

# CRITICAL RAW MATERIALS

MASTERS OF THE PERIODIC TABLE AND THE FINANCIAL IMPERATIVE OF GOLD NOT CONFETTI



## China's Dominance Seen as a Strategic Risk

At a meeting on September 3<sup>rd</sup>, industry leaders, policymakers, and researchers warned that global reliance on China for rare earths poses a significant vulnerability. These materials, essential for everything from smartphones to electric vehicles, remain tightly controlled by Beijing.

## India Moves to Localize Supply Chains

India's recent ban on e-waste exports was spotlighted as a bold step toward securing its own rare earth supply. By retaining discarded electronics, India aims to build domestic recycling industries and reduce dependence on foreign imports.

## Workforce and Cultural Challenges

However, barriers remain. Experts noted the need for a cultural shift toward circularity and reduction, as well as investment in engineering skills. Concerns were raised about reclaimed materials leaving the UK without proper safeguards. Bridging the so-called "valley of death" between lab-scale breakthroughs and industrial deployment was also identified as a pressing challenge.

## Recycling vs. Mining

Delegates agreed that recycling offers faster and cheaper returns than new mining projects. Smaller, distributed recycling plants were viewed as the most practical solution, supported by strong government prioritization.

## Cleaner Technology Gains Momentum

A major highlight of the session was Silex's alkali-based separation technology, which avoids the use of harsh acids. The process promises to be more environmentally friendly, scalable, and resilient to supply disruptions. With intellectual property safeguards and government backing, collaborations with India and other partners are being pursued.

## The Road Ahead

Next steps include building community-based collection systems, supporting safe recycling practices, and pushing for design-for-disassembly in product manufacturing. Clem, who closed the session, extended an invitation for further engagement and collaboration.

**Subscribe to the series to receive invites and materials here:**

<https://www.teamdefence.info/event/critical-raw-materials-for-defence-online-snack-series-session-3/>