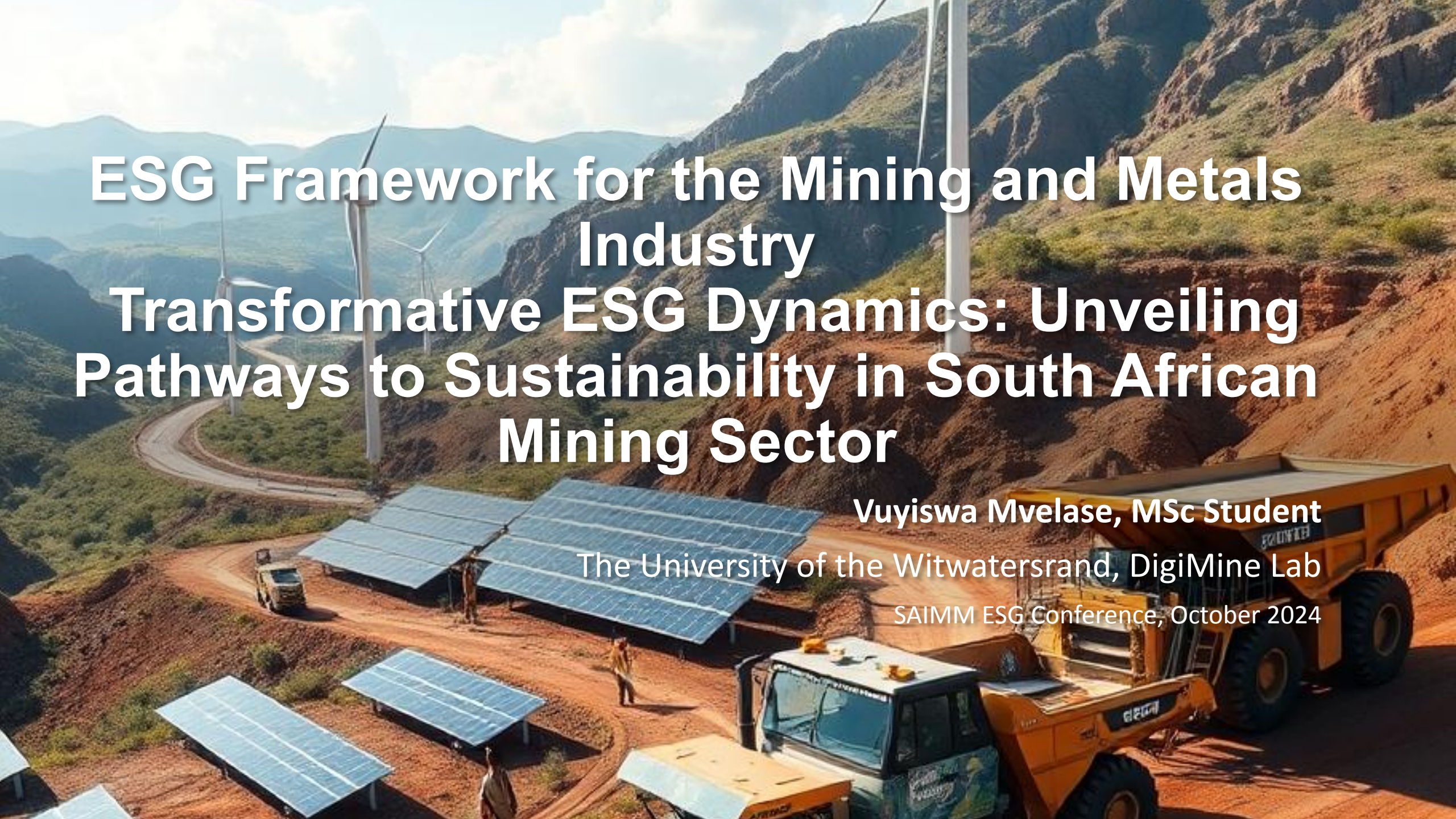

ESG Framework for the Mining and Metals Industry
Transformative ESG Dynamics: Unveiling Pathways to Sustainability in South African Mining Sector

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South African Analysis

- South African mining ESG context
- Characterised by unattainable mine site data
- A lack of transparency in reporting
- A lack of clarity on guidelines in relation to ESG reporting
- No standardised reporting framework
- Comparability of ESG data is a key challenge
- Framework bridges gap between identified ESG challenges and respective regulatory requirements

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ESG Critical for Mining

ESG is vital for South African mining to ensure sustainability, regulatory compliance, and stakeholder trust.

ESG Opportunities: Interconnected networks of both ESG risks and opportunities

ESG risks show a more closely correlated relationship both in the intra- and inter-pillar dynamics.

Address reputational risk and company performance

ESG Stakeholders: Indefinite stakeholder list for the South African mining sector

South African government, local or host communities from which the mining company must obtain a social licence to operate (SLO), industry lobby groups etc.

Investors: Critical role played by investors and shareholders in providing capital for mining projects

Investors are primarily focused on maximising their return-on-investment (ROI)

Portfolio diversification offered by mining projects to investors

Regulatory Framework: Existing legislative framework is redundant and in need of change

Fails to address key mining challenges around sustainability

Focuses on extraction

Little regard to the impacts of mining on the environment, communities, and local development

ESG in the South African Context

- National Environmental Management: Air Quality Act (No. 39 of 2004)
- National Climate Change Response White Paper (2011), Carbon Tax Policy Paper (2013)
- Integrated Energy Plan (IEP) (2016)
- National Greenhouse Gas Emission Reporting Regulations (2017)
- Low Emission Development Strategy (LEDS) 2050 (2018)
- Integrated Resource Plan (IRP) (2019)
- Carbon Tax Act (No. 15 of 2019)
- Climate Change Bill (2022)
- National Development Plan (NDP) 2030

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Framework Overview: Environmental Pillar

Key areas:

- Recycling materials
- Centralized waste treatment
- Reducing environmentally harmful emissions from waste
- Substituting with renewables and natural processes
- Integrating the environment

Goal:

- Linear economy, circular economy considerations
- Climate emergency

Integrating Technology/ Solution:

- Compliance audit software
- EIA software
- Hazardous waste management plans

Regulations:

- National Environmental Management Act 107 of 1998 (NEMA)

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Framework Overview: Social Pillar

Levels of inequality within South African society, high unemployment rates, occupational Health and Safety

Key areas

Socio-economic development, fair labour

Goal

Skills development/education, SLP software

Integrating Technology/Solution

Mineral and Petroleum Resources Development Act (MPRDA) 28 of 2002

Regulations

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Framework Overview: Governance Pillar

Key areas:

- Risk management
- Integrated reporting
- Bribery and corruption controversies
- Board diversity

Goal:

- Gender diversity in board
- Mining Charter implementation guidelines

Integrating Technology/ Solution:

- Board management software
- Digitized reporting

Regulations:

- The Mining Charter

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Implementation of Technologies and Solutions

Technology can enhance ESG performance in mining by improving resource efficiency, reducing environmental impact, increasing transparency, and supporting community engagement.

- Assess current ESG performance to determine areas of concern
- Set clear ESG goals that are actionable and measurable
- Develop ESG-specific targets
- Implement technology and innovation
- Stakeholder engagement and inclusion
- Monitoring performance for improvement
- Report ESG performance transparently and frequently

Expected Benefits of Implementing Solutions

01

Improved sustainability and reduced environmental impact

Enhanced stakeholder trust and long-term financial stability

Integrated environmental and social impacts of mining

Environmental footprint goals

02

Meeting the needs of the modern workplace

Prevention of injuries

Access to water, electricity, sanitation

Employment equity

03

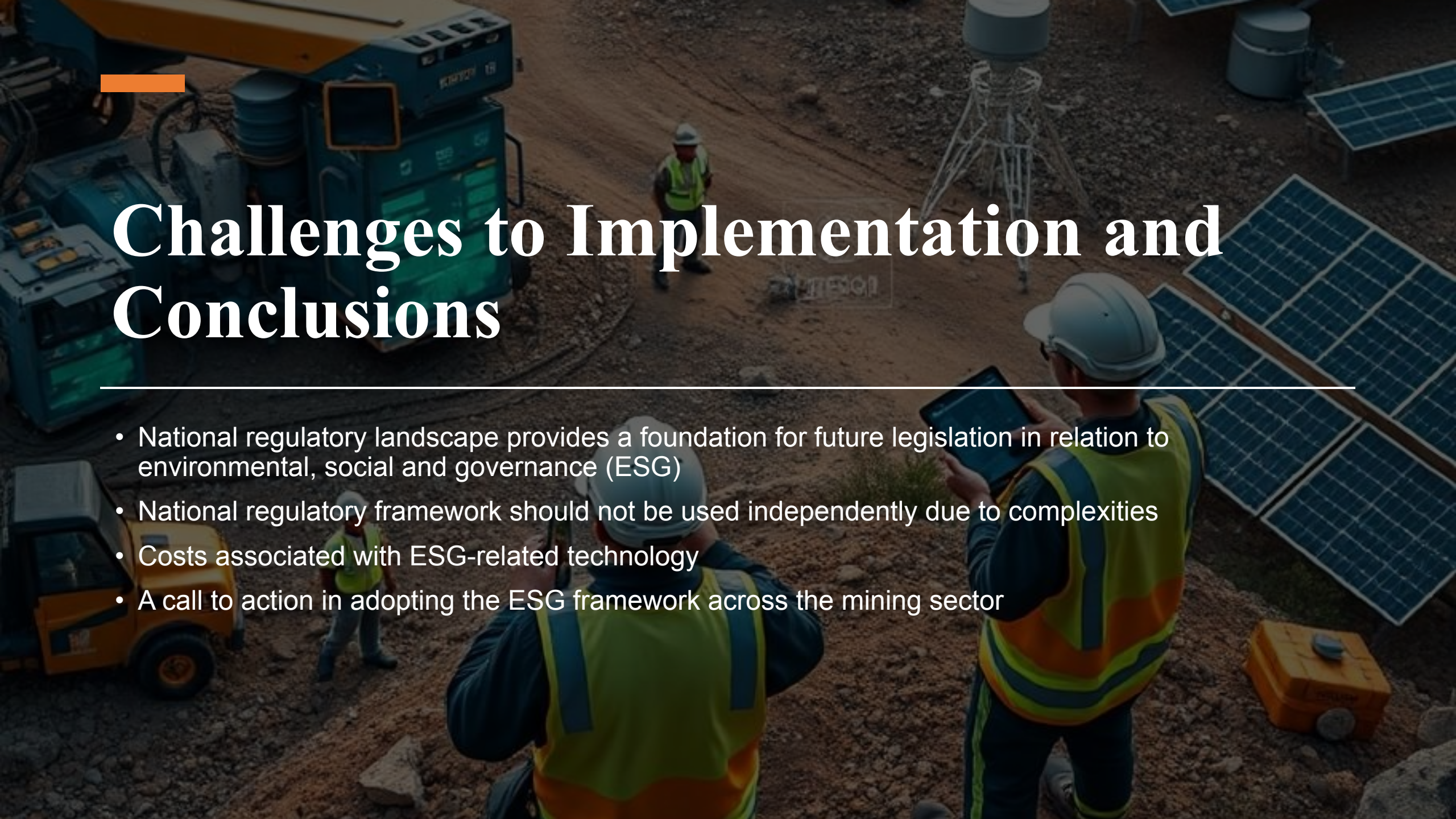
Balance of power

ESG policy

Board refreshment

Accountability

Value creation



Challenges to Implementation and Conclusions

- National regulatory landscape provides a foundation for future legislation in relation to environmental, social and governance (ESG)
- National regulatory framework should not be used independently due to complexities
- Costs associated with ESG-related technology
- A call to action in adopting the ESG framework across the mining sector

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THANK YOU

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