

Glenn Ballard

Project Production Systems Laboratory
University of California, Berkeley



Estimated Worth of the Asset to be Constructed



Willing to Spend



Able to Spend



Allowable Cost

Basic Commercial Model

Budget

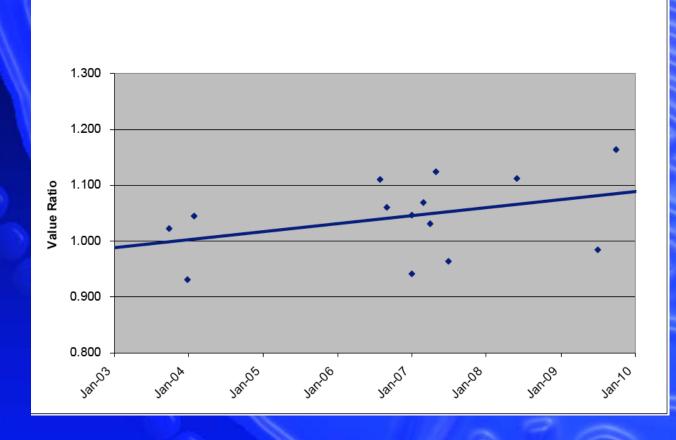
Actual
Cost +
Fixed
Fees

Target Cost

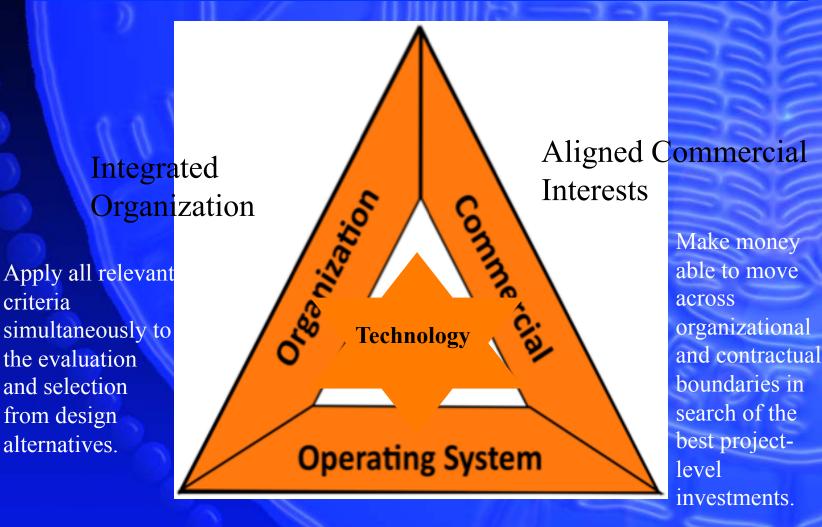
Painsharing zone

Gainsharing zone

Project Cost Reduction Over Time



The Lean Construction Institute Triangle



Lean Management

Value Stream Mapping

©Lean Construction Institute Last Planner System

Target Value Design

criteria



- Sequential processing
- Fixed price contracting
- Reductionist work breakdown
- Push scheduling & reactive project control

Cost Performance on Completed Projects

Project	Location	Date Completed	Market Cost (M)	Cost at Completion (C)	% Savings ((M-C)/M)*100
St. Olaf College's Tostrud Fieldhouse	Northfield, Minnesota	August 2002	\$13,533,179	\$11,716,836	13.4
Thedacare Shawano Clinic	Shawano, Wisconsin	2006	\$13,600,000	\$11,200,000	17.7
Sutter Fairfield Medical Office Bldg	Fairfield, California	Nov 2007	\$22,000,000	\$17,900,000	18.6
Will C. Wood High School Science Building	Vacaville, California	2008	\$16,908,251	\$13,375,000	20.9
UHS' Texoma Medical Center	Denison, Texas	Dec 2009	\$98,000,000	\$89,200,000	8.8
Sutter Mills Peninsula Hospital Expansion	San Mateo, California	Oct 2010	\$14,500,000	\$13,700,000	5.6

Conclusion

In order to reduce the risk that projects fail to achieve their purpose and to reduce the cost of projects over time, the traditional functions of project budgets should be performed by two different mechanisms, with budgets based on worth in order to secure value delivery, and costs driven down through gainsharing.