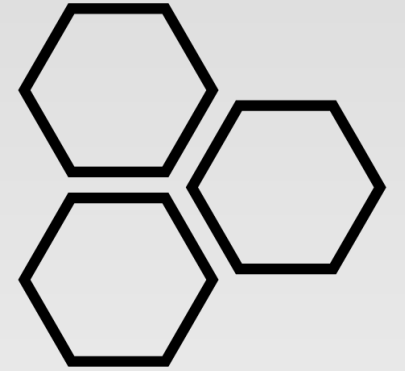
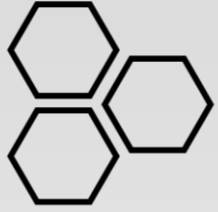


ODYSSEY SEMI



Leading The Transformation From Silicon and Silicon Carbide
To High-Voltage Vertical GaN

Q2 2023 | OTCQB: ODII



SAFE HARBOR STATEMENT

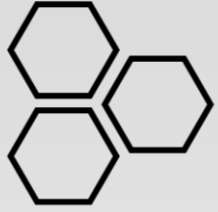
CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

The information contained in this presentation includes some statements that are not purely historical and that are “forward-looking statements” within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements include, but are not limited to, statements regarding the Company’s and its management’s expectations, hopes, beliefs, intentions or strategies regarding the future, including the Company’s financial condition and results of operations. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. The words “anticipates,” “believes,” “continue,” “could,” “estimates,” “expects,” “intends,” “may,” “might,” “plans,” “possible,” “potential,” “predicts,” “projects,” “seeks,” “should,” “will,” “would” and similar expressions, or the negatives of such terms, may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. The term “Company” in this presentation includes Odyssey Semiconductor Technologies, Inc. and its wholly-owned JR2J, LLC subsidiary.

The forward-looking statements contained in this presentation are based on the Company’s and its management’s current judgment, expectations and beliefs, but our actual results, events and performance could differ materially from those expressed or implied by the forward-looking statements. There can be no assurance that future developments actually affecting the Company will be those anticipated. These forward-looking statements involve a number of risks, uncertainties (some of which are beyond the Company’s control) or other assumptions described more fully in the company’s filings with the Securities and Exchange Commission that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements, including those relating to potential fluctuations in our operating results, our possible dependence on a few large customers for a substantial portion of our revenue, a loss of revenue if contracts with the U.S. Government, defense or other major customers are cancelled or delayed, our ability to implement innovative technologies, our ability to bring new products to market, achievement of design wins over our competitors, the rate of acceptance of our products in the market, the efficient and successful operation of our wafer fabrication and other facilities, our ability to adjust production capacity in a timely fashion in response to changes in demand for our products, variability in manufacturing yields, our ability to successfully integrate our Ithaca wafer fab or other facilities or entities we may acquire, our ability to obtain a Trusted Foundry accreditation for the wafer fab, industry overcapacity, inaccurate product forecasts and corresponding inventory and manufacturing costs, dependence on third parties, our ability to attract and retain skilled personnel and senior management, the dilution that may be caused to our stockholders’ ownership by our future need of substantial additional funding, our ability to protect our intellectual property, claims of intellectual property infringement and other lawsuits, security breaches and other similar disruption compromising our information, and the impact of government or environmental regulations. Should one or more of these risks or uncertainties materialize, or should any of our assumptions prove incorrect, actual results may vary in material respects from those expressed or implied by any of these forward-looking statements. The Company undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

These materials do not constitute any offer to sell, or the solicitation of any offer to buy, any securities of odyssey or any other entity. Any presentation to the contrary should be ignored.

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ODII: INVESTMENT HIGHLIGHTS

Odyssey successfully built high-voltage vertical GaN* power devices which meet 1200V rating and is now building samples for customers in industrial motor, renewable energy and electric vehicle market segments

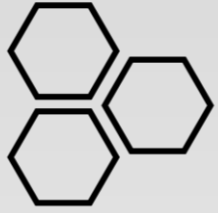
With the industry's strongest vertical GaN IP portfolio, Odyssey is delivering 10X smaller die size and higher performance at cost levels unattainable by silicon carbide

- 10x smaller die size lowers defectivity = improved yield and higher performance
- Smaller die size also makes supply chains and delivery much easier

Odyssey will disrupt the 40% CAGR, \$5B+ silicon carbide market with greater than 40% gross margins. Megatrends drive the need for high-voltage vertical GaN

Key:

*GaN: Gallium Nitride



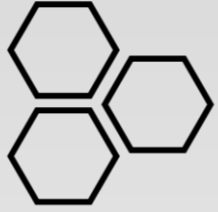
SIGNIFICANT RECENT ADVANCEMENTS AND MILESTONES

Technology

- Product samples delivered to customers in Q1. Product definition conversations maturing; additional product samples will be delivered no later than Q4
- Three additional patents filed

Business

- Two LOIs signed with customers; additional expected by end of Q3
- On-boarded two new foundry customers; recurring revenue expected from both in Q4 and through 2024
- Averaged \$345k / month spend for the quarter



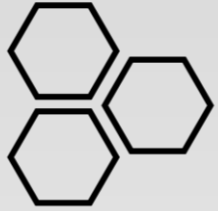
WHAT DO CUSTOMERS THINK?

Odyssey currently has over 10 customer opportunities - customers finding us based on our progress and news

In our focus markets

- EV OEMs
- Automotive Tier 1
- Automotive Tier 2 (power module suppliers)
- Solar
- Industrial motors

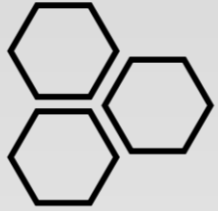
“We don’t see silicon carbide closing the gap on required performance and system cost.”
- Automotive Tier 1 Executive



OUR PATH TO MONETIZATION



There are more customers interested than we can support
We will be engaging companies who will pay to have first access to our products
There are multiple milestones which will trigger payments
Customers will define the product requirements with a high-volume project target



CUSTOMER AGREEMENTS AND PRODUCT STATUS

CUSTOMER AGREEMENTS

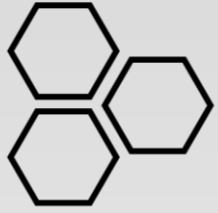
Customer	LOI Status	Lead Opp Size
US EV Tier 1	Complete	\$10-\$20M/yr
US EV Tier 1	Complete	\$20-\$40M/yr
EU EV Tier 1	Awaiting signature	\$50M/yr
EU EV OEM	Awaiting samples	TBD
EU EV Tier 1	Awaiting samples	TBD
US EV OEM	Awaiting samples	TBD
US Ind Motor	Awaiting samples	TBD

PRODUCT

Requirement	Status	IP Created?
Device design	Complete	Yes
Epitax design	Complete	N/A
Process flow	Complete	Yes
Manufacturing	In process	Yes

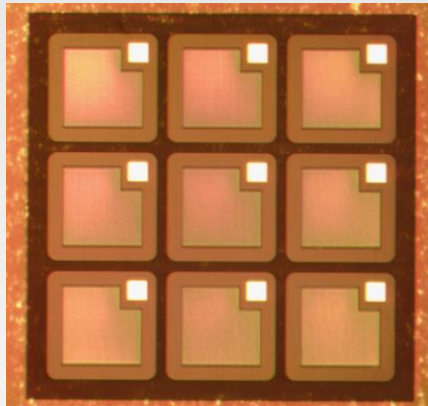
Optimizing manufacturing is underway; to be completed within 3 months
Will allow for process freeze & customer driven product developments

Automotive & e-mobility customers are being prioritized due to their willingness to pay for access to the products
Industrial customers will also be pursued for faster time to revenue



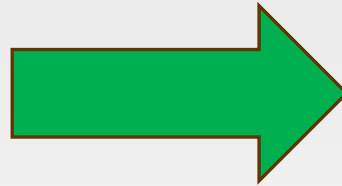
MANUFACTURING PROGRESS

COMPLETE

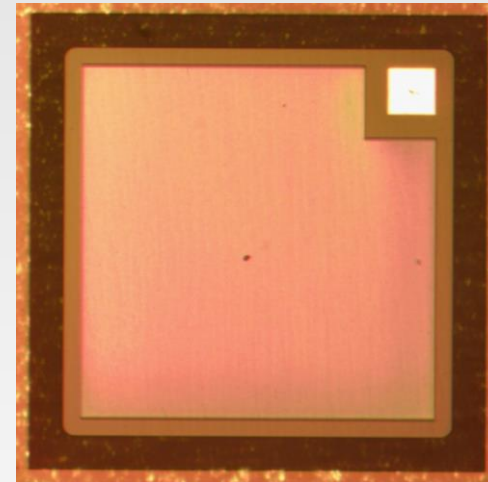


Test chips

Each chip is 0.3mm x 0.3mm

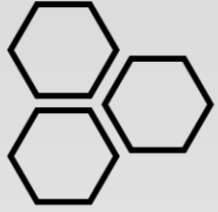


IN PROCESS



Customer application chips

Each chip is 1.5 mm x 1.5 mm



USE OF PROCEEDS

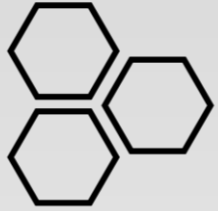
Current burn ~ \$350k / month

Primarily R&D and facilities to run factory

Plan to keep burn flat

6-12 months runway being pursued via bridge

Will also learn outcome of CHIPs and ARPA-E grants during this time period

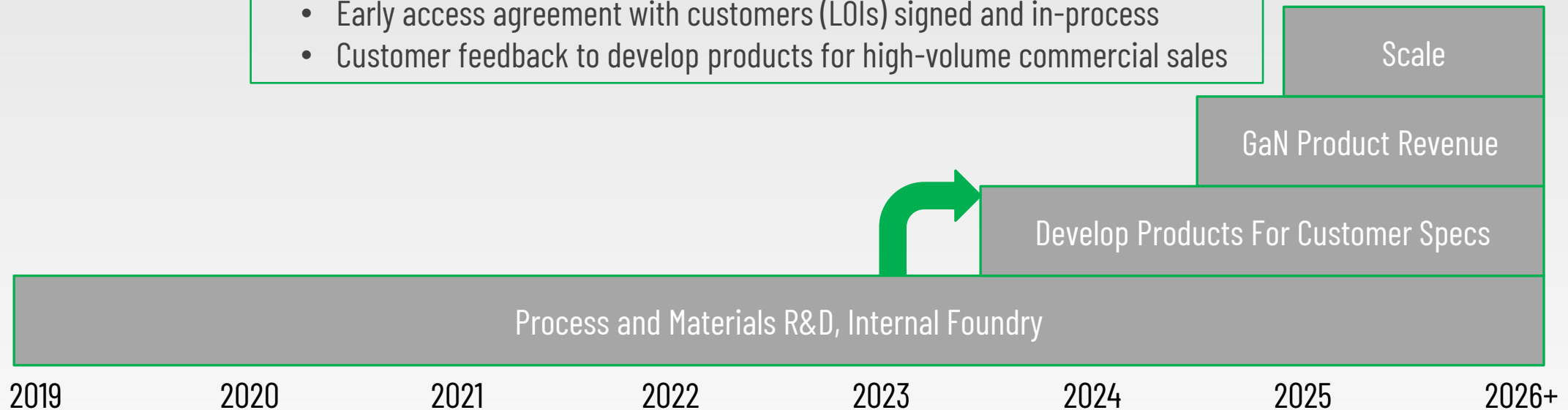


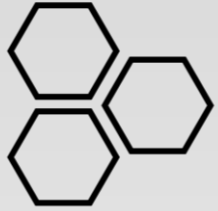
A SIGNIFICANT STEP FOR ODYSSEY SEMICONDUCTOR

With the proven and protected IP to build 1200V vertical GaN FETs, Odyssey has taken the step to develop products that meet customer specifications

Vertical GaN sample shipments to customers commenced in Q1 2023:

- Early access agreement with customers (LOIs) signed and in-process
- Customer feedback to develop products for high-volume commercial sales



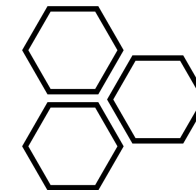


THE OPPORTUNITY

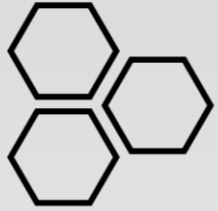


Sustainability AND Electrification AND Availability AND Affordability

ODYSSEY SEMI



Odyssey Semiconductor is uniquely positioned as the premier company to address all of these needs due to our industry strongest vertical GaN intellectual property



THE MARKET IS ENORMOUS AND GROWING

Odyssey will disrupt the 40% CAGR, \$5B+ silicon carbide market

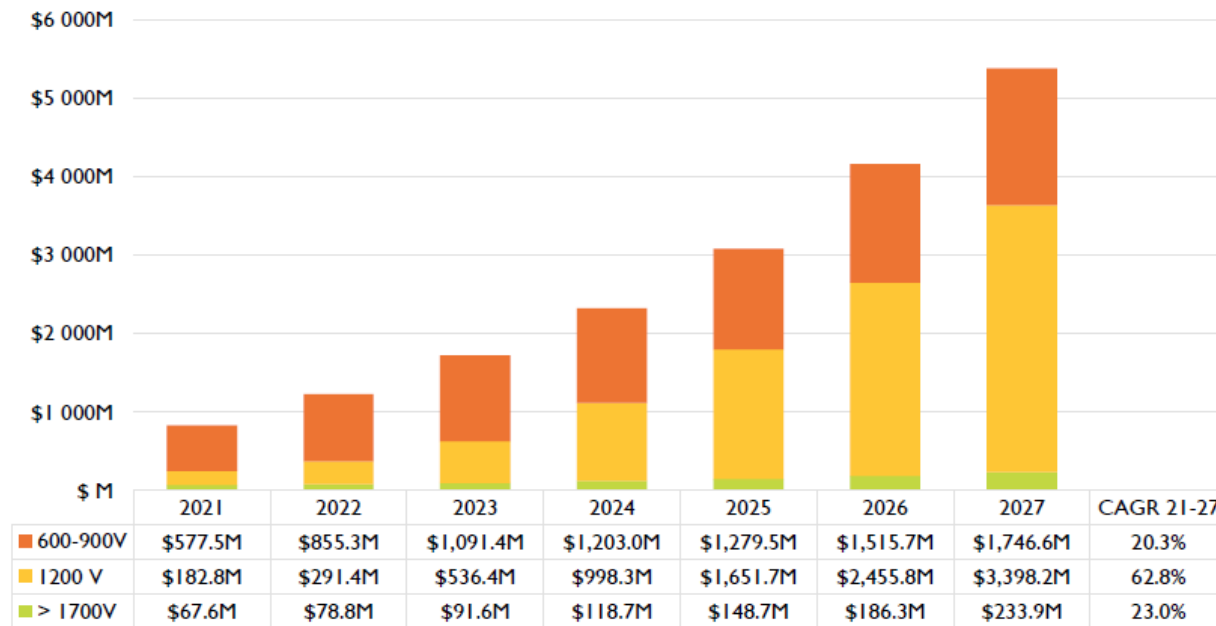
Strong Growth in Addressable Markets 2021 to 2027

600 to 900V: **+20% CAGR**

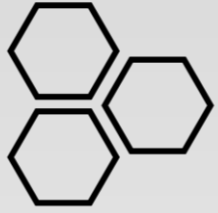
1200V: **+63% CAGR**

>1700V: **+23% CAGR**

SiC Transistor (packaged) market
Split by Voltage rating (\$M)



Power SiC 2022 | www.yole.fr | ©2022



WE FOCUS ON HIGH VOLTAGE APPLICATIONS

100 V

650 V

1,200 V

> 2,000 V

Power Supplies



Electric & Hybrid Electric Vehicles



Solar Inverters



Industrial Motors



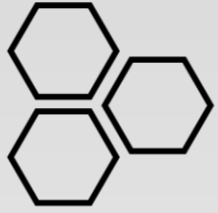
Smart Grid



Electric Train Propulsion



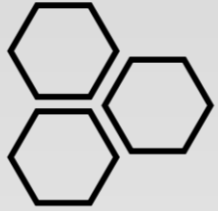
Odyssey delivers dramatic energy savings over competition for industrial motors, electric vehicles, and renewable energy



HIGH VOLTAGE CONSERVES ENERGY



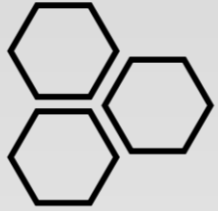
As operating voltages increase, energy efficiency improves
There are limited power converters at these higher voltages, which keeps prices high
THIS PRESENTS THE BREAKTHROUGH OPPORTUNITY FOR ODYSSEY



HIGH VOLTAGE VERTICAL GaN VS. SiC

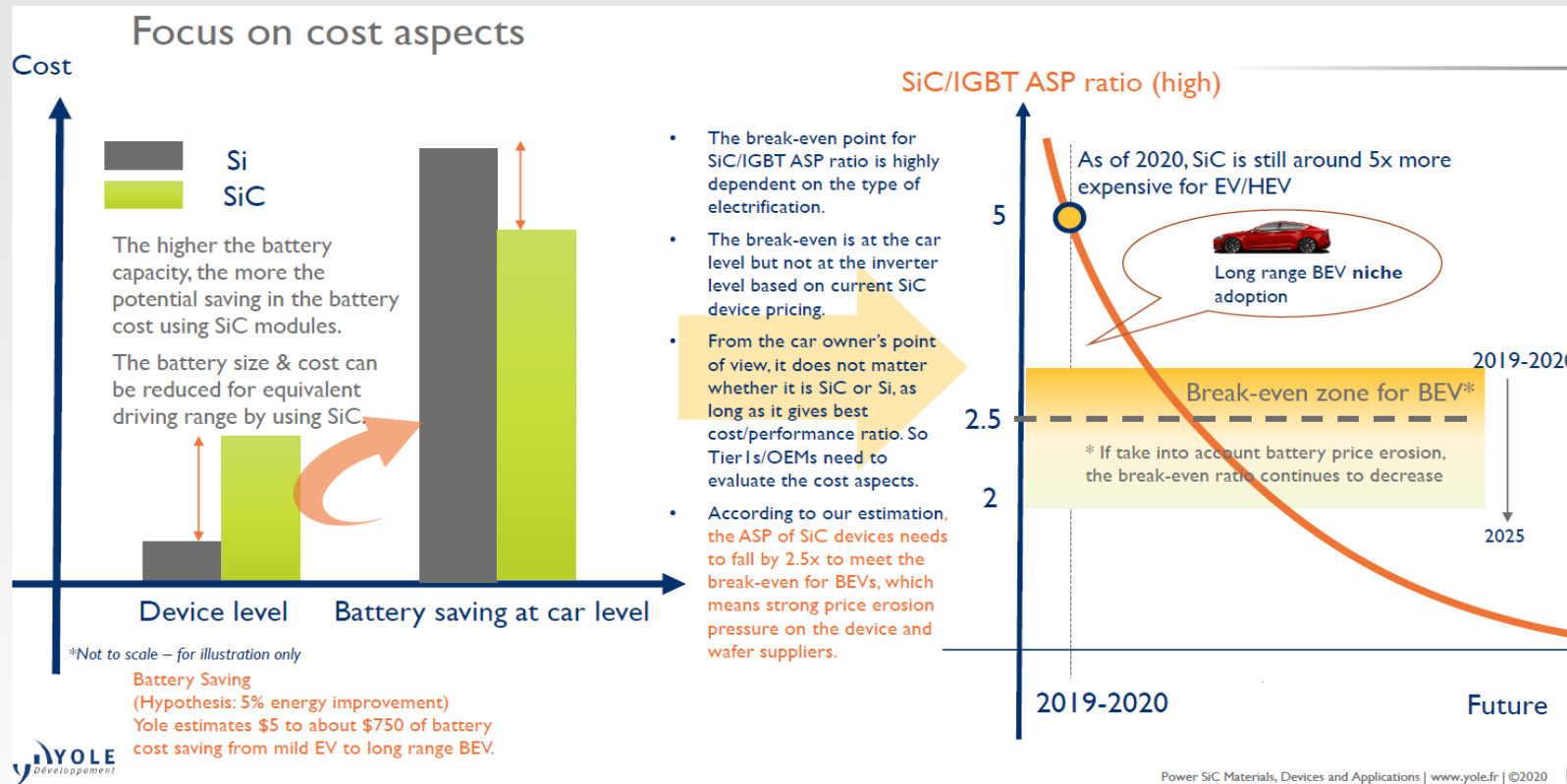
High-Voltage Vertical GaN Advantages vs. SiC		
Faster switching speeds	→	Higher power density
10X Performance	→	Higher energy savings
Smaller components	→	Lower systems cost
Lower defect densities	→	Higher reliability

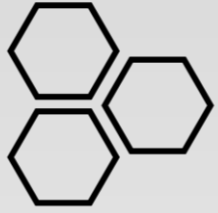
Only Vertical GaN Takes Advantage Of The Material Property Benefits Vs. SiC



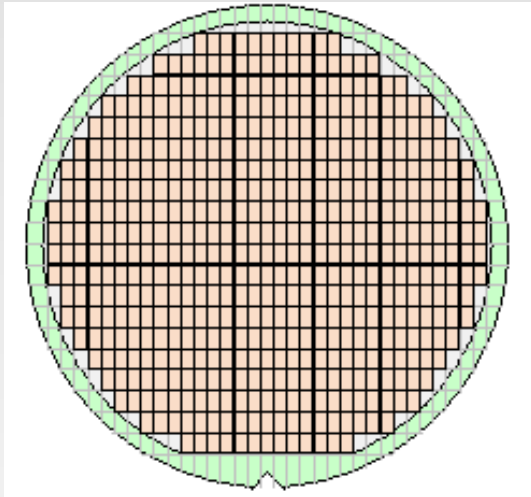
SILICON CARBIDE ECONOMICS FALL SHORT

Silicon Carbide prices need to erode 2.5x to meet EV economics



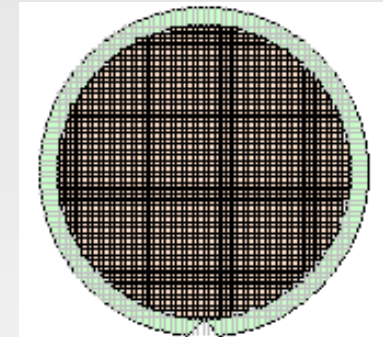


THE ECONOMICS FAVOR VERTICAL GaN



6" SiC Wafer
522 die

	SiC	Vertical GaN
Wafer Size	6"	4"
Product per wafer	522	2128
Wafer Cost	\$812	\$1500
Revenue per wafer	\$35,036	\$142,831

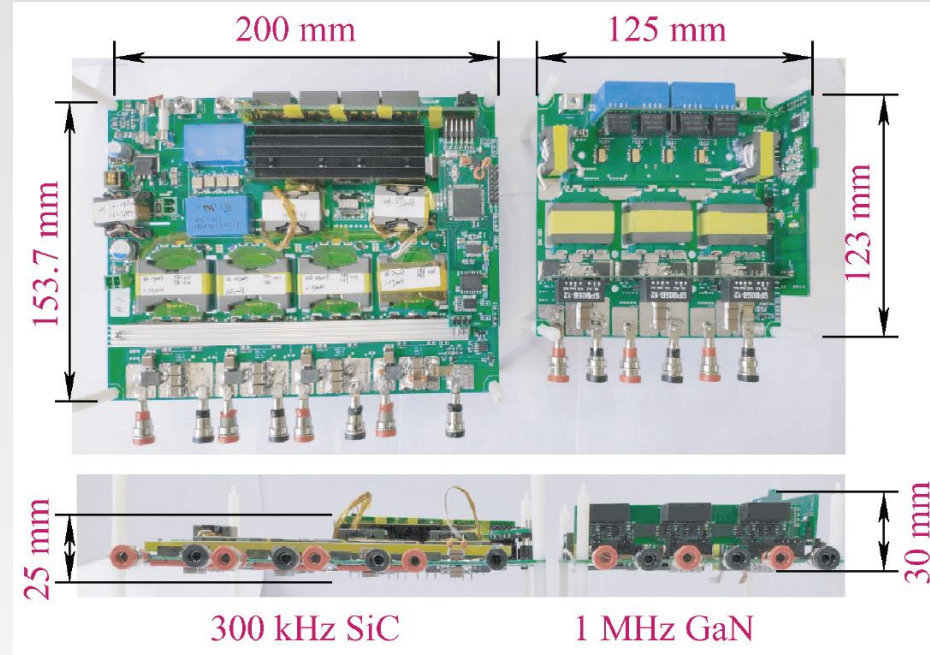


4" GaN Wafer
2128 die

4" Vertical GaN outproduces 6" SiC by 4x/wafer

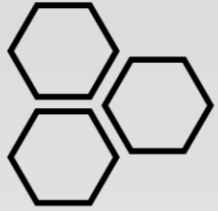


WITH UNMATCHED PERFORMANCE



40% smaller solution | higher efficiency | same output power

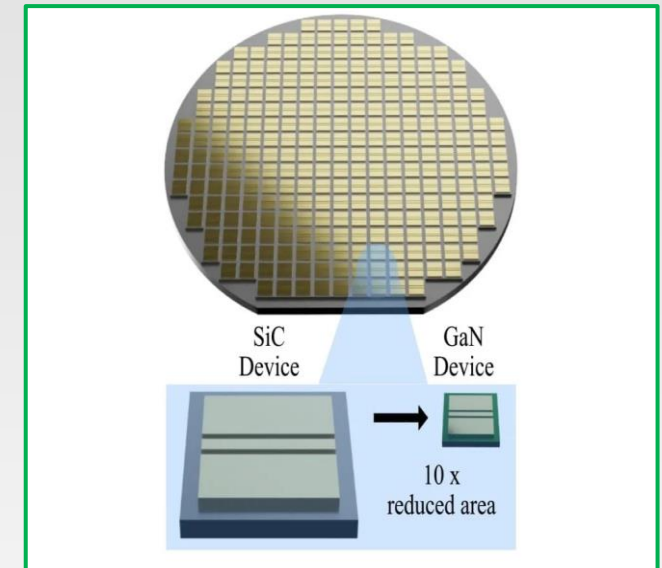
ODYSSEY IS UNIQUELY POSITIONED IN VERTICAL GaN



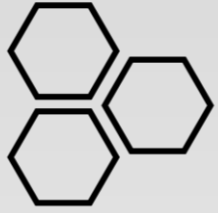
We have the expertise across technology, marketing and manufacturing

We have protected our IP that makes Vertical GaN practical

We are developing two product lines to be commercialized:
650V and 1200V



Vertical GaN delivers higher performance with 1/10th the die area vs. SiC



WE OWN OUR PRODUCTION CAPABILITIES

Odyssey's device fabrication facility delivers innovation and will service production revenue

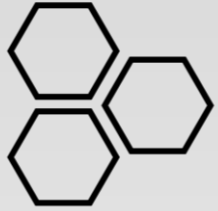
Target \$10 to \$20 million annual revenue from Odyssey's fabrication facility

With our own foundry:

- We control our supply
- We innovate faster than competition



Odyssey's 10,000 sq. ft.
wafer fabrication facility
in Ithaca, NY

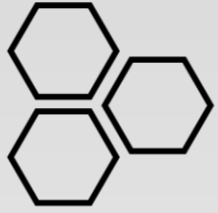


CUSTOMER ENGAGEMENT

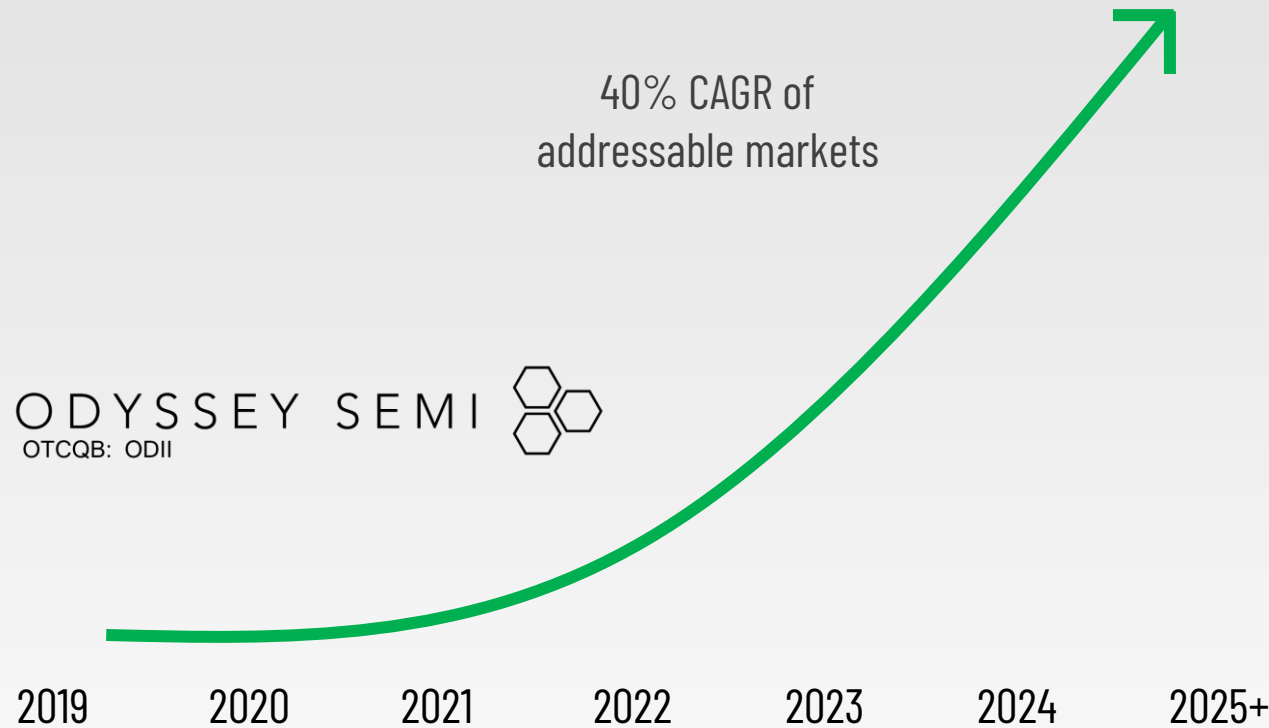
We have prioritized and will deliver samples to customers in Q1 2023

We have narrowed to 3 initial customers with 3-5 additional customer sample requests to be supported later in Q1 2023

Fast Adoption Cycles	Ideal customers to <u>scale new</u> products	Ideal customers to <u>scale established</u> products
Sustained Adoption Cycles	Initial Customer Focus Ideal customers to <u>develop new</u> products	Ideal customers to <u>scale established</u> products
	Technology Drivers	Fast Followers



ODII: THE EMERGING LEADER IN VERTICAL GaN

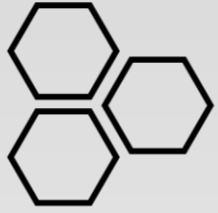


High growth megatrends of Electrification and Sustainability create market opportunity where silicon and silicon carbide cannot deliver

Vertical GaN delivers the performance and economics needed for continuous, high-margin growth

Odyssey Semi is uniquely positioned to capture significant market-share

Odyssey Semiconductor: Positioned for Long Term Growth



ODYSSEY SEMICONDUCTOR AT A GLANCE

OTCQB: ODII

Odyssey's proprietary technology is designed for GaN to replace SiC as the leading high-voltage power switching semiconductor material

Insiders and management own ~40% of total shares outstanding

Previous rounds of financing

- Bridge loan (convertible note) executed December 28, 2022 for \$2.35M

- Bridge loan (convertible note) executed August 8, 2022 for \$1.25M

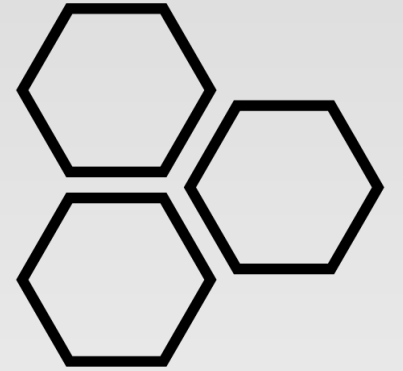
- March 2021 - \$5M @ \$4.00

- August 2019 - \$2.9M @ \$1.50

- Minimal increase in fully diluted share count: 12.7M on 12/31/22 and 12.4M on 12/31/21

S-1 filed in 2022

ODYSSEY SEMI



THANK YOU

OTCQB: ODII

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Jeff Christensen, IR | jchristensen@darrowir.com