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construction project. This includes information like engineering studies, pre-design work, drawings, project financials, past project data, management objectives, sales proposals, supplier information, etc.

Step 2: Create a project charter, project budget and WBS dictionary. In our work breakdown structure example, our project objective is to construct a house.

Step 3: Create a work breakdown structure formatChoose one out of the 3 WBS types discussed in this article. Then, decide on a WBS format from choices like kanban boards, Gantt charts, calendars or flowcharts.

In our construction WBS example, we have selected a phase-based WBS depicted using a tree diagram.

Step 4: List phases and project deliverablesFirst, create a parent task list based on the WBS type chosen. For example, to construct a house, the WBS levels will look this -

Level 1: Construction of a house

Level 2: Internal - further divided into subtasks like Electrical, Plumbing

Foundation - further divided into subtasks like Excavation, Steel Erection

External - further divided into subtasks like Masonary work, building finishes

Step 5: Create work packagesKeep dividing the subtasks such that you get the lowest level of work that can be assigned to team members. These tasks should be discrete such that you can estimate their budgets, fix timelines, and track completion status.

In our example, we can create work packages for a few parent tasks:

Steel Erection - Place columns, install beams, joists, etc

Electricals - install wirings, HVAC equipment, rough-in electrical, etc

On completion of the above 5 steps, you can design a simple tree diagram to get your construction Work Breakdown Structure for a house as follows:

Source: matchware.com

Why you need to get the team involved in the work breakdown structure creation

The WBS doesnt sit in a vacuum. Each step involves other companies, teams and people. Each one needs to understand their role in the project and the WBS justifies their to-do list. There will be no ambiguity.

Include them early as theyre experts in their roles, meaning they can sense check and add value during the planning. By involving the stakeholders in the process, you also instil a sense of accountability.

Tips for Creating a Strong Work Breakdown Structure

Here is a 10-point checklist to ensure your construction work breakdown structures are perfectly usable:

Your WBS should only cover the project scope with the subtasks adding up to the parent task.

Your WBS needs at least 2-3 levels. Only add more levels to make your WBS work packages more 'manageable'.

Stop tasks from overlapping or repeating across the construction project's WBS.

Keep WBS work packages at the bottom so you can estimate costs, define quality measures, fix timelines, and track their completion date.

Make your WBS easy to understand. You can use colour coding, hierarchical lists, or WBS-specific tools.

Check if your WBS misses any phases or steps in your construction project.

Do not focus on 'actions'. Instead, optimise for 'outcomes'.

Your divided tasks should have a hierarchy, reasonable timeline, and clarity on the input-output sequence.

Make sure your project team members understand how to read and update the WBS.

Consult subject matter experts and take feedback from project participants.

What WBS challenges can you expect?

Getting the WBS wrong can derail the rest of your project management efforts. Since creating one is a team effort, as a project manager, you may face below challenges:

Managing the project team dynamics

One of the biggest challenges we faced was resistance to change. Some team members were hesitant to adopt a new methodology, which resulted in delays in implementing WBS.

However, we overcame this challenge by providing training and support to our team members, which helped them understand the benefits of using WBS and how it could improve project management.

- Isaac Robertson, CEO of Total Shape

Grasping the WBS concept can be tricky and lead to pushback. Thats why you need to get the buy-in and manage the process. The results speak for themselves.

Creating WBS is time-consuming

"The WBS takes time to develop, and many organisations are under pressure to start their projects quickly. But taking the time to create a WBS upfront will save time and effort later in the project."

- Project Management Institute (PMI)

You will spend longer drafting a sound WBS for larger projects. Its normal. But using templates, learning from past projects and establishing SOPs can reduce how long it takes.

Turning the WBS into a schedule of works

Your WBS is not the project schedule or programme of work - it just plays a role. Dont overload the WBS with details and deadlines at this stage. Stick to the deliverables, not the sequencing.

Lots of incomplete or inaccurate data

Using inaccurate data for WBS can compound into larger issues and risks during the project. Make sure the information included is as accurate as possible. But also leave room for unforeseen deliverables.

Things to avoid when creating a WBS

Heres a list of things you need to avoid when creating the work breakdown structure.

Failing to involve all team members in the creation process

Give your project team clarity on the project scope and delivery expectations. Failing to onboard the team means the project manager cannot incorporate team insights and feedback into the WBS structure.

Creating too many or too few work packages

You waste serious time when adding the minutest of tasks to the WBS. The same goes for going overboard. Yes, you need to follow the 100% to cover the project scope but you need to recognise when youre making the WBS complex or too simple.

Failing to assign responsibilities for each work package

A WBS lets you estimate the projects labour and duration for the project which helps with project budgeting and risk management. Dont stop there, ensure you reasonably assign each work package and get feedback from your team.

Failing to establish change control

You undoubtedly know about the scope creep trap. Weve all been burned before. Thats why its important to establish change control and monitoring SOPs to accommodate any customer-driven or team-driven changes.

Extra tips on how to use a WBS in construction

Now that we know how to create a WBS for construction projects, let's look at how to make the best use of them:

Assign responsibilities: After securing the work packages' buy-in from key stakeholders, assign them to respective team members. Incorporate any feedback and solve their concerns for a smooth delegation.

Set deadlines: Use past project data and consult with the team members to fix a reasonable completion date for the tasks assigned.

Track progress: Incorporate SOPs for progress tracking. You can automate project tracking by using work breakdown structure software tools.

Monitor costs: Compare estimates with on-ground execution expenses to take timely measures for cost control.

Communicate with stakeholders: Set up relevant communication channels to update and report on project status.

Adjust as required: while the project charter ideally should not change, you can adjust the activities as the situation demands.

Frequently asked questions (FAQ)

What is the 8-80 rule in WBS?

The WBS 8-80 rule says you no task says that no chunks of work can take less than 8 hours and longer than 80 hours to complete. This means tasks are between one 8-hour working day and two full working weeks for two operatives.

Who is responsible for the WBS?

Everyone involved in the project is responsible for the WBS creation and execution. It must be usable and comprehensive for all stakeholders. The project manager will drive the process and manage all the moving pieces.

What is the most important thing in the WBS?

A well-made WBS should successfully turn 100% of a complicated project scope into manageable deliverables and work packages.

**Project wbs example. Construction project wbs sample. What is wbs in construction project.**