
CEEC
Conseil Européen des Economistes de la Construction
The European Council of Construction Economists
Canadian Institute of Quantity Surveyors
CIQS
THE QS RENAISSANCE:
REDEFINING THE ROLE FOR A SMARTER, GREENER FUTURE
QS
PEOPLE
PLANET
VALUE
Professor Janaka Ruwanpura
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BUILDING BETTER
ECONOMIES THROUGH
BETTER BUILT ENVIRONMENTS

CEEC | PROFESSIONAL TERMINOLOGY

Across CEEC, the QS role carries different local titles

This presentation uses “Quantity Surveying” as a familiar reference term. Across CEEC’s 16 European countries, comparable construction cost professionals work under different local titles.

SELECTED EXAMPLES | LOCAL TERMS SHOWN AS INDICATIVE EQUIVALENTS

UNITED KINGDOM + IRELAND
Quantity Surveyor

SWITZERLAND
Bauökonom/in

FRANCE
Économiste de la construction

GERMANY
Bauökonom / Kostenplaner

DENMARK
Byggeøkonom

CZECH REPUBLIC
Rozpočtář / Cost Manager

THE NETHERLANDS
Bouwkostendeskundige

SPAIN
Economista de la construcción

Different titles. A comparable construction cost-management role.

The work and credentials vary by country. Source: CEEC, “Who We Are” (16 countries).


FRAMING
THE MOMENT
A defining time for Quantity Surveyors
in a rapidly transforming built environment
QS
ACCELERATING CONSTRUCTION
Major projects are reshaping cities and infrastructure.
SUSTAINABILITY IMPERATIVE
Climate resilience and net-zero targets are now essential.
EVOLVING EXPECTATIONS
Clients demand greater value, transparency and long-term impact.
Prof. Janaka Ruwanpura

INTRODUCING THE

"QS RENAISSANCE

A new era where **data**, **sustainability**, and **strategic insight** redefine the role of Quantity Surveyors to shape a better built future.



A RENAISSANCE IN MINDSET & IMPACT

SMARTER THINKING
Powered by analytics and technology

SUSTAINABLE FUTURE
Embedding climate resilience and responsible value

STRONGER PARTNERSHIPS
Collaborating early to deliver better outcomes for all

Prof. Janaka Ruwanpura

FOCUS ON EUROPE

A BUILT ENVIRONMENT IN TRANSITION



Major infrastructure renewal & retrofit

Decarbonization & net zero

Digital transformation

Climate resilience & circularity

The Construction Economist / QS is becoming a **critical decision-maker in Europe's transition.**

Prof. Janaka Ruwanpura

FOCUS ON CANADA

A RESILIENT AND SUSTAINABLE TOMORROW



Infrastructure investment & renewal

Decarbonization & climate resilience

Housing & inclusive communities

Digital innovation & productivity

The QS is a critical **decision-maker** in building a stronger, more sustainable Canada for future generations.

Prof. Janaka Ruwanpura

MEGAPROJECT EXCELLENCE

BUILDING A STRONGER, MORE RESILIENT CANADA



Major projects create opportunities for **people and communities.**

But we must also **do better.**

- COST OVERRUNS
- SCHEDULE DELAYS
- UNMET EXPECTATIONS

- ECONOMIC GROWTH
- SUSTAINABLE INFRASTRUCTURE
- PRODUCTIVE COMMUNITIES
- A STRONGER CANADA

MEGAPROJECT EXCELLENCE CREATES LASTING VALUE **FOR GENERATIONS.**

Prof. Janaka Ruwanpura

BALANCING COMPLEX DEMANDS

A MORE UNCERTAIN AND INTERCONNECTED WORLD

NAVIGATING TODAY. SHAPING TOMORROW.



COST PRESSURES

Delivering greater value with constrained budgets and rising costs.



RESOURCE CONSTRAINTS

Limited natural resources, skills shortages and productivity challenges.



REGULATORY COMPLEXITY

An expanding and evolving policy, regulatory and reporting landscape.



SOCIAL EXPECTATIONS

Greater transparency, sustainability, inclusivity and long-term impact.

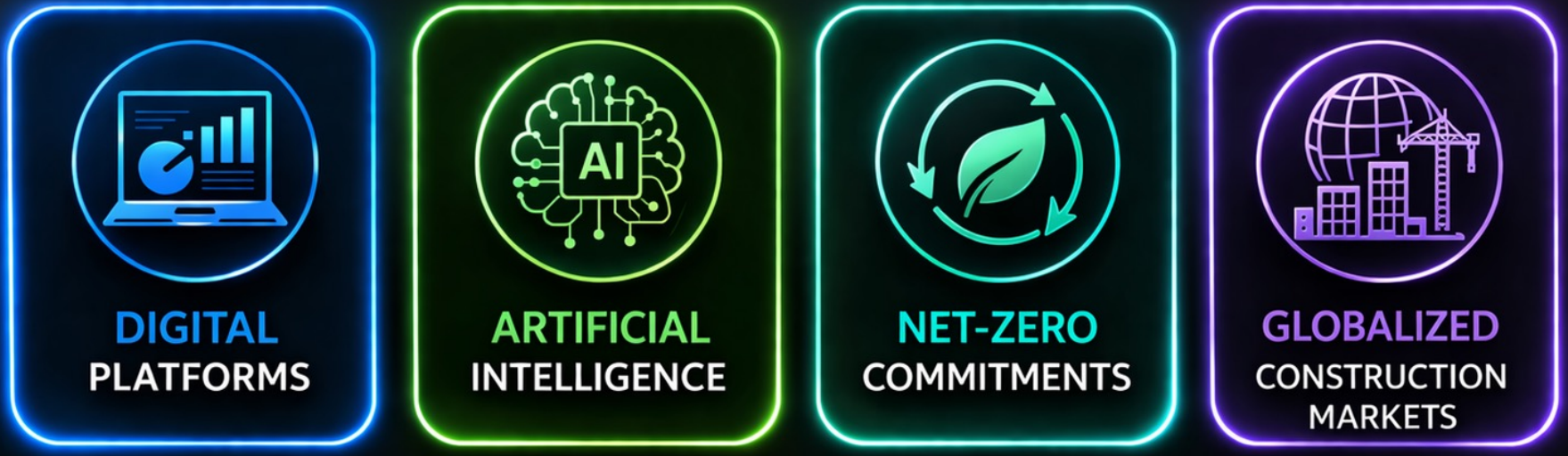
The QS navigates these competing demands to deliver **value, resilience and trust.**

Prof. Janaka Ruwanpura

THE CORE QUESTION

STRONGER FRAMING

If the quantity surveying profession were to be created today—from scratch—



Prof. Janaka Ruwanpura

THE CORE QUESTION

STRONGER FRAMING



Would it still be defined by **measurement?**



Would it still be primarily focused on **cost reporting?**



Or would it be something **much more strategic...**

much more influential...



and much more integrated into **decision-making?**

Prof. Janaka Ruwanpura

THE THREE FORCES

DRIVING CHANGE



1

DIGITAL TRANSFORMATION



2

SUSTAINABILITY AND NET-ZERO



3

CHANGING CLIENT EXPECTATIONS

Prof. Janaka Ruwanpura

THE EVOLUTION OF THE QUANTITY SURVEYING PROFESSION

From measurement to leadership— creating value for a sustainable future



01 TRADITIONAL QS

Focused on measurement and documentation. Cost control and reporting.

MEASURE



02 DIGITAL QS

Leveraging digital tools for efficiency, accuracy and real-time data.

DIGITIZE



03 INTEGRATED QS

Connecting people, processes and data across the project lifecycle.

INTEGRATE



04 STRATEGIC QS

Driving value, managing risks, optimizing outcomes and enabling decisions.

STRATEGIZE



05 FUTURE QS

A trusted advisor and leader for sustainable, resilient and future-ready built environments.

LEAD & TRANSFORM



ELEVATING QS FROM COST MANAGER TO VALUE CREATOR AND CHANGE LEADER

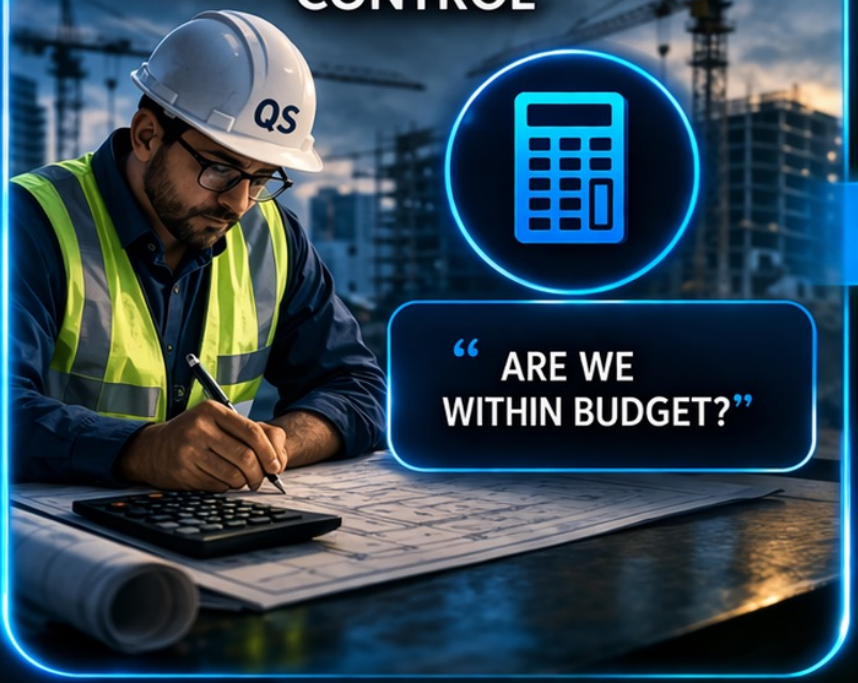
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FROM
COST CONTROLLERS
STRATEGIC VALUE MANAGERS
FOCUS: COST CONTROL
MANAGE COSTS
ENSURE COMPLIANCE
TRACK & REPORT
MITIGATE OVERRUNS
FOCUS: VALUE OPTIMIZATION
DRIVE BETTER DECISIONS
OPTIMIZE TOTAL VALUE
BALANCE COST, SUSTAINABILITY & PERFORMANCE
LEAD STRATEGIC COLLABORATION
VALUE IMPACT
COST
RISK
CARBON
RETURN
A SHIFT FROM MANAGING COSTS TO SHAPING VALUE & OUTCOMES
Prof. Janaka Ruwanpura

THE SHIFT IN EXPECTATIONS

THEN

FOCUS ON COST CONTROL



"ARE WE WITHIN BUDGET?"

NOW

FOCUS ON STRATEGIC VALUE & OUTCOMES



- ARE WE MAKING THE RIGHT INVESTMENT?
- WHAT IS THE LIFECYCLE COST?
- WHAT ARE THE RISKS & SCENARIOS?
- HOW DO WE OPTIMIZE VALUE & SUSTAINABILITY?

THE CONVERSATION HAS EVOLVED FROM COST TO VALUE

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INTEGRATION
ACROSS DISCIPLINES
DESIGN
SHAPES SOLUTIONS
COMMERCIAL
OPTIMIZES VALUE
CONSTRUCTION
DELIVERS IN PRACTICE
INTEGRATED VALUE
QS
OPERATIONS
ENSURES LONG-TERM PERFORMANCE
BETTER COLLABORATION. SMARTER DECISIONS. GREATER VALUE.
Prof. Janaka Ruwanpura

THE DIGITAL SHIFT:

5D AND BEYOND



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ENTER 5D

MORE THAN JUST A MODEL

5D BIM is not just
"3D + TIME + COST."
It is a platform for
INTEGRATED DECISION-MAKING.

It connects

- **DESIGN**
- **SCHEDULE**
- **COST**
- **PERFORMANCE & SUSTAINABILITY**



THE RESULT:

We move from static estimates to

STATIC ESTIMATES

DYNAMIC, REAL-TIME COST INTELLIGENCE

5D turns the model into a
POWERFUL DECISION ENGINE.

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DIGITAL TWINS

THE NEXT EVOLUTION

A DIGITAL TWIN IS A
LIVING, EVOLVING
DIGITAL REPRESENTATION
OF A PHYSICAL ASSET

It continuously connects:

- **DESIGN** — The plan
- **CONSTRUCTION** — The build
- **OPERATIONS** — The real asset
- **REAL-TIME DATA** — Live performance



WHAT IT ENABLES

- **CONTINUOUS MONITORING** — Live performance from day one
- **PREDICTIVE OPTIMIZATION** — Anticipate issues & improve outcomes
- **LIFECYCLE VALUE MANAGEMENT** — Optimize cost, performance & longevity

> *5D helps us make better decisions before construction...*
>
> *Digital Twins help us make better decisions **throughout the asset lifecycle.***

DIGITAL TWINS TURN DATA INTO INSIGHT,
AND INSIGHT INTO **CONTINUOUS VALUE.**

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WHAT CHANGES FOR THE QS

FROM TRADITIONAL PROCESSES TO DIGITAL, INTEGRATED DECISION-MAKING

FROM TRADITIONAL QS



MANUAL MEASUREMENT



PERIODIC REPORTING



SINGLE ESTIMATES



FOCUS ON COST ONLY

TO DIGITAL & INTEGRATED QS



MODEL-BASED QUANTIFICATION



REAL-TIME INSIGHT



SCENARIO-BASED DECISION-MAKING

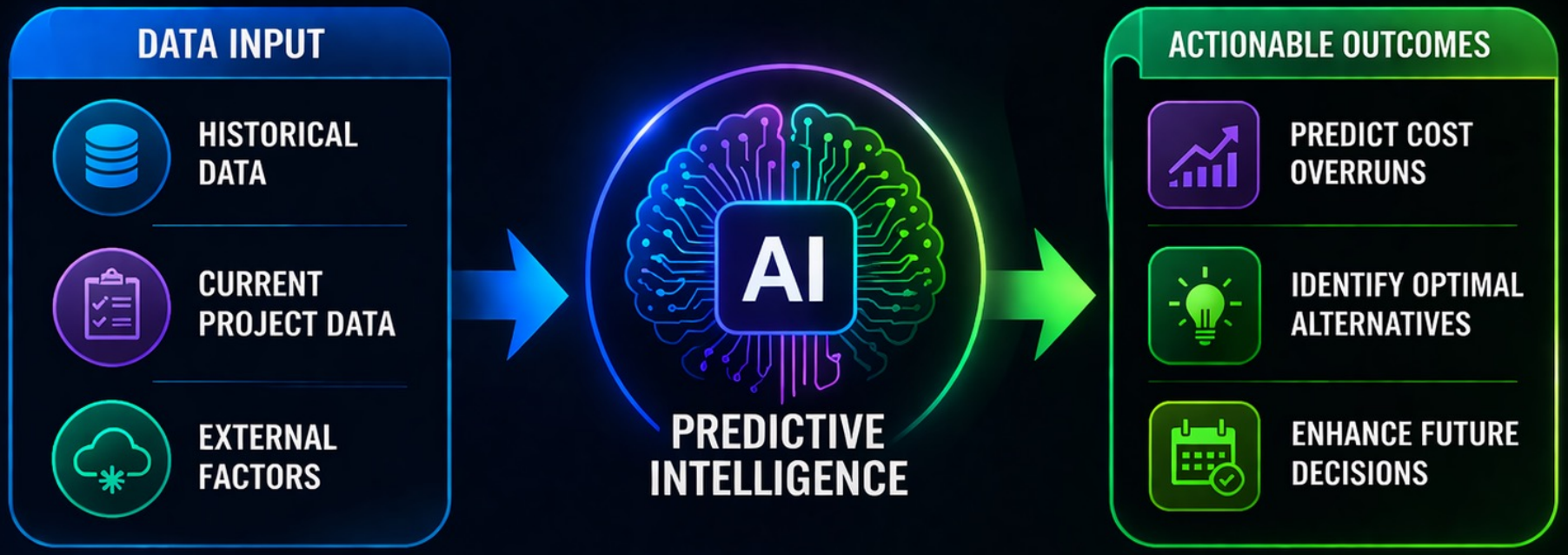


INTEGRATED VALUE METRICS

THE QS EVOLVES FROM A REPORTER TO A STRATEGIC DECISION ENABLER

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AI & PREDICTIVE INTELLIGENCE



THE RESULT:
FROM REACTIVE REPORTING → PROACTIVE, PREDICTIVE ADVISORY

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THE REAL CHALLENGE



Technology alone is not the solution.

Many organizations invest in tools—
without changing:

- PROCESSES
- WORKFLOWS
- MINDSET

And in those cases—

→ **Transformation does not happen.**

> Digital tools do not replace the Quantity Surveyor…
> They amplify the Quantity Surveyor.

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SUSTAINABILITY
COSTING THE PATH
TO NET-ZERO
Prof. Janaka Ruwanpura

THE ROLE OF QS IN SUSTAINABILITY

3 KEY AREAS

1 DRIVE VALUE & COST OPTIMISATION

2 ENABLE SUSTAINABLE DECISION-MAKING

3 LEAD & COLLABORATE FOR BETTER OUTCOMES



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CARBON-INFORMED
COSTING
MAKING CARBON A FACTOR IN EVERY COMMERCIAL DECISION
MEASURE
CARBON IMPACT
MONETISE
CARBON COSTS
OPTIMISE
BOTH COST & CARBON OUTCOMES
Better decisions today.
Lower cost and carbon tomorrow.
Prof. Janaka Ruwanpura


WHY
QS
IS CENTRAL
COST
VALUE
QS
RISK
SUSTAINABILITY
Prof. Janaka Ruwanpura

THE EVOLVING IDENTITY

A BROADER, MORE STRATEGIC ROLE

FROM COST EXPERT
TO VALUE CREATOR
FOR A SUSTAINABLE
BUILT ENVIRONMENT



BUILT ENVIRONMENT LEADER

Shaping resilient, sustainable and inclusive built environments.



STRATEGIC ADVISOR

Integrating cost, risk, sustainability and societal value to support better decisions.



CUSTODIAN OF VALUE & SUSTAINABILITY

Delivering long-term value for people, planet and prosperity.

The QS will continue to evolve — from **technical specialist to strategic leader,** creating value for a better, more sustainable tomorrow.

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FROM DATA TO DECISION
DATA
INTELLIGENCE
HUMAN JUDGMENT
DATA INFORMS. INTELLIGENCE GUIDES. PEOPLE DECIDE.
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HUMAN SKILLS
THAT MATTER
CRITICAL THINKING
COMMUNICATION & INFLUENCE
JUDGMENT & DECISION-MAKING
LEADERSHIP & PEOPLE FOCUS
ADAPTABILITY & RESILIENCE
Prof. Janaka Ruwanpura

Six QS Contributions to MEGAPROJECT EXCELLENCE

Strengthening Predictability. Improving Performance. Delivering Value.





1. Independent Cost Assurance

Realistic estimates and benchmarking



2. Risk & Contingency Management

Quantified uncertainty and transparent contingency



3. Procurement & Commercial Strategy

Smarter risk allocation and market-aligned delivery





4. Active Cost Management & Integrated Controls

Cradle-to-grave budget stewardship



5. Change Management & Dispute Avoidance

Disciplined decisions and fewer claims



6. Whole-Life Value

Lifecycle cost, resilience, carbon and broader societal benefits

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IMPLICATIONS FOR EDUCATION & THE FUTURE OF QS PROGRAMS

We cannot prepare tomorrow's professionals with yesterday's curriculum.

THE REALITY

QS education remains focused on:

- Measurement
- Cost estimation
- Contract administration

THE GAP

Future QS must be equipped with:

- Data & digital tools
- Sustainability & carbon literacy
- Strategic thinking & decision-making
- Communication & leadership



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ENCI 570 CAPSTONE PROJECT
Civil Engineering Expansion Building (F Block) Renovation
UNIVERSITY OF CALGARY
A future-ready learning environment inspired by nature and designed for people.
CLIENT EXPECTATION
Biomimicry – Nature-Based Solutions that are cost effective
Efficient shading and daylighting
Lightweight and efficient structures
Natural ventilation and improved indoor environmental quality
Self-cleaning surfaces and water management
SUSTAINABLE DESIGN
Lower environmental impact
COST EFFECTIVE SOLUTIONS
Value for money
PEOPLE-CENTRED LEARNING SPACES
Better learning and well-being
INNOVATIVE ENGINEERING
Real-world application for students
FUTURE-READY CAMPUS
Resilient and adaptable
Prof. Janaka Ruwanpura

How a QS Approach Enhances Value

Applying the concepts in this presentation to a real project



CLIENT EXPECTATION

Biomimicry – Nature-Based Solutions that are cost effective

- High-performance building
- Low environmental impact
- Healthy and inspiring spaces
- Value for money

01 COST OPTIMIZATION & VALUE ENGINEERING



02 SUSTAINABILITY & BIOMIMICRY PERFORMANCE



03 RISK & FEASIBILITY ASSESSMENT



04 PROCUREMENT & DELIVERY



05 WHOLE-LIFE VALUE



06 DECISION SUPPORT WITH DIGITAL TOOLS



DESIGN INTENT » QS-ENHANCED VALUE » A MORE VIABLE, SUSTAINABLE & FUTURE-READY PROJECT

THE FUTURE OF QUANTITY SURVEYING

FROM MEASURING TO SHAPING VALUE

QUANTITY SURVEYING IS
EVOLVING.
EXPANDING.
LEADING.

PEOPLE
INSIGHTS
BETTER
BUILT ENVIRONMENTS



GREATER VALUE

LOWER CARBON

HIGHER PRODUCTIVITY

MORE INCLUSIVE OUTCOMES

A stronger, more sustainable built environment through **smarter decisions.**

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WILL WE LEAD
THE CHANGE?
THIS IS THE
QS RENAISSANCE
AND IT STARTS WITH
US.
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