

INDIGENOUS

INTEGRATED PROJECT DELIVERY



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**AN INDIGENIZED
IPD GUIDEBOOK**

Prepared for
Indigenous
Communities

ʔə́mí ce:p kʷətɬʷiləm Welcome

Why a Guidebook?

The goal of this guidebook is to make integrated project delivery (IPD) culturally relatable for Indigenous community-led projects and teams.

By collaboratively developing this guide, the authors were able to place an Indigenous value system at the forefront of the IPD process and 'Indigenize IPD'.

This alliance allows IPD to 'Walk in Both Worlds', meaning tools and methods can be utilized to benefit Indigenous communities on their own terms, bridging the space between these two worlds.

Why Now?

"We are in an Indigenous Renaissance! The evolution and progression of our collective Nations reclaiming and asserting our rightful place in our lands and territories is a decisive moment to witness. The future of real estate development is working with Indigenous communities."

- Dennis Thomas-Whonoak



ʔəxʔixəltəl
Paddling Together

Land Acknowledgment

This document was crafted on the homelands of Dennis Thomas-Whonoak, in Tsleil-Waututh Nation core territory, eastern Burrard Inlet.

The place known as Vancouver, is situated on the ancestral and unceded territory of the xʷməθkʷə́yəm (Musqueam), Skwxwú7mesh (Squamish), and səliłwətał (Tsleil-Waututh) Nations (collectively known as MST), and has been stewarded by them since time immemorial.

Vancouver is located on territory that was never ceded, or given up to the Crown by the Musqueam, Squamish, or Tsleil-Waututh peoples. The term unceded acknowledges the dispossession of the land and the inherent rights that Musqueam, Squamish, and Tsleil-Waututh hold to the territory.

The term serves as a reminder that Musqueam, Squamish, and Tsleil-Waututh have never left their territories and will always retain their jurisdiction and relationships with the land, water, and air.



CONTRIBUTION ACKNOWLEDGEMENTS



DENNIS THOMAS-WHONOAK



Dennis Thomas-Whonoak of Tsleil-Waututh Nation is the co-founder of Kwasen Enterprises and the Executive Director of Indigenous Business Initiatives and Engagement at UBC Sauder School of Business.

Dennis was part of the MST Development Corp, the largest developer in the Vancouver region comprised of three nations, xʷməθkʷəy̓əm (Musqueam Nation), Skwxwú7mesh (Squamish Nation), and Dennis' own community of səliłwətał (Tsleil-Waututh Nation), where Dennis also acts as an elected councillor. For many years, Dennis has been focusing his efforts to Indigenize design and construction projects on large scale developments.

Dennis utilized his personal knowledge of the Tsleil-Waututh Nation's cultural values and traditions to exemplify and illustrate how an Indigenous community can Indigenize IPD.

CONTRIBUTION ACKNOWLEDGEMENTS



OLIVIA GEORGE



Olivia George is a Tsleil-Waututh Nation artist. Born and raised in North Vancouver, Olivia grew to love art at a young age. Her favoured mediums are to create multiple designs and logos for clients on the North Shore. A couple major projects were season pass designs for Mount Seymour Resort and medal designs for HSBC Canada Sevens Vancouver. Being a self-taught Coast Salish artist, Olivia always strives to represent a story, an animal, a brand, or any special meaning in a creative, honourable, to-the-best-of-her-abilities kind of way. Her style is traditional with a simple, modern twist.

We are grateful for her incomparable illustration skills enabling the story of Indigenizing IPD to be told in the traditional way with a visual depiction of the messages and meanings.

CONTRIBUTION ACKNOWLEDGEMENTS



**STEPHANI CARTER &
ANDRIANA BEAUCHEMIN**



Stephani Carter and Andriana Beauchemin of Stok collaborated with Dennis to create this guidebook, bringing their knowledge and experience of integrated project delivery. Stephani and Andriana are both IPD practitioners, as of the date of publication, they have worked on over 30 IPD projects and more than 10 progressive design-build projects.

Stephani and Andriana share a keen passion for reconciliation, and through their ongoing efforts of reconciliation have identified strong values alignment between the IPD approach and Indigenous values and cultural traditions.

Andriana has lived in Tsleil-Waututh territory her entire life, and this is where she met and grew up with Dennis. Their children are now growing up together in the same school. Andriana is the proud mother of two status Indigenous children and she is learning where she can bring their ancestral traditions and values into their lives.

Over the summer of 2024, Dennis, Stephani, and Andriana co-created this guidebook. They learned from each other, and had fun, uncovering the multitude of ways IPD and Indigenous values are fundamentally aligned. The goal of the guide is to assist Indigenous communities to deliver successful construction projects with their cultural values firmly held at the centre.

WHY IPD?

The Integrated Project Delivery (IPD) model “defines the relationships among the project participants and the processes that guide their actions. It embodies the project goals and creates consequences for success or failure tied to their achievement. It puts control in the hands of the project participants and makes them responsible for total project outcome, not just their individual performance.

Correctly designed and executed, it stimulates behaviours that increase creativity, improve productivity, and reduce waste. A strong IPD Framework leads to better outcomes.” ([IPDA](#))

The IPD methods, means, and ways align with Indigenous cultural norms. It easily enables any Indigenous community to utilize their value system, principles, and ways of being and doing throughout the design and construction process. This is not easily done with other delivery methods due to inherent delivery structures.

In addition, the IPD method easily enables social procurement; Indigenous communities can ensure their developments include their citizens.

This document was created with the intention to share this realization: that there is a design and construction method that will enable Indigenous culture and therefore its people to thrive on a construction project.

In essence, utilizing an Indigenized IPD process can advance the decolonization of the design and construction industry while empowering and inspiring Indigenous citizens to celebrate their culture.



WHY DECOLONIZE DESIGN & CONSTRUCTION ?

The current design and construction industry is fraught with issues, including 70% of projects behind schedule and over budget, and some of the highest rates of heart disease² and suicide rates³.

The 'race to the bottom', whereby project teams are selected for the lowest bid, stems from placing the highest and sometimes only value on money. This has a downward impact on all project contributors, leading to potential bankruptcy of smaller, more vulnerable organizations.

In many different industries, western science is waking up to what Indigenous communities have known for millennia, which is that a more inclusive and collaborative way built on generosity and reciprocity results in success for everyone.

The construction industry is also experiencing its own revelations: from discomfort came grassroots-led innovation. Through trial and error and continuous improvement has come a better way by design. The IPD process came from these grassroots-led improvements and the findings point to a more inclusive and collaborative approach built on reciprocity that delivers better results.

IPD stops the 'race to the bottom' from the start during procurement, where proponents are selected not on a fee or bid, but instead on their rates, their experience, and their values alignment with the owner.

Indigenous and non-Indigenous IPD projects are experiencing higher rates of success and satisfaction⁴ than conventional siloed delivery methods.



1. Peter W. G. Morris, Jeffrey K. Pinto, and Jonas Söderlund, 2011, eds., *The Oxford Handbook of Project Management* (Oxford University Press), pp. 321344.

2. <https://www.heart.org/-/media/Files/Affiliates/WSA/Oregon/Construction-Workers-and-Cardiovascular-Disease-Infographic-0421.pdf>

3. <https://www.cdc.gov/mmwr/volumes/72/wr/mm7250a2.htm>

4. McGraw Hill Construction

HOW TO USE THIS GUIDE

This guide is intended to form the basis of a holistic and harmonious approach to construction delivery on Indigenous lands and territories.

Our intent for this guidebook is to be an example for the hundreds of Indigenous communities across Turtle Island. We acknowledge each Indigenous community has unique and distinct differences and it is our hope and best intention that each community would Indigenize IPD projects with their cultural teachings and ways of being and doing in their territories.

This particular guidebook outlines Coast Salish traditions (Vancouver area, Tsleil-Waututh perspective), which have been interwoven with the western project delivery concept of Integrated Project Delivery. There are many similarities that resonated with Coast Salish/Tsleil-Waututh teachings, such as paddling together, of one heart one mind, taught to know where we come from, and everything is connected.

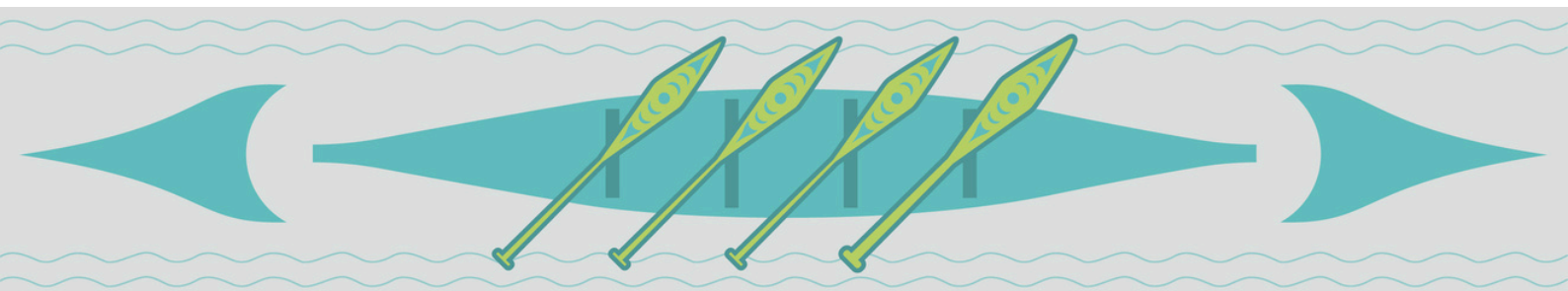
There are some cultural themes that span across all Indigenous peoples; themes of reciprocity, generosity, respect, and community, all while celebrating people's strengths and gifts.

These pan-Indigenous cultural values are what have ensured Indigenous communities remain resilient and culturally proud to this day. The continuation of culture in Indigenous communities is a critical aspect of this current Indigenous Renaissance.

The term Indigenous Peoples of Canada includes: First Nation, Metis, and Inuit.

Each have their own distinct cultures and rights

[Learn more here](#)



HOW TO INDIGENIZE IPD

First and foremost, the process to Indigenize IPD should be Indigenous led. If you are an Indigenous citizen and are interested in utilizing IPD, please engage with your Indigenous leadership, economic development group, and cultural knowledge holders within your Indigenous community.


An Indigenous community knowledge holder is invaluable to lead the process of Indigenizing IPD. They will understand the traditions that can be implemented and celebrated throughout the IPD process and ensure the project is delivered with the Indigenous values of your Nation.

In the development of this guidebook, Dennis energized the role of the Tsleil-Waututh Nation cultural knowledge holder. Dennis can be reached to share his experience with this role with other cultural knowledge holders.

The role of the IPD expert should be to support the effort to Indigenize IPD, not lead it. Support looks like making connections between cultural traditions, world views, ways of being and doing, where and when the IPD process would enable expression, and adoption of such traditions.

The approach of the IPD expert should be to come to the project to listen to the uniqueness of the community with an open mind and open heart. They should go through a process of learning and understanding the cultural values of the community before starting.

It is requested that all non-Indigenous project partners utilize this guidebook to help inform them of this approach to building a mutually beneficial friendship and relationship to ensure the Indigenous-led delivery is respected and followed.

This guidebook is licensed under Creative Commons [CC BY-NC-SA 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/),  meaning it is intended for other Indigenous communities to use and build upon. We simply ask that the original authors be acknowledged.



THE JOURNEY

The symbol of a Coast Salish canoe has deep cultural significance for the Tsleil-Waututh Nation. The metaphor of a team paddling together—sharing the risk and reward of the journey, focused on the same goals and destination—are significant to the IPD process. This shared symbol and the values represented within the canoe are what inspired the theme of this guidebook.

If the paddlers are not in sync:

- the paddles hit
- the canoe feels heavy
- the risk of tipping increases
- the spirit of the canoe is not well
- the team is meandering
- the canoe can crack
- the team takes longer and more energy to reach the destination

If the paddlers are in sync and paddling in unity:

- the canoe is much lighter, the canoe is planing above the waves
- the spirit of the canoe is well and alive and will help you achieve your end goal destination
- the moral is good, the paddlers have more energy while reaching the objective efficiently



snə́weyət

The number four holds great meaning within the Coast Salish/Tsleil-Waututh snə́weyət (teachings). It symbolizes the natural elements of air, water, fire, and land. Four is also found in the four seasonal rounds and the four stages of life; baby, youth, adult, and elder. In keeping with the cultural significance of these teachings, this guidebook has been organized into four legs of a canoe journey.

- Dennis Thomas-Whonoak



THE JOURNEY

The guidebook has been organized into four legs of the journey. The first three legs represent the planning and preparation that must go into ensuring a successful journey. The fourth leg of the journey is where the paddlers row together to a shared destination.

The IPD phases have been identified below and aligned with this distinction of planning and then executing the work.

PLANNING OUR JOURNEY		PADDLING IN UNITY
PRE-VALIDATION	VALIDATION	DESIGN & CONSTRUCTION

01

TAUGHT TO KNOW WHERE WE COME FROM AND WHO WE ARE

02

TO BE OF ONE HEART AND ONE MIND

nə́cəmat

03

EVERYTHING IS CONNECTED

04

PADDLING IN UNITY

?əx?ixəl'təl'

HOW TO READ THE GUIDE

Each chapter outlines one leg of the journey which has also been aligned with specific phases of the IPD process, including validation, design and construction.

Each chapter will include the Indigenous perspective of how to deliver that leg of the journey and the associated IPD process methods and tools for that same leg of the journey.

At the end of each chapter, the comparison is formatted in a simple chart and additional descriptions provide context for better understanding. The chart is a list of all the activities to do in that leg of the journey. The order may be rearranged to suit the needs of the community and the project.

This guide is not a comprehensive detailed instruction on what the IPD process is. Instead, think of this as an introduction to the concepts and methods of IPD and how it enables Indigenous communities to express and celebrate their cultural traditions during a design and construction project.



ʔəxʔixəltəí



1. TAUGHT TO KNOW WHERE WE COME FROM AND WHO WE ARE

Preparing for a canoe journey takes months of time and countless hours of practice by the paddlers. There are ground crews that prepare supplies for sleeping and food for nourishment, and there could be many overnight sleeps on a long journey. Without preparation, there is no successful journey.

The IPD process provides a framework where project team members go slow to go fast. Going slow at the start means that the client ensures they are ready for the project to start and the team can spend the time required to collaboratively problem solve, scenario plan, and co-create the best solution for the client's needs.

This time up front can also be utilized to provide the IPD team time to understand the project from an Indigenous worldview and set of values. Going slow to go fast in this first leg of the journey takes time to prepare and prepare properly so the journey is successful.

There are three parts to this preparation.

Part One: Indigenous Entity Alignment

This first phase is designed to mitigate the risk of misalignment between the owner group, inherent rights holders, and interest holders. There needs to be alignment on what the project purpose, mission, values, priorities, budget, and schedule are. If there is misalignment within the owner group or some key individuals have simply not had their say in what their needs are, this can result in lack of direction to the team, causing confusion, rework, and associated escalated costs.

It is vital that the Indigenous owner group knows what they want and what they do not want. This can be discovered through an iterative process, but by the time the IPD team joins the project, there should be clarity and alignment on a set of prioritized project values and a draft of conditions of satisfaction (COS). COS are the key deliverables that would ensure the Indigenous owner group will be satisfied at the completion of the project, and yes, it includes budget.

Part Two: Procurement of the Larger IPD Team

It is important to select the right team for any project. It is even more important for an Indigenous community to select a team that represents, reflects, and shares the same values in uplifting and celebrating its people.

IPD places a high amount of value and time in selecting the right team. This includes a detailed and intentional procurement process, focusing scoring weighting on interviews. A custom Indigenous scoring process can be developed to support specific cultural values.

This different approach to procurement from the conventional will enable Indigenous communities to add additional requirements like social procurement where the percentage of a team may be required to be Indigenous.



1. TAUGHT TO KNOW WHERE WE COME FROM AND WHO WE ARE

Part Three: Onboarding of the Whole Team

Because IPD is a different process than conventional project delivery, onboarding is a key focus for IPD projects to confirm the entire team is aligned on not just WHAT we're building but HOW we will build it. This emphasis on onboarding enables an Indigenous community to add their own onboarding content, which can include United Nations Declarations on the Rights of Indigenous Peoples ([UNDRIP](#)), Missing and Murdered Indigenous Woman and Girls ([MMIWG](#)), the Truth and Reconciliation Act ([TRC](#)), and any other specific Indigenous community cultural documentation of importance.

Trust is foundational to all successful relationships and any successful project. The IPD process has many mechanisms, approaches and methods for building, sustaining and improving trust. One is called team building. This is where the team gets out of the normal workday efforts and the normal physical workspace and instead does an activity together, learns together, or gives back to the community together.

In this first leg of the journey, there is an opportunity for initial team building to coincide with onboarding to give team members a better cultural understanding and appreciation for who the community is they are serving and the land the project will be located on.

An example of team building in the Coast Salish/Tsleil-Waututh nation could be to walk the land, understand pre-contact history, canoe together, go on boat tours, and eat together. These team building experiences should be conducted by a cultural knowledge holder within the community and/or if the community has an Indigenous cultural tourism company, choose to support the local Indigenous business.

It is important for the team selected to already be of the mindset that reconciliation is imperative and demonstrate their commitment to this by committing time to learn and unlearn. It is important to ensure everyone has a baseline understanding of the historical context and experience that has led us to where we are today.

This is the basis of the name of this leg of the journey: taught to know where we come from and who we are.

Taken a step further, the Indigenous community could develop a Cultural Interpretive Plan (CIP). A CIP helps build understanding of the unique and special stories associated with the place that the project will be located on. It acts as a guide for design in terms of how the unique Indigenous culture will be imprinted on the site with ecology, landscape, public spaces including parks and pedestrian areas, ability, public art, food systems, rain/ground/potable water, commercial uses, waste management, housing, building and architectural character, lighting, energy systems, resilient design elements, and more. It communicates culture and ways of being. This document then can be utilized not only for onboarding but also as a key part of the conditions of satisfaction for the IPD contract.

Dennis Thomas-Whonoak and Kwasen Enterprises have created CIPs for their projects and is willing to share with an Indigenous cultural knowledge keeper to assist them in developing their own CIP.

1. TAUGHT TO KNOW WHERE WE COME FROM AND WHO WE ARE

CULTURAL TEACHINGS

Prepare onboarding materials such as Truth and Reconciliation Act, UNDRIP, and Missing & Murdered Indigenous Women and Girls.

Prepare Indigenous community cultural values to share with the IPD project team such as Coast Salish/Tsleil-Waututh values of reciprocity, generosity, Indigenous sovereignty, transparency, and trust.

Listen to nation members and citizens, especially elders, knowledge holders, and youth.

Set Indigenous requirements for team procurement, from open-mindedness to learn and unlearn and follow Indigenous ways, to including a percentage of Indigenous people on the project.

Prepare team building events such as walking the land together, canoeing together, cedar weaving workshops, and eating together.

Gather gifted advisors such as a master canoe carver, basket weaver, tree faller, hunter, etc.

IPD PROCESS

Determine the WHY behind the project: What higher purpose will the IPD team serve?

Engage and align with Indigenous owner group on budget, schedule, values, priorities, conditions of satisfaction, and risks.

Owner readiness, including alignment and creation of: allowable cost, master schedule, known risks, procurement requirements, decision making processes and tools, financial tracking, prioritized project values, and team values.

Deliver training on Lean thinking, IPD contract mechanisms, and IPD decision making.

Procurement of the IPD team

Onboarding of the IPD team

Strength-based team building

2. TO BE OF ONE HEART AND ONE MIND nə́cəmat

Where the first leg of the journey is for the owner to be prepared and to select the right team members that will support an Indigenous worldview and who already live by Indigenous values, this second leg of the journey is to align all of the selected project team members on key IPD processes and Indigenous values.

One Heart and One Mind

When greeting the canoe, it is important to come with good intentions and an open mind to work as one team for the greater good. The canoe will know when someone is not well and the morale will be impacted.

One of the key components of IPD that sets it apart from any other delivery method is the contract. All projects start out with good intentions, but when something goes wrong, the conventional contracts reinforce an adversarial response. In contrast, the IPD contract ties the entire team to a risk-reward system, where we all benefit if we collaborate successfully, and we will all share in the pain if we do not collaborate effectively. This risk-reward contract ensures the team is not only set up with good intentions, but is incentivized to work through problems as a team for the greater good and stronger social well-being.

Like in the canoe analogy, if the team works well together, it is aligned and delivers the project ahead of schedule and under budget with all of the scope required. The IPD contract enables teams to add more value to the project for the client and the team can potentially increase its own profits. This is nə́cəmat, being of one heart and one mind. In this way, the contract sets up a framework for a true win-win, but it does not guarantee success. If the team does not work well together, does not collaborate, does not communicate, and delivers the project behind schedule and/or over budget, the team could walk away with no profit. In essence, the canoe is heavy and we will not successfully reach the destination.

Radical Transparency

To track this risk-reward system, the contract requires a high degree of financial transparency. This financial transparency builds trust. Everyone can see the budgets, forecasts, and invoices of everyone else. This enables the team to monitor cashflow and quickly adjust when a trend emerges. This transparency requires the team to ask questions of each other so everyone feels comfortable with the data. When everyone can transparently see that the entire team is actively working to reach the shared goal of delivering value within budget, this builds trust, enabling and reinforcing one heart and one mind. The transparency reinforces that the budget is OUR budget and the team has agency to determine how best and where to spend to deliver value.

Conventional projects typically operate with non-transparent financials, where everyone does not have access to view the data. For too long, Indigenous peoples have been ostracized and kept in the dark and therefore often taken advantage of. The radical transparency of the IPD financial management not only builds trust but also provides vital information that an Indigenous community has the right to know.

In this leg of the journey, the owner group and the project team who will sign the contract work through a series of discussions, training, and workshops to understand the contract and the profit pool mechanics to reach alignment on how the system works.

2. TO BE OF ONE HEART AND ONE MIND nə́cəmat

Target Value Delivery

The preparation work completed in the earlier legs of the journey will result in a cultural interpretation strategy and design guideline that will clearly explain and express what the Indigenous community identifies as value. This will enable the IPD team to maximize the budget to drive value for the Indigenous community.

In conventional project delivery, designers design solutions, detail the designs, and then price the design. Unfortunately, too often the price comes back too high, and the design team must cut scope out and spend time re-working the design. This process is often repeated multiple times, delaying projects, increasing costs, and reducing scope the client wanted.

IPD utilizes target value delivery, whereby the client informs the team how much money they have to spend and what they are hoping to build with it, and the team is contractually required to design to this budget. The team cannot go over the budget limitation, even during construction.

Teams are enabled to do this via an initial key phase of the project called validation. This first phase is where the entire team (designers, contractors, engineers, and trades) works together to co-create design solutions that fit within budget. They collaborate to validate if the client's budget is appropriate for what they want. If it is, the project can move forward into design details and construction. If the budget is not appropriate for the scope desired, the client will receive all the data and advice from the team on what could change to make their project work; from there, the project can pause, go on hold, or cancel. Cancelling a project may sound like a failure, but when it's done early in the process, it is a success because the team has protected the client from spending more money than they have. The client now has the freedom to revise their needs based on the information from the IPD team or go out and seek additional funding to build the project of their dreams.

Teams can only deliver value if they understand what value is in the eyes of the client, in this case the Indigenous community they serve. Galvanizing the IPD team on what value is for an Indigenous community ensures the team is thinking and behaving as one heart and one mind.

Values-Driven Decision Making

Because values are such an integral part of an Indigenous experience it is important that Indigenous values also drive the decisions made on a project. The IPD delivery method places values front and centre for all decisions. Therefore, in contrast to conventional project delivery methods where the loudest voice in the room may make a decision, IPD enables Indigenous values to be centric to the delivery of the project and all decisions made.

In this leg of the journey, the IPD team will be onboarded to understand what value is as defined and prioritized by the Indigenous community. The team will listen first and then workshop how to translate what the community desires into the physical form.

The Indigenous community's prioritized project values will be turned into a values-driven decision making tool that all IPD team members will be trained on and required to use. The decisions will be documented transparently so the Indigenous community (inherent rights holders) and interest holders can see why decisions were made to remain accountable to the community's definition of what value is.

2. TO BE OF ONE HEART AND ONE MIND nə́cəmat

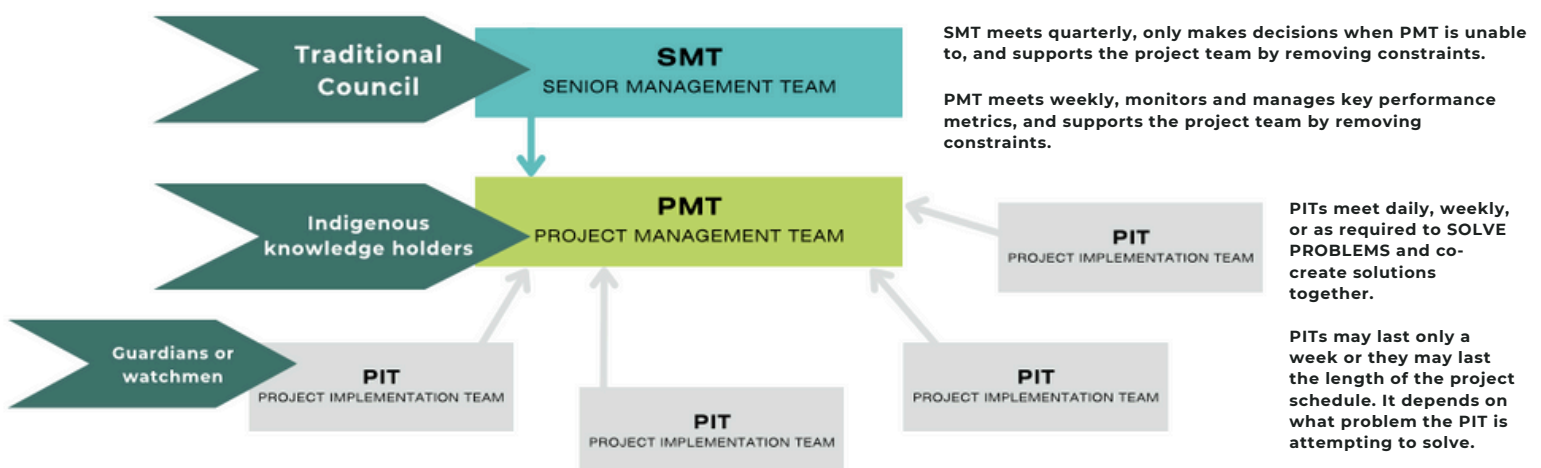
Advice and Consent

From time immemorial, Indigenous communities have understood and appreciated that a diverse group of voices from the nation results in a better outcome. The matriarchal-led tradition seeks guidance and advice from traditional council members with family group representatives including elders and youth. This approach is easily supported in the IPD process because decisions are made using an “Advice and Consent” method. This method requires all decision makers to gather advice from all those who will be impacted by the decision. There are only a handful of hard rules in IPD and one of them is that no one can make a unilateral decision.

Two things are true: (1) a varied set of experiences and perspectives will deliver a better outcome and (2) the IPD team must be aligned on one set of values and priorities to quickly make decisions and drive value for the Indigenous community.

The IPD Senior Management Team (SMT) is a great group for elders, knowledge holders, and elected leaders to contribute to. Their advice will be sought not just once at the start of the project, but at minimum quarterly throughout the entire length of the project. Given that IPD and Lean construction focus the entire team on delivering value to the customer, the customer—who in this case is the Indigenous community—will have additional votes when making decisions, reinforcing that the client is the reason why there is a project and we should deliver what they consider valuable. Having said that, the intention of IPD is not to give the client full control, but simply more votes when making decisions. If the client has full control, the team may feel disengaged if the client does not listen to its perspectives on risks and opportunities.

The graphic below outlines the hierarchy of decision making on an IPD project. To increase decision making flow, the majority of decisions are made by the people who are closest to the work. These groups are often called Project Implementation Teams (PIT), Work Teams, or Clusters. Whatever this group cannot decide on will go up to the Project Management Team (PMT). The PMT should not make all the decisions—they will become a bottle neck and could slow the pace of the project. They also need to be focused on enabling and encouraging PITs to make decisions. PMTs responsibility is to know the status of all the key performance metrics and assist in removing constraints in front of the team. If the PMT cannot come to a decision, that is the only time the decision moves up to the SMT.



2. TO BE OF ONE HEART AND ONE MIND nə́cəmat

Collective Power WITH Instead of Power OVER

Indigenous communities thrive and prosper collectively because the entire village provides fulsome information to make the best decision for the community. Proven success with engagement on decisions comes from thousands of years of practicing this approach. Unilateral decisions break down morale, break trust, do not foster good relationships, and erode the long term success of any relationship.

The governance model of IPD is based on self-management, which empowers the doers of the project with autonomy, mastery and purpose to increase flow of work and enable those with the knowledge of their work to add value and have authority to solve problems as they arise. Decision making power is distributed instead of consolidated at the top. Conventional project delivery consolidates decision making to a few people, creating a bottleneck that slows down the project and can lead to missed key perspectives, causing rework and mistakes.

IPD utilizes a team behaviours agreement, whereby power and authority is distributed throughout the team, to hold each other accountable to the behaviours we want to see versus the behaviours we do not want to experience. This agreement should be based on the cultural norms of the Indigenous community. Team health will be monitored by everyone instead of one authority figure. The team co-creates this agreement, commits to it, and has the power to add to it as new people join the project. Morale becomes a key project metric that is tracked and improved, dramatically increasing the probability of success. Happiness and engagement are leading indicators of success.

The Coast Salish response to when things go wrong is to clear the air, meaning to discuss opposing opinions to find a shared understanding and come to a resolution and commit to it. The IPD process calls this a retrospective and the team health checks include this opportunity for dialog and mutual resolution; however, it requires an open mind from all parties. Sometimes resolutions can not be found, and within the IPD process and contract there is a process for termination or separation, but it is a last resort. The Indigenous communities implementing IPD would benefit from reviewing the IPD contract and customizing the conflict management process to align with their own cultural norms.

Distributing decision-making power and authority, in essence, is letting go of full control and sharing control. It also requires us to lead with trust and assume the best of our teammates. Decentralizing power and control is an act of decolonization.



2.TO BE OF ONE HEART AND ONE MIND nə́cəmat

CULTURAL TEACHINGS

snə́weyət [teachings]

Integrity – We are committed to honesty, trust, and transparency. We do the right thing, even when no one is watching.

Reciprocity – We share with others, take turns, and engage in reciprocal actions.

ʔə́y sqʷeləwən [good feelings]

Family – We recognize that each of us has gifts to share, and we are committed to caring for one another, treating our people with the dignity and respect they deserve as human beings.

Yukwathut [undoing, untying the harm]

We need to untie the colonial policies that caused harm in order to be able to move forward in a healthy way and act as one heart and one mind.

IPD PROCESS

The IPD contract ensures the entire team will be of one heart. When issues arise, the team will solve problems collaboratively, driven by the Indigenous community's values and priorities.

IPD process onboarding, ensuring the entire team is of one mind, and alignment on:

- Decision making
- Delivering value
- Project priorities
- Risks and how to mitigate them
- Conditions of satisfaction
- When milestone checks will occur
- Who will deliver what scope and for how much
- How we will show up for each other, and what behaviours we do and don't want

3. EVERYTHING IS CONNECTED

A Network of Commitments in a System

The Coast Salish people have a deep understanding, connection, and symbiotic relationship with the natural world and the ecosystems within it. Projects are an ecosystem of humans focused on a shared goal, and the cultural stories of the Coast Salish people offer deeper understanding of our part within the community that is a construction project reinforcing how everything is connected.

There is honour in the Coast Salish culture placed on individuals who have skill sets in cultural knowledge, understanding of cultural ways of being and doing, willingness to share with others, and ensuring the next generations have opportunities to learn and carry on cultural customs. They then build trust with others through transparency and being generous with their teachings. After demonstrating the desired behaviours, these people would be bestowed the honour of the title Seyem. Seyem's ensure others work well together and that a team is aligned. In IPD, project managers and general contractors who lead the Last Planner System® would benefit from striving to emulate the characteristics of a Seyem, to ensure team members are aligned and work well together.

In conventional project delivery, the general contractor owns the schedule and is very good at understanding construction at a general level (thus their title); however, when it gets down to the week-to-week and day-to-day level of tasks of sub-trades, it is far more effective to have the subject matter expert plan their own work.

The biggest issue and weakest link of conventional project schedules is the hand-off—the point at which one discipline hands over work to another party to continue on. This is the beauty of the Last Planner System® that IPD uses to collaboratively schedule a project. It visually shows how everyone's work is connected to everyone else's and focuses the team on the hand-offs for a smooth transition. When the team can see the part they play in the larger whole system, the team can then maximize the whole instead of only individual contributions.

Once the plan is finalized with everyone who is contributing to the work, the team commits to the delivery dates and duration that it has set. Then the team delivering this work will meet daily to hold each other accountable to these commitments, once again distributing power and authority to the doers. The peer pressure of completing work on time is a much stronger motivator than any single authority figure. In addition, the peer pressure comes from facts instead of emotions, as the team can visually see the natural consequences of not delivering the commitment on time, because their peers work is impacted.

The intersection of the Last Planner System®, the contract, and the transparent budget enables project team members to truly operate as ONE TEAM. If a team member is behind schedule and struggling, the team can proactively see this risk before it gets to be too big of an issue and mitigate the issue by sharing scope. The contract allows different disciplines to perform the work of other disciplines (if agreed to). With these three mechanisms, the team is enabled to see the issue as something we all should solve, and anyone with the right skillsets has the authority to raise an issue and bring the project back on schedule and back within budget.

3. EVERYTHING IS CONNECTED

A Network of Commitments in a System (continued)

- If a risk is realized, then the team is forced to collaborate on a solution to keep within the validated budget and look for ways to remove cost but not value in the eyes of the client.
- If one scope of the project is trending over budget, and another scope is under budget, the team is enabled to move money to where it is needed so the client gets what they want.
- We are all connected by the contract and we all succeed or we all fail together. This mechanism encourages everyone to care about everyone else's success.

Through this leg of the journey and all subsequent legs, the team continues to monitor more than just budget, schedule, and value delivery; team health is also a key metric that is monitored. We are all connected in our relationships and it is critical that team health is priority, because if one of us is not doing well, we all suffer. Team building and recognition of good work is a daily ritual and team building events occur to coincide with celebrating milestones or offering reprieve from a particularly difficult stretch of work.

Team health checks can be thought of as the skipper in the canoe calling out the pace so the team is aligned in its behaviours. We check to make sure we are in sync and working well together. In this analogy, the skipper of the canoe can feel the weight and balance of the canoe, and can try to mitigate issues arising by keeping the team aligned. The skipper will also have the paddlers take alternating breaks so the team has the energy to continue.

Scope swapping is normal and needed on a long canoe journey. People are not meant to paddle on only one side—our muscles need a break and we need to balance out the work on our bodies. The skipper will identify when it is time to swap roles on the fly.

The IPD contract is currently the only contract that easily allows scope swapping between disciplines. The core team who signs the contract is paid hourly, and the scopes can be fluid due to the continuous transparent financial forecasting and tracking. If a team member is struggling, has too much on their plate, or their work is simply slipping, other team members who have the right skills and experience can offer to take some of the work to help get the project back on track. This does not happen on other delivery methods because the contracts are siloed and team members instead stay within their lanes. Unfortunately, all too often the siloed contracts also mean team members point fingers at each other when work is behind and risks emerge. In contrast, IPD enables team members to support each other so we can reach our destination quicker and more effectively, which increases morale and a sense of comradery as ONE TEAM!



3. EVERYTHING IS CONNECTED

Sustainability and Resiliency

For millennia, Indigenous peoples have observed and appreciated the natural world around them, deeply understanding that everything is connected. Land, air, water, and fire are the four elements that life depends on. Indigenous peoples live among and with nature, understanding we are part of nature and must nurture it to have a mutually beneficial relationship where we all thrive. Whatever term society calls it today—sustainability, resilience, eco-friendly—this concept is a strong value shared by all Indigenous peoples.

The IPD process ensures a project is values led; decisions are made with the client's project values and priorities, and the budget must include specifically stated conditions of satisfaction that are derived from the project values. The project team co-creates design solutions that are designed to the budget, as compared to conventional project delivery where the project is designed and then priced, more often resulting over budget. Designing to a budget incentivizes the team to co-create innovative solutions to maximize what the client values within budget. This process was developed with sustainability in mind, to mitigate the all too often situation of having sustainability initiatives cut from the budget. If the client would like sustainability, it will be a condition of satisfaction and the team will be contractually required to deliver sustainability within budget.

This concept of everything is connected shows up in sustainability and resilience whereby material choices are selected not only for the betterment of the people but also the environment. For example, local materials can be prioritized to support local communities and reduce carbon emissions from transport and more.

Historically, Coast Salish people would only travel within a limit of a three hour radius to collect goods and materials. IPD project teams can consider placing priority on sourcing local materials on Indigenous projects to support this historical approach. This will both support local Indigenous economies and reduce environmental impact of the materials and transport.

Story Telling to Pass Knowledge and Advice on to Future Generations

Story telling is foundational to all Indigenous communities. Coast Salish ways and means of transferring knowledge is a sacred and key aspect, fundamentally important in the continuation of Indigenous culture. Story telling builds and retains skillsets and the cultural shared understanding.

Story telling on IPD projects is a key component to continuously improving from one phase of a project to the next, from one project to the next, and from one community to the next who wishes to employ IPD. Story tellers can be identified at the beginning of a project and contribute throughout the project by capturing stories of how a team member went above and beyond, saved the project from a schedule or budget over run, or changed everyone's mind with an innovative solution!

3. EVERYTHING IS CONNECTED

CULTURAL TEACHINGS

Indigenous cultures have a symbiotic relationship with the natural world.

Take only what you need from a natural resource so we can all continue to thrive.

If a resource is needed in full, gratitude is expressed and a prayer is offered.

Sustainability and resilience is key to all life.

The Seventh Generation Principle is a philosophy that the decisions we make today should result in a sustainable world seven generations into the future.

Story telling connects generations and preserves skills, cultures, and wisdom.

We have to be of two minds, business AND sustainability.

We have to walk in two worlds, Indigenous AND the prevailing cultural society of the time.

IPD PROCESS

IPD is based on systems thinking. The IPD team is trained and enabled to understand how to maximize the whole instead of our individual contributions.

IPD utilizes Last Planner System[®], which engages all team members in co-creating the network of commitments that will deliver the project. By engaging team members early and giving them a say in the plan, engagement and accountability increases and change orders decrease.

Sustainability is baked into the outcomes of the project down to the contract commitments via the conditions of satisfaction and project values. If the project is trending over budget, cuts can be made but not to the conditions of satisfaction!

4. PADDLING IN UNITY

ʔəxʔixəl'təl'

Finally, after three long and important legs of the journey, we are ready to embark on the last leg where we set off and Paddle in Unity ʔəxʔixəl'təl' to our destination.

We Are Ready!

Within the canoe metaphor, we have practiced for endurance training, know our roles, know the commands from the skipper, built leadership skills to share the work, prepared the ground crew with all the needed supplies, and now are ready to embark on our journey.

The IPD team has collaboratively scheduled with Last Planner System[®], we have collaboratively validated that the client's values and priorities for the project can fit within the budget allocated. We have also identified as many risks as we could from a diverse set of perspectives, brainstormed mitigation efforts for these risks, and discussed and aligned on responses for when any risks should arise.

There are myriad tools and processes the team is now trained and onboarded to use on this leg of the journey, including the budget, schedule, risk register, wish list, team health, conditions of satisfaction, values-driven decision making tools, record keeping tools, and more.

Monitor and Measure to Keep on Track

A canoe trip maps out various stops where the paddler community will meet and interact with another nation. Both nations will share through cultural protocol, sharing cultural stories and traditions and building relationships. Each stop is a moment to pause, share, reflect, and celebrate, ultimately becoming more culturally rich all while strengthening nationhoods.

By this time, the IPD team will have decided upon the most important metrics to keep the project and team on track and have built dashboards that visually convey how we are performing. This will include standard metrics like budget, schedule, and quality, as well as non-conventional metrics like ensuring we give back to the Indigenous community—the people and land the project is for. The metrics are also transparent to enable anyone on the team to raise a red flag, question the information, and dig further into the details. We are all safer together and more likely to succeed if we encourage everyone to watch out for all of us. This can lead to difficult conversations, and we anticipated this too, co-creating a set of team values and behaviours to refer to when things go wrong, or at least get heated. This reminds us that we agreed to allow anyone to raise any issue with anyone else, respectfully and with compassion.

We have identified the diversity of strengths of the team and have everyone in the right seat to contribute their best. We have the trip mapped out and identified milestones to pause, look ahead, check our trajectory, adjust, and/or celebrate! If we are ahead of schedule, this means we have more supplies than perhaps needed and we can feel emboldened by the knowing that we will be able to share in a large feast once we reach our final destination.

4. PADDLING IN UNITY

ʔəxʔixəl'təl'

Sharing the Effort Energizes the Team to Keep Going!

As described earlier, to keep up the energy of the canoe, rotation of paddlers happens often to keep efficiency and timing with the tides.

The IPD contract is unique in many ways, one way is the ability to easily share work. It is often on IPD projects where a mechanical trade may frame the mechanical room to increase flow and decrease rework; or an electrical trade may provide general labour while they wait for their work to become available; or the general contractor may offer more general labour assistance to trades when they are unexpectedly short-handed. These types of sharing of work between disciplines is not experienced on other contract models.

Teaching the Next Generation

Redistribution of wealth is a sign of a highly regarded nation. The more gifts given out when hosting ceremony is the sign of a strong nation.

This leg of the journey is the doing, but it also involves teaching. This is applied learning, and is a fantastic opportunity to celebrate knowledge holders of traditional ways and to train the next generation in these skills. As we paddle together, we are paddling for the future. We are setting our future community up for success by passing along knowledge and experiences to then be shared forward.

The IPD process can facilitate knowledge sharing and skills training with Indigenous community members who would like to learn a new skill or trade. The IPD team will especially be incentivized to share and train Indigenous community members if the social procurement goals were set at the start of the project and tracked as a key metric for project success.

Celebrating!

Indigenous cultures understand that it takes a village to raise a child, and a community is ultimately more successful when the parenting can be shared between family members and everyone is recognized and appreciated for their contributions.

Celebrating happens throughout the project. Daily recognition for hard work and for those who played a part contributes to an environment where we can all thrive collectively. Without providing recognition, appreciation, and gratitude, the morale will suffer.

This leg of the journey of course also includes finally reaching our destination! Even as we are all exhausted, the exhilaration from seeing the final stretch pushes us forward to reach our goals. Once landed on shore, there is still work to do: to account for all of our achievements, goals, and remaining supplies. While some attend to the disembarking, others start on the celebrations where the paddlers will take turns recounting their whole journey in story telling form while sharing a well deserved meal together.



4. PADDLING IN UNITY

ʔəxʔixəl'təl'

CULTURAL TEACHINGS

siʔámθət [become rich]

Generosity – We are generous in sharing what we know, we are generous in our support and promotion of others, and we are generous with kindness, encouragement, and love.

The value of generosity enables and celebrates sharing and gifting, which in turn protects the health of the community.

Truly belonging to a community means having integrity, being transparent, inclusive, and honourable.

Honouring our snə́weyəl [teachings]

Integrity – We are committed to honesty, trust, and transparency. We do the right thing, even when no one is watching.

Listen to elders, youth, and traditional council for a richer and holistic outcome.

Embrace the moment to connect with elders to respect the traditional teachings.

Empower and honour each member’s special gifts, and inspire them to long for and embrace, celebrate, and share their gifts.

Provide mentorship and training to the next generation of skilled masters to keep traditions alive for generations to come, like a ripple effect of the paddle in water.

IPD PROCESS

The IPD contract enables the team to share work. When we see one team member overloaded while others are not, the work can be shared and spread out.

Transparent financial forecasting, tracking, invoicing, and reporting brings clarity to how we are performing at any time so we can quickly adjust and course correct as required.

Collaborative scheduling, also known as the Last Planner System®, where weekly and/or daily huddles occur, and six week lookaheads aid in maintaining a smooth journey.

Regular team health checks against our agreed upon set of team values and behaviours helps keep the team morale high and communication flowing.

Risk register, wish list, values-driven advice, and consent decision making.

Key Metric dashboards accessible anytime by anyone, communicate the validated value is delivered/realized, including sustainability and Indigenous community metrics.

REFLECTION

Reflection and Summary

Let us pause and reflect on the journey we experienced together so that we may express gratitude for all those who contributed and participated including the natural world.

On the journey that is this guidebook we learned about ourselves, each other, the land, sea, air, and the Indigenous experience in the first leg of the journey: **Taught to know where we come from and who we are.**

We can only truly prepare for a new journey when we incorporate the past.


Next we built alignment on key goals, metrics, values, and priorities in the second leg of the journey: **To be of one heart and one mind.** Once we have alignment on our destination, we were ready to co-create a plan together in the third leg of the journey: **Everything is connected.**

Finally we set out on our journey and shared experiences through rough and smooth waters of the fourth and last leg of the journey; **Paddling in unity - ʔəxʔixəltəlʼ.**

We may have crossed a mountain of despair to reach a sparkling smooth and beautiful finish. Whatever the journey was, it was our journey and we shared it together. We walked in both worlds, we reconnected our people, we elevated our shared understanding, and we delivered on our promises to an Indigenous community. We decolonized design and construction, and we participated in an act of reconciliation. The friendships forged throughout the journey will last a lifetime. This journey is truly life changing so let's share our stories and continue the message and effort!

The graphic on the next page summarizes at a very high level the concepts in this guidebook; how the Integrated Project Delivery method supports an Indigenous worldview and cultural traditions, as well as enables Indigenous communities to build and retrofit their built environment in alignment with their ancestral knowledge.

To add further clarity via contrast, the graphic also outlines how conventional project delivery does not typically align with nor support an Indigenous world view.

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REFLECTION

IPD METHODOLOGIES:

- Strong focus on onboarding, Big Room co-location, team building
- Relationship-first (no-bid) procurement
- Contractually tied together with a risk-reward system
- Go slow to go fast, validation pause or cancellation is ok
- Gratitude expressed for recognition of exemplary work
- Record the IPD project story throughout
- Lean and continuous improvement mindset fosters knowledge transfer
- Values-driven decisions, reflect what client values, team is driven to deliver
- Inclusive, diverse, transparent decisions



INDIGENOUS CULTURAL TRADITIONS:

- Bonding via meals together
- Community focus
- Valuing elders and youth
- Different approach to time
- Gratitude and sharing
- Oral traditions and story telling
- Knowledge sharing to keep traditions alive
- Stewardship of the land and water
- Inclusive, diverse, transparent decisions



CONVENTIONAL PROJECT DELIVERY:

- Top down, loudest voice, quickest-response decision making
- Power over vs power with
- Money drives decisions
- Go fast, go immediately, don't stop
- Siloed thinking and doing
- Race-to-the-bottom procurement, which leads to:
 - NO time or money for cultural building
 - NO time or money for education
 - NO time or money for team building or eating together
 - NO time or money for procurement changes
 - NO time or money for sustainability



hay ce:p qə THANK YOU

We are grateful to all those who have chosen to walk in two worlds by utilizing this guidebook and the Integrated Project Delivery method to decolonize Architecture, Engineering, and Construction and enable Indigenous communities to express their cultural norms.

We can honour the past, be mindful of the present, and build friendships that grow into relationships that foster partnerships for a better world for everyone.

?əy sq^weləwən

[good feelings]

