INDEPENDENCE GROUP NL

Austmine 2019

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ASX:IGO | ADR:IIDDY

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- All currency amounts in Australian Dollars unless otherwise noted.
- Net Debt is outstanding debt less cash balances and Net Cash is cash balance less outstanding debt.
- Cash Costs are reported inclusive of Royalties and after by-product credits on per unit of payable metal basis, unless otherwise stated.
- IGO reports All-in Sustaining Costs (AISC) per ounce of gold for its 30% interest in the Tropicana Gold Mine using the World Gold Council guidelines for AISC. The World Gold Council guidelines publication was released via press release on 27 June 2013 and is available from the World Gold Council’s website.
- Underlying EBITDA is a non-IFRS measure and comprises net profit or loss after tax, adjusted to exclude tax expense, finance costs, interest income, asset impairments, gain/loss on sale of subsidiary, redundancy and restructuring costs, depreciation and amortisation, and once-off transaction costs.
- Free Cash Flow comprises Net Cash Flow from Operating Activities and Net Cash Flow from Investing Activities. Underlying adjustments exclude acquisition costs, proceeds from investment sales and payments for investments.

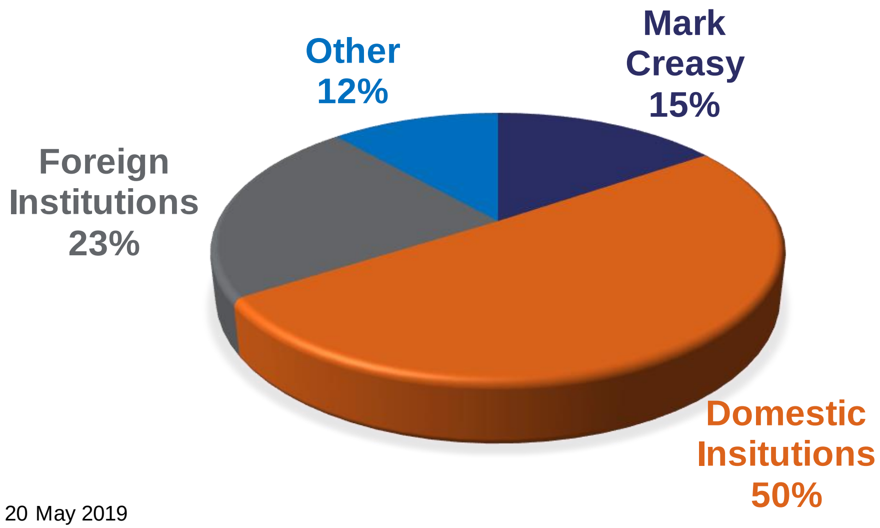
Corporate Overview

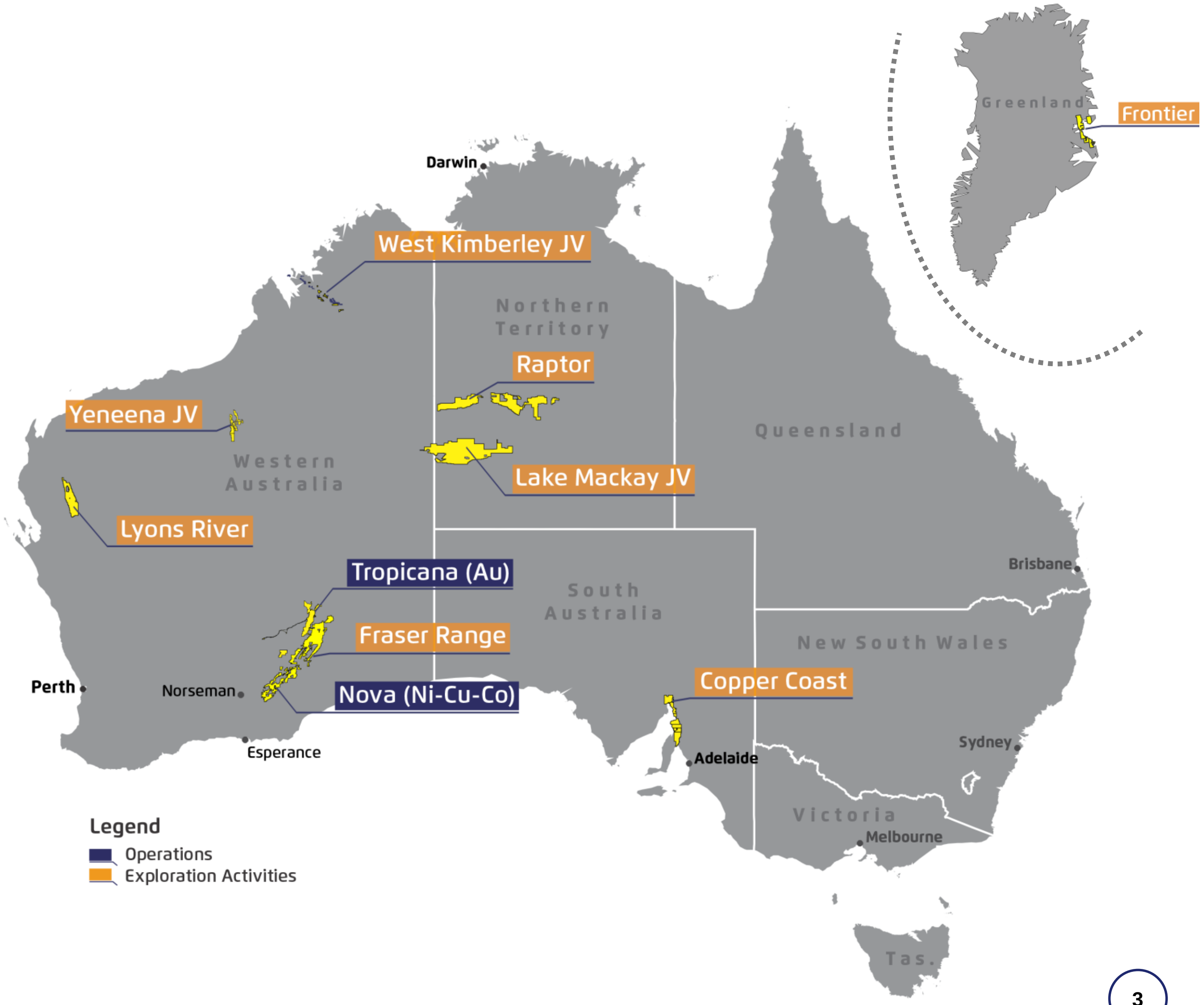
High quality portfolio of operating and exploration assets

Market Cap[(1)]	Shares on Issue[(1)]
A$2.8 billion	590 million

Cash[(2)]	Debt[(2)]
A$257 million	A$86 million

Shareholders[(3)]



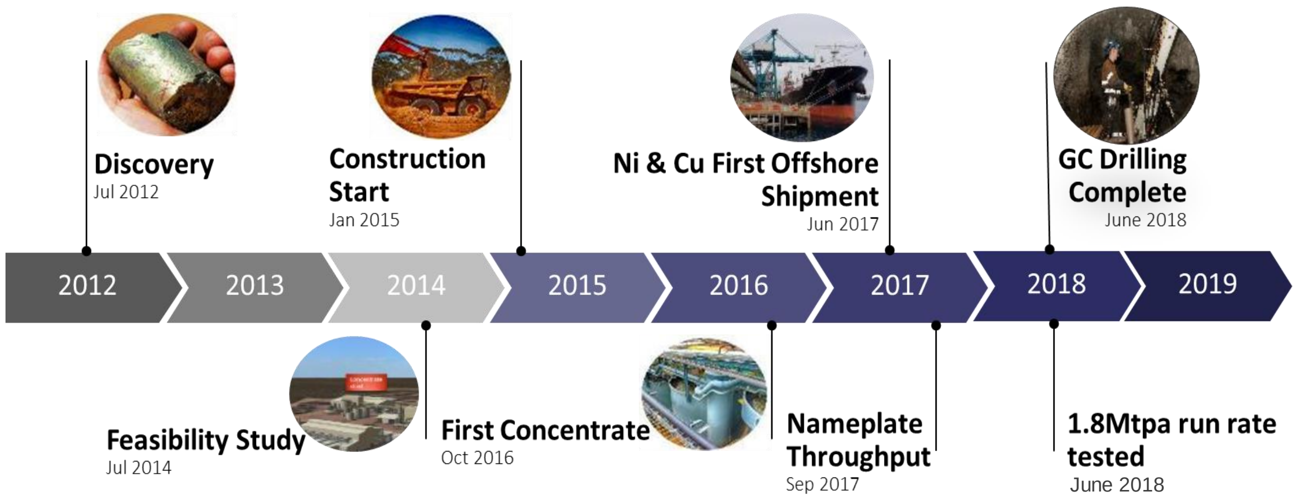


1) As at 20 May 2019
2) As at 31 Mar 2019
3) As at 26 Feb 2019

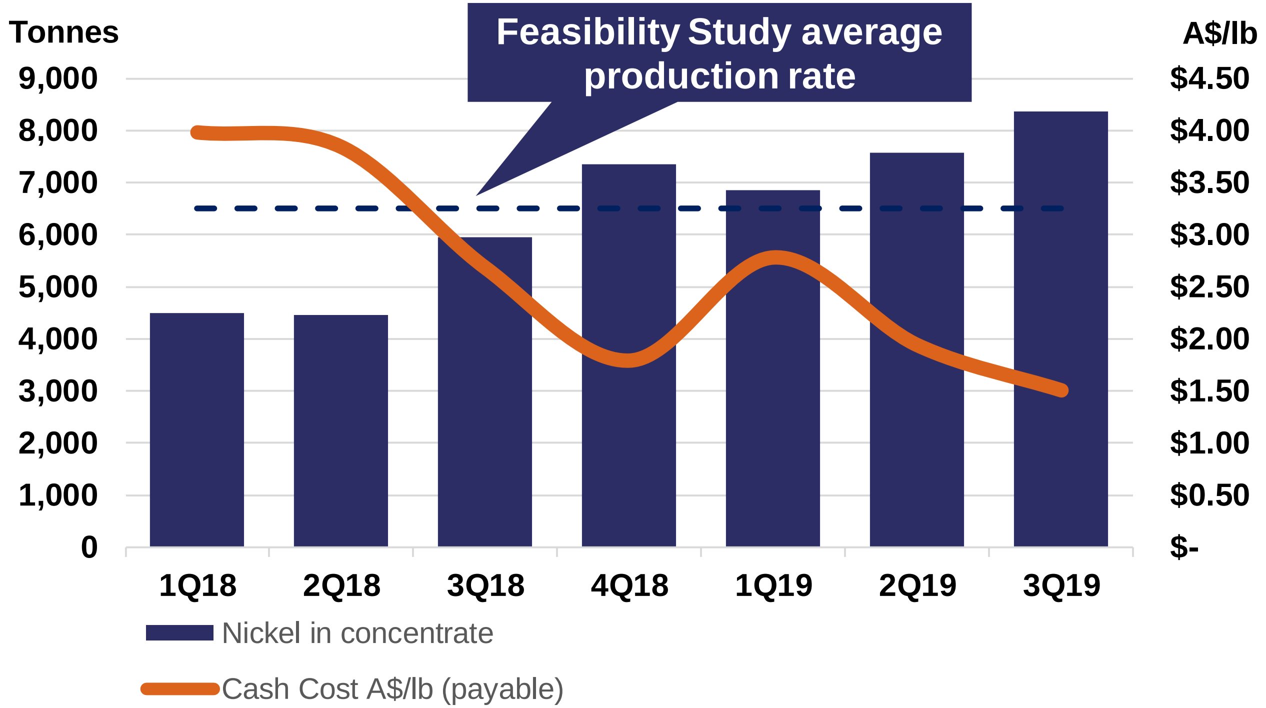
Nova Nickel Operation

High margin, high quality nickel production

Nova Development Timeline



Nova Nickel Production and Cash Costs



World class underground nickel-copper-cobalt mine

Production of high quality, nickel and copper concentrate products

High margin production generating strong free cash flow

Significant exploration potential to extend mine life

IGO is Making A Difference

Strategically focused on metals critical to clean energy

Globally Relevant
large scale, high quality asset portfolio supplying metals critical to clean energy

Vertically Integrated
upstream metal production and downstream processing to unlock value

High-quality Products
to meet customer demand, made safely, sustainably, ethically and reliably

Proactively Green
by embracing renewable energy and innovation to reduce carbon footprint

Delivered by people who are bold, passionate, fearless and fun – a smarter, kinder, more innovative team

The Clean Energy Evolution

Policy & regulatory changes

Global governments focused on demonstrating action to reduce emissions

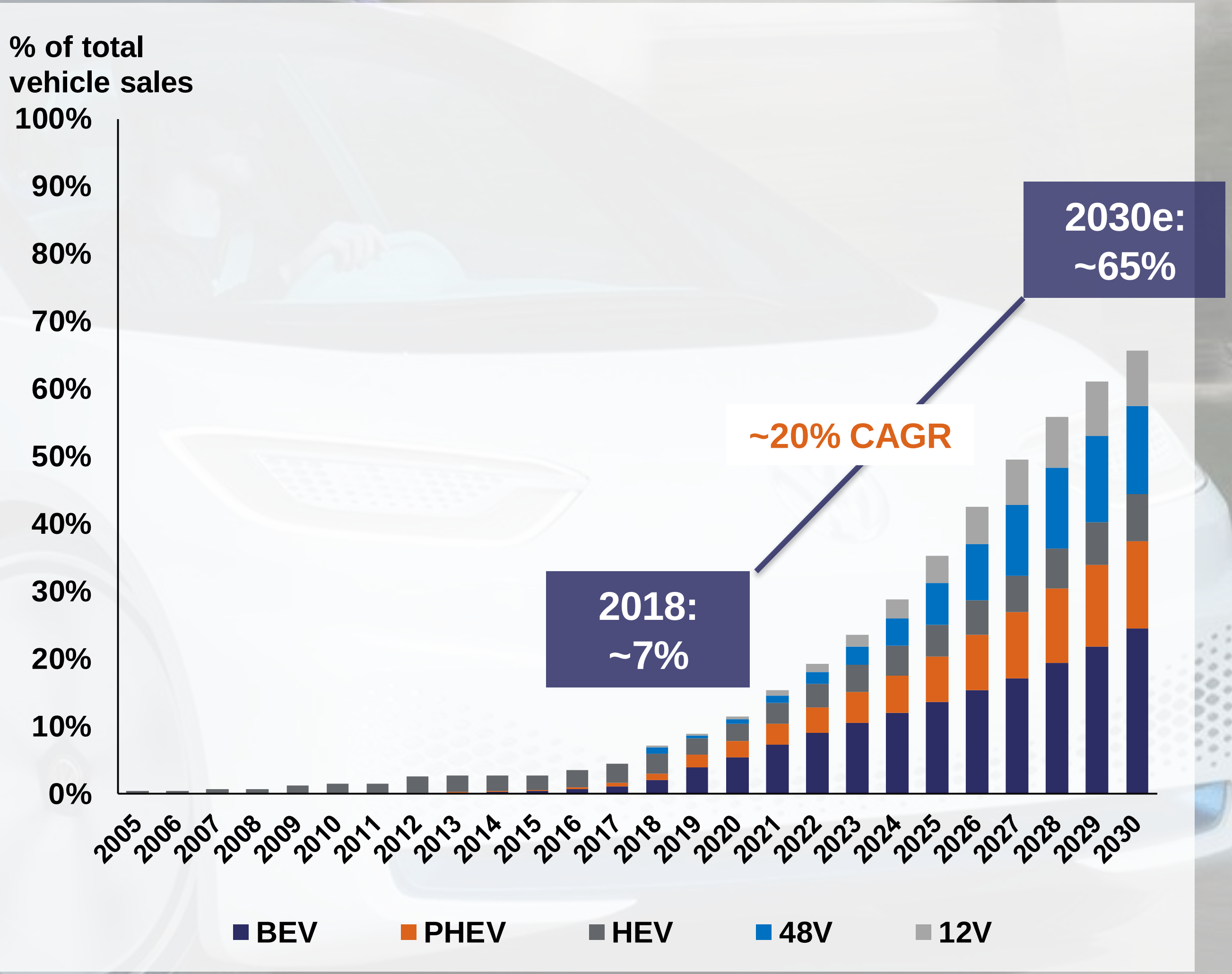
- **Initiatives to increase renewable energy generation and storage**
- **Bans on conventional fossil fuel powered vehicles**
- **Strong support for mass adoption of electric vehicles (EVs)**
  - Subsidies
  - Tax exemptions & rebates
  - Toll exemptions & free parking
  - Substantial investments in recharge infrastructure

Electric Vehicles

A rapidly growing market incentivised by lower costs

- **China and Western Europe are leading the market**
- **65% of new cars sold in 2030 expected to be electrified**[1]
- **Battery pack costs are falling**
  - 2010: ~US$1,000/kWh[2]
  - 2019: ~US$140/kWh[2]
  - 2030(f): ~US$60/kWh[3]
- **EV cost parity with ICE vehicles expected by 2022**[3]

EV sales forecast[4,5]



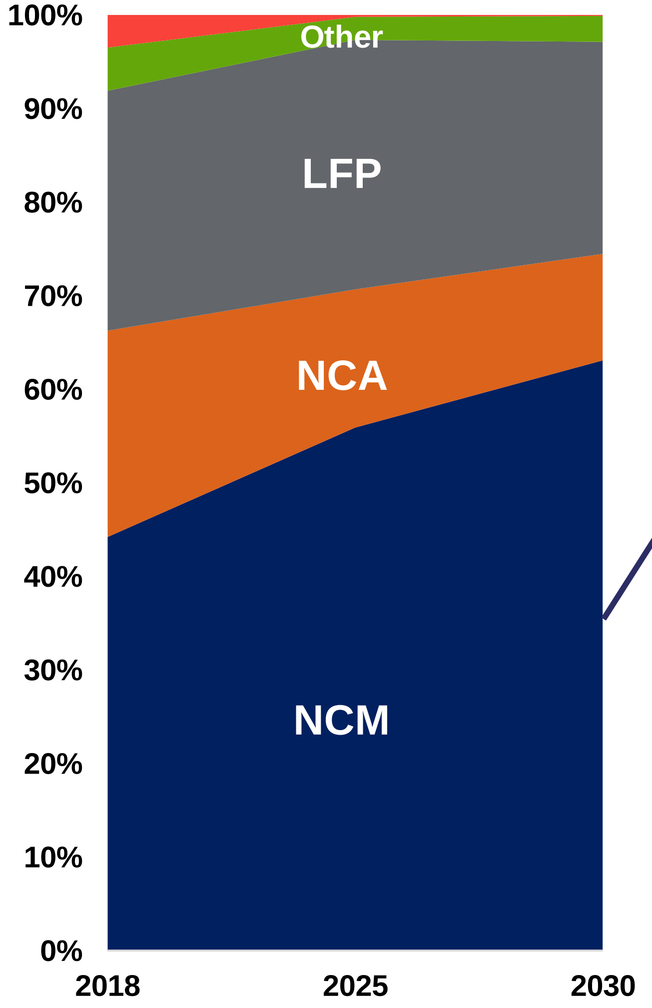
1) Source: Bernstein
2) Source: IGO Research
3) Source: Bernstein
4) Source: Roskill
5) BEV (Battery Electric Vehicle), PHEV (Plug-in Hybrid Electric Vehicle), HEV (Hybrid Electric Vehicle)

Implications for raw materials

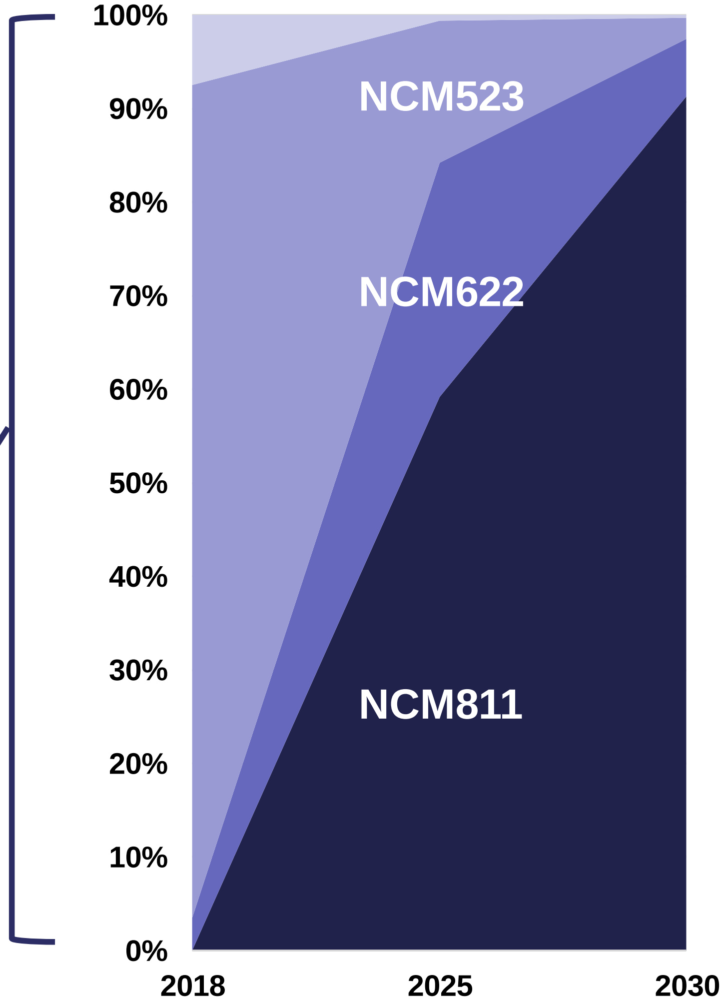
Battery demand growth driving a new source of demand for raw materials

- **Modern lithium-ion battery technologies demanding**
  - Lithium, nickel, cobalt, manganese and copper
- **Cathode chemistries transitioning towards higher nickel intensity**
  - High nickel = higher energy density
  - High nickel NCM811, NCM622 and NCA batteries forecast to be dominant by 2030[1]

Forecast market share by cathode chemistry [1,2]



High nickel NCM811 and NCM622 chemistries forecast to dominate[1]



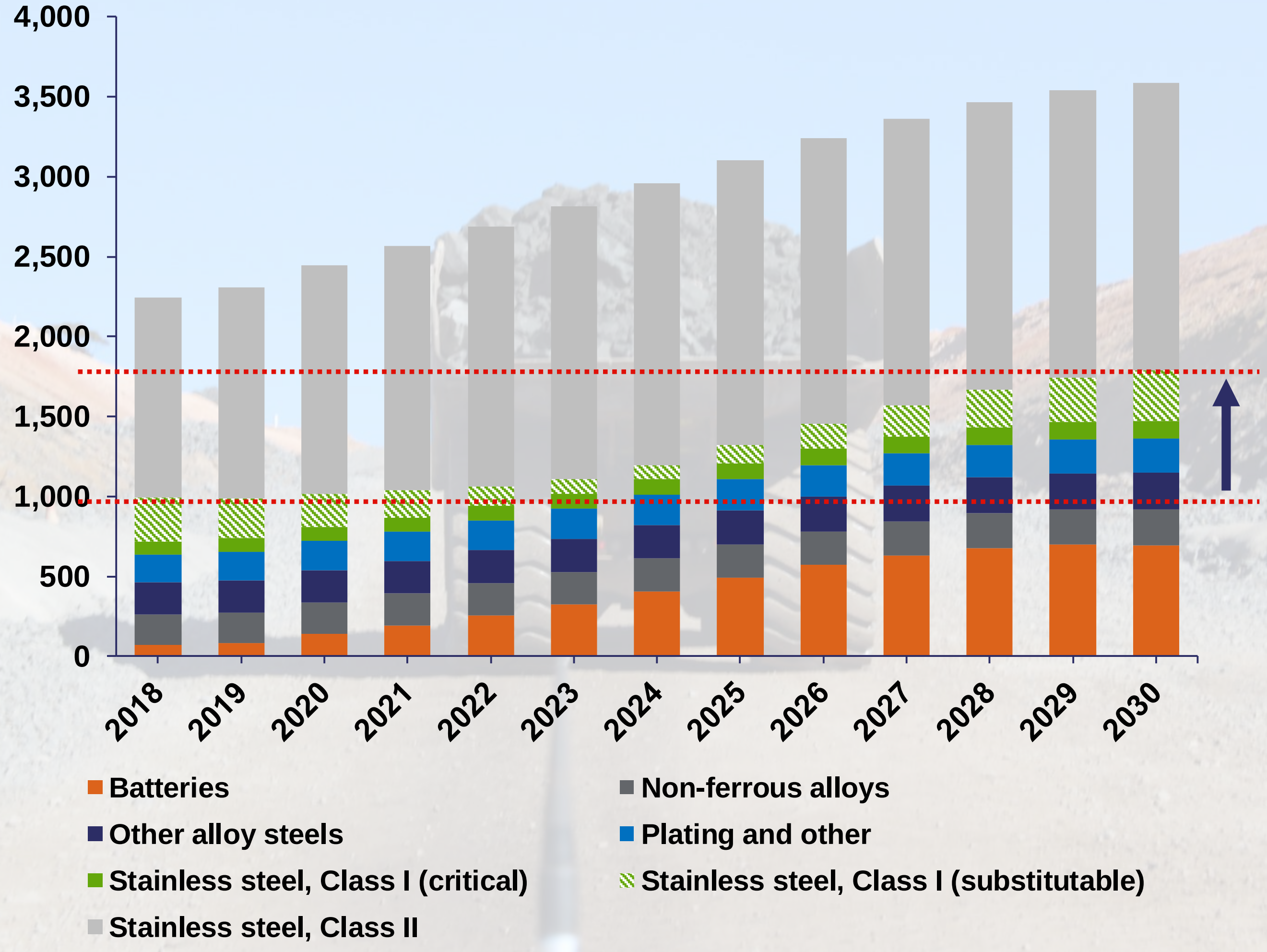
1) Source: Roskill
2) NCM (Nickel Cobalt Manganese); NCA (Nickel Cobalt Aluminium); LFP (Lithium Ion Phosphate)

Implications for nickel

New nickel demand putting pressure on supply

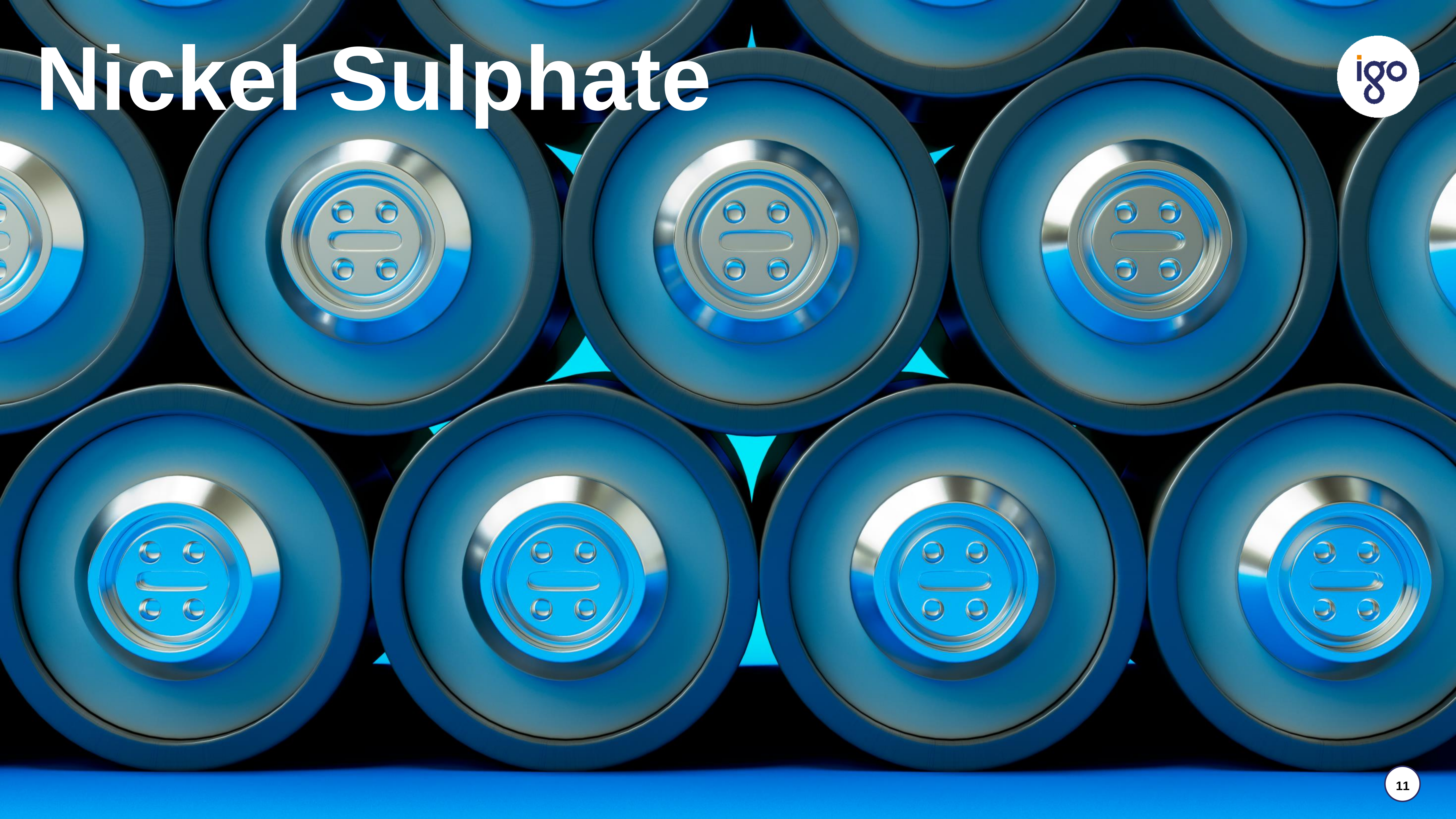
- **Class 1 nickel supply needs to double by 2030 to meet new demand from battery industry**
- **Market faces unique challenges:**
  - Less than half of current global nickel production is suitable for the battery industry
  - Upstream development projects have long lead times
  - Laterite deposits are capital intensive
  - Recent low investment in new nickel production capacity has limited new supply

Class I & Class II Nickel Demand Forecast[1]



1) Source: Roskill

Nickel Sulphate



Nickel Sulphate

A key raw material for the nickel in lithium-ion batteries

- **Typical industry nickel concentrate payabilities influenced by:**
  – By-product credits
  – Commercial factors
- **Producing a battery grade nickel sulphate would deliver:**
  – Significantly higher payabilities
  – A premium price for nickel sulphate over the LME(1) nickel price
  – Directly placing IGO in the energy storage supply chain

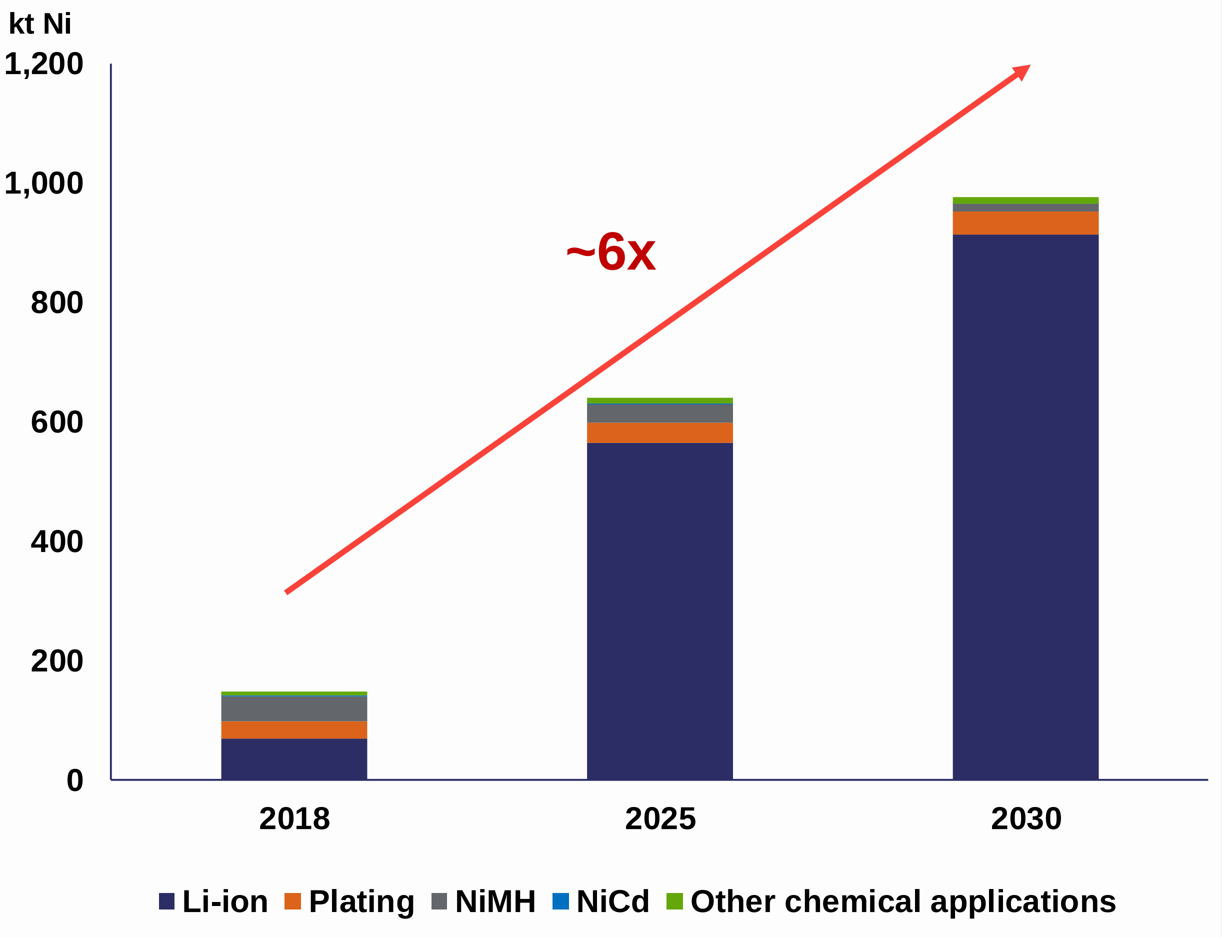
1) London Metal Exchange
2) Photograph on LHS courtesy of Karel Osten, Wood Plc

Nickel Sulphate

Demand growth in line with EV growth projections

- **Nickel sulphate is the key raw material for the nickel in lithium-ion batteries**
- **Demand for nickel sulphate based on**
  - Rapid volume growth of electric vehicle market
  - Lithium ion batteries becoming more nickel intensive:
    - Higher energy density
    - Greater storage capacity
    - Lower cost

Demand outlook for nickel sulphate driven by the battery industry[1,2]

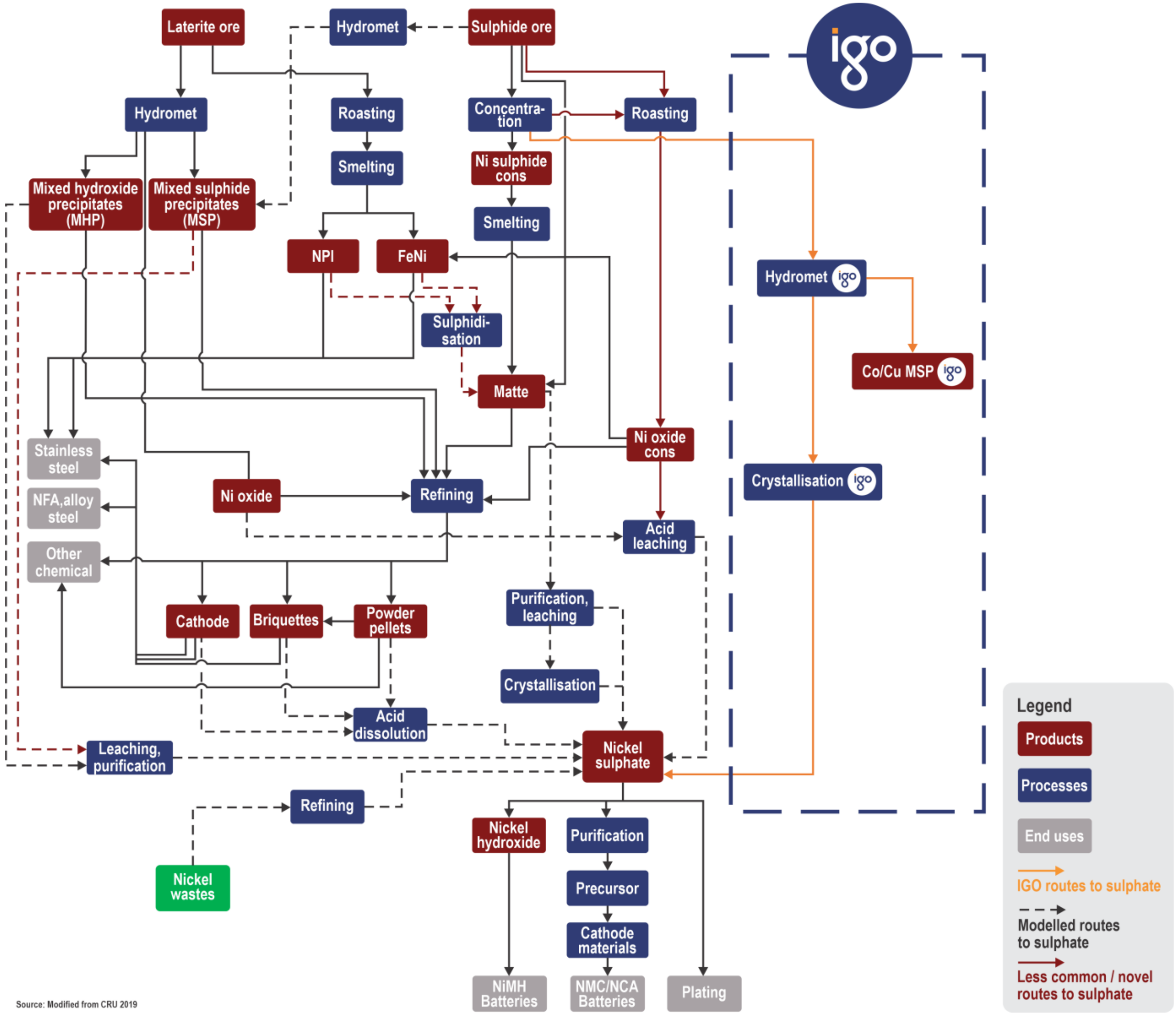


1) Source: Roskill
2) NiMH (Nickel metal-hydride); NiCd (Nickel-Cadmium)

Nickel Sulphate

Complex value chain

- **Nickel sulphate production processes have typically been complex and costly**
- **Key cost factors include:**
  - Traditional processes convert LME grade nickel matte/powder/briquettes into sulphate
  - High capital intensity of nickel sourced from nickel laterite deposits



Source: Modified from CRU 2019

Our Solution

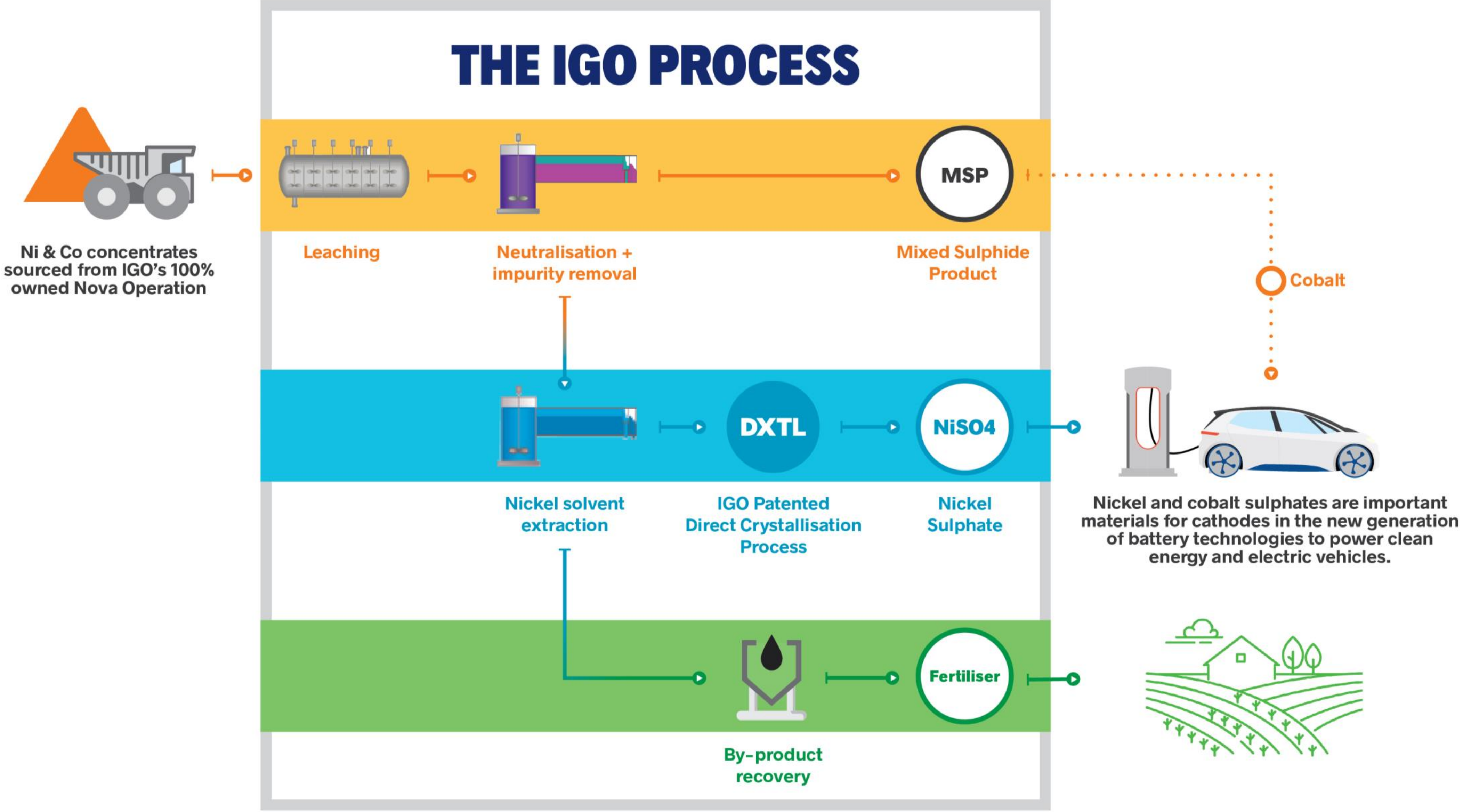
The IGO Process™

Extensive testwork conducted at bench and pilot scale

1	**Feed Optimisation**	Flotation optimisation through reduction of S:Ni ratio to lower oxygen consumption and waste precipitation
2	**Pressure Oxidation**	Both batch and continuous autoclave testwork to identify conditions to maximise Ni extractions at range of temperatures and pressures
3	**Solvent Extraction**	Range of solvent extraction reagents tested including Caustic, Ammonia and Magnesia
4	**Crystallisation**	Production of nickel sulphate at various quality specifications using both conventional crystallisation technologies and direct crystallisation

The IGO Process™

A disruptive process to convert nickel sulphide concentrate into nickel sulphate



- High metal extraction
- Lower cost [(1)]
- Lower emissions[(1)]
- Lower waste[(1)]

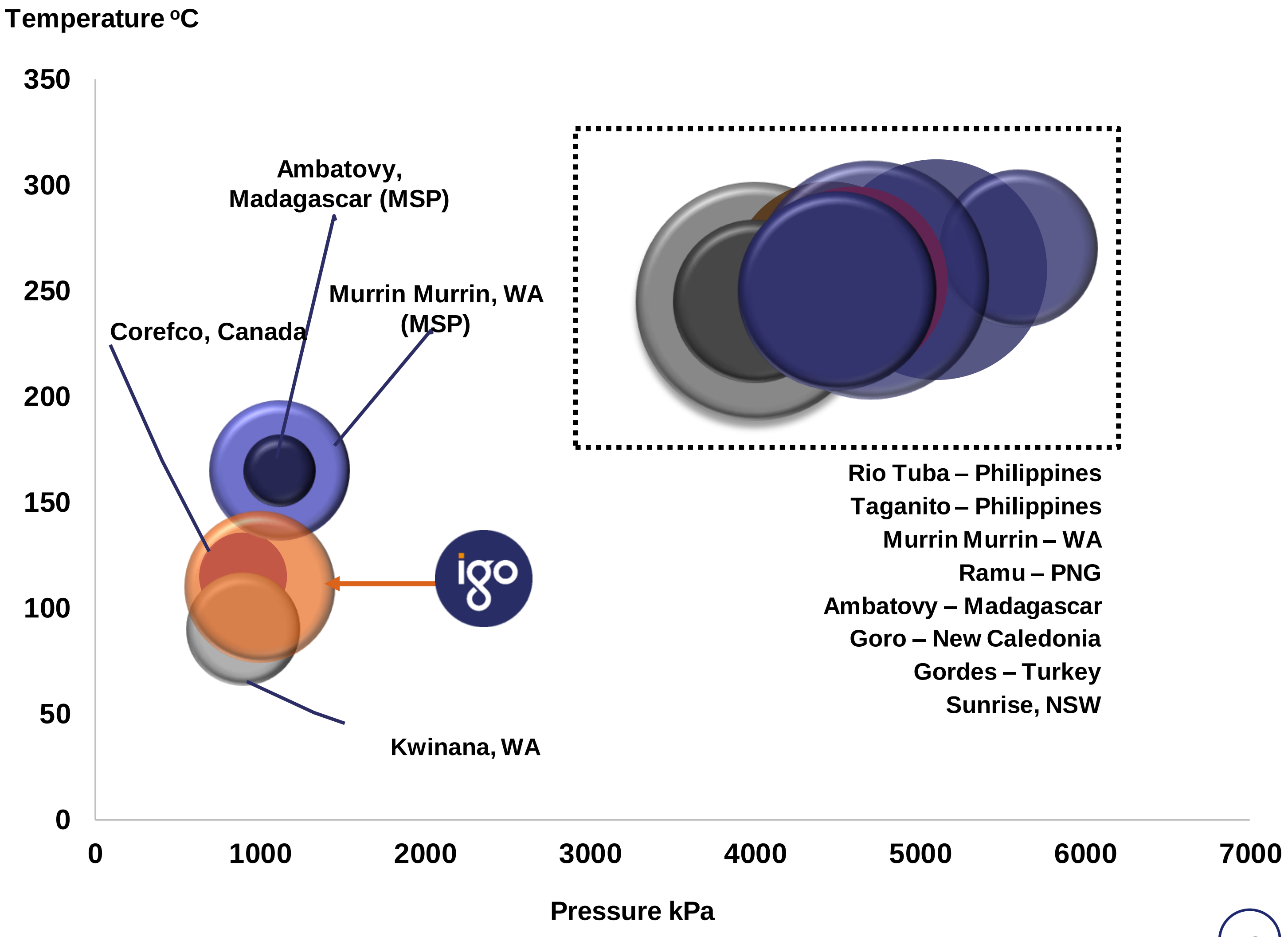
1) Compared to existing alternative processes to convert nickel concentrate to nickel sulphate

The IGO Process™

Concentrate feedstock minimises operational risk

- **Pressure oxidation (POX) used in IGO Process requires lower temperature and pressure than HPAL[1] and conventional POX processes**
  - Lower engineering intensity
  - Lower operating risk
  - Lower capital intensity
- **Operating costs within the lowest quartile of the cost-curve for integrated nickel sulphate producers**

Nickel autoclaves in the mining industry
(bubble size = individual autoclave volume)



1) HPAL: High Pressure Acid Leach

The IGO Process™

Product Quality

- **Testwork has produced high quality, battery grade product**
- **IGO's process has flexibility to produce different product specifications to suit customer requirements**
- **IGO product expected to attract high market premiums**
- **Nickel sulphate expected to be sold under negotiated offtake agreements**

Nickel sulphate product specifications of select offtakers

Element	IGO	Europe 1	Europe 2	China 1	China 2	China 3	WA 1	Others
Ni (%)	22.1 -22.3	22.3	22.3	22.2	22	22.2	22.3	22.2
Co (ppm)	40-140	2	10	30	10	30	80-120	100-250
Cu (ppm)	1-9	1	2	1	10	1	1	5
Al (ppm)	1	1	-	10	-	10	1	-
As (ppm)	1-2	1	-	-	2	-	-	-
Ca (ppm)	1	1	-	7	5	7	2	5-10
Cd (ppm)	1	1	2	2	10	1	1	-
Cr (ppm)	1	1	-	3	-	3	1	5-10
Fe (ppm)	1-6	1	2	4	10	3	1	5
K (ppm)	1	1	-	-	-	-	1	-
Mg (ppm)	1-4	1	-	20	-	20	1	5-10
Mn (ppm)	1	1	-	-	-	-	1	5-10
Na (ppm)	1	5	-	30	-	30	5	-
P (ppm)	1	2	-	-	-	-	-	-
Pb (ppm)	1	1	2	6	10	5	1	5-10
Si (ppm)	1	5	-	10	-	10	2	-
Zn (ppm)	1-5	1	2	2	10	1	1	5

Environmental Credentials

IGO Process delivers favourable environmental outcomes

Low emissions

- Hydrometallurgical versus pyrometallurgical processes generating significant lower emissions
- Aim of The IGO Process is zero emissions

By-product waste

- Production of ammonia sulphate (fertiliser) as a by-product waste stream
- Continued R&D on inert iron oxide waste stream

Reduced carbon emissions

- Lower power requirements
- Conversion to renewable energy at the mine site

Preferred product for the greenest batteries in the world through minimising our carbon footprint and optimising our waste streams

Next Steps

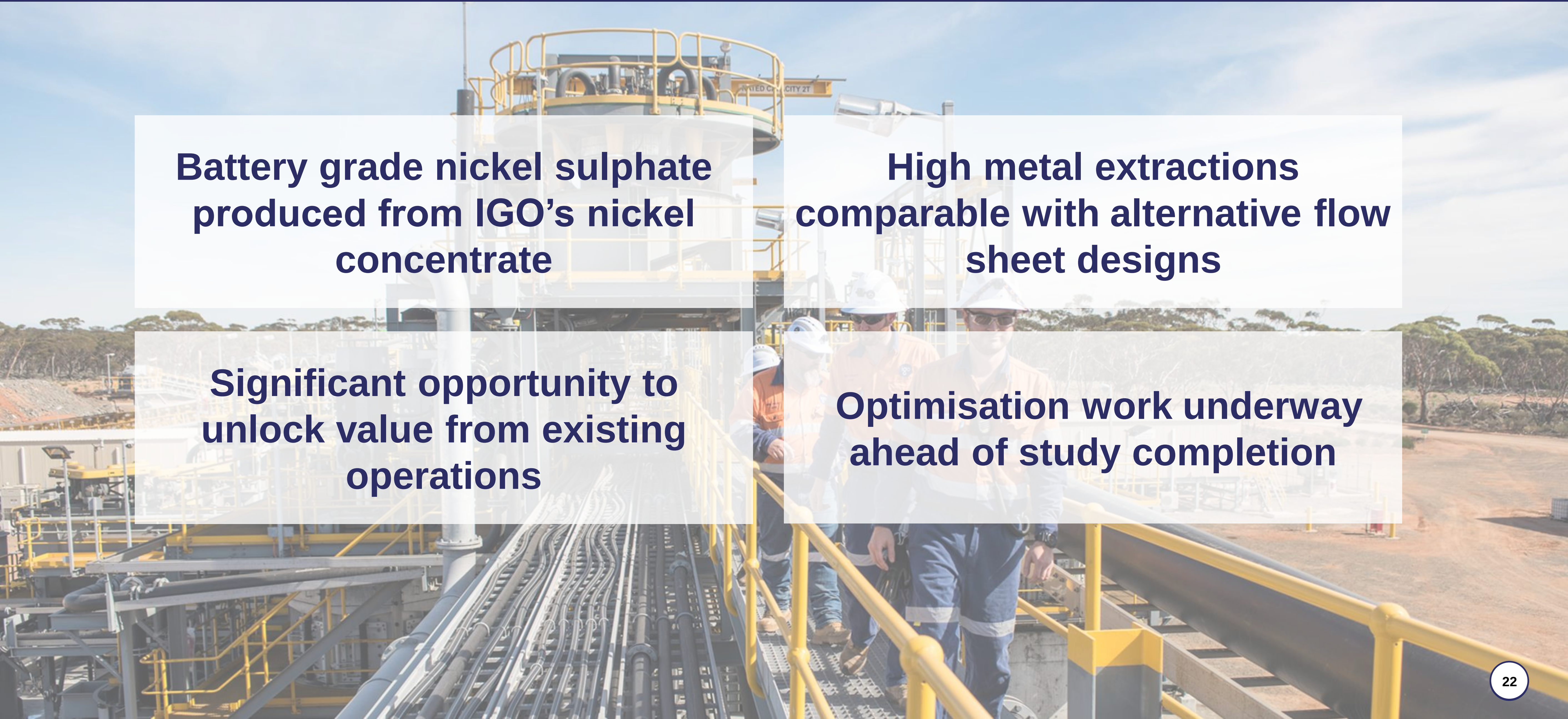
Optimise and complete the pre-feasibility study

- Site selection trade off studies
- Partnership opportunities
- Finalisation of operating and capital costs
- By-product production
- Reagent optimisation

Complete Pre-feasibility Study by end of CY19

Summary

Downstream processing represents a significant value opportunity for IGO



Battery grade nickel sulphate produced from IGO's nickel concentrate

High metal extractions comparable with alternative flow sheet designs

Significant opportunity to unlock value from existing operations

Optimisation work underway ahead of study completion

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AS WE GO FROM
STRENGTH TO STRENGTH

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