AIAI

Association for the Improvement of American Infrastructure

Together, we move P3s forward.

Understanding Public Project Delivery Options: DBB v DBFOM

Large public infrastructure projects such as roads, bridges, transit systems, dams, power plants, hospitals, schools, courthouses and airports are funded, developed and owned by a federal, state or local government entity. These projects typically take a long time to complete, and are costly: often millions or even billions of dollars.

To deliver an asset, a public entity must complete a series of steps that begin with finding funding, transition through project delivery (both design and construction) and, hopefully, offer consideration (and funding) for the lifecycle maintenance and operation of the asset.

PROJECT DELIVERY

There are variations of the DBB approach as well as many other project delivery methods such as design-build and construction management at risk, as well as public-private partnerships (P3s), which incorporate a design-build-finance-operate-maintain (DBFOM) model. There is no one project delivery method that fits every project.

Traditionally, public entities have relied on the conventional design-bid-build (DBB) project delivery method to get an asset built. The DBB approach requires three sequential project phases: design, procurement and construction. The architect designs the asset and might also perform environmental investigations, obtain permits and host public hearings. Once completed, a bid package is presented to interested contractors, who submit bids (schedule and cost) for the work. The owner usually selects the contractor based on low bid and technical merit. Once selected, the contractor constructs the asset in accordance with the contract documents.

A DBFOM or P3 is a procurement model that is rapidly gaining attention as Governments across the U.S. are facing the challenge of doing more with less, as they recognize the need to invest massively to repair and expand our infrastructure systems. A P3 uses an integrated approach to deliver infrastructure incorporating; design, construction, financing, operations and maintenance functions into the contract. A key value of this model when delivering public infrastructure is the risk transfer opportunity from the public sector to the private sector, as well as the long term maintenance and operations allowing for better taxpayer value.

THE PROJECT DELIVERY BEST FIT

DBB and DBFOM project delivery methods differ in some significant ways that public owners should be aware of before choosing the best fit solution. A few of the major considerations should be lifecycle (maintenance), risk transfer (taxpayer protections), and design/build schedule and cost requirements (performance guarantees).

KEY DIFFERENCES BETWEEN DBB AND DBFOM PROJECT DELIVERY

PARAMETER	DBB	DBFOM
Lifecycle Maintenance	First cost emphasis; Long-term maintenance and renewal funding may be uncertain	Lifecycle cost analysis; long-term maintenance and renewal funding included
Risk Transfer (Integration & Interface)	Owner manages interface and integration of multiple primes throughout project	DBFOM holds all interface and integration risk across all project elements including design error or omission or inadequate scope definition
Performance Guarantees	Scope completeness a requirement for bidding construction; Design influence throughout design phase	Functional performance specification completeness a requirement; Limited design influence beyond functional specification
Schedule/Budget	Design process may drive schedule; Best estimate of cost design phase	Schedule drives design process; Lifecycle cost certainty
Sustainability	Objectives established; benefits accrue to owner	Minimum objectives established by owner; direct benefits accrue to DBFOM contractor
Value Improvement	Limited builder input in planning, design or work packaging (multi-prime)	Builder able to significiantly influence planning, design and work packaging
Key Performance Indicators	Cost and schedule	Return on Investment; cash flow; availability or other performance payment indicators
Cash Flow	Often annual appropriation limited; creates inefficiencies	Project financing provides needed cash flow support for efficient execution

KEY BENEFITS OF P3s

- ***An efficient and accelerated project delivery with budget and schedule certainty***
- ***A transfer of risk from the public sector to the private sector for delivering the projects, while retaining the public ownership***
- ***A private equity investment opportunity - "skin in the game"***
- ***Ability to provide and manage an assets lifecycle—not just build an asset***
- ***A chance to demonstrate people, technology and process innovation***