

Stó:lō Connect:
A Case Study in Collaborative First Nation
Referral Management

by

Jessica Marie Morrison

B.A. (Archaeology), University of Saskatchewan, 2003
B.App.GIS Honours, SAIT Polytechnic, 2006

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Approval

Name: Jessica Morrison
Degree: Master of Resource Management (Planning)
Project No.: 566
Title of Thesis: *Stó:lō Connect: A Case Study of Collaborative First Nation Referral Management*

Supervisory Committee:

Chair: Karen Brady, PhD.
MRM Candidate
School of Resource and Environmental Management
Simon Fraser University

Dr. John R. Welch
Senior Supervisor
Associate Professor
School of Resource and Environmental Management and
Department of Archaeology
Simon Fraser University

Dr. David M. Schaepe
Supervisor
Director
Stó:lō Research and Resource Management Centre
Adjunct Professor
School of Resource and Environmental Management

Date Defended/Approved: April 15, 2013

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Abstract

This paper is a case study of the Stó:lō referral review capacity as of April 2013. I examine the development, implementation and implications of the Stó:lō Connect Project, a web-delivered, social network system for referral file management in the dynamic development context of S'ólh Téméxw (Stó:lō territory), British Columbia. The study examines referral management for Bands, including Sumas, Aitchelitz, Squiala, Tzeachten, Skowkale, Yakweawkwoose, Shxwhá:y Village, Sts'ailes, Leq'a:mel, Matsqui, Popkum, Skawahlook, Soowahlie, Kwantlen, Scowlitz, Cheam, Kwaw'Kwaw'Apilt, Seabird Island, Chawathil, Shxw'ow'hamel, Union Bar, Peters, Yale, and Skwah, the two Tribal Councils, Stó:lō Nation and the Stó:lō Tribal Council and the tribal affiliations, Tít, Pilalt, and the Ts'elxwéyeqw Tribe. I examine how the Stó:lō Connect Project has been designed to address challenges in the referrals process. The Stó:lō Connect Project enhances referrals processes through collaborative management strategies in a digital social network.

Keywords: First Nation; Stó:lō; consultation; referrals; development; web portal

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List of Acronyms

BCCI	British Columbia Capacity Initiative
CAD	Consultative Areas Database
FCRSA	Forest Consultation and Revenue Sharing Agreement
FTP	File Transfer Protocol
GIS	Geographic Information Systems
INAC	Indian and Northern Affairs Canada
MARR	Ministry for Aboriginal Relations and Reconciliation
PRRO	People of the River Referrals Office
RRN	Reciprocal Research Network
RTS	Referral Tracking System
SEA	Strategic Engagement Agreement
SNS	Stó:lō Nation Society
SSEAp	Stó:lō Strategic Engagement Agreement Pilot Project
SQL	Structured Query Language
SRRMC	Stó:lō Research and Resource Management Centre
STC	Stó:lō Tribal Council

Chapter 1: The Referrals Problem

In this case study I describe how, as a function of the existence of aboriginal rights, government (Federal, Provincial and sometimes Local) must refer pending decisions regarding land and natural resources to First Nations for consultation. The First Nation 'referrals problem' in BC, where few treaties have been signed, is the result of complex, and inconsistent procedures with uncertain outcomes. The current process of conducting referrals involves redundancy (i.e. incurs redundant costs), and resulting decisions and developments can be delayed in the confusion. In contrast to other Provinces, in the Lower Mainland, and the Fraser Valley specifically, engagement is particularly challenging due to the complex network of First Nation communities and organizations. Shared interest areas (commonly referred to as 'overlapping claims') cause confusion and introduce redundancy to the referrals process. Given that resource capacity for file management and analysis in the process varies greatly between organizations, the existing referral process generates low response rates and minimal engagement. The little consultation that does occur rarely constitutes 'informed consent'.

A 'referral' is a formal request for consultation with a First Nation Band or other First Nation organization. 'Referrals' contain requests for recipients to identify potential aboriginal interests or concerns with respect to a pending decision or proposed development project. A 'pending decision' may involve, for example, the Ministry of Environment considering the approval of a license for an applicant to extract a certain volume of water from a stream. Ministry of Forests Lands and Natural Resource Operations (MFLNRO) refers potential timber harvest areas, and other pending administrative decisions. Decisions like these, considered under Provincial statutory decision making frameworks, constitute 78% of referrals received by the Stó:lō Nation in 2012 (Stó:lō Research and Resource Management Centre, 2013).

The volume and complexity of referrals renders the review process impractical, and outcomes of attempts at consultation are rarely meaningful for government, development proponents, or First Nation organizations. As the starting point for effective consultative engagement between First Nations and third parties, there is a need to develop more dynamic and engaging systems for referral management. Improving the administrative process has the potential to free up limited staff and resources for more meaningful endeavors. Given access to the proper tools and information, this may include a more proactive role in resource and environmental management.

1.1. Stó:lō Referrals

The Stó:lō collectively assert their presence, since time immemorial., in S'ólh Téméxw (the Halq'eméylem language term meaning "our land")(Carlson et al 2001; Figure 1). The Stó:lō Declaration (East Fraser District Council, 1975) affirms the Stó:lō collective rights and title to the lands and resources within S'ólh Téméxw (the region of southwestern BC referred to as the Lower Mainland - loosely defined by the Fraser River Watershed stretching from Vancouver in the west to Hope in the east). The region is arguably the most complex referral zone in the Province, with a large, non-native population base, high density of aboriginal groups with shared interest areas, and high intensity of land use and development (Table 1, Figure 2). The area is subject to a variety of land use and development patterns and interests ranging from urban growth, to intensive agriculture, to resource extraction.

Table 1 - S'ólh Téméxw (Lower Mainland) complexity statistics

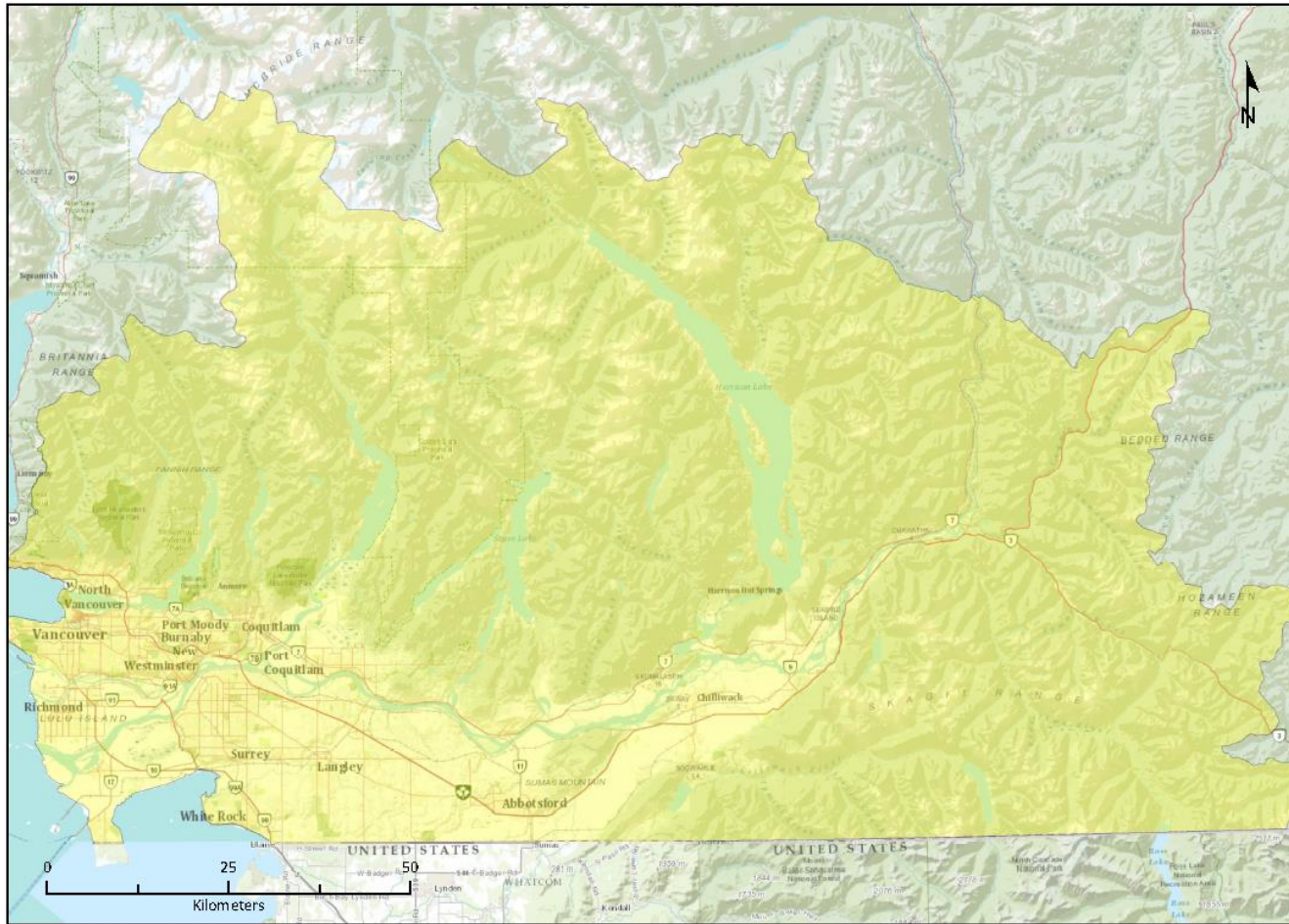
Region	Detail
2012 BC Population	4,622,573
2012 Lower Mainland Population	2,732,563 - 59% of the Provincial population (BC Stats, 2012)
Fraser Valley Regional District	55 Bands with shared interests in region (Siri Bertelsen, FVRD, personal communication, 2012)
Metro Vancouver	49 Bands with shared interests in region (Metro Vancouver, 2011)

I focus this case study in the central and upper Fraser Valley, which is the service area of Stó:lō Nation and Stó:lō Tribal Council, home to 24 of the 30 Stó:lō Bands. The focus on this region stems from my experience working with the member Bands of the two organizations through the Stó:lō Research and Resource Management Centre, a department of the Stó:lō Nation.

The Stó:lō Nation Society formed in 1994 as a collective of 21 member Bands. Stó:lō Nation exists to re-establish self-government, maintain cultural values, support the health and growth of Stó:lō identity, and improve policies, programs and services offered to its members (Stó:lō Nation, 2009 and Plant, 2002). Several iterations of Stó:lō organizations preceded the 1994 incarnation of the Stó:lō Nation Society. A more complete historical accounting of these organizations is provided by Plant (2002) and Hoffman (Hoffman, 2011).

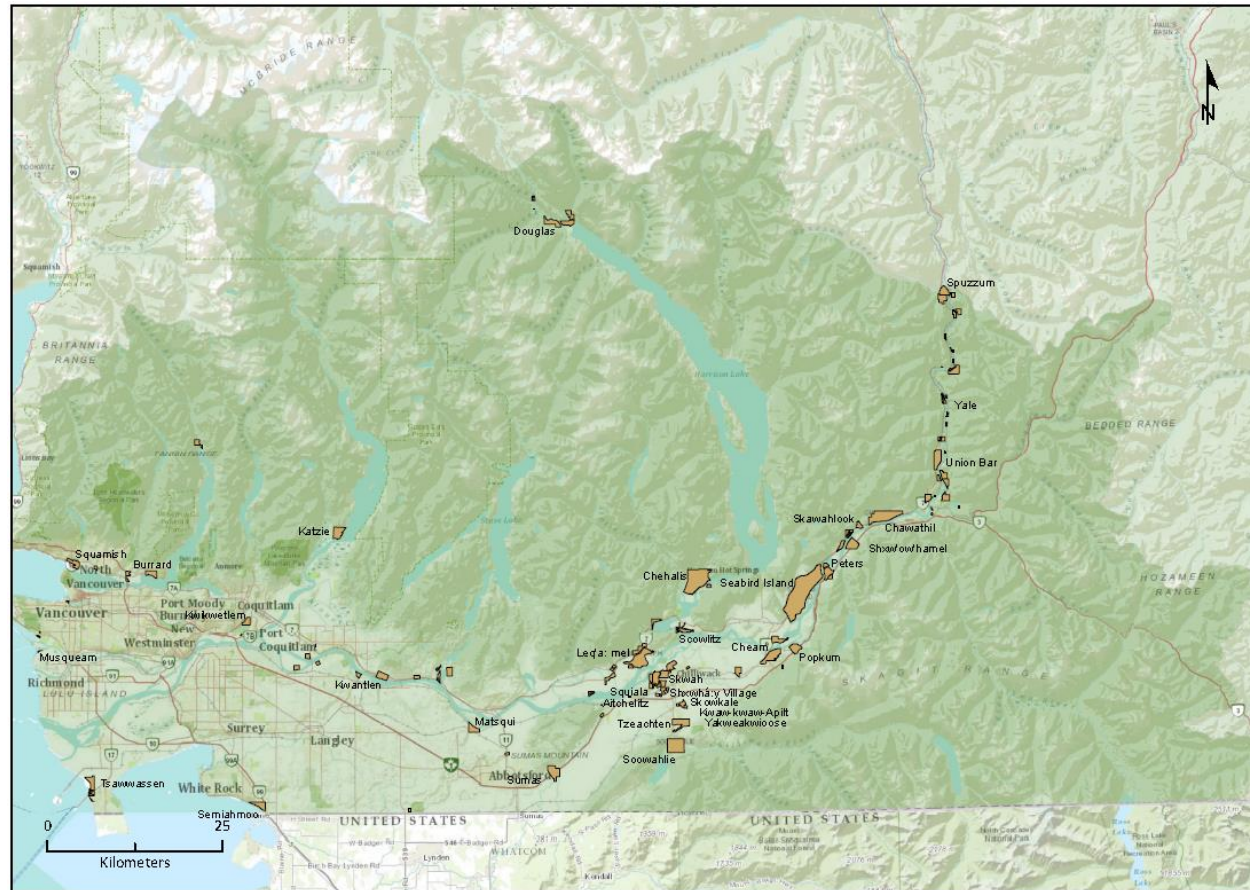
Following the Delgamuukw court decision in 1997 which clarified details of the Crown's duty to consult with First Nations (for details see Section 1.3.1), the Stó:lō Nation began the new administrative process of engaging in referral management. Notifications and invitations for engagement were received through the mail. Aboriginal Rights and Title department staff manually processed incoming requests, and all referrals were presented to the Stó:lō Nation Referral Advisory Committee for discussion and decisions on how to proceed. All incoming referrals were managed through this process, and priorities between incoming requests for consultation were triaged. This referral review process functioned through 2004 (David Schaepe, SRRMC, personal communication, 2013).

Figure 1 - S'ólh Téméxw



 S'ólh Téméxw
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Figure 2 - Reserves in S'ólh Téméxw



Reserves in S'ólh Téméxw
S'ólh Téméxw

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Following an administrative reorganization in 2005, the Stó:lō Nation was unable to sustain the established practice of reviewing referrals. From 2005 until late 2009, the Stó:lō Nation had limited staffing resources to monitor or review incoming referrals, and the Stó:lō Nation Referral Advisory Committee was no longer in place (David Schaepe, SRRMC, personal communication, 2013). During this transition period, some Stó:lō Bands (including Matsqui, Kwantlen, Sumas, Seabird Island, and Chawathil) began to triage referrals directly through their Band offices. The 'triage' process of referral management typically involved an individual staff or council member from an individual Band who would occasionally filter through incoming requests. Engagement would only occur for referrals of great concern, leaving most incoming requests for engagement unanswered. Later in this paper I describe in more detail how Stó:lō Nation referral management was revived through the Stó:lō Research and Resource Management Centre (SRRMC) in 2009. The SRRMC is a department of the Stó:lō Nation, tasked with initiatives concerning aboriginal rights and title, treaty issues, heritage preservation and natural resource management. The SRRMC represents a restructuring of the Stó:lō Nation Aboriginal Rights and Title department, following the 2005 reorganization.

Stó:lō interests and land and resource use patterns are central to the Stó:lō referrals discussion. Stó:lō familial relations are diverse on a regional scale (McHalsie, *Intergenerational Ties and Movement: Family as the Basis of a Nation*, 2001), where often a single family will have direct connections with several Bands. The nature of Stó:lō family-owned resource sites and authority for access are also complex and dynamic (Albers, 2000). The traditional or customary elements of Stó:lō resource management, dynamic and dispersed, operates in contrast to the static, hierarchical governance structures defined by the Canada for both resource management and First Nation organizations. Carlson (2011) notes that the fluidity of Stó:lō identity and the limitations of the Indian Act Band system present problems for consultation. I present the legal context for this issue in more detail in Section 1.3.1

1.2. Objectives of the Case Study

The objective of this retrospective case study is to present the context and causation for the development and current implementation of StoloConnect.com, an enhanced referral management system in S'ólh Téméxw. A social sciences case study takes a descriptive approach, presenting the developmental factors of an issue or system (Yin, 2009). The process includes identifying the core issues influencing communication, collaboration, resource capacity, certainty of outcomes, trust and relationship building.

The specific topics explored in this case study have been tailored to suit the general interests of Stó:lō, government and Industry. These topics include:

- identifying efficiencies to reduce processing time and cost;
- generating resource management capacity to support more informed decision-making;
- providing clarity of process and certainty of outcomes;
- identifying opportunities to build trust by working transparently; and
- providing a mechanism with which to identify opportunities for partnerships and collaborations.

The National Centre for First Nations Governance has also identified some key reasons why referrals and consultation are critically important for First Nation communities (Hill Sloan Associates Inc., 2008):

- respect for Aboriginal rights and opportunities to protect them;
- exercise of jurisdiction over, and social and economic interest in, lands and natural resources;
- commitment to build a sustainable relationship and reconcile historical issues;
- potential for development of revenue sharing and involvement in land and resource management decisions;
- potential for mutually beneficial relationships with governments and third parties; and
- mechanisms for the community to participate in decision-making.

The Province has released a series of informational materials for business and industry, the most recent of which outline the benefits for proponents conducting their

own direct, effective consultation (British Columbia Ministry of Aboriginal Relations and Reconciliation, 2012):

- certainty for the successful progression of a project or proposal;
- access to a First Nation labour force;
- access to First Nation community services [in remote locations];
- demonstration of social responsibility;
- support for procedural aspects of Crown obligations [duty of the Crown] to streamline the process; and
- access to local First Nation environmental knowledge [which may benefit the proposed project].

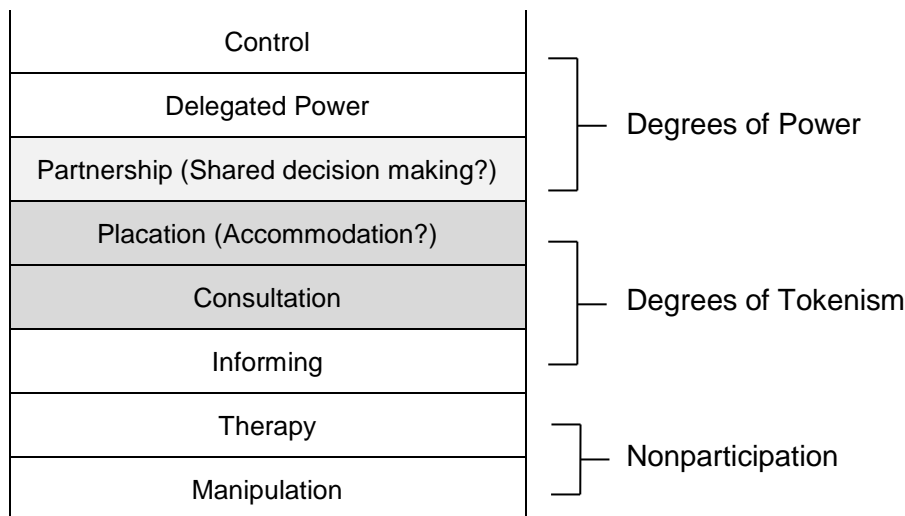
Echoing this perspective, a group of BC business interests also produced their own perspective on the challenges surrounding referrals, highlighting similar interests in clarity, certainty, and timeliness of consultation frameworks (BC Chamber of Commerce, 2007). It is relevant to examine how the Province presents these interests to business and industry, given the tendency for government to primarily support and promote business interests.

I argue that typical government referrals processes operate irrespective of the broader issues raised by National Centre for First Nations Governance, and this fact is apparent in S'ólh Téméxw. The Provincial referrals process is structured around the fragmented practice of referring individual, low-level decisions regarding such topics as the approval of a temporary diversion of an unnamed ditch during road resurfacing, or the granting of land tenure for a septic field on a private recreational property. Project referrals increase in scale and complexity to include individual timber harvest blocks, or the consideration of land tenure for a proposed gravel extraction operation. Referrals rarely represent an opportunity for First Nations to exercise jurisdiction over natural resources in a meaningful way. In Chapters 3 and 4 I will examine these factors in detail, and describe how Stó:lō Connect developed in response.

Through this case study I argue that the development of a comprehensive referral management system, StoloConnect.com, has been influential in addressing some of these issues for Stó:lō organizations. I discuss the features and attributes of the system that recommend it for service as a model elsewhere.

As an outcome, I discuss implications for Stó:lō communities, Provincial and Local governments and development proponents. In a broader context, in the long term outlook for the referrals process, there is a benefit to building mechanisms which will support the eventuality of shared decision-making in resource management. In Arnstein (1969), the politics of citizen decision-making power are presented in a ladder. Arnstein situates the nature of 'consultation' firmly in the spectrum of participation via 'tokenism', highlighting the inherent power imbalance of the practice (**Error! Reference source not found.**).

Figure 3 - Ladder of participation

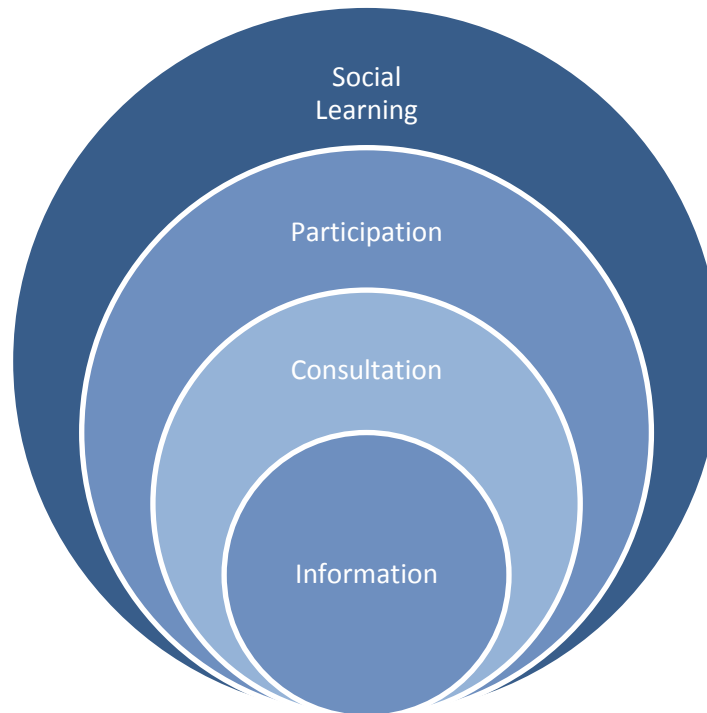


*adapted from Arnstein (1969)

In the BC referrals process, however, questions of power imbalances indicate most or all referrals are expressions of tokenism. Questions arising from Arnstein may be clarified to some degree by the provisions in the United Nations Declaration on the Rights of Indigenous Peoples (2008), and I discuss the UNDRIP further in section 1.3.1. Collins and Ison (2009) suggest that Arnstein's public participation concepts are too simplified to address natural resource management issues. They argue that using linear measurement of 'power' is not always helpful given that roles, responsibilities, and interests of stakeholders vary over time and in relation to the issue and the resource in question. A reframing of the ladder involves a stronger focus on social learning as the

broadest expression of management for complex situations (Figure 4). Social learning describes the dynamic management approach required in a multi-stakeholder environment.

Figure 4 - A conceptual frame of social learning in relation to consultation



(Collins & Ison, 2009, p. 369)

Collins and Ison suggest that the complexity of natural resource management constrains any single party or stakeholder from unilateral decision-making, and that we must construct mechanisms for social learning. I argue that while this may be the case for large scale decisions (complex, intensive developments such as the construction of a major crude oil pipeline), the majority of referrals to Stó:lō Bands and organizations represent such low-level administrative functions (such as the temporary rerouting of a man-made ditch during road repairs), that simple consultation remains the standard. Routine, low-level administrative decisions accounted for almost 85% of Stó:lō referrals in 2012 (Stó:lō Research and Resource Management Centre, 2013). These factors also

underscore need for rigorous ‘triage’ to distinguish between routine decision processes and larger-scale, or complex projects.

These distinctions are relevant in a First Nation referrals context as they directly influence the potential for mutually satisfactory outcomes. If we are developing a revised framework for the practice of ‘consultation’, we must situate the discussion in this context. ‘Consultation’ by nature does not involve shared decision-making in resource management, and this distinction is critical. Reaching beyond the realm of ‘consultation’ and into the spectrum of respectful, shared decision-making is an ongoing issue affecting referral policy and procedure (Wood & Rossiter, 2011). De Paoli (1999) and Hammond (2010) each discuss cooperative arrangements in the spectrum of heritage resource stewardship. The topic must be placed in a broader frame, taking us away from legal discourse and examining real solutions. This type of functional discussion will take us away from analyzing ‘obligations’, and toward the identification of more effective practices (Potes, 2006). Effective referrals processes involve higher response rates, with content and input that is informed and meaningful for First Nations. In other words, I see the goal of referrals policy change as improving the quality of the reciprocal conversation which results in outcomes that more accurately reflect the concerns and interests for First Nations.

1.3. Context

This case study is framed by multiple levels of legal jurisdiction within the context of the Provincial referral policies and processes. While the full picture of the referrals process is complex, involving private proponents, and other levels of government (local and federal), referrals initiated by the Provincial government constitute more than half of the volume received. In 2012, of 442 referrals received by the SRRMC, 342 of them were initiated by the Province (78%) (Stó:lō Research and Resource Management Centre, 2013).

In this section I examine the Provincial and Federal laws and policies that are the basis for the current referral process. I also discuss the relevance and importance of the

Stó:lō context influencing the need for revised processes. The context of Stó:lō governance and organizational structures has not previously been addressed in Crown referral policy.

1.3.1. Legal Context

The legal context for referrals and consultation is complex, involving many levels of jurisdiction and influence. Confusion regarding the obligations of the Crown to consult has led to an ineffective and uncoordinated strategy for referrals. This confusion concerns communication protocol, clarity of when the duty to consult has been fulfilled, tracking and monitoring information flow, and identification of appropriate consultative entities.

I summarize the most relevant issues, covering the contemporary decisions and agreements pertaining specifically to consultation and referrals. I do not extend the discussion to the supportive suite of aboriginal rights and title decisions that pre-date the Delgamuukw decision (pre-1997), when the duty to consult was clarified, resulting in the launch of contemporary consultative processes.

International Context

Internationally, the United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP) (2008) was endorsed by the Government of Canada under the condition that it could be implemented in a manner consistent with the Canadian Constitution. Canada asserts that aboriginal rights should not supersede the rights and freedoms of other Canadians (Joffe, 2010), and expresses a need to “balance the rights of Aboriginal peoples with those of other Canadians” (Aboriginal Affairs and Northern Development Canada, 2010). While Canada has been less than enthusiastic about its eventual support for the UNDRIP, the Declaration contains some key assertions pertaining to consultation, including:

Article 19

States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order

to obtain their **free, prior and informed consent** before adopting and implementing legislative or administrative measures that may affect them.

Article 32

1. Indigenous peoples have the right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources.

2. States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their **free and informed consent prior to the approval of any project** affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.

Article 33

2. Indigenous peoples have the right to determine the structures and to select the membership of their institutions in accordance with their own procedures.

(United Nations, 2008, pp. 8-12)

The UNDRIP addresses elements central to this case study: the need to define the conditions of ‘informed consent’; the need to recognize self-defined aboriginal governance structures beyond the organizational frame set by Canada (see the following section regarding Federal Legislation); and the rights of Indigenous peoples to develop and implement their own strategies for land and resource use in their territories.

The concept of ‘free, prior and informed consent’ is not specifically defined in the UNDRIP, an ambiguity which proves troublesome for interpretation. While use of the word ‘consent’ might seem, for some, to imply that expressed approval may be necessary, the US Department of State clarifies their interpretation of the term as “a process of meaningful consultation with tribal leaders, but not necessarily the agreement of those leaders, before the actions addressed in those consultations are taken” (US Department of State, 2010, p. 5).

Federal Legislation

Federally, the duty to consult and accommodate originates with the Canadian Constitution. Sections 25 and 35 of the Canadian Constitution Act recognize and affirm aboriginal and treaty rights:

25. *The guarantee in this Charter of certain rights and freedoms shall not be construed so as to abrogate or derogate from any aboriginal, treaty or other rights or freedoms that pertain to the aboriginal peoples of Canada including*

(a) any rights or freedoms that have been recognized by the Royal Proclamation of October 7, 1763; and

(b) any rights or freedoms that now exist by way of land claims agreements or may be so acquired.

35. *(1) The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.*

(3) For greater certainty, in subsection (1) "treaty rights" includes rights that now exist by way of land claims agreements or may be so acquired.

(Constitution Act, 1982)

'Rights and freedoms' recognized by the Royal Proclamation cited in Section 25 (a) of the Charter include the rights to their unceded land and territories (The Royal Proclamation of October 7, 1763). Hutchings (1987) presents the modern legal context of the contents of the Proclamation. The National Centre for First Nations Governance (Morellato, 2008) summarizes of consultative obligations imposed by the Canadian Constitution. Aboriginal Affairs and Northern Development Canada (Minister of the Department of Aboriginal Affairs and Northern Development Canada, 2011) also offers a useful, summarized interpretation of the constitutional duty to consult.

Further, the Indian Act (Indian Act R.S.C., 1985, c. I-5) influences consultative process by defining "Bands" as the definitive unit of Aboriginal governance. In doing so, the Indian Act defines whom the government recognizes as a "consultative authority" in the consultation process. Interestingly, contrary to the current recognition of Bands as consultative authorities, in the 1960's the Department of Indian Affairs (DIA) organized regional collectives of Bands, initially for the sole purpose of collective consultation.

“When they [DIA] wanted to consult with Indians about changes, policy development they would meet with the Indians and call them together to a meeting. Then the Indian agent would meet with everybody and set the agenda and set the time.” (Point, 2002).

The collective consultative body organized by the DIA in the Central Fraser Valley (Langley to Yale) was the East Fraser District Council (EFDC), which encompassed 24 of the 30 Stó:lō Bands (Plant, 2002). Once EFDC was functioning as the collective consultation body, the group also began to meet independent of the DIA to discuss rights and resources.

Common Law

A number of court decisions provide some clarity regarding the duty to consult and accommodate the interests of First Nations. Not surprisingly, many of these key cases originate in BC. Few First Nations in BC have negotiated treaties, which formally define the terms and conditions of Government to Government relationships. This list is not meant to be an exhaustive accounting of all cases in which the details of First Nation consultation has been argued, but rather an overview of influential points of clarification. These key decisions (Table 2) have clarified many issues regarding consultation with First Nations.

Table 2 - Timeline of key court decisions on consultation

Case	Clarification	Year	Reference
Delgamuukw	Crown has a fiduciary duty to consult, minimize infringement to aboriginal rights, consultation must be meaningful	1997	(Delgamuukw v. British Columbia, S.C.R. [1997] 3, 1010)
Halfway River	Crown must provide all necessary information to First Nations in a timely way for due consideration	1999	(Halfway River First Nation v. B.C. (Min. of Forests) & CanFor, BCCA [1999] 470)
Haida	Consultation is required even where aboriginal title is 'unproven', consultation must be meaningful	2004	(Haida Nation v. British Columbia (Minister of Forests), S.C.R. [2004] 3511, S.C.C [2004] 73)
Taku River	Clarifies who is obligated to consult	2004	(Taku River Tlingit First Nation v. British Columbia, 3 550, S.C.C. [2004] 74)
Mikisew Cree	Crown has no unilateral authority to undermine the assertion of title or to pre-assess impacts as minimal or inconsequential	2005	(Mikisew Cree First Nation v. Canada (Minister of Canadian Heritage), S.C.C. [2005] 69, S.C.R. [2005] 3 388)
Little Salmon/Carmacks	Treaties are not a 'complete code', the duty to consult extends beyond treaty provisions	2010	(Beckman v. Little Salmon/Carmacks First Nation, S.C.C. [2010] 53)

Rio Tinto Alcan	Crown duty to consult is limited to the impacts of the current decision	2010	(Rio Tinto Alcan Inc. v. Carrier Sekani Tribal Council, S.C.J. [2010] 43)
Ross River Dena Council	Crown procedures must not impede consultation	2012	(Ross River Dena Council v. Government of Yukon, 2012 YKCA 14)

Bands, as the recognized consultative entities, receive streams of development referrals pertaining to everything from large-scale hydroelectric and transmission projects, to the temporary, small-scale redirection of man-made drainage ditches. Other Stó:lō organizations registered as legal entities (e.g. Stó:lō Nation, Stó:lō Tribal Council, Ts'elxwéyeqw Tribe) may receive the same referrals as well. The volume of referrals received by Stó:lō organizations represents a substantial administrative burden for all parties. The Stó:lō Research and Resource Management Centre alone received 442 referrals in 2012 (Stó:lō Research and Resource Management Centre, 2013). The burden of administration for these communications and transmittals dilutes the capacity for First Nations to engage with the Crown in meaningful consultation on particularly important referrals. As First Nations struggle to maintain basic administrative processes and file management, few of the already limited resources are left to support the more time consuming processes of analysis and engagement.

The legal distinctions arising from court decisions are important in a Stó:lō context, where shared interest areas are often the subject of strength of claim challenges by both the Provincial and Federal Crown. Common law tends to support separate, parallel, consultative processes with individual Indian Act (1985) Bands, unless otherwise requested directly by a Band through a Band Council Resolution. In an effort to then simplify the complexity created by separate, parallel consultative process with Bands sharing 'interest areas', strength of claim arguments are applied. These arguments are built into the existing referrals process in BC through the Provincial 'Depth of Consultation Matrix' (as described in the following section).

1.3.2. Policy and Procedural Context

Provincial consultation policies are evolving as the courts continue to provide clarity on the duty to consult. Significant cases such as Delgamuukw (1997) and Haida and Taku River (2004) have been the sources of key policy reconsideration. In this section I

highlight the most recent suite of Provincial policies and procedural practices which most influence the current state of referral administration and management.

The New Relationship

The New Relationship (British Columbia, 2008) originally emerged in 2005, but was revamped in 2008. The Provincial policy lays out an overarching vision for the establishment of more effective relationships with First Nations. The New Relationship identifies four critical elements to consultation:

1. First Nations self-determination should be achieved;
2. the economic component of aboriginal title should be realized;
3. jurisdiction over the use of the land and resources should be exercised through First Nations' own structures; and
4. lands and resources must be managed in accordance with First Nations laws, knowledge and values.

The document sets the tone for the implementation of supporting policy which has begun through the negotiation of a standardized suite of agreements. These include Memoranda of Understanding, Strategic Engagement Arrangements, and Reconciliation Agreements. The New Relationship is promoted by the Provincial Ministry for Aboriginal Relations and Reconciliation (MARR) as a framework for respect, recognition and accommodation of aboriginal title and rights. In a set of guiding principles, the Province acknowledges the need to develop processes and structures for:

- integrated intergovernmental structures and policies to promote co-operation, including practical and workable arrangements for land and resource decision making and sustainable development;
- efficiencies in decision-making and institutional change;
- recognition of the need to preserve each First Nations' decision-making authority;
- financial capacity for First Nations and resourcing for the Province to develop new frameworks for shared land and resource decision-making and to engage in negotiations;
- mutually acceptable arrangements for sharing benefits, including resource revenue sharing; and
- dispute resolution processes which are mutually determined for resolving conflicts rather than adversarial approaches to resolving conflicts (British Columbia, 2008, page 3).

Some of these principles are reflected in the pursuit of new referral procedures across the Province. These include provisions for improved efficiencies, selected revenue sharing, and other financial capacity incentives.

Updated Procedures for Meeting Legal Obligations When Consulting with First Nations

The Updated Procedures document (British Columbia, 2010) was produced by the Province after the New Relationship Agreement was released. The procedures were meant to clarify procedural obligations for Provincial Ministry staff, development proponents. The document was also offered as a reference guide to Bands and First Nation organizations. The Updated Procedures lay out a step-by-step process for achieving appropriate levels of consultation. Process steps are accompanied by a consultation matrix which identifies the depth of consultation required, as assessed by the strength of claim (applying reserve proximity as a factor) of a First Nation, and the level of anticipated impacts of the proposed project. The Updated Procedures manual is a guiding document which provides a framework for process-related elements, but it does not address or account for complex issues facing Stó:lō organizations such as shared territorial jurisdictions. I discuss the challenges of the Matrix for Stó:lō resource management in Section 3.1.4

FrontCounter BC

Established in 2005, FrontCounter BC is a Provincial agency which operates as a single, streamlined point of contact for natural resource applications pertaining to land use and resource extraction (British Columbia , 2012). The office is the starting point for development proponents seeking single or multiple Provincial approvals on complex projects, offering an alternative to the previous need for proponents and applicants to navigate through various Provincial Ministries for complex approvals. The Province coordinates some outgoing development referrals through the single window with the intention of streamlining First Nation consultation on a project-basis. The Province seeks to reduce consultation complexity by eliminating the need for issuing multiple,

individual referrals for more complex developments. FrontCounter BC is currently experimenting with this referral 'bundling' approach, on a project-by-project basis.

Strategic Engagement Agreements

Strategic Engagement Agreements (SEAs) are initiatives for defining and achieving efficiencies in the process of First Nation referral processing and consultation. As of early 2013, five SEAs have been negotiated in the Province (Ktunaxa, Tsihlot'in, Nanwakolas, Kaska, and Wooshtin). Fourteen Stó:lō Bands elected to participate in a SEA Pilot Project, with the prospect of entering into a full SEA in October 2013 (British Columbia, 2013).

These recent efforts in collaborative design and implementation are expected to serve as models for future agreements. Each SEA is focused on the streamlining of referrals through a regional 'clearinghouse', or single intake window. Referrals are then administrated centrally by a regional referral review body, which works directly with the individual signatory Bands. The Province intends these agreements to be expressions of the principles and visions in the Province's New Relationship agreement (British Columbia, 2008).

Forest Consultation and Revenue Sharing Agreements

Forest Consultation and Revenue Sharing Agreements (FCRSA) are mechanisms between First Nation organizations and the Province to share revenues from the Forestry Industry. FCRSAs define the structure and timeframes for consultative process on Forestry and related activities. The agreements also define prescriptive timeframes and specific roles in the process (Ministry of Aboriginal Relations and Reconciliation, 2008).

1.3.3. Stó:lō Context

The Stó:lō context is typical in its challenges compared to other First Nation referral processes. Unique perhaps in its large and complex organizational structure, it serves as a basis for examining other referral processes. I have identified five key areas which pose fundamental challenges for effective referral management for Stó:lō organizations:

- communication (with government, industry and between Stó:lō organizations themselves);
- collaboration (between Stó:lō organizations);
- resource capacity (access to information, tools and staffing);
- certainty of outcomes; and
- trust and relationships.

However, beyond these basic challenges lies the more complex issue of aboriginal governance, as it pertains specifically to land and resource management, as discussed in the following section on objectives of this case study.

Chapter 2: Perspective and Scope

2.1. Researcher Role and Perspective

Between 2007-2013 I worked for the Stó:lō Nation in the SRRMC department, under the management of David Schaepe (SRRMC Director). My perspective originates from, and is influenced by, my experience as the Referrals Manager of the People of the River Referrals Office (SRRMC), the Project Director for Stó:lō Connect, Chair of the S'ólh Téméxw Referrals Alliance, and Stó:lō Technical Team Lead in the negotiation and implementation of the Stó:lō Strategic Engagement Agreement Pilot Project with the Province of BC. I administered Stó:lō Nation Referrals from 2009 to 2013, and I worked closely with other Referrals Officers and Chief and Council Liaisons from Stó:lō Bands and organizations.

As a student of Resource and Environmental Management in Simon Fraser University's REM program, my research is an independent analysis of the Stó:lō case. The foundation of my research and analysis arises from the collaborative effort of SRRMC team (including David Schaepe, Sue Formosa, Karen Brady, Albert 'Sonny' McHalsie, Cara Brendzy, Tracey Joe, and Tia Halstad, among others), and is a function of the historic roots of the departmental direction in collaborative approach to resource management. My independent analysis through the REM program stems from the need to situate the role of StoloConnect.com, an information management tool, as it provides the basis to support the broader spectrum of shared decision making in resource management, Aboriginal governance, information management, and sustainable planning.

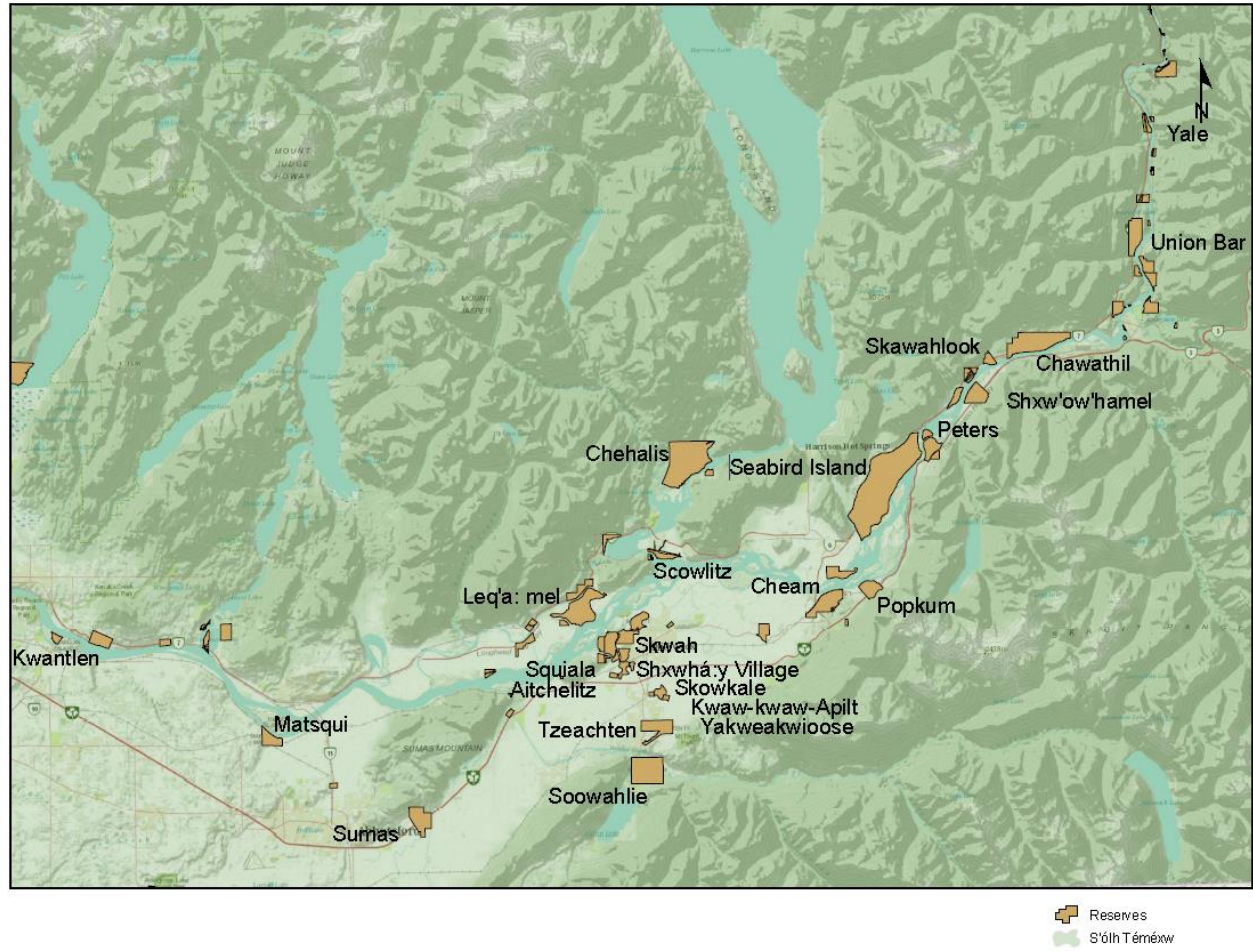
2.2. Scope and Limitations

This is a case study in the management of referral information and administrative communication, focusing on efficiencies and effectiveness. The scope of the case study encompasses referral management in Stó:lō Bands and organizations in the Central and Upper Fraser Valley (Figure 5), focusing on referrals initiated by the Province, and relationships with proponents and industry in recent years. My analysis involves practices in 2010–2013 only, and excludes referral processes or procedures outside of Stó:lō communities. My review of other referral management systems in use in BC is intended to provide context for understanding Stó:lō Connect and is not an exhaustive listing or critical analysis of all referral management systems in use or development.

The limitations of this REM 699 case study prevent an in-depth analysis of aboriginal rights and title, legal obligations in the duty to consult, accommodation, shared-decision making, the full process of consultative engagement, and the contents thereof. These individual topics are complex, and a proper treatment of the dynamics of each would constitute its own study. Regardless, this case study examines a focussed component of referral administration. Stó:lō Connect is a technical tool that has been designed in response to practical aspects of the referrals process.

Given the complexity and variation amongst referral processes within different levels of government, this study focuses on BC Provincial processes only. The Province of BC issues the majority of referrals to Stó:lō communities and organizations. This practice offers a broad range of examples, all framed within the same suite of processes and regulations. Federal referrals processes offer far fewer examples, coupled with less consistency of practices. Referrals processes for local governments are equally infrequent and poorly defined, offering less opportunity for analysis.

Figure 5 - Stó:lō bands in the central and upper Fraser Valley



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Chapter 3: Stó:lō Case Study

In this Section I examine the basic challenges to referral management introduced in Section 1.2.3. Inefficiencies and ineffectiveness in administrative process, and lack of methods for analysis have thus far resulted in unsatisfactory outcomes. I begin with an overview the causes of these issues and summarize the outcomes.

3.1. Challenges in Administrative Processes

3.1.1. Complexity

The complexity of the referrals process in the Central and Upper Fraser Valley is due in large part to the complex and fragmented network of Stó:lō communities with shared interest areas and resource uses. There are twenty four (24) Stó:lō Bands in this region (of a total of 30 Stó:lō Bands across the entire Lower Mainland. The region subject to high intensity development, and a wide variety of land and resource use patterns. Table 3 demonstrates the layered components of Stó:lō organizational structure, and how the Bands relate to other Stó:lō organizations. The complex nature of Stó:lō identity, authority, resource management and organizational structure have been well-documented and analyzed by Albers (2000), Carlson (2001 and 2011), Elmendorf (1971), Hoffman (2011), McHalsie (2001), Plant (2002), Schaepe (2007 and 2009), and Suttles (1990).The manner in which these organizational structures exist and function today reflects dynamic processes subject to continued change. The complexity of these organizational relationships beyond Bands as defined under the Indian Act (1985) is not readily addressed in current consultative frameworks.

Table 3 - Stó:lō organizations in the central and upper Fraser Valley in 2013

Indian Act 'Bands'	Service Delivery (Tribal Councils)		Tribal Entities		
	Stó:lō Nation	Stó:lō Tribal Council	Tít Tribe	Pilalt Tribe	Ts'elxwéyeqw Tribe
Semath	X	x			
Aitchelitz	X				x
Squiala	X				x
Tzeachten	X				x
Skowkale	X				x
Yakweakwoose	X				x
Shxwa:y Village	X				x
Leq'a:mel	X				
Matsqui	X				
Popkum	X		x		
Skawahlook	X		x		
Soowahlie		x			x
Kwantlen		x			
Scowlitz		x			
Cheam		x		x	
Kwaw'Kwaw'Apilt		x		x	
Seabird Island		x	x		
Chawathil		x	x		
Shxw'ow'hamel		x	x		
Union Bar			x		
Peters			x		
Yale			x		
Skwah				x	
Sts'ailes					

Within the region, there are broad level service delivery organizations (Tribal Councils), and other Stó:lō-defined tribal entities organized as 'societies'. Societies are non-profit organizations registered with, and subject to the regulation and authority of the Province. The recognition of these tribal entities is based on their registration under a colonial business model, as there is no standardized Crown mechanism for recognition of tribal (collective, regional) organizations as an 'authentic' expression of aboriginal governance, aside from formal agreements such as treaties.

These co-existing organizations introduce multiple layers of redundancy of representation and service for individual Bands as it pertains to consultation and referrals. Of the thirty (30) Stó:lō Bands, twenty-four (24) are situated in the central and

upper Fraser Valley (Figure 5). Eleven (11) subscribe to the services of the Stó:lō Nation and eight (8) to the Stó:lō Tribal Council (Hoffman, 2011). Five (5) Bands operate under autonomous models, and do not subscribe to services from either Tribal Council. More recently there has been a revival of tribal governance structures, which offer a regional model of authority for land and resource management. The Ts'elxwéyeqw Tribe is comprised of seven (7) member Bands, six (6) of which are affiliated with the Stó:lō Nation, and one (1) with the Stó:lō Tribal Council. The Bands of the Pilalt and Tít Tribes are currently reorganizing, which will add even more complexity to the network. The administrative uncertainty created by this complexity of representation is a key challenge in the referrals process.

3.1.2. Redundancy

The Province maintains an internal, online database of 'consultative areas' (CAD) in their GeoBC service (GeoBC, 2013). The consultative areas defined within it have been drawn from 'expressions of interest' created largely in the late 1990s. In the 1990s, aboriginal rights and title cases were beginning to argue the definition of 'traditional territory' (Morellato, 2008). In some cases these consultative areas represent broad national interests, and in others the expression of tribal or Band levels of interest. The amalgamation of these consultative areas, or 'statements of intent' in the Lower Mainland has resulted in the highest density of 'overlapping' claims' in BC (British Columbia Ministry of Aboriginal Relations and Reconciliation, 2013). Table 3 demonstrates the complexity involved in planning consultation with First Nations in the region. The Province of BC views constitutional expressions of aboriginal rights and title as the foundation for consultation with individual Indian Act Bands. However, due to confusion and uncertainty regarding their legal obligations, the Province and many proponents elect to copy referrals for pending decisions to all Stó:lō service delivery organizations and tribal entities, in addition to individual Bands (Figure 6). The practice of determining the relevant consultative entities for a given referral is sometimes indiscriminate, and in cases where the Province anticipates conflict, a strength of claim analysis is used to select which Bands, tribal societies, or other organizations will receive a referral (British Columbia, 2010). Due to variation in capacities of Stó:lō Bands

and organizations, some Bands with more resources at their disposal have requested referrals to be sent to their offices in addition to receiving them through their affiliated organizations. These copies are apart from, and redundant to, those processed through their Tribal Council services, or their affiliated tribal society. Some Bands receive the same development referral through two or even three separate organizations. Below, I describe an example of this scenario involving the Tzeachten Band. Given the complexity of the Stó:lō framework in particular, a great deal of redundancy is introduced through this 'blanket issuance' process, creating an exponential administrative burden on Stó:lō organizations, government ministries, and industry.

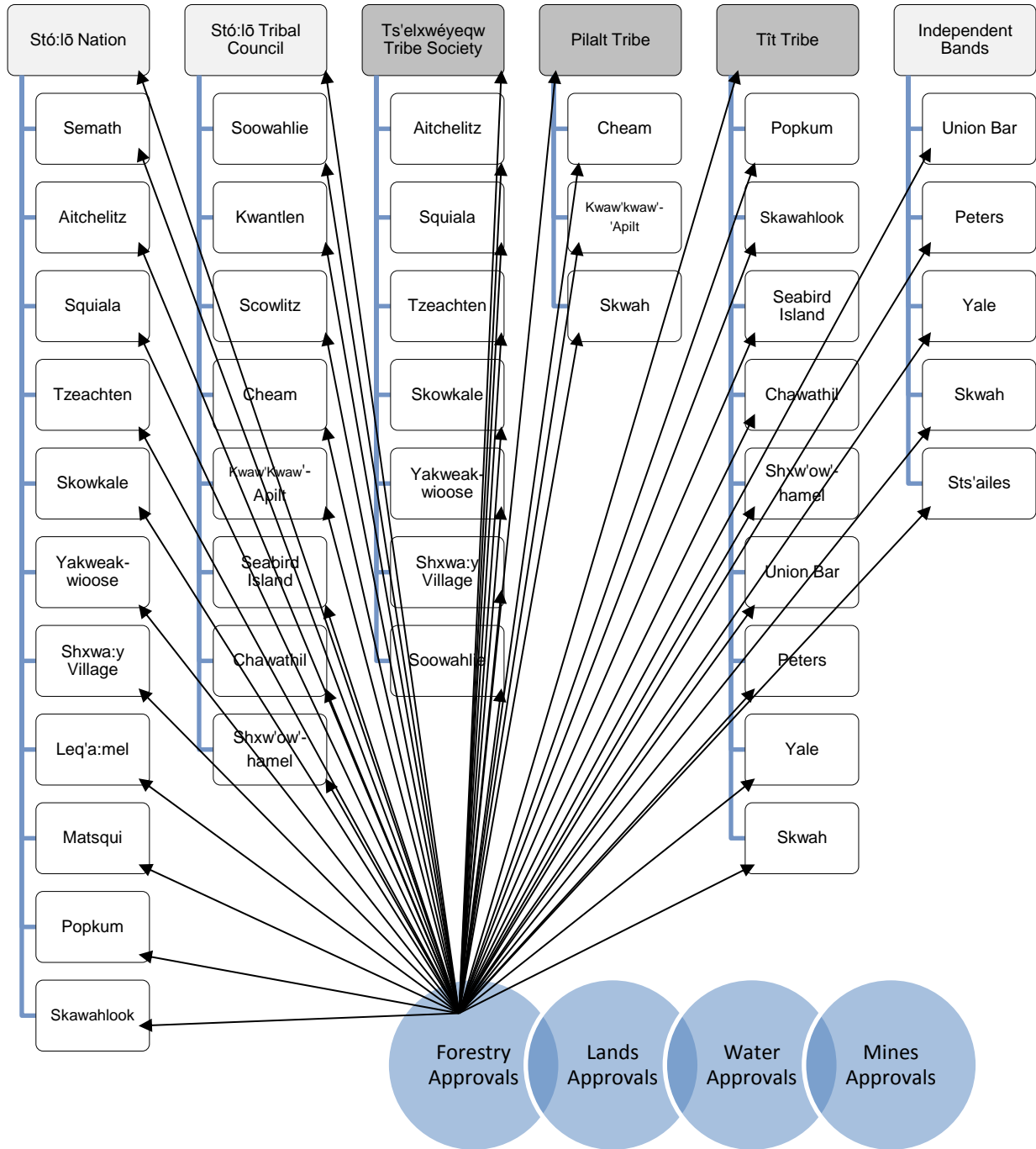
The Province, and those to which the Province delegates some of its consultative obligations (local government, forestry proponents and those proponents conducting Environmental Assessments), have historically approached referral process and policy in a reactive manner. In Haida (2004), the Supreme Court asserted:

“The crown may delegate procedural aspects of consultation to industry proponents seeking a particular development; this is not infrequently done in environmental assessments.”

(Haida, paragraph 53)

Policy has been developed by the Province, with little apparent attention to the practical needs, capacities, or interests of those First Nations with whom they are obligated to engage. Applying its 'Consultative Areas Database' to all pending authorizations, the Province will refer an application to several similar organizations, regardless of membership. For example, a single application for authorization located on a discretely defined location adjacent to a Tzeachten Band Reserve in Chilliwack would result in a referral sent directly to the Band office, the offices of the Ts'elxwéyeqw Tribe (of which Tzeachten Band is a member), the Stó:lō Nation Society service delivery organization (services of which are subscribed by Tzeachten Band), as well as any number of other Bands and First Nation organizations who have drawn overlapping Statements of Intent in the area.

Figure 6 - Representation of redundant incoming referrals for a development project requiring a single approval (forestry example)



3.1.3. *Delivery Methods*

The methods in use for issuing referrals and soliciting engagement or feedback from First Nations are also inefficient. Referrals issued by the Province and local government are typically posted in regular mail, or occasionally via registered mail. The inefficiencies in delivery method are typified in a summary of the Stó:lō Nation processes in Table 4. In some cases the Province will address referrals singularly to individuals in leadership positions (i.e. not technical staff or departments which actually manage referrals). This typically results in a processing delay while mail, email, and faxes are rerouted to the appropriate technical staff. Longer delays are caused by correspondence addressed generally (e.g. simply ‘Stó:lō Nation’), which is commonly bounced from one staff member to another before finally finding its way to the appropriate technical staff. These inefficiencies persist due to wide range of separate organizational practices both with the Provincial Ministries and the Stó:lō organizations themselves.

Table 4 - Stó:lō Nation referral delivery processing delays

Method	Label/Address	Delivery Time (Typical)	Processing Delay (Range)	Delay Cause
Mail	Leadership	5 days	1 week to 1 month	Internal mail redirection
	Empty/General	5 days	1 week to 6 months	Internal mail redirection
	Referral Administrator	5 days	none	NA
Fax	Leadership	Same day	1 day to 1 month	Internal fax redirection
	Empty/General	Same day	1 day to 1 month	Internal fax redirection
	Referral Administrator	Same day	1 to 5 days	Internal fax redirection
Email	Leadership	Same day	1 day to 1 month	Internal email redirection
	Empty/General	Same day	1 day to 6 months	Internal email redirection
	Referral Administrator	Same day	none	NA

3.1.4. *Miscommunication*

A challenge to the referral process is perpetuated by Provincial efforts to predict, suggest, or pre-determine aboriginal interest or opinion on an individual referral. The Province is seeking transparency and predictability in referral treatment and outcome. As such, they have devised Forest Consultation and Revenue Sharing Agreements (FCRSAs) and SEAs in an attempt to predict how referrals may be handled by First Nations, as well as to set standards for response times. These types of strategic agreements for engagement in efficient and meaningful consultation are aimed at reducing uncertainty of outcomes, and managing the timeframe for consultative engagement. When Provincial staff issue a referral, they physical proximity between the location of an authorization and a First Nation reserve as a factor of predicting potential impacts. Physical proximity to a community is weighted against the severity of potential biophysical impact in a “depth of consultation matrix” (British Columbia, 2010).

The ‘physical proximity to reserve’ approach to assessing Band-based interest and impacts is another point of disconnect between the implementation of the provisions Indian Act (1985) and nature of Stó:lō relations, authorities, and land and resource use. The lower Fraser Canyon is an example of a geographic location of great importance to all Stó:lō Bands. The resources in the region are used and formally managed by a diverse network of Stó:lō families, originating from many reserves in the Fraser Valley, not just those in close physical proximity (Schaepe & Gough, 2011). The application of a Depth of Consultation matrix in that area (and others) fails to account

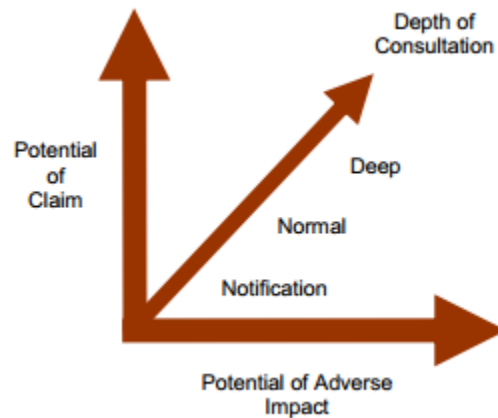


Figure 7 - Depth of consultation matrix (British Columbia, 2010, p. 11)

and accommodate for the significance and diversity of shared use, and actually may result in the unnecessary instigation conflict, rather than the typical intended outcome.

The Depth of Consultation Matrix is assessed by the Province before issuing a referral, and before consulting with the First Nation. However, biophysical impacts are just a single element in a more complex consideration of Stó:lō 'interests'. The application of this 2-axis matrix (proximity to reserve factored by biophysical impact, Figure 7) often provides an incomplete analysis of Stó:lō interests. This approach is particularly problematic given the historical fluidity of Stó:lō identities, and familial relations (McHalsie, 2001, Carlson, 2011). Given that Stó:lō-based authorities for resources and responsibilities for resource management are frequently family-based (Albers, 2000, McHalsie, 2007, Schaepe and Gough, 2011), These limitations of the Indian Act Band system as the basis for separate consultative process is problematic, leaving the Province to adjudicate the relevance of redundant responses through mechanisms such as strength of claim arguments.

Another communication challenge pertains to the content of a referral package. These packages typically contain terminology unfamiliar to Stó:lō organization staff, community members, or leaders. Examples of these common terms include 'easement', 'statutory right-of-way', 'license of occupation', 'disposition', and 'specific permission'. Referral review and processing can experience delays in two ways when information is unclear. First, an important referral response could be delayed because it has been misinterpreted as unimportant. Second, less-impactful referral responses could be delayed after being misinterpreted as important. More importantly, in the context of 'informed consent', it is critical that the analysis of the referral includes plain language descriptions, and data and mapping tools which allow for comprehensive analysis of the breadth of Stó:lō interests.

3.1.5. *Disconnected Systems*

One of the biggest challenges in the referral review process is the disconnect of referral function between Stó:lō organizations. The same project, proposal, or application will often be referred to a number of inter-related (but not inter-connected)

Stó:lō organizations (Figure 6 and Table 5). These organizations each possess varying degrees of technical capacity, access to information, and general knowledge of the possibilities and processes involved in referral review. When considered in the context of the complexity of the Stó:lō organizational structure, this disparity of capacity has a predictably negative impact on the effectiveness of the referral process.

3.1.6. Lack of Tools and Access to Information

One important element of referral processing which is frequently overlooked is technical capacity and access to information. Assuming that Bands, as defined under the Indian Act, are the primary consultative entity, Band offices are the primary venues for referral review. Given that the size and technical capacity of each Stó:lō Band is widely variable, a referral response cannot be guaranteed to constitute ‘informed consent’. ‘Informed consent’ for a proposed project necessitates First Nation decision-makers having access to enough pertinent information to assess and arrive at an informed decision on how to address the content of a specific referral. The implication of these basic administrative challenges is that it may not be possible to achieve meaningful consultation with some Bands, without rethinking the underlying processes. Table 5 offers a snapshot of the capacity in selected of Stó:lō organizations.

Table 5 - Summary of referral resource capacity in selected Stó:lō organizations

Organization	Type	Size* (individuals served)	Formal Referral Management System	GIS capacity	Technical Capacity (referrals staff) ¹
Popkum	Band	8	none	limited	0
Seabird Island	Band	510	none	limited	1.5
Matsqui	Band	212	none	limited	0.5
Sts’ailes	Tribe/Band	545	in-house	in-house	1.5

¹ ‘Referrals staff’ is defined as only those staff who are involved in the direct administration of referrals.

Ts'elxwéyeqw Tribe	Tribe	1212	in-house	in-house	1.5
Stó:lō Nation	Tribal Council	1855	in-house	in-house	5
Stó:lō Tribal Council	Tribal Council	2165	limited	limited	1.5

*Community data (Government of Canada, 2012)

3.2. Referral Outcomes

Ineffectiveness of the referral process leads to delays for developments, less inclusive resource management strategies, and lost economic opportunities for both industry and First Nations. I discuss referral outcomes in two main categories; lack of responses and low quality responses. These categorizations are not meant as a comprehensive treatment of the consultation and engagement framework, which itself is fraught with problems. I am focussed here on basic building blocks of the communication process, which set the table for a broader discussion of the full process of consultation. For an outcome-oriented perspective on this topic, Harstone et al. (2008) offer a summary of the broader conditions and content which produce meaningful, consultative engagement as a specific end-product of the process.

3.2.1. *Lack of Response*

One of the most common challenges in the Stó:lō referral review process is the lack of response to requests for engagement. An agency issues a request for engagement via regular mail, registered mail, fax, phone message, email or any combination of the above. Regular mail is the most typical delivery method, and arguably the most ineffective. A number of assumptions are made in issuing a referral:

- mailing address is correct and current
- addressee is correct and current
- organization is indeed a 'consultative entity'
- referral is within the scope of interest of the consultative entity
- organization has the capacity (i.e. staffing resources) to receive the request

- organization has the capacity (i.e. staffing resources) to process the request
- organization understands the nature of the request (i.e. language, terminology, and mapped information are legible)

Some of these assumptions seem reasonable to make, but as a whole they present as systemic problems in the referrals process.

3.2.2. *Uncertain/Low ‘Quality’ Responses*

The quality of referrals responses, when they are issued, is dependent on four factors: 1) the referral contains enough relevant information (i.e. legible maps, proposal details, etc.) for review, 2) access to information within the responding agency, 3) capacity to process/analyze the referral effectively and accurately, and 4) capacity to clearly communicate consistent ideas and concerns back to the referring agency. Uncertainty of roles and responsibilities coupled with limited access to data and resources commonly results in conflicting responses from various Stó:lō organizations which are frequently unaware of each other’s capacity or involvement in a referral. The uncertainty of referral outcome can lead to litigation over claims of inadequate consultation, and contribute to the broader sense that consultation processes are insufficient. In 2011 almost 90% of Stó:lō Nation referral outcomes were logged internally as ‘inadequate consultation’ (Stó:lō Research and Resource Management Centre, 2013).

Summary

Many Stó:lō Bands lack adequate capacity for involvement in the complex aspects of consultation, and others simply cannot afford to undertake any engagement at all. The most typical outcome for a referral is a ‘non-response’, a response which simply states that the organization does not have the capacity for a review of the referral, or a response that contains too little detail or content to be meaningful (failure to achieve ‘informed consent’) or useful as an outcome.

There are costs associated with litigation introduced by inadequate or failed consultation, complex administrative processes, and delays to development. AANDC

reports spending \$110 million in legal services alone in 2012 (Taddese, 2013). Failures of adequate consultation undermine the overall process by perpetuating mistrust and dysfunctional relationships between Stó:lō and government. These failures reinforce a system where the Province continues to make unilateral decisions regarding resource management.

Chapter 4: Stó:lō Connect

The Stó:lō Connect Project concept emerged out of a need to provide collective resource management solutions to Stó:lō Bands and organizations (Schaepe, 2007). In 2009, Sue Formosa (SRRMC GIS and Geomatics Specialist) and I were tasked with finding a mechanism to share the volumes of centrally-stored SRRMC Geographic Information Systems (GIS) data with the broader Stó:lō collective.

4.1. Concept and Goals

Stó:lō Connect is an online portal for secure file storage, viewing, analysis and networking in a virtual ‘social network’ concept. An online social network (Boyd & Ellison, 2007) involves interactions where users:

- create a public or semi-public profile in a bounded system;
- articulate a list of other users with whom they share a connection; and
- view and traverse their list of connections within the system.

The system is designed to connect Stó:lō communities with each other, and all levels of government and industry, in a transparent and collaborative environment for referral management. In Section 1.3 I highlighted the five key areas which pose the most basic issues for effective referral management; communication, collaboration, resource capacity (access to information, tools and staffing), certainty of outcomes, and building trust and relationships. The core design concepts behind StoloConnect.com are aligned to address these issues.

The design of StoloConnect.com attempts to increase effectiveness by supporting more meaningful engagement, and minimizing redundancy. The system provides a mechanism to limit instances of conflicting engagement outcomes, and

enhance the content engagement to support “informed consent.” Stó:lō Connect offers streamlined and secure digital delivery, with notification tools for timely referral processing and communication. The design attempts to reduce the complexity of the referral process by providing clarity regarding consultative bodies (certainty of process and outcomes), and providing tools which promote the resolution of shared (redundant) referral administration. StoloConnect.com facilitates resolution of administrative redundancy by supporting dynamic Stó:lō governance protocols for resource management. The system is responsive to the diverse demands of resource management in the dynamic context of Stó:lō organizational structures. The framework of StoloConnect.com increases effectiveness (certainty of process) for Stó:lō organizations and external entities by establishing a standardized submission, communication and analysis process. The goals of the design are intended to increase the capacity of Stó:lō organizations by providing tools to support community engagement at a technical level. The goals are to reduce administrative and legal costs for Stó:lō communities, the Province, and proponents by enabling more effective, mutually satisfying engagement, and introducing efficiencies of process. The root of the concept is an online social network which supports administrative process, file management, and communication.

4.1.1. *History and Development*

The SRRMC, as a department of the Stó:lō Nation, receives regular requests for digital data (reference data, development data and Stó:lō cultural data), but is challenged by a number of technical constraints. First, while the SRRMC has substantial GIS capacity, most Stó:lō communities have limited or no GIS capacity. Issuing copies of data would mean that some communities would be able to use the GIS data while others would not. Some Stó:lō communities own GIS software, but lack qualified technicians on staff to operate the programs. Others have the opposite problem (technical staff but no software). Second, sharing data in the most basic sense would mean creating copies of data, which would be ‘orphaned’ from the source once copied. Next, control over data integrity is a concern. Once files are copied and shared, iterative editing is inevitable. GIS data sets orphaned from the original versions could look very

different over time. The management solution would need a practical mechanism by which to issue updates when original data changed. Interpreting and understanding the provenience of data is critically important. Issuing copies of data would create an additional challenge of ensuring that the relevance and limitations of data were understood and accounted for by technicians who would be accessing it. Disseminating copies of data would have the undesirable effect of offsetting costs for maintenance, use, and infrastructure to support the orphaned GIS data, directly to communities. There are also numerous of intellectual property issues associated with the dissemination of the type of information at the heart of the issue, including ownership and confidentiality.

A Web-Based Delivery System

The most effective method for sharing dynamic GIS data is via web-based system. A web system allows the SRRMC to maintain a central storage, and provide access to view data through a secure website with a pre-designed mapping interface. This solves some technical capacity issues by facilitating GIS analysis by non-GIS specialists, and eliminating the need for maintaining expensive in-house GIS desktop software in individual Bands and organizations. A web-based system ensures secure, uniform access to data for technical staff and leadership in all Stó:lō Bands and organizations. It prevents the perpetuation of orphaned and outdated data sets, and allows the SRRMC to maintain the integrity of the source data. Finally, the web-delivery of data from a central store ensures that the most current data is accessible to all registered Stó:lō users at all times.

The common context for data inquiries to the SRRMC is the review of development referrals and requests for consultation, the vast majority of which begin with core questions of spatial context. Karen Brady's (2011) MITACS internship through the SRRMC, Ch-ihl-kway-uhk Forestry Enterprise Ltd. and Simon Fraser University examines the themes in development pressures in S'ólh Téméxw. Using the 2008 calendar year as a sample of these pressures, Brady's analysis inspects spatial and non-spatial referral data. Her work indicates the importance of tracking landscape-level pressures in a collective manner, rather than the autonomous and isolationist approach to Band-level consultation and engagement. In order to facilitate effective participation

in resource management, Stó:lō Bands and organizations need to be able to use spatial data to locate developments across the landscape. The ability to review and analyze development proposals in the context of the broadest spectrum of spatial data concerning known Stó:lō land and resource use supports a clearer path toward a collaborative construct for 'informed consent' (Schaepe, 2007). The SRRMC vision for this spatial lens is to build Stó:lō capacity for meaningful resource management inside a more general tool for file management, communication, and record keeping.

Previous Data Management

The SRRMC had received requests from various Stó:lō Bands and organizations for assistance with reviewing and tracking development referrals, so it was obvious there was a desire to develop a more effective system. In 2008 the SRRMC designed an MS Access database, *refBase*. *refBase* was designed as an in-house networked database system, and was used by 3-4 staff members at the SRRMC to log and view textual information regarding referrals. *refBase* was designed in a way that SRRMC staff with access to desktop GIS software could link dynamically to the data, and pair it with spatial data that was stored on another internal server. This allowed SRRMC staff to conduct analyses necessary for referral review, such as viewing proposed development footprints in the context of land use plans, modelling, and reviewing relevant land and resource use spatial data. However, the limitations of these in-house applications were apparent, given that other Stó:lō organizations had no direct access. Inter-Stó:lō organizations lacked mechanisms to compare their own data, which made accessing and reviewing the analyses carried out by SRRMC staff was awkward task. This was made more difficult by the lack of common filing and referencing systems, and challenges of sharing large digital files via third-party file transfer protocol (FTP) sites. This presented a problem in that the department was often redundantly reviewing and commenting on the same referrals as several other Stó:lō organizations. The Stó:lō Connect Project was conceived over time in response to these inter-organizational capacity limitations, as well as the ineffective nature of Provincial referral processes and procedures. There were no pre-existing systems or software available for purchase that

supported these more complex needs, so the SRRMC set about defining the tools for itself.

Support and Partnerships

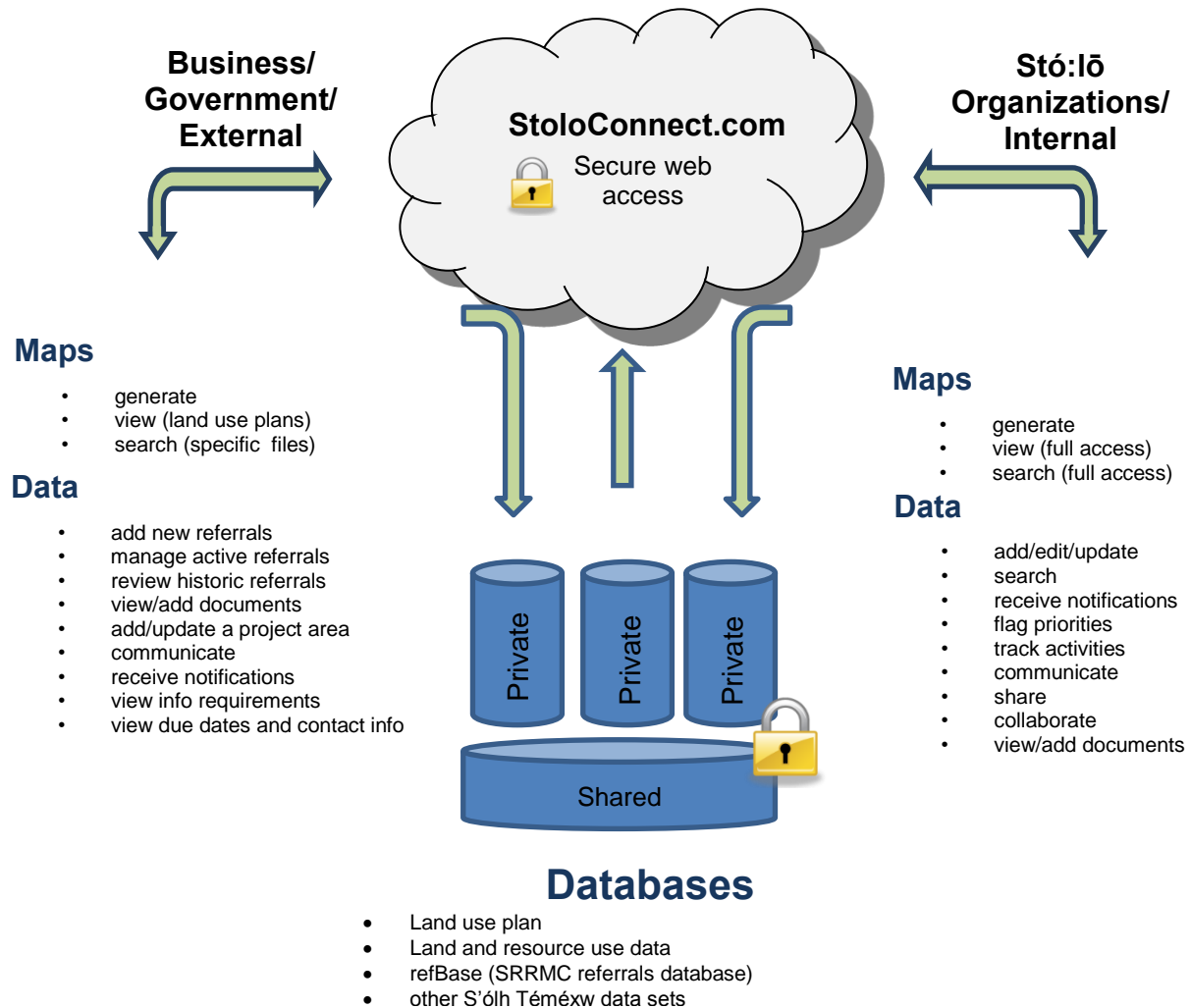
Development of Stó:lōConnect.com was largely supported in its first two years of development by the BC Capacity Initiative (BCCI) fund, offered by Indian and Northern Affairs Canada (INAC), the federal agency which is now Aboriginal Affairs and Northern Development Canada (AANDC). The SRRMC contributed significant portions of the project budget through staff time and resources, and additional in-kind contributions of staff time and resources were offered through partnerships with other Stó:lō organizations including Seyem Qwantlen, Sts'ailes Band, the Stó:lō Tribal Council, and by sharing and gathering ideas from the S'ólh Téméxw Referrals Alliance.² The system design and architecture was developed with Culture Code, a Vancouver-based software engineering partnership. Nicholas Jacobsen and Ryan Wallace of Culture Code had previously worked with the SRRMC and three other organizations on another digital collaborative research and data sharing initiative, the Reciprocal Research Network (RRN) Project (Rowley, et al., 2010). The RRN provides an online, interactive platform for sharing information about cultural objects and knowledge. The system accommodates a variety of users by connecting material from museums and institutions from around the world in a common data portal. Culture Code's familiarity with needs shared between StoloConnect.com and the RRN was beneficial to the Stó:lō Connect Project, and the pre-existing relationship set a conceptual and operational foundation upon which we expanded to develop StoloConnect.com.

² The S'ólh Téméxw Referrals Alliance (STRA) formed in 2010 as a technical working group for any and all Stó:lō Bands and organizations to discuss current practices and policy initiatives regarding referrals consultation.

4.1.2. *The Single Window*

StoloConnect.com is a fully-customized user interface, delivered through a secure website. Historic data from refBase was imported into the new system for archival reference. Embedding Google Maps provides a more familiar and user friendly interface for non-GIS specialist users (the typical user of our system), and open source solutions are more cost effective options. Using Google Maps and open source software eliminates the dependence on commercial software designed for GIS experts, and leaves the system open for other open source add-ons as we design and grow over time. Figure 8 shows the functional components of the system.

Figure 8 - Functional system design

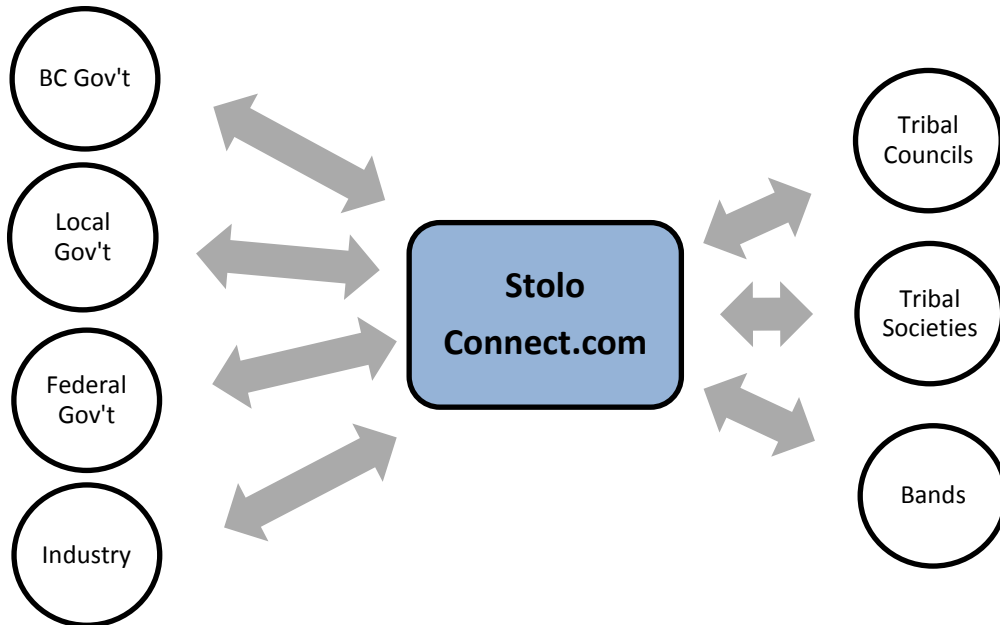


(Stó:lō Research and Resource Management Centre, 2010)

The process model in Figure 9 demonstrates a ‘single window’ framework for Stó:lō organizations. All referrals come in through the single location, StoloConnect.com, and all Stó:lō organizations using the single window system have equal access and opportunity to engage with all referrals. Stó:lō organizations have expressed an interest in the single window model by supporting the development of the system (and by supporting the Stó:lō SEA Pilot Project) and by active participation in

defining the necessary components of the internal-Stó:lō communication protocol of the site.

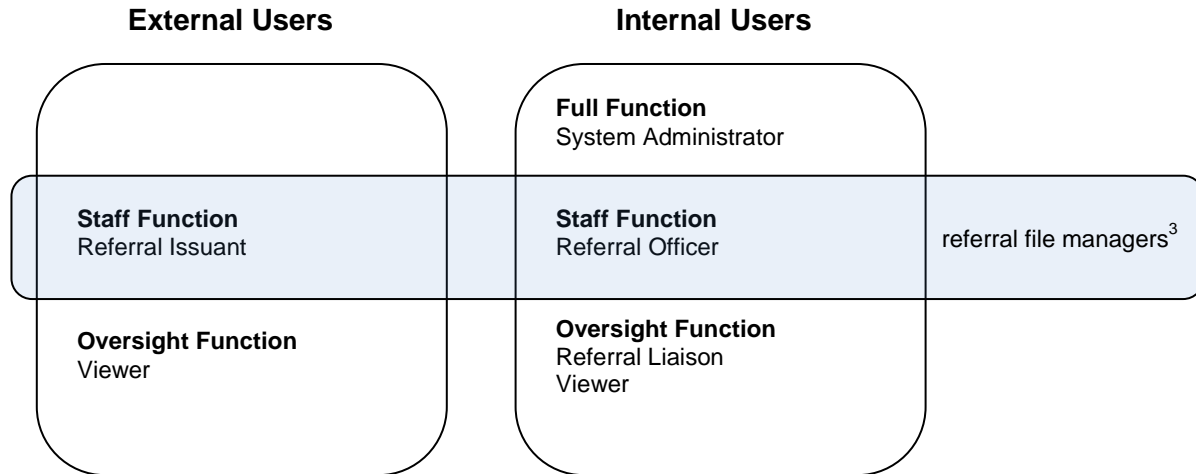
Figure 9 - Single window model



4.1.3. User Types and Functionality

The Stó:lō Connect system employs a number of different user types, each with different levels of functionality and roles based on process and organizational affiliation, forming the basis of the social network (Figure 10). The user types and connections demonstrate the internal and external functions, the transparency of the system, and the core elements of how users relate to each other within a social network. Potential users must request access to the site and be approved by a System Administrator (described below).

Figure 10 - Parallelism in system user types



The site requires approved clearance and an access code to access, and is not accessible to the general public, nor to individual Stó:lō community members. The intended users are staff of Stó:lō Bands and organizations who are involved directly in referrals, resource management, cultural heritage and environment work, managers and Stó:lō leadership. These users include ‘System Administrators’, ‘Referral Officers’, ‘Liaisons’ and ‘Viewers’, and are considered ‘internal’ users. ‘External’ users include development proponents and government staff (Federal, Provincial and Local) who initiate or monitor referrals, and all constitute a single user type, ‘Referral Issuant’ (

³ Referral file managers are the stewards of data within the system, performing the bulk of communication, file management, submission and review of referrals.

Table 6).

Table 6 - StoloConnect.com user types and permissions

User	Type	Referrals	Maps/Data	Documents	Discussions
System Administrator	internal	create all edit all	full access	add all remove all view all	all files moderate internal external
Referral Officer	internal	edit all	full access	add all remove own view all	all files internal external
Referral Liaison	internal	view all	full access	add all remove own view all	all files internal external
Referral Issuant	external	create own edit own	own files Land Use Plan	add own remove own view own	own files external
Viewer	internal	view all	limited access	view all	all files internal external

Each user is associated with an ‘organization’, which they operate on behalf of within the system. For example, John Doe is an industry proponent, and his user profile is associated with ABC Ltd. Jane Smith is a Provincial Lands Officer, so she is linked to the Ministry of Forests, Lands and Natural Resource Operations. Internally, Jim Brown is a Lands and Environment Technician with a Stó:lō Band, so his profile indicates this as such. Within the site, the associations of these users are visible, providing clarity and understanding for other users. These organizational links also contribute to the capacity for oversight by managers within a given organization.

4.1.4. Integrated File Management

One of the strengths of StoloConnect.com as a system for referral management is the capacity for integration of file systems. For the user, the system offers a place to store a range of documents (images, MS Office documents, PDFs, etc.) related to a specific referral (Figure 11). StoloConnect.com keeps records for referrals and cultural heritage data. GIS data is dynamically linked within the interface for individual referrals. The system is intended to operate as a ‘one-stop-shop’ for data management and analysis. All data and information are situated in a single, accessible location which can be accessed by any user, in any community, from any location. No special software is necessary, and no special expertise or experience is required to use it. While a mobile

application for accessing the site has not yet been designed, the website interface is simple enough to access and navigate through a mobile device such as a tablet or a smart phone.

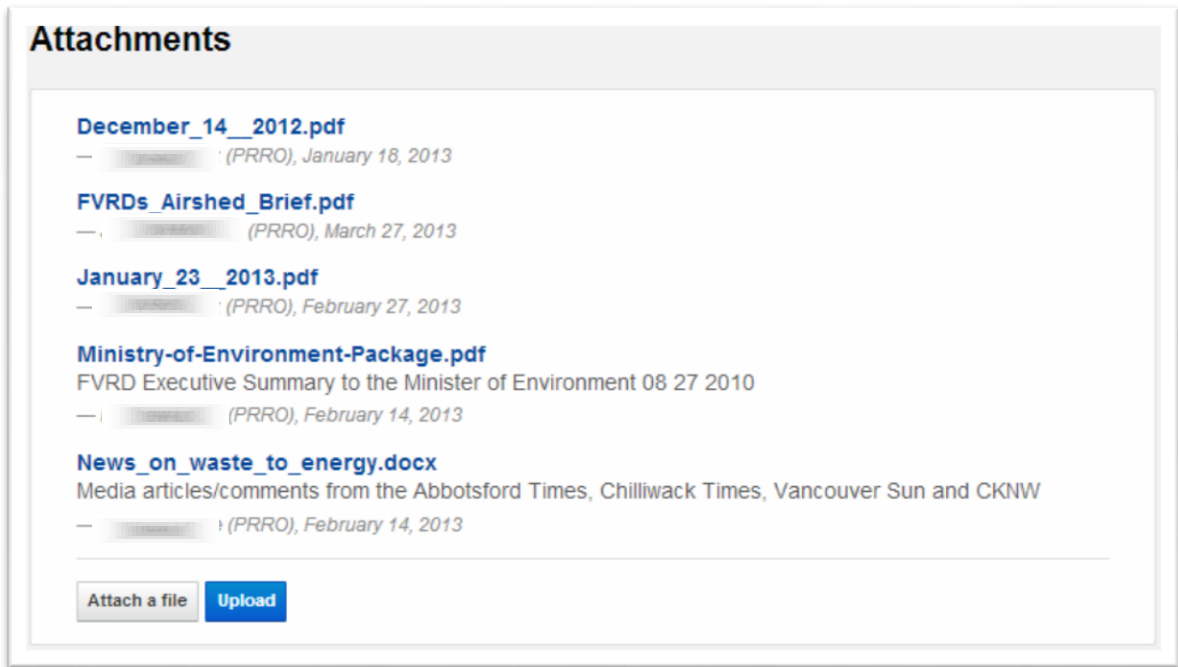


Figure 11 - Document management in StoloConnect.com⁴

(Stó:lō Research and Resource Management Centre, 2013)

4.1.5. Simple Mapping Interface

As the basis for the original concept of the site, mapping functionality remains a core element of StoloConnect.com. With a dedicated Maps tab, users operate in a familiar Google Maps API (Google Maps is embedded into the page), which allows for both a simple, clean, uncluttered interface, and familiar mapping functions which do not require special training or introduction. The simplicity of the mapping interface is critical

⁴ Individual user names have been blurred to maintain privacy and confidentiality.

to its functionality. The majority of site users are non-GIS specialists. The average user generally needs only basic mapping functions. These functions include panning and zooming, and toggling between data layers. Core data layers in the site include base layer underlays (satellite imagery, road networks, terrain view, 'Street View'), and proprietary data overlays (referrals footprints and project areas, land use plans, other modeling, land and resource use cultural data), as shown in Figure 12-14.

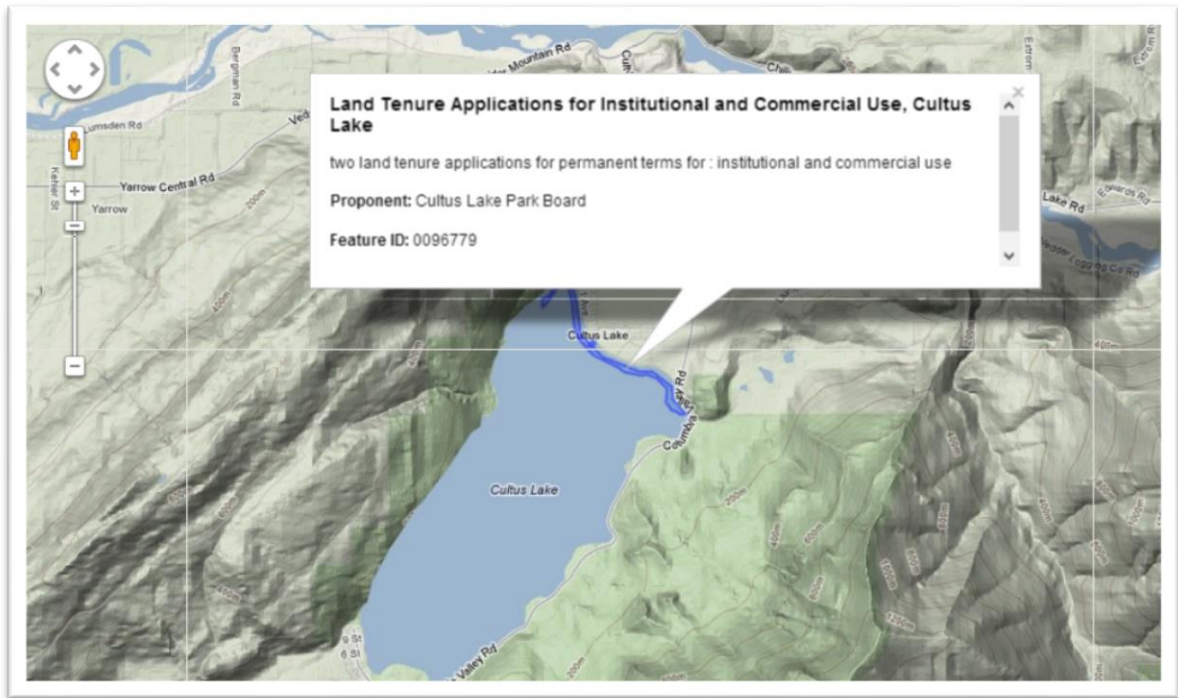


Figure 12 - Viewing the footprint of a referral (blue) in terrain view in StoloConnect.com

(Stó:lō Research and Resource Management Centre, 2013)

The Maps tab allows a non-GIS user to query, display, and analyze referrals in the context of specific and generalized cultural data (Figure 13). Search, filter, and measuring tools provide the capacity for further investigation. A sharing tool allows the user to forward a link to another user, enabling them to view the unique query, filter, and display maps that the user has created. A print option also allows users to print a basic map they have created in a predefined layout style for emailing, in-person inspection, or

sharing in other ways. The dedicated Map tab allows a user to conduct a detailed analysis and view a variety of data at once.

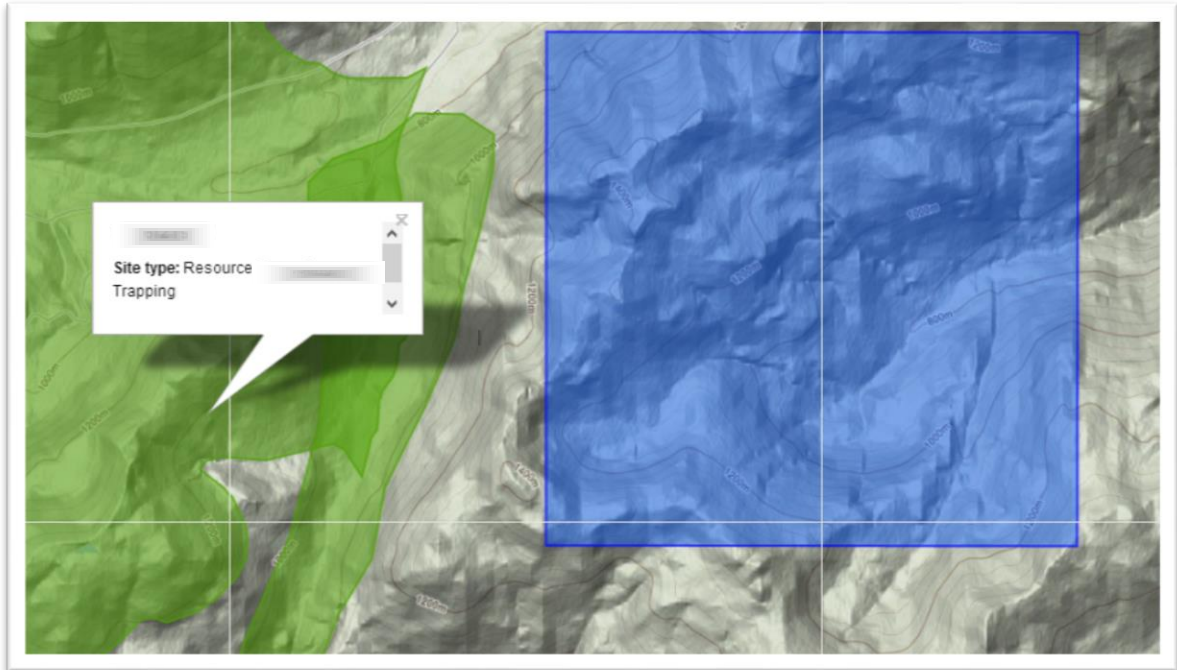


Figure 13 - Viewing cultural resource use data in the StoloConnect.com Maps page in relation to a referral area (in blue)

(Stó:lō Research and Resource Management Centre, 2013)

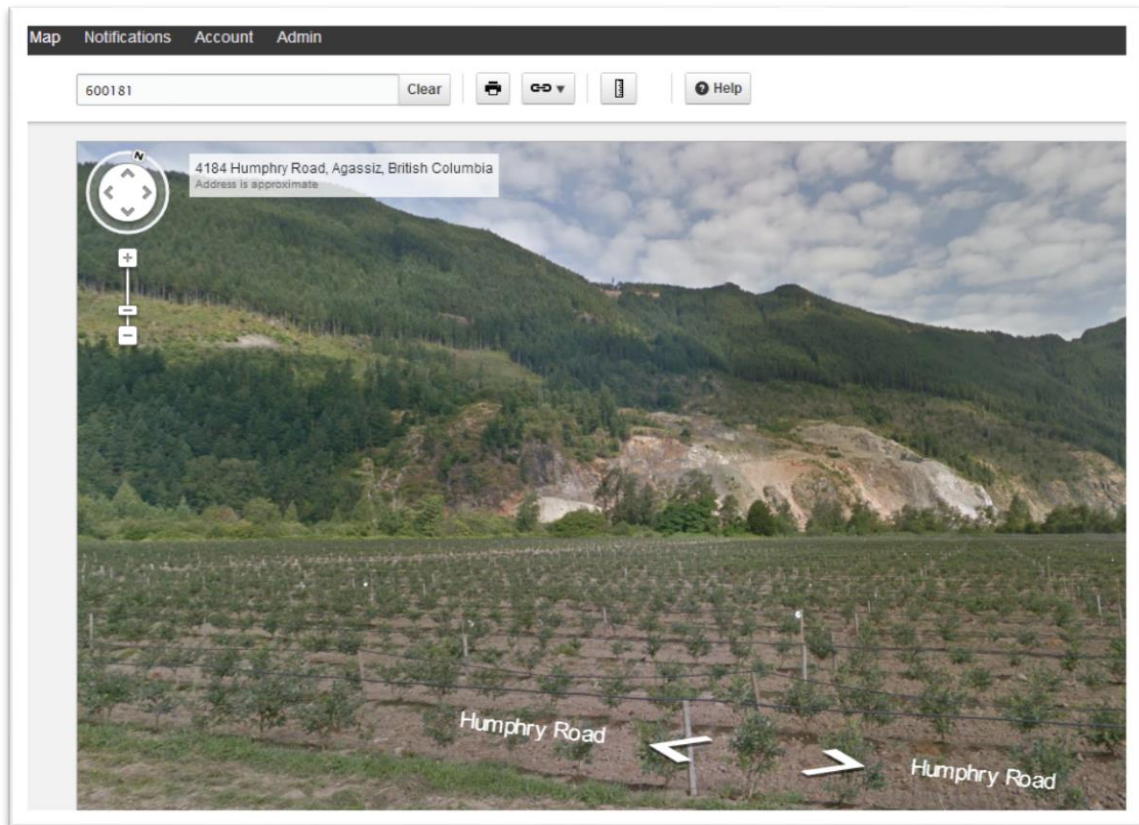


Figure 14 - Using Google street view to assess a referral regarding the expansion of an existing gravel operation in StoloConnect.com

(Stó:lō Research and Resource Management Centre, 2013)

4.1.6. The Social Network

The most compelling concept for communication protocol within StoloConnect.com came from online social networks. There are several components of popular and effective social networks that appeared to be a good fit for a collaborative referral management system:

- disparate range of individuals who need to stay connected intermittently, and/or regularly;
- large volumes of incoming information of varying importance/interest;
- multi-faceted networks and connections between individuals using the system;
- uniquely customizable notification systems;

- easy web-access;
- multi-media capacity;
- methods for users to self-identify interests; and
- methods for administrators or other users to identify and potential interests of users and prompt actions by users.

Assignment of referrals

A core element of the referral file management functionality is the assignment of files to specific users. When a file is entered into the system, it becomes associated with a Stó:lō staff member ('Referral Officer') and the broader organization to which they belong (Figure 15).

The geographic location of the pending referral is then used to determine which Stó:lō Bands and organizations may be interested in being consulted. The file assignment functionality works by associating an individual, or individuals, from those 'tagged' organizations with the referral. This functionality serves two purposes. The first is to provide the referral issuer with relevant contact information specific to their referral. The Referral Issuant sees the names of the Stó:lō organization(s) that require(s) consultation on the referral, and the up-to-date name and contact information for

the specific referrals contact person for those organizations.

The second purpose is to ensure that the

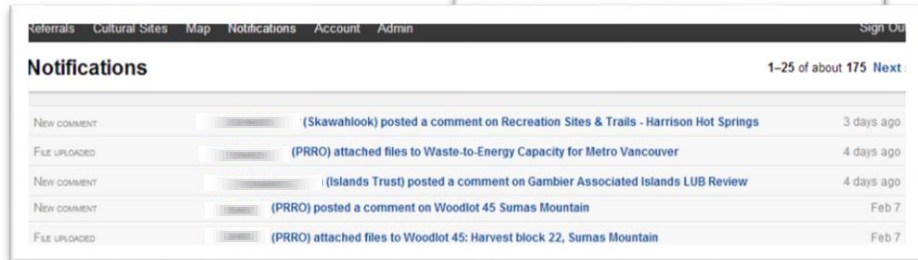
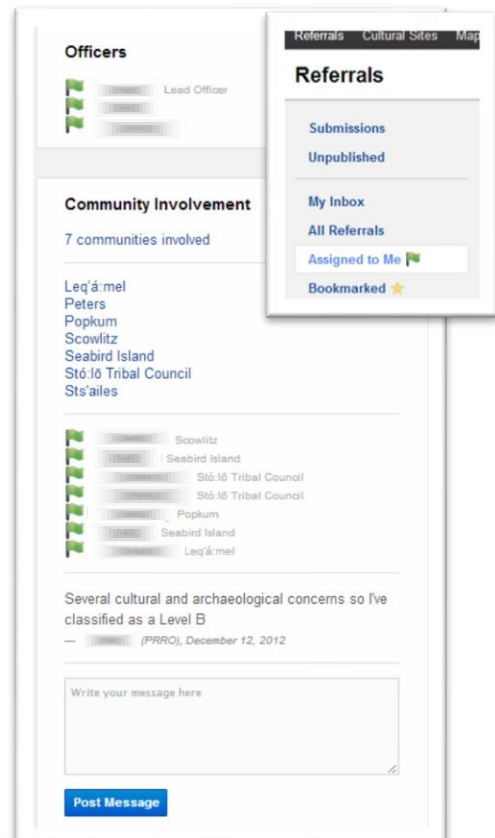


Figure 15 - Communication and collaboration tools, file management in StoloConnect.com

Stó:lō organization, or organizations, will see which other inter-Stó:lō staff members have been ‘tagged’ in the same file. This transparency provides opportunities for Bands and organizations to opt-out, opt-in, or collaborate on a response to the Referral Issuant.

The nature of referral management is such that a diverse range of requests in a broad geographic area result in a need to adapt and devise a unique approach on nearly all incoming referrals. The dynamic opt-in, opt-out, collaborative approach functionality is an attractive feature for both First Nation organizations and for Referral Issuants, who seek clarity, and efficiency of process. Given the dynamic nature of Stó:lō governance structures, this adaptable solution is critical to the relevance of the system for its users.

Communication Tools

StoloConnect.com communication tools include an internal notification system, an email notification system, and internal and external discussion forums (Figure 15). The internal notification system allows users to log into the site and see notifications regarding updates to referrals they are either watching or assigned to. StoloConnect.com also pushes email notifications, as per preferences set in individual user settings. For infrequent users, the email notification system means that they do not have to continually check-in with the site. Users can personalize which activities on the site warrant notifications, and how frequently they wish to receive them (e.g. immediate, daily digest, or never).

The internal discussion forum allows users from Stó:lō organizations to engage in private dialogue regarding an individual referral. This dialogue is not visible to Referral Issuants (external users), but is viewable by all internal users. A second discussion forum within the individual referral allows users from Stó:lō Bands and organizations to communicate directly with Referral Issuants. Again, this dialogue is viewable by all internal users, enhancing the transparency of process and supporting a collaborative approach to communication.

Chapter 5: Other Referral Management Systems

There are a handful of other referral management systems in place and in-development in BC, used by the Province, First Nations, and industry. Each of these systems has experienced varying levels of success and adoption by those involved directly in the referrals process. I do not intend to provide an in-depth analysis of each system, but rather a general sense of the functionality of each in comparison with StoloConnect.com. The comparison highlights needs for general and specific system design features. I have tried to capture the most prominent systems in use. The first, the SRRMC's refBase is included to provide a snapshot of SRRMC organizational referral management practice which pre-dated the development of StoloConnect.com.

5.1. refBase

As mentioned previously, refBase was designed in 2008 as an MS Access database. refBase was an SRRMC in-house network system, designed to log and view textual information regarding referrals. Staff with access to desktop GIS software could link dynamically to the data, and pair it with spatial data that was stored on another internal server. refBase facilitated basic network-based file tracking, but perpetuated issues related to Stó:lō inter-organizational redundancy, given that there were no communication tools for external staff. Lack of a notification system meant that users would have to navigate through files manually to discover and review new information. refBase did not incorporate document management and failed to provide non-GIS specialist staff with the capacity to review the spatial information. In short, the system kept basic digital records, but did not integrate full file management, and provided only limited capacity for analysis for select internal staff.

5.2. RTS - Referral Tracking System

RTS was designed by Adams Lake First Nation, Neskonlith First Nation and DR Systems. It is promoted by the First Nation Technology Council of BC (FNTC) and has been in use since 2008/2009 (First Nations Technology Council of BC, 2013). The system design and functionality include:

- scheduling and assigning of tasks
- cost tracking
- automated invoicing and customizable fee structure
- customizable correspondence
- customizable interests and infringements rating system
- referral review resource checklist
- decision rationale tracking
- linking to spatial data (outside of RTS)
- data queries

RTS has been marketed and sold commercially, at a price of approximately \$8,000, plus training and installation costs, and an additional annual fee that covers support and maintenance. By comparison, this is nearly four times the price of professional GIS software licensing.⁵

RTS has been purchased by a number of Stó:lō Bands and organizations, often those who have managed to secure one-time external funding to purchase the software. However, the number of organizations who have purchased RTS is not reflective of the breadth of its use. Of several Stó:lō Bands and organizations known to have purchased the software, not one continues to use it. Anecdotal reasons for discontinued use of RTS include:

- staffing/resource capacity still an issue
- functionality did not match expectations/needs

⁵ ESRI ArcGIS for Desktop Basic First Nation pricing - \$1,950 per licence, plus annual maintenance

- complex, prolonged set-up
- complex interface
- limited capacity for analysis
- need to maintain external GIS software

5.3. FNTC Web Portal for Referral Management

A newer initiative, also led by the First Nations Technology Council of BC (2011/2012), involves a web platform. The FNTC may intend to phase out marketing of desktop licenses of RTS in favour of their new web services. Preliminary marketing of the FNTC Referrals Web Portal (not to be confused with the 'FNTC Portal', the main FNTC website) is focused on the concept of cloud storage and integrated file management. The system has been designed as a service, for which First Nation organization users will pay a monthly or annual access/storage fee (M. Krupp, FNTC, personal communication, November 14, 2012). As the system was still in development as of Summer 2013, it is not yet clear whether functionality will include the capacity for users to communicate with users outside of their own organization, or whether it will include functionality aimed at addressing redundancy, one of the key referral challenges.

5.4. TNG Stewardship Portal

The Tsihloqot'in National Government Portal (TNG Stewardship Planning Portal) was developed in 2006 and implemented in 2007. The system is a web-based information management platform for referrals and planning. It incorporates GIS for planning and assessment in a referral context, allowing users to upload/download, view, query, store and print spatial and non-spatial data. The TNG Portal is driven by proponent data entry, transferring the administrative burden and related costs from the First Nation back to the proponent. Key benefits of the system are the capacity for non-GIS specialists to access and analyze GIS data, and enhanced mechanisms for communication/notification (Tsihloqot'in National Government, 2011).

The TNG Portal includes access for submissions directly from external users, but those users do not have access to any of the tools or functions of the site. One of the key disadvantages of the site is the complexity of the interface and design of the tools. While it is clear that a great deal of effort was involved in ensuring maximum functionality of the portal, usability suffers in the complex design. As a model for other systems, the role of TNG Portal is unclear.

5.5. eReferrals

eReferrals is a Provincial initiative currently in Beta testing. The eReferrals concept is another web-based portal which was developed initially for inter-government referrals. The intention of eReferrals was to create an automated system to solicit input on proposed authorizations from existing tenure holders, and government agencies.

eReferrals posts referrals for specified users, who then log in to view and submit comments. While the system helps users prioritize files based on comment time periods and has the capacity to receive responses, the design does not readily meet the needs of First Nation organizations. Specifically, the system is 'closed', in that it does not support collaboration or cooperation between organizations. The 'closed' design does not support file management, forcing users to design and maintain their own parallel, in-house systems. Importantly, eReferrals does not yet have a user-side GIS or spatial component, nor does it provide capacity for analysis, or for access to information in the consideration of how to respond to a referral. Perhaps the quality of the system that prevents First Nation organizations from being able to use it is that fact that all files are 'consumed' by the site. Once a user uploads a file (a comment or a response), that file cannot be retrieved, edited or even viewed. Referrals in the system become inaccessible once the system-imposed comment period has expired. eReferrals is designed as a top-down referrals management system which, while it may be useful for government, lacks useful tools or mechanisms that provide benefit for First Nation organizations.

5.6. No Formal System

Many First Nation communities continue to manage referrals outside of any formal file management system due to costs and complexity of systems, or limitations of resource capacity (i.e. staffing, or technical expertise).

Desktop Management

For those Stó:lō Bands and organizations which have operated some manner of 'formalized' internal system of referral management, desktop systems are the standard. This may include pre-packaged software (typically RTS – Referral Tracking System). For others, 'desktop management' involves the use of an MS Excel Spreadsheet to track information related to individual files. In some cases the file is shared on a network, and in others it may be housed on an individual desktop computer hard drive, accessible and used by a single user. Within these spreadsheets, data columns and categories evolve over time. Some data is tracked regularly, but often data is logged in a more ad hoc manner. I have seen examples of hyperlink data fields in MS Excel spreadsheets that link to network or hard drive locations where related data files are stored. One of the main challenges to this type of file management (besides the inaccessibility of the closed-system and individual approach) is that the data itself is not searchable when data entry is not 'normalized' (i.e. unstandardized). Table 7 shows a comparison to demonstrate why data that is not normalized is not searchable.

Table 7 - Normalized versus unstandardized data

Normalized Date field	Unstandardized Date field
January 12, 2013	Jan 12 2012
February 23, 2011	February 23, 2011
July 1, 2007	07/01/07
March 27, 2008	27/03/2008
December 10, 2012	December 10
October 9, 2009	Oct 9-10, 2009
January 2, 2013	2-01-2013

Side-of-the-desk Management

Side-of-the-desk management is a term that is used to describe the typical manner in which referrals are handled in some Stó:lō organizations. Also termed 'professional reliance', individual staff in particular organizations may pick up, or otherwise become involved in referrals in a more informal way, or in a triage capacity. Referrals typically arrive as hard copy documents through regular post, which means they will end up being opened or filed by an individual, and remain in hard copy format. Formal records are not kept, and the individual staff member may follow up or respond to the referral informally, but make no record of having done so.

No Management

Some Stó:lō Bands and organizations have no formal or informal systems for referral management. These include Bands who lack any capacity (staff or technical resources) for management, and those who chose to defer the management of their referrals to another organization for the sake of simplicity, or clarity.

Summary

There are several formal and informal systems and methodologies for referral management in use by First Nation Bands and organizations in BC. The spectrum of options is broad, but the majority of solutions are reactionary, lacking consideration of new mechanisms for dynamic resource management.

Chapter 6: Analysis of Stó:lō Connect

The core concepts of integrated file management and social networking within Stó:lō Connect set the system apart from other systems currently in-use or in-development in the Province. The StoloConnect.com Project was designed first by examining the root of the 'referrals problem'. The areas of focus were inefficiencies and ineffectiveness built into existing administrative processes, capacity for analysis, and outcomes. The design phase involved a re-imagination of the basic structures of the referrals process.

6.1. Comparison of Management Systems

Each of the referral management system alternatives reviewed in Chapter 5 attempted to create efficiencies in administrative processes. The degree to which they achieve these efficiencies varies, and some have missed opportunities to improve outcomes of the overall process. The distinction is where increased efficiencies supplement improved effectiveness. As highlighted in Table 8, the three web portal-style systems (TNG Stewardship Portal, FNTPC Web Portal and eReferrals) facilitate delivery and issuance of referrals. GIS tools are imperative to design most new systems. Web access appears to be the new standard delivery mode, but even web-based models remain encumbered by closed system designs.

Table 8 - Comparison of digital referral management systems

Function	Strategic Imperatives	StoloConnect.com	RTS-Referral Tracking System	FNTC Web Portal	TNG Stewardship Portal	eReferrals
'Single-window' delivery	reduce complexity reduce redundancy provide certainty facilitate collaboration	Yes	No	No	Yes	No
Proponent upload	reduce cost/time ensure data integrity provide access to information provide certainty	Yes	No	Yes	Yes	Yes
Proponent planning/ file management tools	reduce cost/time provide clarity and transparency provide access to information facilitate collaboration provide certainty	Yes	No	Unknown	No	No
User Interaction (social network model)	provide clarity and provide transparency facilitate collaboration reduce complexity reduce redundancy provide certainty	Yes	No	Limited	No	No
Open access to all referrals	facilitate collaboration provide access to information provide clarity and transparency provide certainty	Yes	No	No	No	No
GIS-enabled	provide access to information provide clarity	Yes	No (external software required)	Yes	Yes	No
Analysis tools	increase capacity provide access to information	Yes	No	Yes	Yes	No

Function	Purpose	StoloConnect.com	RTS-Referral Tracking System	FNTC Web Portal	TNG Stewardship Portal	eReferrals
Automated communication tools (notification system)	enhance communication reduce cost/time provide clarity and transparency facilitate collaboration provide certainty	Yes	Limited	Yes	Yes	No
Integrated File Management	provide access to information facilitate collaboration provide certainty	Yes	Limited	Yes	Yes	No
Web-Access	provide access to information reduce cost/time	Yes	No	Yes	Yes	Yes
Simple User Interface	provide clarity reduce cost/time reduce complexity	Yes	No	No	No	Yes
Decision-Support	increase capacity facilitate collaboration provide access to information	Yes	No	Yes	Yes	No
Opt-in/Opt-out	facilitate collaboration reduce cost/time reduce redundancy provide transparency provide certainty	Yes	No	No	No	No
Costs of Use/Access	reduce cost	free	Purchase + maintenance fee	access fees	free	free

Column 2 of Table 8 demonstrates the link between functions of referral management systems and the benefits supported by each. The recognition of these functional benefits relates back to addressing the key challenges for effective referral management in Stó:lō Bands and organizations: communication; collaboration; resource capacity (access to information, tools and staffing); certainty of outcomes; and trust and relationships. Other benefits include reduced costs and time, reduced redundancy, clarity and certainty of process, reduced complexity, and maintenance of data integrity.

6.2. Assessing StoloConnect.com Functionality

The key difference in the design of StoloConnect.com is the critical nature in which it approaches the referrals problem. While other systems appear to have been designed in response to existing referral protocol and procedure, StoloConnect.com reimagines the process itself functioning differently. Starting with administrative questions, functions simplify information flow. Complexity and redundancy of process are reduced by receiving all referrals for a broad geographic region in a single location, minimizing blanket correspondence.

The collaborative nature of the social network model allows users in the geographic region to share and communicate preferred administrative procedure on a case-by-case basis. This flexible approach to file management is designed in response to the dynamic nature of the organizational structure of Stó:lō governance. By allowing users of the system to opt-in or opt-out of roles in referral management as files are referred, communities are provided a hands-on and transparent mechanism to prioritize, and isolate those referrals which are most important. System users can identify collaborative frameworks as needed, communicate their interest in leading engagement, or indicate their interest in delegating management to another Stó:lō organization. The usefulness of these unique collaborative approaches are evidenced in the discussion forums within StoloConnect.com (Stó:lō Research and Resource Management Centre, 2013). As I mentioned previously, this capacity for dynamic response is critical for

success in light of Stó:lō governance frameworks. These functions clarify obligations and process not just between Stó:lō communities, but also with government and development proponents who issue referrals. The advantages of this social and collaborative file management model over closed systems are evident to both internal and external users of the system.

The communication tools in StoloConnect.com are modeled on the social network concept, designed for maximum transparency and the most efficient functionality. They include inter-Stó:lō communication notifications, and others which are shared with external users. While alternative systems have designed notification and email functions, we included discussion forums (both internal communication and external communication) and behaviourally-based notification triggers that will be familiar to users of other popular social networks. Users may indicate interest (or disinterest) in individual referrals with a single click, or leave a comment to inform other users of important information. Government and development proponent users are able to track and manage their own referrals in the system, eliminating the need for back and forth phone calls, emails and letters. Actions within the system are logged and displayed as a permanent record for all users to access and view all referrals (with the exception of external users, who can only access and view referrals which originate from within their own organization). This level of transparency allows neighbouring communities and related organizations to minimize redundant efforts, and identify opportunities for collaboration, when necessary. Access to information through StoloConnect.com provides clarity and certainty for both internal and external users.

Like some other systems in use and in development, StoloConnect.com introduces GIS data and spatial analysis tools for users. However, there are two key design concepts that set it apart from other systems in use in other First Nation organizations. The first is simplicity of the GIS user interface. StoloConnect.com is designed primarily for non-GIS specialists, and the primary design requirement was to keep the interface light and uncluttered, while not limiting capacity for meaningful analysis. We accomplished this minimalism by embedding the powerful Google Maps API, and questioning all assumptions regarding GIS functionality. Users can search,

query, pan, zoom, overlay and underlay data by the click or scroll of the mouse. The simplicity allows us to deploy GIS tools to non-GIS specialists with minimal to no user training. Sharing land and resource use data alongside land use plans and other regional data sets give Stó:lō organizations instant access to information that was previously only available by requesting the iterative production of static maps (paper or PDF). The second design concept that differentiates the GIS tools is the sharing of some spatial data and mapping tools with government and proponent users. Once registered and signed in to the system, these external users can upload their spatial information and view it in the context of Land Use Plans and local community data for planning and reference. By providing access to this important planning data, external users can effectively anticipate the depth of referral review that may be required, or use the information for strategic planning to minimize the impact of their project in advance of their referral submission.

These distinct design and functionality considerations allow StoloConnect.com to be used as a tool to support more effective consultative outcomes. The system minimizes the potential for lack of response by allowing users to easily indicate interests, discuss the referral in an in-site forum, or view each other's contact information to continue the discussion offline. Uncertain and 'low quality' responses are now enhanced by delivering effective analysis and interpretive tools. Improved access to relevant data and tools means that responses are more effectively informed. The transparency provided by the social network model allows inter-Stó:lō organizations to easily identify and flag their administrative interest (or disinterest) in a particular referral. This can eliminate redundant and sometimes conflicting responses by allowing Stó:lō organizations to communicate and clarify their formal responses prior to issuance, or identify opportunities to collaborate on responses where administrative interests are shared.

6.3. Effectiveness of Implementation

Implementation of StoloConnect.com has been restrained by the ability to develop organizational partners and train individual users. Core partnerships have been

successful in deploying the system for everyday use in Stó:lō organizations as the primary tool for referral management. This includes the Stó:lō Research and Resource Management Centre (Stó:lō Nation), Stó:lō Tribal Council, and the Ts'elxwéyeqw Tribe. The People of the River Referrals Office (providing referral review services for the 14 signatory Bands to the Stó:lō Strategic Engagement Agreement) uses StoloConnect.com as the primary intake, communication, file management and analysis tool. Other Stó:lō organizations use StoloConnect.com more passively, occasionally accessing mapping tools for their own reference. Internal users may communicate with each other without participating in collaborative file management or responses. Two organizations that identified themselves as partners early in the project have opted to use the system to simply 'watch' the activity of other users. This style of passive use is encouraged as a mechanism to establish trust, which establishes the potential for a more direct, collaborative function in future.

The implementation of StoloConnect.com has resulted in incremental, but noticeable improvements in effectiveness. Improvements are evidenced by increased numbers of active users. There are now 49 individual internal users (up from 23 in May 2012) and 18 external users (none until September 2012) registered in StoloConnect.com (Stó:lō Research and Resource Management Centre, 2013). Users both internal and external, are using the site and its tools to upload referrals, share documents, discuss details in a shared forum, schedule meetings, conduct analyses, view and produce maps, and communicate findings and recommendations (i.e. responses). Proactive organizations are able to use the tool as a stand-alone system, and do not require or use any other external systems or software to manage their referral work flow. Those organizations who have opted to use the system more passively continue to experience redundancies and confusion in their file management. Not surprisingly, there is less communication and collaboration with these more passive users. Redundancy and capacity remain as unresolved issues for some organizations.

6.3.1. Implementation of Stó:lō Connect

StoloConnect.com and the collaborative social network approach to referral management are now established. Among Stó:lō communities and organizations, the

site is currently the primary referral management tool for fourteen (14) member Bands and three (3) additional Stó:lō organizations. Additionally, five (5) other Bands use the system to access and share information, but do not use StoloConnect.com as their primary referral management tool. Of those Bands that use the system more casually, the typical reason involves the assertion of autonomous identity and function from other Stó:lō organizations, but most agree that the utility of the tools and functions are advantageous.

Stó:lō Connect has been influential in addressing the core referral issues of communication, collaboration, resource capacity, certainty of outcomes; and trust and relationships. Communication between users (both internal and external) regarding pending referrals has been established and simplified in the discussion forums and notification system. Internal users have established collaborative (and autonomous) approaches to individual referrals, and the mapping tools and data are serving to better inform those conducting analysis of incoming referrals. It is difficult to gauge the efficacy of Stó:lō Connect alone in generating higher referral response rates due to the relatively concurrent implementation of the Stó:lō SEA Pilot Project. However, response rates have increased from 13% in 2011 to well over 50% in 2013 (Stó:lō Research and Resource Management Centre, 2013). Stó:lō Connect has prompted internal and external discussion regarding land uses. This serves a long-term outlook of building functional relationships in strategic planning.

External users include Local government, industry proponents and some Provincial Ministry staff who are issuing and managing their referrals to Stó:lō organizations in the system. Unfortunately, the Province of BC has been slow to adopt the system. While select Provincial line Ministries and staff have begun to explore the system as registered users, organizational constraints within FrontCounter BC have prevented the adoption of StoloConnect.com as an official method of transmitting referral information. While official adoption of the system by the Province does not hinder the utility of StoloConnect.com for Stó:lō organizations and their staff, there is ample room to further improve our efficiencies and effectiveness in collaboration with Provincial Ministries.

6.3.2. *Potential Challenges to Implementation*

Since the inception of the Project, there have been several challenges to implementation and success. Some have now been effectively resolved, but others will remain key issues as we move forward. When I use the term collaboration below, I refer simply to the use of the Stó:lō Connect system as an administrative tool, and not necessarily collaboration between entities in the engagement process itself. While Stó:lō Connect does have the potential to support collaborative engagement, individual users still have the option to operate relatively autonomously in the review and management of referrals in the system.

Willingness of Stó:lō to collaborate amongst themselves

Inter-Stó:lō cooperation is a critical issue in most governance, management, and decision-making contexts. Referral management is no exception. The proclaimed independence of some Stó:lō Bands becomes a barrier to effective communication. Some Stó:lō organizations assert this independence by isolating decision-making and isolating the lines of communication with other Stó:lō organizations. It may seem evident that 'independence' is not synonymous with 'isolation', but certain Stó:lō communities feel that simply communicating their autonomous decisions, or decision-making processes, undermines their independence (Boiselle, 2010). In the context of an already restricted capacity decision-making, it may not be hard to understand why some Stó:lō Bands and organizations find collaborative management an unappealing option. The challenge is to demonstrate how participation in a transparent and collaborative management arrangement can actually support, as opposed to undermine, autonomy. Other governance models, such as those anticipated under a negotiated treaty or those already in place as tribal entities, may help to clarify the benefits of collaborative models for decision-making.

Willingness of Stó:lō to collaborate with government

In the same respect, the history of the relationship between government and Stó:lō organizations presents challenges to communication, the sharing of data and information, and the sharing of decisions and decision-making processes. The success

of a social network model for referral management lies not just in creating communication pathways between Stó:lō organizations, but the willingness to allow external users insight into process, procedure, data, and other communication tools. When we began the project we expected to experience more opposition to the idea of allowing external users into the system. We were pleased to discover that the need for mutual communication tools and centralized file management was recognized and welcomed by most users.

Willingness of government to collaborate with Stó:lō

One key challenge we did not anticipate was the hesitation of government to collaborate with Stó:lō organizations in using our system. That being said, success has been achieved in making connections with local government through partnerships and ongoing feedback loops. The federal government (who have funded the project through the BC Capacity Initiative fund) has been inexplicably silent on any real involvement, or functional use of the site. At the far end of the spectrum is the Provincial government, who have not yet embraced the opportunity to have input during design and implementation of the project. Although Provincial line ministry staff expressed a keen interest in the efficiencies and transparency of the new system, few Provincial agencies have given due consideration to using the site as a primary tool. The Ministry of Forests is a notable exception, where local staff have embraced the tool and have commented anecdotally that it makes their tasks simpler and easier to monitor.

Other Challenges

There are additional challenges which remain as separate issues in the context of effective referral management. First Nations and government still struggle to define mutually agreeable terms for achieving effective engagement. Managing expectations of a technological tool in the realm of consultative process is another consideration.

While online social networks, integrated file management, and digital communication tools go far in easing the administrative burden of the referrals process, they are no substitute for the meaningful conversation and face to face discourse that are essential elements in the fulfilment of consultative engagement.

Development activities in BC are the focus of much attention in the legal realm of First Nation rights and title cases, and the ongoing conversation regarding constitutional interpretations, common law, and other unresolved legal questions that all concern the “Duty” of First Nation consultation. British Columbia’s New Relationship policies and the advent of so-called ‘shared decision-making agreements’, like some Strategic Engagement Agreements, are providing the bases for discussions on the effectiveness and appropriateness of the actual practice of consultative engagement.

6.3.3. *Lessons Learned*

The StoloConnect.com Project is currently finalizing Phase II of its development process. The importance of involving as many internal and external entities as possible in the development and design approach has been apparent from the beginning, as has the need for on-going communication and feedback loops to ensure that the system is relevant and effective for all Stó:lō Bands and organizations involved in the referral management process. Regular communication with other Stó:lō organizations reminded the Project team to continually seek feedback and collaborate on system functionality and design. All organizations demonstrated a diverse set of needs, strengths, and limitations. The original concept began simply, building to complexity over time with the benefit of experience. This approach served the Project well, but also highlighted the need to constantly communicate with partners and stakeholders to ensure no one was left behind as we built forward. Early in Phase I we learned to question all assumptions: GIS tools do not have to be complex to be functional; and that independence of authority does not necessitate administrative isolation in the referrals process.

Chapter 7: Conclusions

The Stó:lō Connect Project enhances referrals processes through collaborative information management strategies in an online social network. While improving basic administrative efficiencies and effectiveness, the system also provides the technological means to support the eventuality of shared decision-making in resource management. The 'referrals problem' involves complex, inconsistent and uncertain processes. Inefficiencies and ineffectiveness have historically incurred high administrative costs, created unnecessary delays to development, and prevented Stó:lō Bands and communities from assuming an effective role in environmental and cultural resource management. The importance of playing a functional role in resource management stems from the critical process of preservation of Treaty rights and obligations of land and resource ownership. By providing accessible information management mechanisms and tools for analysis and assessment, StoloConnect.com supports functional Stó:lō participation in environmental and cultural resource management and improves potential for community and economic development. The Stó:lō Connect Project has been designed as a response to previously ineffective referral processes, seeking a revised mechanism for referral management to the mutual benefit of Stó:lō, government, and industry. Project direction has been influenced by relationships with government and industry, and the intricacies of Stó:lō governance and resource management frameworks.

The long-term effectiveness of the implementation of Stó:lō Connect is dependent on the adoption of the collaborative concept and tools by Stó:lō leadership and communities, and on the willingness of government and industry to work collaboratively with Stó:lō.

7.1. Looking Forward

Most of the referral management systems designed previously reflect a reactive approach to the referrals problem. With StoloConnect.com, the SRRMC has attempted to examine the administrative inefficiencies and ineffectiveness of the referrals process. The system promotes new and better procedures, with responsive solutions to broader challenges, and applies proven concepts for improved networking and communication. It seems fair to generalize that other First Nation organizations, government agencies, and development proponents all have an interest in reducing costs and delays in the consultative process. As adoption of StoloConnect.com grows, we will see the benefits of applying a collaborative social (and spatial) network model and transparent, integrated file management to the referral process. The model advances the capacity for effective resource management through the recognition and support of dynamic First Nation governance frameworks.

Looking forward, it will be important to keep a grounded perspective of the role of technological support systems Referral Management in the broader scope in improved consultative engagement processes. Crafting and supporting *meaningful* engagement processes is critical. The current Provincial process for initiating referrals and consultation has been a challenging model to maintain, and First Nation organizations will need to continually think innovatively if they intend to improve upon current consultative process. More importantly, Stó:lō must examine opportunities to use enhanced resource management capacity to claim a more active proactive role in resource management.

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