

The QuantumScape logo features the brand name in a white, sans-serif font. A white, curved line arches over the letters 'Q' and 'S', framing the text. The registered trademark symbol (®) is positioned to the upper right of the 'e'.

QuantumScape®

The text 'Investor Presentation' and 'July 2024' is centered at the bottom of the image in a white, sans-serif font. The background of the entire slide is a composite image showing a road leading from a green, hilly landscape with wind turbines and a drone to a futuristic city skyline.

Investor Presentation
July 2024

Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of the federal securities laws and information based on management's current expectations as of the date of this letter. All statements other than statements of historical fact contained in this letter, including statements regarding the future development of the Company's battery technology, the anticipated benefits of the Company's technologies and the performance of its batteries, plans and objectives for future operations, forecasted cash usage, including spending and investment, are forward-looking statements. When used in this letter, the words "may," "will," "can," "estimate," "aim," "pro forma," "expect," "plan," "believe," "focus," "potential," "predict," "target," "forecast," "enable," "should," "would," "could," "continue," "ongoing," "project," "intend," "anticipates," "reiterate," "seek," "working toward," "progress toward," "prospective" the negative of such terms and other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such identifying words. These forward-looking statements are based on management's current expectations, assumptions, hopes, beliefs, intentions, and strategies regarding future events and are based on currently available information as to the outcome and timing of future events.

These forward-looking statements involve significant risks and uncertainties that could cause the actual results to differ materially from the expected results. Many of these factors are outside the Company's control and are difficult to predict. Factors that may cause such differences include but are not limited to ones listed here. The Company faces significant challenges in its attempts to develop a solid-state battery cell and produce it at high volumes and may not be able to successfully develop its solid-state battery cell or build high volumes of multilayer cells for commercialization, including under its Collaboration Agreement. The Company could encounter significant delays and/or technical challenges in replicating and scaling up the performance seen in its single-layer and early multilayer cells, in achieving the high quality, consistency, reliability, safety, cost, and throughput required for commercial production and sale, and in developing a cell architecture that meets all the technical requirements. The Company has encountered and may encounter delays and other obstacles in acquiring, installing and operating new manufacturing equipment for automated and/or continuous-flow processes such as Raptor and Cobra, including vendor delays and other supply chain disruptions and challenges in optimizing its complex manufacturing processes. The Company may encounter delays and cost overruns in hiring and retaining the engineers it needs to expand its development and production efforts, including as a result of management changes or as part of the Collaboration Agreement, delays in building out or scaling up QS-0, and delays in establishing supply relationships for necessary materials, components or equipment. Delays in increasing production of engineering samples have slowed the Company's development efforts in the past. These or other sources of delay could impact our delivery of B-samples and delay or prevent successful commercialization of our products or the entry into the IP License Agreement. The Company may encounter delays, difficulties and technical challenges in its collaboration with PowerCo to industrialize its solid-state lithium-metal battery technology. Delays or difficulties in meeting technical milestones, including under the Collaboration Agreement required to trigger the IP License Agreement and related royalty prepayment, or scaling up QS-0 could cause prospective customers and collaboration partners not to purchase cells from us or not to proceed with the intellectual property license agreement. If the Company does not enter into the IP License Agreement, it will not receive the royalty prepayment and realize any of the other benefits expected from such agreement. The Company may be unable to adequately control the costs associated with its operations and the components necessary to build its solid-state battery cells at competitive prices. The Company's spending may be higher than currently anticipated and the Company may need to raise additional funds, including in the public markets, and this may cause dilution in the stock ownership of our investors. The Company may encounter difficulties, including due to challenges related to the management transition, the building out of high-volume processes, the achievement of the quality, consistency, reliability, safety, cost and throughput required for commercial production and sale, changes in economic and financial conditions, and not be successful in competing in the battery market industry or establishing and maintaining confidence in its long-term business prospects among current and future partners and customers. The Company is at an early stage of testing its battery technology for use in consumer electronics applications, and we may discover technical or other hurdles that impede our ability to serve that market. If the Company is unable to protect or assert its intellectual property, its business and competitive position would be harmed. The Company cautions that the foregoing list of factors is not exclusive. The Company cautions readers not to place undue reliance upon any forward-looking statements, which speak only as of the date made.

This presentation also contains forward-looking statements with respect to forecasted estimates of cell-level energy and power density, active materials cost, and cost implications of inactive materials. Such forward-looking statements are for illustrative purposes only and should not be relied upon as necessarily being indicative of or predictive of actual future results. The assumptions and estimates underlying such statements are inherently uncertain and are subject to a wide variety of significant business, economic, competitive and other risks and uncertainties that could cause actual results to differ materially from those contained in such statements. Actual results may differ materially from the results contemplated by the forward-looking statements contained in this presentation, and the inclusion of such information in this presentation should not be regarded as a representation by any person that the results reflected in such forward-looking statements will be achieved.

Except as otherwise required by applicable law, the Company disclaims any duty to update any forward-looking statements. Should underlying assumptions prove incorrect, actual results and projections could differ materially from those expressed in any forward-looking statements. Additional information concerning these and other factors that could materially affect the Company's actual results can be found in the Company's periodic filings with the SEC. The Company's SEC filings are available publicly on the SEC's website at www.sec.gov.

Key Premises Behind the QuantumScape Opportunity

1

Achieving Battery Electric Vehicle (BEV) market dominance will require a next generation battery

2

Anode-free lithium-metal technology offers compelling benefits over conventional lithium-ion batteries

3

QuantumScape is positioned to transition from prototype to product

4

QuantumScape technology is on the fastest path to GWh scale

QuantumScape by the Numbers

13 Years of R&D Investment

800+ Employees

World-class next-gen battery development team

300+ Patents and Patent Applications

Materials, use and process

**6 Commercial Agreements with
Automotive OEMs**

Volkswagen Group & PowerCo Partnership

Strategic investor, collaboration & licensing arrangement, and board representation

Setting Ambitious Goals & Achieving Milestones

2023 Milestones Achieved

Product Development

Shipped Unit Cells With Higher-Loading Cathodes

Shipped high cathode-loading unit cells to automotive OEM partners

Improved cell packaging efficiency

Finished integrating several packaging improvements, including tighter internal margins, thinner current collectors, and a slimmer frame.

Introduced QSE-5, our planned first commercial product

Working closely with a prospective launch customer in the automotive sector for the QSE-5

Manufacturing Scale Up

Deployed fast separator production: Raptor

Deployed higher throughput separator process required for low-volume QSE-5 prototype samples

Improved production quality and consistency

Increased cell reliability by improving the cathode-separator interface, reducing particle contamination, improving the components and processes that go into cell assembly, and made advances across our entire production flow

2024 Goals

Product Development

- ◆ Ship Alpha-2 sample
- ◆ Begin low-volume QSE-5 prototype production

Manufacturing Scale Up

- ◆ Ramp Raptor process
- ◆ Prepare for Cobra production in 2025

Future Goals

Product Development

Produce Higher-Volume QSE-5 prototype samples

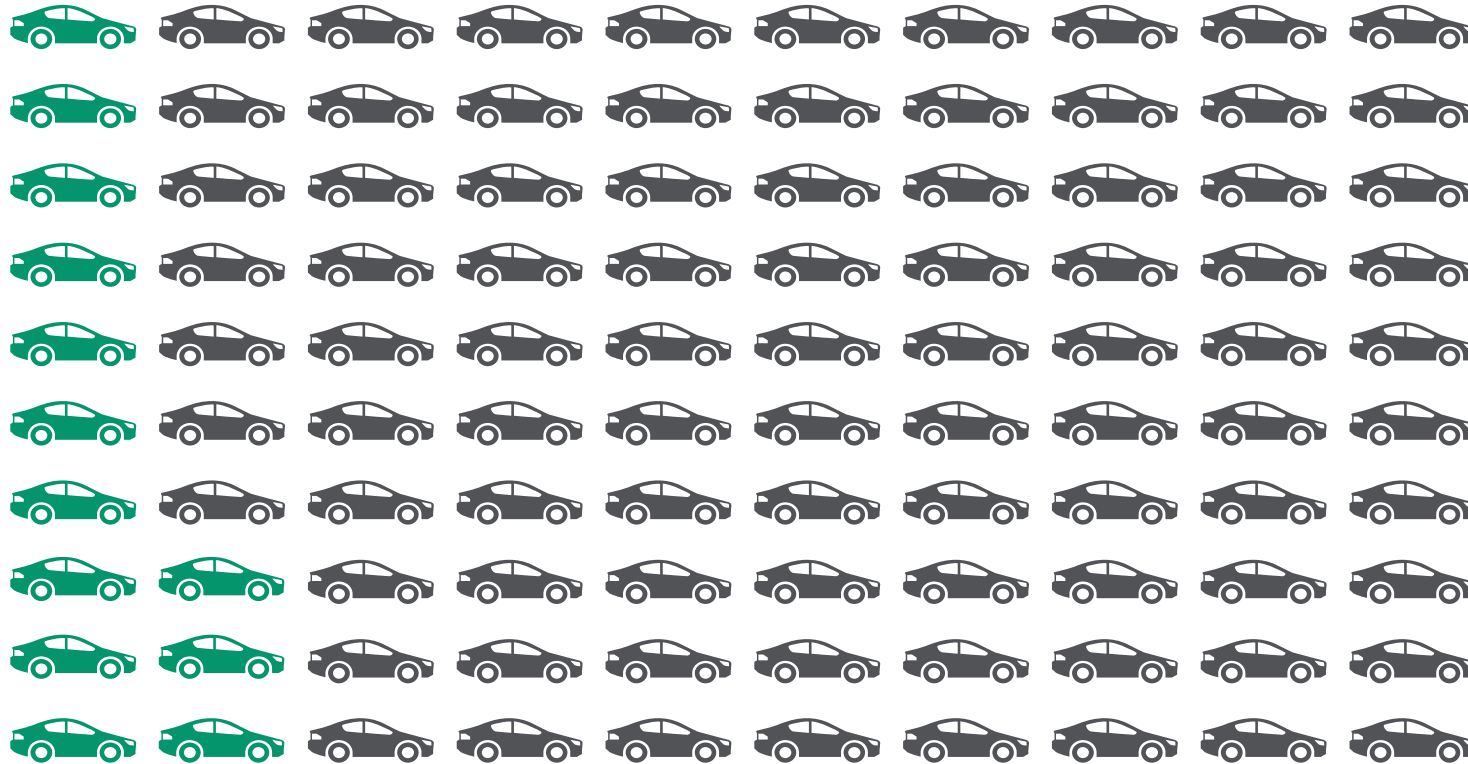
Higher-volume QSE-5 prototype samples in 2025

Manufacturing Scale Up

QS-0 Fast Separator Production: Cobra

Develop manufacturing tools, equipment and processes to scale production and produce higher-volume QSE-5 prototype samples

EVs Currently ~13% of Global Light Vehicle Market*



*Source: Morgan Stanley, 2024

Customer Requirements for Mass-Market Adoption



Energy / Capacity

> ~300-mile range



Fast Charging

10-80% charge @ 45 °C in ~15 min



Safety

Solid, non-oxidizable separator



Battery Cycle Life

> ~12 years, > ~150,000 miles

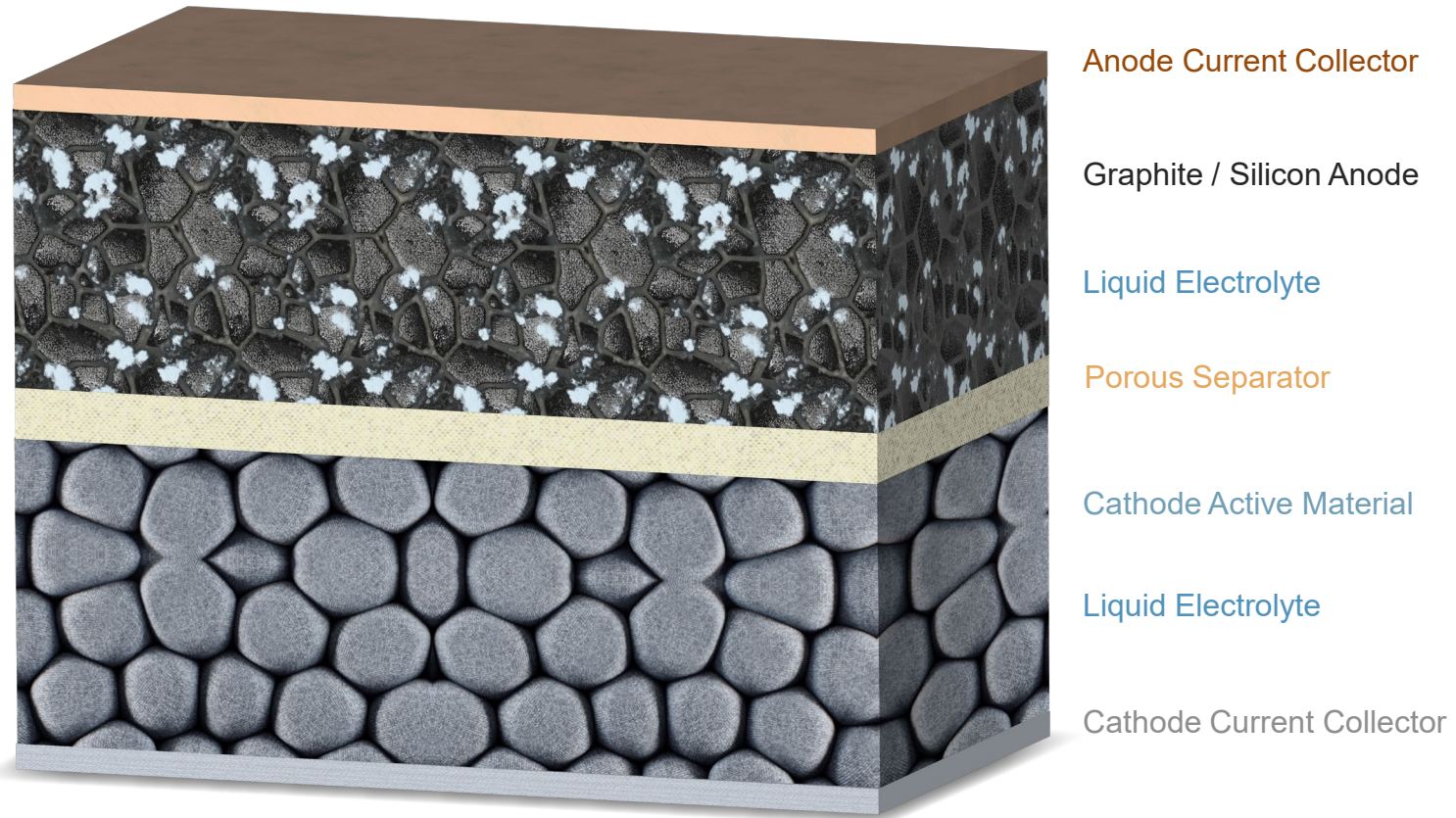


Cost

< ~\$30,000, ~300-mile EVs

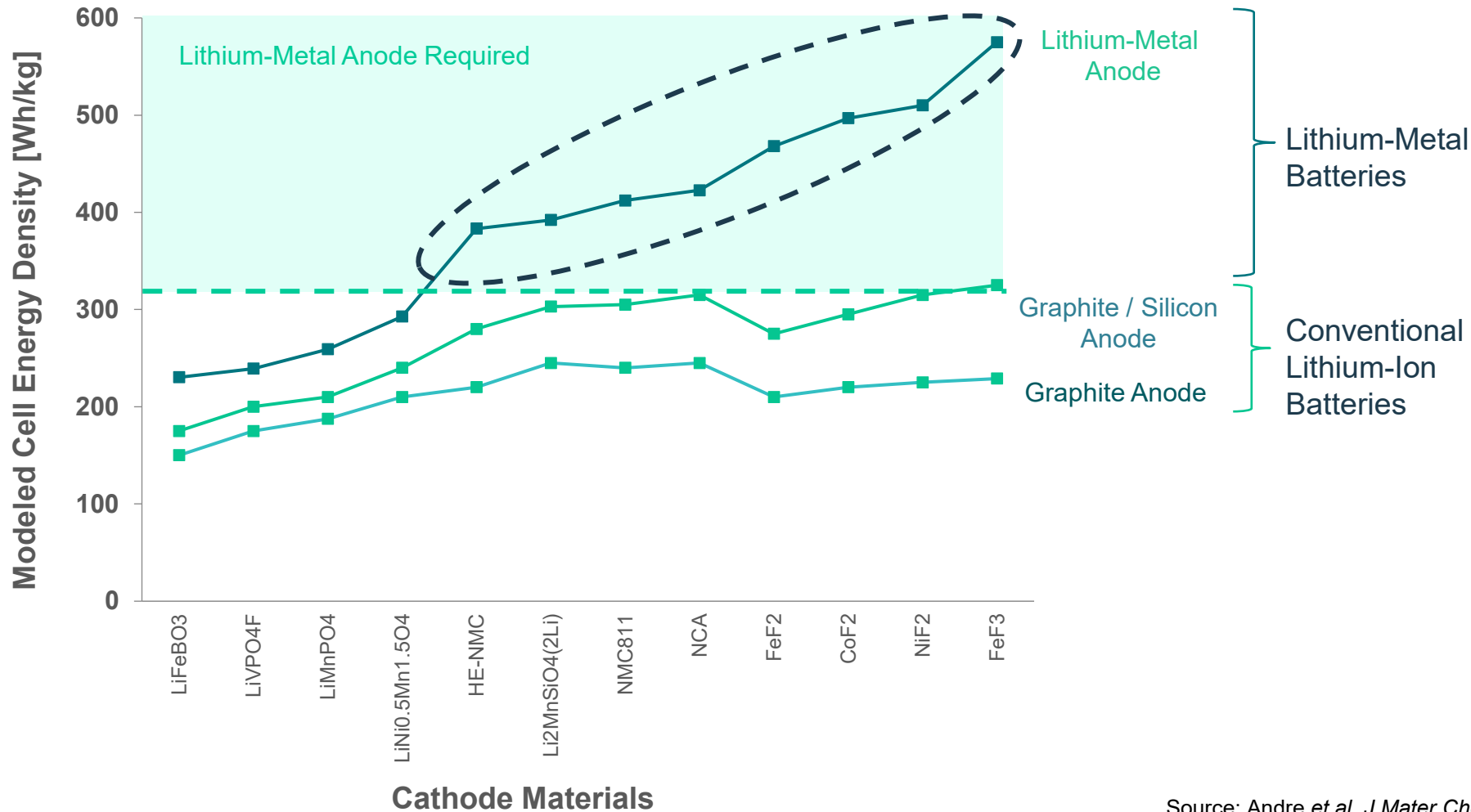
Conventional Lithium-Ion Battery Architecture

Hosted anode: graphite / silicon



Lithium-Metal Anode Enables High Energy Density

And we believe lithium-metal anode requires a solid-state electrolyte-separator



Key Takeaways

Lithium-metal anode enables high energy density

We believe lithium metal can't be used without a solid-state electrolyte-separator

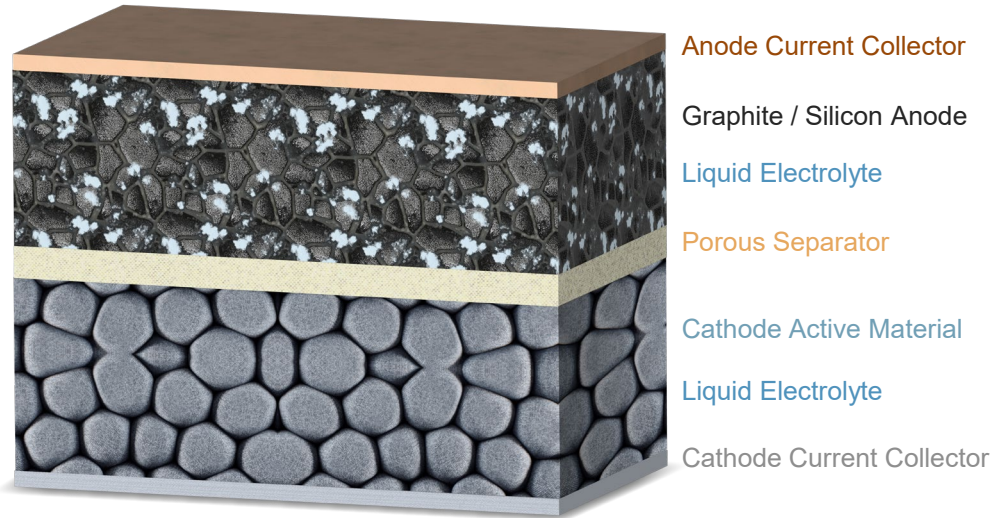
Source: Andre et al, *J Mater Chem A*. (2015) 6709

Note: Modeled cell specific energy is based on traditional cell designs and architectures

QuantumScape Anode-free Architecture

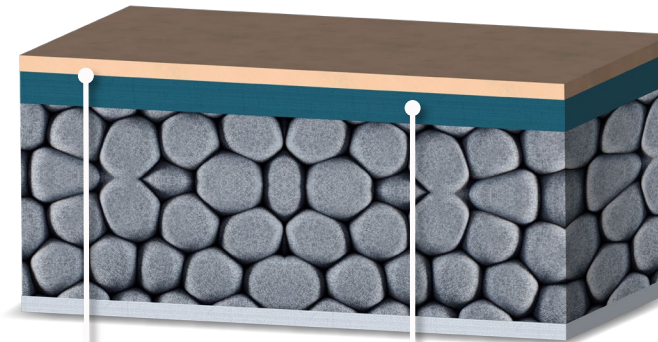
Improved energy density, fast charging and safety

Conventional Li-ion Battery



QuantumScape Solid-State Battery

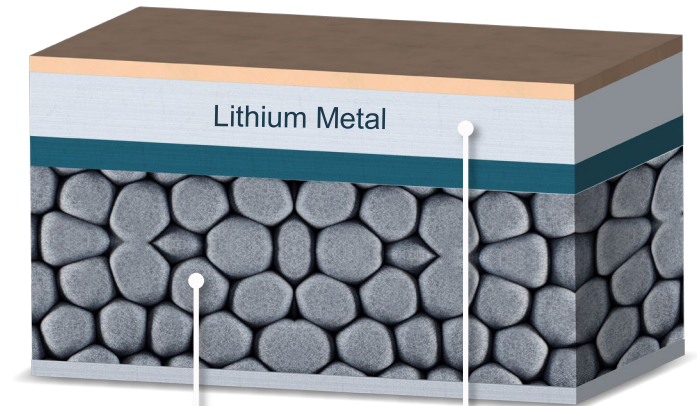
Discharged
(as manufactured)



Manufactured Anode-free
Anode-free cell design with lithium plated during charge cycles – no host material (graphite/silicon)

QS Solid-State Electrolyte-Separator
Ceramic solid-state electrolyte-separator with high dendrite resistance

Charged



Cathode Active Material
Compatible with multiple cathode materials
Catholyte

Lithium-Metal Anode
High-rate cycling of a lithium-metal anode

5 Advantages to QuantumScape's Anode-Free Approach



Energy

Significantly increases volumetric and gravimetric energy density



Fast Charge

Enables ~15-minute fast charge (10-80% at 45 °C)



Cost

Eliminates anode host material and related manufacturing costs



Cycle Life

Can improve cycle life by reducing capacity loss at anode interface



Safety






Solid-state electrolyte-separator is nonflammable and noncombustible

Previous Attempts Have Been Unsuccessful

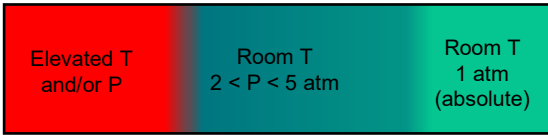
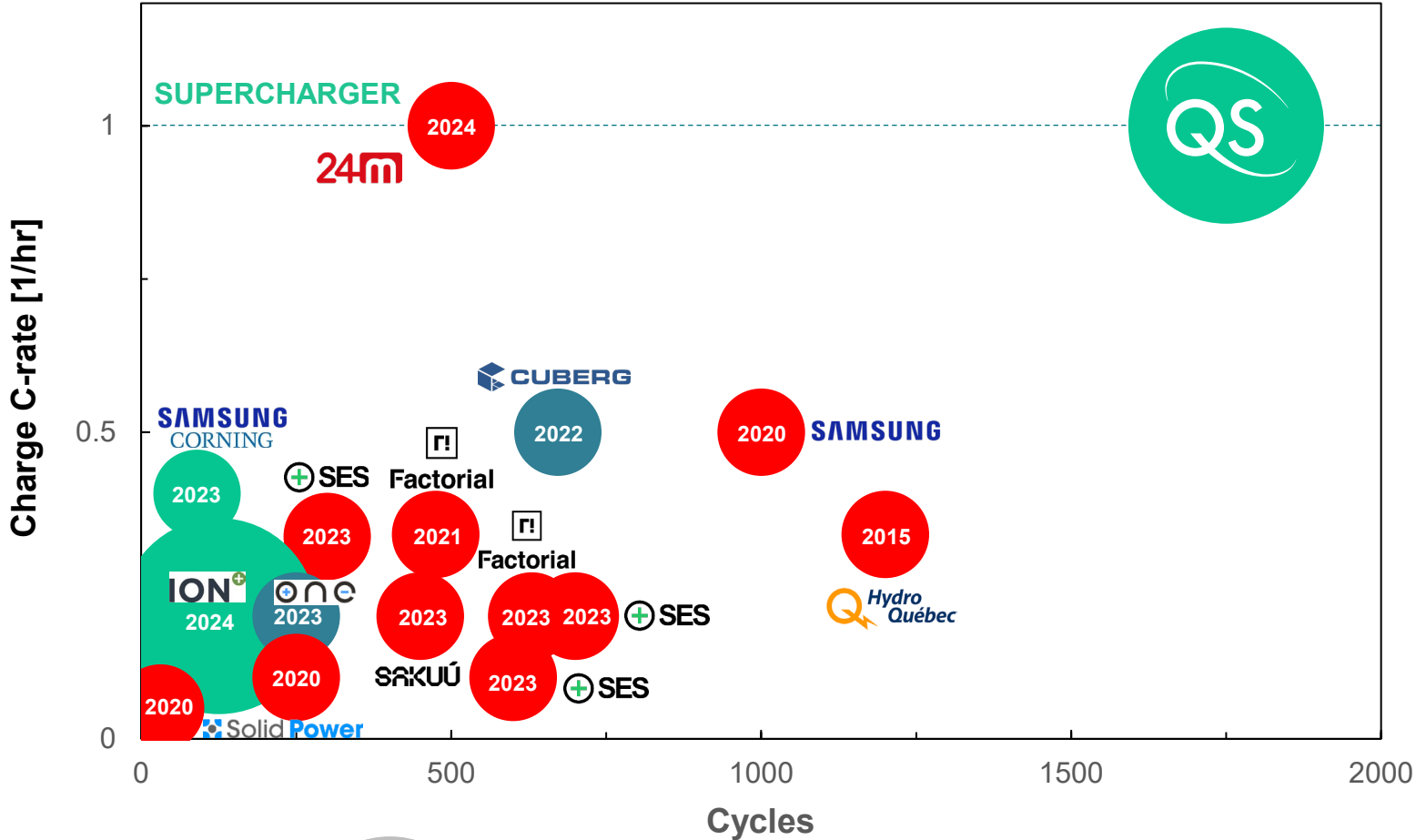
Lithium-Metal Anode					
Organics			Inorganics		
Separator / Electrolyte Requirements	Liquids	Gels	Polymers	Sulfides	Oxides
1 Conductivity <i>Fast charge</i>	✓	✓	X	✓	✓
2 Separator-Anode ASR <i>Power, temperature</i>	X	X	X	✓	X
3 Low and high-voltage stability <i>Power, temperature, cycle life</i>	X	X	X	X	✓
4 Dendrite resistance <i>Power, temperature, cycle life</i>	X	X	X	X	X

Separator also must be thin and continuously processed at low cost over large areas

Other Separators May Compromise Test Conditions to Perform

	Compromise	Impact
Revert to Hosted Anode	 Reversion to Graphite / Silicon Anode or Excess Lithium	Low Energy
Compromised Test Conditions or Performance	 Low Current Density while Charging <ul style="list-style-type: none">• <math><3 \text{ mA/cm}^2</math> or <math><1\text{C}</math>-rate	Slow Charge
	 Low Cycle Life <ul style="list-style-type: none">• <math><800</math> cycles	Shorter Battery Life
	 Limited Temperature Range <ul style="list-style-type: none">• >30 °C	Cost Complexity
	 High Pressure <ul style="list-style-type: none">• >5 atm	Energy Density Cost

Competitive Landscape: Lithium-Metal Anodes



Temperature & pressure conditions during cycling

Compromised Test Conditions

One or more of:

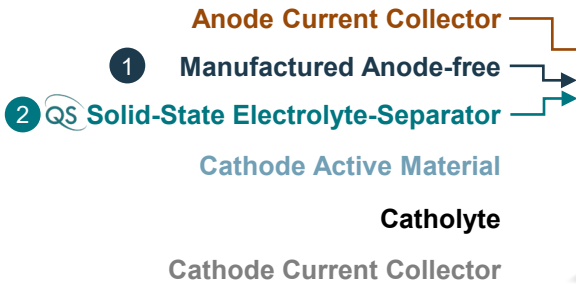
- Low Charging Current Density**
Slower than supercharger
- Excess Lithium**
Low energy density
- Low Cycle Life**
<800 cycles
- Limited Temperature Range**
Elevated only
- High Pressure**
>5 atm

QS cell data based on slide 20. Other cell data aggregated by QS based on information obtained and derived from public sources as of Mar. 5, 2024, and is subject to change. We cannot confirm the accuracy or completeness of competitors' data or performance claims.

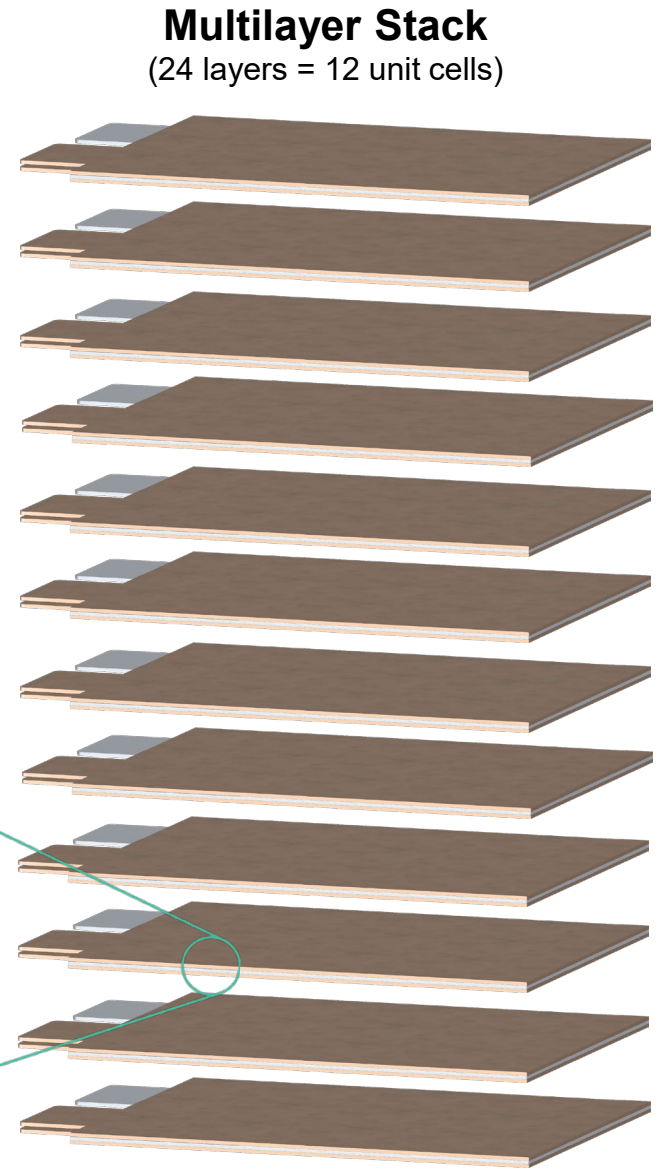
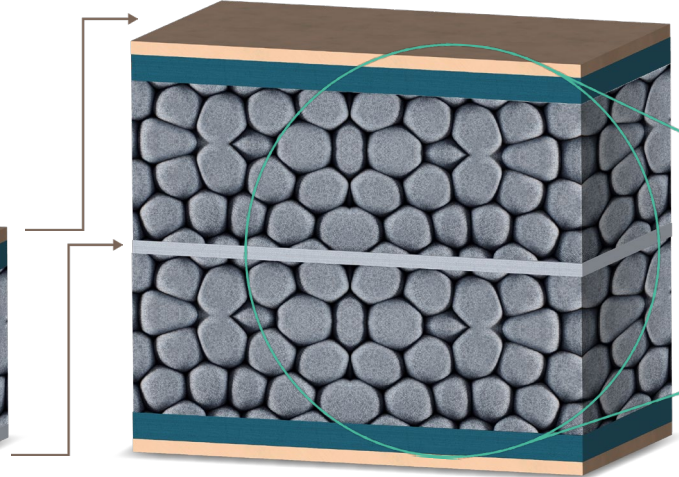
Multilayer Progress

Major Architectural Components

- 1 **Manufactured Anode-free**
Anode-free cell design with lithium plated during charge cycles
- 2 **QS Solid-State Electrolyte-Separator**
Ceramic electrolyte with high dendritic resistance



Unit Stack
(single-layer cell)

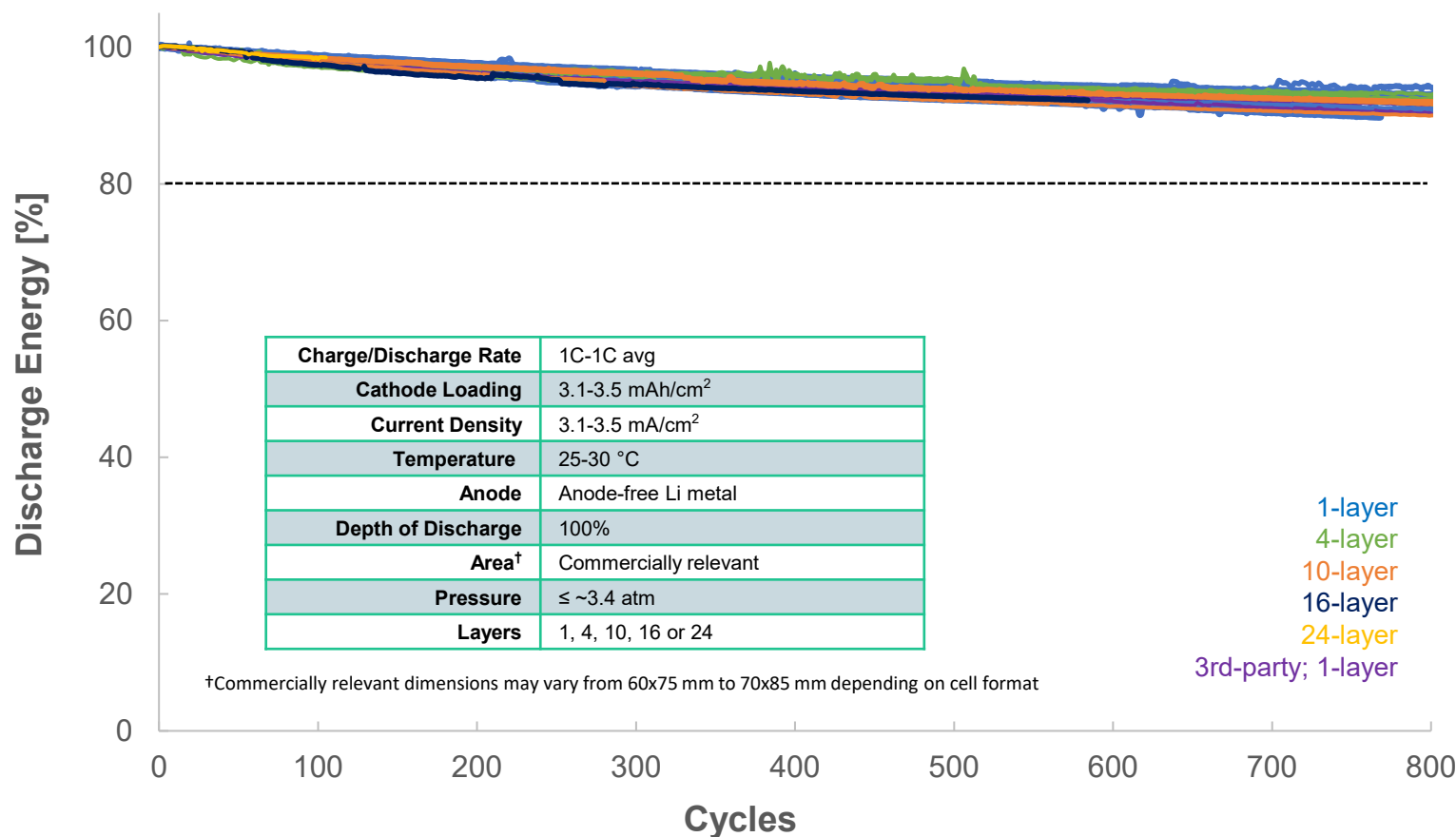


The Gold Standard Test*

Captures key requirements simultaneously under what we believe are uncompromised test conditions

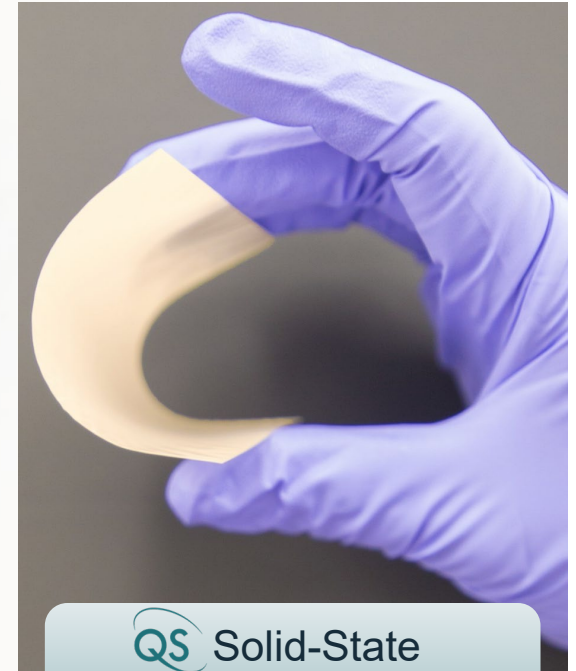
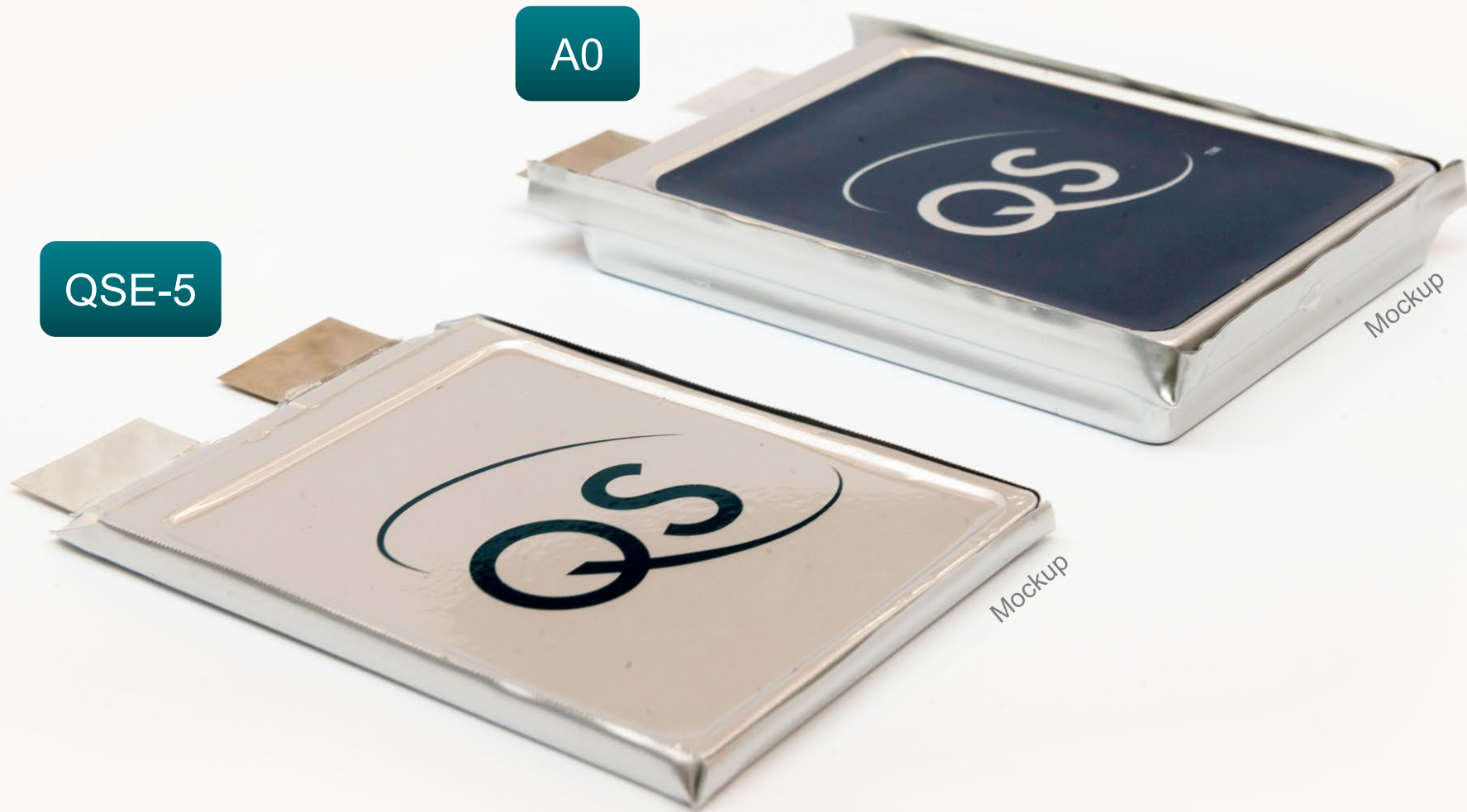
4-,10-,16-, 24-Layer Capacity Retention Mirrors Single-Layer Cycling Performance

Cycle Energy Retention vs Cycle Count



*Our *gold-standard* test conditions include average charge/discharge rates of 1C or faster, temperatures of 25 °C, 100% depth of discharge, and externally applied pressure of no more than ~3.4 atmospheres, all simultaneously.

QuantumScape Cells & Electrolyte-Separator



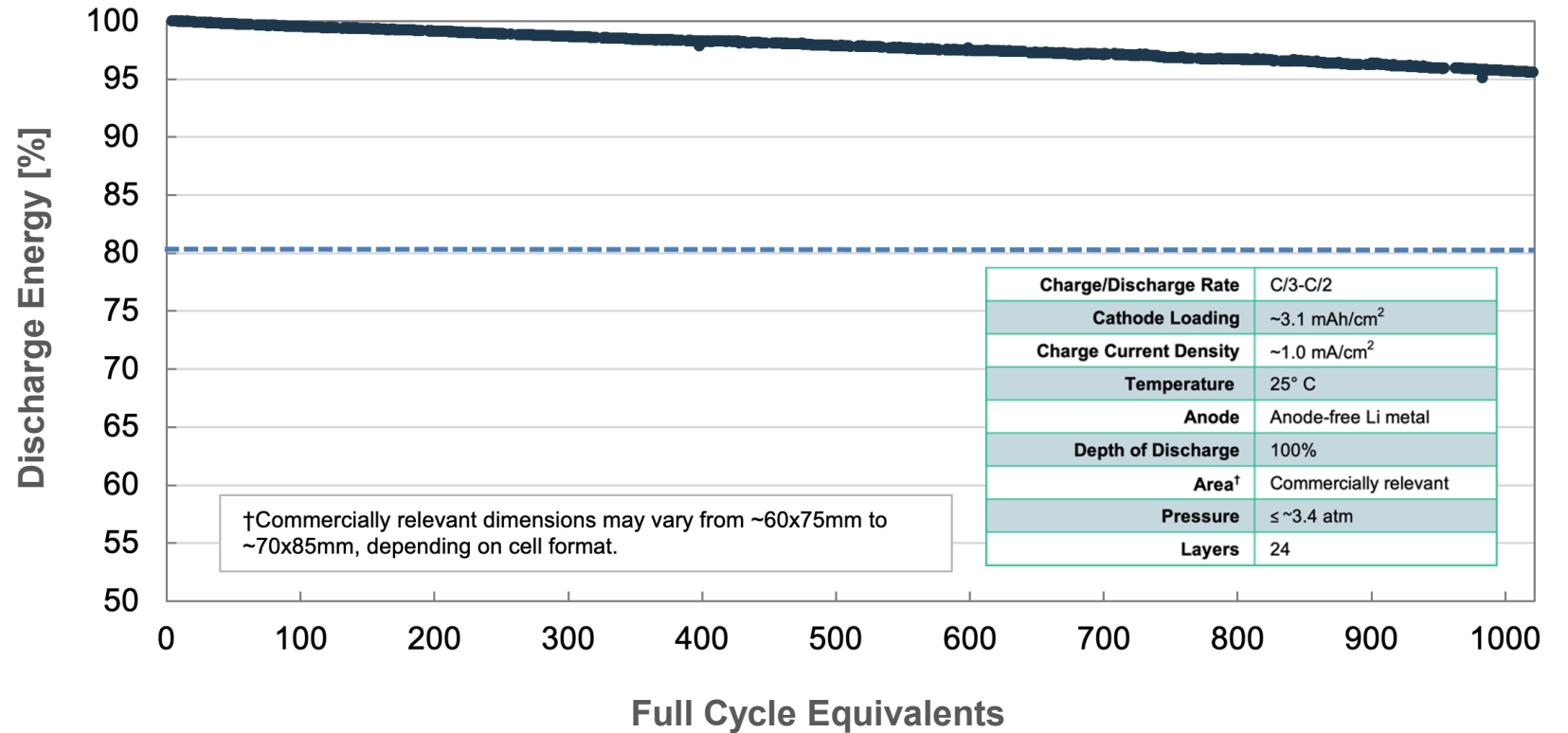
QS Solid-State Electrolyte-Separator

The area of cells shown range from ~65x85 mm to ~70x90 mm.

QuantumScape 24-Layer A0 Prototype Cycle Life

Tested by Volkswagen Group's PowerCo

- 24-layer cell
- >1,000 full cycle equivalents
- >95% energy retained

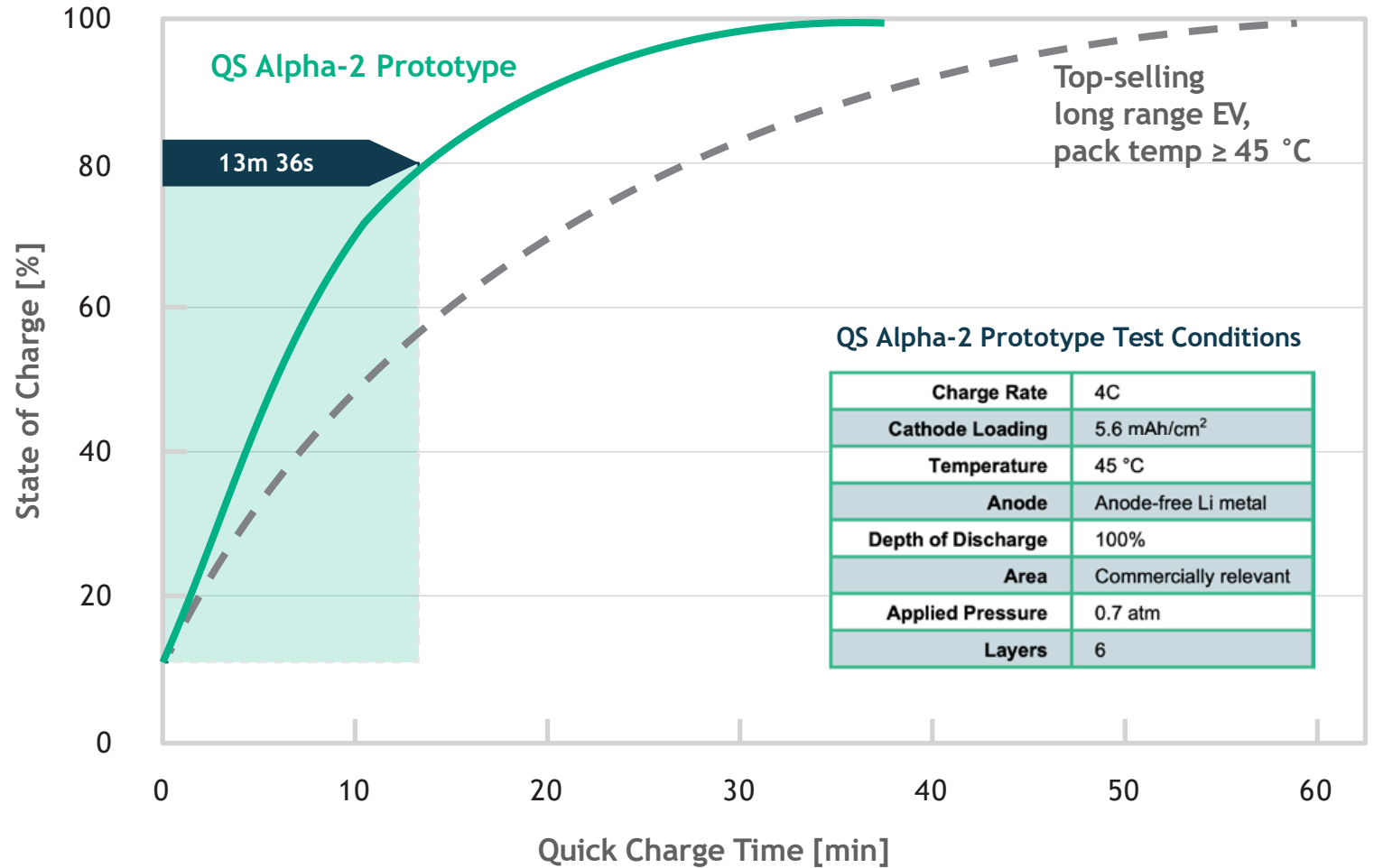


Test data sourced from the Volkswagen Group's PowerCo testing lab in Germany from the top-performing A0 prototype cell.
Full cycle equivalent is defined by PowerCo as the overall discharge capacity throughput divided by the nominal discharge capacity.

Fast Charge Capability

Fast Charging

10-80% charge at 45 °C
in <15 minutes

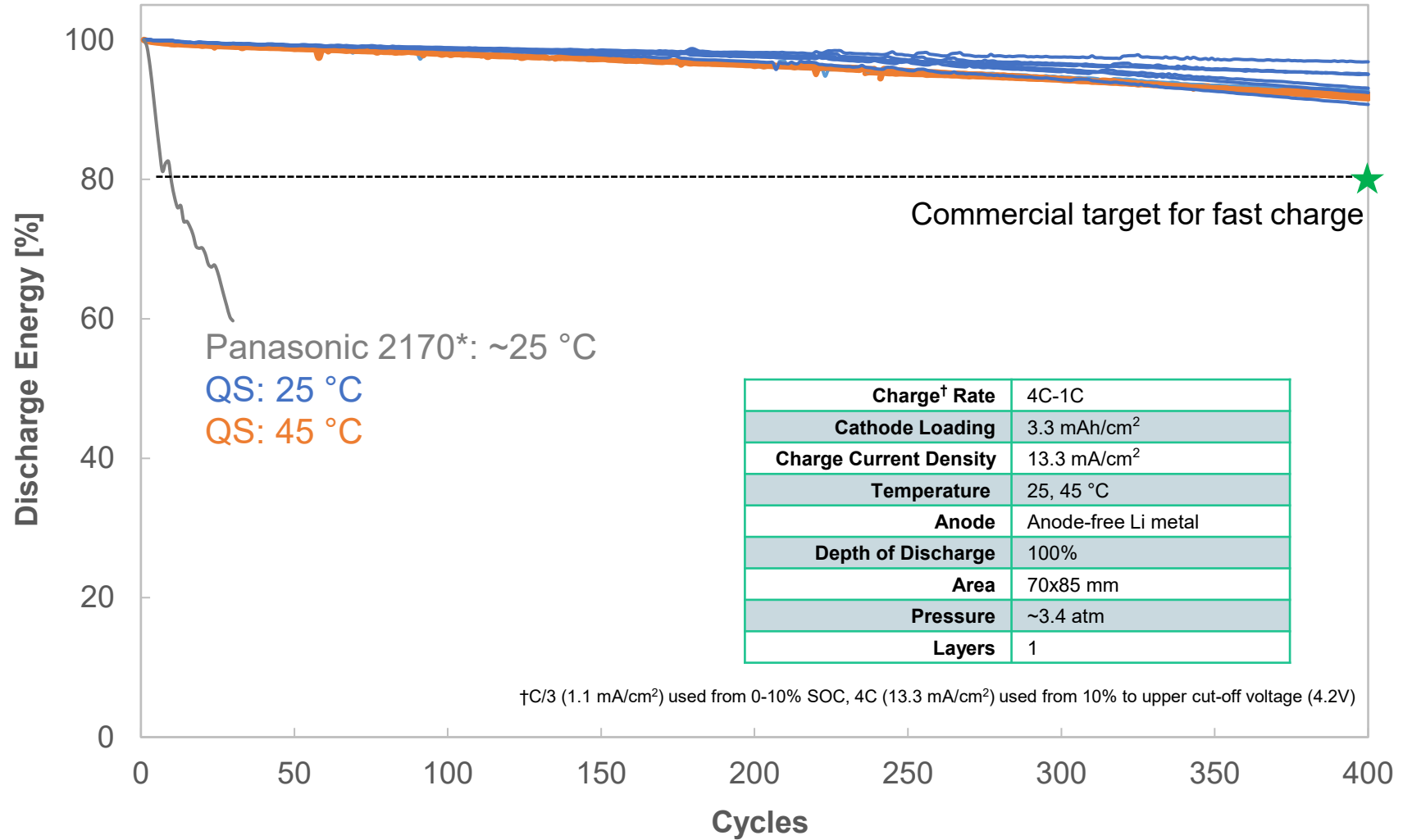


C/3 (1.87 mA/cm²) charge rate from 0-10% SOC, 4C (22.4 mA/cm²) charge rate from 10% to upper cut-off voltage (4.25V). Commercially relevant dimensions may vary from 60x75 mm to 70x85 mm, depending on cell format.

>80% energy retained after
>400 consecutive fast
charging cycles



Repeated Fast Charging



*QS-tested Panasonic 2170 cylindrical cell; provided for illustrative purposes only and should not be relied upon as necessarily being indicative or representative of actual performance of all lithium-ion energy cells from such third-party's product line or of automotive lithium-ion energy cells in general.

Cycling With Zero Externally Applied Pressure

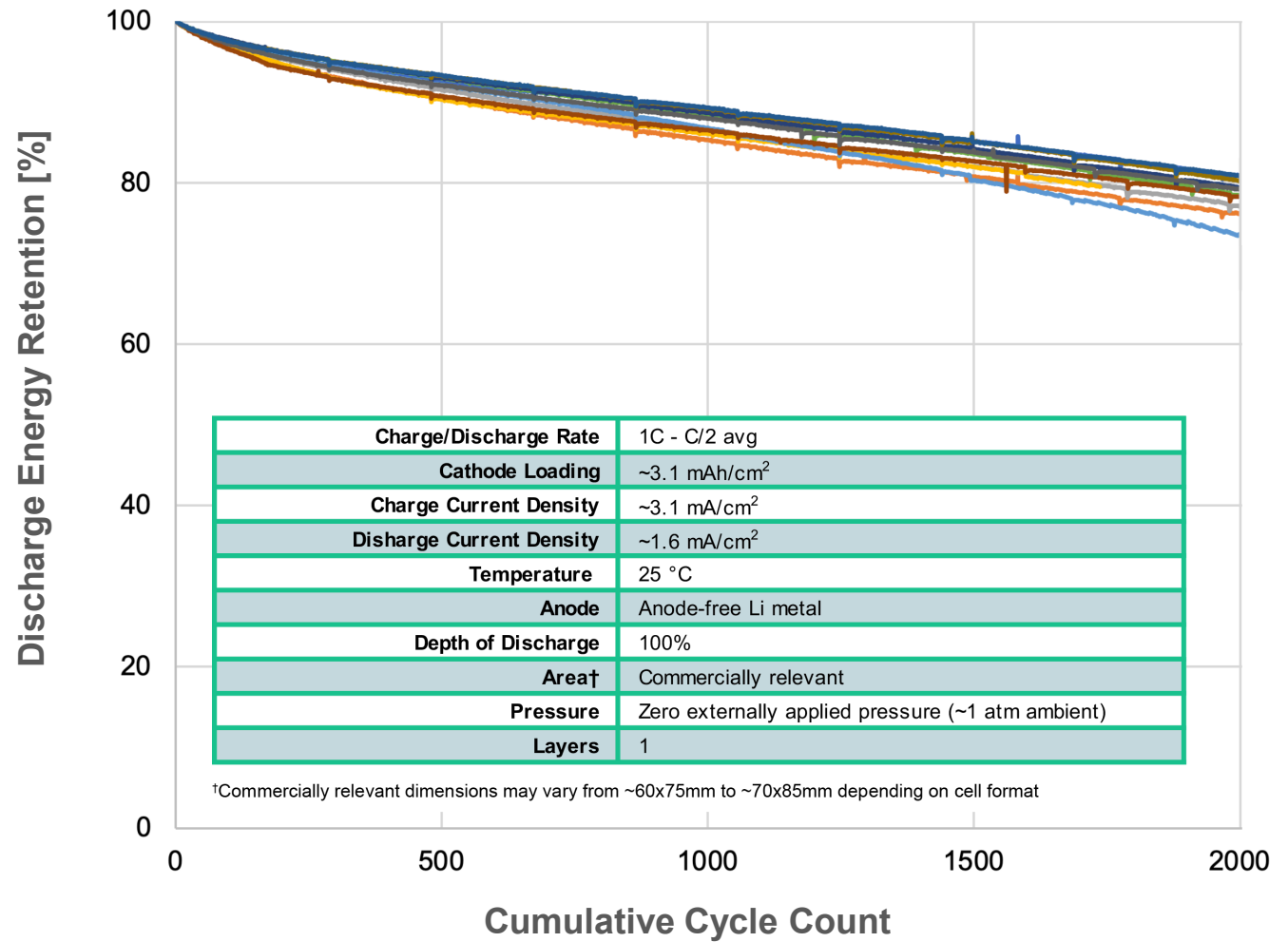
- 1,500–2,000 cycles
- ~80% energy retained
- 1 atm ambient pressure



Consumer Electronics

Batteries with low to zero externally applied pressure can operate without bulky or heavy pressure-applying components – an advantage for consumer electronics applications that typically prioritize compact and lightweight battery systems for portable devices.

500 to 1,000 charge-discharge cycles represents a key life cycle threshold for many consumer electronics applications

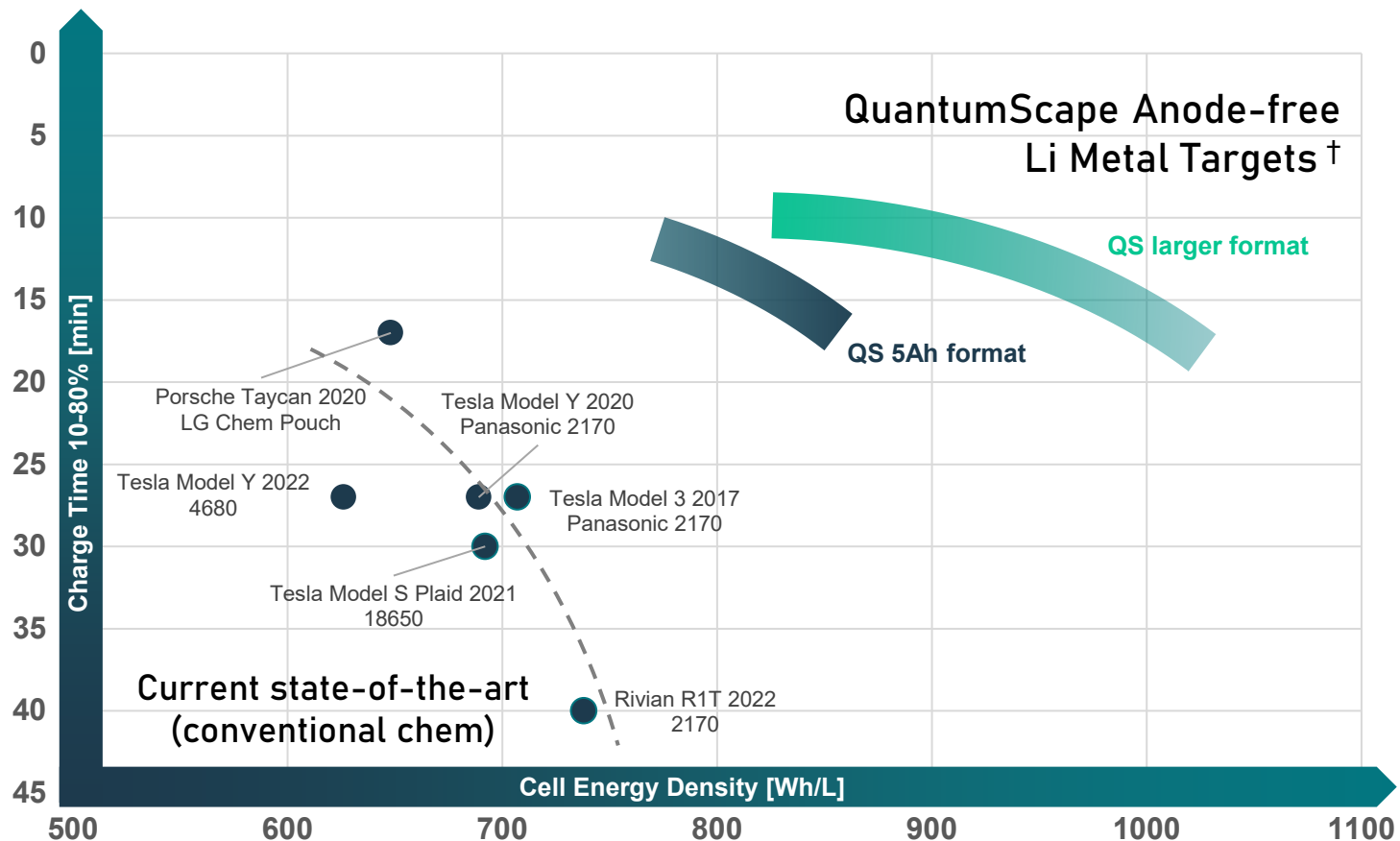


Discharge energy retention vs cycle count for QuantumScape single-layer pouch cells with zero externally applied pressure

Shifting the Energy-Power Performance Frontier

We believe we can achieve 10-80% charge at 45 °C in ~15 minutes with a cell that exceeds the energy density benchmarks of those in today's leading EVs

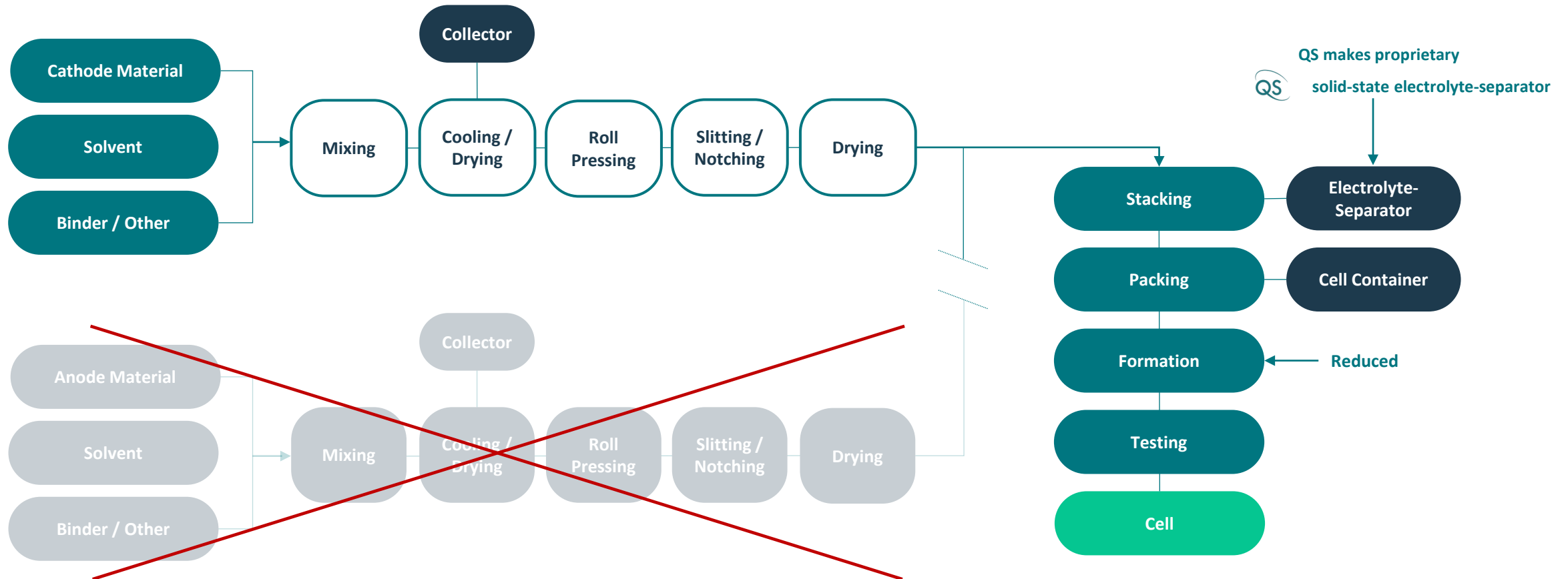
Even faster charge times may be possible in cells with slightly lower energy densities.



† QS projections and targets based on existing estimates and model assumptions

Sources: Li-ion cell energy density from batemo.com database, charge times from ev-database.org and insideevs.com (for Rivian R1T)

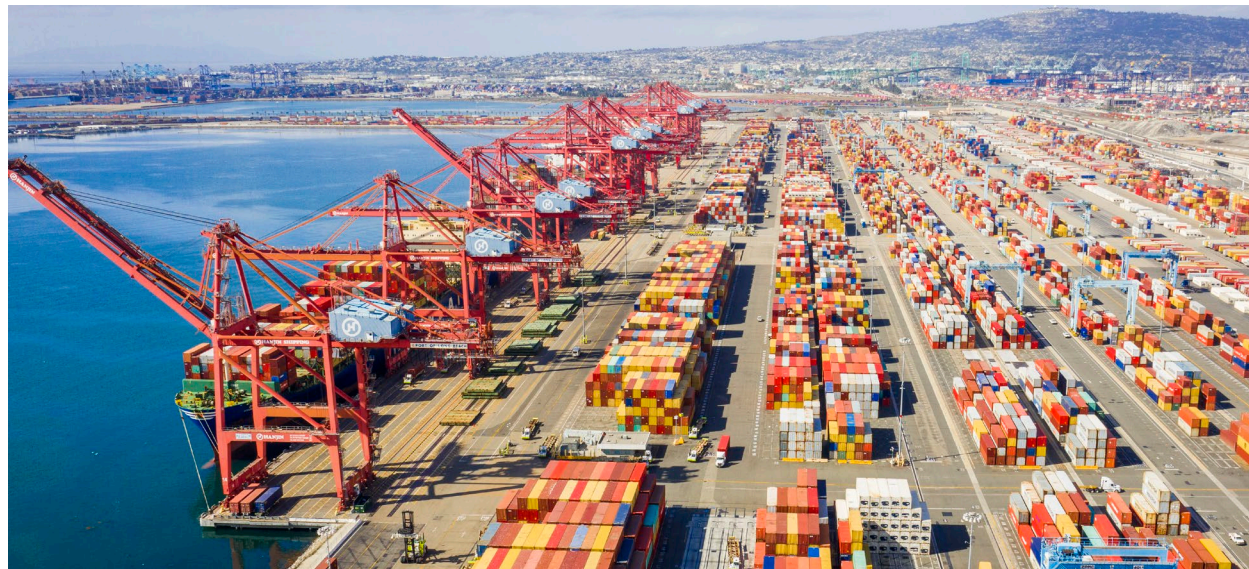
Our Tech Eliminates Anode Materials & Manufacturing Costs



Abundant Materials and Established Supply Chains



Separator precursor materials are abundant and widely used in other industries



Supply chains served by well-established and diverse materials and chemicals firms

Customer Relationships

Volkswagen Group (VW) & PowerCo

VW is the largest automaker by global revenue

Brand representation across all market segments with extensive portfolio of world-class EV models

Close collaboration since 2012

VW invested >\$300 million in QS and is represented on QS board

Publicly validated performance of QS cells at automotive power levels

QS's best performing A0 prototype achieved >1,000 cycles with >95% capacity retention tested in labs at PowerCo, VW's battery arm

Collaboration with PowerCo for licensing of QS solid-state battery platform

Non-exclusive license, covering an initial production volume of 40 GWh per year with an option to expand to 80 GWh

Other Commercial Agreements

Agreements with other automotive OEMs:

- Leading OEMs by global revenue
- Established global luxury OEM
- Premium performance OEM
- Pure-play EV OEM

Agreements in other sectors:

- Consumer electronics
- Stationary storage

VW Group boasts broad portfolio of iconic brands, including:



“We are convinced of the solid-state cell and are continuing to work at full speed with our partner QuantumScape towards series production.”

– Frank Blome, CEO of VW's PowerCo (January 2024)

QSE-5: Planned First Commercial Product

- ~5 amp-hours of capacity
- FlexFrame format

QSE-5 (vs A0 Prototype Cell)

- Higher-loading cathodes
- More efficient packaging
- Sustain higher current densities



Current QSE-5 packaging prototype in the FlexFrame format

Separator Production Roadmap

Targeting faster, more energy-efficient production with a smaller footprint

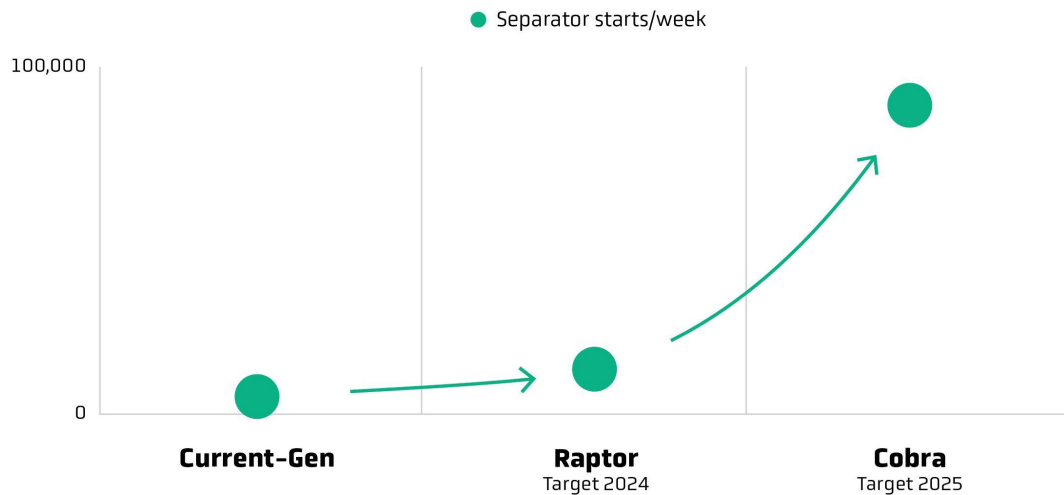
Raptor: Target 2024

- Raptor represents the first deployment of a disruptively faster separator heat treatment process.
- Raptor is capable of providing enough separator films to enable low-volume QSE-5 production in 2024.

Cobra: Target 2025

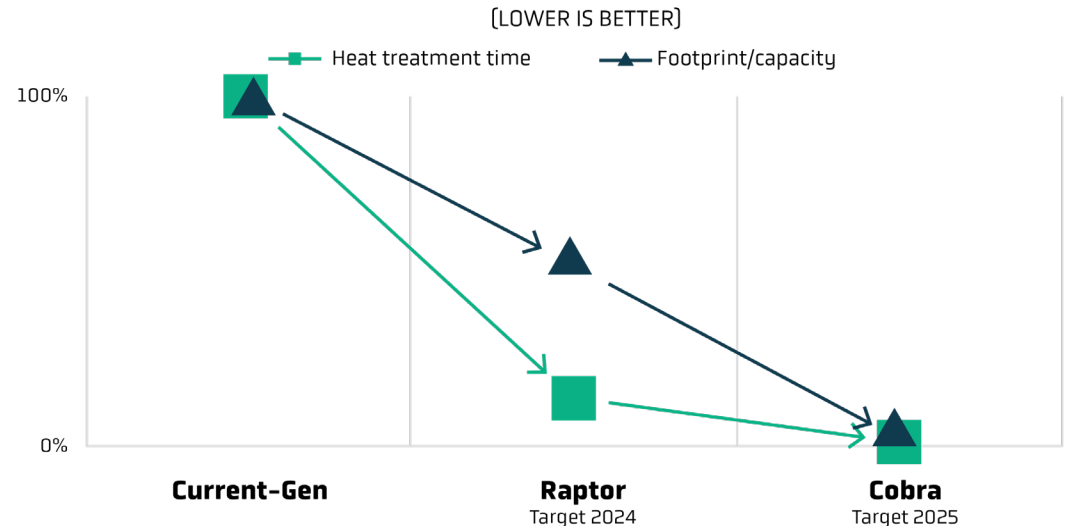
- Cobra is the next generation process after Raptor, designed for faster heat processing, smaller equipment footprint and streamlining of process steps.
- We believe these advantages make the Cobra process the most attractive pathway to gigawatt-hour scale production.

Process Scale-up Targets



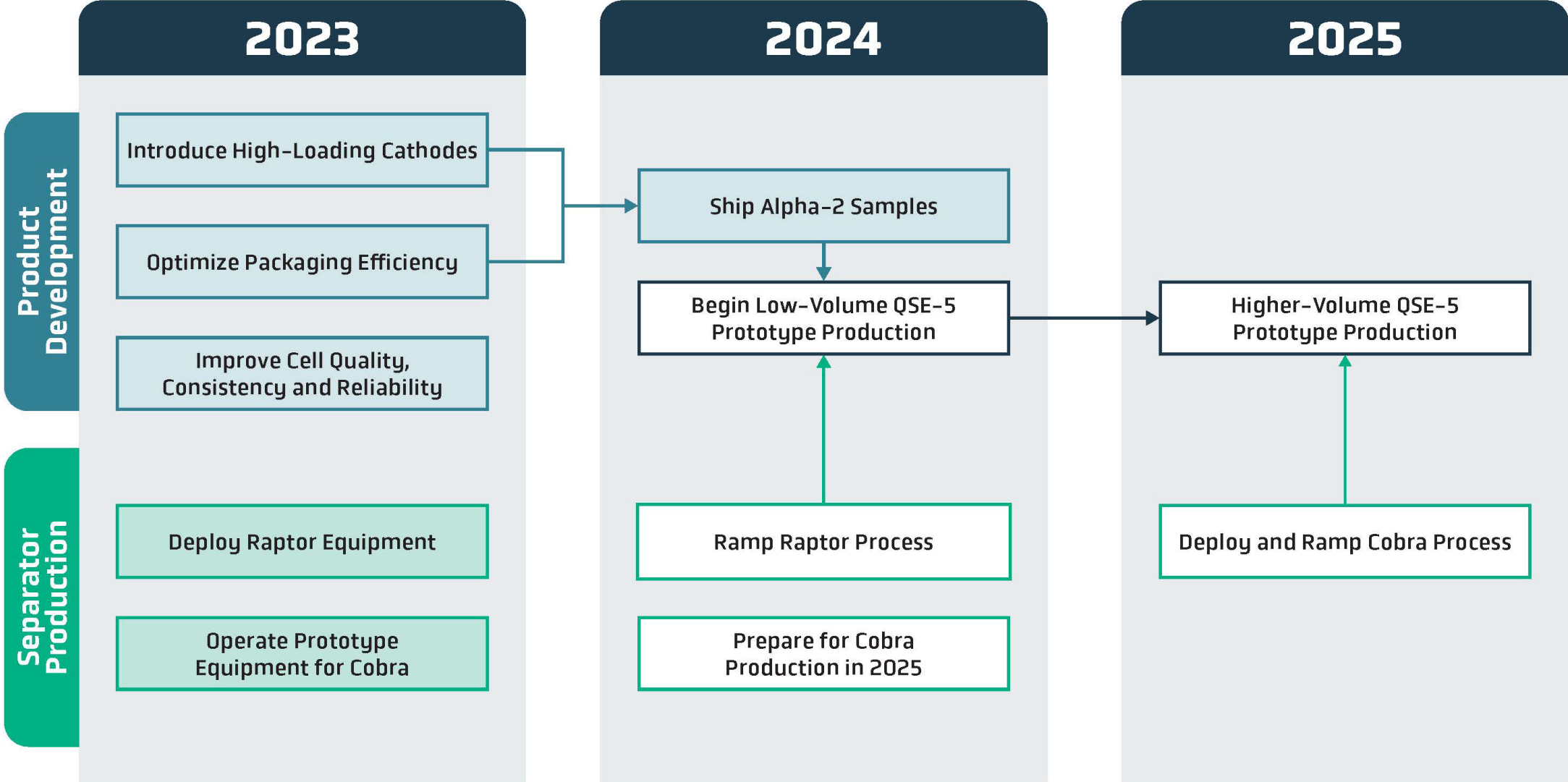
Separator starts/week represents the planned operating capacity of the heat treatment equipment.

Key Indicators of Process Scalability



Planned operating capacity of the heat treatment equipment

Commercialization Roadmap



Collaboration & Licensing with PowerCo

Capital-light pathway to industrialize QS solid-state technology platform

Collaboration

- Co-located **~150-person** joint scale-up team
- Amplifies core competencies
 - **QS'** cutting-edge technology development
 - **PowerCo's** industrialization and manufacturing capabilities
- Licensing and **\$130M royalty prepay** contingent upon satisfactory technical progress



Licensing

- PowerCo granted **non-exclusive license** based on QSE-5 platform
- PowerCo funds associated capex, opex development costs
- **Capacity: up to 80 GWh**
 - ~4X potential capacity vs prior JV with the Volkswagen Group
- Royalty and outperformance sharing

18 Month Cash Runway Extension: Key Drivers

Capital-light pathway extends cash runway into 2028

- 1 JV earmark removed (\$134M)
- 2 PowerCo Royalty Prepayment (\$130M)
- 3 PowerCo contribution of resources + skilled team
- 4 Further non-deal operational efficiencies (opex & capex)

