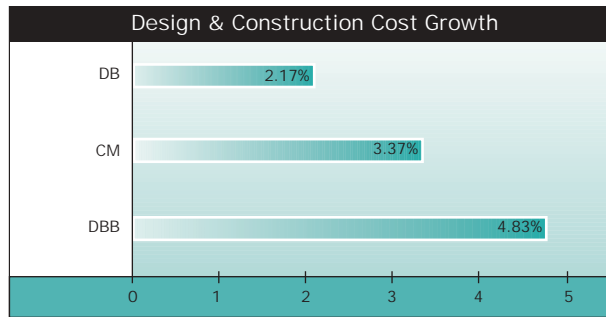


Design-Build Is The Most Economical, Efficient Project Delivery System.

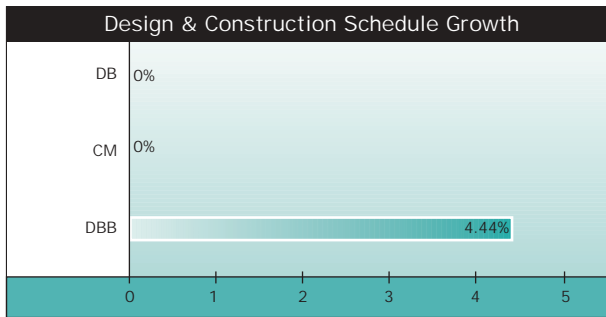
On November 6, 1997, at the Design-Build Institute of America's annual conference, the Construction Industry Institute, in conjunction with the Pennsylvania State University, presented findings from the National Project Delivery System Study. This study analyzed and evaluated three project delivery systems – design-build (DB), construction management at risk (CM), and design-bid-build (DBB) – comparing total cost, schedule adherence, and quality on 351 projects. The study provided quantitative evidence that the design-build system is the most economical, efficient project delivery system.

The Construction Industry Institute is an independent organization dedicated to research of the construction industry. In collaboration with researchers at the Pennsylvania State University, they set out to determine whether significant differences existed among the various systems. Quantitative data was used to determine which of the three systems might be most advantageous.



$$\text{Cost Growth} = \left[\frac{(\text{final project cost} - \text{contract award cost})}{\text{contract award cost}} \right] \times 100$$

Findings are interpreted as the percentage overage of final cost vs. original contract amount.

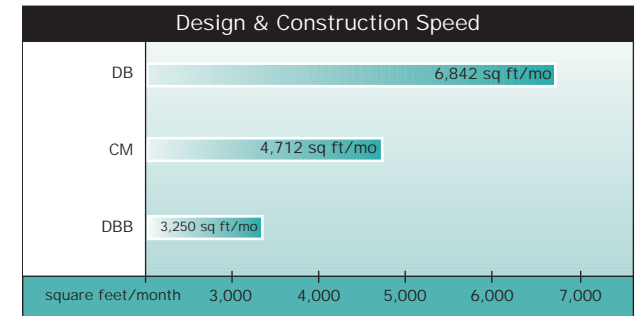


$$\text{Schedule Growth} = \left[\frac{(\text{total as-built time} - \text{total as-planned time})}{\text{total as-planned time}} \right] \times 100$$

Findings are interpreted as percentage delivered late vs. scheduled.

The study evaluated the cost, schedule, and quality performance of 351 projects in six market sectors – light industrial, multi-story dwelling, simple office, complex office, heavy industrial, and high technology. Facilities of 50,000 to 2,500,000

square feet from 37 states were analyzed. The facilities ranged in cost from \$30 per square foot to \$2,000 per square foot.



$$\text{Square Feet/Month} = \left[\frac{\text{area}}{(\text{as-built construction end date} - \text{as-built design start date}/30)} \right]$$

STUDY RESULTS	
Unit Cost	<i>Design-build at least 4.5% less than CM and 6% less than DBB.</i>
Construction Speed	<i>Design-build at least 7% faster than CM and 12% faster than DBB.</i>
Delivery Speed	<i>Design-build at least 23% faster than CM and 33% faster than DBB.</i>
Quality	<i>Design-build exceeded quality expectations at all levels.</i>