

7 Project cost management

Input

- Scope Baseline
- Project Schedule
- HR Plan
- Risk Register
- EEF
- OPA
- Activity Cost Est.
- Basis of Est.
- Scope Baseline
- Project Schedule
- Resource Calendar
- Contracts
- PP
- Project Funding Req's
- Work Performance Information
- OPA

Output

- Activity Cost Est.
- Basis of Estimates
- Uptd. P doc's
- Cost Performance Baseline
- Project Funding Req's
- Uptd. P doc's
- Work Performance Measurement
- Budget Forecasts
- Uptd. OPA
- Change Requests
- Uptd. PP / P doc's

Processes

Comes up with cost estimates of each activity
 Does NOT combine all estimates into one
 Better ctrl. of Projects

Determine how you will do planning - part of all mgmt. plans

Cost Mgmt. Plan includes

- How estimates are stated
- Level of accuracy
- Reporting formats
- Rules for measuring performance
- If costs include "Direct" & "Indirect" costs
- Ctrl. Threshold - Allowed variation before taking action
- Cost Change Ctrl. procedures

Estimate time & costs

Estimate what...

- Q Efforts
- Risk Efforts - Reserve Analysis
- PM's Time
- P Mgmt. Activities
- Mat.
- Direct Costs - Training
- Office expenses
- Profit (i.a.)
- Overhead Costs - Office Expenses
- Mgmt. Salaries

Type of Costs

- Direct - Travel, wages, etc.
- Indirect - Taxes, benefits, janitorial service, etc.
- Fixed - Set-Up, rent, etc.
- Variable - Mat., supplies, etc.

Life Cycle Costing

Looking at costs of whole life of PRODUCT, not just PROJECT

7.1 Estimate costs

Value Analysis

Decrease cost while maintaining scope

Expert Judgement

Top-Down Est.

Analogous Est. Predicts future with historical records & expert judgement For WHOLE P or ACTIVITY / WP

Bottom-Up Est.

Detailed est. of activity then rolled up into ctrl. accounts & finally into overall P est.

Parametric Est.

Est. by standard, historical records or calc relationships (€/m²)

Tools/Techniques

Created

- Regression Analysis
- Scatter Diagram
- Learning curve

3 Point Est. (PERT)

Range of est. calculated: $EAD \pm \sigma$

- = Start

+ = End

The further away from mean the more - risk - can go wrong

Reserve Analysis

CoQ

Cost of work to accommodate Q efforts

Scope Baseline

Details of what you are estimating

Project Schedule

Contains activities & resources assigned

HR Plan

Costs reward system

Lists intended HR

Risk Register

Costs RM

EEF

OPA

Activity Cost Est.

Basis of Estimates

Uptd. P doc's

Determine funds needed for the P (Cost Baseline & Costs Budget)

Result is BUDGET

RM activities have to have been conducted to come up with the contingency reserve

Develop budget

Cost Budget = What COMPANY invests (Cost baseline + Mgmt. reserves)

By aggregation (roll up from bottom)

Determine all roles & responsibilities

Always conduct sanity check

Go back - iterations

Always take constraints by Mgmt. into account

Consider "Cash Flow": WHEN do you need to buy what

Finalize the "how to execute & ctrl." parts of all mgmt. plans

Determine realistic & final PP & performance measurement baseline

Cost Baseline

Project Costs + Contingency Reserve

7.2 Determine budget

Tools/Techniques

Cost Aggregation

Reserve Analysis

Expert Judgement

Historical Relationships

Funding Limits

Activity Cost Est.

Basis of Est.

Scope Baseline

Project Schedule

Resource Calendar

Contracts

OPA

Cost Performance Baseline

Project Funding Req's

Uptd. P doc's

Ctrl. process indicates how the work is progressing

Allows to create forecasts

Determine if P is on track using EVM

Take action to ctrl. the project

Practises for Progress Reporting

50/50 Rule

20/80 Rule

0/100 Rule

Measure performance against performance measurement baseline

EVM

Indicates if there are potential deviations from Scope, Schedule & Cost Baseline

Can be used for forecasting performance & completion dates & costs

May result in Change Requests

PV - Value of work PLANNED to be done

EV - Value of work actually accomplished

AC - Actual costs incurred for the work accomplished

BAC - Total Budget

EAC - Forecast of total P costs

ETC - Forecast "from now on" how much MORE to finish

VAC - How much over / under budget at end

7.3 Control costs

Measure performance against other metrics determined by PM

Determine variances & if they warrant corrective actions or change request

Influence factors that cause change

Request changes

Changes must be communicated with stakeholders & team

Create forecasts

EV Mgmt.

Forecasting

Tools/Techniques

TCPI

Performance Reviews

Variance Analysis

PP

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