



The Mining Association  
of Canada | L'association minière  
du Canada

# Importance of Northern Mining to Canada

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Mining Association of Canada

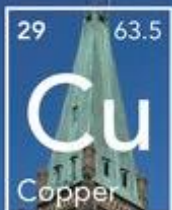
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Northern Investment Seminar  
PDAC, Toronto  
March 3<sup>rd</sup>, 2015



Before it's ours, it's mined.

**CANADIAN  
MINING**  
What will we find next?



mining.ca

## THE NATIONAL VOICE OF THE MINING INDUSTRY IN CANADA:

### Advocacy:

- ◆ to advance the business of mining

### Towards Sustainable Mining:

- ◆ About performance, stewardship and social license

### Strong Membership:

- ◆ 39 Corporate members producing iron ore, gold, diamonds, oil sands, met-coal, base metals, uranium
- ◆ 50 Associate members providing services in engineering, environment, finance and law

### Professional work:

- ◆ Supported by expert member committees in environment, science, economics, public affairs, Aboriginal relations



## Domestic Contribution

- ◆ 220 mines, 33 smelters and refineries
  - ◆ > 380,000 employees, average salary ~ \$110,000
  - ◆ \$20B annual capital investment
  - ◆ \$71B taxes over the past decade
  - ◆ 50% of Canada's rail bulk freight
- ◆ Largest private sector employer of Aboriginal Canadians
- ◆ Mining opened up Canada's North
  - ◆ Yellowknife, Dawson and Rankin began life as mining towns
  - ◆ Contributed >20% northern GDP

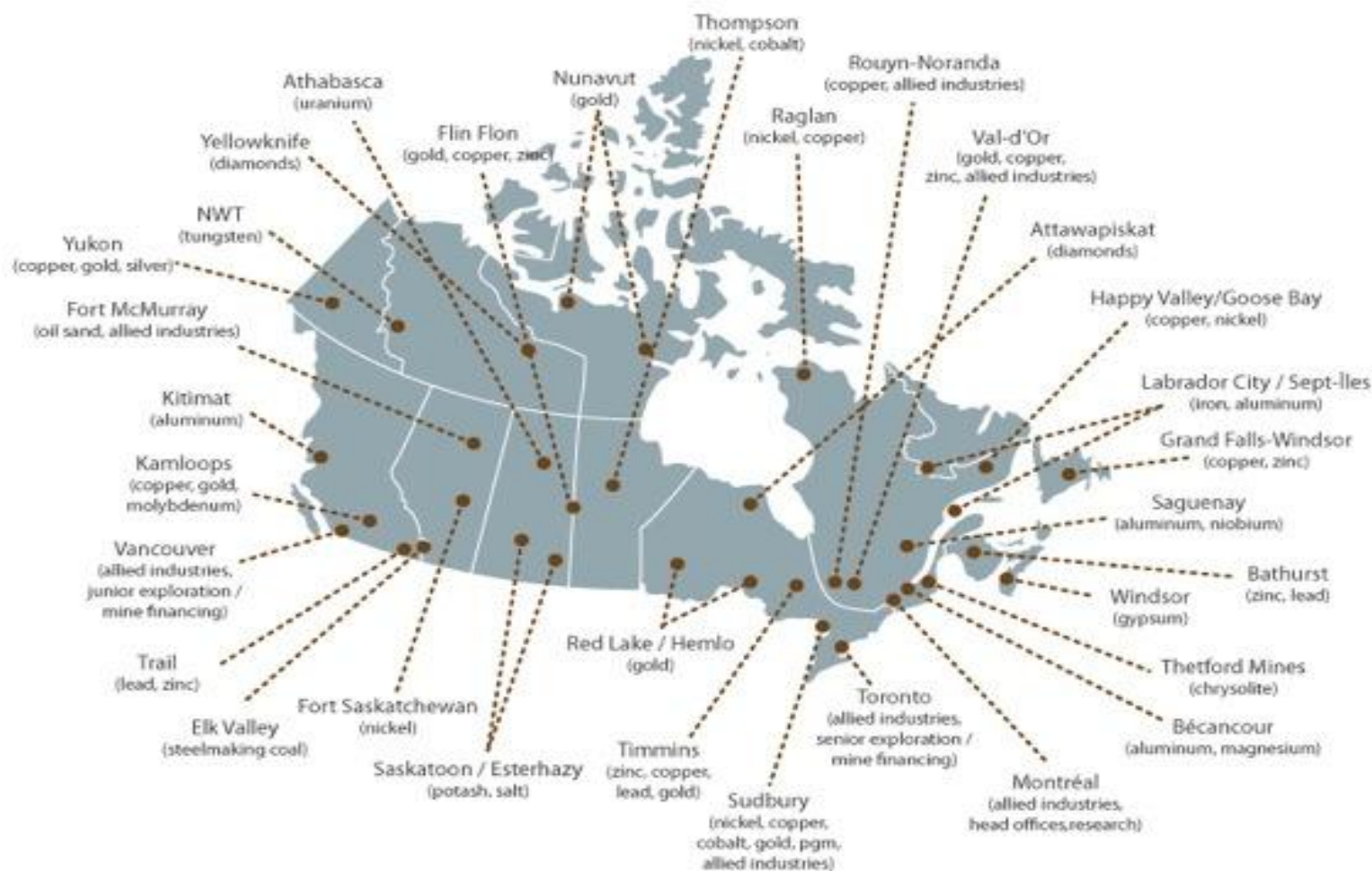




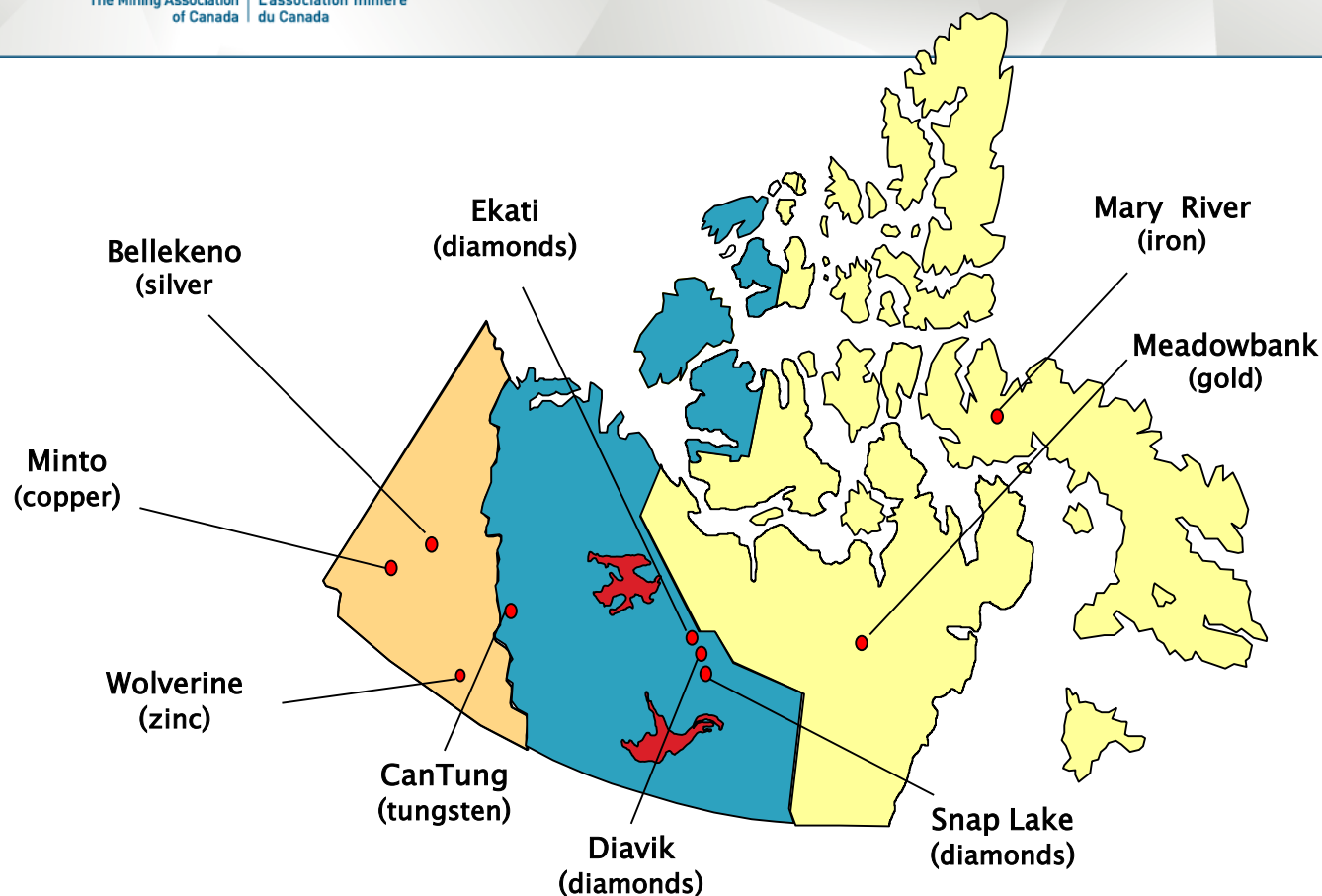
## Canada as a Global Competitor

- ◆ Attracted 13% of world exploration spending in 2013
- ◆ TSX/TSX-V: > 1,600 mining companies listed, 47% projects outside Canada
- ◆ Minerals account for 20% of Canada's total goods exports = \$87B
- ◆ Primary source of minerals for Clean Technology
- ◆ Among top five world producers of uranium, potash, nickel, platinum, zinc, aluminum, diamonds, met coal
- ◆ Canada ranks 3<sup>rd</sup> in world diamond production by value

# CANADA'S MINING INDUSTRY COAST TO COAST TO COAST



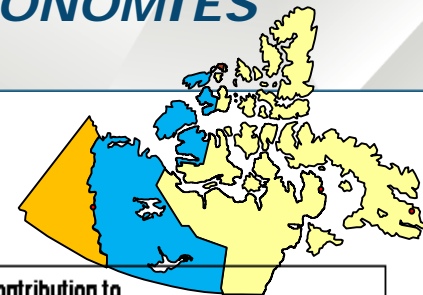
Source: Natural Resources Canada



## Mining Contribution to Canada's GDP (1998 – 2008)

(Source: Statistics Canada)

Canada (National)	3.5% - 4%
Provinces (South)	3% - 4%
<b>Northern Territories</b>	<b>21% - 68%</b>



## Employment

- ◆ > 35,000 person-years

## Production

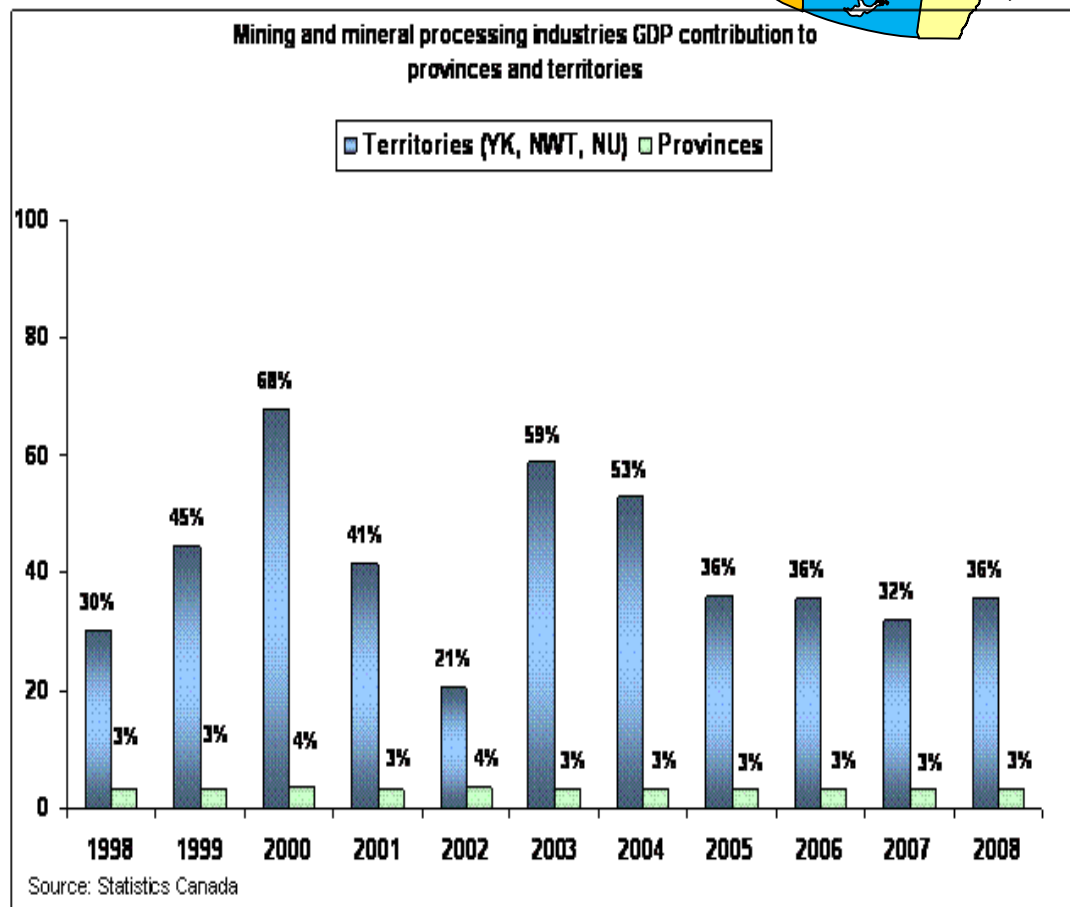
- ◆ >\$30 Billion over 3 decades in diamonds, copper, gold, silver, lead, zinc, tungsten

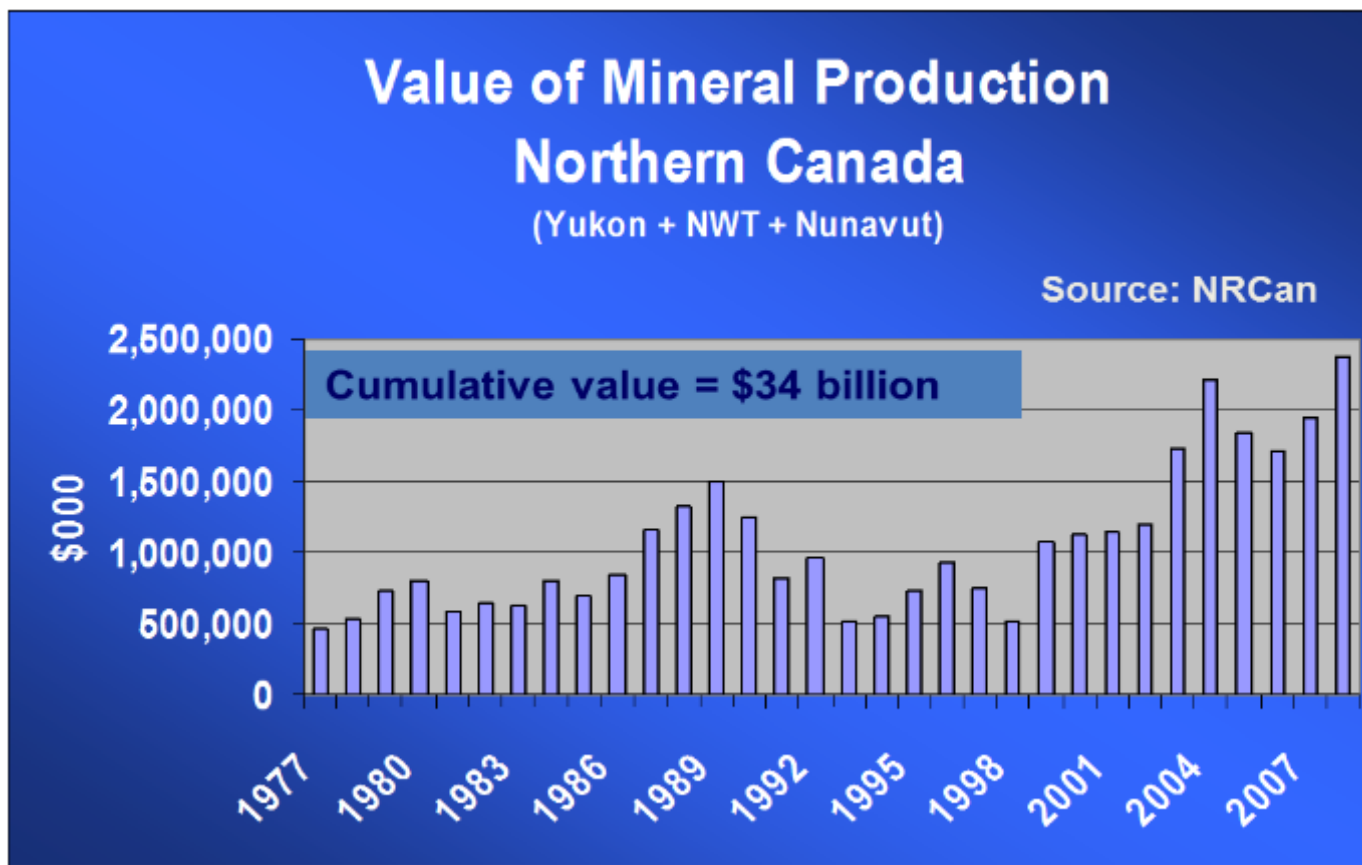
## Investment/Spending

- ◆ >\$15 B+ in capital and operating expenditures

## Taxes

- ◆ ~\$4 Billion to 2013
- ◆ ~\$6 Billion by 2020





- ◆ Three decades of Northern Mining contributed \$34 billion
- ◆ Diamond production = 1/3 of total



# INDUSTRY CONTRIBUTIONS TO BUSINESS AND SOCIAL DEVELOPMENT



## Local Business Development

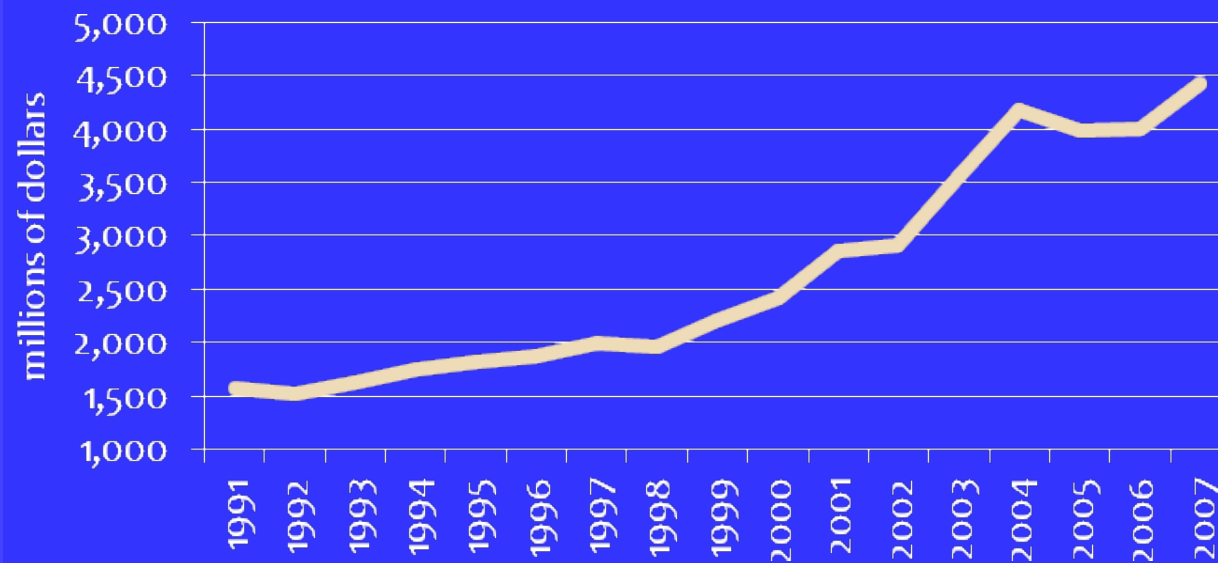
- ◆ >\$9 B Northern, \$4 B Aboriginal contracts
- ◆ More than 50 new Aboriginal Businesses in the NWT alone

## Workforce & Social development

- ◆ Extensive programming in Aboriginal skills training and education
- ◆ >\$100 million social and community contributions (NWT)
- ◆ Support for health care, education and sports facilities

# ECONOMIC GROWTH (GDP)

Gross Domestic Product at Basic Prices, nominal, 1991 to 2007



Source: Statistics Canada, Table 384-0001 Provincial and Territorial Economic Accounts

◆ **From 1991 (discovery of diamonds) to 2007 the NWT Territorial GDP tripled from \$1.6 Billion to 4.5 Billion.**

# NORTHERN CHALLENGES



## Cost of Development and Operation

- ◆ Remote, limited access, harsh climate
- ◆ Little Infrastructure – (BYO)
  - ◆ Communications systems
  - ◆ Transportation – roads and ports
  - ◆ Power development – energy supply

## Environmental Management

- ◆ Mitigating impacts on land and water
- ◆ Avoiding impacts on wildlife habitat and migration patterns
- ◆ Responding to a changing climate

## Workforce Development

- ◆ Need for basic skills training
- ◆ Competition to retain workers

## Business development

- ◆ Need for Investment capital
- ◆ Experienced business partners

- ◆ Remote airstrips, ice roads and arctic port facilities are essential for northern operation, requiring:
  - ◆ Innovative seasonal ice road technology
  - ◆ All season roads over permafrost
  - ◆ Advanced planning for full year supply and storage with short transportation windows





## NORTHERN ENERGY SUPPLY



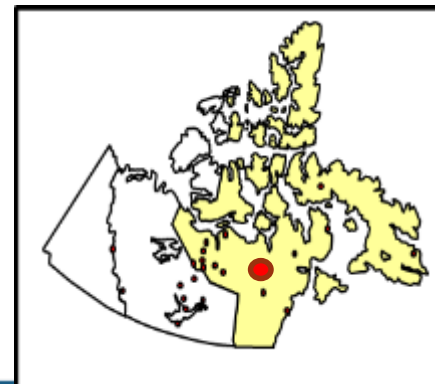
**In collaboration with northern developers, and communities, Territorial Governments are working to expand access to hydro power and improve grid connectivity**

- ◆ Off-grid power is primarily diesel generation for most northern communities and remote mine operators
- ◆ Wind generation successful at some locations
- ◆ LNG – research in long-term storage and transportation technology



## Supply & Logistics

- ◆ 52,000 tonnes of sealift supplies every 12 weeks
- ◆ 54M litres of fuel annually
- ◆ Airlift 400 passengers per week
- ◆ 60,000 lbs of cargo per week
- ◆ Baker Lake – Meadowbank road year-round transportation for fuel, passengers, cargo



## Canada's northern operators have achieved the highest standards of performance

- ◆ ISO 14001 – Environmental Management
- ◆ ISO 9001 – Quality Management Systems
- ◆ ISO 18001 – Occupational Health & Safety
- ◆ Exceeded expectations in employment, business and community development
- ◆ Leaders in climate adaptation and GHG management
- ◆ Operate within a stringent regulatory framework
- ◆ ***Towards Sustainable Mining*** performance awards



# TOWARDS SUSTAINABLE MINING: MAC'S COMMITMENT

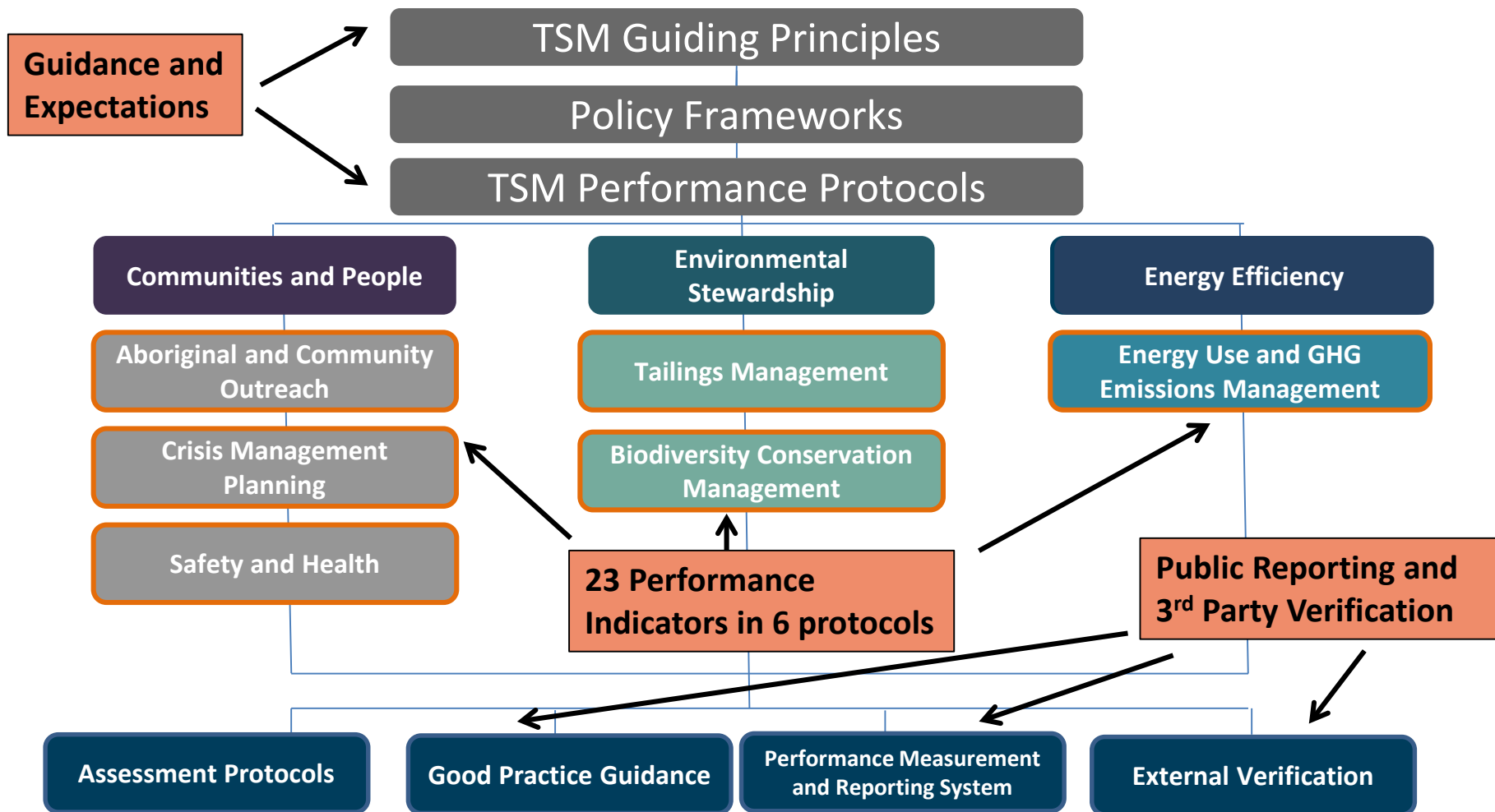


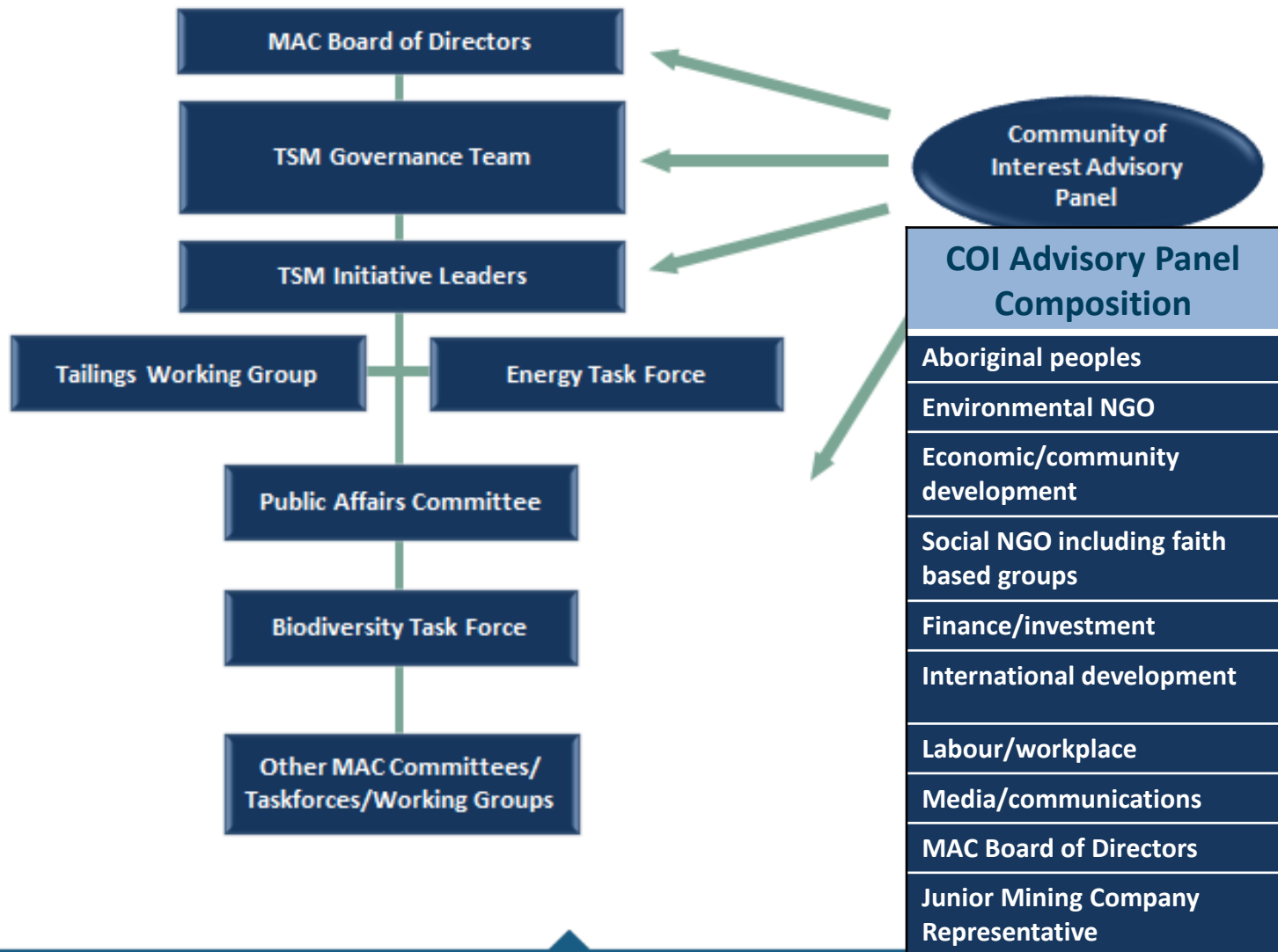
- ◆ Established in 2004, **TSM is MAC's commitment to responsible mining** that every member agrees to implement.
- ◆ TSM's primary objective is to enable mining companies to meet society's minerals products needs in the most socially, environmentally and economically responsible way.

The program's core strengths are:

- ◆ **Accountability** – Mandatory for all members to report at the facility level
- ◆ **Transparency** – Annual public reporting with independent verification
- ◆ **Credibility** – Through consultation with our Community of Interest Advisory panel to improve performance and help shape TSM for continual advancement









## Performance Improvement

- ◆ Born out of the need for better performance

## Risk Management

- ◆ Reduce avoidable impacts and losses

## Access to Capital

- ◆ Building and retaining investor confidence

## Recruitment and Retention of Employees

- ◆ Aligning corporate values with employee values

## Innovation and Learning

- ◆ Developing and applying new processes and technologies to performance

## Social License

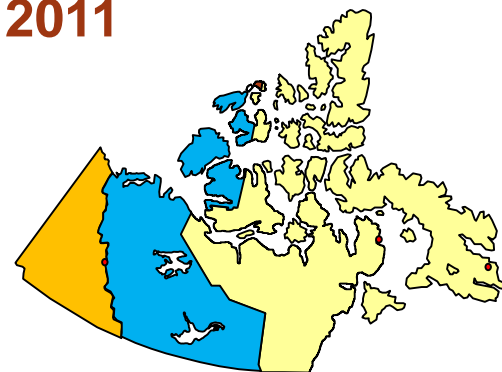
- ◆ Aligning with community values to improve perception and acceptance

**“Canada’s overall northern metal and non-metallic mineral output is expected to grow by 91% from 2011 to 2020...”**

- *The Conference Board of Canada, January 2013*

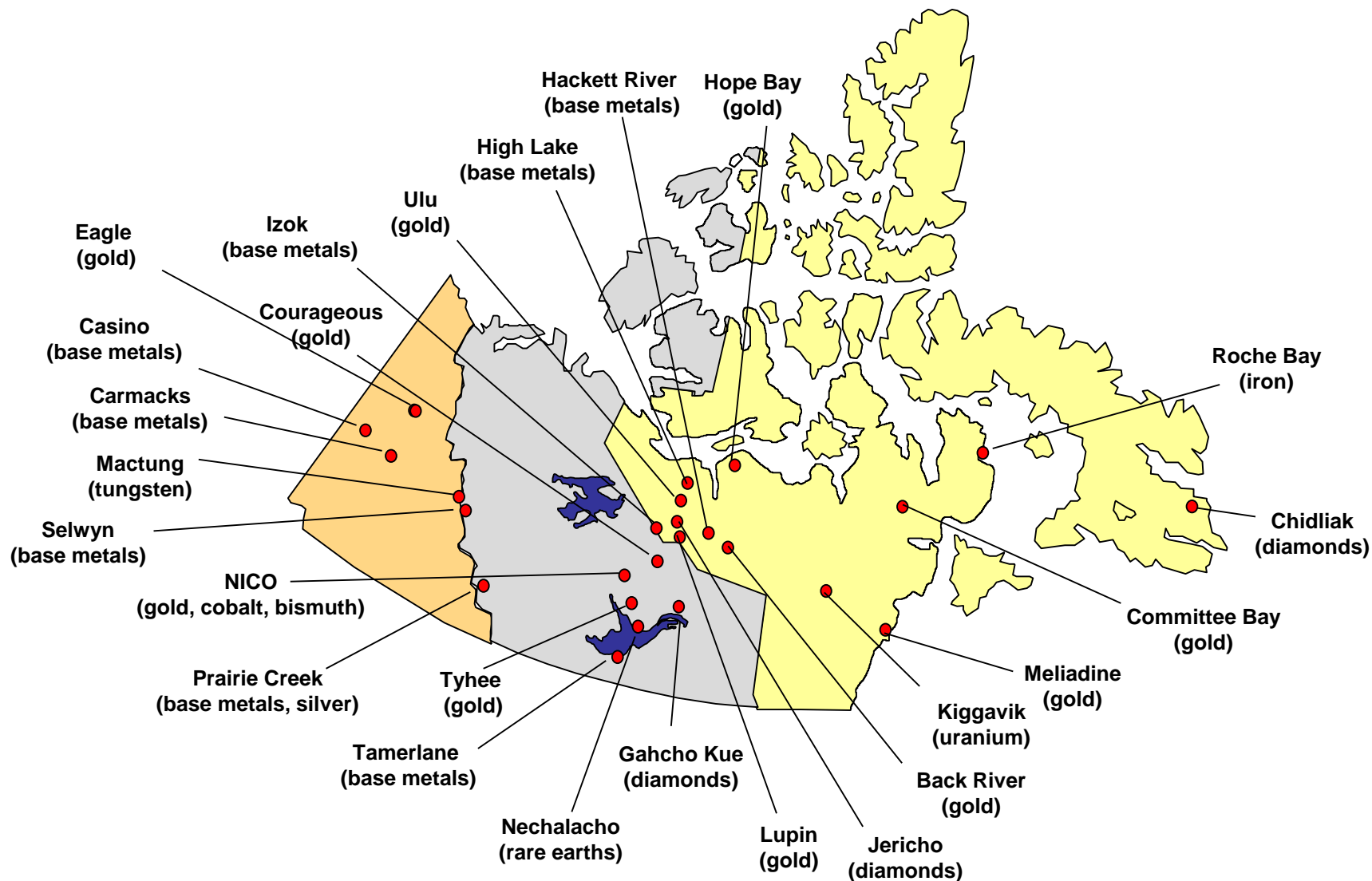
## Northern Opportunity

- ◆ The least explored region in Canada
- ◆ Very high mineral potential.
- ◆ Major projects advancing towards development
- ◆ Anticipated new mineral production within five years.
- ◆ Several additional projects expected by 2020

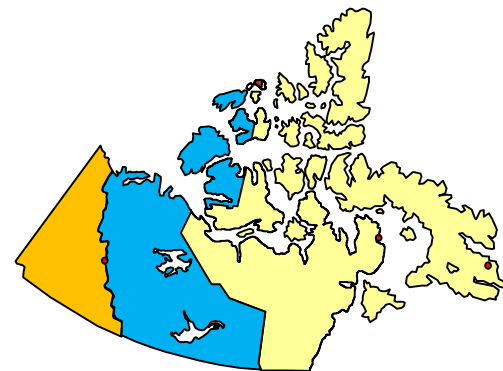




# CANADA'S NORTHERN MINING POTENTIAL



- ◆ Federal – Territorial initiatives improving the ***Northern Operating Environment***
  - ◆ Working towards improving regulatory processes
  - ◆ Funding for public geoscience
  - ◆ Education and workforce training initiatives
  - ◆ Negotiating to settle land claims
  - ◆ Territorial initiatives to improve access and energy supply



## FOR MORE INFORMATION PLEASE CONTACT:

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What will we find next?