

Owner Perspective

- Ability for owner to advance the project and determine scope based on available funds prior to moving forward.
- With appointment of a constructibility advisor prior to award of design, ability to collaborate early and drive the optimal outcome.
- Where funding is uncertain, it allows projects to be sufficiently mature to access 'one-off' pools of public funding and complete projects within tight.
- Very good when detailed programming needs to be worked through and developed.
- Good when used for facilities with high technical difficulty as it allows for reviews of options on design solutions.
- Can have communication difficulties if prime consultant shields subs from Owner.
- Has good ability to deal with project close out and follow up on warranty.

Key Procurement + Contracting Considerations

- Allows for better understanding of costs earlier.
- More suited to well understood and less risky projects.
- Tender documents need to be clear on desired outcome in order to inform design team composition and costs.

Advantages

- Familiar delivery method.
- Defined roles/responsibilities for team.
- Allows more firms to bid.
- Initially presents the lowest potential cost for the project.

Disadvantages

- No "fast-tracking" process available.
- Budgets may or may not be met...Architects are not always current on pricing market(s).
- Low bidder may not understand project goals, objectives and criteria.
- Owner has no control or input on subcontractors.
- Process puts Owner as issue resolution agent if architectural documents and construction conflict.
- High potential for change orders and conflict.
- Owner control over GC's staff is limited.
- No cost savings sharing.
- Relationships can be adversarial.

Core Principles

- Owner hires a design build team. Owner must be clear about end goals and place trust in the design build team as has less influence in the design than a DBB.
- Consultant and contractor must be clear on who will lead the project.
- Implied perception of non-interference, but may not be the case.
- Greater cost certainty but only if owner has clarity in outcome.
- Enhanced design constructibility opportunity owing to the opportunity for early collaboration between design and construction teams.
- Owner must seize opportunity to engage with the project team during the procurement phase. They must ensure their end goals are clearly understood.
- Requires a robust statement of requirements and clear specification demands.
- Single contract between Owner and DB team (before design is complete).
- Has strong potential for innovation when used effectively.
- Early firm price before design is complete.

Considerations & Challenges

- Consultants often see a drive to reduce quality.
- Implied bias - consultants feel beholden to the general contractor.
- May not bring the best designer and best builder together.
- May be difficult to establish criteria for design build team.
- Includes the use of multiple bid packages produced by the design team.
- Right team to start is important to build and foster trust.
- Relationship between GC and Design Team is key.
- Alignment on project scope objectives and clear statement of requirements/specifications is essential.
- Early engagement of all key stakeholders is also impactful.
- Can have a bad rap on the quality side.
- Can be perceived as removing the relationship between design team and owner.
- Two models of DB: Low Price and Set Price. Latter can be very transparent and work well.
- Design schedule can be compressed (or over compressed). Available versus realistic time/schedule needs to be properly considered.
- Ultimately DB is the most customizable model.
- Owner flexibility, but owner must be engaged and clear with their intentions.
- Not necessarily faster to build (but often perceived as being).
- Owner has a fundamental role.
- Owner should be committed to maintain the scope and specifications of initial statement of requirements throughout the project.
- Statement of Requirements must accurately and completely reflect intended use and occupancy of the facility, functional programme, quality.



When To Use

- Something an owner builds often/repetitive builds.
- Design build is often seen as low complexity, but it can be used in high complexity builds when the project is repetitive and well understood.

Benefits

- Early input from suppliers.
- Carbon input and sustainability.
- Drive best value for the project/budget through collaboration and trust.
- Has a strong potential for innovation.
- Great budget certainty earlier on.

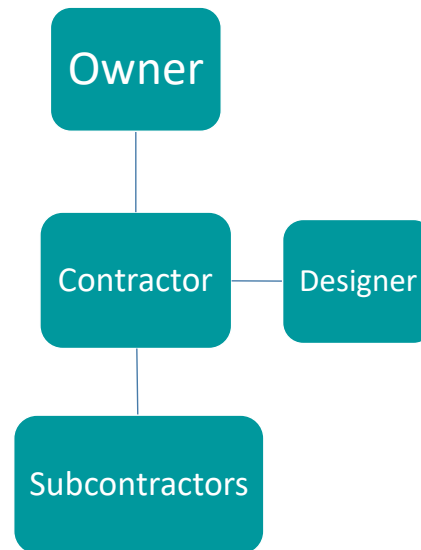
Prime Consultant's Perspective

- Right team to start-> build/foster trust.
- Terms of reference/goals from the owner must be clearly articulated.
- Be respectful of time.

Architect's Perspective

- Architect and design team should control/maintain the vision.
- General Contractors typically insist on the use of their own format of agreement with design teams on design build work rather than using the industry standard CCDC 15 form of agreement. These forms of agreement typically contain uninsurable clauses and are in contravention of the AAA's Practice Advisory. These terms assign liability to the design team for the project schedule and the difference between the bid price prepared on preliminary drawings without full compensation and the final construction cost.

- When control from an Owners perspective is not important.
- Design changes can be vetted and executed faster in this type of delivery method.



- Design build work requires design teams to work for partial compensation to prepare partially complete preliminary drawings which are then used by the GC to submit a fixed construction cost. The risk created by pricing based on incomplete information is carried by the GC and the design team and is ultimately transferred to the Owner.
- Requires a significantly higher fee structure and longer schedule as multiple firms must be hired to take the design to bid cost certainty, plus the Owner must pay for and allow the added time to prepare bridging/reference design and monitor the work of the successful team on public sector projects.

On private sector projects DB is usually more successful as a form of procurement.

- Private sector D-B projects typically do not have bridging consultants and benefit more fully from the architect's involvement at an early stage.

Engineer's Perspective

- Relationship between engineer and design builder is key in establishing scope and design assist.
- Success is through collaboration.
- Engineers feel like they are often dropped during the process at times and their designs are value engineered throughout the process.
- Depending on the quality of DB outline specifications the end result may miss the clients expectations
- Engineering design often results in code minimum's and do not take future requirements into consideration.
- DB's are more successful when the DB team, including consultants and sub-contractors, have the opportunity to collaborate during the RFP response. There can be potential scope/budget problems if the teams are brought together afterwards.
- Success is through collaboration but collaboration -this requires a good level of trust between the subconsultant and the sub-trade. Being partnered up with the construction team can really help streamline the design.
- Some DB teams have been caught with the new codes and the additional effort or costs that may impact the projects. With the new energy code coming out, the teams with a better understanding on the impacts will likely be more successful.
- DBs at times can put engineers in situations where concessions need to be made to satisfy budgets. This may lead to non-ideal designs and long-term operating impacts.
- General Contractors typically insist on the use of their own format of agreement with design teams on design build work rather than using the industry standard CCDC 15 form of agreement. These forms of agreement typically contain uninsurable clauses and are in conflict with APEGA. These terms assign liability to the entire design team for the project schedule and the difference between the bid price prepared on preliminary drawings without full compensation and the final construction cost.

General Contractor's Perspective

- Early engagement of key subtrades and suppliers and earlier construction start.
- Standard documents benefit the project.
- Consistency, design, collaboration.
- Standard documents benefit the project.
- Collaboration/teamwork.
- Legal risk balance.
- Constructability/schedule/design/budget coordination.
- Limits the cost escalation risk to the client. However, you need to ensure a strong statement of requirements.
- Allows the most flexibility for a GC to drive design and innovate as they are financially rewarded for innovation.

- Allows contractors to partner with consultants that have the expertise and competencies for the specific project.
- Allows Owner and Contractor/Design team to work out any issues and provide clarity to the Owners intent/outcome in the early stages of the project.
- Requires a strong/clear Statement of Requirements from the Owner.
- Requires the Contractor and Consultant to be experienced in DB. There is more experience required in understanding conceptual construction.
- A team strong in producing quick turn around on design is required.
- Owner needs to understand that construction materials are typically provided and built more to performance requirements unless clearly identified.
- Allows more flexibility in the design for the General Contractor. Owner has to be aware of this.

Owner Perspective

- Consistency of PM throughout the project is helpful.
- Needs to be alignment on scope and project objectives.
- Depending on approach, opportunity to maximize solution as long as additional scope vs operating cost/quality is not traded.
- Real potential to drive innovation as long as 'price' is not the driving factor.
- Needs a skilled PM that can work with unknowns.
- Needs clear definition by owner up front on quality as quality can suffer in this model. Best model for adding variety of options depending on project - ie Best Value, make the team and then deliver an IPD style model without the IPD contract (DCC model).

Key Procurement + Contracting Considerations

- Opportunity for collaboration is greater than more rigid delivery models.
- Early engagement of key suppliers/subtrades/modular systems.

Advantages

- Owner has a single contract for design and construction.
- GMP is established early and owner risk is controlled.
- Except for Owner changes, no change orders.
- Project schedule can be accelerated/ "fast-tracked" if necessary.
- Owner involvement in the process is limited.
- Construction budget control.
- Owner is not issue resolution agent.
- Opportunity for cost sharing.



Disadvantages

- Owner has limited involvement.
- Difficult to establish criteria for selection of D/B team.
- Design is complete at GMP.
- Process may not bring best designer and best builder together for owner.
- Quality control is responsibility of D/B team, no checks and balances.