



## Investor Presentation

February 2024



Toronto Stock Exchange (Nasdaq:ELVA) & (TSX:ELVA)

Nasdaq: ELVA | TSX: ELVA

# Disclaimer

*This presentation contains forward-looking statements, including statements that relate to, among other things, the effect of the COVID-19 public health emergency on the Company's operations, its employees and other stakeholders, including on customer demand, supply chain, and delivery schedule, the size of the Company's sales pipeline and the ability to satisfy orders thereunder, the Company's ability to satisfy its ongoing debt obligations, anticipated increased collaboration with OEMs and OEM channels constituting a source of sales growth for the Company, anticipated continued increase in sales momentum in fiscal 2024 through OEMs and directly to large global companies, including Fortune 500 companies, the future direction of the Company's business and products, including E-bus, E-truck and Energy storage applications and additional intellectual property protection, the Company's ability to source supply to satisfy demand for its products and satisfy current order volume, technology development progress, all trademark logos and trademarks are owned by the respective Company's, pre-launch plans, plans for product development, plans for shipment using the Company's technology, production plans, the Company's markets, objectives, goals, strategies, intentions, beliefs, expectations and estimates, and can generally be identified by the use of words such as "may", "will", "could", "should", "would", "likely", "possible", "expect", "intend", "estimate", "anticipate", "believe", "plan", "objective" and "continue" (or the negative thereof) and words and expressions of similar import. Although the Company believes that the expectations reflected in such forward-looking statements are reasonable, such statements involve risks and uncertainties, and undue reliance should not be placed on such statements. Certain material factors or assumptions are applied in making forward-looking statements, and actual results may differ materially from those expressed or implied in such statements. Important factors that could cause actual results to differ materially from expectations include but are not limited to: natural disasters, unusually adverse weather, epidemic or pandemic outbreaks, cyber incidents, boycotts and geopolitical events; the COVID-19 outbreak will not have significant further effects on the Company's supply chain or operations; that current customers will continue to make and increase orders for the Company's products, and in accordance with communicated intentions, that the Company's alternate supply chain will be adequate to replace material supply and manufacturing. Additional information about material factors that could cause actual results to differ materially from expectations and about material factors or assumptions applied in making forward-looking statements may be found in the Company's Annual Information Form for the year ended September 30, 2023 under "Risk Factors", and in the Company's most recent annual Management's Discussion and Analysis under "Qualitative And Quantitative Disclosures about Risk and Uncertainties" as well as in other public disclosure documents filed with Canadian securities regulatory authorities. The Company does not undertake any obligation to update publicly or to revise any of the forward-looking statements contained in this document, whether as a result of new information, future events or otherwise, except as required by law. These and other risks and uncertainties related to Electrovaya's business and the assumptions on which the forward-looking information is based are described in greater detail in the sections entitled "Risk Factors" in its Annual Report on Form 40-F filed with the U.S. Securities and Exchange Commission and the Ontario Securities Commission in Canada. Electrovaya assumes no obligation to update or revise any forward-looking statements, except as required by applicable laws. These forward-looking statements should not be relied upon as representing Electrovaya's assessments as of any date subsequent to the date of this presentation.*

# Investment Highlights

Electrovaya is a pure play, North American lithium-ion battery technology and manufacturing company on track for rapid growth



## Industry Leader

Providing the **safest**<sup>1</sup> & **longest lasting**<sup>2</sup> lithium ion battery technology

1 Proprietary ceramic separator tech

2 Longevity or cycle life 4X typical tech



## Premium Product Performance and NextGen Technology

### Infinity Technology

Significant competitive advantages provide **pricing power** and **higher gross margins**

### Solid State

Battery technology developments will be **game-changing**



## Large Addressable Heavy Duty Market

\$18 Billion market with rapid growth<sup>1</sup>

1 Data obtained through MarketWatch



## High Growth with Clear Path to Profitability

100% Organic CAGR over 2 Years  
FY2023 revenue up 171%

**Inflection Point:** Last 3 Quarters with Operating Profit



## Cash Flow Positive

Adjusted EBITDA and **positive cash from operations** for FY23 and beyond



## North American Footprint

**Reshoring production to US** improves capacity, security and gross margins



## Top-tier Customer Base

More than 12 Fortune 100 end customers and the largest OEM partner in the material handling industry



## Unparalleled Experience

25+ years of experience  
100+ patents

# Key Market Challenge: A multi-billion dollar opportunity

Our technology is the **ONLY** high-performance battery technology that is a true fit for fast growing, mission critical heavy-duty equipment market



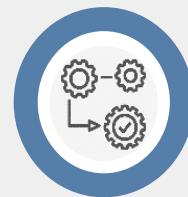
## Industry Challenge

- Safety and longevity challenges with legacy lithium ion tech; not working for heavy duty applications!
- High profile recalls due to safety: Volvo bus & truck, Proterra, Nikola and others
- LFP energy density is too low for many applications and highly dependent on Chinese technology & supply chains



## Our Solution

- **Longer Lifetime:** Our Infinity Technology offers the highest cycle with over 4X the life of typical batteries of the same chemistry
- **Improved Safety:** Electrovaya batteries use a proprietary ceramic separator membrane that significantly improves safety.
- **Heavy Duty Applications:** Mission critical applications incl. Material handling, mining, trucks and buses



## Proven Execution

- **Scaled:** Deliveries of battery systems increasing more than 100% year over year
- **Proven:** Proven technology and manufacturability - >5 years of field data with major customers
- **Reliable:** Operating in mission critical 24/7 warehouse operations at the largest companies in the world (>12 Fortune 100 end users)

# Electrovaya: Our Evolution and Go-Forward Strategy

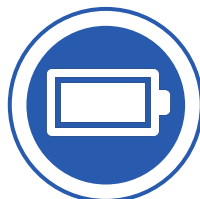
With a strong foundation in automotive, we began a **transition to battery products for MHE** in 2017



**1996**  
Founded



**2002-2010**  
Partnerships



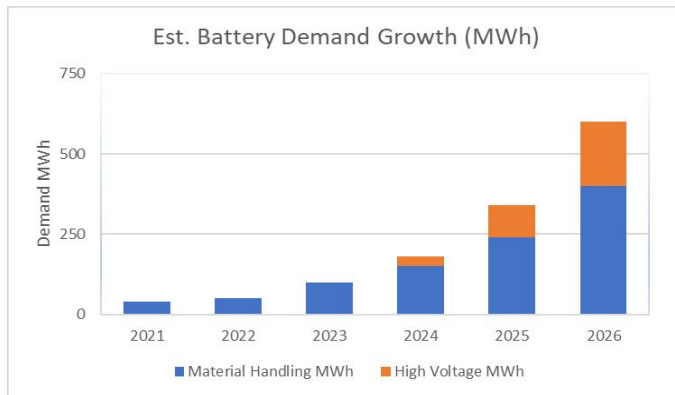
**2015**  
Launched Infinity  
Li-ion cells



**2017-2021**  
Commercial Launch  
of Heavy Duty  
Systems



Battery demand  
estimated to grow  
**3X** by 2026



## Path to Accelerating Growth



### Ramp Production

- Continued production ramp to meet growing demand with improved efficiency



### New Verticals & Partnerships

- New verticals- EBus, ETruck, Aerospace
- Sales and OEM partnerships



### Develop Innovative Products

- Safer, better battery systems for new applications
- Energy Services; Virtual Power Plants- recurring revenue opportunities



### Manufacturing Expansion

- Jamestown Gigafactory to leverage IRA benefits

# Our Products: Capabilities

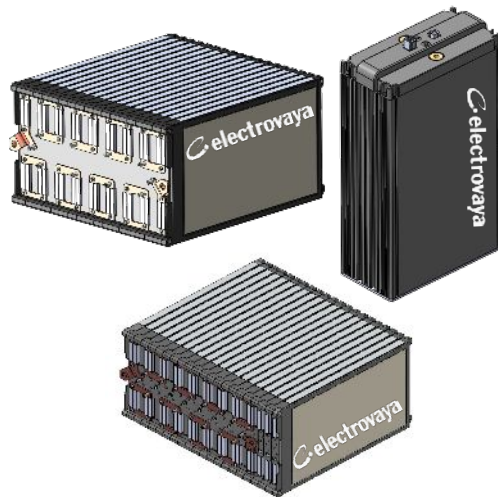
Our expertise and capabilities are in designing and manufacturing lithium ion batteries  
Cells, modules, packs, battery systems and BMS



Cell

Module

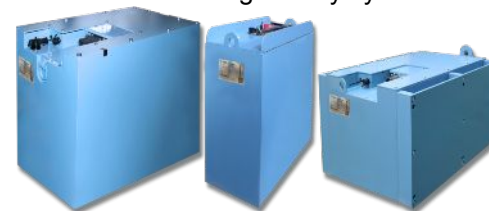
Pack



High Voltage battery systems



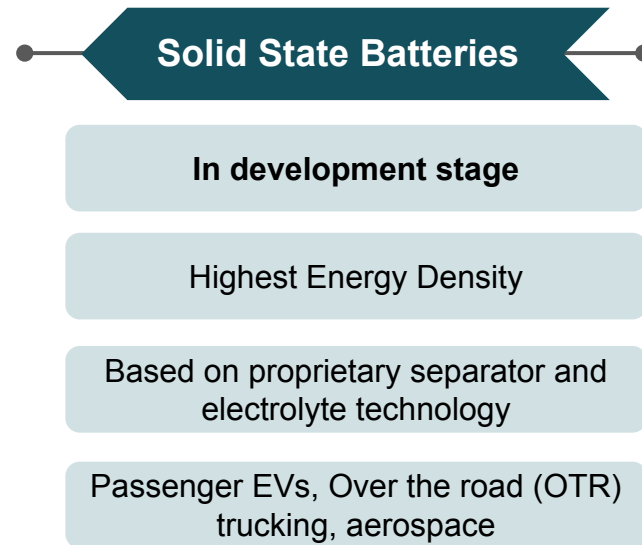
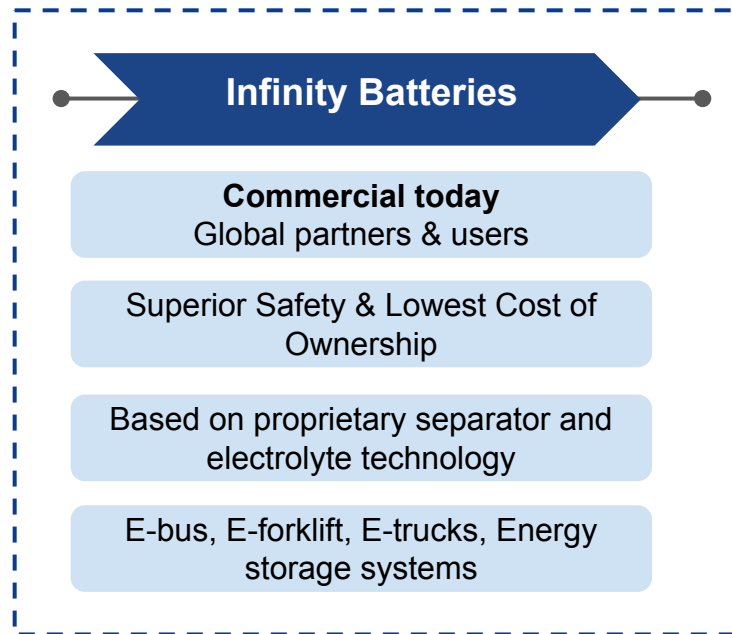
Material handling battery systems





# Our Products: Complementary Technology Solutions

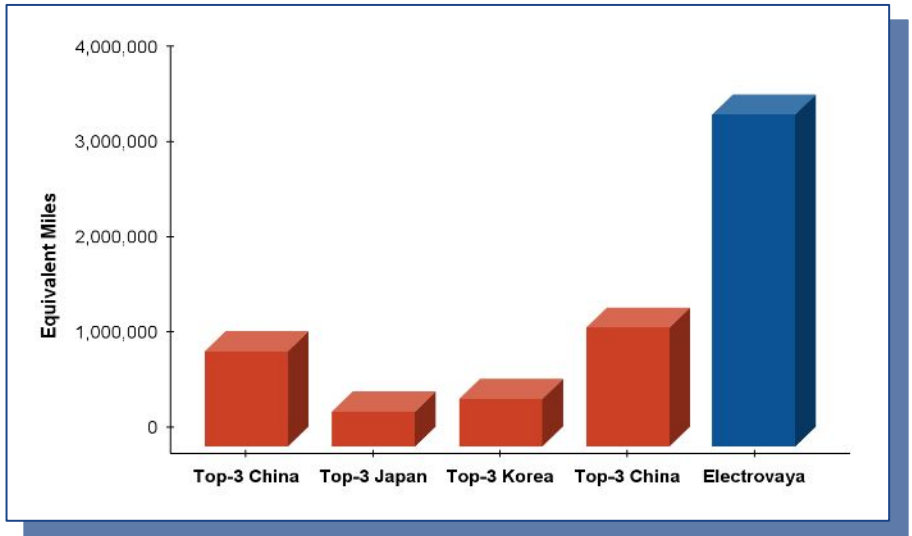
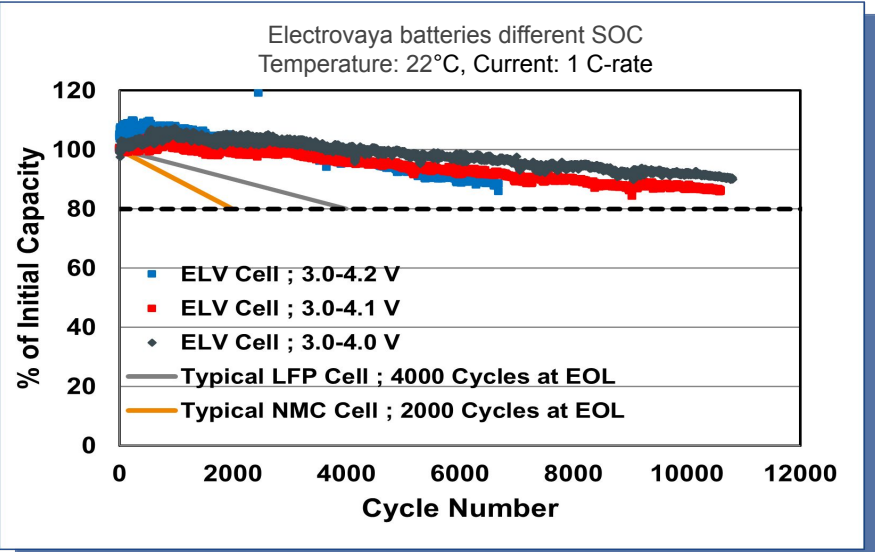
Complementary technologies targeting a number of EV applications  
Infinity Batteries provide industry leading longevity and SSBs provide industry leading energy density



# Multi-Million-Mile Batteries- Performance Advantage






*\*Cycle equivalent:  
14,000 cycles is equivalent to 3,500,000 miles for 250-mile range car*





# Market Opportunity: Infinity Batteries

Take-away message? A multi-billion dollar addressable market for batteries that are safe, efficient, have a long useful life and low cost of ownership?

APPLICATION	USAGE	MARKET SIZE
 E-Buses E-Delivery Trucks	12-20 hrs/day	~ \$9.6 Billion Addressable Market*
 E-Forklifts/ Warehousing	20-24 hrs/day	~ \$4.5 Billion Addressable Market*
 Stationary energy storage	12-20 hrs/day	~ \$4.2 Billion Addressable Market*

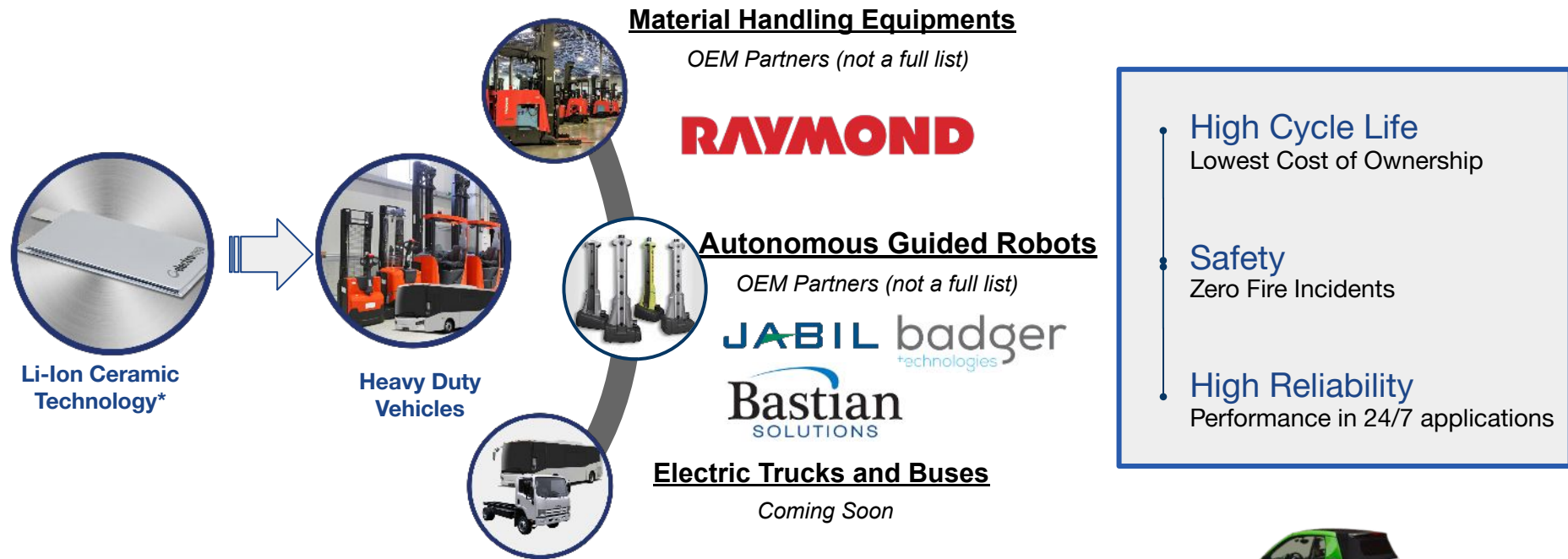


**Battery Requirements:** Efficiency, Lifetime, Safety & Cost of Ownership

\*Data Numbers Obtained Through MarketWatch

# Our Products: Infinity Batteries – A Proven Technology

Setting the industry standard... Our lithium-ion ceramic cells have the highest cycle life and safety

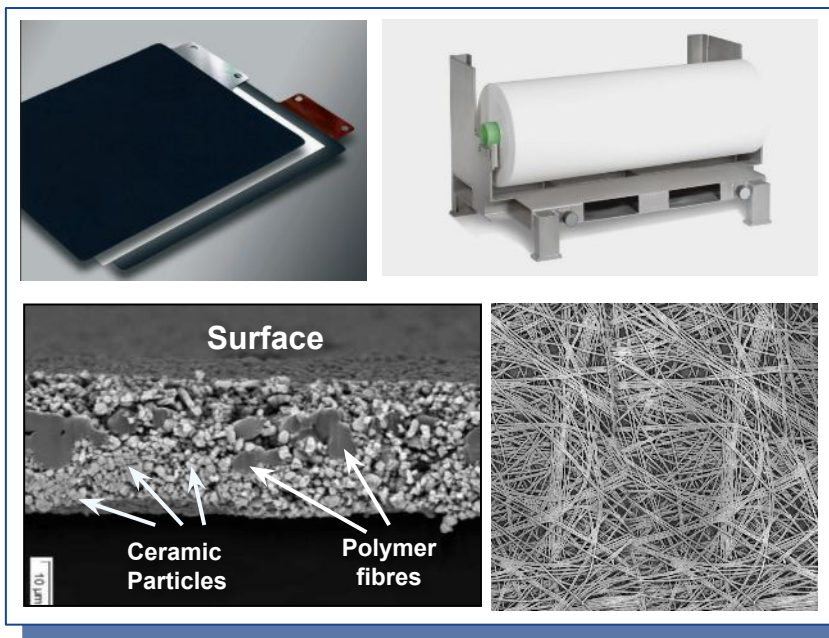


\*An earlier iteration of our lithium-ion ceramic technology has also been used in ~20,000 Daimler Smart cars (no active cooling).

\*There have been no known battery safety incidents in these vehicle and for the 6000+ Material Handling/AGV battery systems

# Our Products: Proprietary Ceramic Separator Technology

Unparalleled experience... the transition to lithium metal-based batteries will almost certainly require the use of ionic conducting ceramic-based electrolyte materials



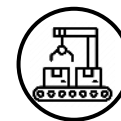
## Our Strengths



Patented unique ceramic separator offers **Unparalleled safety** (36 patents)



**Substantial experience** and know-how in the manufacturing of ceramic separators.



**Only company** that has commercialized the use of ceramic separator for lithium ion batteries

# Our Products: Superior Safety

Multi-level cell and system safety technology resulting in a non-propagating battery design

## Electrovaya Ceramic vs Coated PO Separator



## Third Party Fire Propagation Test

An Electrovaya 24V battery AFTER fire propagation testing for UL

- ❖ Individual cell in fully charged battery pack was forcibly heated to +200°C
- ❖ No internal propagation, the fire was contained within the faulted sub-module
- ❖ No flames escaped the battery enclosure

*Test conducted by UL in early 2020, UL comment about the fire propagation test results: "best results seen in lithium ion battery regardless of the chemistry"*



# Our Customers: Infinity Batteries (MHEV)

## Example OEM Customers

**RAYMOND**

Bastian  
SOLUTIONS

**JABIL**

## End Users Example (not a full list)

### Retail & eCommerce

**Walmart**



**LOWE'S**

\*Confidential F100 ecommerce company

### Food Distribution

**MARS**



**Mondelēz**  
International

### Manufacturing



**SIEMENS**

**3M**

### Logistics



**FedEx**

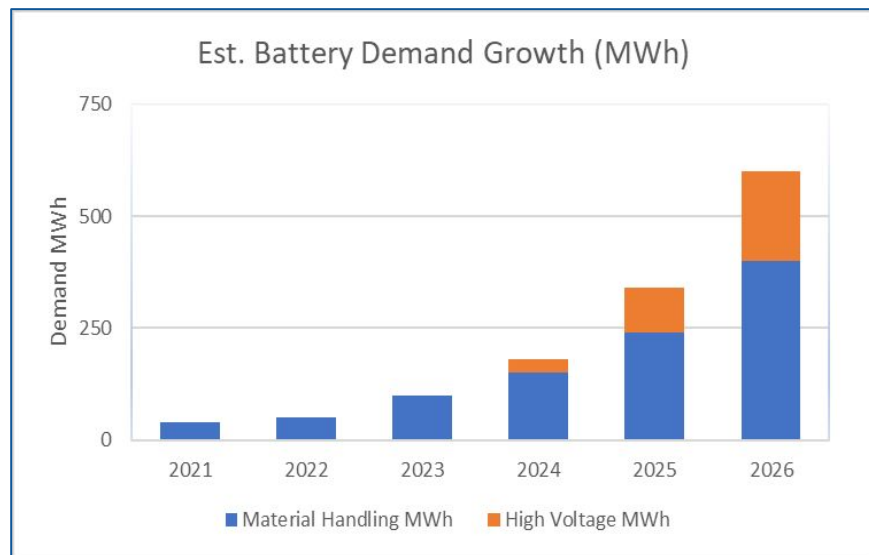
**ceva**  
LOGISTICS



# Market Demand: Near-term Exponential Growth for MHEV

Expanding our capacity to scale our business and meet anticipated growth in demand

Demand is expected to **grow rapidly** over the next 3 Years



\*Demand data from lift truck OEM

We are executing plans to **expand our manufacturing capacity** to ~500MWh in 2025 and >2GWh by 2029





# Expanding Our Capacity: Jamestown, NY Gigafactory



Our **Gigafactory in Jamestown, NY** will enable us to:

- Onshore manufacturing
- Streamline supply chains
- Scale to support increased demand

**130,000 sq ft \$0.05/kWh**

Industrial facility

Low energy cost

**100% < 3 hours**

Renewable energy  
key customers

Close proximity to HQ and

## Update

**2022**

- \* Site acquired
- \* Term sheet received from a NY state consortium lenders covering 80% of stage 1 costs

**2023**

- \* Hiring drive started

**2024**

- \* HV/LV module and HV pack assembly expected to “go live” in Q3-2024

**2025**

- \* Cell assembly expected to “go live” in Q2-2025

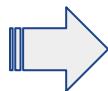


# Our Products: High Voltage Battery Systems

Advanced customized packaging technology for demanding application – launched July 2023



High Voltage Batteries



## Energy Storage Systems

*Electrovaya HV batteries designed for high performance stationary applications.*



## Electric Buses & Trucks

*Based on OEM benchmarks, Electrovaya batteries should last longer than 16 years.  
(Multiple times better performance than standard solutions )*

### High Cycle Life & Safety

Lowest Cost of Ownership

### Modular Design

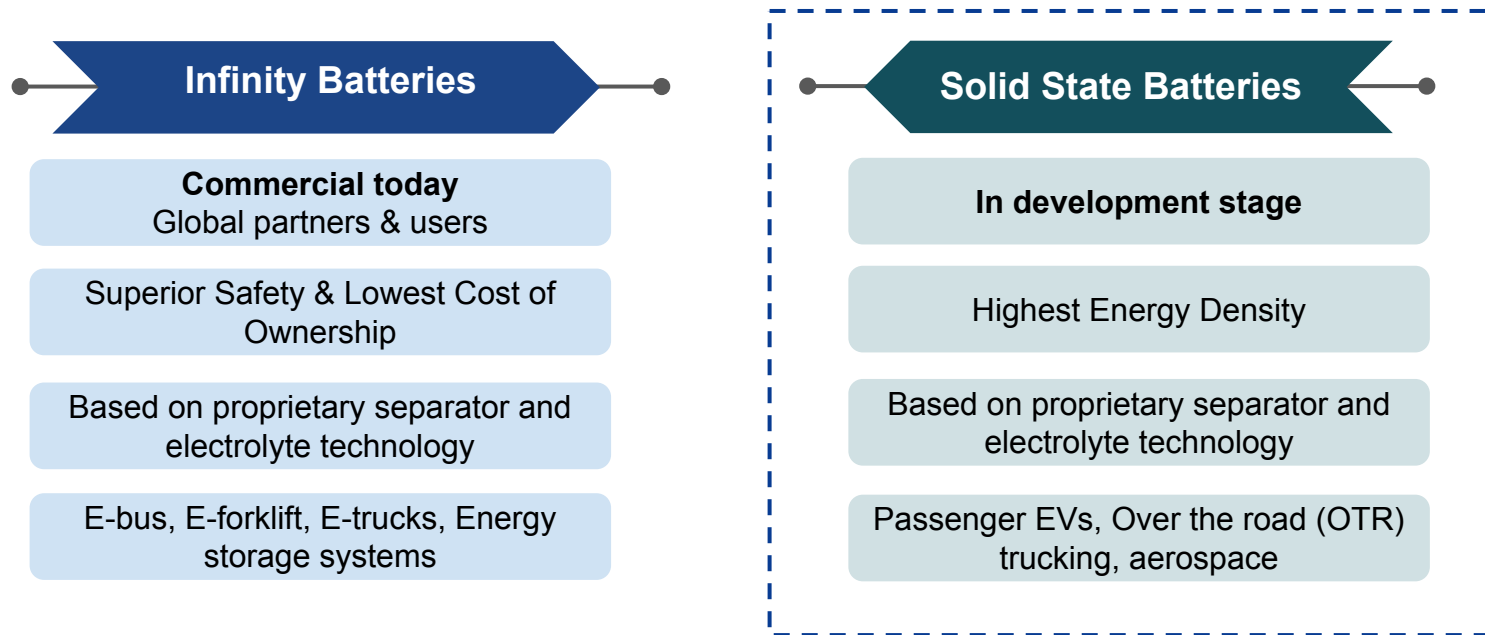
Tailored for specific application

### Strongest Warranty

Up to 12 years

# Our Products: Technology Solutions

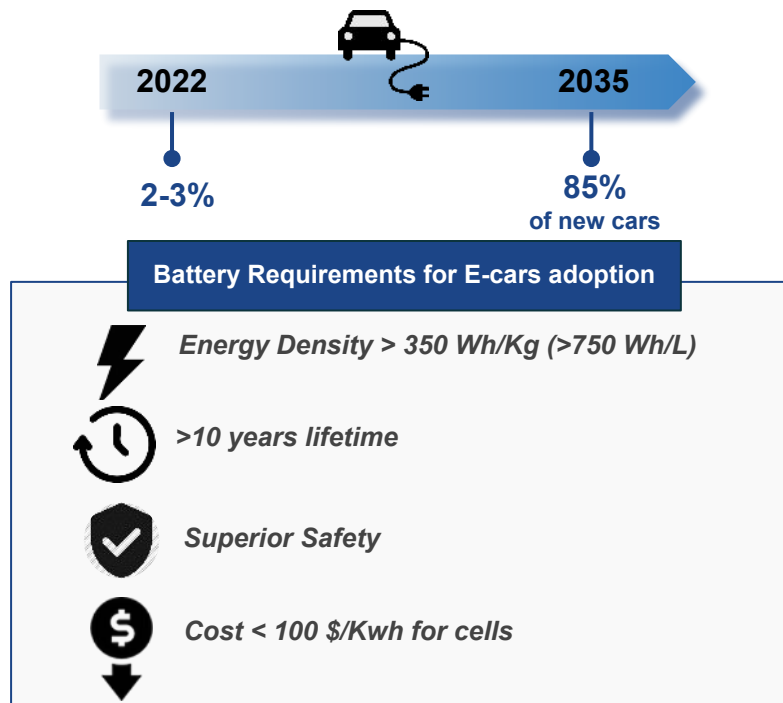
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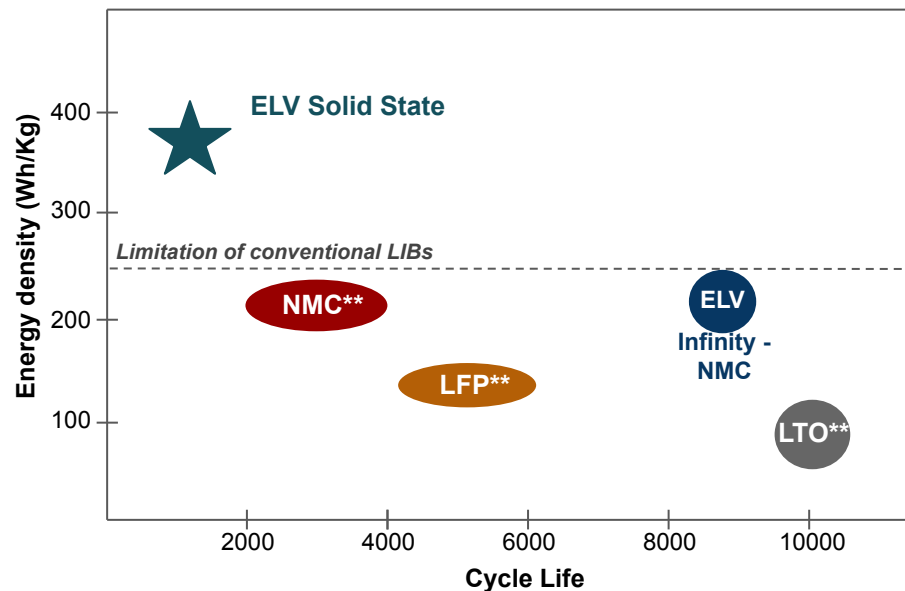
# Our Products: Next Gen-Solid State Batteries (SSB)

Solid State Promises Much Higher Energy Density = More Range, Less Weight, Less Cost

EV penetration in the global vehicle market



Solid State Batteries offer 2X Energy Density over conventional lithium ion batteries= more range, less weight, less cost



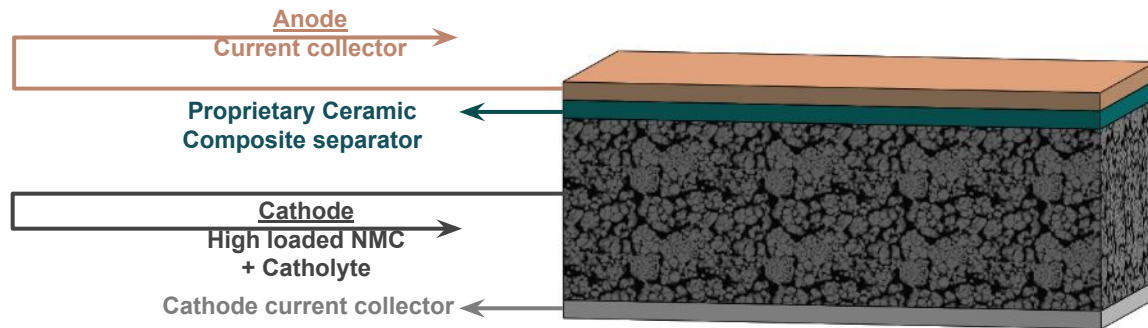
\*\* Competitor data sheets/estimates

# Our Products: Our Approach with SSB

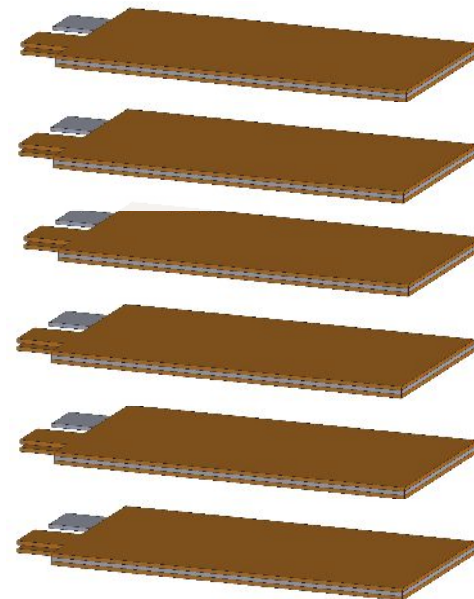
Our SSB platform incorporates versatile, proprietary technology

Four Solid State Battery Related Patents Have Been Filed

## Single layer Pouch stack



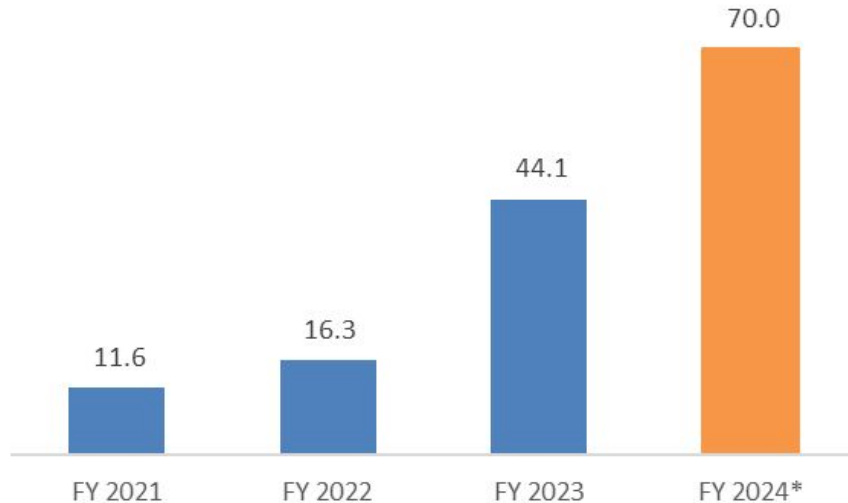
## Multi-layer Pouch stack



# Financial Performance: 100% CAGR over 2 Years

Market demand provides **STRONG TAILWIND** for accelerating revenue growth

Annual Revenue USD\$m



\* At the mid-point of guidance provided on January 3, 2024

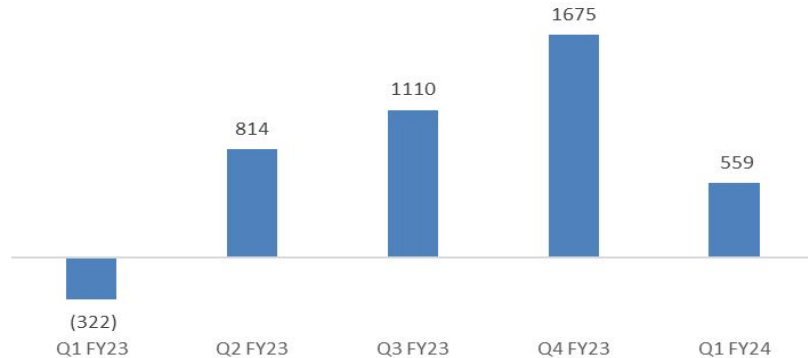
## Key Revenue and Margin Drivers

- FY 2023 **revenue more than doubled** due to **increased orders** driven by **strong market demand**
- **Targeting >30% gross margin for FY 2024**
- Expanding capacity provides opportunity to further accelerate revenue growth
- Breakeven ~\$50 million/annum with incremental revenue contributing to net profits
- Following Start of Cell and Module Production in the USA, Electroveya's margins will further increase due to the Inflation Reduction Act Incentives with \$45 million/GWh of production = 5-10% increase in gross margins

# Financial Performance: Profitability Inflection Achieved

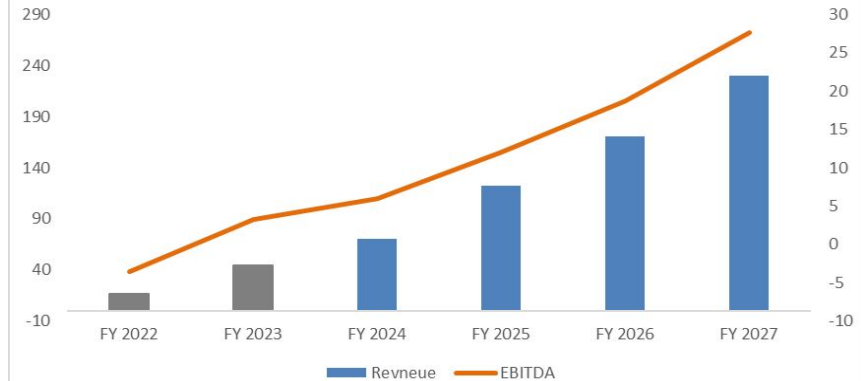
Reaching an inflection point... set to be one of the only profitable battery companies in North America

Quarterly Adjusted EBITDA\* (USD\$000)



- Operational efficiencies and cost savings drove positive EBITDA in FY23.
- **Trends illustrate positive trajectory**

Revenue and EBITDA Trend (USD\$000)



- Significant growth expected in Revenue and EBITDA
- Jamestown production coming online mid 2025
- Expansion into multiple revenue streams

\* Non-IFRS Measure: Adjusted EBITDA does not have a standardized meaning under IFRS. Therefore it is unlikely to be comparable to similar measures presented by other issuers. We believe that certain investors and analysts use Adjusted EBITDA to measure the performance of the business. Adjusted EBITDA is defined as loss from operations, plus finance costs, stock-based compensation and depreciation costs.

# Summary Balance Sheets and Cap Table

## Select Balance Sheet Items (\$USD)

<i>(US\$ in thousands)</i>	<u>12/31/2023</u>	<u>12/31/2022</u>
Cash	\$628	\$136
Trade and other receivables	8,667	5,046
Inventories	9,291	8,120
Other current assets	6,219	4,218
Long-term assets	10,648	7,399
<b>Total Assets</b>	<b>\$35,453</b>	<b>\$24,919</b>
Trade & other payables	\$7,713	\$5,000
Short-term debt	16,337	13,738
Other Liabilities	3,887	7,444
<b>Total Liabilities</b>	<b>\$27,937</b>	<b>\$28,896</b>
<b>Total Equity (Deficiency)</b>	<b>\$7,516</b>	<b>(\$1,263)</b>
<b>Total liabilities and equity</b>	<b>\$35,453</b>	<b>\$24,919</b>

## CapTable As of 12/31/2023

Outstanding shares	33,842,808
Outstanding warrants	1,711,924
Outstanding stock options	4,714,388
<b>Total</b>	<b>40,269,120</b>

## Select Equity Items (Nasdaq \$USD) As of 2/28/2024

Share price	\$4.07
Market Cap	\$137.9M
Insider ownership	~33%



# Management Team



**Dr. Raj S.  
Das Gupta,**  
*CEO, Director*

Raj has been with the company since 2009 and became CEO in 2022 following his previous role as COO. Raj attended Imperial College, London; MIT; and the University of Cambridge, where he received his Doctorate in Materials Science



**John Gibson,**  
*CFO*

John is a Certified Professional Accountant ("CPA, CA") with over 15 years of experience in public and private corporations and brings significant experience in corporate accounting and finance, strategic and financial planning, internal controls, and systems.



**Dr. Jeremy  
Dang,**  
*VP, Business & Project  
Development*

Jeremy's client portfolio includes lift truck OEMs and Fortune 500 clients from material handling, and energy storage industries. Jeremy is a Certified Chartered Chemist and Project Management Professional with a doctorate in Chemical Engineering.



**Dr. Elmira  
Memarzadeh**  
*Director, Engineering  
Programs*

Elmira has been with Electrovaya since 2014 and currently manages cell production. She has worked on several development projects with other Engineering departments within Electrovaya as well as Vendors and Clients. Elmira received her PhD in Material Science from the University of Alberta.



**Jason Roy,**  
*Director, Corporate  
Development and  
Investor Relations*

Jason has been with the company since 2018. He brings with him over 18 years of Capital Markets experience, in various roles of Investor Relations, Communications, Business & Corporate Development with both Publicly traded and Private companies.

# Board of Directors



**Prof Carolyn  
Hansson,**  
Director

Professor Carolyn Hansson CM, FCAE, FRSC has a long and distinguished career in industries such as Lockheed Martin (Martin Marietta), Danish Corrosion Labs and Bell Labs as well in academia (Waterloo, Queens, Columbia & SUNY) and was earlier a member of the Board of a TSX and NASDAQ listed Alternate Energy Company (Hydrogenics).



**Dr Jim Jacobs,**  
Director

Dr. Jacobs' innovations have been instrumental in the development of Electrovaya's SuperPolymer technology. He co-founded the company with Sankar DasGupta in 1996 and was an instrumental part of its IPO in 2000. He served as CTO of the company until 2003. Dr. Jacobs received a BA from Oberlin College, Ohio and completed both his MA and PhD in solid-state physics at the U of Toronto.



**Dr. Sankar Das  
Gupta,**  
Executive Chairman

Sankar is an entrepreneur and an award-winning scientist with over 50 US patents who is passionate on the urgency to reduce the effects of Climate Change. He has been a member of many committees including the White House Committee on Energy & Environment, chaired by then Vice- President Al Gore. Recently he was an Advisor to the Indian PM on Climate Change and Energy



**Kartick Kumar,**  
Director

Kartick Kumar is a seasoned climate change and sustainability investor. Has two decades of investment and operations experience in energy and decarbonization transition issues across Europe, Asia, Latin America, Africa, and the Middle East. Held a range of senior roles within the World Bank Group, the International Finance Corporation (IFC). Holds degrees in economics and law from U of Cambridge, U of Columbia and the U of Toronto.



**Steven Berkenfeld,**  
Director

Steven is a seasoned industry veteran within both the clean energy and finance industries. Founder and principal of Ecotopia Consulting. Former Managing Director Investment Banking at Barclays of the Environmental and Social Impact Banking Initiative, was co-head of the firm's Cleantech Initiative, led the banking effort for Emerging Industrial Technology companies. Former Chair of the Board of the Sierra Club Foundation, an organizations focused on social impact and sustainability

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**Investor & Media queries, please contact:**

***Jason Roy***

*Director, Corporate Development & Investor Relations*

Phone: 905-855-4618

Email: [jroy@electrovaya.com](mailto:jroy@electrovaya.com) Web: [www.electrovaya.com](http://www.electrovaya.com)



**Toronto Stock Exchange (Nasdaq:ELVA) & (TSX:ELVA)**

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