



Lean Construction Institute

Building Knowledge in Design and Construction

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Sutter Health Lean Project Summit

Five Big Ideas that Are Reshaping The Design and Delivery of Capital Projectsⁱ

Declaration

We are setting out to transform how capital projects are designed and delivered to the healthcare industry. This initiative is noble and necessary. We believe that healthcare capital projects cost too much; they take far too much time; they often fall short of our objectives; and they kill or injure too many along the way. It need not be this way.

Five Big Ideas

These big ideas can transform healthcare projects. Together they form the foundation for innovating project delivery systems and approaches. There is solid historical basis for this claim. Companies around the world have adopted one or more of these ideas to improve their practices. These companies report significant gains. No one to our knowledge has adopted all five ideas. And no group has come together to transform the industry. We aim for nothing less.

1. **Collaborate; really collaborate, throughout design, planning, and execution.**

Constructable, maintainable, and affordable design requires the participation of the range of project performers and constituencies. Since abandoning the master-builder concept, and separating design from construction, we have been patching a poorly conceived design practice. Value engineering, design assist, and constructability reviews mask an underlying assumption – that design can be successful when separated from engineering and construction. Design is an iterative conversation; the choice of ends affects means, and available means affects ends. Collaborative design and planning maximizes positive iterations and reduces negative iterations.

2. **Increase relatedness among all project participants.**

People come together on AEC projects as strangers. They too often leave as enemies. Healthcare facilities projects are complex and long-lived, requiring ongoing learning, innovation, and collaboration to be successful. The chief impediment to transforming the design and delivery of capital projects is an insufficient relatedness of project participants. Participants need to develop relationships founded on trust if they are to share their mistakes as learning opportunities for their project, and all the other projects. This will not just happen. However, we are learning that relationships can be developed intentionally.

3. **Projects are networks of commitments.**

Projects are not processes. They are not value streams. The work of management in project environments is the ongoing articulation and activation of unique networks of commitment. The work of leaders is bringing coherence to the network of commitments in the face of the uncertain future and co-creating the future with project participants. This contrasts with the commonsense

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understanding that limits planning as predicting, managing as controlling, and leadership as setting direction.

4. **Optimize the project not the pieces.**

Project work is messy. Projects get messier and spin out of control when contracts and project practices push every activity manager to press for speed and lowest cost. Pushing for high productivity at the task level may maximize local performance but it reduces the predictable release of work downstream, increases project durations, complicates coordination, and reduces trust. In design, we incur rework and delays. In the field, this means greater danger. We have a significant opportunity and responsibility to reduce workers' exposure to hazards on construction projects. Doing so can bring about greater than 50% improvements in the safety on the work site. As the leading community-based healthcare system in northern California we are committed to do all that is possible so that the people who build these projects are able to go home each night the way they came to work. The way we understand work and manage planning can increase that messiness or reduce it.

5. **Tightly couple action with learning.**

Continuous improvement of costs, schedule, and overall project value is possible when project performers learn in action. Work can be performed in a way that the performer gets immediate feedback on how well it matched the intended conditions of satisfaction. Doing work as *single-piece flow* avoids producing batches that in some way don't meet customer expectations. The current separation of planning, execution, and control contributes to poor project performance and to declining expectations of what is possible.

We are setting out to change healthcare project design and delivery for ever. Please join us.

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