10 YEARS OF LI-METAL BATTERIES
Technology, Supply Chain, and New Business Model

INVESTOR PRESENTATION

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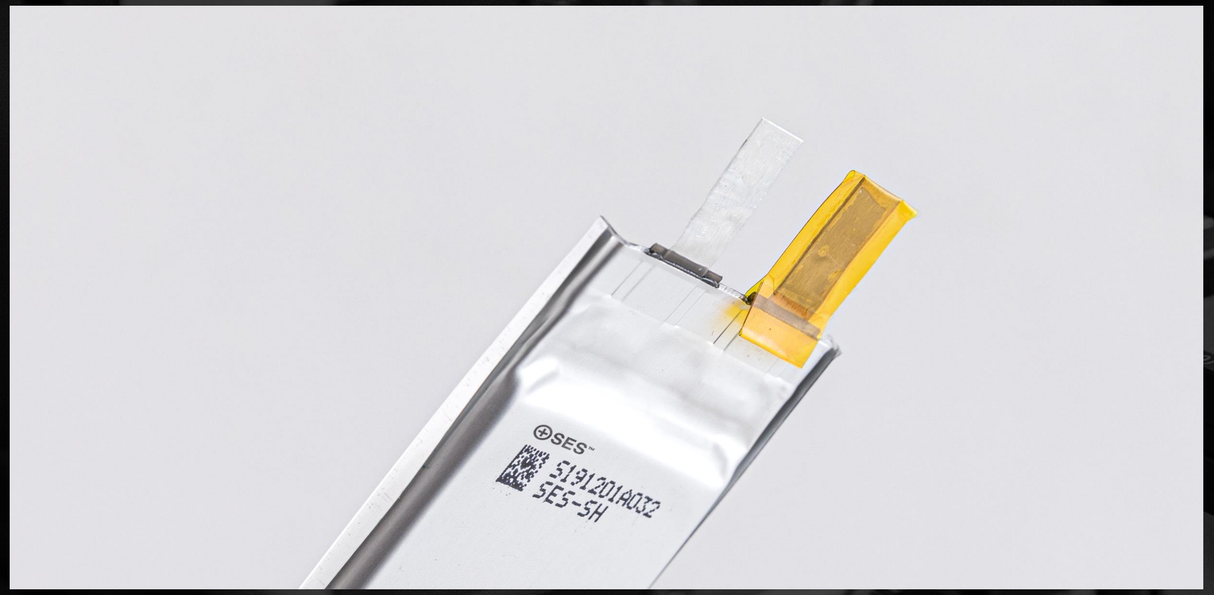


COMPANY INTRO

SES INVESTMENT HIGHLIGHTS

- Li-Metal Batteries with Leading Energy Density and Comprehensive Supply Chain Partners
- Manufacturing Approach Takes Advantage of Cost-effective Conventional Industry Processes
- A-Sample Joint Development Agreements in Place with General Motors, Hyundai, and Honda
- Collecting Data and Building AI Algorithms to Monitor Battery Health and Enhance Safety -- BaaS Opportunities
- Experienced Management Team with Decades of Battery Development
- Funded to Commercialization with ~$426MM of Cash on Balance Sheet as of 3/31/22

BACKED BY STRATEGIC INVESTORS & OPERATORS

OUR TEAM

DR. QICHAO HU
Founder, Chairman & CEO

- Forbes 30 Under 30
- MIT Technology Review Innovators Under 35
- PhD in Applied Physics from Harvard and BS in Physics from MIT

ROHIT MAKHARIA
President
Chief Operating Officer

- 19 years with General Motors
- 12 years in fuel cell and battery EV. Led battery cell development for Chevy Bolt
- 7 years at GM Ventures. Previously, Board Director of SES

JING NEALIS
Chief Financial Officer

- 18 years of finance experience, including at public companies
- Previously worked at View, SunPower, Shunfeng, Suntech Power and Deloitte

DR. HONG GAN
Chief Science Officer

- 25 years of battery R&D experience
- Key contribution in silicon-based Li-ion and Li-S technologies
- PhD in Chemistry from Uni. of Chicago and PostDoc from Uni. of Rochester

YONGKYU SON
Chief Technology Officer

- 20 years of cell and process development experience
- Responsible for Apple's LV battery, SKI's PHEV 20Ah and SDI's first 18650 cell launch

JOANNE BAN
Chief Legal Officer
Chief Corporate Officer

- 17 years legal, corporate, management, M&A and capital markets experience
- Previously worked at Heptagon Micro-Optics and White & Case

HANS KIM
Head Of Korea

- 30 years of experience in cross border corporate finance and capital markets in Seoul, Asia, US and UK
- Advised Korean blue-chip companies such as Samsung Electronics, LG, Hyundai, SK, Posco and Korean sovereign institutions

DR. WINSTON WANG
Head of China

- Managed battery R&D at DJI. Responsible for DJI's key drone smart battery and power systems launch.
- PhD in Mechanical Engineering from the University of Hong Kong.

KYLE PILKINGTON
VP of Legal

- 16 years of international legal experience, including in capital markets, securities law, corporate governance and M&A
- Previously worked at International Game Technology, Sullivan & Cromwell, Gibson Dunn and Baker McKenzie

ERIC GOLDSTEIN
VP of Investor Relations

- Over 25 years of Wall Street experience analyzing the automotive industry as a sell-side research analyst and a professional investor while working at Bear Stearns, Salomon Brothers, and Shay Capital.
- Also served as VP of Investor Relations for auto supplier Magna International. .

RICHARD CHANG
VP of Business Development

- Previously held senior sales positions at prominent battery technology companies
- At CATL, held account management responsibility for BMW and VW

OUR FOOTPRINT

Boston HQ + Shanghai Giga + Korea Positions SES to Realize Scale in Multiple High-Growth Markets

BOSTON HQ

- Chemistry, materials, algorithm R&D
- Finance
- Headquarters

SHANGHAI GIGA

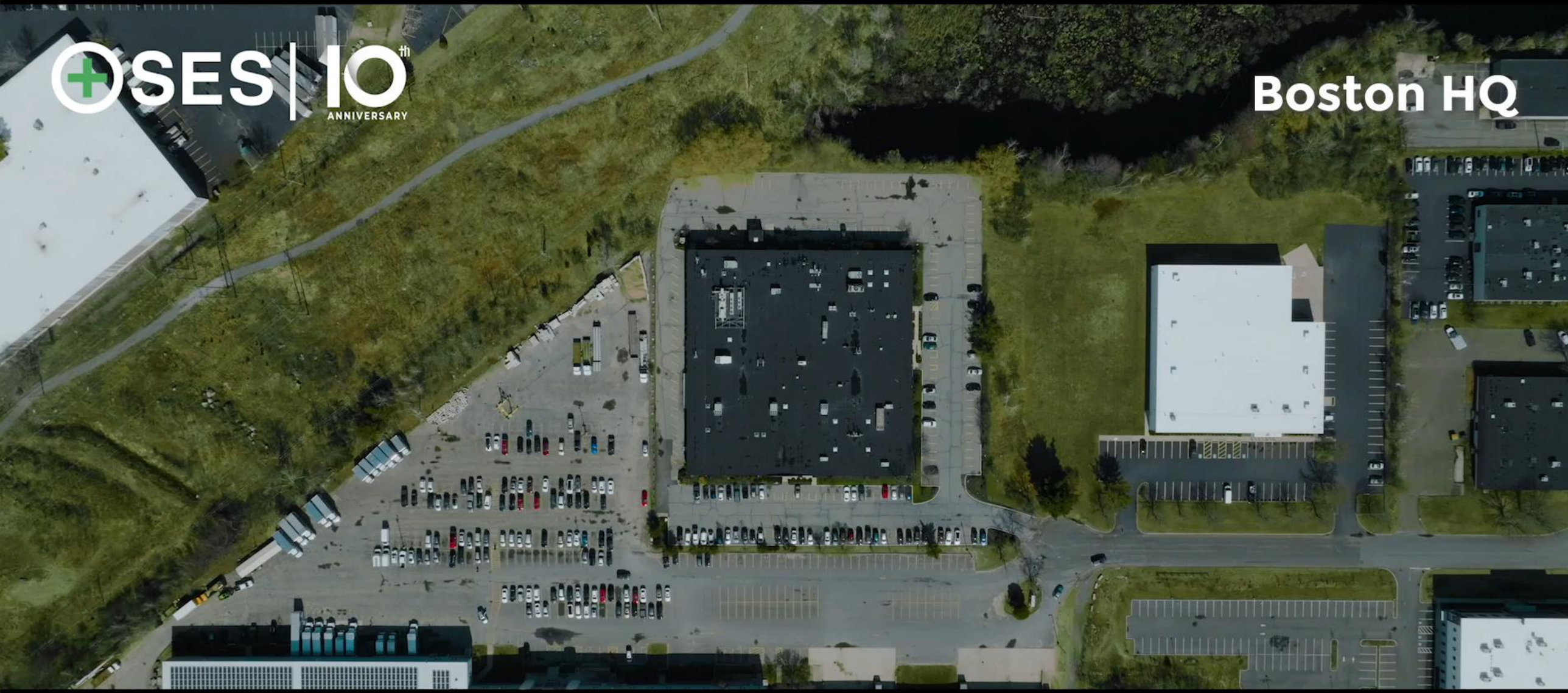
- Manufacturing process development
- Cell, module, BMS R&D
- Pilot plant
- OEM JDA collaboration

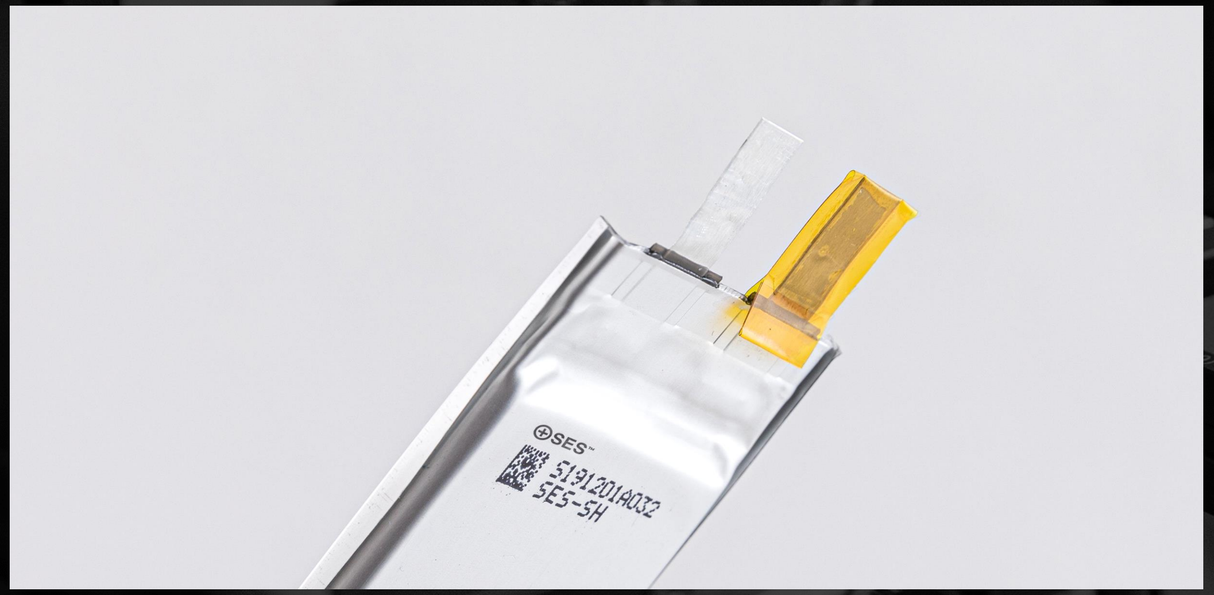
SINGAPORE

- Legal

SOUTH KOREA

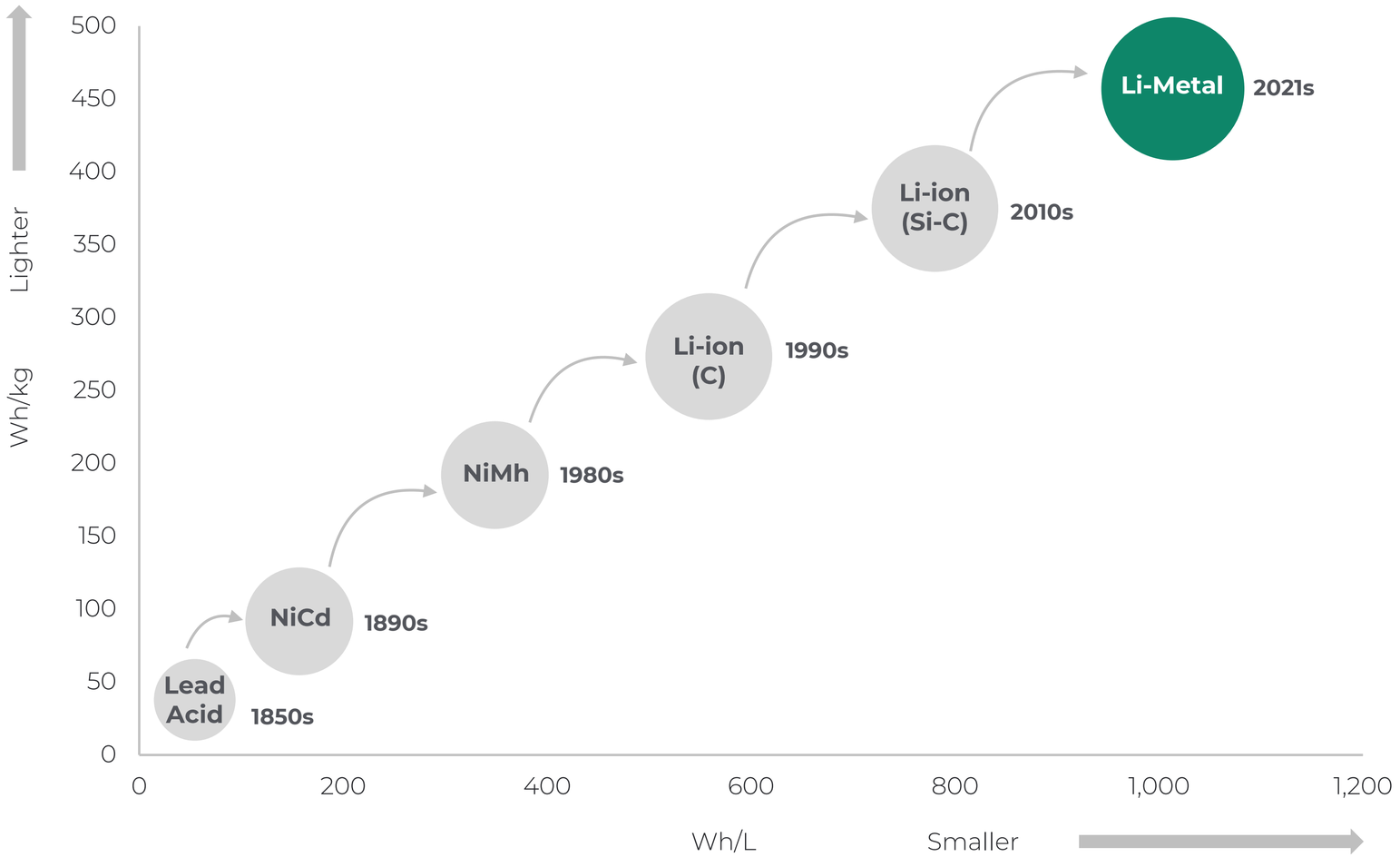
- Supply chain
- Customer relations
- OEM JDA collaboration
- Pilot plant


SES | 10th ANNIVERSARY
Boston HQ



TECHNOLOGY

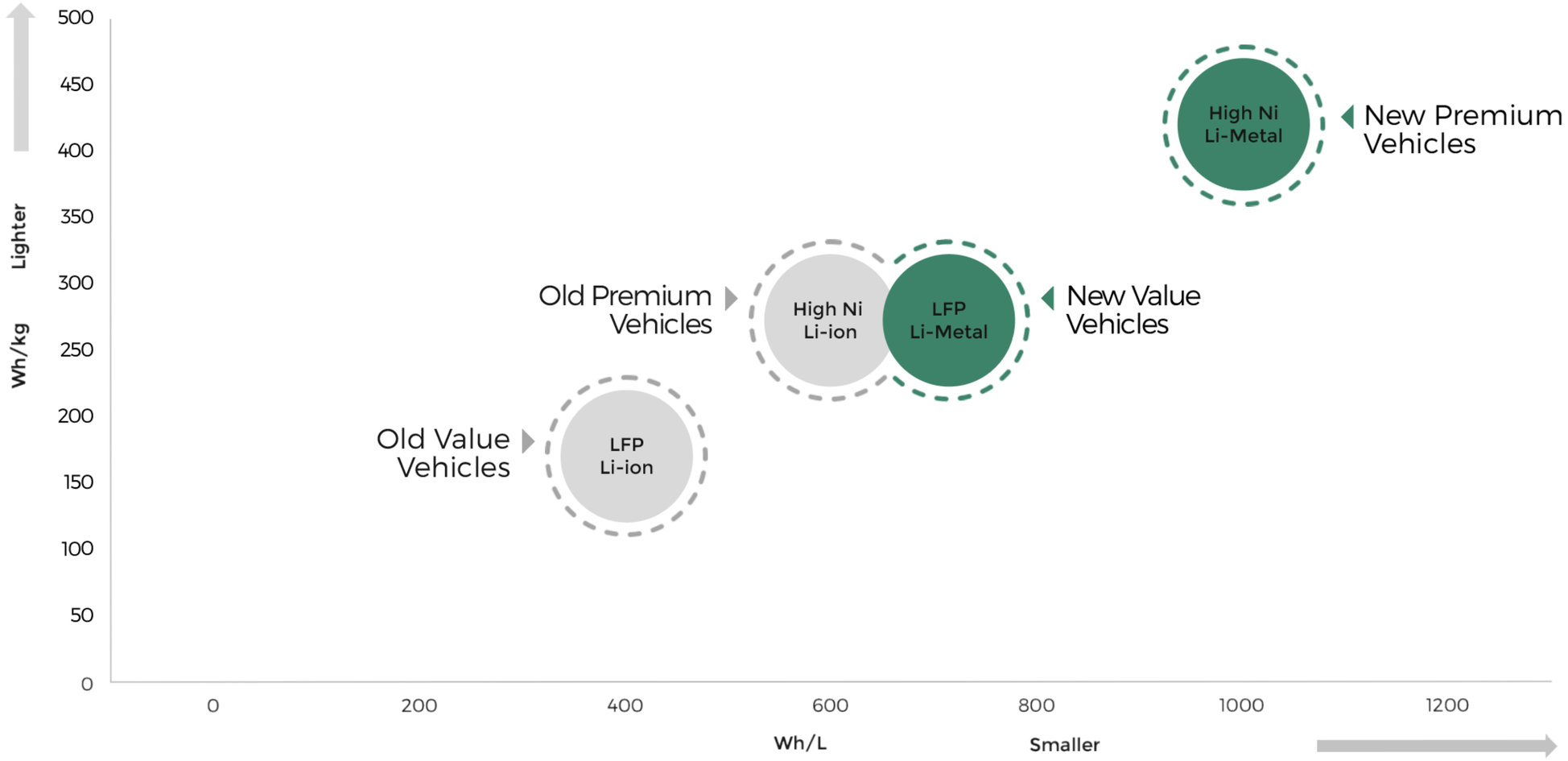
HISTORY OF BATTERIES



Winning Technologies Are Significantly Smaller and Lighter Than Their Precedents.

The future is not solid. It will be Li-Metal.

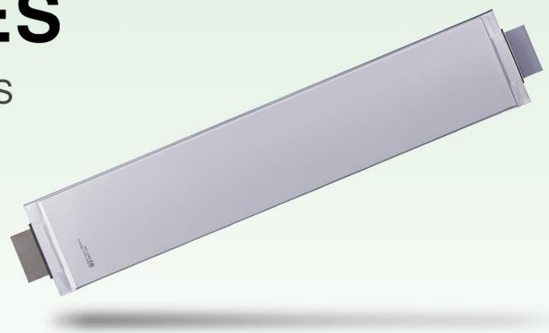
LI-METAL MAKES NICKEL FREE CHEMISTRIES COMPETITIVE



OEMS ARE BETTING ON NEXT GEN LI-METAL

SES

NYSE: SES

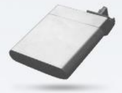


100Ah

GM · HYUNDAI · HONDA · SAIC · GEELY

QuantumScape

NYSE: QS



1Ah ?

SAIC · VW

SolidPower

Nasdaq: SLDP

20Ah

BMW · Ford

Note: Third-party cell capacity information is from public filings for each third party.

SES LI-METAL BATTERIES ARE

DENSER
Projected 400 Wh/kg and 1,000 Wh/L, leading to significantly longer driving range

CHEAPER
Designed to be manufacturable at scale using existing infrastructure and processes

LIGHTER
Ultra-thin Li-Metal anode reduces battery weight and production cost

SAFER
Proprietary electrolyte and AI algorithm greatly enhance safety

FASTER
Capable of 80% charge in less than 15 minutes

SMARTER
AI-powered algorithm optimizes performance

Superior Technology, Safety and Manufacturability

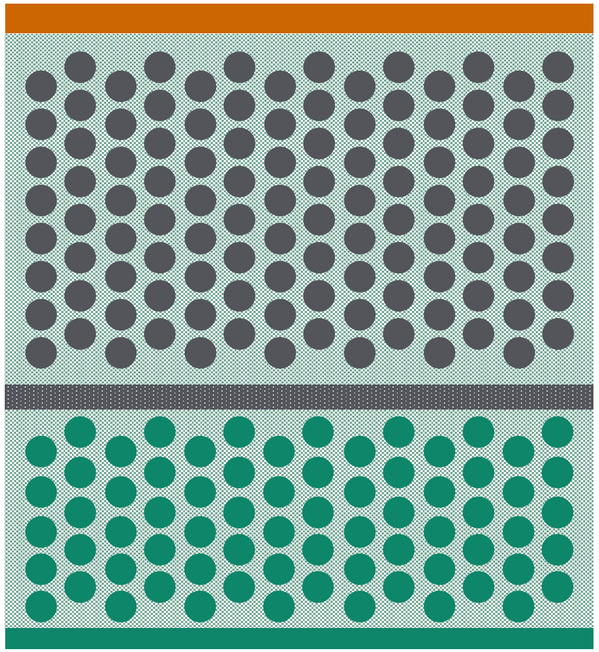
SES VS OTHER APPROACHES

Conventional Li-ion

Anode

Separator

Cathode



✗ Energy Density

✓ Manufacturability

All-Solid-State Li-Metal

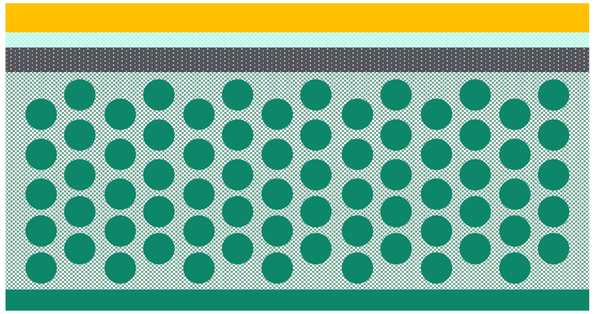
Solid-State Separator
Never Demonstrated at Scale

Solid-State Cathode
Never Demonstrated at Scale

✓ Energy Density

✗ Manufacturability

SES Li-Metal



✓ Energy Density

✓ Manufacturability

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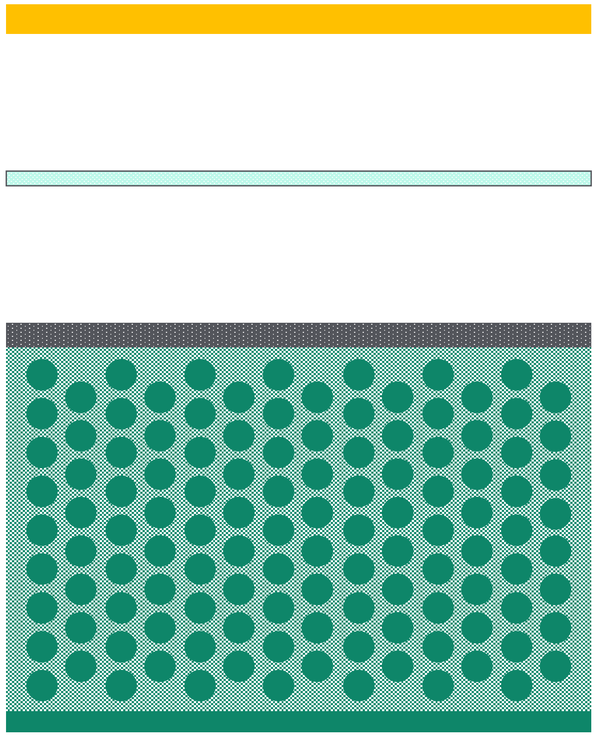
SES LI-METAL BATTERY TECHNOLOGY



Wide Format Li-Metal Anode
- Ultra-thin Li-Metal anode manufactured through a proprietary process

Composite Anode Coating
- Mechanical barrier to enhance safety

Polymer-Based Separator
- Highly manufacturable state-of-the-art separator

Solvent-in-Salt Liquid Electrolyte Formula
- Low-volatility and self-extinguishing

High-Capacity Cathode
- Highly manufacturable state-of-the-art cathode technology

Combined in a Proprietary Cell Design for Optimized Performance and Safety

SES LI-METAL IS THE MOST PRACTICAL APPROACH

All-Solid-State Li-Metal

Anode

Separator

Solid-State Separator
Never Demonstrated at Scale

Cathode

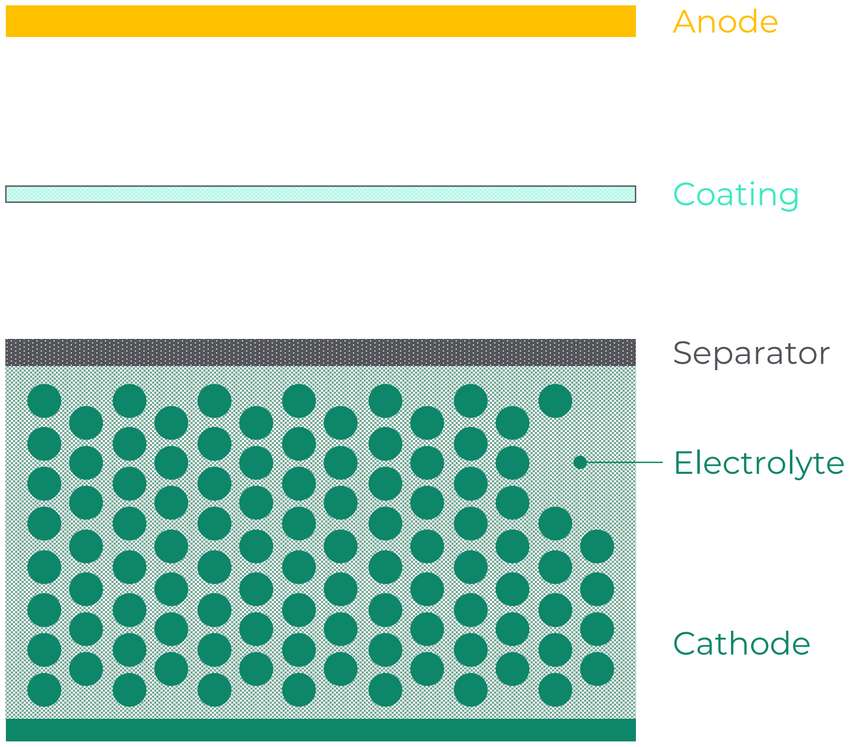
Solid-State Cathode
Never Demonstrated at Scale

Lithium Metal Anode Enables Step-Function Increase in Energy Density

SES Proprietary Liquid Electrolyte and Anode Coating Increase Safety and Cycle Life

SES Li-Metal Design Allows for a Practical Approach to Separator and Cathode Production Using Commercially Validated Technology

SES Li-Metal



PLATFORMS FOR BATTERY DEVELOPMENT

Hermes

Platform for
new material
development

Apollo

Engineering
capability for large
automotive cells

Avatar

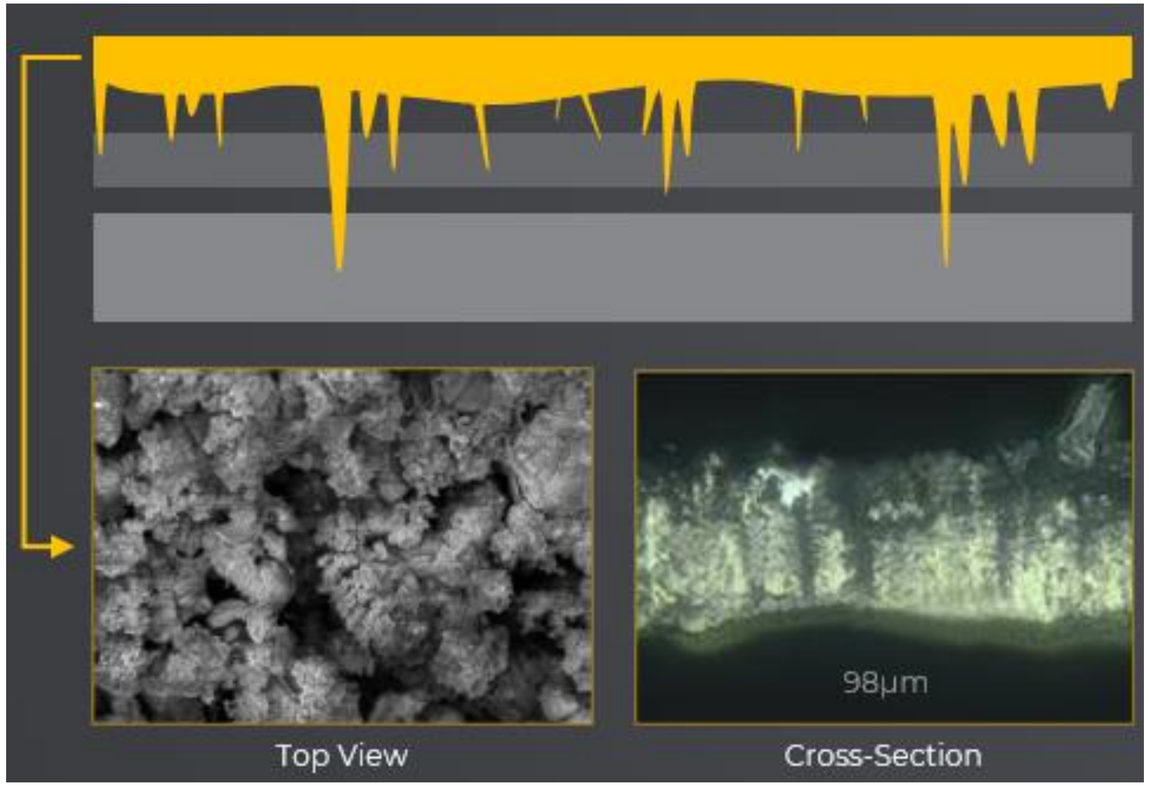
Mine-to-Men
AI Software

PLATFORMS FOR BATTERY DEVELOPMENT - HERMES

HERMES – Platform for New Material Development

- 4Ah to 9Ah Cells
- 25+ Layers of Cathodes & Anodes
- Development, Testing & Qualifying:
  - Novel Electrolytes
  - Anode Protective Coatings
  - Separators & Cathodes

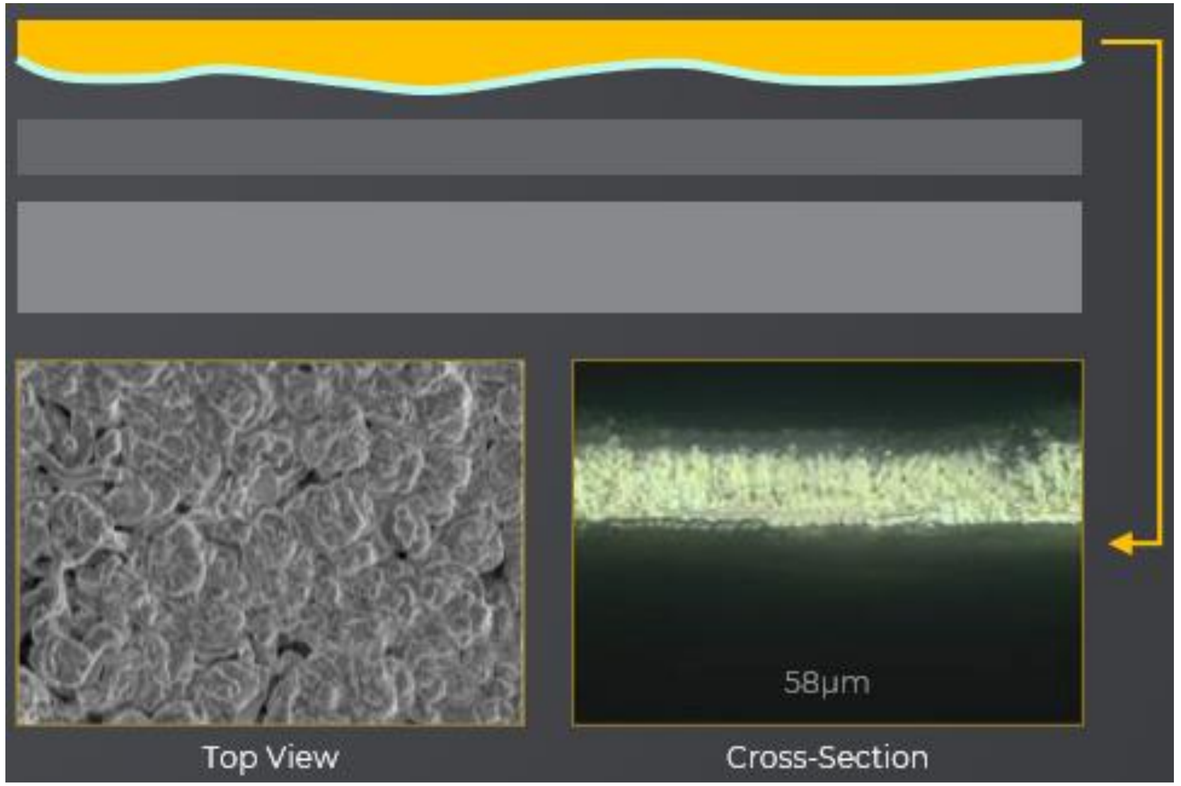
MOSSY LITHIUM NOT DENDRITES



Anode

Separator

Cathode



INNOVATIVE AND PROPRIETARY ELECTROLYTE COMPOSITION

SES electrolyte uses a high concentration solvent-in-salt approach. A conventional liquid electrolyte is low concentration, where the salt is coordinated by solvent and there are free solvent molecules that are volatile and flammable. In SES's high concentration electrolyte, the solvent is coordinated by the salt and there are no free solvent molecules, and the solvent molecules are non-volatile and non-flammable.

Electrolyte Composition:

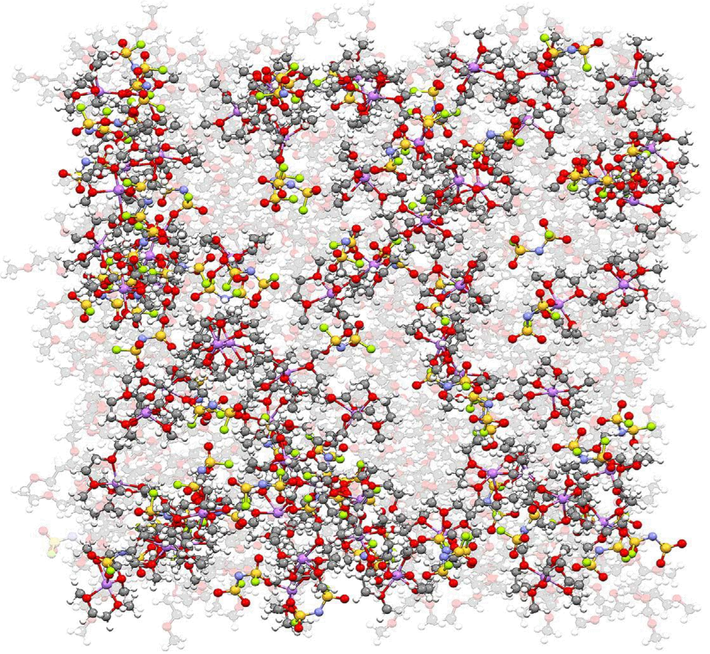
Salt: The main salt is LiFSI, with a proprietary purity profile and trade secret purification process

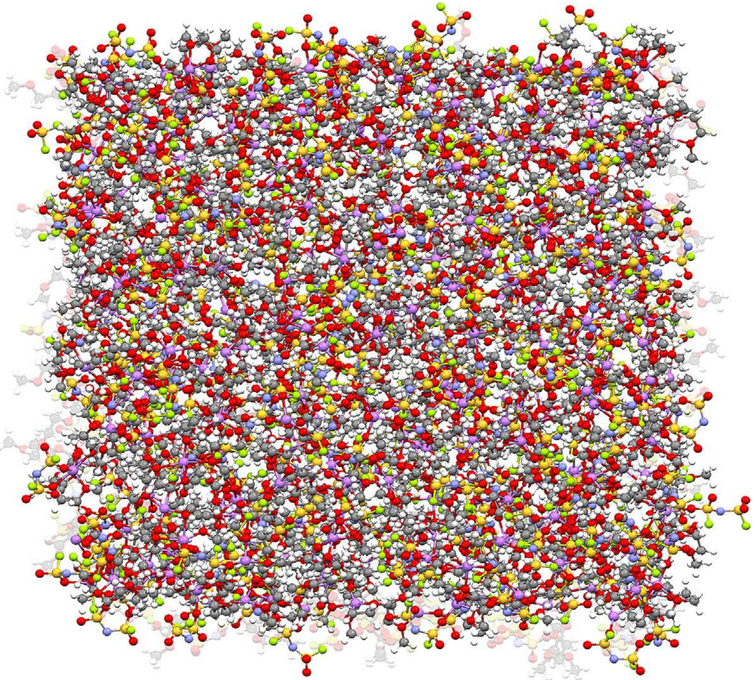
Solvent: Proprietary and patented solvent that SES designed and synthesized, not commercially available, and non-volatile and non-flammable

Additives: Proprietary/trade secret

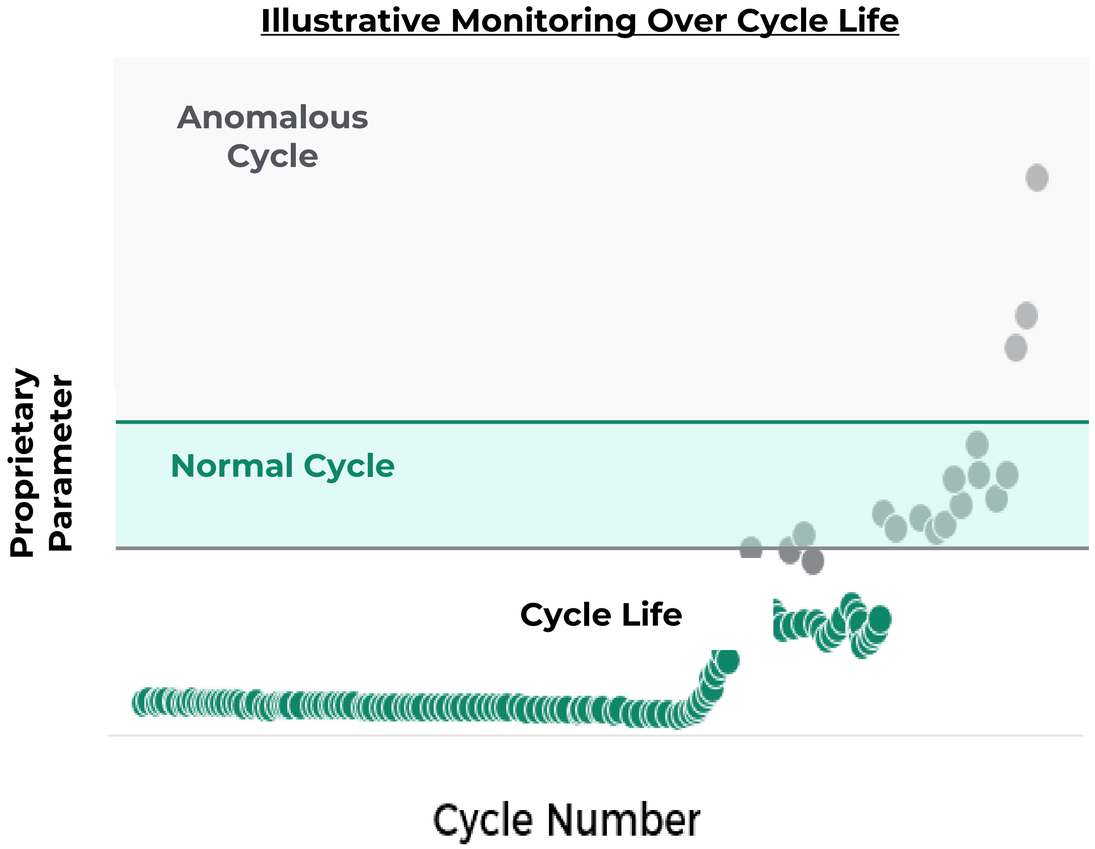
Low Concentration
Most solvent molecules are uncoordinated

High Concentration
Solvent almost fully coordinated
No free solvent





Our Proprietary Safety Algorithm can Detect Early Formation of Mossy Lithium by Monitoring Certain Proprietary Key Parameters



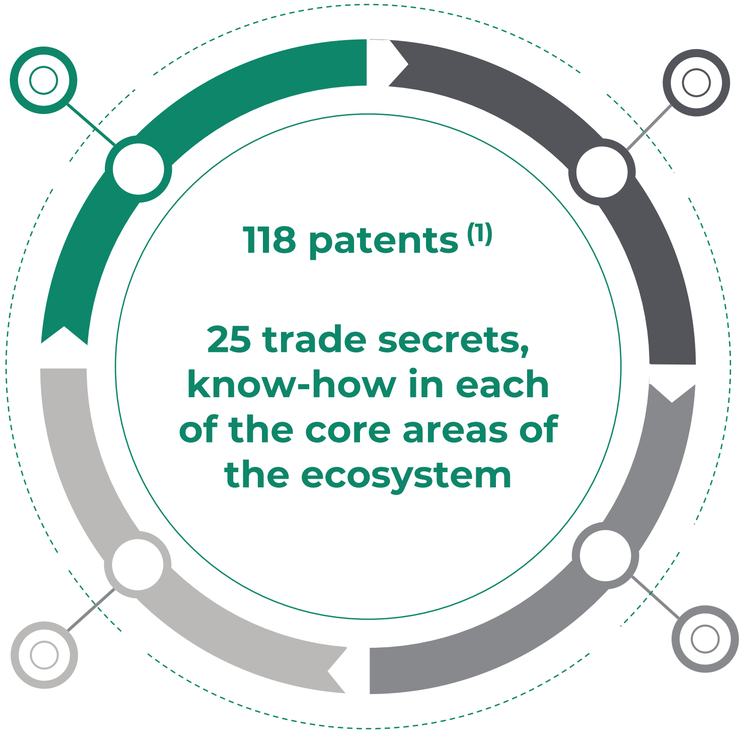
SAFETY FURTHER ENHANCED USING OUR MACHINE LEARNING ALGORITHM

OUR INTELLECTUAL PROPERTY

Holistic IP Portfolio With Robust IP Capture Program

Materials
- Electrolyte
- Salt
- Anode
- Separator

AI Powered BMS
- Safety Algorithm
- Monitoring & Diagnostics

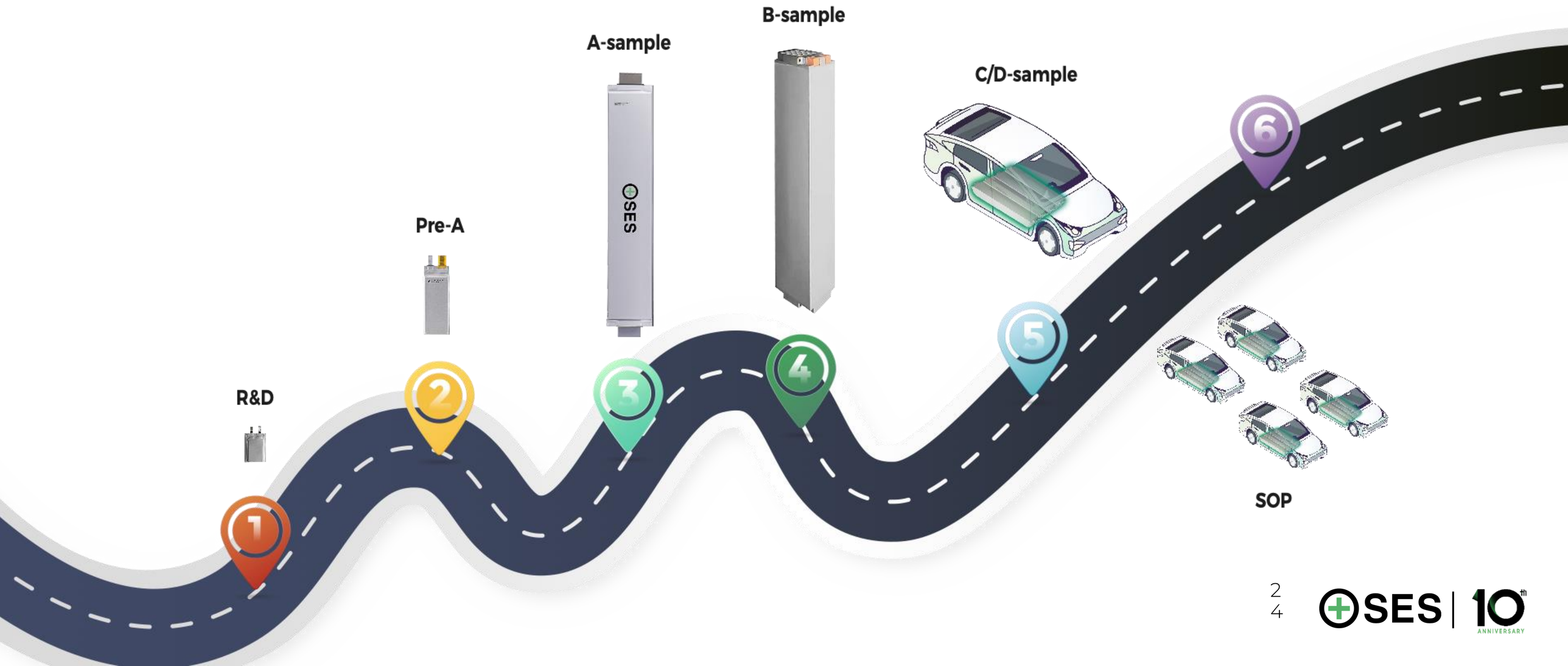


Cells/Packs/Modules
- Anode-Free
- Anode-Light
- High Energy Density
- Packs / Modules (Expandable & Constrained)

Recycling
- Mossy Lithium Recovery
- Lithium Metal Extraction

Note: 61 granted and 57 pending as of March 31, 2022

DEVELOPMENT OF AN OEM-READY BATTERY



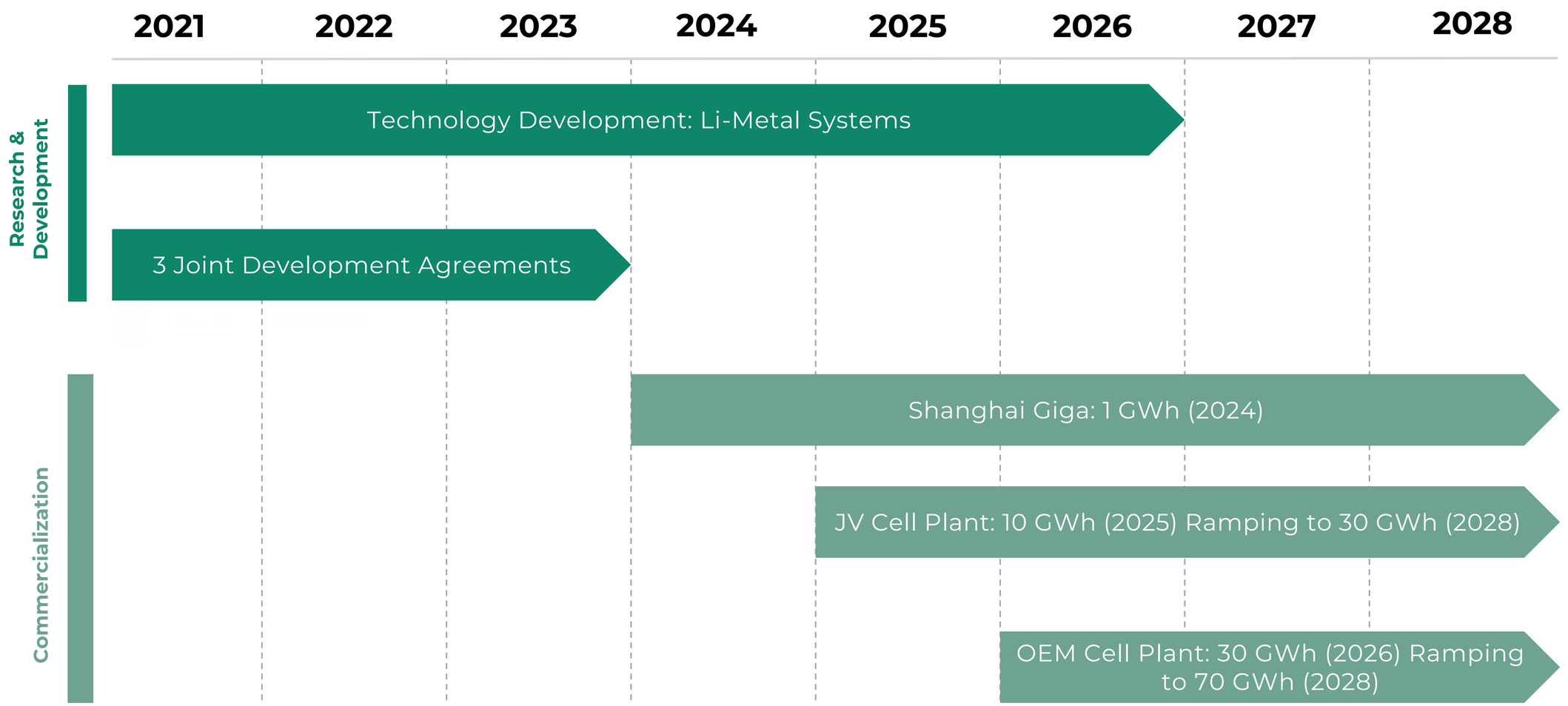
A-SAMPLE JDA WITH 3 WORLD-LEADING OEMS

- **$50MM+ JDA** (March 2021)
- **$60MM equity investment** (since 2015)
- **Joint pre-production facility** (going forward)
- **GM's CTO serves as a director on our Board**

- **JDA** (May 2021)
- **$50MM equity investment** (May 2021)
- **$50MM PIPE commitment** (June 2021)
- **Joint pre-production facility** (going forward)

- **JDA** (January 2022)
- **Largest single investor** in PIPE financing -- $75 million
- **6th major global car manufacturer** to invest in SES

OUR ROADMAP TO COMMERCIALIZATION

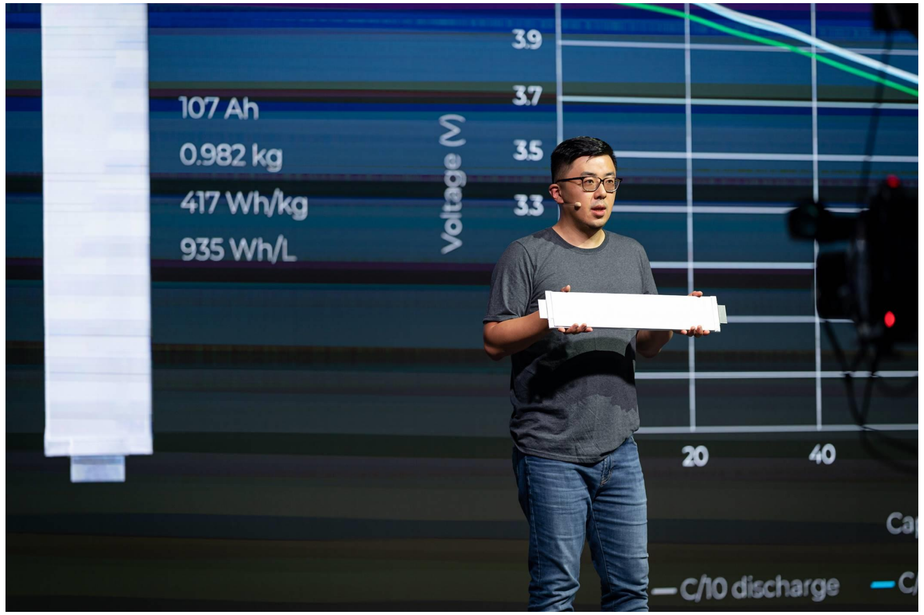


PLATFORMS FOR BATTERY DEVELOPMENT - APOLLO

APOLLO – Engineering Capability for Large Automotive Cells

- Larger version of Hermes Cells
- 50Ah – 100Ah
- Wide-width lithium foil

BATTERY WORLD 2021 – APOLLO™ INTRODUCED



a 107 Ah Li-Metal battery that is the largest in the world and a breakthrough for the automotive industry

107Ah	0.982 kg	417 Wh/kg	935 Wh/L

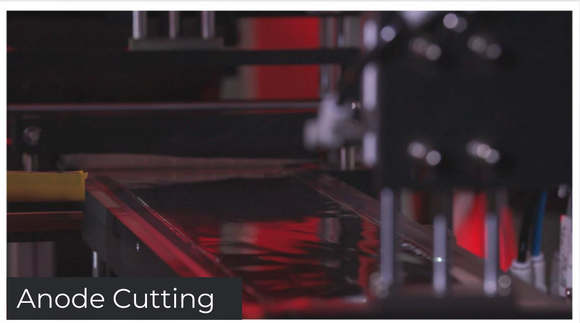
SES SHANGHAI GIGA

Phase I

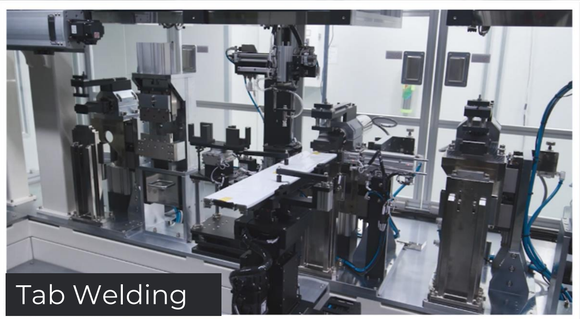
- Completion: **March 2022**
- Capacity: **0.2GWh**
- Production: **A-sample prototypes (from 50Ah to >100Ah)**

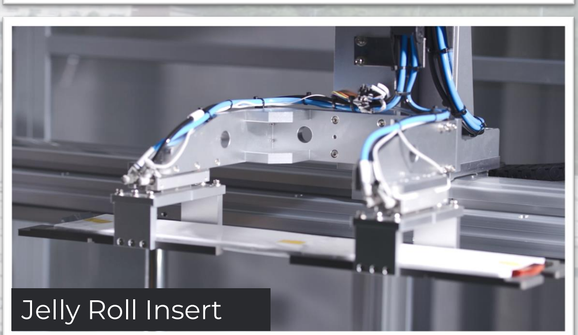
Phase 2

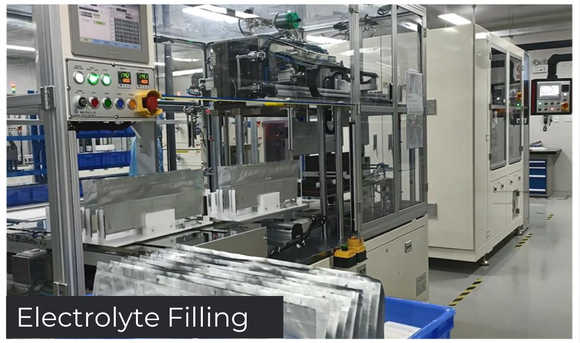
- Expected Completion: **2023**
- Size: **300,000 Square Feet**
- Capacity: **1GWh**


Anode Cutting

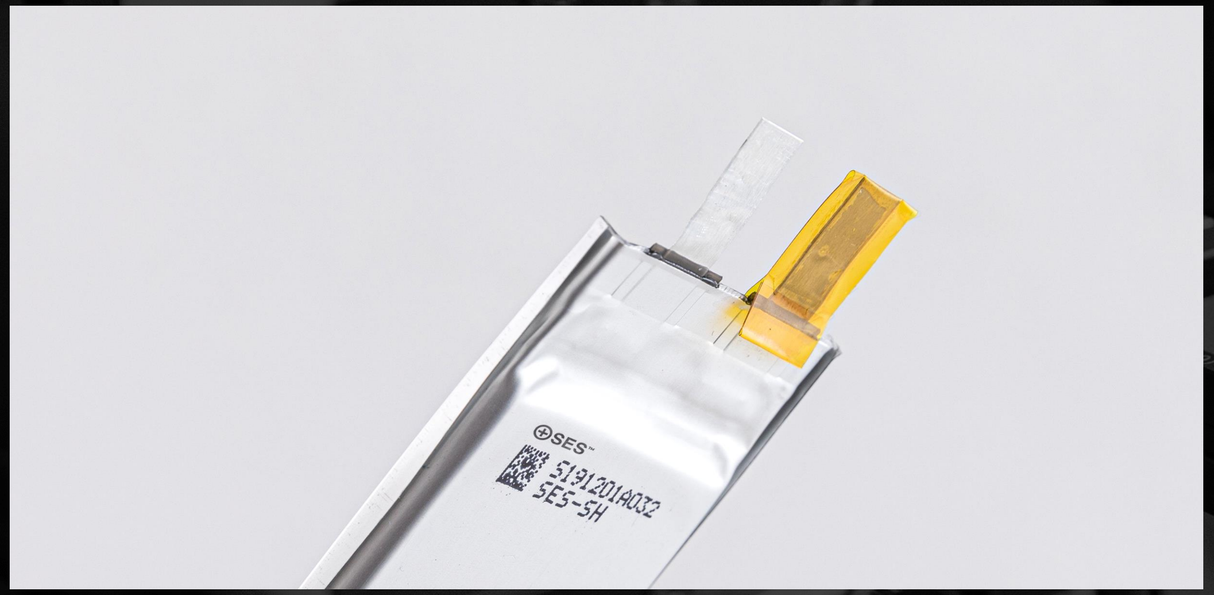

Zig-Zag Stacking


Tab Welding


Jelly Roll Insert


Electrolyte Filling


Dry room

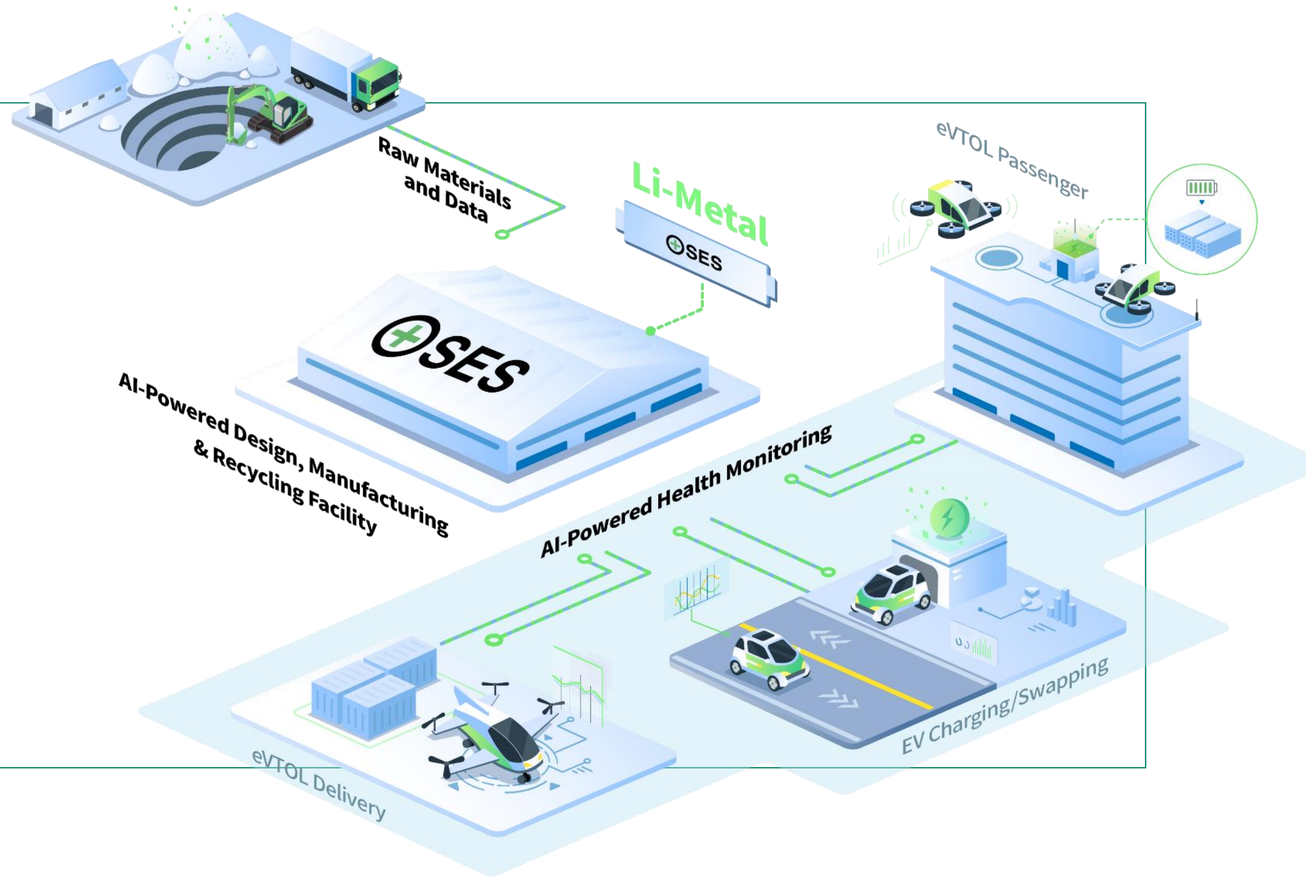


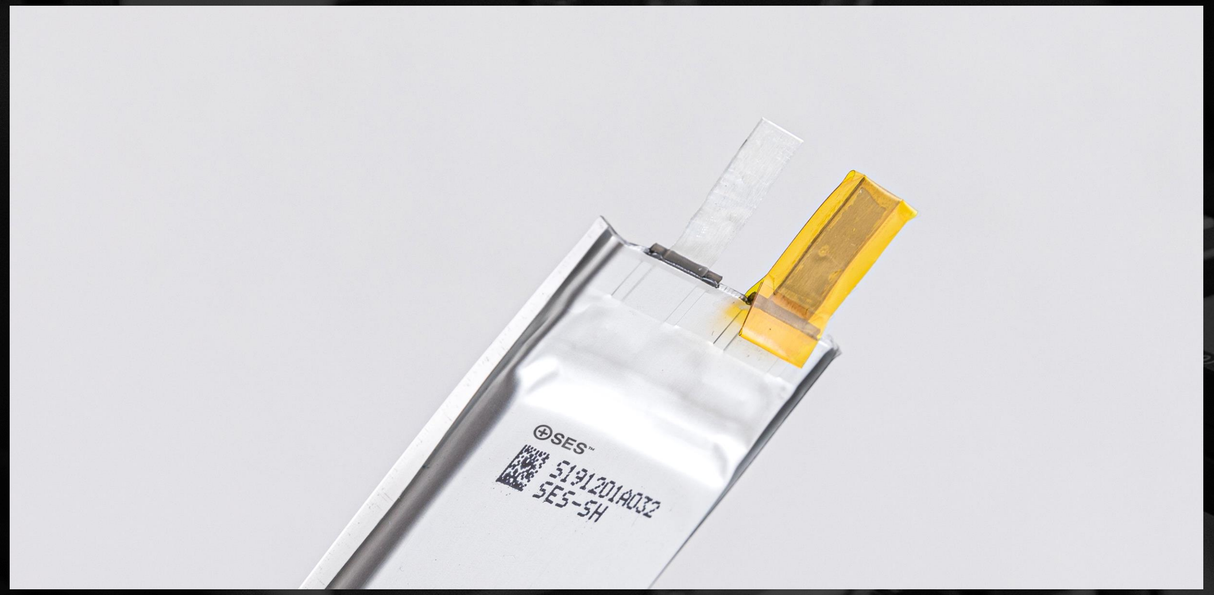
SUPPLY CHAIN

PLATFORMS FOR BATTERY DEVELOPMENT - AVATAR

AVATAR – Mine-to-Men AI Software

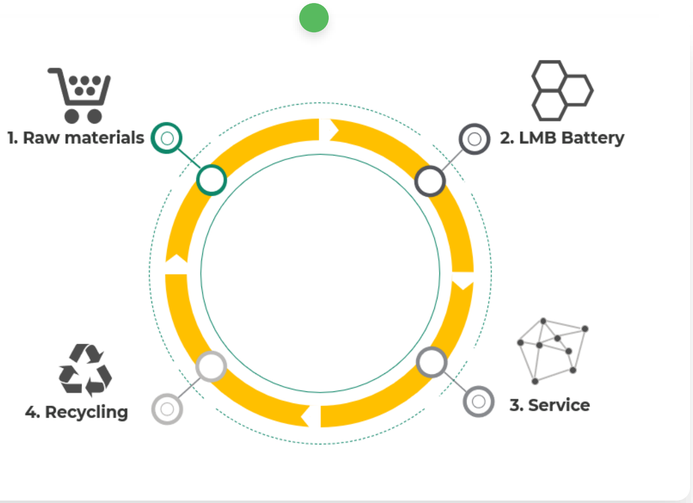
- From mine to manufacturing to in-vehicle use and recycling
- Integral to monitoring battery health & end of life use
- Data will support new Battery as a Service (BaaS) models



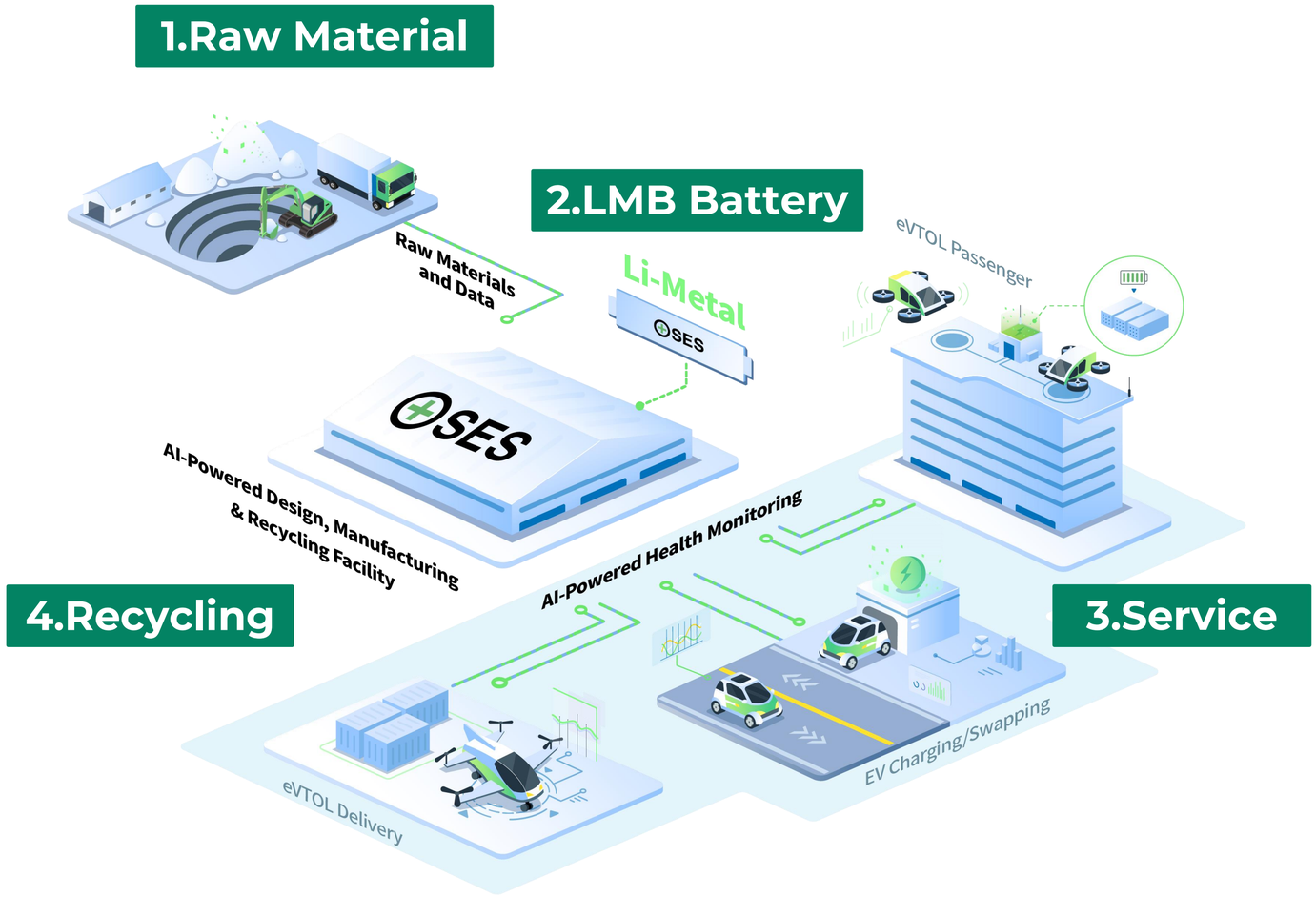


NEW BUSINESS MODEL

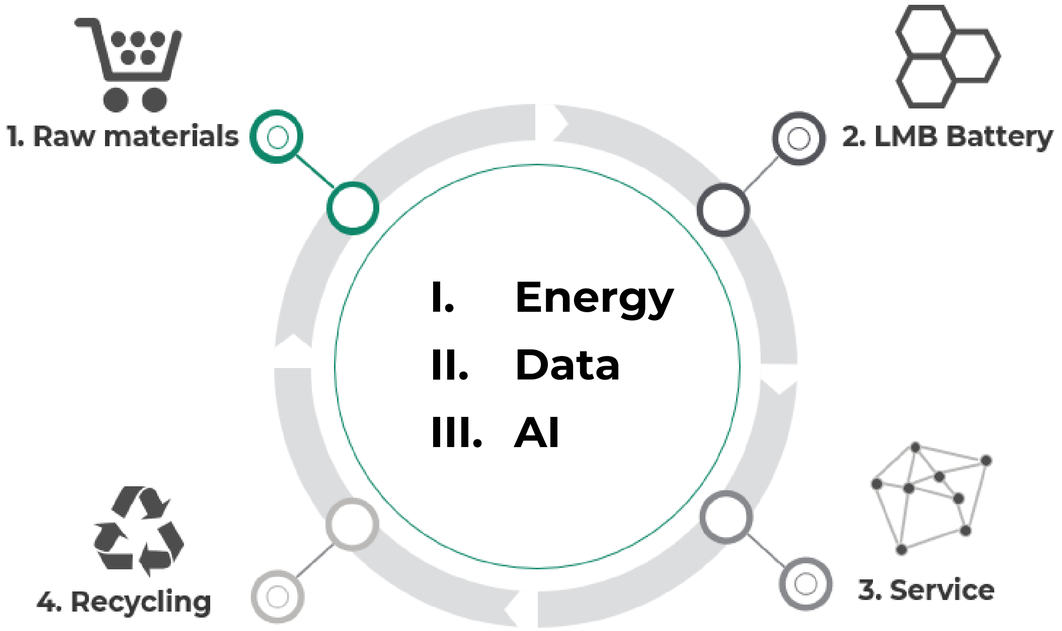
BaaS

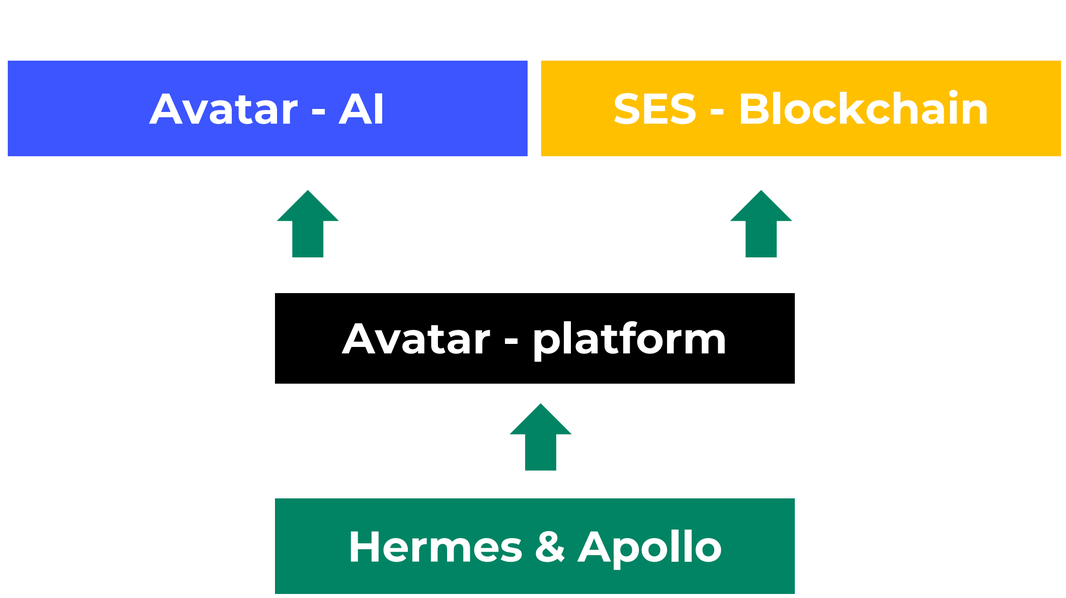


Blockchain



BaaS


1. Raw materials
2. LMB Battery
I. Energy
II. Data
III. AI
4. Recycling
3. Service


Avatar - AI
SES - Blockchain
Avatar - platform
Hermes & Apollo

MILESTONES & 2022 FINANCIAL GUIDANCE

- **Targeted Milestones over the next 12-months**
    - Deliver and optimize A-samples for our 3 JDA Partners
    - Begin to transition from A-samples to B-samples
    - Continue to establish supply chains for key materials

- **2022 Financial Guidance**
    - Capital expenditures in the range of $25 - $35 million
    - Cash used in operations in the range of $70 - $80 million
    - Total cash used in the range of $95 - $115 million

Note: Milestones and financial guidance provided on May 12, 2022

SES

Li-Metal Batteries

APPENDIX

OUR DEMONSTRATED PERFORMANCE

		SES	3RD PARTY VALIDATED?
Energy Density	Measured	(4 Ah): 370 Wh/kg, 700 Wh/L	✓
	Projected	(100 Ah A-sample): >400 Wh/kg, >1,000 Wh/L	---
Cost	Manufactur-ability	Demonstrated multi-layer cells can be built using Li-ion-like assembly process	✓
Lifetime	3/4 Layer	Up to approximately **800 cycles (80% capacity retention)**	---
	Multi-Layer (25+)	Up to 550 cycles (90% capacity retention)	---
Fast Charging	Multi-Layer (25+)	Up to 80% charge in less than 15 minutes	✓
Safety	Thermal	Electrolyte is stable with Li above Li melting point (ARC cell)	✓
	Nail	PASS TEST	✓
	Overcharge	PASS TEST	✓
	External Short Circuit	PASS TEST	✓