

What are CE, PM & QS?

International Cost Engineering Council

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[Standards and Best Practice](#)

[International Cost Management Journal](#)

Cost Engineering and Quantity Surveying have similar and highly overlapping functions.

Quantity Surveying relates more to building design and construction, while Cost Engineering relates more to engineering projects and processes. However, Cost Engineers and Quantity Surveyors commonly work in both areas.

Cost Engineering and Quantity Surveying differ primarily in the route taken to professional qualification, not to any substantive difference in the two professions.

Project Management overlaps both Quantity Surveying and Cost Engineering in the project cost management area to some degree but most Project Management functions are quite different from those of Cost Engineering and Quantity Surveying.

The following document summarizes the conclusions of discussions held at ICEC International Congresses and endeavors to compare the similarities and differences between the three professions, **in terms of cost management matters only.**

What are Cost Engineering, Quantity Surveying and Project Management?

(A White Paper issued February 1996 and revised June 2002)

1. Cost Engineering (CE) and Quantity Surveying (QS)

Functions:

- To provide independent, objective, accurate, and reliable capital and operating cost assessments usable for investment funding and project control; and
- To analyze investment and development for the guidance of owners, financiers and contractors.

CE and QS include:

- estimates of capital or asset costs including development costs;
- estimates of operating and manufacturing costs through an asset's life cycle;
- risk assessment and analysis;
- trending of scope and cost changes;
- decision analysis;
- financial analysis (eg, net present value, rate of return, etc);
- project cost control;
- appraisals of existing assets;
- project analyses, databases, and benchmarking;
- planning and scheduling;
- siting studies, etc.;
- productive and investment needs assessment;
- facility management needs assessment;
- project feasibility and budget assessment;
- cost management;
- procurement management;
- contract administration;
- whole-life appraisals;
- quality audits;

A definition of entire scope of Project Management activity is not intended, nor should it be inferred, from this document.

- value management; and
- dispute resolution.

These are typical functions of the CE or QS but not all practitioners in the field perform all of these functions. Many specialize in a limited number of these functions.

The CE or QS provides information by:

- estimating costs and analyzing risk;
- trending and controlling costs and assessing design; and
- documenting costs.

These are interdependent and feed back to each other. They include:

- analyzing cost;
- assessing design;
- assessing risks;
- trending costs;
- advising clients;
- managing cash flows;
- preparing feasibility analyses; and
- assessing life-cycle costs.

2. Project Management (on cost management matters only) (PM)

Function: To set project objectives in line with the purpose(s) set up by general management and to manage the resources necessary to meet the objectives.

PM should:

- ensure that a realistic reference (scope, cost, time) is set up for further control **and is in line with the objectives**;
- ensure that appropriate management tools are set up to help the team control the project;
- create a cost-minded atmosphere within the team;
- make decisions on what should be done in case of variance; and
- ensure that the project objectives remain in line with business needs.

PM delivers the project by:

- managing resources;

- delegating tasks;
- making decisions;
- receiving information;
- setting goals;
- motivating people; and
- understanding cost engineering and quantity surveying.

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