

Table F-1. Technical, Cost, and Schedule Risk Factors

Technical	Cost	Schedule	Risk Factor
Existing design and off-the-shelf hardware	Off-the-shelf or catalog item		1%
Minor modifications to an existing design	Vendor quote from the established drawings	No schedule impact on any item	2%
Extensive modifications to an existing design	Vendor quote with some design sketches		3%
New design, nothing exotic	In-house estimate based on previous similar experience	Delays completion of non-critical path subsystem item	4%
New design, different from establishing designs or existing technology	In-house estimate for item with minimal experience but related to existing capabilities		6%
New design, requires some R&D but does not advance to state-of-the-art	In-house estimate for item with minimal experience and minimal in-house capability	Delays completion of critical path subsystem item	8%
New design, development of new technology which advances state-of-the-art	Top-down estimate from analogous program		10%
New design, far beyond the current state-of-the-art	Engineering judgment		15%

Table F-2. Technical, Cost, and Schedule Risk Weights

Technical	Cost	Schedule	Risk Weight
—	Material cost <i>or</i> labor rate	Same for all	1
Design or manufacturing	Material cost <i>and</i> labor rate		2
Design <i>and</i> manufacturing			4

Instructions to accompany Table F-1 and F-2:

1. Each activity is assigned a contingency.
2. The contingency for each activity is a sum of three different risk contributions: *Technical*, *Cost*, and *Schedule*.
3. Each risk contribution is calculated as a product of a *Risk Weight* and a *Risk Factor*, values for which are shown in Tables F-1 and F-2, respectively.
4. To calculate the total contingency for a particular WBS element, first evaluate the technical risk of your cost estimate from the left-hand column of Table F-2 and assign the appropriate *Risk Factor* (1%-15%). Then determine whether that element involves design and/or manufacturing and assign the appropriate *Risk Weight* (2 or 4, From Table F-1). You then multiply these numbers. You would similarly calculate the contingency associated with the cost and schedule risk of the WBS element