IGLC 20: First Report

The Department of Civil and Construction Engineering at San Diego State University hosted the 20th Annual meeting of the **International Group for Lean Construction (IGLC)** beginning July 17th. A gracious welcome from **Prof. Ken Walsh** opened the **Industry Day**. A series of presentations followed starting with **Glenn Ballard**'s thorough, concise and thoughtful history of the **Last Planner® System (LPS)**. LPS was designed in response to data showing foremen were unable to complete about half of their assignments each week. The initial aim was to increase the completion rate and thereby improve the productivity of the immediate crew. The key to this improvement was assuring work was ready to be done when assigned. It did not take long to realize that improving the predictability of workflow increased total project performance. This led to a new strategy for optimizing project performance. "**Optimize the project not the piece**" became one of the 5 Big Ideas applied by **Sutter Health** when it decided to deliver their program on Lean basis back in 2004.

Next, **Jeff Liker**, Lean Guru and LCI board member used Lean applied in ship building as a backdrop for "**Developing Lean Leadership**". He focused on the role of the Sensei in transforming organizations. Particularly how they take direct action; moving the welding engineers from in front of their computers to working directly in the field.

Dave Umstot's presentation "**Lean Integration through the Facility Life Cycle at San Diego Community College**" opened with a great one liner, "Projects aren't getting any easier!" And went on to describe the infectious nature of Lean in his organization and those around it. He first told what they had done and then how applying Lean in the design and construction of facilities led to initiatives in maintenance and administration: "Pushed by circumstance and pulled by those who saw opportunities."

Dave Van Wyk's presentation, "**Walt Disney Imagineering: Culture and Technology**" took us to the leading edge of technology and collaboration. Technology makes possible new conversations between designers, builders and end users. As an example, he showed how a 3-D prototype kitchen in the digital "Cave" let the chef enter and test the layout. As cool as the technology is, Dave wasn't shy about the difficulty of shifting culture to take advantage of emerging opportunities.

Howard Ashcraft reviewed the structure, development and application of "**Integrated Project Delivery (IPD)**". Early on he described how diversity of opinion produces creative conflict and how IPD improves the ability of the organization to get the right information at the right time to the right person. Then he turned to shared risk allocation and the owner's question, "Why would I want to give up the right to sue?" His answer is my favorite quote from the entire week, "**Challenge provokes performance. Fear provokes defensiveness**." He explained how teams using **Target Value Design (TVD)** improved project performance and reduced cost for the end-user while increasing their profit. I asked him at near the end to give us a sense his involvement on IPD projects, the number and size of projects. He said about 35 fully IPD projects and about 3 times that many were "IPDish." Then he reported there had been no claims on about $3.5 billion worth of construction. And he reported that he knows of no claims or lawsuit on an IPD project in the US and Canada. He does know of one claim on an Allianced project in Australia.

Howard's presentation proved a point that Glenn and I have long believed, as crazy as it is. Results are not compelling! They do not persuade. Howard certainly makes the case for Lean & IPD and he still faces, indeed, we all face skepticism, despite 20 years of significant achievement. I had a similar experience once when challenged to describe the results achieved by applying the principles and practices of Lean Construction on a significant project.

So I told the story of the civil works package on **Terminal 5 at Heathrow**–a $1.25 billion project that was delivered under the budget by 10% (my recollection) and ahead of schedule. The contractor thought for a moment and replied, "So what?" I was flabbergasted until he said, "Well, after 40 years they should have learned to pad the budget and schedule enough to assure success." Results are more likely to persuade when they are part of a story told by a person who was in the game and can connect result to principles and practices. Even then, sometimes the magic works and sometimes it doesn't. Back to Industry Day

Randy Leopold, Director of Healthcare Architectural Services, UC San Diego, Facilities Design and Construction, and **Wendy Cohen**, District Director of Construction, Palomar Health, spoke about their experience with Lean Construction on two large projects Wendy's was $950 Million and Randy's $250 Million. Both delivered healthcare projects on a Lean basis.

They were a remarkable presentation team; each able to finish each other's sentences. They stressed the centrality of trust and alignment for success. New workers watched a video about the work on the projects that included a discussion by a doctor on the purpose and function of the hospital. More surprising were regular "**Foremen Dinners**" where 2 members of the project board of directors had dinner with a group of foremen. Wendy said these conversations changed the project by what the executives learned. Randy added that those dinners changed him as well when a foreman told him that this was the first time in 20+ years someone had thanked him. Both project teams overcame significant unexpected obstacles and still brought the projects in on schedule with safety records 50% better than the industry average. While neither healthcare organization has adopted Lean on the operational side of the house, the LPS has been adapted for use in management functions.

These were tough acts to follow. My assignment was "Lessons Learned and a Call to Action." I took the assignment in two ways: Lessons learned from the presentations and lessons learned from most of a life trying to improve performance. I tried first to capture the key moments and lessons I learned from the previous speakers. Then I used a bit of a timelapse study of a cable cutting operation from long ago. This is a classic case because people's first reaction is to laugh at the situation and to focus on the crew. They look pretty bad until you peel the onion and understand how the operation evolved. The case supported my lessons learned captured below.

1. Look at the work not the workers.
    a. Think of the next larger and smaller thing.
2. The social and technical systems in which work is embedded and the tasks within it.
3. Learn to improve performance across all levels and boundaries.
4. Fully engage those doing the work
    a. Zoom in and out

5. Propose and test hypothesis to explain what you see. Find or create the theory to support it.
6. Align organizational practices and commercial terms to support optimizing at larger levels.
7. Share what you learn.

Mike Samudio from Rudolph and Sletten closed the meeting. He spoke for the **LCI -San Diego Community of Practice** giving a quick overview of their organization and they did to make the meeting possible. Then it was off to the lobby where we found appropriate refreshment. It was a great day, thanks to Prof. Walsh's team, the local support and the speakers.

Now to work collecting my notes on the IGLC meeting itself. I marked about 25 papers and will tell you why you should read them.

A folly to lighten your day:

http://www.youtube.com/watch?v=_v6S9i3uzMc