



We are currently attending the 14th Annual Lean Construction Institute Congress in Arlington, Virginia. This promises to be more successful than last year. We have a 20% increase in attendees. We had a 300% increase in presentations from which to choose. We're running two educational tracks on Tuesday. And we're celebrating our 2nd Annual Pioneer Awards Banquet.

Greg will be addressing the assembled crowd on Wednesday night. It will be a great chance to understand where we're going and how we get there. Greg continues to be at the center of the Institute's thought leadership and his counsel is both necessary and appreciated.

In our discussions, I brought up the work of Thomas Kuhn, the author of an unexpected book in the 1960's called the *Structure of Scientific Revolutions*. Kuhn's thesis was reviewed recently by John Naughton in *The Guardian*:

Kuhn's central claim is that a careful study of the history of science reveals that development in any scientific field happens via a series of phases. The first he christened "normal science" – business as usual, if you like. In this phase, a community of researchers who share a common intellectual framework – called a paradigm or a "disciplinary matrix" – engage in solving puzzles thrown up by discrepancies (anomalies) between what the paradigm predicts and what is revealed by observation or experiment. Most of the time, the anomalies are resolved either by incremental changes to the paradigm or by uncovering observational or experimental error. As philosopher Ian Hacking puts it in his terrific preface to the new edition of *Structure*: "Normal science does not aim at novelty but at clearing up the status quo. It tends to discover what it expects to discover."

The trouble is that over longer periods unresolved anomalies accumulate and eventually get to the point where some scientists begin to question the paradigm itself. At this point, the discipline enters a period of crisis characterised by, in Kuhn's words, "a proliferation of compelling articulations, the willingness to try anything, the expression of explicit discontent, the recourse to philosophy and to debate over fundamentals". In the end, the crisis is resolved by a revolutionary change in world-view in which the now-deficient paradigm is replaced by a newer one. This is the paradigm shift of modern parlance and after it has happened the scientific field returns to normal science, based on the new framework. And so it goes on.¹

Basically, Kuhn found that when we discover anomalies—results that differ significantly from what we've predicted—we look first to explain them away. A mounting number of divergences from our predictions makes us more anxious about the very system we believe in.

¹ <http://www.guardian.co.uk/science/2012/aug/19/thomas-kuhn-structure-scientific-revolutions>.



This is completely the case in the design and construction world. While we struggle for “cost” and “schedule” certainty through a design, bid, build scenario, we wonder why are results are so anomalous—why is it that projects are routinely late and over budget in that system. Greg calls the existing system a “coherent theory of project delivery.” But while coherent, it appears to be wrong because it is so unreliable in delivering the promised results. Consequently, Greg routinely calls for a new common sense, a new, coherent system that responds to the anomalous results we see.

Last Planner® was that system for reliability in planning our production on site and has allowed for substantial improvement there, and in design. But the coherent system goes much deeper than that. It includes all the things we advocate—integrated project delivery and target value design and built in quality plans, etc. That deeper system of collaboration, flow based delivery and relational contracting is the new common sense we seek to achieve.

There is no doubt that such a transformation requires a new system. As we move into that paradigm shift, what is the role of LCI? Is it to develop metrics that will convince the doubting Thomases? In fact I think it was summarized well by my friend Rex Miller (and others) in the *Commercial Real Estate Revolution*:

In a nutshell, you keep pointing at the anomalies and failures in the old paradigm, you keep coming yourself, and loudly and with assurance from the new one, you insert people with the new paradigm in places of public visibility and power. You don't waste time with reactionaries; rather you work with active change agents and with the vast middle ground of people who are open-minded. Systems folks would say you change paradigms by modeling a system, which takes you outside the system and forces you to see it whole. We say that because our own paradigms have been changed that way.

From this, one could argue that the goal of LCI is not to challenge the reactionaries, not to gather metrics that show the doubters that they are wrong. Rather, the path forward should be to “keep coming, and loudly and with assurance from the new” paradigm and to “insert people with the new paradigm in places of public visibility and power.” That's the importance of the CoPs, of the Congress and of our efforts to cooperate with Associations. We insert our folks in places of public visibility and power—in the big projects, the meaningful work of the industry and in the very heart of the Owner's value proposition.

We often talk in terms of Return on Investment. From my perspective, we shouldn't have to prove very much to establish the importance of LCI in this struggle. The investment is \$7,500 for our corporate sponsors, less for others. Most of the companies we work with spend that kind of money chasing a 7-11 Store. I believe the greatest ROI is that (a) the paradigm shifts; (b) the early adopters have the greatest experience in working under that paradigm (our members



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and sponsors); and (c) as customers start searching for those in the know, they turn to LCI first and foremost to find those folks.

Finally, an idea to increase ROI immensely: get Owners and RFP writers who are seeking lean construction or design or IPD teams to include something in their RFPs like: "We recognize the Lean Construction Institute as the voice of lean in design and construction. What have you done to support its work?"

Hope to see you at the Congress this week. Let us know your thoughts on where we're headed and how we can get there faster, better and more efficiently.