E-Book WBS Content

2.1 Purpose and Outcome

The Work Breakdown Structure (WBS) defines the hierarchical breakdown of scope or the work required to produce the programme outcomes and the project deliverables. The WBS delineates scope, drives consistency of approach by making all activities visible to the team and mitigating potential duplication of effort. It also reduces the potential of scope being missed.

The WBS creates a blueprint of the project scope which will be undertaken to complete the programme. Major programme categories of work have been broken down into smaller components of sub-programmes. These continue to be subdivided until the lowest level of detail is reached. Subprogrammes are divided into districts, followed by projects, then buildings/assets, function, work packages and control accounts.

The WBS should not be read as an organisational chart or as a procurement strategy. Contract codes / references, funding codes and similar codes are held as attributes against the relevant levels within the WBS.

2.1 Purpose and Outcome

The purpose of the WBS is to provide an organisation of scope in a structured way that is used decompose the scope of the programme to ensure completeness and integrity of scope definition. Also, the WBS is used as a key reference to align all information on the programme to enable the integration of various types of information at certain levels or nodes.

2.2 Work Breakdown Structure Hierarchy

The WBS includes five levels of the scope breakdown that are used to organise scope in a manageable way to align each level with the organisational breakdown structure to define areas of responsibility. These five levels are:

Level 0 - Programme

Level 1 - Portfolio

Level 2 - Sub-portfolio

Level 3 - District

Level 4 – Project

Level 5 – Assets

The above levels are reflected in the WBS full code as digits

The MTR WBS is reflected in two versions (parts). WBS Part 1 reflects the programme scope breakdown from the Commercial/Development point of view. WBS Part 2 reflects the programme scope breakdown from the Delivery point of view and is more aligned with the delivery/procurement strategy and the management structure. Both parts are connected through a mapping as they both reflect the same scope.

WBS Part 1 is taken as the basis for this Baseline Book as it provides better alignment between the scope, cost and schedule.

2.2.1 Level 0 - Programme

The Programme level aggregates the entire scope of MTR undertaking.

2.2.2 Level 1 - Portfolio

The Portfolio level organises the programme scope by the programme strategic development phases.

2.2.3 Level 2 - Sub-Portfolio

The Sub-portfolio level organises the scope by geographic areas where each scope item at this level might have a separate master plan.

2.2.4 Level 3 - District

The District level organises the scope by geographic areas called districts. The districts are clearly delineated on the programme map and the define the responsibility boundary for district PMCs. In addition to the geographic districts, districts have been created for the site-wide activities such as infrastructure which span multiple districts. Each district has been allocated a three-alpha code.

2.2.5 Level 4 - Project

The Project level defines the level of scope breakdown with elementary point of responsibility for reporting performance/progress. The scope of each project varies in size and complexity. The project scope can be delivered through multiple contracts and also can include a number of assets. However, all these contracts and the delivery of the assets are managed by one and only PMC within a project.

This level in the WBS is flexible allowing new projects to be added and/or existing projects to be cancelled, should the strategic objectives vary over the course of the programme. Each project has been allocated a unique reference made up of a three numerical code

2.2.5 Level 5 - Assets

Level 5 defines the individual buildings or assets, where an asset could be a road, an area of open space or a component.

Each building/asset has been allocated a unique four numerical code and this code will remain with the building/asset throughout delivery, the event, the operations and the legacy phasing, even where the functionality of the building may change. Multiple assets can be delivered through one contract.

2.2.5 Level 6 - Functions

Level 6 defines the functions required within a project's life cycle. These functions align with the programme governance structure with a minimum of one project stage gate review taking place to review the functional activity. The functions can occur in any order to suit the delivery methodology adopted. For example, procurement may occur several times for a building - the procurement of the designer, the contractor and the operator.

2.2.5 Level 7 - Work Packages

Level 7 defines the work packages. The scope follows the Royal Institution of Chartered Surveyors (RICS) New Rules of Measurement 1 (NRM1) which is used in the production of cost estimates. This allows the WBS and the Cost Breakdown Structure (CBS) to have a one-to-one relationship for managing performance.

2.2.5 Level 8 - Control Accounts

Level 8 defines the control accounts within the work packages. As with Level 7, the structure follows the RICS NRM1.

2.2.5 Level 9 and beyond

The designers, contractors and suppliers will be responsible for developing Levels 9 and beyond for their own use. This will be submitted to the PMC for agreement as part of their master schedule submission.