Introduction

Lean Integrated Project Delivery (Lean/IPD) is a predictable and robust management system that benefits project or building owners and operators. Engaging builders with designers through a non-traditional Partner Selection and Team Forming process enables the entire value stream to be considered. This means that many of the involved participants can offer better opinions, commit to those opinions and perform to those commitments. The availability of this broad knowledge base allows the entire project team to consider life-cycle operating cost, building performance, process outputs and employee engagement benefits to drive optimal solutions from a multitude of solution set options. This broader group of experts brings multiple perspectives to add value to decision making. With real-time cost knowledge, each solution set can be assessed against its impact to cost and schedule, as well as against a pre-defined set of Conditions of Satisfaction.

When builders and designers interact with operators and owners as partners, better understanding and definitions of needs lead to better solutions.
1.0 How

Lean/IPD projects are organized around teams, which eventually include all the key participants in the project—customers and suppliers. When a Lean/IPD project works properly, customers, concerns, new possibilities, value and waste are brought to the fore in new ways—and replace standard practices, historical habits and bureaucratic behaviors. Changes previously considered impossible occur in relationships with suppliers. Previous challenges of managing suppliers disappear and are replaced with collaboration. Task lists are transformed into commitments. People have better conversations and relationships and coordinate with each other much more impeccably. People recover their autonomy, responsibility and dignity. Finally, unprecedented new economic value is uncovered and made available to the participants.

When teams begin to perform well, deeper discussions evolve about building the “right” building for the prescribed need. With subject matter experts representing many areas of the project outcome, coupled with aligned business targets and a transparent sharing of knowledge, a multitude of project systems can be explored and optimized. When builders and designers interact with operators and owners as partners, better understanding and definitions of needs lead to better solutions.

Trust is a foundational principle of Lean/IPD. An owner who relies on the construction industry for regular business growth can expect better outcomes by considering the long-term outlook for partnerships rather than by selecting contractors on a project-to-project basis. By procuring design, build and related specialty services with long-term relationships in mind, the owner can turn the focus from individual company needs to project improvement needs. These partners should be encouraged to speak their minds freely, disagree with the owner/operator and challenge the wants and needs to gain full understanding. They need to be true thought partners, not “yes men.” Done correctly, this will lead to constructive conflict, not tacit agreement. This deep engagement can often help the owner/operator improve operations and steer the team to the “Right” building.

By viewing and sharing this risk openly, the team can collectively carry contingency to cover this potential cost.
2.0 Why

When owner/operators engage with experienced partners earlier in the process, a deeper risk assessment and understanding arises. As a result, the team can manage that risk, find a multitude of ways to mitigate the risk, and price it accordingly. By viewing and sharing this risk openly, the team can collectively carry contingency to cover this potential cost. This process focuses the team on finding solutions rather than arguing about who must pay for it, which typically delays solutions, increases the risk, interrupts project flow, and increases cost. The team nearly always has the capacity to address most, if not all, risks as they arise.

Because Lean/IPD projects have built-in schedule predictability, owner/operators can better manage their internal staff and assign them to tasks accordingly. For example, since less time is spent resolving claims and disputes, project participants are available at the planned completion—when they are most needed—and they are able to move to the next business need. With strong team partnership, the project closeout is more organized and reaches conclusion earlier than traditional programs. As teams work together more frequently, individual project vendor staff become extensions of owner/operator staff.

Completed Lean/IPD projects have shown significant safety improvements. Safety is a crucial concern in the construction industry—and Lean/IPD’s rigorous planning methods have helped tremendously. Tools like 5S, material management techniques, and other site logistic management efforts make the work safer, thus driving better results.

A word of caution: The owner/operator must be involved in this process to drive success. Value is defined by the owner, and the team needs this definition at every turn of the program. The owner should be open to others’ opinions—specifically those of partners who might not be in their primary industry. While at some points it may seem owners are losing control of their programs, they are actually improving control by empowering others to help make the numerous decisions necessary to deliver a successful project.
THE VALUE PROPOSITION

Quick Reference

High-Performing Teams .......................... 113
Partner Selection ................................. 117
Conditions of Satisfaction .................... 133

For additional readings and information, please see the below information.
CHAPTER 2 – THE VALUE PROPOSITION

Additional Readings

**Competing Construction Management Paradigms**

**Production System Design - Work Structuring Revisited**

2 Update on Target Value Design 2 TVD Update ppt

5.1 Integrated Structural Steel Design for Lean

5.3 Model Based Estimating for Target Value Design

5.4 Case Studies of VDC for Lean Project Delivery

**Analyzing User Costs in a Hospital Methodological Implication of Space Syntax to Support Whole-Life Target Value**

**Competition and Collaboration are not mutually exclusive**

**Contract Incentives to Improve Project Optimization**

**Creating Value A Sufficient Way To Eliminate Waste In Lean Design And Lean Production**

**Developing the True North route map as a navigational compass in a construction project management organisation**

**Editorial Lean and Integrated Project Delivery**

**Evidence Based Design as Part of a Lean Project Delivery**

**Generic Implementation of Lean Concepts in Simulation Models-3**

**Implementing Integrated Project Delivery on Department of the Navy construction projects**

**Integrated agreement on one page**
Integrated Project Delivery An Example Of Relational Contracting

Interaction in the construction process-System effects for a joinery-products supplier

Investigation into the nature of productivity gains observed during the Airplane Game lean simulation

Investigation of the Supply Chain of Wooden Doors

Jackson Federal Building Case Study

Lean Construction - 2000 to 2006

Lean Construction as a Strategic Option Testing its Suitability and Acceptability in Sri Lanka

Lean Construction Practices and its Effects A Case Study at St Olav s Integrated Hospital, Norway

LEAN CONSTRUCTION THE CONTRIBUTION OF ETHNOGRAPHY

Lean Construction Where Are We And How To Proceed

Lean for Field Operations-Brian Lightner

Lean in Design

Lean Journey-Lean Transformation of a Company

Lean production, value chain and sustainability in precast concrete factory - a case study in Singapore

Moving on - Beyond Lean Thinking

Owner Perspectives-Disney

Phase Scheduling

PPC2000 Association of Consultant Architects Standard Form Of Project Partnering Contract
**Project Alliancing A Relational Contracting Mechanism For Dynamic Projects**

**Reverse Phase Scheduling Slides - George Zettel**

**Safety-A Lean Transformation**

**Schedule for Sale Workface Planning for Construction Projects**

**Social Construction Understanding Construction in a Human Context**

**Standards and Measures - Whole-building Metrics Driving Innovation and High Performance**

**Target Costing - Glenn Ballard**

**Target Value Design Case Study - Patrick Vasicek**

**Target Value Design Current Benchmark**

**The Lean Project Delivery System An Update**