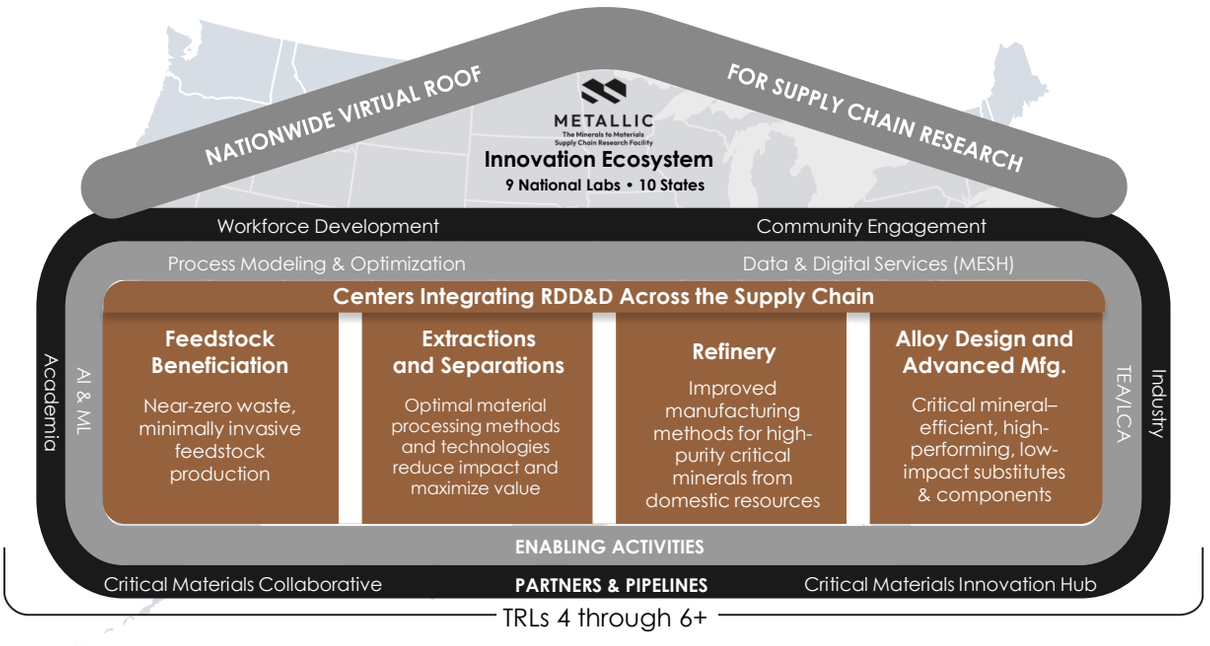
# METALLIC

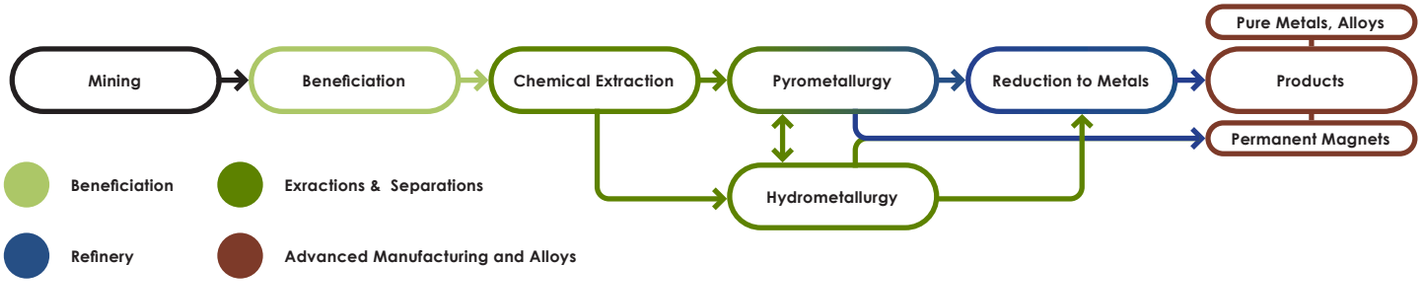
## WHAT IS METALLIC?

The Minerals to Materials Supply Chain Research Facility (METALLIC) provides facilities and expertise to accelerate research, development, demonstration, and deployment (RDD&D) across the entire critical minerals and materials (CMM) supply chain. Capabilities are focused on reducing time, cost, and risk of maturing technologies at the bench, pilot, and industry-relevant prototype scales.




## OUR GOAL

Accelerate the establishment of domestic CMM supply chains by providing the facilities and expertise for developing, maturing, and de-risking the adoption of new feedstocks, production pathways, and advanced processing technologies.



## THE FOUR METALLIC CENTERS

The four METALLIC centers exist to connect research, development, demonstration, and deployment (RDD&D) across critical minerals and materials (CMM) supply chain areas.

### CENTER 1

#### FEEDSTOCK BENEFICIATION

Advances and validates innovative beneficiation approaches for a variety of solid and liquid feedstocks. It leverages comprehensive characterization capabilities to inform efforts and create a resource data library.

### CENTER 2

#### EXTRACTIONS AND SEPARATIONS

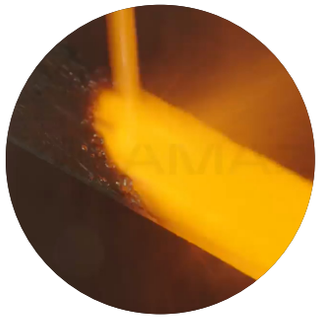
Demonstrates extraction and separations technologies — from acid leaching to solvent extraction, membranes to direct precipitation — on low-concentration sources, high-volume liquids, slurries, and everything in between.

### CENTER 3

#### THE REFINERY

Validates new materials and technologies to support critical materials supply chains, thereby de-risking commercial adoption. It also integrates smart manufacturing and supports workforce training and development.

### CENTER 4



#### ALLOY DESIGN AND ADVANCED MANUFACTURING

Designs and validates improved methods for alloy development, leading to advanced manufacturing approaches to reduce the materials intensity of critical-material-containing alloys and parts.

## ENABLING ACTIVITIES

Techo-Economic Analysis/Life Cycle Assessment, Process Modeling & Optimization, Data & Digital Services (MESH), Autonomous Labs, AI/ML

## AN INNOVATION ECOSYSTEM

METALLIC is maturing, de-risking, validating, demonstrating, and deploying

### INTEGRATED CAPABILITIES

Shared tools, data, and expertise

### STRATEGIC PARTNERSHIPS

Industry, national labs, academia, and other government agencies

### ACCELERATED INNOVATION

Faster path from source to supply

### NATIONAL IMPACT

Stronger supply chains and a secure future


**DIRECTOR**

**Thomas Tarka**
National Energy Technology Laboratory
Work-With-METALLIC@netl.doe.gov


For info about METALLIC


U.S. DEPARTMENT of ENERGY | NATIONAL ENERGY TECHNOLOGY LABORATORY