

A COMPARISON OF PROJECT ALLIANCING AND LEAN CONSTRUCTION

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1 BACKGROUND AND IDENTIFICATION OF PROBLEM /KNOWLEDGE GAP

- Alves and Tsao (2007), through their study of IGLC papers from 2000 – 2006, identified that there has been a lack of research among the IGLC community in the area of relational contracting.
- Ten years later, there is still a gap in the literature comparing project alliancing (PA) and Lean Construction (LC).
- This paper contributes to addressing this issue by providing insight into the relationship between the PA and LC project delivery methods.

2 RESEARCH AIM AND METHODOLOGY

The paper asks the following research questions in regards to Lean Construction and Project Alliancing:

- What are the similarities and differences between the two project delivery methods?
- Is there potential for the two systems to learn from each other?

A clear understanding of the current similarities between PA and LC from a theoretical view could help improve this adoption and could potentially lead to the creation of improved project delivery models.

2.1 Methodology

A literature search was undertaken following the five steps prescribed by Blumberg et al. (2014).

- Step 1 was to define the questions to be answered after the literature search.
- Step 2 and 3 was to identify and apply key search terms in primary sources (for example databases and search engines).
- In step 4, secondary sources were located and reviewed (for example by scanning references).
- Step 5 was to evaluate the sources and the content. After this search, a review of the literature formed the basis for the theoretical background. To gain insight into both the academic and practical aspects of the operating systems, findings from both journal articles and conference papers (mostly primary sources) are used in combination with findings from government and industry publications (mostly secondary sources).

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3 THEORETICAL BACKGROUND

An understanding of the lean principles inherent in alliancing could be valuable to practitioners looking at adopting lean project delivery.

Finland has begun experimenting with adopting lean ideology into their alliance projects

Figure 1 represents the three domains of all project delivery systems.

The domains must be in alignment and balanced to ensure that the delivery system is coherent and optimal.

Using this model as a departure point, the paper begins by exploring the balance and alignment between these three domains for both PA and LC.

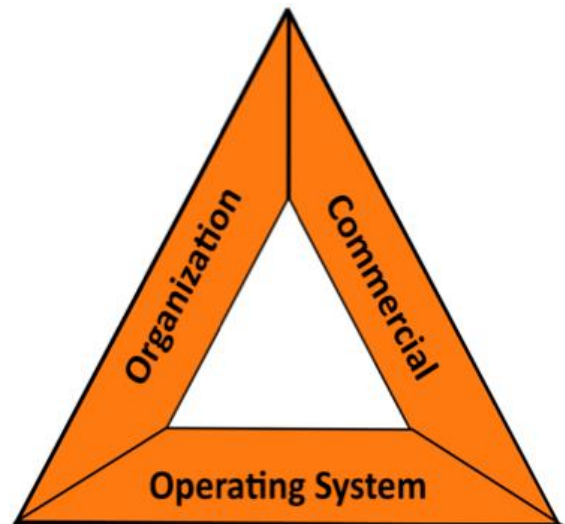


Figure 1: The Lean Construction Triangle (Thomsen, C., Darrington, J., Dunne, D., and Lichtig, W. (no date). *Managing Integrated Project Delivery*. CMAA, McLean, VA, 104 pp)

3.1 Project Alliancing

- Alliancing is structured in a way that creates full alignment of the three domains.
- Alliancing hasn't made any leaps forward in terms of revolutionizing its operating system when compared to traditional PDMs

3.2 Lean Construction

- LC as a method of management seems to operate mostly in the organizational and operating system domains.
- Despite deficiencies in what is commonly understood to be the commercial domain, LC maintains a high-level alignment between the other two domains.
- This alignment makes it particularly adaptable to being incorporated into a wide range of commercial models.

4 CONCLUSION

A major driver of alliancing is to deliver value for money to the client, so it comes as a surprise that, to this date, alliancing it yet to fully capitalize on the LC operating system to drive the pursuit towards maximum value.

The presence of IPD does not make alliancing obsolete and the inclusion of a LC operating system into standard PA would not necessarily become IPD either.

Regarding the similarities and differences between the two project delivery methods,

- The similarities are in the organizational domain while
- Differences exist on the commercial and operating system domains.
- Despite the differences in the commercial domains, PA does inherently align with LC principles, making the two compatible in this area.
- The major difference in the operating system domain is that LC relies on a specific set of tools to handle daily operations while PA uses non-specific, common PM tools

The inclusion of a lean operating system would not require any major changes to the existing structure of a standard PA agreement. Alliancing could essentially remain the same, structurally and commercially, while incorporating LC methods and tools into its operating system.

This integration is made possible due to the inherent alignment between alliancing and the lean construction principles in the organizational and commercial domains.

