

PROJECT MANAGEMENT DOCS

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DURATION ESTIMATE TEMPLATE

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DURATION ESTIMATE

COMPANY NAME
STREET ADDRESS
CITY, STATE ZIP CODE

DATE

The Estimate Activity Duration process is used to approximate the amount of time or work periods needed to complete project activities with the assigned resources. There are many inputs and considerations required for estimating activity durations. These include: scope of the activity; resource types and quantities; resources available; resource calendars; project scope statement; and other organizational and environmental factors.

This process estimates the amount of work required to complete an activity as well as the number of resources needed to complete the work. These estimates are then used to determine the number of work periods required for an activity to be completed. Any assumptions and supporting data must also be documented to support the estimates.

There are several tools and techniques that can be used to estimate activity durations. The following is a list of these tools and techniques, a brief description, and when they are typically used:

- a. **Expert Judgment** – uses historical information or information from past projects to develop estimates. Depending on size and complexity of the project this method may not be extremely accurate. Sometimes used early in the project lifecycle when there is limited information available.
- b. **Analogous Estimating** – uses information and parameters/specifications from previous projects to estimate activity durations. This may include adjusting the estimates based on the complexity of the project. This method is also used when there is limited information available for the project and may also rely on expert judgment as a part of the estimate.
- c. **Parametric Estimating** – uses a statistical or quantitative relationship between planned project activities and historical or known data to develop estimates. If it takes 2 days to pour and set 600 square feet of concrete and our project calls for 1,200 square feet of concrete then we can estimate the activity at 4 days. This method may achieve better accuracy than expert judgment or analogous estimating but relies on known data.
- d. **Three-Point Estimating** – uses a weighted average of outcomes and accounts for some uncertainty in determining the estimate. This method accounts for the most likely outcome, best case, and worst case scenarios in order to develop an estimate. The formula for this estimate is $(\text{Optimistic Estimate} + 4 * \text{Most likely Estimate} + \text{Pessimistic Estimate}) / 6$. This method may be the most accurate but also relies on the availability of data to perform the calculations. It also provides a range of estimates which helps in any reserve planning that may be required.

Depending on the organization and the project, the Estimate Activity Duration process may require contingency reserves to be identified for all or some activities. These reserves may be a set percentage of time, a specified number of work periods, or may result from calculations of an estimates range such as three-point estimating provides. These uncertainties must be planned into the project schedule. As more information becomes available during the project lifecycle, estimated activity durations and reserves may be changed and updated in all applicable project documentation.

Sample Table with Explanations Using Three-Point Estimate Technique:

Durations Estimate						
Project:					Date:	
Activity	Resource(s)	Optimistic	Most Likely	Pessimistic	Estimated Activity Duration	Reserve
This column includes a description or reference for the activity.	List name(s) of likely or known resource(s).	List the best case estimate of the time required to complete this activity.	List the most likely estimate of the time required to complete this activity.	List the worst case estimate of the time required to complete this activity.	This column lists the three point estimate calculation (Optimistic +4*Most Likely+ Pessimistic) / 6.	List the range of the estimate which must be planned for in the schedule.

Example with Sample Data:

Durations Estimate						
Project: Network Upgrade Project					Date: 04/01/20xx	
Activity	Resource(s)	Optimistic	Most Likely	Pessimistic	Estimated Activity Duration	Reserve
A	J. Doe	20 hrs.	25 hrs.	30 hrs.	25 hrs.	+/- 5 hrs.
B	B. Green C. White	35 hrs.	40 hrs.	45 hrs.	40 hrs.	+/- 5 hrs.
C	A. Smith	30 hrs.	40 hrs.	50 hrs.	40 hrs.	+/- 10 hrs.

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