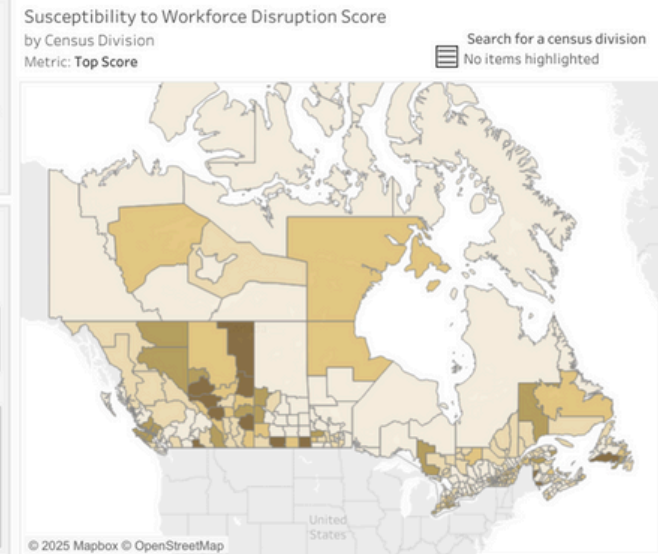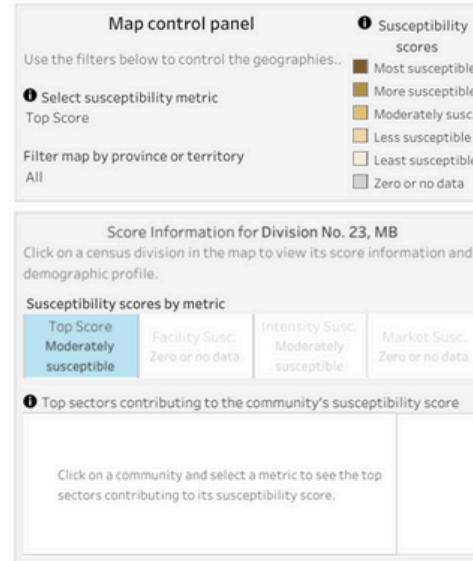# MEASURING COMMUNITY WORKFORCE SUSCEPTIBILITY

Following up on the Community Transformations Project

Ricardo Chejfec
May 2025

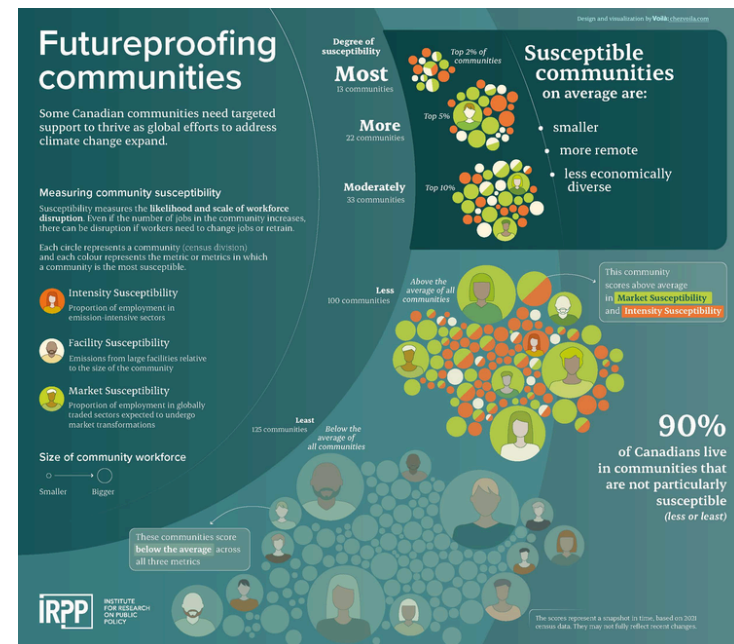# The Community Transformations Project

Mapping community susceptibility to workforce disruption (net-zero)

Challenge	Metric	Sources
Reducing the community's emissions intensity	$\sum_{\text{all sectors}} \left(\begin{array}{l} \text{emissions intensity}_{\text{sector A}} \times \\ \text{share of employment}_{\text{sector A}} \end{array} \right)$	Emissions intensity by sector: 440MT Employment by sector: Census 2021
Decarbonizing large emitters	$\dfrac{\text{total emissions from large emitters}}{\text{labour force}}$	Emissions from large emitters: ECCC Geographic alignment: Boundary files Employment by sector: Census 2021
Changes in global demand for certain products	$\dfrac{\text{employment in exposed sectors}}{\text{labour force}}$	Selection of sectors: Intl. modelling Employment by sector: Census 2021

IRPP

Map control panel

Use the filters below to control the geographies..

ⓘ Select susceptibility metric
Top Score

Filter map by province or territory
All

ⓘ Susceptibility groups

- Most susceptible
- More susceptible
- Moderately susc..
- Less susceptible
- Least susceptible
- Zero or no data

Susceptibility to Workforce Disruption
by Census Division
Metric: **Top Score**

Search for a census division
No items highlighted

© 2025 Mapbox © OpenStreetMap

United States

Gree

Score Information for Division No. 18, SK

Click on a census division in the map to view its score information and demographic profile.

Susceptibility scores by metric

Top Score	Facility Susc.	Intensity Susc.	Market Susc.
Least susceptible	Least susceptible	Least susceptible	Least susceptible

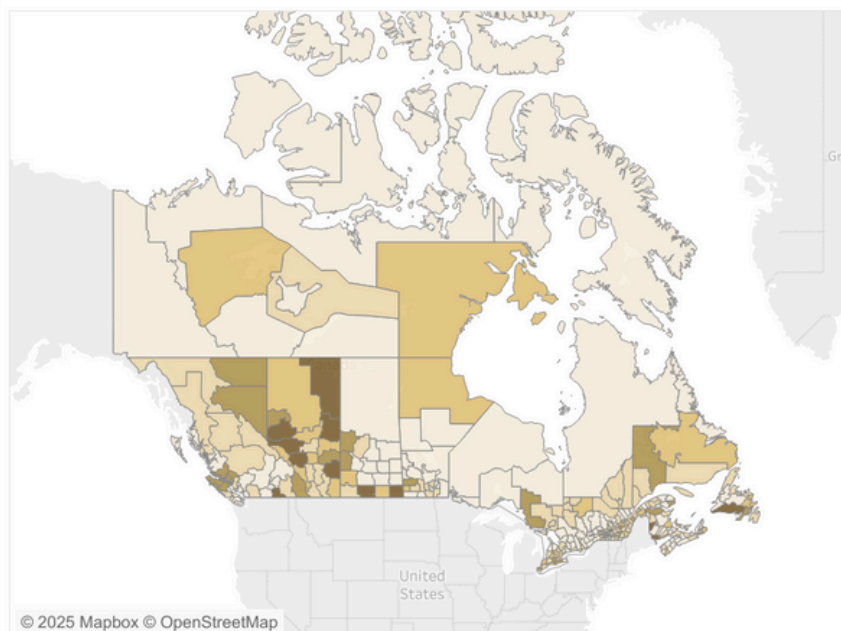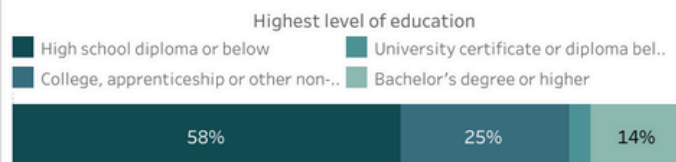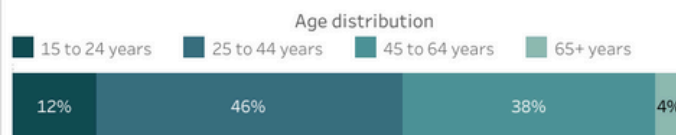**ⓘ Top sectors contributing to the community's susceptibility score**

Click on a community and select a metric to see the top sectors contributing to its susceptibility score.

Demographic profile for the labour force aged 15+..

ⓘ Select sector to view data for
All industries

Profile of Division No. 18, SK
Sector: **All industries**

Total labour force in all industries: **11,140** (100.0%)

Age distribution

■ 15 to 24 years ■ 25 to 44 years ■ 45 to 64 years ■ 65+ years

| 12% | 46% | 38% | 4% |

Highest level of education

■ High school diploma or below   ■ University certificate or diploma bel..
■ College, apprenticeship or other non-..   ■ Bachelor's degree or higher

| 58% | 25% | 14% |

ⓘ TEER occupation categories

■ TEER 5   ■ TEER 4   ■ TEER 3 and 2   ■ TEER 1 and 0

| 16% | 14% | 42% | 19% |

Profile of Saskatchewan

Total labour force: **577,505**

Age distribution

■ 15 to 24 years ■ 25 to 44 years ■ 45 to 64 years ■ 65+ years

| 14% | 43% | 36% | 7% |

Highest level of education

■ High school diploma or below   ■ University certificate or diploma bel..
■ College, apprenticeship or other non-..   ■ Bachelor's degree or higher

| 43% | 28% | 25% |

TEER occupation categories

■ TEER 5   ■ TEER 4   ■ TEER 3 and 2   ■ TEER 1 and 0

| 15% | 15% | 39% | 30% |
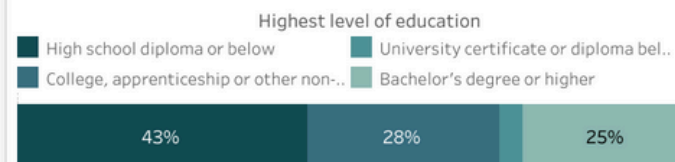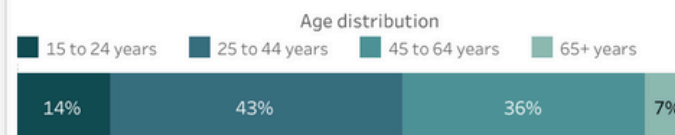
Futureproofing communities

Some Canadian communities need targeted support to thrive as global efforts to address climate change expand.

Measuring community susceptibility

Susceptibility measures the **likelihood and scale of workforce disruption**. Even if the number of jobs in the community increases, there can be disruption if workers need to change jobs or retrain.

Each circle represents a community (census division) and each colour represents the metric or metrics in which a community is the most susceptible.

Intensity Susceptibility
Proportion of employment in emission-intensive sectors
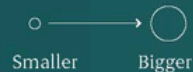
Facility Susceptibility
Emissions from large facilities relative to the size of the community

Market Susceptibility
Proportion of employment in globally traded sectors expected to undergo market transformations

Size of community workforce

Smaller → Bigger

Degree of susceptibility

Most
13 communities

Top 2% of communities

More
22 communities

Top 5%

Moderately
33 communities

Top 10%

Susceptible communities on average are:

- smaller
- more remote
- less economically diverse

Less
100 communities

Above the average of all communities

This community scores above average in **Market Susceptibility** and **Intensity Susceptibility**

Least
125 communities

Below the average of all communities

These communities score **below the average** across all three metrics

90%
of Canadians live in communities that are not particularly susceptible
(less or least)

The scores represent a snapshot in time, based on 2021 census data. They may not fully reflect recent changes.

Measuring community workforce exposure to U.S. exports

Like in our emissions intensity indicator, tariffs would
- impact some industries more than others
- mediated by measurable, actively-tracked factors
- data is available by sector but only at the national level

Generalized formula:

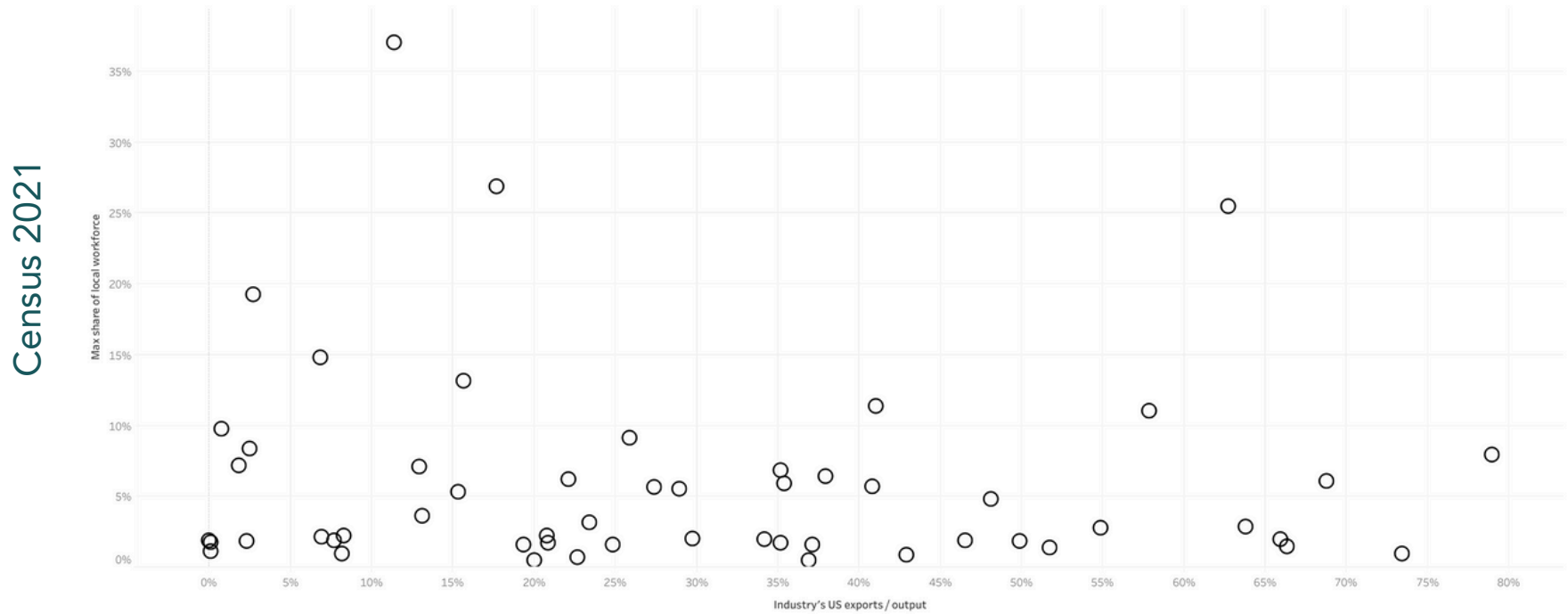how much does the community rely on industries impacted   x   how likely / severe are the impacts to those industries
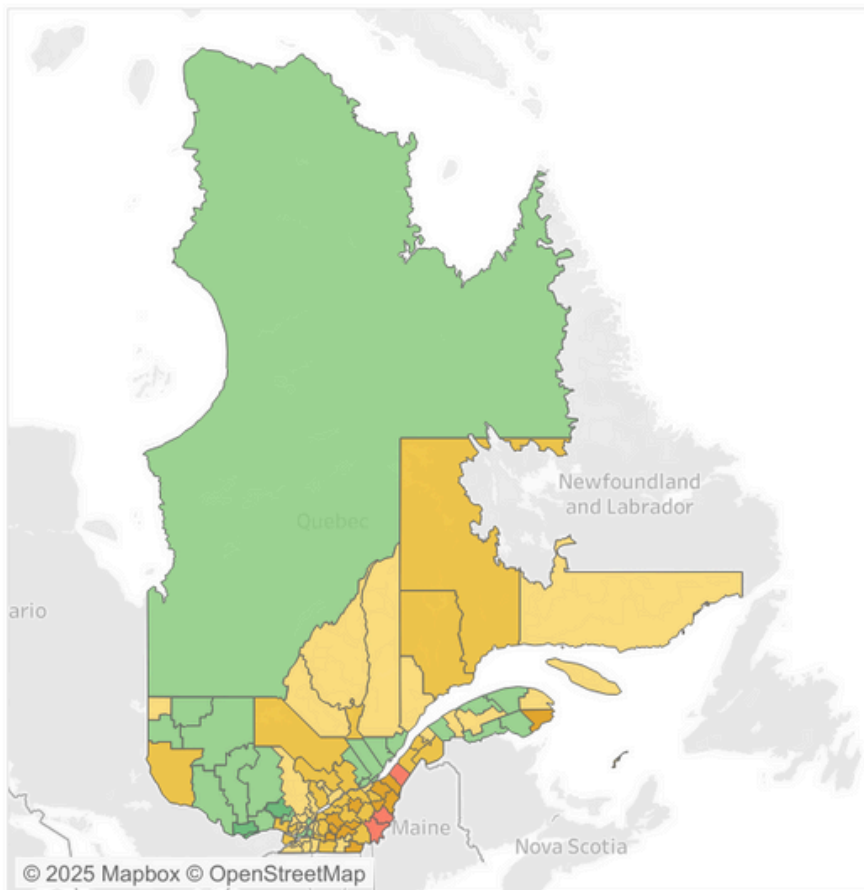
$$
\text{Community workforce exposure to US exports} = \sum_{\text{all sectors}} \left(\text{Share of employment}_{\text{sector A}} \times \frac{\text{Value of US exports}_{\text{sector A}}}{\text{Value of production}_{\text{sector A}}} \right)
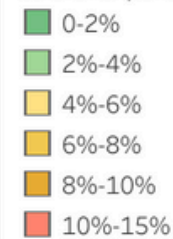$$

IRPP

Mapping community workforce exposure

Census 2021

Supply and Use tables
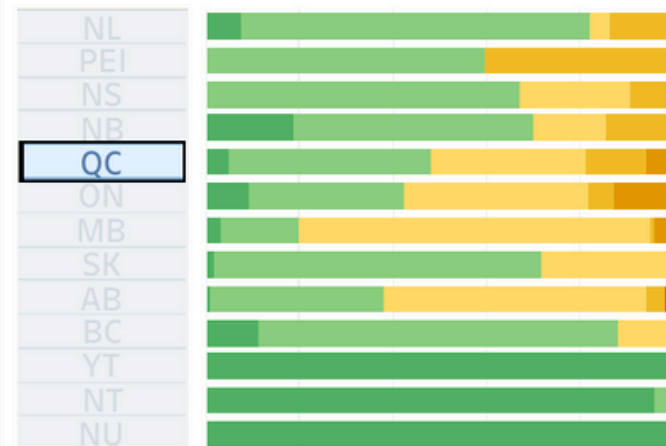
Canadian census divisions by workforce exposure to U.S. exports

Workforce exposure to U.S. exports

- 0-2%
- 2%-4%
- 4%-6%
- 6%-8%
- 8%-10%
- 10%-15%

By province or territory

Click on a name to filter the map

NL
PEI
NS
NB
QC
ON
MB
SK
AB
BC
YT
NT
NU

By census division

Click on a census division on the map to learn more

CDUID	Census division name	Largest census subdivision	Industry	Number of workers in all industries	Number of workers in goods exporting industries	Share of local workforce	Average industry exposure	Workforce exposure
2417	L'Islet, Que.	L'Islet	Total	7,950	3,255	40.9%	28%	11.3%
2430	Le Granit, Q..	Lac-Mégantic	Total	9,855	3,900	39.6%	27%	10.5%
2429	Beauce-Sart..	Saint-Georges	Total	26,370	9,265	35.1%	29%	10.3%
2448	Acton, Que.	Acton Vale	Total	7,620	3,050	40.0%	24%	9.6%
2427	Robert-Clich..	Beauceville	Total	9,735	3,780	38.8%	24%	9.5%
2403	Le Rocher-P..	Chandler	Total					

© 2025 Mapbox © OpenStreetMap

1. Each square below is a census division

4. Learn more about a census division's exposure to U.S. exports
Click on a square to get started

2. Their size and order is determined by this metric
Select one of three possible options
- ● Workforce exposure ⓘ
- ○ Share of workers
- ○ Number of workers

3. You can filter by select industries or by those that rely the most on U.S. exports (top industries)
All goods exporters included by default. Click the button on the right to reset

Top industries	All goods exporting industries
Motor vehicle mfg.	
Oil and gas extraction	
Seafood production	
Aluminum mfg.	
Iron and steel mfg.	

Current selection
Metric: Workforce exposure
Industry: All goods-exporting industries

Province or territory
- AB
- BC
- MB
- NB
- NL
- NS
- NT
- NU
- ON
- PEI
- QC
- SK

Search by census division (CDUID)
No items highlight..

What have we learned so far

Top 10% of communities susceptible to:

NET ZERO	BOTH	US TARIFFS
68 communities	19 communities	30 communities
10% of the population	4% of the population	7% of the population
44,000 average population	76,000 average population	106,000 average population

126,000
average population
CANADA WIDE

112 Animal produ...
113 Forestry and...
211 Oil and gas ...
212 Mining and q...
221 Utilities...
311 Food manufac...
321 Wood product...
324 Petroleum an...
325 Chemical man...
327 Non-metallic...
331 Primary meta...
336 Transportati...
483 Water transp...

111 Crop product...
114 Fishing, hun...
211 Oil and gas ...
311 Food manufac...
313 Textile mill...
321 Wood product...
322 Paper manufa...
326 Plastics and...
331 Primary meta..
333 Machinery ma...
334 Computer and...
336 Transportati...
337 Furniture an...

IRPP

Mapping exposure opens the door for further research

Exposure scores x census data

	Net Zero	US Exports
Index of remoteness (higher = more remote)	⬆	⬆
Economic diversity (lower = less diversified)	⬇	⬇
Population growth since 2021	⬇	⬆
EI regular benefits in 2021	⬆	⬇
Employment income	⬇	⬇
Low skill jobs	⬆	⬆
Workers with high school or less education	⬆	⬆
Older workers	⬆	⬆
Indigenous workers	⬆	⬇

top 10% of communities

⬆ Higher than national average

⬇ Lower than national average

IRPP

Mapping exposure opens the door for further research

Spatial overlays

within the boundaries of susceptible census divisions:

131 First Nation communities	**17 announced projects** (out of 232) from the Strategic Innovation Fund	**8 communities** with no junior colleges, nursing, technical or vocational schools
Census divisions	Census divisions	Census divisions
x	x	x
First Nations geographic location dataset	ISED's Strategic Innovation Fund projects dataset	The Open Database of Educational Facilities

Learn more

The Community Transformations Project
Supporting Workers and Communities on the Road to Net Zero

irpp.org/community-transformations

Rachel Samson
Vice-President, Research
rsamson@irpp.org
Twitter: @rachel_e_samson

Jennifer Ditchburn
President and Chief Executive Officer
jditchburn@irpp.org
Twitter: @jenditchburn

Ricardo Chejfec
Lead Data Analyst
rchejfec@irpp.org
Twitter: @ricardochejfec

Rosanna Tamburri
Publication manager
rtamburri@irpp.org

Cléa Desjardins
Director of Communications
cdesjardins@irpp.org
Twitter: @CleaDesjardins

Abigail Jackson
Research Associate
ajackson@irpp.org