** assigned to the project.

http://en.wikipedia.org/wiki/Work_breakdown_structure

WBS Element "Sanity Checks"

80 Hour Rule: No single activity or group of activities to produce a single deliverable should be more than 80 hours of effort.

Single Reporting Period Rule: No activity or series of activities should be longer than a single reporting period. If the project team is reporting progress monthly, then no single activity or series of activities should be longer than one month long.

Common Sense Rule: If something looks or feels wrong while you are constructing the WBS, it probably is. Feel free to redo.

http://en.wikipedia.org/wiki/Work_breakdown_structure

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Is This Example A WBS?

```
- 80% of Inquiries answered within 10 Minutes

    - 95% of Performance Reviews (PR) Meet Standard

        - Management Committee Approves PR Standards
        - 95% of Managers Score 80% or Higher on Performance Review Test
        - Human Resources Upgrades Performance Review Tests within 5 Days of Submission

    - 90% of Quarterly Reviews Done by Due Date

        - Manager Told of Missing Reviews within 24 Hours of Due Date
        - Manager's Boss Notified if Review Missing after 48 Hours
        - HR Director Calls Manager After 72 Hours Late

    - Personnel System Current to within 3 Days

        - Missing Items Identified in all Employee's records
        - Managers Provide Data for 90% of Missing Items
        - 100% of Human Resources Actions in System within 24 Hours of Receipt

    - 90% of Human Resources Staff Score 90 or Above on Test of Inquiries

        - IT Approves System Training Class Curriculum
        - 100% of Human Resources Staff Attends Class
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DISCUSSION: Is this a proper WBS?

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Work Packages & ATOMIC Tasks

Getting Down to the Checklist

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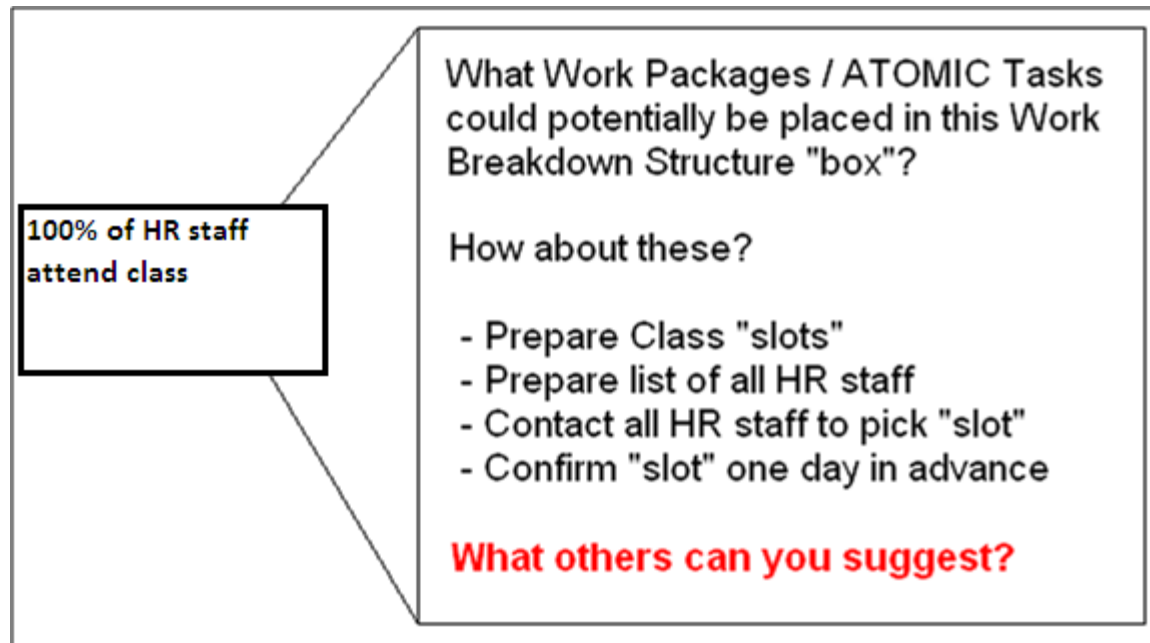香港理工大學

A WBS Organizes <u>Work Packages</u>

Work Packages exist at the lowest management level of a project.

Work Packages are composed of at least one ATOMIC task, which is work that cannot be any further decomposed, and must be:

- In accordance with the WBS "Sanity Checks"
- Capable of producing a measurable deliverable
- Able to be realistically and confidently estimated

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Where Work Packages Go in a WBS

100% of HR staff attend class

What Work Packages / ATOMIC Tasks could potentially be placed in this Work Breakdown Structure "box"?

How about these?

- Prepare Class "slots"
- Prepare list of all HR staff
- Contact all HR staff to pick "slot"
- Confirm "slot" one day in advance

What others can you suggest?

YouTube – WBS Tutorials

- 242 - Versatile Company (4 min)
  - http://www.youtube.com/watch?v=6oEMEo7sRy0

- 243 - SimonSez (16 min)
  - http://www.youtube.com/watch?v=wPAoikQ5k-s

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Questions?

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Thank You