**Work Breakdown Structure (WBS) Template**

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**Work Breakdown Structure (WBS)**

**<Project Name>**

**Company Name**

**Street Address**

**City, State Zip Code**

**Date**

# Introduction

The WBS is a view into the project which shows what work the project encompasses. It is a tool which helps to easily communicate the work and processes involved to execute the project. The Project Manager and project team use the WBS to develop the project schedule, resource requirements and costs. There are many ways you can present the WBS for your project; this template provides many of the most popular layouts from which you can choose. Depending on where in the Project Plan you're putting the WBS a different layout may be more suitable for you. For instance many Project Managers include a high level WBS within the project plan, then a detailed version as an appendix to the plan. You may find that you prefer one layout for a high level WBS and a different one for a detailed WBS.

In order to save space in this template we only developed the WBS examples down to the third level. In your project you will want to develop them down to a much more detailed level using the 8 to 80 rule (where the WBS is broken down to where a work package contains between 8 and 80 hours of work to complete).

The Work Breakdown Structure presented here represents all the work required to complete this project.

# Outline View

The outline view presents an easy to view and understand layout for the WBS. It is also a good layout to use when developing the WBS because you can easily make changes, especially since the Microsoft Word auto numbering feature updates the WBS Code automatically.

1. Widget Management System
   1. Initiation
      1. Evaluation & Recommendations

- Ý tưởng: “Game FPS sinh tồn offline, chiến đấu qua từng wave, có shop, lưu tiền…”

- Phạm vi dự án: làm game offline có quái vật, shop, wave, lưu tiền, không có online, vũ khí, lưu thành tựu.

* + 1. Develop Project Charter

- Bảng tôn chỉ được viết trong file 1150080100\_11580093\_QuanlyDACNPM \_Lab7

- Tổng hợp các phần: Tên dự án, mục tiêu, phạm vi, rủi ro, tiêu chí thành công, và tiến độ

* + 1. *Deliverable:* Submit Project Charter

- Nộp tài liệu Project Charter cho giảng viên hướng dẫn

* + 1. Project Sponsor Reviews Project Charter

- Sửa lại phạm vi, mục tiêu hoặc tiến độ nếu giảng viên yêu cầu

- Cập nhật phiên bản cuối của Project Charter.

* + 1. Project Charter Signed/Approved

- Giảng viên xác nhận bản Project Charter hoàn chỉnh.

- Nhóm chính thức được phép chuyển sang giai đoạn Planning.

* 1. Planning
     1. Create Preliminary Scope Statement
     2. Determine Project Team

- Lê Vũ Kiệt: Quản lý dự án, thiết kế UI/HUD (máu, đạn, tiền), tạo mô hình 3D, lập trình Shop & hệ thống lưu dữ liệu (PlayerPrefs), viết tài liệu và báo cáo.

- Trần Trọng Hiếu: lập trình gameplay & hệ thống vũ khí, xây dựng AI quái vật (NavMesh, FSM), kiểm thử, build game.

* + 1. Project Team Kickoff Meeting

- Tổ chức các buổi họp với giảng viên để thống nhất phạm vi, thời gian, phương pháp làm việc.

* + 1. Develop Project Plan

- Lập timeline 10–11 tuần, xác định công cụ (Unity, Blender, GitHub, Trello), tài nguyên và kế hoạch phát triển từng giai đoạn.

* + 1. Submit Project Plan

- Nộp bản Project Plan cho giảng viên, thuyết trình ngắn, nhận phản hồi chỉnh sửa.

* + 1. *Milestone:* Project Plan Approval

- Khi giảng viên duyệt kế hoạch, nhóm được phép triển khai giai đoạn.

* 1. Execution
     1. Thiết kế gameplay sinh tồn (wave, quái, tiền, shop)

- Xây dựng logic gameplay cơ bản: sinh quái theo wave, nhận tiền khi tiêu diệt, dùng tiền để mua vật phẩm.

* + 1. Thiết kế bản đồ, môi trường và ánh sáng trong UnityDesign System

- Tạo scene chính, bố trí vật thể 3D, ánh sáng, địa hình và skybox.

* + 1. Xây dựng hệ thống vũ khí (pistol, rifle, grenade)

- Tạo prefab cho từng loại vũ khí, gắn animation và cơ chế bắn, sát thương, reload.

* + 1. Lập trình nhân vật người chơi (di chuyển, bắn, reload, máu)

- Viết script điều khiển người chơi, tích hợp camera FPS, kiểm soát chuyển động và hành động.

* + 1. Testing Phase
    2. Install Live System
    3. User Training
    4. Go Live
  1. Control
     1. Project Management
     2. Project Status Meetings
     3. Risk Management
     4. Update Project Management Plan
  2. Closeout
     1. Audit Procurement
     2. Document Lessons Learned
     3. Update Files/Records
     4. Gain Formal Acceptance
     5. Archive Files/Documents

# Hierarchical Structure

The hierarchal structure is similar to the outline view but without indentation. Although this format is more difficult to read, it may be useful where you have many levels and indenting each level would make the table to large to fit into a document.

|  |  |  |
| --- | --- | --- |
| Level | WBS Code | Element Name |
| 1 | 1 | Widget Management System |
| 2 | 1.1 | Initiation |
| 3 | 1.1.1 | Evaluation & Recommendations |
| 3 | 1.1.2 | Develop Project Charter |
| 3 | 1.1.3 | Deliverable: Submit Project Charter |
| 3 | 1.1.4 | Project Sponsor Reviews Project Charter |
| 3 | 1.1.5 | Project Charter Signed/Approved |
| 2 | 1.2 | Planning |
| 3 | 1.2.1 | Create Preliminary Scope Statement |
| 3 | 1.2.2 | Determine Project Team |
| 3 | 1.2.3 | Project Team Kickoff Meeting |
| 3 | 1.2.4 | Develop Project Plan |
| 3 | 1.2.5 | Submit Project Plan |
| 3 | 1.2.6 | Milestone: Project Plan Approval |
| 2 | 1.3 | Execution |
| 3 | 1.3.1 | Project Kickoff Meeting |
| 3 | 1.3.2 | Verify & Validate User Requirements |
| 3 | 1.3.3 | Design System |
| 3 | 1.3.4 | Procure Hardware/Software |
| 3 | 1.3.5 | Install Development System |
| 3 | 1.3.6 | Testing Phase |
| 3 | 1.3.7 | Install Live System |
| 3 | 1.3.8 | User Training |
| 3 | 1.3.9 | Go Live |
| 2 | 1.4 | Control |
| 3 | 1.4.1 | Project Management |
| 3 | 1.4.2 | Project Status Meetings |
| 3 | 1.4.3 | Risk Management |
| 3 | 1.4.4 | Update Project Management Plan |
| 2 | 1.5 | Closeout |
| 3 | 1.5.1 | Audit Procurement |
| 3 | 1.5.2 | Document Lessons Learned |
| 3 | 1.5.3 | Update Files/Records |
| 3 | 1.5.4 | Gain Formal Acceptance |
| 3 | 1.5.5 | Archive Files/Documents |

# Tabular View

The Tabular View is a nicely organized table view of the WBS. It is a good option for organizations which prefer table formats.

|  |  |  |
| --- | --- | --- |
| Level 1 | Level 2 | Level 3 |
| 1 Widget Management System | 1.1 Initiation | 1.1.1 Evaluation & Recommendations  1.1.2 Develop Project Charter  1.1.3 Deliverable: Submit Project Charter  1.1.4 Project Sponsor Reviews Project Charter  1.1.5 Project Charter Signed/Approved |
| 1.2 Planning | 1.2.1 Create Preliminary Scope Statement  1.2.2 Determine Project Team  1.2.3 Project Team Kickoff Meeting  1.2.4 Develop Project Plan  1.2.5 Submit Project Plan  1.2.6 Milestone: Project Plan Approval |
| 1.3 Execution | 1.3.1 Project Kickoff Meeting  1.3.2 Verify & Validate User Requirements  1.3.3 Design System  1.3.4 Procure Hardware/Software  1.3.5 Install Development System  1.3.6 Testing Phase  1.3.7 Install Live System  1.3.8 User Training  1.3.9 Go Live |
| 1.4 Control | 1.4.1 Project Management  1.4.2 Project Status Meetings  1.4.3 Risk Management  1.4.4 Update Project Management Plan |
| 1.5 Closeout | 1.5.1 Audit Procurement  1.5.2 Document Lessons Learned  1.5.3 Update Files/Records  1.5.4 Gain Formal Acceptance  1.5.5 Archive Files/Documents |

# Tree Structure View

The Tree Structure View is the most popular format for the WBS. It presents an easy to understand view into the WBS; however, it is also tricky to create without an application specifically designed for creating this organizational chart structure. The Tree Structure below was created using only Microsoft Word and the SmartArt graphics option under the insert menu.

Widget Mgmt. System

1

Initiation

1.1

Planning

1.2

Execution

1.3

Control

1.4

Create Preliminary Scope Statement

1.2.1

Closeout

1.5

Evaluation & Recommendations

1.1.1

Develop Project Charter

1.1.2

Deliverable: Submit Project Charter

1.1.3

Project Sponsor Reviews Project Charter

1.1.4

Project Charter Signed/Approved

1.1.5

Determine Project Team

1.2.2

Project Team Kickoff Meeting

1.2.3

Develop Project Plan

1.2.4

Submit Project Plan

1.2.5

Milestone: Project Plan Approved

1.2.6

Project Kickoff Meeting

1.3.1

Verify & Validate User Requirements

1.3.2

Design System

1.3.3

Procure Hardware/Software

1.3.4

Install Development System

1.3.5

Testing Phase

1.3.6

Install Live System

1.3.7

User Training

1.3.8

Go Live

1.3.9

Project Management

1.4.1

Project Status Meetings

1.4.2

Risk Management

1.4.3

Update Project Management Plan

1.4.4

Audit Procurement

1.5.1

Document Lessons Learned

1.5.2

Update Files/ Records

1.5.3

Gain Formal Acceptance

1.5.4

Archive Files/ Documents

1.5.5

# WBS Dictionary

The WBS Dictionary contains all the details of the WBS which are necessary to successfully complete the project. Most importantly it contains a definition of each Work Package which can be thought of as a mini scope statement. Resources on the project will look at the WBS dictionary to determine the scope of the Work Package they've been assigned, so it's important to be clear when writing the definition. Most WBS dictionaries contain more information than we show in our sample. These things usually include Level of Effort, Cost Control Numbers, Resource Assignments, Responsibility Assignments - just to name a few.

| Level | WBS Code | Element Name | Definition |
| --- | --- | --- | --- |
| 1 | 1 | Widget Management System | All work to implement a new widget management system. |
| 2 | 1.1 | Initiation | The work to initiate the project. |
| 3 | 1.1.1 | Evaluation & Recommendations | Working group to evaluate solution sets and make recommendations. |
| 3 | 1.1.2 | Develop Project Charter | Project Manager to develop the Project Charter. |
| 3 | 1.1.3 | Deliverable: Submit Project Charter | Project Charter is delivered to the Project Sponsor. |
| 3 | 1.1.4 | Project Sponsor Reviews Project Charter | Project sponsor reviews the Project Charter. |
| 3 | 1.1.5 | Project Charter Signed/Approved | The Project Sponsor signs the Project Charter which authorizes the Project Manager to move to the Planning Process. |
| 2 | 1.2 | Planning | The work for the planning process for the project. |
| 3 | 1.2.1 | Create Preliminary Scope Statement | Project Manager creates a Preliminary Scope Statement. |
| 3 | 1.2.2 | Determine Project Team | The Project Manager determines the project team and requests the resources. |
| 3 | 1.2.3 | Project Team Kickoff Meeting | The planning process is officially started with a project kickoff meeting which includes the Project Manager, Project Team and Project Sponsor (optional). |
| 3 | 1.2.4 | Develop Project Plan | Under the direction of the Project Manager the team develops the project plan. |
| 3 | 1.2.5 | Submit Project Plan | Project Manager submits the project plan for approval. |
| 3 | 1.2.6 | Milestone: Project Plan Approval | The project plan is approved and the Project Manager has permission to proceed to execute the project according to the project plan. |
| 2 | 1.3 | Execution | Work involved to execute the project. |
| 3 | 1.3.1 | Project Kickoff Meeting | Project Manager conducts a formal kick off meeting with the project team, project stakeholders and project sponsor. |
| 3 | 1.3.2 | Verify & Validate User Requirements | The original user requirements is reviewed by the project manager and team, then validated with the users/stakeholders. This is where additional clarification may be needed. |
| 3 | 1.3.3 | Design System | The technical resources design the new widget management system. |
| 3 | 1.3.4 | Procure Hardware/Software | The procurement of all hardware, software and facility needs for the project. |
| 3 | 1.3.5 | Install Development System | Team installs a development system for testing and customizations of user interfaces. |
| 3 | 1.3.6 | Testing Phase | The system is tested with a select set of users. |
| 3 | 1.3.7 | Install Live System | The actual system is installed and configured. |
| 3 | 1.3.8 | User Training | All users are provided with a four hours training class. Additionally, managers are provided with an additional two hours class to cover advanced reporting. |
| 3 | 1.3.9 | Go Live | System goes live with all users. |
| 2 | 1.4 | Control | The work involved for the control process of the project. |
| 3 | 1.4.1 | Project Management | Overall project management for the project. |
| 3 | 1.4.2 | Project Status Meetings | Weekly team status meetings. |
| 3 | 1.4.3 | Risk Management | Risk management efforts as defined in the Risk Management Plan. |
| 3 | 1.4.4 | Update Project Management Plan | Project Manager updates the Project Management Plan as the project progresses. |
| 2 | 1.5 | Closeout | The work to close-out the project. |
| 3 | 1.5.1 | Audit Procurement | An audit of all hardware and software procured for the project, ensures that all procured products are accounted for and in the asset management system. |
| 3 | 1.5.2 | Document Lessons Learned | Project Manager along with the project team performs a lessons learned meeting and documents the lessons learned for the project. |
| 3 | 1.5.3 | Update Files/Records | All files and records are updated to reflect the widget management system. |
| 3 | 1.5.4 | Gain Formal Acceptance | The Project Sponsor formally accepts the project by signing the acceptance document included in the project plan. |
| 3 | 1.5.5 | Archive Files/Documents | All project related files and documents are formally archived. |

# Glossary of Terms

It's important that you provide a glossary of terms as some of the terms are not understood by persons without a project management background. For instance what the PMI *Practice Standard for Work Breakdown Structures* refers to as the WBS Code is commonly referred to as the WBS number.

Level of Effort: Level of Effort (LOE) is how much work is required to complete a task.

WBS Code: A unique identifier assigned to each element in a Work Breakdown Structure for the purpose of designating the elements hierarchical location within the WBS.

Work Package: A Work Package is a deliverable or work component at the lowest level of its WBS branch.

WBS Component: A component of a WBS which is located at any level. It can be a Work Package or a WBS Element as there's no restriction on what a WBS Component is.

WBS Element: A WBS Element is a single WBS component and its associated attributes located anywhere within a WBS. A WBS Element can contain work, or it can contain other WBS Elements or Work Packages.

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