



The latest news, views, and announcements

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**LEAN CONSTRUCTION ANZ (LCANZ) NEWSLETTER Volume 3**

We have been busy sharing a wealth of lean knowledge and experience over the last few months at our LCANZ Communities of Practice events. Read more on pg4.



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<https://www.leanconstructionanz.org/>

# Message from the Chair

Michael Ward, Chair LCANZ



Welcome to another edition of the LCANZ newsletter. The edition I am commenting on the re-emergence of Alliance contracts which presents a great opportunity to introduce the benefits of lean construction to deliver positive change.

## Lean and Alliance Contracts

Alliance contracts are making a comeback in some sectors as client organisations are realising the benefits of designed collaboration. This is being reinforced by the comparative successful outcomes of Alliance programs and projects compared to adversarial contract forms.

The Lean Construction movement in the USA commenced with the focus on lean tools and learnt over time that integrated teams were an important element of optimising lean practices. Integrated Project Delivery Contracts (IPD) were developed to align all the parties and share risk reward with a focus on innovation and designing to the budget allocated.

At around the same time late 1990's adoption of Alliance Contracting in Australia and New Zealand sought to mitigate the frequency of projects being delivered over time and over budget with a high incidence of litigated disputes.

Much of good lean practice has its essence in collaboration, designers working with constructors, integrated planning teams and optimising processes and methods. Alliance contracts are designed to promote cultures of mutual support for shared success.

Several of our webinar presenters over the last two years have highlighted the importance of leadership and an integrated culture to create success.

There is therefore a significant opportunity to leverage Alliance or other forms of collaborative contracts to optimise the benefits of lean construction methods.

## Board Member Profiles



**Michael Ward**

LCANZ LTD BOARD CHAIRPERSON, LCANZ NSW REGIONAL COUNCIL



**Ken Panitz**

LCANZ LTD DIRECTOR, PUBLIC OFFICER



**David Whatmough**

NSW REGIONAL COMMITTEE CHAIRPERSON



**Stephanie Pretorius**

LCANZ LTD DIRECTOR, NZ REGIONAL COUNCIL



**Shang Gao**

LCANZ LTD DIRECTOR, VIC REGIONAL COMMITTEE



**Phil Hendy**

LCANZ LTD DIRECTOR, VIC REGIONAL COMMITTEE



**Christina Levinson**

LCANZ LTD DIRECTOR, QLD REGIONAL COMMITTEE CHAIRPERSON

Our mission is to promote and support higher levels of sustainable performance in the Australia and New Zealand Construction Sector.

Our development objectives to be progressively implemented include:

- Lean Training and Accreditation
- Lobbying body for Lean and Collaborative Contracting
- Becoming the body that sets the Lean Standards for AUS and NZ
- Research and research summary
- Community of Practice on all levels

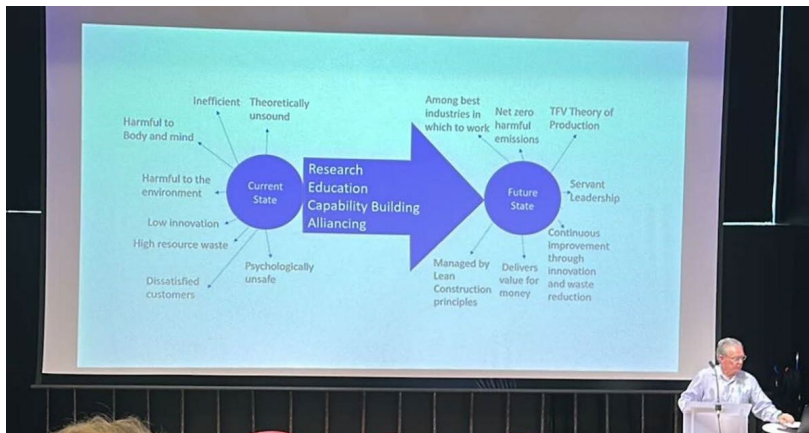
# A Vision for the Future of Lean Construction

Glen Ballard | Exciting Insights from IGLC31 Keynote

In a powerful keynote address at the IGLC31 conference held in France, Glen Ballard, one of the esteemed founders of Lean construction, captivated the audience with his thoughts and hopes for the future of the industry. As a legend in the Lean construction community, his vision for transforming the sector resonated deeply with attendees.

## Present State and Challenges:

Glen emphasised that the construction industry, in its current state, faces significant challenges, including psychological unsafety, dissatisfied customers, low innovation, excessive resource waste, environmental harm, inefficiency, and theoretical unsoundness.



## Ambitious Goals:

With unwavering determination, Glen called upon the Lean construction community to strive towards becoming one of the best industries to work in. He envisioned an industry with zero net emissions, embracing the principles of transformation, flow, and value theory of production. Continuous improvement through innovation and waste reduction was a key focus, along with delivering exceptional value for money. He also highlighted the importance of servant leadership as a guiding principle.

## Collaboration Beyond Boundaries:

In a call to action, Glen urged Lean construction professionals to break free from the confines of their community and actively engage with other construction-related communities. He stressed that collaboration would foster new perspectives and accelerate progress.

## Research Agenda:

Glen outlined a comprehensive research agenda that would further articulate the theoretical foundations of Lean and Lean Construction. He encouraged the accumulation of evidence to challenge traditional paradigms, aiming to demonstrate the superiority of Lean practices. He advocated for taking the lead in new frontiers such as digitalisation and fully integrating operations science into Lean Construction.

## Education for All:

Education, Glen believed, played a pivotal role in the future of Lean Construction. He emphasised the importance of educating future generations in Lean principles and practices. Additionally, he stressed the need to educate public and private owners on what to expect from Lean suppliers, how to demand excellence, and how to support suppliers in meeting those expectations.

Glen Ballard's keynote left the audience inspired and motivated to embrace the vision of Lean construction. His call to action, to collectively strive for a safer, sustainable, and more efficient industry, resonates deeply within the hearts of the Lean construction community.

As the famous saying goes: "Vision without action is a daydream. Action without vision is a nightmare."

#IGLC31 #LeanConstruction #Innovation #Sustainability #Leadership

Summary by Dr Mani Poshdar, Auckland University of Technology

# Communities of Practice Vic

The Victoria council has been working hard to organize a series of community of practices (CoP) events. The May CoP had an exciting theme focused on Design for Manufacture and Assembly (DfMA) in building and infrastructure sectors. The event was graciously sponsored by the Monash Art, Design & Architecture Future Building Initiative (FBI).



Speaker: Simon McCarthy (Brydon Wood)

Dr. Gao Shang from Victoria council of LCANZ kicked off the event by highlighting the synergies between the lean principles and DfMA principles, which share many common grounds. Two presentations followed; The first, presented by Simon McCarthy, Principal Engineer from Brydon Wood, delved into what DfMA really is, providing a global perspective on how projects use platform, modular, and kit-of-parts construction techniques to achieve productivity gains.

The second presentation, by Andrew Hancock (Jacobs) and Kannan Sri (Laing O'Rourke), offered an enlightening case study on the successful adoption of DfMA techniques in the design and construction of Union Station—one of the level crossing removal projects (LXRP) undertaken by the Southeast Program Alliance (SEPA). Their insights shed light on the five key elements of DfMA that were applied to Union Station: a) platforms, b) stairs and stair canopies, c) main roof canopies for platforms, d) lifts, and e) station modules. Notably, the construction benefits included the 'plug and play' approach, which significantly shortened project timelines, improved quality, and enhanced safety performance.




In July, the CoP was co-hosted by Jared Chesterman, a project manager from SMEC. His presentation acknowledged the complexity of engineering design, involving inputs and decisions from many stakeholders, and subject to frequent changes. Jared focused on the importance of creating flow with lean thinking and allowing for change through agility, ultimately leading to far better project outcomes and minimizing wasted design effort and delays.



Speaker: Jared Chesterman (SMEC)

For those of you in Victoria, we have exciting news for the August CoP event - it will be our first-ever site visit, taking place at the Kapitol Group. The founder/director of Kapitol will share insights into Lean Construction - the Kapitol Way. We hope to see you there! Watch out our LinkedIn updates.



Want to join our  
Communities of Practice?

Follow us on [LinkedIn](#) to  
hear more!

# International Group for Lean Construction Conference (IGLC-31)

The International Group for Lean Construction Conference (IGLC-31) has concluded in Lille France. This annual gathering of practitioners and academics for 7 days started and ended strong. We visited the Olympic Village under construction in Paris; then Glenn Ballard and Lauri Koskela gave us updates on theory and practice to begin the week. We ended the week with a new group of emerging scholars - more than a dozen PhD candidates presented and discussed their current dissertation work with Lean Construction Academics.

In between these events were over 150 papers shared with over 200 attendees. My co-authors and I presented two papers, the first 'Examining The Gap Between Construction Software Modules And Lean Contractor Practices' examined Lean Enterprise Best Practices and the supporting software functions. The second, 'A Kaizen Event Enabled By System Engineering In An Infrastructure Project' explained and proposed a system of systems approach for contracting firms.

It was an exhausting but rewarding week. The IGLC is as strong as ever. Many long-term attendees continue to contribute their knowledge and experience with passion. while first-time participants grow in number.

## LCANZ Book of Knowledge

The 'Increase Capability' task force have been busy developing and now progressing this key initiative. The team are currently building a Book of Knowledge and are keen to get more resources that any members can share. The team have also started exploring existing standards and planning the development of ANZ lean accreditation pathways for individuals and organisations.

**Thank you to the support of our Member Companies!**



ALCHIMIE



### LCANZ Memberships: How to get Involved

The construction sector in Australia and New Zealand exhibits a high incidence of project cost and time overruns, business insolvencies and stagnant productivity.

Applying lean construction principles in your organisation or even as an individual contributor offers a way to enhance project success and increase the likelihood that projects will be more collaborative, have less wasted effort and deliver appreciable customer value.

If you are interested in attending our webinars, community of practice events or want to become a member, visit the [LCANZ website](#) for more details. Student and Individual Membership start at just \$200/year.

Membership benefits include:

- Reduced rate for thought leadership events
- Access to LCANZ webinar library
- Lean site visit member rate
- Reduced rate for training
- ... and more!

Join the [LCANZ mailing list](#) to get started!



**Library of Webinars FREE for Members**

**\$15 per webinar for Non-Members**

**Join now!**

**Visit the [LCANZ Website](#)**

## Doing it Right – It's Time to Get Real

*Reference: Oxford Economics - The opportunity cost of poor productivity performance in the Australian Construction industry*

The construction industry is facing a perfect storm of cost inflation, labour shortages, supply disruption, a burgeoning pipeline, increasing complexity and low productivity. New Zealand construction labour productivity has been lagging behind total economy labour productivity from the early 2000's. Australia is similarly challenged. **A recent report by Oxford Economics valued the opportunity cost of lagging productivity for the Australian construction industry to be \$35bn from 1990 to 2020.** This is a staggering cost of lost value from an industry seemingly not able to rise to the challenge and address the productivity gap.

The way to survive long term in a challenging environment is to become efficient and effective at an operational level. Doing it right first time is a worthy goal that will cut out the rework and delay leading to cost overruns and delays.

**What if industry brings the same focus to improving the work that it brings to bear on delivering the work?**

**Look to your processes - how the work gets done.**

Inefficient and ineffective processes are often the root cause of poor project results and the associated mental health impacts from chronic ongoing firefighting and stress. Unless an organisation has committed to improving processes, it is inevitable that unmanaged processes will be delivering a fraction of the value they could.

Develop the ability to do it right the first time. Strive for it even if perfection is unattainable. And where it's not done right - learn from it and improve the process to ensure it is done right next time, and every time after that. This is the path to sustainable performance improvement and better project results.

## How Healthy is your project?

Stephanie Pretorius | Managing Principal & LCA NZ Director

How often do productive projects on paper at the planning stage turn into unproductive projects in execution? This is one of the biggest concerns for industry - initially healthy projects become dysfunctional and unsuccessful, impacted by unplanned cost overruns and delays.

All project teams plan to deliver a productive project at the start. Project Managers allow a little risk and then focus on delivering to the plan. Plan, manage and control well. Full stop. Planning to deliver productive projects is what every project team with a project plan and budget are trying to achieve on every project across the country today. And yet most fail.

What they miss is the fact that it is the unexpected, unplanned and often unseen problems that derail a project after execution starts. Problems that consume risk budget and push out schedule but are never addressed at cause. Problems that affect the efficiency of basic and fundamental core delivery processes.

And problems tend to get worse over time. More problems show up starting as small dysfunctions. Then it's not just one problem causing poor outcomes - it becomes multi-factorial or death by a thousand cuts. Undefined recurring problems start to inhibit work on an ongoing basis, bleeding margin.

There is clearly a lack of an effective "Check-Adjust" function to address cross-functional, systemic problems and even detect them preventatively after project execution has started. Developing the ability to check the health of your project - to detect and resolve the problems that are occurring - is foundational to success. So how healthy is your project?

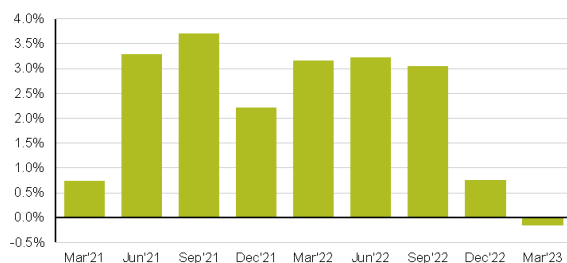
#construction #leanconstruction #lcanz  
#operationalexcellence #problemsolving  
#continuousimprovement #productivity  
#constructionindustry

# Industry Spotlight! Taking Inflation of the Table

*This edition we have an industry insight from **David Kennerly** relating to target cost contracts likely to be included in NZ Standard 3910. Getting fair and robust contracts in place is a critical enabler of effective collaboration, which in turn can create a relational environment that is either supporting or impeding the application of Lean.*

The revamped New Zealand Standard 3910 contract is out for consultation and looks set to include target cost contracts. So how do target cost contracts deal with inflation, and why does it matter? Let's look at what's happened to inflation in New Zealand recently:

Quarterly escalation



NZTA Waka Kotahi, Structures index. <https://www.nzta.govt.nz/>, Accessed 18 July 23

Imagine you're a contractor that signed up to build a bridge in January 2021. Now imagine you built it in the first three months of this year, (January 2023 to March 2023). How much more was spent? 22%. Inflation can wipe out profit and has the potential to leave the contractor paying to deliver the project..... Definitely not sustainable.

So, the contractor loses out but surely, it's good news for the client, right? Wrong. Any contractor in this situation will be fighting tooth and nail to get the money back. Their business depends on it, so the client gets hit with variations.

Arguably a worse position for the client is if the contractor priced in inflation at the outset. Contractors don't have a crystal ball and they certainly can't forecast inflation. What if they allowed 30% at the outset? Well in the case here, they would walk away with an extra 8%. The contractor should be happy but if it's a taxpayer funded project you've got to wonder if it's in the public interest.

Waka Kotahi cite inflation as the perfect example of a risk that should be client-held.

"With best practice risk management, risks that cannot be managed by suppliers, such as inflation, should not be passed to suppliers..... [the client may] pay more as a result." Waka Kotahi NZTA, Procurement Manual p.97

On big value / long durations projects, inflation should be taken off the table. But how? The secondary option X1 clause (X1 hereafter) in the NEC provides a good solution. Refer to NEC4: Engineering and Construction <https://www.neccontract.com/>

There are a few things you need to do first and the key ones to get right are:

- The base date (the date the prices are correct.)
- The indices being used (Stats NZ, BCIS, etc.)
- The proportions

"Proportions" accommodates differing inflation for different resources. The proportions might be:

- 50% labour & 50% steel for a steel bridge vs
- 50% labour & 50% concrete for a concrete bridge

Care should be taken to use indices that reflect the work.

As the contract progresses, inflation means that resources cost more, the team use X1 to adjust the target to account for these increases. Not only that, but X1 accounts for inflation when new scope is added as well.

These two functions make sure that no one loses out. In short it doesn't matter when money gets spent or what scope is introduced - X1 sorts it out. So, there's good reason to take inflation off the table using a mechanism that works. Having clarity at the start means a potential conflict area can be removed with a true win-win deal.