



Governance in Mining

Presented by: Cesar Carrasco
Director of Customer Success - Americas

Agenda



Introduction



Definitions



Context



The Golden Thread



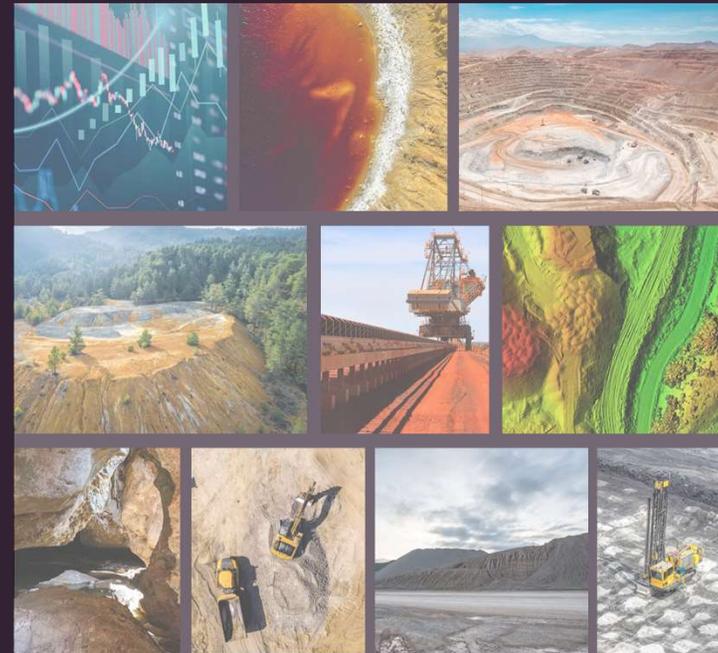
ESG Topics of Relevance



Minimum Disclosure



Principles for Improvement





**What does Governance mean to you?
What does ESG mean to you?**



Scope of ESG in Mining

The term ESG has direct links with responsible investment

The UN PRI reported having 3826 signatories

- comprising 3404 investors
- 422 service providers
- representing collective assets under management of US\$121 trillion as of 31 March 2021

Help differentiate companies as preferred investments

Potentially serious disconnects can occur when material commitments are made in the public domain



- ESG sounds simple...



...It's simply not

- GOVERNANCE – THE BASICS**
- Top level commitment
 - Human rights – respect and due diligence
 - Stakeholder engagement, including a grievance mechanism
 - Compliance with law and permit conditions
 - Indigenous title and consent agreements
 - Alignment with ESG principles/ standards
 - Ongoing risk assessment and ESIA for new projects
 - Apply the impact mitigation hierarchy
 - Functional management systems
 - Validation of conformance with standards
 - ESG disclosures
 - Inflation and volatility

- ENVIRONMENTAL**
- Pollution prevention
 - Sustainable resource use
 - Biodiversity and ecosystems protection
 - Avoiding deforestation
 - Decarbonisation and energy efficiency
 - Climate adaptation
 - Water stewardship
 - Responsible tailings and waste management
 - Responsible mine closure
 - Renewable energy stewardship
 - Hazardous material stewardship
 - Extreme event management plans



- GOVERNANCE – SPECIAL TOPICS**
- Payment of taxes
 - Disclosure of payments to government (and support EITI)
 - Fair transfer pricing
 - Responsible political involvement
 - Anti-bribery and corruption controls
 - Anti-competitive action controls
 - Responsible sourcing
 - Market access for artisanal miners
 - Independence of external auditors and oversight of geopolitical stability

- SOCIAL**
- Fundamental human rights at work
 - Safe & healthy workplace
 - Diversity and inclusion
 - Human development and training in the workplace
 - Community engagement
 - Avoid impacts on community health and emergency planning
 - Community development
 - Cultural heritage protection
 - Avoiding displacement and responsible resettlement
 - Respecting indigenous peoples' rights
 - Manage in-migration
 - Social transition at closure
 - Impact and risk of artisanal small scale mining



What are three prominent ESG incidents that have occurred in recent times and what impact have they had on the mining company and society?



- What are three prominent ESG incidents that have
- occurred in recent times and what impact have they had
- on the mining company and society?



Brumadinho (2019)



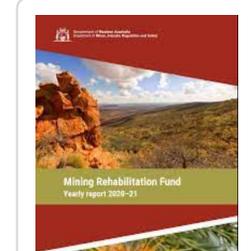
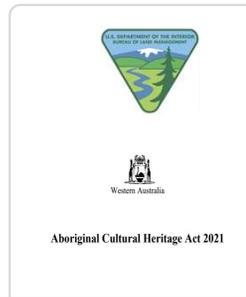
Juukan Gorge (2020)



Jagersfontein (2022)

Regulatory, Community and Industry Standards Rapidly Evolving

Regional Reporting Standards



Greenwashing Regulations

- Being captured by multiple laws and regulations globally
- Includes consumer protection laws on false product claims, stock exchange regulators on investment product claims, company laws on director liability and advocacy group directives
- Fast evolving space with new laws on the way including in with US, Europe and Australia



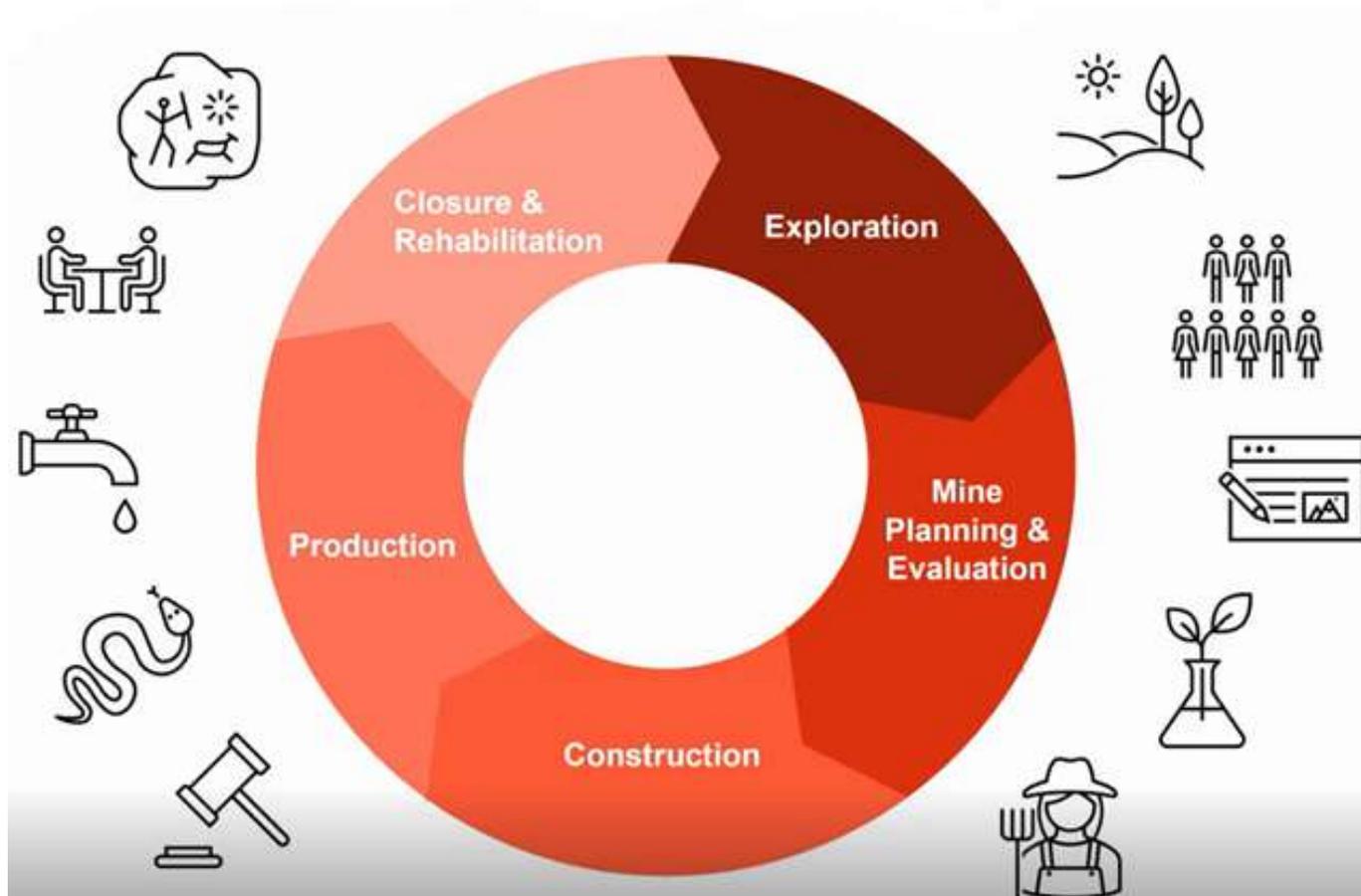
ASIC
Australian Securities & Investments Commission



Peak Industry Bodies



Every phase of the mining lifecycle requires governance



Context

A rapidly evolving commodities Supercycle - The World Needs More Mining and more mines **RAPIDLY** (Appendix 1)



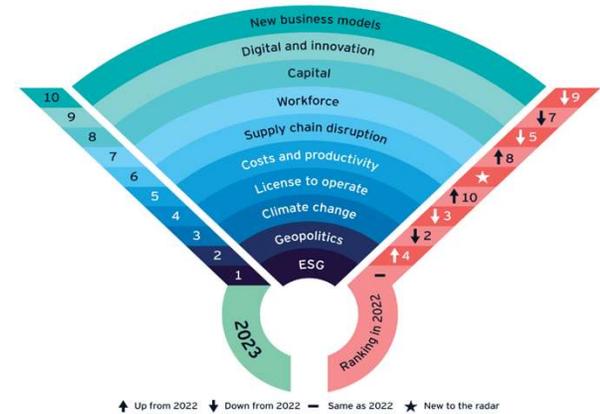
Mining attracts specific ESG disclosures over tick box generic Sustainability Reporting metrics

Value add makes ESG a no brainer

Currently there is a distinct lack of trust in Mining that requires “Radical Transparency”

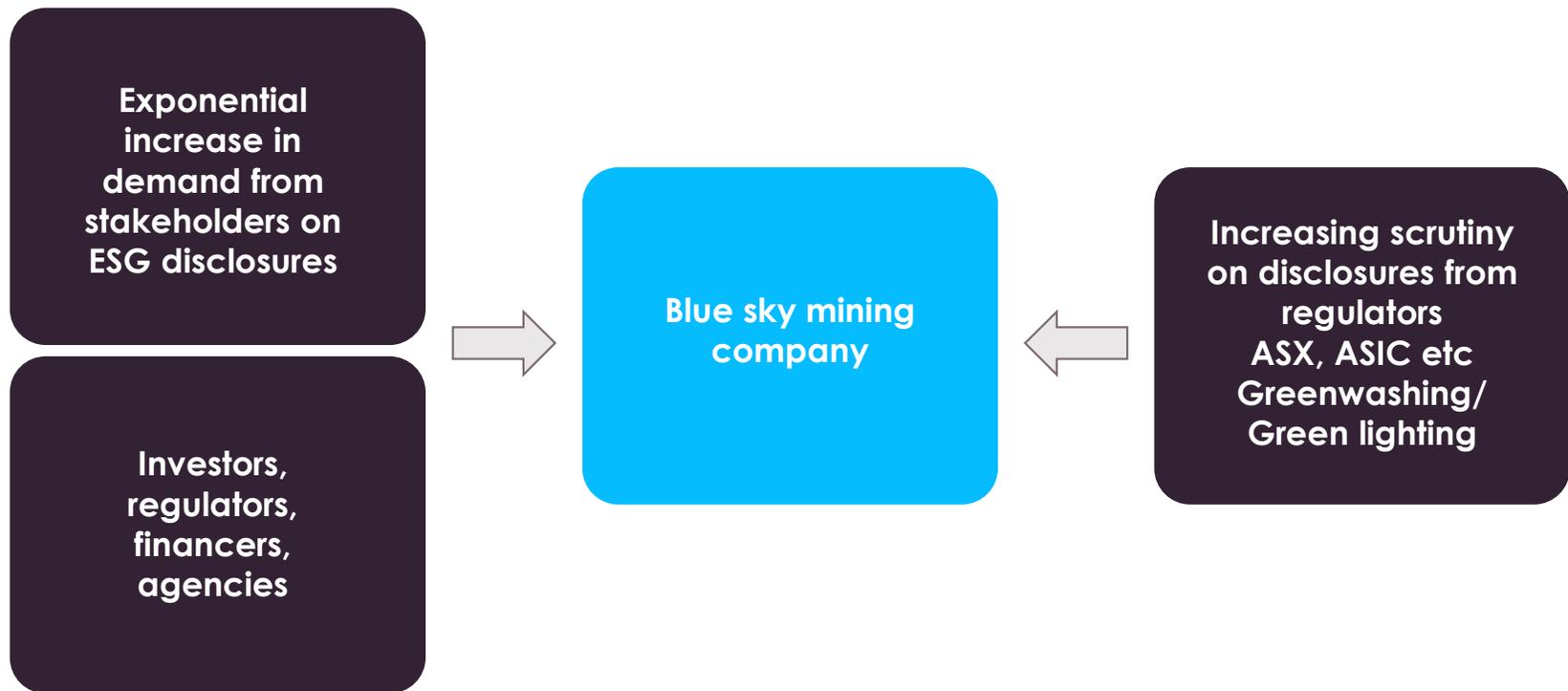
Regulatory Disclosure is growing exponentially for existing and new projects

ESG Risk is constantly top 10 across all mining CEO surveys outlined in EY's 2023 Report



Source: EY Top 10 Business Risks and opportunities for mining and metals in 2023 report.

Context (Push and Pull Factors)





Context

- Global demand for minerals requires more mining but a sustainable approach is needed
- Mining suffers from a lack of trust about ESG performance
- Pressure from multiple stakeholders to increase transparency
- Explosion of ESG disclosure and validation of performance
- ESG considerations are creating risks and opportunities
- ESG in Modifying Factors are linked to exploration, Mineral Resource and Mineral Reserve.
- A 'Golden thread' weaves together ESG initiatives and mineral reporting
 - Fully integrated into company strategy, business, and operating processes
- The burning platform is founded on the consequences of not expediting in a manner that is practical and reasonable to enact and delivers true value creation to all stakeholders.



The Golden Thread



Source | KB Manage



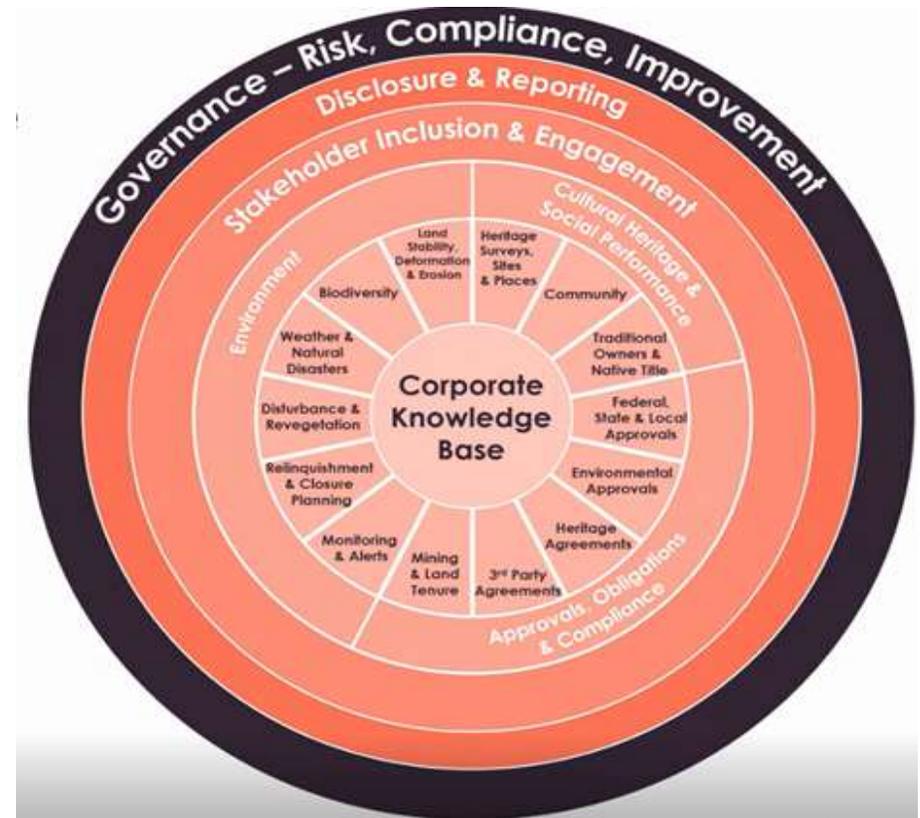
Where would you expect to find the Golden Thread and how would you know the mineral reporting is founded on that?

The Current Force in Governance

A library of interrelated information

- Stakeholders & Interactions
- Mining tenements
- Land Tenure
- Environmental Approvals
- Heritage sites/agreements
- 3rd party agreements
- Documentation
- Multimedia files
- Geographical representation
- Spatial analysis
- Obligations

At the core sits an enterprise Knowledge Base





Scope of ESG in Mining (Continued)

Project cashflows and financial models should integrate and reflect all input costs, including ESG-related costs

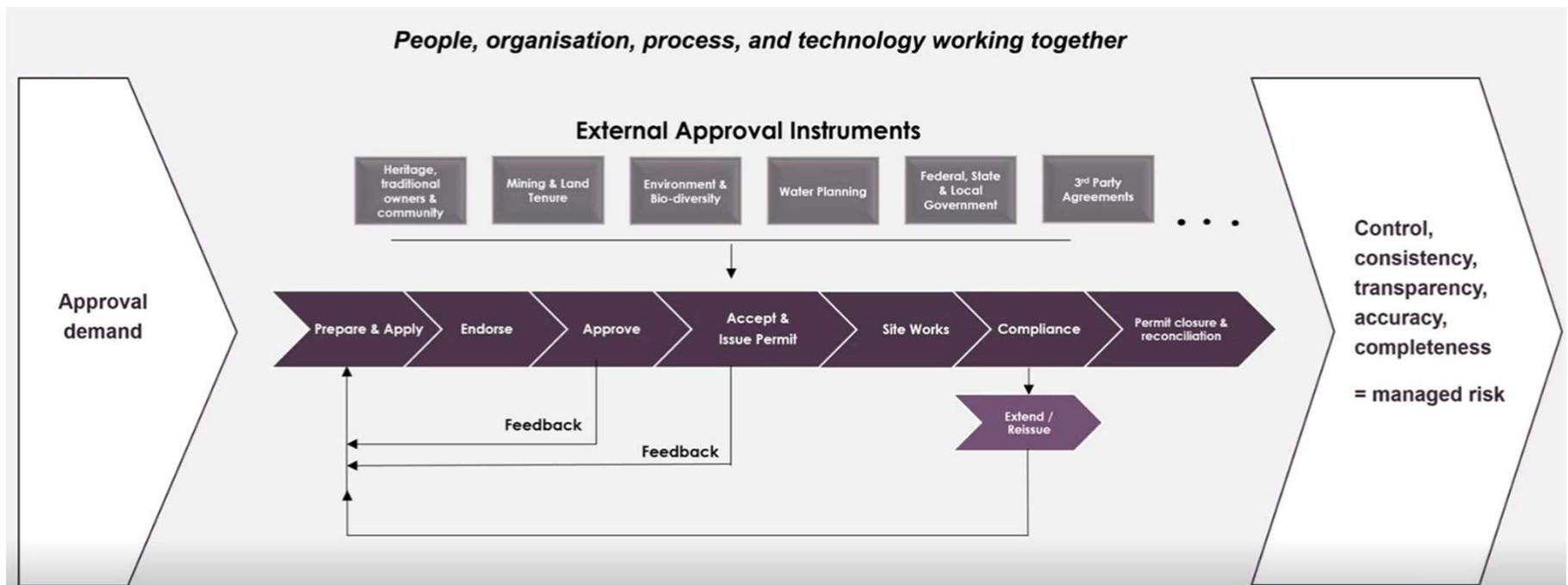
Environmental and social components to be considered in mineral reporting - can be constrained by 'zone of influence'

Material environmental and social factors that have the potential to become Modifying Factors for mineral reporting can then be identified through a process of:

- Analyse and evaluate
- Understand stakeholder issues and concerns
- Predict project-induced impacts that may arise
- Identify risks



What is a typical process?





Industry Trending Topics

**High cost of
decarbonisation
commitments**

**Preparing
operations for
climate change**

**The cost of
implementing new
technology**

**Re-shaping
traditional mining
value chains**

**Building flexibility
and resilience in the
face of regulatory
uncertainty**

**Embedding ESG
into organisations**

**Establishing a new
paradigm for
relations with
indigenous
people**





Minimum Disclosure

Sharp focus on adding value to the users of the information

Highlighting matters based on materiality, risk, and transparency

Transparently disclosing, on a robust and defensible basis

Information that could materially influence the economic value

Basics of risk assessment

Important information should not be hidden or omitted

Greenwashing and boilerplate statements avoided





Principles for Improvement

1. Recognise that mine waste, water and energy management and closure planning are integral
2. Elevate attention to energy and water demand, supply and efficiency, and climate resilience in project planning
3. Update the language in MRMR codes and standards to align with ESG terminology
4. Promote reporting to be clear, concise, simplistic, and relevant
5. Differentiate broader sustainability reporting from that specific to mineral reporting
6. Encourage the use of links and/or references to other publicly available sources of information
7. Drive convergence in company ESG reporting
8. Elevate but do not over-amplify consideration of ESG matters
9. Provide guidance that can be realistically and reasonably enacted
10. Promote consistency in how ESG is integrated with mineral reporting
11. Focus on satisfying the needs of the end user of the information
12. Develop guidance on minimum and leading practice reporting that traverses all life cycle phases
13. Proactively engage with security exchanges and regulators in different jurisdictions
14. Clarify the role of ESG in the different stages of reporting of mineral asset valuations
15. Provide advice on how the materiality of ESG factors can be determined
16. Provide specific, practical direction on how ESG matters should be incorporated into assessments of RPEE and Modifying Factors
17. Provide guidance regarding ESG competence and Competent Person and SME accreditation
18. Clearly explain governance
19. Support a procedural approach for ESG integration
20. Encourage ESG assessments to be undertaken by SMEs in support of Competent Persons, to ensure a balanced approach with the requisite expertise and insight applied
21. Wire ESG metrics into mineral reporting to ensure the 'golden thread' is intact and there is no disconnect between mineral report statements and company strategy and execution





Who does what to improve Governance in mining?



Key Players & Roles

- Stakeholders
- Investors
- Regulators
- Mineral Reporting Codes
- Industry Institutes
- Company Directors
- Competent Persons

- Speak up & set expectations
- track and value ESG performance
- hold companies to account, ensure consistency across different company reports
- provide more detailed guidance
- provide education and professional development
- ensure personnel is empowered and the Golden Thread permeates the entire organization
- use domain experts, ensure the Golden Thread is clear in mineral reports, insist on Transparency, Materiality and Competence



Conclusion & Guidelines

- ESG is now the topic most often covered during shareholder engagements that include company directors
- Holistically deal with Environment, Social, and Governance
- Requirement to organize and align people to this process (Golden Thread)
- The continuous assessment of a mineral property as it progresses is critical
- Core is a spatially integrated, enterprise knowledge base
 - Allows to extend relationships between data items

The focus is on improving access to relevant information for evidence-based decision making, and providing, transparent, relevant, repeatable, and robust governance which ultimately is more efficient and supports risk assessment and management.



Contact Us



info@k2fly.com
cesar.c@k2fly.com



k2fly.com



Head Office - Perth, Western Australia
North America – Denver, Colorado
South Africa – Centurion, Gauteng



Who is K2fly?

Resource Governance purpose driven ESG solutions for the Resource Industry
Without G there is no E or S

- K2fly defining the Resource Governance space alone globally. The only ground up Mining ESG technology player
- K2fly has contracted with 7 of the top 10 miners globally
- 6 of those contracts are HQ corporate in nature and for one solution only – ESG is a corporate risk and the engagement with corporate provides K2fly with ample expansion opportunities
- 5 of the top 10 miners use K2fly Resource Disclosure solution at corporate – the only COTS solution available for Resource Disclosure
- K2fly has delivered the first COTS Heritage and Ground disturbance systems to Rio Tinto and BHP in the Pilbara of Western Australia
- K2fly has delivered the first COTS global Reconciliation reporting system to Rio Tinto in 16 weeks

Global Resource Leaders Contracted 7 from Top 10

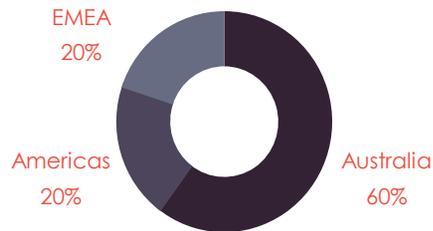


Clients by Commodity



Who is K2fly?

Global Business Distribution by ARR



Sites	500+
Commodities	148
Countries	62
Clients	29

Global Resource Leaders Contracted 7 from Top 10



Clients by Commodity



K2fly Resource Governance Solutions



Land Access



Heritage Management



Ground Disturbance



Tailings Management



Mine Rehabilitation



Resource Disclosure



Mine Reconciliation



Model Manager



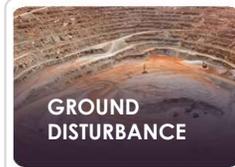
Ore Blocker



Mine Geology

Regulatory, Community and Industry Standards Rapidly Evolving

K2fly Solutions



Greenwashing Regulations

- Being captured by multiple laws and regulations globally
- Includes consumer protection laws on false product claims, stock exchange regulators on investment product claims, company laws on director liability and advocacy group directives
- Fast evolving space with new laws on the way including in with US, Europe and Australia



ASIC
Australian Securities & Investments Commission



Peak Industry Bodies



Global Industry Standard on Tailings Management

Regional Reporting Standards
k2fly



S-K 1300



Aboriginal Cultural Heritage Act 2021

