



# XXVI FIG CONGRESS

6-11 May 2018, İstanbul



# ICMS GLOBAL CONSISTENCY IN PRESENTING CONSTRUCTION COST

EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:  
ENHANCING THE GEOSPATIAL MATURITY OF SOCIETIES

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**Dr. See Lian Ong**

# International Collaboration



- In August 2009 six international organisations (ICEC, PAQS, AAQS, CEEC, FIG & RICS) came together to sign the KL Pact to promote international collaboration for the profession.

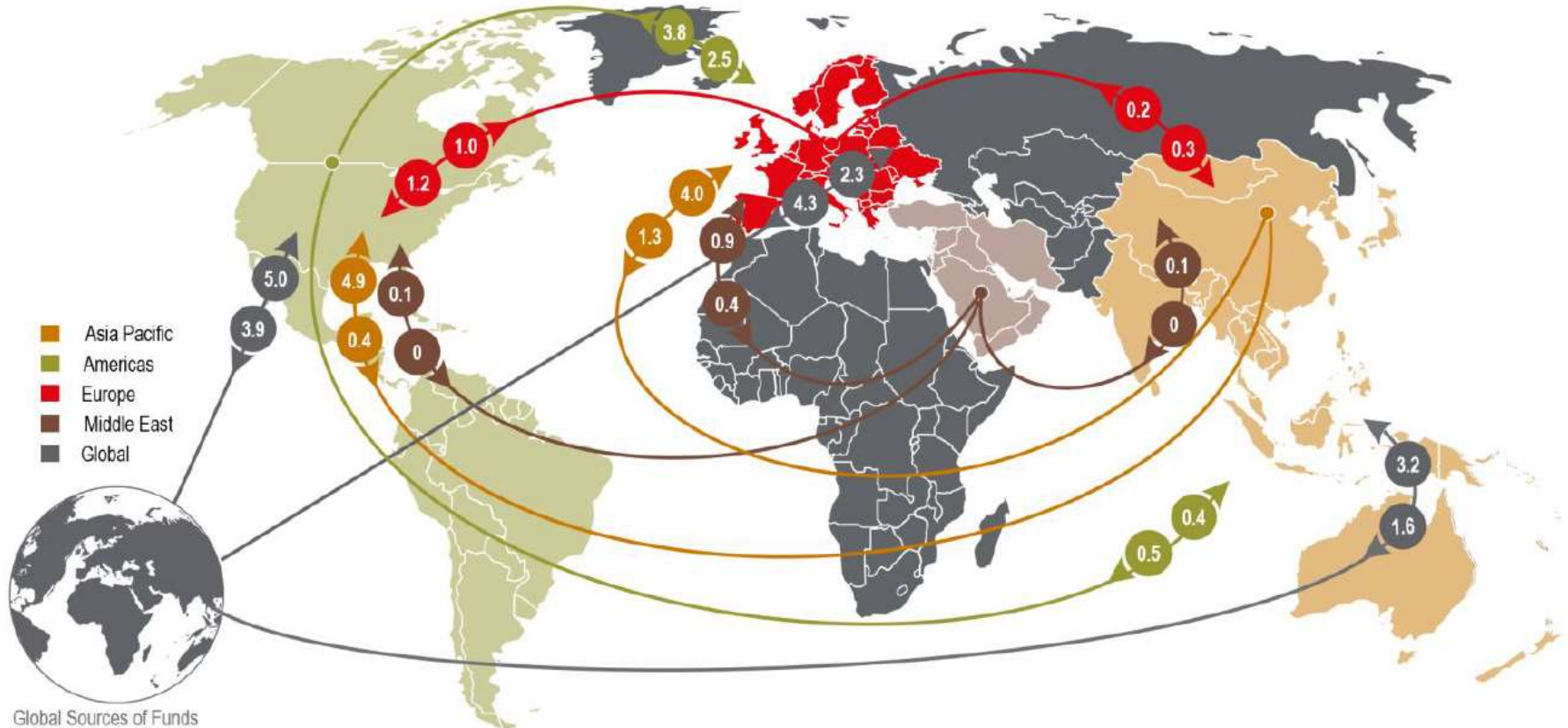
# International Collaboration



## 4 prong objectives of KL Pact:

1. Develop and foster a community of leaders for the profession
2. Foster global cooperation in areas of significance for global policy for the profession
3. Shape the agenda for a global forum in terms of economic trend, climate change, energy and water management
4. Provide a platform underpinned by knowledge and technology to ensure the achievement of excellence in terms of service delivery, competence and education

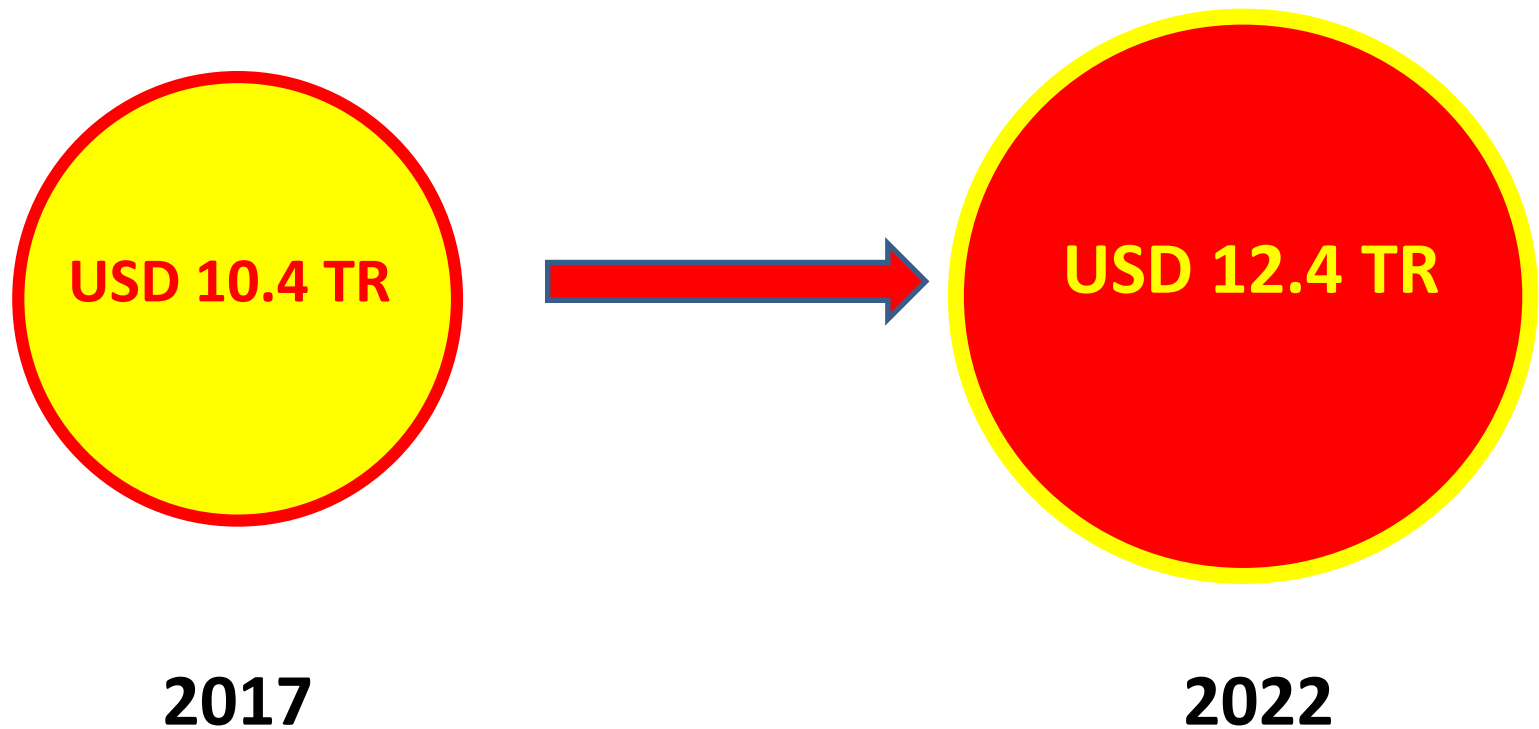
# Inter-Regional Flows of Capital, Q1 2017 (US\$38 B in total)



Global Sources of Funds  
 Global groups that raise capital from multiple regions, with less than 70% of the capital from a particular country

Source: JLL  
 Property Data (UK); Real Capital Analytics (USA)

# GLOBAL CONSTRUCTION OUTPUT



# Hinckley Point Power Station, UK



**Built in the UK, funded by Chinese investors and owned, operated and constructed by French company EDF**

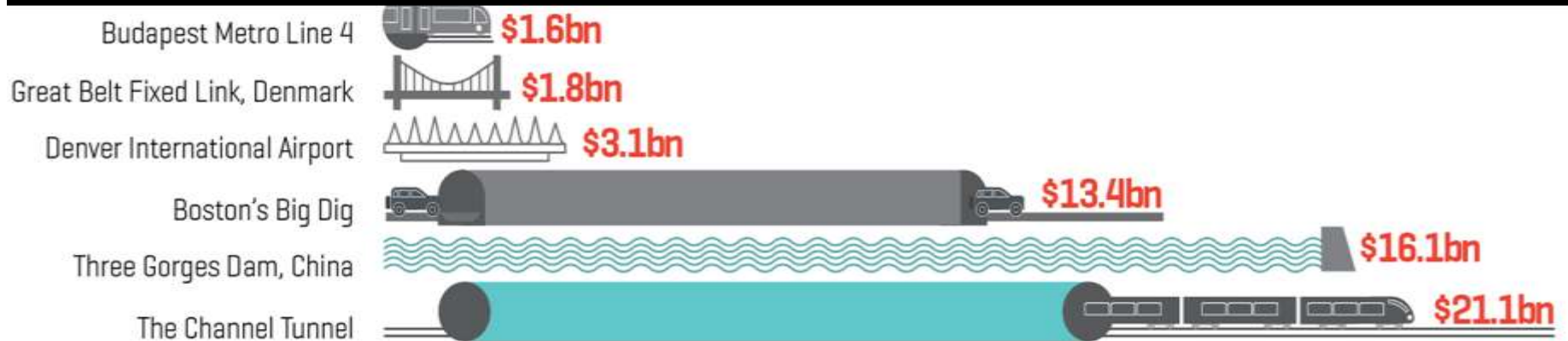
# Why are they important?

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

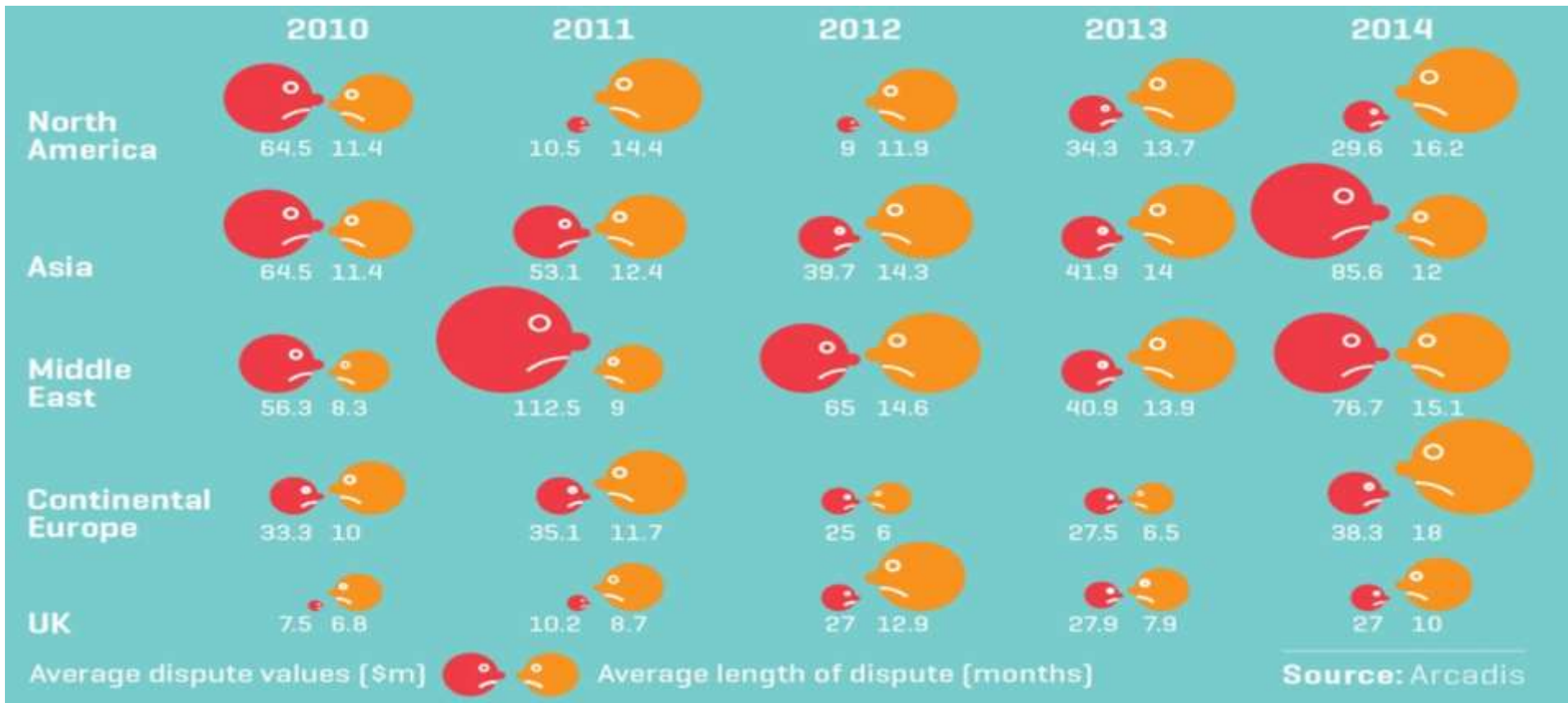
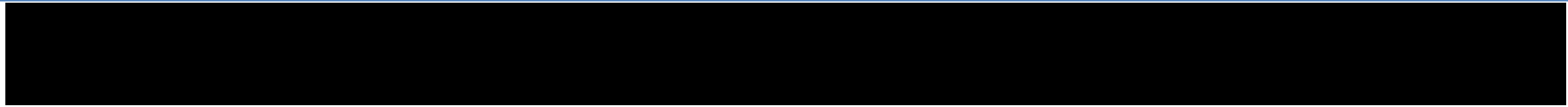


# Why are they important?





# Why are they important?



Source: Arcadis

# 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



# Who will benefit from ICMS?

- Any party that has a direct or indirect interest in construction projects will benefit.
- Those investing in or managing construction projects will benefit significantly.
- Financial institutions will have a consistent basis for assessment of project funding requirements
- The public will benefit through enhanced, prudent assessments of public projects



# The Conception of ICMS

- Developed by a coalition of professional bodies from around the world.
- Established during a meeting at the IMF, Washington D.C. in June 2015.
- Currently 44 Professional organisations worldwide have signed the Declaration and committed to develop and implement the standard.



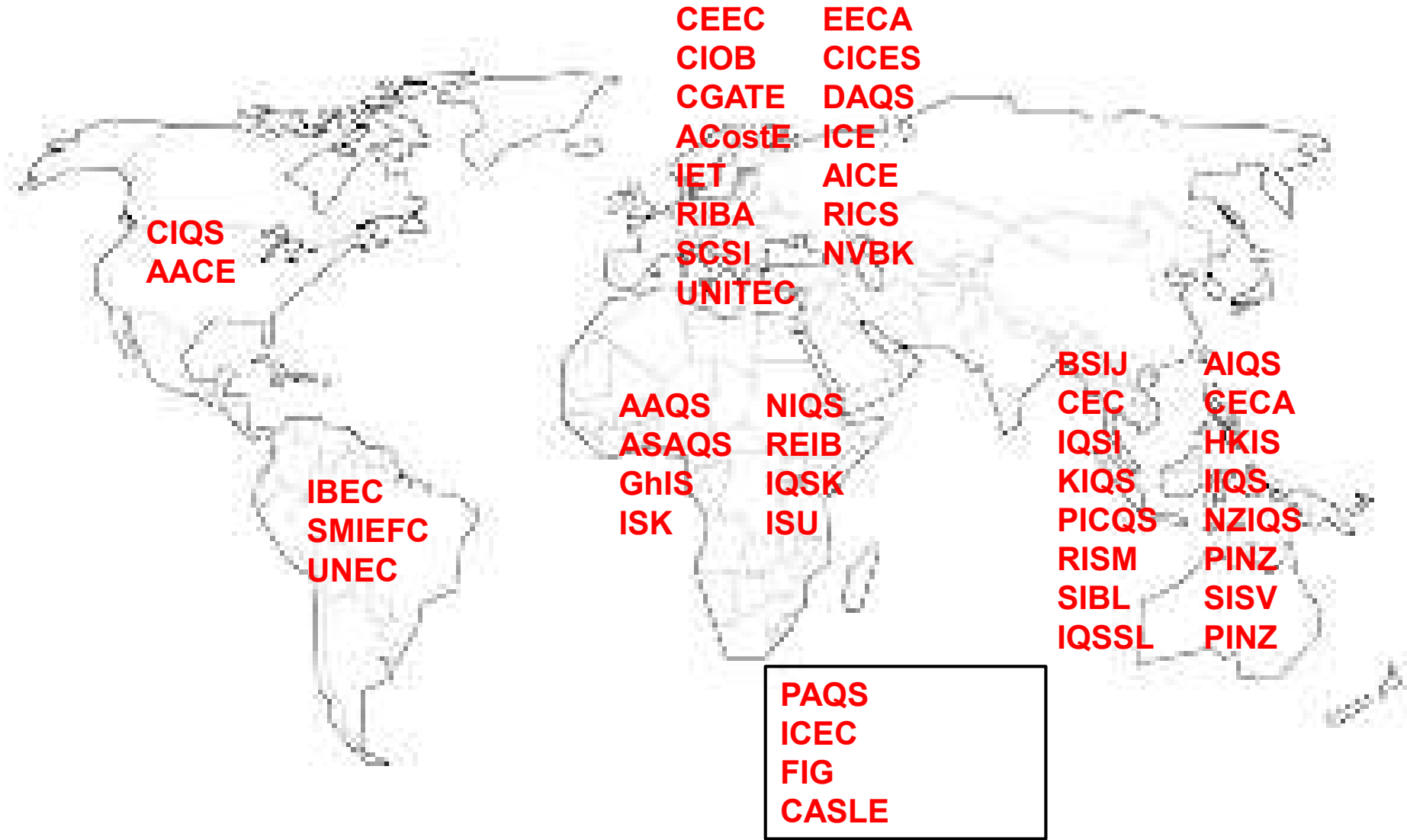
# ICMS COALITION



**ICMS** INTERNATIONAL CONSTRUCTION MEASUREMENT STANDARDS

Sr (Dr) Ong See Lian

# ICMS COALITION





# ICMS Governance Structure

## ICMS COALITION TRUSTEE

- Custodian
- Appoint SSC
- Promotion & Communication
- Promote application of ICMS

## STANDARD SETTING COMMITTEE

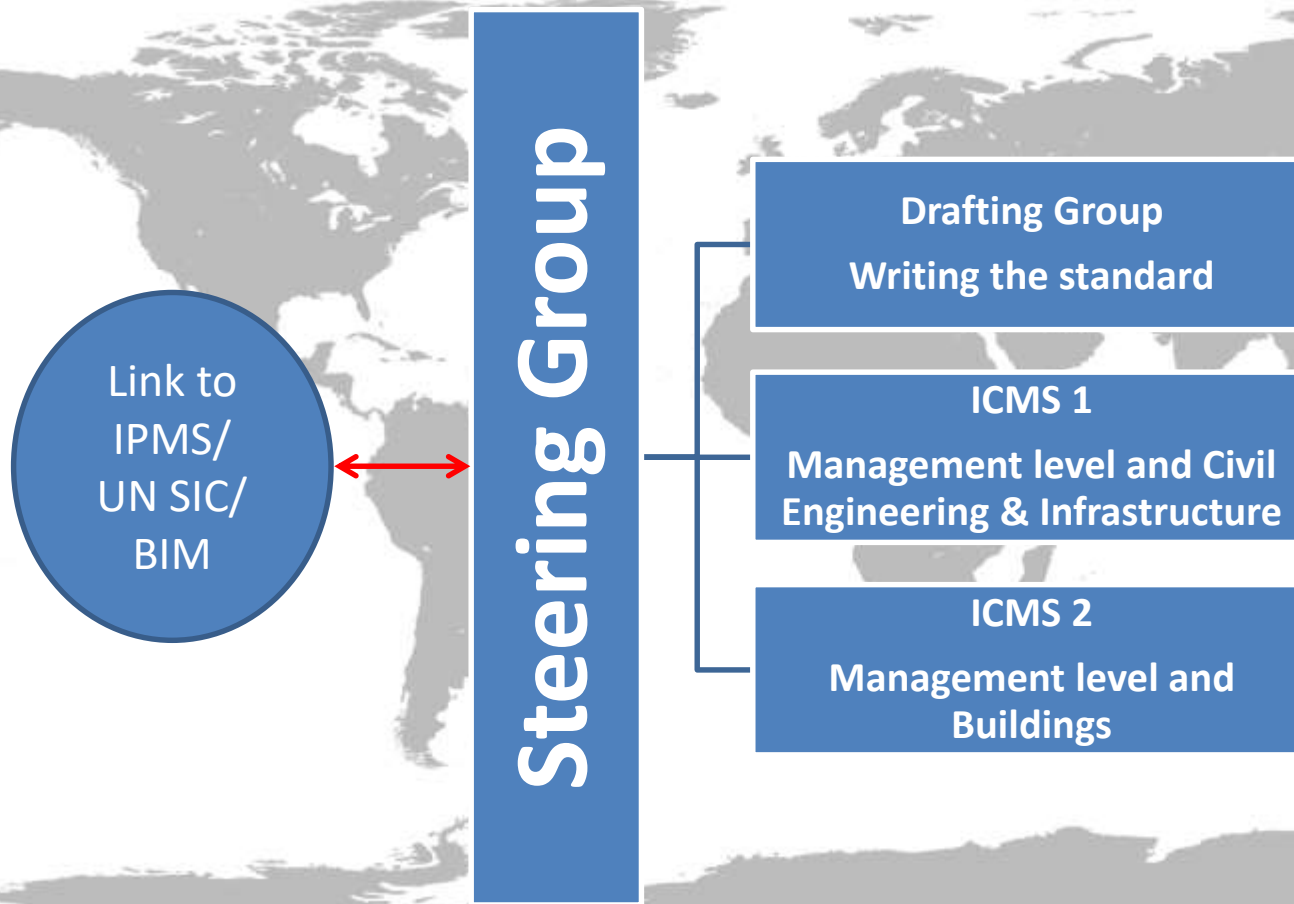
- Independence
- Developing & setting standard
- Receive & collate feedbacks

# The Standard Setting Committee

- An **independent Standards Setting Committee (SSC)** has been established to draft the ICMS.
- The SSC is comprised, in total, of **27 (23) experts from around the world**.
- A **public consultation** on the ICMS will run before the SSC ratifies and hands over the final standard to the Coalition for publication.



# How have we organised ourselves?



# The Journey

- ✓ 1<sup>st</sup> Private consultation draft completed and circulated to family and friends of ICMS coalition for comment at end August 2016
- ✓ 1<sup>st</sup> PUBLIC consultation completed and published in November 2016
- ✓ 2<sup>nd</sup> PUBLIC consultation completed and published in March 2017



# The Journey

SSC meeting in London (Nov 2016)



# The Journey

ICMS Coalition Trustee (London Nov 2016)



# The Journey

## ICMS Coalition Trustee (London Nov 2016)



# The Journey

- **Launch of 1<sup>st</sup> Draft for Public Consultation (London Nov 2016)**
- **2<sup>nd</sup> Draft for Public Consultation (March – May 2017)**





## International Construction Measurement Standards: Global Consistency in Presenting Construction Costs

International Construction Measurement Standards Coalition

**THIS IS THE FINAL  
RESULT OF HARD  
WORK IN  
COLLABORATION  
WITH ALL  
STAKEHOLDERS**



# Official Global Launch of ICMS



- **This was a historic moment for the profession and the industry**

# Official Global Launch of ICMS



**ICMS** INTERNATIONAL  
CONSTRUCTION  
MEASUREMENT  
STANDARDS

International Construction Measurement  
Standards: Global Consistency in  
Presenting Construction Costs

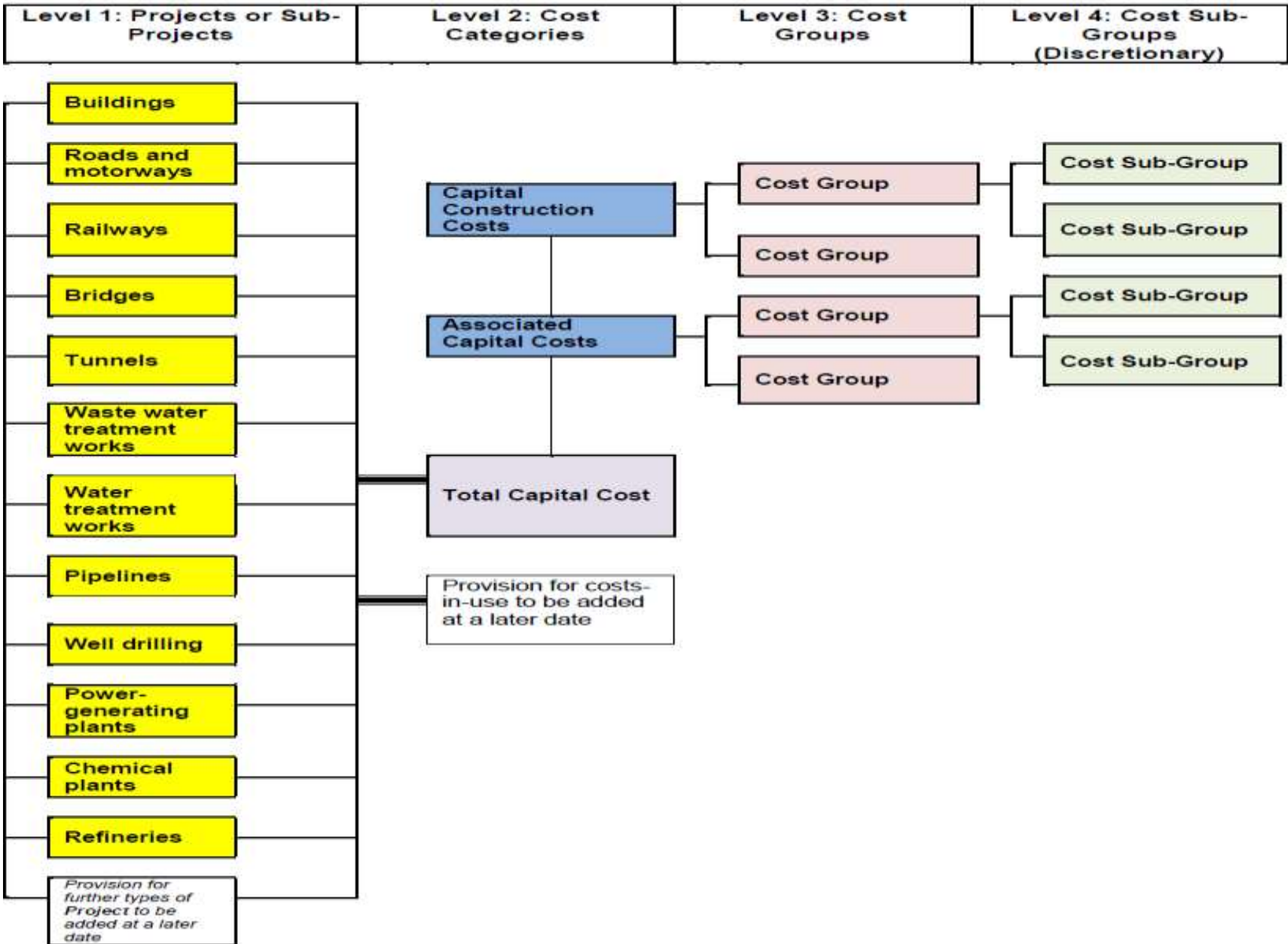
International Construction Measurement Standards Coalition



**ICMS** INTERNATIONAL  
CONSTRUCTION  
MEASUREMENT  
STANDARDS



# ICMS FRAMEWORK

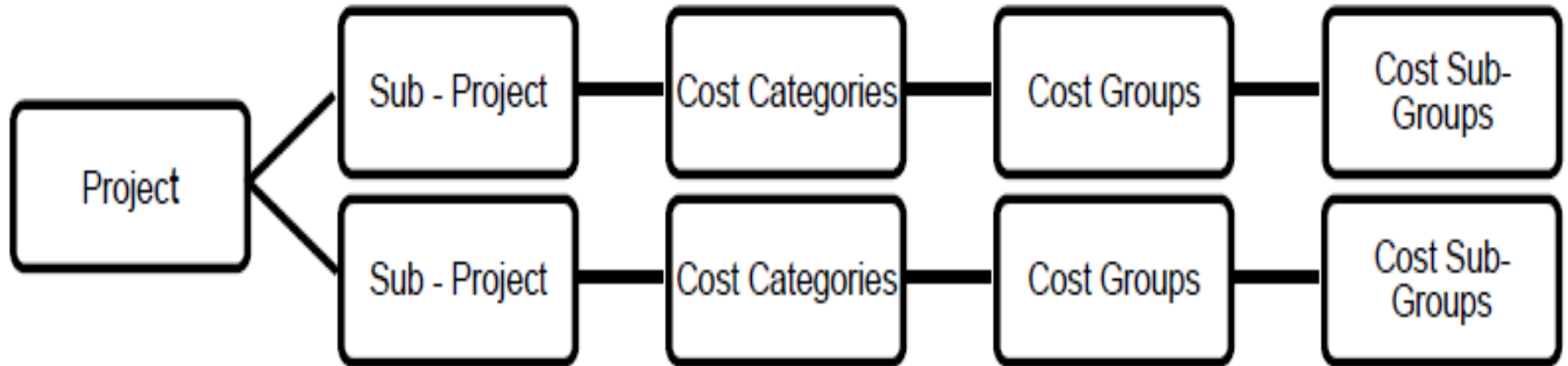


# ICMS FRAMEWORK

- **Level 1 – Project or Sub-Project**
- **Level 2 – Cost Category**
- **Level 3 – Cost Group**
- **Level 4 – Cost Sub-group (Discretionary)**

**Levels 1, 2 and 3 are mandatory**

# ICMS HIERACHY



# 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



## **LEVEL 2 – COST CATEGORIES**

- **Two main Project Capital Cost Categories:**
  - ❑ **Capital Construction Cost**
  - ❑ **Associated Capital Cost**
- **Total Project Cost is the sum total of capital construction cost and associated capital cost**
- **Cost-in-use or life-cycle cost are not included in the current standard, but it is anticipated that this will be covered in future editions of ICMS**

## **LEVEL 3 - COST GROUPS**

- **These are breakdown of cost according to functional elements of the construction project**
- **They are major divisions of a Cost Category into small number of groups to enable easy estimation or extraction of cost data for high-level comparison by design discipline or common purpose.**

# 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

**AECOM**

 **ARCADIS**

**ARUP**

  
**EY**

FAITHFUL+GOULD

  
gardiner&theobald

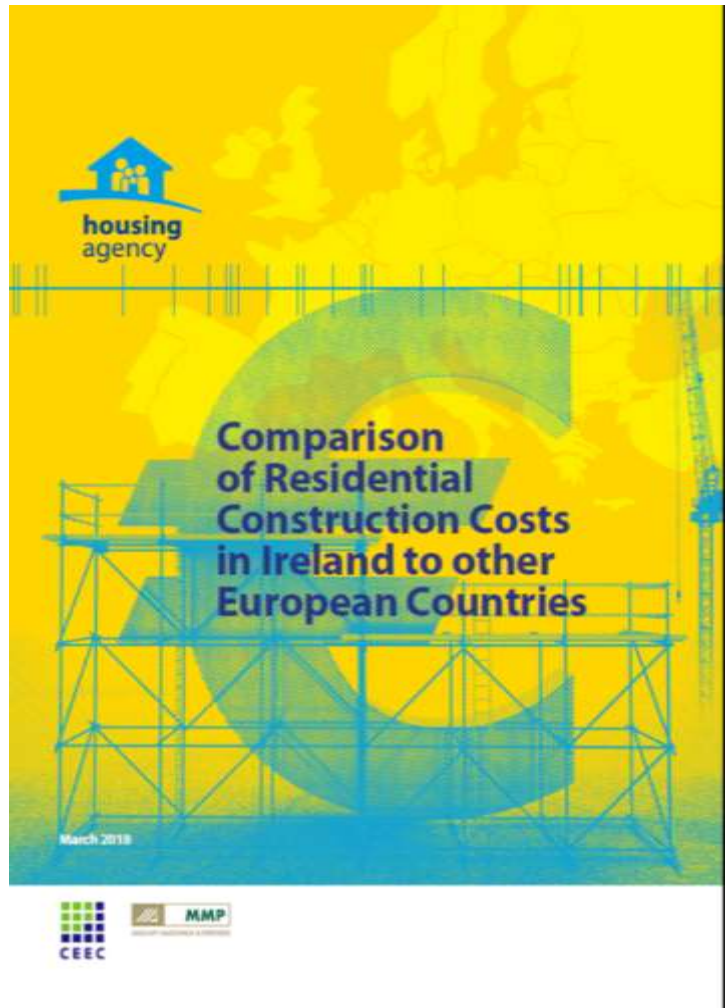
 Global  
Infrastructure  
Hub

gleeds<sup>G</sup>

 Turner & Townsend

**ICMS** INTERNATIONAL  
CONSTRUCTION  
MEASUREMENT  
STANDARDS

# Use of the Standard



**The Irish Government  
has commissioned  
this project based on  
ICMS**

# How will ICMS be adopted?

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- The coalition members have signed the Declaration and committed to implement the ICMS once it is published.
- Many organisations will incorporate ICMS within existing standards and guidance. Some adjustments to existing local standards may be necessary.
- Governments and businesses will lead adoption of ICMS in the marketplace
- Funding agencies and institutions will require all future requirements to be assessed based on ICMS

# How can I get involved?

- Professional and standards-setting bodies are encouraged to join the coalition and to adopt ICMS.
- Private firms, universities and governments will be invited and encouraged to become voluntary 'partners' and work with the coalition to develop, raise awareness for and implement ICMS.



# The Way Ahead

- **We have begun work on the second edition of ICMS**
- **The second edition will incorporate:**
  - ❖ **Life Cycle Costing**
  - ❖ **Additional categories for civil engineering works**
- **We hope to roll out the first draft for public consultation by the end of 2018.**
- **To launch the second edition in 2<sup>nd</sup> half of 2019**



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



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