

Citi's Mining Exploration Day – Rio Tinto Exploration

27 June 2016

Attached is a presentation to be given today by Stephen McIntosh, Group executive Growth & Innovation at the Citigroup exploration conference in Sydney.

The presentation will also be available at www.riotinto.com/presentations.

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27 June 2016

Citigroup exploration conference

RioTinto

Rio Tinto Exploration

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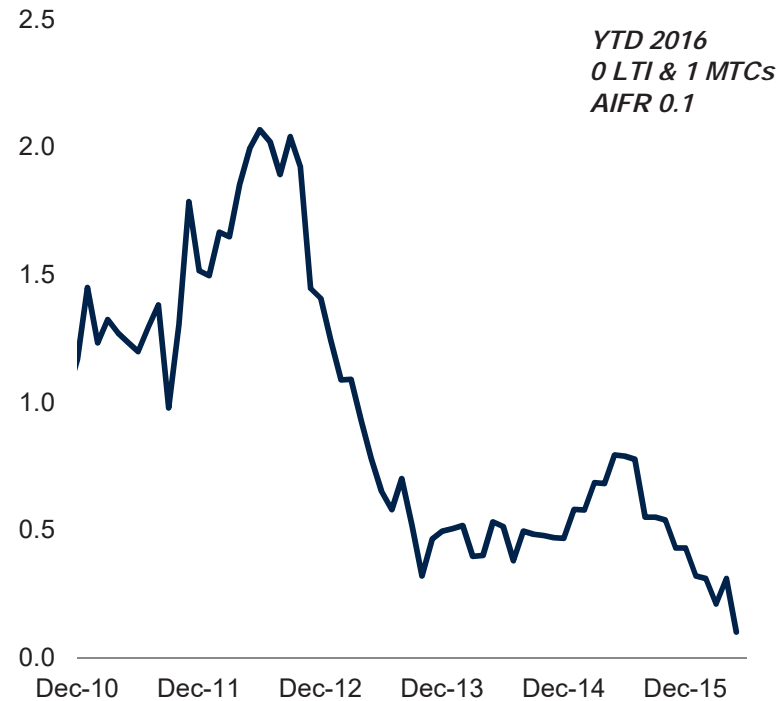
This presentation contains a number of non-IFRS financial measures. Rio Tinto management considers these to be key financial performance indicators of the business and they are defined and/or reconciled in Rio Tinto’s annual results press release and/or Annual report.

Safety is fundamental

Delivering discoveries safely

Exploration All Injury Frequency Rate (AIFR)

*Per 200,000 hours worked to May 2016



- Relentless safety focus – All Injury Frequency Rate lowest on record
- Fatality prevention a key focus



Rio Tinto Exploration overview

Consistent corporate commitment, delivering value

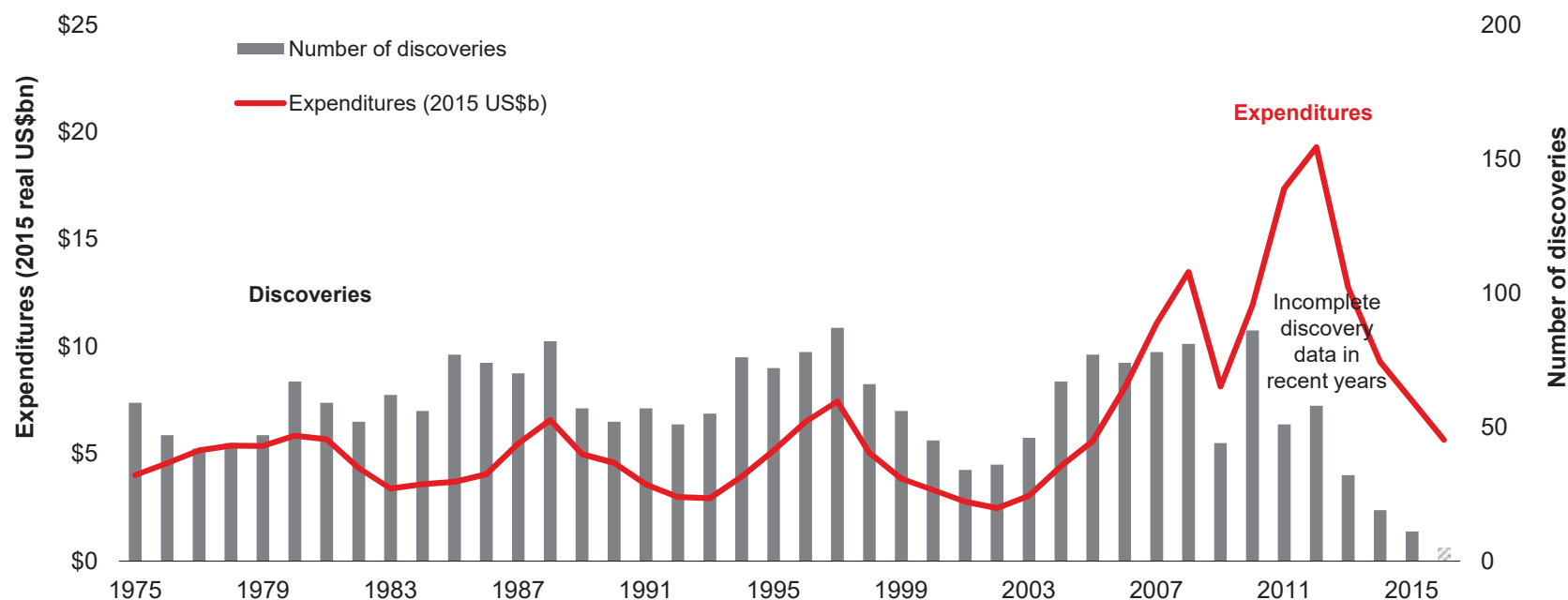
- Successful exploration track record spanning 70 years
- Continued focus on delivering investible Tier 1 resource options to the Group
- Global reach across multiple commodities
- Renewed greenfield focus
- Applying technology to resolve exploration challenges
- Significant in-house program and partnering with juniors
- Specialist orebody knowledge involvement in investment decisions
- Disciplined divestment of non-core discoveries

Global exploration spend and historic discovery rate

Funding sharply down & new greenfield discoveries announced remain subdued

Significant* mineral discoveries (excluding bulk commodities)

Western World: 1975 - 2015 (excluding FSU + Eastern Europe + China 1995 - 2015)



*Significant defined as >100Koz Au, >10Kt Ni, >100Kt Cu equiv, 250Kt Zn+Pb, >5Moz Ag, >5kt U₃O₈

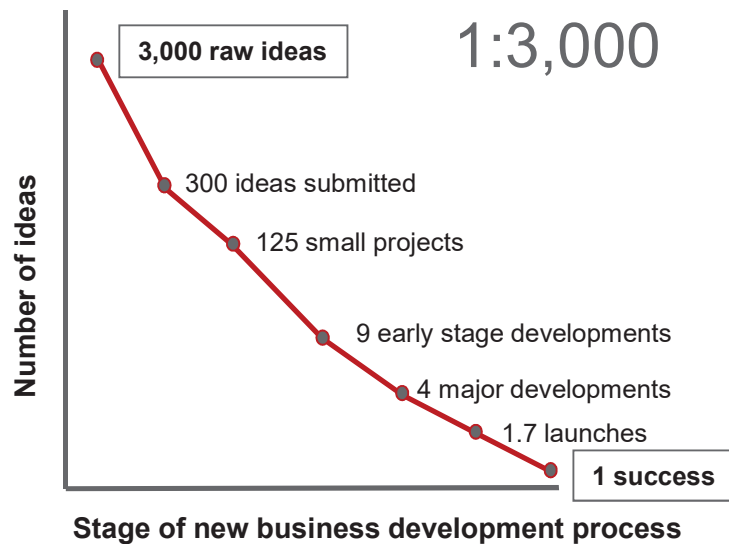
Source: MinEx Consulting March 2016; Expenditures – SNL Metals & Mining December 2015

Note: SNL expenditure data excludes Uranium prior to 2001.

Exploration industry

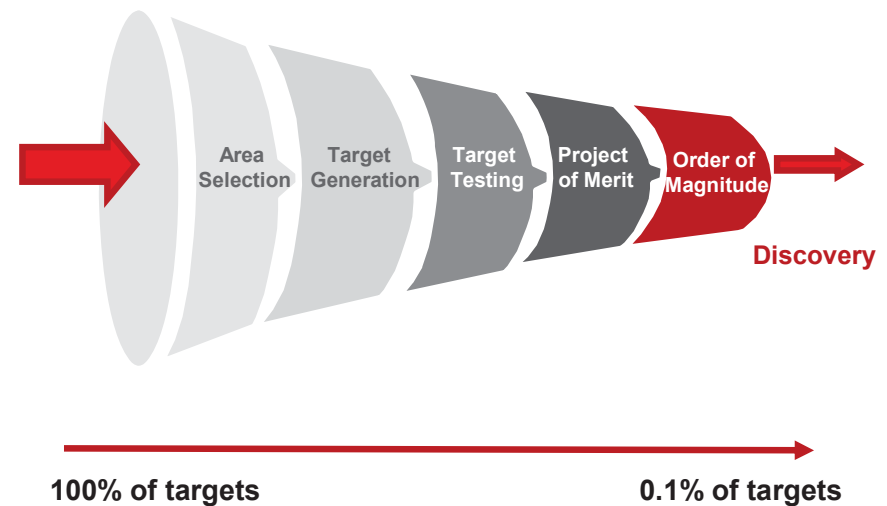
Risks and value just like other R&D sectors

Universal industrial success curve



Source: Stevens and Burley, *Plotting the rocket of radical innovation*, 2003

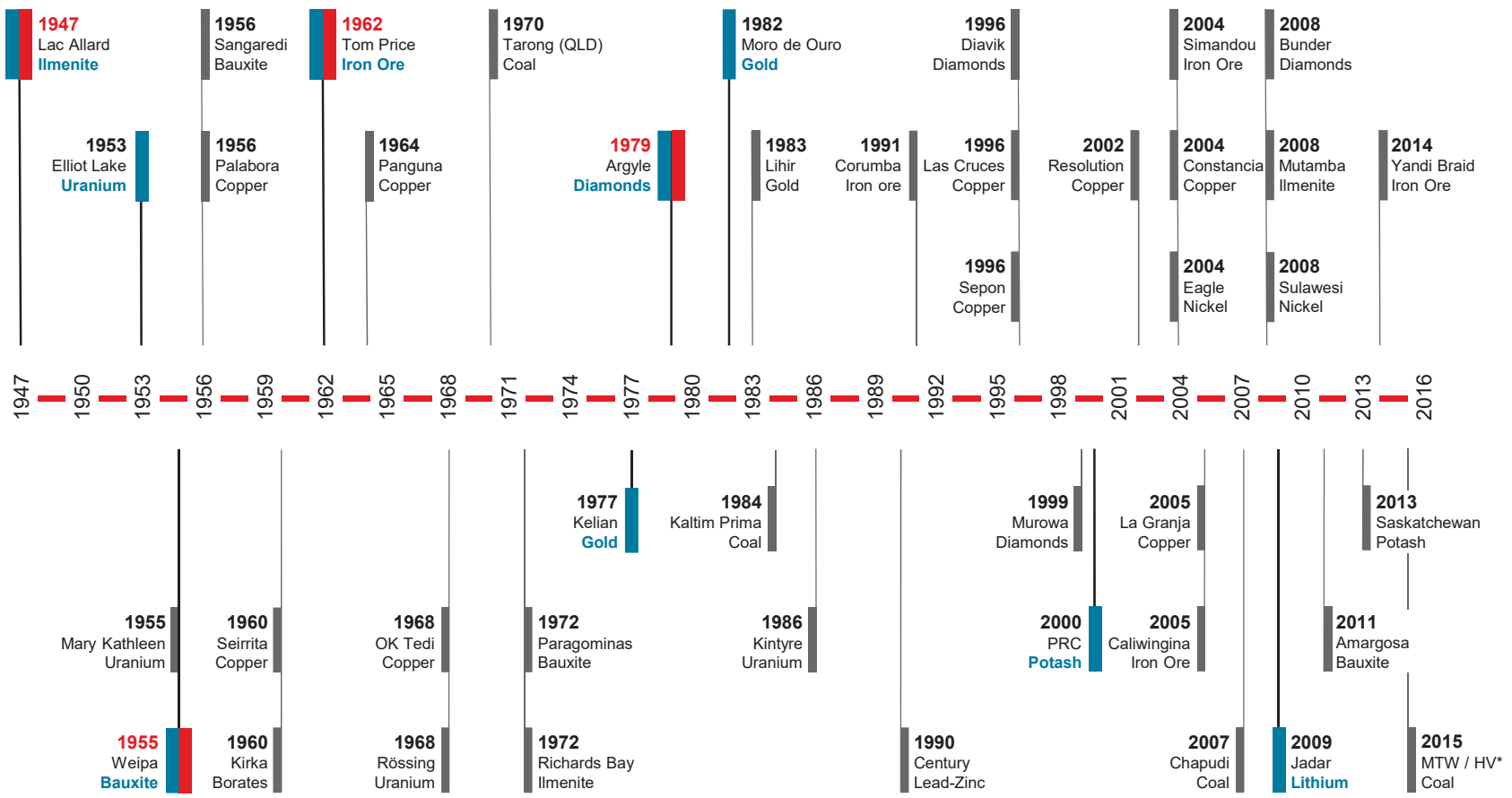
Exploration process



Source: Rio Tinto

Rio Tinto's track record of discoveries*

Unique capability to develop entry into new commodities



*Mt Thorley Warkworth / Hunter Valley

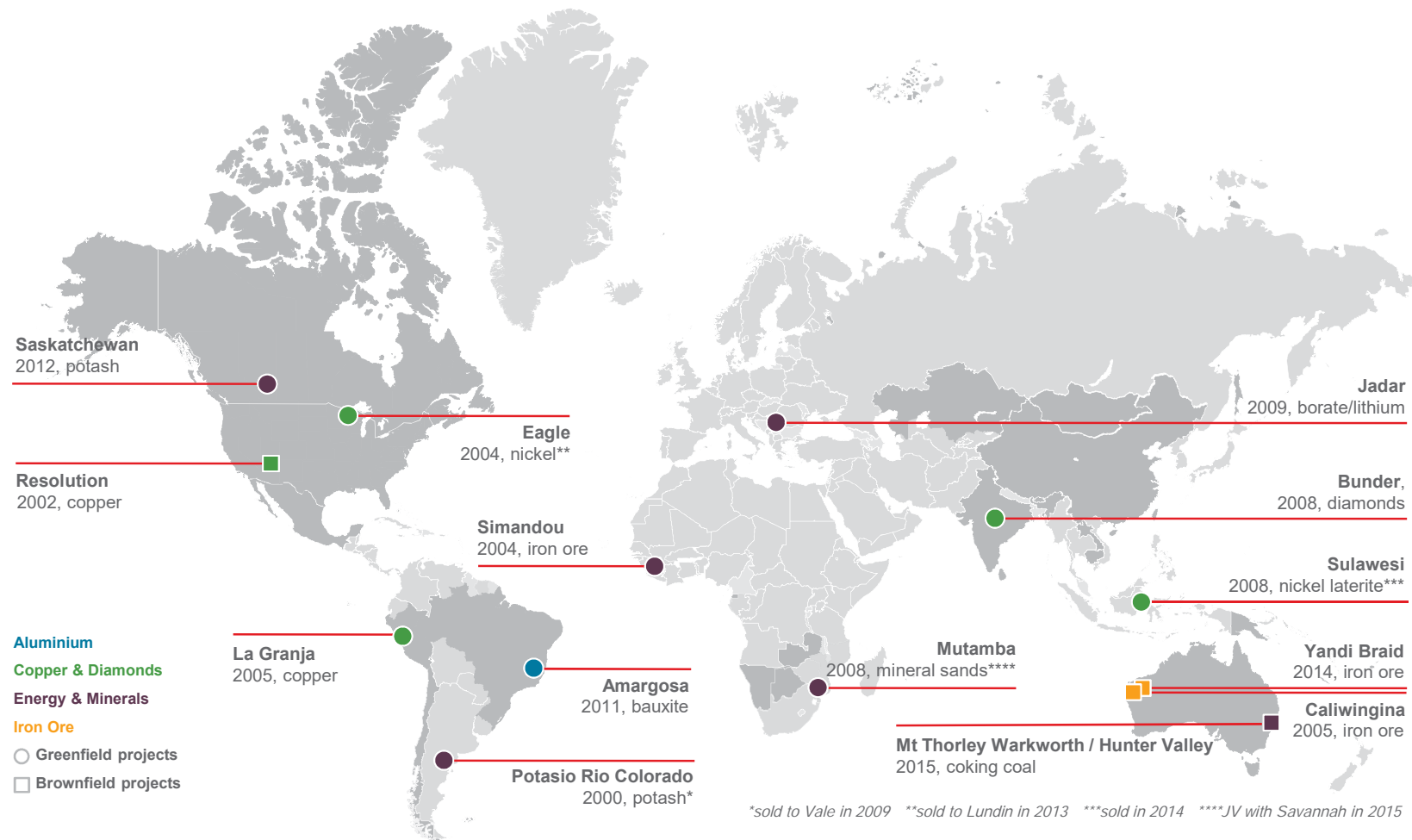
■ Significant discoveries in new commodities ■ Founding discoveries for key product groups

*Discovery: Resource estimate and Order of Magnitude study completed



Rio Tinto's significant discoveries* 2000 to 2015

A global exploration effort

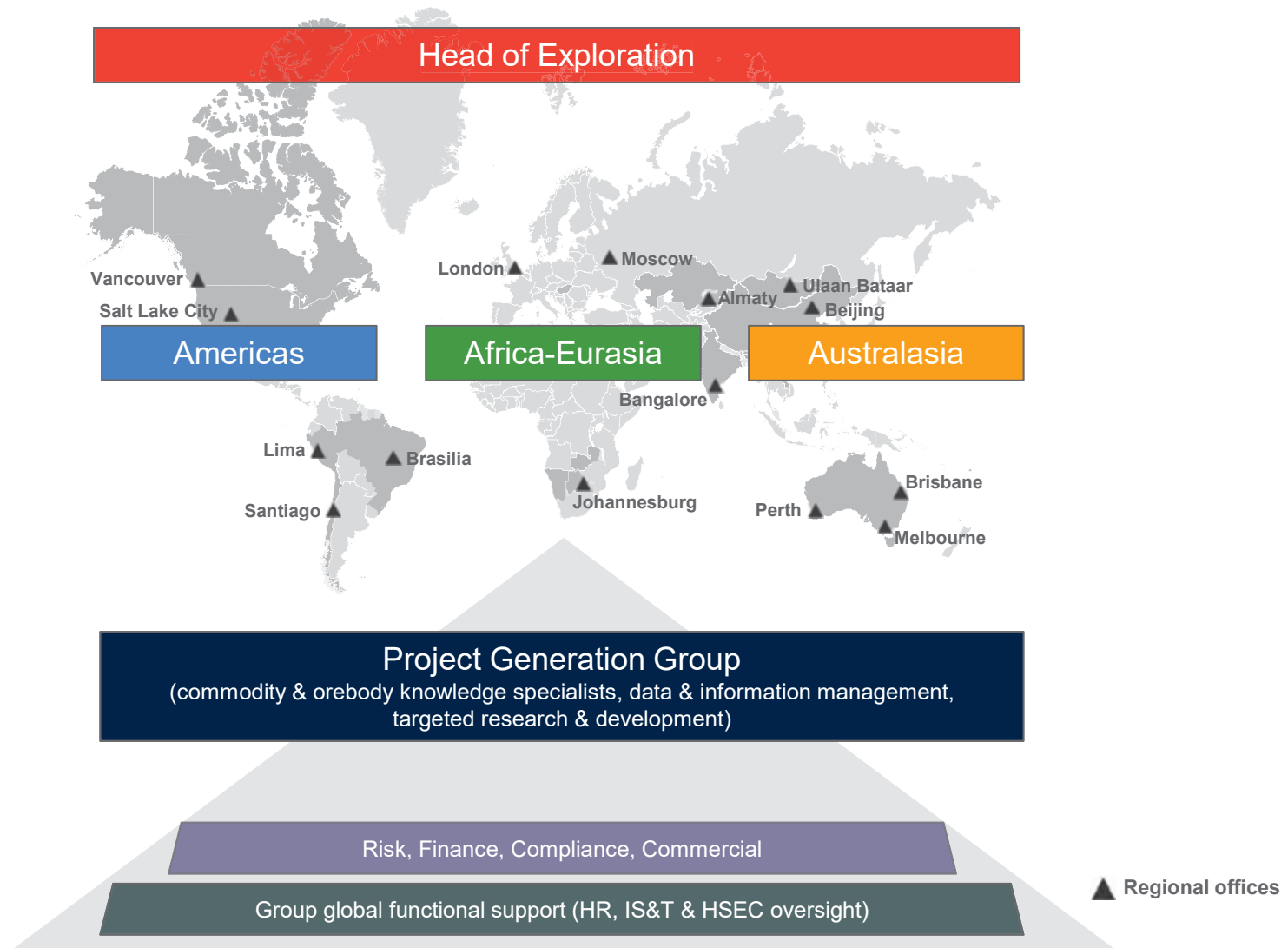


*Discovery: Resource estimate and Order of Magnitude study completed

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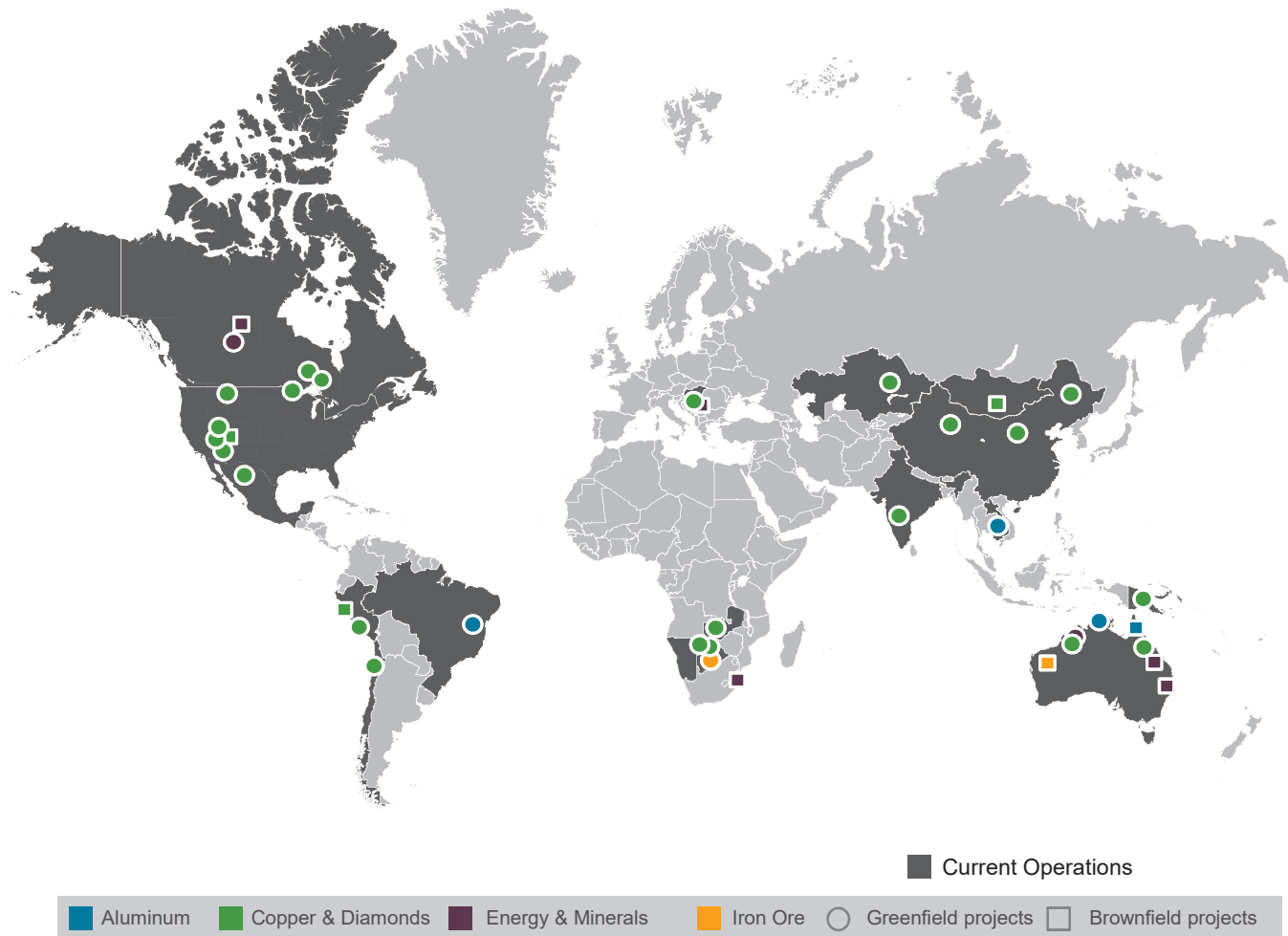
Rio Tinto Exploration's regional structure

Multi-commodity teams and cross-region portfolio prioritisation

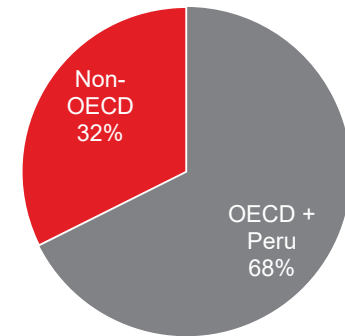


Rio Tinto Exploration – where we operate

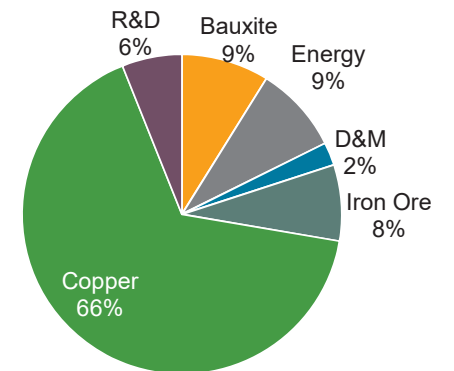
Exploring for 8 different commodities across 17 countries



Expenditure by regions - 2015

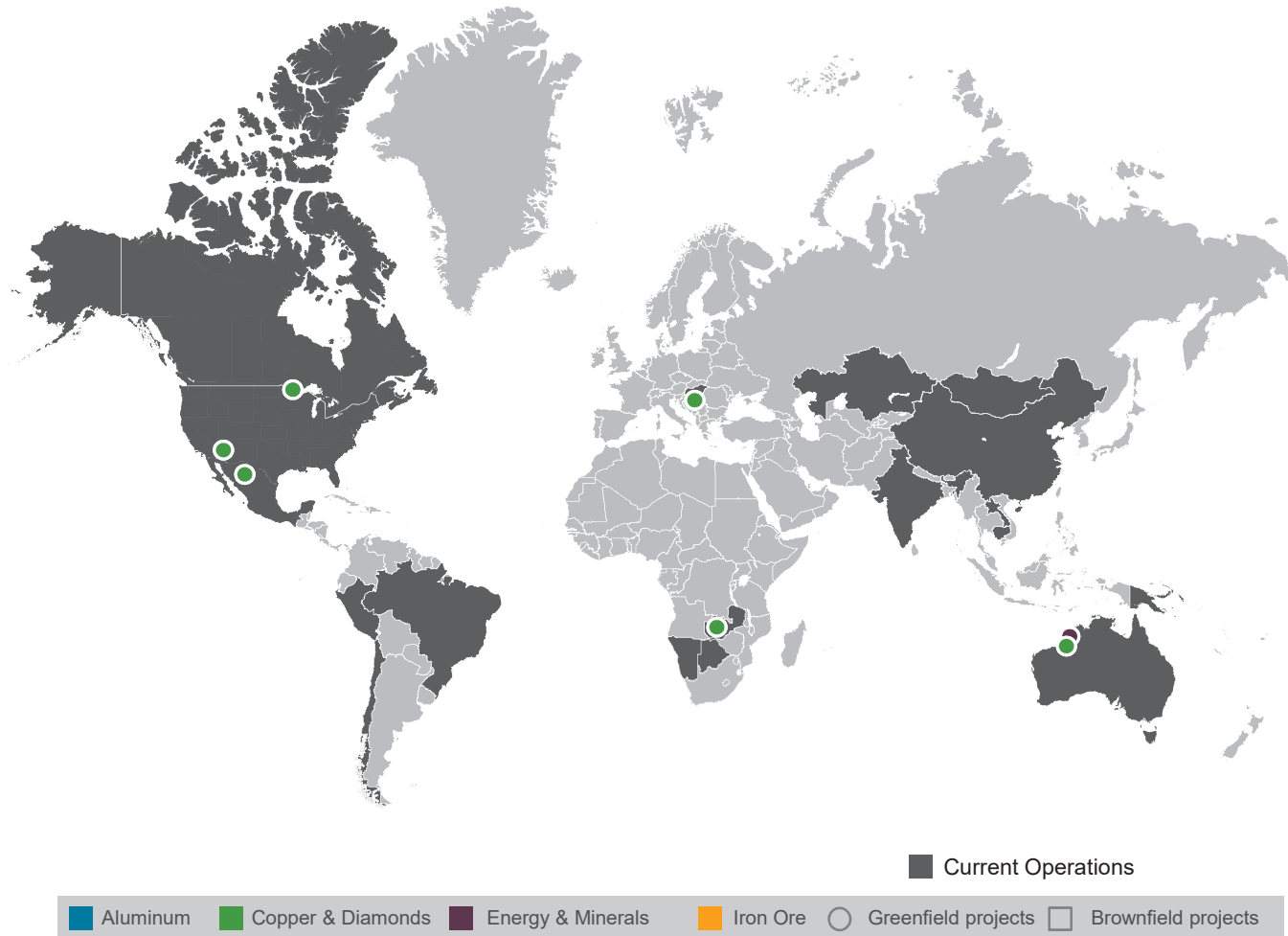


Expenditure by commodity - 2015



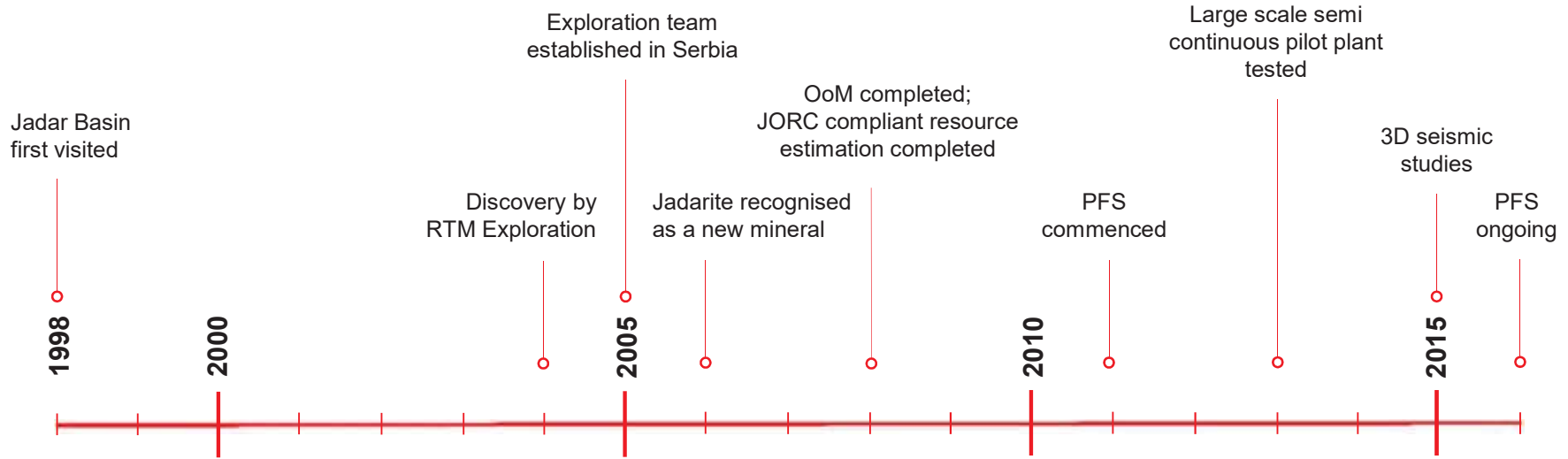
Rio Tinto Exploration – partnering

Working collaboratively across the industry delivers additional options

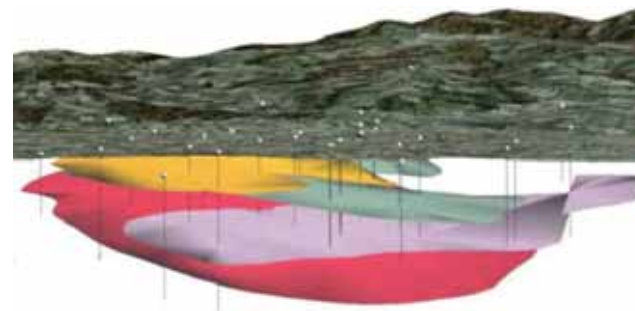


Rio Tinto Exploration - Jadar discovery

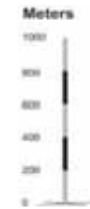
Jadar is a world class lithium resource



Jadar core sample



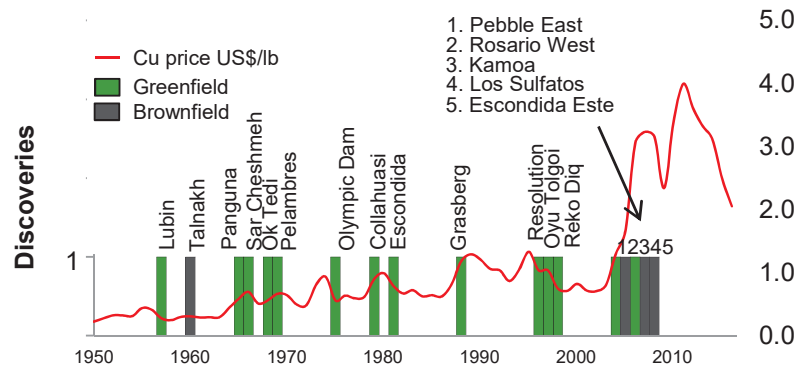
Jadar layered mineralised zones



Tier 1 copper resources

Difficult to find, slow to develop

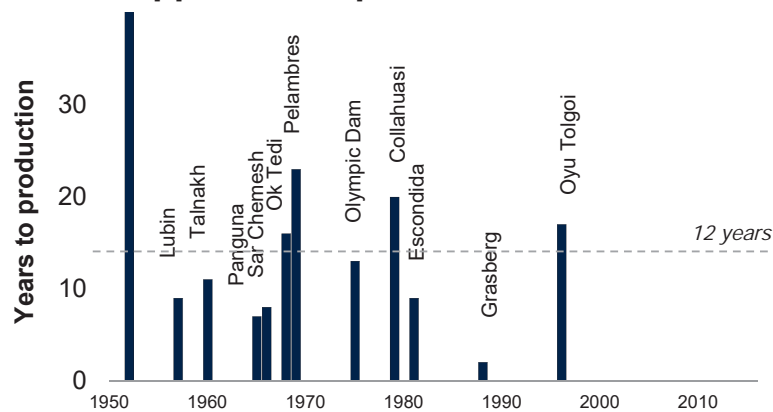
Tier 1 copper discoveries



Sources: SNL, Rio Tinto, public presentations and academic papers

- One Tier 1 copper greenfield discovery is made on average every **4 years**
- A greater proportion of future discoveries will be in non-OECD countries
- In the OECD setting future discoveries will be deeper than historic discoveries
- Significant exploration around existing operations has resulted in a number of Tier 1 brownfield discoveries

Tier 1 copper development timelines



Sources: SNL, Rio Tinto, public presentations and academic papers

- The average time from concept to delivery of a discovery of a Tier 1 resource is **10 years**
- Timeframe is increasing due to regulatory requirements, community involvement etc
- Average time-lag from discovery of a Tier 1 copper resource to production is **12 years**
- Jurisdiction, brownfield / greenfield, deposit grade distribution, grade, depth of cover and time in the economic cycle can impact this

Improving discovery rates

Combination of old & new technologies and effective data integration yielding knowledge

Traditional Methods



Mapping

Sampling

Geophysics

Drilling

Analysis

New Technologies and Concepts

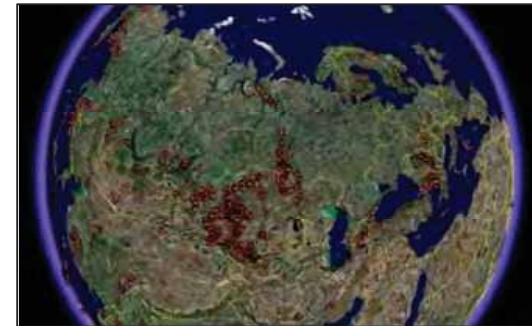


Resistate Indicator
Minerals & Greenrocks

Bundoora Micro-Analytical
Facility Greenrocks & RIMS

VK1 gravity
gradiometer

Data Integration



Very large scale
compilation of government,
open file and Rio Tinto
proprietary data

Accessible by all
geoscientists

Advanced visualization
software

Conclusions

Producing a pipeline of value accretive growth options to deliver future returns

- Strong track record of exploration success
- Continued strategic commitment to exploration
- Strong in house expertise working across multiple commodities and geographies.
- Collaboration across the industry to access opportunities
- Using leading-edge technology to continue discovery success in mature terrains

