

“Collaborative design and delivery of integrated design and construct projects is value-adding for the client- really?- how?”

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# The Context for today's presentation

- This session aims to share the potential and benefits of collaborative working practices that could provide value-added outcomes for the client, the project, the design and construct project team – now and for future projects – facilitated from a design practitioner and academic researcher's perspective.
- So, what are a few of the related current industry challenges we are all having to deal with ?
- What is the situational context in the construction industry and the clients we currently work with, and will be working with that may require us to push some boundaries – and what boundaries exactly ?- and to ignite change – why, how, what and when ?

# The Context continued

- There is a sense and too often a reality in our industry that the currently common DBB and silo working practices that creates functional isolation of consultants and not using the collective energy of the whole project team early on in the project are adding to the fragmentation and mis-aligned designer vs QS estimates/quotes in our industry –
  - resulting in potential, and at times, real client dis-satisfaction and reputation risk for designer professionals and all of the project team.

# related experiences and challenges- shared by a senior pre-construction CM in the construction industry

- “Apartments and townhouses have become smaller and accepted by the market – so one of the historical preconceptions that modular options automatically meant ‘smaller’ are starting to dissipate – they can match the size of the in-situ builds now.”
- “Infrastructure that services intensification hasn’t been solved yet – we’re now allowed to intensify in urban areas and neighbourhoods – but nothing stacks up once you plug in the cost to upgrade the downstream capability that no-one can afford to address (government, council or developer).”
- “Councils are still not aligned or co-ordinated across the country for ‘modular’.
- Are these relevant experiences and challenges for you too? Other examples ?

## related experiences and challenges- shared by a senior pre-construction CM in the construction industry continued

- “Councils are still not aligned or co-ordinated across the country for ‘modular’ yet.”
- “The MBIE ‘Built Ready’ Scheme for off-site manufacturing is a good idea
  - but it’s aimed at companies to certify their materials and QA to streamline and enable consenting and inspections off-site –
  - and after people have engaged modular companies from China, Vietnam Scandinavia for the product – the modules are delivered to site with none of that certification *et al.* really sorted out. The scheme is basically behind market movements.”
- “Cladding solutions – some modular providers supply a module that bolts together with others and you then have to clad them in-situ afterwards ie the normal process of materials and labour on site –which means you’re losing the gains in cost and time (it’s slow and expensive).”

Are these relevant experiences and challenges for you too? Any other examples ?

## A few opinions that are often heard floating about in our industry – would collaborative work practices help diffuse them?

- “That ECI (early contractor involvement) is always a beneficial approach for the project and the client and team? - or -that there can be substantive disbenefits too?”–What are your experiences ?
- “ That it’s always the designers fault that the details don’t work- and/or the documentation is incomplete or wrong” ? – could there be a reason for that eg its linked to a clients’ unwillingness to pay for full service ? or the clients/developers *et al* maybe in a hurry to just get the job started? Or could D&B approach diffuse this issue early in the process ?
- Modular approach is the way to go for increased productivity- but is not always seen as linked to sustainability or addressing /being aware of the whole LCA on project(s)
- AI has really sprung on to the scene this year- will it help the skills shortage ? And /or could/will it assist design professionals or compromise designers’ IP?
- Collaborative work practices would /do only work for larger consultant and construction practices not SMEs
- Your thoughts/experiences related to the challenges and opinions we hear or experience?- look forward to you sharing them with us

## So why consider taking on a collaborative working practice approach?

- Brings the whole project team together around the project from the 'get go' – from the concept design stage draft – when the design can still be easily influenced .
- Ensures an early understanding and clearer sense of the clients', stakeholders and other project team members' project requirements.
- Promotes the creation of a shared vision for the project' - described as value-adding to the project, the team, client, and stakeholders *et al.*' .
- Integrates and resolves buildability and design issues at pre construction stage – and therefore prior to when construction stages begin.
- Collaboration at the early stages of a project (preconstruction ) can also mitigate waste (materials, time, defects etc)

## So why consider taking on a collaborative working practice approach? continued

- It provides a one-stop-shop for clients/stakeholders- taking on the responsibility for the design and construction – ie including all risk associated with the project – and this might also mean the losses too.
- Can improve communication and create closer collaboration amongst a greater number of consultants and contractors from the very beginning of the design/pre-construction and construction process, including the client and shareholders
- This industry often becomes a blame game environment /process- where the contractors blames the designers, the designers blame the client or other consultants for example -and on it goes – lots of finger pointing – we all benefit from collaborative no-blame working relationships.



# Collaboration realities for designers and related disciplines to consider and be aware of

- Collaboration still means that each party has to perform. People can and at times do mistake collaboration for everyone compensating for the others and there are no errors.
- For clients to buy into collaboration effectively, they usually need to have experienced a lot of pain on the other delivery types- if not - do they even know what they are trying to avoid.
- “Understanding the construction client and the ability to value—add to their project can be a hard task in many cases - especially now? – why?”
- “Designers are expected to co-ordinate everything 100% with no errors – and get blasted if they don’t”.
- “Designers can only effectively co-ordinate across other design disciplines through hard won experience”.
- “BIM is not really collaborative in reality, as it’s isolated from services trades and the build etc..... You see the most success in shop drawing process like structure, and in the last 20 years façade engineering”. “Passive fire is now virtually an as-built process”.

# So should we be applying our thinking re-initiating change and pushing boundaries to include the following as well?

**Population** – our industry is in competition with every other industry for people in the work force. Population growth is lower, and with increasing numbers taking retirement and with worker fatigue - there is not enough to go around.

- Therefore - young people are going to be thrust into positions of responsibility way before we did.
- Some people will sink, others will rise – but how do you make them successful?

## **Alternative tenure / ownership modules –**

Can/could offer solutions rather than the outrageous house purchase prices and deposit requirements from banks.

Maybe :

- Mortgages issued and underwritten by the government rather than banks
- Generational mortgages
- Community housing where the m2 cost of laundries and general areas are shared in the complex – not unlike urban places like New York etc..

AND of course : **AI** – which has decidedly sprung on to the scene this year for everyone no matter what industry or discipline we are in – how will/could that impact design professionals – their/our autonomy

Need to add some stuff here

## A few opinions that are often heard floating about in our industry – would collaborative work practices help diffuse them? -

- “That ECI (early contractor involvement) is always a beneficial approach for the project and the client and team? - or -that there can be substantive disbenefits too?”–What are your experiences ?
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Other relevant thoughts/experiences related to the challenges and conflicting ideas we hear or experience?-

# How's it work or meant to?

- Starts with the initial briefing by client/stakeholders with the engaged design professional initially and then the Geotech, Structural Engineer and TA generally consulted /involved too as concept design draft prepared
- Startup meeting – held immediately after / as soon after briefing and draft concept design has been prepared - and who that would involve and why as it's team building in other words and getting the buy in and expertise up front of the project team -across the relevant disciplines and roles on the project (eg QS, Main Contractor/ Builder, Structural Engineer, Urban planner, Specialist sub contractor(s) (if facades involved etc), Client too, from day one essentially –to gather their take on the concept for their role, shared expertise including buildability, costings, actions /info needed and when and what etc  
ie not after detailed design stage /consent documentation completed as is often the norm for the traditional DBB approach.
- Followed by design reviews at end of each design stage with involvement again of relevant project team and peer reviewer and client sign off etc till reach completed detailed design stage and ready for building consent application
- There is /could be a Q of practice /project scale ? and are there any downsides to consider if wanting to embrace collaborative working practice ? Eg would it only really work for larger companies/projects? Or could it work for SME design practice /one off med /high end residential projects?