

ICEC Newsletter

November 2021

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www.icoste.org

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Update from ICEC Chair – Gianluca di Castri

During the time from November 2020 to now, that is more or less the first half of my term, I have been trying to develop some new projects that I think will be interesting for the ICEC members as well as for the ICEC as a whole.

The first of them is the **multilingual glossary**, that is a project fully belonging to the ICEC: up to now we have seven languages on the working tool and we are planning to have about twelve languages by the end of this year, the further step shall be to increase the number of words by adding words form the glossary that is being prepared by the ICEC Rising Professionals as well as from other sources. The glossary is due to be available on ICEC website or on a dedicated website so that we can officially present it to the next World Congress in Rotterdam, 2022: hopefully it will be augmented in the following years either vertically, namely adding more words, or horizontally, namely adding more languages.

For the time being, all the information are being collected on a working tool that is an Excel file: we still have to identify a proper software to be used for publishing.

We are also working on a project on **cognitive readiness in disruptive time**: while the matter is of extreme interest, to be honest we have to accept that the project is still in its definition phase and cannot yet be considered as a project defined according to the requirements of project management and controls professions. We hope to reach this stage by the end of 2021 or beginning of 2022.



Gianluca di Castri ICEC Chair



ICEC Secretary General Report

Dr Peter Smith

Welcome to the November 2021 ICEC Newsletter.

ICEC Secretariat

The ICEC Secretariat continues to be hosted by the Australian Institute of Quantity Surveyors (AIQS). The AIQS have undertaken this role since 2004 and provide considerable administrative, accounting and general support for the Secretariat. The ICEC Secretariat is based in the AIQS headquarters in Sydney, Australia. The contact details are:

International Cost Engineering Council Level 6, 65 York Street, Sydney NSW 2000 Australia Tel: + 612 9262 1822, Email: contact@icoste.org, Web: www.icoste.org

2022 ICEC World Congress – 12-15 June, Rotterdam, The Netherlands

The 2022 ICEC World Congress will be held in Region 2 (Europe). It will be hosted by DACE (the Dutch Association of Cost Engineers) in Rotterdam, The Netherlands from 12-15 June 2022. The congress will be conducted in a hybrid format with both on-site and online attendance provided for. DACE is working on delivering live virtual streams of on-site presentations supplemented with an on-demand channel, with recorded presentations. The event will be conducted in English but DACE is also looking at providing translations in other languages.

Further details about the Congress can be found at:

https://icecworldcongress.com/

2022 ICEC Council Meeting

The ICEC Council meeting is held every 2 years normally in conjunction with an ICEC World Congress (also held every 2 years). Accordingly, the 2022 ICEC Council Meeting will be held in conjunction with the 2022 ICEC World Congress in Rotterdam, The Netherlands.

Details about the meeting are still to be determined but it is likely to be held immediately prior to the congress on the Saturday/Sunday 11-12 June 2022. Online provisions will be made for delegates who wish to attend the meeting remotely.

ICEC Rising Professionals Group

The ICEC Rising Professionals Group was established in November 2018 at the ICEC/PAQS World Congress in Sydney, Australia. It represents the younger members of ICEC member associations with membership open to those members less than 40 years of age. The group continues to be very active under the leadership of the group's president, Aaron Wong. Further details about the ICEC Rising Professionals can be found on their Facebook page at:

https://www.facebook.com/ICECRP/?ref=page_internal

ICEC Mentor Program

ICEC has developed a mentor program that is due to commence on 1 January 2022. This project has been led by TT Cheung and Eugene Seah in collaboration with Aaron Wong and the ICEC Rising Professionals Group. This ICEC team has finalized the program details and will be in touch soon with ICEC member associations to send invitations to potential mentors.

ICEC Glossary Project

ICEC Chair, Gianluca di Castri, is leading an ICEC project to develop a global multi-lingual glossary for quantity surveying, cost engineering and project controls terms through the input of all ICEC associations and other kindred associations. The glossary will have definitions of terms with translations in as many languages as possible with relevant notations for any semantic differences between the languages.

The glossary framework has been identified in English and a number of ICEC member associations have already contributed their translations to the glossary in their respective languages. As at October 2021 we have translations in 11 languages (French, Italian, Spanish, Portuguese, Malay, Filipino, Chinese, Korean, Thai, Swahili and Russian)

Region 4 members are welcome to contribute their translations where a glossary has yet to be submitted in their particular language. Gianluca di Castri can provide further details.

ICEC Web Repository of Congress Papers

ICEC has held international congresses on a biennial basis since 1972. The papers and other reports presented in those congresses represent a huge patrimony of scientific as well as professional knowledge that should be made available for all professionals, academics, researchers and other persons that are interested in our profession.

ICEC is proposing the creation of a web repository of all papers and other documents presented at ICEC congresses. The initiative is in accordance with the ICEC rules but it will require copyright clearance from the respective Congress Organisers and the Congress Paper publishers and individual authors as needed. We don't envisage legal problems nor any reason why a single author should refuse the opportunity to have their paper republished in a site where it can have a wider visibility than the congress documentation.

The proposal is to start from the ICEC World Congress 2018 and go backwards in time (noting that the 2020 Congress was postponed to 2024). The digitalized version of the papers should be available for all congresses after 2000 and for the majority of congresses in the 1990s. Papers published prior to then will require scanning. The papers would be made available in an appropriate online repository on the ICEC website. It will be indexed and free to download for all members of ICEC associations as well as to members of kindred associations such as PAQS.

ICEC Global Standards Project

ICEC continues to develop an Inventory of global Best Practice and Standards for Project Cost Management that is available on the ICEC website at <u>http://www.icoste.org/category/resources/</u>.

ICEC would like to work with ICEC member associations to further develop this inventory. The overall objective is to provide a single source inventory on the ICEC website that provides best practices and standards (or links to such) from around the world. It is envisaged that this will provide a valuable information source for the global profession.

ICEC Global Sources of Published Project Cost Information

ICEC is developing an Inventory of links to sources of project cost information published around the world. The objective is to build up a comprehensive list of published cost information from as many countries around the world as possible (with web links). This will include information published by commercial publishers, governments, professional associations and private industry firms. As with the Global Standards project, ICEC would like to work with ICEC member associations to contribute to this inventory. The overall objective is to provide a single source inventory of published cost information on the ICEC website.

ICEC Global Professional 'Linked-In' Network

ICEC Chair Gianluca di Castri founded the ICEC 'Linked-In' Network in 2010. It is titled 'ICEC International Cost Engineering Council (Total Cost Management – Project Controls). It is a very active site and can be accessed at:

https://www.linkedin.com/groups/3419960

Future ICEC Newsletters

I would like to encourage all ICEC member associations and their individual members to contribute articles and other relevant information for future ICEC newsletters. It provides a good opportunity to share information/knowledge and details of congresses, seminars, forums, projects and other activities.

Contributions can be emailed to the ICEC Secretariat at contact@icoste.org





Dear Colleague,

The world is rapidly changing in many ways: Digitalization, Global warming, World Politics or Covid-19 have a huge impact on the world where we live in. Despite all the changes we want to have a predictable outcome of projects. The theme of the <u>ICEC World Congress</u> 2022, which will be held from June 12 – 15, 2022 in Rotterdam, The Netherlands, is therefore "**Predictable Projects in a Dynamic World**". Participants from all over the world will attend live or via the online platform. The content of the Congress will be presented via papers, live presentations, round-table conversations and pre-recorded videos.



Speakers are encouraged:

To share their experience with predictable projects in areas of: Sea Rise, Renewable Energy, Sustainability, Belt & Road Initiative, Carbon footprint, Increasing urbanisation or any other topic related to the central theme.



Speakers are requested:

To contribute with their know-how, insights, cost and value developments, with attention to the impact of one or more of the following themes: Sustainability and Projects, Project Control, Project Change/Speed of change in projects, ICT, Geographical influences and Human Factor.





Sustainability

Environmental impact in TCO; Reduction of Carbon footprint; Optimizing products and production chains; Climate Change; Renewable energy; How sustainable goals influence traditional costs/quality driven projects.



Project Control

Use of Standardized tools; How to keep an accurate overview of dynamic/complex projects; How to improve predictability;Predicting outcome using risk, scope and change managment.



Change

How a dynamic world influences our work; Measuring and predicting Change; Dealing with change/surprises within a project.





ICT

Current & Future Technology; Data collecting, bases & Methodology; Predicting Cost and Value using ICT; Presenting and predicting Projects; Seamless information transfer and communication.

Geographical Influence

Global & Contractual Relationships; Predictability of Global Projects; Predicting economical, cultural Differences and political influences.



Human Factor

Forming Cohesive and Effective Project Teams; Training ICEC professionals; Using diversity as strength; Coping with change, e.g. the way of working after Covid-19.

With this Call for Abstracts we would like to invite you to actively contribute to the content of the Congress. You are requested to prepare an Abstract for a Scientific & Practical Paper & Presentation or a one-pager for a Presentation. The abstract will be evaluated by the Paper Review Committee. The paper will be published in the Congress proceedings and the presentation will be given live at the congress or in a pre-recorded video. The onepager will be evaluated by the Program Committee to verify if the proposed practical presentation fits into the Congress program.

Scientific & Practical Paper & Presentation

The deadline for submission of the Abstract for the scientific paper and presentation is November 15th 2021. You will be requested to submit the full paper before March 1st 2022.You will be informed about acceptance of your Abstract before December 15th 2021.

Presentation

The deadline for submission of the one-pager for the practical presentation is November 15th 2021. You will be requested to submit your slides for a live presentation or a video of your presentation before April 15th 2022. You will be informed about acceptance of your one-pager before December 1st 2021.

The Abstract can be submitted via <u>the online portal</u>. Please register yourself and follow the instructions. Please note this is not yet your registration for the Congress. Only papers and video presentations of which at least one of the authors participates in the Congress will be published. More information about the Congress can be found at <u>the congress website</u>. On this website you can also subscribe to the Congress newsletter and find the <u>detailed</u> <u>guidelines</u> for abstracts, papers and presentations.

The ICEC World Congress 2022 will be an amazing event. We are looking forward to your contributions and to see you live or online in June 2022 in Rotterdam!

Sincerely yours,

The organizing committee of the ICEC World Congress 2022



Coaching the Business Mindset

Provided by: Eugene Seah, ICEC Admin Vice Chair



Introduction

What is the secret of successful companies and why some staff stay in companies without perceived good benefits? In all cases, it's about the boss whom you work for and not about the money.

Tim Collins wrote about the internal culture of companies in his book, "How the Mighty Fall" and how these companies remain unshakable through the decades. In fact, the Japanese Contractor, Takenaka Corporation has existed since the era of the Samurai.

I concluded that a top firm must recruit and retain the best talents. The key soft element present in successful companies is the Coaching Mind Set.

Coaching encompasses a wide range of skills to be possessed by a person. This paper shares with you, briefly, the elements present in a successful coach which can be imparted into leaders at all levels and inculcated as company culture.

Attributes of a Good Coach.

A good parent coach speaks to the child at eye level, asks effective questions to find reasons for his behaviour and gets the child to own the solution to improve and not commit the same mistake again. Hence, skills needed in Parent Coaching matches what a leader needs in Business Coaching - but with different psychological languages and maturity.

Coaching the Team – Team Ship Rules

Substituting words that can instil fear and apprehension, with words that are "fun" and "encouraging" are part of parent coaching. Parents use a positive attitude in highlighting the child's mistakes, celebrating both successes and failures. This forms a safe learning environment to the child's mind. Similarly, a good business leader or line manager knows how to use coaching business language to create a safe environment in the office for learning and creating value in a team.

Sir Clive Woodard personifies this in his definition of "Teamship Rules" - a setting that leaders make rules formulated from bottom-up by the team and for the team; to ensure discipline, ethics and professionalism in Sports Teams. Instead of the usual top-down rules, enlightened companies empower employees to come up with their rules that are aligned with Business Objectives and KPIs. These rules are then owned by every employee of that Business Unit, which collectively contributes to the greater Vision, Mission and Objectives (VMO) of the company.



The Art of Communication – Speaking, Listening, Questioning.

A verse from the Biblical scriptures asks us to be "Slow to Anger, Fast to Listen, Slow to Speak". Be it Economy or Business Class, Singapore Airlines crew will interact at eye level with the passenger. This is essential to their Service Excellence, which was illustrated in a Harvard Business School report (JULY–AUGUST 2010 ISSUE).

The word "WHY" invokes an amygdala¹ hijack – meaning the brain tells the body that something bad is going to happen and the body tenses to respond. If we control our emotions well, we can also control the way we act and speak, choosing our words carefully to facilitate a coaching environment with innovative mindsets. Instead of using "WHY", parent coaches craft questions differently but get a better result. For instance, "Why are you always making this mistake?" becomes "How can Daddy help you understand this better?". In the adult world, a frequent latecomer can be reformed with "How can I help you be punctual?".

The art of Recognition and Edification

Gary Chapman's book talks about the 5 love languages (5LL) of appreciation. As a parent, the first way is by telling your child that you love him (words of affirmation). The second is to buy things for the child (gifting). The third is to be present for the child (quality time). The fourth is doing something such as sending your child to school (acts of services) and the last method can include a hug, a pat or simply holding hands (physical touch).

If none is present, you may be in trouble. The 5LL are also present in effective teams whereby savvy team leaders can use these 5 love languages appropriately, depending on situation and gender. How does a team leader with business coaching mentality utilise 5LL?

- Words of Affirmation "Hey bro, great job in winning the contract!"
- Gifting "Hey guys, I've bought tea for everyone keep up the good work!"
- Quality Time "Hi John, can you spare 20 minutes for a brief chat?"
- Acts of Services "Guys, I can help deliver the tender documents once it's done."
- Physical Touch Light pat on the shoulder to show encouragement.

The Learning and Working Environment

The environment is one way which can help a person to learn, and the other is learning style.

Let's discuss learning styles first. The old school mantra is to insist the child sit still and study continuously for 2 hours without any risk versus reward motivation. I used to be that kind of parent and my daughters get fidgety easily.

I soon came to realise that the girls are kinesthetic and visual learners, very much like myself. Hence, I started to change the way they study, making them stand up or sit for a few minutes with frequent breaks, placing M&M'S Chocolate Candy in front of them and glasses of water. The intake of water is to keep them hydrated and standing up with periodic breaks

¹ The amygdala is the inner brain which controls the reactions for fight, flight or freeze motions of a person. It is the part of the brain that is first formed and has been implicated as the seat of emotion, addiction, mood, and lots of other mental and emotional processes.

ensure that there is no monotony in the lesson plans. Another example is the use of props to demonstrate how scientific principles work as they are good in visual learning. They need to see something in action in order to comprehend and understand better.

A parent coach also knows how to create a stimulating environment that is conducive and fun for the child. The organic chaos of furniture, music and even colour of the room, promotes curiosity and playfulness.

Usage of the right fragrance and plants can create a conducive learning environment. Some plants can be used in the indoor environment and we can bring all this to the working place.

Body Language

Lastly, I would like to highlight the know-how of body language as a coach. Business coaches train their leaders in understanding body languages for themselves to reflect and use this knowledge in getting the best out of the team. For instance, in coaching and teaching, it is best to sit side by side and at the same level with the trainee or employee. In the office environment, great leaders know how to communicate with their employees effectively through the use of proper body language. The right tone of voice and body language will be successful in winning projects or addressing issues within different teams.

It's a great skill to possess.

Conclusion

This paper discusses the use of Parent Coaching techniques in the business world, i.e., the skills learnt in Parent Coaching sessions are very applicable to the business and office environment. In the Design, Engineering and Management arena, firms can compete in design capabilities and management understanding. However, they cannot compete against culture and skill set which reside within the people working in the company. The competition can copy designs or buy assets, but they cannot buy the company's culture which encapsulates the overall strategy of the company. I strongly believe that coaching skills for leaders in the organisation will be the weapon that makes an organisation strong in the midst of crisis or success.



Complexity in Owners Structure

Provided by: Gianluca di Castri, ICEC Chair



The text below is a synthesis of the paper presented to the 32.nd IPMA World Congress 2021. Full paper can be found in the congress proceedings.

In a complex engineering and construction company, as well as in any capital project, either public or private, the structure of ownership is becoming more complex: as a matter of fact, while until the end of the last millennium was still possible to identify, in majority of capital projects, the "owner" that was generally also the "employer" and the "end user", on one side and one or more "contractors" on the other side, now we find a more complex structure where, instead of the owner, we have different actors like "promoters", "developer" and "investment funds" or other investment organizations, that supply the majority of the finance. This causes a lack of entrepreneurship, that can only in part be supplied by high level consultancy.

The investors have a completely different approach to risk management as well as to the very concept of value creation if compared to entrepreneurs, that causes a different strategic management of the project, with a different vision that sometimes can kill a project that would otherwise be viable.

Until the '50s of the last century of the past millennium, the structure of a project was defined in a quite stabilized way: in private project the organization was based on the classical scheme of

- the Entrepreneur, who first masterminded the project and then has the strategic capability to conceptually design it, make the decision to carry it out and how to finance it, define the project organization, that was normally composed by
- the Engineer (or Engineering Contractor), in charge of Engineering and Work Direction
- the Contractor (or Contractors), in charge of construction, while
- Operation and Maintenance was normally in the hand of the Entrepreneur's organization

The economic background of this organization was in the fact that, in majority of cases, the entrepreneur was financing the project with funds belonging to him or to other shareholders or, in case of need of additional funds, through bank loans backed by personal guarantees. Substantial changes started by the '30s of XX century, when companies owned partially or totally by the Government started to act as investors with supposed entrepreneurial capacity in public works as well as in strategic sectors.

A further change started in the late '90s, when Investment Funds started to replace the banking system in collecting private funds to industrial projects. Let's try to focus the difference between Entrepreneur, Investor and Lender

• The Entrepreneur takes the risk of using his funds in the project and expects a variable return based on profit from the operation, normally he believes in the

project and likes it, put his name on it and aims at transferring it to the future generations.

- The Investor, that is also collecting equity funds, aims at reducing the risk, mainly during construction phase, through proper contractual clauses and other technicalities, and then expects a quite defined return from profits, he does not have any special connection to the project and is prepared to sell it soon as selling becomes more convenient than keeping.
- The Lender is supplying finance to the project, his return should be fixed and independent from the profit.

By this way, the Investment Funds have first limited and then replaced the Entrepreneur, however we are at risk that any Entrepreneurship be completely lost. As a matter of fact, the Funds have not internal entrepreneurship, neither they are supposed to have it since they focus on finance: useless to say, this does not mean that internally be not possible to find people with high technical and economic background and entrepreneurial capacity or that they can successfully delegate this function to high profile consultants, it only means that important decisions are made by Investment Committees that are focused on finance and whose aim is to minimize the risks, mainly during engineering and construction phase.

The consequence on the political and economic system as a whole can be the lack of innovation and, without innovation, the economic development becomes a dream. Starting from the late XX century, the attention has shifted from single projects to groups of projects or programmes or to the whole portfolio of projects and, from engineering & construction to the whole project life cycle.

In some cases, the project life cycle is reduced to only a part of the full path. From the point of view of an Engineering and Construction company, the life cycle starts with the proposal and ends with the final handing over, from the point of view of a Real Estate company the life cycle ends when the estates, after having been completed, have been completely sold to other parties. However, we are focusing on the general case of an ownership aiming at building the project, operate it and then dismiss it, being the main actor of the whole life cycle. Besides the owner, a lot of stake-holders either internal or external to the project, have to be taken into consideration: banks, authorities, associations, the public as a whole. A paramount importance is being given to local consent, since without it becomes very difficult to carry on the project.

The development of structured finance (project finance) also allows the traditional investment process to be reversed, by this way offering new opportunities for economic development. While in the past capital accumulation was necessary in order to be able to proceed with the investment, today it is possible, at least in part, to obtain the capital from future funds that will be obtained once the investment goes into operation, without any guarantee other than the project itself. Hence the need to integrate management and control activity throughout the life cycle of the project.

We must, however, avoid the illusion that it is finance that creates wealth: finance plays a very important role by shifting wealth in time and space and ensuring the maintenance of value over time, but it does not create new wealth if not in a small part. It should be subject to the condition that financial horizon be not limited to the short or the medium term objectives, such as those relating to the movement of wealth, but must also take into account long term objectives relating to the conservation of value.

The new players in the capital projects are de Developers: they are a kind of entrepreneur of the starting phase of a project, that brings the project up to the status of being ready for construction and then sells it to the Investor. By this way, the Investor will be exempted from the risks relevant to the project start, at least in part.

Generally Developers are medium or small size companies, they identify a project and execute the conceptual design as well as everything necessary for the authorisation procedure, identify the site and enter into the relevant preliminary contracts with landowners and then proceed to the sale of a project ready for construction.

We should distinguish among

- 1. the full developers, who perform all the activity with their own funds and eventually sell the project once it is fully authorized and sometimes ready for construction and financing,
- 2. the development consultants who perform the activity in the name and on behalf of a client already defined and using funds of the latter.
- 3. However, in majority of case, the real developer in some way in the middle, there are infinite intermediate cases, usually identified with the term co-development.

After the failure of economic systems based on localism and protectionism as well as the disillusions of globalized economy, the economic systems should evolve integrating someway the local economy with the global economy, taking into consideration the need to have an economic and productive system that works in a sustainable development regime and in a long-term perspective.

It will be essential to adopt appropriate instruments and protocols for territorial management that will make possible to know, manage and sometimes regulate the market mechanisms. This perspective of integration will include for land management, construction and management of infrastructure or production facilities (with particular attention to those carried out under project financing), management of urban heritage, cultural heritage.

Today, the mathematical and informative tools, including to so called artificial intelligence, allow a better understanding of all information and data relating to an economic system, with particular reference to an economic system or subsystem on a given territory. The same tools, through various elaborations and simulations, allow to react to unforeseen events.



Quantity Surveyors Will Be a Key Arbiter of Sustainability and Smart City Technology

Provided by: Eugene Seah, ICEC Admin Vice Chair Written by: Aditya Karkera

In the realm of construction, many invisible pillars and scaffolds help bring projects alive and keep them so. Perhaps no other pillar is as invisible, and yet as critical, as Quantity Surveying (QS). Focused on cost management and quantity extraction, QS professionals often work at the outset of a project or towards its completion. But, according to **Eugene Seah** of **Surbana Jurong**, QSs have an indispensable role in the future of built environment and construction and one that is, in fact, forward-looking: providing objective approaches and solutions to smart urban construction and sustainability.

Eugene, a third-generation QS, wears many hats: he serves as Managing Director of Surbana Jurong Technologies, Senior Director of Special Projects in the Group CEO's Office at Surbana Jurong, and coordinates sustainability solutions and synergy at the firm. A passionate proponent of tireless lifelong learning, Eugene has a panoply of educational and practical experience—from construction and quantity surveying to design, waste, finance, business management, and even information technology. This breadth (with depth) is, according to him, critical to the future of QS and its place in the construction industry. And this role centres on two lines: smart infrastructure and sustainability.

As the <u>Smart Nation initiative</u> continues to gather momentum in Singapore, especially in light of accelerating progress in the light of the pandemic and advancements in smart housing and infrastructure plans, Eugene believes QSs need to punch above their weight. "QS, by practice, is still pretty traditional," said Eugene, adding that there are several opportunities in smart cities for QS to tap into that haven't yet been adequately explored. But this will not be easy, largely due to the uncertainty and missing data surrounding smart components and infrastructure. "Clients don't want a black hole–they want to see what they're going to get." And assembling Bills of Materials and Technology (BoM/BoT) to allow for this to happen with rapidly emerging, sometimes risky smart technology is not easy to do. This is why Eugene works with Surbana Jurong to develop newer benchmarks to help quantify and control costs and values in BoM/BoT formulation.

But work of this nature requires a level of criticality and intellectual flexibility that will challenge QSs to step outside of their pail and wear, as Eugene does effectively, many hats at the same time. Rather than simply offer QS services to the letter and do little beyond, effective QS work in the realm of smart infrastructure requires treating the discovery, specification, quantification, and implementation of smart infrastructure as a "journey from start to finish." And this is where Surbana Jurong excels in its QS platform: it possesses construction or QS experts who double up as technologists or facilities managers who can contribute to data conversations; they are primed as a result to empathise with clients better and pre-empt anxieties by borrowing from the best of both worlds. "They are giving us the royal jelly of information so that when we build technology up it's based on cost-effective and pragmatic solutions."

This journey, and its interdisciplinary prerequisites, transcends smart infrastructure, however. As with Smart Nation, recent pushes for sustainable infrastructure under the <u>SG</u> <u>Green Plan</u> have similarly opened up burrows for QSs to dig deeper into. QSs can be surprisingly important players in accomplishing sustainable infrastructure goals in Singapore and beyond. "We are the only ones who break a building into a thousand lines," Eugene noted, and this allows QS to methodically and comprehensively disassemble projects to pinpoint sustainability bottlenecks and ESG-critical points and materials with surgical precision. This is also achieved through the use of platforms such as Surbana Jurong's "24K Integrated Data Platform" Common Data Environment (CDE), which horizontally allows for data from across the entire array of sensors to be digitally concatenated and wrangled for further sustainability analysis.

Crucially, such data must be deployed by QSs in the service of ensuring that no greenwashing occurs in the delivery of sustainability promises. According to Eugene, this can be achieved most promisingly in materials selection in the context of carbon reduction and emissions control. "As Quantity surveyors, we can play a crucial role to ensure that we know what is the embodied carbon of the building." And this can then be determined by studying (and helping select even, per Eugene) materials that lower embodied carbon and also that ensure lower operational emissions. Embodied carbon and tear-downs given limited land; the higher frequency of new construction requires that embodied carbon is smoothed out over time similar to or more efficiently than longer tenure infrastructure.

QSs who can rise up to this challenge will require more than specialist knowledge within valuing and surveying. To match client needs of the future, Eugene believes that QSs will need to dip their toes in many ponds and be comfortable with cross-pollinating knowledge from across several disciplines. "Because of the ideas and knowledge I have, I'm able to speak to a client and ask, 'Do we need this?'" and be not only a service provider but an active adviser and critical eye in the service of the client's sustainability and smart technology interests and ambitions. As new and exciting developments in construction technology and sustainability continue to emerge, QSs may very quickly find themselves no longer be an invisible pillar in the built environment but indeed a central one.

Originally published here: https://buildtechasia.com/quantity-surveyors-will-be-akey-arbiter-of-sustainability-and-smart-city-technology/

ICMS 3- Briefing Document for ICEC Executive

Provided by: Roger Batten, Advisory Board Chair

With the construction environment responsible for around 40% of the global carbon emissions, it is crucial that sustainable practices are adopted to achieve net-zero ambitions. ICEC has worked with 49 other globally prominent organisations to develop ICMS 3 - a world first for cost and carbon management in engineering and construction from concept to completion and beyond.

ICMS 3 is pioneering sustainable practices that assist the engineering and construction industry to manage and mitigate climate-related risk.

ICMS 3 will contribute positively to efforts to decarbonise the engineering and construction sector in the most cost-effective way. Through ICMS 3, professionals will for the first time be empowered to deliver a globally consistent method for carbon life cycle reporting across construction projects, from buildings and bridges to ports and offshore structures.

ICMS has collaborated to develop and raise the standard of construction carbon and cost management to the public advantage. The solution will support sustainable investment strategies by bringing much needed transparency and cross-border comparability of embodied and operational carbon across the life cycle of engineering and construction projects.

This update to ICMS and subsequent updated standards which our professionals follow when managing any construction project, will see the construction sector making a large and measurable impact when it comes to leading from the front and combatting climate change.

These new standards provide a professional toolkit to measure and consistently report on carbon and influence the most basic design engineering and construction decisions.

While other aspects such as cost and safety will continue to play a key factor, of equal importance ICMS will be ensuring a greener future for the global engineering and construction sector.

The consultation period for the draft ICMS 3 Standard has now ended and the final Standard will be issued towards the end of the year.

Member Association News



Professional Accreditation Success for the ACostE

Provided by: Alec Ray, Region 2 Director

The ICEC Accredited **ACostE Tiered Professional Accreditation** Programme was started in 2012 and the ACOSTE has reached a significant milestone **of accrediting the 100**th ACostE member.

Keeley Fowler is an Estimator for *BAE Systems* and a Graduate member of the ACostE. Keeley achieved Registered status under a special licencing agreement between the ACostE and BAE Systems. 29 of the awards are at the highest level of Certified Professional.



Mick Porter, speaking on behalf of the *BAE Systems Corporate Estimating Group*, stated "We are seeing increasing demand for externally recognised qualifications from our cost estimators across the business and we have invested a lot of time and effort in this accreditation framework with the ACostE. It is great that we can celebrate this landmark achievement of the 100th accreditation with Keely who joined us as a business apprentice a number of years ago"

BAE SYSTEMS

The **ACOSTE tiered programme** covers a range of levels of competence from awareness level up to expert and is based on the UK Engineering Council Specification for EngEch, IEng and CEng and use the UK Project Controls National Occupational Standards.



The assessment of the candidate covers academic and vocational qualifications, experience, competence evidence and for the two top levels, a professional interview. The retention of the award is dependent on the maintenance of Continuing Professional development. This is seen by the ACostE and employers as a vital component.

Individual accreditation has been achieved from candidates representing many companies from Manufacturing, Oil and Gas, Infrastructure, Government Departments, Small Enterprises, consultancies. We have awarded accreditation to candidates or have candidates in the process of being assessed from the UK, India, Finland, Australia, USA, Iraq and the Netherlands.

In addition to the Individual Accreditation, the ACostE have a suite of Accreditations covering Companies, Trainers, Training Organisations, Training Courses and the licence to self-award Enrolled and registered status. The latter being achieved by BAE Systems who are also Company Accredited at the Gold level standard. The Atomic Weapons Establishment is currently undergoing Company Accreditation and hope to complete this by the end of the year.

Each Accreditation is carried out by senior qualified and experienced professionals within the ACostE.

Further details can be obtained through the ACostE web site www.acoste.org.uk under the Professional Development tab.

Or contacting the Accreditation Chair, Clyne Grant - details below

Clyne Grant

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IBEC Ensino

Provided by: Heitor Luz, Region 1 Asst Secretary

IBEC is a benchmark in Cost Engineering in Brazil and it recognizes the value in constant professional qualification; its main mission being to disseminate knowledge through courses, events, publications and so on.

Through IBEC Ensino, the institute has trained thousands of professionals in Cost Engineering and related areas of Engineering, Architecture, projects and construction, including post graduation.

More than 50,000 professionals have participated in IBEC events, including lectures, courses, social activities, among others.

There are currently 1,200 professionals attending postgraduate courses.

=> Pioneering: Graduation in Cost Engineering. We completed 20 years of Post-Graduation In Cost Engineering with great success.

FAATESP-Faculdade Álvares de Azevedo belongs to IBEC since 2017 and is increasingly improving its portfolio of undergraduate courses.

Recently, the Ministry of Education approved, with a maximum mark, the beginning of the pioneering undergraduate course in Cost Engineering (5 years of duration), which means great advancement for the area and its professionals.



=> IBEC Jovem

IBEC launched the IBEC Jovem Program in 2018, fulfilling its duty to contribute to the promotion of Cost Engineering in the country.

The program was inspired by ICEC's Rising Professionals program and, in Brazil its main objective is supporting newly graduated engineers to advance their careers and build a better world.

Many benefits are offered to these professionals, such as discounts on events, free books and teaching materials, paid internships among others.

PAcademic journal of Engineering

The Cost Engineering Journal produced by IBEC will be called Revista Acadêmica de Engenharia, as it comprises all other engineering courses existing in the School of Engineering.

=> UPADI

The Brazilian Institute of Cost Engineering is a member of the Latin American Commission on Cost Engineering of UPADI-Unión Panamericana de Asociaciones De Ingenieros () which includes North American countries.

=> CONFEA

Paulo Dias is a permanent member of the cost engineering working group of CONFEA - Federal Council of Engineering and agronomy since 2019.

The main purpose of this group is to provide engineering professionals with quality technical material and information on Cost Engineering.

=> Cost Engineer 2021

IBEC believes that the appreciation of cost professionals is our pleasure and in many ways benefits the development of cost science and the search for greater and well-deserved recognition of the area.

Since 2007, IBEC honors the prominences of Cost Engineering on Cost Engineer Day (May 27) and this year, The Cost Engineer of the year was Luiz Raymundo Freire DeCarvalho, CRK certified by ICEC/IBEC.

=> Region 1 Directors

The members of Region 1 and its guests have met frequently to discuss issues relevant to the area, strengthen the technical-scientific cooperation already established and foster new partnerships.

The Board currently consists of the following professionals:

- Regional Director: Paulo Dias / Brazil
- Deputy Director-External Relations: Maria Tereza Dalenz / Bolivia
- Deputy Director-Marketing: Manuel Alejandro Rodriguez / Mexico

- Deputy Director-Standards/ Professional Development: José Ramón Cálix Guerrero / Honduras
- Deputy Director-Academic Forums / Research: Maria Teresa Pino / Paraguay
- Deputy Director External Relations: Diana Bula / Colombia
- Regional 1 Assistant Secretary: Heitor Luz / Brazil
- IBEC Delegate: Fernando Camargo / Brazil

Since 2014, nine Latin American countries have been visited in order to present ICEC and the good practice of Cost Engineering.

=> Glossary of Cost Engineering in Portuguese language.

IBEC actively worked on the development of the Brazilian Glossary of Cost Engineering and had the collaboration of several professionals.

This document seeks to contribute to ICEC in favor of the standardization of terms used worldwide in Costs science.

The latest version of the Brazilian Glossary is now available in digital format and has more than 100 terms and will be officially launched on Engineer's day in Brazil; 11 December 2021.

A digital copy was forwarded to the Secretary General of ICEC.

=> Professional Certification

IBEC certifier maintains the IBEC Professional Certification Program. It has been accredited by the ICEC since 2015.

Its main focus is to provide professionals, companies, public bodies and society in general with credibility and trust in certified professionals in the areas of Cost Engineering and Project Management. In Brazilian Engineering this practice is not yet common.

Soon the program will open for new applications to those interested in the certifications offered.

=> World Congress

IBEC and Region 1 are looking forward to the next ICEC World Congress to be held in 2022 in the Netherlands.

We are constantly publicizing the event and hope to send several technical papers.

We are ready to participate in person in this great World event.

'Hoping that all colleagues are well and safe, we long to see them in person in the Netherlands.'

Brazilian Construction Budgeting Standard

Prepared by our specialized body, the Brazilian Construction Budgeting Standard - whose rapporteur was engineer Paulo Dias - was approved and is in prior consultation on the internet.

We hope the government can launch it at the beginning of 2022.







We are delighted to be partnering with Project Controls Expo Australia, the largest project controls hybrid conference and expo dedicated to its advancement and with the objective of providing significant awareness on its process, tools, and techniques to its stakeholders.

Join us at **Melbourne Cricket Ground** from **8-9 February 2022** to celebrate the 3rd edition of **Project Controls Expo Australia**

Meet with other practitioners, employers, clients, and suppliers. Share knowledge, experience, best practices, career development and check out the latest trends and tools.

Day 1

- Specialist workshops AACE CCP and BIM
- Partner showcase with free access by pre-booking
- Asia-Pacific Project Controls Expo Awards 2021

Day 2

- The main Expo day with series of high-quality seminars
- Partner showcase with free access by pre-booking

For more information please visit their website



World's largest project controls conference and exhibition



Specialist Workshops

Tuesday, 8th February 2022

Industry partner showcase (free access) and job fair

• Workshops:

• AACE CCP Certification Preparation Overview (full day)

• BIM workshop (which consists of 2 half-day sessions)

Awards Evening & Black Tie Gala Dinner

Tuesday, 8th February 2022

Expo Day Wednesday, 9th February

In 2022 we will celebrate the 3rd anniversary of producing this successful event in Melbourne.

We have delivered major steps towards professionalising project controls and bringing the project controls community together in a networking environment for knowledge sharing. Everyone can share its benefits for effective project delivery globally.

With ambitious infrastructure projects across the world, it is our intention to bring professionals, apprentices and professional organisations together to benefit the industry and to understand the skillsets required for future generations to develop their careers.

Key Highlights

NEW FOR 2022

This event looks to give recognition to individuals, projects, programmes and organisations for the successful delivery in the application of project controls.

There will be a drinks reception, dinner and the announcement of 7 award winners. The perfect opportunity to network with senior project professionals from across the region who will join in the celebration.

- In addition to our physical event, we will offer virtual access for a truly immersive experience
- Partner showcase (free access) will now take place on **both days**
- Our regular features: Masterclass Zone, Case Studies Zone, Technology Zone, Megaprojects Zone, Innovations Zone and SME Zone with a Panel Discussion

