

## Core Principles

- 'Ramped up' construction management; Comes from lessons learned on a CM project.
- Collaboration depends on the attitudes of those participating in it (need mutual respect, trust and open communication).
- Need to develop a sound and complete business case with clear outcome and specifications.
- The right IPD contract can enhance positive behaviour. Key decision is who is included in signing and the "rewards/risk" pool.
- Entire team establishes project goals, objectives and solves issues - Collaborative decision making.
- Financial transparency among parties.
- Ultimate "team approach." Requires all parties to the contract to dedicate the appropriate resources and staff throughout the project - potential for shorter project schedule.
- Requires a very engaged owner with a collaborative team.

## Considerations & Challenges

- Can be difficult when council and public want cost certainty.
- If not understood, owners can feel like they are giving something away.
- Profit pool can be mismanaged, which can cause distrust. Need a clear understanding how profit pool is used/distributed.
- Corporate memory and/or lack of sophistication/experience can hold owners back from utilizing.
- Requires a very involved owner.
- Newer delivery method, therefore not everyone is familiar with it.
- Some contractual issues to be addressed.
- Need right partners with the correct financial risk and reward.
- Requires shift in perspective; front end loading happens for a reason.
- Who to involve and when can be challenging.
- Need strong facilitator to move project forward.
- Risky to all parties involved when we do not know who our team will be when project is being procured.
- Sticking to first principles, outcomes and drivers requires discipline.

## When To Use

- A number of GC's now have experience utilizing IPD.
- Large enough scale - ~>\$10M?
- Publicly prominent projects.

## Benefits

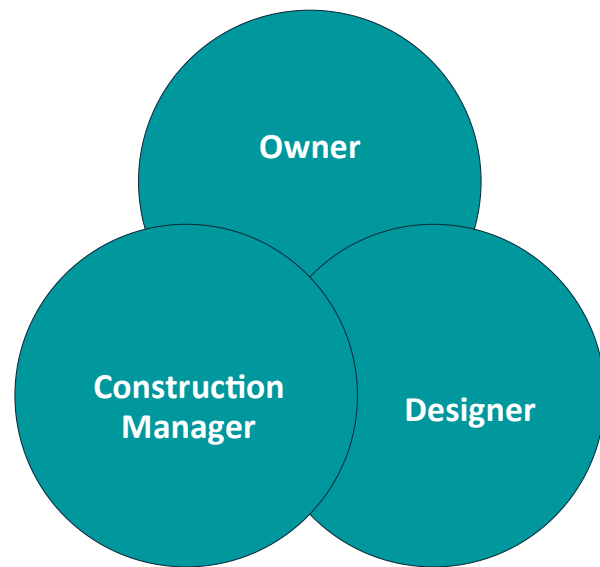
- Innovation; lean practice; high functioning teams; earlier cost surety through risk allocation;
- Can establish a strong group early on.
- Open dialogue early on.

## Prime Consultant's Perspective

- Enhanced opportunity to drive innovation and efficiency.

## Architect's Perspective

- More in driver's seat.
- Better access to information to make decisions.
- Requires a very heavy investment in facilitation, agreements, meetings and administration. Big Room has become big cost.
- Very few standards on how to establish chargeable costs and calculate overhead. Profit being buried in charges -need to align more with prevailing standards for calculating chargeable costs from other countries.
- Lack of understanding of role of architect towards the public good, making unilateral design changes that are costly and now owned ("pain") by all in the IPD pool.
- Proponent profit tied to project schedule means that do not get their profit till long after construction is completed. By the time construction starts 70 - 80% of architects and engineers scope is completed and 100% is used for the basis of budget validation.



## Engineer's Perspective

- Phasing tied to scope. Scope is clearly defined throughout the process which limits the risk.
- Involving the right people at the right time to allow for sharing of ideas and collaborative approach to design and construction.
- Better integration between design team and construction team.
- Need LEAN understanding for design and shift in mentality. TRUST is key amongst all team members.
- Need to solicit all options and innovations during design phase.

## General Contractor's Perspective

- Relinquishes some of the control.
- CM2 (squared).
- Stronger and healthier budget.
- More influence early. Design to detailed budget vs. budget detailed design.
- Hard to entrust profitability to others.
- Get a lot of the benefit of a CM, with a financial incentive for the project team to push and leverage innovation.
- Typically start with a higher budget. The end cost may be a misnomer, as it was a cost arrived at by 'flushing out' a conservative budget.
- Teams cannot be hired in isolation of one another – don't force a marriage.
- IPD does allow for selection of teams based on people and individual experience, rather than ability of the firm. You have a strong chance of getting the right people in the room.
- If set up well, and timelines of individual parties are respected (ie. not everyone in the big room every time), you can keep the attention and motivation of the team and find a collaborative approach to problem solving and design advancement. Mitigate risk of too many participants in decision making process bogging down insignificant items.
- Need a knowledgeable client to be able to understand budget iterations, and hold teams cost accountable.
- Client involvement is much more involved than other models. Need to ensure the right client representative, not necessarily person appointed by committee.
- Delivery method is still quite new and not as understood as more traditional methods.
- Typically less fee for the General Contractor and Consultant.
- Fees are at risk for all parties so may not be a priority for all consultants or trades.
- Can stretch out planning and Precon too far. Finding a balance is important.
- CCDC has a contract now available but seeing too many hybrid/amended versions which adds complexity and potentially cost.

## Owner Perspective

- Ability to fix cost early.
- Challenged by lack of standard contract format.
- Clearly defined expectations and outcomes are a must.
- Opportunity to innovate and improve outcomes based on collaboration.
- Critical that the owners team are clear on their roles and are willing to be collaborative and be open. Must ensure operational user is engaged and included early.
- Problems after the project is complete can be an issue to get team buy in --- what happens with poor owner direction -- should the designer overrule?

## Key Procurement + Contracting Considerations

- Changing current public dialogue: "Lowest cost=best value."
- QBS for team members; less emphasis on fees.
- Qualification based submission.

## Advantages

- CM and Architect selection based upon qualifications.
- High efficiency delivery method.
- "Fast-track" process.
- Ultimate "team" project approach.
- Early involvement of not only CM & A/E but subcontractors for major trades.
- Owner risk is limited by team approach to risk/reward incentives.
- Success of team members is measured against success of project.
- Opportunity for cost sharing.
- Increased ability to deliver project within budget and schedule.

## Disadvantages

- Newer delivery method.
- Requires very involved and experienced owner.
- Some contractual issues to be addressed.
- Not well understood in Public sector - some challenges with respect to risk, particularly from legal teams.