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| ESEIAAT |
| [Project Title]  [Acronym] |
| Deliverable 2  Scope, Time and Cost Management |
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| Group ##-220310-PM-P2018 | [DD-MMM-AAAA] |

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# Project scope statement

*The project scope statement is the description of the project scope, major deliverables, assumptions, and constraints. The project scope statement documents the entire scope (project and product scope).*

*It describes, in detail, the project's deliverables and the work required to create those deliverables. It also provides a common understanding of the project scope among project stakeholders. It may contain explicit scope exclusions that can assist in managing stakeholder expectations.*

*It enables the project team to perform more detailed planning, guides the project team's work during execution, and provides the baseline for evaluating whether requests for changes or additional work are contained within or outside the project's boundaries*.

## Product Scope Description

*Elaborate the characteristics of the product, service, or result described in the project charter and requirements documentation.*

## Project Deliverables

***Deliverable****. Any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project. Deliverables also include ancillary results, such as project management reports and documentation.*

## Project Acceptance Criteria

*A set of conditions that is required to be met before deliverables are accepted*

## Project Exclusions:

*Generally, identifies what is excluded from the project to help to manage stakeholders' expectations*

## Project Constraints

*A limiting factor that affects the execution of a project or process. Constraints identified with the project scope statement list and describe the specific internal or external restrictions or limitations associated with the project scope that affect the execution of the project, for example, a predefined* *budget or any imposed dates or schedule milestones that are issued by the customer or performing organization. When a project is performed under an agreement, contractual provisions will generally be constraints. Information on constraints may be listed in the project scope statement or in a separate log.*

# Work Breakdown Structure (WBS)

Define project WBS

(Use graphics or tables)

1. Project

1.1. Major Deliverable

1.1.1. Control Account

1.1.1.1. Work package

1.1.1.2. Work package

1.1.1.3. Work package

1.1.1.4. Work package

1.1.2. Control Account

1.1.2.1. Work package

1.1.2.2. Work package

1.3. Major Deliverable

1.3.1. Control account

1.3.2. Control account

1.3.2.1. Work package

1.3.2.2. Work package

1.4 ….

*Level 1 represents the total project. At Level 2 the project is broken down into several (usually between 4 and 10) major elements or subprojects. These subprojects should conform to the deliverables or work areas specified in the scope statement. All of the subprojects when taken together must make up the total project effort.*

## Activity list

Table 1. List of project activities

|  |  |  |
| --- | --- | --- |
| **WBS-ID** | **Activity** | **Description of Work** |
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# Sequence activities

## Dependencies or logical relationship between activities

Table 2. List of activities and dependencies or logical relationship between activities

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **WBS-ID** | **Activity** | **Predecessors** | **Relationship(1)** | **Lag** |
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| (1)FS=Finish-to-Start; FF=Finish-to-Finish; SS=Start-to-Start; SF=Star-to-Finish | | | | |

## Network Diagram (Precedence Diagram Method)

# Estimate activity resources

## Resource identification

Table 3. List of resources

|  |  |  |
| --- | --- | --- |
| **Resource ID** | **Type of resource** | **Comments** |
| Resource code | People, equipment, material, supplies, locations, other | Include special grade competency, certification, licensure, or other relevant information as needed |
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## Activity resource requirement

Table 4. List of resource requirement

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| --- | --- | --- | --- |
| **[WBS-ID](#WBS_ID" \o "Unique identifier)** | **Resource ID** | **[Quantity](#Quantity" \o "Document the amount of the resource needed for the activity.)** | **[Assumptions](#Assumptions" \o "Enter assumptions associated with the resource, such as availability, certifications, and so forth.)** |
| Activity ID from WBS | Resource code | Amount needed | Include any assumption specific to resource requirement |
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| [Comments](#Comments" \o "Include information on grade, competency, or other relevant information.) | | | |
|  | | | |

## Resource Breakdown Structure

1. Project

1.1. People

1.1.1. Quantity of Role 1

1.1.1.1. Quantity of Level 1

1.1.1.2. Quantity of Level 2

1.1.1.3. Quantity of Level 3

1.1.2. Quantity of Role 2

1.2. Equipment

1.2.1. Quantity of Type 1

1.2.2. Quantity of Type 2

1.3. Materials

1.3.1. Quantity of Material 1

1.3.1.1. Quantity of Grade 1

1.3.1.2. Quantity of Grade 2

1.4. Supplies

1.4.1. Quantity of Supply 1

1.4.2. Quantity of Supply 2

1.5. Locations

1.5.1. Location 1

1.5.2. Location 2

# Estimate activity duration

Table 5. List of parametric estimates

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parametric Estimates** | | | | | |
| [**WBS ID**](#WBS_ID) | **[Effort Hours](#Effort_Hours" \o "Enter amount of labor it will take to accomplish the work; usually shown in hours, but may also be shown in days. Example: 150 hours)** | **[Resource Quantity](#Resource_Quantity" \o "Document the number of resources available. Example: 2 people)** | **[% Available](#Available" \o "Enter amount of time the resources are available; usually shown as the per-cent of time available per day or per week.  Example: 75% of the time)** | **[Performance Factor](#Performance_Factor" \o "Estimate a performance factor if appropriate. Generally effort hours are estimated based on the amount of effort it would take the average resource to complete the work. This can be modified if you have a highly skilled re-source or someone who has.......)** | **[Duration Estimate](#Duration_Estimate" \o "Divide the effort hours by the resource quantity times the percent available times the performance factor to determine the length of time it will take to accomplish the work. The equation is: Effort/(Quantity x % Available x performance factor)......) (h)** |
| x.x | 150 | 2 | 75 | 0,8 | 125 |
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Table 6. List of analogous estimates

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| **Analogous Estimates** | | | | | |
| **WBS ID** | **[Previous Activity](#Previous_Activity" \o "Enter a description of the previous activity. Example: Build a 160 square foot deck.)** | **[Previous Duration](#Previous_Duration" \o "Document the duration of the previous activity. Example: 10 days)** | **[Current Activity](#Current_Activity" \o "Describe how the current activity is different. Example: Build a 200 square foot deck.)** | **[Multiplier](#Multiplier" \o "Divide the current activity by the previous activity to get a multiplier. Example: 200/160 = 1.25)** | [**Duration Estimate**](#Duration_Estimate) |
| x.x | Build 160 Sq. ft. deck | 10 days | Build 200 Sq. ft. deck | 200/160 = 1.25 | 10 x 1,25 = 12,5 days |
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Table 7. List of three point estimates

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| --- | --- | --- | --- | --- | --- |
| **Three Point Estimates** | | | | | |
| **WBS ID** | **[Optimistic Duration](#Optimistic_Duration" \o "Determine an optimistic duration estimate. Optimistic estimates assume everything will go well and there won’t be any delays in material and that all resources are available and will perform as expected. Example: 20 days)** | **[Most Likely Duration](#Most_Likely_Duration" \o "Determine a most likely duration estimate. Most likely estimates assume that there will be some delays but nothing out of the ordinary. Example: 25 days)** | **[Pessimistic Duration](#Pessimistic_Duration" \o "Determine a pessimistic duration estimate. Pessimistic estimates assume there are significant risks that will materialize and cause delays. Example: 36 days)** | **[Weighting Equation](#Weighting_Equation" \o "Weight the three estimates and divide. The most common method of weighting is the Beta Distribution: tE= (tO + 4 tM + tP)/6 Example= (20+4(25) +36)/6)** | **[Expected Duration Estimate](#Expected_Duration_Estimate" \o "Enter the expected duration based on the Beta Distribution calculation. Example: 26 days)** |
| x.x | 20 | 25 | 36 | (o + 4m + p)/6 | 26 |
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# Project Schedule

*Gantt chart (identify critical path and milestones)*

# Activity Attributes (at Work Package level)

Table 8. Activity X attributes

|  |  |  |
| --- | --- | --- |
| **WBS-ID:**  *This identifies where this activity can be found in the WBS.* | | **Activity:**  *This is the name of the activity from the project activity list.* |
| **[Description of Work:](#Description_of_Work" \o "A description of the activity in enough detail that the person(s) performing the work understand what is required to complete it.)**  *This information includes a detailed description of the work to be performed for this activity and should be consistent with what is provided in the project activity list.* | | |
| **[Predecessors](#Predecessors" \o "Identify any predecessor activities that must occur before the activity.)** | **[Relationship](#Relationship" \o "Describe the nature of the relationship between predecessor or successor activities, such as start-to-start, finish-to-start, or finish-to-finish.)** | **[Lag](#Lead_or_Lag" \o "Any required delays between activities (lag) or accelerations (lead) that apply to the logical relationships.)** |
| *This section lists other activities which must occur before this activity.* | *This describes if the predecessor has a start-start, start-finish or other type of scheduling relationship.* | *This section describes any dependencies on predecessor activities like lead times, lag times or other requirements.* |
| **Number and Type of Resources Required:**  *The number and roles of people to complete the work* | **[Skill Requirements:](#Skill_Requirements" \o "Document the number and roles of people needed to complete the work.)** *The level of skill necessary to complete the work (expert, average, novice or applicable job level)* | **Other Required Resources:**  *Any equipment, supplies, or other type of resources needed to complete the work* |
| **[Type of Effort:](#Type_of_Effort" \o "Indicate if the work is a fixed duration, fixed amount of effort, level of effort, apportioned effort, or other type of work.)**  *Indicate if the work is fixed duration, fixed amount of work or fixed amount of effort* | | |
| **[Location of Performance:](#Location_of_Performance" \o "If the work is to be completed somewhere other than at the performing organization’s site, indicate the location.)**  *If the work is to be completed somewhere other than at the performing organization site, indicate location* | | |
| **[Constraints:](#Constraints" \o "Document any limitations associated with the activity such as finish-no-later-than dates, approaches to work, resources, etc.)** *Indicate any fixed delivery dates, milestones or other constrains* | | |
| [**Assumptions:**](#Assumptions)*List any assumption about resources availability, skill sets, or other assumptions that impact activity* | | |

# Cost estimating

## Level of accuracy

*State the degree at which activity cost estimates will be rounded up or down (e.g., 100.49€ to 100€, or 995.59€ to 1.000€), according to the scope of the activities and magnitude of the project.*

## Cost estimation worksheet

Table 9. List of parametric estimates

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parametric Estimates** | | | | |
| **WBS ID** | **Variable Cost** | **Cost per Unit (m.u./ud)** | **Number of Units (uds)** | **Cost Estimate (€)** |
| *1.1* | *Square feet* | *9.50* | *36* | *342* |
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Table 10. List of analogous estimates

| **Analogous Estimates** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **WBS ID** | **Previous Activity** | **Previous Cost (m.u.)** | **Current Activity** | **Multiplier** | **Cost Estimate (€)** |
| *1.1* | *Build 160 m2 deck* | *5000* | *Build 200 m2 deck* | *1.25* | *6250* |
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Table 11. List of three point estimates

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| **Three Point Estimates** | | | | | |
| **WBS ID** | **Optimistic Cost (m.u.)** | **Most Likely Cost (m.u.)** | **Pessimistic Cost (m.u.)** | **Weighting Equation** | **Expected Cost Estimate (€)** |
| *1.1* | *4000* | *5000* | *7500* | *(o+4m+p)/6* | *5250* |
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## Activity cost estimation

Table 12. List of activity cost estimation

| **WBS ID** | **Resource** | **Direct Costs** | **Method** | **Confidence Level** | **Reserve** | **Indirect Costs** | **Estimate** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *From WBS* | *Type of resource, labor, material, etc.* | *Costs related to the project* | *Method used, such as parametric analogous, etc.* | *Degree of confidence in the estimate* | *Contingency reserve amounts (at WP level)* | *Indirect costs* | *Approximate cost* |
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# Cumulative costs

## Cumulative cost curve

*Establish the cost baseline of the project*

## Budget at completion

*Establish the expected budget of the project*