RioTinto

Investor Seminar

Performance, strategic direction and shareholder returns

20 October 2021

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Agenda

BST	AEDT	Торіс	Presenter	
08:00 - 08.15	18:00 - 18.15	Strategy and execution	Jakob Stausholm, Chief Executive	
08:15 - 08:40	18:15 - 18:40	Panel Culture and People: Becoming best operator	Mark Davies, Chief Technical Officer	
			James Martin, Chief People Officer	
			Kellie Parker, Chief Executive, Australia	
			Arnaud Soirat, Chief Operating Officer	
08:40 - 09:10	18:40 - 19:10	Decarbonisation: Impact on commodity markets	Vivek Tulpule, Chief Economist	
		Our own business and impact of green steel	Mark Davies, Chief Technical Officer	
		Commercial opportunities from decarbonisation	Alf Barrios, Chief Commercial Officer	
09:10 - 09:40	19:10 - 19:40	Q&A session 1	Jakob Stausholm Mark Davies James Martin Kellie Parker Arnaud Soirat Vivek Tulpule Alf Barrios	
09:40 - 09:55	19:40 - 19:55	BREAK		
09:55 - 10:15	19:55 - 20:15	Pilbara Iron Ore	Simon Trott, Chief Executive, Iron Ore	
10:15 - 10:35	20:15 - 20:35	Aluminium	Ivan Vella, Chief Executive, Aluminium	
10:35 - 11:00	20:35 - 21:00	Panel Excel in development	Bold Baatar, Chief Executive, Copper	
			Mark Davies, Chief Technical Officer	
			Sinead Kaufman, Chief Executive, Minerals	
11:00 - 11:10	21:00 - 21:10	Financials	Peter Cunningham, Chief Financial Officer	
11:10 - 11:40	21:10 - 21:40	Q&A session 2	Jakob Stausholm Ivan Vella Mark Davies Sinead Kaufman Peter Cunningham	
11:40 - 11:45	21:40 - 21:45	Closing remarks	Jakob Stausholm, Chief Executive	

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Jakob Stausholm Strategy and execution

Outstanding financials but operational improvement needed

Return on Capital Employed



Copper equivalent production* Million tonnes



*Excludes divested assets

The team



Bold Baatar, Chief Executive Rio Tinto Copper



Alf Barrios Chief Commercial Officer



Peter Cunningham Chief Financial Officer



Mark Davies Chief Technical Officer



Sinead Kaufman Chief Executive Rio Tinto Minerals



James Martin Chief People Officer



Kellie Parker Chief Executive Australia



Arnaud Soirat Chief Operating Officer



Jakob Stausholm Chief Executive



Simon Trott Chief Executive Rio Tinto Iron Ore



Vivek Tulpule Chief Economist



Ivan Vella Chief Executive Rio Tinto Aluminium



Four areas of immediate focus

Best operator

Expand capability and leadership

Impeccable ESG credentials

Strengthen track record and transparency

Excel in development

Deliver organic & inorganic growth

Social Licence

Earn trust by building meaningful relationships and partnerships

Our Values

Care for

- People's safety
- Communities
- Planet

Courage to

- Try new things
- Speak up
- Do what's right

Curiosity fosters

- Collaboration
- Learning
- Innovation

The world faces a major challenge

Annual global GHG emissions*



Limited action so far. The world has more than doubled cumulative GHG emissions since the early '90's

Momentum changing. Countries are setting ambitious targets and enacting policies

China, the world's largest consumer and a significant producer of commodities, has set clear objectives

*The source of the historic data is: Trends in global CO2 and total greenhouse gas emissions: 2020 report. Netherlands Environmental Assessment Agency. The annual decline rate is an illustrative straight-line rate and not a forecast or scenario. | **Nationally Determined Contributions

A large carbon footprint today

Global commodity	Global	CO ₂ emissions	Production	CO ₂ intensity
emissions and	Copper*	86 Mt	21 Mt	4 tCO ₂ /t
intensities	Aluminium*	~1.0 Gt	66 Mt	15 tCO ₂ /t
	Crude Steel	~3.3 Gt	1,850 Mt	1.8 tCO ₂ /t





*Primary production | **Iron Ore Company of Canada (IOC) included in Minerals

All our commodities are vital – today, towards 2050 and beyond



Ongoing population growth and urbanisation provides base demand for metals

Additional demand for all our products from decarbonisation and global energy transition

Often no alternatives to steel, aluminium, copper and minerals from primary sources even with circular economy

Creates opportunities for us to deliver value-adding growth

Delivering our strategy



Accelerate R&D and beyond Advantaged renewables position

- Accelerate R&D
- ELYSIS™
- Studying Canadian DRI
- High-quality iron ore
- Partnerships
- Crack the code on Pilbara iron ore
- Delivering our Scope 3 goals

Ambition to double investment in growth

Growth to 2030 (multiple of current size)** 5.5 3.8 10 1.5 275 184 48 Market 28 Size (\$bn) 13 3 9 Nickel Lithium 2020 Cobalt Copper (Class 1) 2030

~\$7.5bn*** investment in decarbonisation from 2022-2030 plus indirect expenditure

Double growth capex up to \$3bn per year from 2023

*2018 Scope 1 & 2 emissions baseline has been adjusted for divestments. **Market size is for primary market only. Recycling is expected to take a larger share of total demand in the future for most commodities. ***Conceptual view of capital requirements at October 2021. Marginal Abatement Cost Curves (MACC) will be updated on an annual basis. Sources: Rio Tinto Market Analysis, UBS, CPM Group | DRI = Direct Reduction Iron

Well placed to deliver

We operate in three out of the eleven advantageous regions for renewable energy



Advantaged positions

Large power producer and consumer. Uniquely positioned in advantaged green energy locations – Pilbara, Quebec and Queensland

Assets and people

Long-life orebodies with superior orebody knowledge. Talented workforce

Technology

Metallurgy, geology, mining equipment, processing, energy

Cash flow and balance sheet

Disciplined capital allocation. Cash flow through cycle. Ability to invest and pay an attractive dividend – in line with our policy

Vivek Tulpule Decarbonisation: Impact on commodity markets

Transitioning towards net zero emissions



Low-carbon policies

- Set zero by 20501
- Met zero by 2050²
- Carbon neutral by 2060³

Scrap use

Cannibalises some demand for primary material

AI	Steel	Cu
4-6%	1-3%	3-4%

Annual growth to 2040



Electrification

2.5x electrification growth from now to 2050 in net zero scenario

Average per capita electricity demand will more than double



Renewables

Renewable energy from 10% to 70% of energy mix by 2050



16x wind increase 30x solar increase



Power storage

Battery capacity additions for electric vehicles will grow over 30x by 2050

Stationary storage will grow with intermittent renewable generation



Hydrogen

A critical part of the fuel mix in industry and heavy transport

6% of final energy mix by 2050

¹ EU Updated Nationally Determined Contribution (NDC), Dec 2020, United Nations Framework Convention on Climate Change (UNFCCC) | ² As per section 4.a(ii).b, The United States of America Nationally Determined Contribution, April 21 2021 | ³ Official Statement in 75th Session of The UN General Assembly, Sep 2020 Source: Net zero statistics from International Energy Association (IEA)

All our commodities are vital – today, towards 2050 and beyond



Green aluminium lowers carbon input

Green steel supporting lowcarbon urbanisation

Copper supports rapid renewable electrification

Lithium is an essential battery technology mineral

China is targeting peak emissions by 2030



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Competitive advantage for low-carbon smelters

Aluminium smelter all-in cash costs (Real US\$2021 per tonne)



60% of world's aluminium production in 2020 powered by coal

China accounted for ~75% of capacity growth over 2010-20

Carbon intensity of coal smelters is over 7x that of hydro smelters

Inert anodes could enable zero-carbon smelting

All non-carbon costs are regional weighted averages from CRU, 2021 (long-run uses 2030 costs). Hydro costs are based on a weighted average of Canadian smelters. Coal costs are based on a weighted average of coal-fired Chinese smelters. Costs do not include CO₂ charges from alumina refineries.

Green steel structures can reduce emissions

Total carbon emissions Kg per m² (China)







Source: Tsinghua School of Civil Engineering, 2021. Green construction with steel structures includes the shift to green concrete and green steel in addition to the move from current reinforced concrete structures to steel structures.

Building construction is responsible for about 30% of China's carbon emissions

New China building code will require higher seismic precautionary intensity

A shift to green construction and steel structures will reduce carbon emissions by ~60%

Moving to steel structures contributes up to a third of the total emissions reduction

Steel intensity of construction increases by ~45-80% across low to high rise buildings

Decarbonisation is a big driver of copper demand



Net additional demand* in a net zero carbon scenario

Net demand after deducting copper consumption using traditional technologies in these segments. Net zero carbon scenario is an internal based view where developed countries reach net zero emissions by 2050, large emerging markets, including China, by 2060 and all other countries by 2070. Average intensity data from International Copper Association (ICA). *Global semis

Additional green demand expected to account for over one quarter of total demand in the net zero carbon scenario

Rapid electrification of grid adds ~5Mt in copper demand by 2050

Solar and wind generation consume ~3-6 tonnes of copper per MW respectively vs ~1 tonne per MW for thermal power

Electric vehicles contain ~80kg of copper vs 20kg in an internal combustion engine

Significant supply gap emerging for lithium

Lithium demand and supply in net zero carbon scenario

(Multiple of 2020 demand levels, Lithium Carbonate Equivalent)



By 2030, electric vehicles will account for up to 55% of annual light vehicle sales

Lithium is the preferred material in electric vehicle batteries and has potential upside in emerging solid state battery chemistry

Supply gap will require over 60 Jadar projects

- Committed supply and capacity expansions contribute ~15% to demand growth over 2020-50
- Remaining 85% would need to come from new projects

Net zero carbon scenario is an internal based view where developed countries reach net zero emissions by 2050, large emerging markets, including China, by 2060 and all other countries by 2070.

Energy and industrial transition drives demand for our products



Limiting the impact of climate change requires a green revolution

This social-industrial change will profoundly shift the energy and industrial landscape

Green metals and minerals will be key enablers

Mark Davies

Decarbonising our own business and the impact of green steel

Our Scope 1 & 2 carbon footprint today



Taking actions to address our emissions

Electricity

Growing renewables from 75%¹

- Gudai-Darri (34MW), QMM (20MW) and Weipa (4MW)
- Large scale (1GW) Pilbara renewables
- Switching Boyne Island and Tomago smelters to renewables
- Signed statement of cooperation with Queensland Government

Process heat Redesigning processes

- Yarwun hydrogen calcination pilot
- Plasma torches trials

Anodes & Reductants Developing technologies

- Construction of first ELYSIS[™] commercialscale cell at Alma
- Increasing R&D

Offsets

Building capacity and capability including new technology partnerships

Diesel Partnering with industry

- Komatsu and Caterpillar zeroemission truck partnerships
- Charge On Innovation Challenge

¹Share of renewables in 2020 across our managed operations

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Raising our decarbonisation target from 15% to 50% by 2030

35 30 32.6 -50% 25 20 15 16.3 10 5 0 Other**** **Business-**Pilbara Pacific Aluminium MACC** 2018* 2030 renewables Operations as-usual projects repowering

Our Scope 1 & 2 emissions (Mt CO₂e equity basis)

*2018 Scope 1 & 2 emissions baseline has been adjusted for divestments. | **Marginal abatement cost curve, see slide 28 | ***Conceptual view of capital requirements at October 2021. MAC curves will be updated on an annual basis | ****Includes energy efficiencies, ELYSISTM and carbon offsets

Accelerate delivery of existing 15% emissions reduction target to 2025

2030 target from 15% to 50% reduction

Increase decarbonisation investment of our own assets to ~\$1.5bn over next three years and total investment of ~\$7.5bn from 2022 to 2030***

Incentivise MACC projects with internal carbon price of 75/t CO₂ initially

Switching the Pilbara to renewables



Progressing renewable power options for Australian smelters

Assets in coal-based grids		Ownership	Power (100% basis)	Contract expiry	Catalyst for regional renewable energy deployment and development of industry
Tomag smelter	jo er	51.6%	960MW (demand)	2028	Signed Statement of Cooperation with Queensland Government
Boyne smelte	Island er	59.4%	810MW (demand)	2029	Requires deployment of 5GW+ ¹ of solar and wind power with robust firming solution
Gladst power	one station	42.1%	1,680MW (capacity)		

¹ Equity share

Accelerating current abatement projects

Our Marginal Abatement Cost Curve for Scope 1 & 2 emissions

(excl. Pilbara and Pacific Operations repowering, ELYSIS[™], energy efficiency and carbon offsets)

300 250 Renewables Mobile diesel 200 Process heat 150 Anodes & reductants 100 50 0 1.0 0.5 1.5 2.0 2.5 3.0 3.5 4.0 4.5 -50 MtCO₂ -100

As of 30 September 2021

USD/tCO₂

Developing green products for our customers



Scope 3 goals

- 1 Technology for reductions in steelmaking carbon intensity of at least 30% from 2030
- 2 Breakthrough technologies to deliver carbon neutral steelmaking pathways by 2050
- 3 Anticipate that ELYSIS[™] technology will reach commercial maturity in 2024
- 4 Net zero emissions from shipping our products by 2050

A shift to greener steelmaking technologies



¹ These products can be used in an EAF or BOF | BF = Blast furnace, BOF = Basic oxygen furnace, DR = Direct reduction, EAF = Electric arc furnace, CCUS = carbon capture, utilisation and storage

Our focus areas for iron and steel decarbonisation



DRI = Direct reduction iron, CSIRO = Commonwealth Scientific and Industrial Research

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Alf Barrios

Commercial opportunities from decarbonisation

Sustainable future across the value chain

Leveraging insights across the value chain

Assets

Customers

Suppliers

Markets

Communities

Partnering with our suppliers and developing sustainable supply chains

Working together with our customers to provide products & services for a more sustainable future

3

2

Innovating with our customers to enable them to decarbonise

Partnering with suppliers and developing sustainable supply chains



Driving innovation through supplier partnerships

- Collaborating on a mining decarbonisation pathway
 - 2025 Piloting zero emission trucks and locomotives
 - 2030 No new diesel-powered trucks and locomotives
- Supporting local and Indigenous supplier development

 1 From our own and time chartered fleet | 2 Delivery from H2 2023 IMO: International Maritime Organisation, LNG: Liquified Natural Gas



Accelerating shipping decarbonisation

- Reduced emissions intensity¹ >30% by end 2021, vs IMO target of 40% by 2030
- Chartered 9 LNG dual-fuel Newcastlemax vessels²
- Net zero emission vessels by 2030

Working with customers to meet societal demands



Government policy and markets responding to end-user demand

ESG transparency through START

- Transparency and traceability from mine to market
- Secure platform, built on blockchain
- Enabling consumers to make ESG-informed decisions, beyond carbon

Solutions for a more sustainable future



Products for a greener world

- Aluminium alloys for giga-casting in electric vehicle manufacturing
- Collaborating with InoBat across the full lithium lifecycle, from mining through to recycling

Li = Lithium, Sc = Scandium, Te = Tellurium, Se = Selenium



Circular solutions to reduce emissions

- Partnering with ABInbev to reduce emissions from packaging
- Multi-product collaboration with Schneider Electric for infrastructure and electric vehicles
- Optimising market placement for critical minerals (Li, Sc, Te, Se) extracted from our waste streams
Simon Trott Iron Ore

Pilbara Iron Ore set for even stronger performance



Raising our system capacity

	Pri	Estimated Capacity		
	Max month* Mt	Max quarter*	Max annual Mt	Mid term** Mt
Mine	370	349	338	345-360
Rail	362	351	338	350-360
Ports	393	357	338	360+
System	362	351	338	345-360

*Annualised rates | ** Mid-term defined as upon completion of the next tranche of new and replacement mines

System capacity will be delivered by:

- Rio Tinto Safe Production System driving improved productivity
- Improved interface efficiencies across mine, plant, rail and ports
- Modest capital investment, including two additional rail consists

Requires commissioning of replacement mines, including Western Range, Bedded Hill Top and Hope Downs 2 and Brockman Syncline 1 to reach and sustain capacity

Mine productivity to mitigate higher work index

The work index of our mining operations is increasing



Initial gains in productivity – targeting further improvement



*Average haul distance travelled by each truck – adjusted for gradient | ** Dewatering volumes increase as pit deepens | EU = Effective utilisation, MTBF = Meantime between failure

Adjusting our operating practices to protect heritage

Heritage site example



A. 70 metre exclusion zone | B. 200 metre blast management zone | C. 350 metre blast management zone

Responding to new information



Improving plant performance



- COVID-19 restrictions impacted available labour in 2020 reducing maintenance hours
- 2021 labour availability improved but still constrained

Focus areas to address maintenance backlog:

- Shutdown alignment across system
- Improved maintenance tactics and simplified maintenance schedules
- Improved conveyor reliability though better rock breaking and targeted asset improvements

Completing the brownfield mine tie-ins will further improve plant performance

Maximising productivity from port and rail

Rail performance

Focus on asset health, including ballast and turnout replacement AutoHaul delivering operational and safety improvements:

- Reduction in driver change-over delays from 90 minutes per train to zero
- One in 250 journeys require a driver to operate the train
- Reduction of 1.5 million kilometres each year in light vehicle travel

Track speed restrictions cycle time impact (in minutes)



*At October 2021 | **Includes all full and partial weeks in Q3 2021

Port productivity

Our ports are our competitive advantage Focus areas:

- Optimising shut durations for capacity needs
- Reclaimer replacements 2024+
- High density ore upgrades 2022+
- Car Dumper 1 at Cape Lambert end of life 2022

Weekly outload capacity in Q3 2021 (Weeks**)



How we are improving our business

	Operational Readiness	Rio Tinto Safe Production System					
Focus area	Commission and ramp up new assets	Reduce wait for feed at the crusher	Reduce materials handling losses	Reduce fixed plant unscheduled loss	Improve rail capacity and resilience		
Priorities	Gudai-Darri	Dewatering	Fragmentation	Conveyor reliability	Asset health		
	Robe Valley Sustaining	Drill and blast	Feed strategy	Shutdown productivity	Cycle time		
	West Angelas C&D						
	Western Turner Syncline Phase 2	Load and haul	Engineering and technology	Asset management	Digital and technology		
Value chain	Mine						
		Port					

Operating and sustaining capital cost outlook

Outlook for 2022

2021 cost guidance of \$18-18.5/t

Cost pressures continue:

- Work index increase of 12% (from 2021 forecast)
- Continued investment in asset health and reliability
- Tight labour market driving higher rates
- Diesel price (+23%, 2021F v 2020)
- Cost of materials due to strong construction market and COVID-19 restrictions



*Unit cost for peers are based off publicly available sales, revenue and EBITDA data, with adjustments made for comparison to RTIO's reporting method and products



FTE = full time equivalent

Investing in our assets

Key focus areas:

- Asset reliability

(US\$bn)

- Plant and rail asset health
- Accommodation / camps

Sustaining capital investment

- Systems including IT



Mine project pipeline



Studies being progressed. Commissioning from 2025:

- Western Range
- Bedded Hill Top and Hope Downs 2
- Brockman Syncline 1

Approvals timeline risk has increased

High volume of environmental approvals for new mines



Ongoing focus on quality and product mix



RV = Robe Valley, PBL: Pilbara Blend Lump, PBF: Pilbara Blend Fines | 2021 YTD at 30 September 2021

Consistent quality remains key for our Pilbara Blend. Demand remains strong, and will continue to underpin our product strategy

Pilbara Blend quality maintained by:

- Blending different ore sources to tight specifications
- Producing lower quality products (including SP-10) as required

Positioning Pilbara ores in a green steel world

Working with customers to decarbonise the blast furnace mostly capped at ~20-30% emission reduction

Options to more cost effectively beneficiate Pilbara ores are being developed

Working on new processing routes to crack the code for Pilbara ores

Two examples shown – both early stage development but showing promise Steel making process routes to move to 'net neutral'



Pilbara Pathway 2: H₂ Hot Briquetted Iron + melter



Strengthening partnerships



Traditional Owners

Working together to build a better future through employment, business and caring for country and culture

Embedding cultural competency and heritage management into The Way We Work

Asset General managers now responsible for Traditional Owner relationships Modernising agreements



Local Communities

Supporting thriving communities through economic development and employment:

- Direct shipping into Dampier
- Automation qualifications and education pathways

Partner with State Government to provide logistics support for COVID-19 vaccinations across the Pilbara



Western Australia

Building local capacity - using local suppliers to build rail ore cars, a first in the industry

Long-term partnerships and outcomes such as the partnership with Royal Flying Doctor Service



Becoming the most valued resource business

Best operator

Transform our safe operating performance

Empower our workforce through Rio Tinto Safe Production System Impeccable ESG credentials

Position Pilbara for green steel

Decarbonise the Pilbara and position our ores to participate in Green Steel Excel in development

Deliver new mines of the future

Optimise Pilbara capacity, product mix and development sequence

Social licence

Create value with our partners Connect, partner and restore trust with the community People at our heart Shift from 'asset focus' to 'people focus'

50

Ivan Vella Aluminium

Over a hundred years of aluminium expertise



Engineering excellence

RioTinto



Technological expertise



Partnership and innovation

A structurally advantaged integrated business



Bauxite

4 bauxite mines

56.1Mt*

Australia, Brazil and Guinea

*2020 production



Alumina

4 alumina refineries

8.0Mt*

Australia, Brazil and Canada



Energy

7 hydro plants

4.1GW

Supporting our assets in Canada



Aluminium

14 aluminium smelters, 80% renewables

3.1Mt*

Australia, Canada, Iceland, New Zealand and Oman

RioTinto

The most profitable integrated Aluminium business



Source: Rio Tinto Market Analysis and peer disclosures



¹Upstream assets includes bauxite, alumina and primary metal



Proven operational resilience

Global All Injury Frequency Rate





Asset Utilization rate Casthouse*



*Atlantic managed operations

Continuing to improve our business

1st decile hydro-powered smelters*



Positioned for low CO₂ metal demand Access to structurally short US market

Optimising business through data analytics and advanced process control

Saguenay integrated operations centre

*Includes managed operations in Saguenay region. **9 months annualised 1st quartile bauxite mines leveraging R&D



Processing technology development in the areas of impurities

Exploratory work on alternative technologies for silica

Processing technology to reduce product moisture

Automating our casting process



Using machine learning and automation to maximise scrap remelting opportunities

Further leveraging data analytics

Flex power – modulating smelter power demand

Potential for positive structural change in the market from energy and smelting caps in China



Primary Aluminium supply (China) Mt



Sources: Rio Tinto Market Analysis, CRU, IAI.

Renewables include hydropower and other renewables. Non-Renewables include coal, gas, and nuclear.

Sources: Rio Tinto Market Analysis, CRU, IAI

New coal-powered smelting likely to be challenged



Aluminium smelter all-in cash costs (Real US\$2021 per tonne)



All non-carbon costs are regional weighted averages from CRU, 2021 (long-run uses 2030 costs). Hydo costs are based on a weighted average of Canadian smelters. Coal costs are based on a weighted average of Chinese smelters from Shandong, Shanxi, Xinjiang and Inner Mongolia.

Sources: Rio Tinto Market Analysis, CRU *Global semis production including melt loss

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Switching our Australian smelters to renewables

Smelting requires uninterrupted energy, increasing the technical difficulty of a transition without hydro-power...

Typical energy requirements for large-scale aluminium smelter



¹ Renewables requirements vary by region, mix of wind and solar and system design

...but regions with high-quality renewables and a coordinated approach can create value in the transition



World-class solar and wind resources

Ability to create a coordinated solution to support heavy industry transition

Internationally competitive renewables and skilled industrial workforce provides regional advantage. Signed Statement of Cooperation with Queensland Government

Decarbonising the aluminium supply chain

Already lowest CO₂ emissions



2021 - Total emission tCO₂/t

Producing the lowest CO₂ per tonne

Lowest footprint alumina refinery in the world

The graph is on an equity basis for Rio Tinto and all the other individual producers Source: CRU includes direct emissions (Scope 1) and indirect from electricity generation (Scope 2)

Hydrogen calcination



Green hydrogen a substitute to natural gas

Potential to underpin 10% Rio Tinto group-wide decarbonisation

Commercialising ELYSIS[™]



P1020 metal grade or better

On track for commercial scale technology in 2024

Green materials need to be more than carbon free

Carbon free

Responsible

Traceable

Circular

Recyclable material that

retain its properties

Zero carbon through the full lifecycle of production



ELYSIS

Decarbonisation of Australian Smelters Produced with respect and care for host communities, partners, first nations and environment



Materials identifiable and traceable throughout lifecycle

START

Recycling pilots in Quebec

Strengthening our social licence



First nations and communities

Mutual Respect Agreement with Mashteuiatsh for 20 years

Joint business opportunities with First Nations in Quebec and British Columbia

Long-term relationships with Traditional Owners in Weipa and Gove



Vaudreuil filter press

Reduce red mud waste volume

Eliminate slurry pond storage

Stable red mud disposal sites



Turning waste into valuable resources

Treatment technology developed by RTA

Treat spent pot lining of the Canadian Al industry and reuse in the cement industry

Convert Anhydrate by-product into a fertiliser used in blueberry crops

Opportunities to leverage our attractive foundation

Tier 1 bauxite resource with options to expand and improve cost position

Deep technical and processing expertise

Growing smelting capacity requires more green power

Working with customers to meet their specific needs

Improve capital intensity of future investments

ELYSIS[™] commercial maturity in 2024

Recycling is an opportunity to enhance our profitability and relevance to customers



Positioned to thrive in a low-carbon environment

Strong foundation

- Integrated business with Tier 1 assets
- Advantageous renewables position
- Strong history with world-class technical expertise
- Operational stability

Clear strategy

- Accelerate zero carbon, zero waste
- Empowering our people to be the Best Operator
- Optimise capital intensity
- Build strong connections with our partners and stakeholders
- Pursue options for increased profitability or growth

Attractive future

- Potential structural change in the market
- ELYSISTM net zero aluminium smelting
- Switching Australian smelters to renewables
- Long-life Tier 1 resource in bauxite
- Long-life hydropower assets
- Well positioned for North American market

Best operator	Impeccable ESG credentials	Excel in development	Strengthening our social licence

Peter Cunningham Performance, investment and shareholder returns



We are in very robust financial health



Peers: BHP, Vale, Anglo American and Glencore | *Consensus (Visible Alpha, 15 October 2021) | **Pro-forma net debt (cash) adjusts for the remainder of previously announced buy-backs from operations, lags in shareholder returns from disposal proceeds, Australian tax lag (December only) and disposal-related tax lag and the impact of IFRS 16 Leases accounting change for the prior periods. This lease accounting change is reflected in the June and December 2019 reported net debt

Actions in place to improve our performance

Copper equivalent production for the nine months to September* Million tonnes



Operating performance not where we want it to be

Rigorous performance management

Deploying Rio Tinto Safe Production System

Building capability across the organisation

Increasing our capital allocation towards sustaining

Focused on risk management

Disciplined allocation of capital remains at our core

Essential capex *Integrity, Replacement, Decarbonisation*

2 Ordinary dividends

Iterative cycle of



Maintaining our rigorous approach to investments



Controlled risk taking allows for more opportunities

Using a range of criteria across different investment opportunities

Integrity Rigorous assessment of options

Decarbonisation Capital intensity of CO₂ reduction | Cost of capital

Growth Embedded options | Cost position | Valuation

Embedded options | Cost position | Strategic fit | Right owner | Valuation

Reinvesting for growth and decarbonisation

Capital expenditure profile \$bn



Sustaining capital of ~\$3.5bn per year including Pilbara Iron Ore of ~\$1.5bn

~\$0.5bn per year to decarbonise our assets from 2022 to 2024

Total decarbonisation investment of ~\$7.5bn* from 2022 to 2030, predominantly in second half of decade

Ambition to grow and decarbonise reflected in 2023-24 capex of up to ~\$9-10bn including up to \$3bn in growth spending, depending on opportunities

Replacement spending unchanged at \$2-3bn per year

*Conceptual view of capital requirements at October 2021. Marginal Abatement Cost Curves (MACC) will be updated on an annual basis

Broad-based funding model for decarbonisation

Capital expenditure ~\$7.5bn over 2022-30

Pilbara energy system | ELYSIS[™] implementation capital | MACC projects

Operating expenditure

New capability | Energy efficiency | R&D

Long-term contracts

Pacific Aluminium smelters and refineries Kennecott

Partnerships*

Green steel: 25 existing R&D partnerships more targeted

Examples provided under each category of funding is not an exhaustive list and options for decarbonisation will continue to evolve. *Funding model to be determined. MACC = Marginal Abatement Cost Curve



Attractive dividends remain paramount

Shareholder returns of 40-60% of underlying earnings on average through the cycle Pay-out ratio (%)



Excluding divestment proceeds returned to shareholders

Consistent five-year record of shareholder returns

Pay-out ratio policy de-risks the company

60% average pay-out on **ordinary** dividend over past 5 years

73% average pay-out in total

Our financial strength allows us to simultaneously:

- reinvest for growth
- accelerate our own decarbonisation
- continue to pay attractive dividends to shareholders in line with our policy

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Strong foundation for growth, decarbonisation and shareholder returns

Outstanding foundation	Clear strategy	Compelling investment proposition
 No fossil fuel extraction Long-life assets producing vital commo Resilient cash flows through the cycle Capital discipline Robust financial position Advantageous renewables position World-class pipeline of projects and exploration 	 Accelerate our own decarbonisation Grow in materials enabling the global energy transition Develop products and services that help our customers to decarbonise 	 Deliver value-adding growth Continue to pay attractive dividends in line with our policy Attractive partner to our customers and host countries Reduce risks by accelerating our own low-carbon transition Maintain financial strength and resilience
Best operator	Impeccable ESG Excel credentials in Developme	ent social licence



Appendices

Jadar project, Loznica, Serbia

Shareholder structure



*21 September 2021

Debt maturity profile

30 June 2021 debt maturity profile*



*Numbers based on June 2021 accounting value. The debt maturity profile shows \$1.1 billion of capitalised leases under IFRS 16.

Average outstanding debt maturity of corporate bonds at ~12 years (~ 9 years for Group debt)

No corporate bond maturities until 2024

Liquidity remains strong under stress tests

\$7.5bn back-stop Revolving Credit Facility extended to November 2023 and remained undrawn throughout the pandemic

Group level financial guidance

	FY2021	FY2022	FY2023	FY2024
CAPEX				
Total Group	~\$7.5bn	~\$8.0bn	~\$9.0 – 10.0bn	~\$9.0 – 10.0bn
Sustaining Capex Group	~\$3.5bn	~\$3.5bn	~\$3.5bn	~\$3.5bn
Pilbara Sustaining Capex	~\$1.5bn	~\$1.5bn	~\$1.5bn	~\$1.5bn

- \$0.5bn per year to decarbonise our assets from 2022 to 2024
- Total decarbonisation investment of ~\$7.5bn* from 2022 to 2030, predominantly in second half of decade
- Ambition to grow and decarbonise reflected in 2023-24 capex of \$9-10bn including up to \$3bn in growth spending, depending on opportunities
- Replacement spending \$2-3bn per year

Effective tax rate	30%		
Returns	Total returns of 40	 60% of underlying the cycle 	g earnings through
*Conceptual view of capital requi	rements at October 2021. Margi	nal Abatement Cost Curves (MACC) will be updated on an annual basis

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Product group level guidance

	2021 production guidance ¹	2021 costs
Iron Ore Shipments	320 – 325mt ² (100% basis)	\$18.0-18.5/wmt (FOB), based on an Australian dollar exchange rate of \$0.75
Copper		
Mined Copper	~500kt ³	C1 Copper unit costs 75-80 US c/lb
Refined Copper	190 – 210kt ⁴	
Aluminium		
Bauxite	54 – 55mt ⁶	Modelling guidance provided for
Alumina	7.8 – 8.2mt	Canadian smelters only (see slide 80)
Aluminium	3.1 – 3.3mt	
Minerals		
TiO ₂	~1.07	
IOC pellets and concentrate ⁸	9.5 – 10.5mt	
B_2O_3	~0.5mt	
Diamonds	3.0 – 3.8m carats ⁵	

¹ Rio Tinto share unless otherwise stated.

² Pilbara shipments guidance remains subject to COVID-19 disruptions including risks around mandatory vaccination for the resources industry in Western Australia as of 1

December, and risks around commissioning of new mines and management of cultural heritage.

³ Remains subject to COVID-19 disruptions and risks around mine plan sequencing following geotechnical issues at Kennecott.

⁴ Reduction reflects a Kennecott smelter incident in September resulting in force majeure on customer contracts.

⁵ Diamonds 2021 guidance and actuals are for Diavik only for comparability, following Argyle closure in 2020. Unadjusted Diamonds production for 2020 was 14.7 million carats, including both Diavik and Argyle operations.

⁶ Reduction reflects equipment reliability issues and operational instability at the Pacific mines. The focus in the fourth quarter is on the recovery of plant equipment availability and asset health to support 2022 performance.

7 Full year titanium dioxide slag production guidance has been reinstated following stabilisation of the security situation at Richards Bay Minerals in South Africa and resumption of operations.

8 Iron Ore Company of Canada.



Modelling EBITDA

Underlying EBITDA sensitivity

	Average published price/exchange rate for 2021 first half	US\$ million impact on full year 2021 underlying EBITDA of a 10% change in prices/exchange rates
Copper	413c/lb	478
Aluminium	\$2,245/t	784
Gold	\$1,805/oz	77
Iron ore realised price (62% Fe CFR freight-adjusted)	\$168.4/dmt	4,180
A\$	0.77US\$	665
C\$	0.80US\$	249
Oil (Brent)	\$65/bbl	112

Note: The sensitivities give the estimated effect on underlying EBITDA assuming that each individual price or exchange rate moved in isolation. The relationship between currencies and commodity prices is a complex one and movements in exchange rates can affect movements in commodity prices and vice versa. The exchange rate sensitivities include the effect on operating costs but exclude the effect of revaluation of foreign currency working capital.

Modelling aluminium costs

Canadian* smelting unit cash** cost sensitivity

	(\$/t) Impact a \$100/t change in each of the input costs below will have on our H1 2021 Canadian smelting unit cash cost of \$1,262/t
Alumina (FOB)	\$191
Green petroleum coke (FOB)	\$27
Calcined petroleum coke (FOB)	\$36
Coal tar pitch (FOB)	\$8

* Canadian smelters include all fully-owned smelters in Canada (Alma, AP60, Arvida, Grande-Baie, Kitimat, and Laterrière), as well as Rio Tinto's share of the Becancour and Alouette smelters

** The smelting unit cash costs refer to all costs which have been incurred before casting, excluding depreciation but including corporate allocations and with alumina at market price, to produce one metric tonne of primary aluminium.

Jadar project – 100% owned and managed

Mining and processing

Underground mine using bench stoping Co-located beneficiation and chemical processing plant Primary products: lithium carbonate, boric acid Overall product recoveries: ~80%

Capex

Capital: \$2.4bn (nominal)

Construction phase: 2021-2026 (peak 2022-2025) LOM sustaining capital: \$30m per year, average (real)

Production profile¹

First saleable production: 2026

Full ramp-up: 2029

Annual target volumes: up to 58,000 tonnes of battery-grade lithium carbonate²,160,000 tonnes of boric acid (B_2O_3 units) and 255,000 tonnes of sodium sulphate³ per annum

¹ Continuing to work closely with stakeholders in Serbia. Subject to award of final permits and approvals.

² These production targets were previously reported in a release to the Australian Securities Exchange (ASX) dated 10 December 2020, "Rio Tinto declares maiden Ore Reserve at Jadar"

(for battery-grade lithium carbonate it was 55,000 tonnes). All material assumptions underpinning the production targets continue to apply and have not materially changed.

³ These resources and reserves were previously reported in the Rio Tinto Annual Report 2020. The material assumptions on which they were based have not materially changed.

Serbian tax and royalties

Mining royalty: 5% (levied on gross sales minus allowable deductions) Corporate income tax rate: 15% Withholding tax rate: 5%

40 year mine life

Ore reserve: 16.6Mt @ 1.8% $\rm Li_2O$ and 13.4% $\rm B_2O_3$

Mineral resource: 139.2Mt @ 1.8% Li₂O and 14.7% B₂O₃

First quartile costs

Dry stacked tailings solution

Electric haul trucks

70% water recycling

~2,100 direct jobs during construction

>1,000 ongoing jobs when operational

RTA Value Chain – 2020 Actuals



Common acronyms

T = Tonne

Mt = Million tonnes

Gt = Giga tonnes

 tCO_2 = Tonne of carbon dioxide

 $tCO_2 e =$ Tonne of carbon dioxide equivalent

P.a = Per annum

Mtpa = Million tonnes per annum

 CO_2 = Carbon dioxide

GHG = Greenhouse gas

Mwh = Megawatt hour

MW = Megawatt

GW = Gigawatt

ROCE = Return on capital employed

EBITDA = Earnings Before Interest, Taxes, Depreciation and Amortisation

CAGR = Compound annual growth rate

USD = United States dollar

Bn = Billion

NPV = Net present value

ESG = Environmental, Social, and Governance

IRR = Internal rate of return

R&D = Research and development

VAP = Value-added product



Increasing transparency for our stakeholders

A commitment to reporting on:

Ongoing progress against our own commitments and internal work-streams external obligations and recommendations.

The **enhanced governance** arrangements in place to oversee the company's progress against these actions. How Traditional Owners' views are being sought and considered in shaping these commitments and **Traditional Owners' perspectives** on how successfully these

commitments are being met.

How the company is working to advocate for enhanced sector-wide cultural heritage management and how this is consistent with our internal standards.



Working to improve in multiple areas

1	Remedying and rebuilding our relationship with the PKKP people
2	Partnering with Pilbara Traditional Owners in modernising and improving agreements

- 3 Establishing the new Communities and Social Performance model
- 4 Building local capability and capacity to support the site General Manager
- 5 Improving our governance, planning and systems where it relates to communities
- 6 Reducing barriers to, and increasing, Indigenous employment
- 7 Increasing Indigenous leadership and developing cultural competency within Rio Tinto
- 8 Establishing a process to redefine and improve cultural heritage management standards
- 9 Establishing an Australian Advisory Group
- **10** Elevating external consultation
- **11** Elevating employee engagement

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Establishing an Australian Advisory Group

(previously called Indigenous Advisory Group)

Specific actions

We are establishing an Australian Advisory Group (AAG) to help shape, influence and support our approach to issues that are important to Indigenous peoples, the Australian community and our business.

The AAG aims to:

- Introduce more diversity and breadth of views
- Increase the awareness of leaders within Rio Tinto to make fully informed decisions
- Act as a sounding board for Rio Tinto on knowledge, practices, and perspectives with a particular focus on Indigenous issues
- Provide coaching, mentoring and advice to senior leadership
- Identify ways to improve the culture within Rio Tinto

Reducing barriers to and increasing Indigenous employment

Specific actions

We have:

Committed to a **US\$50 million investment** to retain, attract and grow Indigenous professionals and leaders in our business

Increased Indigenous leaders from 6 to 19 across Australia

Increased our 2021 target to recruit 50 Indigenous leaders

Launched a leadership development programme in Australia, with over **200 Indigenous employees** enrolled

Implemented a two-way Indigenous mentoring programme

Launched an Australia-wide Indigenous employee networking programme

Awarded **Indigenous university scholarships** to students in the fields of environmental science and engineering

Establishing the new Communities and Social Performance model

Specific actions

RioTinto

We have:

Increased number of CSP professionals from 250 to 300, working in 65 sites and 35 countries

Restructured reporting lines so field based CSP professionals report to their line managers

Established a central CSP Area of Expertise with technical subject matter experts

Established a senior leadership team comprising CSP leaders from all product groups, exploration, projects, closure and Indigenous Affairs



Partnering with Pilbara Traditional Owners in modernising and improving agreements

Specific actions

RioTinto

Preliminary discussions with ten Pilbara Traditional Owner groups in relation to agreement moderisation

Identified **key principles** for consideration in modernising agreements

Signed **engagement protocols** that provide a scope and framework of the modernisation work with four of the Traditional Owner groups

Continuing to work with Traditional Owners to **enhance benefits** that flow to communities



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Building local capability and capacity to support the site General Manager

Specific actions

Iron Ore Chief Executive has the overall accountability for Traditional Owner relationships and heritage matters for the product group

Site General Managers have direct responsibility for TO relationships

Traditional Owner Engagement Leads support the mine General Managers by maintaining the day-to-day engagement with the Traditional Owner groups

Increased capacity across our CSP function as well as upgrading CSP systems to provide improved, linked-up decisionmaking

A **Traditional Owner Partnerships Committee** has been created to drive improvements and share learnings

Establishing a process to redefine and improve cultural heritage management standards

Specific actions

We are increasing both the capabilities and resources of the internal Cultural Heritage teams to increase understanding and delivery of cultural heritage performance.

Rio Tinto Iron Ore has almost **doubled the size of its cultural heritage** team to more than 60 people.

We are progressing the **Integrated Heritage Management Process** (IHMP) to ensure we do not impact sites of exceptional cultural significance within our existing mine plans. To date, we have:

- Reviewed 2205 heritage sites
- Reviewed all sites for 2021 and 95% for 2022
- Removed approx. 54 million tonnes of Iron Ore from our reserves as a precautionary measure
- Set up protective buffer zones for all sites of high cultural significance