Work package

The work package is a part of the work breakdown structure. It is a self-contained service to be provided within a project. Within a work package it is defined which person(s) are to perform the task by what time and with what effort. Thus, work packages can also be seen .as mini-projects within a larger project

Properties of work packages

Work packages are the smallest units within a work breakdown structure and are used (in addition to sub-projects) for structuring. In contrast to sub-projects, work packages are not :subdivided further. They are characterised by a number of other features

.Are assigned to exactly one project phase or one (sub-)project

.Comprise a concrete, self-contained task

.Have a clearly defined start and end time

Are assigned to exactly one responsible person (who, however, does not necessarily have to .work on it alone)

Common mistakes with work packages

Work packages should be defined carefully and be comparable with each other. Here in :particular there are a number of pitfalls to be aware of

If work packages are defined too small, one quickly loses the overview. If they are too large, .planning becomes coarse-grained and error-prone

If work packages do not have a clearly defined responsible person, they will not be .completed or will be completed several times

If the individual operations or results of a work package are not clearly defined, problems .occur with the following work packages

Define the scope of work packages

In order to be able to meaningfully monitor the progress of work packages in terms of project controlling, the scope of a work package should be coordinated with the reporting cycle. For example, if the project participants meet weekly for a meeting, the individual work packages should ideally not last longer than a week. In this way, deviations can be identified .quickly and resolved in a timely manner

A simple rule of thumb is that work packages should have a scope of about 5 to 20 person-days and cover about 5 % of the total project scope. However, this is only a rough guide; deviations may be appropriate in individual cases. Project planning tools can help to manage A work package is the smallest unit .work packages efficiently with good task management

of a Work Breakdown Structure. When preparing a Work Breakdown Structure using the decomposition technique, deliverables are generally broken down into smaller, more .manageable chunks of work

This process of deconstruction continues until the deliverables are small enough to be considered work packages. Each of these packages should be small enough to help the Project Manager estimate the duration and the cost. Work packages can be scheduled, cost EbooksVideo TutorialsFree Practice Tests.estimated, monitored, and controlled

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The Importance of Work Packages in Project Scope Management

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If you're studying for the project management professional exam, you probably know there's a lot to learn. When it comes to project scope management, the concept of work packages is a key topic to learn. Work packages are important when preparing the Work Breakdown Structure (WBS) for any project.

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What is Work Package?

A work package is the smallest unit of a Work Breakdown Structure. When preparing a Work Breakdown Structure using the decomposition technique, deliverables are generally broken down into smaller, more manageable chunks of work.

This process of deconstruction continues until the deliverables are small enough to be considered work packages. Each of these packages should be small enough to help the Project Manager estimate the duration and the cost. Work packages can be scheduled, cost estimated, monitored, and controlled.

Why are Work Packages Important?

By breaking a project down into work packages, the development of Work Breakdown Structures becomes easier—and project managers will have a finer level of control over assignments.

Other benefits include:

Work packages allow for simultaneous work to be done on different components of a project in parallel by multiple teams. Each team follows the tasks defined for the work package and completes them by the specified deadline.

Once the teams have finished their individual work packages, the entire project comes together with seamless integration. Completion of a work package is most often overseen by a specific person: a manager, supervisor, a team lead, or a designated team member.

Even though costs are estimated at an activity level, these cost estimates are aggregated to the work package level, where they are measured, managed, and controlled.

For each work package, we can determine the direct labor costs, the direct costs for material, equipment, travel, contractual services, and other non-personal resources, as well as the indirect costs associated with each of these work packages.Measuring Work Package Performance with Earned Value Management

The performance of a work package can be measured by the earned value management measurement technique, a commonly used performance measurement metric. It integrates project scope, cost, and schedule measures to help the project management team assess and measure project performance and progress. It calls for the preparation of an integrated baseline against which the performance of the work packages can be measured for the duration of the project.

Earned Value Measurement develops and monitors three key dimensions for each work package.

Planned Value: Planned value is the authorized budget allocated to the work to be accomplished for the work package.

Earned Value: Earned value is the value of work performed expressed in terms of the approved budget assigned to the work package.

Actual Cost: Actual cost is the total cost actually incurred and recorded in accomplishing work performed for a work package.

Variances from the approved baseline are also monitored.Measuring Work Package Performance – Other Metrics

Cost Variance

It is a measure of schedule performance on a project. It is the difference between the earned value and the actual costs. The relation to determining Cost Variance is: CV = EV – AC

.Performance indices are also useful for determining project status

Cost Performance Index

The cost performance index (CPI) is a measure of the value of work completed compared to .the actual cost or progress made on the project

Relation: CPI = EV / AC

These CV and CPI values for work packages are documented and communicated to .stakeholders

Schedule performance of the project can be measured at the level of a work package

Variances in schedule can be measured for every work packageSchedule Variance

This is a measure of schedule performance on a project. It is equal to the earned value minus the planned value. Relation: SV = EV – PV

.Schedule performance indices can also be determined for every work package

Schedule Performance Index

The schedule performance index is a measure of achieved progress relative to planned .progress on a project

Relation: SPI = EV / PV

These SV and SPI values for each work package are documented and communicated to stakeholdersWork packages allow team members to have a clear understanding of their roles and responsibilities with organization charts and other aids. Various formats exist to

document team member roles and responsibilities. Most of these formats fall under three .types: hierarchical, matrix-based, and text-based

For instance, the responsibility assignment matrix (RAM) is a matrix-based chart which is used to illustrate the relationship between work packages or activities and project team members. On larger projects, a higher-level RAM can be used to define what a project team group or unit is responsible for within each work package. Also, a lower level RAM can be used within the group to designate roles, responsibilities, and level of authority for specific .activities

Risks can be managed at the level of work packages in a Work breakdown structureThe work breakdown structure is a critical input to identifying risks as it facilitates an understanding of potential risks at both micro and macro levels. Risks can be identified and subsequently .tracked at the level of work packages