

4th Lean Construction Institute Academic Forum

February 14, 2004 – Atlanta, Georgia

Forum Minutes

by

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Forum Attendees: Brad Sims (Western Carolina University); Glenn Ballard (Lean Construction Institute); Greg Howell (Lean construction Institute); Johna Clark (Johna Clark & Associates); Jorge Vanegas (Georgia Institute of Technology); Luis Lares (Gala Habitat, Mexico); Marcia Selleck (Bowling Green State University); Pablo Borboa (Gala Habitat, Mexico); Tariq Abdelhamid (Michigan State University); Wilfred Roudebush (Bowling Green State University).

As-planned Meeting Objectives:

1. Presentation of Lean Construction classroom instructional models.
2. Presentations by graduate students on their ongoing research.
3. Drafting an outline for a group proposal to NSF to sponsor a Lean Construction Awareness/Understanding workshop for academic institutions.
4. Cataloging ongoing research and teaching efforts in Lean Construction

As-Realized Meeting:

The meeting began with a brief overview of the academic forum history and mission. This was followed by a presentation and discussion of lean construction teaching models used for both graduate and undergraduate curriculums. Jorge Vanegas gave a presentation on a vision for realizing the full potential of the lean construction movement based on his experience with sustainability. The meeting concluded with a discussion of possible funding sources for lean construction workshops targeted at faculty in higher education. The presentations will be posted to the Academic Forum homepage on the Lean Construction Institute website.

Using input received from the International Group for Lean Construction (IGLC) members, a number of lean construction teaching models were presented. Papers from IGLC conferences as well as other lean textbooks are used as material for background reading. Instructors also use case studies and educational games to introduce lean construction principles. Depending on the available time for the course as well as the background and expertise of the instructor, a specific lean construction aspect may be emphasized over others. For example, an instructor may emphasize lean supply over lean design and lean assembly.

Generally speaking, lean construction courses are being offered under two main schemes; as a semester-long (typically 45-50 hours) class on lean construction, or as part of an existing class where instructors typically dedicate 20-30% of the course to cover lean construction topics. Clearly, the semester-long courses allow more in-depth coverage.

The group also discussed various issues surrounding the introduction of lean construction courses in existing curriculums. It appears that introducing LC in graduate programs is easier

compared to undergraduate programs. This is probably a reflection that LC is still incorrectly considered a specialty area under traditional Construction Management. Another typical issue is the title given to a lean construction course. Using ‘Lean’ anywhere in the title may result in resistance to the introduction of the course, especially at the undergraduate level. Notwithstanding the title issue, many instructors have been using existing courses to introduce lean construction principles and tools. Essentially, if there is a will there is a way!!

The discussions and issues raised during the meeting, lead the group to the following action items:

- ❑ Writing a group proposal to NSF and/or other non-profit foundations to sponsor a series of Lean Construction Awareness / Understanding workshops for institutions of higher education – T. Abdelhamid, W. Roudebush; I. Tommelein, J. Vanegas
- ❑ Build alliances with other organizations working on the dissemination of lean thinking [NIST to extend MAP programs to include LC] – G. Howell
- ❑ Lean Construction teaching material
 - Identifying existing case studies and educational games – T. Abdelhamid
 - Cataloguing lean construction teaching effort around the world – T. Abdelhamid
 - Collect/create lectures/case studies on basic topics for lean construction
 - ✓ Develop formats for lectures and case studies – J. Clark
 - ✓ Identify topics for lectures/case studies – G. Ballard
 - ✓ Invite instructors to submit lectures/case studies using established formats – T. Abdelhamid
- ❑ Upgrade the Academic Forum website on LCI’s homepage to house existing and newly developed LC teaching materials – G. Howell and T. Abdelhamid.
- ❑ Scheduling the 5th Academic Forum; when and where based on Forum members preference – T. Abdelhamid