

# Lean Facilities Design: Developing a Lean Healthcare Approach For The Sophisticated Clients of Today



By Ken Lasley and Charles Hagood

**L**ean Production was developed by Toyota by engineer Ohno. Starting from efforts to reduce machine set up time and influenced by TQM, he developed a simple set of objectives for the design of the production system. In the 1980's the book, "The Machine That Changed the World" became a must read for manufacturers, especially those in the automotive industry and has since become a must read for companies in most every manufacturing industry. More recently, this has expanded to other industries such as healthcare and service industries as well. Today, the best companies in all of these industries are learning to use Lean Facilities Design to gain a significant competitive advantage.

## What is Lean Facilities Design?

Regardless of the service or product delivered, a firm must reduce waste and eliminate non-value-added activities to survive in this competitive environment. Such philosophies and methodologies should also apply to the design and construction process as well, where significant amounts of money are spent. More and more clients throughout the world have successfully applied the Lean Enterprise principles to their businesses and should bring those same expectations to their A/E, Design, and Construction related projects as well.

In response to this premise, HPP and its affiliate firm, TAG Design Services constantly search for significant measures to improve our practices. One such measure is the implementation research currently being developed by the Lean Construction Institute's "Lean Project Delivery System". Link (<http://www.leanconstruction.org/>)

Given our years of Lean Enterprise experience we emphasize a clear and focused approach to design with planning contributions from both outside and internal sources. For facilities design and building projects we insist on designs that are focused on "Lean" practices and principles in the recurring processes. The appropriate task sequence is established with team members committing to completion dates. Effective monitoring of the process throughout the project duration permits continual measurements and highlights enablers or constraints to be adjusted. Design and construction firms should always be seeking out waste in the value stream and entire process, singling out such waste and non-value added steps in order to save our clients money and to expedite the entire design and construction process.

Lean is not a standard or program, but rather a business operating philosophy that allows us to do more with less. Nor is it a cut and slice strategy, but should be viewed as a growth strategy for all involved, from the ultimate customer or patient to the sub-contractor.

Our objective is to maximize the efficiency of the entire value stream. At HPP, this also includes one of our service areas, which we recognize as "design".

## Concepts important to Lean Facilities Design:

- Understanding the value streams by which value is delivered throughout the entire process, starting with the customer or patient.
- Concurrent engineering principles that will reduce the total cycle times associated with a project.
- Identifying value from the customer's point of view.
- Achieving synchronous flow within work processes as waste is removed.
- Achieving pull so that no information or materials are delivered until needed.
- Perfection – recognizing that improvement needs to be constantly pursued.

## Lean Facilities Design Can...

- Reduce waste...resulting in lower costs for the customer.
- Improve efficiency...from conceptualizing through final delivery and completion.
- Provide a closer match of expectations with service
- Improves customer satisfaction
- Stabilize design schedules through commitments of team (including Client and Contractors)
- Reduce total span times associated with projects.

Clear, focused communication of scope, schedule and budget is critical. Our goal when utilizing Lean Principles is to facilitate information exchange among all interested parties. At HPP & TAG, our operating and production systems have evolved through years of commitment to continuous improvement in not only processes and systems, but also in facility design and total project delivery. The resulting improvement efforts have emerged as "HPP Lean Healthcare Facilities Design Process".

**For more information on HPP and TAG Design Services and its proven approach to facilities design and management of projects, contact Charles Hagood at [chagood@hpp.bz](mailto:chagood@hpp.bz) or call at 615-265-2002.**

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