



Phinergy

The Future is in the Air

PRESENTATION AT ON DEMAND MOBILITY AND EMERGING AVIATION TECHNOLOGY

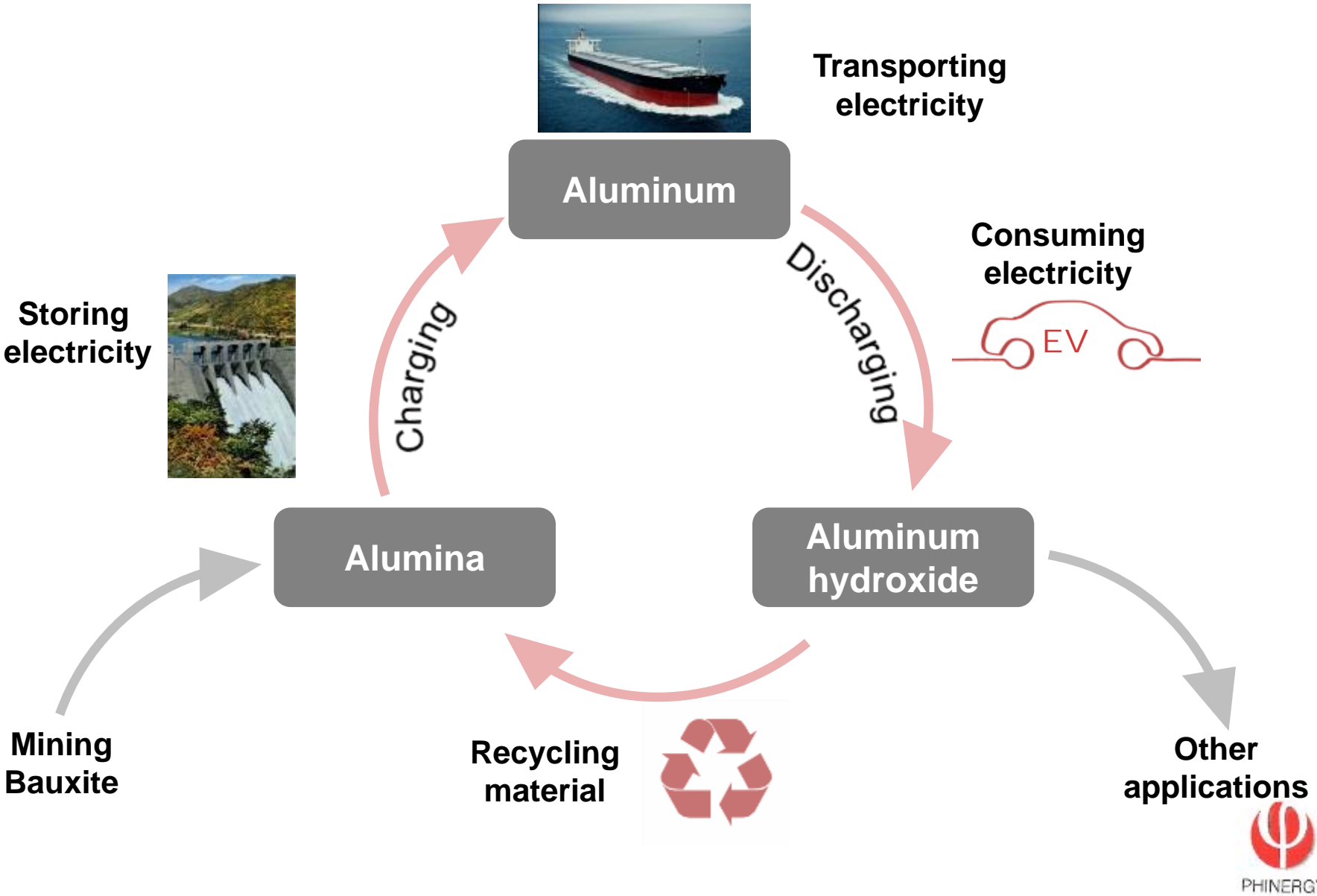
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PHINERGY

Aluminum is a means to store and transport energy

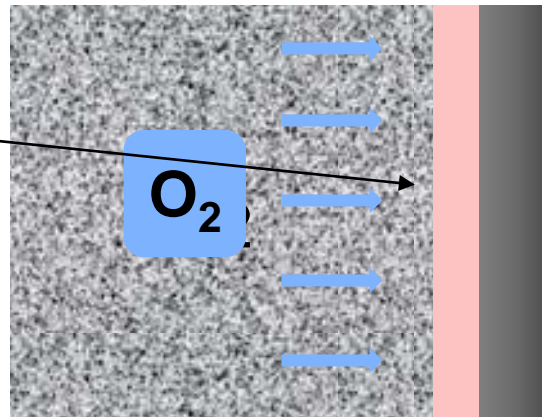


Metal-Air: Lighter batteries breathing the air

Conventional
batteries

Oxygen is carried into a large and heavy material

Major obstacle overcome
by Phinergy



Theoretical specific energy

➤ 8.1KWh/kg Al

Phinergy's current utilization

➤ 3.5KWh/kg Al

Cathode

Air

Cathode

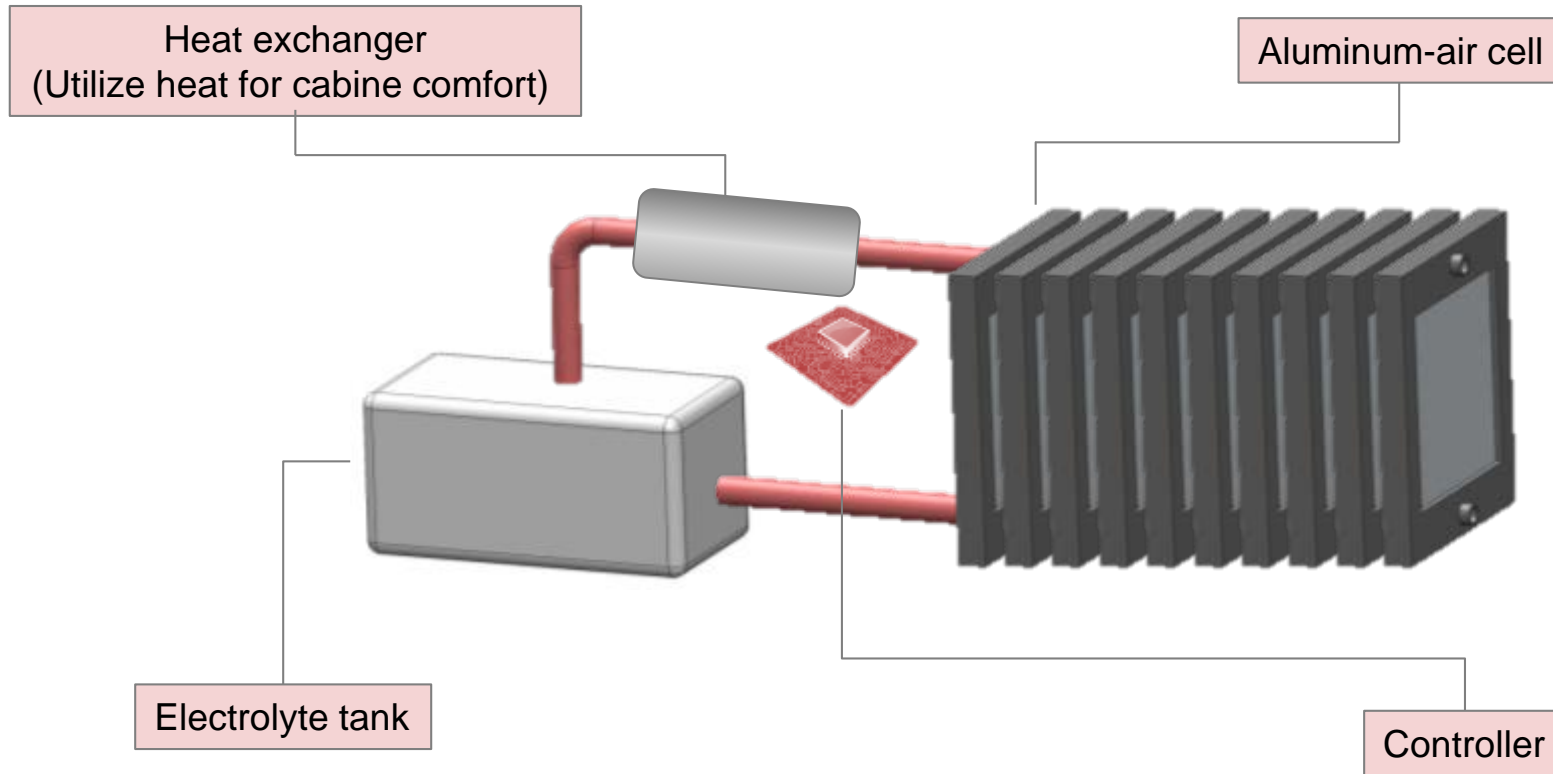
Electrolyte
(liquid)

Metal
Anode



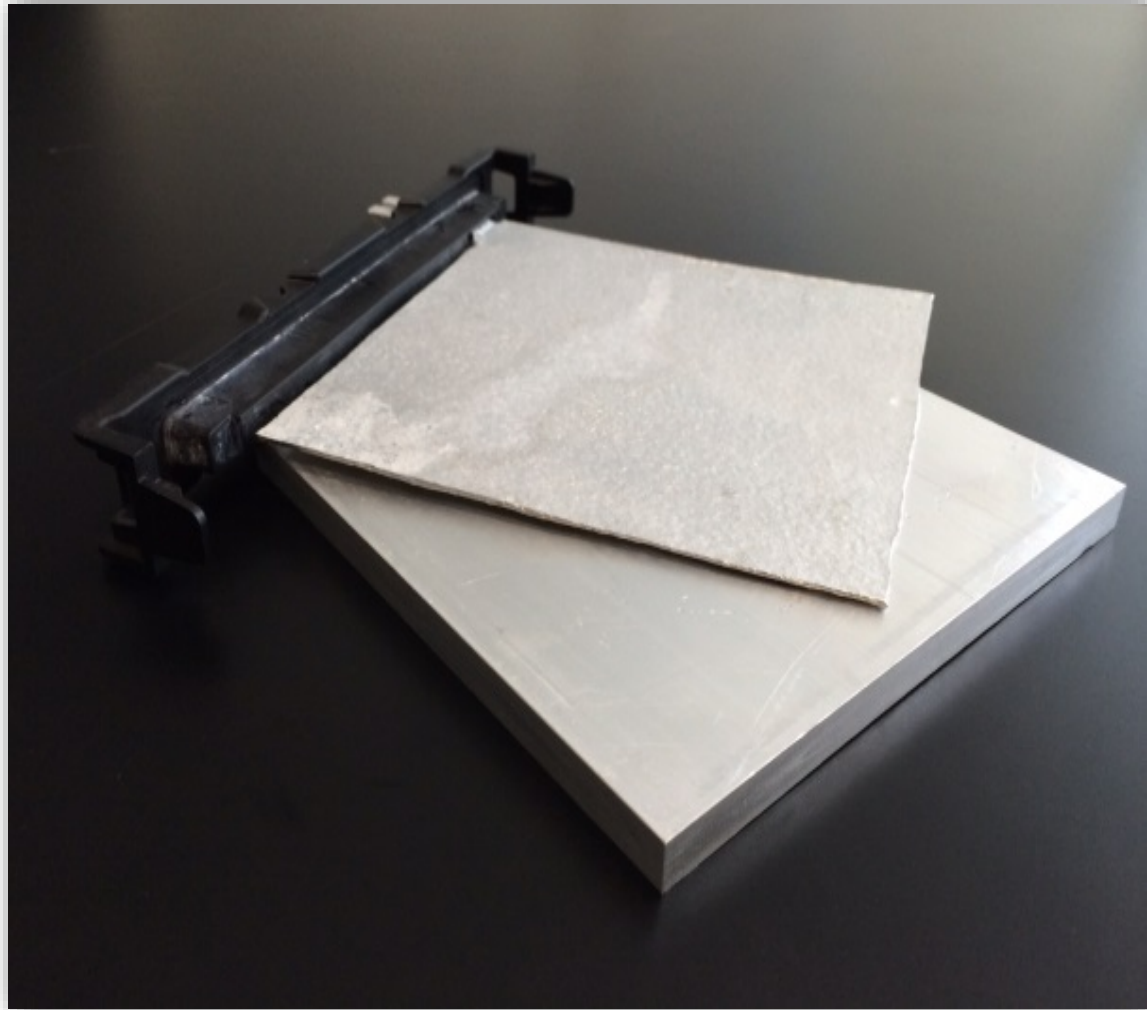
Aluminum-Air Energy Core - Topology

High level architecture



- **Quick electrolyte replacement**
- **Quick anode reload**
- **No prolonged recharge**

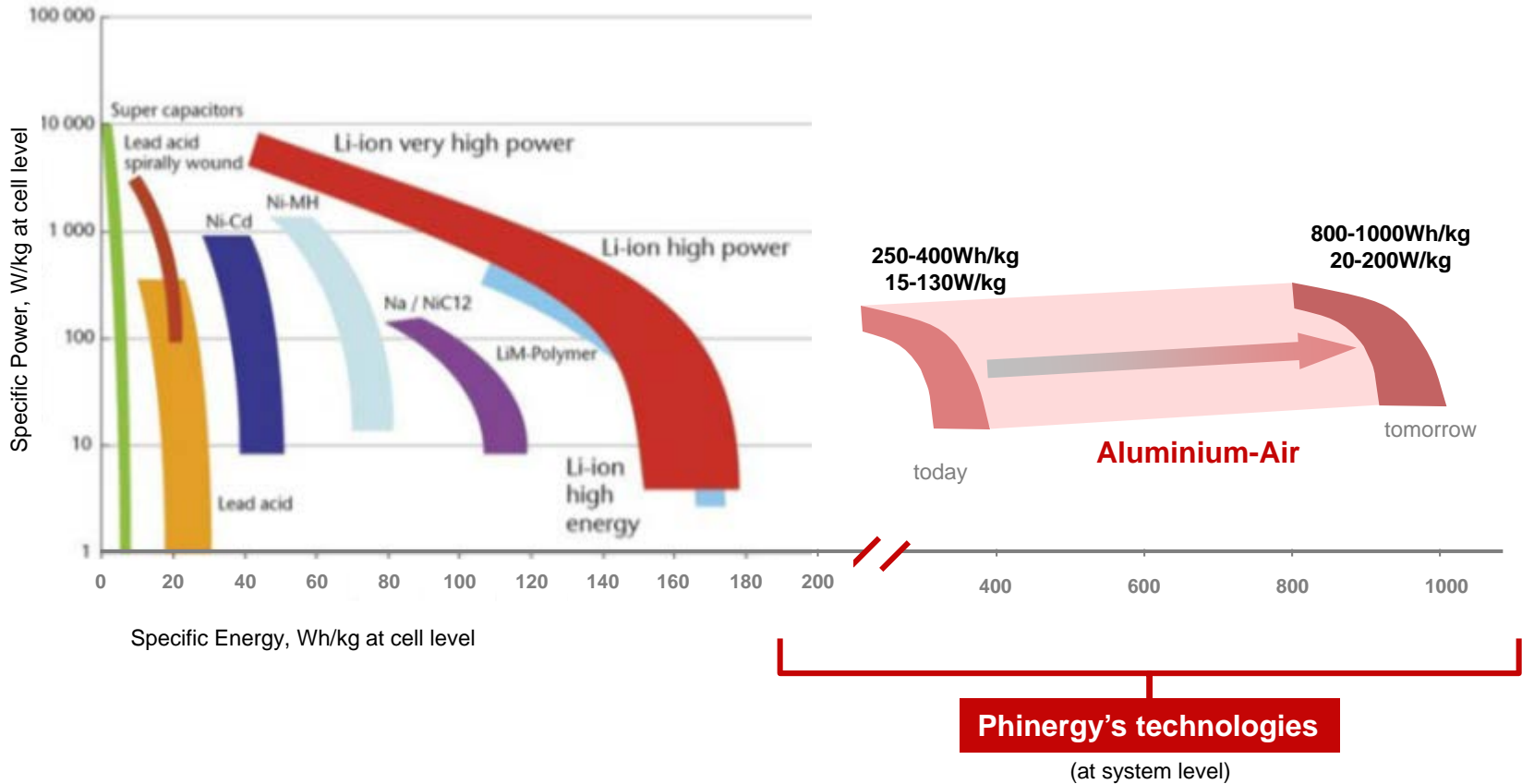
New Aluminum anode vs 90% depleted anode



Phinergy's aluminum-air battery



Phinergy's technological roadmap targets



Source: *Electric Power Research Institute*

Phinergy – timeline

