

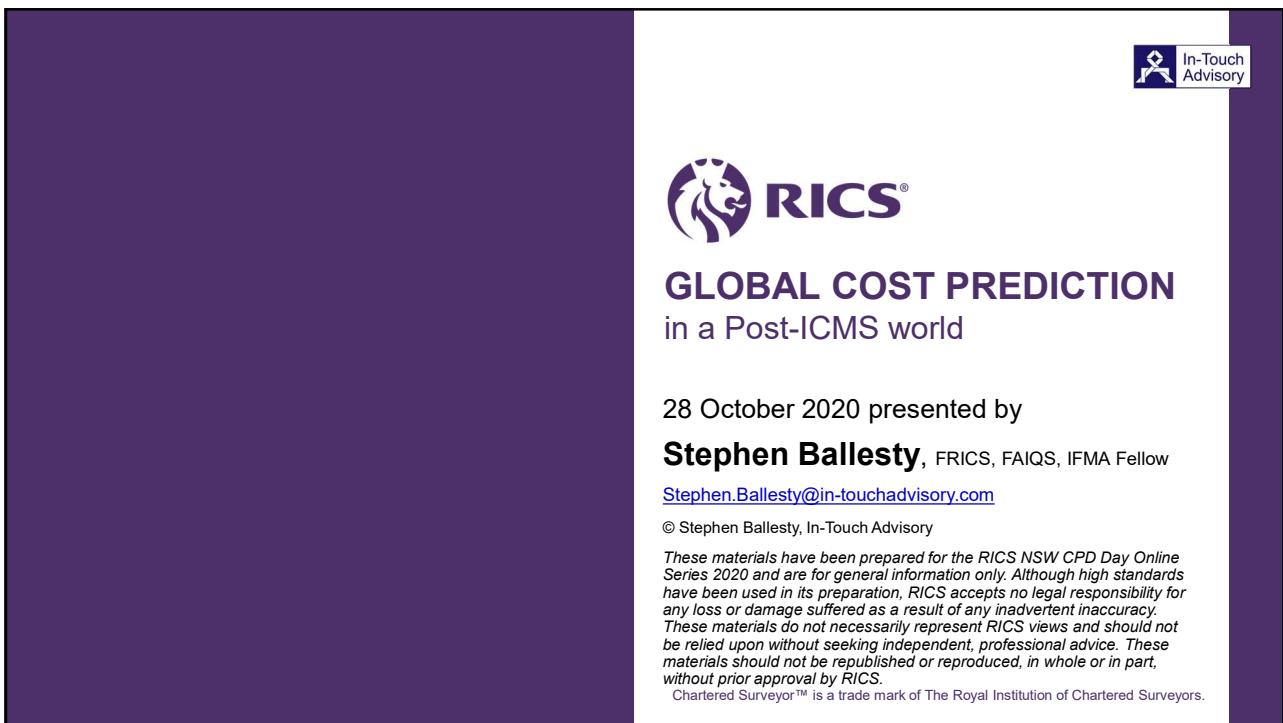



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GLOBAL COST PREDICTION in a Post-ICMS world

28 October 2020 presented by
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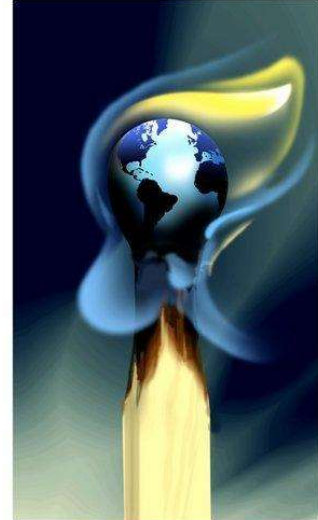
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GLOBAL COST PREDICTION in a Post-ICMS world



1. Global Challenges, Opportunities & Standardisation
2. International Construction Measurement Standard (ICMS) update, 1st & 2nd editions (2017 & 2019)
3. RICS' Professional Statement in Cost Prediction, Global (2020, tbc)



Disclaimer: It should be noted that this presentation represents a summary of the issues addressed and does not constitute advice. The views expressed in this document reflect the author's personal views, including those about any and all of the sources referred to herein. The author makes no representation as to its accuracy or completeness and the information should not be relied upon as such. All opinions and estimates herein reflect the author's judgement on the date of this document and are subject to change without notice. It is recommended that you make your own enquires and obtain the full version of the publications and sources referred to herein.



“ **Cost prediction** encompasses *estimating, cost planning, benchmarking* across the **project life cycle** for *clients, consultants and contractors* on both **buildings and infrastructure** ”

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Our Global Challenges

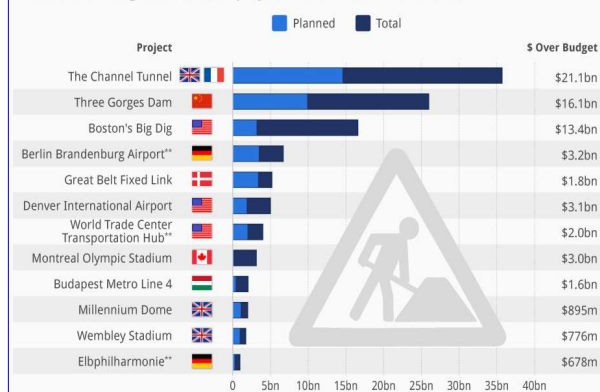


- Unacceptable level of project failures, and poor productivity levels
- Project management information systems (PMIS) not yet ubiquitous
- Slow adoption of technological change
- Mixed approach to risk contingencies
- Low profit margins and returns
- Skills labour shortages
- Sustainability concerns
- Adversarial contracting
- etc. ... and now? **COVID-19**

KPMG's 2015 Global Construction Project Owner's survey found that **"only 25% of projects are delivered on time and within budget – an extremely concerning statistic"**

Over-Budget Construction Projects In Comparison

Selected over-budget construction projects worldwide (in U.S. dollars)*

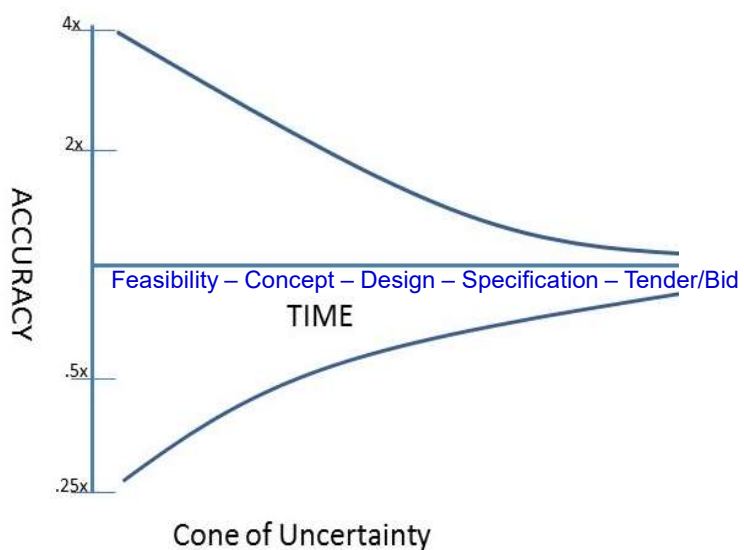


* Converted to US dollars and adjusted for inflation; ** Still not completed

@Statista.com Sources: Podio, Der Spiegel, NY Times



Estimating & Cost Planning realities



- Expectations
- Definitions
- Structure
- Measurement
- Compliance
- Forecasts
- + "exclusions"**
- Market
- Contract
- Risks
- Life cycle
- Commissioning
- Operations / FM

Out-turn cost
(also known as 'final account', 'actual cost' or 'cost outcome')



Standards Matter, and should provide ...



- a common language
- consistent reporting
- greater transparency
- increased confidence through reduced risk
- ability to performance benchmark
- measure, cost, analyse and forecast



Pursuit of global market transparency, comparability and performance benchmarking.

Global Benchmarking Challenge ... inconsistency



HOW DO YOU PRICE A CONSTRUCTION PROJECT?

It's done differently all over the world

For example...

- Do you include the cost of the land itself?
- Do you include design costs?
- Do you include the cost of furniture and equipment?
- Do you include taxes?

There are thousands of inconsistencies worldwide

- As a result **10** identical projects...
- built in **10** different countries...
- will have **10** different price tags...

*And that's before you even factor in LOCAL WAGES, MATERIALS COSTS and VARIATIONS IN CURRENCY

This could lead to cost variations of **millions of dollars**

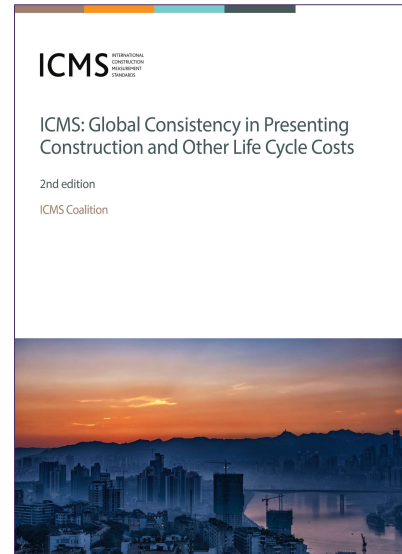
INCONSISTENT COST REPORTING PRACTICES...

Source: <https://icms-coalition.org/>

International Construction Measurement Standard



- ❑ **ICMS#1** released July 2017
- ❑ **ICMS#2** released September 2019
- ❑ **ICMS#2** scope covers buildings and civil engineering assets
- ❑ Focus on constructed assets so that **cross-boundary costs** can be consistently benchmarked and cost differences identified.
- ❑ Standards for measuring, reporting and **benchmarking** of construction project cost and life cycle costs



Free ICMS downloads: <https://icms-coalition.org/>

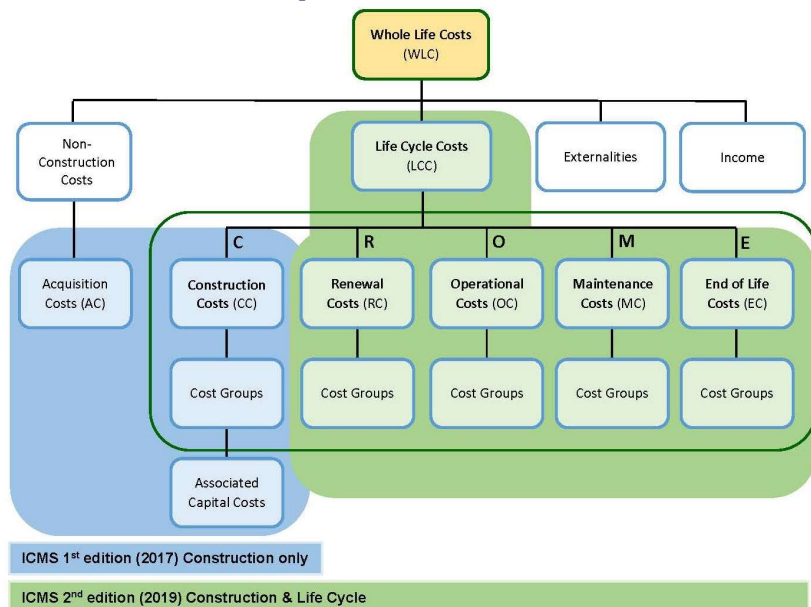


ICMS 1st ed. versus 2nd ed. Comparison

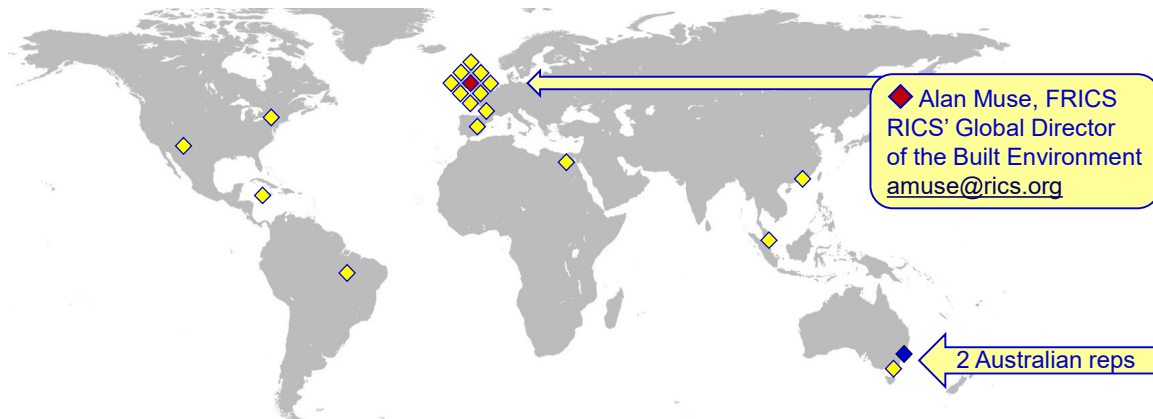


ICMS#2 (2019) defines **CROME** as the new framework:

- ❑ **C**onstruction
- ❑ **R**enewal
- ❑ **O**perational
- ❑ **M**aintenance
- ❑ **E**nd of Life



RICS' Cost Prediction Professional Statement, Global



- 22 participants from 12 countries
- East & West calls over two (2) years
- Three (3) workshops in London
- Additional research and consultation
- ICMS based, then ICMS2 alignment
- Report release due **late 2020**



RICS' Cost Prediction Professional Statement, Global



“Different markets and construction sectors undertake cost prediction in different ways. This professional statement elicits the key principles from these various approaches to signpost best practice from around the world”.



RICS' Cost Prediction Professional Statement, Global



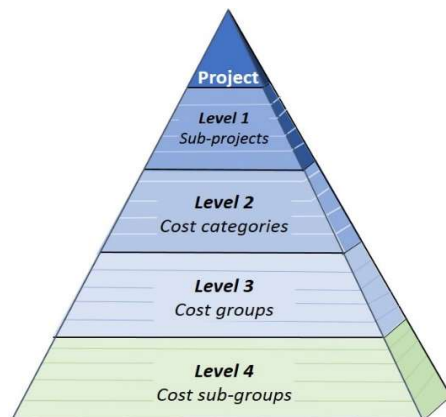
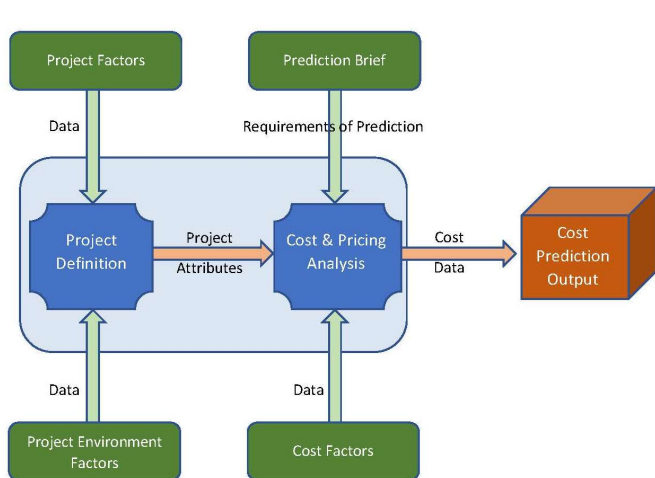
1st edition Report for a 2020 release



RICS' Cost Prediction Professional Statement, Global



Examining cost planning and control techniques



ICMS #2 alignment

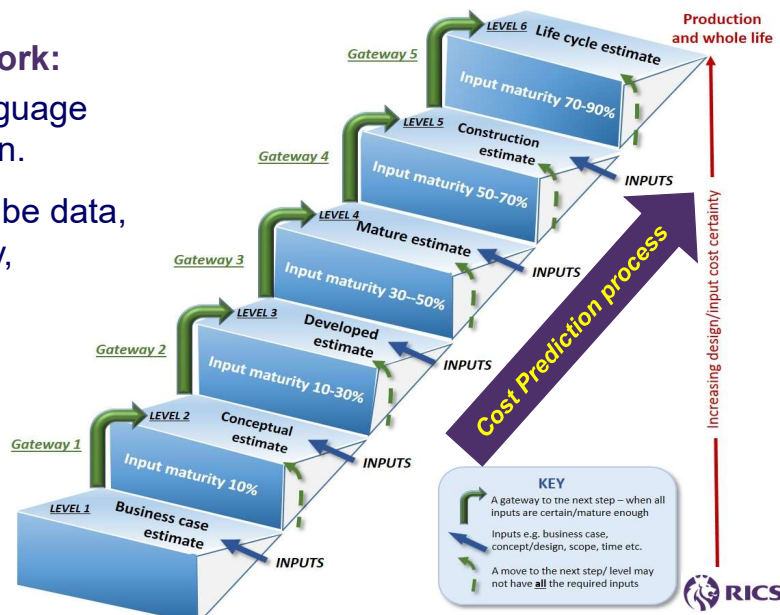


RICS' Cost Prediction Professional Statement, Global

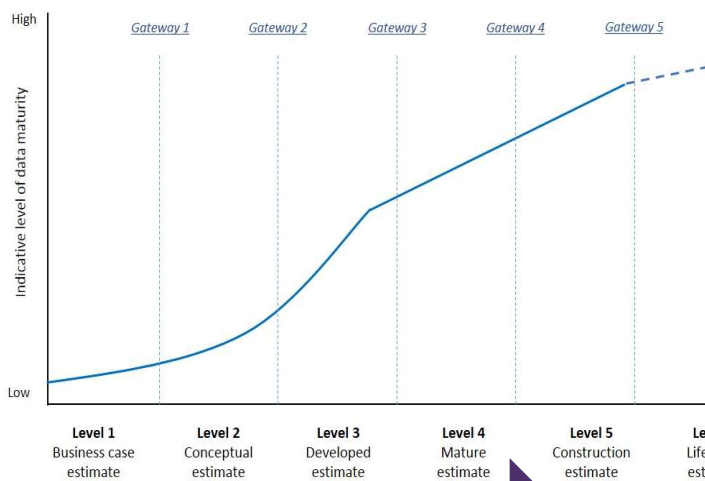


Cost Reporting Framework:

- A common process language for global cost prediction.
- Progressive inputs can be data, information, productivity, construction materials, methodology or timing.
- WOL considerations throughout.
- Design is an input, not the input.



RICS' Cost Prediction Professional Statement, Global



Mandatory Requirements:

Note: This is only a summary.

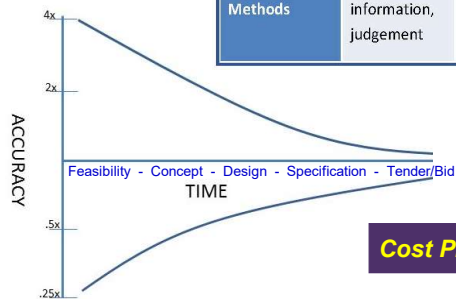
- reliable cost prediction appropriate to the project stage
- the use of the ICMS
- sources and dependability of cost data
- identify key assumptions
- report changes and reasons for
- provide an estimate of accuracy or level of uncertainty in cost prediction and how it can be improved



RICS' Cost Prediction Professional Statement, Global

- ❑ Cone of uncertainty v's defined costing levels
- ❑ Direct correlation between design info / data completeness and costing accuracy by level

Criteria	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Cost prediction levels	Business case estimate	Conceptual estimate	Developed estimate	Mature estimate	Construction estimate	Life cycle estimate
Information completeness	10%	10-30%	30-50%	50-70%	70-90%	90-100%
Cost prediction accuracy	-30% to +50%	-20% to +30%	-15% to +20%	-10% to +15%	-5% to +10%	>10%
Methods	Historical information, judgement	Parametric ratios	Semi-detailed unit costs	Detail (quantity based)	Detail (quantity based and full specs)	Economic evaluation



RICS' Cost Prediction Professional Statement, Global

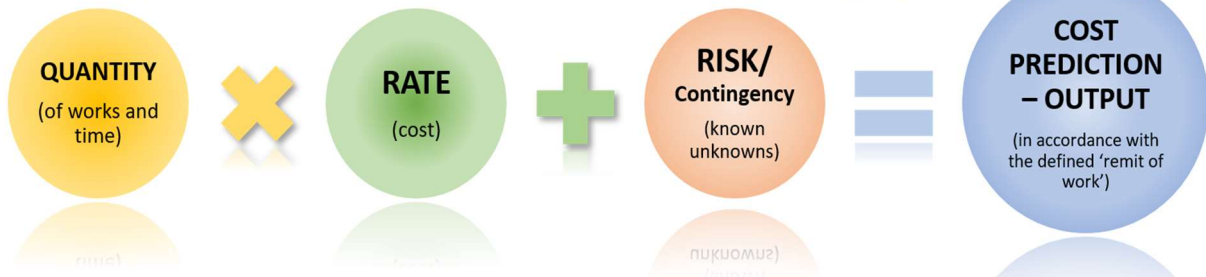
- ❑ Minimising risk, uncertainty and bias ... to improve outputs.
- ❑ Intuition v's Rational reasoning:

- **Optimism bias** - a tendency to underestimate the cost and overestimate the benefits or favourable outcomes.
- **Anchoring bias** - a tendency to rely too heavily, or "anchor", on one piece of information when making decisions.
- **Confirmatory bias** - a tendency to focus on, remember or search for information in a way that confirms preconceptions.
- **Unconscious bias** - a bias that we are unaware of, and which happens outside of our control.



RICS' Cost Prediction Professional Statement, Global

- ☐ ICMS provides standardised cost classification
- ☐ Recognition of cost data sources, attributes and integrity



- ☐ ISO 31000:2018 defines risk as the “*effect of uncertainty on objectives*”
- ☐ Focus on **the process** and the **out-turn cost** / final account targets



GLOBAL COST PREDICTION in a Post-ICMS world

*"Prediction is difficult,
especially about the future"*

Niels Bohr, 1885-1962

Any questions?

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... connecting you with solutions for your Built Environment

