IRON ORE

UNDERSTANDING A SIMPLE COMMODITY WITH A VAST MARKET

Management and Economics Society
CIM – Montreal

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Disclaimer

Special Note Regarding Forward-Looking Information

This presentation contains "forward-looking information" within the meaning of the U.S. Private Securities Litigation Reform Act and Canadian securities laws concerning anticipated developments and events that may occur in the future. Forward looking information contained in this presentation includes, but is not limited to, statements with respect to: (i) the estimation of mineral resources; (ii) the market, demand for, and future price of iron ore and related products; (iii) estimates of future steel production; (iv) estimation of railway capacity; (v) the negotiation, conclusion and potential terms of infrastructure contracts; (vi) potential economic benefits of the Kami Project; (vii) future freight costs, (viii) the potential advantages of iron ore concentrate produced from the Kami Project and (ix) the results of the Updated Preliminary Economic Assessment ("PEA") including statements about future production, future operating and capital costs, the projected IRR, NPV, payback period, construction timelines and production timelines for the Kami Project.

In certain cases, forward-looking information can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved" suggesting future outcomes, or other expectations, beliefs, plans, objectives, assumptions, intentions or statements about future events or performance. Forward-looking information contained in this presentation is based on certain factors and assumptions regarding, among other things, the estimation of mineral reserves and resources, the realization of resource estimates, iron ore and other metal prices, the timing and amount of future exploration and development expenditures, the estimation of initial and sustaining capital requirements, the estimation of labour and operating costs, the availability of necessary financing and materials to continue to explore and develop the Kami Project in the short and long-term, the progress of exploration and development activities, the receipt of necessary regulatory approvals , the estimation of insurance coverage, and assumptions with respect to currency fluctuations, environmental risks, title disputes or claims, and other similar matters. While the Company considers these assumptions to be reasonable based on information currently available to it, they may prove to be incorrect.

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Additional Information

For further information on the Kami Project please refer to the Technical Reports entitled "Update to the Re-Scoped Preliminary Economic Assessment of the Kamistiatusset (Kami) Iron Ore Property, Labrador" dated effective November 7, 2017 and "An Analysis of the Economic Impacts Associated with the Kami Iron Ore Project: A 8 Mtpa, 26 Year Project" effective November 25, 2017 (the "Reports") that are available on SEDAR at www.sedar.com.

NI 43-101 Qualified Person

The technical information presented in this presentation is from the Report. The Report was prepared under the supervision of Mr. Angelo Grandillo, P.Eng, of BBA, a Qualified Person as defined by NI 43-101, with contributions from Gemtec Limited and Watts, Griffis and McOuat ("WGM"). Mr. Grandillo is a Qualified Person as defined by NI 43-101 and Mr. Grandillo is independent of Alderon. Mr. Grandillo has reviewed and approved the technical information contained in the Report, with the exception of the mineral resource estimate. Mr. Michael Kociumbas, P.Geo. with independent firm, Watts, Griffis and McOuat Limited, is a Qualified Persons as defined by NI 43-101 and is responsible for reviewing and approving the mineral resource estimate and the QA/QC associated with the mineral resource estimate. Mr. Kociumbas is independent of Alderon.

Outline

1. Safety Share
2. Iron Ore 101
3. Market Evolution
4. Canadian Miners' Perspective

Distracted driving by the numbers

- Number of drivers **killed every day** in US due to distracted driving = **9**
- Number of **crashes involving texting** = **341,000+**
- Probability a motor vehicle crash **involved a cellphone** = **25%**
- Percentage of US drivers who admitted to **reading or writing text messages** = **33%**
- How much using a cellphone **increases the risk of a crash** = **4**
- Number of seconds you can **safely glance away** from the road = **2**
- Average number of seconds a driver takes his **eyes off the road to send a text** = **5**
- Age group **most likely to text** while driving = **21-24**

Source: AAA Foundation for Traffic Safety, 2015

Relatively simple yet, multi-dimensional commodity

Iron ore 101: Core ingredient in steel

DSO Lump/Fines

- > 62% Fe
- Sells at a premium
- > 4.75 mm

Pellets

- 62 - 69 % Fe
- Sells at a premium
- 10 – 12 mm

Concentrate

- aka “sinter feed”
- 62 – 70% Fe
- < 4.75 mm
- Must be processed to sinter by Steel Producer

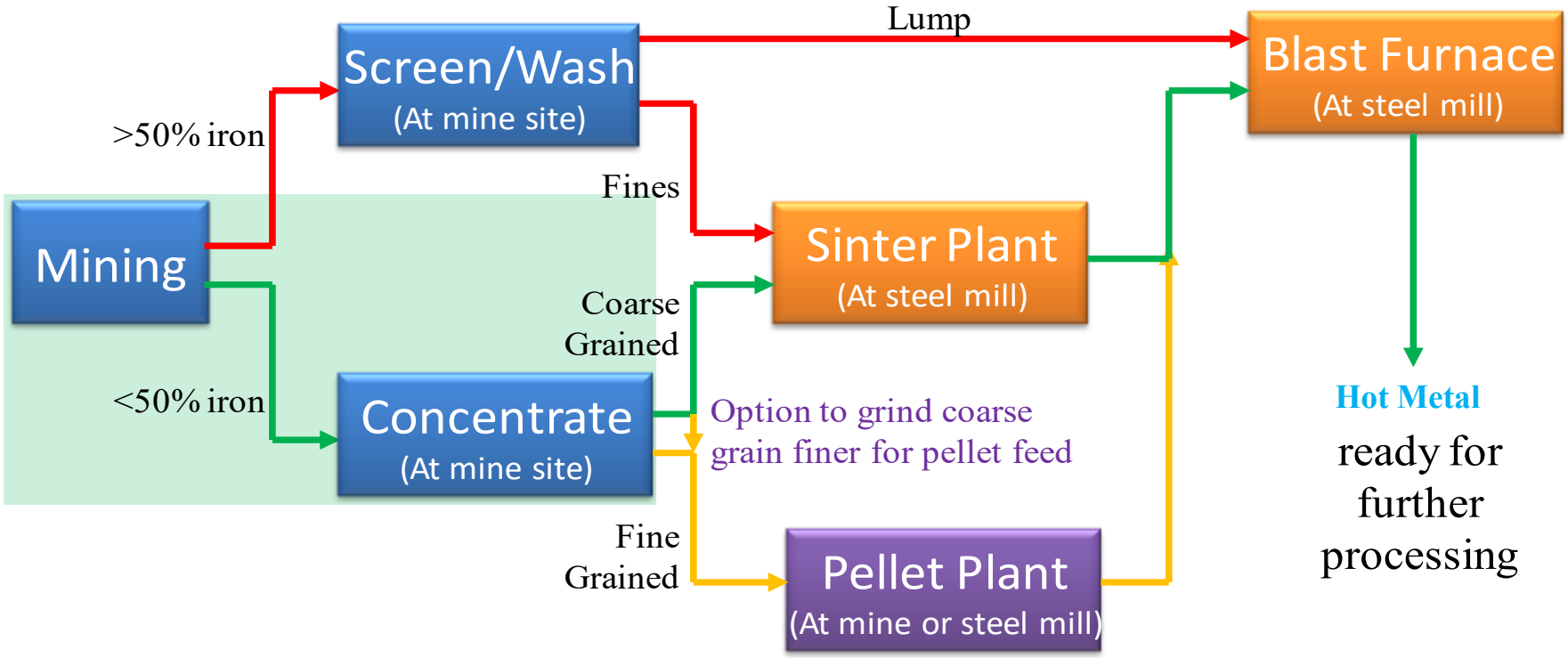
Pellet Feed

- Must be pelletized (too fine)
- 62 – 70% Fe
- Majority < 45 um
- Hard to ship due to moisture

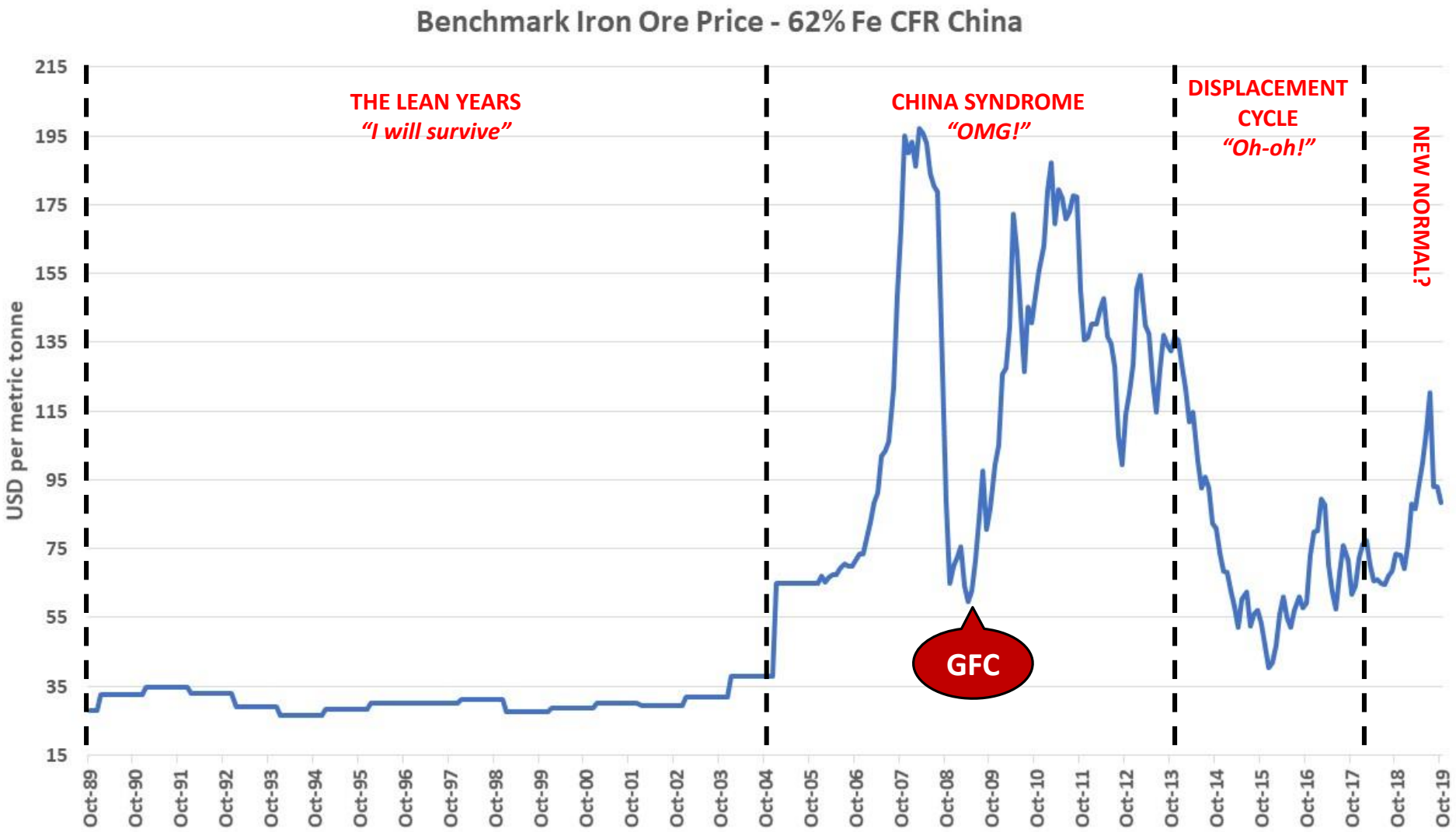
North American Mainstay

Lump & Pellets = Direct charge

Iron ore 101: Journey from resource to hot metal



Following 22 years of decline in real terms, iron ore market got interesting in 2005

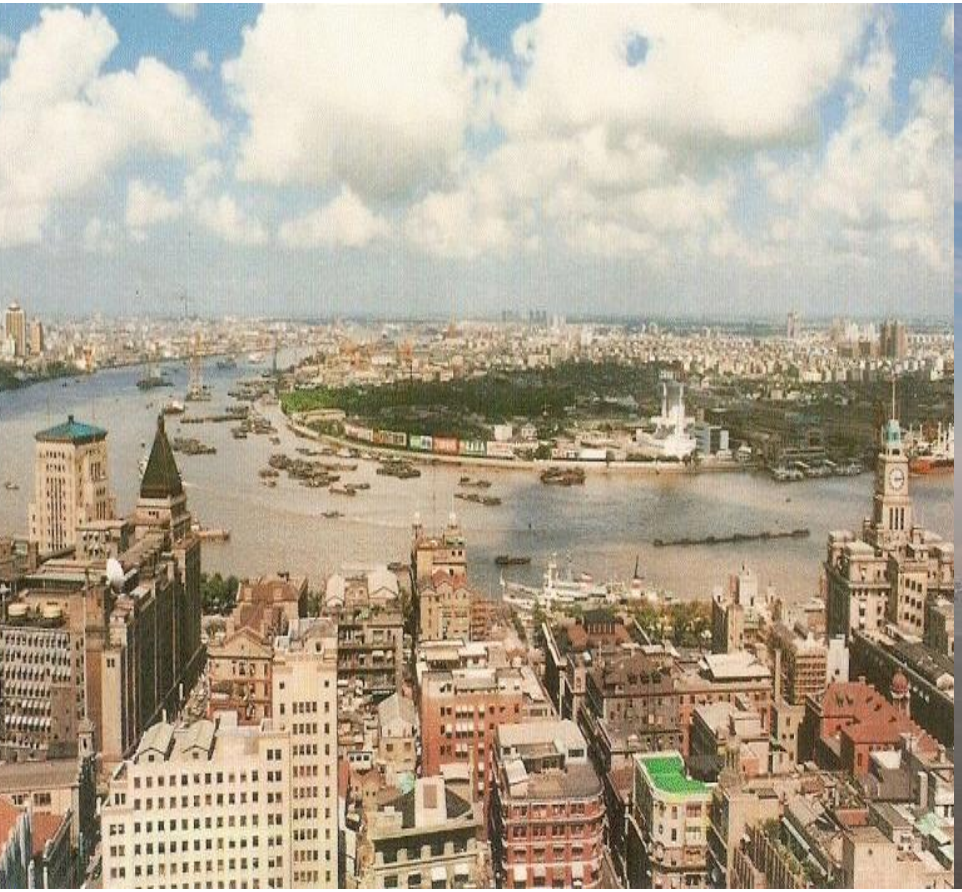


Source: Indexmundi

World needs steel; steelmakers need iron ore

China's urban transformation has underpinned iron ore demand growth since 2005

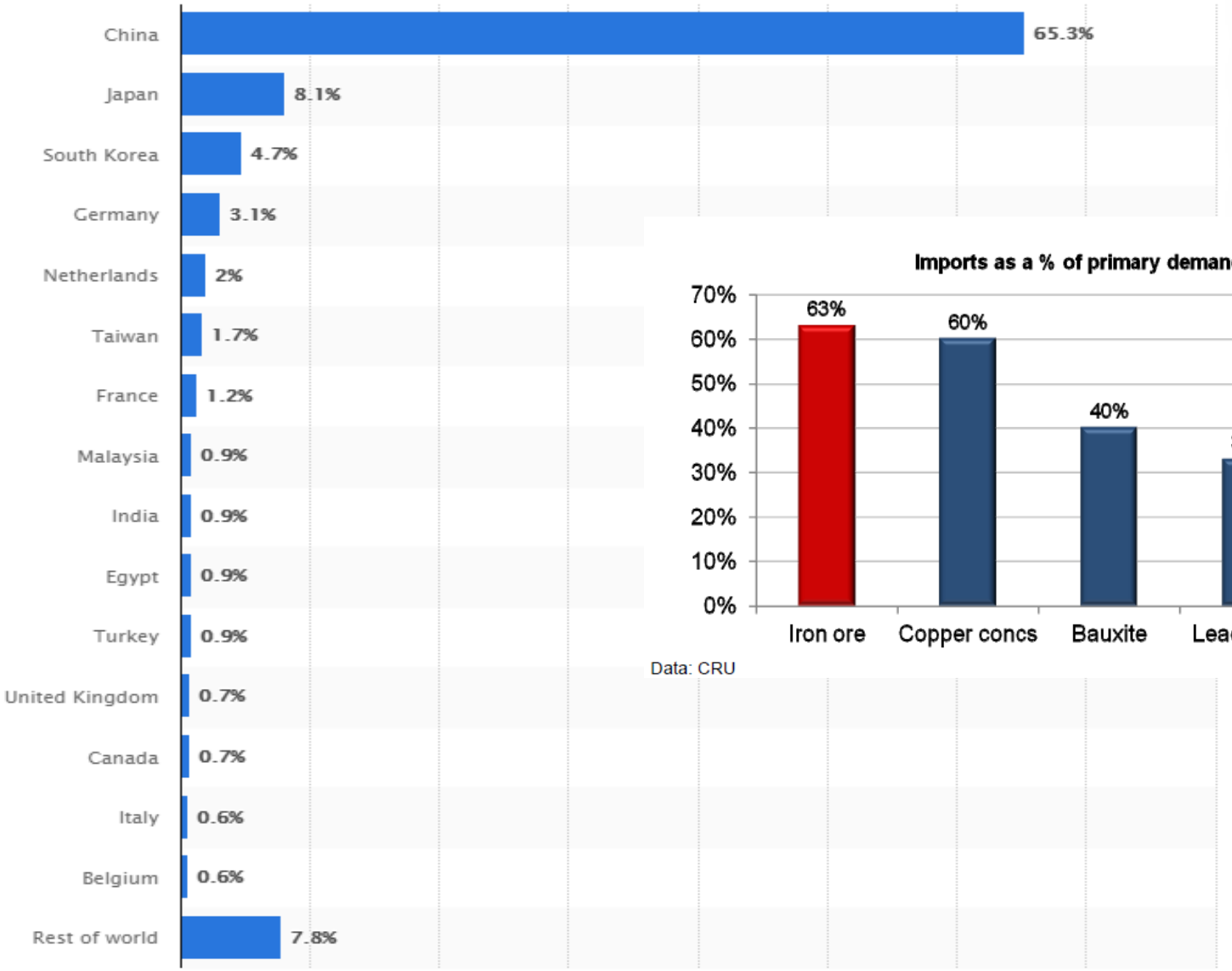
Shanghai's Pudong District

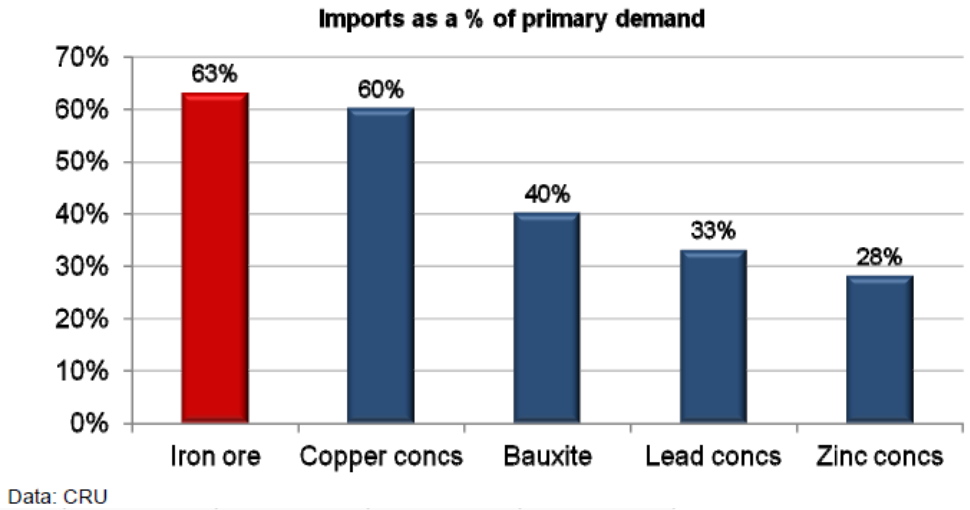


1994

2018

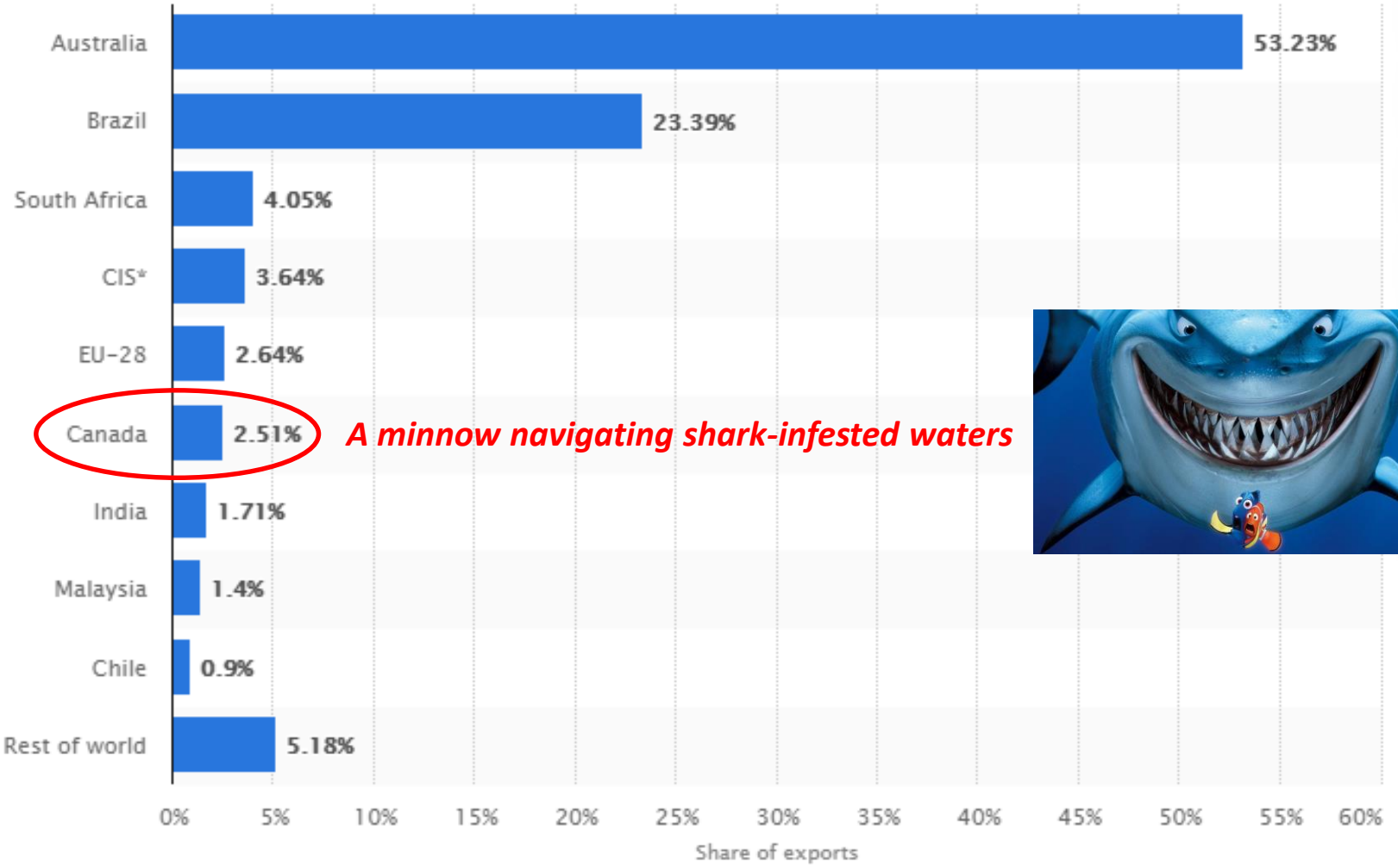
China has become the largest importer of globally traded iron ores





Source: Statista, 2018

… whilst Australia & Brazil remain the biggest exporters



A minnow navigating shark-infested waters

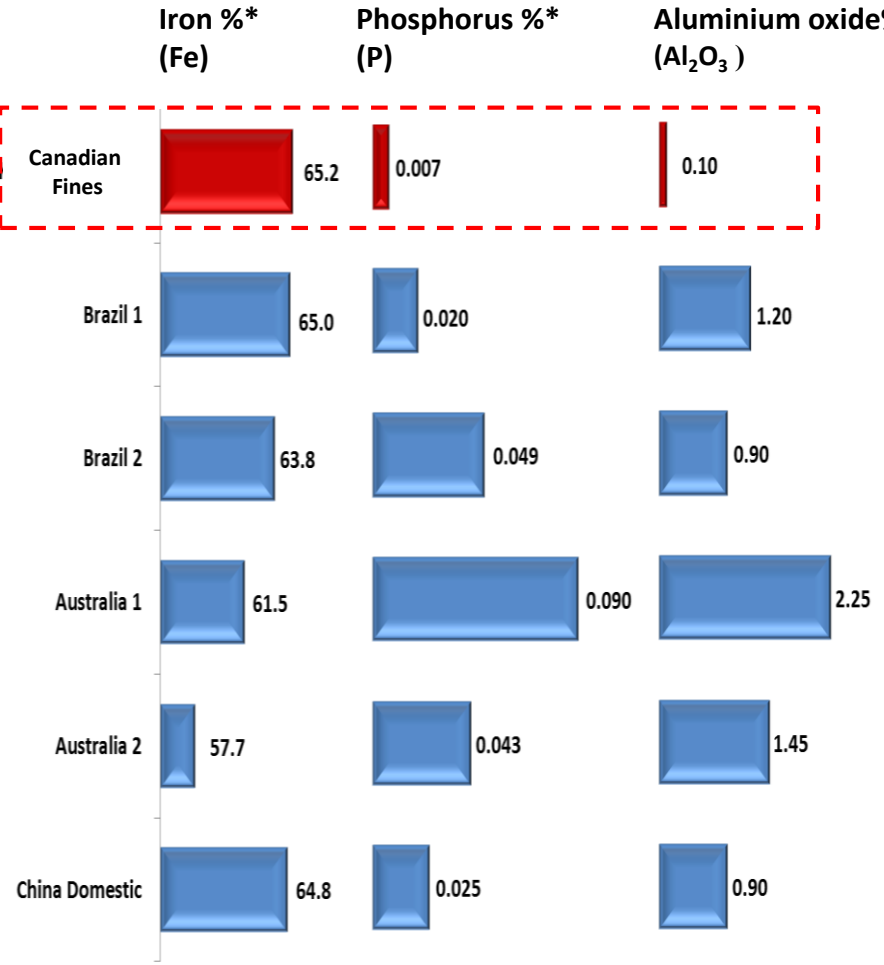
Over 70% of seaborne market dominated by 4 producers Vale, Rio Tinto, BHP, FMG

Source: Statista, 2017

Today, China is trying to balance appetite for growth with need for clean air

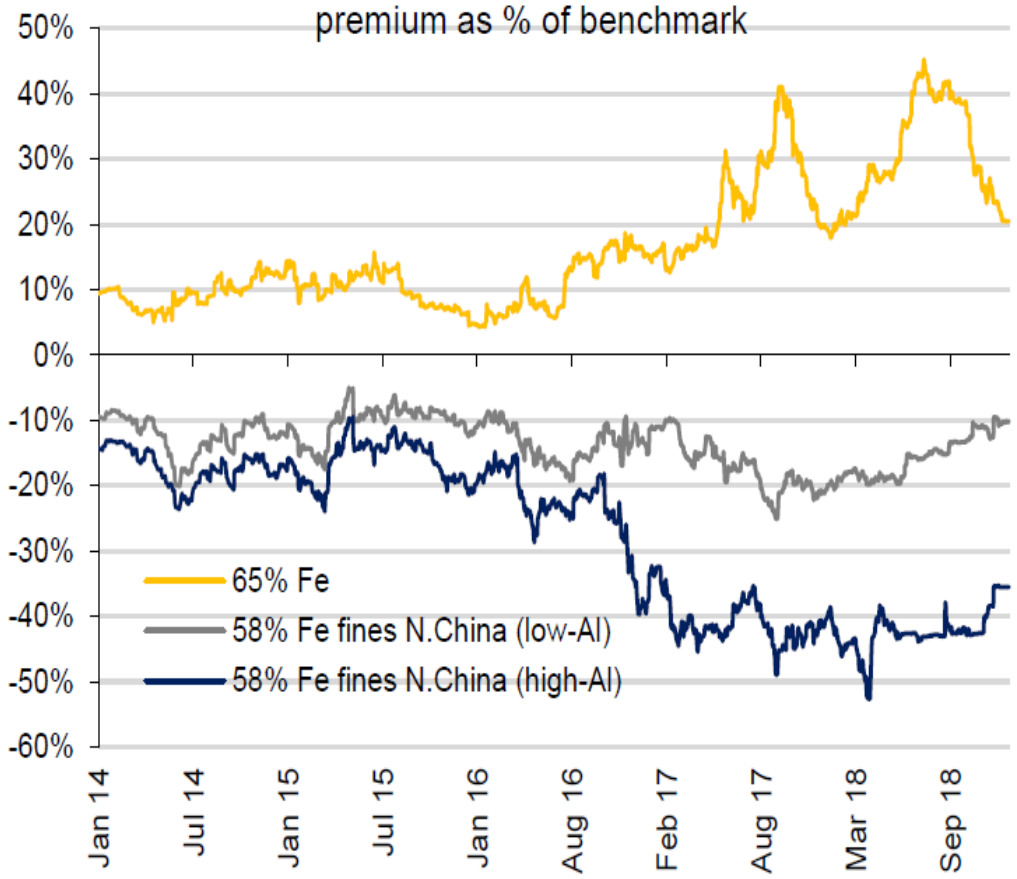
Cleaning up air quality has become a credibility issue for the Xi Jinping government

China's fight against pollution has led to bifurcation of the market



Source: Platts & Company Disclosures

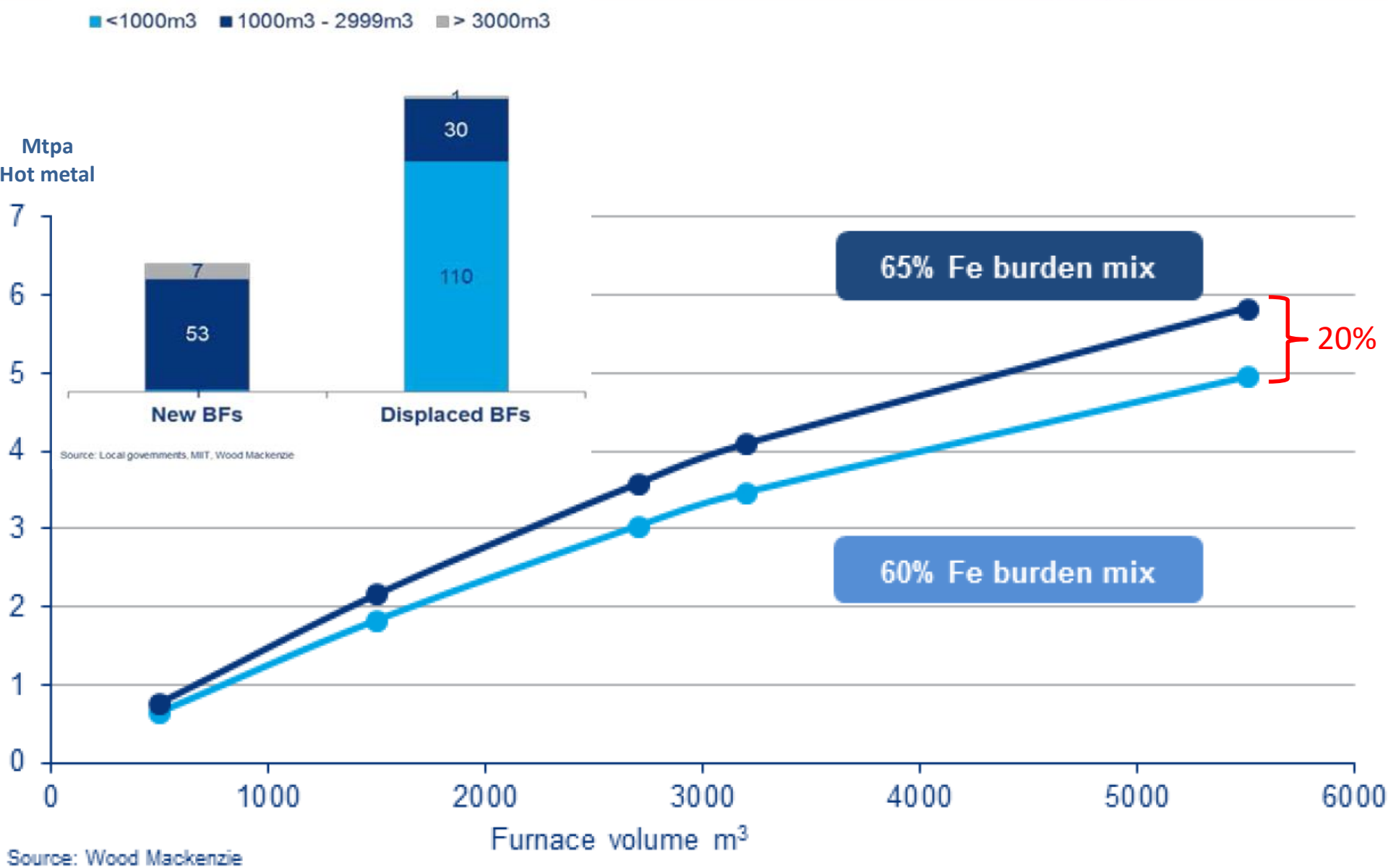
Bifurcation of the market has set in



Source: Macquarie

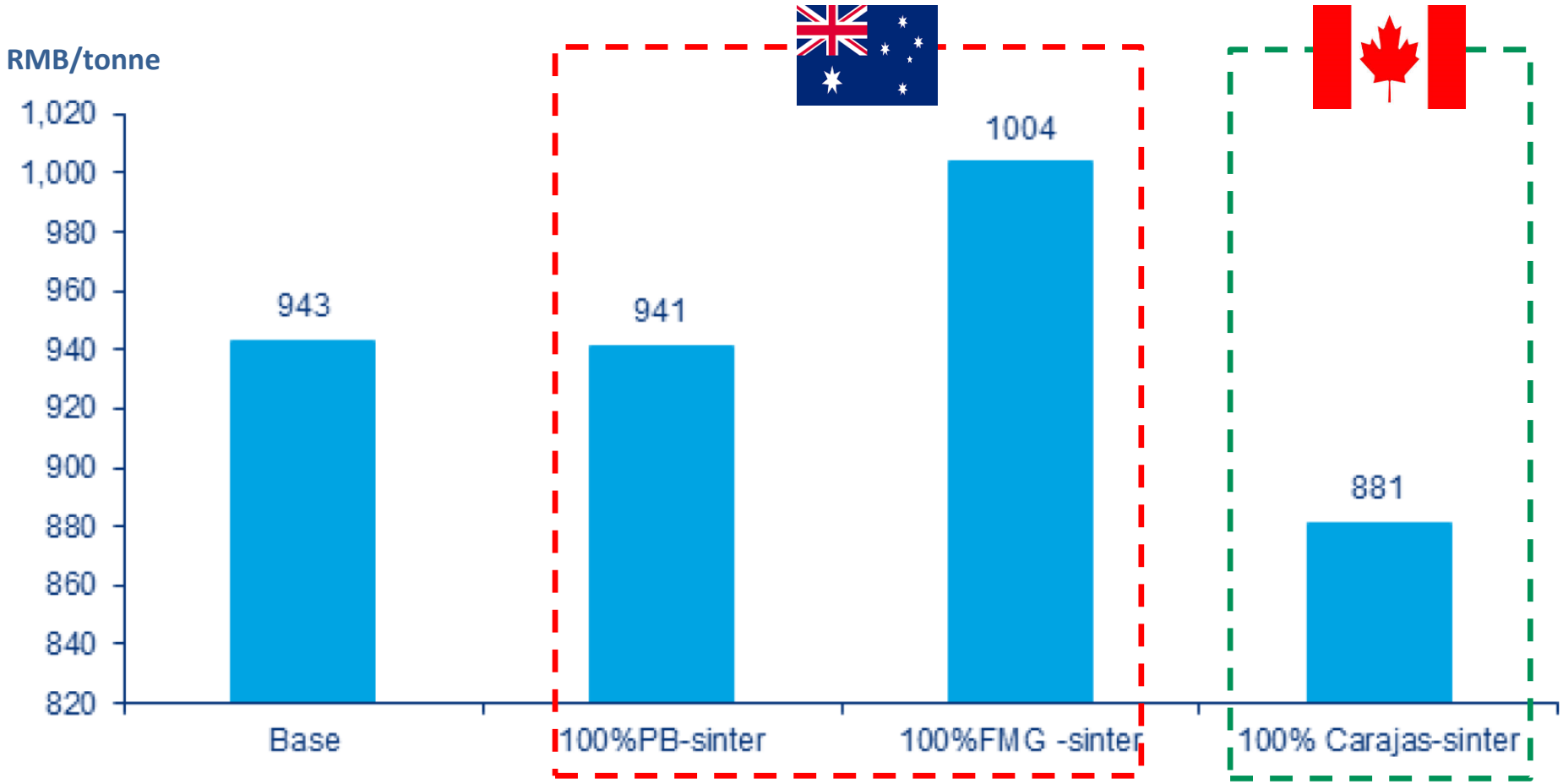
China's supply side reforms underpin demand for higher quality raw materials

Larger blast furnaces (BF) can bridge the productivity gap with higher grade iron ores



Source: Wood Mackenzie
Note: Burden mix grade is combined sinter, lump, pellet and flux grade

Use of higher grade iron ores lowers conversion cost*



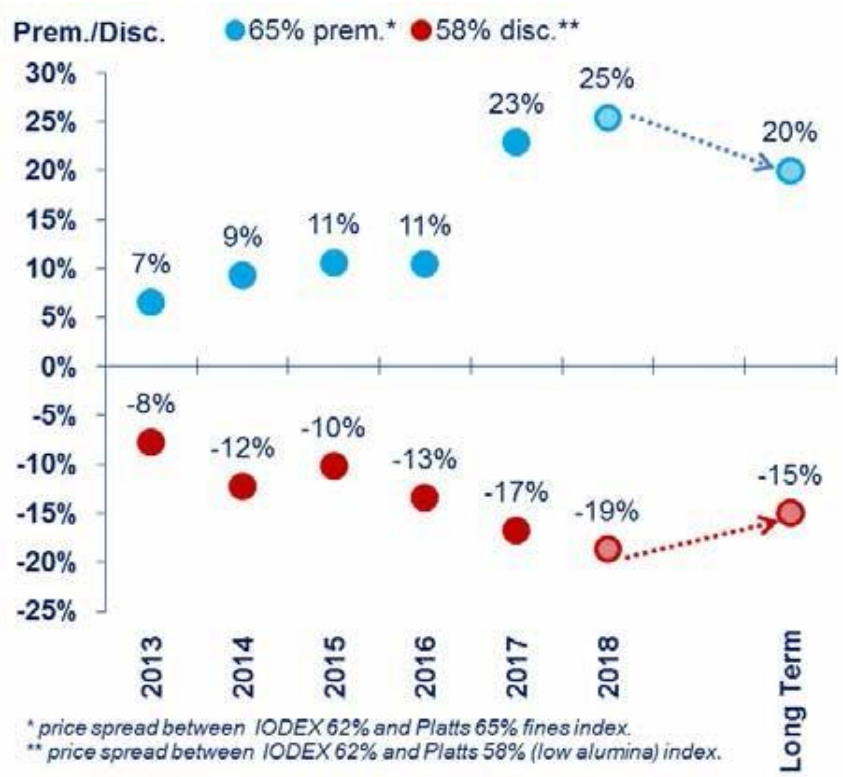
Source: Wood Mackenzie

* Base case is the case where a steel plant uses 50% PB fines, 20% Vale fines and 30% FMG fines. 100% PB sinter means 100% PB fines as the sinter feed for sintering and sinter is the only feedstock for ironmaking.

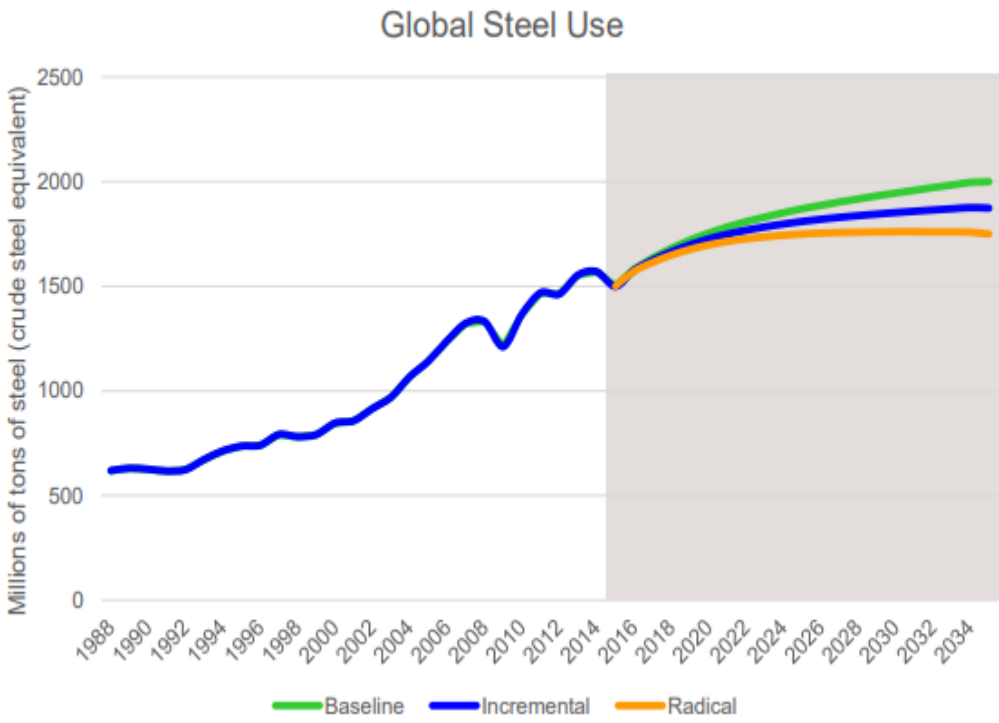
**Conversion cost = (cost of hot metal) – (cost of iron ore)*

Iron ore will continue to trade on fundamentals into the foreseeable future

- Chinese steel production remains robust in overall terms; India positioned to drive next wave of steel intensity growth
- Iron-ore consumption expected to peak by mid to late next decade (CAGR=0.4%)
- Premium products will continue to gain prominence as quality from majors slides
- Price spread between benchmark and premium grades will be sustained in the long term



Source: Wood Mackenzie



Source: Accenture Strategy

Differentiation to overcome the risk of irrelevance

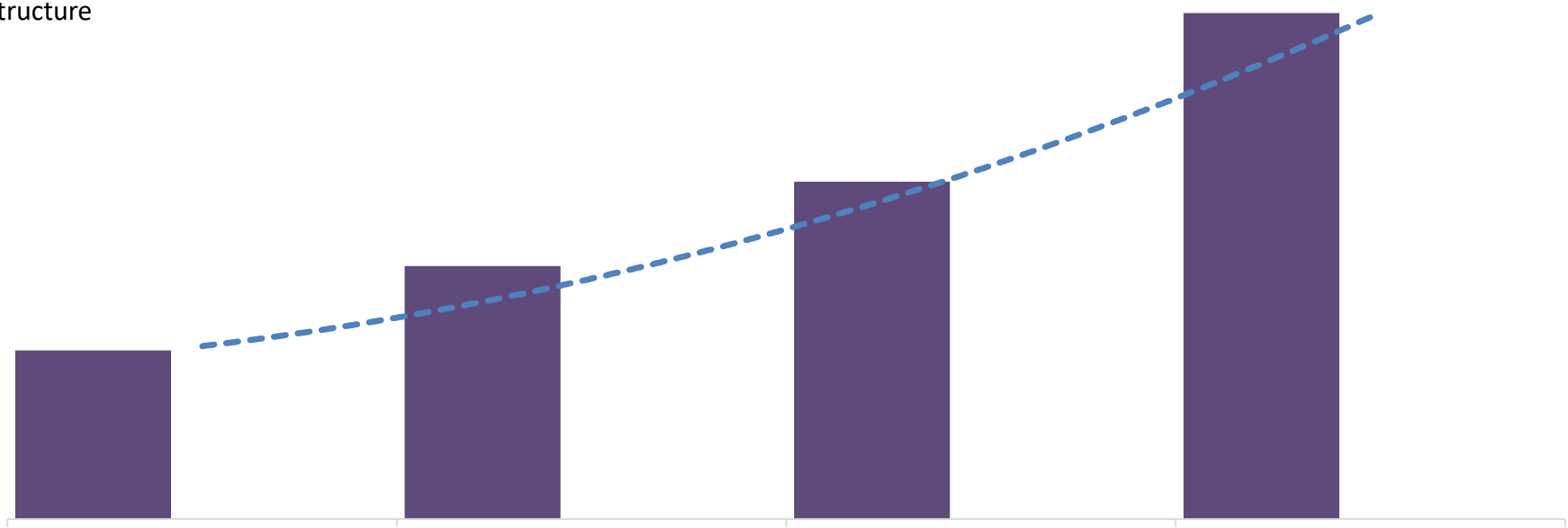
On a landed cost basis Canadian producers & projects face a competitive disadvantage

- Low head grades necessitate beneficiation to add value
- Lower economies of scale relative to Brazil, Australia and RSA
- Hard-rock mining inherently more cost-intensive
- Labor cost remains high relative to Brazil, India and RSA
- Eastern seaboard represents the longest transit time to China

In-situ grade vs the need to add value means climb up the cost curve

Assumes same -
- Mining method
- Volume
- Jurisdiction
- Infrastructure

CAPITAL INTENSITY & UNIT COST
(ILLUSTRATIVE)



DSO

CONCENTRATE

PELLET FEED

PELLET

Value-added products ➔ higher capital intensity

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Drilling

Blasting

Load & Haul

Crushing

DSO

Primary Grinding

Gravity Separation

Magnetic Separation

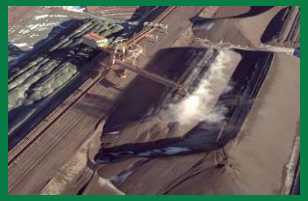
Tailings Deposition

Concentrate for sinter

Pellet feed prep

Rail

Stack & Reclaim

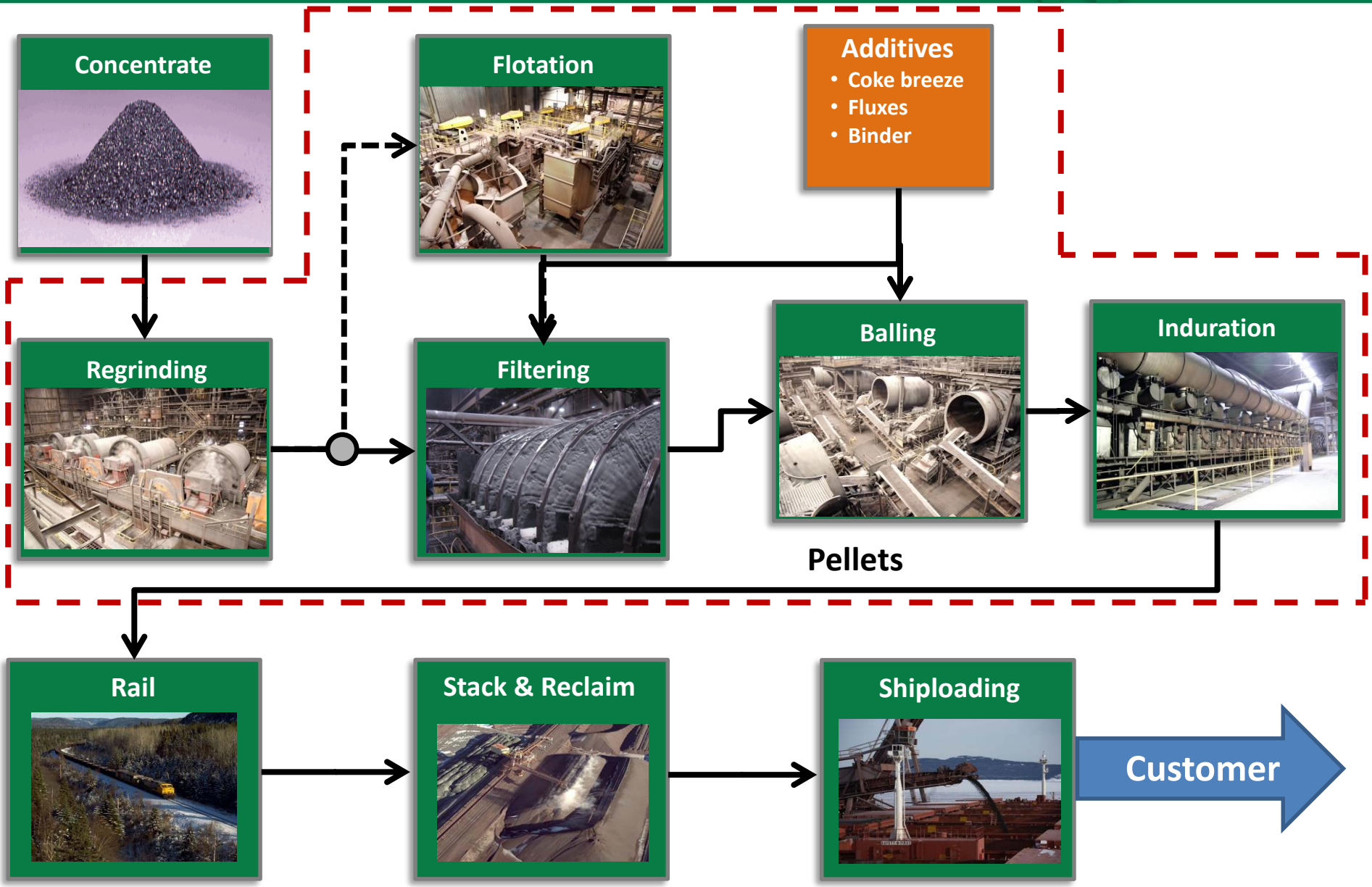


Shiploading

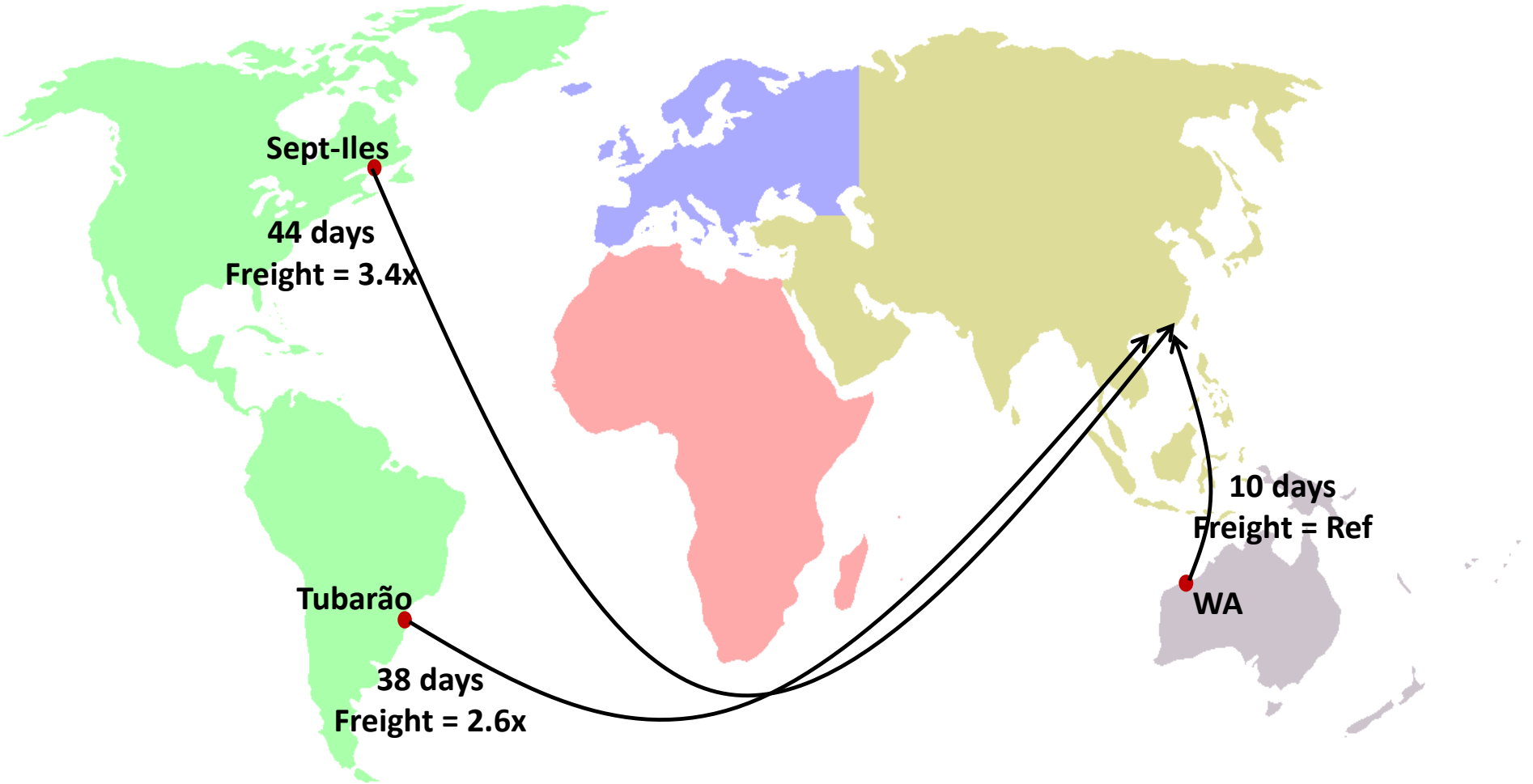
Customer

Value-added products ➔ higher capital intensity

ALDERON IRON ORE CORP



Freight is a major driver of landed costs

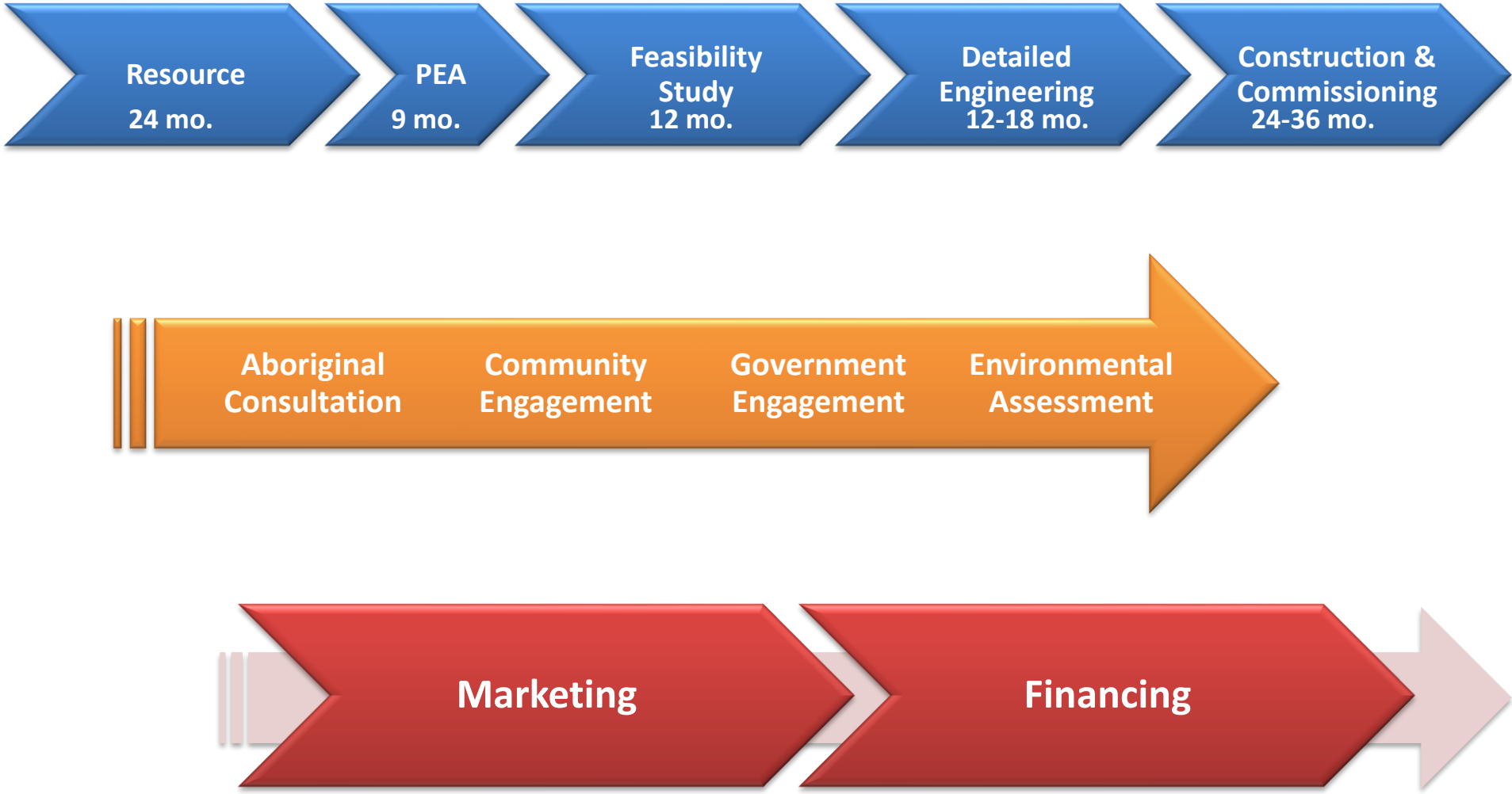


Yet, Canada is a compelling investment target for iron ore projects

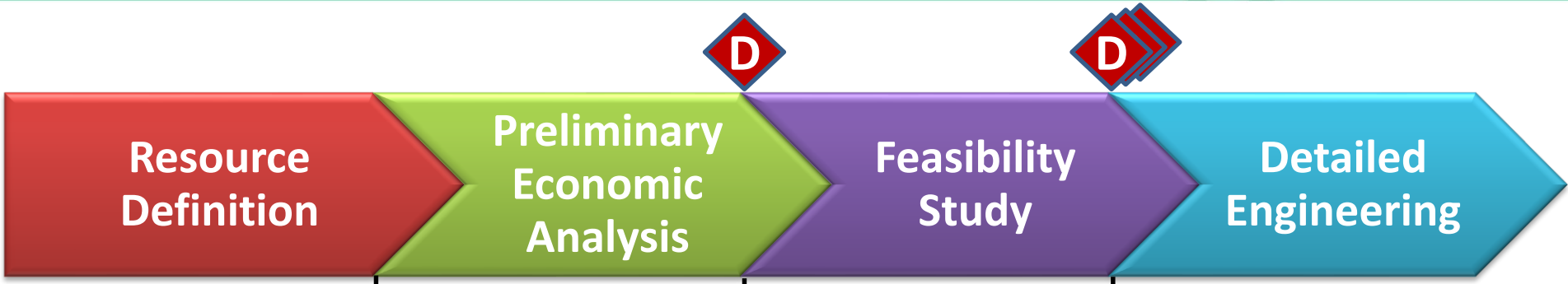
- Supply diversification
- Politically stable, mining-friendly jurisdiction
- High quality product offering
- Natural resource driven economy
- Existing infrastructure
- Hydro-electric power
- Skilled labor

… however, moving from discovery to production is a hard slog!

If not constrained by financing, EA & construction typically drive project schedule



Typical technical cycle



- Aeromagnetic survey
- Exploration drilling
- Definition drilling
- Geo. modeling
- Resource estimation
- Duration: ~2 years

- Basic engineering (<5%)
- Process design basis
- Preliminary product specs.
- Capex & Opex estimate
- Market analysis
- Financial analysis
- Duration: < 1 year
- Accuracy: -20% to +35%

- Engineering (<10%)
- Geotechnical drilling
- Process design
- Mine plan & phase design
- Met testing & final product specs
- Equipment selection
- Capex & Opex estimate
- Financial analysis
- Duration: ~1 year
- Accuracy: -10% to +15%

- Progressive engineering to 100%
- Geotechnical drilling
- Detailed process design
- Pilot testing
- Mine schedule
- Process control plan
- Control estimate
- Duration: ~16-20 months

All Canadian projects are subject to Federal & Provincial Environmental Assessment

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24 – 30 months

Project Registration
- Project definition (scope, footprint, effects)
- Decision on extent of environmental assessment

Guidelines
- Elements against which the project must be assessed
  - Environmental, social, health, economic

EIS
- Baseline studies and post project effects assessment
- Submission of Environmental Impact Statement

Review(s)
- Regulatory & public reviews
- Request(s) for additional information

Decision
- Federal & Provincial Ministers' release

Stakeholder Consultation

A balancing act…

Value Levers

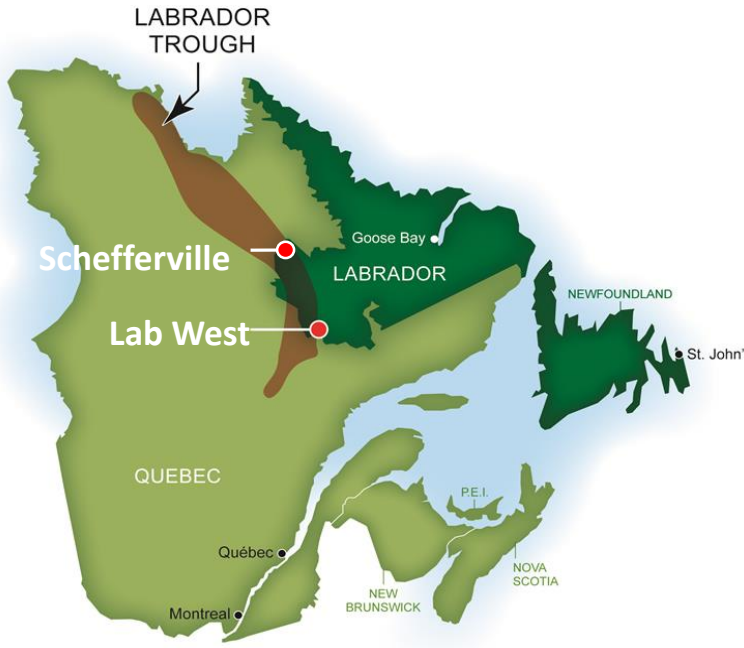
- Talent
- Technology
- Relationships
- Contract model
- Cost discipline
- Creative capital

Pressures

- Capital availability
- Royalties/taxes
- IBA's
- Stakeholder demands
- Evolving regulations
- Industry track-record

Opportunities for the Labrador Trough

- Drive the value-in-use differentiator home with the financial community
  - Not all iron ores are created equal
  - Focus on margin over cost curve for the industry
- Present projects as brown-fields
  - Existing transportation & shipping capacity means lower capital intensity
- Implore Prov. Governments to move from talk of collaboration into value-accretive actions
- Accelerate move up the technology curve
- Dispel myth around winter operations
- Consolidate!



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