COCOMO

Example:

The following example of the algorithmic cost estimation using the Intermediate COCOMO Model.

The product to be developed is T2P software for a travel agency to book a flight for customers. The effort equation for aT2P product predicts 21.6 programmer-months unadjusted for the effects of the cost drivers.

E= 2.8\*(7000/1000)^1.05 = 21.6PM

To complete the effort prediction calculation, effort multipliers must be used to adjust the estimate for off-nominal aspects of the project. For instance, the software is expected to be highly complex, but this is balanced by the planned use of highly qualified analysts and programmers. The effort multipliers for this project are:

|  |  |  |
| --- | --- | --- |
| Multiplier | Rationale | Value |
| Reliability | Local use(nominal) | 1.00 |
| Database | 745KB/1000(low) | .94 |
| Complexity | (very low) | .7 |
| Timing | (nominal) | 1 |
| Storage | (nominal) | 1 |
| Machine | (low) | .87 |
| Turnaround | (low) | .87 |
| Analysts | Senior Student(nominal) | 1 |
| Experience | Not a lot experience (low) | 1.13 |
| Programmers | Senior Student(nominal) | 1 |
| Experience | No experience(low) | 1.1 |
| Experience | Two years with the language(nominal) | 1 |
| Practices | (very high) | .82 |
| Tools | (very low) | 1.24 |
| Schedule | 4 months(nominal) | 1 |

Effort Adjustment Factor (EAF) = .63

When applied to the nominal estimate, the effort adjustment factor produces an estimate of 13.6 programmer-months.

Now proceed with the estimation of the development time:

D = 2.5 \*(21.6)^.38 = 8.0 Month

Assuming that the programmers and analysts costs $8000 per person-month, the total cost of the project personnel will be DOLLARS =(13.6 PM) \*($8000 per PM) = $108,800