



ENSURGE™

Q3 2021 – Interim Report

17 November 2021

Kevin Barber

CEO



Safe Harbor Statement

This report includes forward-looking statements covered by the Private Securities Litigation Reform Act of 1995. Because such statements deal with future events, they are subject to various risks and uncertainties and actual results for fiscal year 2021 and beyond could differ materially from the Company's current expectations. Forward-looking statements, including estimates of capacity, selling price and other material considerations, are identified by words such as "anticipates," "projects," "expects," "plans," "intends," "believes," "estimates," "targets," and other similar expressions that indicate trends and future events.

Factors that could cause the Company's results to differ materially from those expressed in forward-looking statements include, without limitation, variation in demand and acceptance of the Company's products and services, the frequency, magnitude and timing of raw-material-price changes, general business and economic conditions beyond the Company's control, timing of the completion and integration of acquisitions, the consequences of competitive factors in the marketplace including the ability to attract and retain customers, results of continuous improvement and other cost-containment strategies, and the Company's success in attracting and retaining key personnel. The Company undertakes no obligation to revise or update forward-looking statements as a result of new information, since these statements may no longer be accurate or timely.

Ensurge financial reports and presentations may be accessed online at <https://ensurge.com/investor-relations/>

progress update

- Built first stacked batteries utilizing cell-stacking equipment and roll-based unit-cells
 - Incorporates unique Ensurge integration of material and process technology
 - Enables Ensurge to deliver mAh class MicroBatteries
 - Significant key milestone towards delivering customer samples
- Signed second customer agreement with global leader in medical hearables market expanding our coverage in this important market segment
- Proposals in negotiation with prospects in medical wearables and industrial applications
 - Form factor and energy density benefits
 - Some applications viable only with Ensurge's unique architecture and value propositions
- Hired roll-based, low-cost manufacturing veteran Jay Tu as VP Operations

Q3 '21 financial summary

K \$ USD		Q3 21'	Q2 21'	Q1 21'	Q4 20'
Ending Cash		\$13,100			
Expenses	Payroll	\$2,359	\$1,148	\$1,062	\$1,543
	R&D	\$626	\$692	\$521	\$692
	Other	\$2,988	\$2,868	\$2,151	\$1,159
	Depreciation & Amortization	\$12	\$14	\$12	\$14
	Total Operating Expenses	\$5,985	\$4,722	\$ 3,747	\$3,408
Cash Adjustments	Interest on Utica Debt	\$483	\$562	\$596	\$510
	Utica Principal reductions ¹	\$2,380	-	-	\$246
	Less: Stock based compensation	(\$2,034)	(\$989)	(\$528)	(\$404)
	Adjusted Cash Expenses	\$6,814	\$4,295	\$3,815	\$3,760
	Normalized Principal reductions	\$794	\$793	\$793	\$246
	Normalized Adjusted Cash Expenses	\$5,228	\$5,088	\$4,608	\$3,760

1 - Utica principal "catch-up" payment in Q3 21'

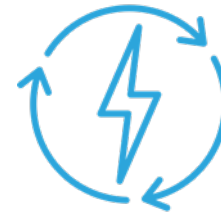
superior solution for existing billion-unit market

Ensurge™ uniquely focused on solid state micro batteries



Addressing micro battery market requirements

- Small, thin & flexible form factors
- Higher energy densities
- Long lifetime & reliability
- Safe



Solid micro batteries superior to lithium-ion

Leveraging proprietary IP & unique technology platform

microbatteries – our market focus

Established and growing markets



Initial focus

Premium pricing
Focused market, direct sales to OEMs
Customization potential

Subsequent expansion

Broader customer base
Leverage partnerships
Standard products

hearables market

True Wireless



2024: 540 MU (1.08B batteries)



40-70 mAh

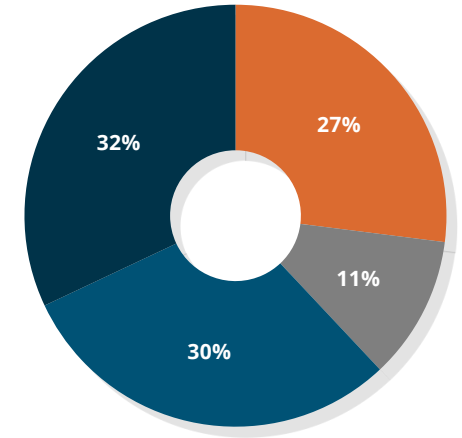


All rechargeable



Big trends

- Health
- Convergence with hearing aid



■ Apple ■ Samsung ■ Tier2 ■ Other

Ensurge value propositions

- Smaller size
- Longer lifetime

Hearing Aids



2024: 23MU



15-25 mAh

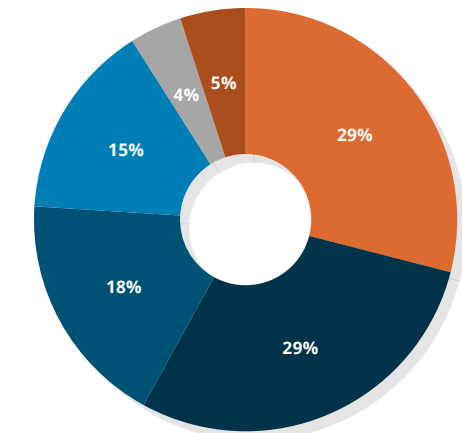
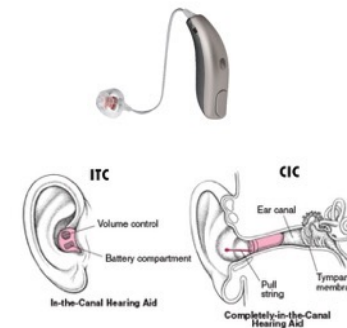


Moving from primary to rechargeable



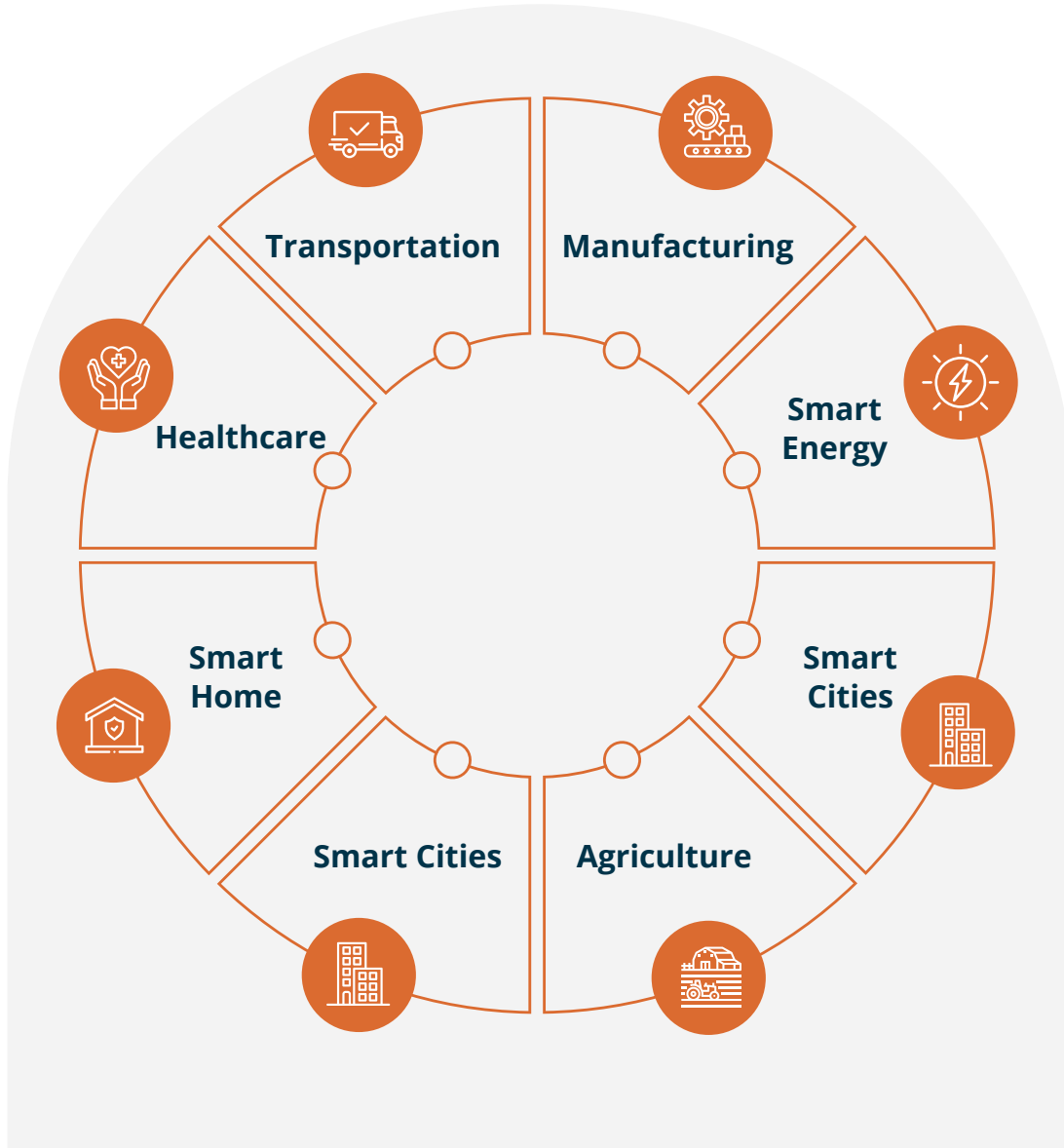
Big trends

- OTC in USA creates potential disruption
- Convergence with True Wireless



■ Sonova ■ Demant ■ WS A
■ GN ■ Starkey ■ Other

IoT connected sensors



Market

240MU in 2024 with 1-50 mAh capacity
Big trends: 5G, Energy harvesting



Unique requirements

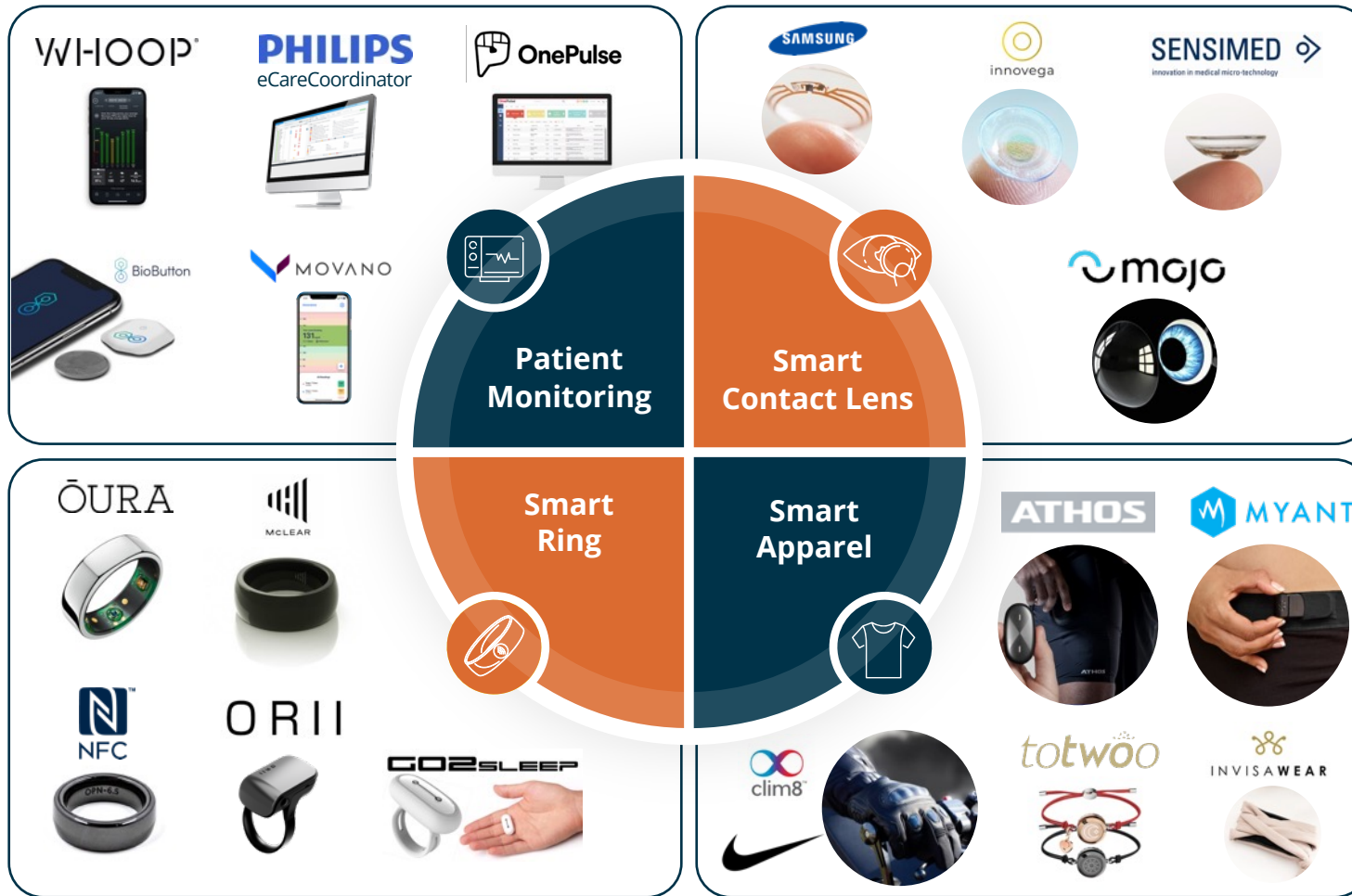
Industrial temperature range (-20-+85 °C)
5-20 years of shelf and product life
Slow discharge rate
Charge cycles



Ensurge Value Proposition & GTM

Size, charge cycles, temp range
Develop partnerships with energy harvesting, sensor and chip companies

wearable applications



Applications that absolutely need Solid State Batteries to get off the ground



Driven by:

- Form factors
- Unique requirements
- Longer charge cycles
- Safety
- Temperature range

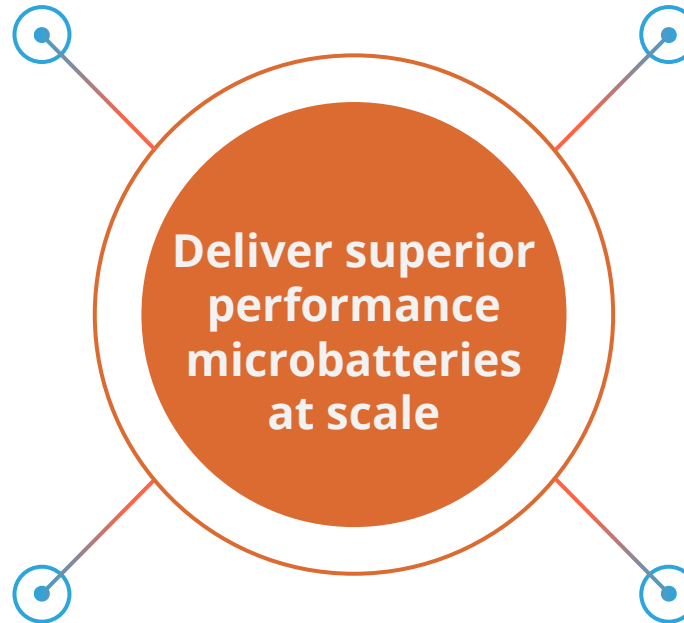
novel architecture transforming microbatteries

Established anode-less solid state chemistry

- Invented in 1990s
- Core longevity and safety advantages

Proven ultrathin steel substrates

- Proprietary Ensurge development
- Maximizes volumetric energy density
- Reliably shipped millions of EAS units



Innovative cell stacking & packaging

- Enables thinner form factors
- Enables form factor customization

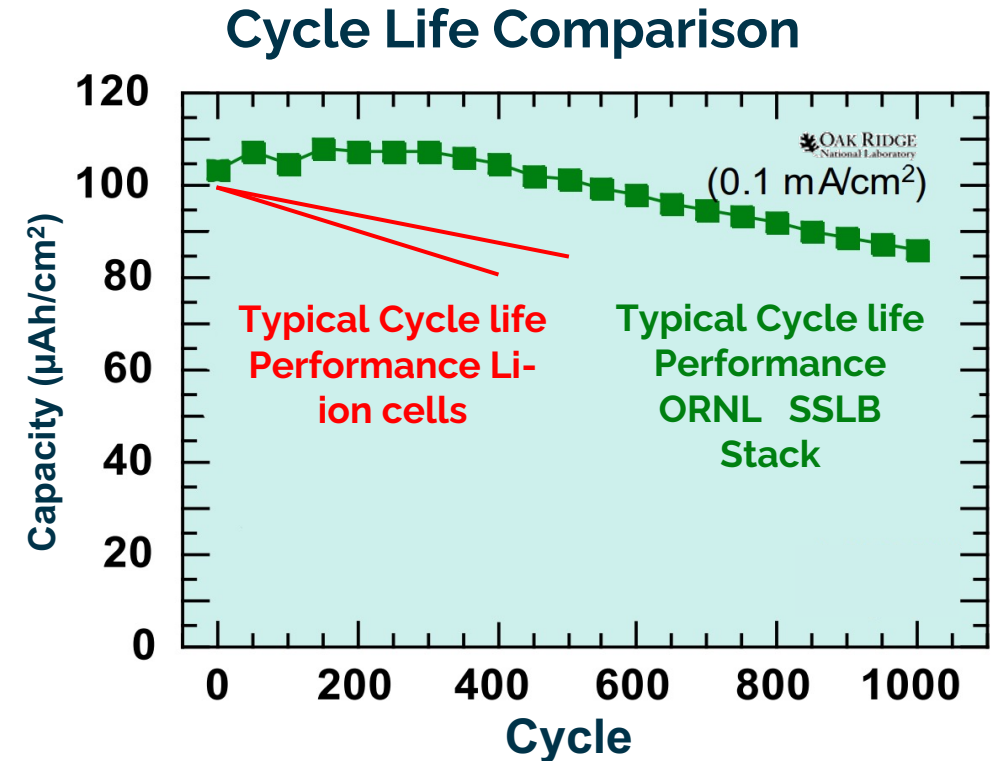
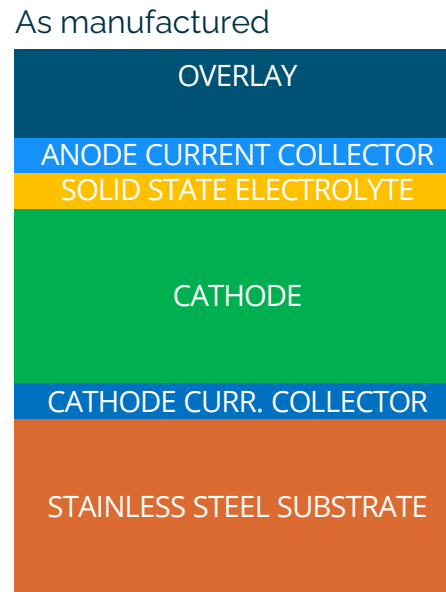
Installed ~\$40M scale-up R2R factory

- Cost-effective path to high volume
- Supports technology roadmap

anode-less solid-state chemistry

Enabled by Mature Oak Ridge National Lab
SSLB Battery Stack

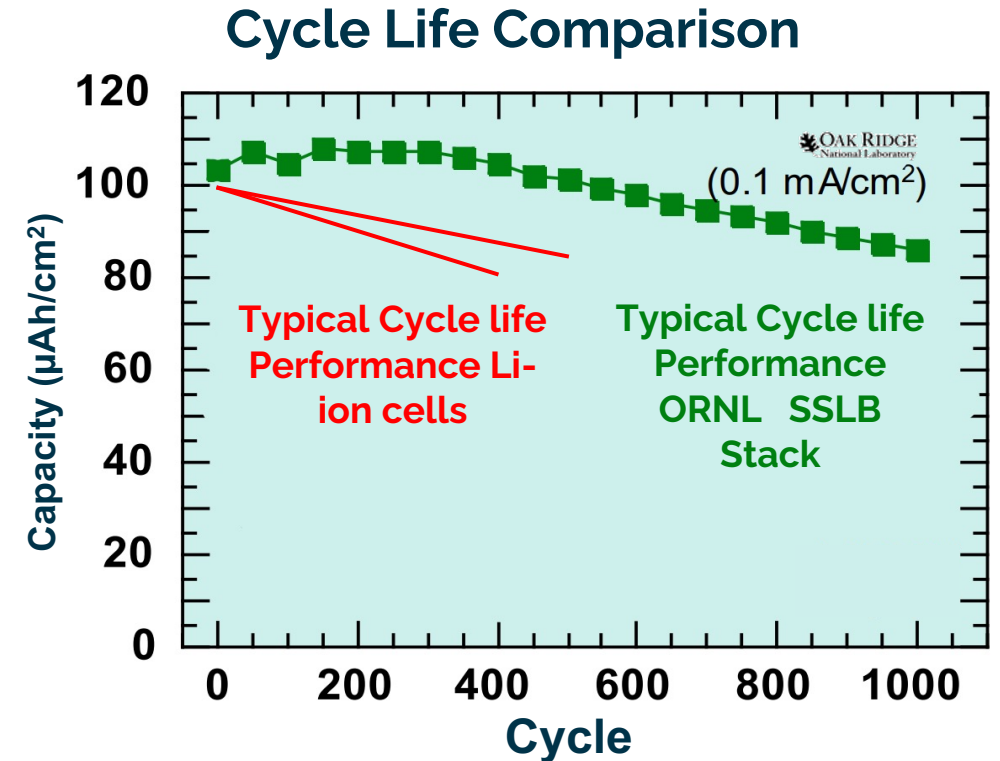
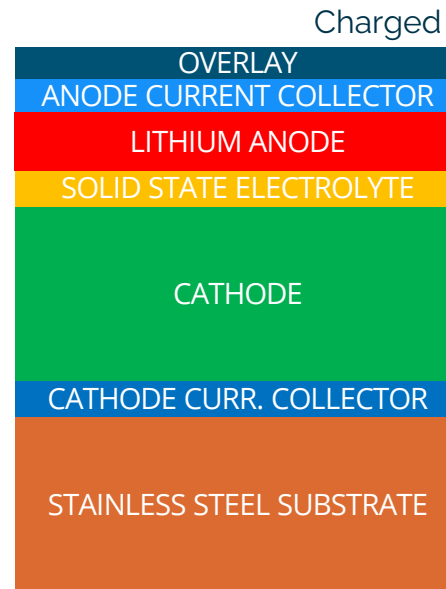
- Low cost manufacturing
- 1000+ cycles expected
- Enables rapid charging



anode-less solid-state chemistry

Enabled by Mature Oak Ridge National Lab
SSLB Battery Stack

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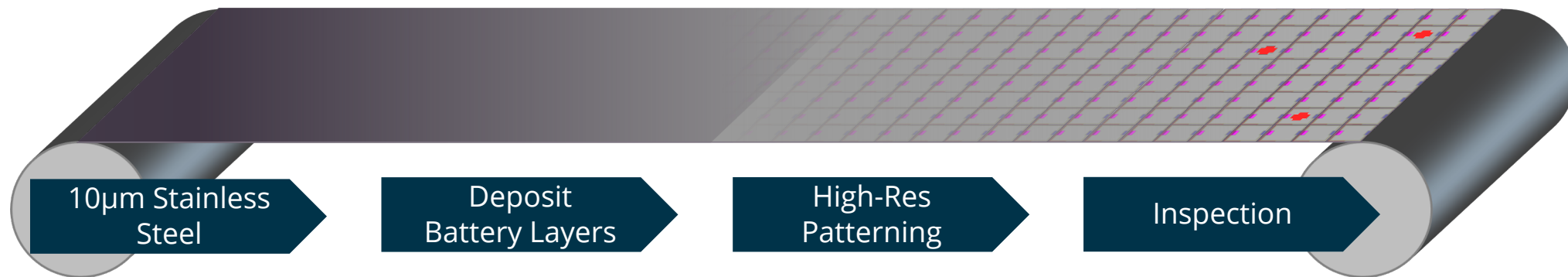
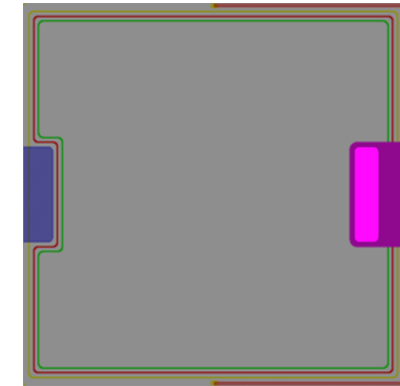


ultra-thin stainless steel

- Ultra-thin steel expertise
- 10 μ m ultra thin steel enables high energy densities
- Battery layer deposition
- Customizable patterning

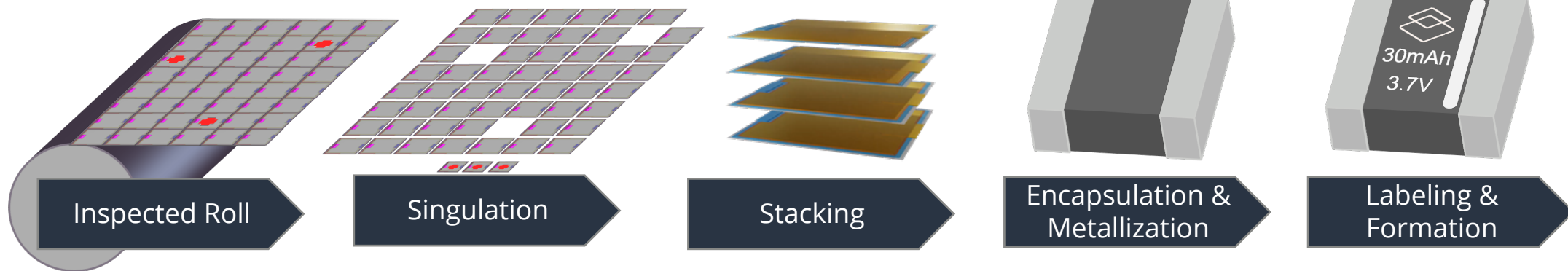
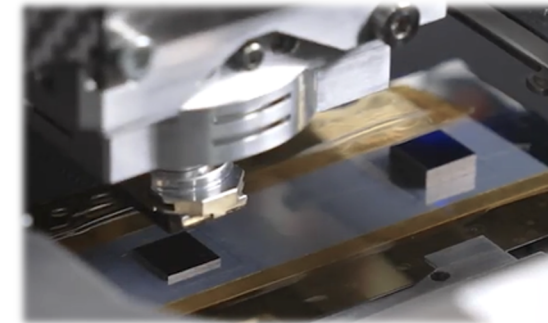
Initial tape out - 8x8 mm cell

High-Res patterning can be customized to form factor



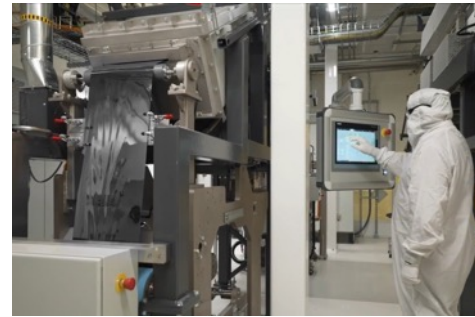
innovative cell stacking

- Multi-layer, die stacking
- Compliant overlay
- Moisture barrier
- Contacts for direct PCB connection

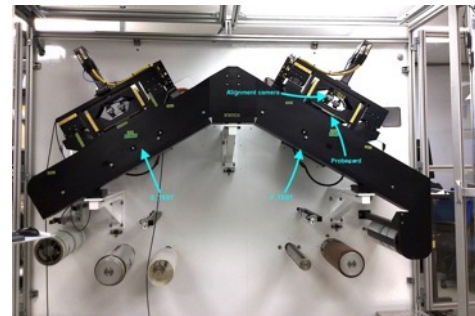


scale up roll to roll factory

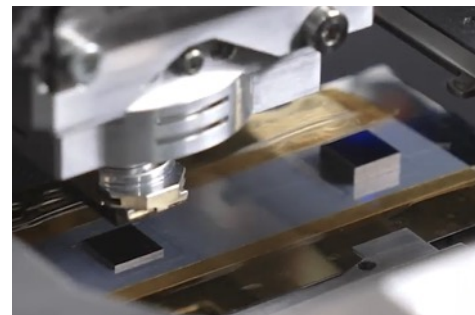
- High thruput automated factory
- \$40M in roll-to-roll equipment in 2017
- Initial cell stacking equipment in 2021
- Facility delivers \$100M EBITDA
 - When fully equipped, depending on mix



R2R Deposition

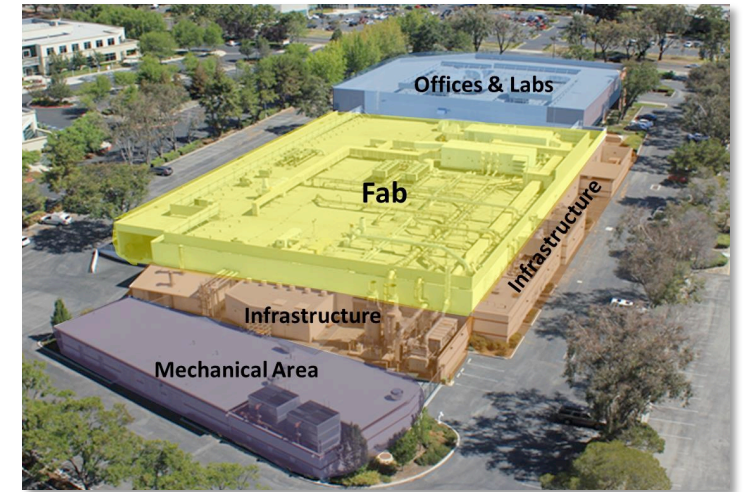


R2R Test







Cell Stacking

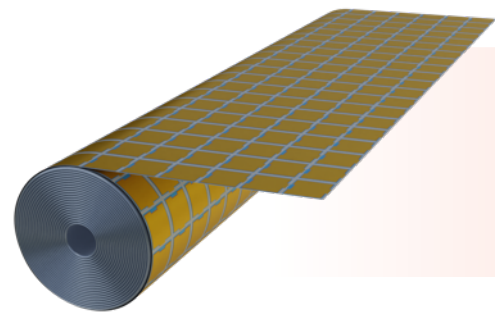
San Jose, CA



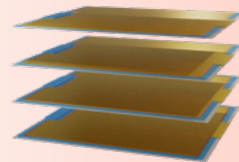
- 20,000 ft² (2,000 m²) cleanroom
- 70,000 ft² (6,500 m²) office & light labs
- Class H5 manufacturing facility

Ensurge: performance and customizability, at scale

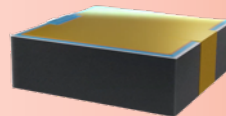
		energy density more battery life per unit volume	recharge cycles longer lasting hearables, wearables, sensors	charging speed improved user experience	safety no fire, explosion, heat risk	form factor enabling unique end products
	Ensurge SSLB	2x	2-3x	2x		rectangle ultra thin
	vs.					
	Li-ion button cell	1x	1x	1x		thick circle



Scale via roll-to-roll fabrication



precision stacking & encapsulation

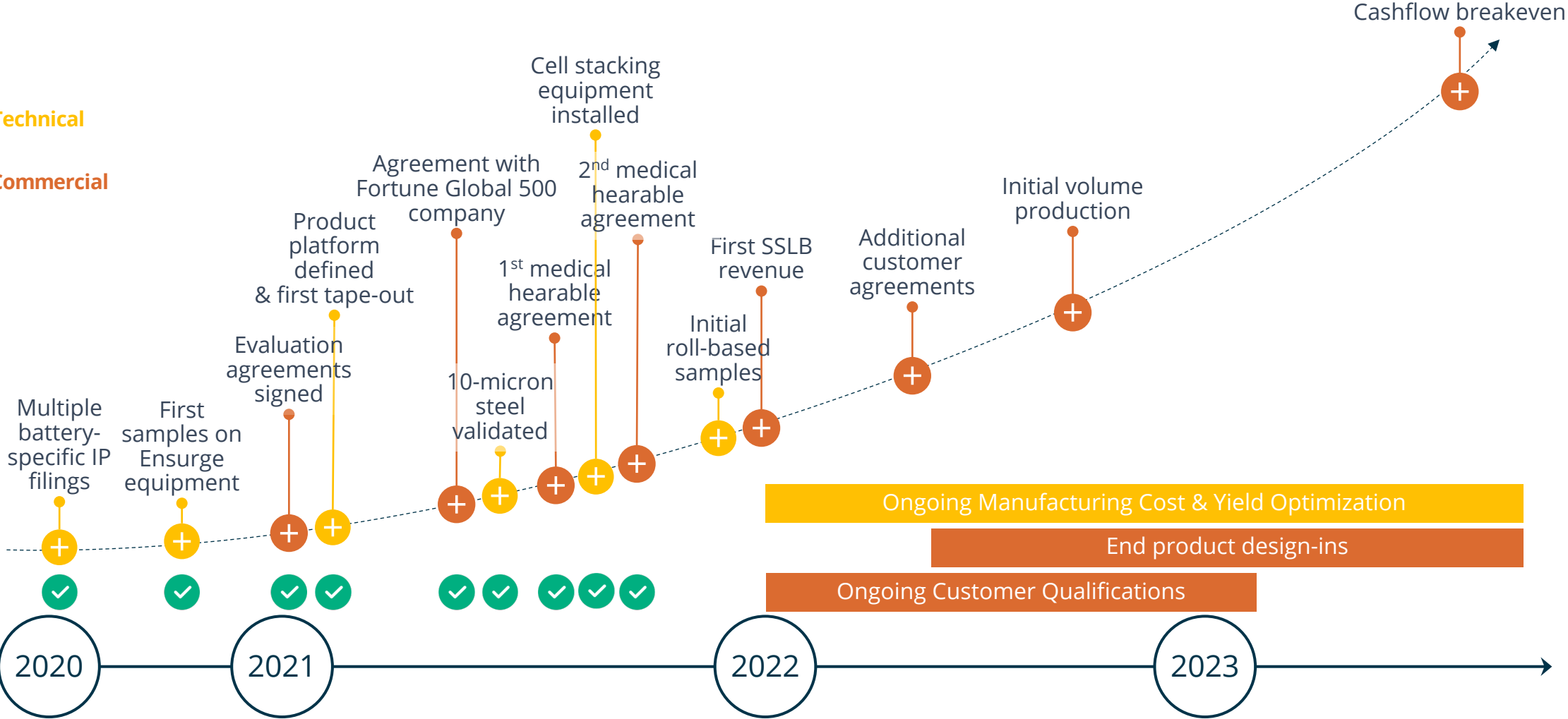


Microbattery product platform

execution on track

+ Technical

+ Commercial



summary

winning with steel, stacking and scale

Solid-state lithium rechargeable microbatteries

- superior energy density, lifetime, safety vs. lithium-ion
- customizable form factors

Billion-unit, ten-billion \$ addressable market

- hearables, wearables, sensors
- existing and emerging applications
- multiple customers announced

Barriers to entry

- extensive IP
- thin film and roll-based manufacturing know-how

Existing, production-grade factory

- \$40M equipment for high-capacity roll-to-roll mfg.

Profitable

- EBITDA potential w/ existing facility ~\$100M





Thank You