

12 October 2023

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## **PILBARA OPERATIONS SITE TOUR PRESENTATION**

Fortescue Metals Group Ltd (Fortescue, ASX: FMG) is hosting an institutional investor and analyst tour of its Pilbara Operations on 12-13 October, including a visit to Christmas Creek, Iron Bridge and Hedland Operations. A copy of the presentation is attached.

### **Operations and guidance update**

Fortescue advises its September 2023 Quarter iron ore shipments totalled 45.9 million tonnes (mt), three per cent lower than the prior corresponding period with increased maintenance activity and lower stocks at port following the record shipments achieved in FY23.

FY24 guidance for total iron ore shipments is unchanged at 192 - 197mt. This is inclusive of approximately 5mt from Iron Bridge (100 per cent basis) (previously 7mt). The revised estimate for Iron Bridge reflects the production ramp up curve as performance of the raw water pipeline and plant rectification works impacted availability in the September 2023 Quarter. The ramp up to full production capacity of 22mt per annum remains unchanged and is expected within 24 months.

**Authorised by**  
**Cameron Wilson**  
Company Secretary

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# Pilbara operations site tour

OCTOBER 2023

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WE ARE FORTESCUE

2003 - 2023

THE POWER OF NOW

20 YEAR  
ANNIVERSARY



# Forward Looking Statements Disclaimer



## Important Notice

The purpose of this presentation is to provide general information about Fortescue Metals Group Ltd and its subsidiaries ("Fortescue"). It is not recommended that any person makes any investment decision in relation to Fortescue based on this presentation. This presentation contains certain statements which may constitute "forward-looking statements". Such statements are only predictions and are subject to inherent risks and uncertainties which could cause actual decisions, values, results, performance or achievements to differ materially from those expressed or implied in any forward-looking statement. Forward-looking statements are based on assumptions regarding Fortescue's present and future business strategies and the future conditions in which Fortescue expects to operate. Accordingly, Fortescue cautions against undue reliance on such statements. Fortescue makes no representation, warranty or assurance, express or implied, as to the accuracy or likelihood of the forward-looking statements or any outcomes expressed or implied in any forward-looking statements contained in this presentation being achieved or proved to be correct. Except for statutory liability which cannot be excluded, Fortescue and its respective officers, employees and advisers expressly disclaims any responsibility for the accuracy or completeness of the material contained in this presentation and excludes all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in this presentation or any error or omission therefrom. Except as required by applicable regulations or by law, Fortescue disclaims any obligation to publicly update or review any forward-looking statements, whether as a result of new information or future events.

## Additional Information

This presentation should be read in conjunction with the Annual Report at 30 June 2023 together with any announcements made by Fortescue in accordance with Fortescue's continuous disclosure obligations applying to it as a company listed on the Australian Securities Exchange. Any references to reserve and resources estimations should be read in conjunction with Fortescue's Ore Reserves and Mineral Resources statements included in the FY23 Annual Report released to the Australian Securities Exchange on 28 August 2023. Fortescue confirms in the subsequent public report that it is not aware of any new information or data that materially affects the information included in the relevant market announcement and, in the case of estimates of mineral resources or ore reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. All amounts within this presentation are stated in United States Dollars consistent with the functional currency of Fortescue, unless otherwise stated. Tables contained within this presentation may contain immaterial rounding differences.



# Acknowledgement of Country

We would like to acknowledge the Traditional Custodians of the land on which we meet today and pay our respects to Elders past, present and emerging. We also wish to extend this respect to other Aboriginal people and Torres Strait Islanders who are present.





# Presenters



**Dino Otranto**  
Chief Executive Officer  
Metals



**Vivienne Tieu**  
Director Sales, Marketing  
and Shipping



**Graham Howard**  
General Manager  
Iron Bridge



**Katie Valentine**  
Head of Decarbonisation,  
Integration and Execution



# Itinerary



## Christmas Creek

- Green Energy Hub

## Iron Bridge

- Site tour
- Management presentation
- Japal village

## Port Hedland

- Concentrate Handling Facility
- Stockyard and shiploader



**Focused on becoming the number  
1 integrated green technology,  
energy and metals company**





**We are  
Fortescue**



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**Unique culture**

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**Proven track record**

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**Robust balance sheet**

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**Focus on shareholder returns**



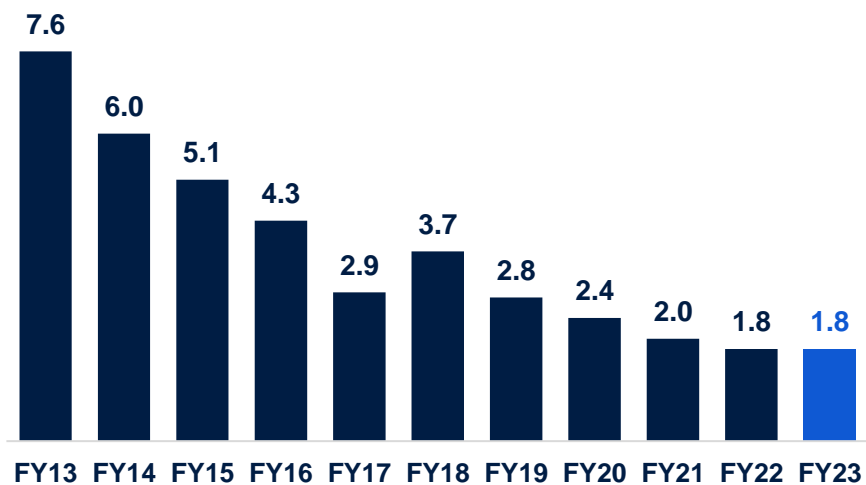
# Safety



# 1.8 TRIFR

Total Recordable  
Injury Frequency  
Rate at 30 June 2023

Total Recordable Injury Frequency Rate (TRIFR)





# Diversity, inclusion and equity



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## Fortescue Family Diversity Plan

A safe and inclusive workplace for all

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## Workplace Integrity Review

Initiatives implemented to enhance safety

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## 30% female employment

in senior leadership roles



# FY24 guidance



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**192 - 197<sub>mt</sub>**

Iron ore shipments

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**US\$18.00 - US\$19.00/wmt**

C1 cost for Pilbara hematite

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**US\$2.8 - US\$3.2<sub>bn</sub>**

Fortescue Metals capital expenditure

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**US\$800<sub>m</sub>**

Fortescue Energy net operating expenditure

**US\$400<sub>m</sub>**

Fortescue Energy capital expenditure

Guidance is based on an assumed FY24 exchange rate of AUD:USD 0.68.





# Iron Bridge guidance



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**22mtpa**

Production capacity

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**Within 24 months**

Ramp up to full capacity

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**5mt**

FY24 shipments

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**US\$45/wmt**

Life of mine attributable C1  
cost

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**US\$7/wmt**

Life of mine sustaining capital  
expenditure

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**US\$400m**

FY24 operating expenditure<sup>1</sup>

<sup>1</sup> Excluding royalties and shipping, Fortescue's share.



# Iron Bridge





# Safety at Iron Bridge



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## TRIFR of 1.5<sup>1</sup>

Safety is our number one priority

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## Risk reduction campaigns

Ongoing safety programs

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## Psychosocial safety

Focus on mental health and wellbeing

<sup>1</sup> Iron Bridge operations September Quarter 2023.



# People and culture



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**1,017 people**

Operations team (including contractors)

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**18%**

Female employment rate

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**12%**

First Nations employment rate



# Community contribution



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**A\$3.6bn**

goods and services sourced in Western Australia

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**A\$331m in contracts**

Awarded to Nyamal businesses since 2019

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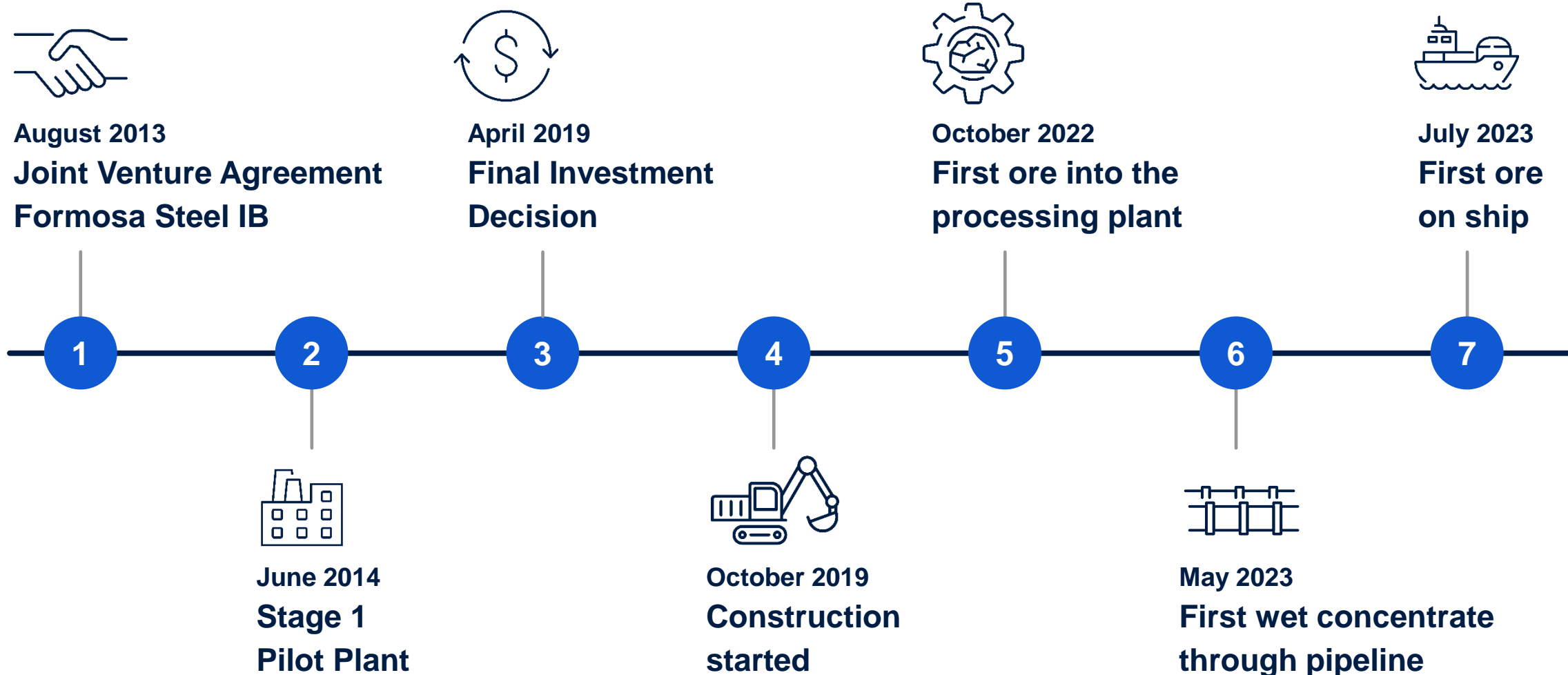
**8 VTEC trainees<sup>1</sup>**

Employed at Iron Bridge

<sup>1</sup> Vocational Training and Employment Centre.



# Project milestones





# March 2019





# September 2023







# Unlocking value at Iron Bridge



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## Unique process flow

Four international and national patents

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## High grade product

New market segment

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## Decarbonisation

Targeting Real Zero by 2030





# Commissioning and ramp up



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## Successful

Technical commissioning

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## Staged

Mechanical commissioning

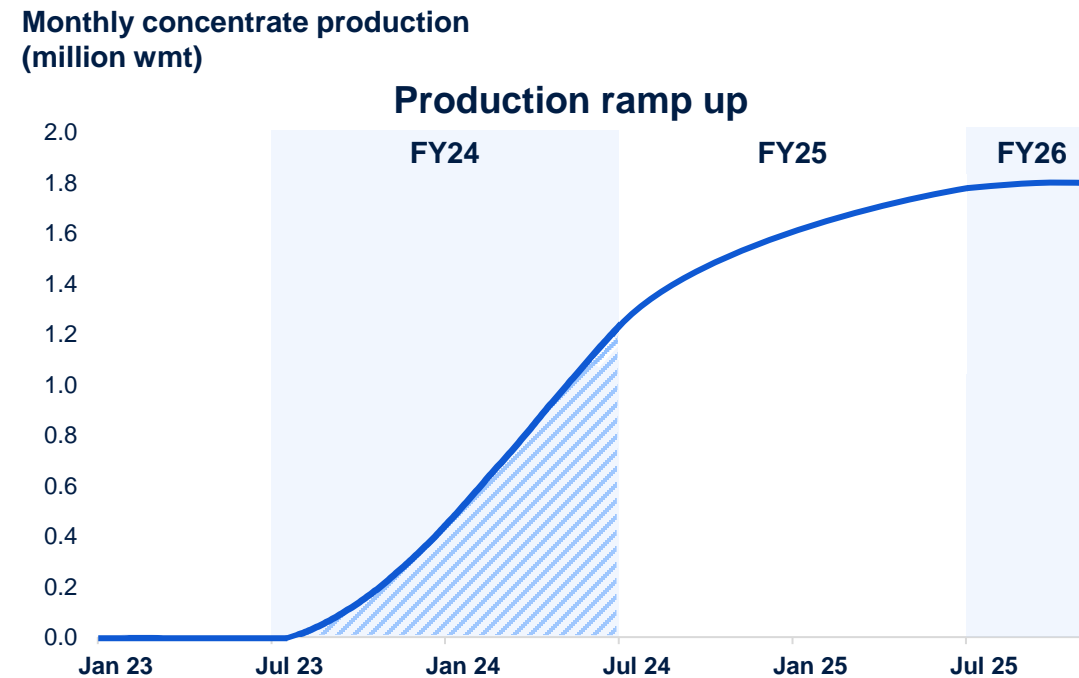
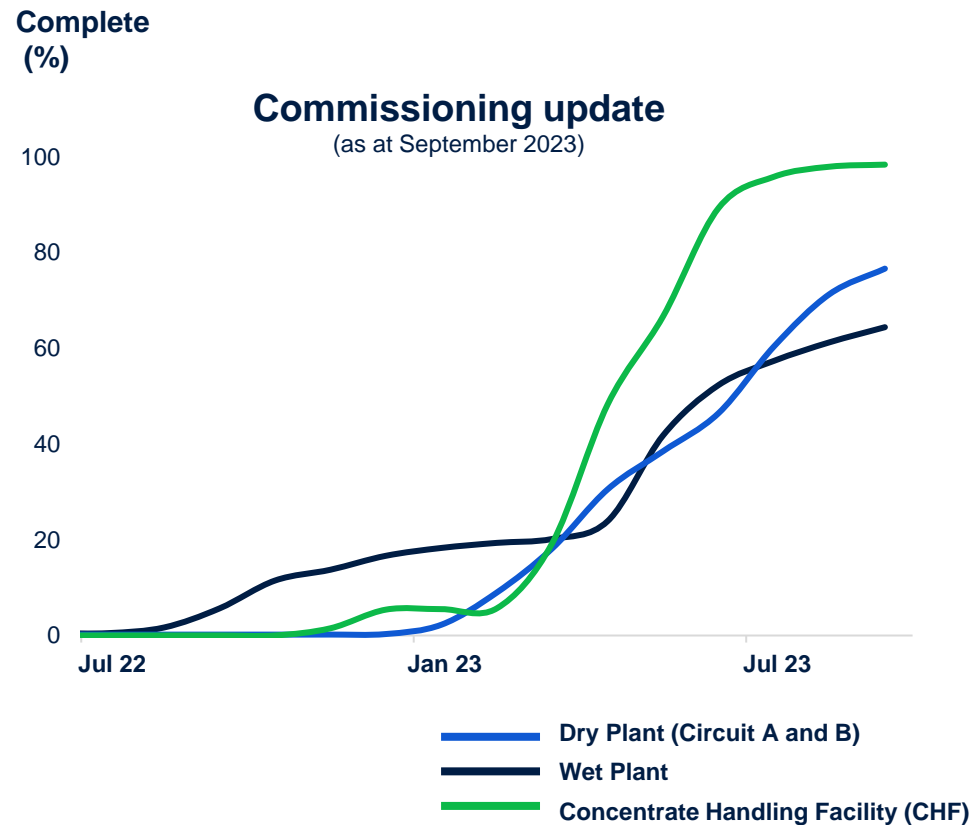
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## 24 months

Ramp up to full production (from August 2023)

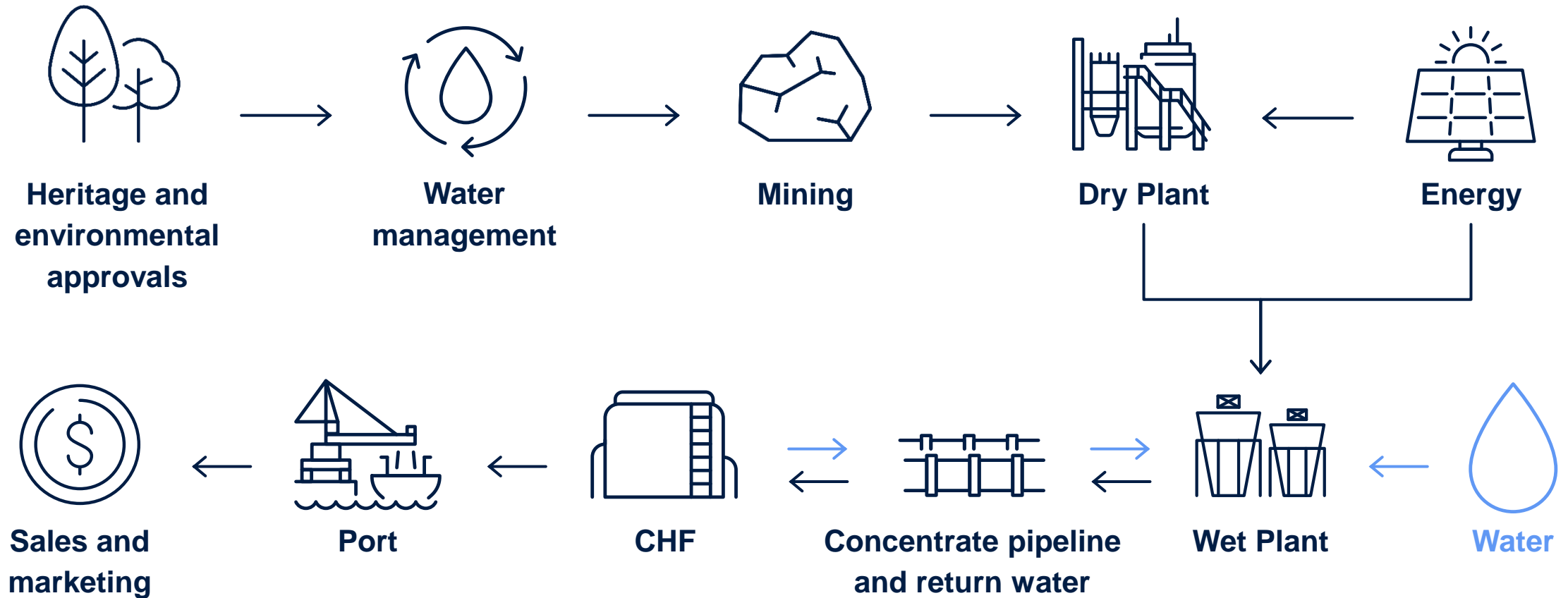


# Commissioning and ramp up

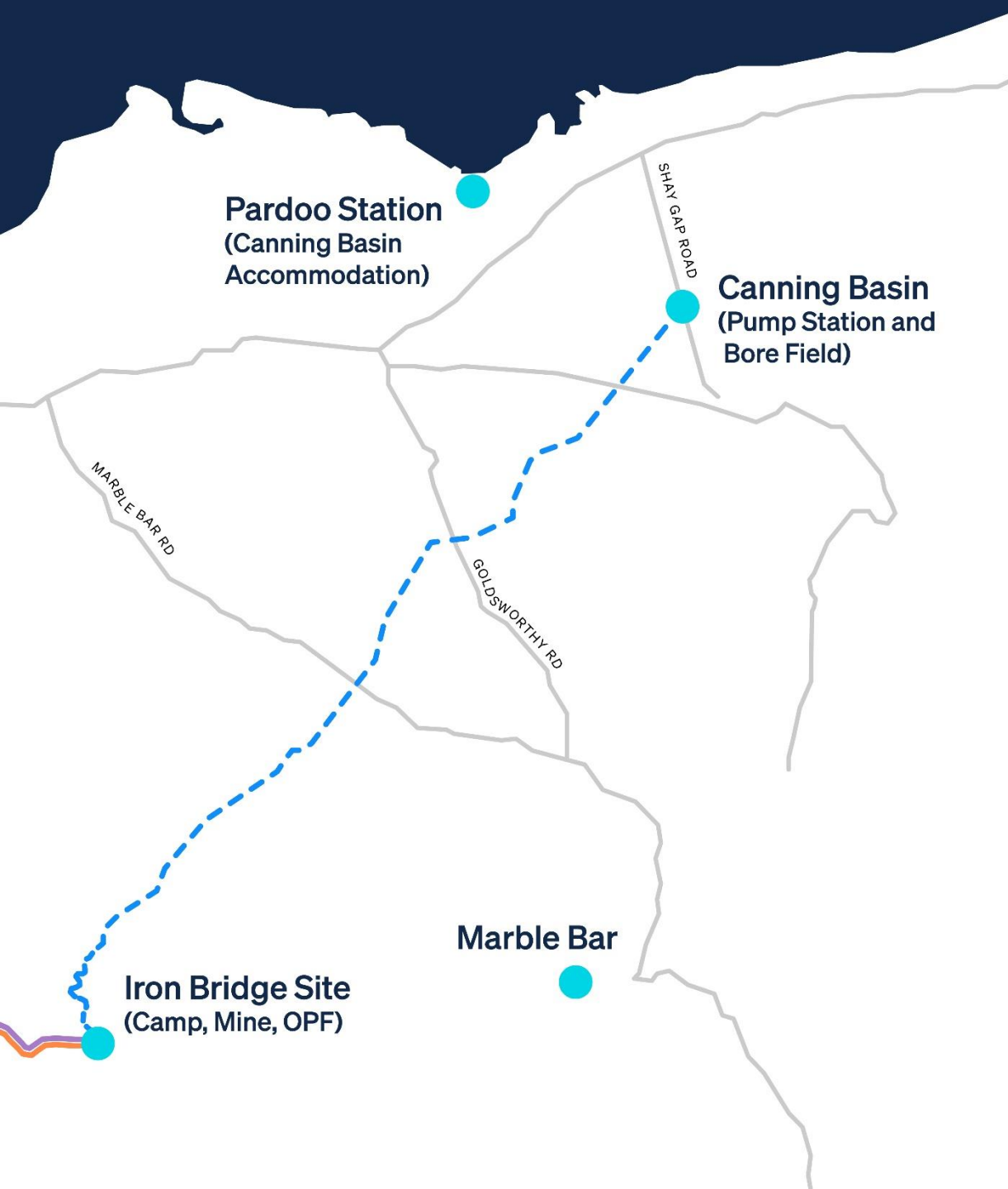




# Iron Bridge value chain







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## West Canning Basin

Drawing from the Wallal Aquifer

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### 10 bores

at West Canning Basin

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## Promoting water balance

Flow sheet recycles water



# Raw water pipeline



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## 160km

Canning Basin pump station to Iron Bridge

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## Glass reinforced plastic

1,000mm average diameter

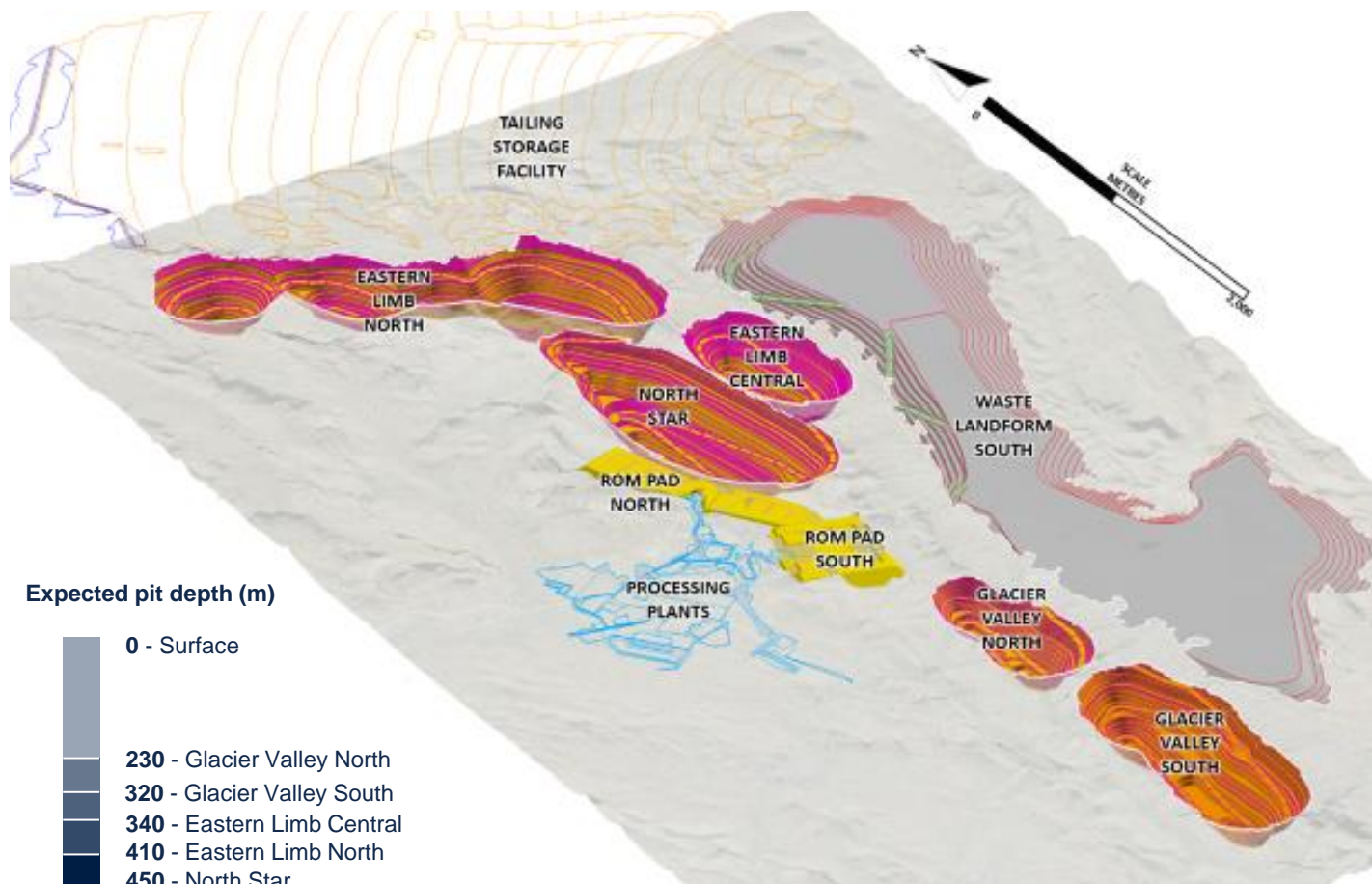
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## Commissioning

Ongoing, focused on reliability



# Iron Bridge mining operations



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**6.5bn tonnes**

Large Mineral Resource<sup>1</sup>

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**110mtpa**

Total material moved

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**0.7x**

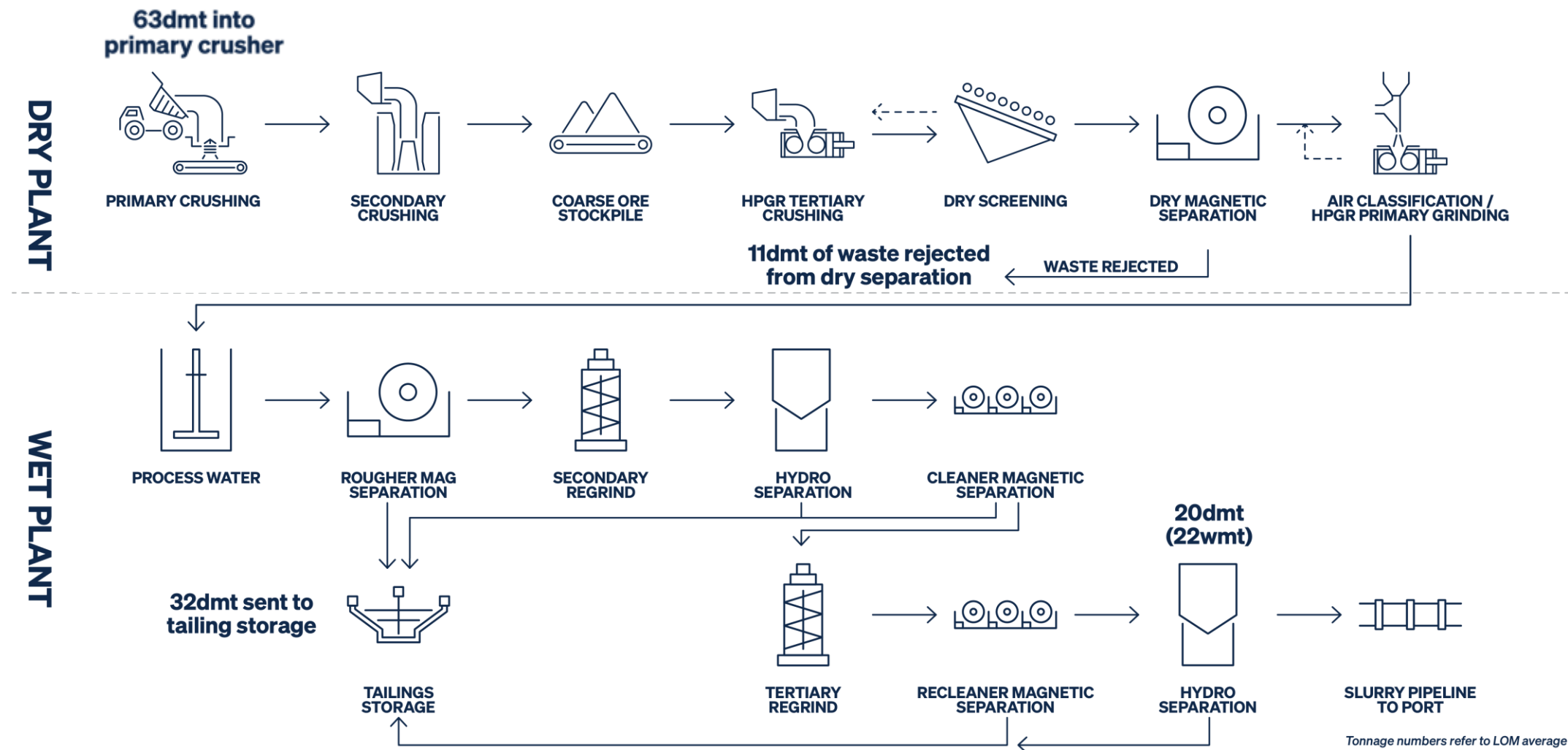
Low strip ratio

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<sup>1</sup> Fortescue's Ore Reserves and Mineral Resources statements were included in the FY23 Annual Report released to the Australian Securities Exchange on 28 August 2023.



# Iron Bridge OPF process flow



Million tonnes, dry metric tonne (dmt), wet metric tonne (wmt).



 Fortescue

D

Dry processing

A

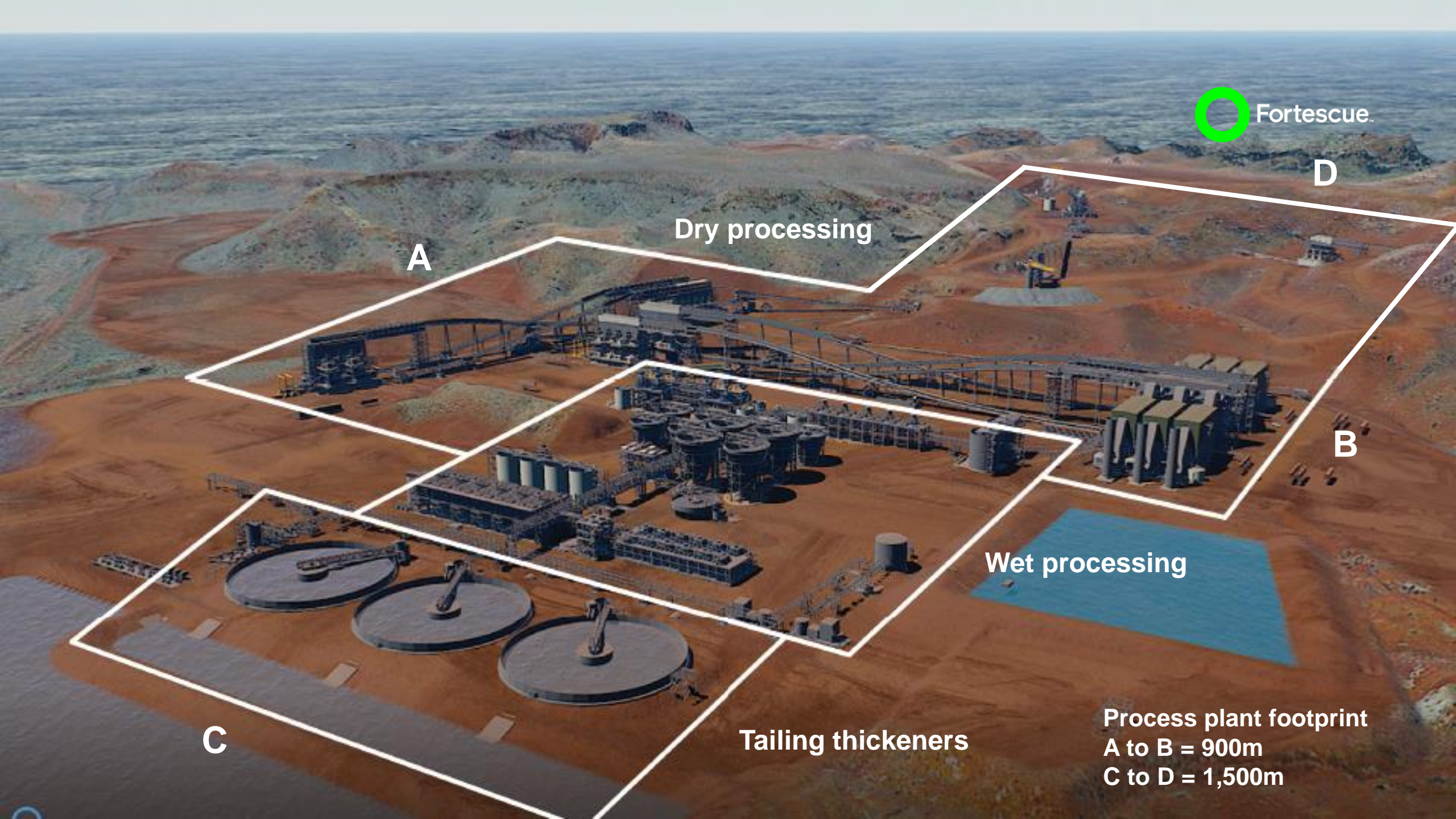
B

Wet processing

C

Tailing thickeners

Process plant footprint  
A to B = 900m  
C to D = 1,500m







# Dry Plant



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## Two dry crushing circuits

Continuous feed and blending

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## Air classification

Innovative energy efficient design

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## Dry rejects

Early rejection of waste material





# Wet Plant



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## Reduced fine grinding

Energy efficiency

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## HIG mills

High Intensity Grinding

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## Hydro separation

Remove impurities without chemicals





# Tailings storage facility



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## 32mtpa

Tailings (dmt equivalent)

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## Natural valley

Downstream construction design

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## Recycled water

Extracted through embankment



# Concentrate and return water pipelines



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## 135km

Twin pipelines to Port Hedland

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## 650mm diameter

Steel pipe with liner

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## Flow management

Continuous monitoring



An aerial photograph of the Concentrate Handling Facility at sunset. The facility features several large white storage tanks, complex piping, and conveyor systems. In the background, there are large circular settling ponds and a vast, flat landscape under a dramatic orange and pink sky.

# Concentrate Handling Facility



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## Dewatering process

From 38% moisture level

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## 10GI per annum

Water recovered and recycled

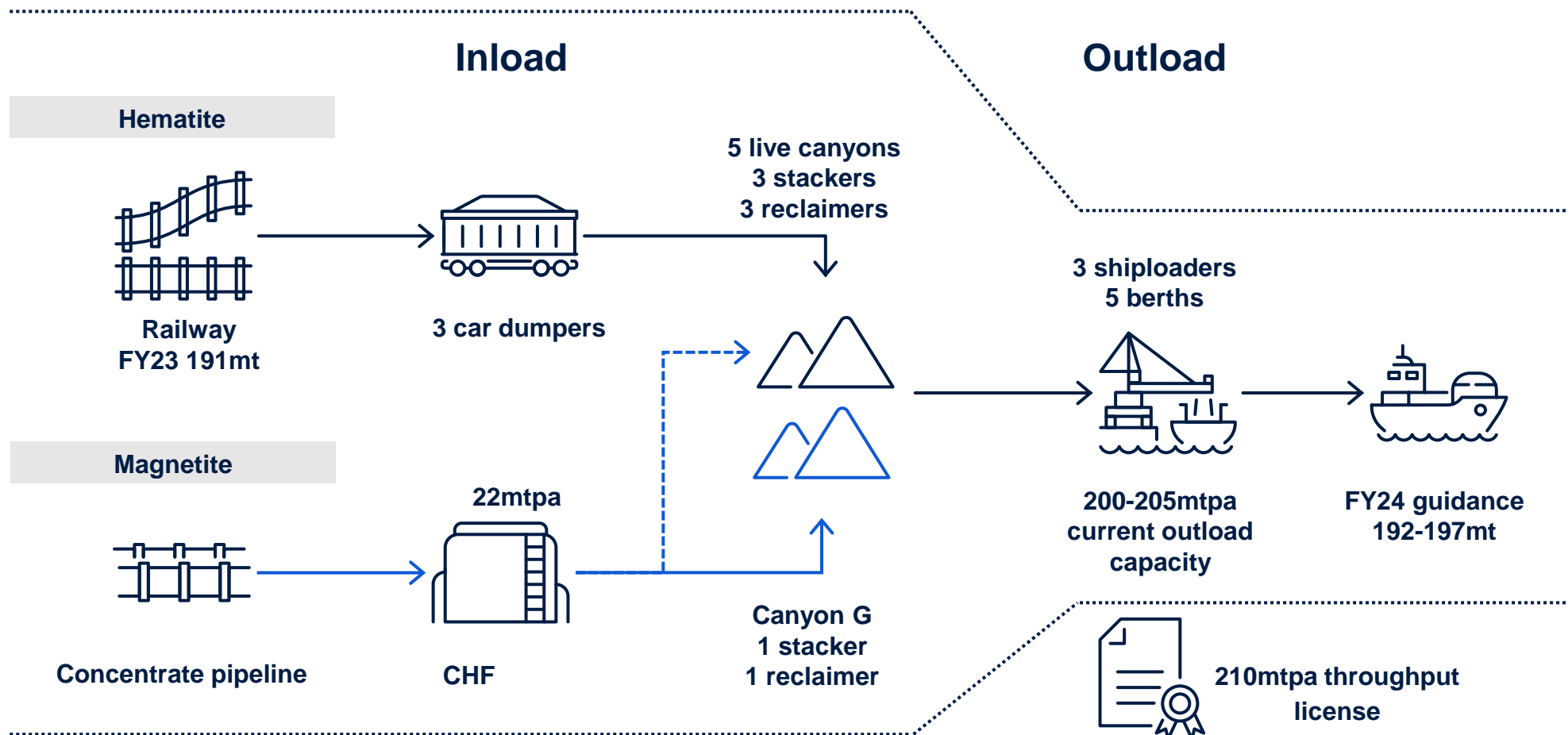
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## Integrated infrastructure

Fortescue stockyard and outload



# Port operations

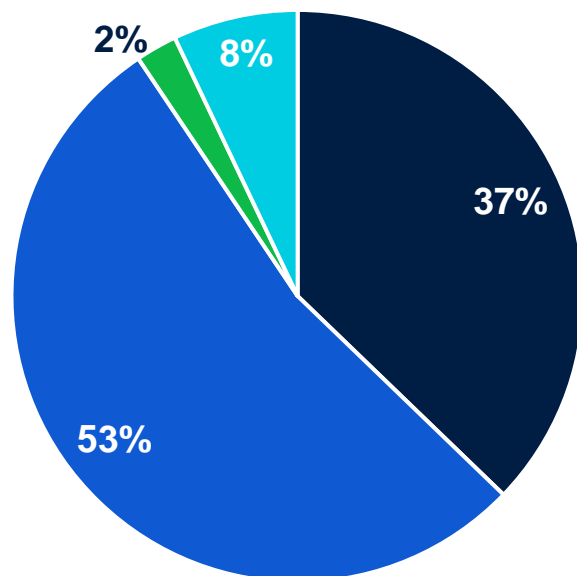




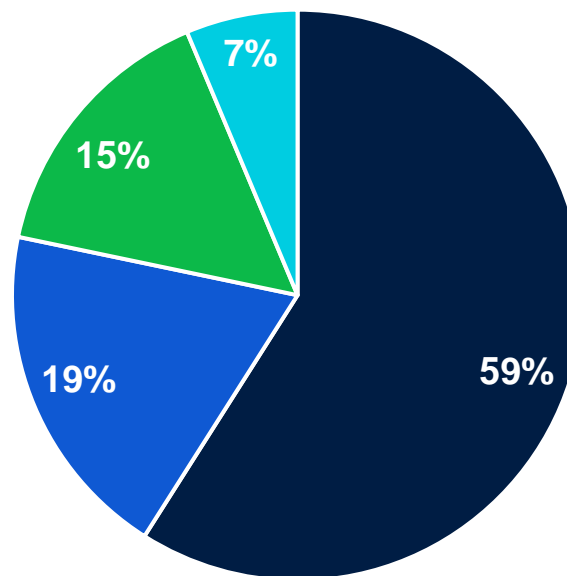
# C1 cost breakdown



Iron Bridge attributable C1 cost  
(LOM estimate)



Pilbara Hematite C1 cost  
(FY23 actual)





# First ore on ship





# Sales and Marketing



# Fortescue marketing strategy



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## Direct stakeholder engagement

Valuable products to our customers

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## Long term relationships

Deep understanding of customer needs

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## Responsive to dynamic markets

Innovative products and logistics offerings

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## Technical engagement

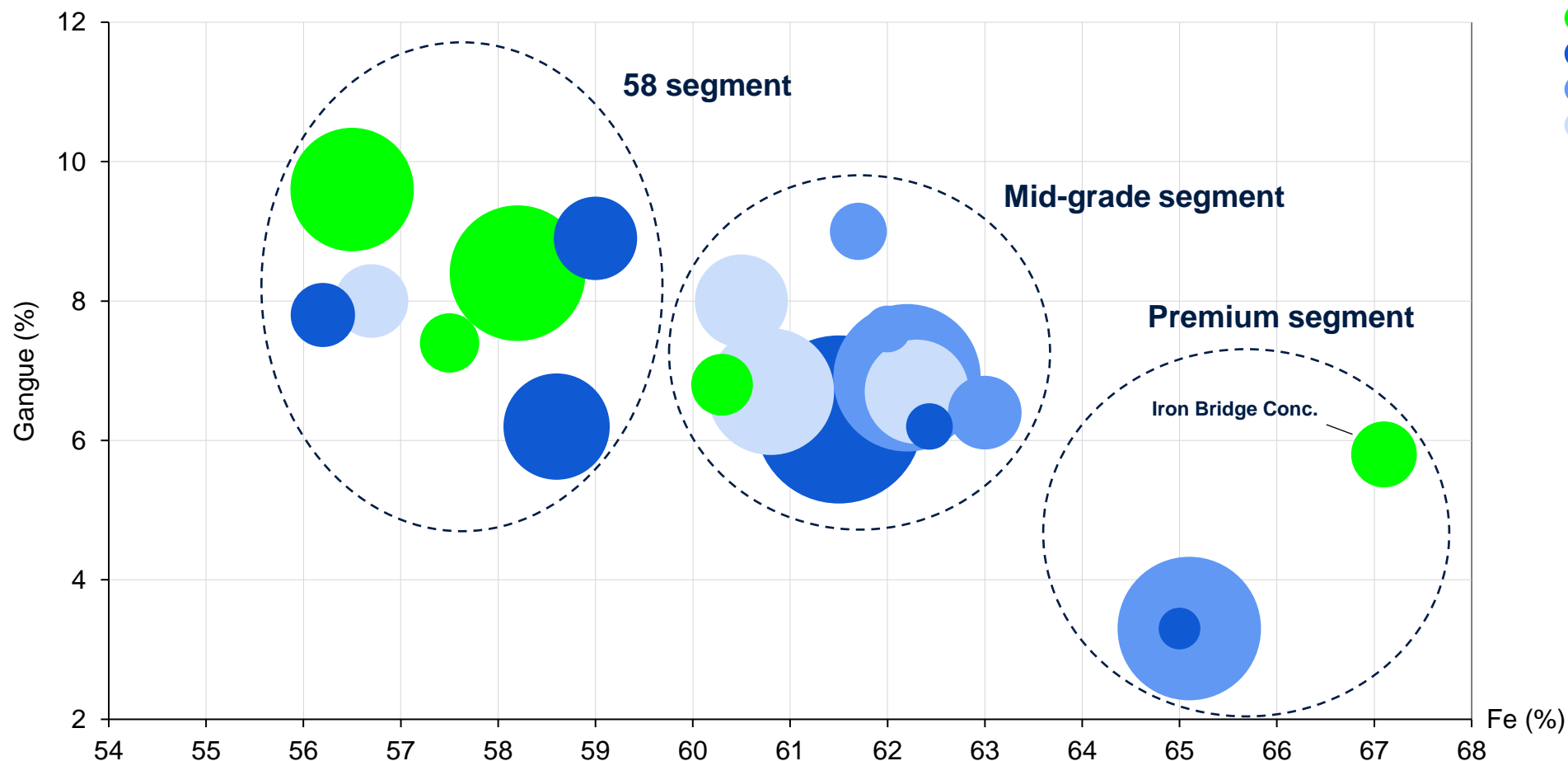
Addressing emerging industry trends



# Strengthening Fortescue's portfolio



Product positioning natural Fe vs. gangue ( $\text{SiO}_2 + \text{Al}_2\text{O}_3$ )







Iron Bridge product is  
high grade and suitable  
for pelletisation



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## **Strong demand**

Primarily as a pellet feed

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## **BF and DRI interest<sup>1</sup>**

From steelmakers across the globe

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## **Lower carbon intensity**

Contributing to decarbonising steel production

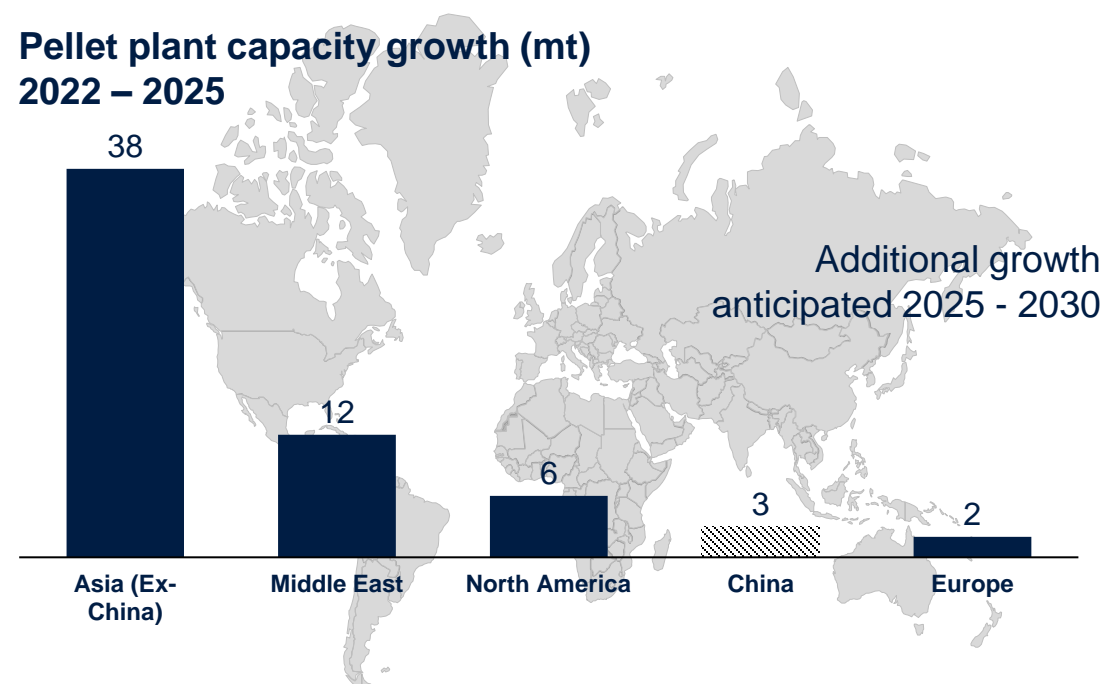
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## **Optionality to blend**

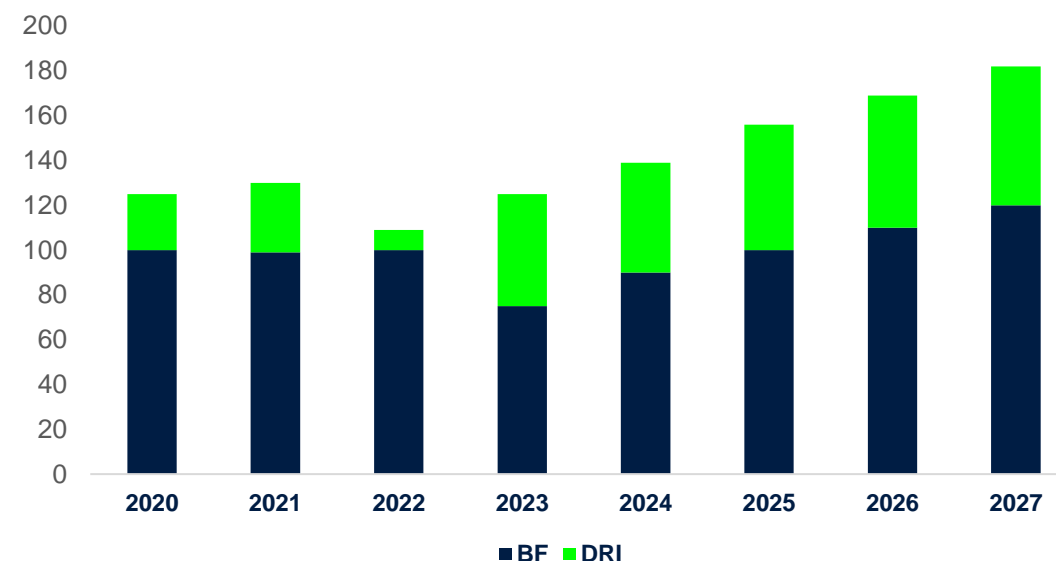
Optimising value

<sup>1</sup> Blast Furnace (BF), Direct Reduced Iron (DRI).

# Pellet demand forecast to increase with decarbonisation



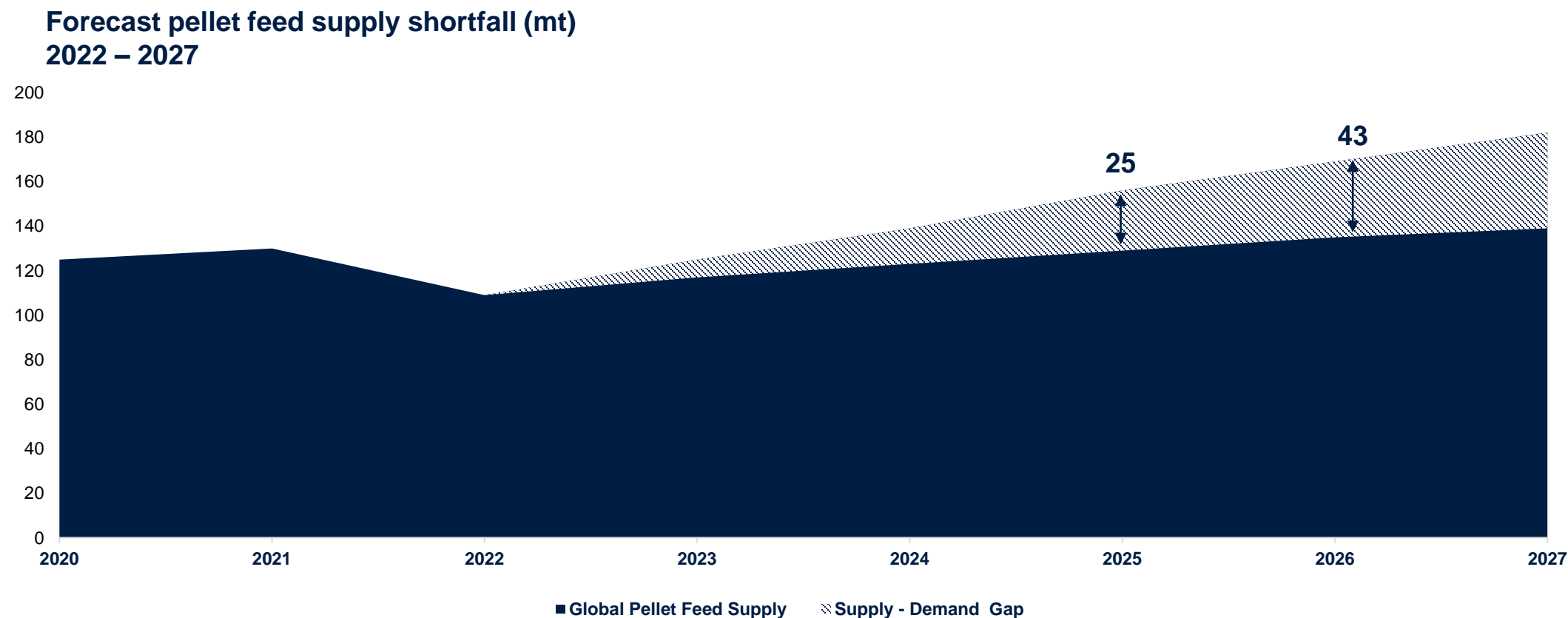
**Iron ore pellet demand, BF and DRI (mt)  
2022 – 2027**





# Emerging gap in pellet feed supply

Supporting future demand for Iron Bridge product

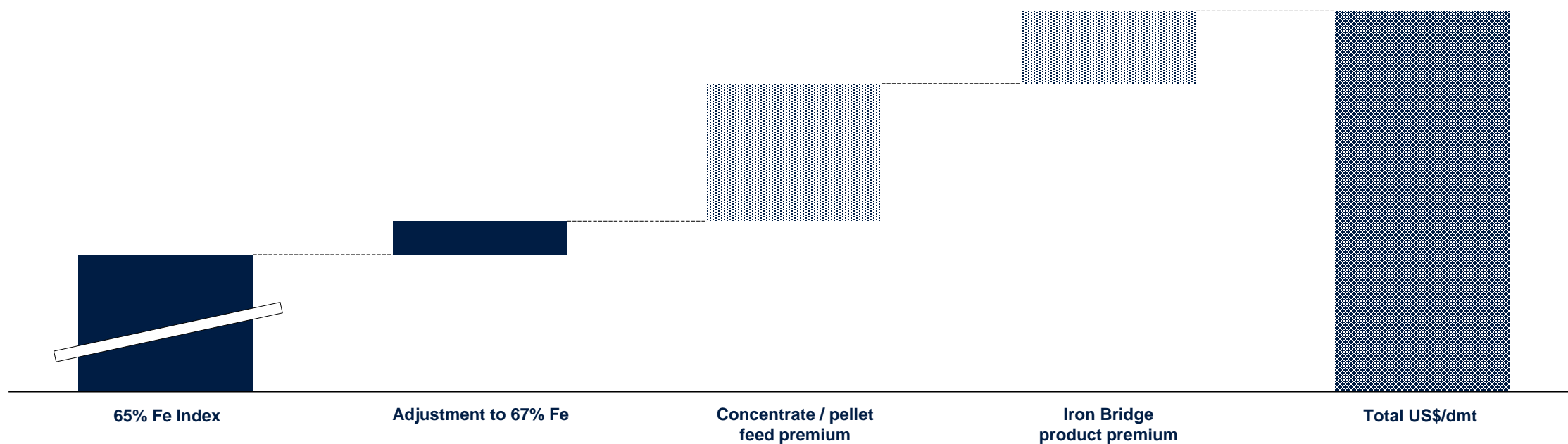


# Iron Bridge product positioning

## Benefits from global market structural changes



Conceptual Iron Bridge pricing  
US\$/dmt





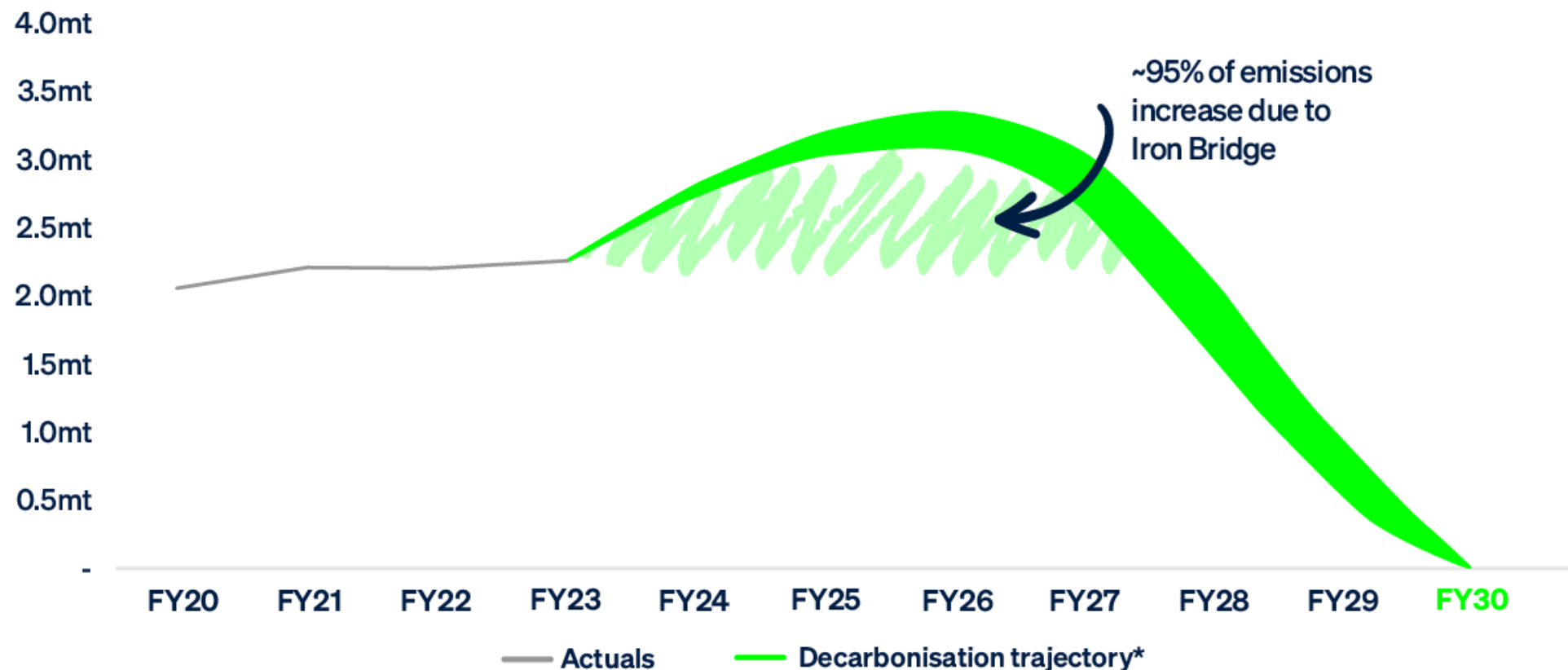
# Decarbonisation Update

# Real Zero by 2030



## Projected emissions pathway for Australian iron ore operations

Scope 1 and 2 terrestrial emissions (mt CO<sub>2</sub>-eq)



\*Fortescue's emissions are forecast to fall within the shaded range based on our current decarbonisation plan and modelling. It is subject to various factors beyond our control, including those set out in this report and our FY23 Annual Report.








# Energy infrastructure

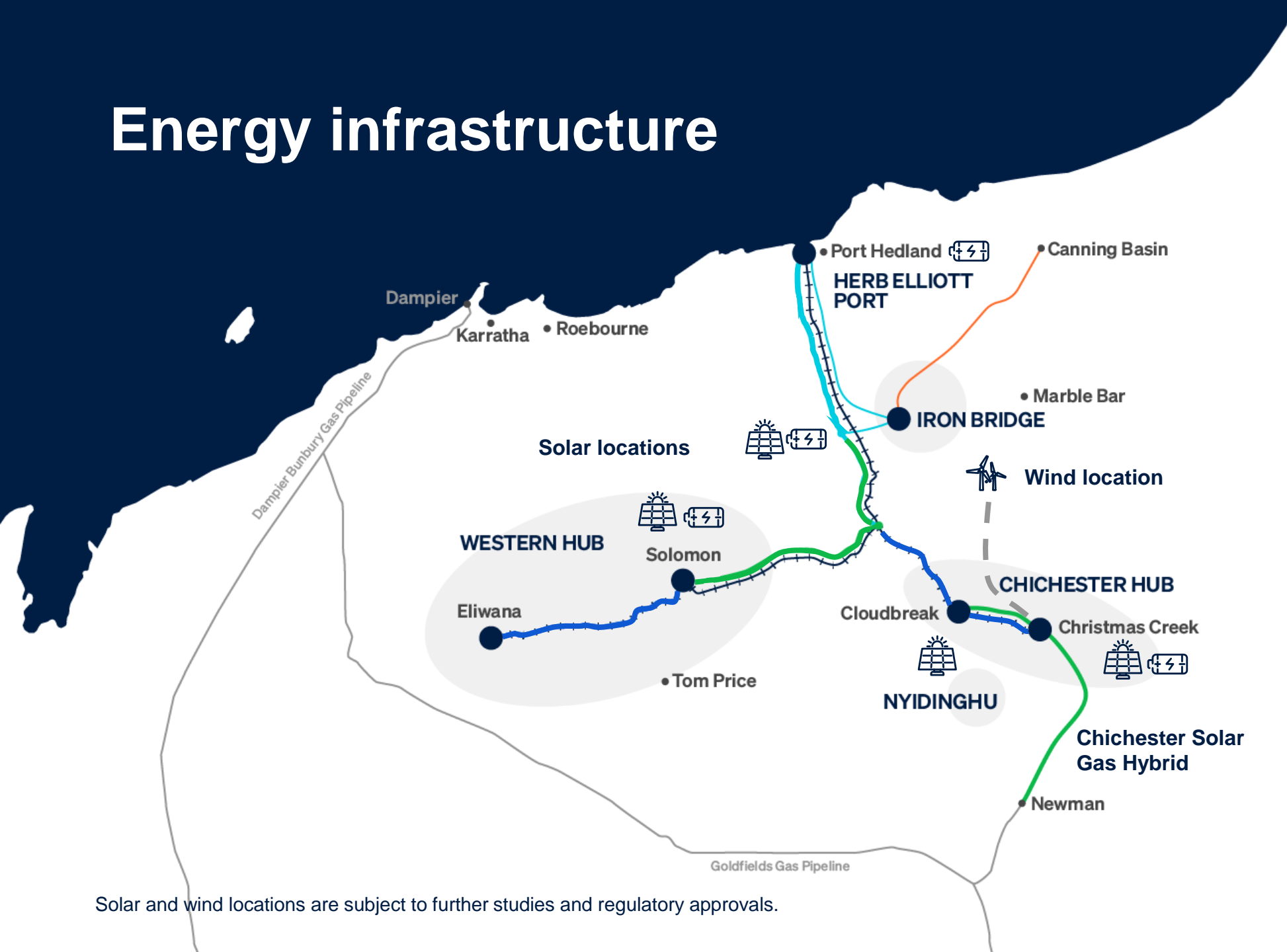


## Pilbara Western Australia

### Anticipated infrastructure

-  > 1GW
-  ~ 1GW
-  ~ 4GWh storage
-  > 750 km

- ### Transmission lines
-  Operational
  -  Commissioned
  -  Under development
  -  Future development



Solar and wind locations are subject to further studies and regulatory approvals.

# Mobile asset overview



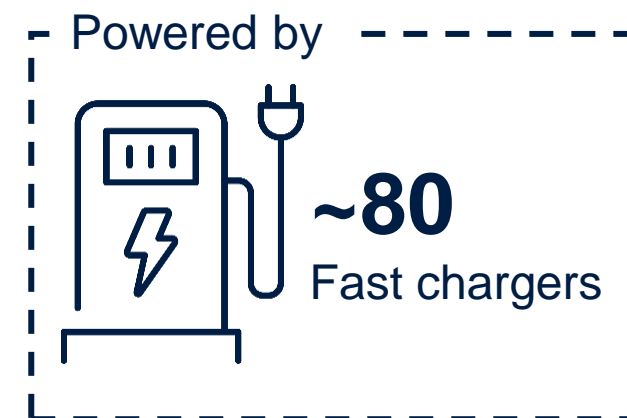
Green Heavy Mobile Equipment to replace:



**~350**  
Haul trucks



**~80**  
Excavators



**~220**  
Other HME



**~70**  
Drills



**~120**  
Locomotives  
and tender cars



# Developing a portfolio of products to support zero emission mining



**Battery electric truck with Liebherr/WAE**



**Fast charger for HME**



**H2 fuel cell electric truck prototype**



**H2 fuel cell offboard power unit**



**Battery electric locomotive with WAE**



**Ammonia locomotive conversion kit**

# Decarbonisation program animation





# Green Fleet

Prototype battery system



Fortescue



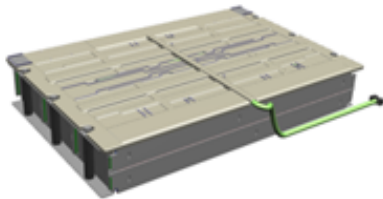
# Modular battery design

Flexible cell chemistry which is scalable and upgradable



## Cell

1.25V – 1.47V



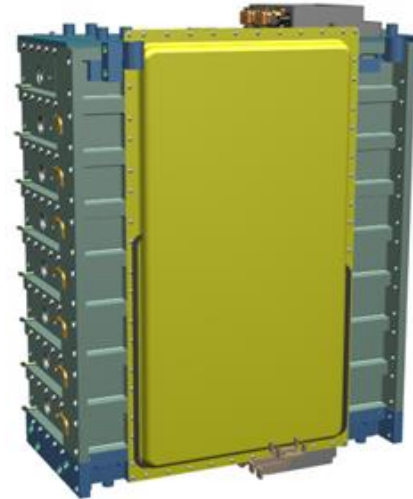
## Module

36 cells  
45V – 52.8V



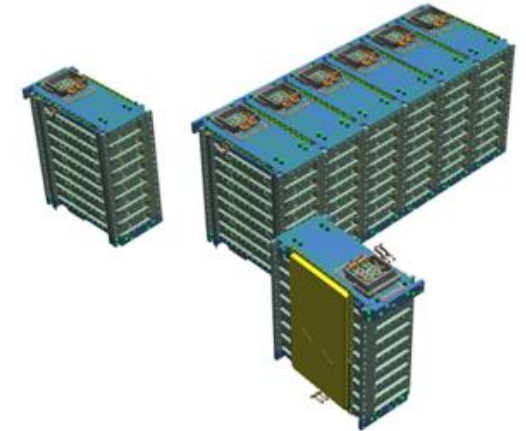
## Subpack cast layer

2 modules per layer  
(excluding top layer)



## Subpack

Stacked casting  
15 modules per subpack  
675V – 792V



## Pack

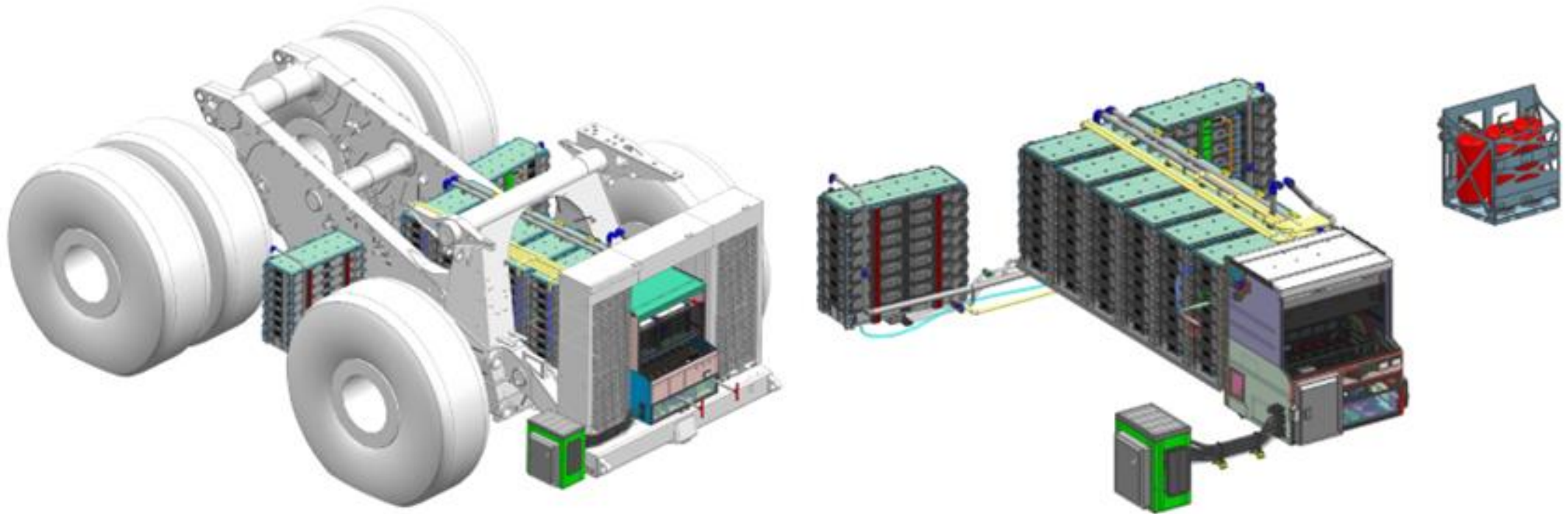
8 subpacks in vehicle  
1,350V – 1,584V



# T264 – Power system solution



External low level exchangeable parts to maximise safety and uptime



# Roadrunner at Christmas Creek

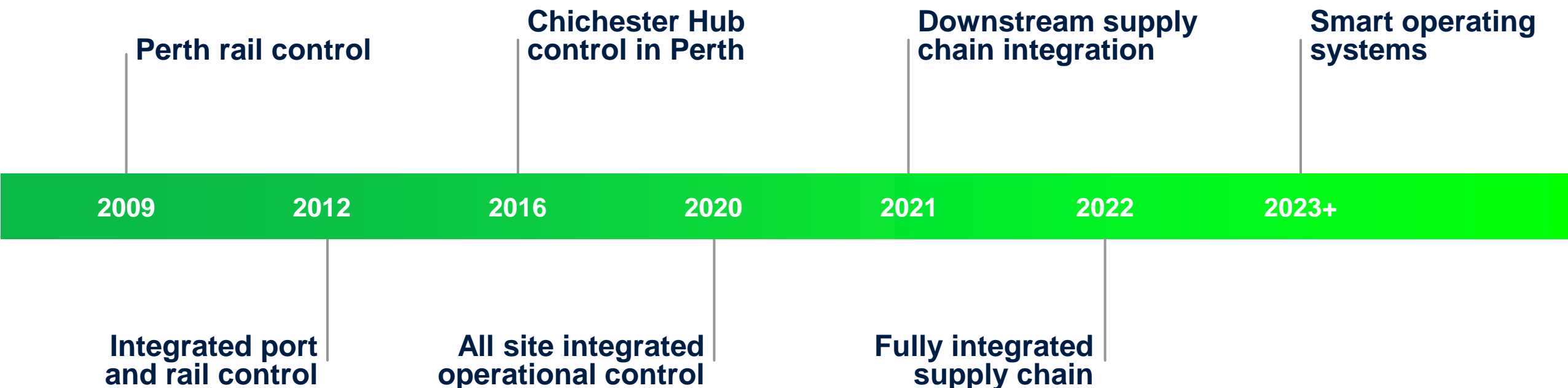




# Fortescue Hive



The journey to a fully integrated mine to market facility



# We are Fortescue



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**Safety**

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**Family**

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**Empowerment**

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**Frugality**

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**Stretch targets**

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**Integrity**

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**Enthusiasm**

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**Courage and  
determination**

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**Generating  
ideas**

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**Humility**

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