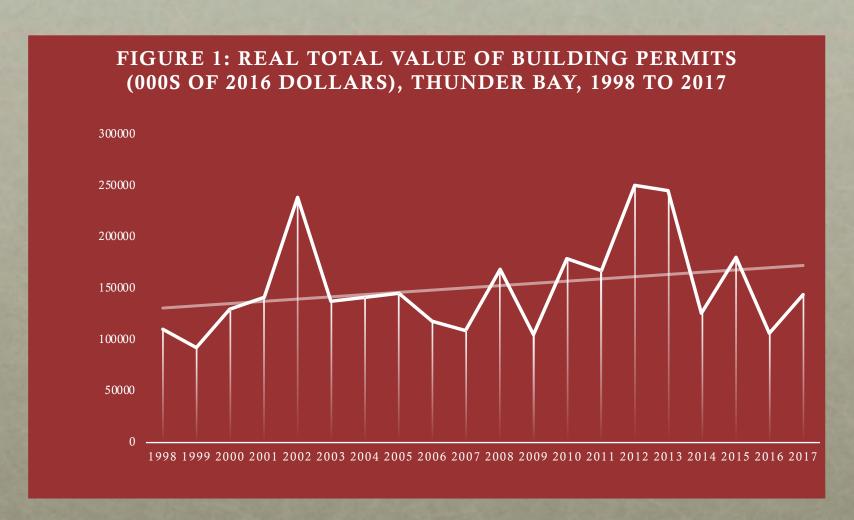
THUNDER BAY'S ECONOMIC DRIVERS

THUNDER BAY'S CURRENT ECONOMIC DRIVERS

- Rail & Port
- Airport
- Institutional & Government Construction
- Public & Quasi-Public Sector Services
- Resource Development

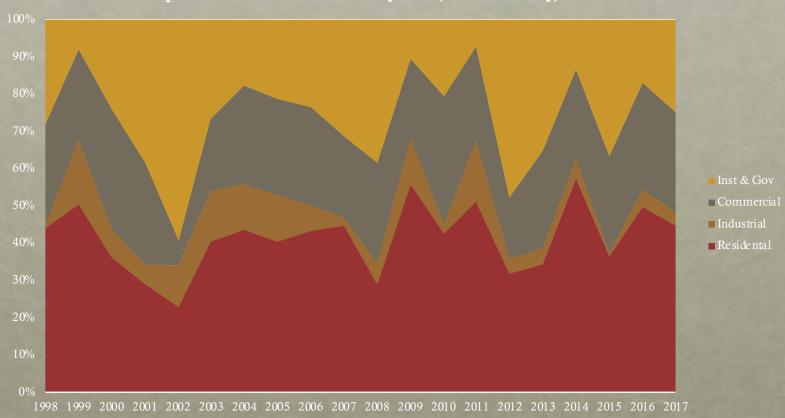
CONSTRUCTION ACTIVITY

VALUE OF PERMITS

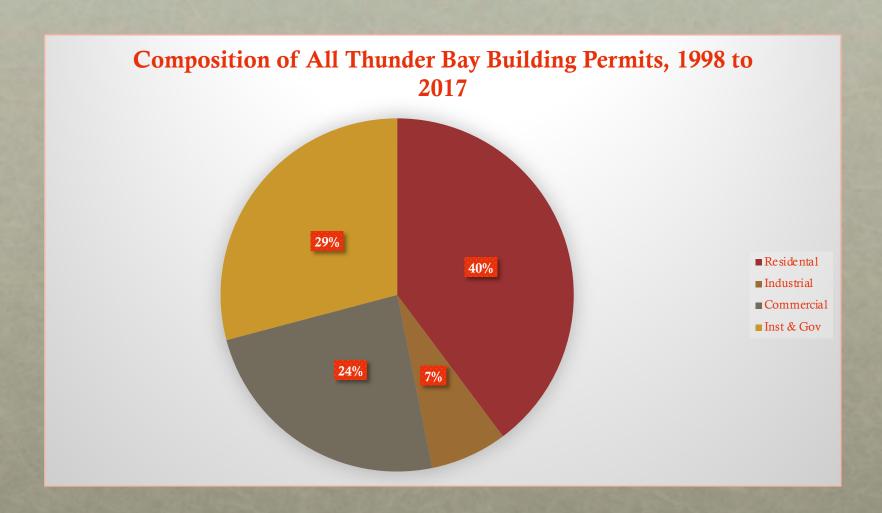


COMPOSITION OF NEW INVESTMENT

Composition of Permit Values by Year, Thunder Bay, 1998 to 2017



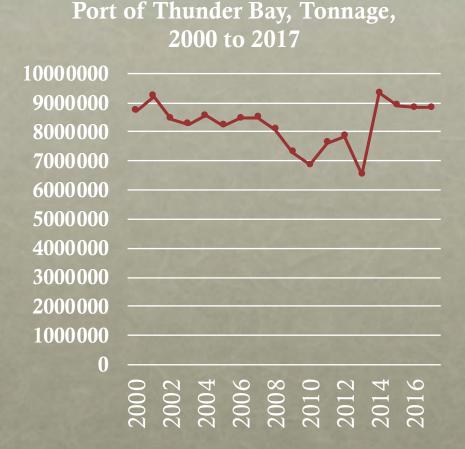
OVERALL INVESTMENT COMPOSITION



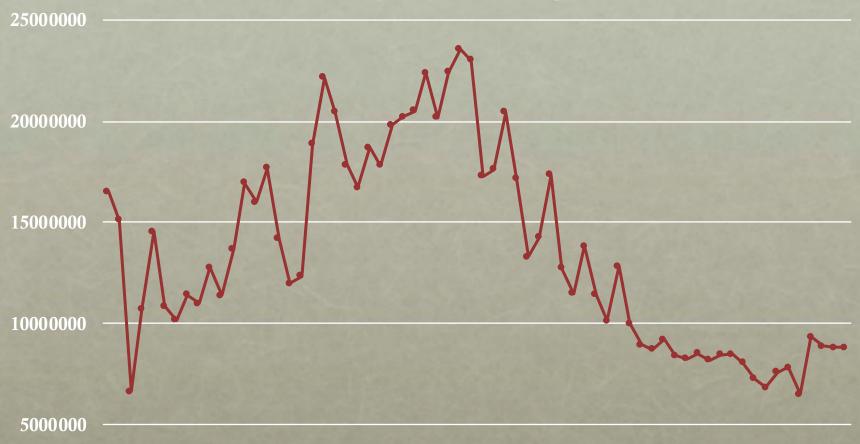
PORT ACTIVITY

RECENT PORT ACTIVITY-UPSWING IN GRAIN HAS BOOSTED TONNAGE

- Resurgence in activity. Grain and potash are up.
- Economic Impact of Port of Thunder Bay
 - 1808 direct, induced and indirect jobs
 - 369.1 million in business revenue



Port of Thunder Bay, Annual Tonnage, 1952-2017

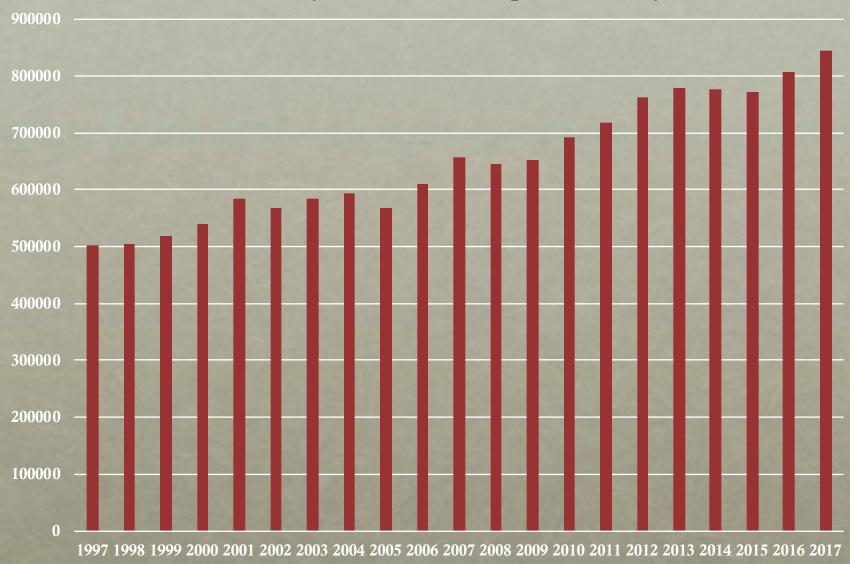


AIRPORT

AIRPORT ECONOMIC IMPACT

- Important qualitative impact by providing frequent & convenient access to Toronto
- Substantial passenger growth over recent decade
- Direct Economic Impact
 - 2,086 jobs
 - 217.8 million dollars in added GDP

Thunder Bay Airport, Total Passengers 1997-2017 (Source: Thunder Bay International Airport Authority)

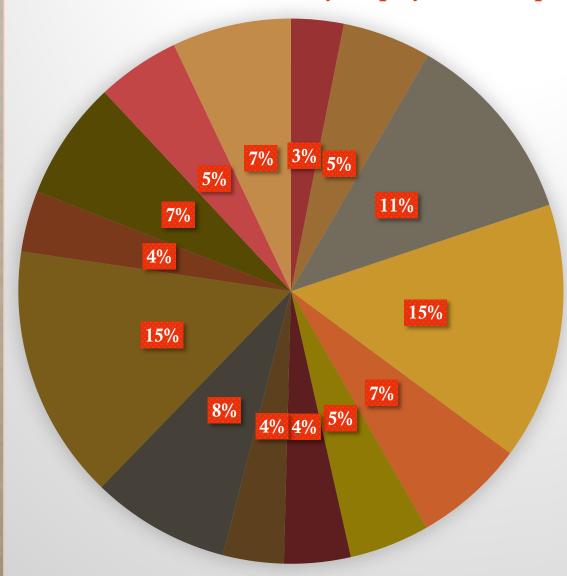


MAJOR EMPLOYERS

EMPLOYMENT SECTORS

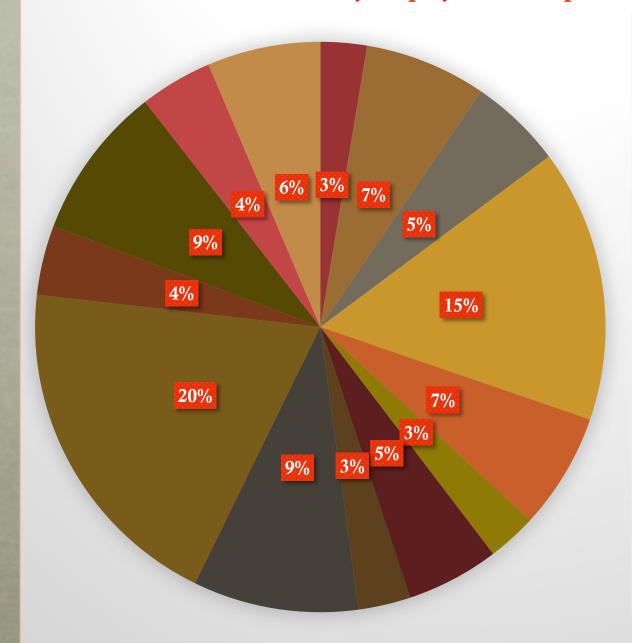
- First Nations
- Public Administration
- Forestry
- Knowledge Economy
 - Health
 - Education
 - Research
- Manufacturing
- Mining
- Transportation & Warehousing
- Retail
- Business, Financial & Services (Accommodation & Food)

Thunder Bay Employment Composition, 2001

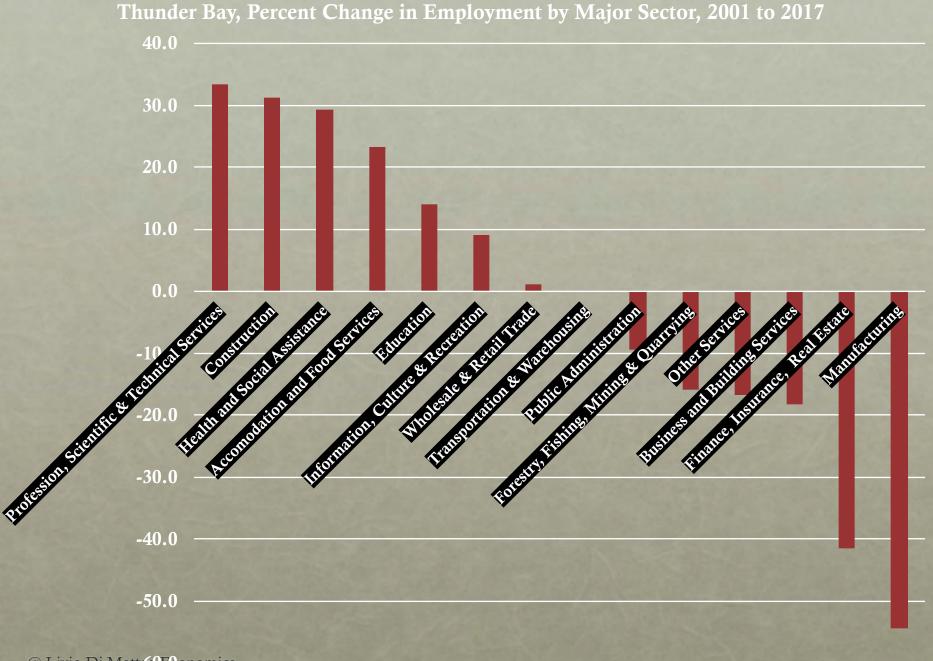


- Forestry, Fishing, Mining & Quarrying
- Construction
- Manufacturing
- Wholesale & Retail Trade
- Transportation & Warehousing
- Finance, Insurance. Real Estate
- Profession, Scientific & Technical Services
- Business and Building Services
- Education
- Health and Social Assistance
- Information, Culture & recreation
- Accomodation and food Services
- Other Services
- Public Administration

Thunder Bay Employment Composition, 2017



- Forestry, Fishing, Mining & Quarrying
- **■** Construction
- Manufacturing
- Wholesale & Retail Trade
- Transportation & Warehousing
- Finance, Insurance. Real Estate
- Profession, Scientific & Technical Services
- Business and Building Services
- **■** Education
- Health and Social Assistance
- Information, Culture & recreation
- Accomodation and food Services
- Other Services
- Public Administration



MAJOR EMPLOYERS ARE TIED TO PUBLIC SECTOR

Thunder Bay Top Major Employers

Employers	Business Type	Employees
Thunder Bay Regional Health Sciences Centre	Acute Care Hospital	2,824
Lakehead District School Board	Elementary & Secondary Education	2,200
Lakehead University	Education	2,100
City of Thunder Bay	Municipal Government	1,855
Government of Ontario	Provincial Government	1,849
St. Joseph's Care Group	Complex Care, Rehabilitation, Mental Health & Addiction Services, Long Term Care	2,200
Thunder Bay Catholic District School Board	Education	1,500
Bombardier Transportation	Mass Transportation Equipment Manufacturing	1,100
Confederation College	Education	785

MINING SECTOR

MINING IN THE NORTHWEST

- Currently 9 producing mines in NW Ontario: Nelson Granite(2), New Gold, Goldcorp (Red Lake & Musselwhite). North American Palladium, De Beers, Barrick Gold, Harte Gold.
- Numerous exploration projects underway.
- Northwestern Ontario Mines produced approximately 900,000 ounces of gold and 234,000 ounces of palladium in 2017.
- New Gold Inc.'s Rainy River Gold Project came into production in late 2017 as Canada's newest gold mine. Production rate will be 325,000 ounces of gold per year.
- Harte Gold was expected start putting ore through at its gold mine north of White River in July 2018 but now expected in early 2019.

Northwestern Ontario (Source: Thunder Bay CEDC)



THE RING OF FIRE

- a massive planned chromite mining and smelting development project in the mineral-rich James Bay Lowlands of Northern Ontario
- The Ring of Fire crescent covers 5,000 square kilometres
- Tony Clement, the Harper government's Treasury Board President and the FedNor minister responsible for the Ring of Fire, claimed it will be the economic equivalent of the Athabasca oil sands, with a potential of generating \$120 billion.
- Major players to date: KWG Resources Inc., Noront Resources Ltd., Metalex Ventures Ltd Projects, Ontario government, Nine First Nations
- Process underway by Noront Resources to select a site for processing facility (smelter): Timmins, Thunder Bay, Sudbury & Sault were in the running but Thunder Bay is out. Only Timmins and Sault still in running.

RING OF FIRE CHALLENGES

- high development costs, often related to a lack of infrastructure (transportation access), and high operating costs, caused by a lack of skilled labour and high energy costs. Re transportation: construction of all season road (construction scheduled for 2019) but with change in government will have to see.
- lengthy environmental permitting process is yet another challenge that firms must overcome.
- First Nation consultation process: The Ring of Fire projects must come to an agreement with the nine members of the Matawa Tribal Council.
- However, in the end the real challenge is **commodity prices**: Ring of Fire hype was fueled by the steep rise in the price of Ferro Chrome that peaked in 2008. Nothing will really happen until the commodity price recovers.

IN THE END, ITS ABOUT COMMODITY PRICES

- Ferro-Chrome prices dropped about 60 percent from their peak in 2008. Some recovery in 2017 but have not gone anywhere near old peak.
- Gold prices fell about 40 percent from their peak about 2012 and have stabilized up about 20 percent since 2014 explains New Gold starting production.
- Nickel prices have dropped 80 percent from their peak in about 2006.
- Palladium prices have done well: are up over 400 percent from trough circa 2008-09

CONCLUSION

THUNDER BAY ECONOMY

- Is reasonably diversified and stable but growing at below national average rates
- Economy has stabilized but employment levels not fully recovered from forest sector crisis
- Traditional pillars of transportation, government and natural resources are still key but a transformation well underway.
- Job growth in tourism, knowledge economy & government services supporting services, hospitality, accommodation & food, and retail activity.
- Public sector now the core of its economic base: 30% of employment in public administration, health, social assistance and education.

TRANSFORMATION HAS ATTRACTED INTERNATIONAL ATTENTION (JULY 28 STORY IN UK INDEPENDENT)



Thunder Bay has shaken off the economic decline of the Noughties (Thunder Bay Tourism)

This city was built on paper mills but has proved there's life after lumber

THE FUTURE: TOMORROW IS YESTERDAY

Transportation

Natural Resources

Government

HOW DO WE BUILD ON THESE THREE PILLARS OF THUNDER BAY'S ECONOMY?

- Research, technology and knowledge intensity are key to all three pillars.
- Need for greater entrepreneurship and recognition of opportunities in these sectors
- Human capital and First Nations

QUESTIONS