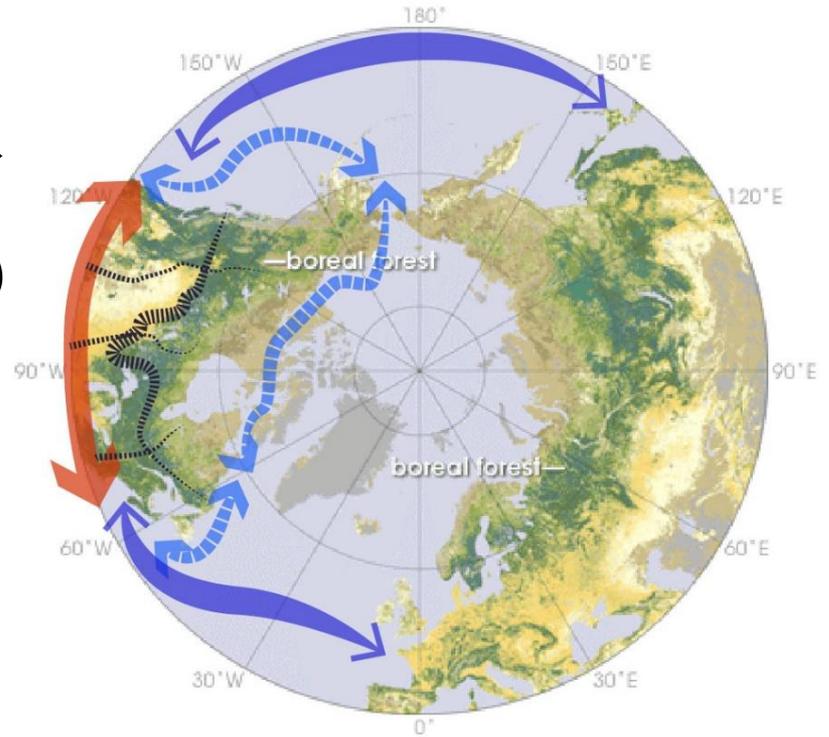


Growing Canada:



A National Growth Plan

Presented by
John van Nostrand, FCIP, FRAIC.
SvN Architects + Planners

Presented to:
CIP Conference

Date
July 2019

Three Growth Scenarios for Canada

3 SCENARIOS FOR CANADA

A CHOICE THAT WILL DEFINE OUR FUTURE

SELECT A YEAR



SELECT AN IMMIGRATION SCENARIO



2.57%
GDP GROWTH

	POP	POP RANK	GDP RANK	GDP GROWTH
0 IMMIGRATION	19.5M	78	NA	0.21%
STATUS QUO	53.7M	69	NA	1.55%
100M SCENARIO	100.1M	27	NA	2.57%

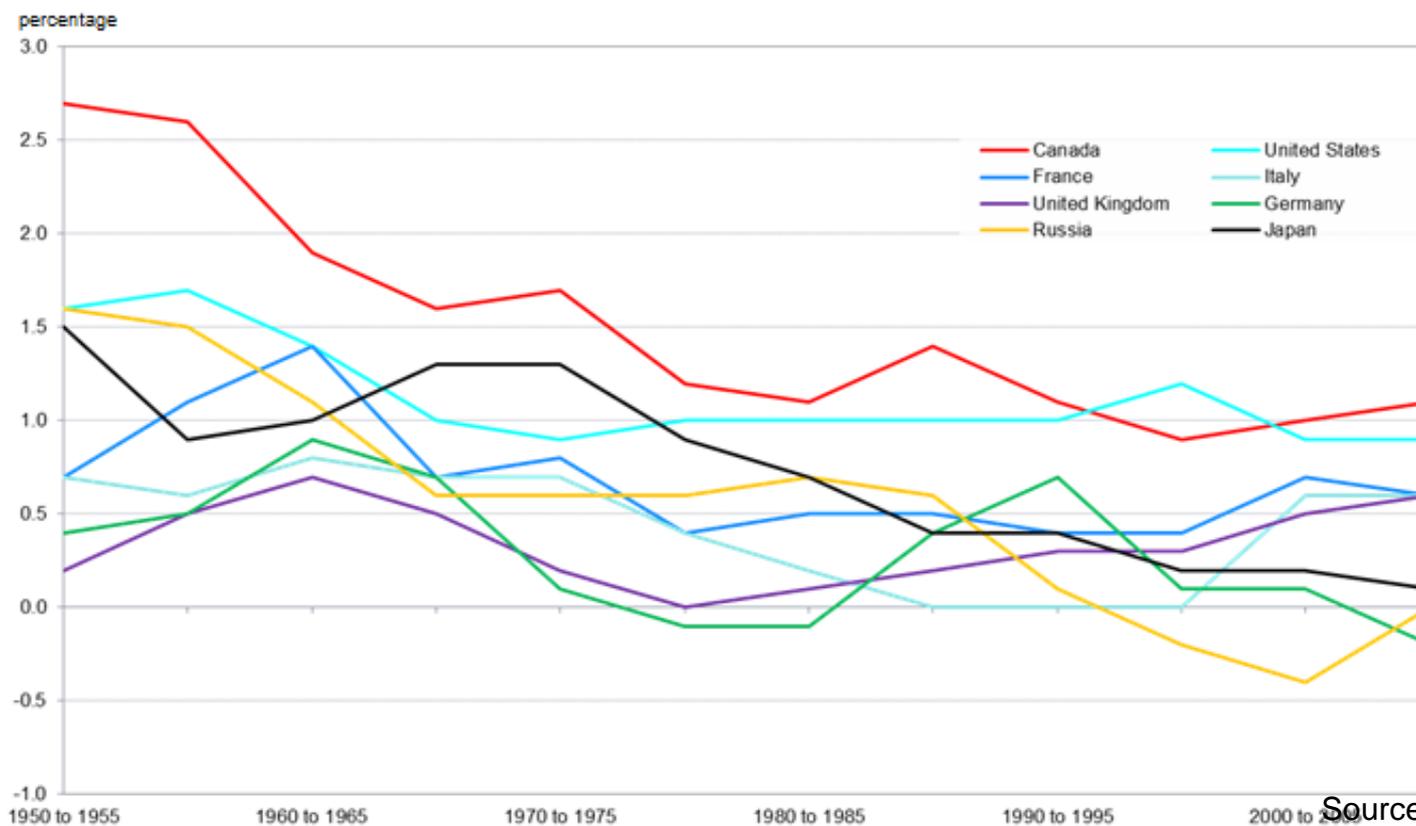
100M SCENARIO

Under this scenario Canada is a country of 100 million people by the end of the century. Immigration levels would slowly rise until Canada admits 1.3% of the population each year. Canada clearly benefits from this scenario with a GDP growth of 2.5% per year and, at 100 million, maintains global relevance as one of the world's 30 largest countries. It is only through this type of steady, incremental growth that Canada enjoys economic success. A bigger Canada benefits us all.

Canada's Population Growth

Canada's population is growing rapidly compared to other G8 countries

Average annual growth rate of the population, G8 countries, 1950 to 2010

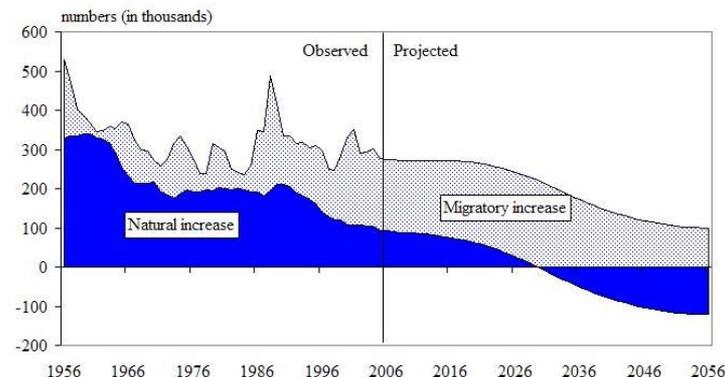
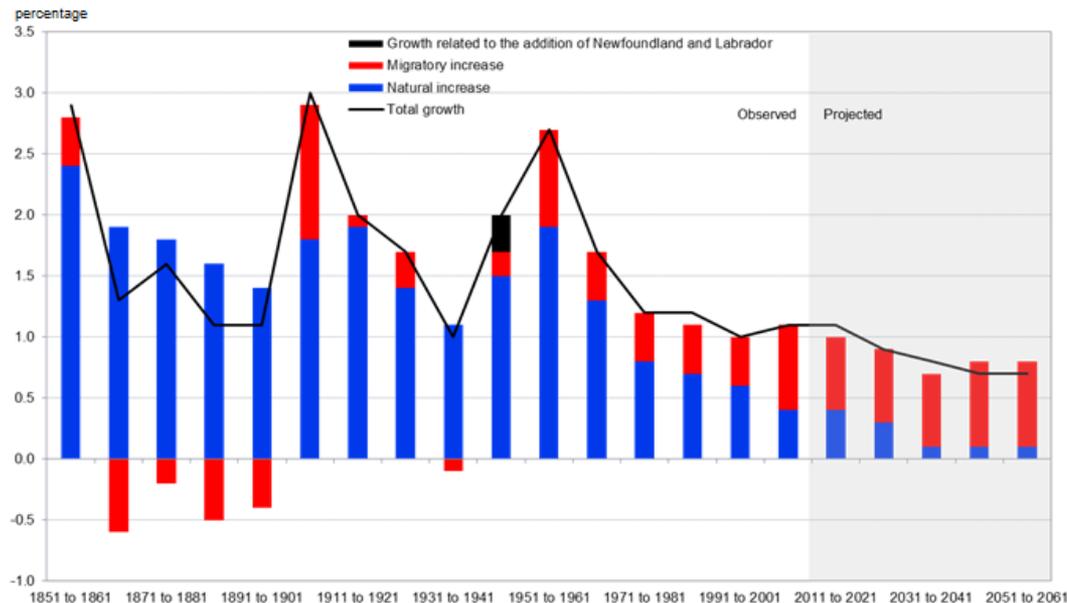


Source: Statistics Canada

Natural vs. Migratory Population Increase

Migratory increase is the main source of Canada's population growth

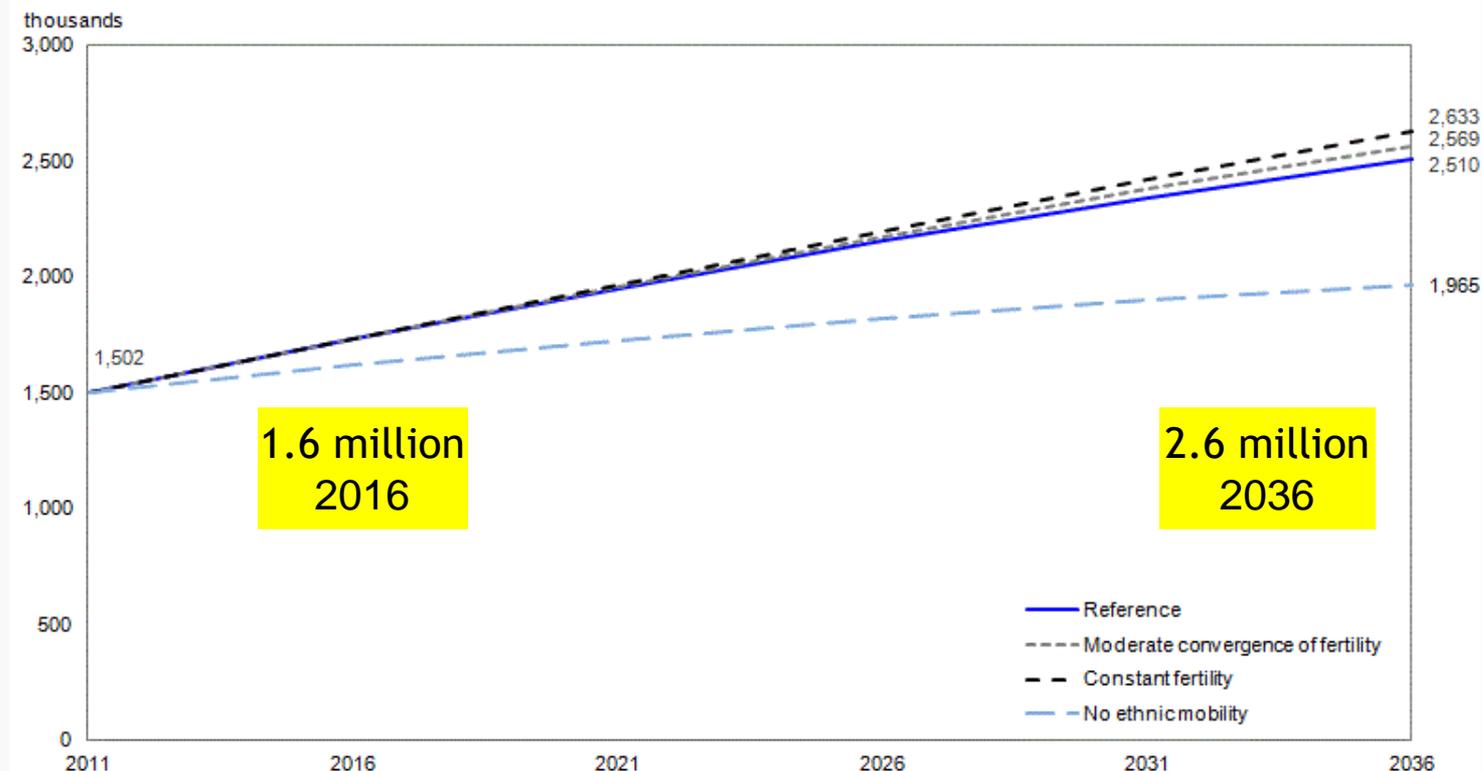
Annual average growth rate, natural increase and migratory increase per intercensal period, Canada, 1851 to 2061



Indigenous Nations - Fastest Growing “Natural” Population

Figure 2

Aboriginal identity population, Canada, 2011 (observed) and 2016 to 2036 (according to four projection scenarios)

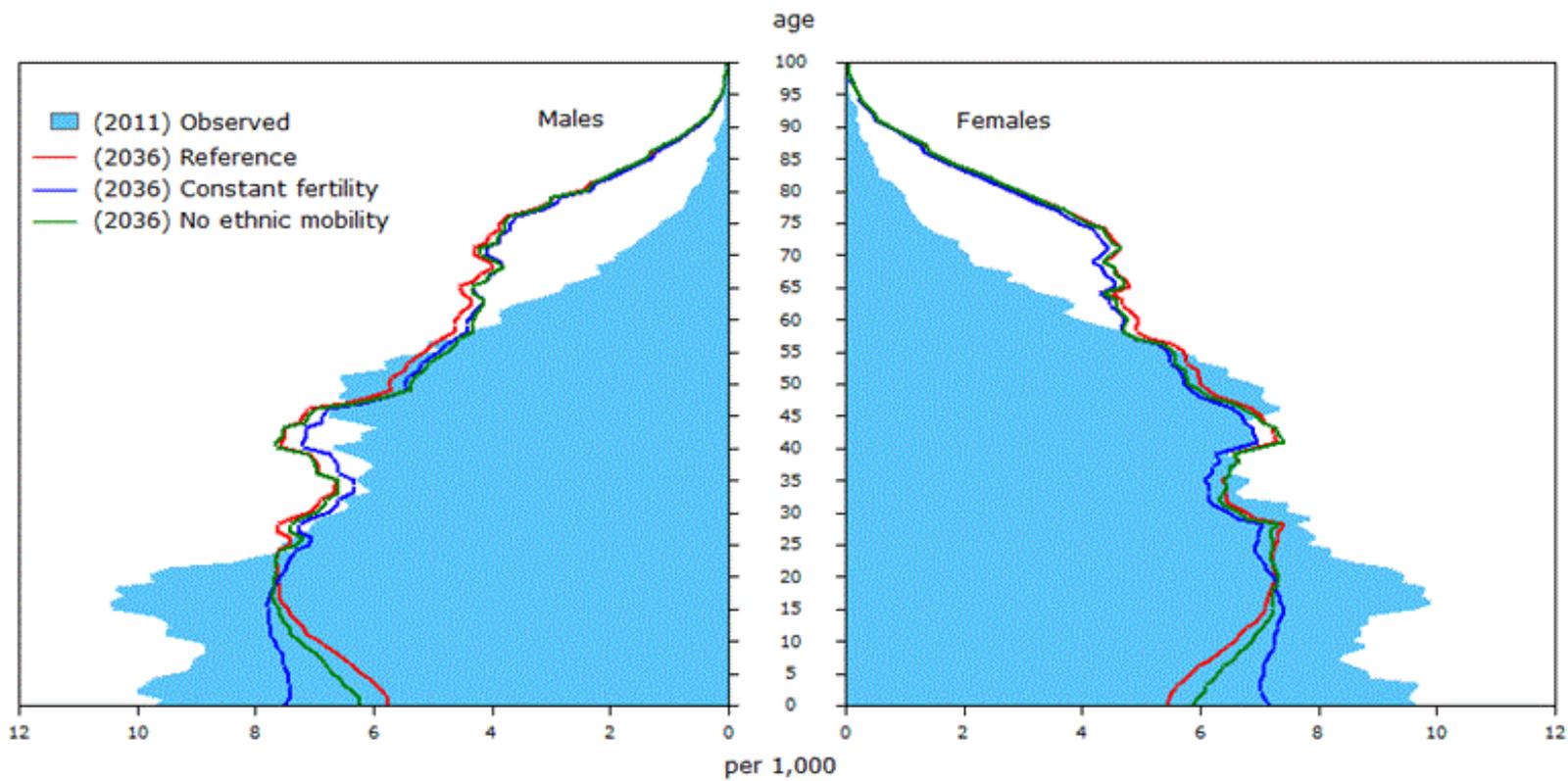


Source: Statistics Canada, Demography Division.

Indigenous Nations - Fastest Growing “Natural” Population

Figure 3

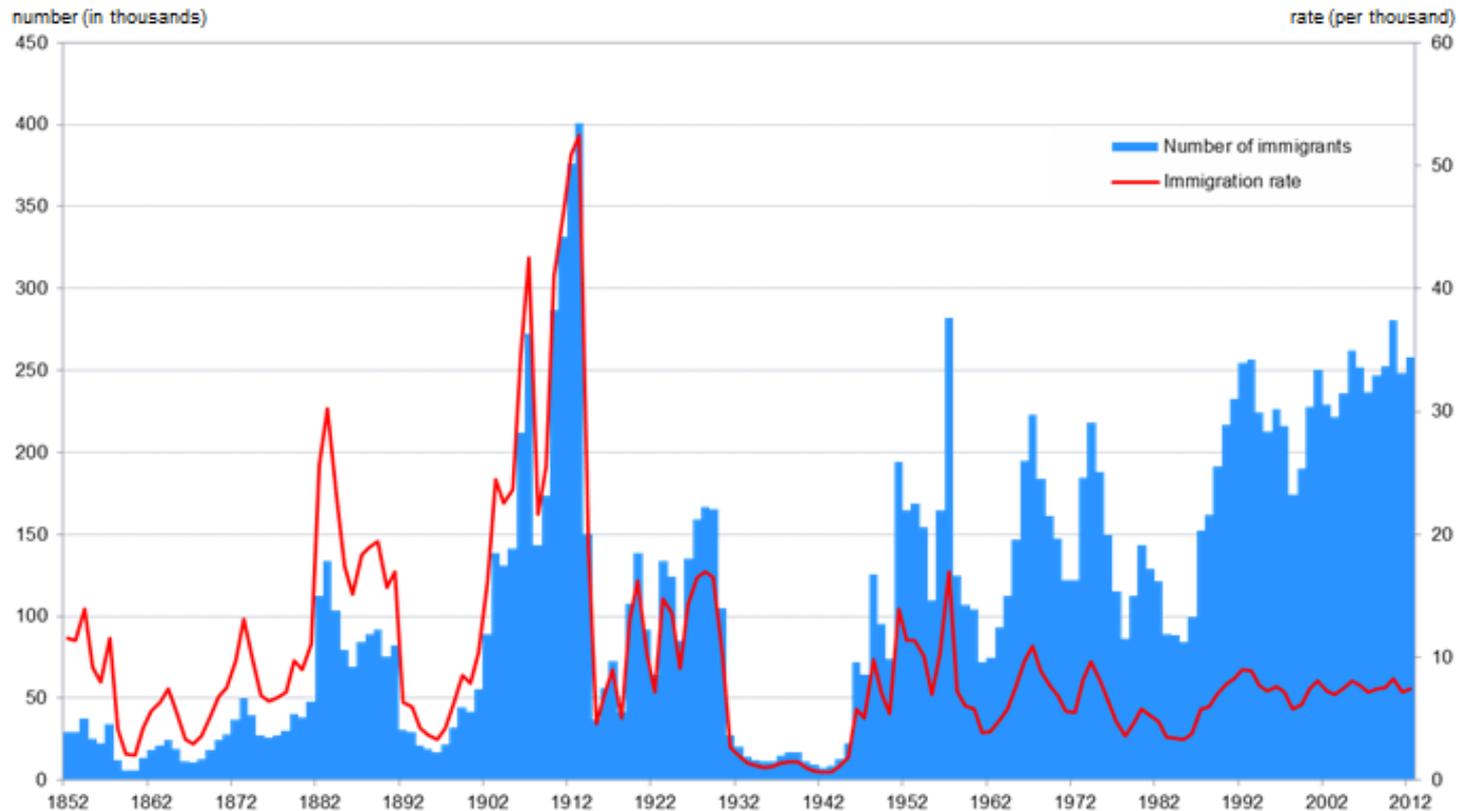
Distribution (per thousand) of the Aboriginal identity population by age and sex, Canada, 2011 (observed) and 2036 (according to three projection scenarios)





Variation in immigration level to Canada during last 150 years

Number of immigrants and immigration rate, Canada, 1852 to 2012



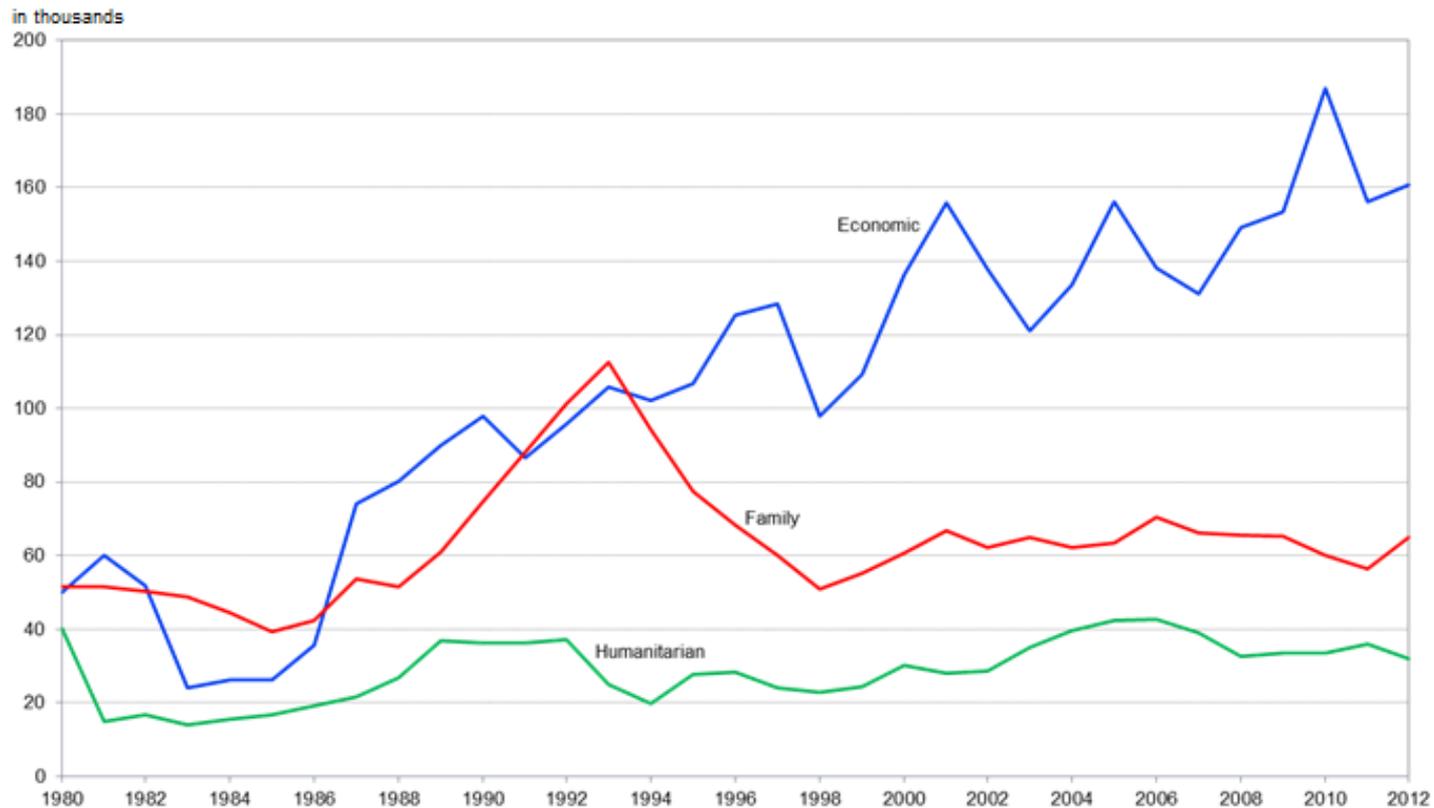
Note: Data available as of October 2013.

Sources: From 1852 to 1979: Employment and Immigration Canada. 1982-1980 Immigration Statistics, Immigration and Demographic Policy Group, catalogue no. MP22-1/1980. From 1980 to 2012, Citizenship and Immigration Canada.



Most immigrants admitted to Canada in 2012 were part of the economic category of the immigration policy

Number of immigrants by category of admission, Canada, 1980 to 2012



The Next 82 Years

Canada's Projected Population

2016: 36.3 million
50-60% immigration

2050: 45 - 60 million
60-80%
immigration

2100: 90 - 100 million
60-80% immigration

We Need
**A National Growth
Plan**

A National Growth Plan

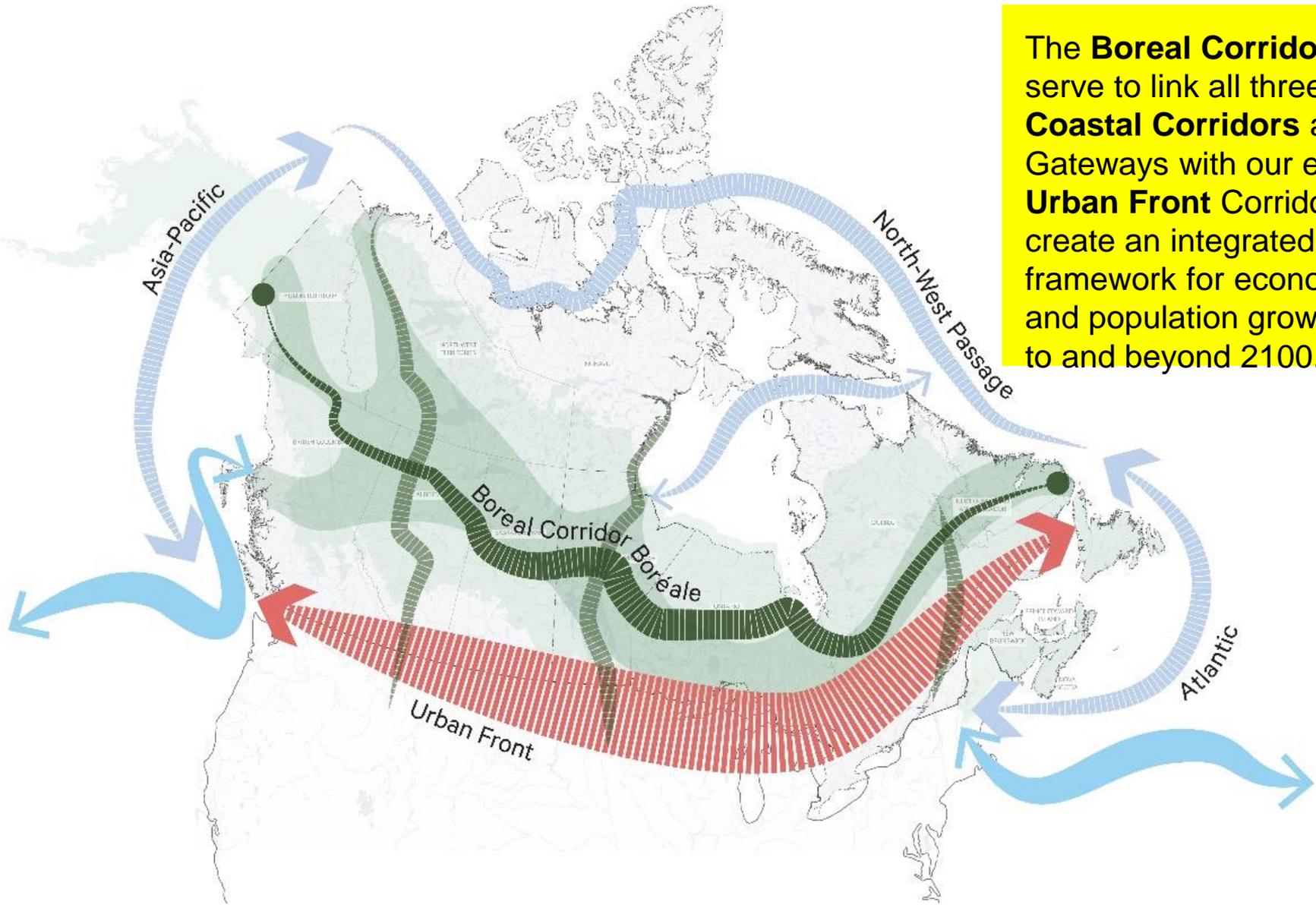
Dramatic increase in future population demands that we create a **National Growth Plan** driven not just for our primary **Urban Front** which accommodates 90% of Canadians within 300 miles of our southern border

but also for the emerging **Boreal Corridor Boréale (BCB)** at the centre of the country

and

the **Asia-Pacific Gateway** on our **Pacific Coast**
the **Atlantic Gateway** on our **Atlantic Coast**, and
the **North-West Sea Passage** on our **Arctic Coast**.

A National Growth Plan



The **Boreal Corridor** will serve to link all three **Coastal Corridors** and Gateways with our existing **Urban Front Corridor** to create an integrated framework for economic and population growth up to and beyond 2100.

The Challenge

A National Growth Plan will:

RE-ESTABLISH a balance between Canada's social, economic and environmental futures

ADDRESS the lack of east-west + north-south infrastructure that is leading to, or supporting tidewater ports for export to and from Canada's interior to foreign markets

BOOST regional and local economic growth and job creation through investment in the BCB infrastructure (\$125-150 billion)

The Challenge

A National Growth Plan will

DECENTRALIZE population growth, and as a result reduce pressures on infrastructure within the Urban Front

PROVIDE a higher quality of life for existing and future Northern residents by lowering the cost of goods in the Boreal and Northern regions of Canada;

INTRODUCE high-speed internet access throughout the BCB, lower installation costs and allow local economies to be further diversified and communication enhanced

Key Actions

The National Growth Plan needs to be:

CREATED on a nation-to-nation basis in partnership with all Indigenous nations and supported by comprehensive consultations / negotiations at the national, regional and local levels

IMPLEMENTED in stages comprising short-, medium, and long-term investments in environmental stewardship, infrastructure, housing and the advancement of key resource projects. **Stage One** would focus on key resource regions such as the Alberta Oil Sands, Northern Manitoba, the Ring of Fire, Quebec Nord, and the Qikiqtaaluk Nation.

Key Actions

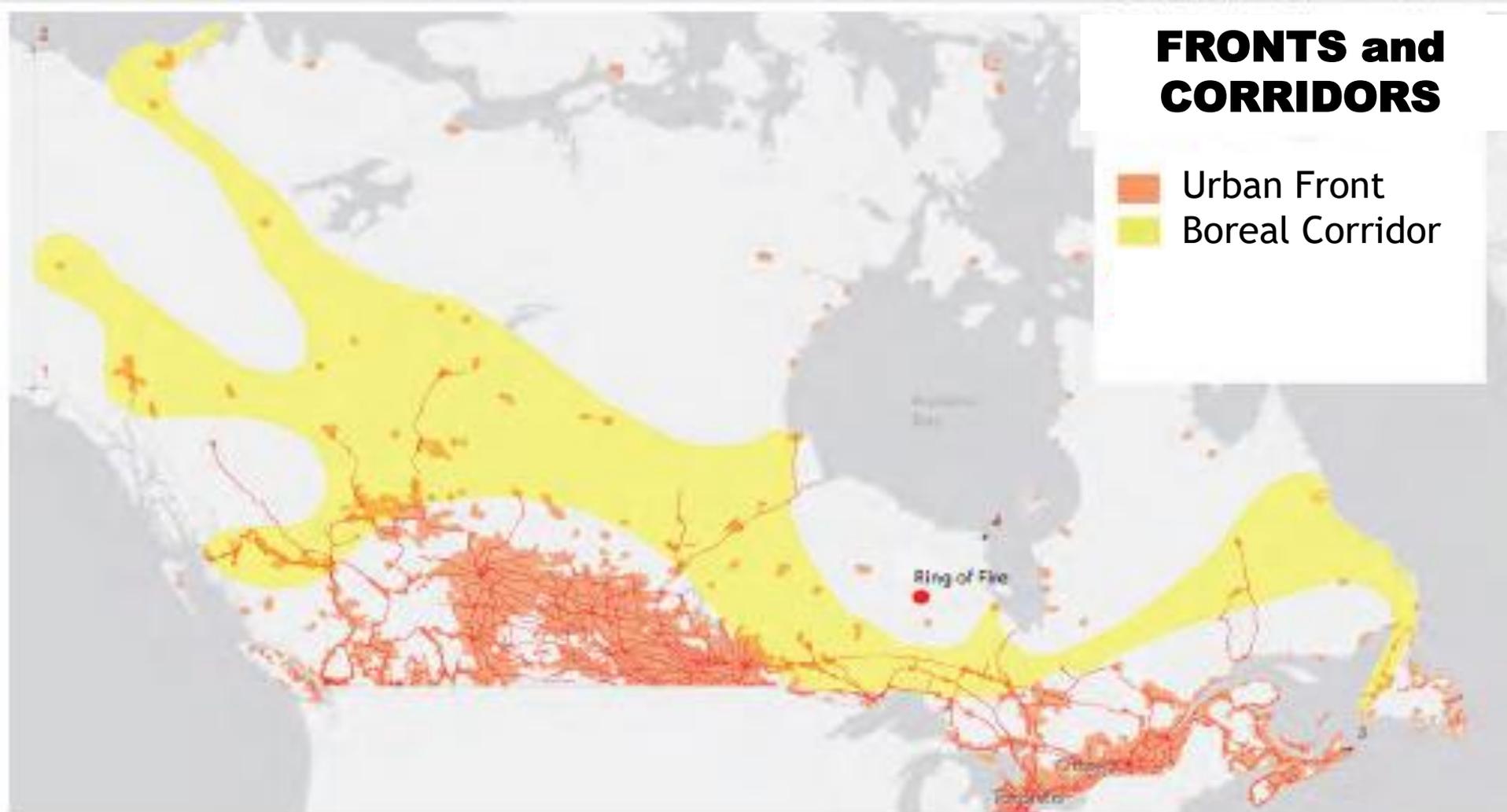
The National Growth Plan will need to:

INCLUDE population projections; cost estimates; initial land-use, infrastructure and housing plans, along with corresponding cost-benefit analyses including GDP estimates.

FOCUS on the expansion of not only Canada's **existing Urban Front** but also its new **Economic Corridors and Gateways** - starting with the BCB. It will direct newcomers to live in (not fly-in-and-out) of Canada's emerging economic areas

Canada will **complete its Confederation** by including the middle-and-northern half of the country that have been

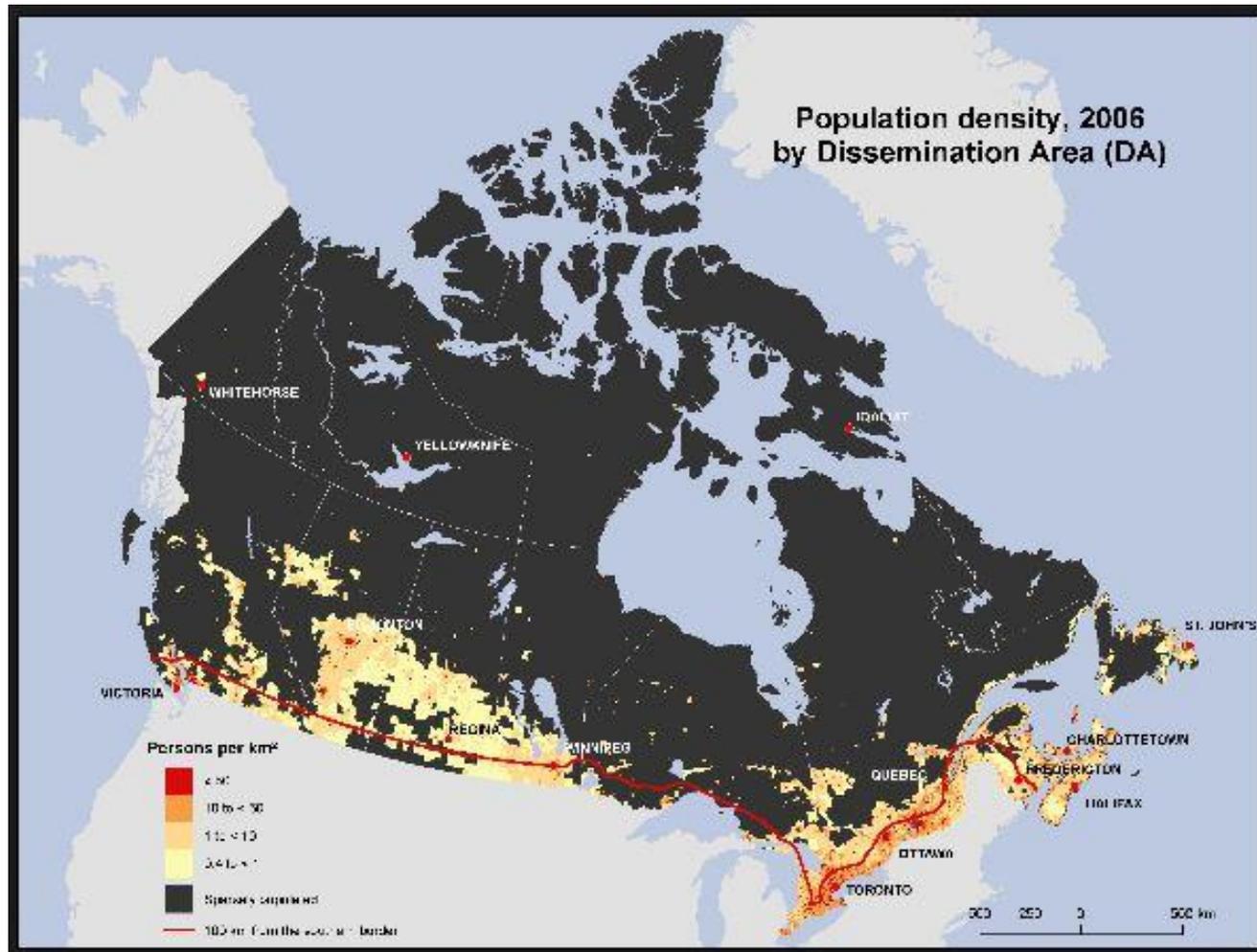
Urban Front + Boreal Corridor Boréal



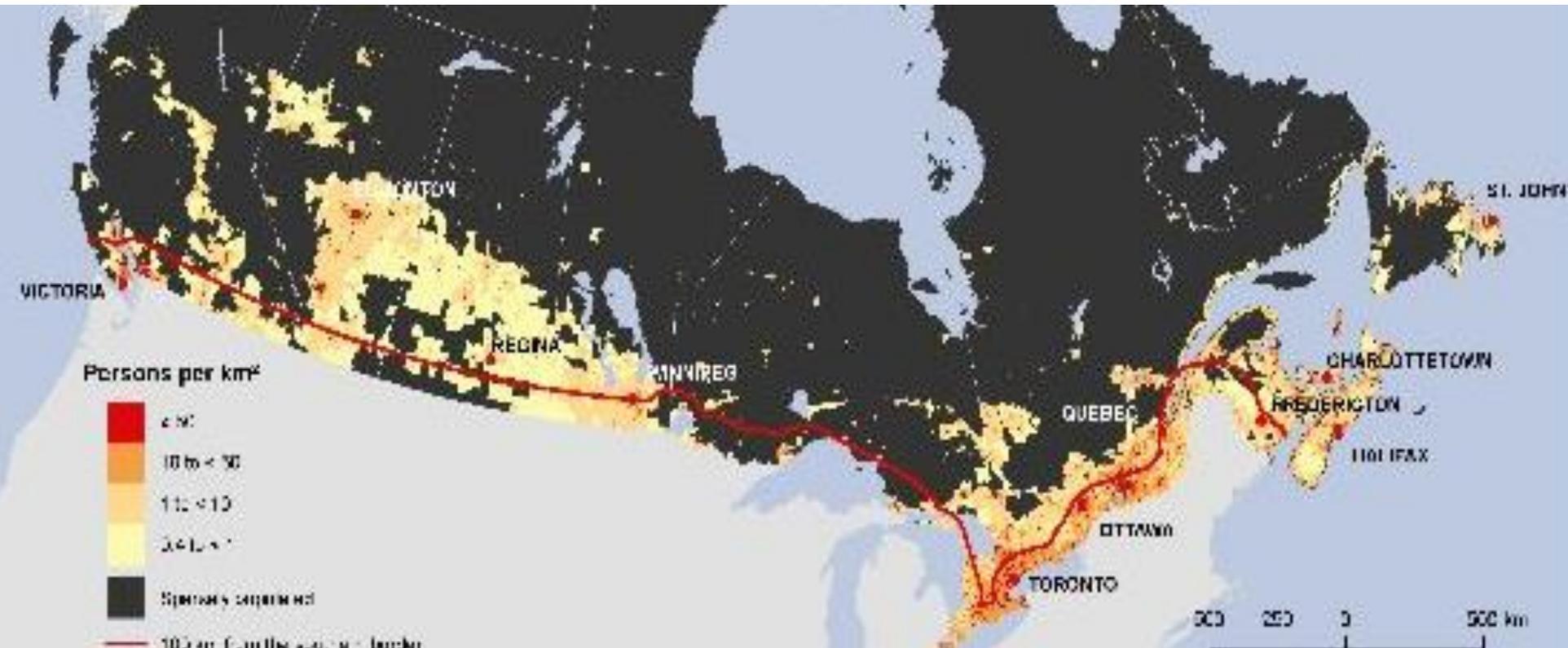
National Growth Plan: Part One

Canada's Urban Front

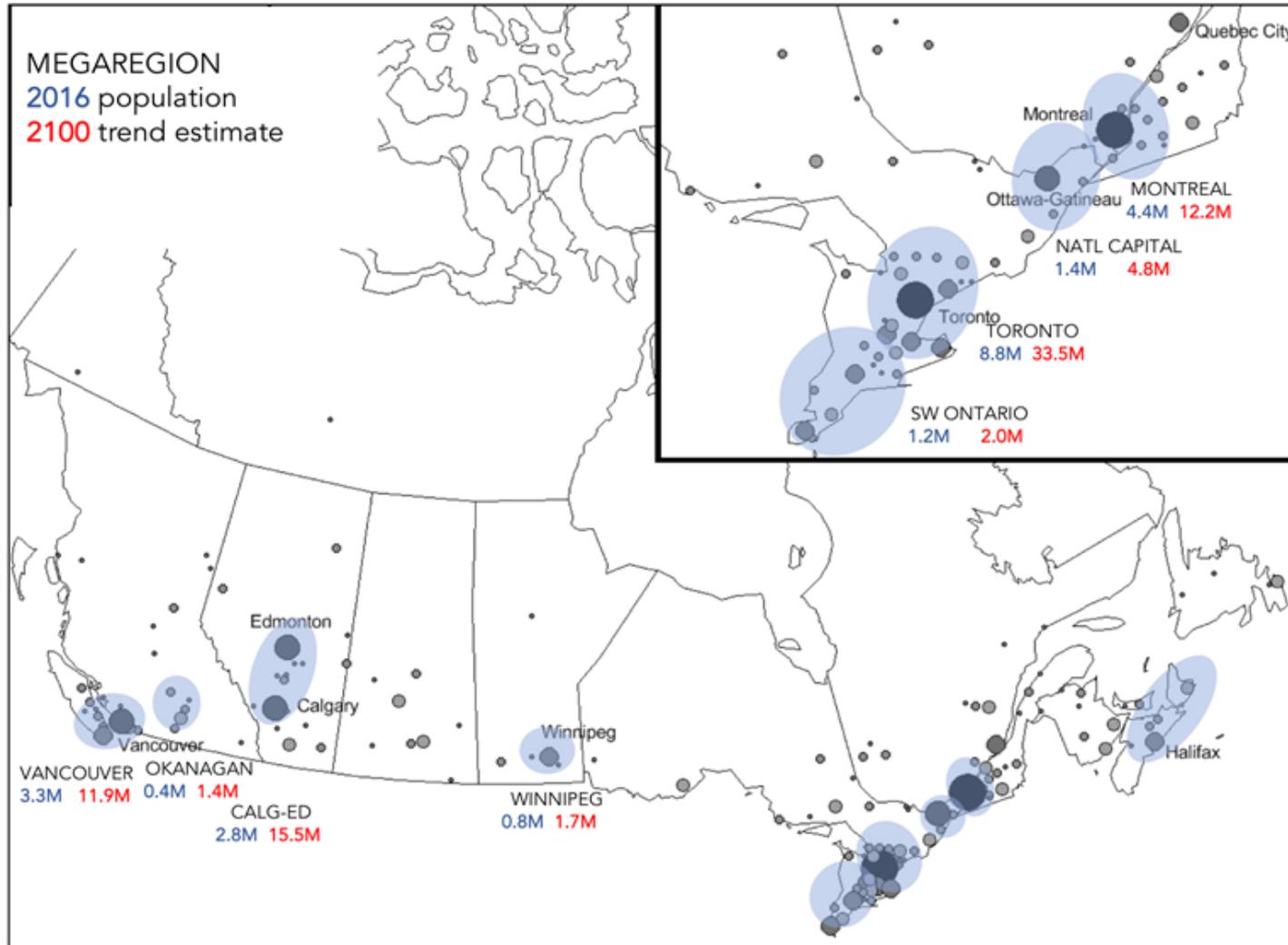
Canada's Urban Front (2006)



Canada's Urban Front (2006)



A Nation of Mega-Regions (2100)



Based on Simmons and Bourne, 2013

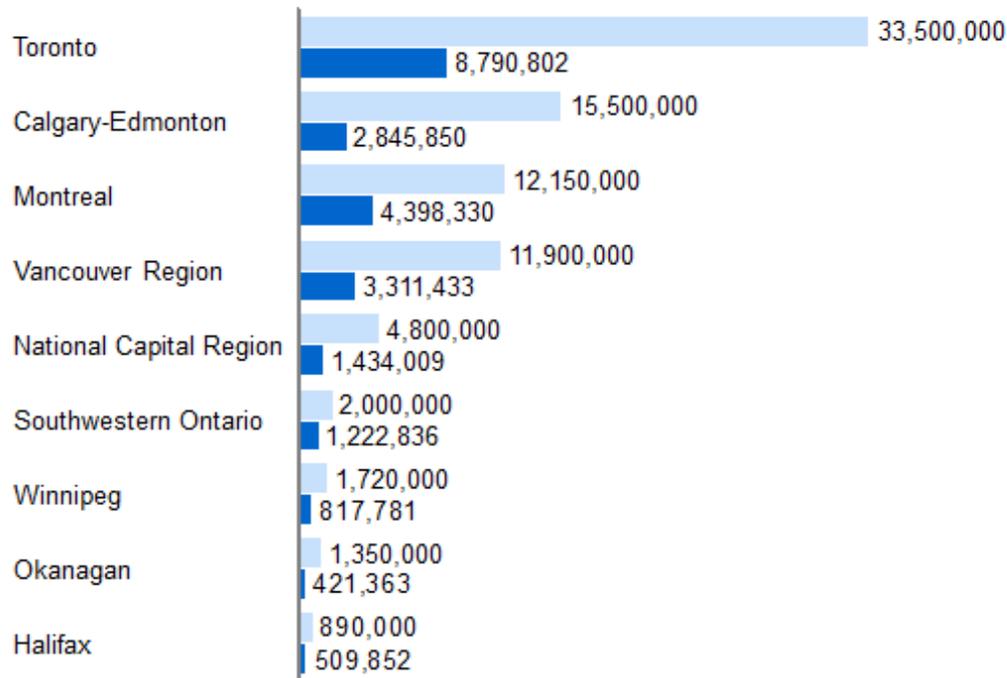
Credit: Neptis Foundation with Pamela Blais for Century Initiative (2017)

A Nation of Mega-Regions (2100)

Largest cities break away as population growth concentrates in the largest urban areas

Megaregions, 2016 and 2100 in a Canada of 100 million

2100
2016



MEGAREGIONS, 2100

Toronto, 34 million
 Calgary-Ed, 16 million
 Montreal, 12 million
 Vancouver, 12 million
 Ottawa, 5 million

MEGAREGION COMPARABLES,¹ 2010 v 2100

Tokyo, from 36 million to 26 million
 New York, 19 million to 30 million
 Los Angeles, 13 million to 20 million
 Paris, 10 million to 13 million
 London, 9 million to 12 million

2016: 67% of Canada's national population lived in 9 largest regions; projected to grow to 84% by 2100³

¹ Hoornweg, 2010

² SSP2

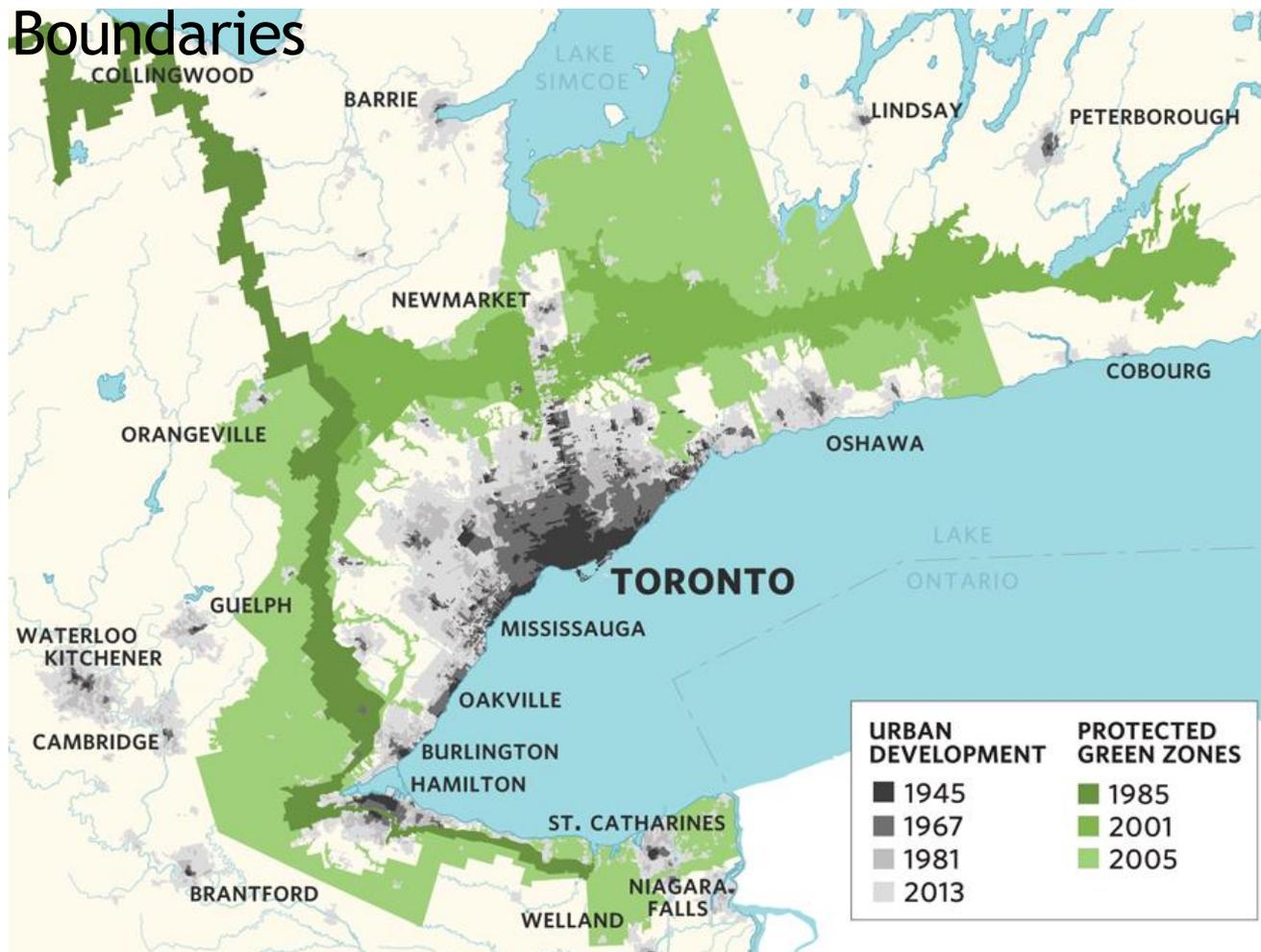
³ Projections based on extrapolation of shares applied to 100 million

The Toronto Region will grow from 9.5 million persons today to 13 million persons by 2041 (25 years) and **33.5 million persons** by 2100.

60% - 80% of Growth will be through immigration (ie: 4 - 19 million newcomers).

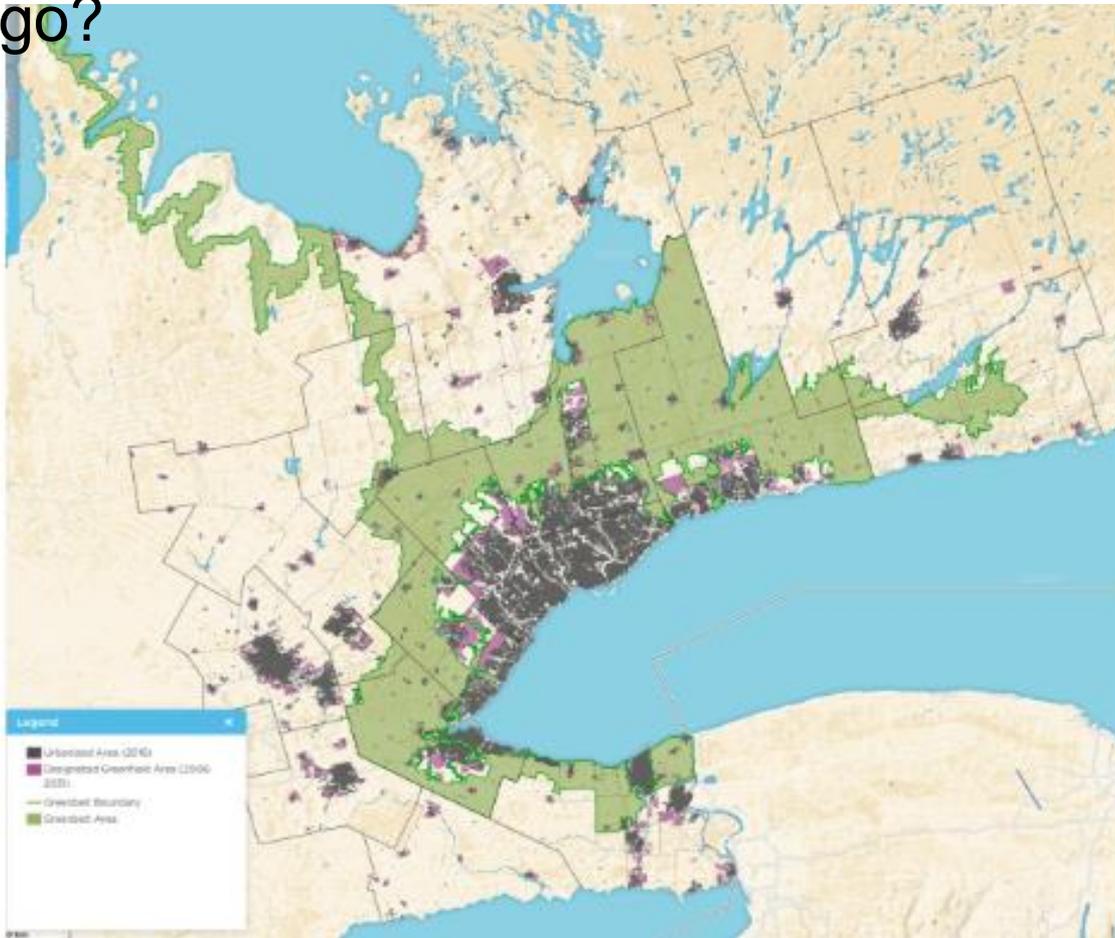
Growth Plan for the Greater Toronto Region

60% of all Growth to be located within Existing Urban Boundaries



Toronto Mega-Region

Where will the growth go?



Under status quo development patterns, a major expansion up to and beyond the greenbelt, and significant density increase in existing urban area is implied.

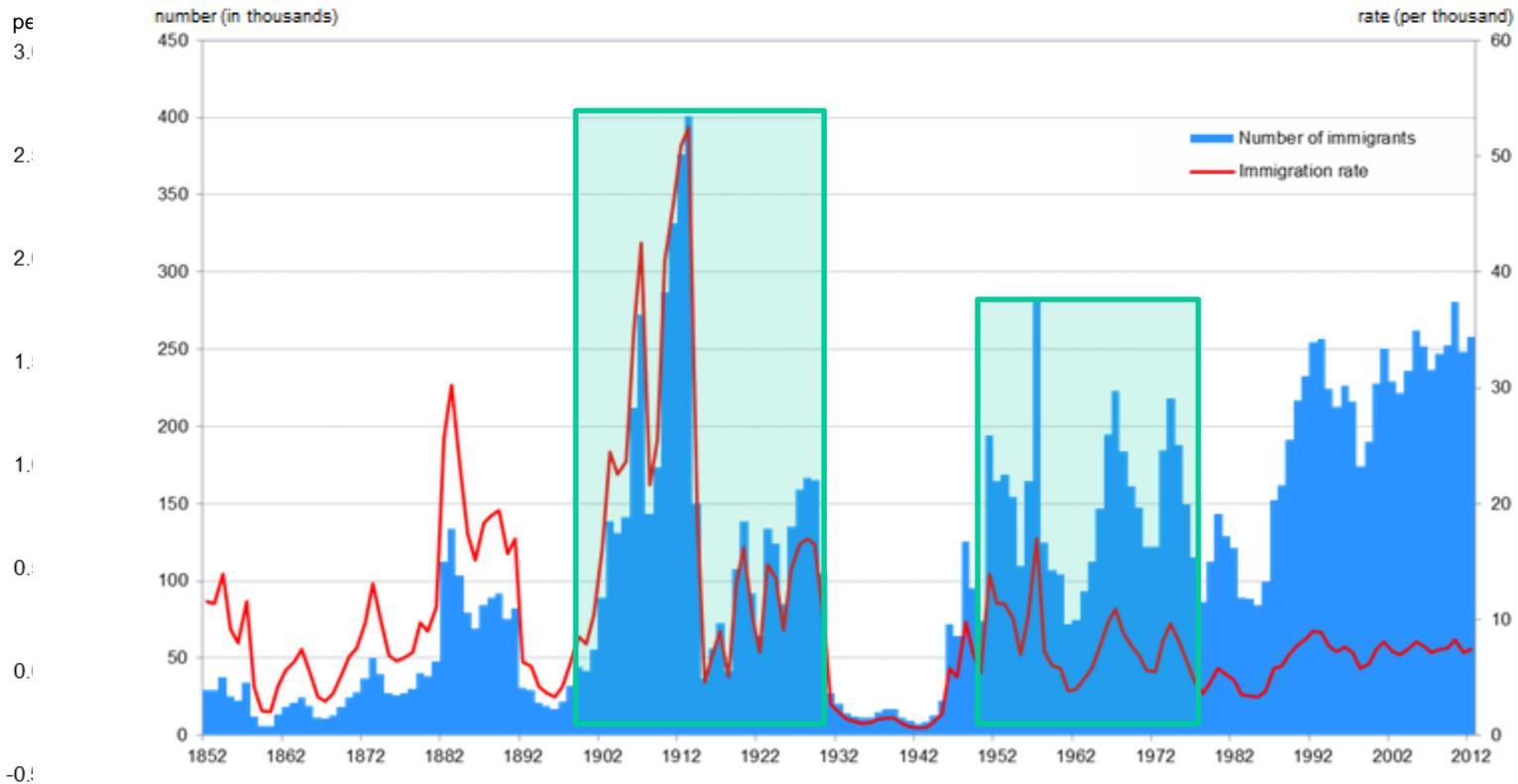
2016 pop: 9 million
2100 pop: 34 million
Growth = 25 million

2001 - 2011
86% GTHA population growth
(858,000) took place on
greenfields



Variation in immigration level to Canada during last 150 years

Number of immigrants and immigration rate, Canada, 1852 to 2012



Note: Data available as of October 2013.

Sources: From 1852 to 1979: Employment and Immigration Canada. 1982, 1980 Immigration Statistics, Immigration and Demographic Policy Group, catalogue no. MP22-1/1980. From 1980 to 2012, Citizenship and Immigration Canada.

-1.0
1950 to 1955

1960 to 1965

1970 to 1975

1980 to 1985

1990 to 1995

2000 to 2005

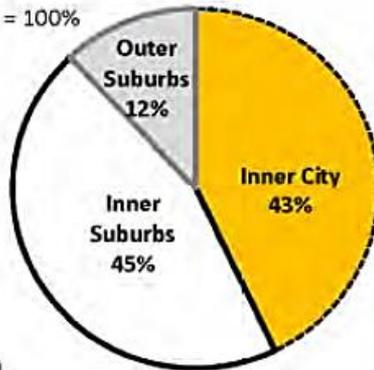
Recent Immigrants (1971 & 2006)

Percentage of the Total Recent Immigrant Population in the Inner City, Inner Suburbs and Outer Suburbs and Percentage of the Population Recent Immigrant by Census Tract, Toronto CMA, 1971 and 2006

Toronto Census Metropolitan Area = 100%

1971

285,000
Immigrants
Arrived
1965-1971



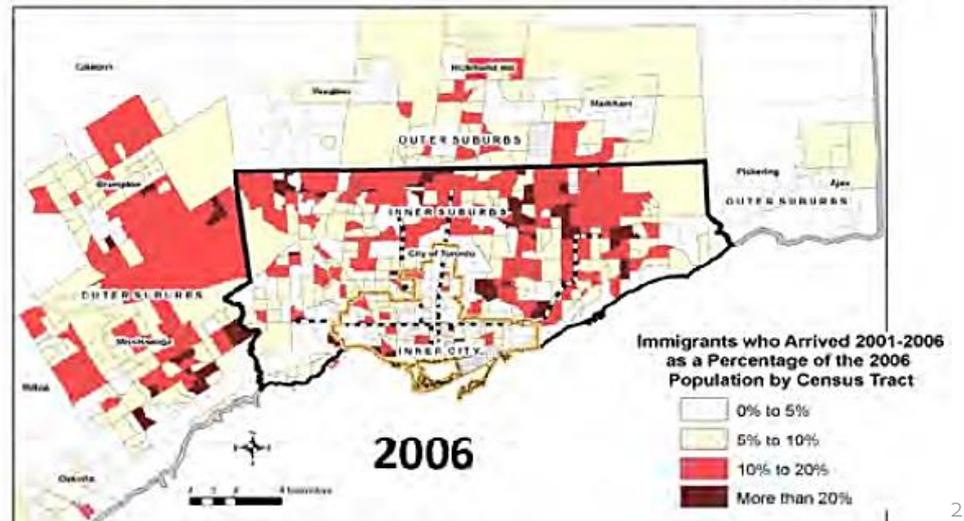
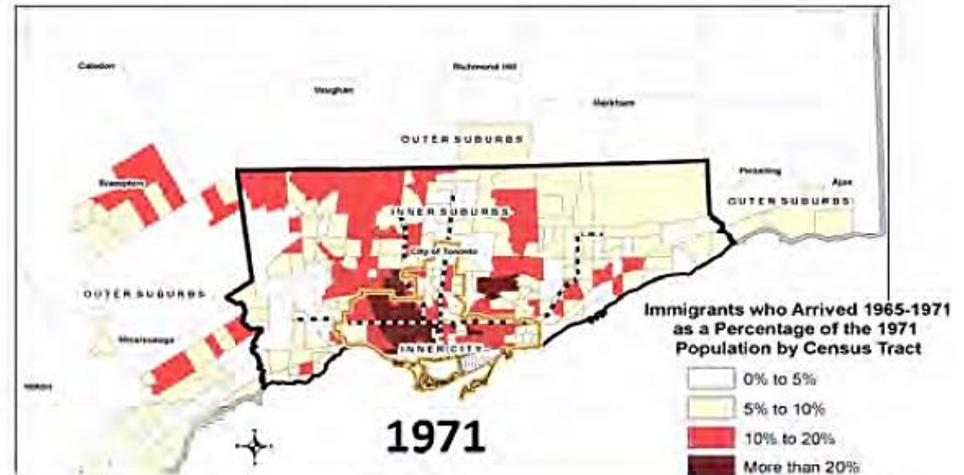
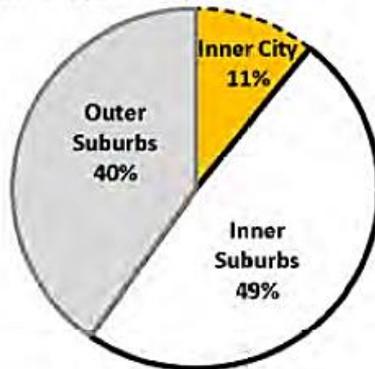
Inner City
(former City of Toronto)

Inner Suburbs
(former cities of Scarborough, North York, Etobicoke, York, East York)

Outer Suburbs
(the "905 Region" adjacent to the City of Toronto and within the Toronto Census Metropolitan Area)

2006

450,000
Immigrants
Arrived
2001-2006



National Growth Plan: Part Two

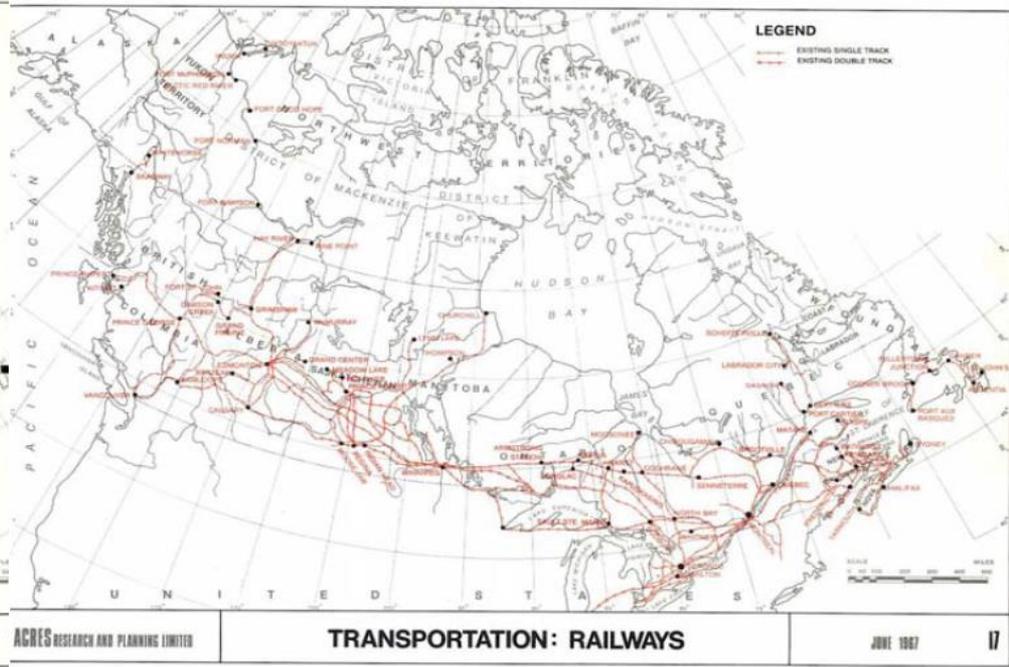
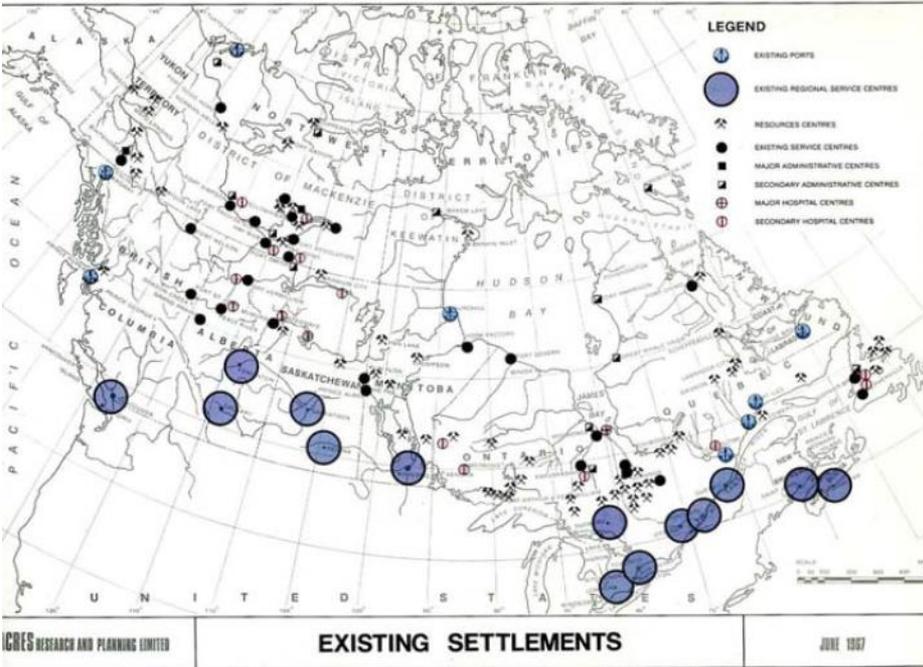
A Development Plan for Boreal Corridor Boréal

The Mid-Canada Corridor (1967)



The idea of a “Mid-Canada Corridor (MCC)” was first advanced in 1967 by General Richard Rohmer, working with Acres Consulting Engineers

The Mid-Canada Corridor (1967)



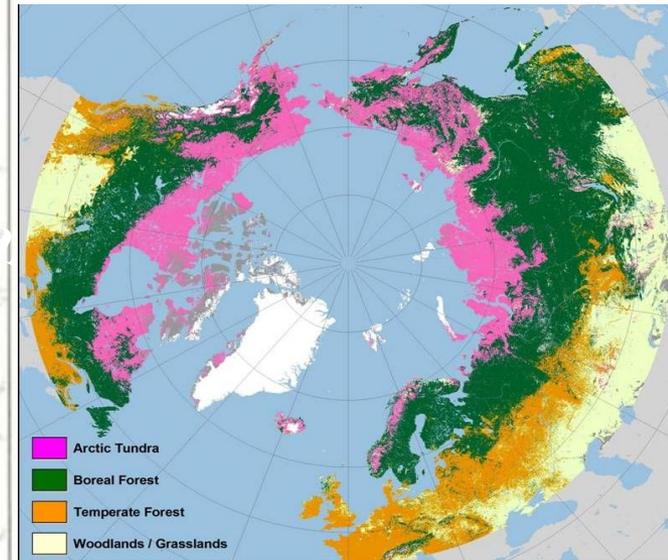
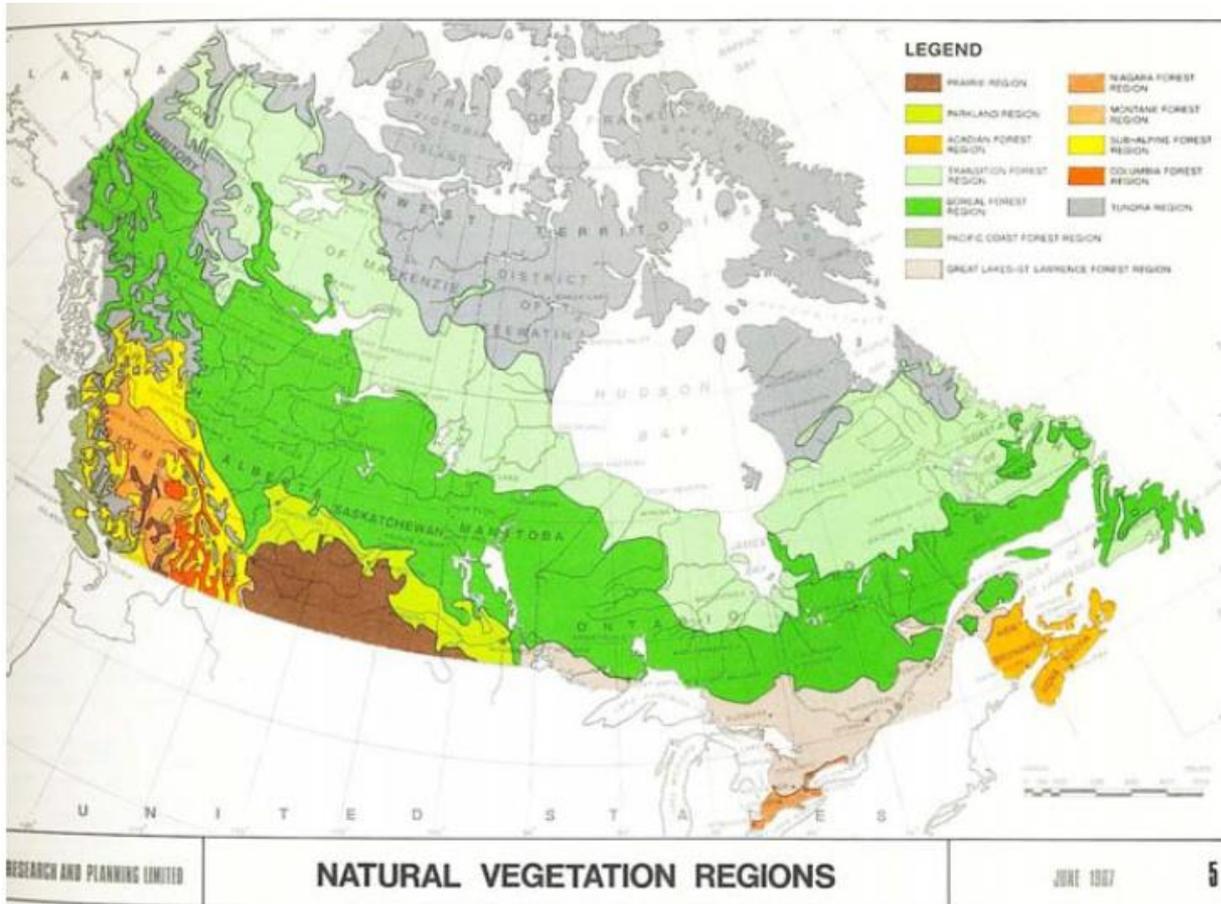
The Great Majority of Canadians Live Within 300 Miles of Our The Border

The Mid-Canada Corridor (1967)



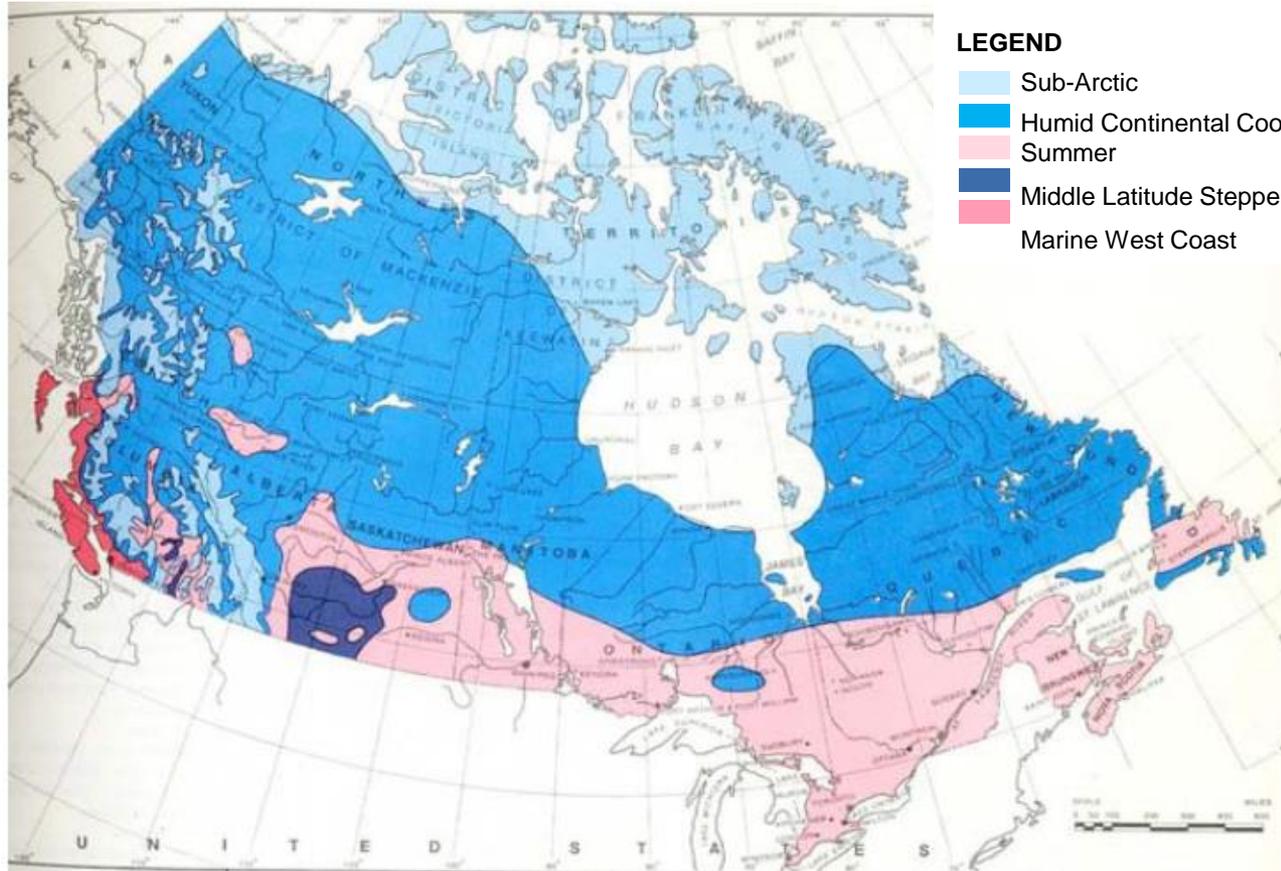
Mid-Canada Is Located Between the Northern Edge of The Urban Front + The Treeline

The Mid-Canada Corridor (1967)



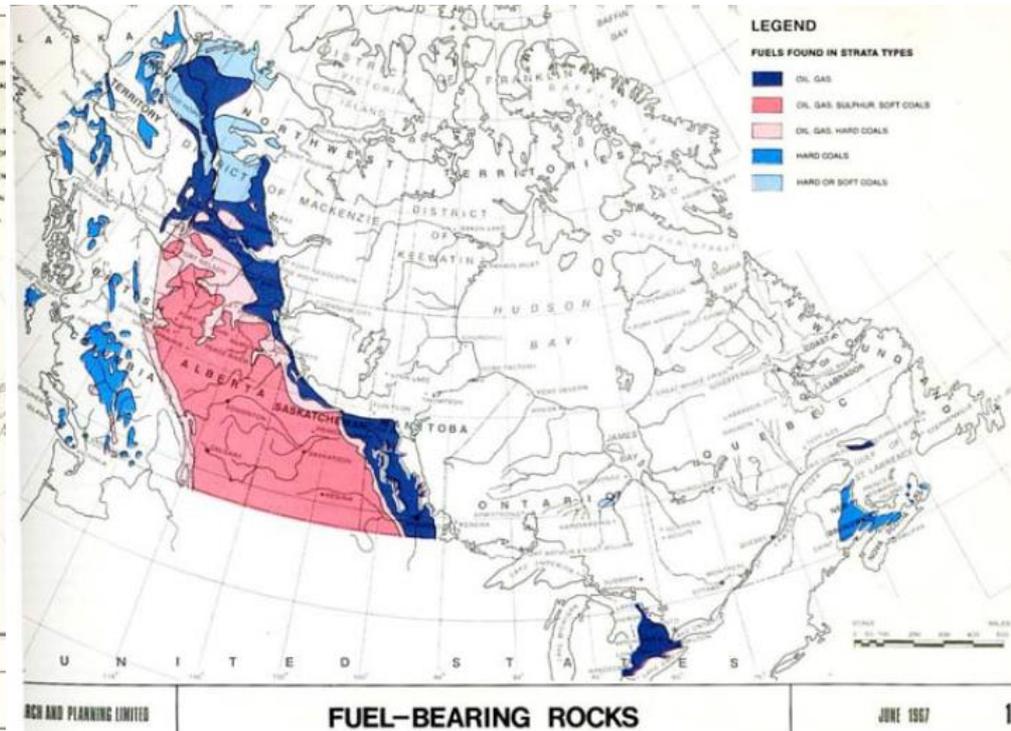
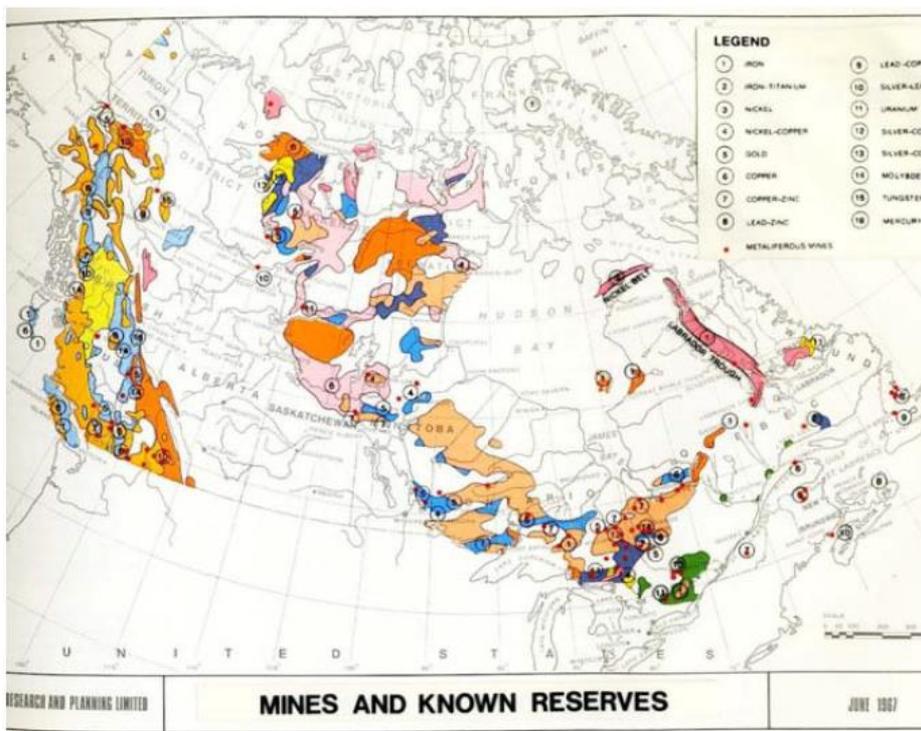
Mid-Canada is Dominated by the Circumpolar Boreal Forest

The Mid-Canada Corridor (1967)



Mid-Canada Is Temperate and Habitable

The Mid-Canada Corridor (1967)

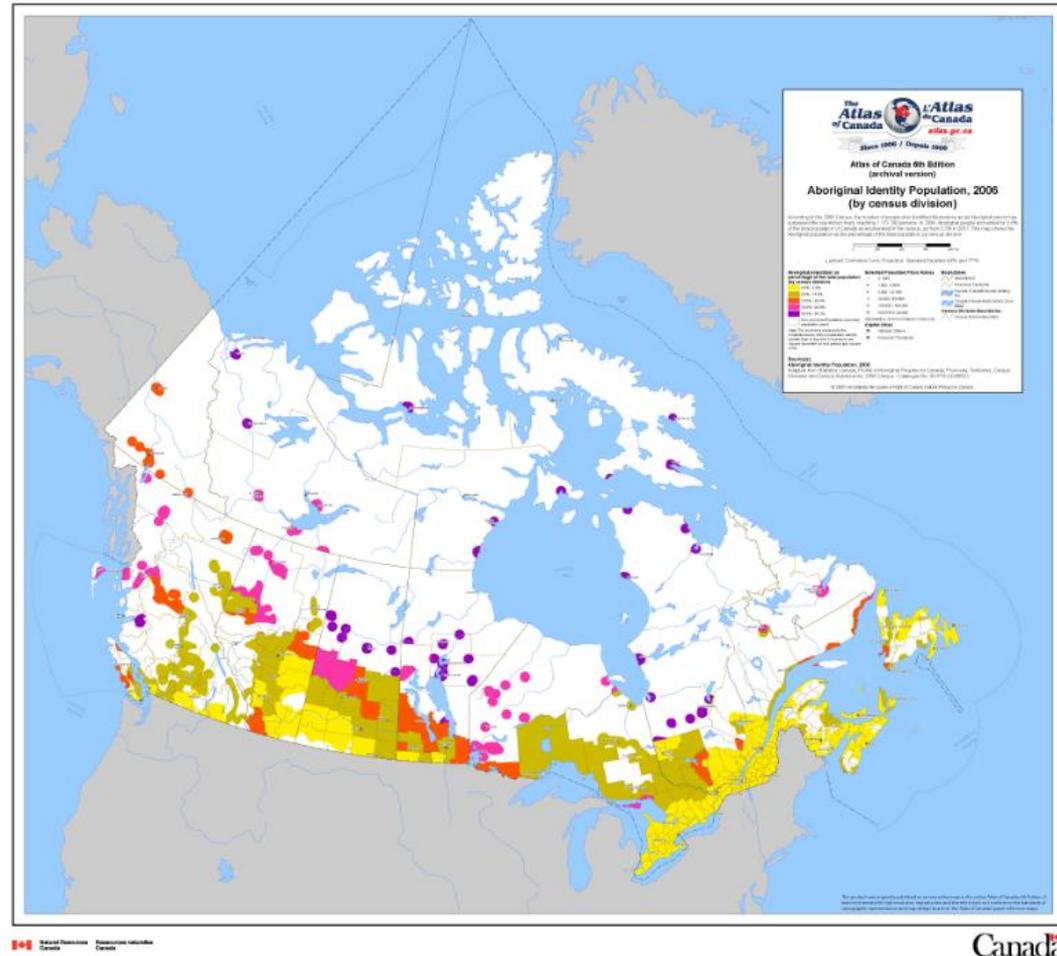


75% of Canada's Natural Resources are located within The Mid-Canada Corridor

The Mid-Canada Corridor (1967)

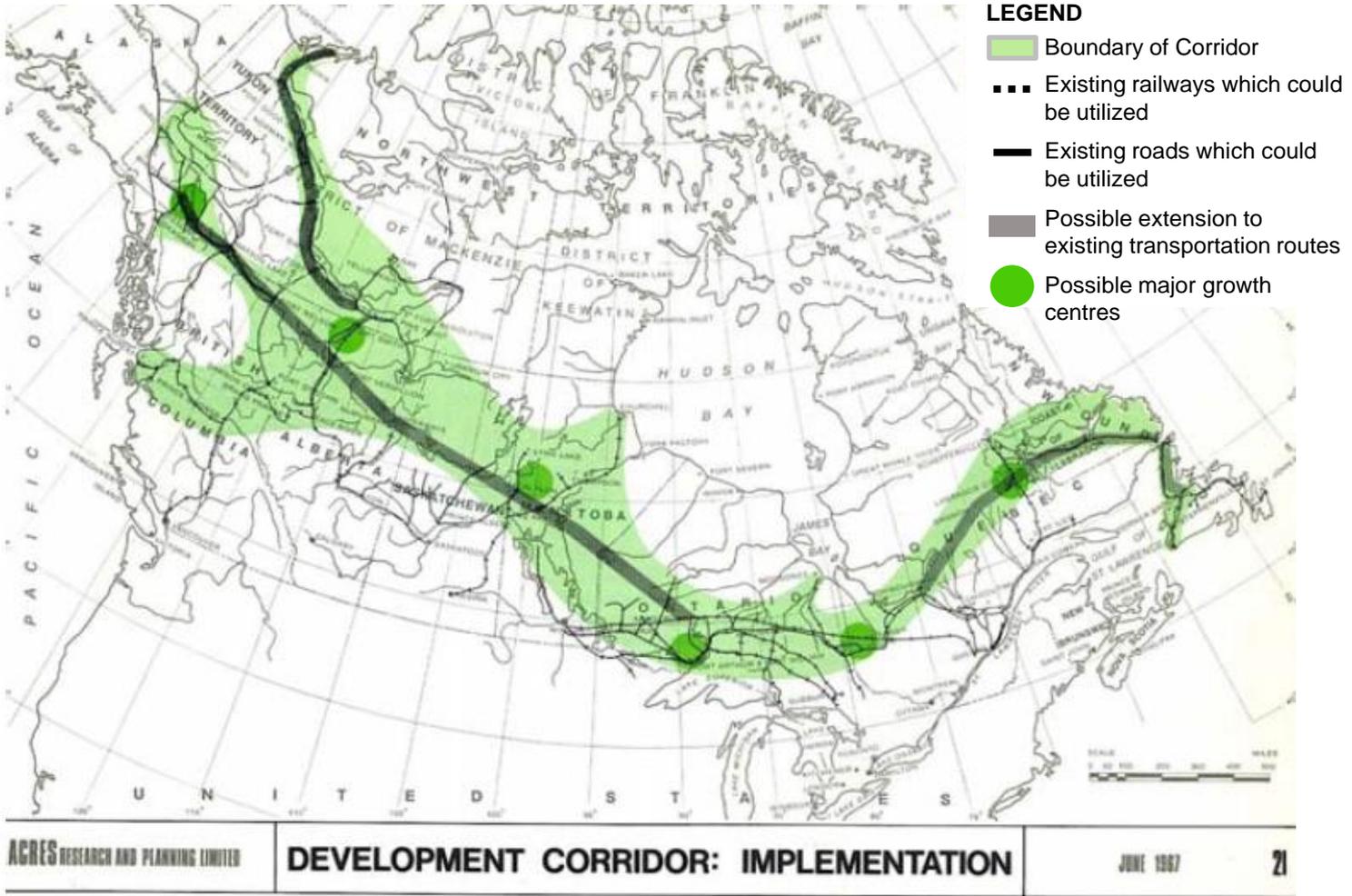
Indigenous Nations

- Form the majority population
- Are gaining increased access to land rights in our higher courts
- Are eager to participate in its economy while acting as stewards of its environments



The MCC Is Home To 75% of Our Aboriginal Population

The Mid-Canada Corridor (1967)

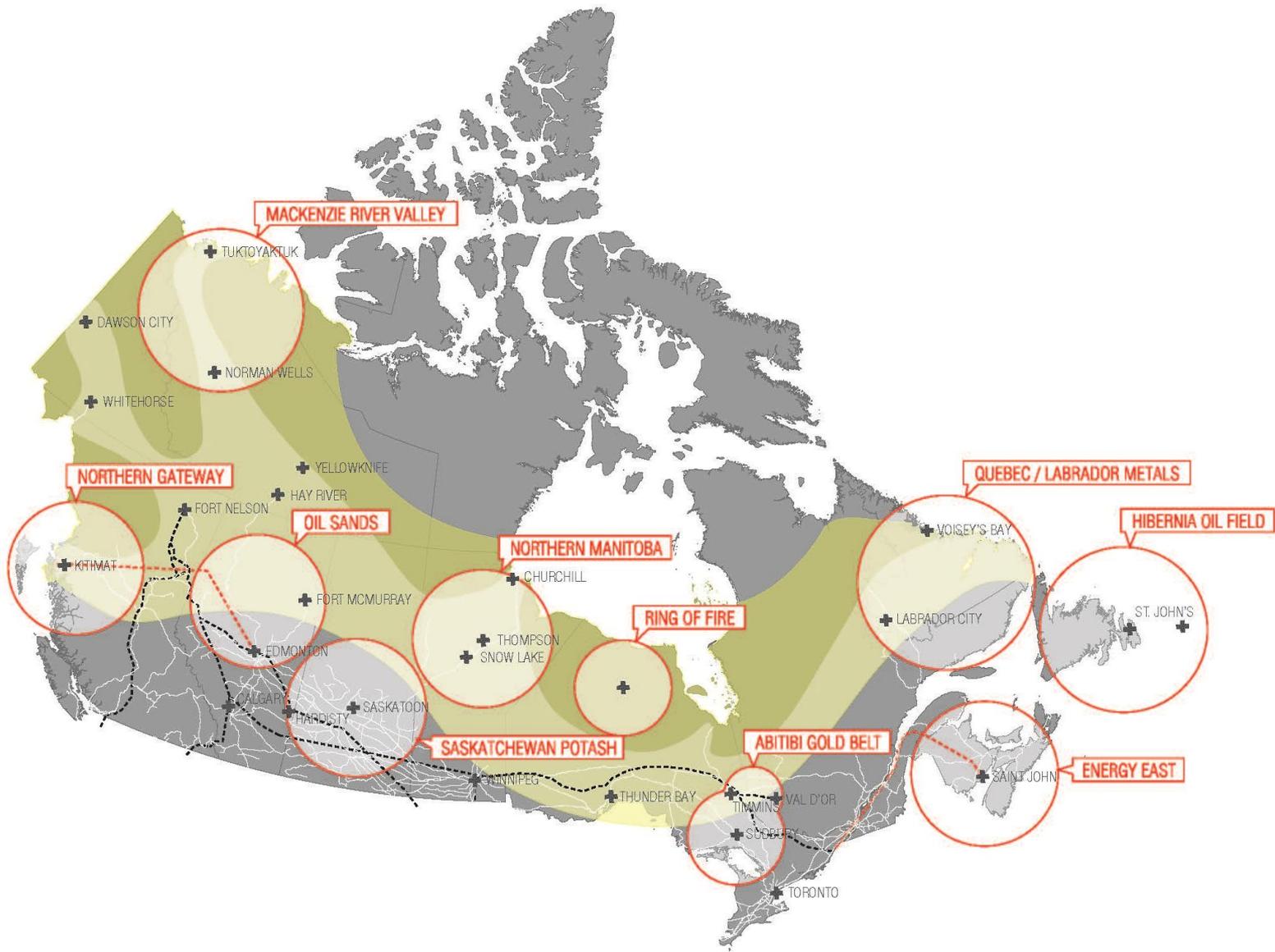


..and It Needs Planning

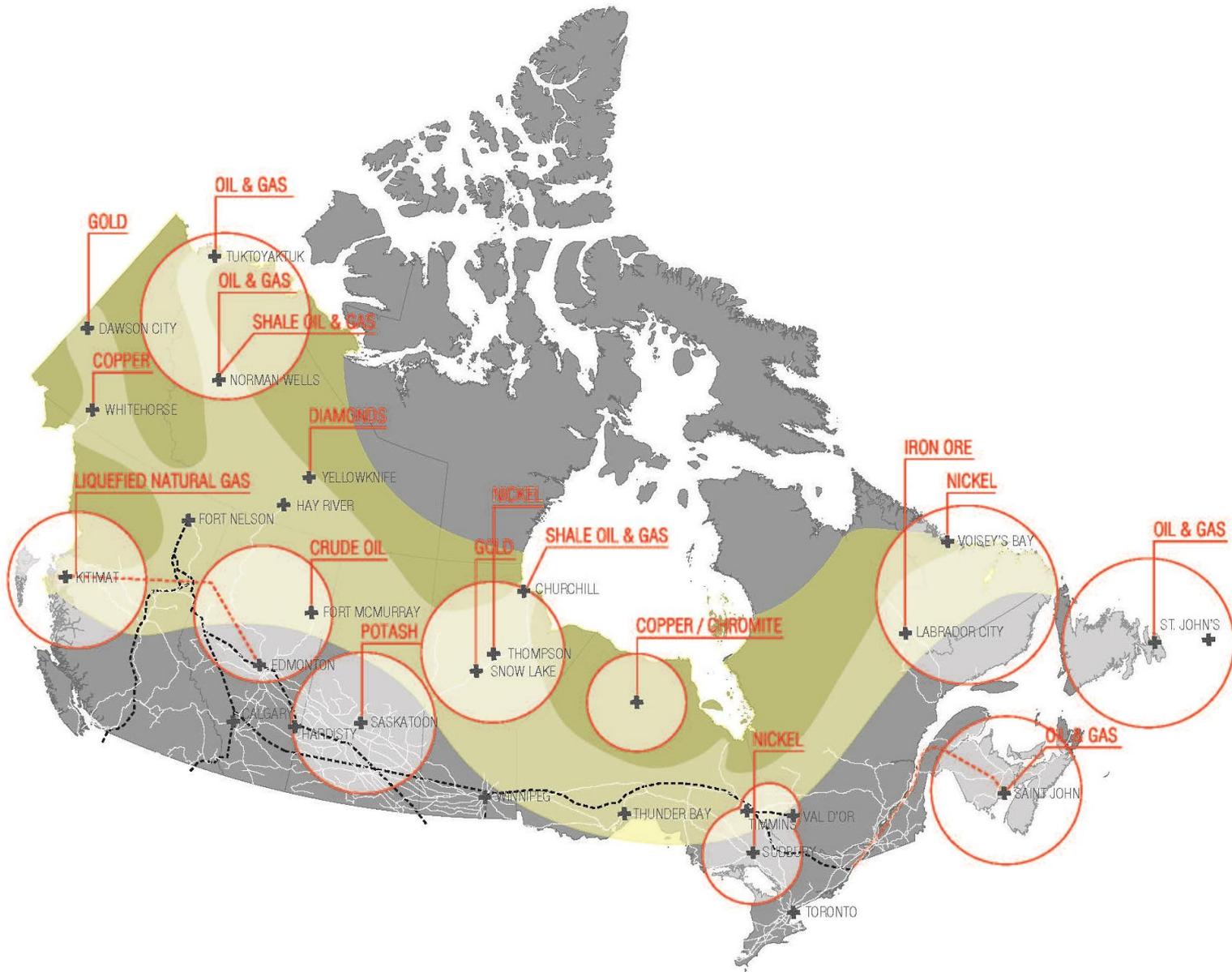
Boreal Corridor Boréale (Today)



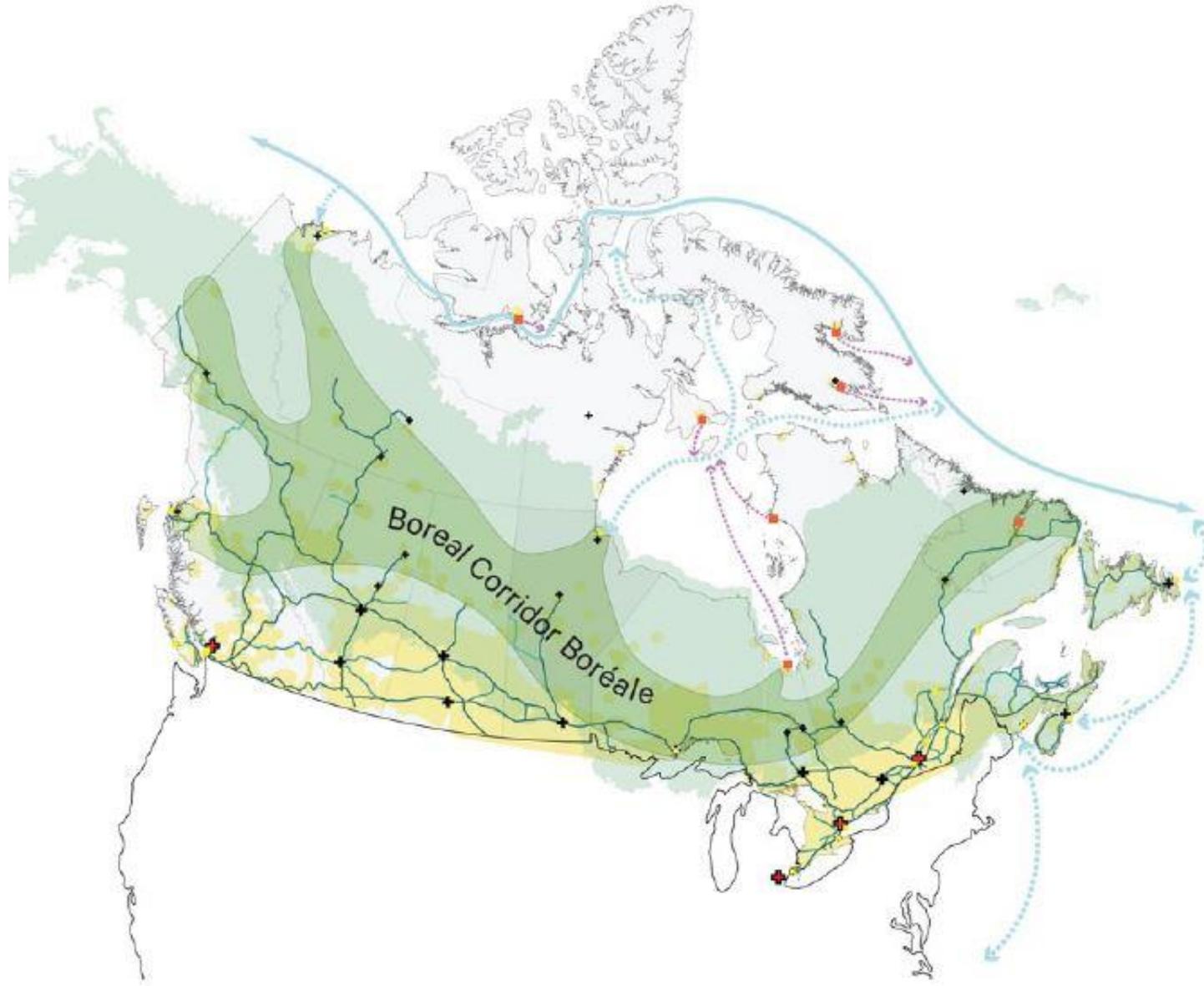
Boreal Corridor Boréale (Today)



Boreal Corridor Boréale (Today)



Boreal Corridor Boréale (Today)



Current Context

Development Plan for the Boreal Corridor Boréale will be driven by:

- Increasing Indigenous autonomy and population + economic growth
- Economic growth through **increased immigration**
- Addressing climate change through denser, more sustainable housing
and placing indigenous communities in charge of natural lands

Mining renaissance driven by new markets for electric car batteries, which require zinc, lithium, cobalt and graphite, alongside traditional silver, gold and rare earth

The BCB will form a critical stepping stone to the Arctic, and east-west (as opposed to north-south) investment and technological co-operation will promote cost sharing across the country.

What is the Business Plan

Guggenheim Partners say the North American Arctic will require close to \$1 trillion of infrastructure investment in next decade. Northern Canada represents one of the safest new investment markets in the world.

The BCB and Northern Hubs, as well as air, ship, rail and road links and broadband connection are more likely to happen by working together.

Some of these are already underway, such as the proposed new Highway from Yellowknife to Gray's Harbour in Nunuvut (linking the BCB with the Northwest Passage and the Arctic).

What is the Business Plan

The BCB will be developed by all levels of government and the private sector through **Private/Public Partnerships**.

More forms of capital will be needed, including **seed capital** for new ventures, **private capital** for liquidity and growth, and **public capital** for beachfront infrastructure. sustainable development and resource extraction.

Public investment in highways, energy and internet will improve connectivity. Canada's Infrastructure Bank and the Canadian Trade +Transportation Corridors Initiative promise to induce such investment.

These investments will foster private sector growth, attract new residents and accommodation, and pay for itself through a growing tax and property tax base.

What is Needed for Success

For the Boreal Corridor to be a success it will need...

Engagement Plan

A Comprehensive Engagement Plan administered through a hierarchy of roundtables set at four levels - National, Provincial, Regional and Local

Environmental & Infrastructure Plans

- Comprehensive Environmental Plans created by and approved for each Level - to determine developable + non-developable areas.
- Comprehensive Infrastructure Plans - addressing key infrastructures at each Level (i.e. multi-modal transportation, energy, pipelines, telecommunications, harbours) in northern conditions

What is Needed for Success

For the Boreal Corridor to be a success it will need...

Population & Employment Projections

- Comprehensive Population and Employment
- Projections at all 4 levels – for 2041, 2051 and 2101

Integrated Development Plan

Integrated Development Plan – integrating infrastructure with permanent natural areas, housing, social facilities, mining and other industrial operations.

How Is The Plan Transformational

The BCB Plan will be created and developed on a nation-to-nation basis including all indigenous nations, focusing on the expansion of not only Canada's existing Urban Regions but also its new Coastal Economic Corridors and Gateways.

It will be the first Plan to direct newcomers to live in Canada's emerging economic areas – as opposed to flying them in and out of these at enormous public expense.

How Is The Plan Transformational

The BCB Plan assumes that 5-10% of Canada's growth can be attracted to live in the Corridor on a long-term by around 2050, and another 10-20% by 2100.

This will result in population increases through immigration of up to 6.5 and 14 million new residents respectively.

Combined with natural population increase across the BCB we estimate that these populations would generate annual GDPs of up to \$300-\$750 billion by 2050 and 2100 respectively.

How Is The Plan Transformational

We estimate that the BCB will cost \$10-15 million per km in built-up areas and that approximately 10-15% of the Corridor will be located in these areas.

Our overall estimated cost of the 7,000 km long BCB is \$125-150 billion USD for Stage 1.

Key Stakeholders + Strategies

The Key Stakeholders are Indigenous Nations, resource companies, governments, and newcomers moving into the Corridor.

Key Stakeholders + Strategies

Key objectives of these parties are for:

Indigenous Nations

To secure a share of resource royalties (say 20%) and assume responsibility for their traditional lands and resources (i.e. food), and to manage and husband sensitive, no-go environments on behalf of all residents and visitors.

Resource Companies

To lead the mining and/or harvesting of resources, employing local and first nations enterprises (e.g Fort McKay in the Oil Sands).

Governments and Councils

To lead the development planning of infrastructure and housing at the national, regional and local levels, and to establish regulatory frameworks that promote good governance and attract investment.

Key Stakeholders + Strategies

This will require dialogue across the BCB, at a hierarchy of Engagement / Consultation/ Negotiation **Roundtables** – where all three stakeholder meet to plan for and implement development, focusing on our initial target

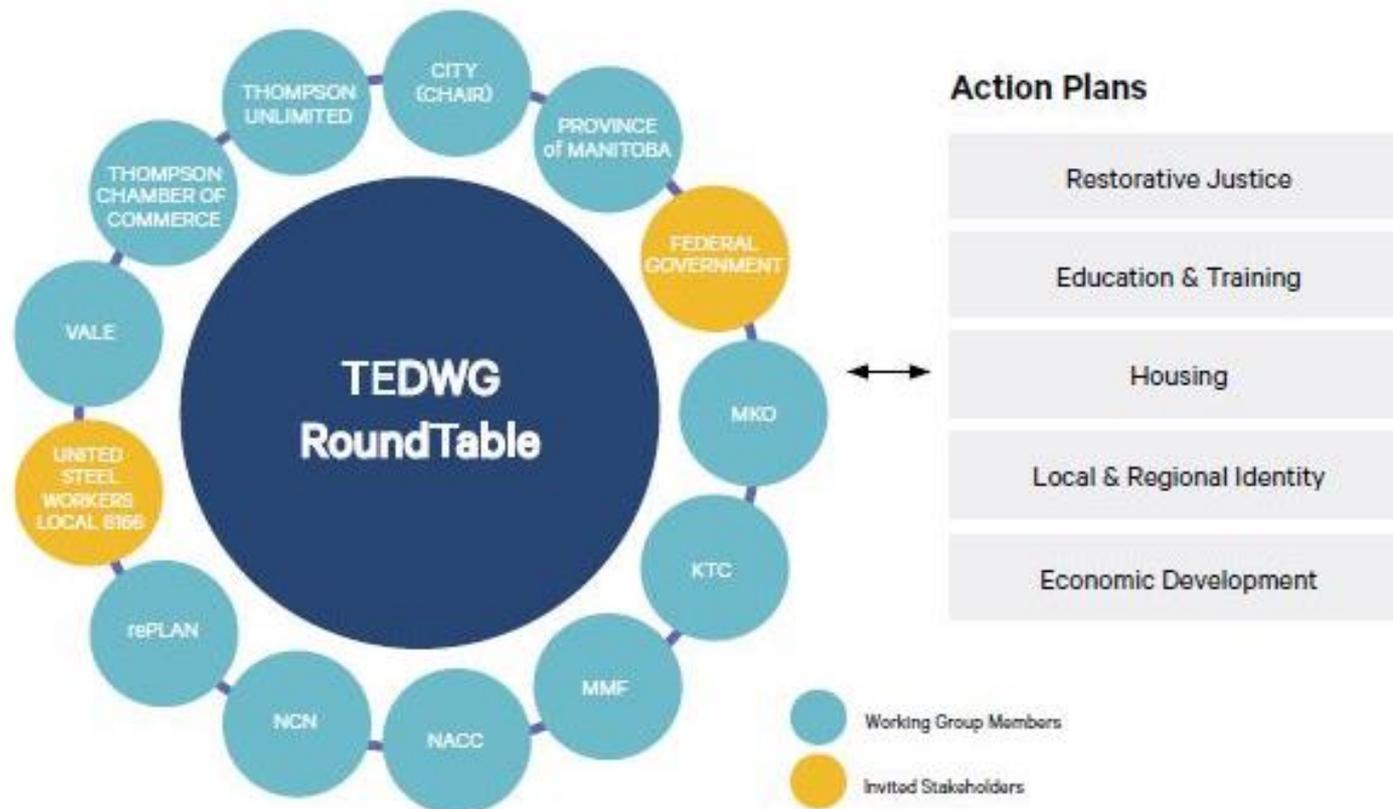


FIGURE 6 TEDWG RoundTable

Key Stakeholders + Strategies

Infrastructure Canada should consider establishing a **Boreal Heritage Fund** similar to Alberta's Heritage Fund or Norway's Sovereign Wealth Fund.

In turn, Canadian and Indigenous Nations should consider establishing a **Boreal University** to address the challenges and opportunities of their communities while creating a dedicated centre of research to ensure their regions remain prosperous for those – in particular youth - who want to continue to live there, and for those who are arriving.

Enabling The Plan

All-Nations Development Agency

Combining federal, provincial, regional and local leaders and chiefs with hierarchy of national, provincial, regional and local portfolios at each level.

Federal and Provincial agencies to focus on infrastructure, and Regional and Local agencies on regional and community planning, housing, and education, health and other social facilities.

Planning Principles

Principles and agency to set hierarchy of planning targets for each level – national, provincial, regional and local

Enabling The Plan

Implementation & Governance

To be implemented all 4 levels simultaneously within the context of an overall plan

Financial Strategies

- Federal and Provincial agencies to leverage federal and provincial crown/public lands to finance infrastructure through PS programs (i.e. through post sales of adjacent lands)
- Regional and local agencies to administer land grants and land development programs
- Resource Royalties to be distributed proportionally across all 4 tiers
- Regional and Local governments to tax new development

Enabling The Plan

Our approach to development planning is inspired in part by the settlement of Western Canada, notwithstanding its displacement of First Nations communities and Metis Settlements.

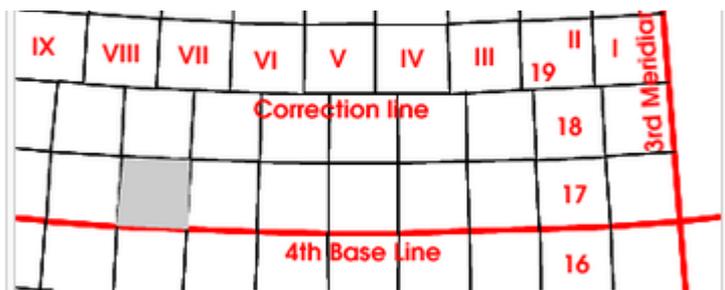


CANADA'S LAST NATIONAL CORRIDOR

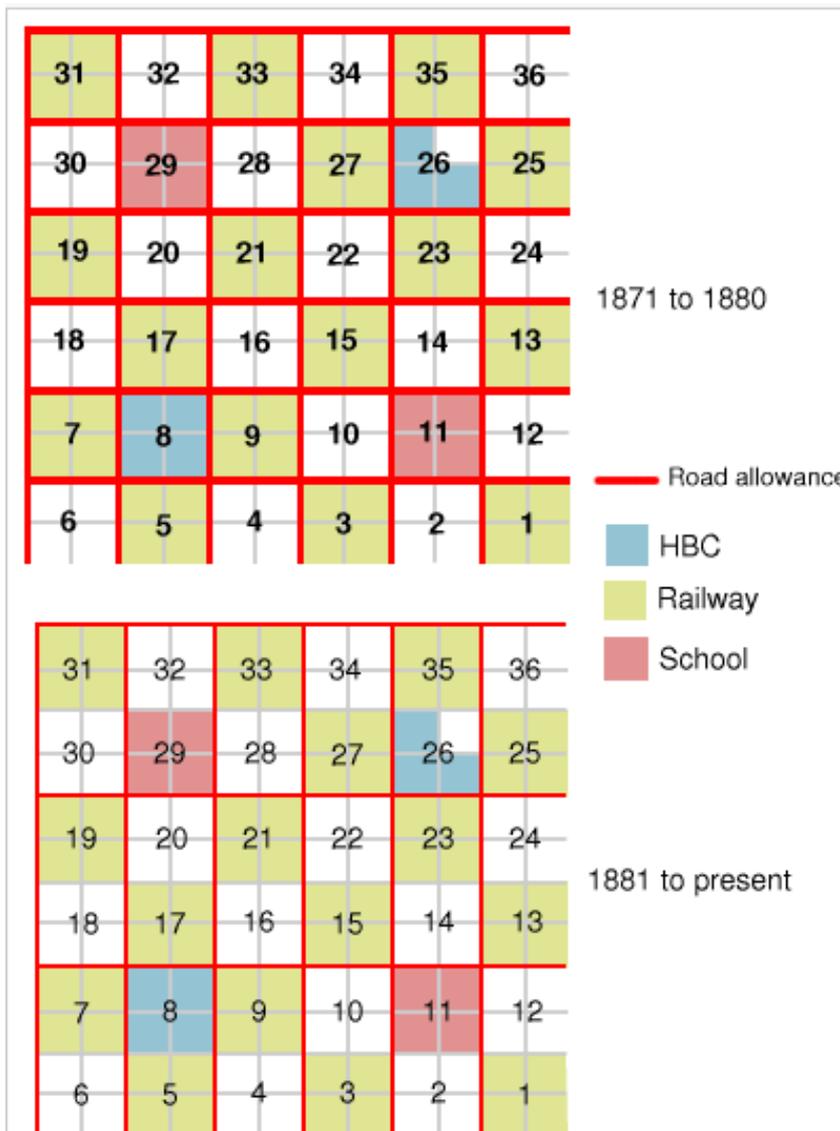
What can we Learn From
The Development of The
Southern Prairie and **The
Transcontinental Railway
Corridor....**

When the Resource was
Wheat ?

TRANSFERS OF CROWN LAND FINANCED THE CORRIDOR

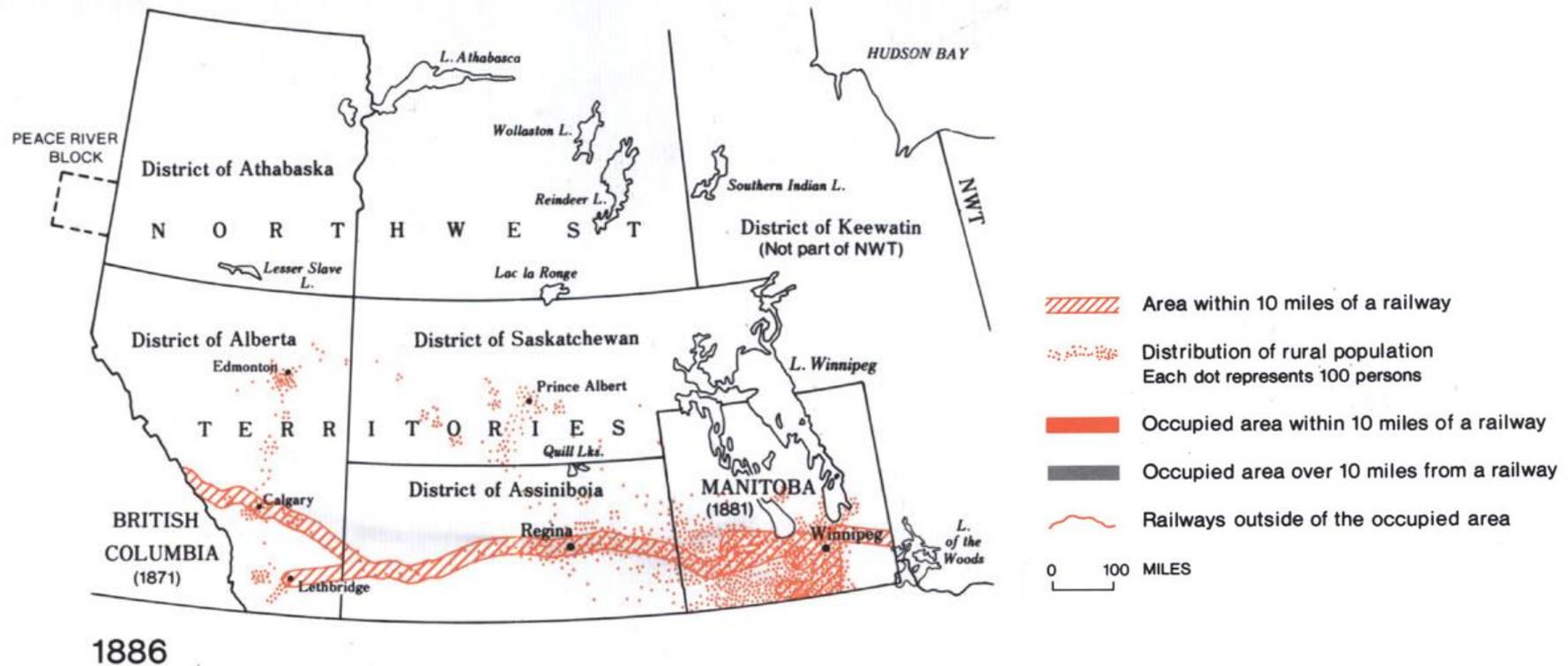


A part of the Dominion Land Survey (convergence of meridians exaggerated). The shaded township is Township 17, Range 8 west of the Third Meridian.



Road allowances and special sections in the Dominion Land Survey.

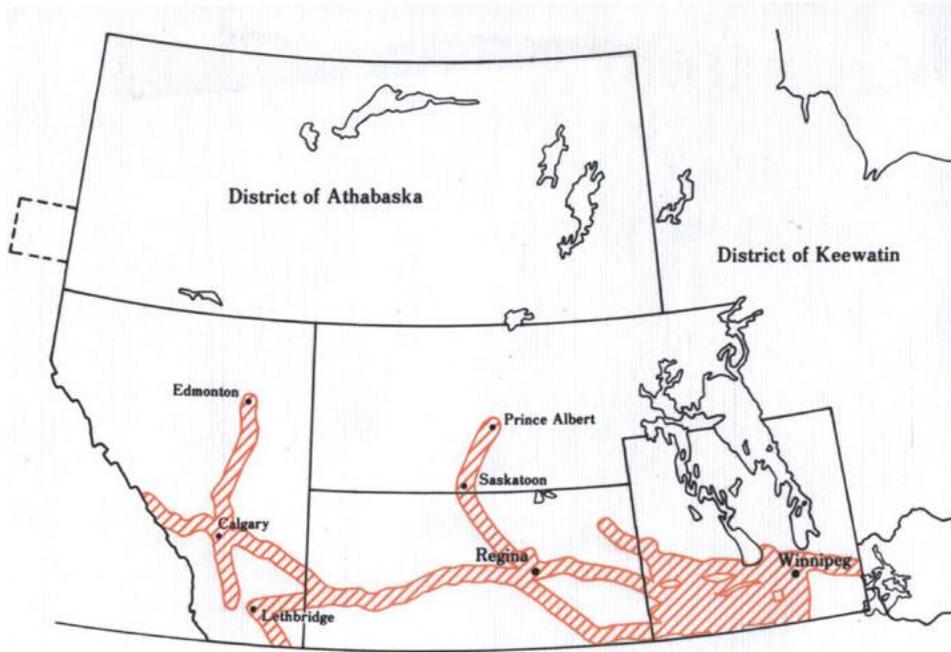
CANADA'S LAST NATIONAL CORRIDOR (1886)



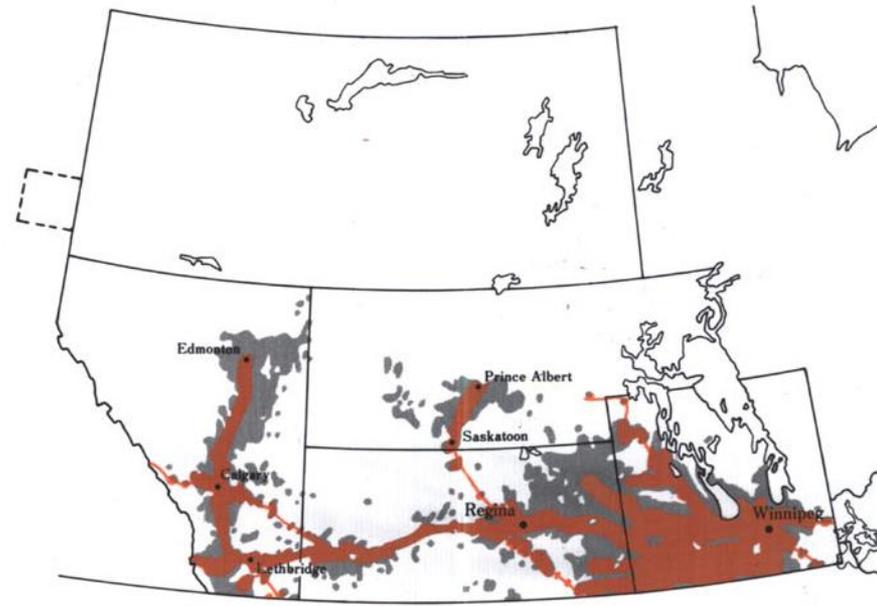
Rapid development of the west, including starter towns, was planned around the 10 mile wide Train Corridor.

Opening The West For Agriculture

CANADA'S LAST NATIONAL CORRIDOR (1896 – 1901)



1896 (Data for population distribution unavailable for 1896)



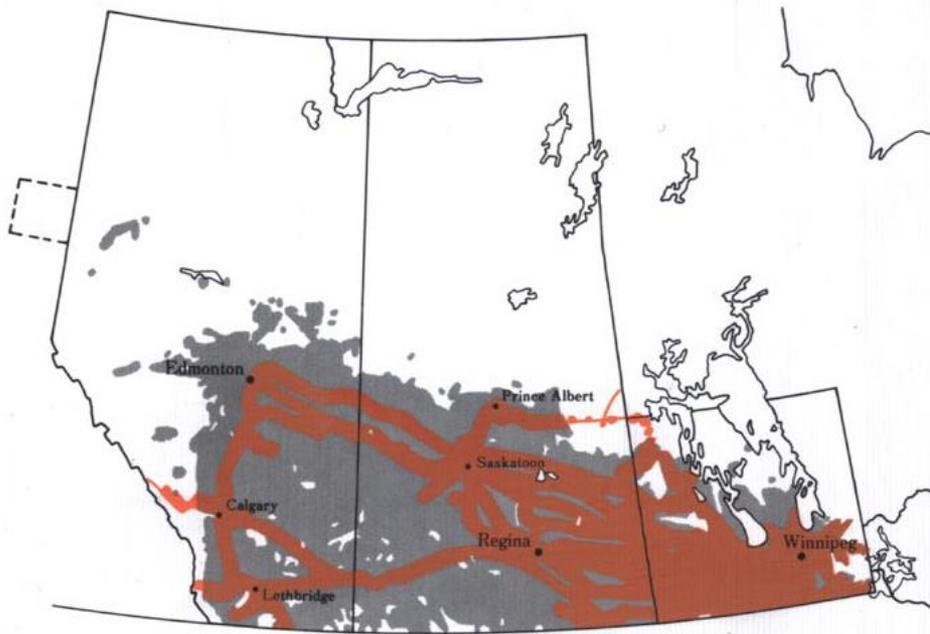
1901

The area experienced rapid growth and spread of infrastructure.

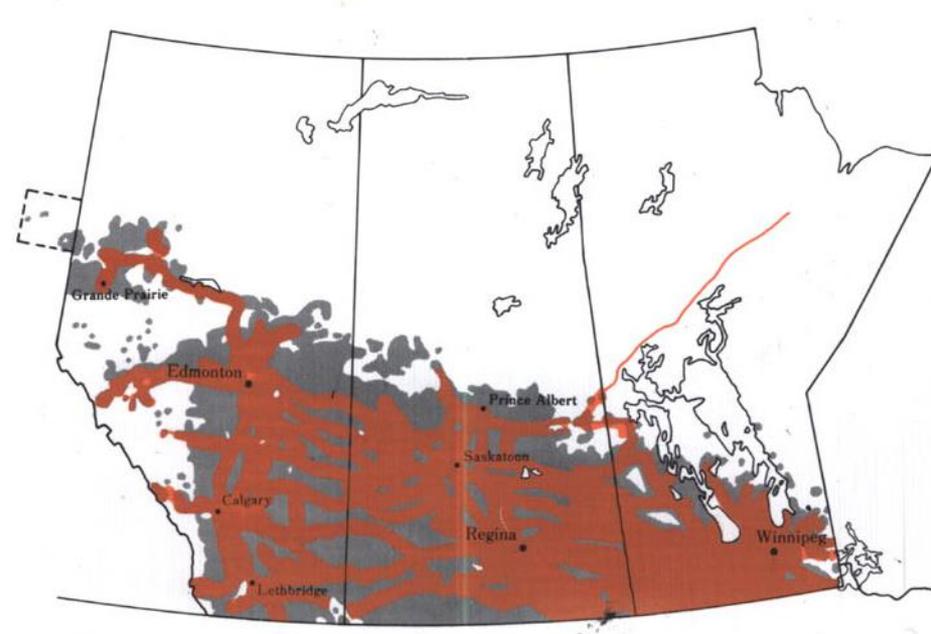
-  Area within 10 miles of a railway
-  Distribution of rural population
Each dot represents 100 persons
-  Occupied area within 10 miles of a railway
-  Occupied area over 10 miles from a railway
-  Railways outside of the occupied area

Opening The West For Agriculture

CANADA'S LAST NATIONAL CORRIDOR (1911 – 1921)



1911

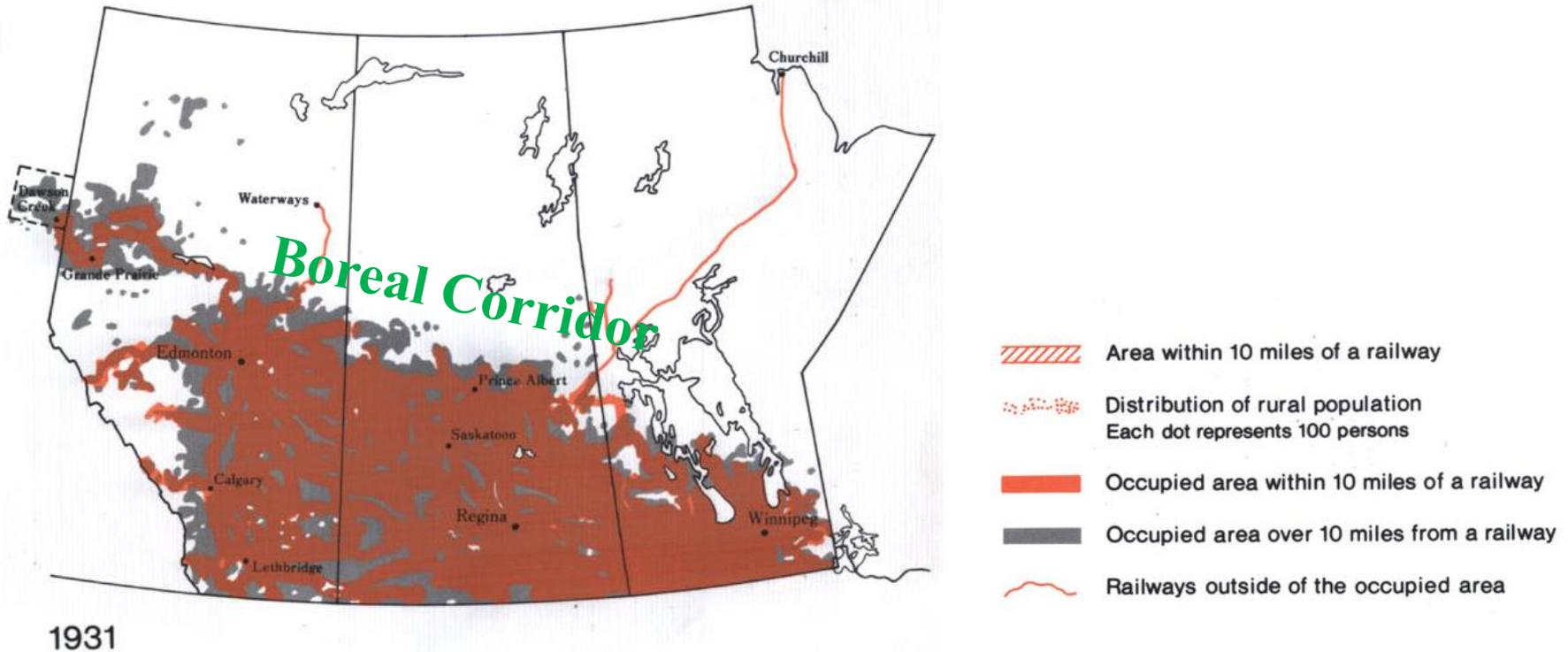


1921

Grain elevators and train stops were planned every 8 mi. so that farmers could reach them in one day. Starter towns naturally formed around areas surrounding the rail and grain elevators.

-  Area within 10 miles of a railway
-  Distribution of rural population
Each dot represents 100 persons
-  Occupied area within 10 miles of a railway
-  Occupied area over 10 miles from a railway
-  Railways outside of the occupied area

CANADA'S LAST NATIONAL CORRIDOR (1931)



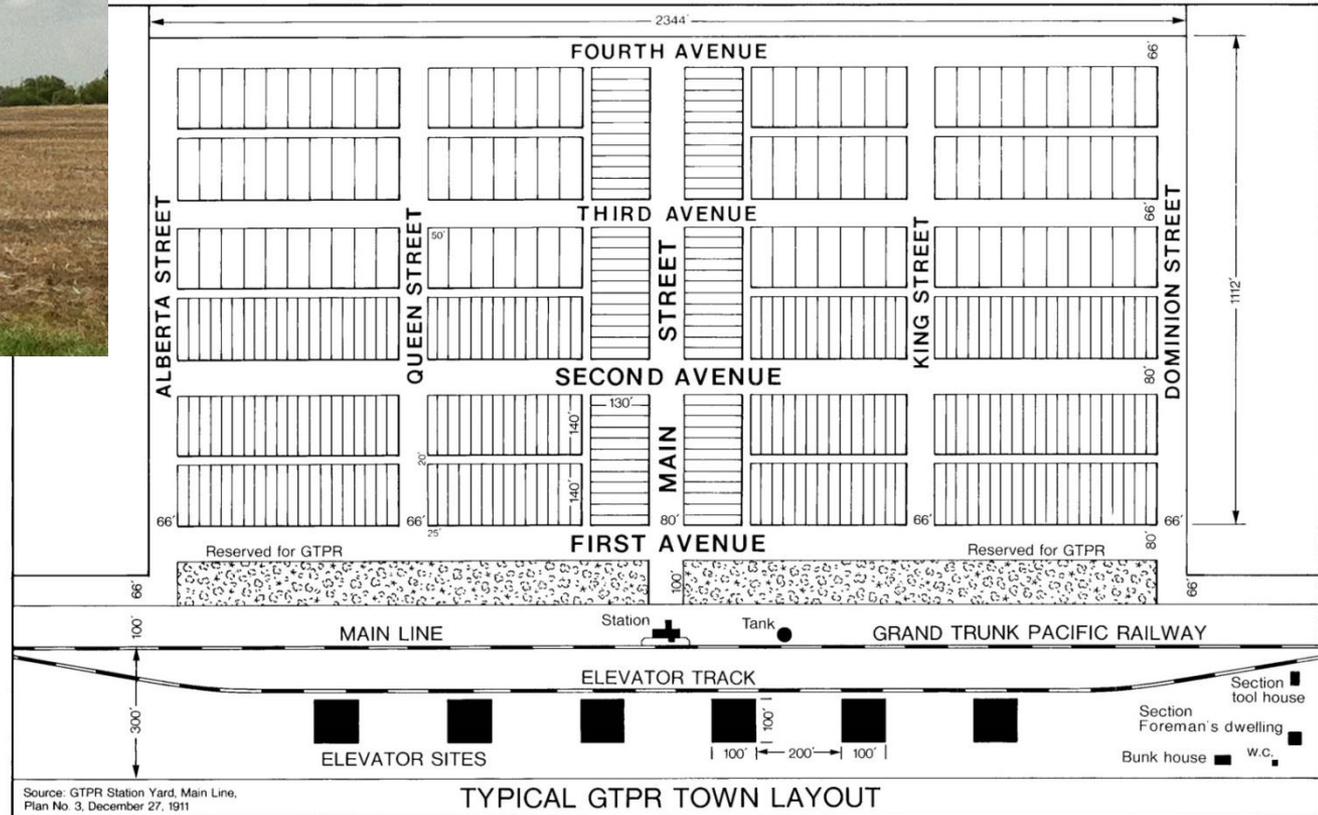
Based on planning, infrastructure and starter towns, The West developed rapidly. This map shows the growth along the first Transcontinental Train Corridor between 1886 and 1931 (i.e. over 45 years).

Opening The West For Agriculture

STARTER TOWNS SURVEYED AROUND WHEAT ELEVATORS - 1905



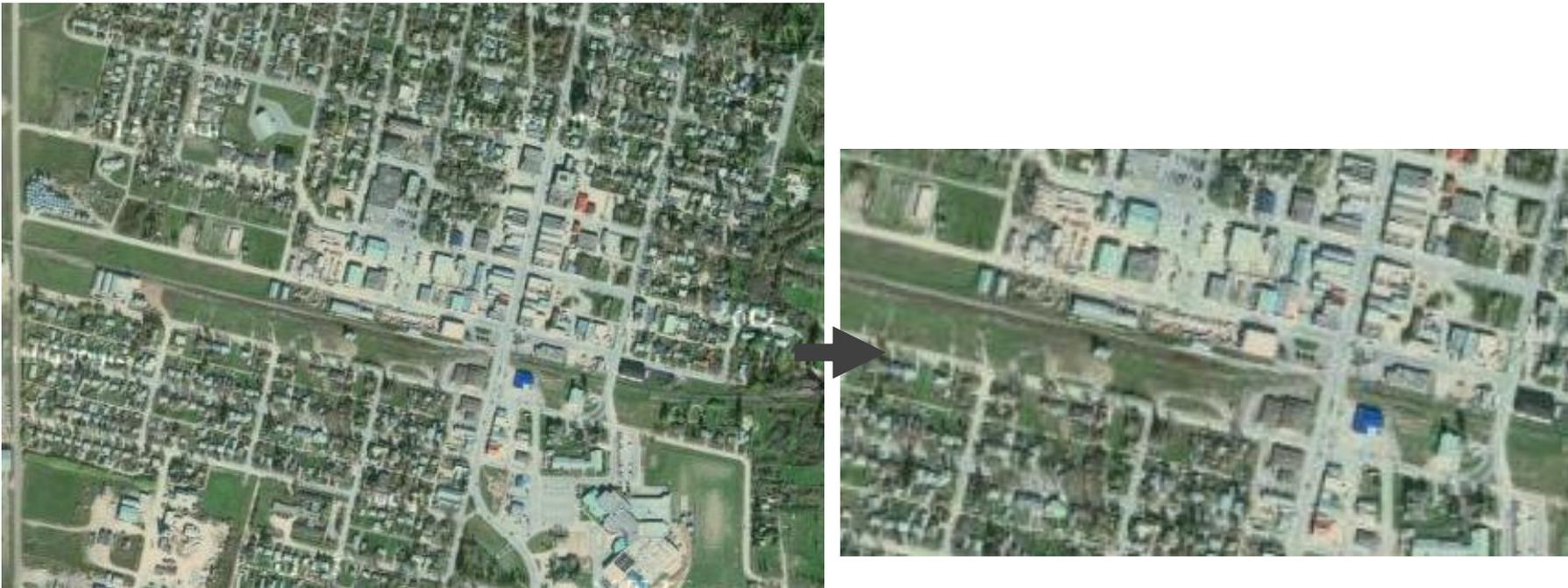
Typical Grand
Trunk Pacific
Rail Town :
1900's



Typical survey of town plots at grain elevator
locations

Opening The West For Agriculture

STARTER TOWNS TODAY (700 WERE DEVELOPED)



Tisdale is one of several hundred towns in Southern Saskatchewan that still exists today. Many of these towns have diversified economies and serve as homes for potash workers. The initial national investment in creating these towns continues to provide value to the region and its economy.

Opening The West For Agriculture

Technical Feasibility

The development of the Corridor should focus on key initial investment segments in particular regions – NW BC, Oil Sands, Northern Manitoba, NW Ontario Ring of Fire; Quebec Nord, and the Qikiqtaaluk Nation – including key economic hubs within each.

The **Roundtables** in each of these Regions will develop regional and local infrastructure and housing plans, designed both to facilitate access to resources but also accommodate existing, growing indigenous populations, as well as newcomers. The billions of dollars currently spent on fly-in-fly-out transportation and temporary work camps will be directed to the creation of new full-time communities and housing.

Mitigating Environmental Approval

The BCB is not just an infrastructure corridor accommodating transportation, energy, internet, pipelines, but also a land-use band. It is defined by the treeline in the north, the Boreal Forest and by a less obvious southern border defined by limits of southern growth, consisting of crown and traditional lands; environmentally-significant lands, resource sites and licence-areas, and towns and other settlements.

Mitigating Environmental Approval

A. NO-GO Zones

Environmentally-Sensitive Lands (under the stewardship of Indigenous Nations)

Traditional Indigenous Lands (managed by Indigenous Nations)

Protected infrastructure corridors

Mitigating Environmental Approval

B. GO-TO Zones

Resource Development

Servicing + Housing for growing Indigenous Nations and newcomer populations

JvNd has worked in a number of regions across the BCB preparing strategic and integrated Infrastructure, Settlement and Housing Plans for:

The Athabasca Oil Sands, Alberta

The Thompson Regional Infrastructure Plan, Manitoba

The Ring of Fire, Ontario

Chipewyan Regional Plan, Saskatchewan/Alberta



APPENDIX

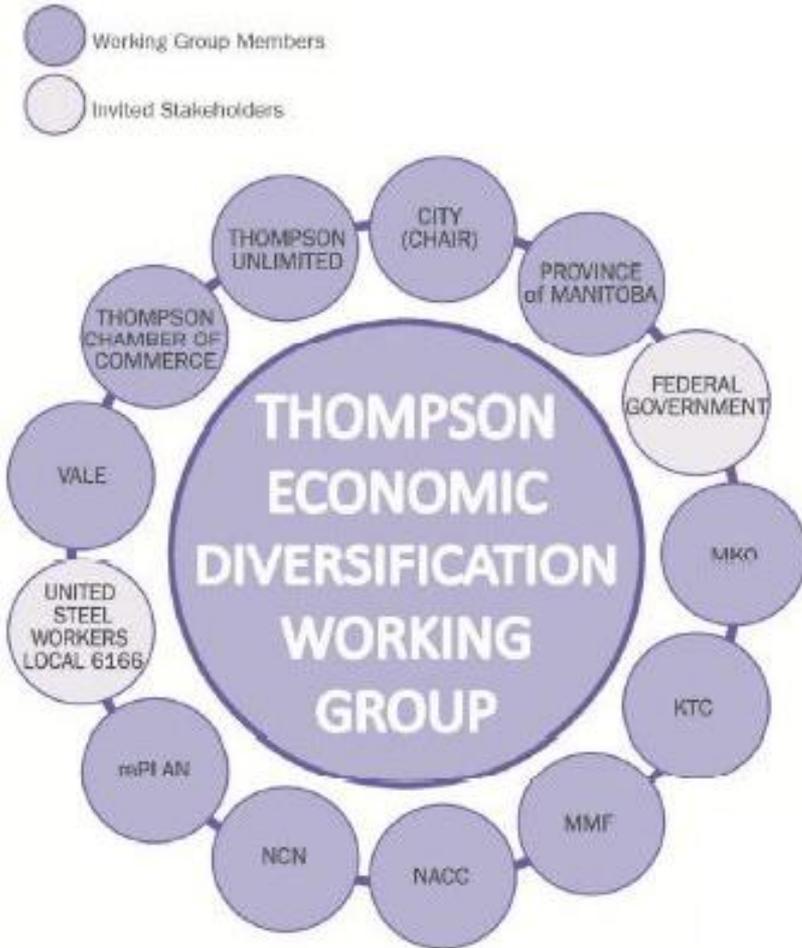
POLICY FRAMEWORK FOR DEVELOPING A GROWTH PLAN FOR CANADA



1

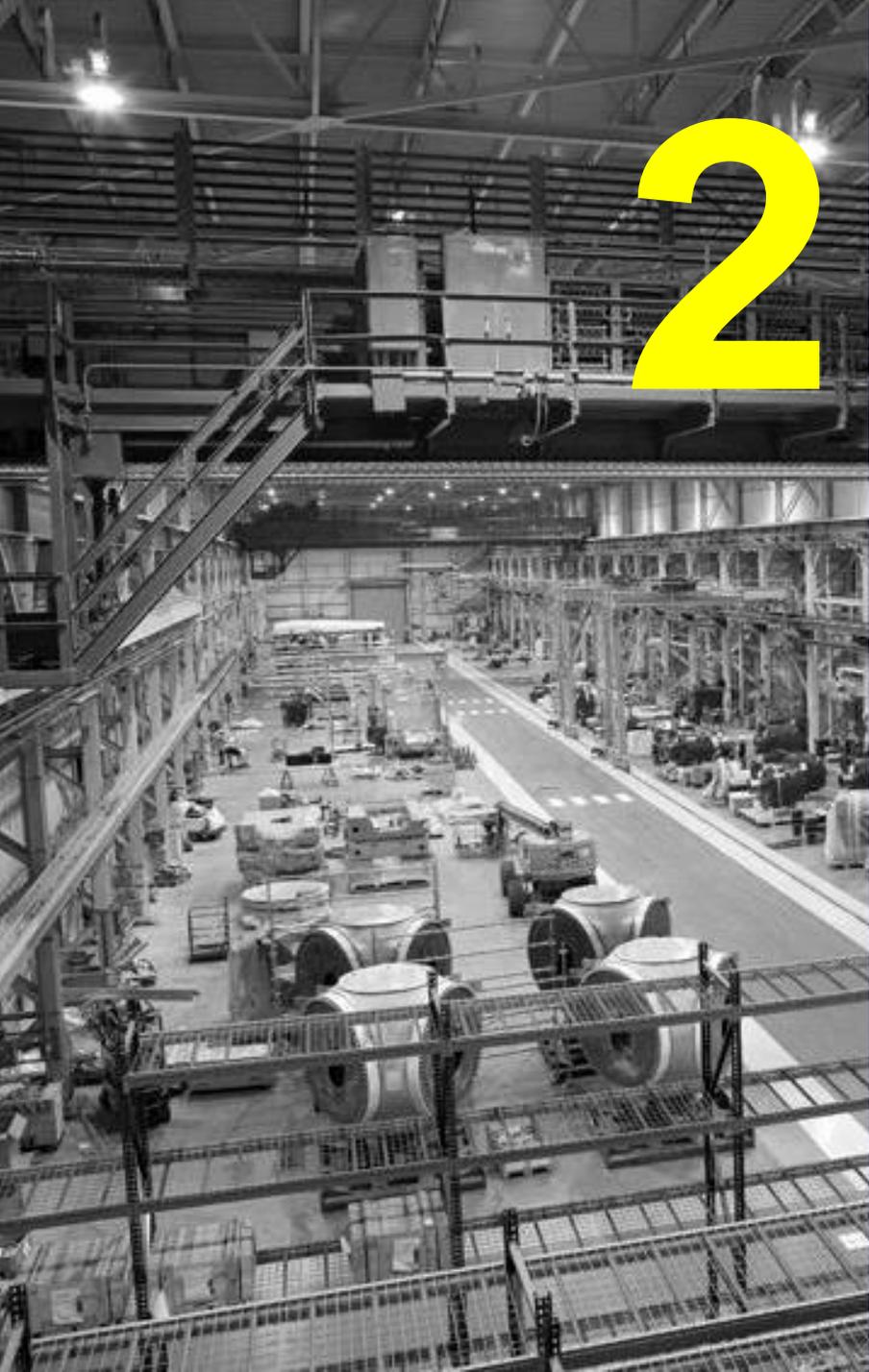
SETTING THE TABLE

- We need to set up roundtables at the **community, regional, provincial, and national levels** to discuss + promote Integrated Regional Development.
- Needs to be both **top-down and bottom-up** with each scale informing and being informed by the others.



PROCESS

- An informed, multi-stakeholder participatory planning process
- Quantitative and verifiable baseline data
- Stakeholder-informed mapping
- An options-based approach to planning and economic development
- Short-, medium- and long-term strategic plans
 - Partnerships for Implementation



2

CREATING MULTIPLE ECONOMIES

Need to work with the **Primary Economy** – be it mining or oil-and-gas – to create complementary **Secondary / Tertiary / Quaternary Economies** that:

- **Exploit other local + regional resources** – Agriculture / Hospitality + Tourism / Forestry / Manufacturing / Services / Construction / Hunting + Fishing
- **Cushion the rise and fall of resource prices**
- **Can carry on after closure**
- **Align the Energy East Corridor to foster growth**



3

PROMOTING LOCAL WORKFORCE DEVELOPMENT

- On-Reserve populations are expected to increase by 64% by 2026 to **667,900 persons**
- Serious action is required to address historical failures, underfunding + community engagement to improve education + training and increase Aboriginal labour force participation.
- Need to create opportunities in major growth areas (Northern BC / Northern Alberta / South Sask / Ring of Fire / Atlantic) to develop an integrated labour force in collaboration with smaller pre-existing communities.

3

PROMOTING IMMIGRATION

- Need to Encourage Long-term Settlement of BCB
- Reduce Dependency on Fly-in Fly-out (FIFO) Populations + Camps - which Create Social Problems at Home and at Work
 - Promote both Local Development + Immigration to Developing Resource Areas (as Canada used to) – both national and international



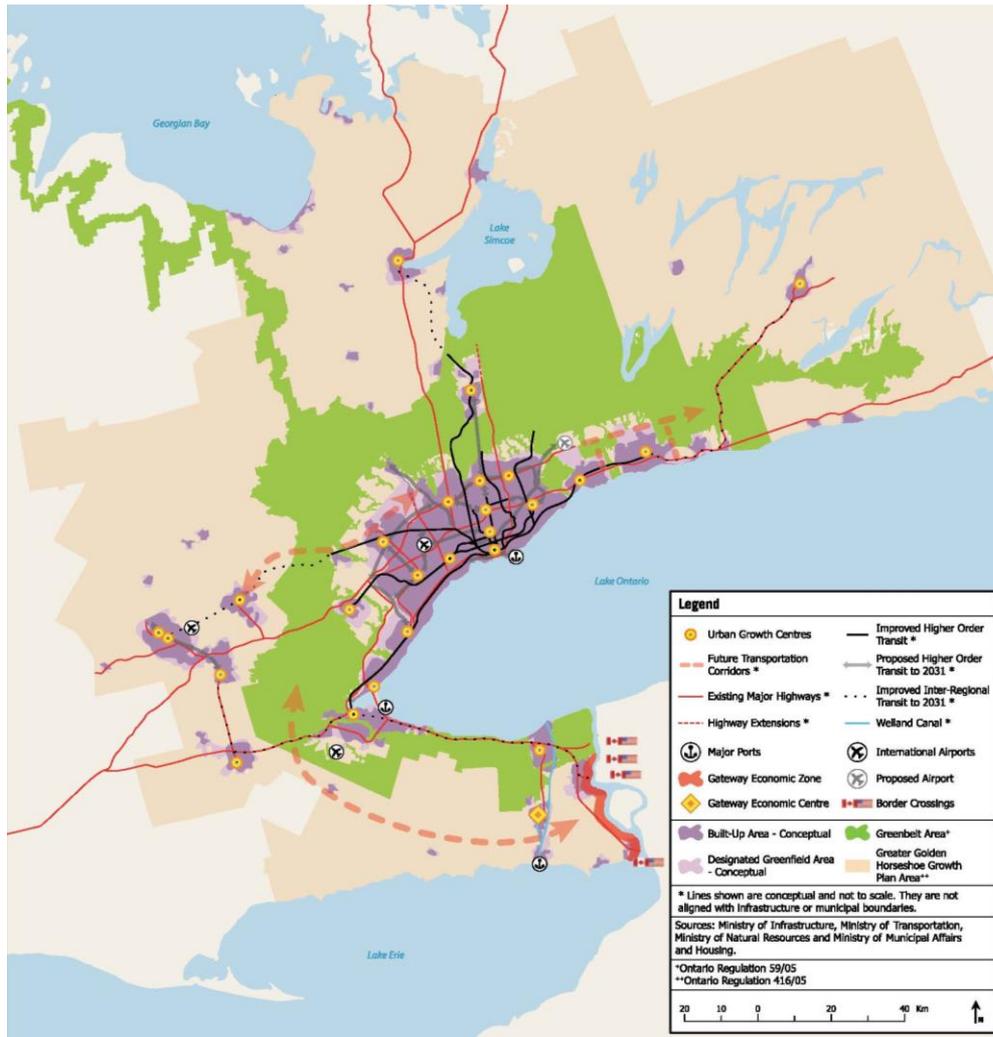
An aerial photograph of a town, likely a mining community, showing a mix of residential buildings, commercial structures, and industrial areas. A large, bright yellow number '4' is superimposed over the center of the image. The town is situated near a body of water, possibly a river or lake, and is surrounded by forested hills.

4

PLANNING SIMULTANEOUSLY FOR ENVIRONMENT + RESOURCE COMMERCE + INFRASTRUCTURE + HOUSING

- Start by identifying environmentally significant areas where development cannot happen.
- Support sustainable mine planning.
- Plan for not simply infrastructure but also housing and related development that makes use of the infrastructure.
- Create **Starter Towns** as opposed to Camps that can develop as full communities over time.

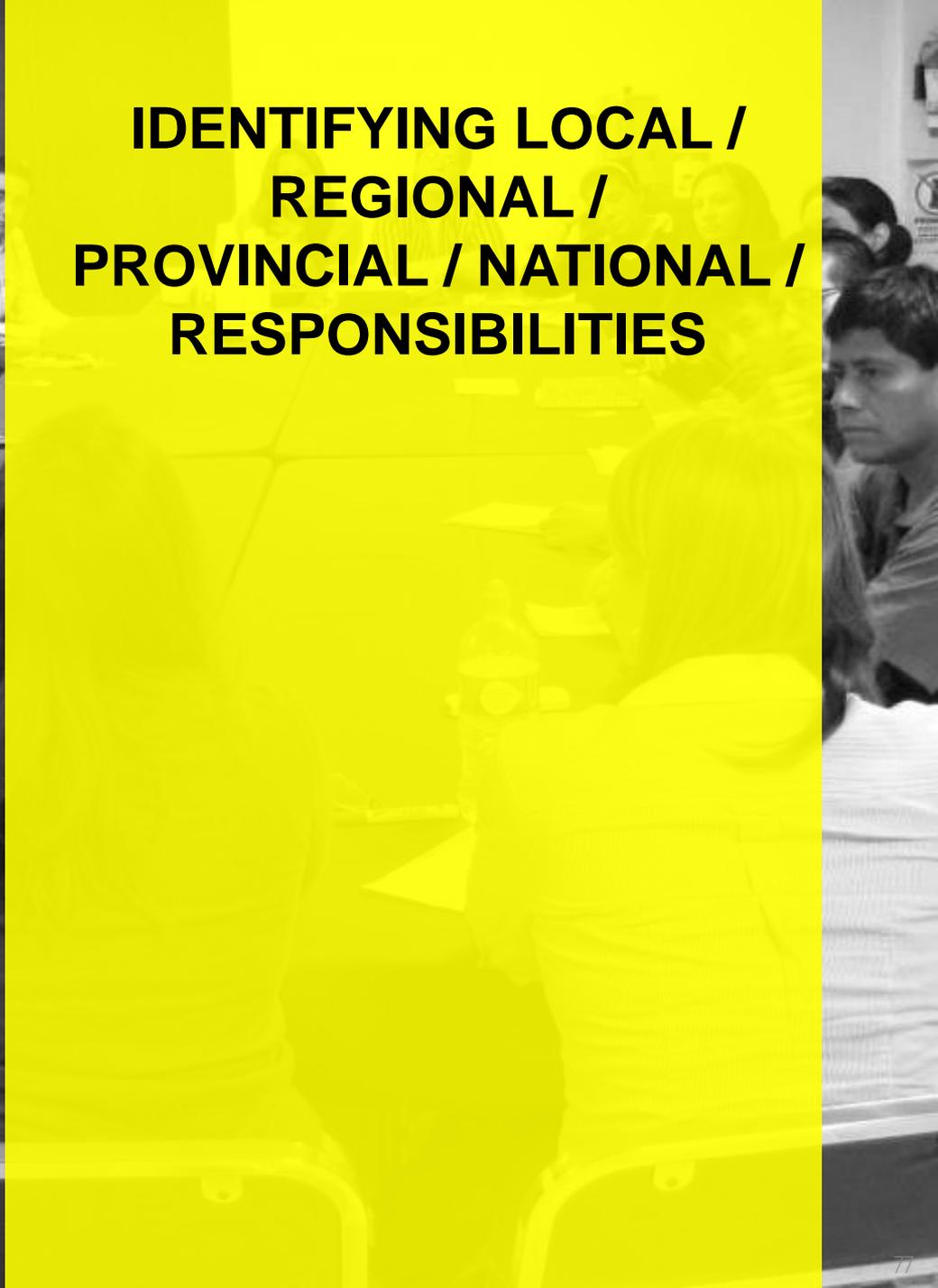
E.G. PLACES TO GROW – TORONTO'S GREATER HORSESHOE



Sustainable Regional Planning for Growth + Change

5

IDENTIFYING LOCAL / REGIONAL / PROVINCIAL / NATIONAL / RESPONSIBILITIES



IDENTIFYING LOCAL / REGIONAL / PROVINCIAL / NATIONAL RESPONSIBILITIES

	LOCAL	REGIONAL	PROVINCIAL	NATIONAL
Aboriginal Rights	X	X		X
Resources Extraction			X	
Environment			X	X
Growth Planning	X	X	X	
Infrastructure	X	X	X	X
Housing	X	X	X	X
Tourism	X	X	X	X

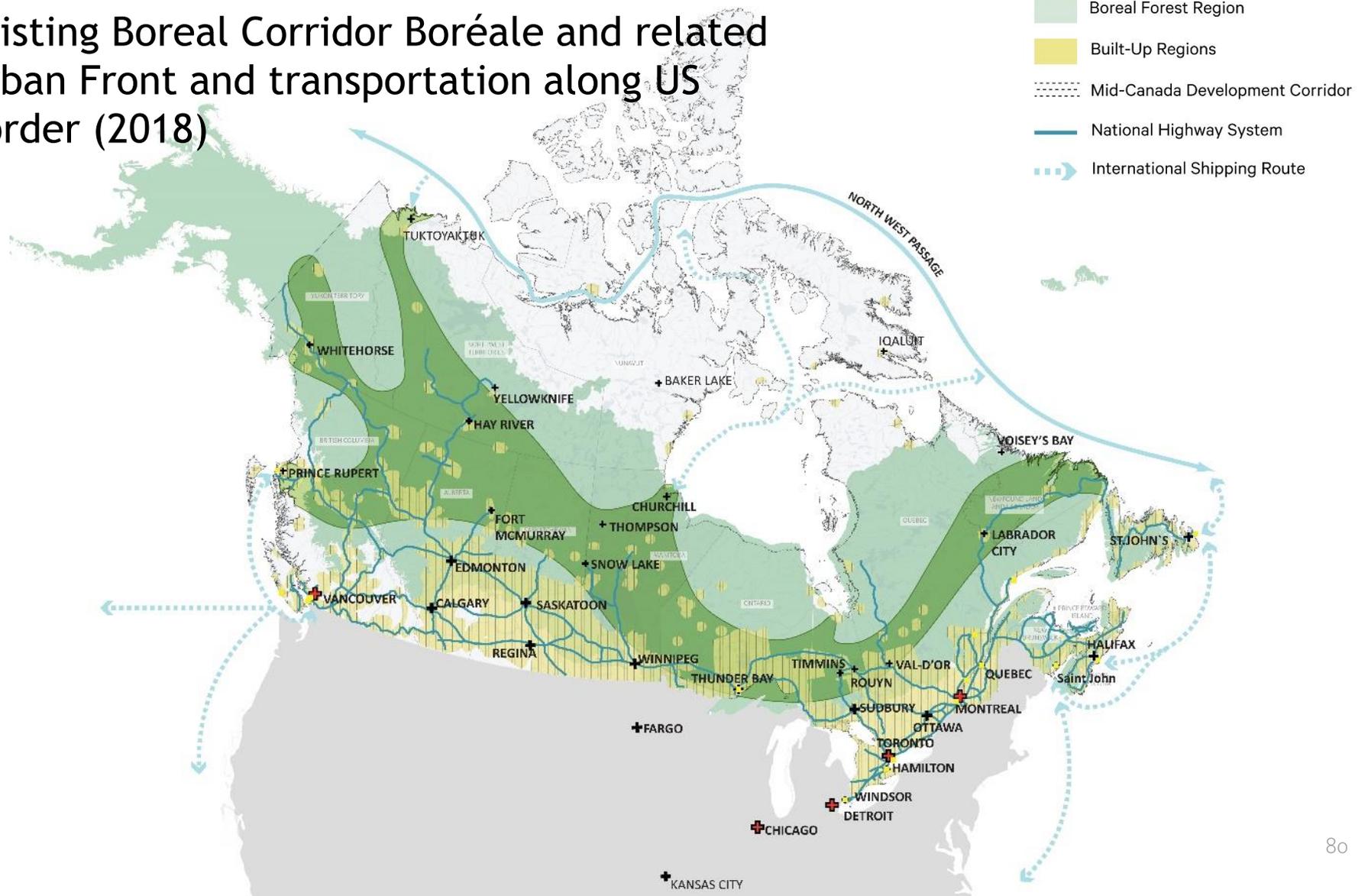
6

FOSTERING INNOVATION

- Promote Sustainable Approaches To Planning + Building at all Scales
- Mediate Climate Change
- Promote Local + Regional Indigenous + Non-Indigenous Business
- Make Being an Entrepreneur The Norm

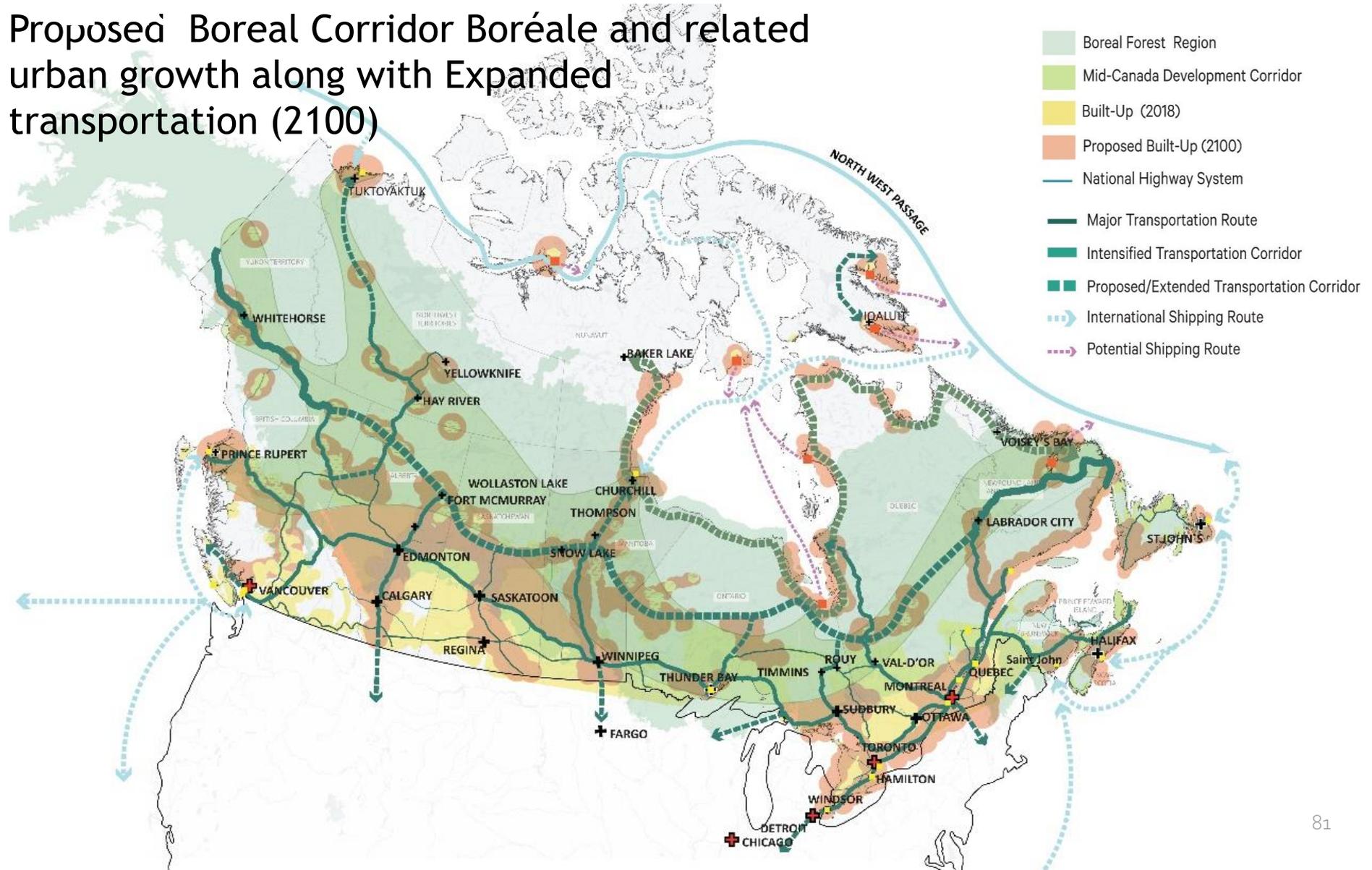
What Would a National Growth Plan Look Like

Existing Boreal Corridor Boréale and related Urban Front and transportation along US Border (2018)



What Would a National Growth Plan Look Like

Proposed Boreal Corridor Boréale and related urban growth along with Expanded transportation (2100)



Questions?

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