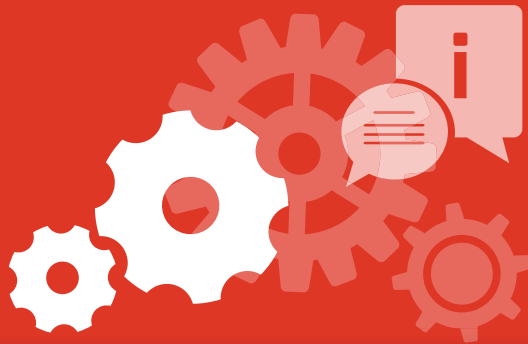


# SECTION

# 1

## TARGET VALUE DELIVERY INTRODUCTION



## TARGET VALUE DELIVERY (TVD) OVERVIEW Chapter 1

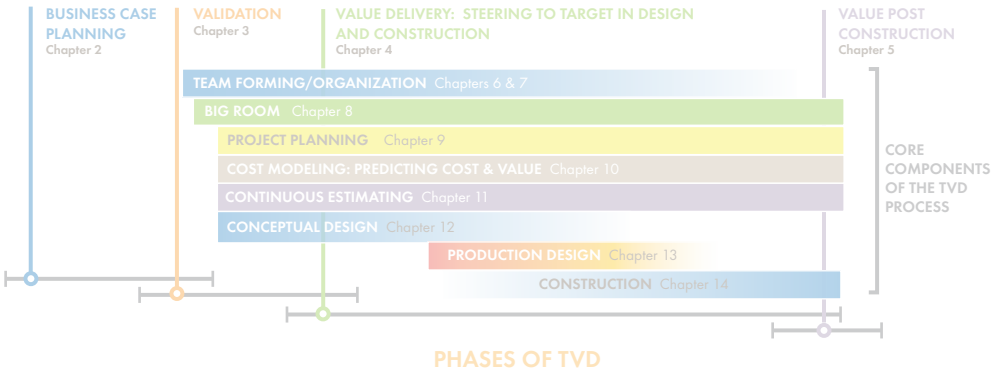


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## TARGET VALUE DELIVERY OVERVIEW

- Why Lean?
- Lean Design and Construction
- How Target Value Delivery is Different

### Why Lean?

Construction industry studies have shown 50% or more of the effort required to deliver a built environment is non-value added effort,<sup>1</sup> or waste in the eyes of the customer.

The effectiveness of a labor hour has not improved in the last 50 years. Demographics and labor shifts have significantly reduced the construction industry's

<sup>1</sup> *Construction Industry Institute Annual Report, 2004*

labor availability, and the relative cost increases of the built environment are not satisfying the business needs of many of its customers.



Figure 3: 5 Cornerstones of Lean

The construction industry recognizes it needs to evolve to keep pace with the ever-growing complexity of the built environment, pre-manufactured alternative approaches and to make progress toward the same efficiency and technology gains other industry sectors have achieved over the last half century. Many believe and studies are beginning to show that Lean Design and Construction is a way forward for our industry.

## Lean Design and Construction

Lean Design and Construction extends from the objectives of a Lean production system – to maximize value and minimize waste – capturing specific tools and techniques applied in a new project delivery method. Lean design and construction is a

respect- and relationship-oriented production management-based approach to project delivery – a new and transformational way to design and build.

Lean production management revolutionized manufacturing design, supply, assembly and fulfillment. Applied to the design, supply and construction of a capital facility, Lean changes the way work is done throughout the project-delivery process.

## Here's a way to think about the five cornerstones of Lean within a TVD project.

- 1. Respect for people**
- 2. Focus on customer-defined value**
- 3. Delivering value and eliminating waste**
- 4. Continuous improvement of processes**
- 5. Shift thinking and behavior, supported with Lean tools to optimize the whole**

### 1. Respect for people

People transform ideas and materials into value. In TVD people are central to Lean project delivery. They must collaborate within and across teams using foundational Lean principles with the goal of optimizing overall value.

The production management-based approach of Lean project delivery encourages transparency and optimizes all processes and flows within design and construction.

### 2. Focus on customer-defined value

Through TVD, team members have the ability to understand and refine the definition of value from the customer's point of view, and this definition becomes increasingly clear through the life of the project.

TVD provides what might be termed an *iterative* value definition, as value is defined in big-picture terms and is then translated into details as the process continues. The project team seeking to optimize for the owner recognizes that this is an emergent understanding, not something simply locked in at the beginning of the project.

### 3. Delivering value while eliminating waste

Lean thinkers continuously ask, “Who is the customer of this process, and what do they value?” As what is of value is identified, Lean teams take action to eliminate steps and activities in their processes that use resources but do not add value.

### 4. Lean thinking demands a mindset of continuous improvement

Leaders must create an environment where experimentation is encouraged within project constraints and small, manageable failure is acceptable if the goal is to continuously improve. This atmosphere can drive innovation that will benefit the entire value stream. An overarching concept of Lean thinking is to optimize the project as a whole, sometimes at the expense of individual efforts. Lean tools promote the study of the overall outcome to determine where value is added or waste is included in each step, while constantly considering the value proposition.

Lean theory, principles and techniques, taken together, provide the foundation for a new form of project implementation. Building upon its roots in production management, Lean Design and Construction produces significant improvements.

### 5. Thinking and behavior (supported by Lean tools) to optimize the whole

Most conversation about Lean focuses on the use of Lean tools, which lead to tactical implementation of Lean approaches. Beneath the tools, however is a shift in how people and teams view processes. It requires that teams continuously learn, identify value and eliminate waste for the betterment of the overall project.

Some of the Lean tools discussed in this book (with examples and/or elaboration in the Appendices) are:

- **A3:** A one-page report prepared on a single 11-by-17-inch sheet of paper. See Page 159.
- **PDCA:** Stands for Plan-Do-Check-Act, a method of continuous improvement. See Page 163.
- **Pull:** A method of advancing the wherewithal necessary for work when the next-in-line customer is ready to use it. Pull releases work when the system is ready to use it. See Page 164.

## How Target Value Delivery Is Different<sup>2</sup>

In TVD, a core team aligns around target conditions for delivering the project early on during business case development (Chapter 2: Business Case Planning) or at minimum during validation. The team continues to refine Target Cost<sup>3</sup>, ROI or other owner-provided value drivers through the validation period (Chapter 3: Validation).

LCI defines Target Value Delivery as follows: “A disciplined management practice to be used throughout the project to assure the facility meets the operational needs and values of the users, is delivered within the allowable budget, and promotes innovation throughout the process to increase value and eliminate waste.”



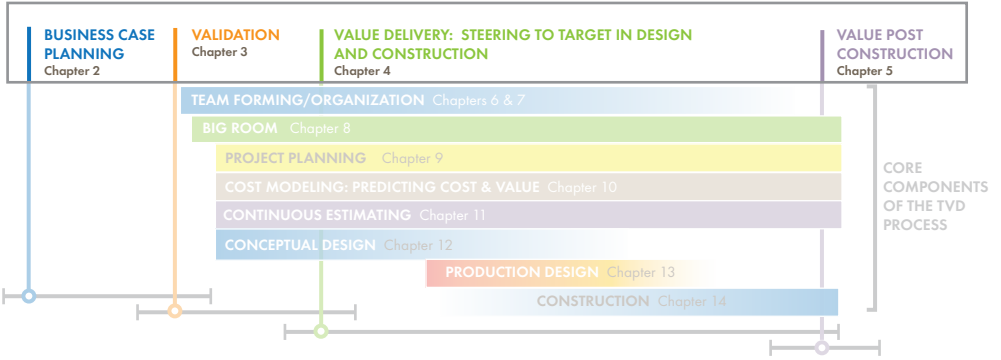
Figure 4: Driving Force of TVD

TVD is a very different model from the traditional, large-batch process of design, estimate cost and value engineering – a process replete with waste. Clients do not value the process of rework and loss of quality that comes from this traditional “value engineering” process. The driving force of TVD is to increase value while decreasing cost for all team members.

<sup>2</sup> This section adapted from the Universal Health Services (UHS) Lean Project Delivery Guide, which may be found on the LCI website at: [www.leanconstruction.org](http://www.leanconstruction.org)

<sup>3</sup> Target Cost is defined as the cost goal established by the delivery team as the “target for its design and delivery efforts. The Target Cost should be set at less than best-in-class past performance. The goal is to create a sense of necessity to drive innovation and waste reduction into the design and construction process. (Glossary, Transforming Design and Construction, op. cit.)

# TARGET VALUE DELIVERY (TVD) OVERVIEW Chapter 1



## PHASES OF TVD

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