Our Communities Care
British Columbia's Natural Gas and Oil
Supply Chain and Community Investment Study 2018-2021
TECHNICAL REPORT



January 13, 2023

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INTRODUCTION

iTOTEM Analytics is pleased to submit to the Canadian Association of Petroleum Producers (CAPP) the inaugural Province of British Columbia (B.C.) Upstream Natural Gas and Oil Supply Chain and Community Investment report, named **Our Communities Care.**

As Indigenous communities and municipalities focus on the challenges associated with pandemic recovery and climate change, CAPP recognizes the importance of profiling the businesses working each day to support climate transition and economic development.

Our Communities Care is an invitation for British Columbians to learn more about the Indigenous and local businesses and organizations who work daily to make B.C.'s upstream natural gas and oil industry one of the safest, least carbon intensive and most stringently regulated energy sectors in the world. The natural gas and oil supply chain in British Columbia is critical to Canada's ability to meet the growing demand for responsibly produced affordable energy both at home and globally.

Branded **Our Communities Care** (OCC) is a recognition that B.C.'s world-class natural gas resource is stewarded by Indigenous Nations and municipalities, in every region of the province, from an energy-efficiency combustion engineering firm in Victoria to an environmental planning consultant in Nelson, to a metal fabricator in Parksville, to an Indigenous-owned earthworks supplier in Wonowon, to a construction company in Kitimat. Your neighbours and friends most likely work in the industry, either directly or indirectly.

Incubating and supporting businesses in B.C.'s natural gas and oil sector promotes a viable energy transition with durable jobs and the business opportunities necessary to spur the innovations and climate solutions required to advance decarbonization. Importantly, a healthy Indigenous and local natural gas and oil supply chain supports reconciliation and backstops B.C.'s economic recovery.



with the best practices in Indigenous and local content reporting, as expressed by the ambitions of the 'Mining Shared Value - Local Procurement Reporting Mechanism' and the 'National Indigenous Economic Strategy for Canada', CAPP members provided iTOTEM with all data on procurement transactions between 2018-2021. Goods, materials, and services purchased from B.C.-based businesses working in the upstream operations of the B.C. natural gas and oil sector were included. The study's findings captured 100% of the annual B.C. upstream capital and operating budgets of CAPP members participating in OCC, which represented roughly 90% of natural gas production in the province at the time'.

Project Objectives

The objectives of the OCC project included:

- To discover the provincial and regional economic impact of natural gas development through supply chain expenditures;
- 2. To gain a better understanding of the variety of suppliers, including Indigenous-affiliated, supporting the natural gas sector, and their geographic distribution;
- 3. To report on the community investment contributions made; and
- 4. To test the effectiveness of a new methodology of supply chain data collection from a cross sectional representation of natural gas producers.

¹ The upstream industry expenditures did not include large diameter transmission pipelines, LNG facilities, refineries, or other downstream segments of the natural gas and oil value chain.



KEY FINDINGS

The key findings of the **OCC** study are grouped into the following themes:

- 1. Geographic reach of the upstream natural gas and oil supply chain in B.C.
- 2. Economic impact by business type
- 3. Indigenous participation in the natural gas and oil supply chain
- 4. The supply chain benefits of reclamation-related activities
- 5. Community investment contributions

Geographic Reach

- OCC captured \$4.7B² worth of expenditures spent on goods, materials, and services on B.C. natural gas operations with more than 2400 B.C.-based suppliers, located or affiliated with some 140 B.C. municipalities and Indigenous Nations.
- From 2018 to 2021, the annual B.C. supply chain reported by each OCC participant ranged from \$33M to \$430M. During the period 2018 to 2021, the median annual expenditure reported was \$163M, and the mean annual expenditure was \$168M among all participating members.
- From 2018 to 2021, each OCC company contracted with **400 businesses** on average.
- Fort St. John had the most supply chain benefits from B.C.'s natural gas and oil sector, accounting for 52% of total supply chain expenditures reported by OCC participants between 2018 and 2021.
- Notably, the natural gas sector supply chain had a significant impact on urban British Columbia. Expenditures by OCC companies with operations in Metro Vancouver increased by 25% between 2018 and 2021.
- The **top ten municipalities** in terms of supply chain spending were:
- 1. Fort St. John

5. Wonowon

9. Creston

- 2. Dawson Creek
- 6. Charlie Lake

10. Fort Nelson

3. Pouce Coupe

7. Prince George

4. Vancouver

8. Rolla

² In scope was an analysis of B.C.-based suppliers who provide goods, materials, and services to B.C.'s upstream natural gas and oil operations. In total, B.C. natural gas producers invested approximately \$13.4 billion into the Canadian supply chain during the reporting period.



The **top ten** municipalities with the greatest number of businesses involved in the natural gas supply chain were:

- 1. Fort St. John
- 2. Dawson Creek
- 3. Vancouver
- 4. Charlie Lake
- 5. Fort Nelson
- 6. Chetwynd
- 7. Prince George
- 8. Surrey
- 9. Taylor
- 10. Pouce Coupe

Economic Impact by Business Type

- OCC participants submitted company cost codes used to categorize their B.C. supply chain.
- More than 3000 cost codes were filed.
- Four main categories and 17 subcategories were established to standardize the description of the goods, materials and services offered by contracted businesses.
- Each vendor was sorted into one or more of these categories, based on the cost code submitted with each transaction.
- See Appendix A for a description of the categorization methodology.
- The supply chain master category with the highest expenditure between 2018 and 2021 was Parts, Equipment, and Capital Assets. Construction companies made up 11% of the vendor count reported by OCC, but these businesses accounted for nearly 22% of the total expenditures in OCC.
- The average annual expenditure on construction-related services reported was \$260M.
- The second and third subcategories with the most expenditures were Equipment
 Services / Maintenance and Drilling / Completion / Downhole Services with a
 respective average annual procurement of \$195M and \$176M per instance.
- Despite the fact that Fort St. John led in almost all supply chain expenditure categories, some goods, materials, and services were also prominent in other communities. For example, the study discovered that Vancouver outperforms other municipalities in terms of chemical suppliers to industry. In Dawson Creek, health and safety services had a high level of supply chain participation.



Indigenous Participation

- Aligned with the Government of B.C.'s commitment in the *Declaration on the Rights of Indigenous Peoples Act (DRIPA) Action Plan* to 'create opportunities for Indigenous people to be full partners in the economy', the B.C. natural gas sector spent ~\$540M with some 100 B.C.-based Indigenous-affiliated businesses and organizations between 2018-2021.
- The B.C. Assembly of First Nations' Northeast Region had the largest count and spend of Indigenous-affiliated vendors, while the Lower Mainland Southwest Region had the second highest count and spend in B.C.'s natural gas industry.
- 4% of the businesses engaged in B.C. natural gas sector were Indigenous affiliated;
 whereas Indigenous-affiliated vendors represented 11.5% of B.C.'s total supply chain spend.
- By 2021, the annual amount of supply chain expenditure with Indigenous-affiliated businesses **increased by 148% over 2018** expenditures; similarly, the proportion of B.C.'s total natural gas supply chain expenditures attributable to Indigenous-affiliated supply chain spend increased from **6.4% in 2018 to 14.6% in 2021**. For comparison, Public Services and Procurement Canada (PSPC), Indigenous Services Canada (ISC) and the Treasury Board of Canada Secretariat (TBS), are striving for a minimum of 5% of the total value of public contracts be held by Indigenous vendors³, effective 2024.
- The OCC also reported on the different types of Indigenous-affiliated businesses operating in the natural gas sector. Notably, Indigenous-affiliated vendors provided all 17 goods, materials, and services available to OCC participants. As with the provincial supply chain distribution, the Consumables, Utilities and Logistics category overperformed. But overall, the Equipment Services / Maintenance subcategory, overperformed in terms of expenditure earned by Indigenous-affiliated businesses in B.C.
- Overall, 7% of B.C Consumables, Utilities and Logistics companies were Indigenousaffiliated. Yet, these Indigenous-affiliated companies represented approximately 23%
 of the total Consumables, Utilities and Logistics category expenditure in B.C.

³ Definition: Indigenous peoples own and control at least 51% of the enterprise, or for joint ventures, eligible Indigenous businesses can partner with non-Indigenous businesses. It must be demonstrated that 33% of the value of the work performed under the contract will be performed by the Indigenous business. Source: https://www.sac-isc.gc.ca/eng/1617820318610/1617820524323#a1



Reclamation-related Activities

Reclamation and remediation activities were reported by all OCC participants.

- Approximately **\$260M** in expenditures were reported for reclamation and remediation activities in B.C. between 2018-2021.
- An estimated 280 businesses were contracted to support reclamation and remediation services
- 11% of these businesses were Indigenous-affiliated.

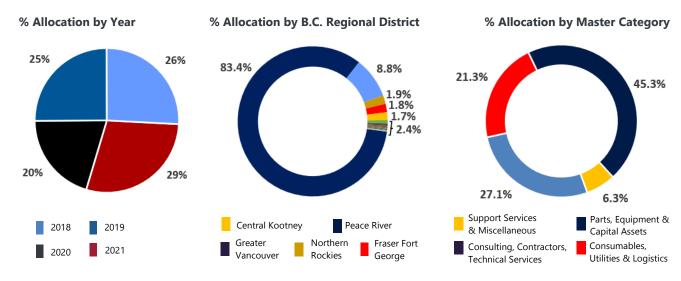
Community Investment Contributions

- OCC participants also reported contributing approximately \$16.8M in community investments between 2018-2021.
- Sponsorships, donations, and in-kind contributions supported more than 350 organizations in over 25 municipalities and Indigenous Nations across B.C. between 2018 to 2021.
- Approximately \$13M was made in community investments with Indigenous Nations or affiliated organizations.



PROVINCE OF B.C. SUPPLY CHAIN BENEFITS AND CONTRIBUTIONS BETWEEN 2018-2021

Total Supply Chain Spend on B.C. Operations with B.C. Businesses 2018 – 2021: \$4.7B



Note: An amount of \$257M is excluded as non-supply chain spend. This exclusion consists of taxes, fees and levies, and other internal expenses. Community Investments is reported separately.

Supply Chain -----

~2400

B.C.-based businesses

~100

B.C.-based Indigenousaffiliated businesses ~140

Municipalities and Indigenous Nations associated associated with supply chain

Contributions -----

~280

B.C.-based businesses active on reclamation-related activities

~350

B.C. organization benefitting from community investments

\$16.8M

Community investment contributions in B.C.



SECTION ONE

THE GEOGRAPHIC REACH OF THE NATURAL GAS SECTOR SUPPLY CHAIN IN B.C.



SECTION ONE: THE GEOGRAPHIC REACH OF CAPP'S SUPPLY CHAIN

Section Description

The geographic reach of CAPP's supply chain was evaluated:

- Province-wide
- By Municipality

Key Insights

- More than ~ \$4.7B of materials, goods and services were procured from ~ 2400 businesses located or affiliated with ~ 140 municipalities, unincorporated communities and Indigenous Nations in B.C. between 2018-2021 by OCC companies.
- On an average **400** businesses were contracted annually by each OCC company from 2018 to 2021.
- Fort St. John had the greatest number of businesses active in B.C. natural gas operations. Fort St. John was also the municipality with the greatest supply chain spend.
- Notably, the natural gas sector supply chain also had significant impact on urban B.C.
 Expenditures made by OCC companies with businesses based in metro Vancouver increased by 25% between 2018-2021.



1.1 PROVINCE-WIDE IMPACT OF B.C. OPERATIONS

More than 2400 businesses located in some 140 Municipalities and Indigenous Nations provided ~\$4.7B of goods, materials and services to the natural gas sector between 2018 - 2021.

SUPPLY CHAIN SUMMARY	2018	2019	2020	2021
TOTAL SUPPLY CHAIN SPEND ON B.CBASED BUSINESSES	\$ 1.25B	\$ 1.17B	\$ 943M	\$ 1.3B
NUMBER OF B.CBASED BUSINESSES ACTIVE	1,670	1,650	1,565	1,600

The table below shows the change in spend and count in the upstream sector year over year between 2018-2021, and the percentage change over four years.

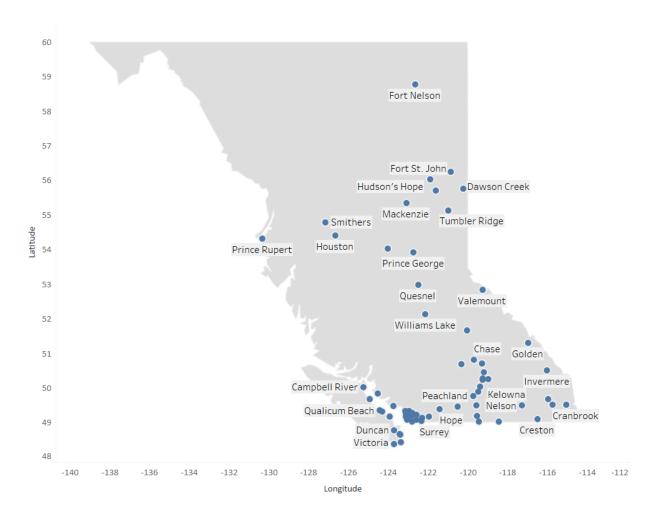
SUPPLY CHAIN TRENDS	CHANGE OVER TIME					
TRENDS	2018 TO 2019	2019 TO 2020	2020 TO 2021	2018 TO 2021		
ANNUAL CHANGE IN SUPPLY CHAIN SPEND	Decline of \$ 84M (-6.7%)	Decline of \$ 223M (-19%)	Rise of \$ 397M (+42%)	Rise of \$ 90M (+7.2%)		
ANNUAL CHANGE IN NUMBER OF VENDORS	Decline of 19 (-1%)	Decline of 86 (-51%)	Rise of 34 (2%)	Decline of 71 (-4.1%)		

Note: the annualized increase/decrease is shown, as well as the increase/decrease between the beginning of the reporting period in 2018 to the end in 2021.

Shown on the next page is a heat map representing the number of businesses province-wide, by municipality, which provided goods, materials and services to B.C.'s upstream natural gas and oil sector.



THE SUPPLY CHAIN IMPACT HAS A PROVINCE-WIDE FOOTPRINT



• The municipality of Fort St. John led B.C. supply chain activities in terms of spend (\$2.5B), as well as count of businesses engaged (~870). Other municipalities which served as hubs for B.C.'s natural gas sector's supply chain activities between 2018-2021 were Dawson Creek, Pouce Coupe, and Vancouver.



1.2 SUPPLY CHAIN TOP 10

OCC considered the supply chain impact province-wide based on:

- The dollar value spent on the supply chain by municipality; and,
- The number and types of businesses by municipality.

The top 10 municipalities with the most supply chain spend, and the municipalities with the greatest number of natural gas supply chain businesses are presented below.

B.C. MUNICIPALITIES WITH THE GREATEST SUPPLY CHAIN SPEND

MUNICIPALITY	SPEND
FORT ST. JOHN	\$ 2.5B
DAWSON CREEK	\$ 632M
POUCE COUPE	\$ 408M
VANCOUVER	\$ 337M
WONOWON	\$ 132M
CHARLIE LAKE	\$ 120M
PRINCE GEORGE	\$ 83M
ROLLA	\$ 78M
CRESTON	\$ 77M
FORT NELSON	\$ 40M

All values are approximate.

B.C. MUNICIPALITIES WITH THE GREATEST NUMBER OF BUSINESSES

MUNICIPALITY	SUPPLIER COUNT
FORT ST. JOHN	870
DAWSON CREEK	440
VANCOUVER	120
CHARLIE LAKE	110
FORT NELSON	100
CHETWYND	55
PRINCE GEORGE	50
SURREY	40
TAYLOR	40
POUCE COUPE	40

All values are approximate. See **Appendix A** for a complete list of municipalities with the greatest number of vendors and the most supply chain spend.



SECTION TWO

SUPPLY CHAIN IMPACT BY GOOD, MATERIAL AND SERVICE TYPE



SECTION TWO: SUPPLY CHAIN IMPACT BY GOOD, MATERIAL AND SERVICE TYPE

Section Description

- To contextualize the impact of the natural gas sector on the B.C. economy, the categories of goods, materials and services accessed were studied.
- OCC grouped businesses into standardized categories to analyze the expenditures and counts by supply chain category.

Key Insights

- The 'Construction' subcategory was the highest expenditure category between 2018-2021.
- **'Equipment Services/ Maintenance'** subcategory **had the most businesses** providing goods, materials and services to OCC companies, with some 1100 businesses active.
- Fort St. John had the most businesses representing all categories of goods, materials and services procured between 2018-2021.
- Similarly, Dawson Creek, Vancouver, Charlie Lake, Fort Nelson made the top five
 list by having the greatest number of vendors representing the most categories
 of goods, businesses and services accessed by OCC companies; this shows that
 these localities have a developed natural gas service sector.



2.1 SUPPLY CHAIN BY EXPENSE CATEGORY

The study grouped spends made by the natural gas sector by supply chain category to demonstrate the economic impact of the industry between 2018-2021.

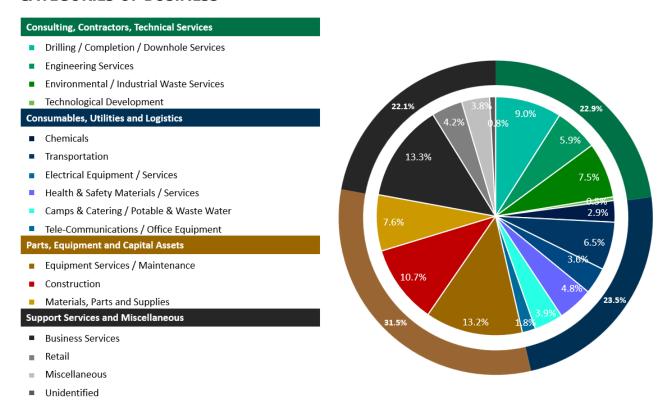
MASTER CATEGORY	SUBCATEGORY	SPEND
	Drilling / Completion / Downhole Services	\$ 705M
CONSULTING,	Engineering Services	\$ 233M
CONTRACTORS, TECHNICAL	Environmental / Industrial Waste Services	\$ 336M
SERVICES	Technological Development	\$ 3M
	SUBTOTAL	\$ 1.3B
	Camps and Catering / Potable and Wastewater	\$ 110M
	Chemicals	\$ 187M
	Electrical Equipment / Services	\$ 224M
CONSUMABLES, UTILITIES AND	Health and Safety Materials / Services	\$ 84M
LOGISTICS	Telecommunications / Office Equipment	\$ 11M
	Transportation	\$ 384M
	SUBTOTAL	\$ 1.0B
	Construction	\$ 1.0B
PARTS, EQUIPMENT	Equipment Services / Maintenance	\$ 778M
AND CAPITAL ASSETS	Materials, Parts and Supplies	\$ 313M
	SUBTOTAL	\$ 2.1B
	Business Services	\$ 105M
	Retail	\$ 13M
SUPPORT SERVICES AND	Miscellaneous	\$ 118M
MISCELLANEOUS	Unidentified	\$ 53M
	SUBTOTAL	\$ 290M
GRAND TOTAL		\$ 4.7B

See **Assumptions and Parameters** for a description of the categorization methodologies.



The pie chart below represents the count of businesses based on the different goods, materials and service categories in in B.C.'s natural gas supply chain. A supplier can also serve more than one category.

CATEGORIES OF BUSINESS



See Assumptions and Parameters in Appendix C for a description of the categorization methodologies.



2.2 DISTRIBUTION OF EXPENDITURES BASED ON THE TOP FOUR MUNICIPALITIES

Shown below is the distribution of spend based on the municipalities with greatest supply chain expenditures.

		Final City				
Master Category	Expense Category	Dawson Creek	Fort St. John	Pouce Coupe	Vancouver	
Consulting,	Total	21.59%	70.06%	1.62%	6.74%	
Contractors, Technical	Drilling / Completion / Downhole Services	22.13%	75.76%	0.06%	2.05%	
Services	Engineering Services	24.43%	69.41%	0.03%	6.13%	
	Environmental / Industrial Waste Services	18.02%	56.64%	6.77%	18.58%	
	Technological Development	1.38%	97.38%		1.24%	
Consumables,	Total	13.17%	61.24%	1.76%	23.84%	
Utilities and Logistics	Camps & Catering / Potable & Waste Water	13.56%	83.63%	0.01%	2.80%	
	Chemicals	6.67%	51.64%	0.73%	40.95%	
	Electrical Equipment / Services	4.44%	52.55%		43.00%	
	Health & Safety Materials / Services	26.86%	63.81%	0.28%	9.05%	
	Tele-Communications / Office Equipment	17.88%	34.55%	0.12%	47.45%	
	Transportation	20.12%	72.14%	4.44%	3.30%	
Parts, Equipment	Total	15.48%	59.56%	21.54%	3.42%	
& Capital Assets	Construction	10.22%	41.01%	43.04%	5.73%	
	Equipment Services / Maintenance	16.96%	81.44%	0.09%	1.50%	
	Materials, Parts and Supplies	30.91%	67.42%	1.47%	0.20%	
Support Services	Total	14.51%	74.94%	1.99%	8.55%	
& Miscellaneous	Business Services	19.35%	68.25%	0.48%	11.91%	
	Miscellaneous	13.92%	83.55%	0.08%	2.45%	
	Retail	18.77%	80.28%	0.06%	0.90%	
	Unidentified	0.20%	54.83%	16.09%	28.88%	

Note: the percentages of expenditure shown by master category and subcategory are based on the top four municipalities only. See **Appendix B** for a more detailed list of the top municipalities with the most expenditures in each category.



SECTION THREE

INDIGENOUS PARTICIPATION

SECTION THREE: INDIGENOUS PARTICIPATION

Section Description

The section addresses Indigenous-affiliated business participation.

Key Insights

- Approximately **\$765M was spent between 2018-2021** in B.C.'s natural gas supply chain with **135 Indigenous-affiliated businesses from across <u>Canada</u>**.
- Approximately \$540M was spent with some 100 B.C.-based Indigenous-affiliated businesses between 2018-2021, which is equivalent to 11.5% of B.C.'s total natural gas supply chain expenditures during that period, as reported by OCC companies.
- By 2021, the annual amount of supply chain expenditure with Indigenous-affiliated businesses increased by 148% over 2018 expenditures; similarly, Indigenous-affiliated supply chain spend, as a proportion of B.C.'s total natural gas supply chain expenditures, increased from 6.4% in 2018, to 14.6% in 2021 respectively.
- The count of B.C.-based Indigenous-affiliated businesses, as a percentage of the total B.C. supply chain increased marginally from 4.6% in 2018, to 5.5% in 2021. The overall increase in the count of Indigenous-affiliated vendors in B.C. stood at 14% by 2021.
- Fort St. John reported having the most Indigenous-affiliated businesses, with ~50 businesses being engaged by OCC companies. These Indigenous-affiliated vendors earned some \$350M, which is more than 60% of Indigenous-affiliated expenditures in B.C. between 2018-2021.
- Indigenous-affiliated businesses offered services in all **17-supply chain** subcategories.
- By count, 'Equipment Services / Maintenance' had the most Indigenous-affiliated businesses. In addition, this category also was the category with the greatest expenditures made with Indigenous-affiliated businesses.
- The second most prominent supply chain category with Indigenous-affiliated businesses, by **spend and count**, was **'Construction'**.



3.1 INDIGENOUS SUPPLY CHAIN

INDIGENOUS-AFFILIATED SPEND, VENDOR COUNT AND PERCENTAGE CHANGE

- By 2021, the annual amount of supply chain expenditure with Indigenous-affiliated businesses increased by 148% over 2018 expenditures; similarly, Indigenous-affiliated supply chain spend, as a proportion of B.C.'s total natural gas supply chain expenditures, increased from 6.4% in 2018, to 14.6% in 2021.
- Whereas the count of B.C.-based Indigenous-affiliated businesses, as a percentage of the total B.C. supply chain increased marginally from 4.6% in 2018 to 5.5% in 2021. The overall increase in the count of Indigenous-affiliated vendors in B.C. stood at 14%.
- This represents an opportunity for Indigenous and non-Indigenous businesses to pursue new partnerships.

	2018	2019	2020	2021	% CHANGE 2018-2021
INDIGENOUS SPEND (Amount)	\$ 79M	\$ 125M	\$ 143M	\$ 196M	148%
INDIGENOUS SPEND (% of B.C. Supply Chain Spend)	6.4%	10.7%	15.1%	14.6%	
INDIGENOUS VENDOR COUNT	77	87	89	88	14%
INDIGENOUS VENDOR COUNT (% of B.C. Supply Chain Vendor Count)	4.6%	5.2%	5.7%	5.5%	

Percentages reflect Indigenously affiliated vendors proportion of B.C. supply chain spend by B.C. based vendors. Vendor count is based on unique vendors reported each year.

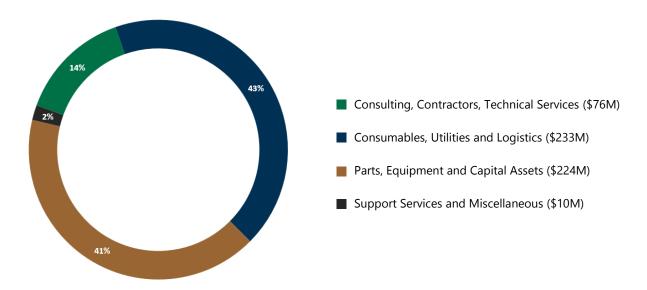


3.2 INDIGENOUS SUPPLY CHAIN LOCATION IMPACT

- The distribution of Indigenous-affiliated vendors was mapped according to the British
 Columbia Assembly of First Nations (AFN) 'First Nations in B.C. Interactive Map'.
 - ~ 83% of Indigenous-affiliated spend and ~75% of Indigenous-affiliated vendors were in the Northeast Region based on the AFN B.C. Interactive Map' boundaries. From a regional district perspective, this area covers the Peace River Regional District.
 - The second region with the highest Indigenous spend and Indigenous-affiliated vendor count, at ~7% and ~11% respectively, was the Lower Mainland Southwest Region or the Greater Vancouver Regional District.

3.3 DISTRIBUTION OF INDIGENOUS SUPPLY CHAIN EXPENDITURES BY CATEGORY

• The master category 'Consumables, Utilities and Logistics' (43%), with 'Camps & Catering / Potable & Wastewater' (14%) and 'Electrical Equipment / Services' (13%) being the main categories of supply chain activity. But overall, specifically the 'Equipment Services / Maintenance' (21%) and 'Construction' (19%) supply chain subcategories, out-performed other categories, when it came to the amount of expenditure earned by Indigenous-affiliated businesses; an estimated \$110M and \$100M were spent on indigenous-affiliated business in these subcategories respectively.





 Indigenous-affiliated businesses offered their services in all supply chain subcategories. By count, Indigenous-affiliated businesses were most active in the 'Equipment Services / Maintenance' categories. The table below shows the distribution of the Indigenousaffiliated vendors among the categories of goods and services offered.

INDIGENOUS-AFFILIATED BUISNESS PARTICIPATION IN NATURAL GAS SUPPLY CHAIN BASED ON CATEGORY

Category	~ Vendor Count
Consulting, Contractors, Technical Services	
Drilling / Completion / Downhole Services	60
Engineering Services	35
Environmental / Industrial Waste Services	55
Technological Development	1
Consumables, Utilities and Logistics	
Camps and Catering / Potable and Wastewater	35
Chemicals	15
Electrical Equipment / Services	20
Health and Safety Materials / Services	30
Telecommunications / Office Equipment	5
Transportation	50
Parts, Equipment and Capital Assets	
Construction	65
Equipment Services / Maintenance	75
Materials, Parts and Supplies	40
Support Services and Miscellaneous	
Business Services	35
Miscellaneous	20
Retail	20
Unidentified	1

Note: The spends with missing data/information/cost-codes were tagged as "Unidentified", which was less than 1%.



SECTION FOUR

RECLAMATION-RELATED ACTIVITIES

SECTION FOUR: RECLAMATION-RELATED ACTIVITIES

Section Description

This section reports the contributions made by the natural gas sector towards activities involving reclamation and remediation.

· Key Insights

- Approximately \$260M was spent in reclamation-related activities from 2018-2021, supported by some 280 businesses located in some 35 municipalities across B.C.
- Of these 280 businesses, 11% were Indigenous-affiliated businesses.
- 'Environmental / Industrial Waste Services' was the main supply chain category in terms of amount spent on reclamation.

4.1 RECLAMATION INVESTMENT BY YEAR

The following table depicts the annual spend on reclamation and remediation projects during 2018 to 2021.

B.C. RECLAMATION AND REMEDIATION SUPPLY CHAIN

	2018	2019	2020	2021
SPEND	\$42M	\$51M	\$63M	\$106M
VENDOR COUNT	115	145	170	195

B.C. ANNUAL CHANGE IN RECLAMATION & REMEDIATION SUPPLY CHAIN SPEND

B.C.-based vendors active in reclamation and remediation activities saw a consistent year over year increase in activity and spend between 2018-2021.

		2018-2019	2019-2020	2020-2021
CHANGE IN RECLAMATION & REMEDIATION SUPPLY CHAIN SPEND	AMOUNT	Rise of \$9M	Rise of \$13M	Rise of \$42M
	%	22%	25%	67%
CHANGE IN RECLAMATION &	COUNT	Rise of 26	Rise of 27	Rise of 24
REMEDIATION SUPPLY CHAIN VENDOR COUNT	%	22%	19%	14%



4.2 RECLAMATION INVESTMENT BY SUPPLY CHAIN CATEGORIES

• The a) 'Environmental / Industrial Waste Services', b) 'Drilling / Completion / Downhole Services', c) 'Construction' and d) 'Equipment Services / Maintenance' were the top four supply chain categories, representing more than 80% of the spend made with B.C.-based businesses on reclamation-related activities.

BUSINESS PARTICATION IN RECLAMATION-RELATED ACTIVITIES CATEGORY

Consulting, Contractors, Technical Services

- Drilling / Completion / Downhole Services
- Engineering Services
- Environmental / Industrial Waste Services

Consumables, Utilities and Logistics

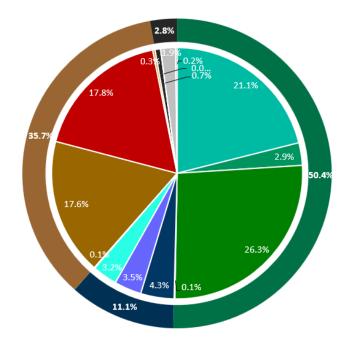
- Chemicals
- Transportation
- Health & Safety Materials / Services
- Camps & Catering / Potable & Waste Water
- Tele-Communications / Office Equipment

Parts, Equipment and Capital Assets

- Equipment Services / Maintenance
- Construction
- Materials, Parts and Supplies

Support Services and Miscellaneous

- Business Services
- Retail
- Miscellaneous
- Unidentified



Note: The spends with missing data/information/cost-codes were tagged as "Unidentified", which was less than 1%.

SECTION FIVE

COMMUNITY INVESTMENT

SECTION FIVE: COMMUNITY INVESTMENT

Section Description

This section reports the contributions made by the OCC companies to community initiatives and organizations.

Key Insights

- Approximately \$16.8M in community investments were made to more than 350 organizations across B.C. in over 25 Indigenous communities and municipalities from 2018-2021.
- The **top three specific areas of community investment**, based on the number of recipients **who received contributions during the study period in B.C. were:**
 - a. Indigenous community investment
 - b. Business improvement organizations
 - c. Educational support
- More than **\$13M** in community investments supported over 75 Indigenous communities and organizations.

5.1 COMMUNITY INVESTMENTS DISTRIBUTION BY YEAR

Approximately \$16.8M was donated to support some 350-based community initiatives and organizations. The table below shows the annual distribution of community investments between 2018 and 2021.

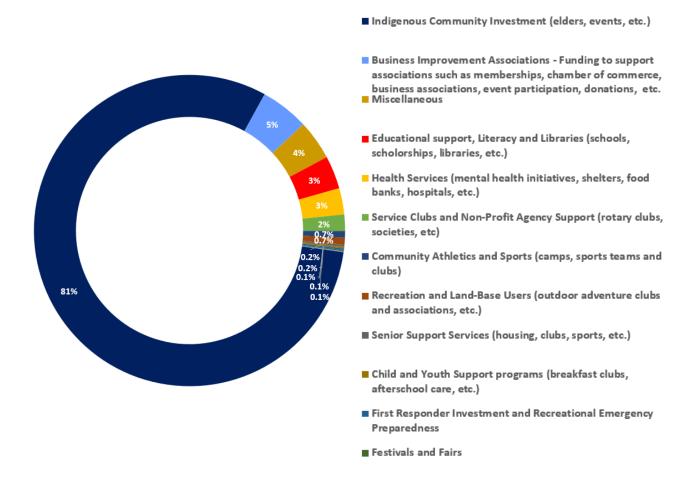
COMMUNITY INVESTMENT SPEND AND RECIPIENT COUNT

	2018	2019	2020	2021
FUNDING	\$3.4M	\$4.0M	\$3.7M	\$5.7M
NUMBER OF ORGANIZATION SUPPORTED, INCLUDING INDIGENOUS	150	145	120	130



5.2 AREAS OF COMMUNITY INVESTMENT

The contribution towards community investment benefits is distributed in the following categories:



The top three specific community investments made were in the following areas:

- 1. Contribution to Indigenous communities and organizations
- 2. Business Improvement Associations
- 3. Educational support, Literacy and Libraries (schools, scholarships, libraries, etc.)



5.3 INDIGENOUS COMMUNITY INVESTMENTS

~\$13.6M was contributed to support more than 75 Indigenous-affiliated community initiatives and organizations across B.C. The table below shows the distribution of community investments made towards Indigenous-affiliated organizations between 2018 and 2021.

INDIGENOUS COMMUNITY INVESTMENT AND RECIPIENT COUNT IN B.C.

	2018	2019	2020	2021
FUNDING	\$2.9M	\$3.2M	\$2.9M	\$4.6M
NUMBER OF ORGANIZATIONS SUPPORTED	30	35	30	25

TOP AREAS OF INDIGENOUS COMMUNITY INVESTMENT

The following table shows the distribution of community investments supporting B.C. Indigenous communities and organizations.

TOP FOCUS AREAS FOR INDIGENOUS COMMUNITY INVESTMENT	NUMBER OF INDIGENOUS COMMUNITY INVESTMENT PARTNERS	BENEFIT AMOUNT (\$)
SHARED VALUE CREATION / MISCELLANEOUS ⁴		\$10M
CAPACITY FUNDING	10	\$ 3M
FESTIVALS AND FAIRS	25	\$ 100K
BUSINESS IMPROVEMENT ASSOCIATIONS	10	\$ 65K
RECREATION AND LAND-BASE USERS	5	\$ 54K
EDUCATIONAL SUPPORT	5	\$ 48K
HEALTH SERVICES	5	\$ 37K
COMMUNITY ATHLETICS AND SPORTS	5	\$ 13K
SENIOR SUPPORT SERVICES	5	\$ 10K
GRAND TOTAL	75	\$ 14M

⁴ Shared Value Creation / Miscellaneous – This funding includes capacity funding provided to Indigenous Nations as well as funding to support education, training, social and cultural programs. These payments can also include funding for the development or maintenance of physical infrastructure and environmental initiatives for Indigenous communities as well as in-kind investments of services, resources, and infrastructure excluding formal consultation activities. The information on this funding was received as lumpsum amount.



CONCLUSION

The **Our Communities Care** study shows that B.C.'s upstream natural gas and oil sector supports economic, climate and societal transformation at a local level. As British Columbians adapt to a new world post-pandemic, OCC is a recognition by CAPP and the upstream natural gas and oil industry that rebuilding starts locally.

The diverse and geographically dispersed supply chain, together with the energy producers based here and B.C.'s world-class natural gas resources, forms the foundation for a modern, inclusive, and low-carbon upstream industry in the province.

iTOTEM Analytics believes that a strong natural gas supply chain, as demonstrated by the thousands of businesses operating in British Columbia between 2018 and 2021, can assist the province in meeting our collective goal of a decarbonized future.

Why do we think this way? Because B.C.'s natural gas and oil supply chain is comprised of businesses from Indigenous communities and municipalities from across B.C. Citizens who care about their community's infrastructure and services; Indigenous people with traditional knowledge and who care about reversing climate change; and residents who care deeply about advancing social progress in their schools, worksites and neighborhoods.

iTOTEM sincerely appreciates CAPP and its members' collaborative spirit in participating and reporting in the **Our Communities Care** study over a 10-month period. Participants demonstrated that data transparency is a critical first step toward creating an equitable and inclusive natural gas and oil industry. We know that solving the world's most difficult problems and seizing new opportunities requires sharing information in a way that makes data accessible, relatable, shareworthy, and trustworthy.



APPENDIX A

TOP 25 MUNICIPALITIES WITH THE MOST SUPPLY CHAIN SPEND

	MUNICIPALITY	SPEND
1.	FORT ST. JOHN	\$ 2.5B
2.	DAWSON CREEK	\$ 632M
3.	POUCE COUPE	\$ 408M
4.	VANCOUVER	\$ 337M
5.	WONOWON	\$ 132M
6.	CHARLIE LAKE	\$ 120M
7.	PRINCE GEORGE	\$ 83M
8.	ROLLA	\$ 78M
9.	CRESTON	\$ 77M
10.	FORT NELSON	\$ 40M
11.	ARMSTRONG	\$ 35M
12.	BALDONNEL	\$ 32M
13.	TUMBLER RIDGE	\$ 23M
14.	DELTA	\$ 20M
15.	HUDSON'S HOPE	\$ 19M
16.	FARMINGTON	\$ 17M
17.	CHETWYND	\$ 15M
18.	PENTICTON	\$ 14M
19.	GOODLOW	\$ 14M
20.	ROSE PRAIRIE	\$ 13M
21.	BURNABY	\$ 13M
22.	PRESPATOU	\$ 12M
23.	SURREY	\$ 12M
24.	TAYLOR	\$ 10M
25.	CECIL LAKE	\$ 10M



TOP 25 MUNICIPALITIES WITH THE GREATEST NUMBER OF UNIQUE SUPPLIERS

	MUNICIPALITY	NUMBER OF SUPPLIERS
1.	FORT ST. JOHN	870
2.	DAWSON CREEK	440
3.	VANCOUVER	120
4.	CHARLIE LAKE	110
5.	FORT NELSON	100
6.	CHETWYND	55
7.	PRINCE GEORGE	50
8.	SURREY	40
9.	TAYLOR	40
10.	POUCE COUPE	40
11.	BURNABY	40
12.	KELOWNA	35
13.	CECIL LAKE	30
14.	ARRAS	30
15.	hudson's hope	25
16.	VICTORIA	25
17.	ROSE PRAIRIE	25
18.	WONOWON	20
19.	TUMBLER RIDGE	20
20.	DELTA	20
21.	PRESPATOU	20
22.	RICHMOND	15
23.	KAMLOOPS	15
24.	TOMSLAKE	15
25.	NORTH VANCOUVER	15



APPENDIX B

TOP FIVE MUNICIPALITIES WITH THE TOP FIVE CATEGORIES OF EXPENDITURES

SUBCATEGORY	MUNICIPALITY	SPEND
	POUCE COUPE	\$ 368M
	FORT ST. JOHN	\$ 351M
CONSTRUCTION	DAWSON CREEK	\$ 87M
	VANCOUVER	\$ 49M
	CHARLIE LAKE	\$ 32M
	FORT ST. JOHN	\$ 524M
	DAWSON CREEK	\$ 109M
EQUIPMENT SERVICES / MAINTENANCE	CHARLIE LAKE	\$ 43M
	PRINCE GEORGE	\$ 17M
	VANCOUVER	\$ 10M
	FORT ST. JOHN	\$ 448M
	DAWSON CREEK	\$ 131M
DRILLING / COMPLETION / DOWNHOLE SERVICES	CRESTON	\$ 57M
	VANCOUVER	\$ 12M
	WONOWON	\$ 11M
	FORT ST. JOHN	\$ 199M
	DAWSON CREEK	\$ 55M
TRANSPORTATION	BALDONNEL	\$ 25M
	ROLLA	\$ 17M
	ARMSTRONG	\$ 15M
	FORT ST. JOHN	\$ 140M
	ROLLA	\$ 50M
ENVIRONMENTAL / INDUSTRIAL WASTE SERVICES	VANCOUVER	\$ 46M
	DAWSON CREEK	\$ 44M
	POUCE COUPE	\$ 17M



APPENDIX C

ASSUMPTIONS AND PARAMETERS

The following section summarizes methodology, definitions and categorization.

These steps were taken over 10 months to produce the **Our Communities Care** study:

- 1. Finalized the data model and categorizations,
- 2. Developed the draft data collection forms,
- 3. Consulted with CAPP Policy and Indigenous Relations Advisory Committees on the data model and data collection form,
- 4. Supply chain data was collected from seven CAPP member companies representing 90% of the natural gas production in B.C.,
- 5. iTOTEM processed the data, which included but not limited to the following steps:
 - o data cleaning,
 - data structuring for analysis,
 - o categorization of supply chain and community investments,
 - o deduplication,
 - o data consolidation,
 - standardization and checking of vendor locations,
 - business names and location names standardization,
 - validation and tagging of vendor locations to respective regional districts and Provinces, Territories and States,
 - o identifying and tagging reclamation and remediation related expenses,
 - o identifying and tagging non-supply chain spends as exclusions,
 - o identifying, tagging and validation of Indigenous-affiliated vendors,
 - o identifying and tagging community investment related spends
- 6. A quality assurance (QA) process was run, and all data was validated by each participating company. Detailed QA reports were generated for each participating members and feedbacks were received from the members on their respective data for validating the topline results, supply chain categories, Indigenous affiliations, reclamation spends and vendor locations.



The table below describes the methodology used in the Our Communities Care Study.

	METHODOLOGY	
FOCUS AREA	ASSUMPTIONS AND PARAMETERS	
CATEGORIZATION	 All vendor expenses were tagged to the natural gas supply chain based on 17 goods, materials, and service subcategories in accordance with the account descriptions provided by the members in their data. These 17 categories were further grouped together into four master supply chain categories, See below for explanation on categorization. All the spends towards community investment were tagged to 12 different community investment-based categories. To provide further insights on community investments made, the "Indigenous Community Investment" spend was also tagged to these categories. 	
GEOGRAPHIC REFERENCES	 Suppliers were tagged by Indigenous Nation, municipality or unincorporated community according to the following federal and provincial government mapping resources: Indigenous - First Nation Profiles (aadnc-aandc.gc.ca) British Columbia Assembly of First Nations (AFN) 'First Nations in B.C. Interactive Mapbcafn.ca/first-nations-bc/interactive-map 'Municipalities - CivicInfo BC Municipalities Unincorporated Communities - CivicInfo BC Municipalities Municipalities and communities were mapped by Regional District. 	
INDIGENOUS- AFFILIATED BUSINESS	 Indigenous-affiliated business refers to: Any corporation, partnership, firm, joint venture, or other entity which has, prior to the Issue Date, by or through one or more contracts, agreements, arrangements, or understandings between it and a Local Indigenous Community or one or more Affiliated Indigenous Individuals procure for, conferred on or otherwise made available to that Local Indigenous Community or those Affiliated Indigenous Individuals business, economic, employment/training opportunities, or benefits (in each case as certified or confirmed in writing by the duly authorized leaders or representatives of the relevant Local Indigenous Community). Indigenous Businesses who are affiliated with, controlled by, and/or are members of a Local Indigenous Community (in each case as defined by the duly authorized leaders or representatives of the relevant Local Indigenous Community).	
LIMITATIONS AND NOTES	 iTOTEM relied on the accuracy of the information provided by CAPP participants regarding their supply chain and community investment expenditures and the respective locations of the businesses in B.C. The Vendor Count for reclamation activities is based on the count reported by six of the seven participating CAPP member companies. The Reclamation Spend was reported by seven out of seven participating companies. Therefore, the number of vendors active in reclamation-related activities is conservative. Vendors with 'Unidentified Locations' were included in the study's Total Spend and Total Count, and not included in the B.C. spend and count benefits. 	
QUALITY ASSURANCE DATA CHANGES AND EXCLUSIONS	 A QA process was run to remove duplications, standardize spellings and apply exclusions. All the spends relating to taxes/levies/Government fees etcetera were excluded from the analysis 	



	METHODOLOGY
FOCUS AREA	ASSUMPTIONS AND PARAMETERS
	iTOTEM ran a QA process with the OCC participants to assure the data veracity in terms of business locations, supply chain categorization, Indigenous-affiliated vendor identification and reclamation-related activity tagging.
ROUNDING AND MARGIN OF ERROR	 \$ were rounded to the nearest billion, million or where applicable the nearest thousand. Counts were rounded down to nearest 5s and 10s. The unique count of suppliers may have a margin of error of up to 3%.
UNIQUE SUPPLIER COUNTS	 A supplier can be tagged in more than one municipality, but this does not change the total number of unique vendors in the province, nor does it change the total number of unique businesses in a municipality. The unique supplier count means the supplier is counted once. In situations where the same supplier operated in more than one location, but spelling was recorded differently, the spelling was standardized, and duplications excluded. A supplier's head office can be outside of the provinces, but if the expenditure was made with a B.Cbased office, the supplier was counted as being in B.C. The locations of the vendors were extracted from postal codes; postal codes were verified with Canada Post. If a supplier had multiple offices, in B.C. and an office in other Provinces or Territories, the supply chain expenditure was tagged to the municipality where the procurement occurred in B.C. This geographic label represents the supply chain potential and does not negate some of the supply chain expenditure may benefit other regions of Canada.

STANDARDIZATION AND GROUPING OF COST CODE CATEGORIES



STANDARDIZING CATEGORIES				
	MASTER CATEGORIES OF SPEND			
INDICATOR: TYPE OF MATERIALS, PRODUCTS, AND SERVICES	CONSULTING, CONTRACTING AND TECHNICAL SERVICES	PARTS, EQUIPMENT AND CAPITAL ASSETS	CONSUMABLES, UTILITIES AND LOGISTICS	SUPPORT SERVICES
BUSINESS SERVICES				X
CAMPS AND CATERING / POTABLE AND WASTEWATER			X	
CHEMICALS			X	
CONSTRUCTION		Х		
DRILLING / COMPLETION / DOWNHOLE SERVICES	X			
ELECTRICAL EQUIPMENT / SERVICES			X	
ENGINEERING SERVICES	X			
ENVIRONMENTAL / INDUSTRIAL WASTE SERVICES	Х			
EQUIPMENT SERVICES / MAINTENANCE		Х		
HEALTH AND SAFETY MATERIALS / SERVICES			Х	
MATERIALS, PARTS AND SUPPLIES		Х		
RETAIL				Х
TECHNOLOGICAL DEVELOPMENT	X			
TELECOMMUNICATIONS / OFFICE EQUIPMENT			X	
TRANSPORTATION			Х	



STANDARDIZING CATEGORIES				
	MASTER CATEGORIES OF SPEND			
INDICATOR: TYPE OF MATERIALS, PRODUCTS, AND SERVICES	CONSULTING, CONTRACTING AND TECHNICAL SERVICES	PARTS, EQUIPMENT AND CAPITAL ASSETS	CONSUMABLES, UTILITIES AND LOGISTICS	SUPPORT SERVICES
MISCELLANEOUS				Х
UNIDENTIFIED				Х

DEFINITION OF SUPPLY CHAIN CATEGORIES

CATEGORY	DEFINITION
BUSINESS SERVICES	Companies involved in consulting on business practices and business efficiencies, accounting, legal. Includes training and staffing
CAMPS AND CATERING / POTABLE AND WASTEWATER	Companies providing temporary or permanent camp facilities and catering and/or food services; supplying potable water and treating wastewater
CHEMICALS	Companies dealing with manufacturing, handling, developing or selling chemicals/chemical products
CONSTRUCTION	Companies involved in the manual labour of a project such as constructing pipelines, constructing buildings, tree clearing, etc.
DRILLING / COMPLETION / DOWNHOLE SERVICES	Companies involved in providing and/or consulting on drilling, completion or downhole services for projects
ELECTRICAL EQUIPMENT / SERVICES	Companies providing and/or consulting on instrumentation, electrical equipment usage, electrical power servicing, electrical control equipment etc.
ENGINEERING SERVICES	Companies providing engineering services such as consulting, designing projects (excludes drilling)
ENVIRONMENTAL / INDUSTRIAL WASTE SERVICES	Companies working on environmental services such as testing, inspection, research, monitoring, reclamation and remediation, waste treatment, etc.
EQUIPMENT SERVICES / MAINTENANCE	Companies manufacturing, distributing, selling or renting equipment such as large rigging equipment, pumps, automation equipment etc. Includes maintenance, repair and operation of equipment/facilities
HEALTH AND SAFETY MATERIALS / SERVICES	Companies providing products and/or services that promote and provide safety in the workforce such as training or fire-retardant uniforms etc.
MATERIALS, PARTS AND SUPPLIES	Companies providing basic materials and unfinished goods and/or spare parts to the oil sands such as steel, plastics, nuts, bolts, filters, small piping, etc.
RETAIL	Companies falling outside the realm of the natural gas industry such as signage, office supply, advertising, sports goods stores etc.
TECHNOLOGICAL DEVELOPMENT	Companies dealing with developing technology and/or supplying technological products such as software development, computer models etc.
TELECOMMUNICATIONS / OFFICE EQUIPMENT	Companies providing temporary or permanent communications devices and/or services such as Telus, Bell etc.
TRANSPORTATION	Companies involved in logistics such as goods transporting and package shipping. Includes flights, vehicle rentals and courier services.
MISCELLANEOUS	The supply chain spends which not fall under the above 15 categories were tagged as miscellaneous.

Note: The spends with missing data/information/cost-codes were tagged as "Unidentified", which was less than 1%.



DEFINITION OF COMMUNITY INVESTMENT CATEGORIZATION

TYPE OF COMMUNITY INVESTMENT	DEFINITION
ART, MUSIC, THEATRE INITIATIVES	Funding to support art and theatre such as art councils, art galleries, art clubs, etc.
BUSINESS IMPROVEMENT AND LABOUR ORGANIZATIONS	Funding to support business improvement associations such as Chamber of Commerce, business associations, event participation, donations, etc.
CHILD AND YOUTH SUPPORT PROGRAMS	Funding to support children and youth with programs such as breakfast clubs, afterschool care, etc.
COMMUNITY ATHLETICS AND SPORTS	Funding to support community athletics and sports such as camps, sports teams and clubs.
EDUCATIONAL SUPPORT, LITERACY AND LIBRARIES	Funding to support education initiatives for communities or individuals including the following: scholarships, donations to the local school, financial support for school programs, etc.
FESTIVALS AND FAIRS	Funding to support community festivals and fairs such as carnivals, exhibitions, and community events.
FIRST RESPONDER AND RECREATIONAL EMERGENCY PREPAREDNESS	Funding to support first responders and recreational emergencies such as firefighter charities and RCMP victim services.
HEALTH SERVICES	Funding to support health and wellness within the community including the following: health infrastructure (water and sanitation projects, agricultural projects), community wellness initiatives, etc.
INDIGENOUS COMMUNITY INVESTMENT	Funding to support Indigenous communities specifically. Community investments to Indigenous communities include the following: health and wellness (sports, health infrastructure, community wellness initiatives, environmental initiatives (environmental conservation, wildlife societies, and emergency preparedness), physical infrastructure (pow-wow grounds), social and cultural program funding (pow-wows, elder retreats, treaty days, language programs), education (scholarships, donations to local schools), and employment/training programs. Does not include consultation or permitting-related expenditures
RECREATION AND LAND- BASE USERS	Funding to support recreation and land-based users such as outdoor adventure clubs and associations, etc. Includes funding to support environmental initiatives, wildlife societies
SENIOR SUPPORT SERVICES	Funding to support Seniors for services such as housing, food programs, clubs, sports, etc.
SERVICE CLUBS AND NON-PROFIT AGENCY SUPPORT	Funding to support registered service clubs and non-profit agencies such as the Rotary.



