

STRATEGIES THAT CAN HELP TRANSFORM THE CONSTRUCTION INDUSTRY

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1 ABSTRACT

This paper is an appeal to the various stakeholders committed to lean transformation of global construction to coordinate their efforts, and to recruit others not yet committed. Both opponents and advocates of industry transformation are identified; those who live off the waste are in one corner and those who suffer from unsafe, defective, late and costly construction are in the other. A case is made for an alliance of advocates to develop and coordinate the manifold initiatives that together constitute a strategy for transformation.

2 OBSERVATIONS FROM A PRACTICAL VIEW

Transforming the construction industry is hindered by existing paradigms and other obstacles. More research is needed to reveal and reduce these obstacles. Many a practitioner having received an introduction to Lean has mentioned that “miracles” like aligning of interests or real and open co-operation are considered impossible. Even companies that have embraced Lean in one or several projects find it hard to maintain the momentum or to develop into a Lean organization. Lean research does not seem to produce answers to those problems. It is mostly concentrated around hypothetical research questions, often far away from practical needs. The traditional administrator usually suspects the idea of Integrated Project Delivery (IPD). The public sector has to be won over and supported in the development of new regulations. The difference between value and low price is not sufficiently understood. Lean research does not seem to produce answers to those problems.

In most countries, Lean education is either totally missing or incomplete. The possibilities of the internet are not explored in that context. If we observe an insufficient Lean education throughout, we have to consider creating a Lean online university.

It is widely accepted that the adoption of lean requires changes in attitudes, thinking, and behaviour. At the same time, it is clear that these changes are hard to achieve and that there are a lot of obstacles. However, too little research action is seen addressing the problems and facilitating the change, especially when different national peculiarities increase the human resistance to change. Too little is done to develop concepts that can drive the change and to identify the drivers.

Often lean is perceived as merely a collection of tools. Sometimes the roles of Lean and BIM are reversed or confused, with BIM even regarded by some as synonymous with Lean. Lean Construction and VDC (Virtual Design and Construction) are often misunderstood to be competing solutions. Why do not VDC and lean always go hand in hand? Lean needs to join forces with other progressive initiatives in the industry to overcome traditional thinking and mindsets.

While promoting change within the industry, we have to deal with a huge number of companies with less than 10 employees. Lean construction implementation needs to be evaluated both for its successes and for its omissions.

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Corruption is possibly the number one waste in the industry, but there are more groups that live off waste. A closer look at two world maps, one of Transparency International (Corruption Perceptions Index), the other from the World Bank (Control of Corruption) reveals that these countries, with a few exceptions, are the ones with the least adoption of Lean. Looking at the corruption world map another interesting observation can be made. Some countries with the lowest corruption factor are very reluctant to embrace full IPD. Possibly, it is feared that corruption could no longer be controlled with these new procurement methods. Any initiative trying to promote Lean has to take such matters into consideration.

In addition, there are the timid ones and persons and organizations resisting change. They all belong to the group of opponents and form obstacles against transformation. On the other hand, there are advocates who have shown considerable success in projects and organizational improvements. They are too few and often regionally confined. A concerted action is needed to spread the success stories and to teach the conditions for success, on a worldwide scale.

3 NEED TO CREATE AN ORGANIZATION TO LEAD THIS INITIATIVE: PLAN OF ACTION

Lean Construction is said to need a greater sense of mission, focus, and industry support (Forbes and Ahmed 2011). We invite interested parties to participate in creating a plan of action. We list some elements that need to be considered:

- Producing a fundamental Lean Theory with clearly defined terminology and agreed definitions (what is lean, value, change etc.) and key principles.
- Research revealing how Lean can help attack fundamental obstacles like corruption.
- Opportunities for several relevant research focuses can be distinguished: research on obstacles to lean transformation; observation and description of real-world problems and paradigms; observation and description of what is working and why it is working during the lean journey.
- Exploring other industries for useful input to the lean transformation of construction. Interesting parallels were drawn in the recent paper about filmmaking and construction (Ballard et al. 2016).
- A new direction should be set in order to boost interest and trust of traditional academia and increase number of proceedings in other non-lean conferences and journals, and stimulate externally generated citations of IGLC papers. (More statistics on citations can be found in the work of Pasquire and Connor (2011).
- A plan for attracting young people to the construction industry as practitioners and researchers.
- Collaborate really collaborate to make Lean Construction a global movement:
- Establish a strong integrated network (a platform) of representatives of research, education, practice and potential members of the Lean Community.
- Create internet-based Lean Construction courses, the nucleus of a later internet Lean University.

Needs and opportunities for change have been identified and first steps proposed, including creation of a leadership group consisting of influential stakeholders of IGLC. The role envisioned for IGLC as an organization is to be part of the industry transformation leadership, focused on issues of research and education.

