DEFENCE CONSTRUCTION CANADA

CONSTRUCTION DE DÉFENSE CANADA

# Collaborative Procurement Models for Large, Complex Projects

By: Melanie Pouliot, National Director, Contract Services

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# Outline

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# Defence Construction Canada and our Challenges

**$7.1B+**

Value of projects awarded

**$12,9B**

Active contracts portfolio under DCC management

**Since 1951**

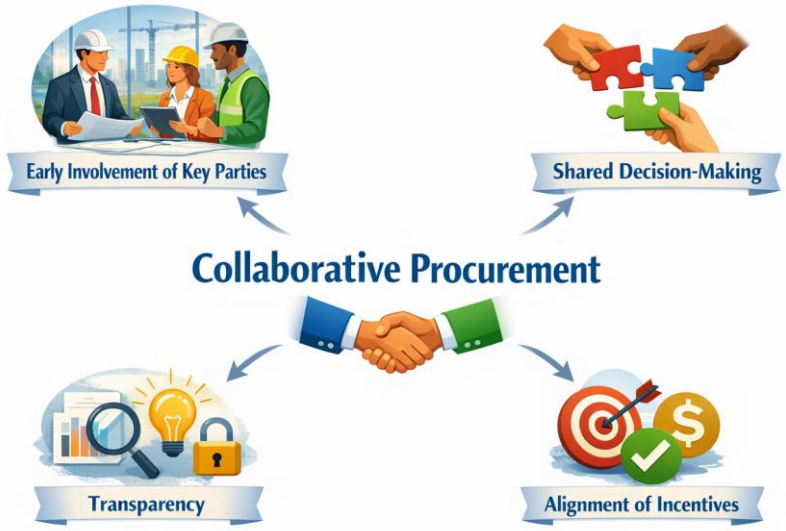
## What We Do

DCC is a federal Crown corporation providing infrastructure, environmental, and professional services to support the Department of National Defence and the Canadian Armed Forces (DND/CAF).

## Our Challenges

- Increasingly complex infrastructures
- Compressed schedules driven by operational requirements
- Market capacity constraints in specialized trades
- Cost and scope uncertainty at contract award
- Supply chain volatility
- Workforce capacity

# What is a Collaborative Procurement Model and its Principles




# Evolution of Procurement Models

- Traditional Design-Bid-Build (DBB)
- Construction Management (CM)
- Design-Build (DB)
- Progressive / Modified Design-Build (MDB)
- Integrated Project Delivery (IPD)

# Progressive/Modified Design-Build (PDB /MDB)

Contrat model: CCDC 32 Progressive Design-Build (PDB)

Key characteristics:

- No performance specifications
- Owner Statement of Requirements (OSR)
- Best value selection process (RFP): technical evaluation criteria (past projects, key personnel, approach and methodology) and cost (hourly rates for design, maximum upset amount for design, Design-Builder Mark-Up).
- After contract award, the design is developed with the Owner, Consultant and Design-Builder
- Negotiation of a stipulated price for the construction phase, which is an open-book negotiation

Other observations:

- Initial contract value higher than DBB
- Final contract value noticeably the same
- Better value for same cost
- Less effective for projects less than $10M

# PDB / MDB - Pros and Cons

## Pros:

- Owner input during the design development
- No cost to develop performance specifications & minimal advocate costs
- Early involvement of every parties for optimization
- More collaborative process to facilitate issue resolution
- Reduced claims and disputes
- High level of quality

## Cons:

- Owner requires knowledgeable negotiators
- Requires preparation for negotiations
- Costs for an independent cost consultant

# Integrated Project Delivery (IPD)

Contact Model: CCDC 30 Integrated Project Delivery

Key Characteristics:

- Multi-party agreement (Owner, Consultant, Contractor, Other IPD Parties)
- Collaboration is one of the most critical component of IPD
- Decision making by consensus
- Validation phase is completed at cost plus overhead and profit
- Parties agree on a Target Cost
- Parties share the risk: profit is at risk:
  - if costs exceed the Target Cost, profit is reduced
  - if costs are below the Target Cost, profit is increased
- Liability is limited to 3rd party claims

# IPD - Pros and Cons

**Pros:**

- Alignment of parties to the project objectives
- High level of cost & schedule certainty
- Early involvement of all parties optimizes the design and implementation
- High level of collaboration for issue resolution
- Focus is not on risk avoidance/claims avoidance

**Cons:**

- Importance of the right people
- Steep learning curve if first IPD
- Careful selection of project personnel for all parties
- Higher Owner involvement

# Risk Sharing and Collaboration

- **Principle: risk should sit with the party best positioned to manage, mitigate, and price it.**

| Risk Category | Traditional DBB | Progressive Design-Build | IPD |
|---|---|---|---|
| Site Conditions / Geotechnical | Owner | Design-Builder (if studies completed) | Shared |
| Design Errors | Owner | Design-Builder | Shared |
| Construction Methods & Means | Contractor | Design-Builder | Contractor |
| Market Escalation / Material Costs | Contractor | Design-Builder | Shared |
| Regulatory / Permit Delays | Owner | Owner | Shared |
| Scope Growth / Change Orders | Owner | Owner (minimized) | Shared |
| Schedule Overrun | Contractor | Design-Builder | Shared |
| Innovation / Value Engineering Savings | Contractor | Shared | Owner + IPD Parties |

# Lessons Learned — What Makes or Breaks Collaborative Projects

## Success Factors

- Leadership commitment from the Owner, the Design and the Contractor
- Clear, well-understood contract frameworks with fair risk sharing
- Investment in pre-construction relationship building (partnering)
- Realistic expectations about timelines
- Defined escalation paths and dispute resolution protocols
- Dedicated project champions with authority to make decisions


## Common Pitfalls

- Treating collaboration as a procurement label, not a culture change
- Insufficient Owner capacity to participate in joint decision-making
- Reverting to adversarial behaviors when things get difficult
- Incomplete risk allocation — ambiguity leads to disputes
- Failing to document processes and share lessons across projects
- Selecting contractors on price alone even within 'collaborative' models

# Key Takeaways

**Evidence is clear:** Collaborative procurement models consistently outperform traditional DBB on large, complex projects across cost, schedule, quality, and relationships.

**Not one-size-fits-all:** Match the model to the project. DBB, DB, CM, Progressive/MDB, and IPD each serve different contexts. Start with the project's risk and complexity profile.

**Risk-sharing works:** When risk is allocated to those best positioned to manage it — and when incentives align — contractors and owners  solve problems together.

**Public owners can do this:** Competitive processes, principles, and government policies are compatible with collaborative procurement however it requires planning.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