

# WBS (work breakdown structure)

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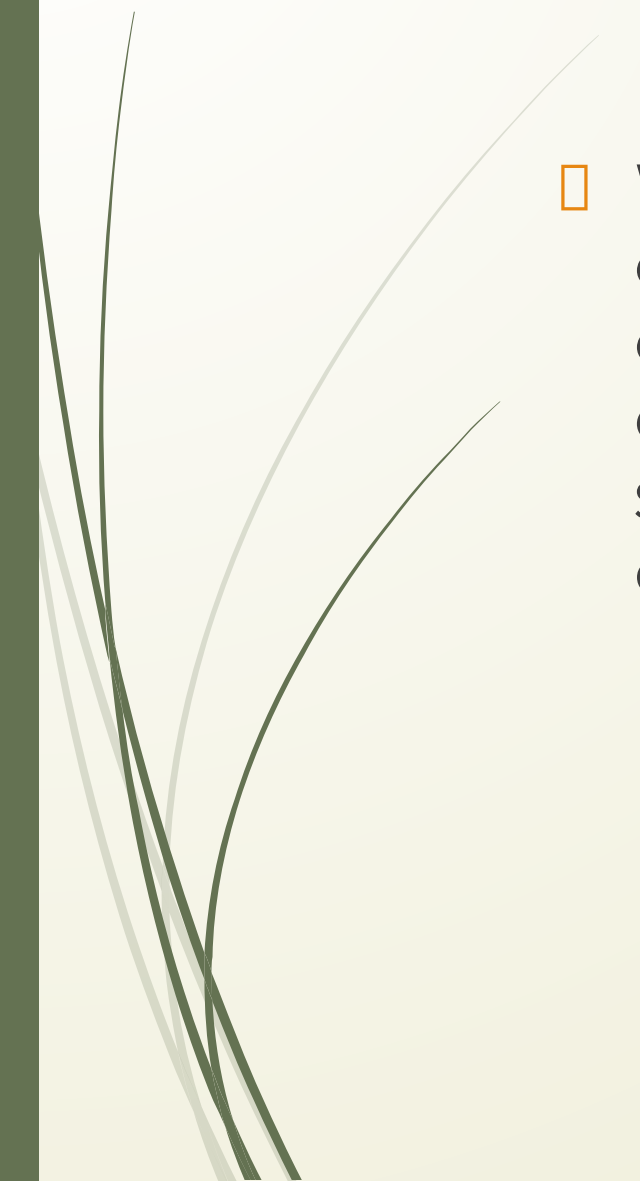
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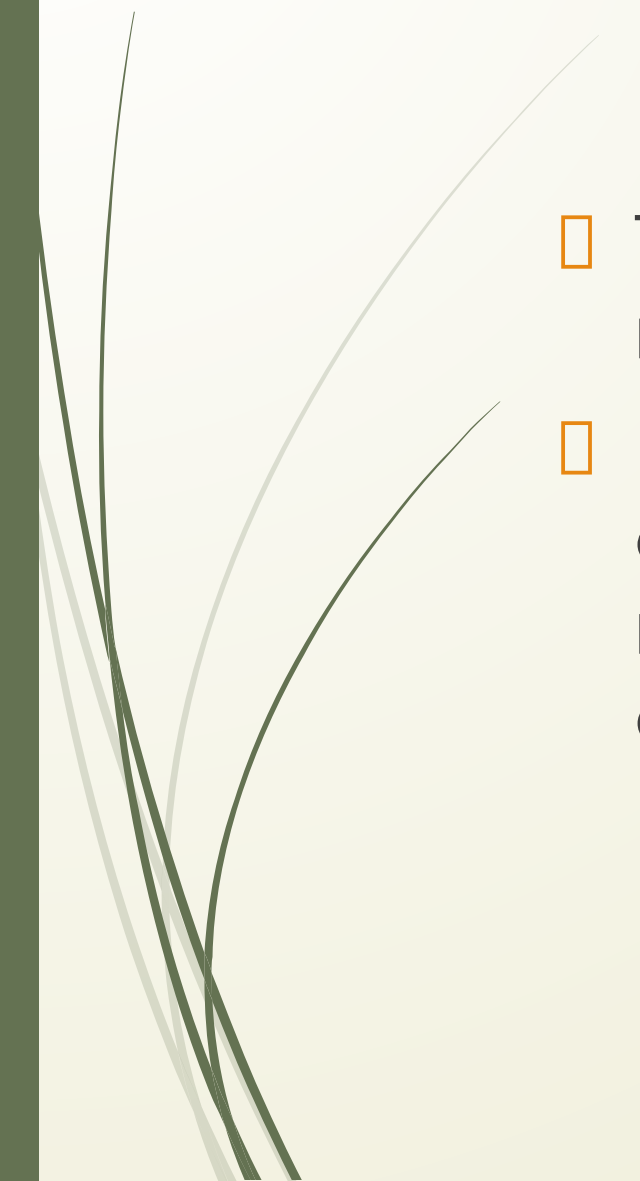


# What Is WBS

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- Work breakdown structure is method for completing a complex , multi-step project. Its a way to divide and conquer large project to get thing done faster and more efficiently. It singlehandedly integrates scope, cost and schedule baselines ensuring that project plans are in alignment.




# Goal of WBS

- The goal of a WBS is to make a large project more manageable.
  - Breaking it down into smaller chunks means work can be done simultaneously by different team members, leading to better team productivity and easier management.
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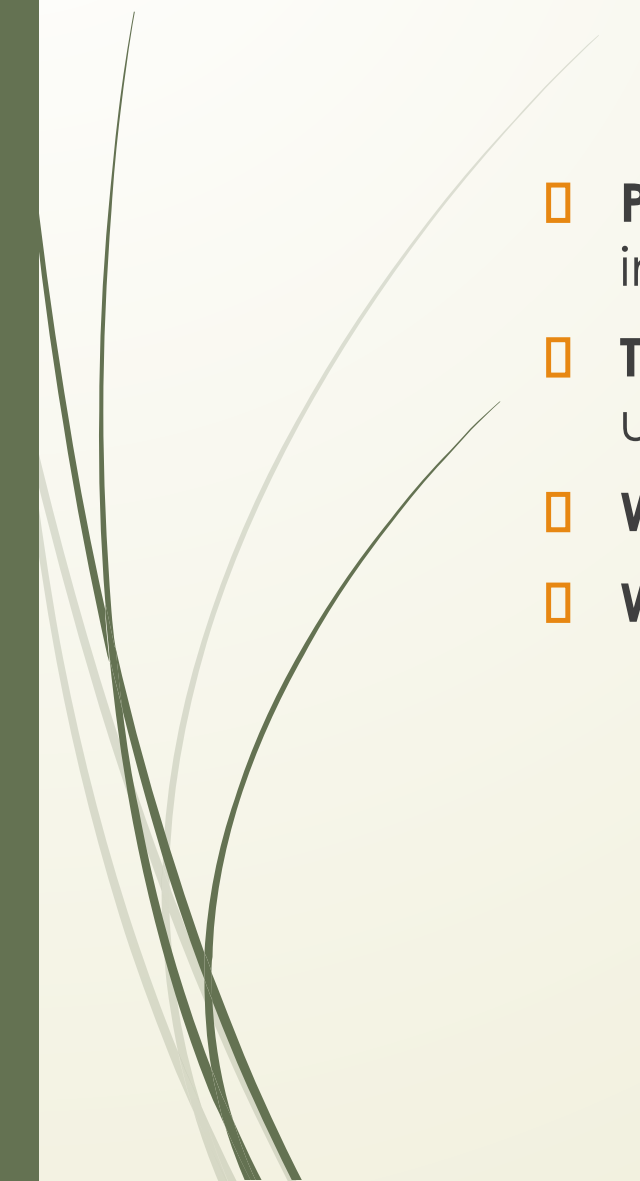


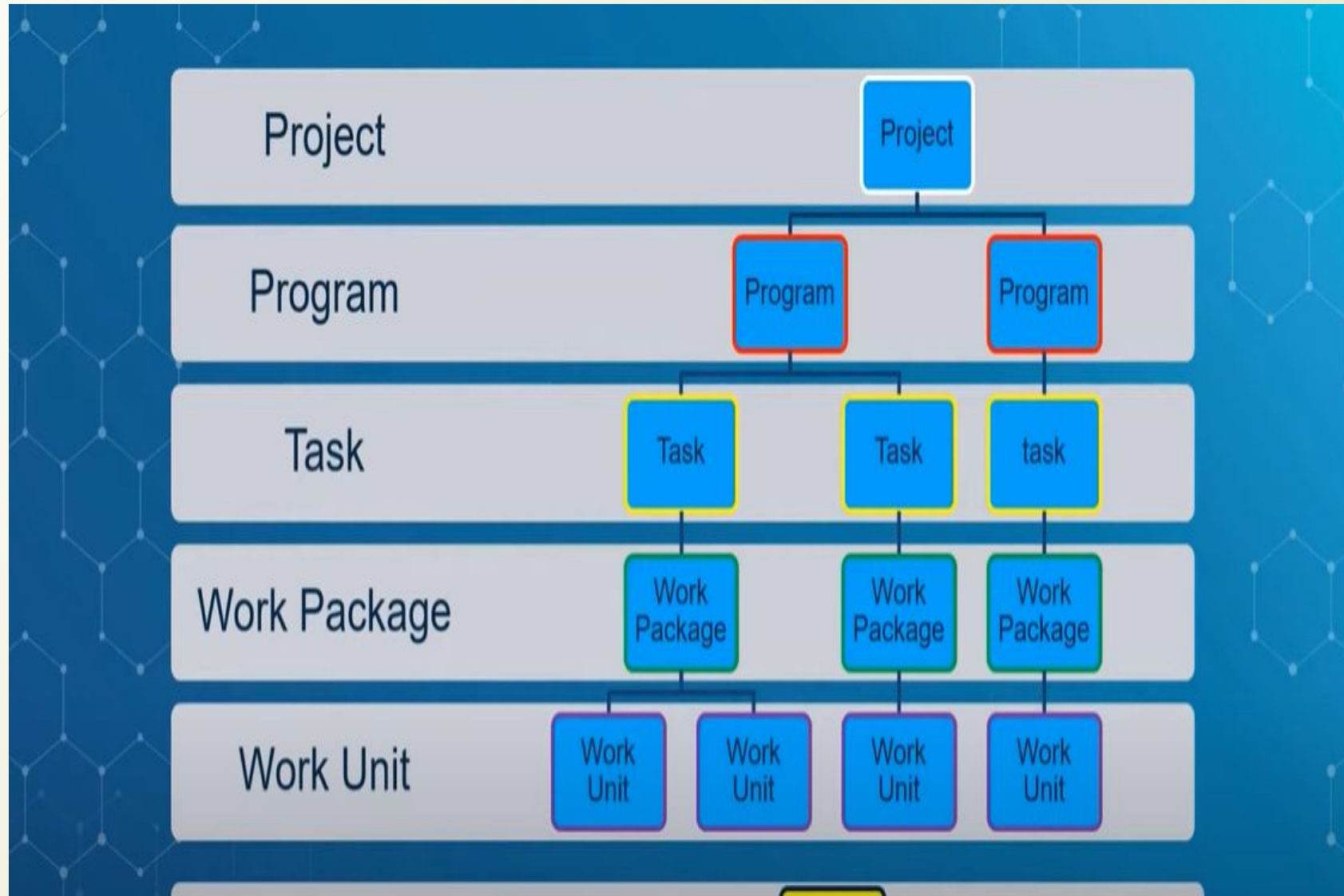
# Elements of wbs

- Program or deliverables
  - Task
  - Work Packages
  - Work Unit
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# Element Of wbs

- **Program:** a broad, long-term objective that is often decomposed into a series of project and sub-project.
  - **Task :** an identification and measurable activity that create a small unit of work for a related project.
  - **Work package :** division of a project task.
  - **Work unit :** division of work package.
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# Characteristics of WBS

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- ❑ **1.**Wbs refers to a “deliverable-oriented hierarchical decomposition of the work to be executed by the project team to accomplish the project objectives and create the required deliverables.
  - ❑ **2.**Each Wbs level represents a new and increasingly detailed definition of work needed to complete the project.
  - ❑ **3.**A WBS structure must be constructed in a way tha each new level in the hierarchy includes all the work needed to complete its parent task.



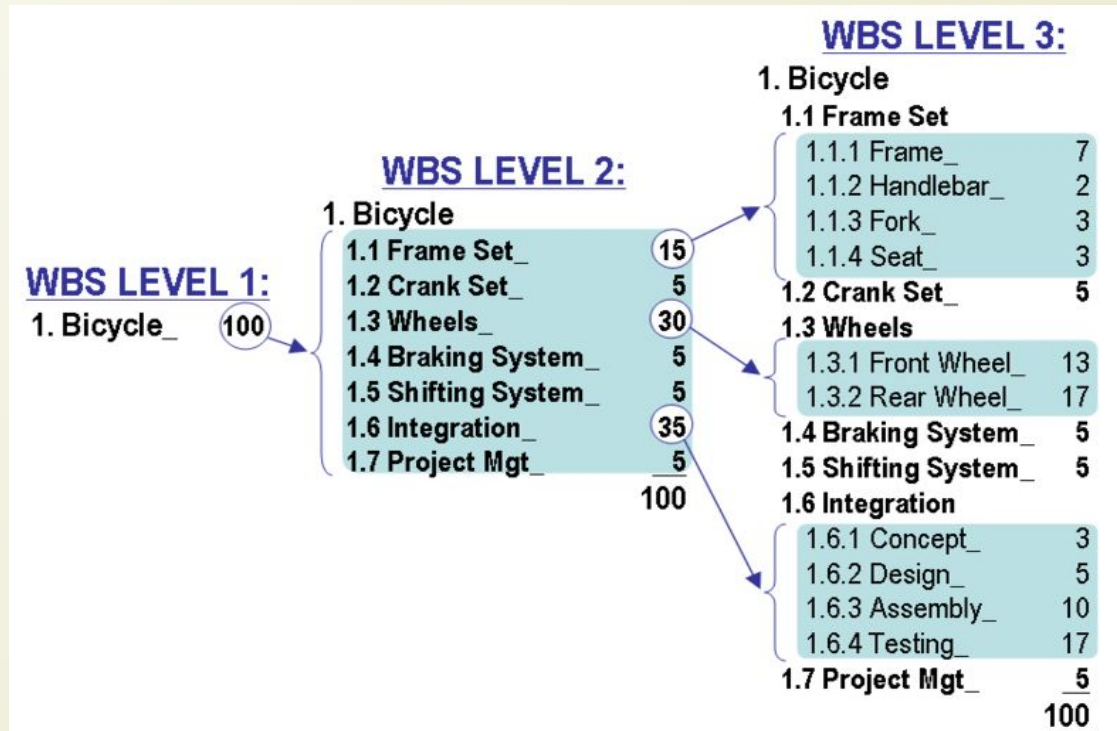
# TYPES OF WORK BREAKDOWN STRUCTURES


- 1.process-oriented WBS
  - 2.Deliverable-oriented WBS
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# WBS design principles

**1. The 100% rules :** The 100% rule states that the WBS includes 100% of the work defined by the project scope and captures all deliverables – internal, external, interim – in terms of the work to be completed, including project management.






# Why level 2 is Important

*Level-2 is often the most important because it determines how actual costs and schedule data are grouped for future project cost and schedule estimating. A project manager may find it useful to know how much it took to design (major work element) a product after it had been completed so that the data can be used for future analogous estimating.*

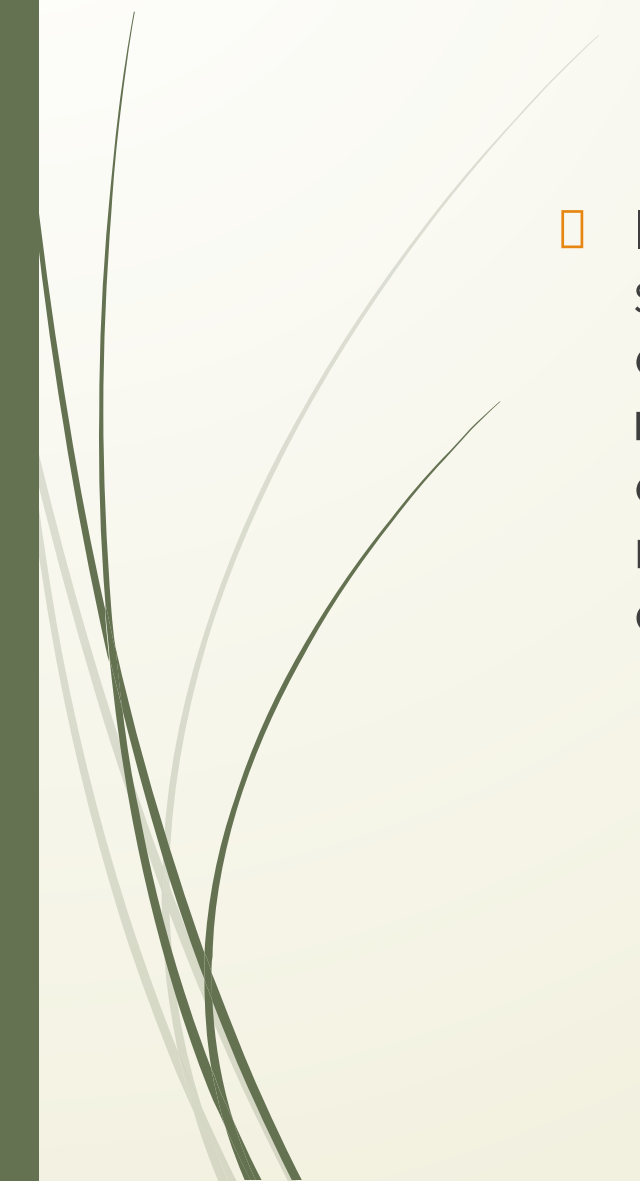


# The Four Elements in WBS Element

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- 1. The scope of work, including any “deliverables.”
  - 2. The beginning and end dates for the scope of work.
  - 3. The budget for the scope of work.
  - 4. The name of the person responsible for the scope of work.

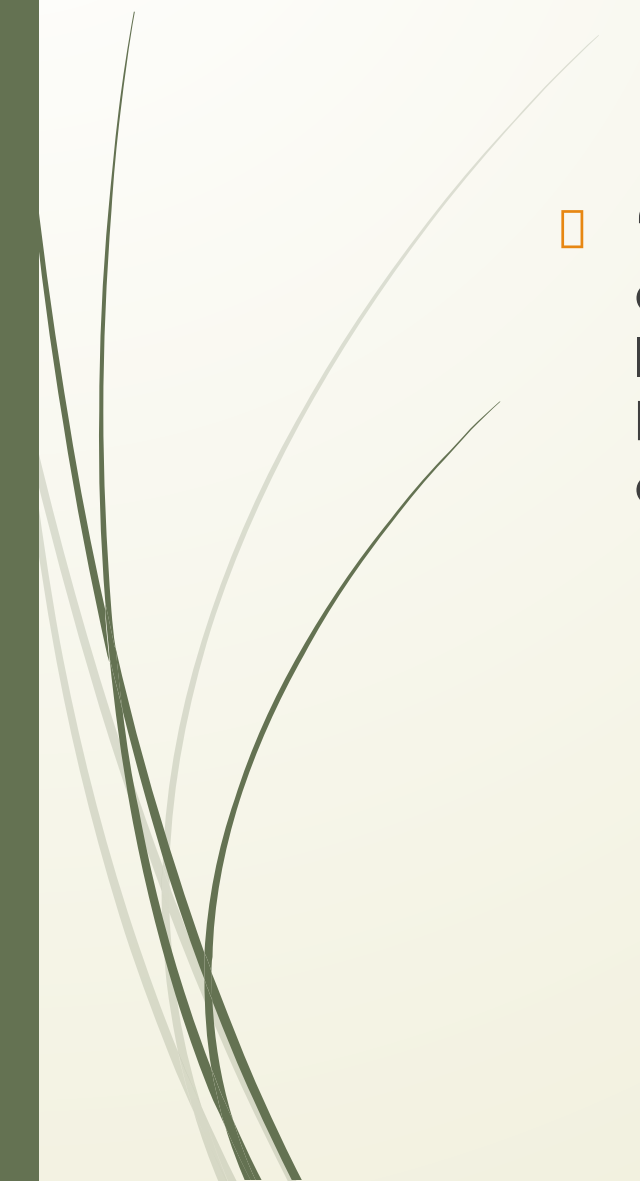


# Mutually-exclusive Elements

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- In addition to the 100% Rule, it is important that there is no overlap in scope definition between two elements of a WBS. This ambiguity could result in duplicated work or miscommunications about responsibility and authority. Likewise, such overlap is likely to cause confusion regarding project cost accounting. If the WBS element names are ambiguous, a WBS dictionary can help clarify the distinctions between WBS elements




# The 40-Hour Rule of Decomposition

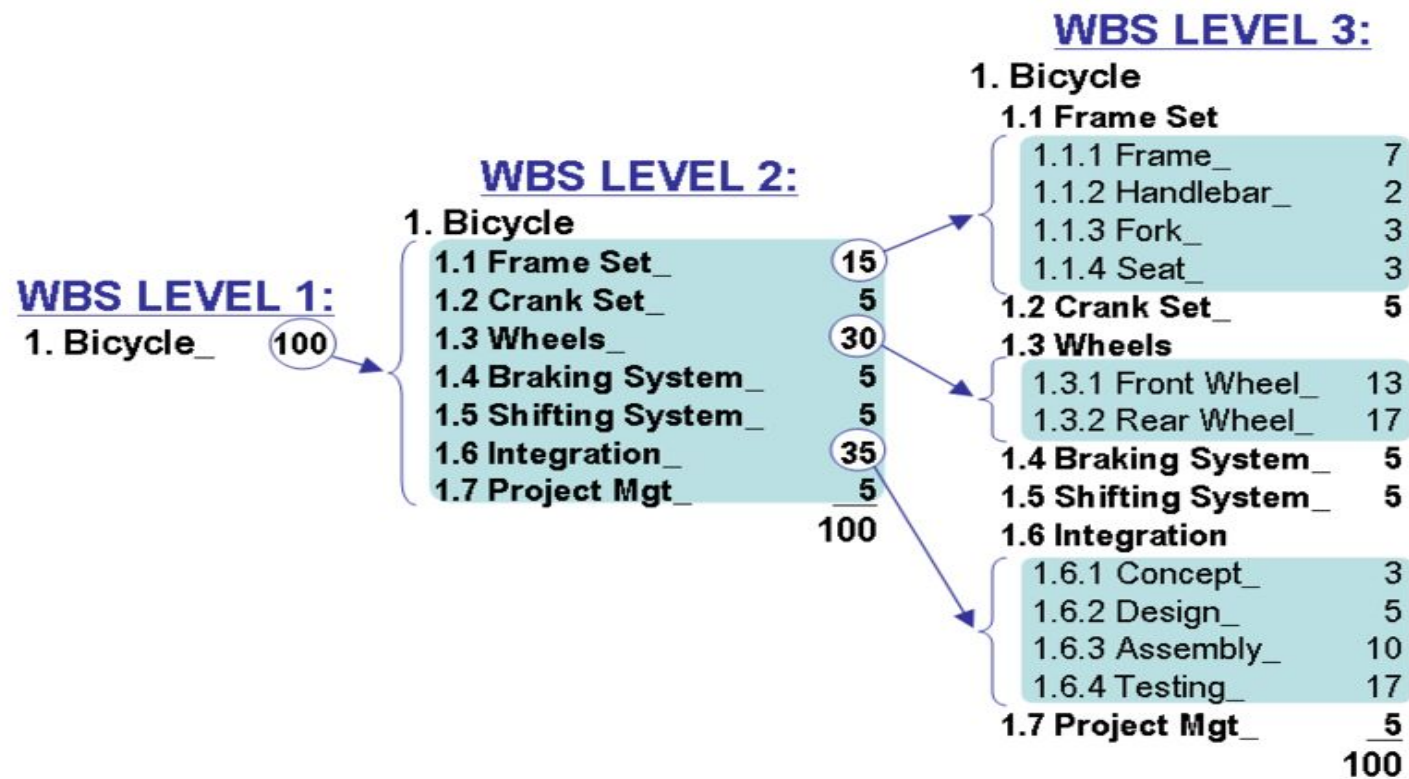
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- “40 Hour Rule.” Generally, when a project has been decomposed down to an element that has about 40 hours of allocated direct labor, there is no need to decompose further. The 40 Hour Rule is based on a 40-hour work week. Because of this, most WBS diagrams are not symmetrical.



# The 4% Rule of Decomposition

- Gary Heerkens suggests a 4% Rule for decomposing a WBS. With this rule a WBS is adequately decomposed when the lowest element is about 4% of the total project. 3 For a 26-week schedule, the lowest element should be about one week. For a \$2.6M project, the lowest level should be about \$104K.
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# WBS Identification Numbering







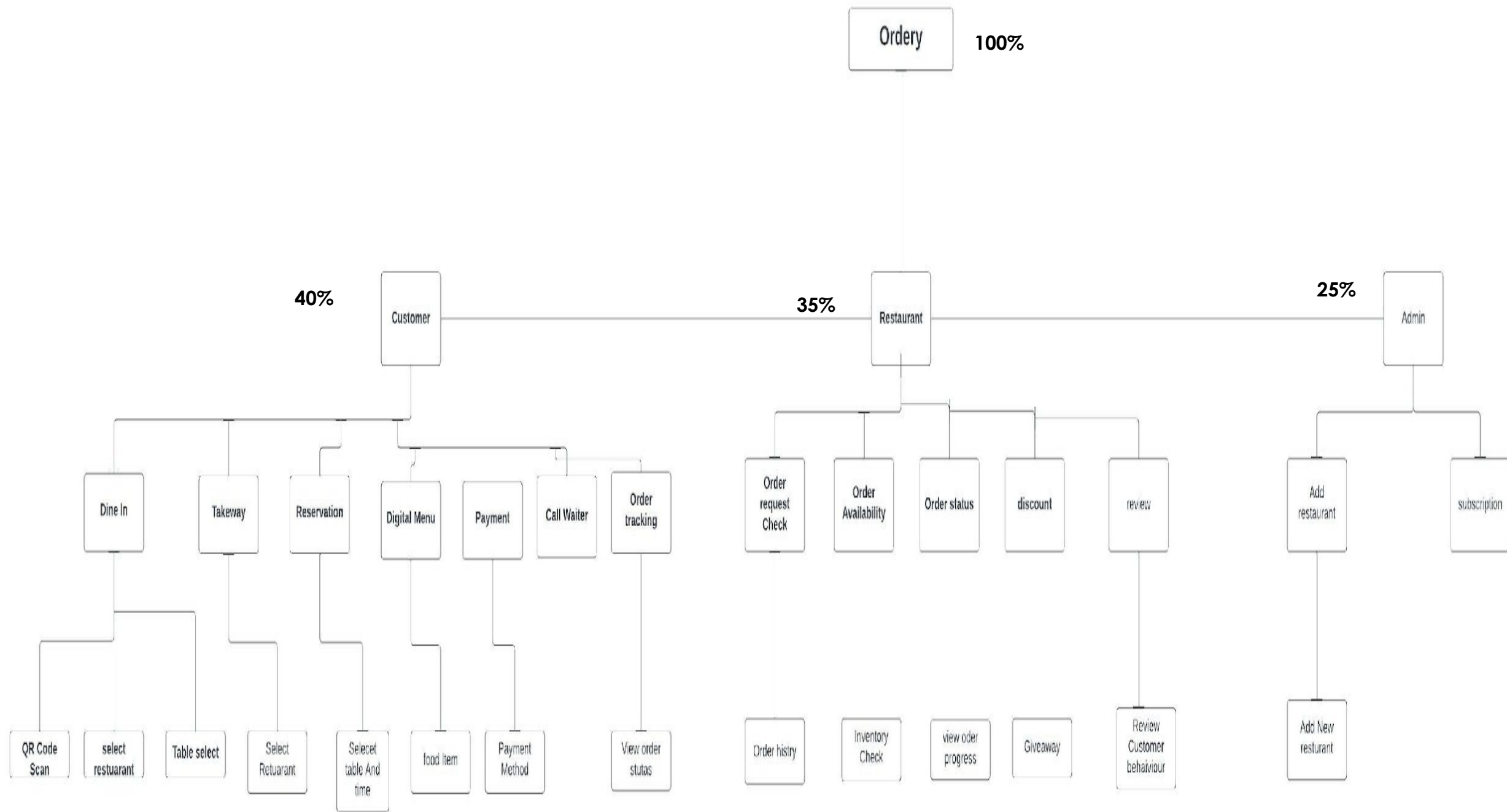
# Elements of a good work breakdown structure

- ❑ **Defined:** Your WBS should be easily understood by project participants and stakeholders.
- ❑ **Easily estimated:** Task durations, cost, and required resources can be included to estimate the cost and time necessary to complete the project.
- ❑ **Manageable:** Specific responsibilities are clearly assigned to individuals, making them easy to manage.
- ❑ **Measurable:** A WBS should include start and completion dates and assessable milestones so that progress can be accurately measured.
- ❑ **Flexible:** Your structure should be able to accommodate minor changes, such as changes in deadlines or the addition of tasks. However, keep in mind that one purpose of the work breakdown structure is to give a full picture of the deliverables expected beforehand to avoid scope creep or rework.
- ❑ **Check your WBS for accuracy.** Ensure that all of your deliverables, deadlines, and resources are correctly recorded in your visual.





WBS use In **ordery**





**Thank You**