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Spotlight

Design-Build may become the buzzword when it comes to designing and building constructions

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ALL-IN-ONE PACKAGE

The Design-Build concept has evolved out of a strategic need for speedy and cost-effective solutions in the conception, design and delivery of any construction project. TJCD reports

Design-Build is a procurement method and delivery mechanism in which one entity is contractually responsible for both the design and construction of a project. It has been used for over 50 years as EPC (Engineer-Procure-Construct) in the industrial sector and its application to building design and interiors has grown exponentially in the last two decades in the US, Europe, Japan and now, in India. Design-Build has become the project delivery system of choice for more than 50 per cent of non-residential construction projects in the Europe and in more than 70 per cent of non-residential projects in Japan. A market penetration survey of major delivery systems in US reveals that 40 per cent of building and interior projects at the moment are serviced by Design-Build. By 2010, Design-Build is expected to become the dominant delivery mechanism.

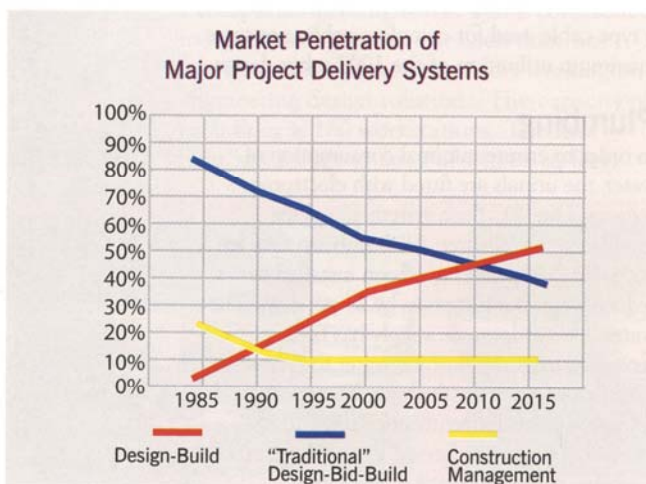
Utilising Design-Build is a major cultural shift that manages to align the interests of clients, designers, constructors and suppliers

through a transparent process of constructability assessment, design development, cost analysis and realistic scheduling. It enables the formation of a cohesive team that benefits from positive partnering and open communication. It nurtures more innovation, creativity and project control than any other mode of delivery.

In India, liability differences encourage an artificial separation between design and construction agencies, creating adverse relationships and interests that work at cross-purposes. 'Traditional' Design-Bid-Build has hardened into an inefficient mechanism, incapable of delivering fast-track, value engineered solutions that address the need of clients competing in a global economy for 'just-in-time capacity additions' and 'first to market new products' into a competitive advantage.

Peculiar to India is the issue of limited designer liability coupled with low contractor efficiency and credibility. Rarely do clients get comprehensive performance guarantees and post-completion warranties. Clients are now demanding total facility delivery systems with both design and construction in the hands of a single entity, with a single point of responsibility for quality, cost and schedule adherence. With Design-Build, clients are able to focus on timely decision making, rather than coordinating between designers, associated consultants and numerous contractors. Regrettably, a perception remains in India that Design-Build applies only to the simplest of projects, mostly interiors. The true potential of this delivery mechanism is yet un-fulfilled in India.

In India, Planet 3 Studios has pioneered the use of architect-led Design-Build for a variety of projects. The quantifiable success of these deliveries and an ever-growing list of clients are proof enough of the system's efficacy. Planet 3



Studios leads the initiative to employ globally accepted best practices and to evangelise the benefits of Design-Build to the end users and the industry.

Singular responsibility

Planet 3 Studios is the sole point of responsibility for quality, cost and schedule adherence. It delivers a successful project by fulfilling multiple parallel objectives including aesthetic and functional quality, budget and a schedule for timely completion. It ensures that the administrative burden and time spent by the client on project performance are minimised. Design-Build enables superior risk management for the client. Planet 3 Studios take sole responsibility for any design errors or omissions, and thereby prevent typical litigation problems inherent in Design-Bid-Build.

Time saving advantage

With Design-Build, Planet 3 Studios is able to get on ground sooner, build faster and deliver before schedule. Time is saved in the elimination of the bid phase between design and construction and by overlapping design and construction activities. Materials, equipment procurement and construction on site can be initiated well before preparation of specific details documents. The integrated process approach encourages timesaving value engineering and parallel construction activities that do not get into each other's way. Due to better control that Planet 3 Studios exerts over the various component agencies, any delays or non-performance can be addressed quickly and effectively without getting into contractual issues and time wasting procedures.

Cost saving advantage

Due to the control over design and scope, it is comparatively easy to provide the client with a fixed construction cost early in the project. Planet 3 Studios' costing is based on facts. The cost of the 'unknowns' is minimal. Constructability assessment and value engineering allow it to evaluate alternative materials and building technology to rationalise costs and provide the best-designed value for money. The greatest saving is in the elimination of layers of mark-ups of contractors and sub-contractors. Planet 3 Studios employs a transparent system of consistent, scientific cost analysis that is open to client audit and scrutiny.

It's Official

The most definitive study on Design-Build cost effectiveness is Project Delivery Systems: CM at Risk, Design-Build, Design-Bid-Build (Construction Industry Institute Research Report 133-11, April 1998).

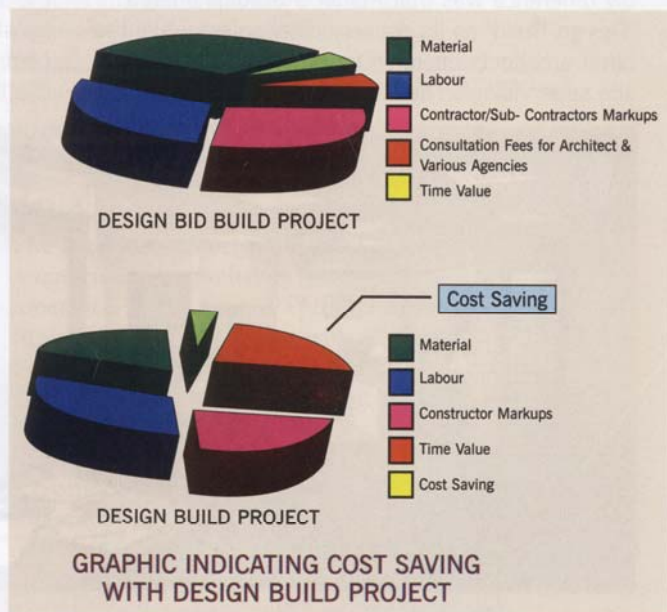
Authors Victor Sanvido and Mark Konchar analyse survey data from 351 construction projects. The authors concluded that the Design-Build performance compared favourably to the Design-Bid-Build performance; the unit cost was six per cent less, construction time was 12 per cent faster and project time was 33 per cent faster.

Superior quality control

Planet 3 Studios' 'Total Quality Delivery' system ensures that all integral components of the delivery mechanism conform to specified standards. Planet 3 Studios warrants design documents to be complete and free of error. Even though the materials used in construction are ISI compliant, they are subjected to rigorous on-site checking and only the approved lots are used for construction. The designs are compatible with the worker skills and minimum tolerance is allowed for errors. Planet 3 Studios ensures full time on-site supervision of work by qualified professionals.

Design innovation

Planet 3 Studios leverages the Design-Build advantage to build and test newer and better prototypes and deliver value-added solutions. Design-Build allows for improvisation for on-site challenges with far greater ease and flexibility





Planet 3 Studios

The directors of Planet 3 Studios, Kalhan Mattoo and Santha Gour Mattoo (both B.Arch, Sir JJ Arch '96), have won the 'Young Designer 2005' award given by the Indian Architect and Builder (I A&B) Magazine. They have successfully implemented the Design Build concept in two of their projects in Mumbai, namely, Rio Tinto Diamonds and Distinctive Devices Inc. Following are case studies of these

two projects. Their work also includes the design and construction of more than 40 architectural and interior design projects for institutions, corporate houses, the hospitality industry besides healthcare facilities, retail, banks, exhibitions and a few residences. Commenting on the Design-Build concept, Kalhan Mattoo says, "The client is made an active partner in the process. Squatters from the studio inhabit and experience the client's business and an inordinate focus on programming is encouraged. Options are investigated and developed through 3D graphics and scale models."

Case study 1

Rio - Tinto Diamonds

Rio-Tinto diamonds of Australia approached Planet 3 Studios in January 2002.

As a leading global firm in the diamond-mining arena, they needed their head office in India to reflect quality, elegance and a serious corporate atmosphere. They were not the kind of clients looking for a 'different' or a 'funky' office look.

They had also invited two other leading architectural firms to bid for the project, which eventually was bagged by Planet 3 Studios. The big difference was that Planet 3 Studios offered "Design-Build" as its delivery mechanism while the other architects offered "Design consultancy with site supervision". The client understood the



the days of delay. Fortunately, the client never had to exercise this contractual right.

Reduced administrative burden: The client saved the time required for coordinating between various agencies. With 'Design-Build', Planet 3 Studios was the singular agency in charge of design and construction and consequently, the single point of communication that had to be tracked. This left the client free to concentrate on their primary business.



Post completion performance: Planet 3 Studios provided comprehensive on-site support and warranties for all installed components for a period of one year as compared to the industry standards of three months. This was possible due to the quality and standards employed during construction and the availability of skilled workmen with specific site work-experience.

All these advantages of Design-Build as a delivery mechanism contributed to the success of the project, resulting in an extremely satisfied clientele.

following advantages of Design-Build:

Lower project cost: The primary advantage was a 25 per cent lower project cost estimate. This was possible through elimination of layers of contractors, its policy of sourcing material directly from manufacturers and rational mark-ups. Planet 3 Studios made their managers sit up and take notice of its competitive rates and the subsequent savings.

Reduced delivery time: With the cost of real estate lease being at such a premium all over Mumbai, relocation to another property for the duration of the project added to the project cost. Planet 3 Studios stuck to a tight schedule of eight weeks and delivered within seven weeks. By managing the time schedules of various processes onsite, man-hours and labour working shifts, Planet 3 Studios could achieve this time reduction.

Case Study 2

Distinctive Devices Inc

Distinctive Devices Inc, a US-based firm, needed to establish an office in India for IT outsourcing. A part of the facility was reserved for internet-based training programs. Since the principals were based in the US, they definitely welcomed the option of Design-Build as it offered a singular point of contact in India. Having built branch offices all over the world, Planet 3 Studios was familiar with the



man-hours spent in coordinating with client-designer-builder in an overseas Design-Bid-Build project. Since Planet 3 Studios guaranteed time bound project delivery and a quality check on material



used fetched them the project.

The client's design brief was to deliver a simple, no-frills workspace, used to seat optimal number of people, taking care however to meet minimum global standards. Planet 3 Studios took on the added responsibility of sourcing competitive rates for office equipment like computers, copier machines and so on. In short, the client demanded total facility delivery systems with both design and construction, which was provided by Planet 3 Studios.

All advantages mentioned for the Rio-Tinto case study stayed constant for this project too, including the reduced administrative burden that was very important for this project.

than traditional Design-Bid-Build. The shift in focus from contractual restrictions to the pleasure of innovation is a great design enabler.

Crisis management

Most project deliveries encounter problems that need real-time solutions to prevent compromise on scheduling, costing or quality. Planet 3 Studios is able to address crisis much more effectively due to the overall control over all delivery components. The communication, scope and contractual problems that plague Design-Bid-Build denies it the nimble footed ease that Planet 3 Studios possesses. Clients usually do not have the expertise to manage the traditional triad of client-designer-builder and crisis situations accentuate the problem. Planet 3 Studios insulates the client from all issues not requiring scope related decisions.

Post-completion service

Planet 3 Studios provides comprehensive on-site support and warranties for all installed

components. This is possible due to the quality and standards that Planet 3 Studios employs and the availability of skilled workmen with that particular site work-experience. Planet 3 Studios' post-occupancy studies have provided it quantifiable data that helps it design and deliver sustainable solutions with lower life cycle costs.

DBIA industry partnership

The high level of organisational commitment to quality in design and construction has earned Planet 3 Studios an industry partner status with the Design-Build Institute of America. Planet 3 Studios benefits by association with other industry leaders who share its vision about the value of Design-Build. By actively engaging the Design-Build community, Planet 3 Studios is able to stay up-to-date with the latest developments to improve its skills and participate in collaborative interactions.