

Silex World Advances Industrial Symbiosis Platform for Strategic Materials Recovery

Silex transforms industrial by-products into strategic materials using modular, low-energy processing to strengthen resilient critical materials supply chains

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/EINPresswire.com/ -- [Silex](https://www.silexworld.com/) World Ltd, a University of Leeds spinout focused on [critical materials](#) processing, today announced further development of its industrial symbiosis strategy, designed to transform industrial waste streams

into valuable strategic materials through integrated processing technologies.

The company believes that many industrial by-products traditionally regarded as waste represent an increasingly important domestic source of critical materials. By recovering value from these secondary resources, Silex World aims to strengthen supply chain resilience while

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Michael Hodges

supporting more resource-efficient manufacturing.

Rather than treating industrial residues as disposal challenges, Silex World's technology platform is designed to recover valuable materials from a diverse range of industrial feedstocks using scalable, modular processing systems.

The approach supports growing interest from governments and industry in reducing dependence on imported raw materials while improving the utilisation of existing industrial resources.

Silex World's industrial symbiosis platform has been

developed to support:

- Recovery of strategic materials from industrial residues and secondary resources
- Integration of waste-derived feedstocks into critical materials supply chains
- Continuous, low-energy processing through modular infrastructure
- Digital traceability and material verification across processing pathways
- Reduced dependence on primary extraction through greater resource efficiency
- Regional deployment close to industrial feedstock sources



INDUSTRIAL SYMBIOSIS
TRANSFORMING INDUSTRIAL WASTE INTO STRATEGIC MATERIALS
Silex World's platform recovers value from diverse industrial by-products and secondary resources, strengthening supply chain resilience and supporting resource-efficient manufacturing.

OUR PLATFORM SUPPORTS

- Recovery of strategic materials from industrial residues
- Integration of waste-derived feedstocks
- Continuous, low-energy processing
- Digital traceability and material verification
- Reduced dependence on primary extraction
- Regional deployment close to feedstock sources

STRATEGIC BENEFITS

- Stronger supply chains
- Resource efficiency
- Lower environmental impact
- Support for domestic manufacturing
- Greater national resilience

DIVERSE INDUSTRIAL FEEDSTOCKS

- RED MUD
- PHOSPHORUM
- SPENT CATALYSTS
- E-WASTE & WAX/NET SCRAP
- INDUSTRIAL SLAGS

INTEGRATED PROCESSING

VALUABLE MATERIALS RECOVERED

- BASE EARTH OXIDES
- CRITICAL METALS
- INDUSTRIAL MINERALS
- SPECIALTY MATERIALS

RESEARCH & INNOVATION **DIGITAL TRACEABILITY** **RECOVERING VALUE** **REGIONAL DEPLOYMENT** **SUSTAINABLE FUTURE**

Silex World - Industrial Symbiosis

Industrial sectors across manufacturing, mining, metals, energy and recycling are increasingly seeking technologies capable of extracting greater value from existing material streams while reducing environmental impact and improving resource security.

As part of its commercialisation strategy, Silex World is continuing industrial deployment activities in India while engaging with partners across the United Kingdom, Europe and the United States to explore opportunities for integrating industrial by-products into future critical materials supply chains.

Michael Hodges, Founder of Silex World Ltd, said:

"Tomorrow's critical materials will not come solely from new mines. Increasingly, they will come from the materials we already have, provided we have the technology to recover and process them efficiently."

He added:

"Industrial symbiosis is about seeing waste differently. By transforming existing industrial resources into strategic materials, we can strengthen domestic manufacturing while building more resilient and sustainable supply chains."

The company believes industrial symbiosis will become an increasingly important component of future critical materials strategies as governments seek to improve resource productivity, support domestic manufacturing, and reduce reliance on imported processing capacity.

Silex World is continuing discussions with industrial partners, government organisations, and strategic investors regarding future deployment of technologies supporting industrial symbiosis and critical materials recovery.

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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