

Cost Engineer

FF05 Finance, control and administration · ISCO-08 2413 · CBS 0412 Financial specialists and economists · seniority medior · Also known as: Cost Estimator, Cost Controller

Estimates and monitors the costs of technical projects, compares budget with actual spending and flags cost overruns during execution.

The cost engineer works at the intersection of engineering and finance and translates technical scope into cost, from materials to labour hours. Unlike a business controller, they focus on a specific project or investment rather than ongoing business results. Selection often looks at numerical skill, while flagging an impending overrun early to a project leader who would rather push on than admit the problem makes the difference to the project's final outcome in practice.

Key figures for this profile

24 skills · 5 competencies to measure · 6 knockout skills · centre of gravity: Cognitive ability and problem solving 24%, Business operations, commerce and entrepreneurship 23%, Professional knowledge domains 20%

1 Competencies to measure

These are the behavioural and ability constructs in this profile. Each one shows which hrmforce questionnaire measures it.

Competencies to measure	Target level	hrmforce instrument	Assessment method	Behavioural anchor at target level
Accuracy and attention to detail Competency (50-framework): Accuracy	 N4	Big Fifty, 360 Feedback	Personality questionnaire	Builds check moments into the own process, keeps track of errors and prevents repetition by adjusting the method.

Competencies to measure	Target level	hrmforce instrument	Assessment method	Behavioural anchor at target level
Numerical reasoning	 N4	Ability Scan	Cognitive ability test	Combines two data sources, calculates the development over time and explains which calculation step leads to which result.
integrity and dependability Competency (50-framework): Integrity	 N4	Big Fifty (Integrity Scale), 360 Feedback, Structured interview	Personality questionnaire	Reports a possible conflict of interest on own initiative and asks for review before a decision is taken.
Discipline and keeping commitments Competency (50-framework): Discipline	 N3	Big Fifty, 15PF, 360 Feedback	Personality questionnaire	Commits only to what is feasible, tracks own commitments and informs those involved as soon as a deadline comes under pressure.
Managing workload pressure Competency (50-framework): Stress resilience	 N3	Big Fifty, Competency Check, Pulse Survey	Structured interview	Cuts or shifts tasks independently when busy on the basis of importance, records this and discusses consequences with clients.

2 Full skill profile

Every skill in this profile, sorted by weight. The behavioural anchor under each skill belongs to the target level.

T	Skill	Target level	Weight	Knockout	Assessment method	hrmforce instrument
V	Quantitative interpretation Translates monthly figures into three concrete findings, names the measurement uncertainty and warns when numbers are too small.	 N4	5	yes	Work sample test	Ability Scan, Work sample test
G	Accuracy and attention to detail Builds check moments into the own process, keeps track of errors and prevents repetition by adjusting the method.	 N4	5	no	Personality questionnaire	Big Fifty, 360 Feedback
V	Budgeting and cost control Makes the budget for an own project, follows realisation per period and proposes measures in case of deviation.	 N4	5	yes	Work sample test	Knowledge test (client-specific), Work sample test
V	Financial administration Independently closes the monthly administration, explains differences between subledger and general ledger and corrects incorrect entries.	 N4	5	yes	Work sample test	Work sample test, Knowledge test (client-specific)
V	Controlling and management information Independently analyses budget variances, traces them to operational causes and advises the manager on adjustment.	 N4	5	yes	Work sample test	Work sample test, Knowledge test (client-specific)

T	Skill	Target level	Weight	Knockout	Assessment method	hrmforce instrument
A	Numerical reasoning Combines two data sources, calculates the development over time and explains which calculation step leads to which result.	 N4	4	no	Cognitive ability test	Ability Scan
G	integrity and dependability Reports a possible conflict of interest on own initiative and asks for review before a decision is taken.	 N4	4	no	Personality questionnaire	Big Fifty (Integrity Scale), 360 Feedback, Structured interview
T	Spreadsheets and worksheets Builds a worksheet with linked formulas and pivot tables, checks for errors and explains the calculation logic to colleagues.	 N4	4	yes	Work sample test	Knowledge test (client-specific), Work sample test
K	Reading and interpreting financial reports Compares reports across several periods, calculates ratios and names which items explain the deviation.	 N4	4	no	Knowledge test	Knowledge test (client-specific)
V	Business case and investment analysis Builds an own business case with scenarios, makes the assumptions explicit and defends the outcome in the meeting.	 N4	4	yes	Work sample test	Work sample test, Knowledge test (client-specific)
V	Business reporting Builds a report from question to conclusion, separates fact from interpretation and phrases recommendations with a named owner.	 N3	4	no	Work sample test	Work sample test, Competency Check

T	Skill	Target level	Weight	Knockout	Assessment method	hrmforce instrument
V	Problem analysis Splits a recurring complaint into possible causes, tests these with own data and names the most likely cause.	 N3	3	no	Assessment centre	Competency Check, Ability Scan
V	Methodical working Chooses a suitable method for a new task, records the steps and sticks to them under time pressure.	 N3	3	no	On-the-job observation	Competency Check, Work sample test
V	Advisory skill Reframes the question behind the question, offers two supported options with consequences and agrees a decision moment.	 N3	3	no	Assessment centre	Competency Check, Structured interview
V	Risk management Draws up a risk list with likelihood, impact and measure per risk and reviews it periodically with those involved.	 N3	3	no	Knowledge test	Knowledge test (client-specific), Competency Check
G	Discipline and keeping commitments Commits only to what is feasible, tracks own commitments and informs those involved as soon as a deadline comes under pressure.	 N3	3	no	Personality questionnaire	Big Fifty, 15PF, 360 Feedback
V	Reporting and dashboard building Designs a dashboard together with the user, chooses indicators and definitions and processes user feedback into new versions.	 N3	3	no	Work sample test	Work sample test, Portfolio

T	Skill	Target level	Weight	Knockout	Assessment method	hrmforce instrument
V	Invoicing and accounts receivable Manages the outstanding items, follows up arrears by telephone and agrees payment schemes within the established policy.	 N3	3	no	Work sample test	Work sample test, Knowledge test (client-specific)
K	Applying basic tax knowledge Prepares the periodic value added tax return, checks the reconciliation with the ledger and corrects incorrect bookings.	 N3	3	no	Knowledge test	Knowledge test (client-specific)
K	Technical understanding Independently explains the behaviour of an installation during a fault and traces the problem back to a technical principle.	 N3	3	no	Knowledge test	Ability Scan, Knowledge test (client-specific)
V	Audit and internal control Independently designs an audit approach for a high risk process, weighs the evidence and formulates substantiated findings.	 N3	3	no	Work sample test	Work sample test, Knowledge test (client-specific)
G	Managing workload pressure Cuts or shifts tasks independently when busy on the basis of importance, records this and discusses consequences with clients.	 N3	2	no	Structured interview	Big Fifty, Competency Check, Pulse Survey
V	Process automation Runs an existing automation and reports when the outcome differs from what was expected.	 N2	2	no	Work sample test	Work sample test, Portfolio

T	Skill	Target level	Weight	Knockout	Assessment method	hrmforce instrument
K	Treasury and working capital management Prepares the daily liquidity overview under guidance and flags payments that exceed the available headroom.	 N2	1	no	Knowledge test	Knowledge test (client-specific)

3 Levels per seniority

The same profile with the job family seniority adjustment applied. Target levels are clamped to 1 to 5.

Skill	medior	senior
Quantitative interpretation	N4	N5
Accuracy and attention to detail	N4	N5
Budgeting and cost control	N4	N5
Financial administration	N4	N5
Controlling and management information	N4	N5
Numerical reasoning	N4	N5
integrity and dependability	N4	N5
Spreadsheets and worksheets	N4	N5
Reading and interpreting financial reports	N4	N5
Business case and investment analysis	N4	N4
Business reporting	N3	N4
Problem analysis	N3	N4
Methodical working	N3	N4
Advisory skill	N3	N4
Risk management	N3	N4
Discipline and keeping commitments	N3	N4
Reporting and dashboard building	N3	N4
Invoicing and accounts receivable	N3	N4
Applying basic tax knowledge	N3	N4
Technical understanding	N3	N4
Audit and internal control	N3	N4
Managing workload pressure	N3	N4
Process automation	N2	N3

Skill	medior	senior
Treasury and working capital management	N2	N3

4 The proficiency scale

Level	Label	Autonomy	Complexity	Scope	Depth of knowledge
N1	Guided	works under supervision and follows instruction	routine, one variable at a time	own task	basic understanding of terminology
N2	Applying	works independently within set frameworks	familiar situations with limited variation	own role	working knowledge, applies standard approach
N3	Proficient	sets own approach and seeks input proactively	several variables, some ambiguity	own team or process	thorough knowledge, weighs alternatives
N4	Advanced	directs others and decides on the approach	complex, with conflicting interests	several teams or a department	in-depth knowledge, advises others
N5	Leading	sets the standard and the policy	strategic, under high uncertainty	organisation, value chain or profession	authority, advances the profession

5 Behavioural anchors per skill

Anchors sit at N1, N3 and N5. N2 and N4 are deliberately not anchored: raters interpolate between them, following the O*NET convention.

Skill	N1	N3	N5
Quantitative interpretation Explains what figures, charts and key indicators mean for the question at hand and states what they do not show.	Reads a standard report and names which values lie above or below the agreed norm.	Translates monthly figures into three concrete findings, names the measurement uncertainty and warns when numbers are too small.	Decides which key indicators steer the organisation, demonstrates the pitfalls in the measurement and corrects improper use of figures.
Accuracy and attention to detail Works carefully, checks own work for errors and keeps to agreements about completeness and correctness of data.	Goes through the own work with a checklist and repairs errors found before the work is passed on.	Builds check moments into the own process, keeps track of errors and prevents repetition by adjusting the method.	Sets the standards for completeness and correctness, has samples checked and addresses teams on structural sloppiness.

Skill	N1	N3	N5
Budgeting and cost control Draws up a budget for a task, team or project, tracks spending against that budget and intervenes when overspending threatens.	Tracks spending in the supplied overview and reports deviations above the agreed limit.	Makes the budget for an own project, follows realisation per period and proposes measures in case of deviation.	Sets the budget framework for the organisation, decides on reallocation of resources and accounts for it to the board.
Financial administration Processes purchase, sales and bank entries in the accounting system, reconciles ledger accounts and delivers an auditable administration.	Posts purchase invoices to the correct ledger account under supervision and refers unclear items to the accountant.	Independently closes the monthly administration, explains differences between subledger and general ledger and corrects incorrect entries.	Designs the layout of the administration and the chart of accounts and sets guidelines for processing and control.
Controlling and management information Builds budgets, forecasts and reports, analyses differences between budget and actuals and explains them to management.	Fills the report with figures from the system under guidance and checks that the totals reconcile.	Independently analyses budget variances, traces them to operational causes and advises the manager on adjustment.	Determines the organisation's steering information, develops the planning and control toolkit and tests investment proposals for soundness.
Numerical reasoning Works with numbers, ratios and tables and draws conclusions from them about quantities, trends and relationships in numerical material.	Reads a simple table, names the highest and lowest value and calculates a percentage using a calculator.	Combines two data sources, calculates the development over time and explains which calculation step leads to which result.	Sees in complex number series which assumptions determine the outcome and sets the calculation logic that others in the organisation follow.
Integrity and dependability Acting in line with applicable standards and agreements, also without supervision, and being transparent about own interests, mistakes and doubtful cases.	Keeps to agreements and rules of conduct made and reports an own mistake to the manager.	Reports a possible conflict of interest on own initiative and asks for review before a decision is taken.	Sets the organisation's integrity standards, enforces them also with influential parties and explains the resulting choices publicly.

Skill	N1	N3	N5
Spreadsheets and worksheets Builds worksheets with formulas, references and pivot tables, checks outcomes and presents figures understandably in tables and charts.	Enters data in an existing worksheet and uses simple formulas such as sum and average as instructed.	Builds a worksheet with linked formulas and pivot tables, checks for errors and explains the calculation logic to colleagues.	Sets the standards for calculation models in the organisation and judges whether models are reliable enough for decision making.
Reading and interpreting financial reports Reads balance sheet, profit and loss account and cash flow statement and derives from these how an organisation or unit stands financially.	Points out the revenue, cost and result items in a periodic report and names the period used.	Compares reports across several periods, calculates ratios and names which items explain the deviation.	Assesses annual accounts and management reports of the organisation, sets the reporting standard and advises the board on it.
Business case and investment analysis Substantiates a proposal with costs, benefits, assumptions and risks and calculates payback period and return for the decision makers.	Fills a standard business case template with supplied figures and names which data are still missing.	Builds an own business case with scenarios, makes the assumptions explicit and defends the outcome in the meeting.	Sets the calculation rules and threshold values for investments and weighs the entire investment portfolio of the organisation.
Business reporting Bringing findings, figures and recommendations together in a report that leads the reader to a decision or next step in one reading.	Fills in an existing report template with the correct figures and describes per section what has been done.	Builds a report from question to conclusion, separates fact from interpretation and phrases recommendations with a named owner.	Sets the reporting line for the whole organisation, tests the quality of steering information and accounts for outcomes to board and regulator.
Problem analysis Breaks a problem into parts, separates causes from effects and states which information is needed to move forward.	States precisely what deviates in a malfunction and which data are missing, and puts this to the supervisor.	Splits a recurring complaint into possible causes, tests these with own data and names the most likely cause.	Traces persistent organisational problems back to a few root causes and sets the analysis method that other teams will use.

Skill	N1	N3	N5
Methodical working Follows a fixed and traceable method for tasks, with steps, documentation and checks, so that others can repeat the work.	Completes the steps of a prescribed procedure in the right order and records the result.	Chooses a suitable method for a new task, records the steps and sticks to them under time pressure.	Writes the working methods for the field, has them tested in practice and revises them at fixed moments.
Advisory skill Sharpening the question of a client and delivering a well founded recommendation in a way that the receiver adopts and implements it.	Supplies requested information and explains a standard recommendation following the fixed structure used by the team.	Reframes the question behind the question, offers two supported options with consequences and agrees a decision moment.	Advises the board on issues with conflicting interests, challenges established assumptions and safeguards the quality of advice across the organisation.
Risk management Identifying risks in work, projects or policy, weighing likelihood and impact, choosing control measures and periodically testing whether those measures work.	Reports unsafe or risky situations in the own work through the agreed reporting route.	Draws up a risk list with likelihood, impact and measure per risk and reviews it periodically with those involved.	Builds the risk framework of the organisation, sets risk appetite with the executive team and reports on it to the supervisory body.
Discipline and keeping commitments Sticks to agreements, procedures and commitments even without supervision, and reports in good time when a commitment turns out to be unachievable.	Arrives at the agreed time with the agreed work and reports any delay to the supervisor.	Commits only to what is feasible, tracks own commitments and informs those involved as soon as a deadline comes under pressure.	Anchors the standard for reliable follow through in working agreements and addresses anyone at any level who lets that standard slip.
Reporting and dashboard building Builds recurring reports and dashboards that show the right indicators for an agreed audience and keeps their definitions up to date.	Fills an existing dashboard or report template with current figures and checks the display for errors.	Designs a dashboard together with the user, chooses indicators and definitions and processes user feedback into new versions.	Determines which management information the organisation uses and keeps definitions unambiguous across all reporting.

Skill	N1	N3	N5
Invoicing and accounts receivable Creates and sends invoices, follows up outstanding items and takes steps on late payment up to handover to debt collection.	Creates invoices according to the assignment data and checks address, amount and payment term before sending.	Manages the outstanding items, follows up arrears by telephone and agrees payment schemes within the established policy.	Sets the credit and dunning policy of the organisation and decides on write offs and further legal steps.
Applying basic tax knowledge Knows the main rules of value added tax, payroll tax and corporate income tax and applies these to invoices, filings and simple tax questions.	Puts the correct value added tax rate on an invoice and refers questions about deviating cases to the finance department.	Prepares the periodic value added tax return, checks the reconciliation with the ledger and corrects incorrect bookings.	Determines the tax approach of the organisation, consults the tax authority and advises the board on tax risks.
Technical understanding Understands how machines, structures and installations work, recognises causes of failure and explains them using technical and physical principles.	Names the parts of a simple machine and explains, using the manual, what function each part has.	Independently explains the behaviour of an installation during a fault and traces the problem back to a technical principle.	Develops technical guidelines for the field and is consulted internally and externally on design and failure questions.
Audit and internal control Tests whether processes and records comply with rules and internal control, gathers evidence and reports findings with recommendations.	Carries out control steps under supervision according to the audit programme and records the evidence found in an orderly way.	Independently designs an audit approach for a high risk process, weighs the evidence and formulates substantiated findings.	Determines the organisation's annual audit plan and control standards and accounts for the outcomes to the board or council.
Managing workload pressure Keeps an overview when the volume of work rises, chooses what goes ahead and what does not, and puts the consequences to stakeholders.	Tells the supervisor that the work does not fit the available time and follows the choice that is made.	Cuts or shifts tasks independently when busy on the basis of importance, records this and discusses consequences with clients.	Redistributes work and capacity across departments in cases of structural overload and sets norms for sustainable workload distribution.
Process automation Analyses a recurring work process, builds or commissions automation of its steps and checks that the outcome stays reliable.	Runs an existing automation and reports when the outcome differs from what was expected.	Describes a process in steps, automates the repeatable steps and builds in checks on errors and exceptions.	Determines the organisation's automation agenda and decides which processes are and are not automated.

Skill	N1	N3	N5
Treasury and working capital management Manages liquidity, financing and payments, steers receivables, payables and stock and limits interest rate and currency risk.	Prepares the daily liquidity overview under guidance and flags payments that exceed the available headroom.	Independently builds a liquidity forecast, steers payment terms and raises the financing need in good time.	Determines the organisation's treasury policy, chooses the financing structure and hedges interest and currency risk with substantiated instruments.

6 Assessment methods and validity

The validities are the corrected meta-analytic estimates from Sackett, Zhang, Berry and Lievens (2022) in the Journal of Applied Psychology, which replace the older Schmidt and Hunter (1998) figures. The spread matters as much as the mean: with a high SD, validity varies strongly by context.

Assessment method	rho	SD	What it is
Work sample test	0.33	0.09	The candidate performs a representative work sample under standardised conditions.
Personality questionnaire	0.40	0.15	Self-report of behavioural preferences. At hrnforce the Big Fifty and the 15PF.
Cognitive ability test	0.41	0.14	Standardised test of verbal, numerical or abstract reasoning.
Knowledge test	0.40	0.13	Test of declarative job knowledge, usually assembled per client.
Assessment centre	0.29	0.09	Multiple exercises, multiple assessors, dimension-wise scoring.
On-the-job observation	-	-	Structured workplace observation with a form based on behavioural anchors.
Structured interview	0.42	0.19	Behaviour-based interview with fixed questions and a rating scale per question.

7 Assessment instruments for this job

hrnforce instrument	Skills	What it measures
Work sample test	12	Representative work sample under standardized conditions
Knowledge test (client-specific)	12	Professional knowledge test, customized for each client
Competency Check	6	Behavioral-Level Competency Assessment
Ability Scan	4	Aptitude Test: Verbal, Numerical, and Abstract Reasoning Skills
Big Fifty	3	Personality questionnaire, 150 items, 25 factors
360 Feedback	3	Multiple assessments based on behavioral anchors
Structured interview	2	Behavioral interview with a fixed structure
Portfolio	2	Evaluation of prior work against fixed criteria

hrmforce instrument	Skills	What it measures
Big Fifty (Integrity Scale)	1	
15PF	1	Personality Profile, a shorter alternative to the Big Fifty
Pulse Survey	1	Periodic measurement at the team and organizational levels

8 How to use this profile

1. Agree the profile with the hiring manager before the first candidate is measured. Weights shifted afterwards make the outcome indefensible.
2. Choose the assessment method per skill from the Assessment method column. Combine at most three methods per candidate.
3. Calibrate the assessors in a two-hour session using the anchors in chapter 5. Anchors without rater training deliver little.
4. Fill in the match calculator and discuss the gaps in the development conversation. Type A and type G are selection criteria, not one-quarter development goals.

Source: hrmforce Skills Framework 2.0, version 2.0.0, built 2026-09-08. Crosswalks to ESCO v1.2.1, O*NET 31.0, Lightcast Open Skills, SFIA 9, DigComp 3.0, EntreComp, LifeComp, GreenComp, Allit, WEF Future of Jobs 2025, ISCO-08 and the Dutch CBS occupational classification BRC 2014 edition 2025. This profile is a starting point, not a standard: align it with your own organisation before selecting on it.