



Enovix

Next-Gen Li-ion Battery
Technology Advancing
Consumer Electronics

41st International Battery
Seminar

Orlando, FL

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Vice President, Business Development &
Head of Mobility

March 14, 2024

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This presentation contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical fact, including statements regarding our ability to build and scale our advanced silicon-anode lithium-ion battery, our production and commercialization timeline, our ability to meet milestones and deliver on our objectives and expectations, our ability to maintain a competitive advantage over other participants in the lithium-ion battery industry, estimates relating to various addressable markets, projected advantages and capabilities of our batteries in certain use-cases, our strategy and ability to scale our manufacturing and meet our targeted unit outputs, our ability to build and scale production of our advanced silicon-anode lithium-ion battery in multiple facilities in North America and Asia, timing of delivery of equipment orders for our next generation manufacturing line and our Agility Line for custom cells, market opportunities and the expansion of our customer base, our ability to meet the expectations of potential and existing customers, our ability to achieve market acceptance for our products, our estimate of the size of our revenue funnel, our ability to convert our revenue funnel to purchase orders and revenue, and our ability to consummate this offering and the expected use of proceeds from this offering are forward-looking statements. These statements involve known and a significant number of unknown risks, uncertainties, assumptions and other factors that could cause results to differ materially from statements made in this presentation, including any performance or achievements expressed or implied by the forward-looking statements. Moreover, we operate in a very competitive and rapidly changing environment, and new risks may emerge from time to time. It is not possible for us to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results or outcomes to differ materially from those contained in any forward-looking statements we may make. For additional information on these risks and uncertainties and other potential factors that could affect our business and financial results or cause actual results to differ from the results predicted, please refer to our filings with the Securities and Exchange Commission (the “SEC”), including our annual report on Form 10-K for the fiscal year ended January 1, 2023. You can locate our SEC reports through the SEC website at www.sec.gov.

In some cases, you can identify forward-looking statements because they contain words such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “likely,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will” or “would” or the negative of these terms or similar expressions. Any forward-looking statements made by Enovix in this presentation are based on information available to us as of the date hereof and subsequent events may cause these expectations to change. Actual outcomes and results may differ materially from those contemplated by these forward-looking statements. We disclaim any obligations to update these forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

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Delivering High Performance Batteries

Unlocking the full potential of next-gen devices

We are a global battery manufacturer with a large, diverse portfolio serving the consumer electronics, IoT, medical, industrial and EV markets.

- Headquartered in Fremont, CA with R&D and Manufacturing centers in India and Malaysia
- Developed novel cell architecture to enable the full potential of next gen materials such as silicon anodes
- Recently acquired Routejade in South Korea to complete vertical integration, expand product offerings including pack and power control module
- Customized, flexible designs to address broad market demands
- >400 patents and patent applications.



Addressing a \$23B TAM by Enabling Advances in Mobile Technology

Enabling the Full Capabilities of Consumer Devices Today and in the Future

Mobile

'26 Battery TAM: \$11B²



Engagements with **top tier OEMs**, targeting **multiple smartphone launches** between 2025 and 2026

IoT

'26 Battery TAM: \$8B¹



Shipping today to leading **brands in wearables** and active designs with leaders in a variety of high-volume IoT categories.

Computing

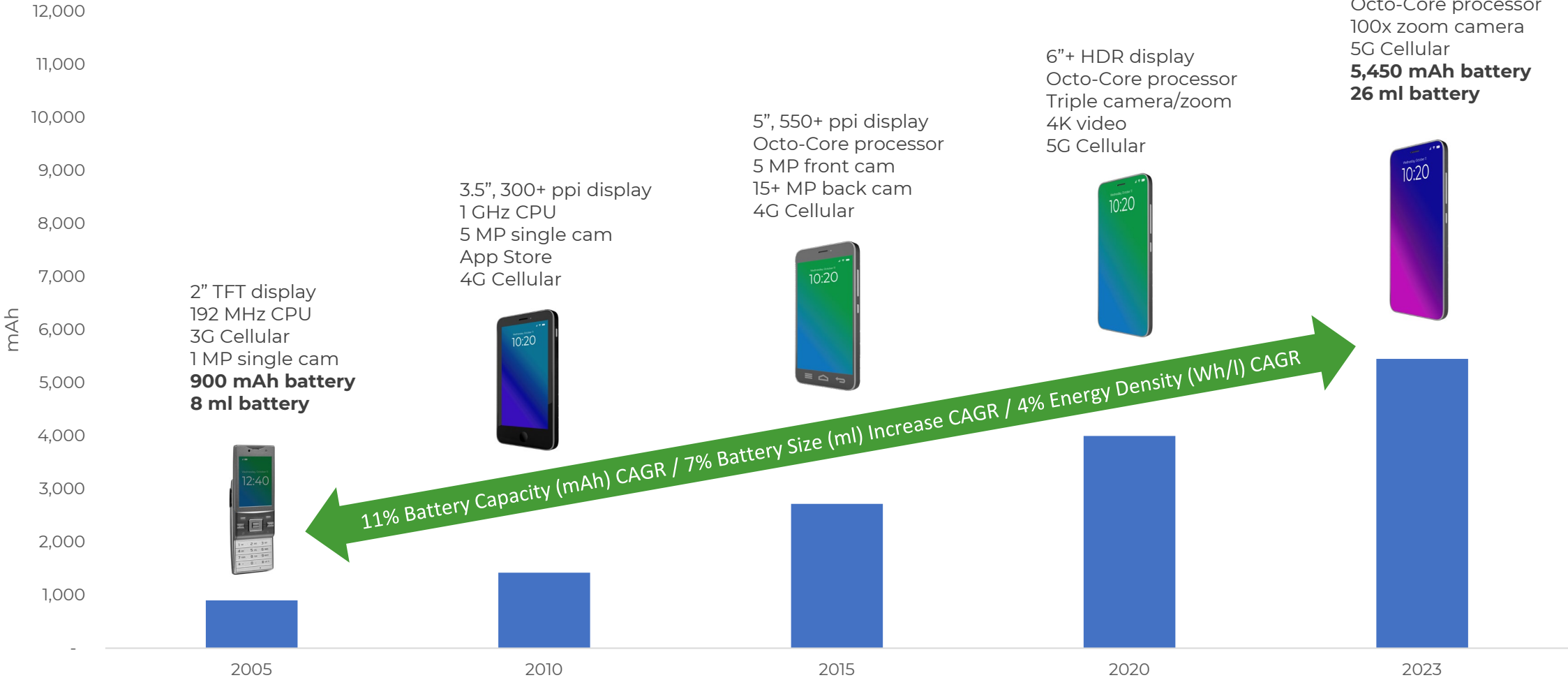
'26 Battery TAM: \$4B³



Engagements with **top PC OEMs** and targeting launches on multiple 2026 laptops

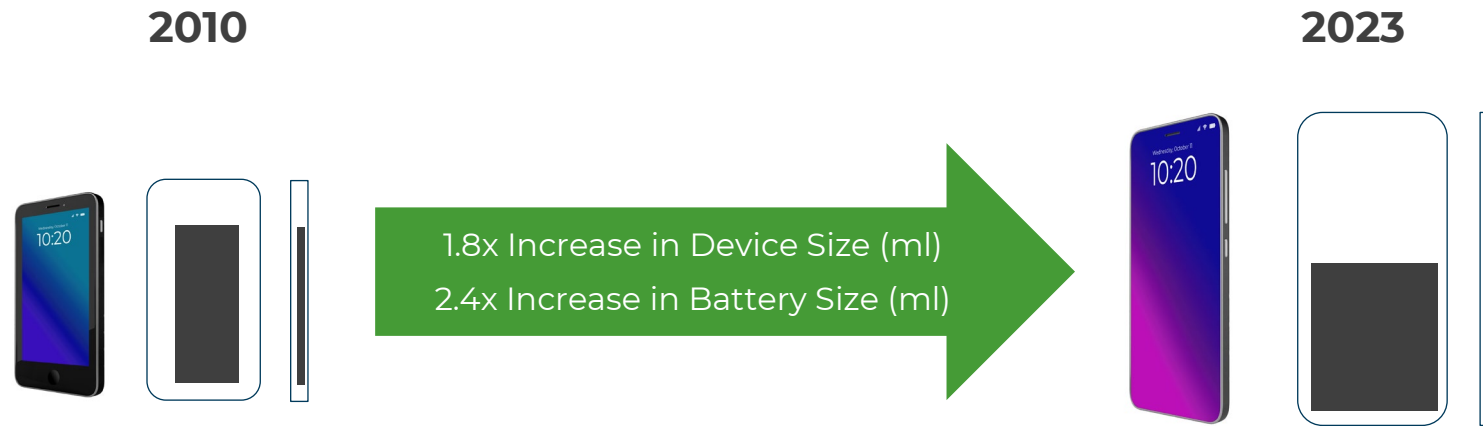
Smartphone OEMs Have Increased Battery Size to Keep Up

Battery Capacity (mAh) of Leading Smartphones¹



¹ Based on select flagship smartphone models

Increasing Battery Size is Limited As Device Size Maxes Out¹



Battery Volume as % of X, Y-Dimensions

40%

43%

Battery Volume as % of Z-Dimension

43%

57%

Battery Volume as % of Total Smartphone Volume

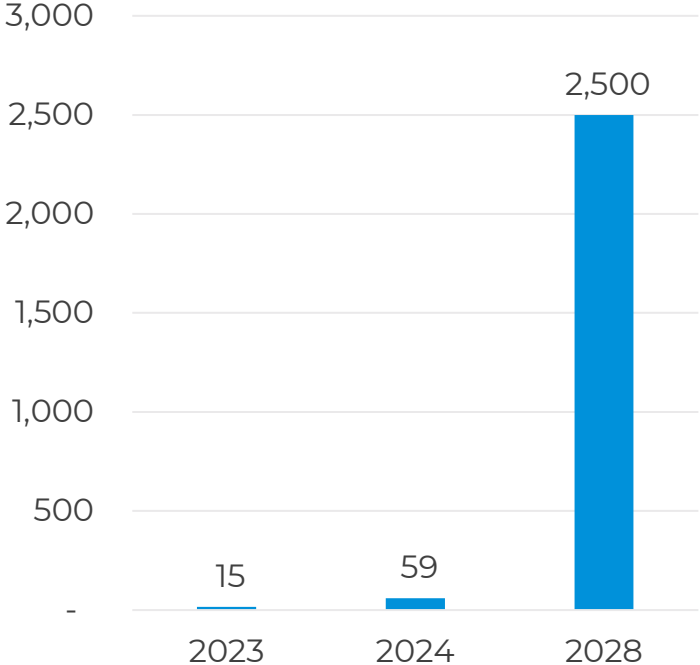
17%

23%

Growth of AI Apps Threatens All-Day Smartphone Battery Life¹

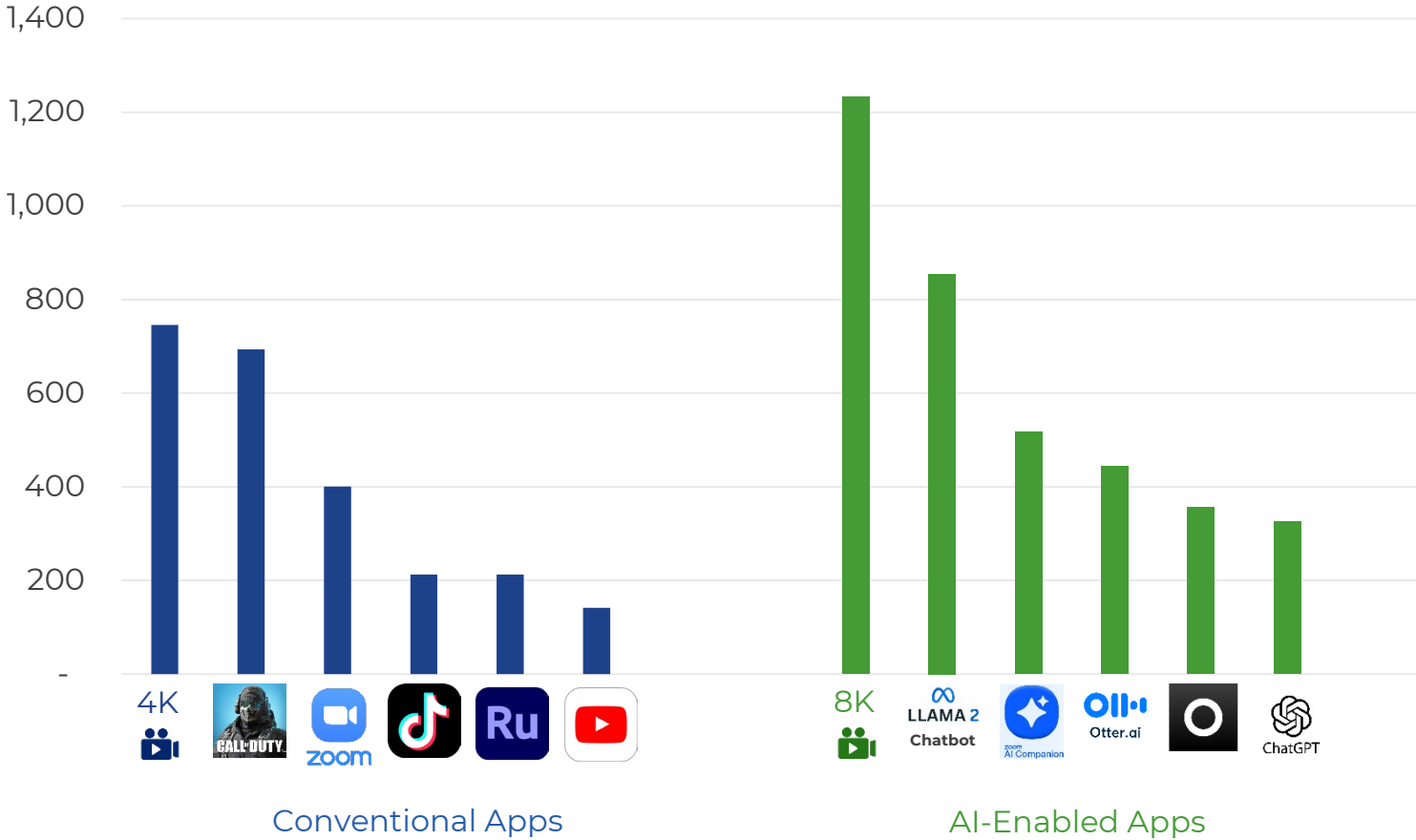
150x+ Growth for AI...

Global GenAI Output Forecast:
Video/Image Frames (Billions)



...AI-Based Apps Consume Much More Power

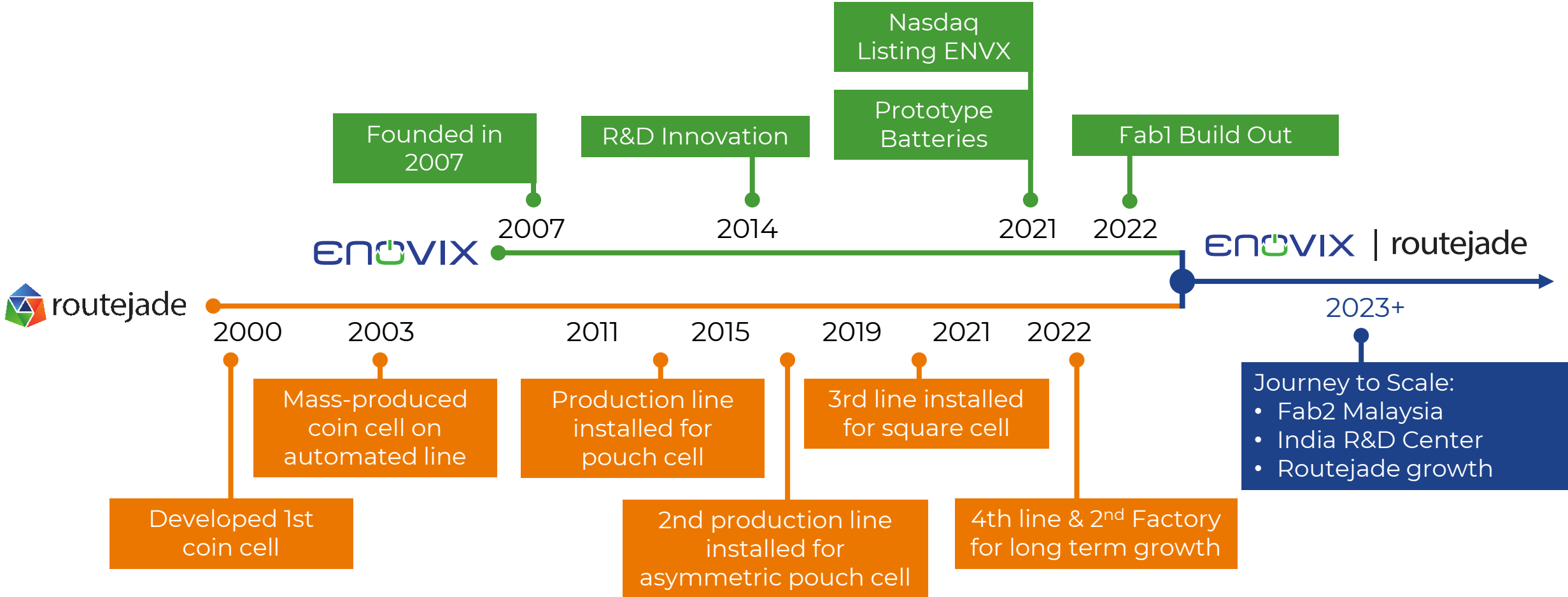
Battery Capacity Used Per Hour (mAh)



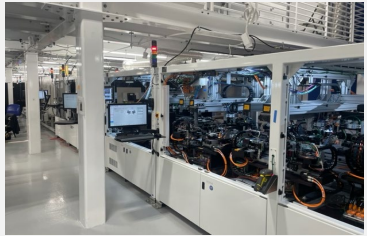
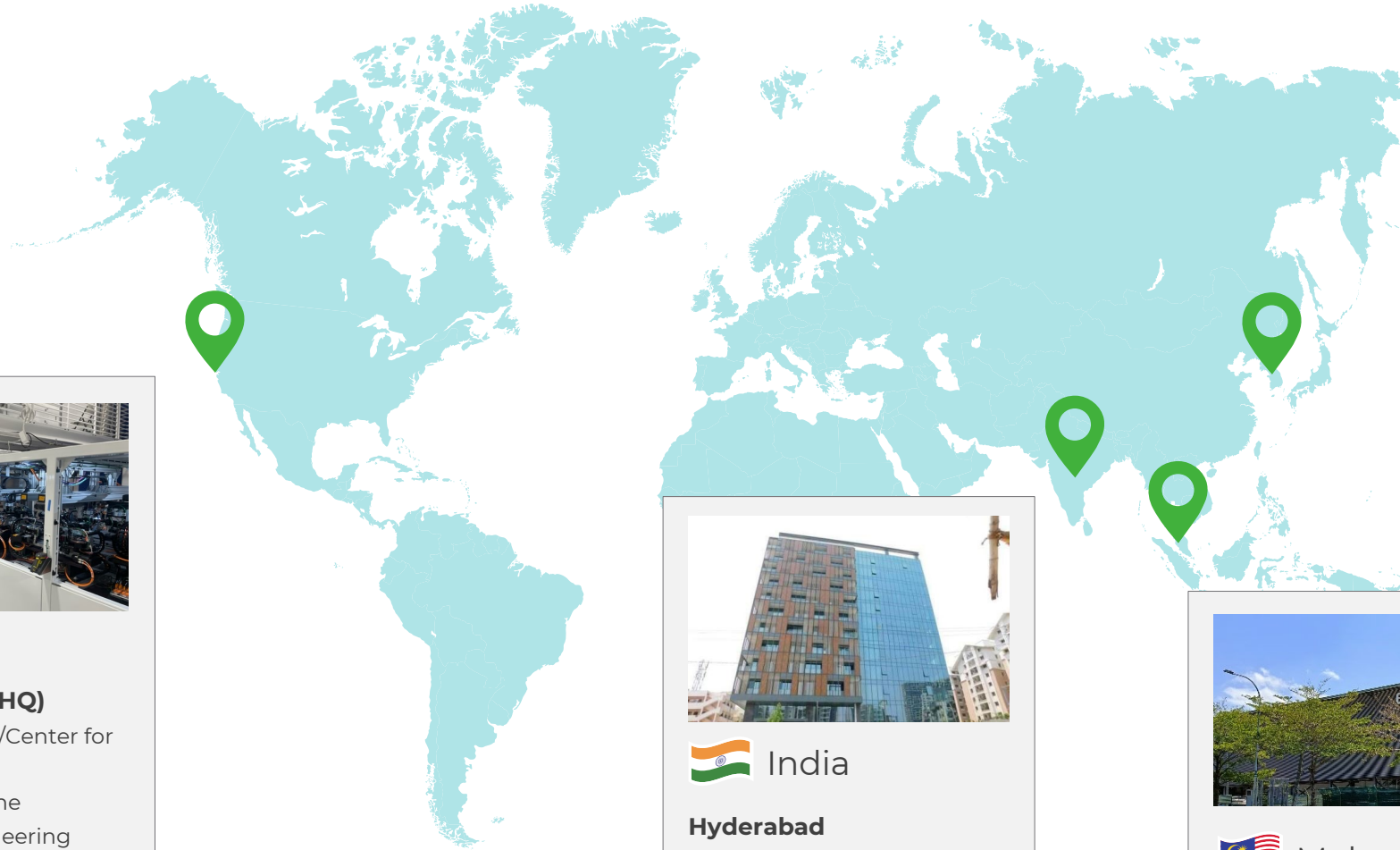
¹ Source: "Battery Technology Trailing Smartphone Innovation," January 2024, Tirias Research for Enovix

Enovix Routejade Timeline

Nearly 4 decades of combined R&D and manufacturing experience



Global Footprint to Support World-Class Manufacturing and R&D



 USA

Silicon Valley (HQ)

- ✓ Corporate HQ/Center for Innovation
- ✓ R&D Agility Line
- ✓ Process Engineering
- ✓ Materials Research
- ✓ Customer Qualification
- ✓ Automotive R&D




 India

Hyderabad

- ✓ R&D
- ✓ AI/ML Modeling to Support Materials Research




 South Korea

Nonsan City (Routejade)

- ✓ Electrode Coating and Battery Production
- ✓ Two factories
- ✓ Four battery production lines and two coating lines
- ✓ 127,500 sq ft



 Malaysia

Penang (Fab2)

- ✓ High-Volume Manufacturing.
- ✓ Space for Four Gen2 Production Lines
- ✓ Agility Line for Customer Qual
- ✓ 250,000 sq ft

Product Portfolio



Product Advantages and Synergies



Enovix (EX) Cells

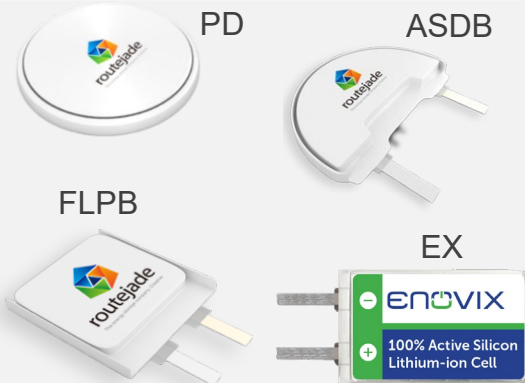



- High energy density pouch cells
- 100% Active Si anode
- Fast charge
- High cycle life
- Robust mechanical architecture
- Volume production starting 2024



Enovix Routejade Cells

- Wide range of cell sizes and form factors available to meet customer needs
- Electrode encapsulation technology
- High power cells (up to 30C discharge)
- 20 years of production in medical, consumer and military markets
- In production now

Product Portfolio by Market

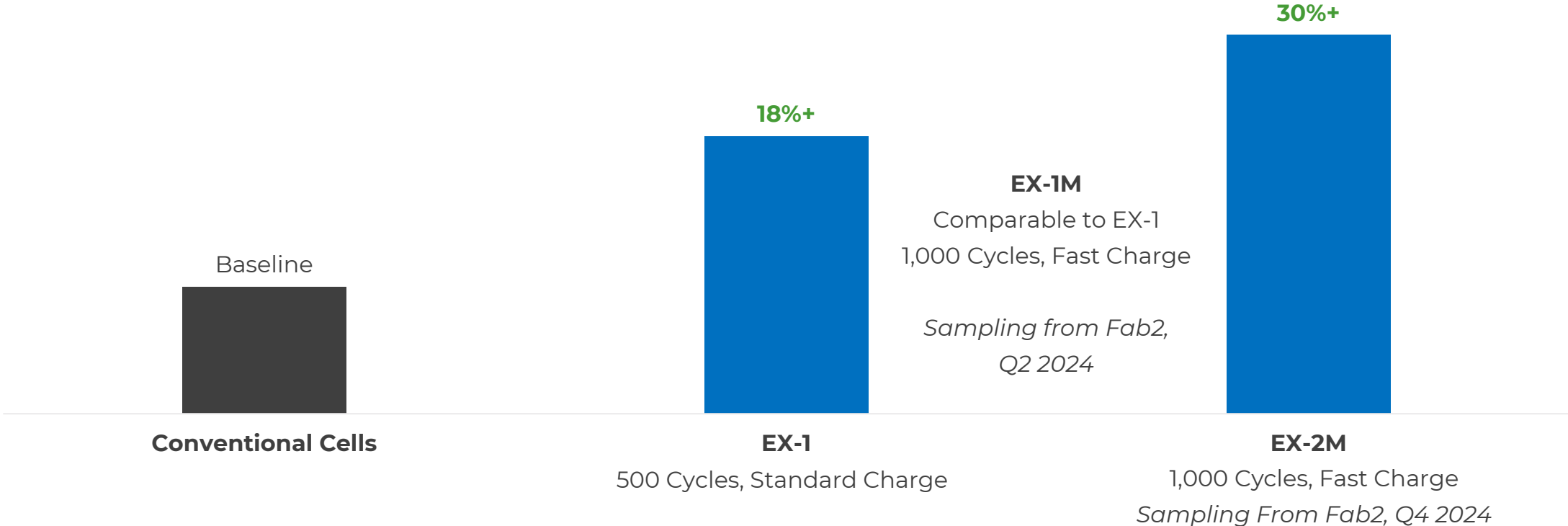
	IoT	Mobile	Compute	Industrial
Example Applications	Smartwatch/Fitness Bands AR/VR Headsets Sensors	Smartphone	Laptop Tablet	Power Tools Drone UPS Autonomous/Robotics
Product(s)	 <p>PD ASDB FLPB EX</p>	 <p>EX</p>	 <p>EX</p>	 <p>SLPB EX</p>
Key Features	Custom sizes and shapes (graphite) High energy density	High Energy Density Long cycle life Fast Charge	High Energy Density Long cycle life (1000+ cycles)	High energy and power options Up to 30C continuous, 45C pulse discharge Long cycle life



Enovix Cell Technology

Enovix Offers Multi-Generational Jump in Battery Performance

Enovix Smartphone Battery Roadmap Capacity Advantage Over Leading 2023 Smartphone Batteries¹



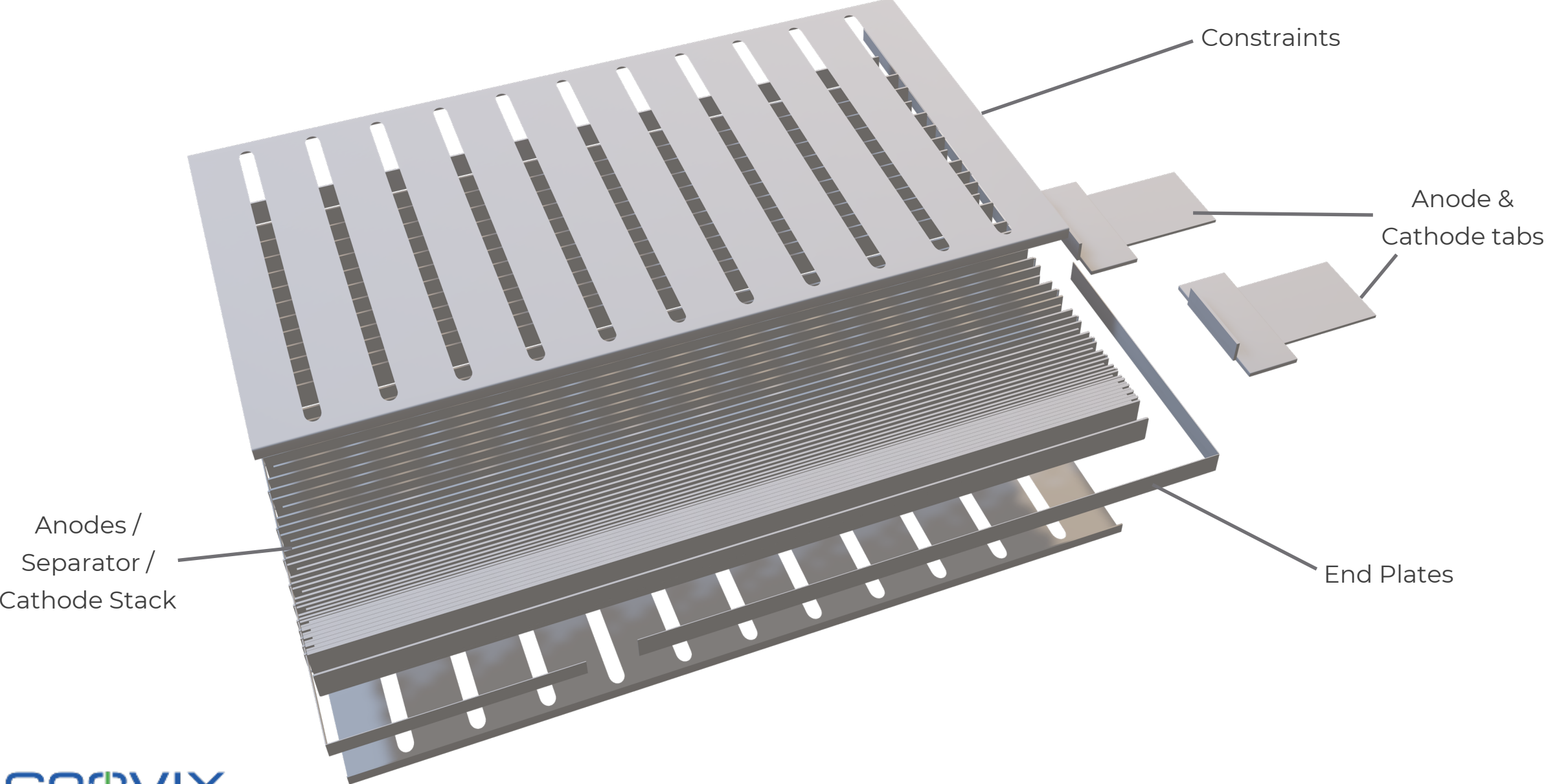
Average Capacity (mAh) of Select Leading Smartphone Batteries in 2023



¹ Methodology: Measured battery capacities and battery cell dimensions for flagship models of nine leading smartphone OEMs (Apple, Samsung, Xiaomi, Vivo, Oppo, Honor, Huawei, Lenovo, and Nokia) adjusted to estimated 0% state-of-charge; Enovix capacities adjusted to same size smartphone battery cell sizes for equivalent comparison at 0% state-of-charge.

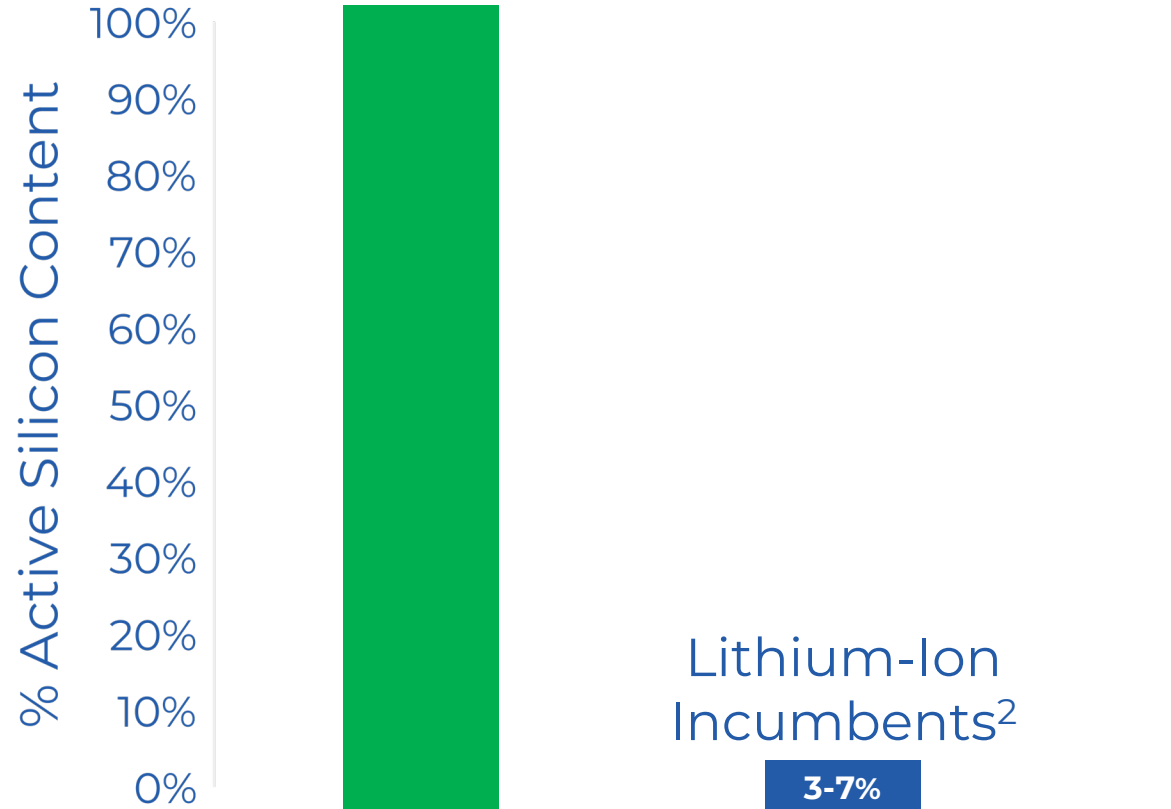


Enovix Cell Architecture



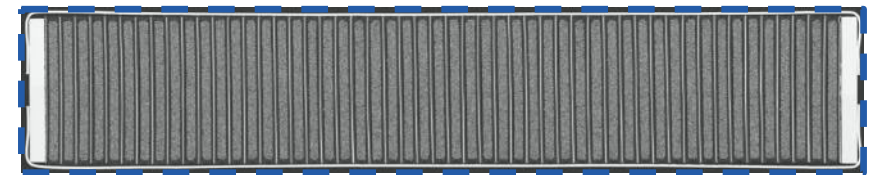
Maximizing Silicon to Drive High Energy Density

Silicon Can Theoretically Store Over 2x the Lithium in the Anode than Graphite¹

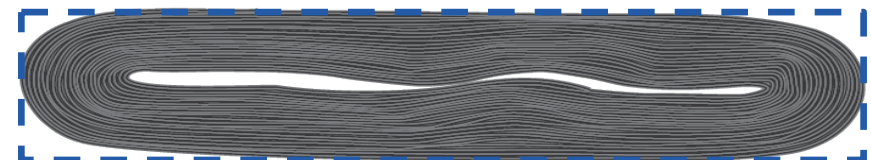


Fully Replacing Graphite with Higher-Performing Silicon Requires an Architecture Change

Enovix 3D Architecture + Integrated Constraint



Conventional Wound Lithium-Ion Cell

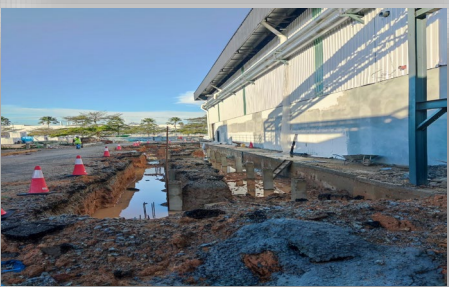
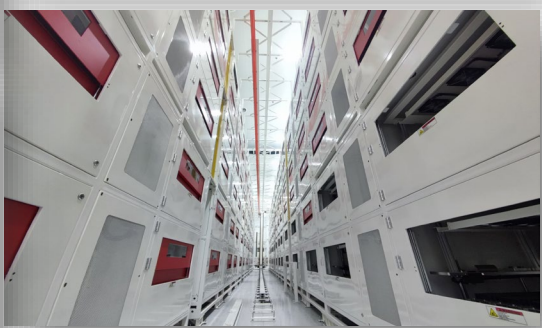


¹ Silicon anode material capacity: 1,800 mAh/cc (de-rated from theoretical capacity of 2194 mAh/cc for Lithium trapping losses). Graphite anode material capacity: 800 mAh/cc (nominal capacity between host capacity of 841 mAh/cc and lithiated capacity of 719 mAh/cc)

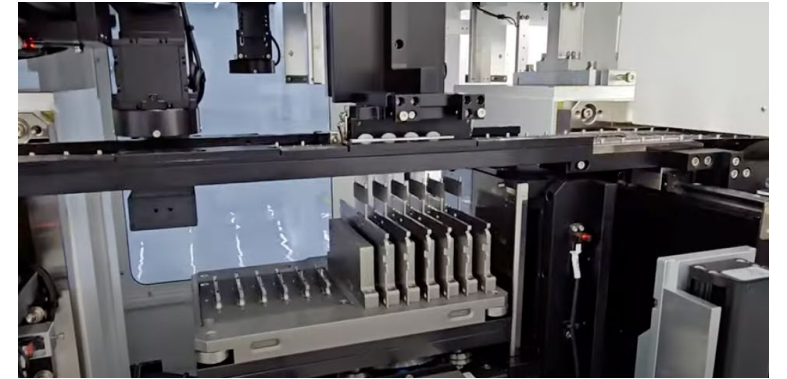
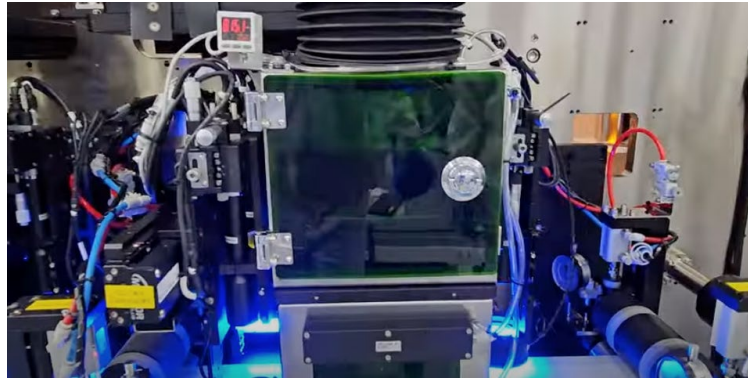
² LG Chem and Panasonic; from UBS Global Research, May 2021

Journey to Scale Penang, Malaysia

SEP 23 OCT 23 NOV 23 DEC 23 JAN 24

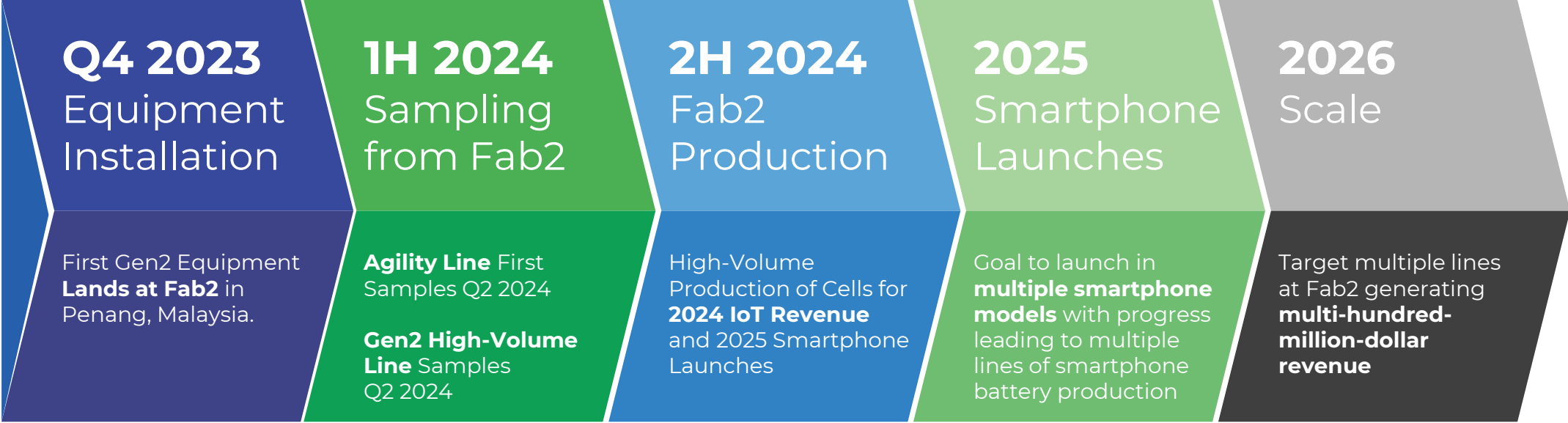


Gen2 Equipment Update



Watch the Video Here >>

Projected Scale-Up Timeline



Enovix Routejade Cell Technology



Routejade Cell Line



Power Disc

Coin Type
Lithium-ion Battery



FLPB

Flexible
Lithium Polymer Battery



ASDB

Asymmetric Design
Lithium Polymer Battery

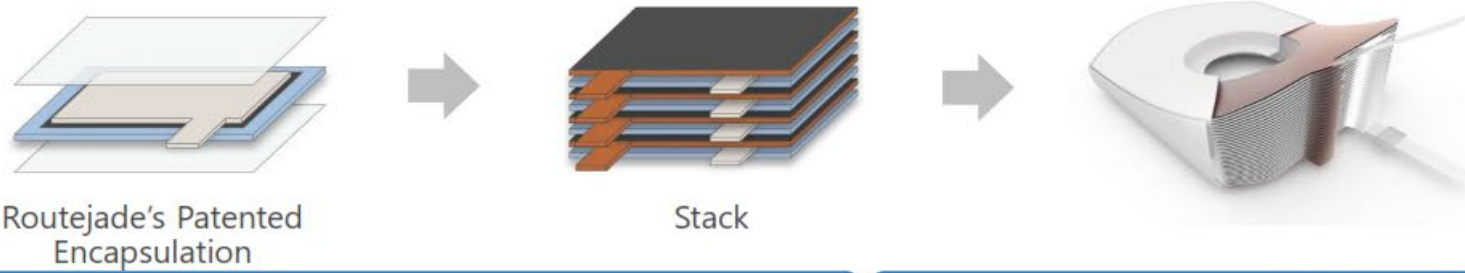


SLPB

Superior
Lithium Polymer Battery

Encapsulation Technology for PD/FLPB/ASDB™

Routejade has developed a Patented Encapsulation technology to make cathode electrode plate and separator be integrated by heat-sealing.



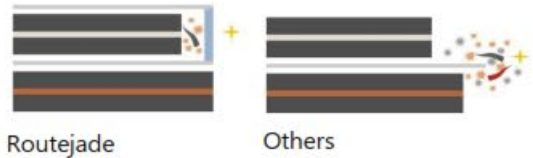
Improved stability

Eliminate the **"Internal Short Circuit"** possibility by burr & debris

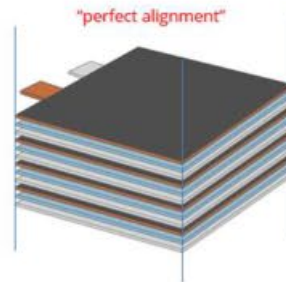


Schematic structure of encapsulated cathode

- Debris from Cathode
- Debris from anode
- Cathode foil Burr
- Anode foil Burr
- Other conductive impurities

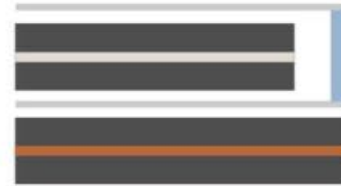


No possibility of lithium salt because of perfect alignment



Optimized performance

Higher energy density by minimizing dead space from extra separator

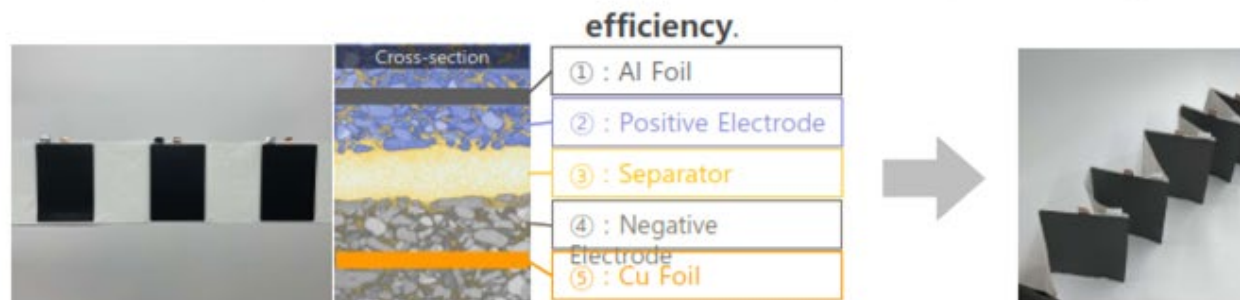


Higher capacity with almost all shape of battery in same process by maximizing internal space



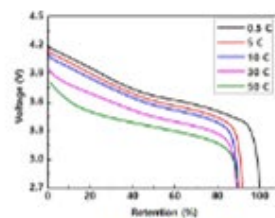
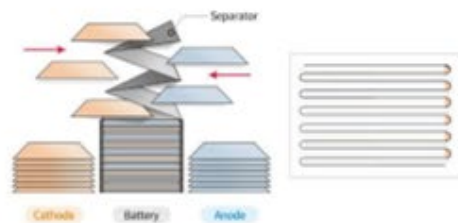
Z-folding Technology for SLPB™

Routejade has been using Z-folding technology for SLPB series to make battery with **low internal resistance** and **high charge / discharge energy efficiency.**

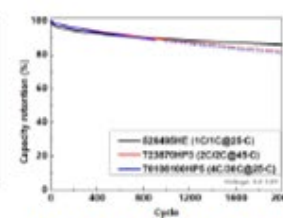


World 1st Z-folding Technology

High Power & Stable Long Cycle Life



90% retention with 50C discharge



Stable cycle life with 2000 cycles

Enovix Korea



Battery Certifications



RoHS



Routejade

ISO 14001 – To certify the environment management system of the company

ISO 9001 – To certify the quality management system of the company

UL 1642 – Standard for Safety for Lithium Batteries

UL 2054 – UL Standard for Safety for Household and Commercial Batteries

IEC-62133 – Safety requirements portable sealed secondary cells

UN38.3 – Transport of dangerous goods

BSMI – Taiwan regulation for electrical products

KC – Korean regulation for all electronic and electrical products

RoHs – The restriction of the use of certain hazardous substances in electrical products

PSE – Japanese regulation for electrical products (battery over 400Wh/L)

TISI – Thailand regulation for electrical products

BIS – Indian regulation for electrical products

Enovix

UN38.3 certification – Transport of dangerous goods

IEC-62133-2:2017 – Safety requirements portable sealed secondary cells

UL1642 – Standard for Safety for Lithium Batteries

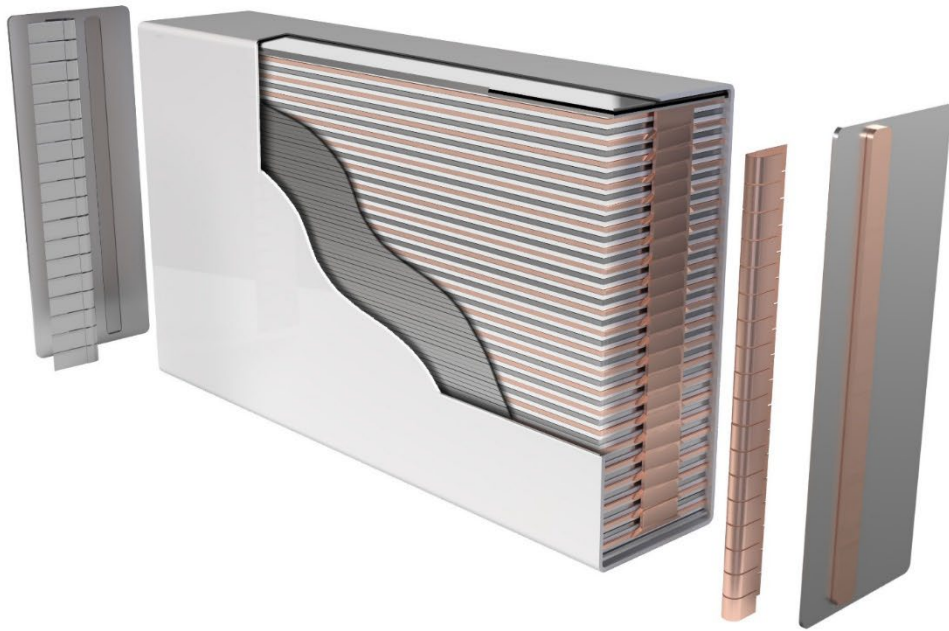
Enovix also received **ISO 9001:2015** for our Fab-1 manufacturing facility and cell characterization and safety lab, both in Fremont, California.



Benefits of Enovix Cell Design for EV Applications

Advanced EV Cell Design

Improved thermal and mechanical performance



EV cell design has not developed as quickly as materials and performance requirements

New mechanical cell design with multiple advantages:

- Enables materials with large volume changes (e.g. silicon)
- Exceptional thermal performance enabling fast charge, reduced thermal gradients

Technology proven in consumer space

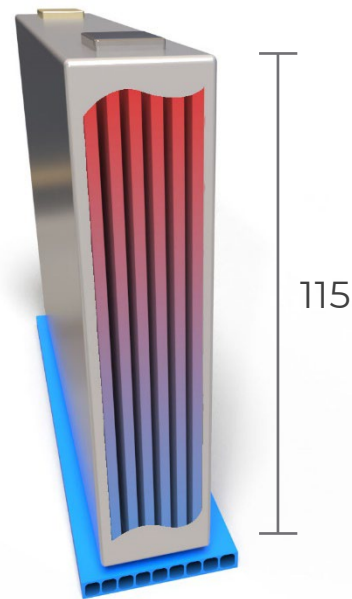
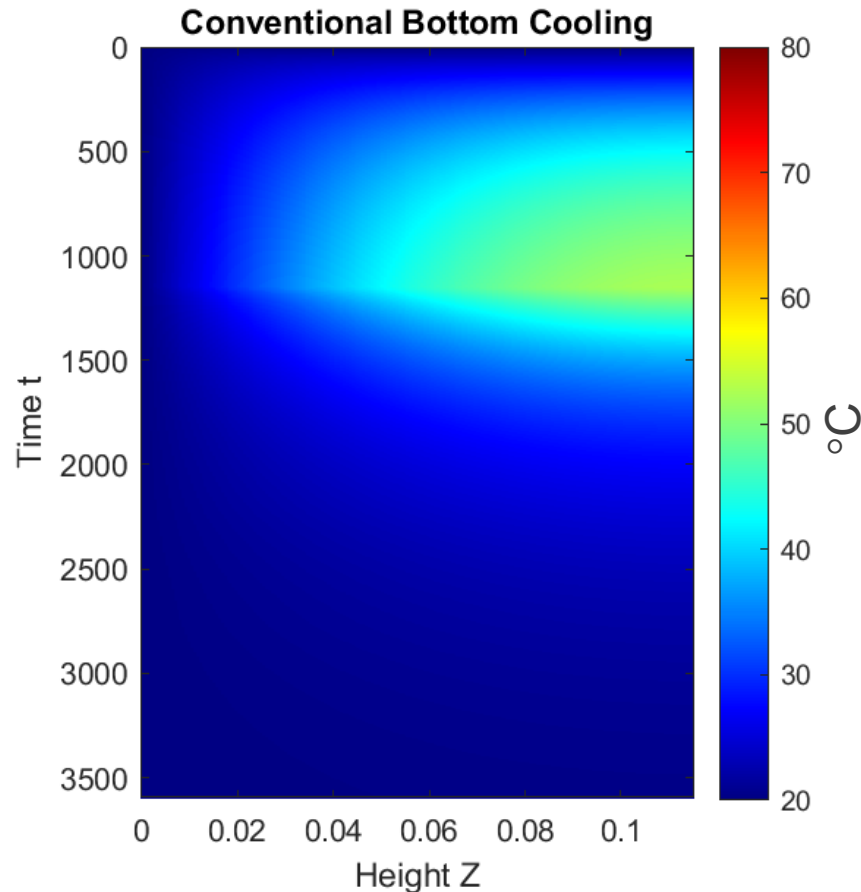
Material agnostic design

Reoriented Electrodes Designed to Deliver Excellent Thermal Performance

33X Higher* thermal conductivity to large face of prismatic cell

2.5C Fast Charging Temperature Profile

Cell Dimensions: 173 x 115 x 32 mm



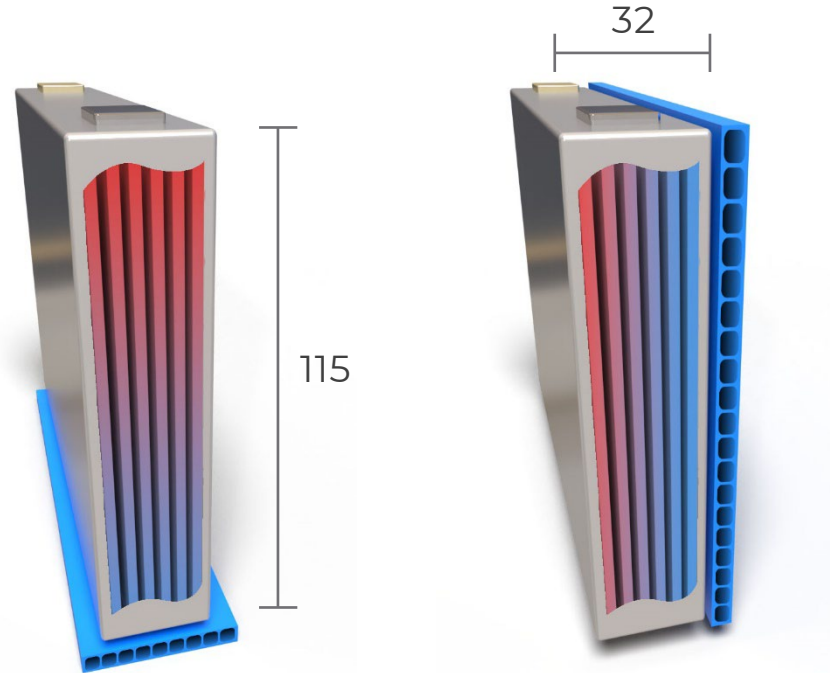
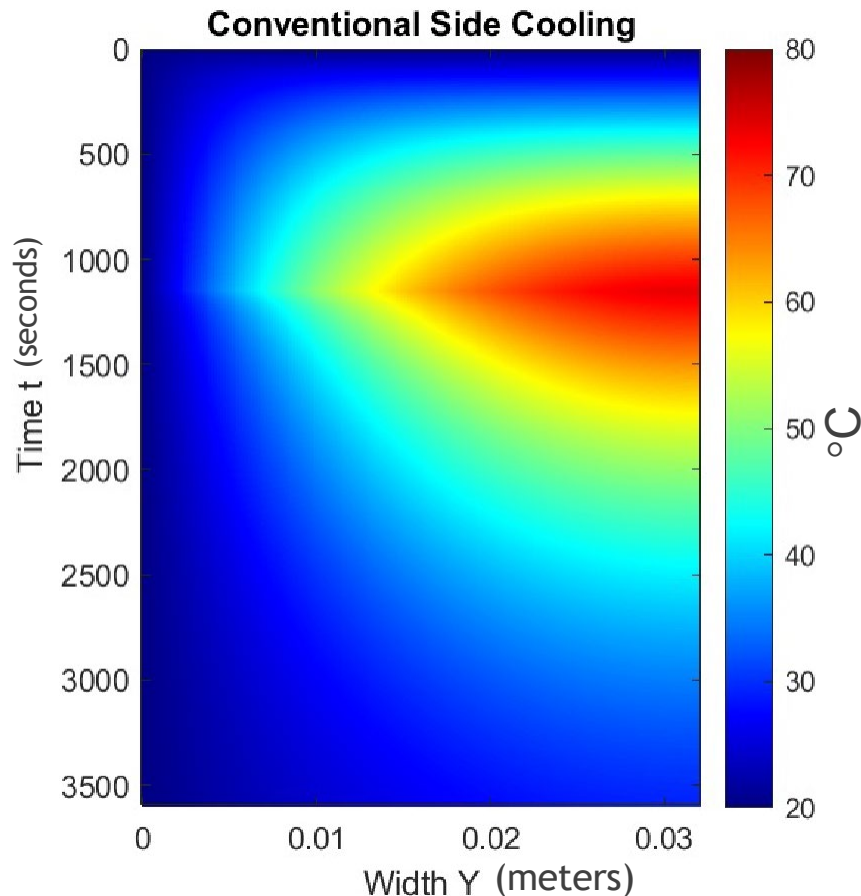
Conventional Stack Cell Bottom-Cooled
 $\Delta T_{\max} = 31.9^{\circ}\text{C}$

Reoriented Electrodes Designed to Deliver Excellent Thermal Performance

33X Higher* thermal conductivity to large face of prismatic cell

2.5C Fast Charging Temperature Profile

Cell Dimensions: 173 x 115 x 32 mm



Conventional Stack Cell Bottom-Cooled

$$\Delta T_{\max} = 31.9^{\circ}\text{C}$$

Conventional Stack Cell Side Cooled

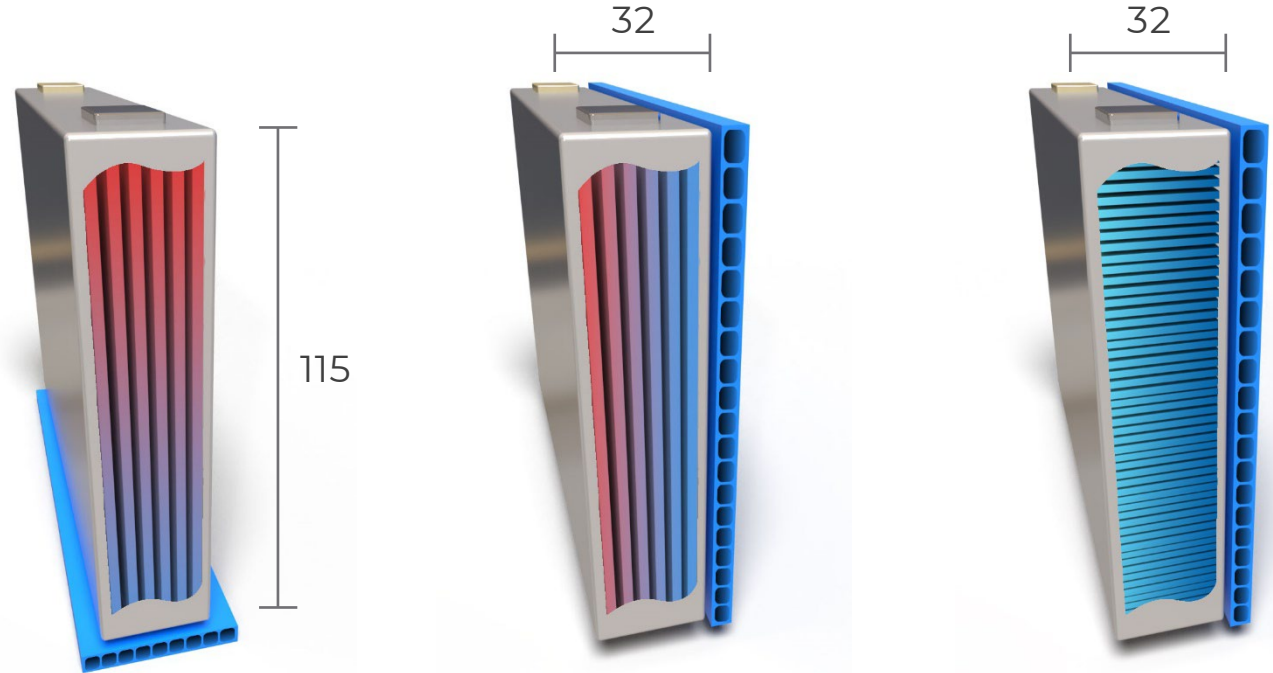
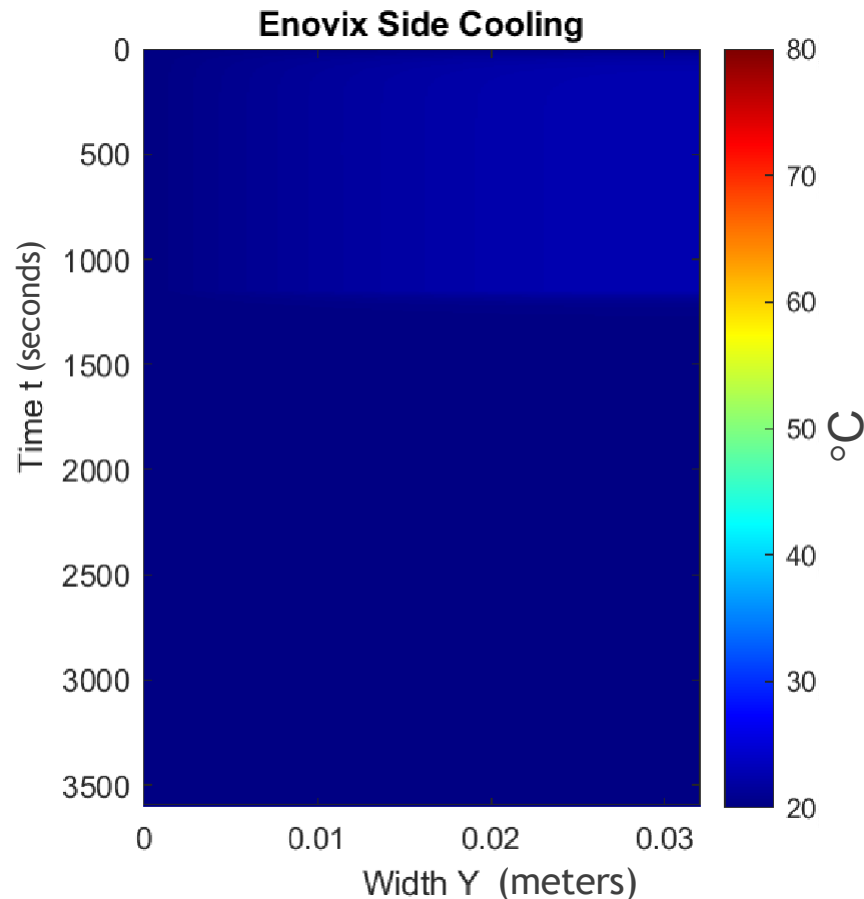
$$\Delta T_{\max} = 53.8^{\circ}\text{C}$$

Reoriented Electrodes Designed to Deliver Excellent Thermal Performance

33X Higher* thermal conductivity to large face of prismatic cell

2.5C Fast Charging Temperature Profile

Cell Dimensions: 173 x 115 x 32 mm



Conventional Stack Cell Bottom-Cooled

$$\Delta T_{\max} = 31.9^{\circ}\text{C}$$

Conventional Stack Cell Side Cooled

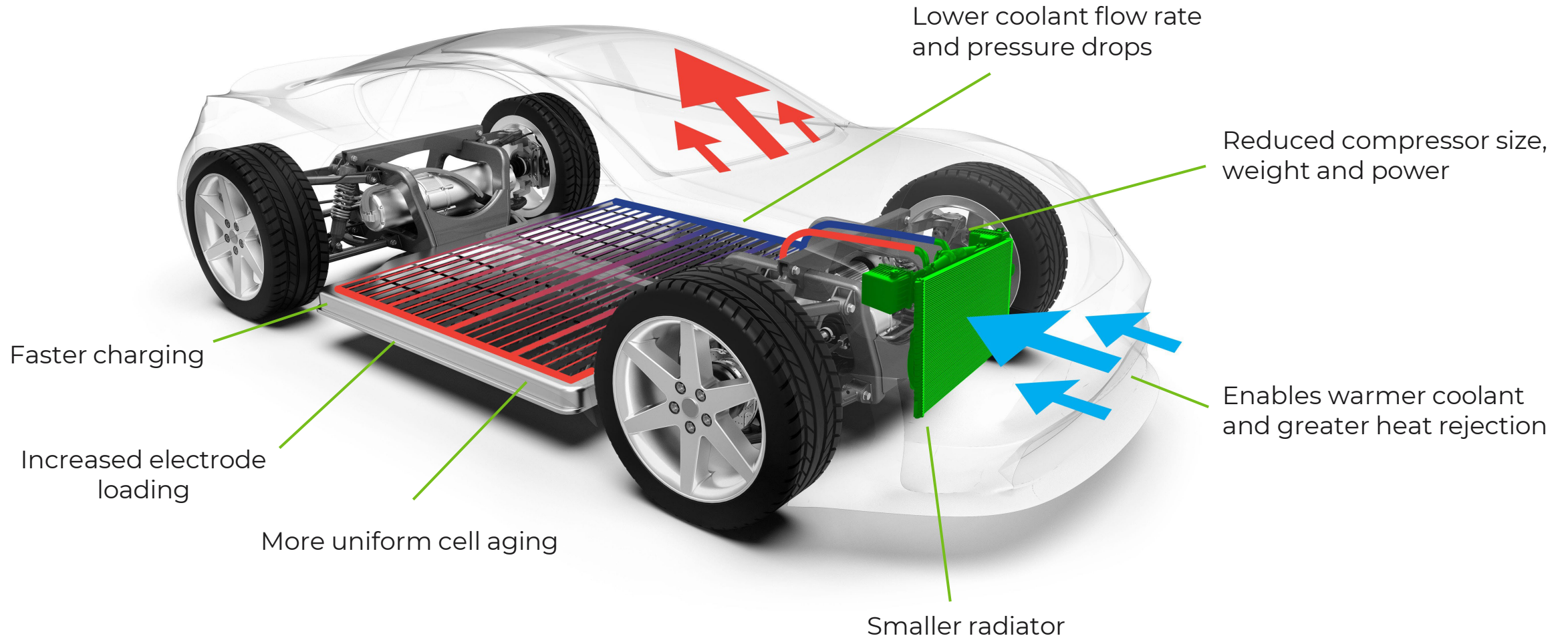
$$\Delta T_{\max} = 53.8^{\circ}\text{C}$$

Enovix Stack Side Cooled

$$\Delta T_{\max} = 2.8^{\circ}\text{C}$$

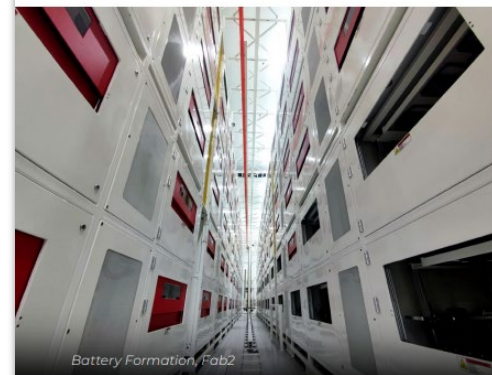
Cell Thermal Design Key to System Performance

Significant opportunities to reduce system cost, improve performance



Powering the Technologies of the Future

- Global battery manufacturer with large, diverse product portfolio
- Customized and flexible designs to address broad market demands
- Made in Korea and Malaysia with R&D in India and Silicon Valley
- >400 patent and patent applications
- One-stop solution with in-house pack line
- Contact sales@enovix.com
- Visit us at Booth #202!



Thank you!

