



INTEGRATED PROJECT DELIVERY CHALLENGES & OPPORTUNITIES

OAA Conference 2023 - Sudbury

June 21, 2023

PRODEMUNITY

AN ALLIANCE FOR PROTECTION

OUR CAUSE

To support the architectural profession to take the risks necessary to design a better world. We do so by championing the wise, effective, and efficient management of risk.

OUR PURPOSE

To be the trusted ally to protect & defend the architectural profession and their families by strengthening and supporting their resiliency to the risks associated with practice.

OUR AMBITION

To strive each day to be the authority on risk, resulting in financially sustainable practices that unleash the full potential of the profession to improve society and human interaction through better design.

OUR VALUES

We build upon our core values of **Trust, Accountability, Collaboration, Innovation.**

Program

- ▶ Introduction
- ▶ Why IPD's Time has Come
- ▶ CCDC-30 – Multi Party Agreement
- ▶ Real Life Experience with IPD
- ▶ Questions & Discussion

LEARNING OBJECTIVES

1. Understand Why IPD is Attractive

Understand why project delivery models are evolving towards greater collaboration, and why IPD is an attractive approach for owner, consultants and contractors

2. Describe Key Features of IPD

Be able to describe the key features of an IPD approach that depart from the current conventional project delivery models

3. CCDC-30

Learn how and why CCDC-30 -2018 is a fundamental departure from previous CCDC forms of contract

4. Be Prepared

Be better prepared to consider and plan an IPD approach with clients and colleagues

Panelists

John Hackett B.Arch., OAA, FRAIC

Vice President, Practice Risk Management, Pro-Demnity Insurance Company

Geza Banfai BA LL.B.

Counsel - McMillan LLP

Philip Ghosh BA JD

Senior Legal Counsel, Pro-Demnity Insurance Company

Bill Lett B.Arch., OAA, FRAIC

Managing Principal, Lett Architects Inc.

John Hackett

Why Pro-Demnity is sponsoring a program about IPD



CCDC 30-2018 Integrated Project Delivery Contract

CONTENTS

Articles of Agreement

Annex Other Parties

Definitions – 43 in total

General Conditions

1. General Provisions

2. Responsibilities of the Parties

3. Project Management Structure

4. Project Phases

5. Scope Allocation

6. Payments

7. Changes

8. Conflict Management

9. Default, Suspension and
Termination

10. Insurance and Contract Security

11. Liability Allocation

Schedules

A Risk Pool Allocation

B Allowed Costs

C Time-Based Costs

D Contract Tasks Matrix

E Added Party

F Use of BIM

Geza Banfai

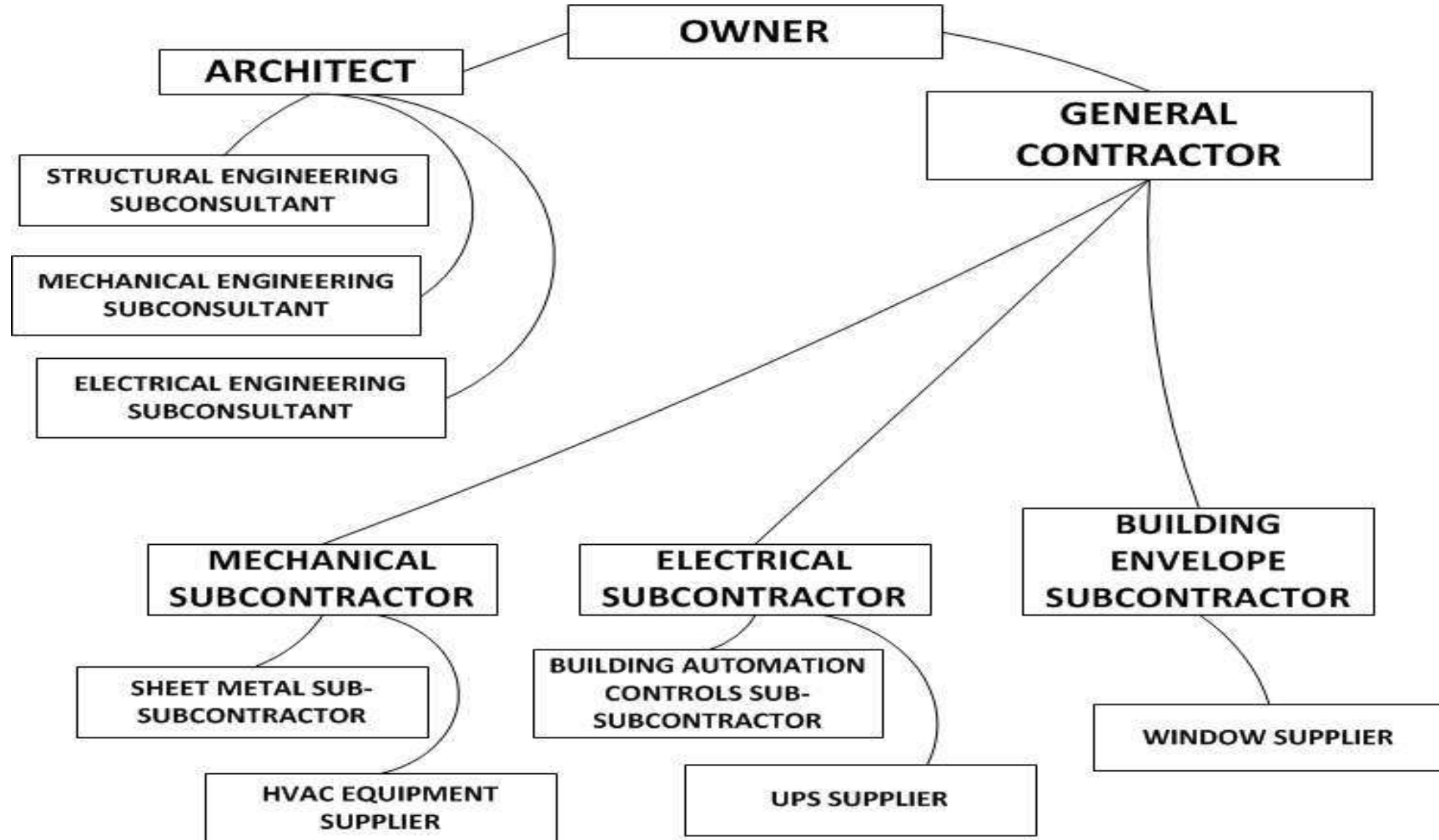
Why IPD's time has come...

We must change how we deliver projects



Why IPD?

How we do things now, mostly: the Networked System of Bilateral Contracts



The Trouble with a Networked System of Bilateral Contracts

- ✓ Fragmented delivery
- ✓ Misalignment of interests
- ✓ The system is crystalline – but construction is dynamic
- ✓ Imperfect sense of the common goal
- ✓ Communication difficulties
- ✓ Inefficiencies, waste
- ✓ Adversarial
- ✓ “Not much fun”

Mitigating These Problems: Key Principles

1. A single, multi-party contract (CCDC 30 – 2018).
2. Early involvement of key participants.
3. High transparency re financial matters.
4. Determination of project viability made jointly (Validation).
5. Key decisions, including Owner's go/no go decision, are delayed until the Last Responsible Moment.

Mitigating These Problems: Key Principles (cont'd)

6. Collaborative decision-making.

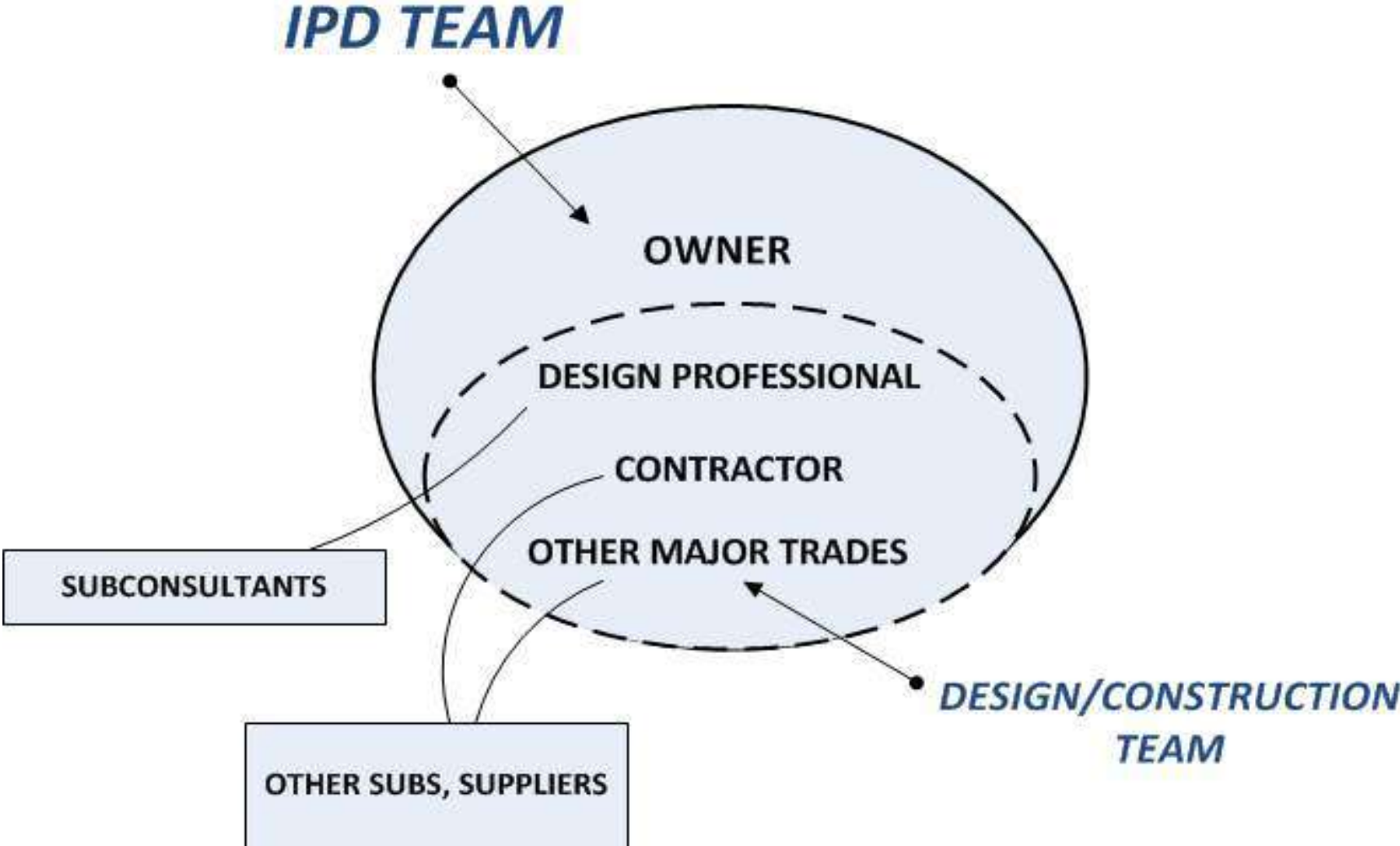
7. Problem-solving in real time.

8. Co-location (“Big Room”).

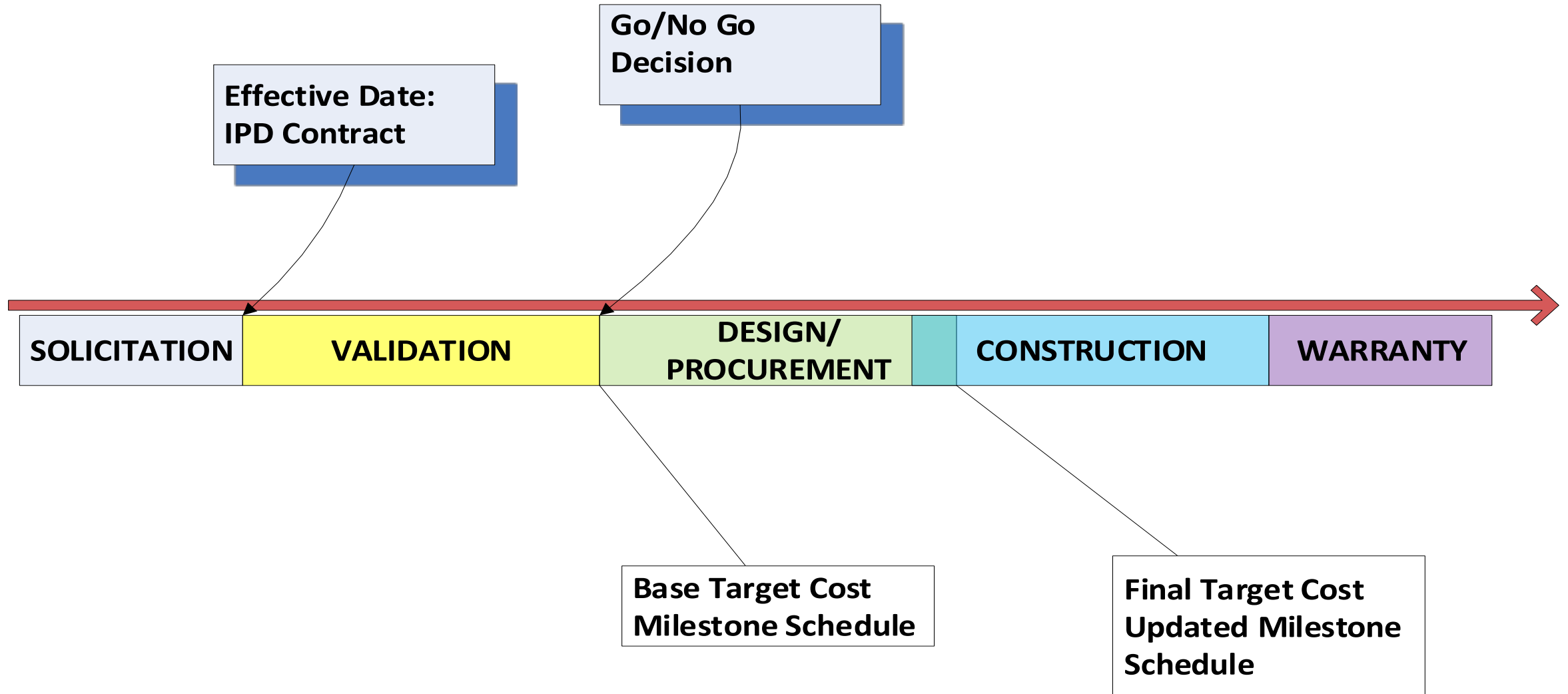
9. Profit at risk (“Risk Pool”).

10. Waivers of liability.

IPD Contract Schematic



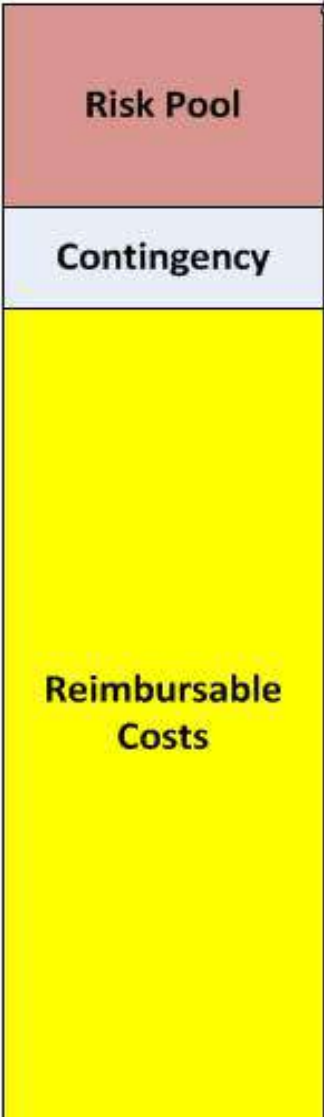
The Phases of an IPD Project



Compensation in an IPD Project

Base Target Cost

- set at Validation



Final Target Cost

- set at end of Design/
Procurement Phase



Philip Ghosh

CCDC 30 Multi-Party IPD Agreement
Liability & Insurance Implications



WILL THERE BE CLAIMS?

ANSWER : Yes, but different

Let us consider:

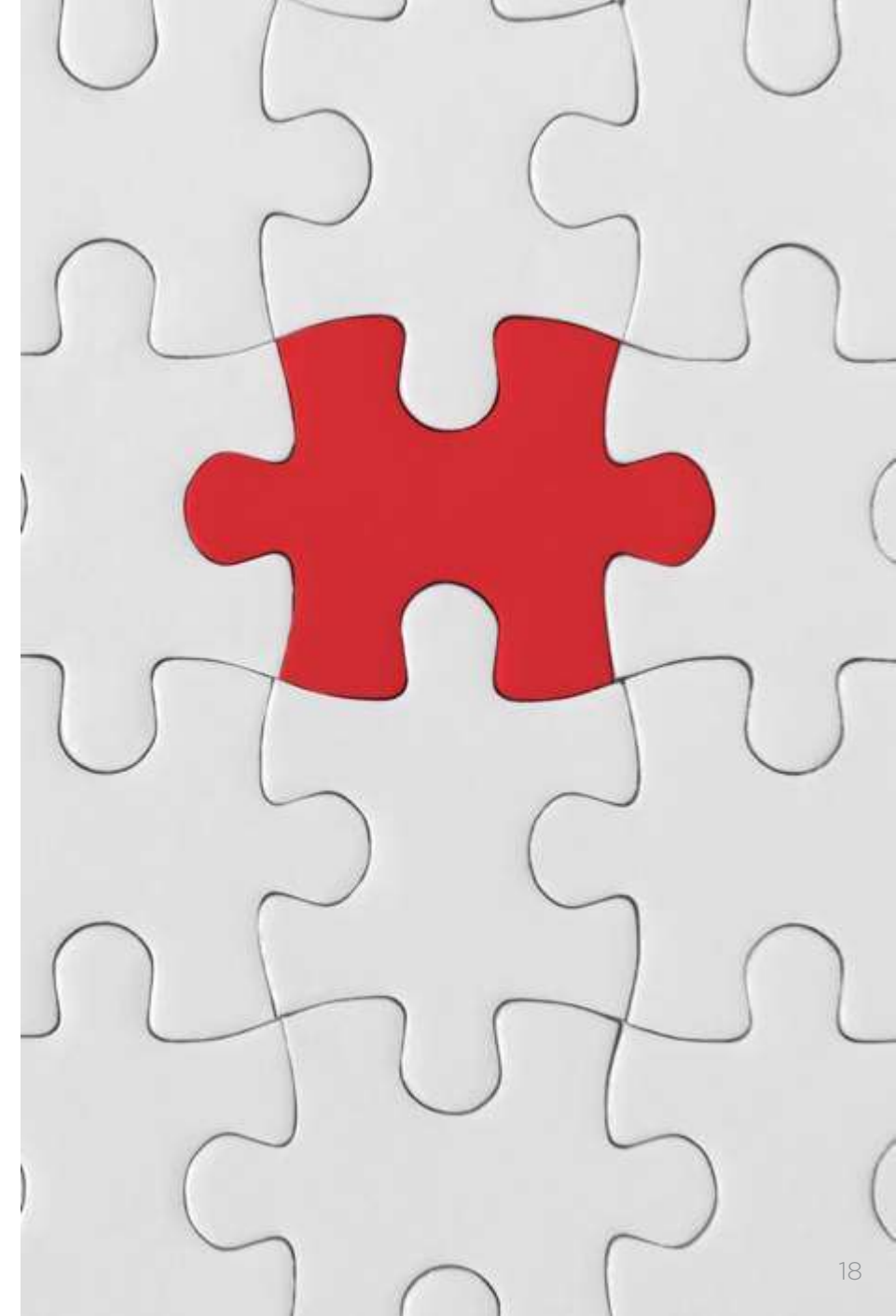
1. Implication for claims during the project
2. Implication for claims after completion
3. Impact on Professional Liability Coverage



Liability & Insurance Provisions

CCDC 30 - 2018

- As with any good contract, each clause is a “piece of the puzzle” to achieve its objectives
- While contract needs to be read as a whole, the key liability allocation provisions include:
 - GC 11.1 WAIVER OF LIABILITY
 - GC 11.2 INDEMNIFICATION
 - GC 10.1 INSURANCE



CCDC 30-2018 PART 11 - LIABILITY ALLOCATION

GC 11.1 WAIVER OF LIABILITY

11.1.1 *The Owner, Consultant, Contractor and Other IPD Parties waive all claims against each other arising from or related to the Contract, except solely for direct loss, and damages arising from the following:*

- .1** claims arising from a party's willful default;
- .2** claims arising from express warranty obligations of the parties, or an obligation to provide third-party warranties under the *Contract Documents*;
- .3** claims for payment of amounts due under the *Contract* by any party to the *Contract* against any other party;
- .4** claims attributable to any violations or alleged violations of any intellectual property right, including infringement or an alleged infringement of a patent or copyright, or violations or alleged violations of a trademark or licences;

CCDC 30-2018 PART 11 - LIABILITY ALLOCATION

GC 11.1 WAIVER OF LIABILITY

11.1.1 continued...

.5 claims for failure to provide insurance coverage specified in the *Contract Documents*;

.6 claims for which indemnification under policies of insurance specified in the *Contract Documents* is available, to the extent such insurance proceeds are available;

.7 claims by third parties; or

.8 claims for damages resulting from substantial defects or deficiencies in the *Design* or the *Work* which are not known or reasonably could not have been discovered, prior to the end of the *Warranty Phase*. "Substantial defects or deficiencies" mean those defects or deficiencies in the *Work* which affect the *Work* to such an extent or in such a manner that a significant part of the whole of the *Work* is unfit for the purpose intended by the *Contract Documents*.

CCDC 30-2018 PART 11 - LIABILITY ALLOCATION

GC 11.1 WAIVER OF LIABILITY

11.1.2 *The Owner, Consultant, Contractor and Other IPD Parties waive claims* against each other for *indirect, special, punitive or exemplary damages* arising from or related to the *Contract*, and also for any *consequential damages* including without limitation loss of anticipated profit, loss of revenue, loss of business opportunities, or loss of use, howsoever caused.

CCDC 30-2018 PART 11 - LIABILITY ALLOCATION

GC 11.2 INDEMNIFICATION

11.2.1 Each of the parties to the *Contract* shall indemnify and hold harmless the other parties from and against all claims, whether in respect of losses suffered by them or in respect to claims by third parties that arise out of, or are attributable in any respect to their involvement as parties to the *Contract*, provided such claims:

.1 are claims listed in one or more of paragraphs 11.1.1.1 to 11.1.1.8 inclusive of GC 11.1 – **WAIVER OF LIABILITY**; and

.2 are made by *Notice in Writing* within the period prescribed by any limitation statute of the province or territory of the *Place of the Work*.

The parties expressly waive the right to indemnity for claims other than those provided for in the *Contract* In paragraph 11.2.1

CCDC 30-2018 PART 11 - LIABILITY ALLOCATION

GC 11.2 INDEMNIFICATION

11.2.2 To the extent the obligation of any party to indemnify as set forth in paragraph 11.2.1 shall be a claim for which indemnification under one or more policies of insurance specified in the *Contract Documents* is available, **the obligation of such party to indemnify shall be limited to the amount of such insurance proceeds as are available to satisfy such claim.**

Let's Pause and Consider Impacts

Pro-Demnity deals with the following classes of claims:

1. Construction Law (delay, workmanship, Scott Schedules)
2. Fee Claims (with negligence counter-claims)
3. Subrogated Losses (fire, water, wind, snow)
4. Personal Injury
5. Condominium Claims
6. Dissatisfied Customers (homeowners, etc)

CCDC 30-2018 PART 10 - INSURANCE AND CONTRACT SECURITY

GC 10.1 INSURANCE

10.1.2 Without restricting the generality of GC 11.2 – INDEMNIFICATION, **the PMT shall cause to provide, maintain and pay for the following insurance coverages**, the minimum requirements of which are specified in CCDC 41 – CCDC INSURANCE REQUIREMENTS in effect for the durations as specified below:

- .1 “Wrap-Up” general liability insurance...
- .2 Builders’ Risk Broad Form of property insurance...
- .3 & .4 Boiler and Machinery / Equipment Breakdown ...

CCDC 30-2018 PART 10 - INSURANCE AND CONTRACT SECURITY

GC 10.1 INSURANCE

10.1.2 continued

.5 Project professional liability insurance naming the *Consultant, Contractor, Other IPD Parties*, subconsultants and subcontractors providing *Design Services* with limits of not less than \$10,000,000 per claim and with an aggregate of not less than \$10,000,000, unless specified otherwise by the *PMT*. The policy shall insure the *Consultant, the Contractor, Other IPD Parties, subconsultants, and subcontractors who provide Design Services*. The policy shall be effective continuously from commencement of the *Contract* (including pre-construction and design assistance activity) **until 3 years after Substantial Performance of the Work**. The *Project* professional liability policy shall be endorsed to provide 30 days advance written notice of cancellation.

Insurance Implications

- Project-specific policies will be primary, according to their terms
- Pro-Demnity's policy should provide coverage in most cases where that project-specific policy does not apply
- Exclusion for "liability assumed under contract" *may* be applicable in some cases with respect to indemnification provision
- Coverage is case-by-case analysis, defence coverage is broad



Bill Lett

Real-Life Experience with Integrated Project Delivery








OAKVILLE
Fire Station 8
305 Pine Glen Road



What are the foundational elements of a successful project?

On-time

On-time

On-budget

On-time

Design Quality

On-budget

On-time Design Quality

User Satisfaction

On-budget

On-time

Design Quality

Fit for use

User Satisfaction

On-budget

On-time Design Quality
Fit for use
User Satisfaction

On-budget

Financial Goal

On-time

Design Quality

Fit for use

User Satisfaction

Business Objective

On-budget

Financial Goal

Over and above the business objectives and financial goals, what do you think is the third foundational element of an IPD project?

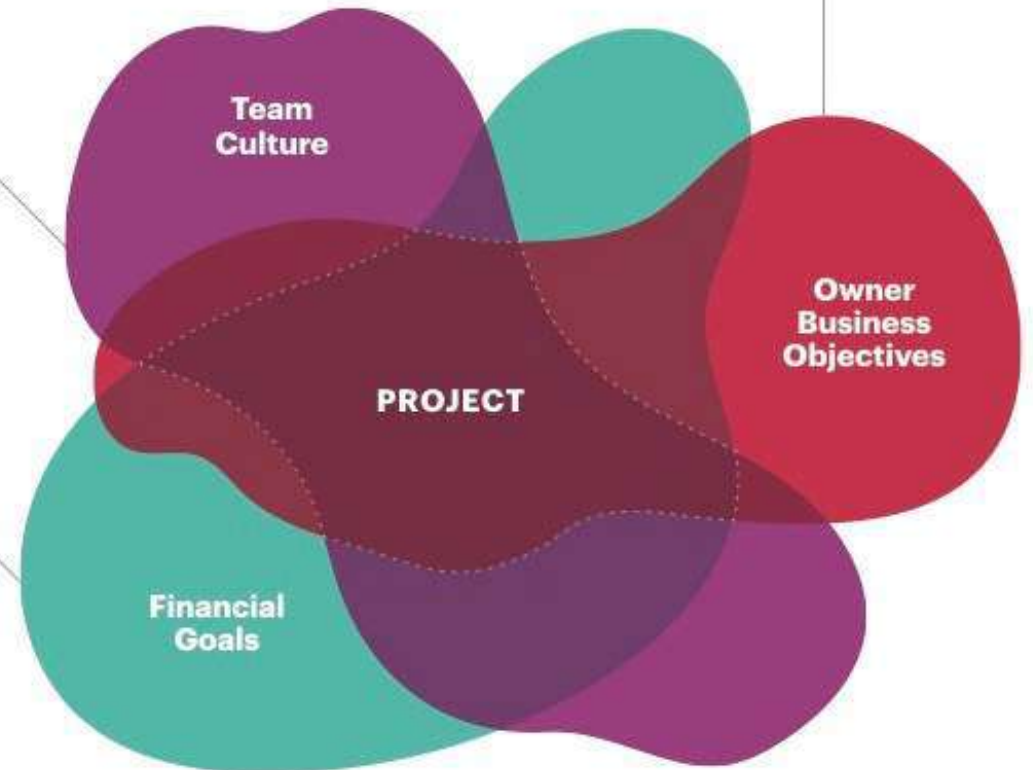
In an IPD project, Team Culture is equal in importance to Owner Goals and Financial Goals

In a project with a high-level understanding, there is often an intersection of three spheres: financial goals, owner business objectives, and team culture.

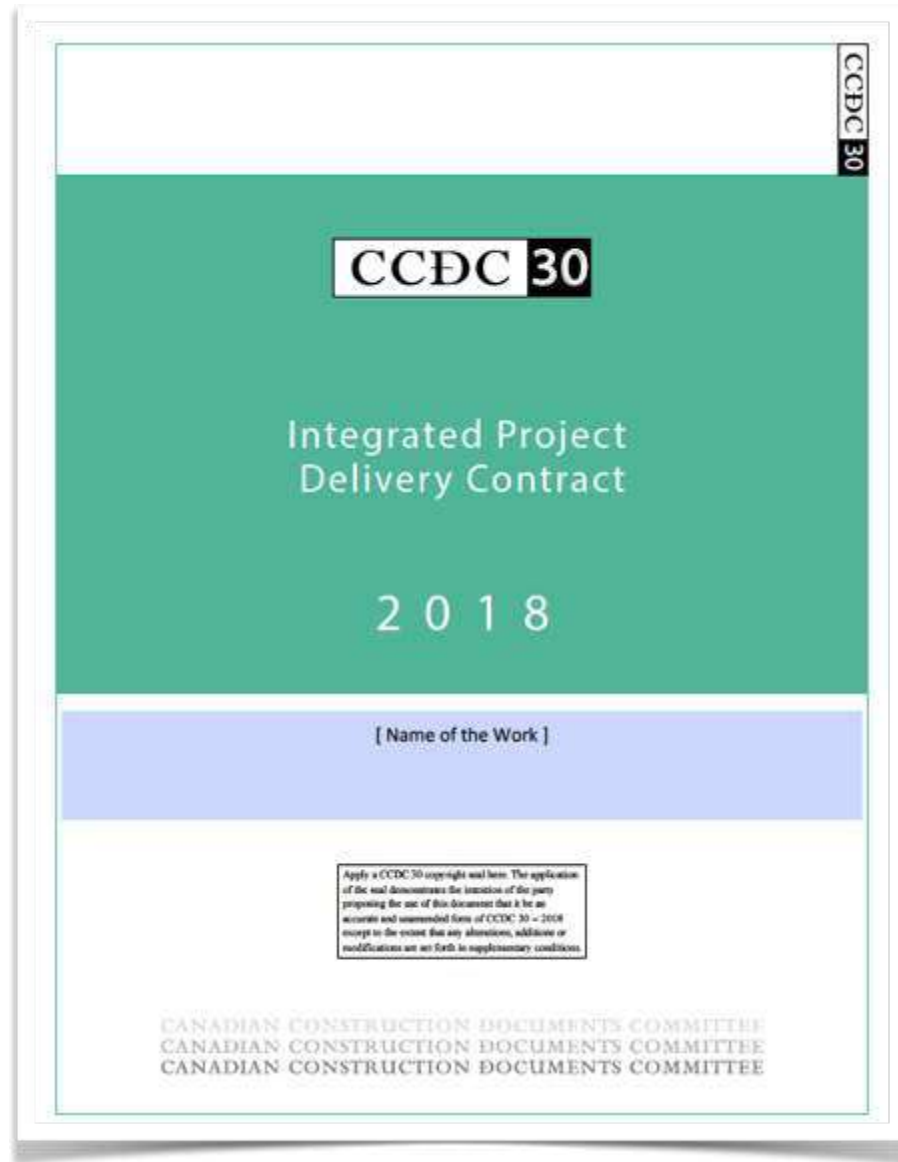
Team culture includes the vast range of so-called soft elements, including shared values, alignment of goals, creation of psychological safety, mutual trust, and respect as well as lean thinking and a "project first" attitude. An IPD team invests a substantial amount of time and energy in establishing, supporting, and maintaining a strong team culture.

Financial goals include the owner's financial parameters and funding criteria. It also includes the financial incentives for the IPD team—taking into account how each member of the team structures profit, overhead, and labor. In many cases, the financial goals include nonmonetary or indirect value for the owner and team.

Owner business objectives are critically important for the IPD team, since a building project is the solution to the owner's needs, not an end in itself. Business objectives typically include meeting budget and schedule goals but go well beyond into areas of performance, brand identity, employee wellness, and societal impact.



The contractual and cultural foundations of IPD, more than any other model, drive best for project thinking and behavior



CCDC30 – GC 2.1

The IPD Team shall actively facilitate **collaborative planning, design, construction, and commissioning** of the Project. Each member of the IPD Team shall make reasonable commercial efforts to:

- .1 establish and maintain **an atmosphere of mutual trust, respect and tolerance**;
- .2 work together and individually to achieve **transparent, cooperative and timely** exchange of relevant information relating to the Project, and to **share ideas for improving Project delivery**;
- .3 actively **promote harmony, collaboration, and cooperation** among all entities performing on the Project;
- .4 actively participate with the PMT and perform the Contract Tasks assigned in Appendix D – CONTRACT TASKS MATRIX;
- .5 support the full engagement of their PMT representative and provide the necessary resources to allow its PMT member to meet or exceed its commitments; and
- .6 **resolve disputes by amicable negotiations** prior to using the other forms of resolution as specified in Part 8 of the General Conditions.

one team

common purpose

effective communications

Changing how we Interact

Sure glad that hole isn't at our end.



Your work is important.

Your work is complex.

You are part of a team.

collaboration
is
inevitable

one team

common purpose

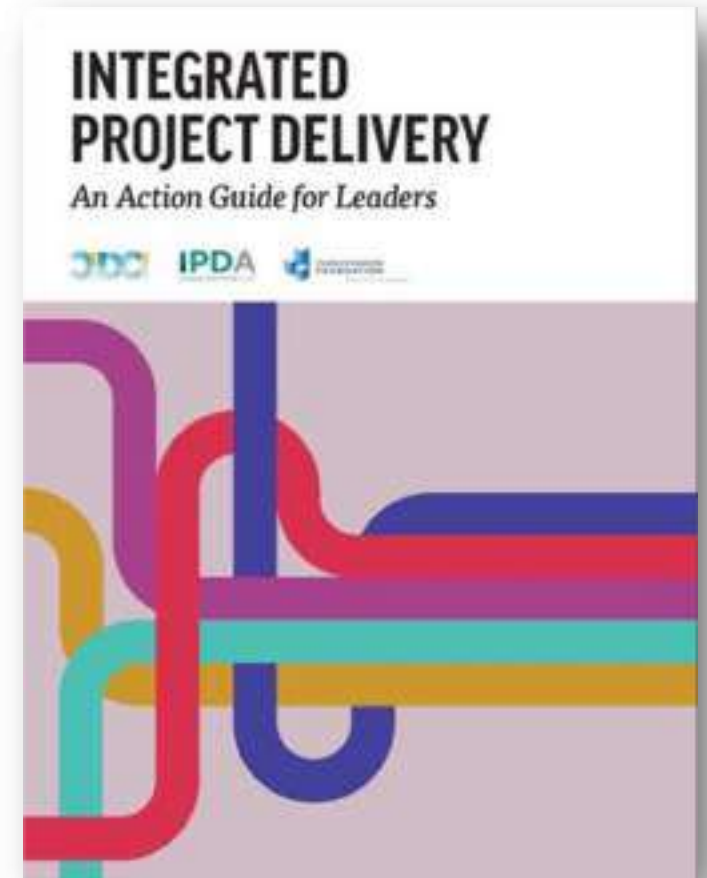
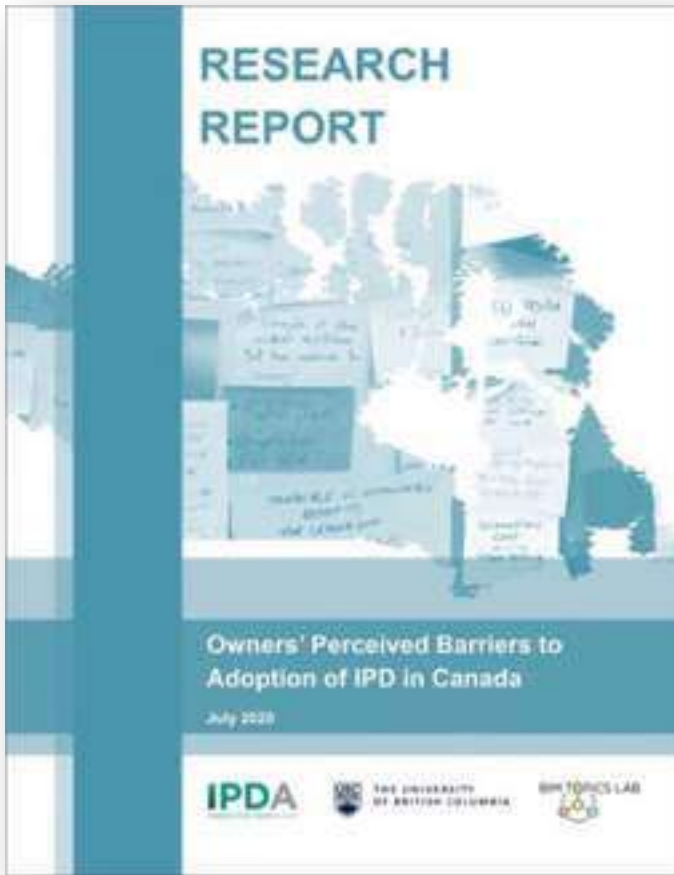
effective communications

commercial alignment

IPD in Canada

100+ known projects
2 known over cost

IPD in Canada



ipda.ca

IPD in Canada



IPD in Canada



THE UNIVERSITY
OF BRITISH COLUMBIA



**ÉCOLE DE TECHNOLOGIE SUPÉRIEURE
UNIVERSITY OF BRITISH COLUMBIA
INTERGRATED PROJECT DELIVERY ALLIANCE**

IPD in Canada

“Implementing IPD, however, is not without its challenges. For instance, lack of awareness, precedent, and education, consistently rank among the most significant barriers to IPD.”

IPD in Canada

“IPD implies fundamental changes in how projects are structured, procured, designed, and delivered. This change in the ways of doing things requires significant amounts of effort by the entire project supply chain to, in essence, redesign their work.”

IPD in Canada



“Overall, all three projects did deliver on the expected benefits of IPD.”

IPD in Canada



“In all three cases, the owner’s expectations were largely met and even exceeded in certain regards.”

IPD in Canada



“Quality was generally seen as excellent or very high in all three projects.”

IPD in Canada



“All three projects were delivered on-time or even ahead of schedule.”

IPD in Canada



“All three projects faced schedule challenges and overcame them with considerable ease. Project participants largely attributed this to IPD and indicated that these challenges would have been significantly harder to overcome with traditional project delivery modes.”

IPD in Canada



“Regarding fiscal and cost-based indicators, first and foremost, all three projects paid out their full ICL, which also implies that they were on budget.”

IPD in Canada



“The team culture was seen as quite good on all three projects, which lead to a more transparent and collaborative process. This is confirmed in Figure 21 which indicates that the overall experience of the project teams members was very high, some even indicating that it was the best project of their career.”









Lake Simcoe Region
conservation authority

“LSPOP requires that all new development must control 100% of the phosphorus from leaving their property. This is referred to as the Zero Export Target, a key component of the LSPPOP that ensures new development or redevelopment activities do not continue to contribute to phosphorus loading to Lake Simcoe.”



phosphorus control = \$3.4M

big-room surgical strike team (sst)

redesign

total cost to project: \$56k (0.015%)

project remained on schedule









What would you say is the greatest plus + of this IPD Project?

Relationships within the PMT.

Collaboration

collaboration

There were moments of brilliance when collaborating to solve problems

That this project from award of validation to opening doors was as short as it was and as complete as it was. Trade Partner involvement

The team.

The team banded together to try and make it better, easier, faster and cheaper for each other. I real team atmosphere.

People and collaboration :)

new relationships and better understanding of the owners side of the construction bussiness

Teams ability to adapt and overcome

The exposure & inclusion the team members had to all the processes, challenges, complications, & stress, that are involved in a project & how important it is to have a strong team.

The team function as an IPD team. Construction was far more enjoyable than a typical, conventional project.

Ability to solve construction issues quickly

what we all achieved in 3 years (in comparison to traditional projects)

Achievement of project completion in the time allotted.

Would you do IPD again?

Yes but not without the lessons learned from this being included in the next project.

Not right away

yes

The Fox team as a whole learned a lot from the process and would be better prepared both in administration matters and execution of the work

Yes. I believe it is a revolutionary way to do construction but with revolutionary change there is many new process and procedures required to manage it properly.

Yes, absolutely. If validation was more robust, the right decisions had been made to adjust the schedule to react to major events, this project would have been almost perfect.

I would. I would be more vocal about which partners I want on my team though.

Yes

YES!

Yes

YES

YES

Yes

yes, with refinements based on what was learned

Yes



BEAUDOIN



ENTUITIVE



Architecture Interior Design



grc architects



KTJ Consulting



ROCKLIFF PIERZCHAJLO KROMAN ARCHITECTS LTD.



Smith + Andersen



RYFAN



WORLD CLASS CONTRACTING LTD. Gas Fitting • Heating • Plumbing MECHANICAL CONTRACTORS



Turner



University of Regina



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Questions & Discussion

