Rio Tinto Overview

May 2022
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Introduction to Rio Tinto
Our purpose

We produce minerals and metals essential to human progress

By doing so efficiently, effectively and sustainably, we aim to create long-term value for all stakeholders.
What we do

We own and manage a portfolio of world-class assets in 35 countries:

- Alumina
- Aluminium
- Bauxite
- Borates
- Copper
- Diamonds
- Iron ore
- Lithium
- Salt
- Titanium dioxide

riotinto.com/products
Who we are

We explore the boundaries of everything we do

We produce minerals and metals essential to human progress. We foster a culture where every voice is heard, every idea is encouraged and everyone is supported.
Safety

Our number one priority:

• Goal is zero fatalities*
• Focus is identifying, understanding, managing and eliminating safety and work-related health risks
• Work-life balance
• Mental health awareness

*Three consecutive years of no fatalities (2019-2021).
Where we operate

**Aluminium**
**Copper**
**Iron Ore**
**Minerals**

**Key**
- Mines
- Smelters, refineries, power facilities and processing plants remote from mine
- Projects
- Offices

Map showing locations in Europe, South America, Africa, Asia, and Australasia.
More than 87% of non-current assets in OECD

2021 non-current assets (other than excluded items* and non controlling interest) by region

- Canada: 22%
- US: 10%
- South America: 4%
- Africa: 5%
- Mongolia: 6%
- Other Asia: 2%
- Australia / NZ: 51%

*2021 non current assets (other than excluded items* and non controlling interest) by region
Our history

- **1873** Rio Tinto founded
- **1925** Joint ventures, technological developments and overseas expansion
- **1963** Produced the first bauxite from Weipa in Queensland, Australia
- **1966** Shipped the first iron ore from the Pilbara, Western Australia to Japan
- **1968** Acquired US Borax, California
- **1995** Became the first mining company in Australia to embrace Indigenous people’s land rights
- **1995** RTZ Corporation and CRA Limited merge to form dual-listed company
- **2000** Acquired North Limited
- **2003** First production of diamonds at Diavik, Northwest Territories, Canada
- **2007** Acquired Alcan
- **2015** Signed the Paris Pledge on climate change
- **2018** Became the first major mining company to have a portfolio free of fossil fuel production
- **2018** Construction begins on the Gudai-Darri iron ore mine in Western Australia
- **2018** Launched ELYSIS joint venture with Alcoa
- **2020** Destruction of Juukan Gorge rock shelters. We unreservedly apologise, take action to improve
- **2021** Revised strategy and accelerated actions on climate change
- **2022** Published Everyday Respect Report on workplace culture, committed to implementing all 26 recommendations
- **2022** Completed acquisition of Rincon, undeveloped lithium brine project in Argentina
Our people

- 49,000 people in 35 countries
- 27,000 employees in Australia and New Zealand
- 15,500 employees across Canada and the United States
- 58% of graduate intake were women in 2021
- $50M Investment to advance Indigenous leadership across Australia
Our values

Our values connect us as human beings and guide how we work and treat each other

Care
• People’s safety
• Communities
• Planet

Courage
• Try new things
• Speak up
• Do what’s right

Curiosity
• Collaboration
• Learning
• Innovation
Our business model

Explore and evaluate

Develop and innovate

Mine and process

Market and deliver

Repurpose and renew

riotinto.com/about/business
Our structure

4 product groups
- Iron Ore
- Aluminium
- Copper
- Minerals

Supported by
- Development & Technology
- Commercial

Support functions
- Legal, Governance & Corporate Affairs
- Communities & Social Performance
- Finance
- Group Internal Audit
- Group Services
- HSES
- Human Resources
- Information Systems & Technology (IS&T)
- Procurement
- Closure
- Risk
- Technical functions

riotinto.com/about/business
Our strategy

We will accelerate the decarbonisation of our assets, develop products and technologies that help our customers decarbonise and we will grow in materials enabling the energy transition.
Our strategy

Accelerate the decarbonisation of our assets
- Switching to renewables including PacAl smelters and Pilbara
- Electrification of processing – Yarwun and hydrogen
- Low-carbon mobile fleet

Develop products that help our customers to decarbonise
- Elysis – net-zero aluminium smelting
- Canada DRI – net-zero iron
- Iron ore R&D and customer partnerships

Grow in materials enabling the energy transition
- Copper
- Battery materials
- High-quality iron ore

Hydro, solar and wind power

Technology and R&D

Partnerships
Strong foundation for growth, decarbonisation and shareholder returns

## Clear strategy

- Accelerate our own decarbonisation
- Grow in materials enabling the global energy transition
- Develop products and services that help our customers to decarbonise
- Continue to deliver attractive shareholder returns

## Significant achievements in 2021

- New strategy
- Ambitious emissions targets
- Record financials and dividends
- Maintained financial strength
- Commenced underground operations at Oyu Tolgoi
- Binding agreement for Rincon lithium
- Visible shift in attitudes and behaviours
- Established partnerships with customers for blast furnace optimisation and green hydrogen based DRI and melter in the Pilbara

## Continued progress in 2022

- Further evolving our culture
- Build operating excellence: rollout RTSPS at 15 sites
- Further advance Oyu Tolgoi
- Complete Pilbara replacement projects
- Develop growth options, complete Rincon transaction, explore options for Jadar
- Implement decarbonisation projects
- Continue to engage with Traditional Owner Groups and modernise agreements in the Pilbara

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<table>
<thead>
<tr>
<th>Best operator</th>
<th>Impeccable ESG credentials</th>
<th>Excel in Development</th>
<th>Strengthening our social licence</th>
</tr>
</thead>
</table>

RioTinto
Delivering on our objectives in order to grow, decarbonise and deliver attractive shareholder returns

Best operator
Transform our safe operating performance
Empower our workforce through Rio Tinto Safe Production System

Impeccable ESG credentials
Accelerate our own decarbonisation
Help our customers develop products and services that decarbonise

Excel in development
Grow in commodities enabling the global energy transition
Deliver value-adding growth whilst maintaining financial strength and resilience

Social licence
Attractive partner to our customers and host countries
Partner and restore trust within the community for shared success
2021 highlights
**Record financial results**

<table>
<thead>
<tr>
<th>(Sbn, except for per share data)</th>
<th>2021</th>
<th>2020</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidated sales revenue</td>
<td>63.5</td>
<td>44.6</td>
<td>+42%</td>
</tr>
<tr>
<td>Underlying EBITDA</td>
<td>37.7</td>
<td>23.9</td>
<td>+58%</td>
</tr>
<tr>
<td>Underlying earnings</td>
<td>21.4</td>
<td>12.4</td>
<td>+72%</td>
</tr>
<tr>
<td>Net earnings</td>
<td>21.1</td>
<td>9.8</td>
<td>+116%</td>
</tr>
<tr>
<td>Underlying ROCE</td>
<td>44%</td>
<td>27%</td>
<td>n/a</td>
</tr>
<tr>
<td>Cash flow from operations</td>
<td>25.3</td>
<td>15.9</td>
<td>+60%</td>
</tr>
<tr>
<td>Capital expenditure</td>
<td>7.4</td>
<td>6.2</td>
<td>+19%</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>17.7</td>
<td>9.4</td>
<td>+88%</td>
</tr>
<tr>
<td>Total dividend</td>
<td>16.8</td>
<td>9.0</td>
<td>+87%</td>
</tr>
<tr>
<td>Total dividend per share ($)</td>
<td>10.40</td>
<td>5.57</td>
<td>+87%</td>
</tr>
<tr>
<td>Net cash / (debt)</td>
<td>1.6</td>
<td>(0.7)</td>
<td></td>
</tr>
</tbody>
</table>
A disciplined business generating strong returns over the cycle

**Strength and resilience** from:

- Quality of our assets
- Capability of our people
- Operational performance
- Innovative partnerships
- Disciplined capital allocation

*Return on Capital Employed (ROCE) is defined as underlying earnings before net interest divided by average capital employed (operating assets before net debt)*
Revenue (2021)

By destination

- China: 57%
- North America: 15%
- Other Asia: 9%
- Japan: 8%
- Europe: 6%
- Other: 5%

$63.4bn Consolidated sales revenue in 2021

By commodity

- Iron ore: 66%
- Aluminium, alumina and bauxite: 20%
- Copper: 5%
- Industrial minerals: 3%
- Gold: 2%
- Diamonds: 3%
- Other: 5%
Robust demand drives commodity prices

Iron Ore\(^1\) (+48% YoY)

Despite weaker demand and mill operating restrictions during H2, China’s FY21 crude steel production exceeded 1Bnt for the second time in history. Demand recovery in the rest of world maintained its momentum.

Combined shipments of the major low-cost producers remained below FY18 volumes for the third consecutive year.

Less high-cost supply was needed to balance the market during H2 21, while prices declined 25% half on half.

Aluminium\(^2\) (+46% YoY)

Strong global demand recovery led by packaging, transport and building and construction

- Increase in global deficit on extensive power related smelter curtailments in China and Europe
- Lower global inventories supportive of high market and product premiums

Copper\(^3\) (+50% YoY)

Exchange inventories declined to multi-year lows

Demand grew strongly through 2021 with a pick-up in the rest of the world in H2

Mine supply returned to growth, but many regions continued to face headwinds from lingering effects of COVID-19, workforce constraints and adverse weather conditions.

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\(^1\) Monthly average Platts (CFR) index for 62% iron fines
\(^2\) Average LME price. MWP = Mid-West premium
\(^3\) Average LME price
YoY = change in annual average price. Source: Rio Tinto
Strong conversion of price into earnings…

Underlying EBITDA
$bn

<table>
<thead>
<tr>
<th>Component</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Ore</td>
<td>+11.6</td>
</tr>
<tr>
<td>Copper</td>
<td>+1.9</td>
</tr>
<tr>
<td>Aluminium</td>
<td>+3.0</td>
</tr>
<tr>
<td>Other</td>
<td>+1.0</td>
</tr>
</tbody>
</table>

-23.9  

2020 Underlying EBITDA

<table>
<thead>
<tr>
<th>Component</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prices</td>
<td></td>
</tr>
<tr>
<td>Exchange rates</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td></td>
</tr>
<tr>
<td>Inflation</td>
<td></td>
</tr>
<tr>
<td>Volumes and mix</td>
<td></td>
</tr>
<tr>
<td>Operating cash unit costs</td>
<td></td>
</tr>
<tr>
<td>Non-cash costs / other</td>
<td></td>
</tr>
</tbody>
</table>

37.7

2021 Underlying EBITDA
...and strong conversion of earnings into cash flows

Free cash flow is defined as net cash generated from operating activities less purchases of PP&E less lease principal payments plus sales of PP&E
Operating cash flow and free cash flow include capital gains tax paid on disposals of $0.9bn in 2019, $0.1bn in 2018 and $0.2bn in 2017, primarily related to coal disposals
Disciplined reinvesting for growth and decarbonisation

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

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

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

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

Replacement spending unchanged at $2-3bn per year**.

M&A is in addition.

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*Estimated investment as of 31 Dec 2021. Marginal Abatement Cost Curves (MACC) and large decarbonisation projects will be updated regularly | **Subject to potential increases of up to 15% for Pilbara replacement projects in 2022.
Balance sheet is strong; we will maintain our discipline

Balance sheet strength is an asset. Offers resilience and creates optionality

Gearing -3% and net (cash)/debt to LTM\(^{\text{^\*}}\) EBITDA of -0.04x

Operating cash flow of $25.3bn

Invested $7.4bn and distributed $15.4bn of cash to shareholders in 2021

Our financial strength allows us to simultaneously:

- Reinvest for growth
- Accelerate our own decarbonisation
- Continue to pay attractive dividends in line with our policy

Net (cash) debt

<table>
<thead>
<tr>
<th>Year</th>
<th>Pro-forma Net (Cash) Debt*</th>
<th>Reported Net (Cash) Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun-16</td>
<td>14.1</td>
<td></td>
</tr>
<tr>
<td>Dec-16</td>
<td>12.9</td>
<td></td>
</tr>
<tr>
<td>Jun-17</td>
<td>11.3</td>
<td></td>
</tr>
<tr>
<td>Dec-17</td>
<td>10.0</td>
<td></td>
</tr>
<tr>
<td>Jun-18</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>Dec-18</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>Jun-19</td>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td>Dec-19</td>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td>Jun-20</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>Dec-20</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>Jun-21</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Dec-21</td>
<td>1.6</td>
<td></td>
</tr>
</tbody>
</table>

*Pro-forma net debt adjusts for the remainder of previously announced buy-backs from operations, lags in shareholder returns from disposal proceeds, Australian tax lag 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 (cash) debt. \(^{\text{^*}}\) LTM = Last Twelve Months
Attractive dividends remain paramount

Shareholder returns of 40-60% of underlying earnings on average through the cycle

Pay-out ratio (%)

Consistent six-year track record of shareholder returns

2021 pay-out of 79% reflects exceptional financial results, strong balance sheet and disciplined ramp up of investment

$16.8bn total dividend declared including $12.8bn ordinary dividend

60% average pay-out on ordinary dividend over the past six years

74% average pay-out in total over the past six years

Excluding divestment proceeds returned to shareholders
# Group level financial guidance

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAPEX</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Group</td>
<td>~$8.0bn</td>
<td>~$9.0 – 10.0bn</td>
<td>~$9.0 – 10.0bn</td>
</tr>
<tr>
<td>Sustaining Capex</td>
<td>~$3.5bn</td>
<td>~$3.5bn</td>
<td>~$3.5bn</td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilbara Sustaining</td>
<td>~$1.5bn</td>
<td>~$1.5bn</td>
<td>~$1.5bn</td>
</tr>
<tr>
<td>Capex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>$0.5bn</em> per year to decarbonise our assets from 2022 to 2024</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Total decarbonisation investment of ~$7.5bn</em> from 2022 to 2030, predominantly in second half of decade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Effective tax rate</strong></td>
<td>30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Returns</strong></td>
<td>Total returns of 40 – 60% of underlying earnings through the cycle</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Estimated investment as of 31 Dec 2021. Marginal Abatement Cost Curves (MACC) and large decarbonisation projects will be updated regularly.*
## Product group level guidance

<table>
<thead>
<tr>
<th>Product Group</th>
<th>2022 Production Guidance</th>
<th>2022 Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Iron Ore</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipments</td>
<td>320 – 335Mt(^1)</td>
<td>$19.5-21.0/wmt (FOB), based on an Australian dollar exchange rate of $0.75</td>
</tr>
<tr>
<td></td>
<td>(100% basis)</td>
<td></td>
</tr>
<tr>
<td><strong>Copper</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mined Copper</td>
<td>500 to 575kt</td>
<td>C1 Copper unit costs 130-150 US c/lb</td>
</tr>
<tr>
<td>Refined Copper</td>
<td>230 – 290kt</td>
<td></td>
</tr>
<tr>
<td><strong>Aluminium</strong></td>
<td></td>
<td>Modelling guidance provided for Canadian smelters only (see slide 63)</td>
</tr>
<tr>
<td>Bauxite</td>
<td>54 – 57Mt</td>
<td></td>
</tr>
<tr>
<td>Alumina</td>
<td>8.0 – 8.4Mt</td>
<td></td>
</tr>
<tr>
<td>Aluminium</td>
<td>3.1 – 3.2Mt</td>
<td></td>
</tr>
<tr>
<td><strong>Minerals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TiO(_2)</td>
<td>1.1 to 1.4Mt</td>
<td></td>
</tr>
<tr>
<td>IOC pellets and concentrate(^2)</td>
<td>10.0 – 11.0Mt</td>
<td></td>
</tr>
<tr>
<td>B(_2)O(_3)</td>
<td>~0.5Mt</td>
<td></td>
</tr>
<tr>
<td>Diamonds(^3)</td>
<td>5.0 – 6.0m carats</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Pilbara shipments guidance remains subject to risks around commissioning and ramp-up of new mines and management of cultural heritage.  
\(^2\) Iron Ore Company of Canada.  
\(^3\) Reflects 100% ownership of Diavik (previously 60%)
Sustainability
Sustainability framework

**Supplying Low-intensity Materials**
Decarbonising our value chain (Scope 3) and maximising the full value of our resources (Critical Minerals & CircularITY).

**Economic Opportunity & Just Transition**
Catalysing improved economic outcomes in host communities and regions and playing our role to advance a fair and socially inclusive energy transition.

**Caring for our Planet**
Being a trusted steward of resources.
Minimising environmental and heritage impacts and managing the interrelationship between water, biodiversity and our resilience to a changing environment.

**Caring for People & Communities**
Being a socially responsible business partner
Building a healthy, diverse and inclusive workforce, supporting local communities to achieve their goals and aspirations and delivering enduring positive social outcomes.

riotinto.com/sustainability
Our commitment

We work hard to leave a lasting, positive legacy everywhere we work

- **50% reduction in emissions by 2030**
- **$66.6bn direct economic global contribution in 2021**
- **$13.3bn taxes and royalties in 2021**
- **$72m community investment in 2021**
- **$251bn 5-year global economic contribution (2017-21)**

50% reduction in emissions by 2030
Sustainability performance 2021

- $13.3 billion in taxes & royalties paid in 2021
- $19.4 billion paid to suppliers in 2021
- $72 million invested in communities

- Zero fatalities
- 75% of power from renewables
- 40 all-injury frequency rate
- 25% of our Executive Committee are women
- 28% decrease in the rate of new occupational illnesses since 2020
Our economic contribution

$66.6bn
Direct economic global contribution in 2021

30%
30%
19%
19%
19%
8%
1%

• Payments to suppliers
• Reinvested
• Payables to governments*
• Dividends and finance items
• Salaries
• Non-government royalties and other

*Payable to governments includes charges for corporate income tax, government royalties, employer payroll taxes and other charges.

Global taxes paid

$13.3bn global taxes and royalties paid in 2021

Australia
$11.1bn

Canada
$855m

Chile
$562m

Mongolia
$544m

US
$81m

Sustainability Fact Book 2021
Strong safety performance

All injury frequency rate
(per 200,000 hours worked)

Zero fatalities since 2019

AIFR of 0.40
Up from 0.37 in 2020

28% decrease
in the rate of new occupational illnesses since 2020
Communities

To us, communities aren’t just places. They are the people on whom our operations can have an impact and with whom we strive to build long-term partnerships.

- **37,000 suppliers** in over 120 countries
  - $19.4 billion paid to suppliers in 2021
  - $251 billion in economic contribution (2017-21)
  - $72 million in community investment in 2021
Evolving our culture

Living our values: **Care, Courage, Curiosity**

Creating a **safe, respectful and inclusive** work environment

Implementing all 26 recommendations from the Everyday Respect report; visible shift in attitudes and behaviours over the last 12 months

Empowering the front line through **Rio Tinto Safe Production System**

**Different mindset**, controlled risk-taking to grow

**Leadership development** training

riotinto.com/sustainability/people/everyday-respect
Juukan Gorge

We apologise unreservedly to the Puutu Kunti Kurrama and Pinikura (PKKP) people, and to people across Australia and elsewhere, for the destruction of Juukan Gorge.
A breach of our values

In allowing the destruction of Juukan Gorge to happen, we fell far short of our values as a company and breached the trust placed in us by the Traditional Owners of the lands on which we operate.
Ensuring it never happens again

We have taken decisive action to strengthen our processes and approach to cultural heritage, including, but not limited to:

• Developed an Integrated Heritage Management Process (IHMP) to review all heritage sites that we manage
• Remedying and rebuilding our relationship with the PKKP people
• Partnering with Pilbara Traditional Owners in modernising and improving agreements
• Increasing Indigenous leadership and developing cultural competency within our company
• Increasing awareness and understanding of community and heritage issues
• Building a more inclusive work culture where people feel empowered to challenge decisions
Climate change

We want to be part of the solution to the climate change challenge

75% of the electricity we use is from renewable sources

2050
Our ambition is to reach net zero emissions across our operations

$7.5B invested from 2022-2030 to decarbonise our assets

2025
Committed to reduce emissions by 15%

2030
Committed to reduce emissions by 50% by end of decade

riotinto.com/sustainability/climate-change/climate-change-approach
Decarbonising our business and value chain*

Net zero by 2050 across our operations
Scope 1 and 2: 15% reduction by 2025, 50% by 2030
Scope 3: Engaging with iron ore and bauxite customers

Energy Development team established
- Deploying renewables at scale, securing tenure
- Working with key providers and using third parties for renewable power
- Disciplined on financing and use of our balance sheet

Partnering with suppliers and industry
- Purchased four electric locomotives from Wabtec for piloting in Pilbara
- MoU with CarbFix to use land in Iceland to develop terminal for CO₂ injection and mineralisation
- InoBat investment: supporting the development of a battery ecosystem in Europe

Developing technologies
- ELYSIS™ produced aluminium without any direct GHG emissions
- Low-carbon research project using microwave energy and sustainable biomass as a reductant
- Canada green hydrogen based DRI

Partnering with customers, technology companies, universities and alliances
- BF optimisation: Baowu, Nippon Steel, POSCO, BlueScope
- Pilbara green hydrogen based DRI and melter: BlueScope
- Tsinghua University and Australian Universities

*Refer to Appendix for details (slides 43-44)  
DRI = Direct reduction iron, BF = Blast Furnace

riotinto.com/news/stories/sustainable-supply-chains
Our value chain

Promoting responsible practices from mine to market

riotinto.com/sustainability/ethics-integrity/value-chain
Our products enable the energy transition and we need to be part of net zero value chains

<table>
<thead>
<tr>
<th>Iron ore</th>
<th>Customer partnerships</th>
<th>Technology partnerships and investments</th>
<th>2022 customer engagements</th>
</tr>
</thead>
<tbody>
<tr>
<td>365Mt CO₂e</td>
<td>- Baowu / Tsinghua (2019)</td>
<td>Blast furnace optimisation</td>
<td>28% of our customers have public targets and net zero ambition; We will engage with our direct customers, representing 75% of our iron ore scope 3</td>
</tr>
<tr>
<td></td>
<td>- Nippon Steel (2020)</td>
<td>Pilbara beneficiation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- POSCO (2021)</td>
<td>Low-carbon research project</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- BlueScope (2021)</td>
<td>H₂ DRI and melter</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>H₂ DRI Canada</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Simandou</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminium</th>
<th>ELYSIS™</th>
<th>Limited influence on power-related emissions</th>
<th>2022 customer engagements</th>
</tr>
</thead>
<tbody>
<tr>
<td>145Mt CO₂e</td>
<td>On track for zero emission technology to be available for installation from 2024</td>
<td>74% of our downstream aluminium value chain Scope 3 emissions are from our customers (and customer’s customers) use of electricity, predominantly in China</td>
<td>We will engage with all our bauxite customers to seek collaboration in alumina refining decarbonisation projects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shipping</th>
<th>Net zero by 2050 from shipping of our products</th>
<th>1 Improving existing vessels efficiency</th>
<th>2 Increasing use of transition fuels (LNG and biofuels)</th>
<th>3 Partnering for development of net zero fuels (green ammonia)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.6Mt CO₂e</td>
<td>Net zero vessels in our portfolio by 2030</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>40% intensity reduction by 2025 five years ahead of IMO deadline</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Partnering to reduce the carbon footprint of our value chains

95% of Scope 3 emissions is from the processing of iron ore, bauxite and other products by our customers.

94% of these processing emissions take place at our customer facilities in China, South Korea, Japan and other countries that have pledged to be carbon neutral by around mid-century.

About 28% of our iron sales are directly to steel producers that have already set public targets for their Scope 1 and 2 emissions (our Scope 3), and have ambitions to reach net zero by around mid-century.

In 2022, we commit to engage with all our direct iron ore customers, representing approximately 75% of our iron ore sales and related Scope 3 emissions.
Accelerating current abatement projects

Our Marginal Abatement Cost Curve for Scope 1 & 2 emissions
(excl. Pilbara and Pacific Operations repowering, ELYSISTM, energy efficiency and carbon offsets)

As of 30 September 2021

Renewables
Mobile diesel
Process heat
Anodes & reductants

USD$/t CO₂e

Mt CO₂e

As of 30 September 2021

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Climate Change Report 2021
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

*RES = Renewable Energy System
Assets transitioning to closure

Our impact and responsibility do not end when our operations cease, so we consider a site’s closure in the way we design and run every operation.

**In progress**

- **Argyle Diamond Mine***
  Western Australia (2020)

- **Ranger uranium mine***
  Northern Territory, Australia (2021)

**In plan**

- **Diavik Diamond Mine***
  Northwest Territories, Canada (2025)

- **Gove***
  Northern Territory, Australia (2030)

*Dates based on current mine plans

riotinto.com/sustainability/closure
Market outlook
Transiting towards net zero emissions

**Low-carbon policies**
- Net zero by 2050\(^1\)
- Net zero by 2050\(^2\)
- Carbon neutral by 2060\(^3\)

**Scrap use**
Cannibalises some demand for primary material

<table>
<thead>
<tr>
<th>Al</th>
<th>Steel</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-6%</td>
<td>1-3%</td>
<td>3-4%</td>
</tr>
</tbody>
</table>

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)
We supply materials essential to a low-carbon economy

Cu
Copper
Primary conductor in the world’s electrical infrastructure

Al
Aluminium
Light, strong, flexible, corrosion-resistant and infinitely recyclable

Fe
Iron ore
Used in steel, the fundamental building block of industry and infrastructure

B
Borates
A vital ingredient of energy-efficient building materials and fertilisers, which help to feed the world’s growing population

TiO₂
Titanium dioxide
Used in a wide variety of everyday products
China is targeting peak emissions by 2030

**Electricity:** power tariff for aluminium smelters and coking plants to increase by RMB 300/MWh to RMB 611/MWh
**Aluminium:** 4% curtailed since Feb
**Steel:** 60% production affected

- **Aluminium:** 22% instructed to close due to energy controls
- **Steel:** 10% production affected

- **Electricity:** new aluminium smelter tariff rumoured to rise 50% from RMB 250/MWh to RMB 375/MWh
**Aluminium:** 57% capacity closed or idled
**Steel:** 50% production affected

- **Aluminium:** 6% capacity start curtailment since September
**Steel:** 40% production affected

- **Aluminium:** 14% capacity instructed to close due to energy controls
**Steel:** 10% production affected

- **Electricity:** peak time prolonged to 7 hours per day and tariff for peak hours in summer lifted by 25% vs. original tariff
**Aluminium:** downstream facilities open only 2 days per week
**Steel:** 20% production affected

- **Electricity:** initiate floating price of power by introducing an escalator of RMB 15/MWh for every RMB 50/t increase in coal price
**Steel:** 10% production affected

- **Electricity:** power tariff for aluminium smelters and coking plants to increase by RMB 300/MWh to RMB 611/MWh
**Aluminium:** 4% curtailed since Feb
**Steel:** 60% production affected

- **Aluminium:** 27% capacity at risk
**Steel:** 10% production affected

- **Aluminium:** smelting less impacted due to captive power plants; downstream cable capacity 10% curtailed
**Steel:** 30% production affected

- **Aluminium:** small-sized downstream facilities closed till Sep end
**Steel:** 30% capacity affected

- **Electricity:** initiate floating price of power by introducing an escalator of RMB 15/MWh for every RMB 50/t increase in coal price
**Steel:** 10% production affected

---

**China power cuts and energy control policy notifications by region (at 15 October 2021)**

1. Level I Alert (9 provinces)
2. Level II Alert (10 provinces)
3. Level III Alert (10 provinces)
Aluminium smelter all-in cash costs
(Real US$2021 per tonne)

Hydro

Coal

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

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

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.
Decarbonisation is a big driver of copper demand

Net additional demand* in a net zero carbon scenario

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

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
Significant supply gap emerging for lithium

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 Jadad 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.
Product Groups
Iron Ore

We produce five iron ore products in Western Australia – including the Pilbara Blend™, the world’s most recognised brand of iron ore.
Iron Ore

Western Australia

17 iron ore mines in the Pilbara

3 solar salt operations

5 mainstream iron ore products

$27.5bn underlying EBITDA

4 port terminals

1,890km+ rail network

Flagship Pilbara Blend™

76%
Underlying free on board (FOB) EBITDA margin
Iron Ore
Strong financial result despite operational challenges

Operating metrics

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2020 comparison</th>
<th>2022 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average realised price¹, ³</td>
<td>$143.8/t</td>
<td>+ 45%</td>
<td></td>
</tr>
<tr>
<td>Shipments² (100% basis)</td>
<td>321.6 Mt</td>
<td>- 3%</td>
<td>320-355Mt</td>
</tr>
<tr>
<td>Unit cost², ³</td>
<td>$18.6/t</td>
<td>+ 26%</td>
<td>$19.5-21.0/t</td>
</tr>
</tbody>
</table>

Financial metrics ($bn)

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>+ 44%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>39.6</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>27.6</td>
<td>+ 46%</td>
</tr>
<tr>
<td>Margin (FOB)³</td>
<td>76%</td>
<td>+ 2 pp</td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>19.2</td>
<td>+ 45%</td>
</tr>
<tr>
<td>Capex</td>
<td>3.9</td>
<td>+ 34%</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>15.2</td>
<td>+ 48%</td>
</tr>
<tr>
<td>Underlying ROCE</td>
<td>100%</td>
<td>+ 26 pp</td>
</tr>
</tbody>
</table>

Production impacted by above average rainfall in H1, cultural heritage management and tie-in of growth and replacement mines

Higher volumes of SP10 due to timing of project completion

Commissioning and ramp-up of growth and replacement mines impacted by COVID-19: access to labour and supply chain quality issues

Kept focus on fixed costs. Higher input prices including labour, explosives, energy, stronger AUD, increase in mine work index and operational readiness costs

Genuine progress made with Traditional Owner Groups, continue discussions on agreement making in 2022

¹ Dry metric tonne, FOB basis
² Unit costs are based on operating costs included in EBITDA and exclude royalties (state and third party), freight, depreciation, tax and interest. Guidance reflects rising input prices and labour costs, an increased mining work index and higher mine processing plant maintenance, partially offset by the ramp-up of Gudai-Darri and continued efficiency improvements. Unit costs are stated at an Australian dollar exchange rate of 0.75 and exclude any additional COVID-19 response costs
³ Pilbara only. All other figures reflect Pilbara operations, portside trading and Dampier Salt.
Iron Ore
Strong pricing supports EBITDA

Underlying EBITDA 2021 vs 2020

$ million

- Our Pilbara iron ore shipments decreased by 3% compared with 2020. Shipments were impacted by lower mined production due to above-average rainfall in the first half of 2021, cultural heritage management and delays in growth and brownfield mine replacement tie-in projects.

- Underlying EBITDA of $27.6 billion was 46% higher than 2020, driven by higher prices ($10.3 billion), with a 45% rise in the monthly average Platts index for 62% iron fines adjusted to an FOB basis compared with 2020. This more than compensated for the impact from reduced shipments and rising unit costs.

- 2021 Pilbara unit cash costs, which were $18.6 per tonne (excluding COVID-19 costs of $0.5 per tonne), marginally exceeded guidance of $18.0 to 18.5 per tonne and compared with $14.8 per tonne in 2020 (excluding COVID-19 costs of $0.6 per tonne). Unit cost performance was driven by higher input prices including labour, explosives and energy, a 9% stronger Australian dollar, an increase in the mine work index, operational readiness costs for our growth and brownfield mine replacement tie-in projects and fixed cost inefficiencies from lower volumes.

- Our Pilbara operations delivered an underlying FOB EBITDA margin of 76%, compared with 74.0% in 2020.

- Gross product sales for our Pilbara operations included freight revenue of $2.7 billion (2020: $1.5 billion).

- We price the majority of our iron ore sales (77%) by reference to the average index price for the month of shipment. In 2021, we priced approximately 11% of sales with reference to the prior quarter’s average index lagged by one month with the remainder sold either on current quarter average, current month average or on the spot market. We made approximately 72% of sales including freight and 28% on an FOB basis.

- We continue to increase our iron ore portside sales in China, with a total of 14.0 million tonnes in 2021 (2020: 5.5 million tonnes). We experienced increased inventory levels of Pilbara product at the port at December (2021: 8.8 million tonnes, 2020: 1.7 million tonnes), due to higher volumes of SP10 and constrained availability of high grade blending stocks in the fourth quarter.
## Mine productivity to mitigate higher work index

### The work index of our mining operations is increasing

<table>
<thead>
<tr>
<th>Material movement (Bt)</th>
<th>Effective flat haul* (km)</th>
<th>Work index (Bt.km)</th>
<th>Below water table mining (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 2.0 1.4</td>
<td>11 14 15</td>
<td>12 17 21</td>
<td>36% 42% 33%</td>
</tr>
<tr>
<td>2018 2021F 2024F</td>
<td></td>
<td>2018 2021F 2024F</td>
<td>2018 2021F 2024F</td>
</tr>
</tbody>
</table>

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

### Initial gains in productivity – targeting further improvement

<table>
<thead>
<tr>
<th>Truck EU (Index 2018 = 100)</th>
<th>Payload (Index 2018 = 100)</th>
<th>Digger MTBF (Index 2018 = 100)</th>
<th>Dewatering** (Index 2018 = 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 105 115</td>
<td>100 105 106</td>
<td>100 126 135</td>
<td>100 109 117</td>
</tr>
</tbody>
</table>

---

64
Improving plant performance

**Maintenance impacted by labour constraints**
Hours, Index 2019 = 100

<table>
<thead>
<tr>
<th>Year</th>
<th>Index</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td></td>
<td>100</td>
<td>80</td>
<td>98</td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Increased planned shutdowns**
Hours, Index 2019 = 100

<table>
<thead>
<tr>
<th>Year</th>
<th>Index</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td></td>
<td>100</td>
<td>97</td>
<td>114</td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Stabilising and addressing maintenance backlog**
Outstanding hours, Index 2019 = 100

<table>
<thead>
<tr>
<th>Year</th>
<th>Index</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td></td>
<td>100</td>
<td>117</td>
<td>120</td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 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)

<table>
<thead>
<tr>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21F*</th>
<th>22-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>232</td>
<td>132</td>
<td>121</td>
<td>110</td>
<td>&lt;100</td>
</tr>
</tbody>
</table>

**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**)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1</td>
<td>9</td>
<td>360Mtpa</td>
<td></td>
</tr>
</tbody>
</table>

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

**Investing in our assets**

Key focus areas:
- Asset reliability
- Plant and rail asset health
- Accommodation / camps
- Systems including IT

**Unit cost history**

![Chart showing unit cost history from 2016 to 2021]

**2021 latest cost estimate (%)**

- FTE labour: 35%
- Contractor labour: 20%
- Diesel and energy: 13%
- Materials: 12%
- Other: 13%

FTE = full time equivalent

**Sustaining capital investment**

<table>
<thead>
<tr>
<th>Year</th>
<th>Investment (US$bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>0.5</td>
</tr>
<tr>
<td>2018</td>
<td>0.9</td>
</tr>
<tr>
<td>2019</td>
<td>1.1</td>
</tr>
<tr>
<td>2020</td>
<td>1.3</td>
</tr>
<tr>
<td>2021</td>
<td>~1.5</td>
</tr>
</tbody>
</table>

*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.
Pilbara Iron Ore set for even stronger performance

14 new growth mines since 1999
Port expansion towards 360Mt, industry-leading automation
Underpinned by key acquisitions and introduction of Pilbara Blend

Build on outstanding financial performance
Transform our safe operating performance
Deliver new mines
Create value with our partners
Position Pilbara for green steel

> $50bn free cash flow
> 60% EBITDA margins
> 50% average ROCE since 2016

Shipments (Mt, 100%)

1999 - 2013
China expansion

2014 - 2021
Consolidation

2021+
Refocus our future

New mines
Key infrastructure and automation
Shipment (Mt, 100%)
Setting up Pilbara iron ore for stronger performance

First train loaded from mobile crushing and screening at Gudai-Darri with first production from main plant expected for Q2 2022, subject to COVID-19 constraints

Commissioning and ramp up of brownfield mines ongoing, impacted by supply chain quality issues in particular, Mesa A wet plant

Expect elevated quantities of SP10 until mid-year. Pressures to ease with ramp-up of Gudai-Darri and replacement mines. SP10 will then decrease in the medium term

Studies being progressed for new mines*: Western Range, Bedded Hill Top and Hope Downs 2 and Brockman Syncline 1. Delivering system capacity alongside RTSPS** initiatives to improve efficiencies across the network

Modernising agreements across all Traditional Owner partners. Heads of Agreements are currently being drafted with two Traditional Owner groups to define principles of partnership and co-management

Sustaining capex unchanged at $1.5bn. Investing to improve asset health and reliability

Expanding our tenure for potential wind and solar sites

*Commissioning from 2025 subject to approvals | **Rio Tinto Safe Production System
Raising our system capacity

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

<table>
<thead>
<tr>
<th></th>
<th>Prior best performance</th>
<th>Estimated Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max month* Mt</td>
<td>Max quarter* Mt</td>
</tr>
<tr>
<td><strong>Mine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>370</td>
<td>349</td>
</tr>
<tr>
<td><strong>Rail</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>362</td>
<td>351</td>
</tr>
<tr>
<td><strong>Ports</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>393</td>
<td>357</td>
</tr>
<tr>
<td><strong>System</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>362</td>
<td>351</td>
</tr>
</tbody>
</table>

*Annualised rates | ** Mid-term defined as upon completion of the next tranche of new and replacement mines
# How we are improving our business

## Operational Readiness
- 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

## Rio Tinto Safe Production System
- 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

## Focus area

<table>
<thead>
<tr>
<th>Priorities</th>
<th>Focus area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gudai-Darri</td>
<td>Commission and ramp up new assets</td>
</tr>
<tr>
<td>Robe Valley Sustaining</td>
<td>Reduce wait for feed at the crusher</td>
</tr>
<tr>
<td>West Angelas C&amp;D</td>
<td>Reduce materials handling losses</td>
</tr>
<tr>
<td>Western Turner Syncline Phase 2</td>
<td>Reduce fixed plant unscheduled loss</td>
</tr>
</tbody>
</table>

## Value chain

<table>
<thead>
<tr>
<th>Value chain</th>
<th>Mine</th>
<th>Rail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Rio Tinto Safe Production System

### Gudai-Darri
- Dewatering
- Drill and blast
- Load and haul

### Robe Valley Sustaining
- Fragmentation
- Feed strategy
- Engineering and technology

### Western Turner Syncline Phase 2
- Shutdown productivity
- Asset management
- Digital and technology

### Phase 2
- Asset health
- Cycle time
Mine project pipeline

High volume of environmental approvals for new mines

Completed projects
Projects in development
Projects in study stage

Capital Intensity
($/t Real 2021)

Studies being progressed. Commissioning from 2025:
- Western Range
- Bedded Hill Top and Hope Downs 2
- Brockman Syncline 1

Approvals timeline risk has increased
Ongoing focus on quality and product mix

Shipments by product (%)

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

RV = Robe Valley, PBL: Pilbara Blend Lump, PBF: Pilbara Blend Fines
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 1: Low-carbon research project

- **Raw materials**
  - Iron Ore
  - Sustainable Biomass

- **Ironmaking**
  - Green Iron Process
  - Electric Furnace

- **Steelmaking**
  - Pig Iron
  - Basic Oxygen Furnace
  - Electric Arc Furnace

Pilbara Pathway 2: H₂ Hot Briquetted Iron + melter

- **Raw materials**
  - Iron Ore
  - Hydrogen

- **Direct Reduction Ironmaking**
  - Fluidised Bed
  - Shaft Furnace

- **Steelmaking**
  - Hot Briquetted Iron
  - Electrical Melter
  - Basic Oxygen Furnace
  - Electric Arc Furnace
A shift to greener steelmaking technologies

**Short-term / partial decarbonisation**
- BF / BOF: Lump / pellet high-grade iron ore
- Hydrogen (H₂) injection

**Medium / Long-term / net-zero potential**
- BF optimisation + CCUS
- Biomass pig iron¹
- Green H₂ direct reduction¹
- Green H₂ direct reduction + melter¹

**New technologies**
- Direct Smelting
- New iron and steelmaking electric furnace
- Electrolysis

---

Driving need for high-quality iron ore

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

Future pathways for Pilbara iron ore

1. Blast furnace optimisation
   - Multiple projects
2. Pilbara beneficiation
   - Universities
3. Low-carbon research project
   - Pilbara pathway 1
4. H₂ DRI and melter
   - Pilbara pathway 2
5. H₂ DRI Canada
   - Project – study phase
6. Simandou
   - High-quality iron ore

Customer partnerships
We have a dedicated steel decarbonisation team
Aluminium
Lightweight and infinitely recyclable, the carbon footprint from our global aluminium operations is 60% below industry average
Aluminium

Canada, Australia, New Zealand, Iceland, Brazil, Guinea, and Oman

4 bauxite mines

4 alumina refineries

7 hydropower plants
supplying clean, renewable electricity to our Canadian operations

14 smelters

$4.4bn underlying EBITDA

In Canada, operations in the 1st decile of the cost curve

Canadian and New Zealand operations are powered by clean, renewable hydropower
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
Aluminium
Solid operating performance in recovering markets

<table>
<thead>
<tr>
<th>Operating metrics</th>
<th>2021</th>
<th>2020 comparison</th>
<th>2022 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average aluminium price¹</td>
<td>$2,899/t</td>
<td>+ 49%</td>
<td></td>
</tr>
<tr>
<td>Average alumina price²</td>
<td>$329/t</td>
<td>+ 21%</td>
<td></td>
</tr>
<tr>
<td>Production – bauxite</td>
<td>54.3Mt</td>
<td>- 3%</td>
<td>54-57Mt</td>
</tr>
<tr>
<td>Production – alumina</td>
<td>7.9Mt</td>
<td>- 2%</td>
<td>8.0-8.4Mt</td>
</tr>
<tr>
<td>Production – aluminium</td>
<td>3.2Mt</td>
<td>- 1%</td>
<td>3.1-3.2Mt</td>
</tr>
<tr>
<td>Canadian smelters – hot metal cash costs³</td>
<td>$1,373/t</td>
<td>+ 18%</td>
<td>Refer to p86</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial metrics ($bn)</th>
<th>(2021)</th>
<th>(2020) comparison</th>
<th>(2022) guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>12.7</td>
<td>+ 36%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>4.4</td>
<td>+ 104%</td>
<td></td>
</tr>
<tr>
<td>Margin (integrated operations)</td>
<td>38%</td>
<td>+ 12 pp</td>
<td></td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>3.6</td>
<td>+ 87%</td>
<td></td>
</tr>
<tr>
<td>Capex (excl. EAUs)</td>
<td>1.3</td>
<td>+ 29%</td>
<td></td>
</tr>
<tr>
<td>Free cash flow</td>
<td>2.3</td>
<td>+ 155%</td>
<td></td>
</tr>
<tr>
<td>Underlying ROCE</td>
<td>16%</td>
<td>+ 13 pp</td>
<td></td>
</tr>
</tbody>
</table>

¹LME plus all-in premiums (product and market) | ²Platts Alumina PAX FOB Australia | ³Operating costs defined as hot metal cash costs for the Canadian smelters (alumina at market price)

Substantial increase in FCF to $2.3bn, and more than double EBITDA on stable metal operations, higher sales prices and heightened demand for value-added product (VAP)

Gradual restart at Kitimat in 2022 following strike action, production uplift weighted to H2

Bauxite operations struggled with system stability following severe wet weather in Q1 2021 and equipment reliability

ELYYSIS joint venture successfully produced aluminium at industrial scale with no direct greenhouse gas emissions

Investment of $87m for 16 new smelting cells at AP60 smelter to increase its annual production by 45%
Aluminium

Higher prices, recovery of VAP demand and volumes

Underlying EBITDA 2021 vs 2020
$ million

- In 2021, aluminium prices rallied to multi-year highs, following a firm recovery in global demand and extensive power-related supply disruptions in China, which led to a global market deficit.

- This rebound in sales prices, together with increased demand for value-added product (VAP), were the key drivers for our aluminium business to more than double underlying EBITDA and deliver a substantial increase in cash flow.

- Underlying EBITDA of $4.4 billion, which was 104% higher than 2020, benefited from the stronger pricing environment, in particular for primary metal and alumina, and higher product premiums for primary metal. This was only partly offset by the impact of stronger local currencies, lower bauxite and alumina shipments and cyclical cost inflation for coke, pitch and alloys. This increased our industry-leading underlying EBITDA margin to 38%.

- We achieved an average realised aluminium price of $2,899 per tonne, 49% higher than 2020 ($1,946 per tonne). This comprised the LME price, a market premium and a product (VAP) premium.

- The cash LME price averaged $2,480 per tonne, 46% higher than 2020, while in our key US market, the midwest premium duty paid increased by 119% to $584 per tonne (2020: $267 per tonne).

- Our VAP sales represented 50% of the primary metal we sold (2020: 43%) and generated product premiums averaging $230 per tonne of VAP sold (2020: $213 per tonne).

- We generated $3.6 billion in net cash from operating activities, reflective of the higher underlying EBITDA achieved, net of a $0.5 billion build in working capital, driven by the higher pricing environment and supply chain constraints.

- Free cash flow increased by 155% to $2.3 billion.

- Although we are broadly balanced in alumina, approximately 2.2 million tonnes of our legacy alumina sales contracts are exposed to a fixed linkage to the LME price. These contracts date back to 2005 or earlier, and the majority expire between 2023 and 2030.
Aluminium Value Chain
2021 actuals

Mining

- Bauxite 54.3dmt
  - 30% 70%

- Bauxite 37.6dmt

Refining

- Alumina 7.9mt
  - 80% 20%

- Alumina 1.6mt

Aluminium

- Aluminium 3.2mt
  - 100%

Casting

- Casthouse Prodn
  - 50% 50%

RTA Intersegment

- 3rd Party Sales

VAP

Non-VAP
The most profitable integrated Aluminium business

Historic supply growth created challenging conditions

Integrated Upstream¹ EBITDA Margin (%)

Integrated EBITDA Margin & ROCE (%)

¹Upstream assets includes bauxite, alumina and primary metal

Source: Rio Tinto Market Analysis and peer disclosures
Potential for positive structural change in the market from energy and smelting caps in China

Aluminium supply by source (global)

Primary Aluminium supply (China)

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

Sources: Rio Tinto Market Analysis, CRU, IAI.

CAGR: 6.8%

CAGR: 2.6%

CAGR: 4.2%

Sources: Rio Tinto Market Analysis, CRU, IAI.
New coal-powered smelting likely to be challenged

### Total metal required*

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycled</td>
<td>63</td>
<td>75</td>
<td>79</td>
</tr>
<tr>
<td>Primary</td>
<td>25</td>
<td>36</td>
<td>43</td>
</tr>
</tbody>
</table>

**CAGR:** 3.3%  
**CAGR:** 5.5%

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

#### Hydro

<table>
<thead>
<tr>
<th>Year</th>
<th>Recycled</th>
<th>Primary</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021e</td>
<td>330</td>
<td>1,000</td>
</tr>
<tr>
<td>2030</td>
<td>290</td>
<td>1,000</td>
</tr>
</tbody>
</table>

#### Coal

<table>
<thead>
<tr>
<th>Year</th>
<th>Recycled</th>
<th>Primary</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021e</td>
<td>700</td>
<td>750</td>
</tr>
<tr>
<td>2030</td>
<td>770</td>
<td>770</td>
</tr>
</tbody>
</table>

**Carbon price assumption**

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

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 Chinese smelters from Shandong, Shanxi, Xinjiang and Inner Mongolia.
Modelling aluminium costs

Canadian* smelting unit cash** cost sensitivity

<table>
<thead>
<tr>
<th>Input Cost</th>
<th>Impact of $100/t Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumina (FOB)</td>
<td>$191</td>
</tr>
<tr>
<td>Green petroleum coke (FOB)</td>
<td>$25</td>
</tr>
<tr>
<td>Calcined petroleum coke (FOB)</td>
<td>$36</td>
</tr>
<tr>
<td>Coal tar pitch (FOB)</td>
<td>$8</td>
</tr>
</tbody>
</table>

* Canadian smelters include all fully-owned smelters in Canada (Alma, AP60, Arvida, Grande-Baie, Kitimat, and Latemère), 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.
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
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

1GW hydro OR ~4GW renewables

...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

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

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

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).
Empowering customers with a “nutrition label” for materials

Demand
- Growing demand for qualitative information about materials
- Low CO₂ impact and ESG performance production standards (human rights etc.)

Transparency
- Transparency from mine to metal
- Points of distinction from provenance to production
- START provides the information consumers demand

Digital
- Leverages blockchain
- Distinguish products beyond low CO₂ aluminum offering
- ASI certification provides 11 factors of responsible production

Brand
- Goes beyond low CO₂ metal to include multiple factors of ESG product differentiation
- Modern, light brand
- Designed for end-user
Scaling up ELYSIS™ technology

- ELYSIS has achieved stable cell operation, producing commercial metal grade
- Completed construction of new Industrial R&D Center in Saguenay-Lac-St-Jean for next steps in technology scale-up
- Commissioning in full swing to produce metal at scale similar to small, industrial-sized smelting cells
- Technology expected to reach commercial maturity in 2024

Strong market demand emerging

- **Q3 2020**: Apple’s 16” MacBook Pro is world’s first device manufactured using ELYSIS metal, delivered through Rio Tinto’s commercial network.
- **Q4 2020**: Rio Tinto supplied ELYSIS metal to AB InBev as part of partnership to produce their most sustainable can – piloted with Michelob ULTRA
- **Q2 2021**: Selected our Alma smelter in Saguenay-Lac-Saint-Jean, Quebec, for the first installation and demonstration of its inert anode technology at a commercial size of 450 kiloamperes (kA) and start of construction of the first prototype cells.
Copper

Kennecott and Oyu Tolgoi operations are the first and second copper mines in the world to be awarded Copper Mark – the industry’s responsible production assurance programme
Copper

US, Mongolia, Chile, and Guinea

3 copper operations

3 copper growth projects
US, Australia and Mongolia

$4bn underlying EBITDA

Kennecott and Oyu Tolgoi
first and second copper mines in the world awarded Copper Mark

1 high-grade iron ore growth project in Guinea
Copper

Strong financial results despite COVID-19 and other challenges

<table>
<thead>
<tr>
<th>Operating metrics</th>
<th>2021</th>
<th>2020 comparison</th>
<th>2022 Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper realised price¹</td>
<td>415c/lb</td>
<td>+ 66%</td>
<td></td>
</tr>
<tr>
<td>Production – mined copper</td>
<td>236kt</td>
<td>- 11%</td>
<td>500-550kt</td>
</tr>
<tr>
<td>Production – refined copper</td>
<td>111kt</td>
<td>+ 50%</td>
<td>210-250kt</td>
</tr>
<tr>
<td>Unit cost²</td>
<td>71c/lb</td>
<td>- 43%</td>
<td>60-75c/lb</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial metrics ($bn)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>3.8</td>
<td>+ 91%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>2.0</td>
<td>+ 199%</td>
<td></td>
</tr>
<tr>
<td>Margin (product group ops)</td>
<td>61%</td>
<td>+ 18pp</td>
<td></td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>1.2</td>
<td>+ 1,132%</td>
<td></td>
</tr>
<tr>
<td>Sustaining capex</td>
<td>0.2</td>
<td>+ 47%</td>
<td></td>
</tr>
<tr>
<td>Replacement and growth capex</td>
<td>0.5</td>
<td>- 36%</td>
<td></td>
</tr>
<tr>
<td>Free cash flow</td>
<td>0.6</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Underlying ROCE³</td>
<td>13%</td>
<td>+ 11 pp</td>
<td></td>
</tr>
</tbody>
</table>

¹ Average realised price for all units sold. Realised price does not include the impact of the provisional pricing adjustments, which positively impacted revenues in 2021 by $246m (2020 positive impact of $182m).
² Unit costs for Kennecott, OT and Escondida utilise the C1 unit cost calculation where Rio Tinto has chosen Adjusted Operating Costs as the appropriate cost definition. C1 costs are direct costs incurred in mining and processing, plus site G&A, freight and realisation and selling costs. Any by-product revenue is credited against costs at this stage.
³ Underlying ROCE is defined as underlying earnings (product group operations) excluding net interest divided by average capital employed.
⁴ Following a reorganisation of the management team in 2021, the Diamonds business is reported within Minerals and the Simandou iron ore project in Guinea is reported within Copper. 2020 comparatives have been adjusted accordingly.

Strong market conditions due to declining stocks, renewed speculative interest and COVID-related supply constraints

Oyu Tolgoi agreement reached with partners. Underground operations under way. First production in H1 2023

Kennecott – improved smelter performance, copper grade exceeding 0.5% in H2

Temporary increase in grades at OT open pit; continued COVID impacts at Escondida

Costs below 2020 but marginally above guidance: lower throughput and grades at Escondida and higher royalties, offset by higher gold grades at OT. Lower gold volumes and underlying inflation reflected in 2022
Copper
Higher prices, volume impacted by COVID-19

Underlying EBITDA 2021 vs 2020
$ million

- At $4.0 billion, underlying EBITDA was up 90%, with margins rising to 59%, driven by the strong recovery in prices and an improved smelter performance at Kennecott in the US.
- The improvement in our financial performance was primarily attributable to strong market conditions, with the copper price driven higher by renewed speculative interest, declining LME stocks, a weaker US dollar and COVID-related supply constraints.
- We also benefited from higher sales volumes of refined metal at Kennecott and temporarily higher gold grades at Oyu Tolgoi in Mongolia. These compensated for lower volumes at Escondida in Chile, where ongoing preventive measures in response to COVID-19 continued to impact workforce availability.
- Our average realised copper price increased by 50% to 424 US cents per pound, even before taking into account the provisional pricing benefit to revenues of $246 million in 2021, while the benchmark gold price rose just 2% to $1,799 per ounce.

- We incurred additional costs related to our response to COVID-19, higher energy costs and higher unit costs at Escondida due to lower concentrator throughput.
- We generated $2.6 billion in net cash from our operating activities, a 168% increase on 2020, from the same drivers as underlying EBITDA and a $0.8 billion increase in dividends from our 30% equity holding in Escondida to $1.4 billion, partly offset by a $0.4 billion tax payment in Mongolia.
- Free cash flow of $1.3 billion reflected the higher operating cash flow and high level of capital investment ($1.3 billion), mainly relating to the ongoing development of the Oyu Tolgoi underground project, where we have a 34% effective interest but fully consolidate on the basis of management control.
- Our copper unit costs, at 82 cents per pound in 2021, were 26% lower than in 2020, but marginally above guidance of 75 to 80 cents per pound. Lower throughput and grades at Escondida and higher royalties, in line with stronger prices, at Kennecott and Oyu Tolgoi were offset by higher production of copper and, in particular, gold at Oyu Tolgoi, driven by higher grades.
Sector-leading attributes

Attractive industry fundamentals
- Robust long-term demand
- Constrained supply
- Deficit expected towards end of decade

Large, high-quality resources
- Long-life, low-cost, expandable assets
- Interests in Tier 1 copper mines

Multiple, strong growth options
- Medium-term growth potential from Oyu Tolgoi
- Longer-dated optionality at Resolution
- Exploration pipeline, including Winu
Oyu Tolgoi underground

Technical progress despite COVID-19 restrictions

Material Handling System 1 is 90% complete; technical criteria achieved to support undercut commencement despite site operating as low as 25% manning levels due to COVID-19.

Other milestones are in progress, critical to project delivery.

One of the largest block cave mines. Globally competitive safety performance; highest water use efficiency per tonne, 89% average water recycling rate.

Talented & committed workforce: 12,000 employees of which 96% are Mongolian nationals.

>$12bn spent since 2010, COVID-19 support, 70% of FDI*, 1/3rd of GDP**

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*This estimate is at a better than feasibility study level of accuracy. The definitive estimate assumes restrictions in 2021 that are no more stringent than those experienced in September 2020. Mongolia implemented further restrictions at the end of 2020 in response to a re-emergence of COVID-19. Should COVID-19 constraints be maintained at December 2020 levels, escalate further in 2021 leading to tougher restrictions, or continue beyond 2021, additional costs and schedule impacts will arise.

**Foreign direct investment

**Gross domestic product

riotinto.com/operations/mongolia/oyu-tolgoi
Oyu Tolgoi delivers substantial economic value to Mongolia

FDI
OT accounts for one-third of Mongolia’s GDP; 70% of Foreign Direct Investment

Jobs
Country’s largest private-sector employer, workforce of 12,000 is >96% Mongolian

Taxes
Since 2010, OT has spent US$13.4bn in-country in the form of salaries, payments to Mongolian suppliers, taxes and other payments to the Government of Mongolia. Since 2010, OT has paid US$3.6bn in taxes, fees and other payments.

Local spend
$4.1bn on national procurement spend since 2010; National procurement spend is 71% of total spend. 864 suppliers of which 540 are national businesses.

Source: World Bank

riotinto.com/operations/mongolia/oyu-tolgoi/oyu-tolgoi-communities
Kennecott
A stronger contributor to cash

South wall push back underpins over a decade of high-quality cash flow

Overall improvement of ~5% in truck productivity equates to ~12 mt additional material moved

Operational excellence to maximise value

Returns to higher grades in 2021

riotinto.com/operations/us/kennecott
Resolution Copper
Potential to produce up to 25% of US copper demand; critical to a low carbon future

We are continuing to work with the US Forest Service to review the Final Environmental Impact Statement (EIS) and draft Record of Decision. Mine studies continue to progress in parallel.

More than $2bn has been spent on the project from voluntary reclamation, sinking a second shaft, rehabilitating the existing shaft and deepening to mining depth, ore body study and evaluation, and the federal approval and public engagement.

We are committed to ongoing stakeholder engagement in our effort to seek consent from Native American Tribes consistent with the International Council on Mining and Metals (ICMM) Statement on Indigenous Peoples and Mining.

Resolution Copper has the potential to produce up to 25% of US copper demand each year, a critical step toward delivering a low-carbon future. The project has the potential to create approximately 3,700 direct and indirect jobs in Arizona process.
We are committed to Guinea and the Simandou project

One of the world’s largest untapped and richest high-grade iron ore deposits, located in Guinea

High-grade ores can support the transition to lower-carbon steel

Strengthens Rio Tinto’s iron ore portfolio as well as our product offering

Complements Rio Tinto iron ore operations in the Pilbara, Western Australia

Competitively positioned as a mid-ranking producer on the cost curve

Diversifies and strengthens the economy of Guinea and local communities

There are factors coming together now to support its development with or without Rio Tinto
Non-managed 30% interest in Escondida

Strong cash flows underpin dividends of $0.6bn in 2020

No additional significant capex required for near future

Desalination plant operating well

Transition to renewable based contracts in 2021
Minerals
Our products are essential to everyday modern life
<table>
<thead>
<tr>
<th>Minerals</th>
<th>Canada, Madagascar, South Africa, the US and China</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6 mining sites</strong></td>
<td>5 countries</td>
</tr>
<tr>
<td><strong>7 smelters, refineries and processing plants</strong></td>
<td>1st mining company to be certified by the Responsible Jewellery Council</td>
</tr>
<tr>
<td><strong>$2.6bn underlying EBITDA</strong></td>
<td><strong>18,000 solar panels to power QIT Madagascar Minerals operations by end of 2022</strong></td>
</tr>
</tbody>
</table>
Minerals

Robust financials in operationally challenging year

**Operating metrics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>2021</th>
<th>2020 comparison</th>
<th>2022 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOC pellets price¹</td>
<td>$214/t</td>
<td>+ 68%</td>
<td></td>
</tr>
<tr>
<td>TiO₂ slag price²</td>
<td>$785/t</td>
<td>- 2%</td>
<td></td>
</tr>
<tr>
<td>Production – IOC</td>
<td>9.7Mt</td>
<td>- 6%</td>
<td>10.0-11.0Mt</td>
</tr>
<tr>
<td>Production – TiO₂</td>
<td>1.0Mt</td>
<td>- 9%</td>
<td>1.1-1.4Mt</td>
</tr>
<tr>
<td>Production – Borates</td>
<td>0.5Mt</td>
<td>+ 2%</td>
<td>~0.5Mt</td>
</tr>
<tr>
<td>Production – Diamonds</td>
<td>3.8Mct</td>
<td>+ 3%</td>
<td>5.0-6.0Mct³</td>
</tr>
</tbody>
</table>

**Financial metrics ($bn)**

<table>
<thead>
<tr>
<th>Metric</th>
<th>2021</th>
<th>2020 comparison</th>
<th>2022 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross produce sales</td>
<td>6.5</td>
<td>+ 25%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>2.6</td>
<td>+ 52%</td>
<td></td>
</tr>
<tr>
<td>Margin (product group ops)</td>
<td>43%</td>
<td>+ 8 pp</td>
<td></td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>1.4</td>
<td>+ 28%</td>
<td></td>
</tr>
<tr>
<td>Capex</td>
<td>0.6</td>
<td>+ 42%</td>
<td></td>
</tr>
<tr>
<td>Free cash flow</td>
<td>0.8</td>
<td>+ 19%</td>
<td></td>
</tr>
<tr>
<td>Underlying ROCE⁴</td>
<td>21%</td>
<td>+ 7 pp</td>
<td></td>
</tr>
</tbody>
</table>

Entered into a binding agreement to acquire the Rincon lithium project in Argentina

IOC – favourable pricing but labour and equipment availability impacted production

RBM resumed operations in August following stabilisation of security situation

QMM in Madagascar operating well and delivering consistent production, construction launch of solar and wind power plant. Unplanned maintenance and equipment reliability issues at RTFT

Diavik – became sole owner in November, strong price recovery following pandemic-related build-up of demand and low inventory

---

¹ Wet metric tonne | ² TZMI chloride slag assessment November 2021, excludes UGS | ³ Diamonds guidance is for Diavik only following the closure of Argyle in 2020. Increase in 2021 production reflects 100% ownership of Diavik (previously 60%) from 1st November 2021. | ⁴ Underlying ROCE is defined as underlying earnings (product group operations) excluding net interest divided by average capital employed | ⁵ Following a reorganisation of the management team in 2021, the Diamonds business is reported within Minerals and the Simandou iron ore project in Guinea is reported within Copper. 2020 comparatives have been adjusted accordingly
Minerals
Strong pricing across portfolio supports EBITDA

Underlying EBITDA 2021 vs 2020
$ million

- In 2021, we benefited from strong market conditions in particular for iron ore pellets and concentrate, but also for titanium dioxide pigment and borates, driven by global economic growth and underpinned by a robust construction market. We also saw a recovery in diamond prices following a pandemic-related build-up of demand and low inventory levels.

- Underlying EBITDA of $2.6 billion was 52% higher than 2020, primarily due to the strong pricing environment which more than offset the impact of lower volumes, which in turn drove up unit cash costs due to fixed cost inefficiencies.

- We generated net cash of $1.4 billion from our operating activities, and $0.8 billion of free cash flow, 28% and 19% higher than 2020, respectively, reflecting the strong pricing environment and higher dividends paid to holders of non-controlling interests at Iron Ore Company of Canada.

- The business continued to comply with government-imposed COVID-19 restrictions, notably in Canada, the US and South Africa. At our titanium dioxide business we experienced 9% lower production, as a result of community disruptions and subsequent curtailment of operations at Richards Bay Minerals (RBM) in South Africa for around three months coupled with an extended ramp-up period, as well as unplanned maintenance and equipment reliability issues at Rio Tinto Fer et Titane (RTFT) in Canada.

- On 18 November, we announced we had become the sole owner of Diavik Diamond Mine in the Northwest Territories of Canada, continuing its leading role in the Canadian diamond industry.
Commercial, Exploration & Evaluation
Commercial

Maximising the value of our physical flows to improve both our business and that of our customers

~2000 customers

37,000 suppliers in more than 120 locations

230 ships contracted and owned ships managed at any one time, including 17 owned by Rio Tinto

2,700 voyages per year
Exploration & Evaluation

400+ explorers

$726M spent on exploration and evaluation in 2021

Exploring for
7 commodities
in 18 countries

Key exploration projects
in Australia, Canada, United States, Kazakhstan, Zambia and Finland
Innovation

From being the first company in the world to have our aluminium certified as responsible to building one of the world’s largest robots, our pioneering spirit and innovation keep us moving forward.
Innovation

We use advanced technology and some of the best minds in the business to maximise value.

- **Auto Haul™**
  The world’s largest automated heavy haul rail network

- **World’s largest**
  Autonomous drill fleet (Pilbara, Australia)

- **ELYSIS™**
  Pathway to carbon free aluminium smelting

- **Gudai-Darri**
  Set to be our most technologically advanced mine

- **Li from waste**
  Producing battery grade lithium from waste rock at Boron
Partnerships in innovation

Technology partners, local suppliers, governments, community groups, industry leaders and NGOs

- Downstream emission reductions
- Unlocking frontier exploration markets
- Australia’s first nationally accredited automation training
- Ensuring the sustainability of the diamond industry
- Path to carbon free aluminium smelting
- Sustainable approach to meeting the resource needs of green energy
- Australia’s first indigenous owned and operated bauxite mine

Transitioning to a low-carbon emission steel value chain

Committed to responsible production and transparency

Strengthened global capabilities for key Chinese partners

Industry standards for sustainable development

One billion tonnes of autonomous ore haulage

Responsible aluminum value chain

Lifesaving connections for rural communities

Powering the mine of the future
Our joint venture with Alcoa, supported by Apple and the governments of Canada and Quebec

Helping to further develop breakthrough aluminium smelting technology with zero direct greenhouse gas emissions
Smart mining

Data is one of our most valuable assets

**MAS**
Our Mine Automation System pulls together data at 98% of our sites

**≈260**
unmanned trucks in operation today

**1700**
people using RTVis™ at 98% of our mines

**>4,000**
vehicles across our 60 global operations tracked, 24 hours a day

**>45**
electronic tags on each haul truck sending data every few seconds
Data analytics and AI lowers cost and drives productivity

Copper head grade prediction
Reduction in materials handling downtime
Forecasting ship arrivals

Real-time chemistry increasing Cu recovery
~40% reduction in materials handling downtime
Enable the reduction of demurrage costs

Global replication opportunity
Global replication opportunity
Global replication opportunity

Targeted head grade prediction is from Rio Tinto Kennecott. Materials handling downtime results are from Hope Downs 1.
Industry-leading exploration technology delivering results

Sophisticated proprietary tools & techniques

- “Greenrocks”
- Geochronology & Fertility
- Automated Mineralogy
- Predictive Analytics
- New models

Rapid application of new technologies

- Drones
- Hyperspectral Imaging
- Data in the field
- Search Analytics
- Research Partnership

Discovered by applying new insights to public and proprietary data to improve our targeting techniques

Novel adaptation of existing technology accelerating definition of the orebody
In August 2020, all ICMM members including Rio Tinto committed to implement the Global Industry Standard on Tailings Management (GISTM).

All tailings facilities operated by Rio Tinto with “Extreme” or “Very high” potential consequences will be in conformance with the Standard by 5 August 2023.

We have reviewed all our relevant standards, which are well aligned with the GISTM.

We use our standard for the management of tailings and water storage facilities at 108 tailings storage facilities (TSFs) at our assets globally. There are a further 50 TSFs at non-managed sites. In total, there are 65 active TSFs, 40 are inactive and 53 are closed.

For non-managed sites with tailings facilities, we actively participate in technical committees in an advisory capacity with our joint venture partners. Each of the technical committees has a Tailings Steering Committee, or equivalent, to support the effective management of tailings.
Three levels of assurance for managing tailings and water storage

1st level: Site processes
- Effective design, inspection and monitoring

2nd level: Surface Mining Centre of Excellence
- Technical risk reviews

3rd level: Audit
- Audit of control effectiveness: Group Internal Audit working with external auditors. Assures systems for risk management, internal control and governance are effective
- Group review: Assurance to the Rio Tinto Standard. Business conformance audits and HSEC reviews. Review by subject matter experts external to the asset
- Operations management: Effective facility design (Engineer of Record / Design Engineer). Comprehensive operational controls. Independent external review undertaken at least every two years

 riotinto.com/sustainability/environment/tailings
Financial information & policies
Shareholder returns policy

Balanced capital allocation

Maintain an appropriate balance between:
– Investment in compelling growth projects
– Total shareholder cash returns of 40-60% of underlying earnings through the cycle

Supplement ordinary dividends with additional returns in periods of strong earnings and cash generation

Balance between interim and final to be weighted towards the final dividend

Board to determine appropriate ordinary dividend per share, taking into account:
– Results for the financial year
– Outlook for our major commodities
– View on the long-term growth prospects
– Objective of maintaining a strong balance sheet
## Credit rating*

* A rating is not a recommendation to buy, sell or hold securities, and may be subject to revision, suspension or withdrawal at any time by the assigning rating agencies.

<table>
<thead>
<tr>
<th></th>
<th>Standard &amp; Poor’s</th>
<th>Moody’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term</td>
<td>A</td>
<td>A2</td>
</tr>
<tr>
<td>Short-term</td>
<td>A-1</td>
<td>P-1</td>
</tr>
<tr>
<td>Outlook</td>
<td>Stable</td>
<td>Stable</td>
</tr>
</tbody>
</table>
Debt maturity profile
31 December 2021 debt maturity profile*

Average outstanding debt maturity of corporate bonds extended to ~16 years following the bond maturity extension transaction undertaken in H2 2021 (~11 years for Group debt)

No corporate bond maturities until 2024

Liquidity remains strong under stress tests

In H2 2021, the $7.5bn back-stop Revolving Credit Facility was re-financed and now matures in November 2026. It has two additional one-year extension options

*Numbers based on December 2021 accounting value. The debt maturity profile shows $1.4 billion of capitalised leases under IFRS 16.
<table>
<thead>
<tr>
<th>Product Group</th>
<th>All numbers on 100% basis (US$)</th>
<th>Approved capital cost</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Copper</strong></td>
<td></td>
<td>$0.9bn</td>
<td></td>
</tr>
<tr>
<td>Phase 1 investment to extend mine life at <em>Rio Tinto Kennecott</em></td>
<td></td>
<td></td>
<td>The $0.9 billion first phase of the south wall pushback at Kennecott in the US, extending mine life to 2026, is now complete and we are gradually accessing higher copper grades. Stripping for the $1.5 billion second phase, extending operations to 2032, remains on track. In July, we announced a $108 million investment for underground characterisation studies: potential underground mining would occur concurrently with open pit operations and result in increased output.</td>
</tr>
<tr>
<td>Further investment (Phase 2) to extend mine life at <em>Rio Tinto Kennecott</em>, US by a further six years to 2032</td>
<td>$1.5bn</td>
<td>Approved in December 2019, the investment will further extend strip waste rock mining and support additional infrastructure development. This will allow mining to continue into a new area of the orebody between 2026 and 2032. Stripping for the $1.5 billion second phase, extending operations to 2032, remains on track. In July 2021, we announced a $108 million investment for underground characterisation studies: potential underground mining would occur concurrently with open pit operations and result in increased output.</td>
<td></td>
</tr>
<tr>
<td>Development of the <em>Oyu Tolgoi</em> underground copper/gold mine in Mongolia (Rio Tinto 34%), which is expected to produce 480,000 tonnes* of copper per year on average from 2028 to 2036 (open pit and underground), compared with 149,600 tonnes in 2020 (open pit).</td>
<td>$6.75bn</td>
<td>The project was originally approved in May 2016 for $5.3bn, with an additional $1.45 billion approval by the Rio Tinto Board in December 2020, following completion of the definitive estimate. Underground operations are now under way at the Oyu Tolgoi underground copper/gold project in Mongolia, following the comprehensive agreement reached with our partners on 25 January 2022. Sustainable production is expected in the first half of 2023, with the capital forecast at $6.925 billion, including $175 million of estimated COVID-19 impacts to the end of 2021.</td>
<td></td>
</tr>
</tbody>
</table>

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* This production target (stated as recovered metal) for the Oyu Tolgoi underground and open pit mines was previously reported in a release to the market on 16 December 2020 (market release). All material assumptions underpinning the production target continue to apply and have not materially changed.

^ These estimates exclude any impacts of delays to work schedules caused by restricted approved budgets since the start of 2021. This, together with any ongoing COVID-19 impacts, will be assessed following the commencement of underground operations with further updates provided to the market in due course. Panels 1 and 2 studies will be ongoing throughout 2022. Further study work is also under way to assess the extraction methodology and ultimate recovery of the Panel 0 recoverable pillars.
<table>
<thead>
<tr>
<th>Product Group</th>
<th>All numbers on 100% basis (US$)</th>
<th>Approved capital cost</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron ore</td>
<td>Investment in <strong>West Angelas and the Robe Valley</strong> in the Pilbara region of Western Australia to sustain production capacity.</td>
<td>$0.9bn (RT share)</td>
<td>The investment in the Robe River Joint Venture replacement iron ore mines is progressing. First ore at West Angelas (C and D deposits) was achieved in June and are now fully commissioned. First ore at Robe Valley (Mesa B, C, H) was achieved in August. Ongoing Mesa A wet plant construction and commissioning challenges have impacted production ramp-up. New wet plant components are on order and production will operate at a reduced capacity until repairs are completed.</td>
</tr>
<tr>
<td></td>
<td>Investment in <strong>Gudai-Darri</strong> (formerly Koodaideri), a new production hub in the Pilbara region of Western Australia, to sustain existing production in our iron ore system.</td>
<td>$2.6bn</td>
<td>The Gudai-Darri greenfield iron ore mine in Western Australia is advancing. The first train was loaded from the mobile crushing and screening facilities in December and first production from the main plant is expected in the second quarter of 2022, subject to the continuing impacts of COVID-19. This first phase of Gudai-Darri, with a 43 million tonne annual capacity, will replace depleting orebodies and provide some incremental capacity.</td>
</tr>
<tr>
<td></td>
<td>Investment in the <strong>Greater Tom Price</strong> operations to help sustain production capacity.</td>
<td>$0.8bn</td>
<td>The Western Turner Syncline phase 2 mine, which will also replace existing iron ore production, achieved first ore in October, following commissioning of the autonomous mining truck fleet. Some residual brownfield plant works are due to be complete during mid-year shutdowns.</td>
</tr>
<tr>
<td>Minerals</td>
<td>Development of the <strong>Zulti South</strong> project at Richards Bay Minerals (RBM) in South Africa (Rio Tinto 74%), to sustain current capacity and extend mine life.</td>
<td>$0.5bn</td>
<td>Approved in April 2019, the investment will underpin RBM’s supply of zircon and ilmenite over the life of the mine. Construction remains on full suspension, pending normalisation of operations.</td>
</tr>
<tr>
<td>Aluminium</td>
<td>Investment in a second tunnel at the 1000MW <strong>Kemano</strong> hydropower facility at Kitimat, British Columbia, Canada. The project will ensure the long-term reliability of the power supply to the modernised Kitimat smelter.</td>
<td>$0.6bn</td>
<td>The project was approved in 2017, with $155 million of additional capital approved in 2020. It was impacted by the departure of the main contractor in the first half of 2020. Tunnel excavation works restarted in September. However, due to the escalation of COVID-19 in the province, tunnel excavation works have been interrupted. We expect to restart late in the first quarter of 2021.</td>
</tr>
</tbody>
</table>
## Modelling EBITDA

### Underlying EBITDA sensitivity

<table>
<thead>
<tr>
<th></th>
<th>Average published price/exchange rate for 2021</th>
<th>US$ million impact on full year 2021 underlying EBITDA of a 10% change in prices/exchange rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>422c/lb</td>
<td>543</td>
</tr>
<tr>
<td>Aluminium</td>
<td>$2,480/t</td>
<td>813</td>
</tr>
<tr>
<td>Gold</td>
<td>$1,799/oz</td>
<td>120</td>
</tr>
<tr>
<td>Iron ore realised price (62% Fe CFR freight-adjusted)</td>
<td>$143.8/dmt</td>
<td>3,605</td>
</tr>
<tr>
<td>A$</td>
<td>0.75US$</td>
<td>736</td>
</tr>
<tr>
<td>C$</td>
<td>0.80US$</td>
<td>285</td>
</tr>
<tr>
<td>Oil (Brent)</td>
<td>$70/bbl</td>
<td>111</td>
</tr>
</tbody>
</table>

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.
## Accounting treatment of principal operations

<table>
<thead>
<tr>
<th>Asset</th>
<th>%</th>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alumina</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jonquiere</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Queensland Alumina</td>
<td>80.0</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Sao Luis (Alumar)</td>
<td>10.0</td>
<td>Brazil</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Yarwun</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td><strong>Aluminium</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alma</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Alouette JV</td>
<td>40.0</td>
<td>Canada</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Arvida</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Arvida AP60</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Bécancour</td>
<td>25.1</td>
<td>Canada</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Bell Bay</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Boyne</td>
<td>59.4</td>
<td>Australia</td>
<td>Equity accounted unit</td>
</tr>
<tr>
<td>Grande Baie</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>ISAL</td>
<td>100.0</td>
<td>Iceland</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Kitimat</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Laterrière</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Sohar</td>
<td>20.0</td>
<td>Oman</td>
<td>Equity accounted unit</td>
</tr>
<tr>
<td>Tiwai Point (NZAS)</td>
<td>79.4</td>
<td>New Zealand</td>
<td>Proportional consol</td>
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<tr>
<td><strong>Salt</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dampier Salt</td>
<td>68.4</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td><strong>Uranium</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Resources of Australia (ERA)</td>
<td>68.4</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Asset</th>
<th>%</th>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bauxite</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gove</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Porto Trombetas (MRN)</td>
<td>12.0</td>
<td>Brazil</td>
<td>Equity accounted unit</td>
</tr>
<tr>
<td>Sangaredi (note 1)</td>
<td>23.0</td>
<td>Guinea</td>
<td>Equity accounted unit</td>
</tr>
<tr>
<td><strong>Borates</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>100.0</td>
<td>US</td>
<td>Full consolidation</td>
</tr>
<tr>
<td><strong>Copper</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Escondida</td>
<td>30.0</td>
<td>Chile</td>
<td>Equity accounted unit</td>
</tr>
<tr>
<td>Kennecott</td>
<td>100.0</td>
<td>US</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Oyu Tolgoi</td>
<td>33.5</td>
<td>Mongolia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Turquoise Hill Resources (TRQ)</td>
<td>50.8</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Resolution</td>
<td>55.0</td>
<td>US</td>
<td>Full consolidation</td>
</tr>
<tr>
<td><strong>Diamonds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyle Diamonds</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Diavik Diamonds</td>
<td>60.0</td>
<td>Canada</td>
<td>Proportional consol</td>
</tr>
<tr>
<td><strong>TiO₂ feedstocks</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTFT mine and smelter</td>
<td>100.0</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>QMM mine</td>
<td>80.0</td>
<td>Madagascar</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Richards Bay Minerals</td>
<td>74.0</td>
<td>South Africa</td>
<td>Full consolidation</td>
</tr>
</tbody>
</table>

**Salt** and **Uranium** are likely related to the production of salt and uranium, respectively. The table lists the assets, their respective percentages, locations, and the accounting treatment applied by the company.
## Accounting treatment of principal operations (cont)

<table>
<thead>
<tr>
<th>Asset</th>
<th>%</th>
<th>Location</th>
<th>Accounting treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brockman (2 and 4)</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Eastern Range JV (note 2)</td>
<td>54.0</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Hope Downs JV (1 and 4)</td>
<td>50.0</td>
<td>Australia</td>
<td>Proportional consol</td>
</tr>
<tr>
<td>Iron Ore Company of Canada (IOC)</td>
<td>58.7</td>
<td>Canada</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Marandoo</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Mt Tom Price</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Nammuldi</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Pannawonica (Mesas J and A)</td>
<td>53.0</td>
<td>Australia</td>
<td>Proportional consol (note 3)</td>
</tr>
<tr>
<td>Paraburdoo</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>West Angelas</td>
<td>53.0</td>
<td>Australia</td>
<td>Proportional consol (note 3)</td>
</tr>
<tr>
<td>Western Turner Syncline</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
<tr>
<td>Yandicoogina</td>
<td>100.0</td>
<td>Australia</td>
<td>Full consolidation</td>
</tr>
</tbody>
</table>

**Note 1:** Río Tinto has a 22.95% interest in Sangaredi but benefits from 45% of production, through Halco, which is equity accounted.

**Note 2:** Under the terms of the Eastern Range Joint Venture Agreement, Hamersley Iron manages the operation and is obliged to purchase all production from the JV.

**Note 3:** Río Tinto recognises 65% of the assets, liabilities, revenues and expenses of Robe River, with a 12% non-controlling interest. The Group therefore has a 53% beneficial interest in the Robe River mines (Mesas J and A and West Angelas).
Principal corporate activity 2010 to 2012

2010

- Sale of majority of Alcan Packaging to Amcor $1,948m
- Sale of Coal & Allied undeveloped properties (Maules Creek and Vickery) – Rio Tinto share $306m
- Sale of Alcan Packaging Food Americas to Bemis Inc $1,200m
- Increase in stake in Ivanhoe Mines to 40.1% $1,591m
- Sale of remaining 48% stake in Cloud Peak Energy $573m

2011

- Increase in stake in Ivanhoe Mines to 42.1% and participation in rights offering $751m
- Increase in stake in Ivanhoe Mines to 46.5% $502m
- Acquisition of Riversdale Mining Ltd (net of cash acquired) $3,690m
- Sale of talc business to Imerys – enterprise value $340m
- Increase in stake in Ivanhoe Mines from 46.5% to 49% $607m
- Increase in holding in Coal and Allied from 75.7% to 80% $266m
- Acquisition of Hathor $536m
- Buy-back of Rio Tinto plc shares (up to 31 December 2011) $5,500m

2012

- Purchase of remaining shares in Hathor $76m
- Increase in stake in Ivanhoe Mines from 49% to 51% $308m
- Buy-back of Rio Tinto plc shares (up to 26 March 2012) $1,500m
- Rio Tinto completes formation of Simandou JV with Chalco $1,350m
- Increase in stake in Richards Bay Minerals from 37% to 74% $1,700m

Note: only selected transactions are shown.
Principal corporate activity 2013 to 2017

2013
• Sale of Eagle $315m
• Sale of Palabora Mining Corporation $373m
• Sale of Northparkes $820m
• Sale of Altynalmas Gold (held by Turquoise Hill subsidiary) $235m
• Sell-down of interest in Constellium $670m

2014
• Sale of Clermont thermal coal mine $1,015m

2015
• Buy-back of Rio Tinto Limited shares (off-market) $425m
• Buy-back of Rio Tinto Plc shares (ongoing throughout 2015) $1,575m

2016
• Sale of Bengalla thermal coal Joint Venture $617m
• Sale of Mt Pleasant thermal coal project $221m
• Sale of Lochaber aluminium smelter $410m

2017
• Sale of Coal & Allied $2,690m
• Buy-back of Rio Tinto Limited shares (off-market) ~$575m
• Buy-back of Rio Tinto plc shares ~$1,500m

Note: only selected transactions are shown. Based on amounts announced in Rio Tinto media releases: may vary from Cash Flow Statement due to timing, completion adjustments and exchange rates.
Principal corporate activity 2018 to 2022

2018
• Sale of 82% interest in Hail Creek coking coal mine and 71.2% interest in Valeria coal development project to Glencore $1,700m
• Sale of 75% interest in Winchester South coal development project to Whitehaven Coal Limited $200m
• Sale of 80% interest in Kestrel coking coal mine to consortium comprising EMR Capital and PT Adaro Energy Tbk $2,250m
• Sale of 100% interest in wharf and land in Kitimat to LNG Canada $576m
• Sale of 100% interest in Dunkerque aluminium smelter in France to Liberty House $500m
• Sale of interest in Grasberg mine to Inalum $3,500m
• Buy-back of Rio Tinto plc shares ~$3,300m
• Buy-back of Rio Tinto Limited shares (off-market) ~$2,100m

2019
• Buy-back of Rio Tinto plc shares $1.55bn

2020
• Buy-back of Rio Tinto plc shares $0.2bn

2021
• Entered into a binding agreement to acquire the Rincon lithium project in Argentina from Rincon Mining $825m

2022
• Completed the acquisition of the Rincon lithium project in Argentina $825m

Note: only selected transactions are shown. Based on amounts announced in Rio Tinto media releases: may vary from Cash Flow Statement due to timing, completion adjustments and exchange rates.
Shareholder structure

23% Rio Tinto Limited
     Shares outstanding: 0.371bn

77% Rio Tinto plc
     Shares outstanding: 1.247bn

100% Rio Tinto DLC
     Shares outstanding: 1.619bn

riotinto.com/invest/shareholder-information
Governance
The team

Bold Baatar, Chief Executive Rio Tinto Copper

Alf Barrios, Chief Commercial Officer

Peter Cunningham, Chief Financial Officer

Mark Davies, Chief Technical Officer

Isabelle Deschamps, Chief Legal Officer & External Affairs

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

Ivan Vella, Chief Executive Rio Tinto Aluminium

riotinto.com/about/executive-committee
Dominic Barton BMM

Chairman

Dominic spent over 30 years at McKinsey & Company, including nine years as the Global Managing Partner. Most recently, he served as Canada’s Ambassador to China. Dominic brings a wealth of global business experience, as well as a deep insight of geopolitics, corporate sustainability and governance.

Dominic was previously Chair of Teck Resources, from 2018 to 2019, and, in 2019, served as a Non-Executive Director at Singtel Group and Investor AB.

Jakob Stausholm

Chief Executive Officer

Jacob joined Rio Tinto in September 2018 as Executive Director and Chief Financial Officer. He became Chief Executive in January 2021.

Prior to joining Rio Tinto, Jakob was the Chief Strategy, Finance and Transformation Officer for the Maersk Group, with oversight of the Group’s strategy, digitisation, IT, legal as well as the transformation and shared services functions. He also served as Group CFO of the global facility service provider ISS. Prior to this, Jakob worked for 19 years for Shell across Europe, Latin America and Asia-Pacific, including as Vice President, Finance for Asia-Pacific, and earlier, as chief internal auditor at Singtel Group and Investor AB.

Peter Cunningham

Chief Financial Officer

Peter joined Rio Tinto in March 1993 and was appointed Chief Financial Officer and Executive Director in June 2021, after serving as Interim Chief Financial Officer for a short period of time.

Over the last three decades, Peter has held a number of senior financial and non-financial leadership positions across Rio Tinto in Australia and the UK. These include Group Controller, Chief Financial Officer – Organisational Resources, Global Head of Health, Safety, Environment & Communities, Head of Energy and Climate Strategy, and Head of Investor Relations.

Prior to joining Rio Tinto, Peter qualified as a chartered accountant, after graduating from the University of Oxford.
Megan Clark AC

Megan, an Australian citizen, has had an extensive career in both the private and public sector, combining expertise in the metals and mining business with high-level experience in science, research and technology. Her core industry experience and knowledge bring valuable insight and effective contributions to the board.

APPOINTMENT
November 2014. Chair of the Sustainability Committee

COMMITTEE MEMBERSHIP
Sustainability Committee (Chair); Remuneration Committee; Nominations Committee

Simon Henry

Simon, a British citizen, has significant global experience in the oil and gas industry, having spent more than 30 years at Royal Dutch Shell plc, most notably as Chief Financial Officer, a position that he held from 2009-17. Simon brings extensive financial expertise to the board and is a fellow of the Chartered Institute of Management Accountants (CIMA) and has a BA in Mathematics and an MA from the University of Cambridge.

APPOINTMENT
April 2017. Chair of the Audit Committee

COMMITTEE MEMBERSHIP
Audit Committee (chair), Nominations Committee, Sustainability Committee

Sam Laidlaw

Sam, a British citizen, has had a long and distinguished career in the energy industry, both in the UK and internationally. Sam brings to the board deep experience of long-cycle, high-capex and safety critical industries from his involvement in the upstream oil and gas industry for over 30 years. Sam also has particular experience of health, safety and community engagement issues in the mining industry, as well as experience of operations in developing countries that have a significant economic, environmental and social footprint.

APPOINTMENT
February 2017 (board), May 2019 (Senior Independent Director). Chair of the Remuneration Committee

COMMITTEE MEMBERSHIP
Nominations Committee; Sustainability Committee; Remuneration Committee (Chair)
Rio Tinto Board
Sector experience of Non-executive Directors

Simon McKeon
Simon brings insights into a wide range of sectors including financial services, the law, government and charities. He practiced as a solicitor before joining Macquarie Group where he spent 30 years culminating as Executive Chairman of its business in the State of Victoria, Australia. Simon served as Chairman of AMP Limited and of the Australian government’s research and development body, CSIRO. He also served as the first president of the Australian Takeovers Panel.

APPOINTMENT
January 2019 (board), September 2020 (Senior Independent Director, Rio Tinto Limited)

COMMITTEE MEMBERSHIP
Audit Committee; Remuneration Committee; Nomination Committee

Jennifer Nason
Jennifer has over 30 years’ of experience in corporate finance and capital markets. For the past 17 years, she has led the Technology, Media and Telecommunications global client practice at JP Morgan, based in the USA. During her time at JP Morgan, she has also worked in the metals and mining sector team in Australia.

APPOINTMENT
March 2020

COMMITTEE MEMBERSHIP
Remuneration Committee; Nominations Committee; Sustainability Committee

Ngaire Woods CBE
Ngaire is the founding Dean of the Blavatnik School of Government, Professor of Global Economic Governance and the Founder and Director of the Global Economic Governance Programme at Oxford University. As a recognised expert in public policy, international development and governance, she has served as an adviser to the African Development Bank, the Asian Infrastructure Investment Bank, the Center for Global Development, the International Monetary Fund and the European Union.

APPOINTMENT
September 2020

COMMITTEE MEMBERSHIP
Remuneration Committee; Nominations Committee; Sustainability Committee

Ben Wyatt
Ben has had a prolific career in the Western Australian Parliament, holding the ministerial portfolios of Treasury, Finance, Energy and Aboriginal Affairs, and becoming the first Indigenous treasurer of any Australian parliament. His extensive knowledge of public policy, finance, international trade and Indigenous affairs brings valuable insight and adds to the depth of knowledge on the Board. He retired from the Western Australian Parliament in March 2021.

APPOINTMENT
September 2020

COMMITTEE MEMBERSHIP
Nominations Committee; Sustainability Committee
## Board Committees

### Audit Committee
- **Simon Henry** (Chair), **Simon McKeon**

### Nominations Committee
- **Simon Thompson** (Chair), **Dominic Barton**, **Megan Clark**, **Simon Henry**, **Sam Laidlaw**, **Simon McKeon**, **Jennifer Nason**, **Ngaire Woods**, **Ben Wyatt**

### Sustainability Committee
- **Simon Henry** (Chair), **Simon McKeon**

### Remuneration Committee
- **Sam Laidlaw** (Chair), **Simon Thompson**, **Dominic Barton**, **Megan Clark**, **Simon McKeon**, **Jennifer Nason**, **Ngaire Woods**

### Remuneration Committee
- **Simon Thompson** (Chair), **Jakob Stausholm**, **Peter Cunningham**

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