

Value engineering within a Design-Build setting reassigns the job of defining “value” to the rightful party – the owner.

Sometimes Misunderstood As A Facility Cost-Cutting Method, Value Engineering’s Merits Are More Pronounced Than Ever Within The Integrated Design-Build Organization.

Long before “value” became the marketing cry of the nineties, value engineering was being applied to the facility construction process. Its origins, however, are in manufacturing. In the 1930’s, General Electric began using the process of “value analysis” – identifying unnecessary cost, or cost which contributed nothing to quality, use, life-cycle, appearance, or desired customer features. While the process was aimed at analyzing the overall value of an item, it soon became known for its ability to reduce cost.

What began in a small division soon grew to become an integral part of the entire organization. The savings that GE realized prompted other U.S. corporations to embrace the concept and develop the techniques that are the basis for value engineering as we know it today. It was the Department of Defense that brought value engineering to the facility development process. The Navy’s Bureau of Ships called the process “value engineering” to reflect its emphasis and relation to engineering design application. The practice was extended to docks, yards, and supply facilities. Soon, all armed forces made value engineering standard practice in all facility development. By the 1960’s, private-sector designers and constructors incorporated value engineering into their processes.

Design-Build’s Team Approach Gives Value Engineering Its Rightful Home.

In the years since then, the importance of value engineering to the construction industry has grown, as has the realization that value engineering works best as a collaborative, integrated process, not a set of singular examinations. The traditional design-bid-build method of facility development handicaps value engineering. In distinct settings, architects, engineers, procurement specialists, and project management personnel can’t affect value creation significantly enough. They lack control over total project outcomes and may find it cumbersome to coordinate value-creating ideas. As well, their separation makes value engineering inefficient. For instance, even if a project manager makes a value-creating recommendation to an architect, it may be after working drawings are completed. Depending on owner priorities, the loss in time may jeopardize the value created by the recommendation.

Integrated Design-Build Allows Value Engineering Customized To Client Needs.

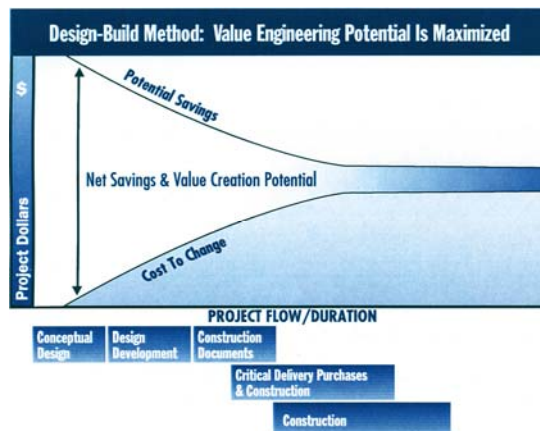
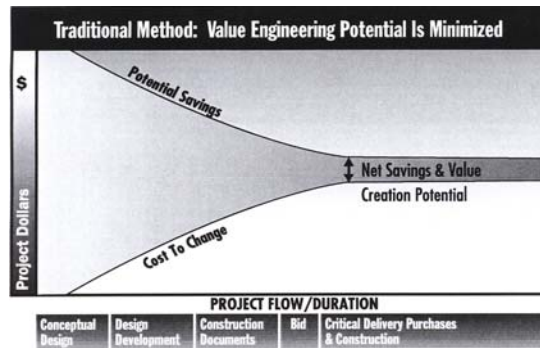
VALUE DELIVERY POINTS	APPLICABLE CLIENT PARTY		
	Owner	Facility Managers	Employees/Users
Delivery		X	
Cost		X	
Low Maintenance			X
Energy/Utilities		X	X
Space Utilization			X
Sq. Ft. Per Full-Time Employee			X
Aesthetics		X	X
Site Expansion/Adaptability		X	X
Ownership Options		X	
Real Estate Exit Strategies		X	

In this hypothetical project scenario, value engineering is applied to a full spectrum of client needs. An integrated approach means that the varying requirements of owners, managers, and users can be incorporated into the value engineering equation. Of course, every client’s definition of value differs. The flexibility of an integrated provider allows a customized approach for each and every client.

The evolution of value engineering as a process aimed at value creation rather than mere cost reduction is an important validation of the Design-Build process.

Value engineering has its best chance for success in the integrated Design-Build organization. In much the same way that value engineering is successful in the consolidated world of manufacturing, so too does it work best when design, construction, and other professional disciplines are aligned. From the pre-design stages, when the potential for value engineering is highest, the owner meets with and provides input to his entire integrated project team. As the integrated team begins its work, multiple facets of value delivery are hypothesized, tested, and enacted continuously. Team members across different functional lines consider the project in a holistic sense. Every idea affects the work of another team member. Thus, instant feedback and a solution mentality are the norm. Because of its single source responsibility, the integrated Design-Build team focuses not on getting money out of a project, but on putting value into the project for the duration of the facility's useful life.

VALUE ENGINEERING EFFECTIVENESS IS INCREASED USING THE DESIGN-BUILD APPROACH DUE TO EARLIER COLLABORATION



The Integrated Design-Build Process Lets Owners Decide What Value Is.

Value engineering within a Design-Build setting reassigns the job of defining “value” to the rightful party – the owner. In the traditional method, separate providers are naturally inclined to influence their work with their own determination of value. And, while there may indeed be value in their recommendations, the value may be irrelevant to owner, manager, and user needs. Only in a fully integrated Design-Build firm can an objective, client-focused agenda of value be established. Whether it be aesthetics, space utilization, delivery, projected life cycle, energy utilization, or any combination of these value points, the holistic viewpoint of an integrated team is best suited to achieve client goals. The ever-expanding definition of integrated Design-Build brings value creation factors such as ownership options and real estate exit strategies into the equation as well. These non-Design-Build factors can be every bit as important to clients in their realization of value.

The evolution of value engineering as a process aimed at value creation rather than mere cost reduction is an important validation of the Design-Build process. Because the two processes are inextricable, Design-Build owners have the ability to choose a process of facility development based on the most efficient practices of modern industry. Benefits accrue to them in any number of areas that represent value. Most importantly, the integrated Design-Build organization gives owners the ability to work with one team flexible enough to meet these specific expectations of value.