How critical mineral alliances aim to shape the future of e scrap metals

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ReElement Technologies, a company that specializes in refining rare earth elements and battery materials from both mined and recycled feedstock, joined the Minerals Integrity & Resilience Alliance (MIRA) in May as part of a broader effort to strengthen transparency and resilience across critical mineral supply chains.

What “critical minerals” mean in practice

Governments and manufacturers use the term “critical minerals” for materials seen as essential to economic and national security, including rare earth elements, lithium, cobalt, nickel and others used in EVs, wind turbines, data centers and defense systems. Supply of many of these minerals is highly concentrated in a small number of countries and often flows through opaque, politically exposed chains. That concentration risk is why policymakers and OEMs increasingly talk about diversification, “friend-shoring” and the role of recycling and urban mining in closing the gap.

The issue is clearly tied to the e-scrap and ITAD sectors because a growing share of critical mineral supply can in principle come from end-of-life electronics, magnets, batteries and industrial tech scrap, not just mines. Companies like ReElement explicitly position multi-feedstock refining platforms that can take in permanent magnets, lithium-ion batteries and other technology waste alongside mined ores and byproducts.

What MIRA is and what it does

MIRA is a collaborative initiative convened by the *Center for International Private Enterprise* (CIPE), building on its PROTECT program, which is funded by the U.S. Department of State and focuses on responsible ownership and transparency in critical minerals. CIPE describes MIRA as a global collective-action platform that brings together private-sector companies, governments and civil society to improve integrity, transparency, trust and resilience in critical mineral supply chains. Its work includes mapping governance and integrity risks from “mine to market,” encouraging risk-based integrity systems, and developing practical

tools and forums that support traceability, investment readiness and more secure supply chains.

In its May announcement, ReElement said its participation in MIRA reflects a commitment to helping build “a more secure, transparent, and resilient critical minerals ecosystem” in the United States, allied markets and strategic international regions. The company notes that, through MIRA, it will engage with stakeholders focused on responsible ownership, supply chain integrity, transparency and investment readiness across the critical minerals and rare earth sectors.

Where e-scrap fits into this picture

E-scrap and ITAD streams contain many of the same materials policymakers worry about in primary supply chains: rare earths in magnets, cobalt and nickel in some batteries, and copper and precious metals throughout devices and infrastructure. ReElement describes its chromatography-based “refining-first” platform as able to process recycled materials from permanent magnets, lithium-ion batteries and industrial and technology waste, as well as mined ores, brines and coal-based byproducts, into high-purity products. That makes electro-scrap one of several potential feedstock sources for a refiner that is now aligning itself with governance-focused initiatives like MIRA.

For upstream electronics recyclers, these developments are a reminder that the most attractive downstream homes for certain fractions are increasingly embedded in regulated, scrutinized and highly traceable supply chains. ReElement’s earlier partnership with ERI on rare earth magnets and its more recent collaboration with Mitsubishi Materials on rare-earth supply chains show how recycled inputs are being woven into broader industrial and policy strategies around critical minerals.

Why alliances and governance efforts matter to recyclers

Groups such as MIRA are not certification bodies, but they may still influence how parts of the critical minerals supply chain approach governance, sourcing transparency and supplier oversight. Organizations involved in these initiatives often include refiners, processors, manufacturers and policy-focused institutions with an interest in supply-chain resilience and traceability.

For recyclers and downstream processors, the relevance is less about formal compliance

obligations and more about the direction of market expectations. As critical minerals and recycled feedstocks receive greater policy and industrial attention, some companies may face increased requests for documentation related to sourcing, chain of custody, material origin and processing practices, particularly when supplying strategic or export-sensitive sectors.

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