

Silex World Expands Digital Infrastructure Strategy for Critical Materials Supply Chains

Digital verification, traceability and provenance systems designed to support resilient rare earth and critical materials networks.

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/EINPresswire.com/ -- [Silex World](#) Expands Digital Infrastructure Strategy for Critical Materials Supply Chains

Silex World Ltd, a University of Leeds spinout focused on critical materials processing, today announced the continued development of its digital infrastructure strategy designed to support transparency, traceability, and trust across emerging critical materials supply chains.



Critical materials supply chains are increasingly becoming information supply chains. Verification and traceability

As governments and manufacturers seek to secure access to strategic materials, attention is increasingly turning toward the ability to verify material origin, processing history, environmental credentials, and chain-of-custody throughout complex industrial networks.

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Critical materials supply chains are increasingly becoming information supply chains. Verification and traceability will be as important as processing.”

Michael Hodges

Silex World believes that future critical materials supply chains will require both physical and digital infrastructure. Alongside its work in rare earth recovery, modular refining systems, and distributed processing networks, the company is developing digital tools intended to support

material verification, supply chain transparency, and trusted industrial data exchange.

The initiative builds upon Silex World’s existing [digital traceability architecture](#) and forms part of a wider strategy to support emerging requirements across defence, advanced manufacturing, renewable energy, electrification, and semiconductor sectors.

The company is also progressing development activities under its MagnetPass programme, a next-generation digital framework intended to support future verification and traceability requirements within rare earth and magnetic materials supply chains.

While details of the programme remain commercially confidential, Silex World believes digital verification will become increasingly important as governments and manufacturers seek to establish trusted and resilient supply networks for strategic materials.

Demand for verified supply chains is growing rapidly as procurement standards evolve and organisations seek greater visibility over material provenance, processing pathways, and compliance requirements.

Silex World's digital infrastructure strategy is designed to support:

- Material provenance and chain-of-custody verification
- Digital traceability across processing and manufacturing pathways
- Integration of recycled and secondary materials into trusted supply chains
- Support for emerging procurement and compliance requirements
- Enhanced transparency across distributed industrial ecosystems
- Future digital services supporting critical materials networks

Michael Hodges, Founder of Silex World Ltd, said:

"Critical materials supply chains are increasingly becoming information supply chains. The ability to verify, authenticate, and understand material history will be just as important as the ability to process the material itself."

He added:

"Physical infrastructure and digital infrastructure will evolve together. The next generation of critical materials supply chains will require both."

The company believes that combining advanced processing capability with digital verification systems could help establish a new generation of trusted industrial supply chains capable of supporting allied manufacturing and strategic materials security.

Silex World is currently engaging with industrial partners, government stakeholders, and technology collaborators to explore future deployment opportunities for digital infrastructure supporting critical materials ecosystems.

About Silex World Ltd

Silex World Ltd is a University of Leeds spin-out company developing technologies for critical materials recovery, rare earth recycling, advanced materials processing, industrial minerals upgrading, and sustainable manufacturing systems. The company is focused on creating scalable solutions that support resilient and circular supply chains for strategic materials.

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