



RioTinto

Rio Tinto Ventures and Rio Tinto's Jadar Project

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Lithium and Battery Metals Conference

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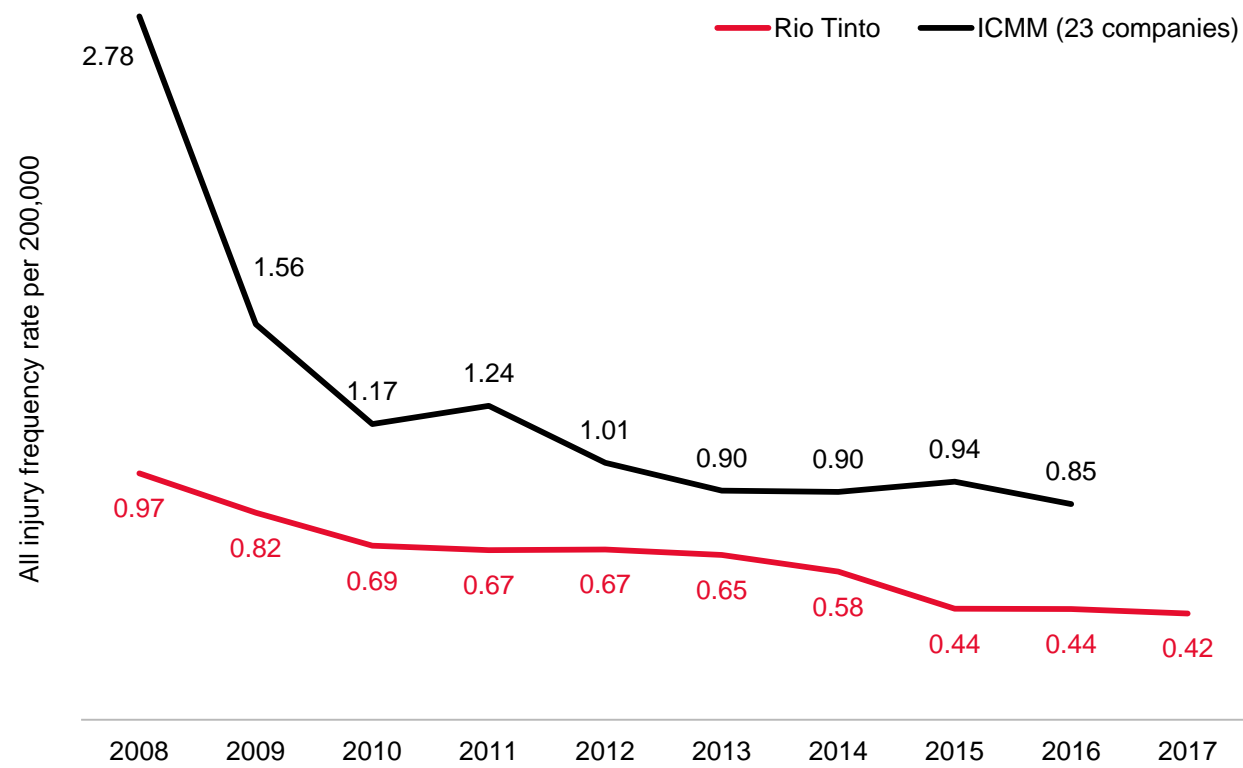
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Safety and health come first

Continuing history of improvement



Safety fatality at Kennecott Operations and Health fatality in Pilbara Exploration in October

Focusing on **fatality elimination** –
1.5 million CRM verifications in 2017

Reducing injuries –
Targeted hazard elimination campaigns

Catastrophic event prevention through control of major hazards

Mental health, wellbeing and fatigue management

Connection with engagement, leadership and **productivity initiatives**

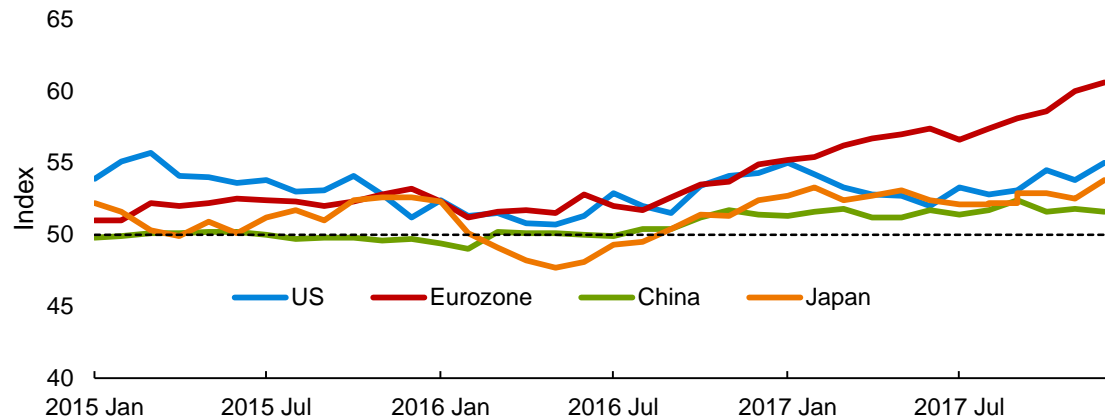
Critical Health Risk Management

Superior returns from world-class assets

	Iron Ore	Aluminium	Copper & Diamonds	Energy & Minerals
Margins	68% Pilbara operations FOB EBITDA margin	35% Integrated operations EBITDA margin	39% EBITDA margin	36% EBITDA margin
Cash flow	Cash flows from operations of \$8,466m Development capex of \$653m Free cash flow of \$7,265m	Cash flows from operations of \$2,648m Development capex of \$654m Free cash flow of \$1,380m	Cash flows from operations of \$1,695m Development capex of \$1,159m Free cash flow of \$319m	Cash flows from operations of \$1,939m Development capex of \$32m Free cash flow of \$1,467m
				

Global macro indicators remain supportive

PMIs remain elevated



Global growth momentum remains healthy

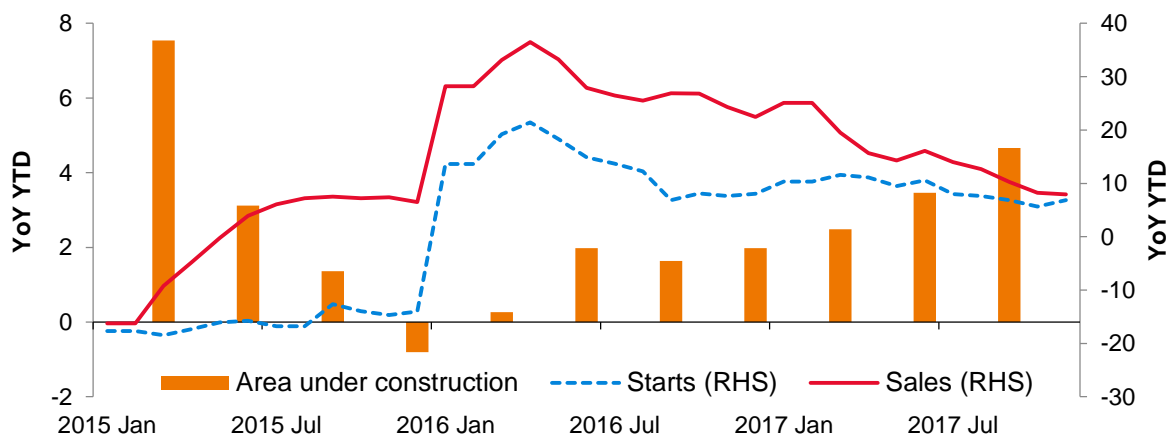
US growth supported by record high consumer confidence and healthy manufacturing and investment

EU performing better than expectations on stronger manufacturing and consumer confidence

China may slow modestly over the next six months but outlook remains positive in the medium to long-term

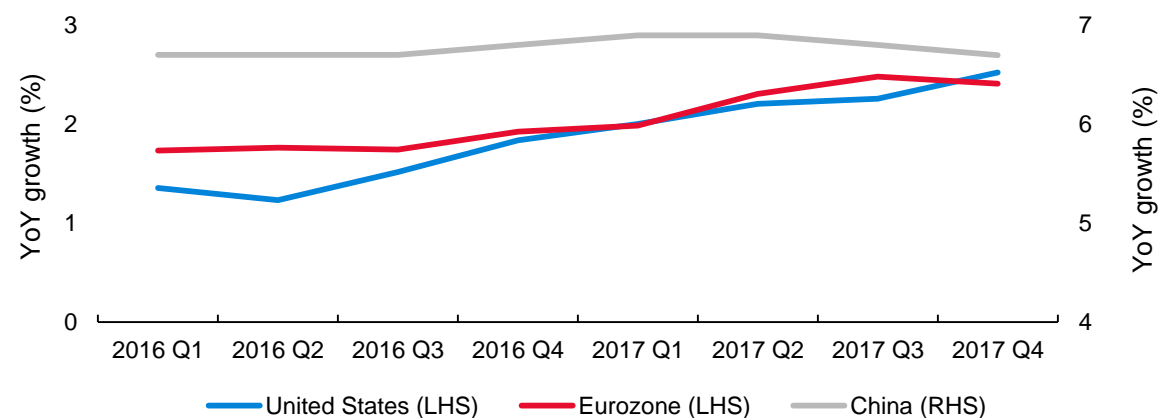
Chinese environmental policy measures are increasing demand for higher grade iron ore and reducing new aluminium capacity

China housing sales and starts slowing modestly

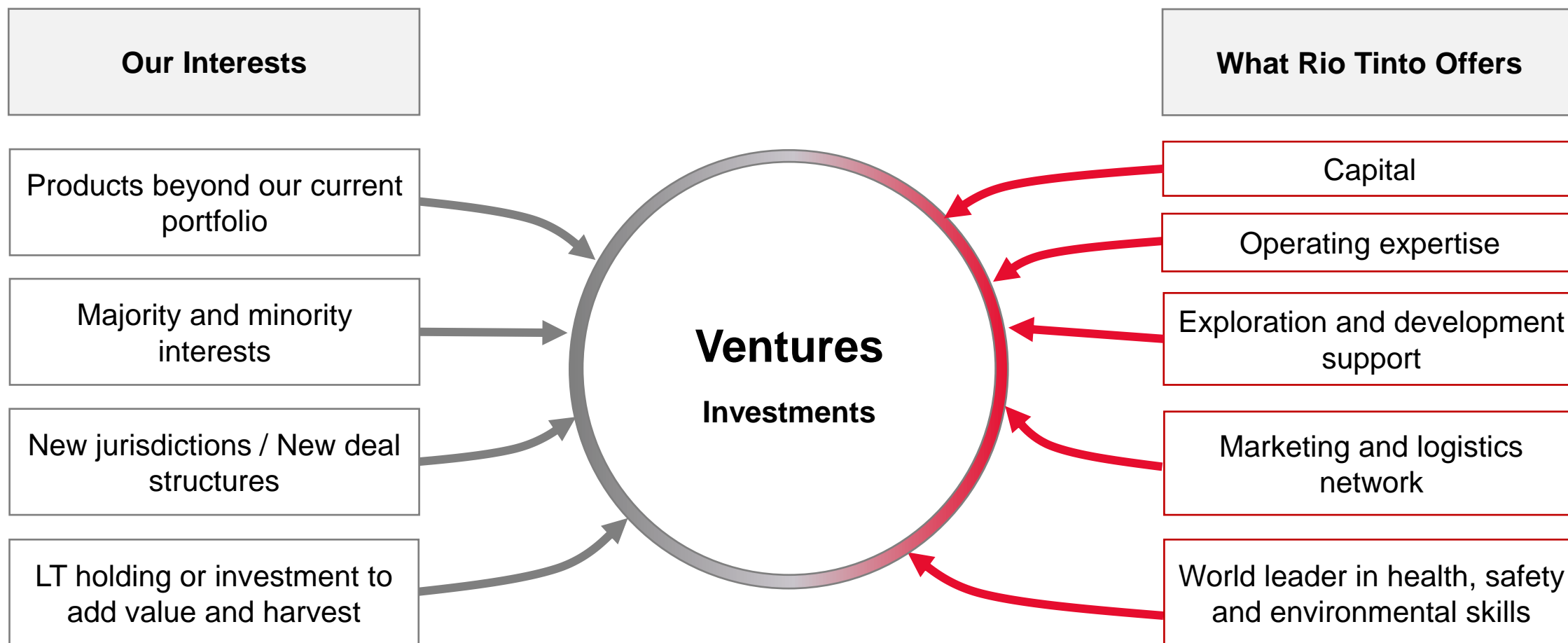


Source: CEIC, Rio Tinto

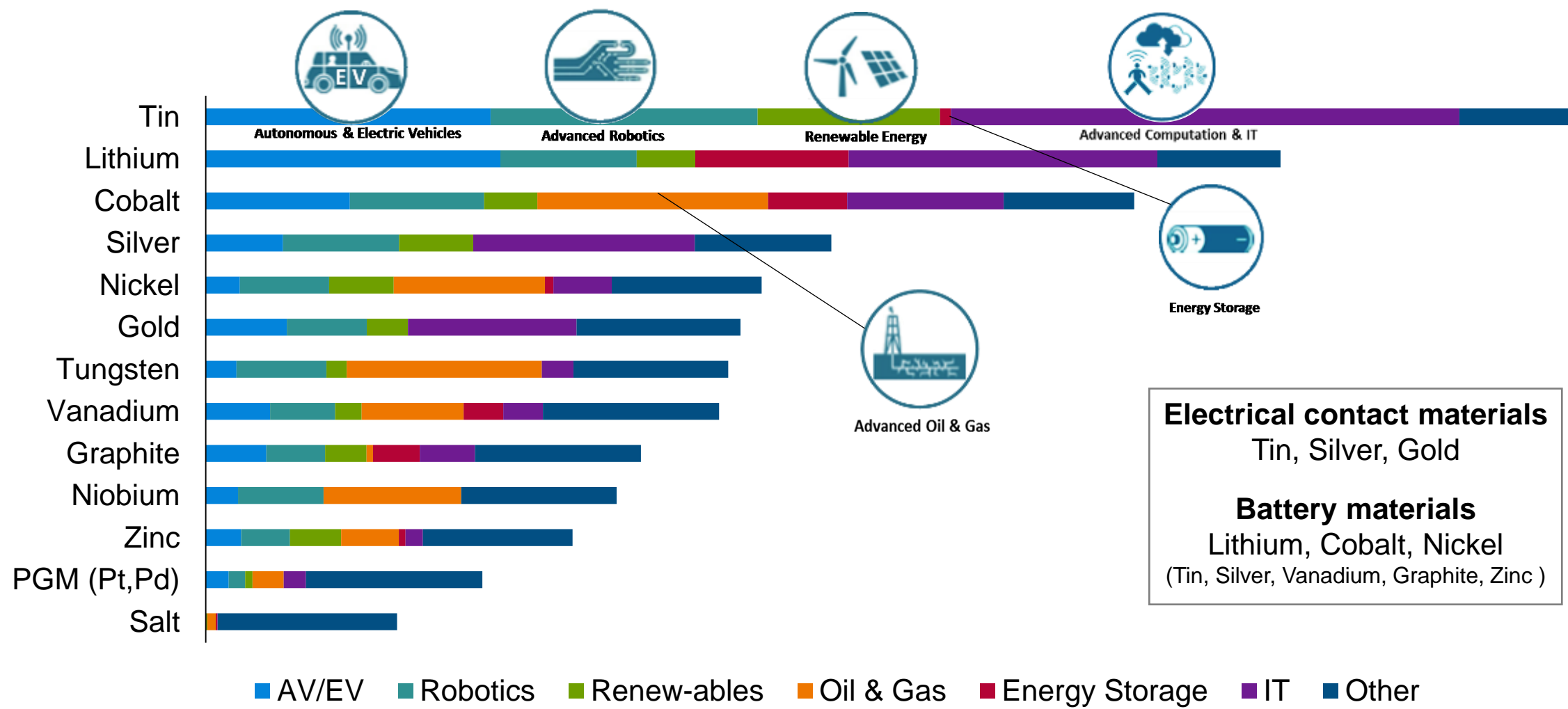
Positive GDP momentum



The Ventures approach



Metals most impacted by new technology



The Jadar Project



Jadarite – A unique Lithium-Borosilicate

Jadarite

- Lithium-sodium-borosilicate mineral ($\text{LiNaSiB}_3\text{O}_7\text{OH}$) comprising 47.2% B_2O_3 and 7.3% Li_2O .



Want to know if we've found Kryptonite?

We discovered a new mineral, jadarite, which is an important source of lithium which is used to power electric vehicles. Learn how else we're pioneering progress at riotinto.com



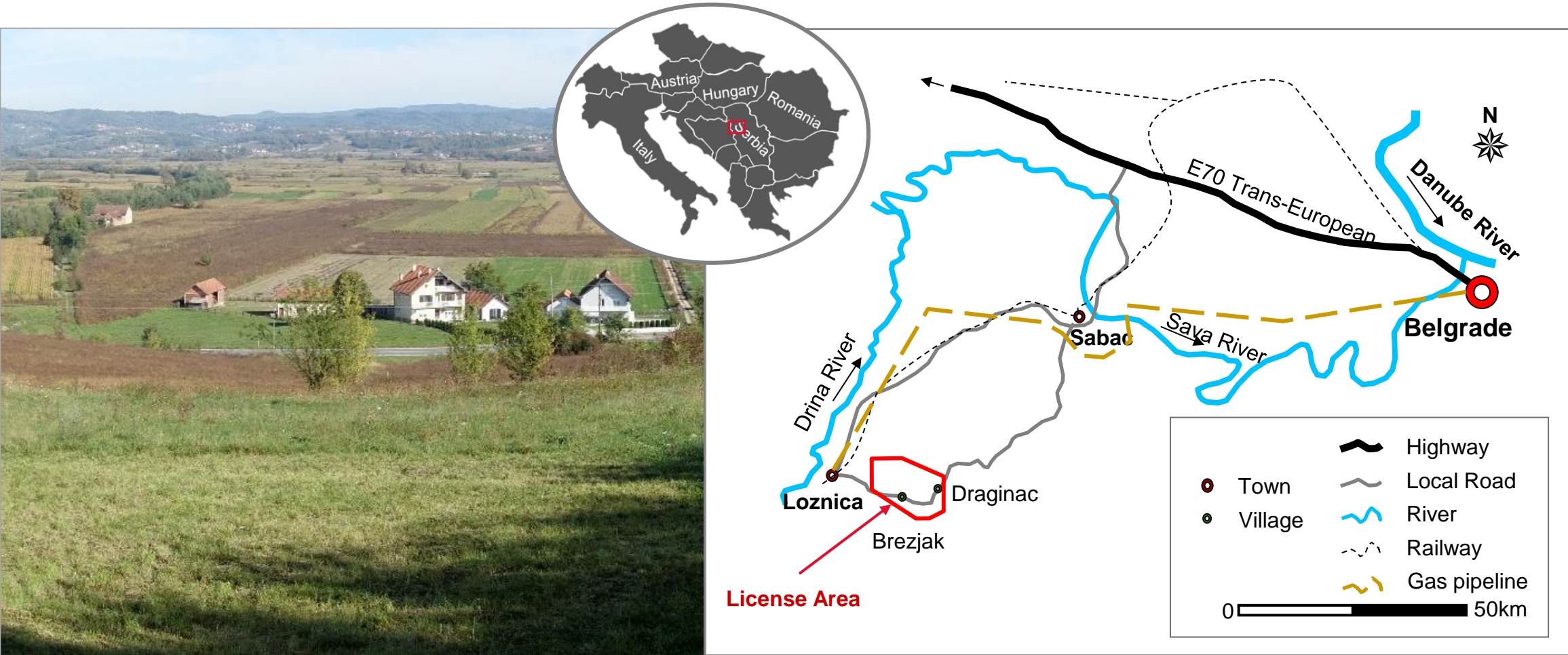
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History – A Rio Tinto Discovery

2000's	<ul style="list-style-type: none">➤ Rio Tinto Exploration discovers borates in western Serbia and jadarite – a new mineral
2007-2010	<ul style="list-style-type: none">➤ Order of magnitude study and drilling to gain orebody knowledge
2010-2014	<ul style="list-style-type: none">➤ Mining and Metallurgical studies, Pilot plant at Rio Tinto's Boron operation in California, improved orebody knowledge and resource modelling
2015-2018	<ul style="list-style-type: none">➤ Pre-feasibility, enhanced process testwork at RT Technology Centre



Jadar Valley – Northwestern Serbia



Jadar – Resource Profile and Mineralogy

100% owned by Rio Tinto

- 136 Mt mineral resource⁽¹⁾:
 - Indicated: 52 Mt @ 1.8% Li₂O, 19.2% B₂O₃
 - Inferred: 83 Mt @ 1.9% Li₂O, 13.0% B₂O₃
- Contains:
 - 2.5Mt lithium oxide (Li₂O)
 - 21Mt borates (B₂O₃)
- Long potential mine life

Alongside **Jadarite**, **Ezcurrite** (Na₄B₁₀O₁₇·7H₂O) is most common mineral. **Kernite** (Na₂B₄O₇·4H₂O) and **Borax** (Na₂B₄O₇·10H₂O) also present.

	Mineral	Formula	%B ₂ O ₃	%Li ₂ O
Borates	Ezcurrite	Na ₄ B ₁₀ O ₁₇ ·7H ₂ O	58.2	-
	Kernite	Na ₂ B ₄ O ₇ ·4H ₂ O	50.9	-
	Borax	Na ₂ B ₄ O ₇ ·10H ₂ O	47.2	-
	Ulexite	NaCaB ₅ O ₉ ·8H ₂ O	42.9	-
	Colemanite	Ca ₂ B ₆ O ₁₁ ·5H ₂ O	50.8	-
	Jadarite	LiNaSiB ₃ O ₇ (OH)	47.2	7.3
Li - Rich Minerals	Spodumene	LiAlSi ₂ O ₆	-	8.0
	Lepidolite	K ₂ Li ₃ Al ₃ (AlSi ₃ O ₁₀) ₂ (O,OH,F) ₄	-	5.4
	Petalite	LiAlSi ₄ O ₁₀	-	4.9

(1) Resource estimate as released to the market in the 2017 Rio Tinto Annual Report on 2 March 2018. The Competent Persons responsible for reporting of those Mineral Resources were M Sweeney and J Garcia. Rio Tinto is not aware of any new information or data that materially affects the above resource estimate as reported in the 2017 Annual Report, and confirms that all material assumptions and technical parameters underpinning this estimate continue to apply and have not materially changed. The form and context in which each Competent Person's findings are presented have not been materially modified.

Operating Cost Implications

Lithium production with Boric Acid by-product moves
Jadar hard-rock project down the cost-curve



Brine - low cost

Hard rock - low cost

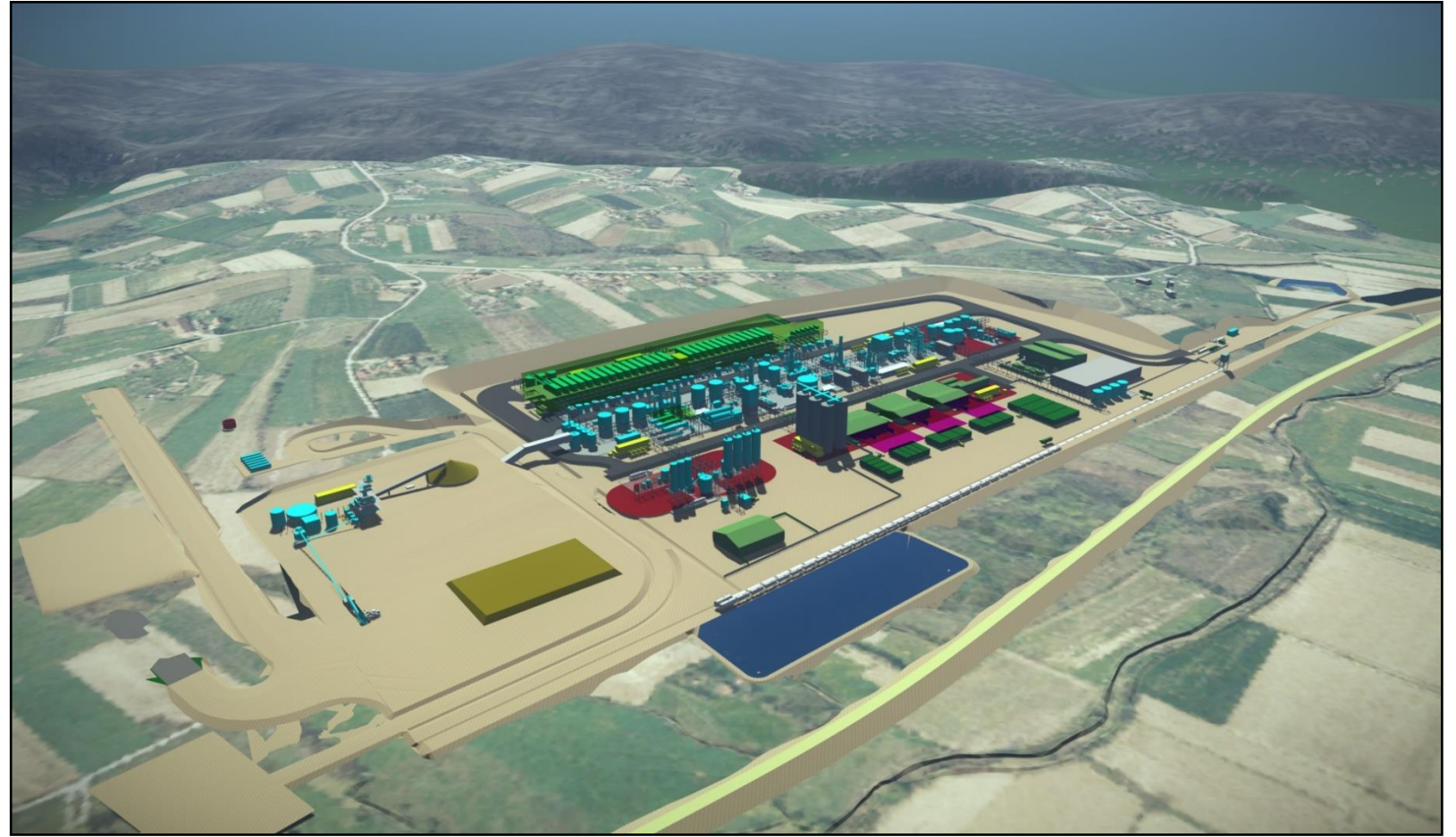
Brine - high cost

Hard rock - high cost

Indicative 2025 lithium carbonate cost curve

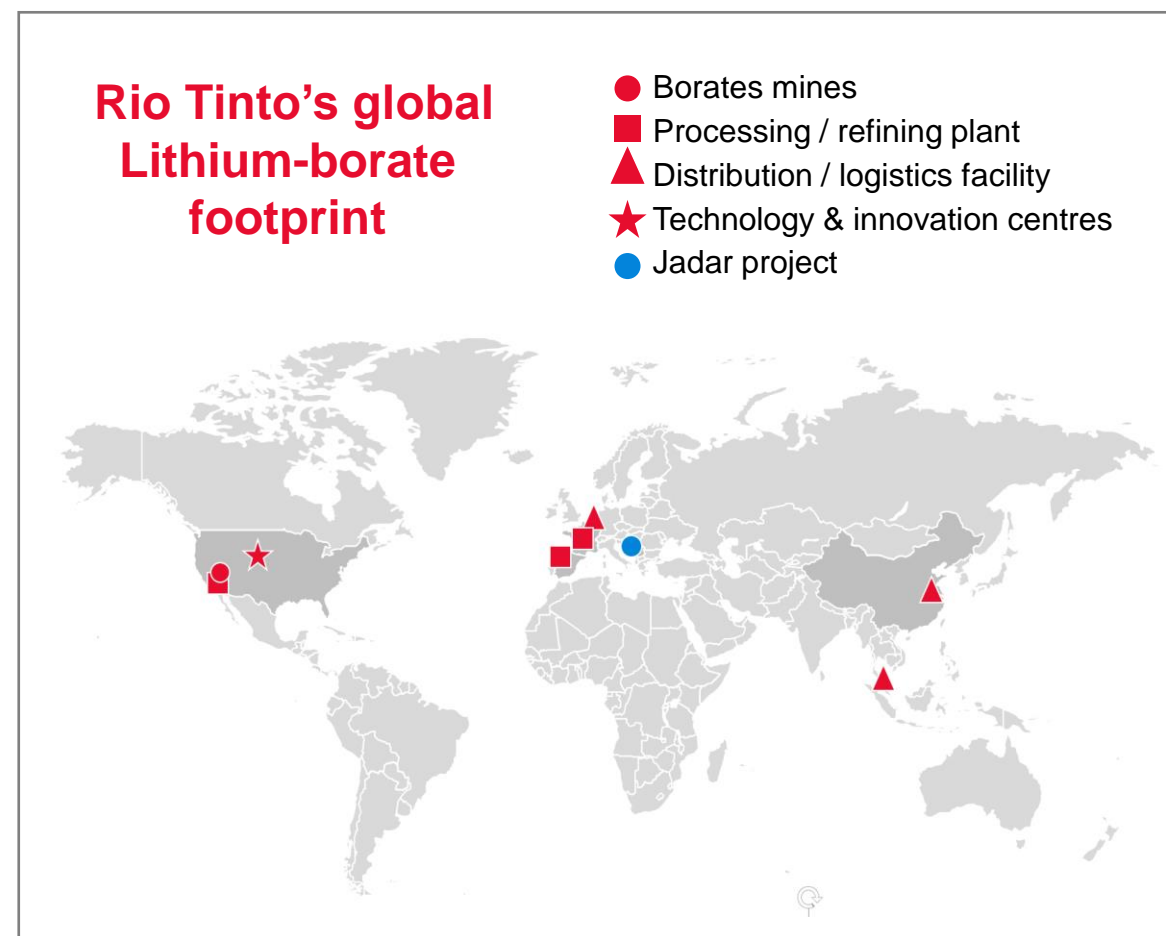
Jadar project overview

- Greenfield underground mine
- On site plant producing battery grade lithium carbonate and boric acid
- Potential production start up early 2020's



Attractive Serbian investment climate combined with existing Rio Tinto infrastructure

Attractive Serbian investment climate	<ul style="list-style-type: none">▪ On track for EU membership▪ Established mining jurisdiction▪ Mining code updated in 2015▪ Supportive government
Local infrastructure	<ul style="list-style-type: none">▪ Skilled and productive labor force▪ Competitive operating costs
Rio Tinto infrastructure	<ul style="list-style-type: none">▪ Existing boric acid production / market presence▪ Infrastructure in Americas, Europe, Asia
Access to market	<ul style="list-style-type: none">▪ Multiple transportation options▪ On doorstep of 2nd biggest EV market▪ Customs free access to scale markets from EU membership



Jadar value proposition

Unique large scale resource	Access to market and infrastructure	World class Rio Tinto technical expertise	Rio Tinto license to operate
Two high grade lithium and borates products from a single resource	Adjacent to multiple transportation options	PFS program well underway	Long history of successful partnerships across the globe
Long potential mine life	Located in Central Europe between developed European markets and emerging markets of Middle East and Asia	Track record of successfully delivering projects	Excellent local and government relationships
Highly competitive cost position	Borates distribution and logistics infrastructure in place	Industry leading borates processing capability	Local community support

