MINERALS COUNCIL
SOUTH AFRICA

MEDIA STATEMENT

South Africa's Mining Future Takes Centre Stage at Modernisation Day

Johannesburg, 23 July 2026. Three new reports highlight the South African mining sector's journey to modernise operations, with the Minerals Council South Africa and key stakeholders releasing studies into research, development and innovation (RDI) investment trends, insights into artificial intelligence (AI) in mining and a global benchmarking report.

South Africa's mining sector is more than 140 years old. To make mining safer and healthier, more inclusive, sustainable and productive, modernisation is essential. These goals will be achieved through implementing innovative mining methods and processing technologies, utilising AI to, amongst others, explore for new mineral deposits and optimising mining operations to keep South Africa globally competitive.

The launch of these reports reflects a growing recognition that modernisation is no longer optional; modernisation is essential for mining in South Africa to secure safe and healthy operations to deliver sustainable positive impact and long-term value for investors, employees, communities and the broader economy.

The three reports are:

• Research, Development and Innovation (RDI) for the Modernisation of South African Mining: A survey report prepared jointly by the Human Sciences Research Council (HSRC) Centre for Science, Technology and Innovation Indicators (CeSTII) and the RIIS through a pilot research project with Minerals Council South Africa;

• The Global Benchmarking Report prepared by RIIS and Minerals Council South Africa;

• 10 Insights into 4IR Report: AI - Powering the Future; prepared by PwC Smart Mining and Minerals Council South Africa.

"The launch of these publications marks another significant milestone in advancing South Africa's mining modernisation agenda and reinforcing the sector's commitment to innovation-led safety, growth, inclusive industrial development and global competitiveness," says Sietse Van Der Woude, Senior Executive: Modernisation and Safety at the Minerals Council.

The reports were released at the Modernisation Showcase, an event that convened mining executives, policymakers, researchers, technology providers and innovation partners to help shape the sector's technology and innovation priorities for 2026–2030.

The study titled *Modernisation of Mining in South Africa: Research, Development and Innovation Patterns and Firm Capabilities (2021–2023)*, was led by HSRC-CeSTII, in partnership with the Minerals Council, with contributions from RIIS and Copenhagen Business School.

The report explores the patterns of firm-level RDI activities driving mining modernisation in South Africa and identifies the key enablers and barriers. A key finding of the report is that modernisation of mining in South Africa is more about the adoption of technologies than engaging in research and development.

Mining modernisation depends on several enabling conditions including skills, collaboration, infrastructure and investment capacity. Key barriers to modernisation revealed by the study are governance and skills shortages spanning engineering, managerial and technical roles, which align closely with well-established gaps in tertiary education gaps and the provision of formal training.

"In South Africa the number of researchers per capita is about five times lower than Australia. This gives us an indication of how far behind the curve South Africa is relative to countries that have perhaps more actively and aggressively pursued modernisation in mining practices," says Dr Nazeem Mustapha, who leads the Centre for Science, Technology and Innovation Indicators.

The Global Benchmarking Report was developed by the Minerals Council in partnership with RIIS. The report examines how leading mining countries around the world are advancing modernisation through innovation, technology adoption, policy frameworks and strategic investment, while identifying recommendations to strengthen the global competitiveness of South Africa's mining sector and enable the successful adoption of innovative technologies.

The report highlights that globally competitive mining sectors are enabled not only by technology adoption, but by strong innovation ecosystems, coordinated policy frameworks and sustained collaboration between industry, government and research institutions.

"South Africa stands at a defining crossroads in mining modernisation. Despite holding world-class mineral wealth and a capable private sector, the country trails global leaders due to regulatory uncertainty, critical skills gaps, and fragmented innovation efforts. This benchmarking study, conducted across ten countries, confirms that nations which modernise successfully do so by investing simultaneously across policy, infrastructure, and skills - not in sequence.

The findings are clear: South Africa's window to position itself as a preferred global critical minerals supplier is open now, but it will not stay open indefinitely. Government, industry, and research institutions must act with urgency and genuine coordination before faster-moving competitors close the gap" says Sylvesters Okello, a Principal at RIIS.

The third and latest edition of the *Ten Insights into 4IR in South African Mining* publication, was developed in collaboration with PwC.

Drawing on interviews with CEOs and industry stakeholder, the report examines how AI and Fourth Industrial Revolution (4IR) technologies are influencing mining operations, leadership, workforce development, efficiency, safety, health and sustainability, while underscoring the importance of leadership-led digital transformation and workforce readiness.

"For PwC, this third edition of the study reflects our ongoing commitment, alongside the Minerals Council South Africa, to support the mining sector through a period of significant change. By bringing together industry voices and practical experience, we aim to help mining leaders navigate complexity, make better decisions and unlock sustainable value," says Ian Mackay, Associate Director, Mining Transformation, PwC South Africa.

Collectively, these reports underscore the importance of collaboration amongst industry, government, academia and innovation partners in responding to some of the sector's most pressing challenges and opportunities, including infrastructure development, skills for the future, digital transformation, decarbonisation and accelerating technology adoption across the mining value chain to enable a transition to a low carbon economy future and social prosperity.

All materials including speeches and the reports released at the launch are here.

The PwC media statement on its Ten Insights into 4IR in South African Mining is here.

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