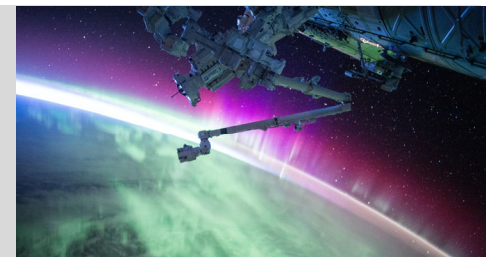


# Accelerating Canada's Critical MATERIALS Supply Chains

Energy & Mines

Ian M London P.Eng MBA

November 29<sup>th</sup>, 2023



# C2M2A

- Established in 2013
- Informal network of critical mineral producers, commercial laboratories, processors, innovators and expert service providers
- Actively engaged in national and global policy, investment, technology, and B2B initiatives re critical materials, its full supply chains and advances in cleantech



# Canadian Approach

*Global demand for critical minerals is expected to significantly increase over the coming decades and Canada is a secure and responsible source to competitive supply of the minerals and metals essential to the low carbon and digitalized economy.*

- Build **critical mineral value chains**, including midstream processing, products and technologies
- Leverage Canada's world leading ESG credentials and clean mining practices to position Canada as a **supplier of choice** with international allies
- Work with global partners to support investment attraction and build diversified supply chains for the **low carbon and digitized economy**

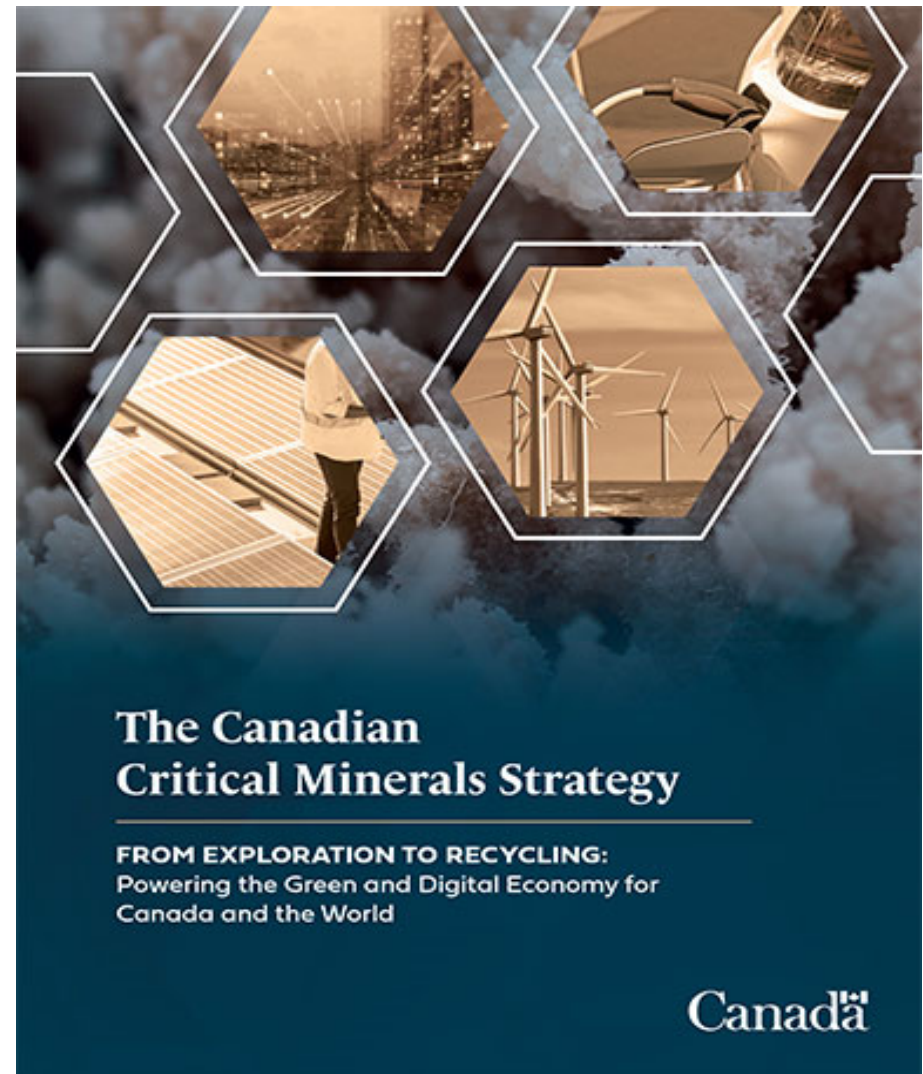
# Strategy... but no clear Action

## Canadian Critical Minerals Strategy

<https://www.canada.ca/en/campaign/critical-minerals-in-canada/canadas-critical-minerals-strategy.html>. December 2022



Industry Strategy Council – *Restart, Recover and Reimagine Prosperity for all Canadians: An Ambitious Growth Plan for Building a Digital, Sustainable and Innovative Economy.* January 2021





# Canada's Critical 'Minerals' List

31 minerals critical for the sustainable economic success of Canada and our allies and to position Canada as the leading 'mining nation'.

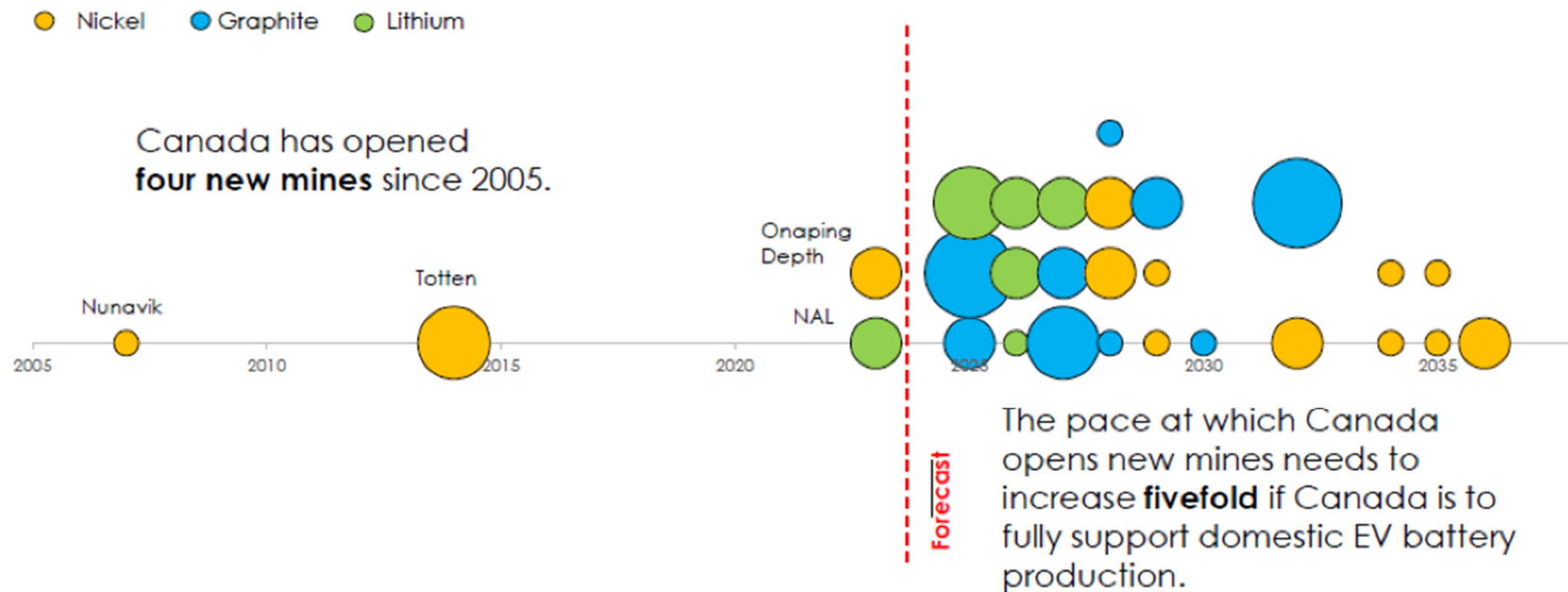


# Significant considerations going forward...

- Critical Materials (CM) more than a 'mining' story... It's about Canada's re-industrialization and economic, sustainable & national security
- Traditional CM commodities (Cu, Ni, Al) different than the smaller volume, non-commoditized materials (Nd, Dy, Ga, Ge....) required for next generation technologies.
- CMs more than 'Batteries'. Transportation, clean energy production & utilization, digital & medical technologies require multiple streams.
- 'Demand Pull' clearly succeeds over 'Supply Push'
- 'Hewers of wood & drawers of water' -- What was,.. Was! Successful economies innovate & value-add
- Stop boasting about our potential and start delivering. Customers purchase volumes of specified products... not aspirations.
- Need focused technical expertise, trades & operators, business & policy acumen to build and deliver full CM supply chains?

# Seriously? Can we afford adopting a linear approach?

## New Mines Needed for Canada to Support Domestic EV Battery Production



# Industry must Lead...

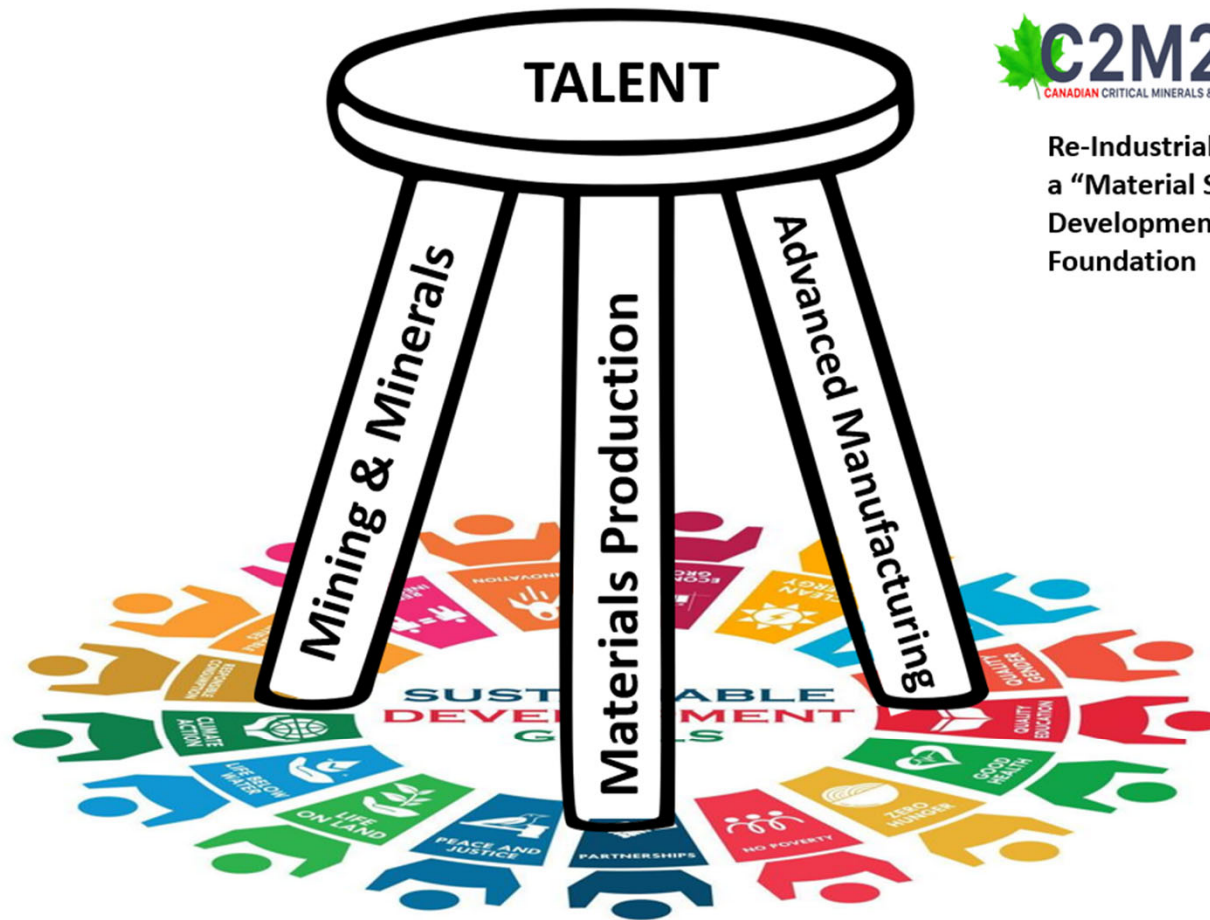
- To demonstrate focused actions with product deliveries to secure Canada position in global CM business.
- Government can't deliver everything to everybody.
- Establish 'Mission Critical' Campaign Cabinet comprised of respected industry leaders across materials spectra.
- Campaign Cabinet -- Multi-year mandate; identify priority projects most likely to deliver; Recommend/facilitate intervention needed to ensure technical expertise, investment, lab capacity, permits available.
- Establish mid-stream production, kickstarted with raw material imports and/or recycled feeds if Canadian-sourced upstream unavailable



# SMEs key to next generation economy – Pre - Commercialization Hubs

- Economics don't work for many start-ups - stand-alone facility overheads, scaling-up & staffing. Pilot equipment often abandoned -- running costs high and/or availability of feed not at commercial level
- Pre-commercialization hubs, with shared space, equipment, overheads and ready access to technical expertise of others may allow start-ups to produce material for sale without significant down-time between pilot and plant, Also allows continued work on process optimization.
- Shared facility could house several SMEs - technically supported to assist each company's staff jointly run their operation and co-shared resources
- Government support could help to leverage capital to build the infrastructure hubs.

# The need for non - linear initiatives



Re-Industrialization placed on  
a "Material Sustainable  
Development Goals"/ESG  
Foundation



# A question over lunch?

- Who, here today, is committed to leveraging this opportunity to accelerate Canada's production of value-added midstream energy transition materials in our collective interest?

Note: Our global competitors are galloping ahead!



Answer the above question (slido.com #3720341)  
or message me via the conference SwapCard App

# Thank you! Merci!

Ian M London, PEng MBA

Executive Director

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