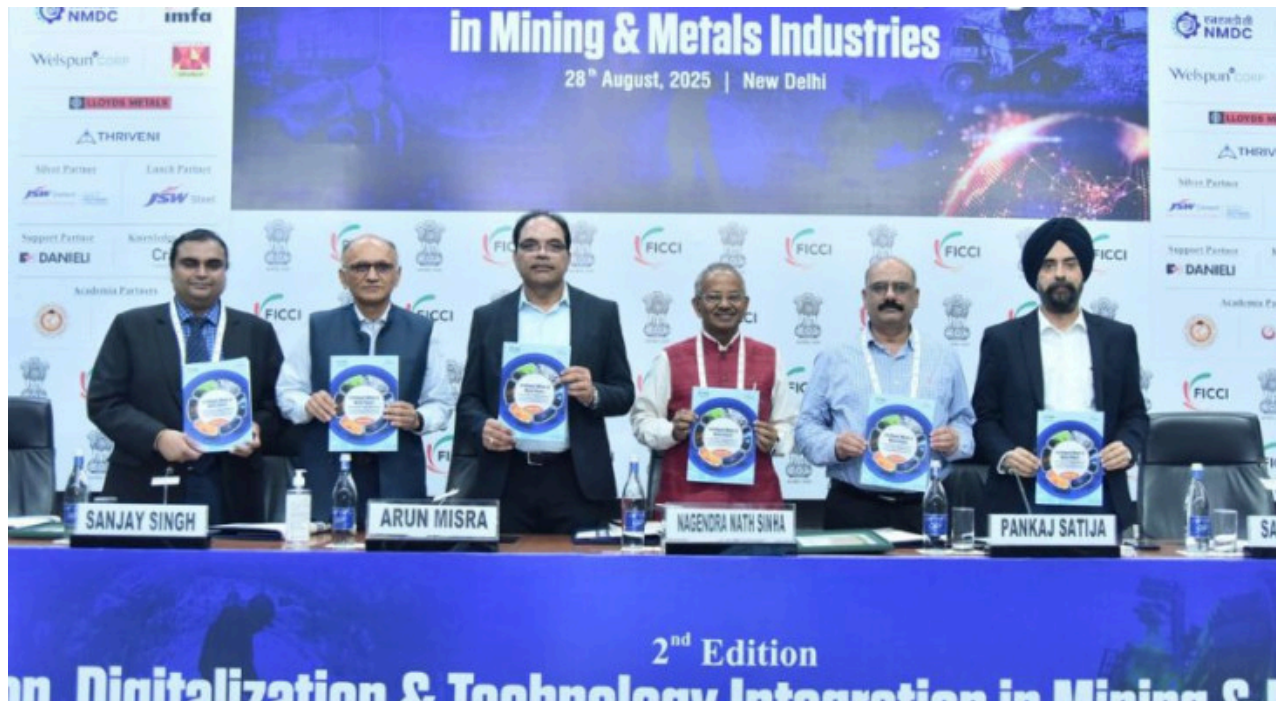


# Digital Push Could Lift Mining & Metals Competitiveness By 15%: Report

**BW**[businessworld.in/article/digital-push-could-lift-indian-mining-metals-competitiveness-by-15-report-569230](https://www.businessworld.in/article/digital-push-could-lift-indian-mining-metals-competitiveness-by-15-report-569230)

[BW Online Bureau](#) Aug 29, 2025

- [# FICCI–Crisil](#)
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Automation gains seen matching tariff protections as industry gears up for global market challenge

Indian mining and metals companies stand to boost competitiveness by up to 15 per cent through digitalisation and automation, a leap industry leaders likened to the benefits of past import safeguard duties. The projection comes from the FICCI–Crisil report, Intelligent Mines & Metal Plants, unveiled at FICCI's second Conference on Automation, Digitalisation & Technology Integration in Mining & Metals.

The study highlights that automation, robotics, artificial intelligence and Internet of Things (IoT) applications could deliver productivity gains that pay back investments within two years. This is particularly critical as the sector faces tighter sustainability norms and looming trade adjustments such as the European Union's carbon border tax.

“Digital transformation is not optional; it is a competitive lever,” said Nagendra Nath Sinha, Former Steel Secretary and Managing Director of Rodic Digital & Advisory. “With intelligent use of technology, industries can achieve efficiency improvements of 10–15 per cent - equivalent to the gains once sought through safeguard duties.”

The report notes growing demand for coal, iron ore, bauxite, zinc and critical minerals such as lithium, copper and cobalt, fuelled by India’s infrastructure build-out and the global energy transition. But depletion, price volatility, and environmental concerns are sharpening the urgency for digital adoption.

Steel demand in India is set to nearly double by 2030, said Sanjay Singh, Director of Strategy and External Relations at Jindal Steel and a former Steel Secretary.

“Sustainable production with reduced emissions is imperative. While breakthrough technologies like green hydrogen will take time to scale, AI and robotics can significantly enhance existing blast furnace operations.”

Industry leaders stressed that digitalisation must focus on actionable insights. Arun Misra, Chief Executive of Hindustan Zinc and Vedanta Executive Director, said: “True digitalisation means timely, actionable insights — not just dashboards.” He pointed to applications like geographic information systems for mine boundary management and predictive drilling.

Safety technologies, including driver fatigue monitoring and slope stability radar, were cited as immediate innovations with measurable benefits in reducing operational risks.

Executives agreed that success hinges on boardroom ownership. “CEOs and senior management must drive, monitor and resolve challenges,” Sinha said, underlining the need for workforce upskilling to ensure employees embrace technology as an enabler.

Pankaj Satija, executive in charge at Tata Steel and Co-Chair of FICCI’s Mining Committee, added: “Continuous evolution in technology adoption and workforce training is vital. Technology must connect people, assets and processes while expanding into areas such as environmental monitoring.”

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