

**Canadian Regional
Development**
A Critical Review of Theory,
Practice, and Potentials



**Développement régional
canadien**
Un examen critique des théories,
des pratiques et des potentiels

Innovation Report: Kootenay Region

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Introduction

“Canadian Regional Development: A Critical Review of Theory, Practice and Potentials” is a cross Canada, multi-disciplinary study of regional development theory, policy, and practice in Canadian regions. The project is based in four provinces across Canada: British Columbia, Newfoundland and Labrador, Ontario, and Quebec, and in five select study regions within these provinces. The project is focused on five key themes in regional development: multi-level collaborative governance, learning and innovation, rural-urban relationships, place-based development, and integrated development. Combined, these themes form the basis of “New Regionalism”, an emerging approach to regional development (see Markey, 2011 for more information).

This report provides an overview of our findings related to the theme of learning and innovation within the Kootenay region of British Columbia (the Kootenays), which is described further below. There is no single, agreed upon definition of innovation, but the research team has drawn from two of these definitions. First, Dicken (2007) states that, “*Innovation, put simply, is the creation or diffusion of new ways of doing things.*” Adding a regional development perspective to the concept, Vodden et al. (2013, p. 3), drawing from the Organization for Economic Co-operation and Development (OECD, 2005) and Markey et al. (2012), describe innovation as “the implementation of new or significantly improved product, process, or organizational method.” Innovation in regional development, they add, may include “new ways of organizing and/or sharing information within or across organizations, new strategies for addressing local challenges and opportunities, or new forms of investment.” While innovation in this broader sense requires new perspectives and ways of looking at development, we consider innovation to include something that may be new to the region rather than new to the country or the world.

Recognizing these definitions, innovation does not rely necessarily on invention, but rather more broadly on new approaches that occur at different scales to address current and emerging needs and opportunities. Furthermore, innovation can be thought of in terms of a system, involving multiple actors connecting to foster learning and produce innovation. The capabilities of these regional innovation systems vary depending on proximity of actors, available resources, and institutional thickness (Amin and Thrift, 1995; Cooke, 2001). For more on how innovation and learning are conceptualized within this study see Vodden et al. (2013). This report will discuss the context of innovation and learning within the Kootenays, providing an overview of social, economic, political, and practical components.

Study Region

The Canadian Regional Development project conducted field work in five select study regions throughout Canada, including the Great Northern Peninsula, and Gander New-Wes-Valley/Kittiwake, Newfoundland; Eastern Ontario; Rimouski-Neigette, Quebec; and, the region for this report, the Kootenays, British Columbia (see Figure 1). Each of these regions provides a unique set of characteristics that shape their approaches to innovation and regional development. This section will provide a snapshot overview of the Kootenays, relying on available contextual data.

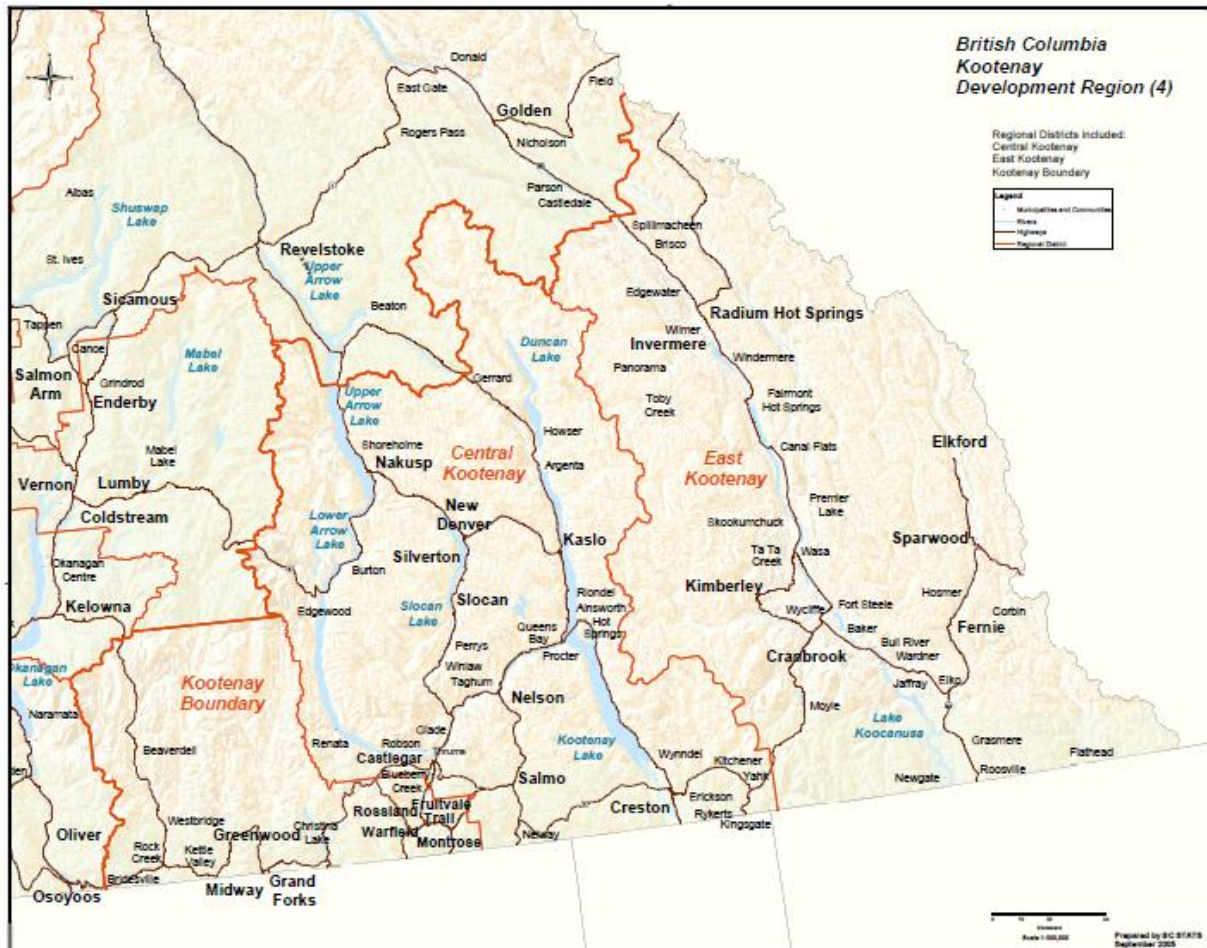


Figure 1: Map of the Kootenay Development Region (BC Stats, n.d.)

The Kootenay region is located on the southeastern corner of British Columbia and shares a border with Alberta and several American states (Washington, Idaho, and Montana). While the region is landlocked it does contain several large watersheds such as the Columbia River (Breen, 2012). The region is based on the Kootenay Development Region, which is composed of three Regional Districts: Kootenay-Boundary, Central Kootenay, and East Kootenay. Regional districts are comprised of multiple municipalities and electoral areas. Additionally, communities can be further clustered with those in their immediate geographic area creating functional regions or pockets of collaboration (Breen, 2012a).

In 2011, the region's population was 146,264 constituting only 3.3% of the provincial population (Breen, 2012). This is a 2.9% increase from 2006 when the population was 142,110 (B.C. Stats, 2012). The region covers 6.2% (57,786.8 km²) of the province's 925,344.7 km² physical landmass and has a population density of 2.5 persons per km² (B.C. Stats, 2012).¹ While covering a large landmass the region has a relatively small population; the largest cities in the region are: Cranbrook (18,267), Nelson (9,258), and Castlegar (7,259) (B.C. Stats, 2012).

In terms of education levels, in 2006 87.2% of the region's population (25-64) completed high school, 14.3% held bachelor's degree or higher, and 39.4% held apprenticeship or trade diplomas or certificates (B.C. Stats, 2012). In contrast, 88.9% of the provincial population (18-64) have completed high school, 24.1% hold bachelor's degrees or higher, but only 31.5% hold apprenticeship or trade diplomas or certificates (B.C. Stats, 2012). The post-secondary institutions present (or absent) in the region may be contributing to lower university degree completion but higher presence of residents with trade diplomas or certificates in the region as compared with the province as a whole. For example, there is no university in the Kootenays but there are two colleges: Selkirk College and College of the Rockies (Breen, 2012).

In 2005, the average income for all economic families in the Kootenays was \$68,067, which is lower than the provincial average of \$80,511. The average employment income in 2005 was \$30,637, only slightly lower than the provincial \$34,978. On average, 73.8% of this income was generated through employment, 12.5% from government transfers, and 13.7% from other sources. This is similar to the provincial averages and indicates a relatively high level of economic self-reliance. Income is dependent on six sources: public sector employment (22%), government transfers (17%), forestry (12%), mining (11%), construction (8%), and tourism (7%). Only 1.7% of the region's population relies on income assistance, which is the same as the provincial statistic (B.C. Stats, 2012). This data does not account for any 'underground' or 'informal' economic activity that may occur in the region.

The Kootenay labor force (ages 15-64) constitutes 62.9% of the region's population; 41.7% of the population is employed full-time, all year. This is slightly lower than the provincial labor force of 65.6% of the overall population (B.C. Stats, 2012). This demonstrates that while most of the population is part of the region's workforce, there are also many dependents in the region. B.C. Stats (2013) illustrates a concentration of citizens age 45-64, which is likely contributing to a decline in the percentage of the population within the labor force as the population ages. This trend may be deterred by immigration, but the Kootenays have only experienced an increase of 890 (0.6% increase) people between January 2001 and May 2006 as a result of immigration. This is much lower than the provincial increase of 177,840 (4%) in the same period (B.C. Stats, 2012).

While located near the American border and within driving distance of major urban centers (e.g., Vancouver and Calgary), there are physical barriers (e.g., high mountain passes) that contribute to many Kootenay residents feeling isolated from the rest of the province (Breen, 2012a). However, this physical location does not limit their potential to innovate. Resiliency and committed regional/local actors provide the region with an innovative potential that exceeds

¹ All the data collected from BC Stats represents information from 2012 when the empirical data was collected.

what the innovation literature would predict for an isolated rural area. The supports for innovation, an indication of this innovation potential, and examples of innovation will be highlighted in the following section.

Innovation Policy and Support Institutions

Innovation literature emphasizes the need for support structures to help foster innovation in the private sector. Government departments are typically referenced as a source of financial as well as technical resources, post-secondary institutions as sites for research, and the private sector as actors responsible for the commercialization of research and development activities. This triple helix partnership is deemed important to innovation as it combines the ideas, abilities and resources of these important innovation actors (Etzkowitz, 2008). Foray et al. (2012) have expanded the triple helix theory to include a fourth actor: non-government organizations. Examples of such organizations involved in the economic development sphere of regional development include planning boards, business development centers, and agencies such as Community Futures Development Corporations. Given the emphasis placed on these partnerships and supports in previous innovation research, supports for innovation within the Kootenays were examined.

From an economic development perspective, innovation policy and programs/funds that support innovation are key mechanisms for strengthening the private sector and maintaining a competitive edge in the global marketplace (Pike et al, 2008). The following sub-sections will outline the programs and support mechanisms offered by organizations deemed critical to innovation in the Kootenays. While some programs focus on financial supports such as grants or loans others facilitate partnerships, mentoring, and other learning-based exercises.

Innovation Councils

In 2011, the BC Social Innovation Council was formed to provide recommendations to the Parliamentary Secretary for Non-Profit Partnerships and the Ministry of Social Development. These recommendations sought to enhance social innovation in the province (BC Social Innovation Council, 2013). The Council's 2012 report provided a series of action-oriented recommendations to policy-makers:

- *Supporting Social Enterprise:* 1) social enterprise investment tax credits; 2) supportive procurement; 3) social impact bonds; and 4) inclusion of social enterprise in SME programs and supports.
- *Legislative Enablement:* 1) Community Contribution Companies (CCCs) as a new structure to raise capital; and 2) work with provincial and territorial counterparts and the federal government to address issues with non-profit charitable status.
- *Social Innovation Labs:* social innovation labs to work towards strategies to address provincial and regional challenges through a collaborative effort among multiple levels of government, non-profit groups, the private sector, and academia.
- *Engaging Communities:* 1) online community platform to share success stories, generate new ideas and match social innovators with mentors, funders and collaborators (see

<http://www.hubcapbc.ca/>); and 2) targeted strategy to build social innovation and entrepreneurship in BC Aboriginal communities.

- *Learning and Research*: 1) network of education, training, learning, capacity building and community-based research; and 2) continued effort through “Partners for Social Impact.”

(BC Social Innovation Council, 2012).

British Columbia also has crown agencies dedicated to fostering innovation through supports for technology and entrepreneurship. The British Columbia Innovation Council is the provincial authority for this initiative, but regional councils exist as well (BCIC, 2014). In the Kootenays these innovation councils are the Kootenay Rockies Innovation Council (KRIC) and the Kootenay Association for Science and Technology (KAST). Each council is responsible for overseeing innovation support in the region; KRIC serves the east and KAST serves the west. The following tables (Table 1 and Table 2) outline their services:

Table 1: Kootenay Rockies Innovation Council Programs

Program	Description
Manufacturing and Technology Sector Initiative	Overarching strategy to retain and improve the regional situation for businesses.
Business Retention and Expansion	Through this program KRIC worked with KAST, the Columbia Basin Trust, the Columbia Basin Rural Development Institute, and 179 manufacturing and technology firms. This allowed KRIC to better understand the sectors, challenges, and required supports in the region. These findings were given back to communities to implement and make their region most hospitable to firms.
The Basin Business Sherpa	The KRIC employs several business coaches with different backgrounds and specialties to coach regional businesses. These free services include progress tracking, marketing and product advice, and creating an awareness of business development resources.
The Basin Business Blender	This was a networking event hosted by the KRIC at the College of the Rockies.
Business Coaching	KRIC staff work with new firms on all aspects of business: Human resources, marketing, planning, developing ideas, succession planning, and finding resources.
Venture Acceleration Program	This is a fee-based program that involves KRIC staff working with firms to deliver structured venture development services.

Source: Kootenay Rockies Innovation Council, 2013

Table 2: Kootenay Association for Science and Technology Programs

Program	Description
Manufacturing and Technology Sector Initiative	See KRIC description
KASTmba	KAST staff will work with businesses to provide free networking opportunities, mentoring, and coaching to new entrepreneurs. KAST will also work with other, senior businesses to allow mentoring and networks to form in the private sector.
Ask an Expert: Legal	This program involves a partnership between KAST, Community Futures, and Leon Pigott. The program offers firms free legal advice from lawyer, Leon Pigott on industry, market, and firm level legal matters.
Commercialization Voucher	This program is offered through KAST, the British Columbia Innovation Council, and Mitacs. It offers a \$15,000 voucher to graduate students and entrepreneurs that are seeking to the market quality of a new product. This funding will generate faster commercialization of feasible products and increase private activity.

Source: Kootenay Association for Science and Technology, 2013

In addition to these programs, KAST and KRIC regularly work with firms and communities to improve the business community and foster innovation. The councils create multiple forums for firms to meet and interact such as networking events, workshops, and presentations. These are excellent resources for firms and other organization to learn and form links with the councils, other businesses, and public and non-profit agencies.

The Columbia Basin Trust

The Columbia Basin Trust was formed in 1995 by the citizens of the Basin who lobbied government for recognition of damages caused by water storage and lack of public consultation under the Columbia River Treaty. The Trust was formed under a binding agreement with the British Columbia provincial government that granted:

- “\$276 million to finance power project construction;
- \$45 million, which CBT used as an endowment; and
- \$2 million per year from 1995 to 2010 for operations”

(Columbia Basin Trust, 2013)

These funds allow the Trust to administer various programs to take advantage of opportunities that improve the social, economic, and environmental well-being of their region (see Table 3 for a review of some of the Trust’s program). The Trust’s community work extends into climate change, water issues, youth, social enterprise training, and broadband initiatives. The Trust provides beneficial services to students and young adults attending post-secondary institutions in the form of awards and bursaries. It should be noted that the boundaries of the Trust differ from

those of the Kootenay Development Region, excluding the Boundary portion of the Kootenay Boundary Regional District, as well as extending north of the Kootenay Development Region. However, the Trust is such an important agency in the region that one person interviewed for this project stated that for those not included in the Trust this is a challenge/missed opportunity.

Table 3: Columbia Basin Trust funding programs

Program	Description	Funding/Service
Arts, Culture, and Heritage Program	Offered through the Columbia Kootenay Cultural Alliance this fund is designed for artistic and cultural activities at multiple scales. This includes theatric tours and small scale community art projects.	Funding is need-based.
The Basin Business Advisors Program	This program supports small and medium enterprises by providing no-cost one on one business counselling and assessment services. This is carried out through business experts at CFDC.	Free business counselling/ assessment
Community Development Program	This program provides community actors with grants used to fund community-based projects. The Trust will then work with the actors to ensure completion.	Funding is need-based.
Community-Directed Youth Funds	This funding is to be used in communities seeking to enhance the opportunities or service directed to youth ages 12-19. This includes recreational, social, or cultural projects.	\$100,000 over a four year period.
Community Initiatives and Affected Areas Programs	These are the Trusts oldest programs and are available to regional actors seeking to support community initiatives. There is an annual \$3.6 million allocation for these programs.	A minimum of \$30,000 per incorporated municipality, regional district, or first nation's band.
Endowment Support for Community Foundations and Community Funds	The Trust is willing to match donations raised for community funds.	Will only match endowments \$25,000-\$50,000.
Environmental Initiatives Program	The Trust will support projects that seek to reduce human ecological impacts. This includes practical methods as well as education and awareness strategies.	Small Grants: less than \$10,000. Large grants: \$10,001-\$30,000.

Program	Description	Funding/Service
Social Grants Program	This program is designed to support various aspects of community well-being: health, families, seniors, innovation, collaboration, and sustainability.	Grants come from a \$1 million budget.
Training Fee Support Program	The Trust is willing to support individuals returning to a post-secondary institution or short-term training facility to benefit their employment.	Up to \$800 to cover part of the individual's tuition.
Youth Grants Program	This program will fund projects that produce direct benefits for people ages 12-29.	\$15,000
Youth Action Grant	This program is designed to encourage regional youth (12-19) to lead community based-projects. This includes social, economic, and environmental activities.	\$3000

Source: Columbia Basin Trust, 2013a

Community Futures Development Corporation

Another actor that supports innovation in British Columbia is Community Futures Development Corporation (CFDC). This organization was established by federal policy and is funded through federal and provincial contributions. Local CFDC offices provide business and community loans/grants for development and expansion initiatives and offer training support for organizations in their region. Community Futures maintains a strong presence in the Kootenays, with multiple offices across the region (e.g., Greater Trail, Grand Forks, Nelson, Cranbrook). These organizations regularly work with local actors to support day-to-day functions, enhance learning opportunities, and support the private sectors and communities (Breen, 2012).

British Columbia Applied Research and Innovation Network

The British Columbia Applied Research and Innovation Network (BCARIN) is a collection of colleges and research institutions throughout British Columbia that actively engage with businesses. Firms that are interested in conducting research are encouraged to apply to the network explaining their research need or question. This is then circulated through the network's members until one institution is tasked with conducting the research. The research institution and firm will then work together to address the situation and develop an appropriate solution. This network fosters quadruple helix partnerships as firms are connected to a post-secondary institution by a non-governmental organization; application for government funding or assistance would complete this model (Foray et al., 2012). In the Kootenays, the network members are College of the Rockies and Selkirk College (BCARIN, 2013).

National Research Council

At the federal level, the National Research Council (NRC) provides valuable funding opportunities to firms but also conducts and works with researchers. The Council will provide or support firm level research that will facilitate the commercialization of new or improved products or services or link firms with advanced researchers at recognizable institutions. Furthermore, NRC provides tax credits to firms that conduct their own research in an attempt to promote research and innovation. A notable funding program NRC provides is the Digital Technology Adoption Pilot Program (DTAPP). Through this program firms acquire the funding to purchase technologically advanced capital that will allow their firm to excel (National Research Council, 2013).

Other Provincial Supports

A general search of innovation on the British Columbia government website provides additional insight into the provincial support of innovation, including government departments that have innovation in the name and strategies or plans that report innovative approaches and are not already discussed above. Two provincial departments include innovation in their name: Social Development and Social Innovation and Technology, Innovation, and Citizen Services. None of these departments have an explicit innovation support program but they do fund initiatives and implement strategies that may support innovative actors (e.g., affordable housing, aboriginal research, higher learning, etc.). As far as strategies or plans that are allegedly innovative, the Province reports an innovative labor development plan (Ministry of Technology, Innovation and Citizen' services, 2014; Ministry of Social Development and Social Innovation, 2014).

In summary, there is a clear presence of innovation support agencies in British Columbia as well as specifically in the Kootenays. However, not all of those agencies offer substantial funding programs. The Columbia Basin Trust is by far the largest funding agency in the region but is limited to the Columbia Basin and does not include the Boundary portion of the Kootenay Boundary Regional District and extends beyond the Kootenay Development Region to the north. However, each support organizations does provide assistance locating resources from provincial and federal structures. Despite the appearance of innovation policy in the region and the financial capital available to the region some maintain that: *“there is no capital...that’s our biggest challenge.”* This suggests that the awareness and delivery of such supports could be improved and that programs must be promoted throughout the region. Functions of the Columbia Basin Trust and the program Invest Kootenay seek to address this challenge by linking investors with local actors.

Innovation Indicators

In addition to the primary data collected within the region for this study that is presented in the sections that follow, the research team obtained secondary data to examine traditional indicators of innovation in the region (summarized in Table 4). These indicators are divided into two types: measures of innovative capacity and indicators of innovation. The latter set of indicators represent traditional ideals of innovation, including invention, technology use, and attempts to access innovation financing. The following table provides an overview of each indicator, the reason for its selection, and context within the Kootenays.

Table 4: Kootenay Innovation Indicator Data

Indicator(s)	Justification/sources	Kootenay status
Innovation Capacity Indicators		
Availability of post-secondary institutions	Increased knowledge and experience generated in post-secondary institutions (Slaper et al., 2011; Rose et al., 2009; The Center for Innovation Studies, 2005).	Only two post-secondary institutions in the region: Selkirk College (includes RDI) and College of the Rockies. Universities of Calgary, British Columbia, Northern British Columbia, Victoria, and Lethbridge are the closest institutions outside the region.
Levels of post-secondary education	Education influences the quality of innovation within a given region (Slaper et al., 2011; Rose et al., 2009; The Center for Innovation Studies, 2005).	87.2% completed high-school (vs. 88.9% provincially), 14.3% hold bachelor's degrees or higher (vs. 24.1%), and 39.4% hold apprenticeships or trade diplomas/certificates (vs. 31.5%).
Training	The provision of training programs for employees may be correlated to organizational innovation; quantity and quality of training opportunities should be considered (OECD, 2005; Rose et al, 2009; The Center of Innovation Studies, 2005).	Training opportunities offered by Community Futures and the region's colleges. However, there is still room for improvement. 41% of the organizations interviewed have training budgets for staff.
Access to information technology and communications infrastructure	Martinus (2012) states that maintenance of various forms infrastructure is fundamental to networking, production, and innovating. Providing technological support systems will allow actors to function more efficiently.	Fiber Optic initiative was intended to provide internet to the majority of the region. However, several organizations stated that the bandwidth is still inadequate and cell service is poor.

Indicator(s)	Justification/sources	Kootenay status
Urban proximity	Slaper et al (2011) state that the distance an actor is from an urban area will determine its ability to innovate.	~400 km to Vancouver and 200 km to Calgary (from the region's edges). However, Cranbrook's population of 18,267 is considered urban.
Access to financing for innovation initiatives	The availability of programs and the ability of firms to apply for such programs are necessary to support innovative endeavors (The Advisory Committee on Measuring Innovation in the 21 st Century, 2008).	Some funding agencies include: Columbia Basin Trust, CFDC, KRIC, KAST, NRC, RDI, and BCIC. However, a lack of financial capital is identified as a major challenge in the region.
Networking	The OECD (2010) expresses the value networking for fostering innovation.	Some presence of networks depending on profession and department: planners network, BCARIN, Basin Business Blender, chambers of commerce, and CFDCs.
Innovation Indicators		
Productivity; Average income	Innovation is the prime driver of productivity increases and this, in turn, typically leads to increased wealth (Advisory Committee on Measuring Innovation in the 21 st Century, 2008; Andrew et al, 2009; Rose et al, 2009; the Center of Innovation Studies, 2005).	Provincial productivity statistic is 39.8 and average regional income is \$30,637 (unavailable at the sub-provincial level).
Applications for innovation support	The Advisory Committee on Measuring Innovation in the 21 st Century (2008) asserts that the number of applications directed towards funding agencies is illustrative of innovation efforts.	Countless applications have been submitted to and approved by the Columbia Basin Trust since its establishment. But data for this is largely unavailable.

Indicator(s)	Justification/sources	Kootenay status
Technology use	The level of and use of technology can indicate the level of innovation in an area (Slaper et al, 2011; OECD, 2010; OECD, 2005; Davies, 2010).	Enhanced broadband fiber optic internet in the region and some individual new technologies (e.g., new mapping technologies and GIS software). In the event internet service improves, new technologies will likely be more emergent.
Patents	Introducing new products and services into a region complies with traditional notions of innovation (Slaper et al., 2011; Rose et al., 2009; Davies, 2010; The Center for Innovation Studies, 2005).	Multiple (more than 30) patents in the last decade filed in the area. In 2010, there were 0.5 in East Kootenay, 2.33 in Central Kootenay, and 1.5 in Kootenay Boundary.

Sources: B.C. Stats, 2012; Breen, 2012; Community Accounts, 2013; OECD, 2012

Some of these indicators may not favor the Kootenays or other rural areas as they contain a clear urban-bias that will highlight urban success. Existing innovation literature is often urban focused (see Florida, 2002 and Wolfe, 2009 for examples). However, rural innovation is gaining support in the literature (see Davies, 2010a for example) and is of particular interest in the project’s study regions. The region has high levels of trade and apprentice talent to draw from, supported by two college level institutions, and the patent data for the Kootenays is surprisingly high. Every year in the last decade (2001-2010) at least one patent has been filed from the area with the majority being filed in Central Kootenay (OECD, 2012). The following section further highlights examples of innovation and innovation-related concepts within the Kootenay context.

Data Collection Results

The research team conducted 22 semi-structured interviews in the Kootenay region on the five project themes. Analysis was conducted using NVivo software to assist in searching for patterns in the interview data according to theme-based codes and sub-codes (See Appendix One). This section will provide an overview of findings related to several important innovation and learning topics, which provide indicators of the presence or absence of innovation and learning in regional development in the Kootenays. Notable examples of learning and innovation in the region that were highlighted by interview respondents are also presented. Because the themes within Canadian Regional Development are complex not all of the possible codes were present in each interview. Time restrictions and respondents’ personal experiences influenced the content and direction of each interview.

Innovation Support

In total this topic was discussed in 32% of the interviews (7/22). This topic includes any project, program or initiative that fosters/supports innovation within the region that is offered through government, business, and NGOs. This not only includes programs and innovation support projects but also actors that are critical to innovation.

Within this topic, respondents discussed several organizations that support firms or other organization that may be innovative. The first organization is the Columbia Basin Trust. This organization was created in 1995 under the Columbia Basin Trust Act to redistribute benefits gained from the Columbia River Treaty within the Basin region. One example of the Trust's programs, the Environmental Initiatives Fund, sponsors community-based environment projects. A second key organization is Community Futures Development Corporation. These organizations are present across Canada and provide training and financial support to businesses, such as the Self-Employment Fund, and organizations engaged in economic development. The innovation councils in the area, The Kootenay Rockies Innovation Council (KRIC) and Kootenay Association for Science and Technology (KAST), are two additional actors that work with the British Columbia Innovation Council to foster innovation in the region. Finally, the Lower Columbia Community Development Team (LCCDT) was noted by interview respondents for its work with other regional actors to address social and economic opportunities in the region that may indirectly foster innovation such as tourism promotion, securing affordable housing, and improving infrastructure.

Within this topic, respondents discussed two key support programs. The first program is Invest Kootenay, a municipally driven initiative. This program is organized by levels of government, business organizations, and different regional support agencies to encourage investment in the region. This supports emerging enterprises by attracting interest to a potentially overlooked region. The second is a 350 program which was introduced to the region by an individual from America, working in the region. This is an informal program that involves citizens spending \$50 on three companies in their region within a given timeframe. This facilitates support for local firms and rewards innovators.

A minority of respondents stated that there was support for high risk investments in the region. These discussions mostly focused on two important support agencies: the Columbia Basin Trust and Community Futures. Both organizations offer programs to businesses and communities (government, community groups, and NGOs) to ensure the development and continuity of their regions. It was mentioned as a challenge to be located in the Boundary portion of the Regional District of Kootenay Boundary, which is outside of the Columbia Basin Trust catchment area. Furthermore, a majority of respondents (82%) cited access to capital as a challenge in the region.

Openness to Creativity and Examples of Innovation

In total this topic was discussed in 91% of the interviews (20/22). Related codes captured examples of openness to creativity, risk, and change in the region and/or within a respondent's own organization. This includes examples of new products, services, processes and initiatives as well as support for this openness within the region.

Many respondents (73% or 16/22) stated that their organization had introduced a new or improved version of a product, service, process or initiative in the last 3-5 years. Because many interviewees represented government organizations, most of these novelties were improved plans or strategies that dealt with such issues as economic development, watershed management, and business retention and expansion. For example, in response to the outbreak of the Mountain Pine Beetle that negatively impacted BC forests, Beetle Action Committees were established to distribute funds from different levels of government (primarily the Ministry of Natural Resources and private donors to ensure the sustainability of the provinces forest industry. Other interesting responses included a move towards alternative forms of energy such as biofuels to contribute to the green economy. A notable example would be extensive renovation made to a building in Trail that produced geothermal heating. Another technological advancement in the region is the development of a new GIS system by the department of planning and development services in the regional district of East Kootenay. Another notable sub-regional initiative is the planning that resulted in multiple spinoff industries, such as developments in the service sector and recycling, in the Trail area that built on the exiting economic activity from Teck Metals Ltd. This is an excellent example of reinvesting in the region and diversifying into new regional industries. A key regional development that benefits multiple actors is the introduction of fibre optic internet services. This technological infrastructure allows better communication and is more attractive to those considering relocating to the Kootenays.

Nearly two thirds of the respondents (64% or 14/22) discussed a presence of a buy local initiative in the region. There was, however, no mention of a formalized policy that specifically favors or promotes local firms except in the discussion with a representative from East Kootenay where the municipal practice is to “*look locally.*” Generally, organizations stated that this buy local movement was largely supported and promoted informally by the local chambers of commerce who represented business interests. Furthermore, pursuing a 350 project provides some form of support for local firms. However, respondents stated that the region must deal with rural realities and cannot compete with firms in larger areas. Many people would rather shop at Walmart or in the United States where prices are lower than support local firms. The Invest Kootenay initiative is an example of governments, business groups, and other support agencies attempt to attract and retain investment in their region for the betterment of the regional business community.

Nearly two thirds of the respondents (64% or 14/22) stated that their organization or the region was open to change or new ways of doing things. This is perhaps unsurprising as it may be unlikely that individuals would label their own firms or organizations as conservative and unwilling to change. However, many of the respondents demonstrated a willingness to try new things, some of which are outlined above. However, several people also stated that an aging population that often fears change induced a conservative attitude in the region. The Columbia Basin Trust (2010) symposium revealed that many in the region preferred isolation from the rest of the province and resisted radical change. This admission was not present in the interview data but serves as an explanation for some challenges.

Learning Resources

In total this topic was discussed in 55% of the interviews (12/22). This topic sought examples of opportunities available to individuals to learn and resources that were allocated to learning

initiatives such as training. This could occur in the context of the firm (e.g., bringing in a trainer) or outside of the firm (e.g., attending professional development seminars/classes).

Most respondents that discussed learning resources represented support organizations whose staff were responsible for working with local firms/people and overseeing the implementation of development programs/policies. Only 41% of these organizations (9/22) allocated training budgets to their staff to ensure that employees engaged in professional development and improved their skills. These training budgets could finance workshop, conference, or class attendance. This also included inviting a speaker to an organization to train the staff in-house. For local government officials, it was noted that training is available through the Union of British Columbian Municipalities following every election.

The respondents mentioned three learning institutions in the region that support professional and individual skills development: Selkirk College, College of the Rockies, and an aboriginal center for excellence and learning. These institutions reportedly work with other colleges in other regions to provide better deliverables to Kootenay residents. There is university in the region but major universities such as Simon Fraser University, University of British Columbia, University of Northern British Columbia, University of Victoria, University of Calgary, and University of Lethbridge are within a day's travel from the region. Furthermore, Selkirk College does provide bachelor's degrees in Geographic Information Systems and Nursing. However, the universities appear to play a minimal role in the region as only Columbia Basin Trust explicitly discussed their association with the universities.

Some organizations such as Community Futures offer unique training opportunities to businesses, firms and regional organizations. These may include basic skills such as bookkeeping but also important business skills such as marketing strategies. These training sessions are either available upon request or on a semi-regular schedule. To tailor to the needs of their clients, staff regularly seek out what kind of training is needed in the area. Community Futures offices also have facilities that are available to provide a forum for learning or meetings, including video conferencing equipment.

Knowledge Infrastructure

In total this topic was discussed in 64% of the interviews (14/22). These codes sought examples of infrastructure that made the acquisition and diffusion of knowledge easier. This includes post-secondary institutions, new technologies, and technology centers.

Only 14% of the respondents (3/22) discussed the post-secondary institutions in the region. There are two public post-secondary institutions in the region: Selkirk College and the College of the Rockies.² While both of these facilities are important to the region not only for training and educational purposes, but economically "*the college is a big generator of the economy,*" several respondents stated that absence of post-secondary institutions in the region was a challenge. One respondent informed the team that there was no degree granting institution in the region and people seeking degrees must leave the region for a city (e.g. Victoria, Vancouver, Lethbridge,

² There are multiple other post-secondary institutions that have limited program offerings such as fitness, Chinese remedies, etc.

and Calgary). Only the Columbia Basin Trust stated that they had connections with post-secondary institutions in other regions including the University of Washington.

More than half of the respondents in the regions (55% or 12/22) discussed new technologies that had been introduced to their organization or the region. The most dominant discussion was centered on the quality of the Internet in the region. Many (approximately half) discussed the benefits of having broadband fiber optic Internet in the region; one such benefit is the ability to have telecommuters in the region. Telecommuters that establish their own firm were also given the unique title “*entrepreneurial nomads*” as their location is arbitrary as long as the Internet quality is adequate. Other responses focused on new technologies that had been introduced by individual firms. For example the RDKB in Trail introduced mapping technologies that were new to their organization (sensitive habitat inventory mapping) and new GIS software in the planning and development services department of the regional district of East Kootenay in 2011.

In the challenges section some respondents stated that infrastructure in the region was problematic. For example, a staff member of the regional district of East Kootenay stated that the Internet quality in the region was inadequate. This may be due to the size of the region; while the more populated portions of the Kootenays have reliable Internet service, others may not. Furthermore, it was mentioned that cell service is not adequate in all parts (remotes) of the region limiting mobile connections. However, some regional residents are not opposed to this limited service as it contributes to the rural lifestyle. It was also mentioned by several local government officials that an aging and declining population makes financing infrastructure expansion difficult. Moreover, a lack of industrial presence forces local governments to rely on residential taxes.

Knowledge Partners

In total this topic was discussed in 82% of the interviews (18/22). These codes sought examples of partnerships that form within the region among different categorized organizations and how these partnerships involve knowledge sharing. The authors also examined how the partnerships align with existing innovation literature.

One third of the respondents (36% or 8/22) discussed intergovernmental partnerships. Many of the partnerships discussed included the municipalities and the regional districts. A recurring partnership was between the mayors of the tri-city mayors; mayors of Castlegar, Trail, and Nelson, who interviewees indicated meet regularly. Partnerships appear to form between mayors within the same geographical area in various combinations, with some attempts at formalized groups. These partnerships can lead to the sharing of resources, ideas, and may lead to jointly managed initiatives. Another notable example beyond the region would be the Union of British Columbia Municipalities that includes local governments from all of British Columbia. Some municipalities also form partnerships with provincial or federal departments such as Department of Fisheries and Oceans, the provincial Health Board and School Board, or the Department of Jobs, Tourism, and Skills Training on specific projects in the region. This would also include government institutions such as the post-secondary institutions (especially Selkirk College). A particularly notable intergovernmental partnership is the Carbon Neutral Kootenay’s project, which brought together 3 regional districts, 29 municipalities, and 5 Aboriginal groups that sought to reduce the environmental impact of industry.

Nearly half of the respondents (46% or 10/22) discussed cross-sector partnerships. This code was largely present when businesses or NGOs worked with government organizations (especially municipalities and regional districts). The Columbia Basin Trust is an example of an organization that partners with multiple actors to ensure successful development occurs in the region. There were also examples of government organizations such as municipalities working with business organizations such as a chamber of commerce to better business development in the region. A notable initiative was the project that brought Fiber Optic Internet into the region. This required the involvement of several levels of government, businesses, and local development organizations such as board representatives, the Columbia Basin Trust, and municipalities. This is only one example of several initiatives by multiple actors that sought to improve regional infrastructure.

Etzkowitz (2008) highlights importance of post-secondary institutions, governments, and the private sector collaborating as a triple helix to foster innovation. One example of this type of multi-sector partnership is the Basin Business Blender noted in the policy section above. This was a meeting of firms at the College of the Rockies, which was hosted and funded by Columbia Basin Trust and the Kootenay Rockies Innovation Council (a crown agency). Unfortunately regional actors are limited in their partnerships with post-secondary institutions as there are only two in the region and no university. This limits the potential for triple helix partnerships to form in practice.

One third of the respondents (36% or 8/22) discussed partnerships that involved actors whose affiliation was unclear or whose title was not disclosed by the respondent. Some examples of the latter include the Kootenay Rockies Innovation Council, Kootenay Association for Science and Technology, and the Northwest Power Planning Conservation Council. These are typically crown agencies that act independent of government and reflect local interests.

Clearly there are multiple partnerships in the Kootenay region but the Challenges to innovation section reveals why there may not be more. Many organizations stated that there was not enough collaboration in the region but the reason behind this was contested. Distrust (or fear of amalgamation), regional differences, personality differences, lack of Aboriginal participation, conservative/insular ideals, and municipal competition were all cited as potential reasons for the lack of collaboration. However, in the end interview participants felt that: “*resources are so thin that people are going to have to collaborate.*”

Reflection, Seeking, and Sharing Knowledge

In total this topic was discussed in 95% of the interviews (21/22). While these codes are similar to knowledge partnerships, the key difference is duration of knowledge transfer but also the recognition of self-reflection and learning within individual organizations. Partnerships can be long-term, formalized entities, while reflection or sharing knowledge can take place at a specific time and place. This code examines the function of ideas within the organization and between actors.

Many respondents (73% or 16/22) stated that they engaged in some form of reflection or evaluation process. Organizations that conduct reflection on their activities and processes often

do so informally by reviewing a project once it is completed to ensure its effectiveness and identify potential improvements: “*I know I reflect on it, what could we have done differently? What could we have done better or different for a different outcome?*” Organizations with a larger budget and mandated commitment to accountability, such as the Columbia Basin Trust, will bring in an external consultant to review their projects to ensure satisfactory performance. Only 36% of the respondents conduct formalized evaluations within their organization, either with the assistance of a consultant or around the board table reviewing their ongoing and completed projects. However, some organizations stated that they could not participate in effective reflection/evaluation because the time requirement was too significant. Many respondents stated that their organizations developed plans at the beginning of the year and reviewed these plans regularly to ensure completion of goals. Overall, the reflection process of most actors is a method for “*fine tuning*” projects to enhance productivity or implementation.

Two thirds of the respondents (68% or 15/22) stated that they actively shared ideas, experiences, and lessons learned with other individuals or organizations. Many respondents engage in informal sharing of ideas in public spaces such as coffee shops but there are multiple ways they share ideas. One such method is to participate in conferences that involve multiple actors exchanging information. For example Community Futures Network of Canada holds an annual conference that engages all Community Futures employees from across the country; this allows different actors to share ideas across jurisdictions. Other organizations noted the value of trade shows or events that allow firms and/or support agencies to showcase their success. Some organizations such as the Regional District of Central Kootenay have information sharing in their mandate with an “*open data sharing model*.” Participation in webinars, video conferences, and meetings are also methods of sharing ideas in the Kootenays. A key strategy to share ideas is networking; for example the Kootenay Rockies Planners Network consists of professional planners in the region who provide each other with valuable information when they meet at networking events or on a day-to-day basis.

Many respondents (73% or 16/22) stated that they participated in some form of information seeking. The most dominant form of information seeking was through public participation. Because many of the interviewees were government employees or organizations that are highly accountable to the public, they obtain a great deal of information and direction by consulting local stakeholders, for instance at town hall meetings. However, many organizations noted that there is often a sense of complacency in the region and public participation levels are relatively low. Further, in most cases public participation consists of the older, more conservative demographic. Other forms of information seeking include attending workshops or seminars; many organizations often share lessons learned at conferences internally so other staff can benefit from the sessions.

Challenges to Innovation

In total this topic was discussed by all interview respondents (22/22). Respondents shared examples of challenges to innovation that organizations face living in the region. These challenges could stem from different scales: local, regional, provincial, and national. The most prominent of these challenges were access to capital, trust, and demographics. Other, less discussed challenges were issues with human resources, policy conflicts, and leadership issues.

Most of the respondents (82% or 18/22) claimed that access to capital is a challenge to innovation and typical business in general. The access to capital in the Kootenays seemed to address two specific challenges; a lack of provincial/federal government support and a difficulty obtaining support from private banks. However, two organizations were cited as major benefits in terms of providing capital: Community Futures and the Columbia Basin Trust. Unfortunately the catchment area of the Columbia Basin Trust does not entirely overlap with the Kootenay Regional Districts and therefore the entire region is not eligible for their funding; many respondents felt that was a challenge. One respondent stated: *“there is no capital...that’s our biggest challenge.”*

Half of the respondents (50% or 11/22) stated that a lack of trust posed a challenge to innovation, usually because it limited collaboration and partnership development. There were several contributors to this challenge. The first was municipal competition; due to lack of resources and industry, multiple municipalities attempt to attract new firms to their community. Unfortunately, this competition creates hostility and isolates communities in the region. *“Some areas will be supportive and some areas will be in competition. And I am not sure if we are ever going to get past that to say that there is ever going to be a point in time where the municipalities are 100% going to let their guard down and participate openly and actively with each other.”* Other contributors to this challenge include personality conflicts and complacency. Many actors simply do not wish to participate in regional activities, partnerships, or decision-making, nor do many people want to share ideas. This insular attitude restricts collaboration and the potential for knowledge sharing. The final contributor to this challenge is isolation. Many organizations stated that they felt isolated from other parts of the province and even communities within their own region. This may represent a challenge but also a willingness to collaborate if the opportunity existed.

Half of the respondents (50% or 11/22) stated that regional demographics were an immediate and future challenge to innovation in the region. This challenge arose relatively consistently among the respondents. The problem stems from a lack of young people in the region, which is the result of a lack of high paying jobs, educational institutions, and urban amenities. Consequently, the region is now thought to be aging and declining; one respondent claimed that the average age in the Trail region is approximately 10 years older than the rest of the province. Many respondents claimed that older residents are often unwilling to embrace change or collaborate with others. B.C. Stats (2013) that illustrates a demographic concentration in the 45-64 group. Many of these individuals are retired or will be retiring in the near future therefore local firms and municipalities will experience further strain. *“...the population is holding steady and expected to drop a tiny little bit. The growth is baby boomers. And the loss is people my age and younger. Typical right, for rural BC?”*

Nearly half of the respondents (41% or 9/22) stated that there were some human resources issues in their organizations and/or in the region that challenged innovation. The first issue relates to the lack of young people in the region. Better opportunities in the cities have caused many young people to leave the region, which results in an older and in some cases more conservative generation constituting the workforce. Furthermore, as the older generation retires there is some concern on who will replace them. A sub-regional recreation director was concerned that new workers would lack the work ethic the baby boomers had. This was perceived as a concern

because many believed the younger demographic entering the workforce, lacked innovative ideas and adequate motivation. Another discussion surrounded a lack of skilled labor or workers that were adequately trained. Unfortunately, the young people who leave to acquire training often fail to return to the region.

One third of the respondents (36% or 8/22) discussed barriers to innovation that resulted from policies or a policy conflict. The most dominant discussion pertaining to this challenge was an urban policy bias that induced a retreat from rural policies and programs. The majority of funding programs and investments are directed to urban areas (e.g., Victoria and Vancouver), shifting much of the infrastructural responsibilities to the regional districts and municipalities. In other words: *“There is no official policy around rural development either federally or provincially. And so we are screwed right.”* One respondent stated that most government officials maintained a reactive approach to problems rather than proactive. This passive, anti-rural perception is a major threat to rural innovation in the Kootenays.

Most of the respondents (82% or 18/22) mentioned a challenge that did not fit within any of the above codes. However the ‘other’ code does represent two commonly discussed challenges in the region. The first is location/distance from cities and the “epicenter” of amenities; 36% of the respondents (8/22) claimed that the region’s remote location prevents industrial attraction as their infrastructure cannot compete with urban areas. Furthermore, the distance from the province’s political core places the region at a disadvantage acquiring government funded projects. The second challenge is the infrastructure in the region. While the Internet has experienced improvements, not all the region enjoys these benefits. This was suggested by staff members of the RDEK who claimed the Internet quality was inadequate. Cell coverage is still poor in remote parts of the region as well. Furthermore, poor infrastructure (i.e. roads, highways, and lack of railways) deters industry establishment in the region.

Moving Forward

The research team asked each of the respondents what they believed were future opportunities and what was needed or desired to better regional development in the Kootenays. The responses varied depending on the regional circumstances the respondent(s) encountered. For example, respondents in the Columbia Valley are planning to re-negotiate the Columbia Basin Trust Act to prolong the existence of that region’s key support agency and possibly expand the area included in the Trust’s catchment. Another key strategy for the region will be economic diversification. While the Kootenays currently have some large industries that generate exceptional employment in the communities, many respondents realize that these industries will eventually pass. Therefore, attracting small-scale firms such as agriculture and green sector operatives may provide more stable, long-term employment. To achieve this goal regional actors can promote the lifestyle the Kootenays can offer business owners: *“The Kootenays, people think differently. It’s landscape. It’s just gorgeous, people love living here. Lifestyle. It’s the lifestyle choice that we make. I love living here. I love that I can go and kayak and mountain bike and swim and ski.”* New sources of employment may also entice younger people to stay in the region or return following post-secondary education.

It was recognized that moving regional initiatives forward would require more collaboration between regional actors. This must involve more partnerships *“as opposed to communities doing*

it by themselves.” By working together, local communities become a more cohesive force that can strategically work with provincial and federal governments, develop business expansion and retention plans, retain or attract young people, and address other pressing issues the communities encounter through innovative strategies.

The region has recently benefitted from some new developments that have enhanced its economic capacity. This includes the establishment of the airport outside Castlegar and the spin-off industries that resulted from success with Teck Metals Ltd, in other words: “*the best prospect is focusing on those assets that we currently have.*” Building upon these strengths will lead to further development and create an appeal to businesses that may settle in the region. Respondents suggested that another unique strategy the region can employ is to embrace the senior’s society that is emerging in the region. With an aging population, many retirees are buying homes in the area and some require the assistance of health care professionals. This generates demand in the housing market and provides high paying jobs to younger people.

With connections to the global economy, regional actors do not have total influence over what will happen to the Kootenays. In other words: “*what happens surrounding us affects us.*” While many in the region believe they are isolated from the rest of British Columbia, a dramatic change in the provincial or national economy will have a direct impact on the Kootenays. However, regional/local actors working together with outside firms, government, and post-secondary institutions to create a culture of innovation will be prepared for whatever economic conditions the future will bring.

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Appendix One: Nvivo Code Descriptions

Topic	Nvivo Code	Explanation
Resources for Learning	Lr100	Places, entities, programs or types of materials where individuals and acquire knowledge.
Human resources	Lr110	Programs, leadership and investments that supports learning for staff, students, or the workforce in general.
Support for individual learning	Lr120	Learning processes or supports that provide knowledge to specific individual needs.
Knowledge Partners	Kp100	Working with another actor to give and receive knowledge or experience.
Intergovernmental	Kp110	Multiple government departments sharing knowledge; possibly at different scales.
Business-Business	Kp120	Multiple firms sharing knowledge.
NGO-NGO	Kp130	Multiple Non-Government Organizations sharing knowledge.
Cross-Sector	Kp140	Different actors from separate sectors sharing knowledge; examples of triple helix and quadruple helix partnerships were sought.
Reflection and Sharing	Rs100	Sharing/seeking ideas and reflecting on past experiences.
Internal reflection	Rs110	Looking back on previous ideas or experiences through formal or informal means.
Sharing	Rs120	Expressing experiences or ideas with others so they can learn from you.
Seeking	Rs130	Actively searching for new ideas from other organizations through research or interactions.
Innovation Support	Ip100	A project or program that explicitly addresses innovation.
Public Sector	Ip110	An innovation support project sponsored by a public organization.
NGO	Ip120	An innovation support project sponsored by a Non-government organization.

Topic	Nvivo Code	Explanation
Private Sector	Ip130	An innovation support project sponsored by a private firm or group of firms.
Examples of Innovation and Openness to Creativity	Op100	The respondent (and/or their organization) is open to new ideas or different ways of doing things.
New products or services	Op110	Introduced a new product or service in the past 3-5 years. This may also be a new initiative or process considered innovative by the respondent.
Self-employment	Op120	Evidence of entrepreneurship in the region/organization
Support High Risk Financing	Op130	Projects that may not be successful are supported; indication of risk taking.
Entrepreneur Training	Op140	Training is available that betters the region's entrepreneurial spirit.
Social Enterprise	Op150	An organization that improves regional social and economic well-being.
Support Local Actors	Op160	There is evidence of support for local firms or non-private organizations through consumerism
Culture open to change	Op170	The region or respondent is open to changing/adapting their way of doing things
Knowledge Infrastructure	Ki100	There are structures in place that foster the acquisition or dissemination of knowledge.
Presence of Post-secondary institutions	Ki110	There is a learning institution such as a college or university in the area (or comments that these did not exist = absence).
New Technologies	Ki120	Organizations have incorporated new technologies into their ordinary operations (or comments that technologies have not been incorporated = absence)
Technology Centers	Ki130	A concentration of technological actors in the region.
Challenges to Innovation	Ci100	Anything that limits actors' innovation or innovative capacity.

Topic	Nvivo Code	Explanation
Trust Issues	Ci110	Actors lack a willingness to work together due to a lack of trust.
Demographics	Ci120	Problems with the regional population limit the region's innovative potential.
Policy Conflict	Ci130	There is an existing policy that restrains an organizations ability to innovate.
Leadership Issues	Ci140	The leader or executive of an organization is preventing the organization from innovating.
Access to Capital	Ci150	An organization cannot access some form of capital such as human, financial, or resources.
Human Resource Issues	Ci160	An organization cannot innovate because of problems with staff or human interactions.

N.B. Each bolded heading is the overarching theme and subsequent headings are subthemes. Each theme had an unclear code (xx190) that simply reflects an unclear statement that did not fit with any other subtheme; for challenges, this code embodied all other challenges other than those assigned individual codes.

**Canadian Regional
Development**
A Critical Review of Theory,
Practice, and Potentials



**Développement régional
canadien**
Un examen critique des théories,
des pratiques et des potentiels

The *Canadian Regional Development: A Critical Review of Theory, Practice and Potentials* project is a multi-year research initiative funded by the Social Sciences and Humanities Research Council of Canada. The project is investigating how Canadian regional development has evolved over the past two decades and the degree to which Canadian regional development systems have incorporated New Regionalism into their policy and practice.

The project is conducting an empirical assessment of Canadian regional development using a multi-level network, mixed methods case study approach in four provinces: British Columbia, Newfoundland and Labrador, Ontario, and Québec. The assessment of regional development across the case studies is based on the five key themes of New Regionalism: i) collaborative, multi-level governance; ii) integrated versus sectoral and single objective approaches; iii) fostering knowledge flow, learning and innovation; iv) place-based development; and v) rural-urban interaction and interdependence.

The project is lead by Kelly Vodden of the Environmental Policy Institute, Grenfell Campus, Memorial University. The research team includes David Douglas (School of Environment Design and Rural Development, University of Guelph), Sean Markey (Geography, Simon Fraser University), and Bill Reimer (Sociology and Anthropology, Concordia University). In addition, graduate students at all four universities are engaged on the project.

Further information on the project can be obtained at <http://cdnregdev.wordpress.com>. The project has been financially supported in part by the Social Sciences and Humanities Research Council of Canada, the Leslie Harris Centre for Regional Policy and Development and the Rural Secretariat – Executive Council, Government of NL.

