

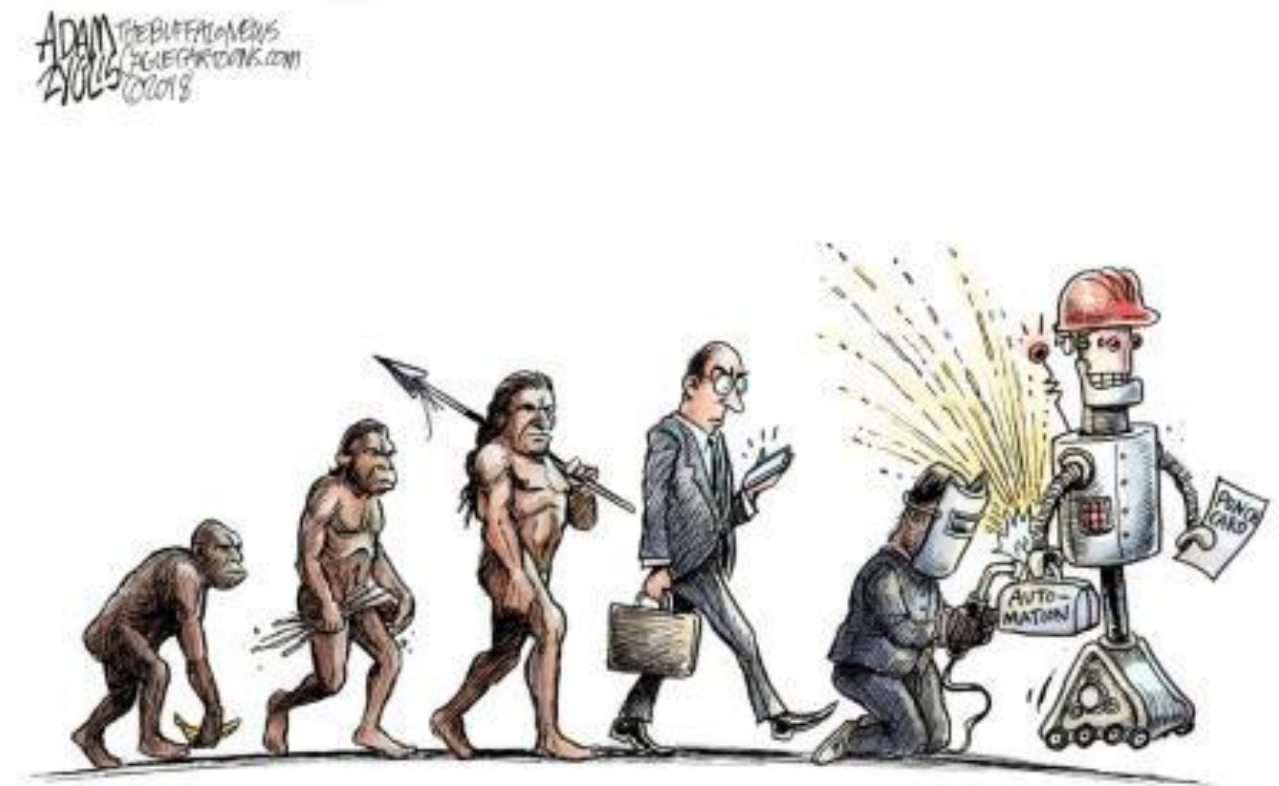
Navigating the Changing Landscape

Ethics in ESG

'Can you dig it - Modifying factors and multi-factor risk'

Bruce Harvey FAusIMM (CP)
Geoff Deans FAusIMM (CP)

24 October, 2024 – Perth, Australia



Ability is nothing without opportunity

No licenses – no leases – no mining

Wherever project proponents seek to explore, develop or maintain resource projects there will be people, communities and populations with rights and interests pertaining to the asset area throughout the life of the asset.

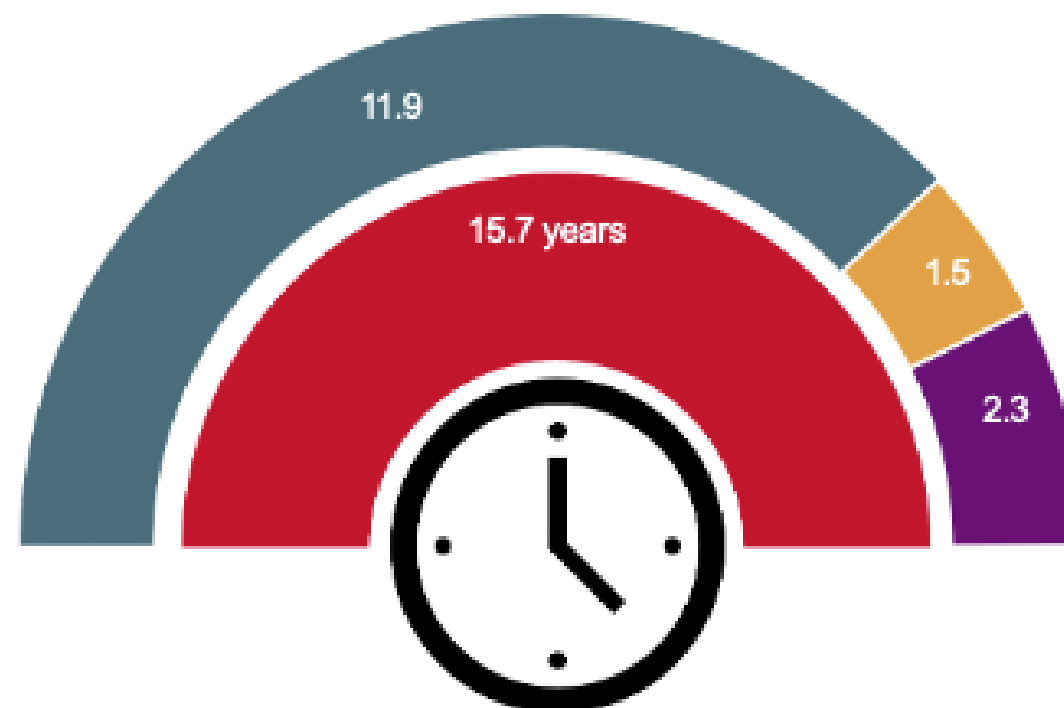
Setting the Scene: What's the risk?

Pathways to development: Only three US mines have been developed since 2002

Eagle (which came online in 2014), Ruby Hill (2007), and Pogo (2006). Notably, none of these are on federal lands, which impacts the complexity of the permitting process.

Average lead times of mines for discovery to production: 2002-2023

- Discovery, exploration, studies
- Construction decision
- Construction to startup

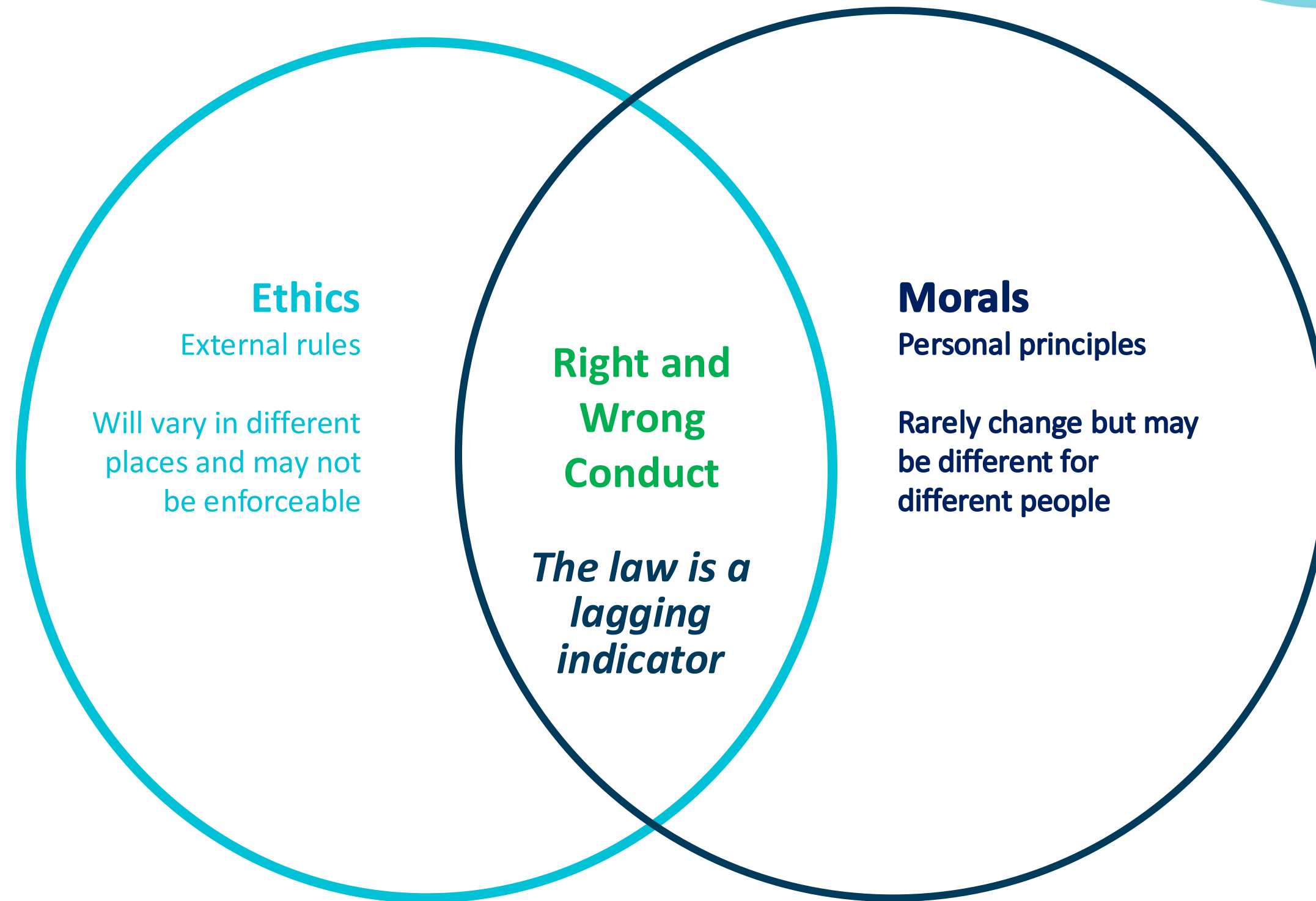


Geography	Number of mines included in initial analysis
Australia	11
Canada	11
Peru	9
Burkina Faso	9
Chile	8
Russia	7
Mexico	6
Indonesia	5
China	5
DRC	5
United States	3

JORC Code Update Discussion Draft

- Discussion Draft period closes on 31 October
- Disclosure, not prescription
- Transparency, Materiality, Competence
- Contemporary ESG–related expectations
- Risk (uncertainty) assessment and disclosure
- In effect, a comprehensive minerals project disclosure guide
- Aligns with AusIMM Study Processes Handbook Monograph 35

Ethics and Morality



Warren Buffet Test of Acceptability

“I ask managers to judge every action they take — not just by legal standards, though obviously that’s the first test — but also by what I call the ‘newspaper test.’”

“Let’s start with what is legal, but always go on to what we feel comfortable about being printed on the front page of the local paper ...”

But the risk of capricious political intervention is ever present



Changing Landscapes

First Principles considerations



Increasing
Complexity



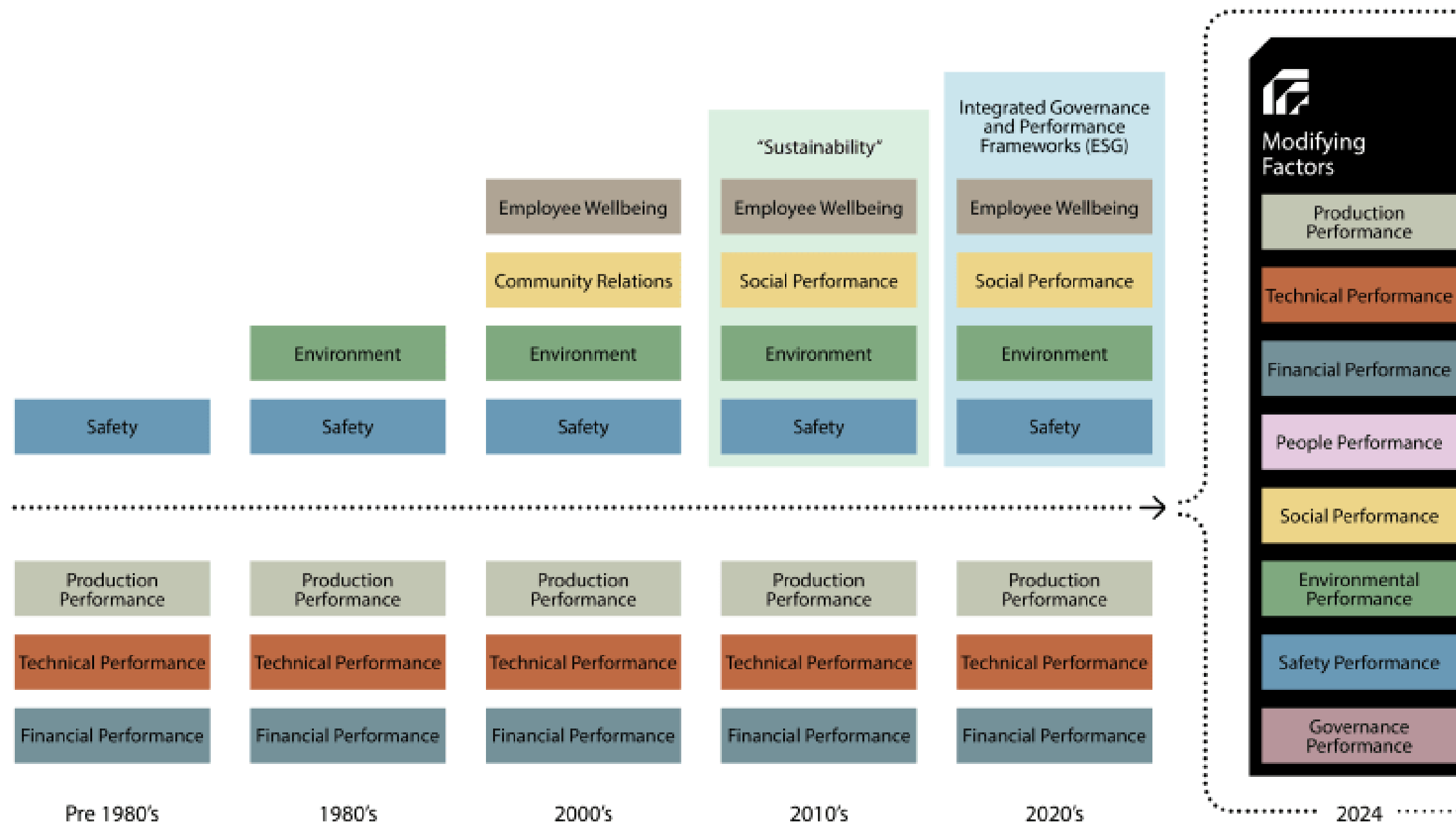
Decreasing
Risk Appetites



Increasing
Stakeholder
Expectations

Evolution of Performance

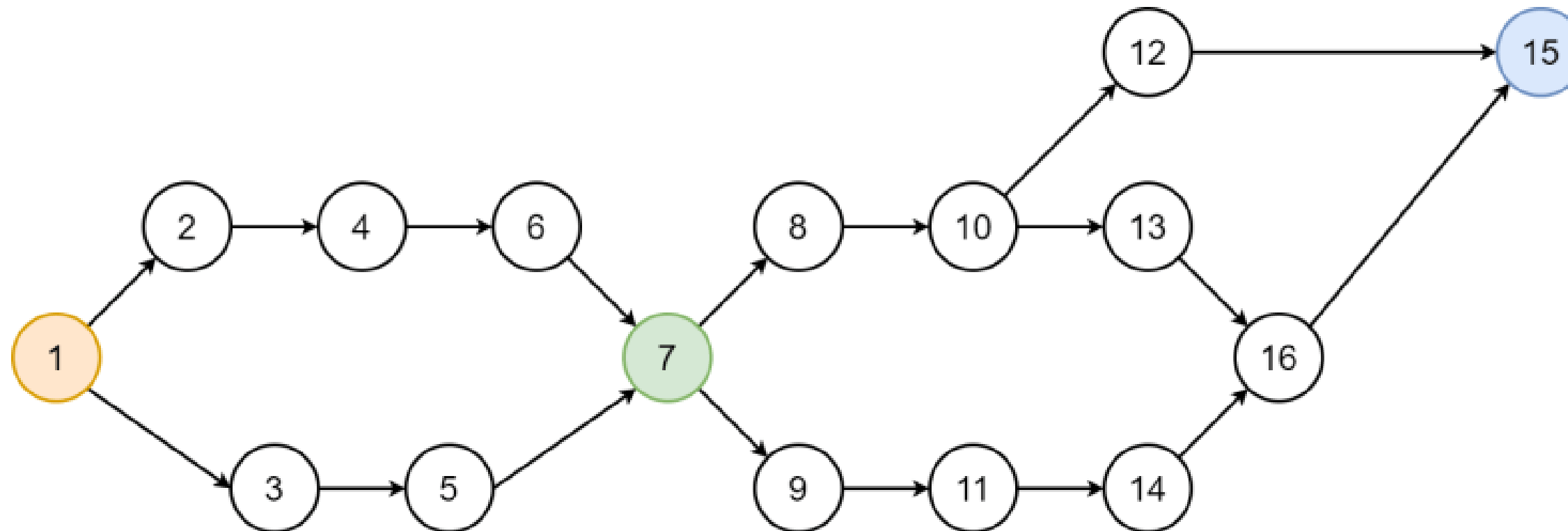
What was once an 'or' is now an 'and'



- The expectations from stakeholders is changing what defines success.
- What was optional or additional, is now 'core' representing preconditions for development.
- Sustainability is easy to talk about, but difficult to execute.
- Disclosure metrics are not the same as operational metrics.
- Complexity is created when competing interests often transact in different currencies. e.g. a species of migratory birds or pristine habitat cannot be valued in jobs or investment.
- Threats and opportunities are most commonly embedded during the study phases

What's this all about? Risk

What factors represent 'chokepoints' for your development pathway?

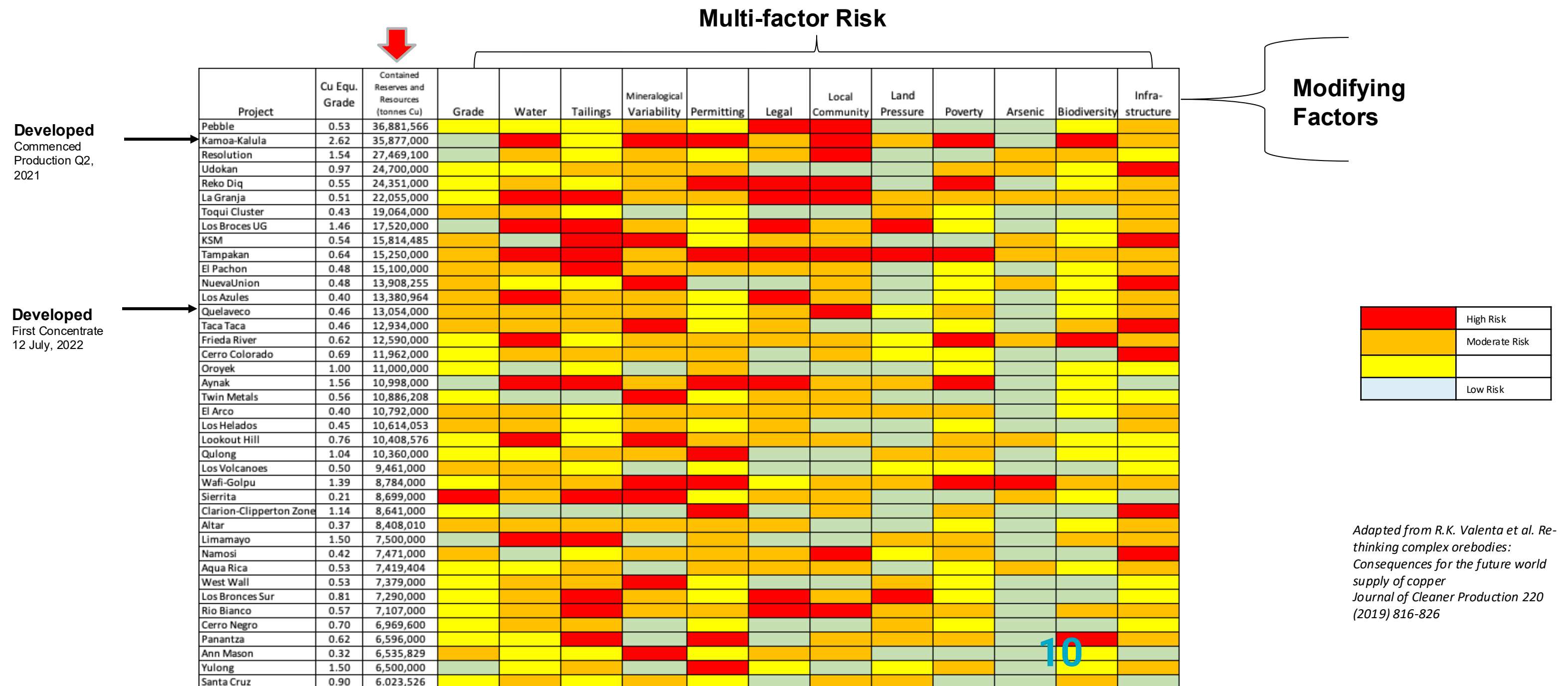


Each resources project is uniquely impacted by a common set of 'Modifying Factors'.

These include, but not limited to Mining, Metallurgical, Processing, Economic, Marketing, Legal, Infrastructure Environmental,, Social, Governance (ESG), Regulatory factors) (JORC, 2024 discussion draft)

What does multi-factor look like?

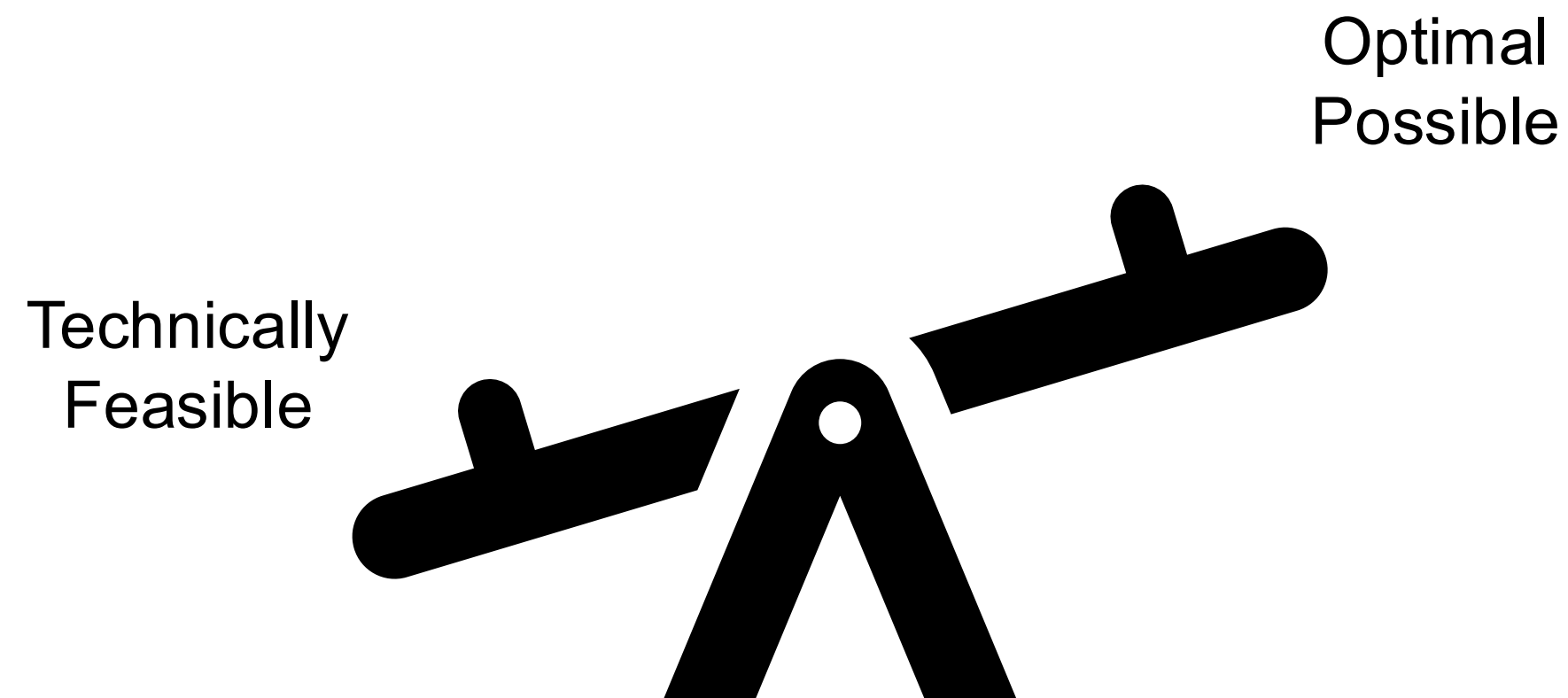
Complex Orebodies: Global Top 40 Copper deposits by tonnage



Adapted from R.K. Valenta et al. Re-thinking complex orebodies: Consequences for the future world supply of copper
Journal of Cleaner Production 220 (2019) 816-826

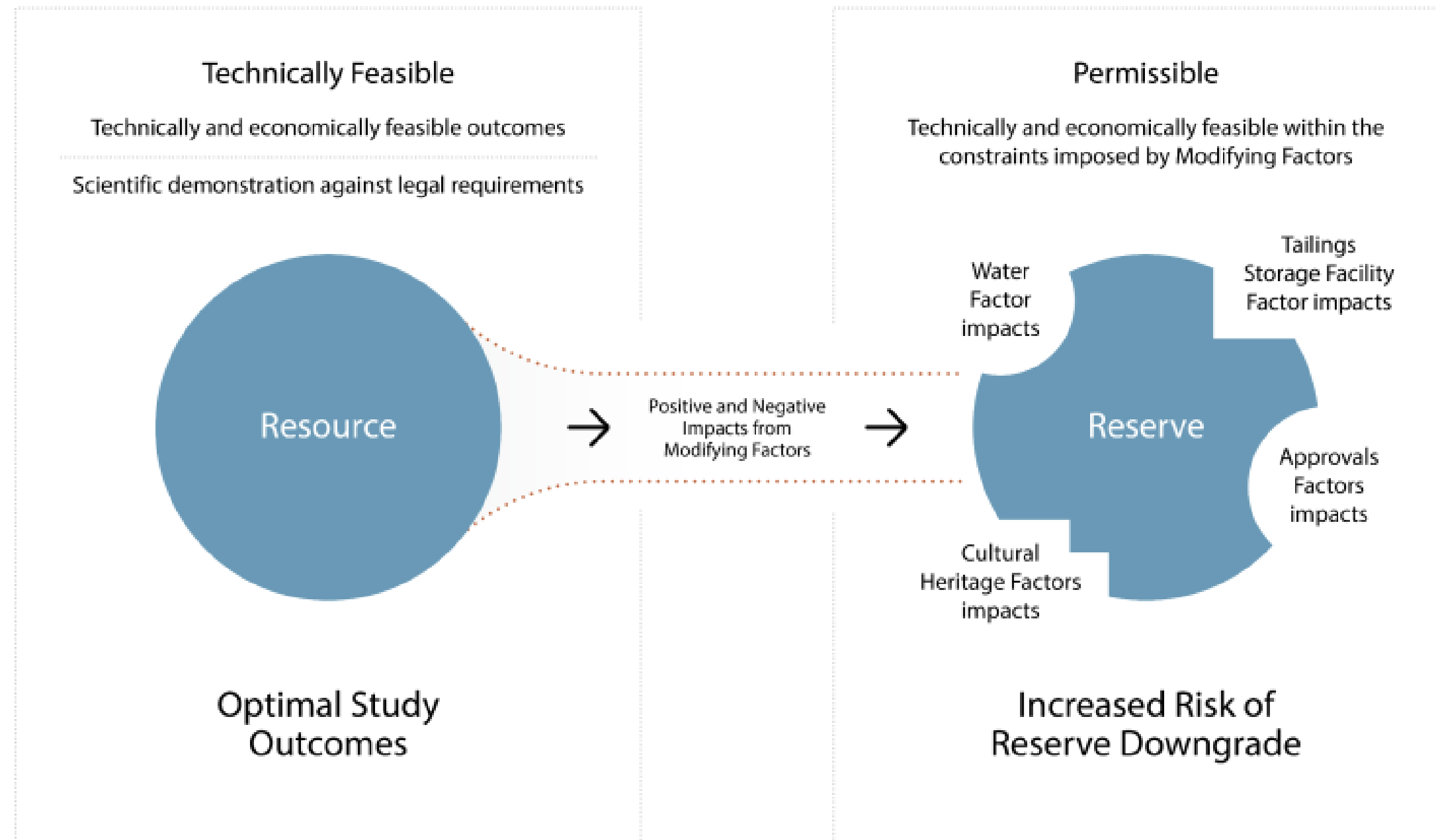
Minimum Standards vs Minimum Expectations

Stakeholder Acceptance considerations



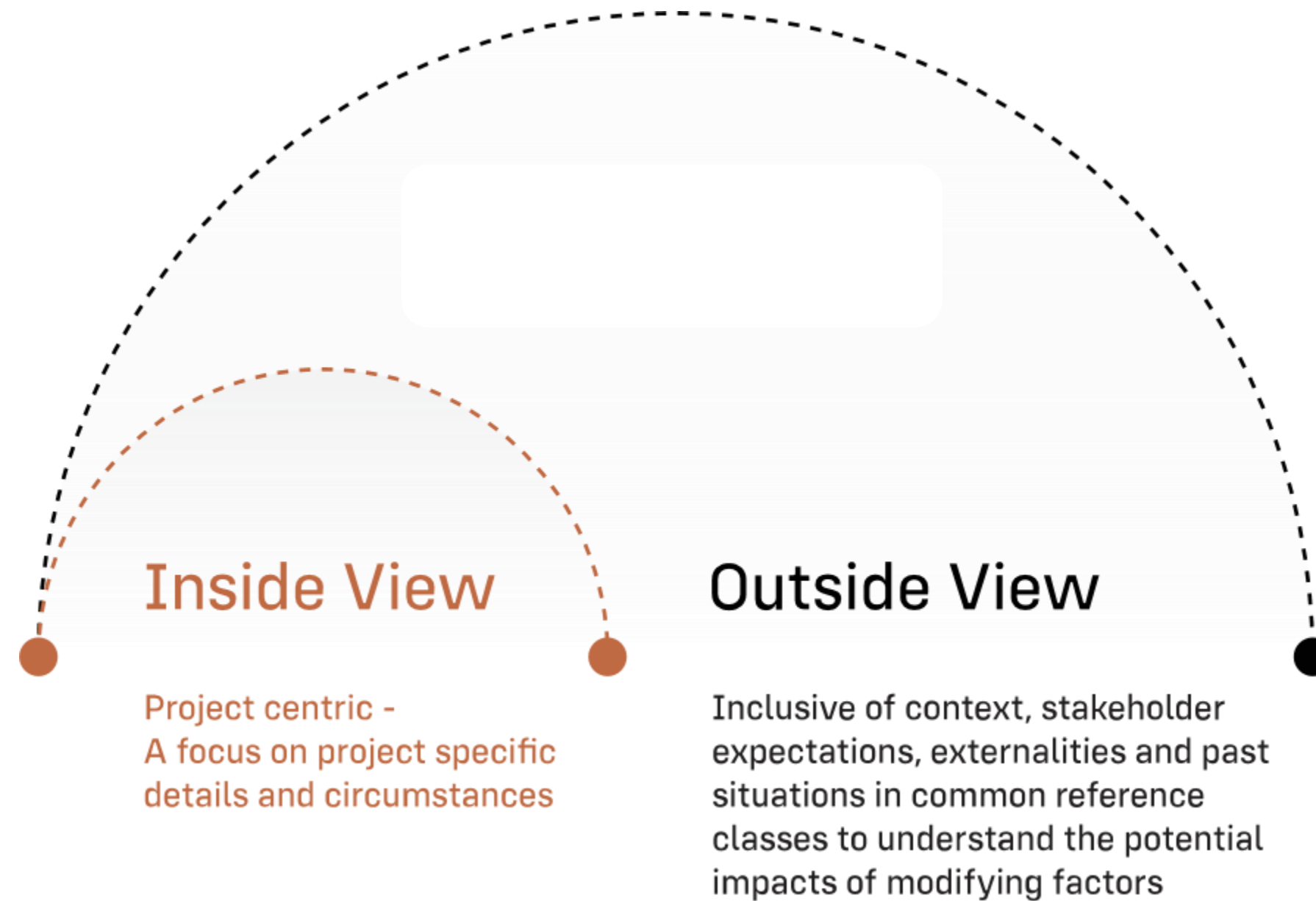
Trees don't complain, people do

What's the risk? Feasible, permissible, ethical



Context, Perspective and Ethics

What to do?



Final Thought....

We are not alone: Lessons learnt are gifts

9NEWS

Federal environmental laws 'single biggest challenge' for delivering renewable energy projects in Australia

By national regional affairs reporter Jane Norman

Posted Mon 22 Apr 2024 at 5:29am



A new report has identified assessments under the EPBC Act as the 'single biggest challenge for delivering renewable energy projects' in Australia. (Supplied: Tadgh Cullen (DP Energy))

*"History does not repeat,
but it often rhymes"*

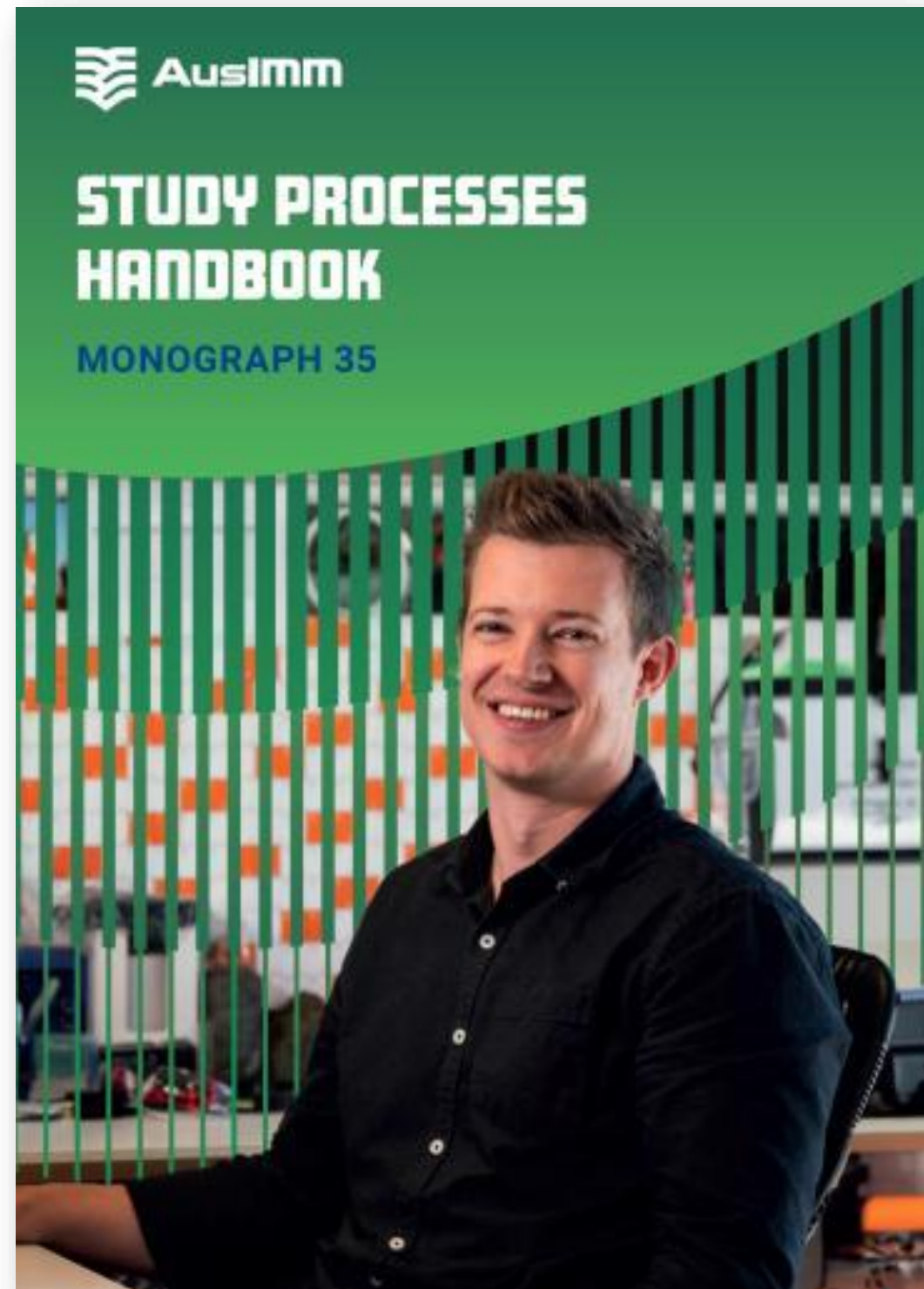
Mark Twain

Approval time frames for renewables:

- **QLD 190 days***
- **VIC 376 days**
- **NSW 746 days**

*Average approval time frame for wind farms only, as QLD data on other projects was not readily available.

*Source: Clean Energy Investor Group,
Herbert Smith Freehills*



Chapter 2: Permits, Environment, Social

JORC Code 2024 – Modifying Factors, including ESG and Risk

Bruce Harvey FAusIMM(CP) and Geoff Deans FAusIMM(CP)
26 Sep 2024 · 2,300 words, 6 minute read

JORC Code 2024 Update

The long-awaited Joint Ore Reserves Committee (JORC) Code update Exposure Draft (JORC, 2024a) and draft Guidance Notes (JORC, 2024b), the result of prodigious review and discussion by the Committee and many contributors, is available for public comment until 31 October 2024. An evolution on JORC 2012, the updated draft modernises the disclosure requirements for Environment, Social and Governance (ESG) considerations as classes of 'Modifying Factors'. This integration of contemporary 'ESG' expectations is bolstered by the inclusion of risk assessments (analysing the consequences and uncertainty of opportunities and threats). The Exposure Draft Code responds to the greatly increased standards of transparency expected of the minerals industry by the financial sector, regulators and the public. In this light, it is important to revisit and consider the 'why', 'what' and 'how' of the JORC Code, in line with its core principles of Transparency, Materiality, and Competence.



Current AusIMM Bulletin

Thank you

Questions?