



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

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Advanced project Management

Effectiveness of WBS Tool on Small Projects

(Interior Design for a Bedroom Project)

1. Introduction

Interior design is a multi-faceted profession that combines creative and technical solutions to create a designed interior experience within a building. These methods are practical, improve the occupants' quality of life and community, and are aesthetically pleasing. The Interior Design process incorporates a structured and organized framework that includes research, analysis, and knowledge translation into the creative process, ensuring that the client's needs and requirements are addressed to create an interior space that meets the project's objectives.

The purpose of the project is to design the bedroom to appear larger, more luxurious, fit with the rest of the house and to guarantee that this space of the house is well-planned and functional. As a head of designer's team my role is to create a clear Work Breakdown Structure (WBS), so we can organize all the required activities to achieve the deliverables and milestones.

A work breakdown structure (WBS) allows project managers to plan their work more efficiently and effectively. Project managers must prepare for the project's timeline, fixed costs, and functional completion, as well as delegate tasks. The WBS helps in the consistency of this planning and ensures efficient project implementation.

The aim of this research is to study the effectiveness of WBS in small projects.

2. Literature Review and Conceptual framework:

2.1 Work Breakdown structure (WBS):

A project work breakdown structure (WBS) is a graphical representation of a deliverable or product-oriented grouping of project work components used to organize and subdivide a project's total work scope. The WBS dictionary, which is included with the hierarchical diagram, contains relationships between WBS elements as well as detailed descriptions of each element.

The WBS dictionary is a critical project specification tool that specifies in detail the scope of each task element; documents assumptions about the work, including deliverables, milestones/key performance parameters, and quantities (if applicable), a list of the tools and processes needed to complete the task; identifies a timeline for completion, with concrete achievements, and access to key technology. Both project phases, critical decision points, and other operations are covered by the WBS hierarchical approach. A project WBS, on the other hand, must be focused on deliverables. Even though various organizational functions and project deliverables are concerned, they can be linked to individual breakdowns rather than being aligned with a particular organization.

2.2 WBS Bottom-Up Approach

The bottom-up approach entails project team members specifying tasks and organizing them into separate classes or work packages. The entire project team will brainstorm all of the tasks needed to properly update the system if you used a bottom-up strategy to define tasks for the software upgrade described above. In addition to top-down strategy, there is a better likelihood that a team member can spot an operating system conflict or at the very least include a step to test the

function. Tasks should be written down on sticky note pads or index cards as ideas flow. After that, all these tasks can be organized into groups that make up each work package. The bottom-up approach achieves a more comprehensive schedule, but it is often more time consuming than the top-down task planning approach. The schedule you create is based on direct input from professionals who will be working out the project; it's also a good way to improve coordination. Bottom-up planning takes even longer than top-down planning. The project team has described the objectives and can render precise predictions at a specific level using the bottom-up methodology. The estimated cost and timing for the project schedule are then determined by including these figures and mission dependencies to each work package. This approach will be used to create detailed project estimates, plans, and monthly projections. It also aids in defining the specific resource skills required during key project phases, allowing for a more precise timetable. The disadvantage of adopting a bottom-up strategy is that it takes longer.

2.3 Case study: Asphalt Plant Installation WBS

The goal of this case study is to examine the WBS of an asphalt plant construction as a case study, to assess the current installation WBS's weaknesses, and to assess the plant installation risk. In addition to suggesting appropriate WBS that can help the case company's plant installation, In addition, a framework to control and monitor the WBS implementation should be developed. The proposed WBS in this study was created based on the plant installation's problem interpretation. The proposed installation WBS will attempt to address the WBS' shortcomings as well as its execution, with the goal of shortening the installation time and expense. The impact of the organization and their client on the situation became very clear as a result of the study.

The study found that there is potential to enhance the installation WBS, allowing the organization to save a significant amount of time and money, as well as a large

number of wasted working hours. The case company will proceed to the next level to verify the proposed outcome by improving the current condition.

The validation process will take at least two months for stationary plants and one month for mobile plants, according to the proposed schedule. However, the outcome is close to the actual scenario according to the analysis of the case company expert's opinion.

3. Methodology

The strategy that chooses to integrate the research components in order to address the effectiveness of WBS using bottom-up approach in small project and present it as Memo. Data collected from many sources, personal experience, Secondary articles and previous studies, academic papers and online books.

4. Results and Discussion

After reviewing the project charter and scope of work for this project. I chose the bottom-up approach to build the WBS for designing the bedroom. The reason is design is a process that Mainly dependent on aesthetics, coordination of furniture, comfort in use, and psychological sensations that space, colours, and texture bring to the user. I started with collect the requirements from the owner in datils for each work package in my WBS and chose to present it as Memo because the size of the project and the number of activities. Also, all my work packages (tasks) should be finish in 10 days and the possibility of doing more than one activity at the same time. The fallowing Memo shows my WBS for 15 days period Starting with the most important:

May 6-7-8-9

Starting the finishing process, starting with choosing the colour of the floor, the colour of the wall, and the material of each. Vanilla Latte (1519) is the chosen colour for the wall paint from Jotun because it is a neutral colour, is perceived as

practical and orderly. It complements other earthy colours by providing a subtle balance.

The Marble floor (Afyon White 30x60) has chosen for the flooring. It takes 2 working days for the finishing.

May 10

Shopping for Bedroom Furniture and set an appointment for receipt and installation. The chosen bedroom furniture style is Contemporary Bedroom Design because it is trendy and never get old. Furniture will be black. The size of the closet is 270x400. The bed is king size 200x193. Two chests were selected size 40x55 and it has 2 drawers. Dresser size 1479x400 with 4 drawers.

May 11

Shopping for Mattress, Bed linen, Duvet and Pillows. The bed linen includes duvet cover and 4 pillowcases, fabric is cotton and the colour is dark blue. The duvet size is 240x220. 4 pillows 2 different sizes 50x80 and 50x70.

May 12-13

Curtain shopping and installation. Two different fabrics were chosen, Burlap fabric and organza. The colour for the Burlap is light blue and the organza is white. The size of the curtain is the size of the wall 6x3.

May 14

Shopping for Lightening. The chosen lights are a Floor Uplighter lamp for the lift corner of the room, 2 Wall Lamps above the chests and Pendant Lamp in the ceiling wall. 4 White tone Bulb needed.

May 15

Shopping for Decoration. Chosen decoration are a poster above the bed, vase with artificial flowers on the dresser, small alarm clock on the chest and bowl with potpourri it gives a nice smell in the room.

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As a result of creating the WBS using Bottom-Up Approach and Memo Presentation I found out that this technique is great for small projects. I had the ability to accomplish my project even before the deadline, because the Memo approach divided my work packages resulting from WBS to more than one task can be done in the same day instead of one task each day. I recommend to use this approach for designing projects and all projects that depends on personal shopping and materials selection. However, sometimes you can finish more than one task in one day as in such approach.

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