



**David
Adamson**

International Construction Consultants

Barriers & Critical Success Factors to Implement Lean Construction

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www.davidadamsongroup.com



Introduction



The **David Adamson Group** is an International Construction Consultancy, originally formed in the United Kingdom in 1930.



Established in the State of Qatar in 1997, providing professional consultancy services to a diverse range of Government and Private clients within both the construction & infrastructure sectors.



Registered as a Firm Regulated by the RICS.



UPDA Grade A Qatar Engineering Consultant.

Project Controls | Cost Management | Quantity Surveying |
Contract Management | Planning Management | Programme
Management | Schedule Delay Analysis | Dispute
Management



Agenda

LEAN

The background is a dark blue gradient with various white and light blue icons and patterns. In the center, the word 'LEAN' is written in large, bold, blue capital letters. A hand is visible at the bottom right, with the index finger pointing towards the word. Surrounding the central text are several circular icons: a robotic arm, a factory with smoke, a lightbulb with a lightning bolt, a bar chart, and a gear. There are also faint architectural drawings and a '6σ' symbol visible in the background.

- The Relevance of Lean Construction and its Benefits
- Barriers to the Implementation of Lean Construction
- Critical Success Factors for Implementation of Lean Construction
- Summary & Conclusion

The Egan Report – ‘Rethinking Construction’ (1998)



“Slow progressing industry with frequent problems of low productivity, unsatisfactory quality, time overruns and poor safety records; which obstruct client delivered value”.

“Lean thinking presents a powerful and coherent synthesis of the most effective techniques for eliminating waste and delivering significant sustained improvements in efficiency and quality. We recommend that the UK construction industry adopt lean thinking as a means of sustaining performance improvement”.

The Relevance of Lean Construction and its Benefits

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To understand the relevance of Lean Construction, its benefits need to be identified clearly so that thoughtful consideration can be given to Lean Construction implementation:

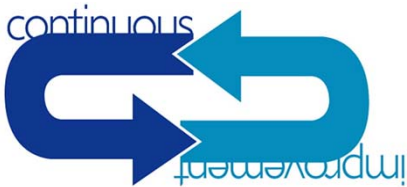
- **Increase in Profit:** Lean can identify projected savings and achieve reduction in time.
- **Effective Work Processes:** Enable an activity to be completed on time, without additional cost or resources allocation, whilst maintaining value.
- **Harmonious Workplace:** Lean taps into the existing knowledge of your workforce, increasing participants self-worth.

The Relevance of Lean Construction and its Benefits

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Waste Reduction: Identification and elimination of waste at every opportunity during the construction process.



Continuous Improvement: Lean Construction is not a temporary solution but a conscious shift in the mindset of any organization to a permanent commitment to improve...in every activity that they undertake.

Barriers to the Implementation of Lean Construction

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The construction industry has traditionally rejected many ideas and processes that have their origin in manufacturing industries. Many consider these ideas as incompatible...due to construction largely consisting of one off or bespoke projects containing many complex issues and unknown risks. These barriers are transient in nature...and can only temporarily slowdown the implementation of Lean Construction.

Barriers to the Implementation of Lean Construction

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- **Poor Management:** For the adoption of Lean Construction, Management are required to fully commit and promote the philosophy of lean.
- **Capital Expenditure:** Introduction of innovative change in the production process requires initial capital investment.
- **Cultural Change:** Cultural barriers that effect the introduction of any new process into an organisation.
- **Education - Inadequate Training / Understanding:** Poorly devised training programmes (at all levels) is one of the most common barriers to Lean Construction.
- **Ineffective Supply Chain:** Ineffective supplier relationships and transactions are required to be identified and resolved.
- **Lack of Government Leadership:** Lean Construction can be hindered by inconsistency in policies and also local and national bureaucracy.

Critical Success Factors for the Implementation of Lean Construction

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To ensure successful implementation, Critical Success Factor (CSF) identification should be undertaken and incorporated into the implementation plan. CSF's are vital for Lean Construction to prevail and flourish. They can assist an organisation's focus areas requiring improvement, such as increasing productivity or meeting customer demand...and much more.

Critical Success Factors for the Implementation of Lean Construction

LEAN

- **Management:** Without the positive involvement and support of management, all other individuals in an organisation may encounter numerous difficulties in the successful implementation of Lean Construction concepts.
- **Early Integration into Projects:** Lean Construction must be introduced as early as possible before traditional process have taken hold, so processes are not mixed (which can create confusion and delays).
- **Promote a Teamwork Culture:** Requirement for greater interaction between management and workers.
- **Collective Decision Making:** Having different perspectives provides the team with better scope to arrive at the best solution.
- **Continuous Improvement:** Lean Construction is driven by the idea of continuous improvement.
- **Long-Term Supply Chain:** Develop a co-operative strategy with competent and reliable members of your supply chain.
- **Clear Definition of Customer:** Define the expected value from the customer's perspective. Identify what the customer expects under cost, time and value.
- **Government Involvement:** National leaders to help guide their short and long-term strategies for Lean Construction adoption; Creation of Special Interest Groups (SIG's) to influence legislation and create policy to assist lean adoption.

Summary & Conclusion

- Prior to the implementation of Lean Construction, there is a requirement to identify all barriers and provide a strategy to mitigate their impact...or remove them in their entirety.
- Whilst barriers may have been identified, they are temporary in nature and can be omitted or overcome with effective planning and training, undertaken in unison with the development of a collective and positive mindset from all participants.
- To cultivate CSF's, organisations must support and encourage their Lean Practitioners and Lean Champions to initiate, develop and monitor the process of implementing Lean Construction...thereby ensuring successful implementation and the identification of tangible results.

Thank You

David Adamson & Partners Overseas WLL
PO Box 19213, Doha, State of Qatar.
(t) +974 4465 9206 (f) +974 4465 9179 (e) qatar@davidadamsongroup.com
www.davidadamsongroup.com