



# **INTERNATIONAL CONSTRUCTION MEASUREMENT STANDARD (ICMS) :**

## **GLOBAL CONSISTENCY IN PRESENTING CONSTRUCTION COST**

# Why are they important?

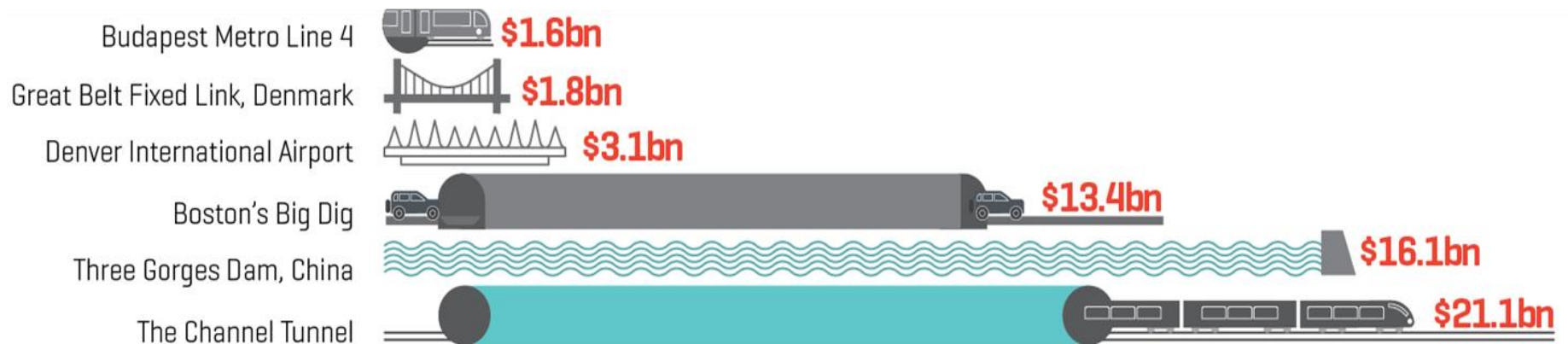
Knowing what is, and what is not included in the construction cost of a project is vital to:

- Understanding **how it compares** with other projects within or outside that market
- Accurately assessing **value-for-money**
- **Assessing and benchmarking** project construction cost
- **Reporting** national and international statistics on construction output

# Why are they important?

## Budget Busters

The most over-budget infrastructure construction projects in the world....



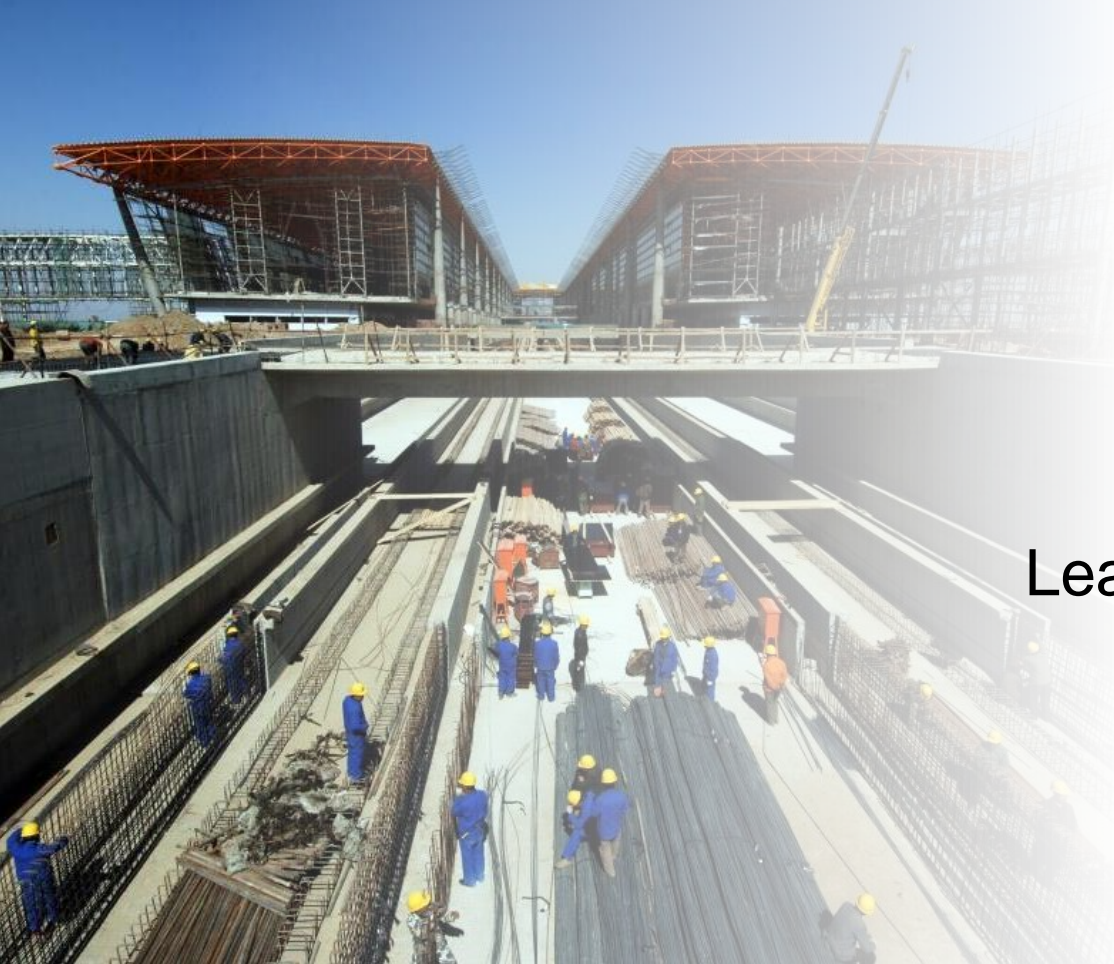
# Standards used today?

- The standards used today differ within countries and from one jurisdiction to the next.
- Depending on where the project is located the costs might include some or all of the following elements:
  - Labour and materials
  - Land acquisition
  - Professional Fees
  - Client costs





# What are the implications of global inconsistency?



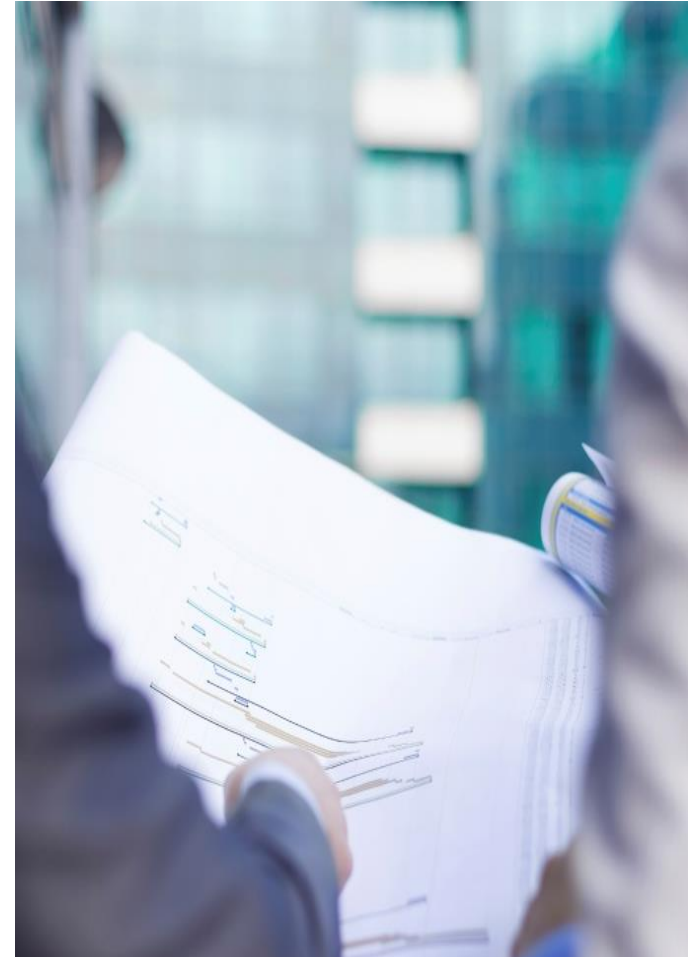
- Inability to accurately compare project construction costs
- Investment risk
- Lack of transparency

Leading to:

- Under-investment in construction projects
- Time and cost overruns

# What are the aims of ICMS?

- Construction cost to be consistently and transparently benchmarked;
- The causes of difference in costs between projects can be identified;
- Properly informed decisions on the design and location of construction projects to be made; and
- Data to be used with confidence for project financing & investment, programme and decision-making and related purposes



# ICMS COALITION



C.A.S.L.E



IKATAN QUANTITY SURVEYOR INDONESIA (INDONESIAN ASSOCIATION OF QUANTITY SURVEYORS)



THE NIGERIAN INSTITUTE OF QUANTITY SURVEYORS



**ICMS** INTERNATIONAL CONSTRUCTION MEASUREMENT STANDARDS

Sr (Dr) Ong See Lian



SOCIETY OF **CHARTERED SURVEYORS** IRELAND



# Official Global Launch of ICMS 2017



ICMS INTERNATIONAL  
CONSTRUCTION  
MEASUREMENT  
STANDARDS

International Construction Measurement  
Standards: Global Consistency in  
Presenting Construction Costs

International Construction Measurement Standards Coalition



ICMS INTERNATIONAL  
CONSTRUCTION  
MEASUREMENT  
STANDARDS



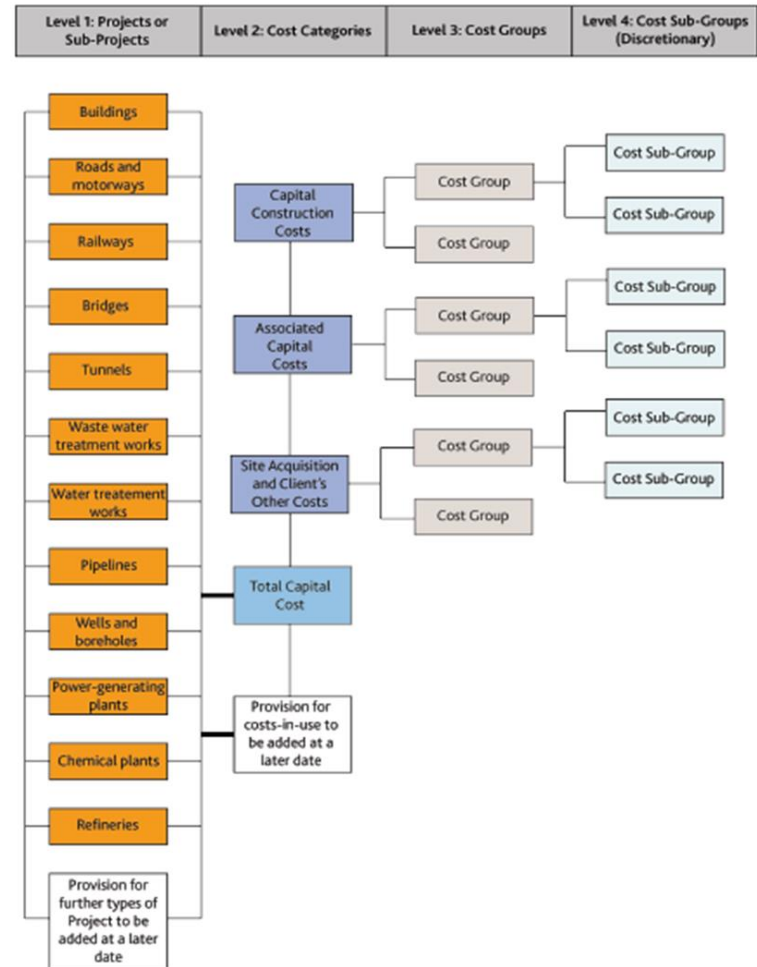
 **SOCIETY OF  
CHARTERED  
SURVEYORS**  
IRELAND

Sr (Dr) Ong See Lian



# ICMS-1 2017

## ICMS 1 Classification Framework



# LEVEL 1 – PROJECT CATEGORIES

Project Categories	UN ISIC Code
1. Buildings	F4100
2. Roads and Motorways	F4210
3. Railways	F4210
4. Bridges	F4210
5. Tunnels	F4210
6. Waste Water Treatment Works	F4220
7. Water Treatment Works	F4220
8. Pipelines	F4220
9. Well Drilling	F4220
10. Power Generating Plants	F4290
11. Chemical Plants	F4290
12. Refineries	F4290

# PROJECT ATTRIBUTES

- **Project Attributes** are the principal characteristics of a project or sub-project relating to time, cost, scope of works, design, quality, quantity, procurement, location and other contextual features that might impact its cost.
- **Project Values** are the standard set of descriptors and/or measurements for each of the Project Attributes



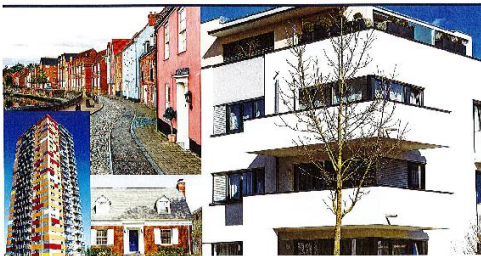
# INCORPORATES IPMS ( INTERNATIONAL PROPERTY MEASUREMENT STANDARDS)

**IPMS**  
INTERNATIONAL  
PROPERTY  
MEASUREMENT  
STANDARDS  
[www.ipmsc.org](http://www.ipmsc.org)

## International Property Measurement Standards: Residential Buildings

International Property Measurement Standards Coalition

September 2016



**IPMS**  
INTERNATIONAL  
PROPERTY  
MEASUREMENT  
STANDARDS  
[www.ipmsc.org](http://www.ipmsc.org)

## International Property Measurement Standards: Office Buildings

International Property Measurement Standards Coalition



**IPMS**  
INTERNATIONAL  
PROPERTY  
MEASUREMENT  
STANDARDS  
[www.ipmsc.org](http://www.ipmsc.org)

## International Property Measurement Standards: Industrial Buildings

International Property Measurement Standards Coalition

January 2018



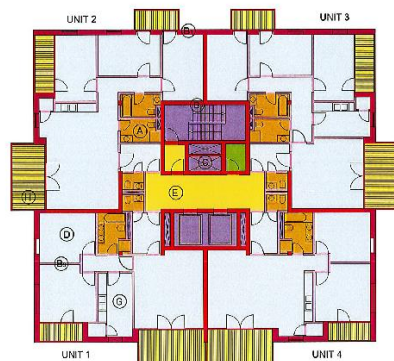


Diagram 1: IPMS - Residential Apartments - Component Areas

- Component Area A - Entrance Hallway
- Component Area B - Internal Stairs and Elements
- Component Area C - Internal Non-Structural Elements
- Component Area D - External Services
- Component Area E - Ramp Area
- Component Area F - Car/Jail Area
- Component Area G - Amenity
- Component Area H - Lobby Space
- Component Area I - Other Area

Door openings are shown in Component Area B, B7 or B3 if there is a lift, but as an alternate Component Area if the opening is 2.1m high.

Measurements excluded but to be stated separately:

Measurement for IPMS 1 does not include:

- Temporary Structures
- Open light wells or the upper level voids of an atrium
- Open external stairways that are not an integral part of the Building, for example, an open framework fire escape
- Any Structure beyond the Covered Area

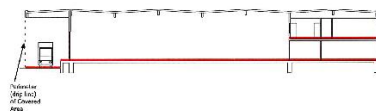


Diagram 1: IPMS 1 - Total Floor Area of Level 0 and Level 1

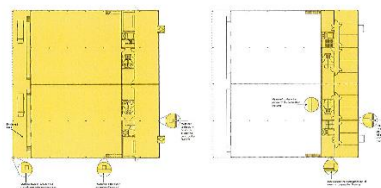


Diagram 2: IPMS 1 - Ground Floor (Level 0) | Diagram 3: IPMS 1 - Upper Floor (Level 1)

For larger versions of the above diagrams see Part 5 (pages 30-31).

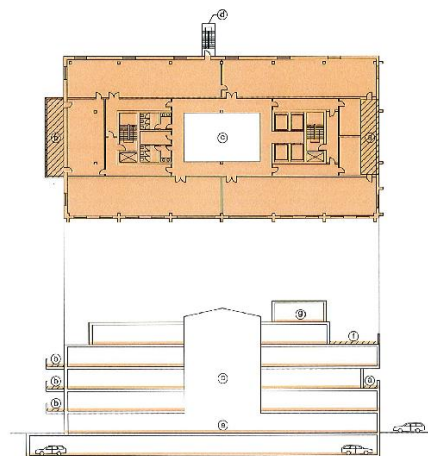


Diagram 2: IPMS 1 - plan and section

- a) Covered gallery
- b) Balcony
- c) Open light well/upper level void of atrium
- d) Open external stairway (not an integral part of the structure)
- e) Atrium ground level
- f) Roof terrace
- g) Lift/elevator motor room

Hatched areas are to be stated separately.

# Use of the Standard

- Global investment decisions
- International, national and regional or state cost comparisons
- Feasibility studies and development appraisals
- Cost planning & control, cost analysis, cost modelling and the procurement and analysis of tenders
- Dispute resolution work
- Reinstatement cost for purpose of insurance, and
- Valuation of assets and liabilities





# THE DEVELOPMENT OF ICMS-2

- Market and Industry calls for incorporation of Life Cycle Cost in ICMS.
- 1<sup>st</sup> SSC meeting on ICMS-2 on 4 & 5 June 2018 (London)
- 2<sup>nd</sup> SSC meeting on ICMS-2 on 9 & 10 October 2018 (Dubai)

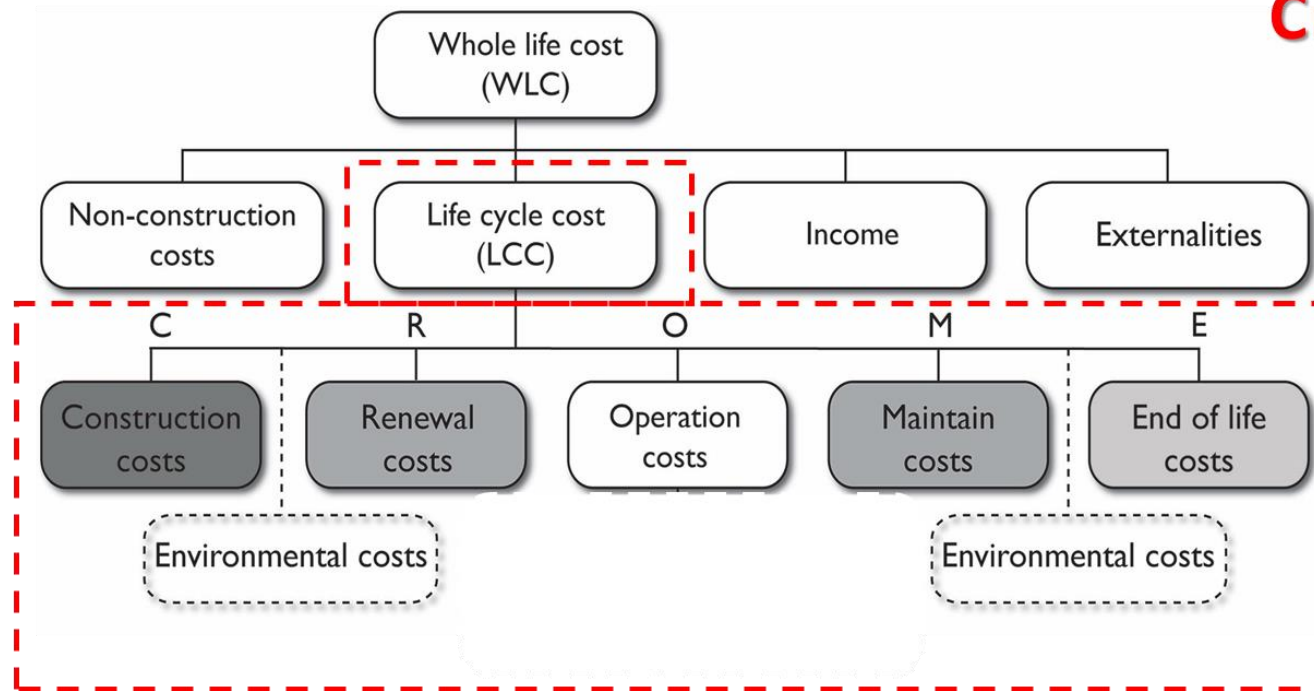


# THE DEVELOPMENT OF ICMS-2

## ICMS 2 Basis of Classification

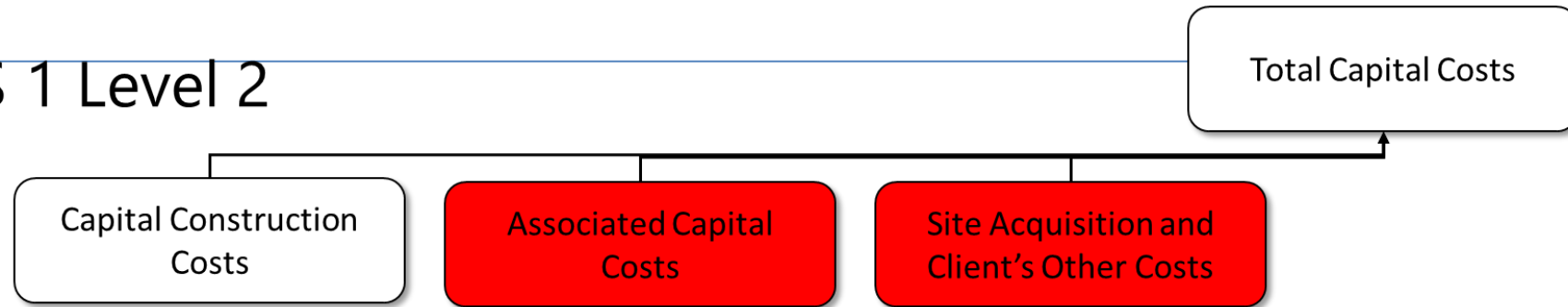
**BS ISO 15685 part 5 – 2008 and RICS NRM 3**

**CROME**

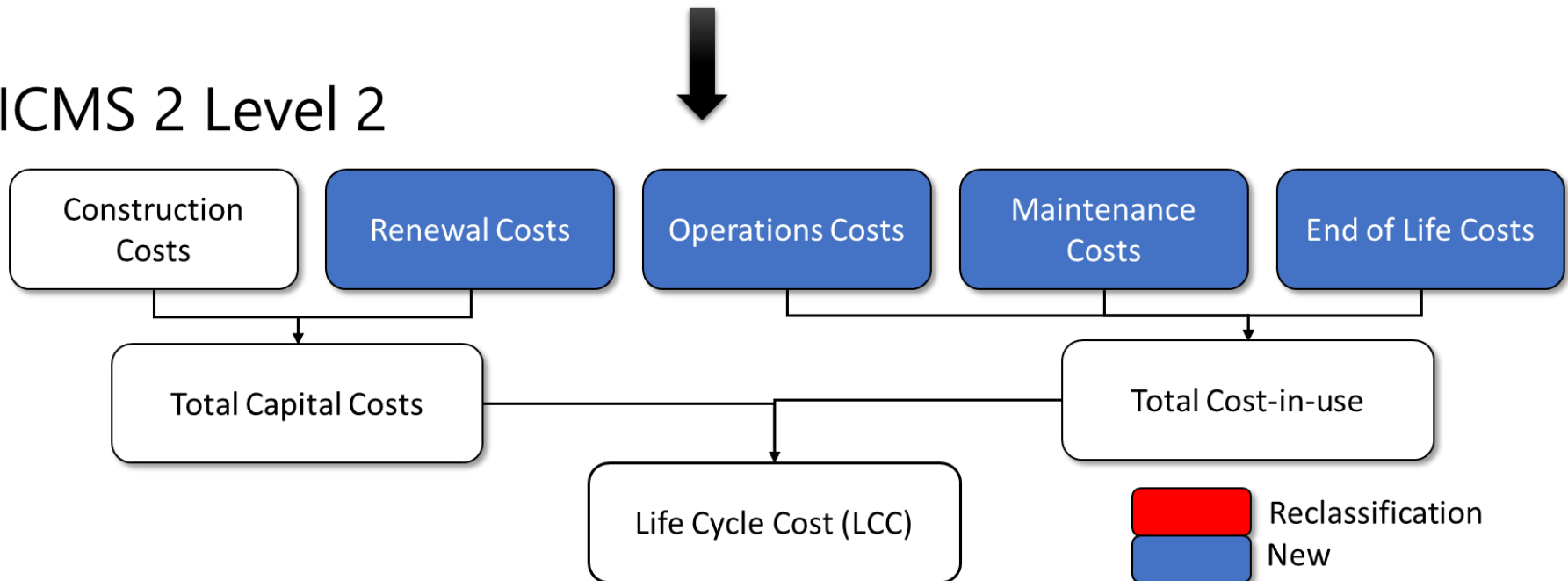


# THE DEVELOPMENT OF ICMS-2

## ICMS 1 Level 2



## ICMS 2 Level 2

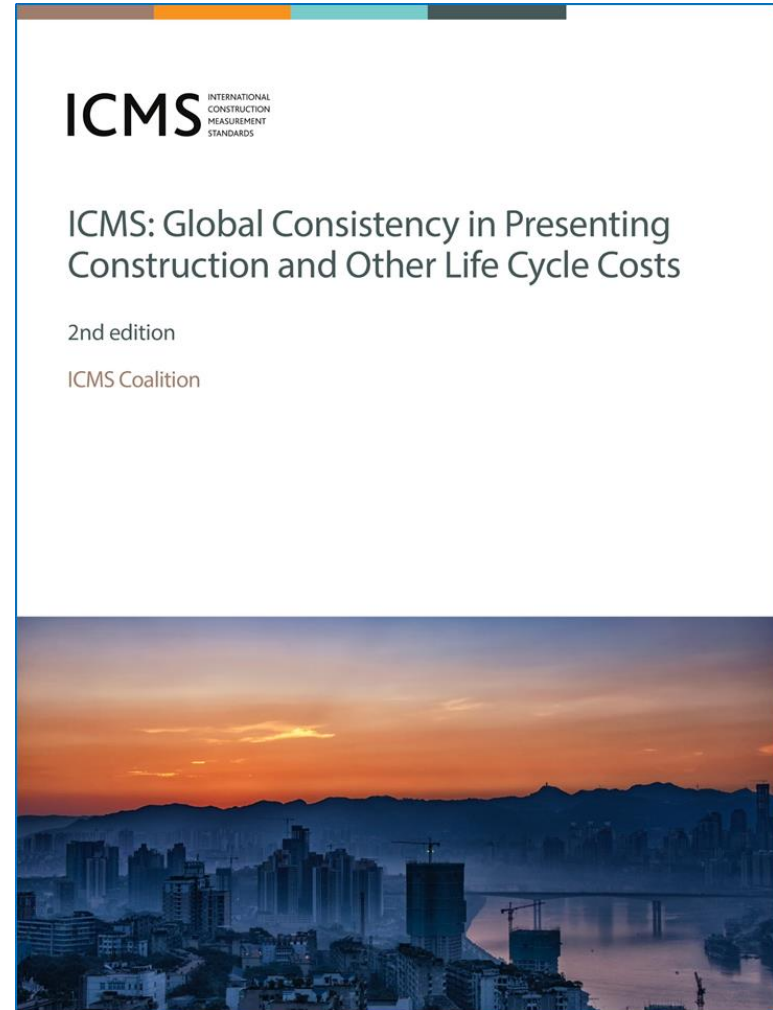




# THE DEVELOPMENT OF ICMS-2

The Final  
issue of  
ICMS-2

Publication  
End  
September  
2019



# THE DEVELOPMENT OF ICMS-2

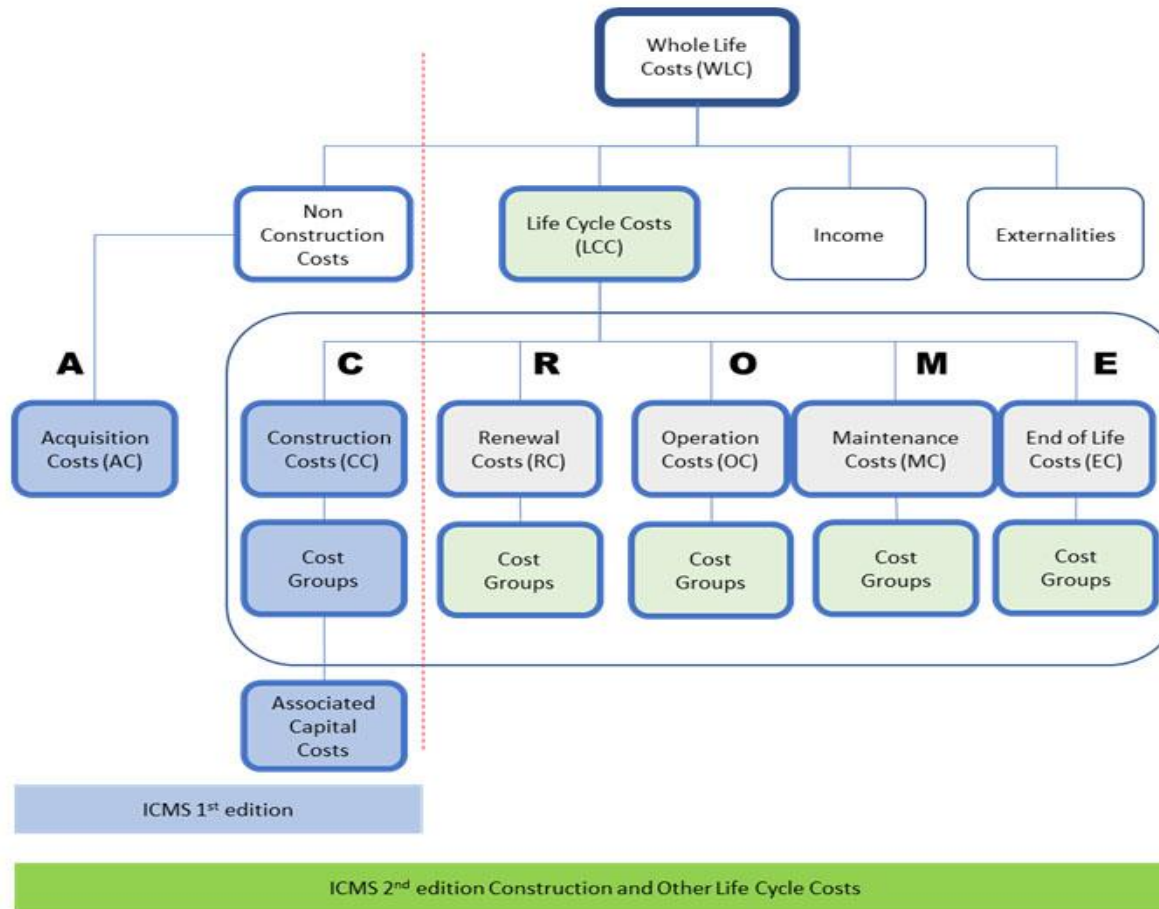


Figure 1:

The relationship between ICMS, LCC and WLC

# THE DEVELOPMENT OF ICMS-2

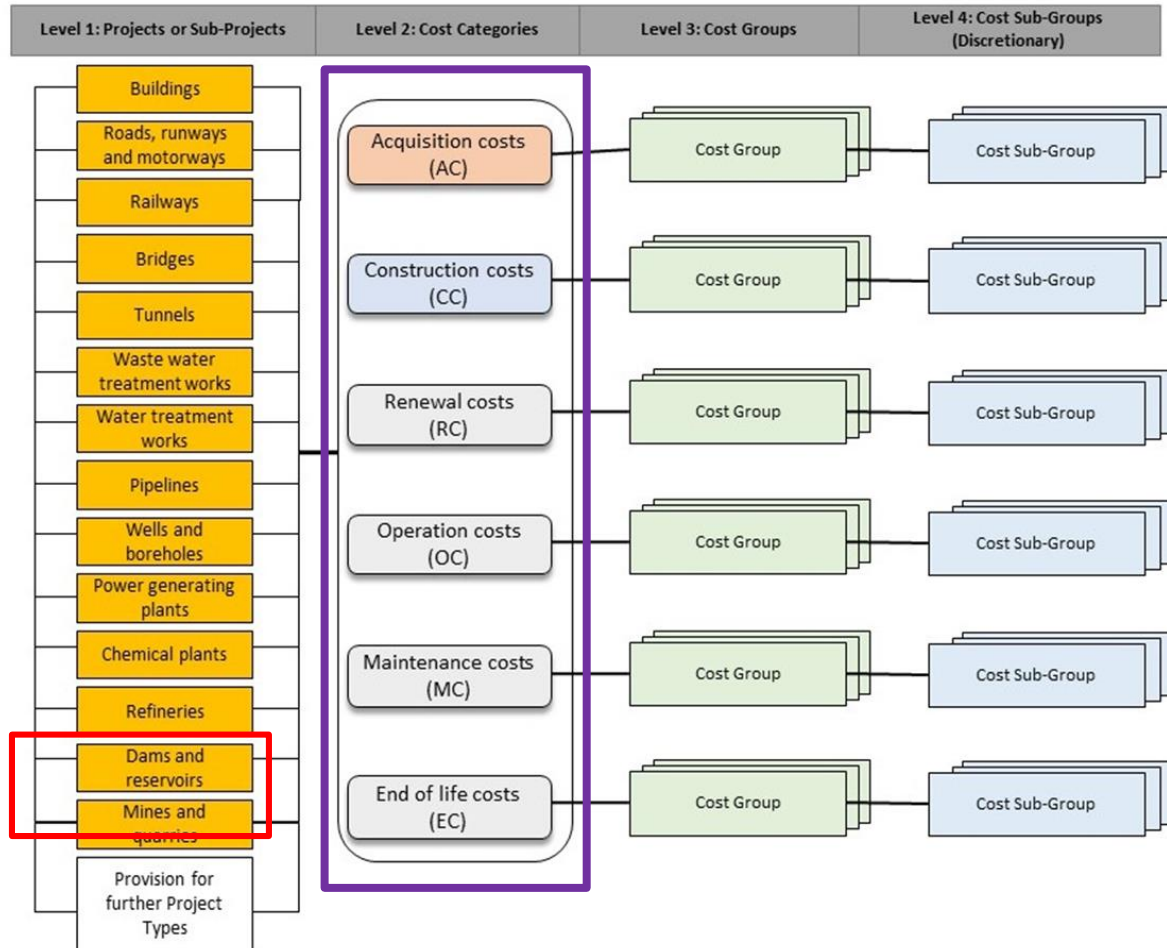


Figure 2:

**ICMS Framework including Level 1 Projects and Sub-Projects**

# THE DEVELOPMENT OF ICMS-2

LEVEL 3: COST GROUPS			
Acquisition Costs	Construction Costs or	Operation Costs	End of Life Costs
	Renewal Costs or Maintenance Costs		
01. Site acquisition	01. Demolition, site preparation and formation	01. Cleaning	01. Disposal inspection
02. Administrative, finance, legal and marketing expenses	02. Substructure	02. Utilities	02. Decommissioning and decontamination
	03. Structure	03. Waste management	03. Demolition and reclamation
	04. Architectural works   non-structural works	04. Security	04. Reinstatement
	05. Services and equipment	05. Information and Communication Technology	05. Constructors' site overheads   general requirements
	06. Surface and underground drainage	06. Operators' site overheads   general requirements	06. Risk Allowances
	07. External and ancillary works	07. Risk Allowances	07. Taxes and Levies
	08. Preliminaries   Constructors' site overheads   general requirements	08. Taxes and Levies	
	09. Risk Allowances		
	10. Taxes and Levies		
	11. Work and utilities off-site		
	12. Post-completion loose furniture, fittings and equipment		
	13. Construction-related consultants and supervision		

## Level 3 Cost Groups



# THE DEVELOPMENT OF ICMS-2

## Other Features in ICMS2:

- **Improvement on Project Attributes.**
- **Provision for BIM-based cost management**
- **Data standard for software vendors available**
- **Provision for emerging technologies such as IBS or prefabricated structures or building modules.**
- **Clarify definitions and terms.**

# International Construction Measurement Standards (ICMS) – Get Involved!



[www.icms-coalition.org](http://www.icms-coalition.org)