

# Wolfspeed Investor Day

 **OCTOBER 31, 2022**

# Welcome

*Wolfspeed*<sup>®</sup> TYLER GRONBACH | VP OF INVESTOR RELATIONS

# FORWARD-LOOKING STATEMENTS AND NON-GAAP MEASURES

## Note on Forward-Looking Statements

This presentation contains forward-looking statements involving risks and uncertainties, both known and unknown, that may cause Wolfspeed's actual results to differ materially from those indicated in the forward-looking statements. Forward-looking statements by their nature address matters that are, to different degrees, uncertain, such as statements about Wolfspeed's business outlook, future targets, product markets, plans and objectives for future operations, and product development programs and goals. Actual results could differ materially due to a number of factors, including but not limited to, ongoing uncertainty in global economic and geopolitical conditions, including the ongoing military conflict between Russia and Ukraine, infrastructure development or customer demand that could negatively affect product demand, collectability of receivables and other related matters as consumers and businesses may defer purchases or payments, or default on payments; risks related to international sales and purchases; risks associated with our factory optimization plan and construction of a new device fabrication facility and a new materials facility, including design and construction delays and cost overruns, issues in installing and qualifying new equipment and ramping production, poor production process yields and quality control, and potential increases to our restructuring costs; the risk that the markets for our products will not develop as we expect, including the adoption of our products by electrical vehicle (EV) manufacturers; the risk that adoption of EVs does not continue to grow at the rate anticipated; the risk that our opportunity pipeline will not convert into orders and revenue at the rates that we have assumed or historically experienced; the risk that we may experience production difficulties that preclude us from shipping sufficient quantities to meet customer orders or that result in higher production costs, lower yields and lower margins; our ability to lower costs; the risk that our results will suffer if we are unable to balance fluctuations in customer demand and capacity, including bringing on additional capacity on a timely basis to meet customer demand; the risk that longer manufacturing lead times may cause customers to fulfill their orders with a competitor's products instead; product mix; risks associated with the ramp-up of production of our new products, and our entry into new business channels different from those in which we have historically operated; our ability to convert customer design-ins to sales of significant volume and, if customer design-in activity does result in such sales, when such sales will ultimately occur and what the amount of such sales will be; the risk that the economic and political uncertainty caused by the tariffs imposed by the United States on Chinese goods, and corresponding Chinese tariffs and currency devaluation in response, may negatively impact demand for our products; the risk that we or our channel partners are not able to develop and expand customer bases and accurately anticipate demand from end customers, which can result in increased inventory and reduced orders as we experience wide fluctuations in supply and demand; risks resulting from the concentration of our business among few customers, including the risk that customers may reduce or cancel orders or fail to honor purchase commitments; the risk that our investments may experience periods of significant market value and interest rate volatility causing us to recognize fair value losses on our investment; the risk posed by managing an increasingly complex supply chain that has the ability to supply a sufficient quantity of raw materials, subsystems and finished products with the required specifications and quality; risks relating to the ongoing COVID-19 pandemic, including the risk of new and different government restrictions and regulations that limit our ability to do business, the risk of infection in our workforce and subsequent impact on our ability to conduct business, the risk that our supply chain, including our contract manufacturers, or customer demand may be negatively impacted, the risk posed by vaccine resistance and the emergence of fast-spreading variants, the risk that the COVID-19 pandemic will contribute to a global recession and the potential for costs associated with our operations during current and future years to be greater than we anticipate as a result of all of these factors; the risk we may be required to record a significant charge to earnings if our remaining goodwill or amortizable assets become impaired; risks relating to confidential information theft or misuse, including through cyber-attacks, cyber intrusion or ransomware; our ability to complete development and commercialization of products under development; the rapid development of new technology and competing products that may impair demand or render our products obsolete; the potential lack of customer acceptance for our products; risks associated with ongoing litigation; the risk that customers do not maintain their favorable perception of our brand and products, resulting in lower demand for our products; the risk that our products fail to perform or fail to meet customer requirements or expectations, resulting in significant additional costs; risks associated with strategic transactions; and other factors discussed in our filings with the Securities and Exchange Commission (SEC), including our report on Form 10-K for the fiscal year ended June 26, 2022, and subsequent reports filed with the SEC.

The forward-looking statements in this presentation were based on management's analysis of information available at the time the presentation was prepared and on assumptions deemed reasonable by management. Our industry and business is constantly evolving, and Wolfspeed undertakes no obligation to update such forward-looking statements to reflect new information, future events, subsequent developments or otherwise, except as may be required by applicable U.S. federal securities laws and regulations.

## Note on Non-GAAP Measures

This presentation includes certain non-GAAP financial measures and targets. Wolfspeed's management evaluates results and makes operating decisions using both GAAP and non-GAAP measures included in this presentation. Non-GAAP measures exclude certain costs, charges and expenses which are included in GAAP measures. By including these non-GAAP measures, management intends to provide investors with additional information to further analyze the Company's performance, core results and underlying trends. Non-GAAP measures are not prepared in accordance with GAAP and non-GAAP measures should be considered a supplement to, and not a substitute for, financial measures prepared in accordance with GAAP. Investors and potential investors are encouraged to review the reconciliations of non-GAAP financial measures to their most directly comparable GAAP measures attached to this presentation. Please see the Appendix at the end of this presentation.

# SPEAKERS & AGENDA

**1 — STRATEGIC UPDATE**  
GREGG LOWE, PRESIDENT & CEO

**2 — TECHNOLOGY OVERVIEW**  
ELIF BALKAS, VP OF RESEARCH & DEVELOPMENT,  
MATERIALS

**3 — OPERATIONS UPDATE**  
REX FELTON, SVP GLOBAL OPERATIONS  
MISSY STIGALL, VP, NC FAB OPERATIONS  
ADAM MILTON, VP, MOHAWK VALLEY FAB  
LISA FRITZ, VP GLOBAL QUALITY

**4 — BREAK: CONVERSATION STATIONS**

**5 — FINANCIAL UPDATE**  
NEILL REYNOLDS, EVP & CFO

**6 — Q&A SESSION**  
GREGG LOWE & NEILL REYNOLDS

**7 — FIRESIDE CHAT**  
THIERRY BOLLORÉ, CEO, JAGUAR LAND ROVER  
& GREGG LOWE, CEO, WOLFSPEED

# Strategic Overview

*Wolfspeed*<sup>®</sup> GREGG LOWE | PRESIDENT & CEO

# JAGUAR LAND ROVER PARTNERS WITH WOLFSPEED FOR SILICON CARBIDE SEMICONDUCTOR TECHNOLOGY



Gregg Lowe and Thierry Bolloré, CEO of JLR



## Key Partnership Facts

- *Reimagine* strategy transforming Jaguar Land Rover into an **electric-first business**
- Wolfspeed **enables a secure supply chain** for Silicon Carbide devices for next generation vehicles
- Wolfspeed's Silicon Carbide devices have been used by Jaguar TCS Racing Formula E team since 2017
- Next generation Silicon Carbide devices to be produced at **world's largest, fully automated 200mm Silicon Carbide Mohawk Valley Fab**



## LAST YEAR I TOOK A BIKE RIDE...



...and spoke about the importance of Wolfspeed's focus on where we're going...

## ...THIS YEAR I TOOK A ROADTRIP

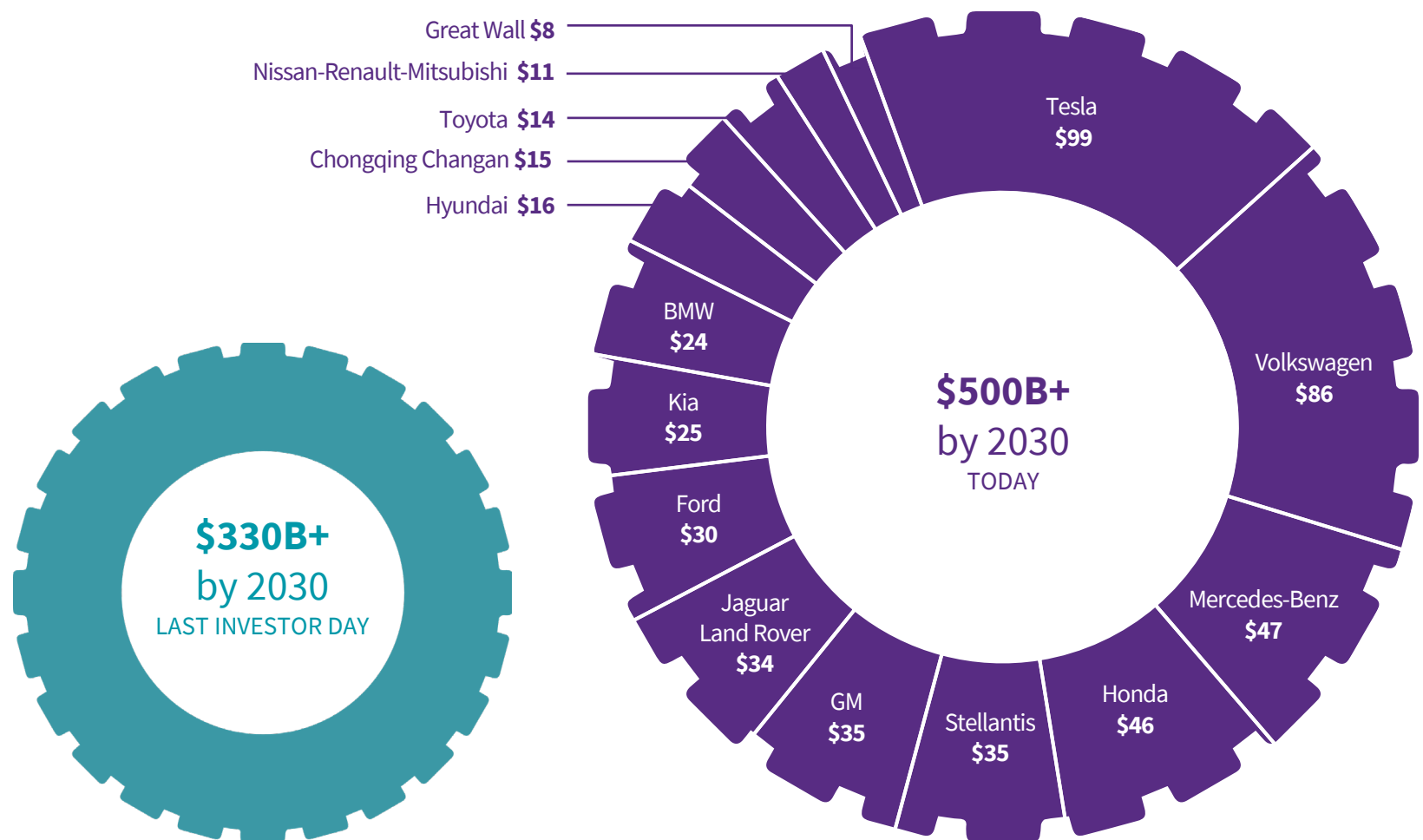


### Some Things I Learned

- 1 Driving an EV with a longer range definitely calms “range anxiety”
- 2 The charging stations work, and were nearly perfect
- 3 But the charging infrastructure will need improvements soon
- 4 Charging is a social event



# AUTOMAKERS' ANNOUNCED INVESTMENTS IN NEXT-GEN VEHICLES ONLY CONTINUE TO INCREASE





**Jaguar Land Rover** launches goal of Jaguar electric only vehicles from 2025 onwards



**GM** plans to transition to an all-electric fleet by 2035



**Stellantis** announces 40-50% of US sales will be EVs by 2030



**Tesla** targets selling 20M EVs/year before 2030



**Mercedes Benz** announces 50% of cars to be EVs by 2025, and 100% by 2030

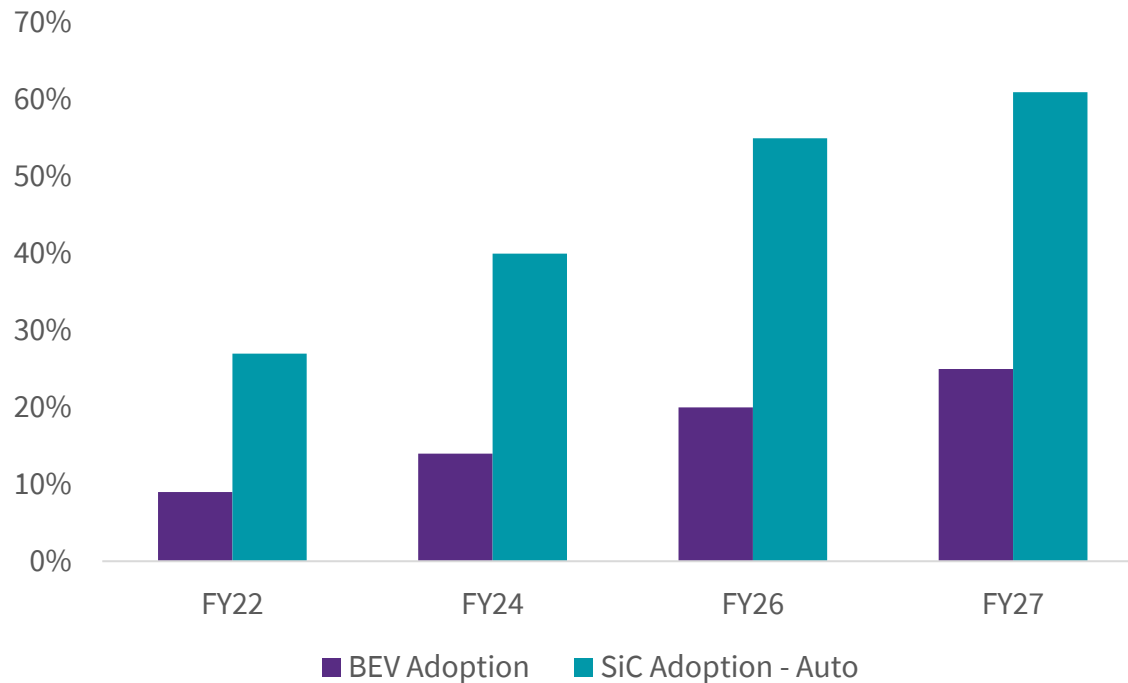


**Volkswagen** plans to for 50% of sales to be BEVs by 2030

<sup>1</sup>S&P Global Market Intelligence, International Counsel on Clean Transportation, company announcements, data in \$B

# EV DEMAND IS DRIVING ACCELERATION OF SILICON CARBIDE ADOPTION

BEV & SiC Adoption Rates<sup>1</sup> (%)



## Key Drivers

- Estimated **92.5M vehicle sales in FY27**
- Battery Electric Vehicle (BEV) ramp
- Electric vehicle **charging infrastructure momentum**
- **New applications enabled** by Silicon Carbide

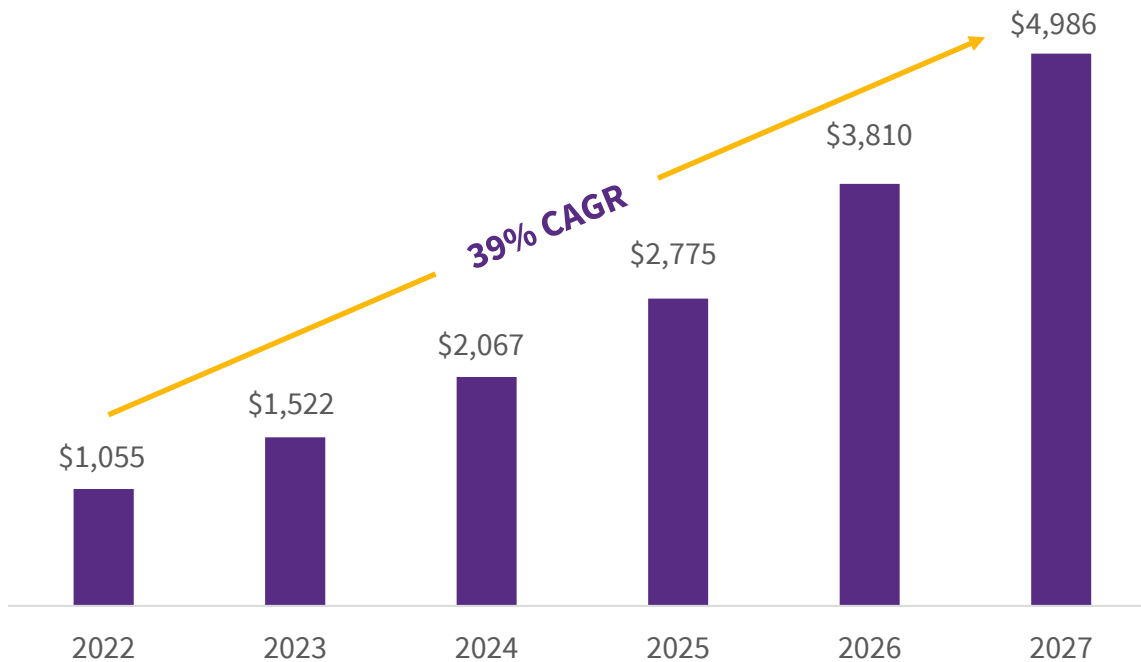
Next generation high-voltage Power Devices are subject to different headwinds and tailwinds than the broader silicon semiconductor industry

<sup>1</sup>Internal Estimates

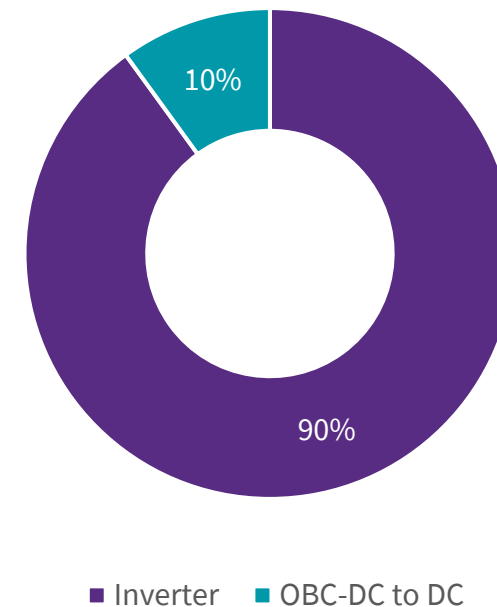
# SILICON CARBIDE CONTENT IN EVs IS INCREASING

The transition from ICE to BEV powertrain nearly doubles the amount of semiconductor content per vehicle from ~\$500 per vehicle to ~\$1,000 per vehicle<sup>1</sup>; ~90% of Silicon Carbide content in an EV is the inverter

Value of Silicon Carbide Content in EVs (\$M)<sup>2</sup>



Silicon Carbide Content Breakdown per EV<sup>2</sup>

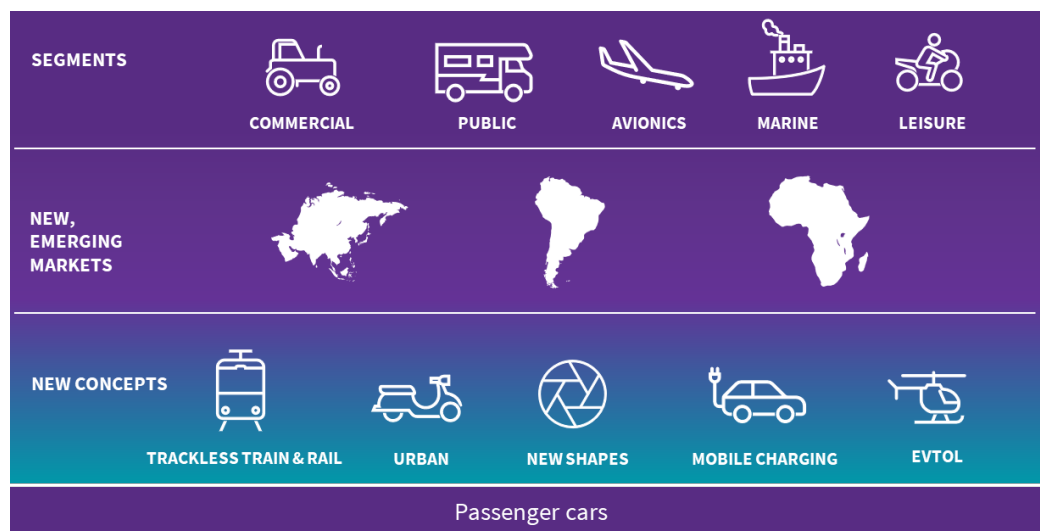


Wolfspeed is one of the largest suppliers of Silicon Carbide to OEMs

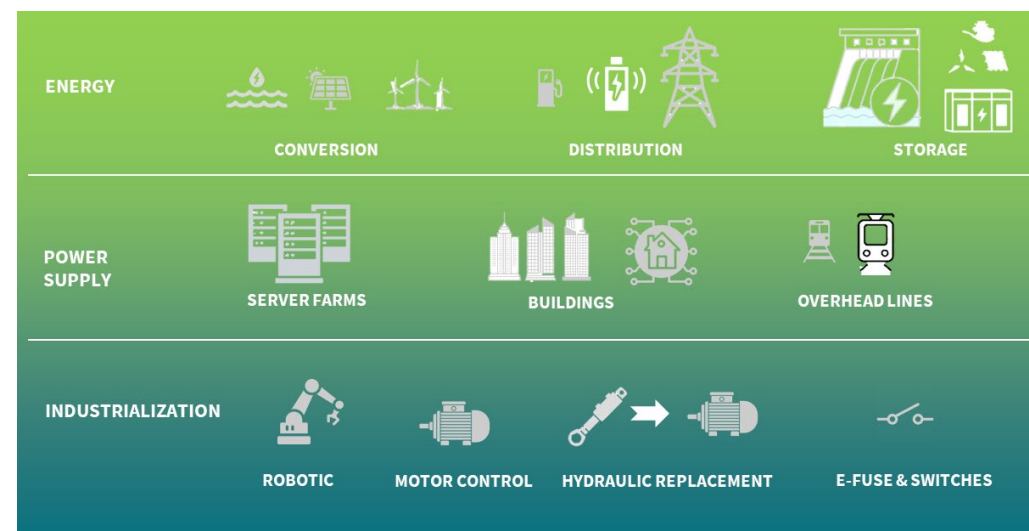
<sup>1</sup>Cowen 2022 Compound Semis Report, <sup>2</sup>Yole Power SiC 2022 report

# SUCCESS IN EVs IS DRIVING SILICON CARBIDE ADOPTION ACROSS OTHER MOBILITY SEGMENTS AND BROADER INDUSTRIAL APPLICATIONS

\$5B+ opportunity in transportation applications by 2027, driven largely by automotive<sup>1</sup>



Over \$1B opportunity in non-transportation applications by 2027<sup>1</sup>

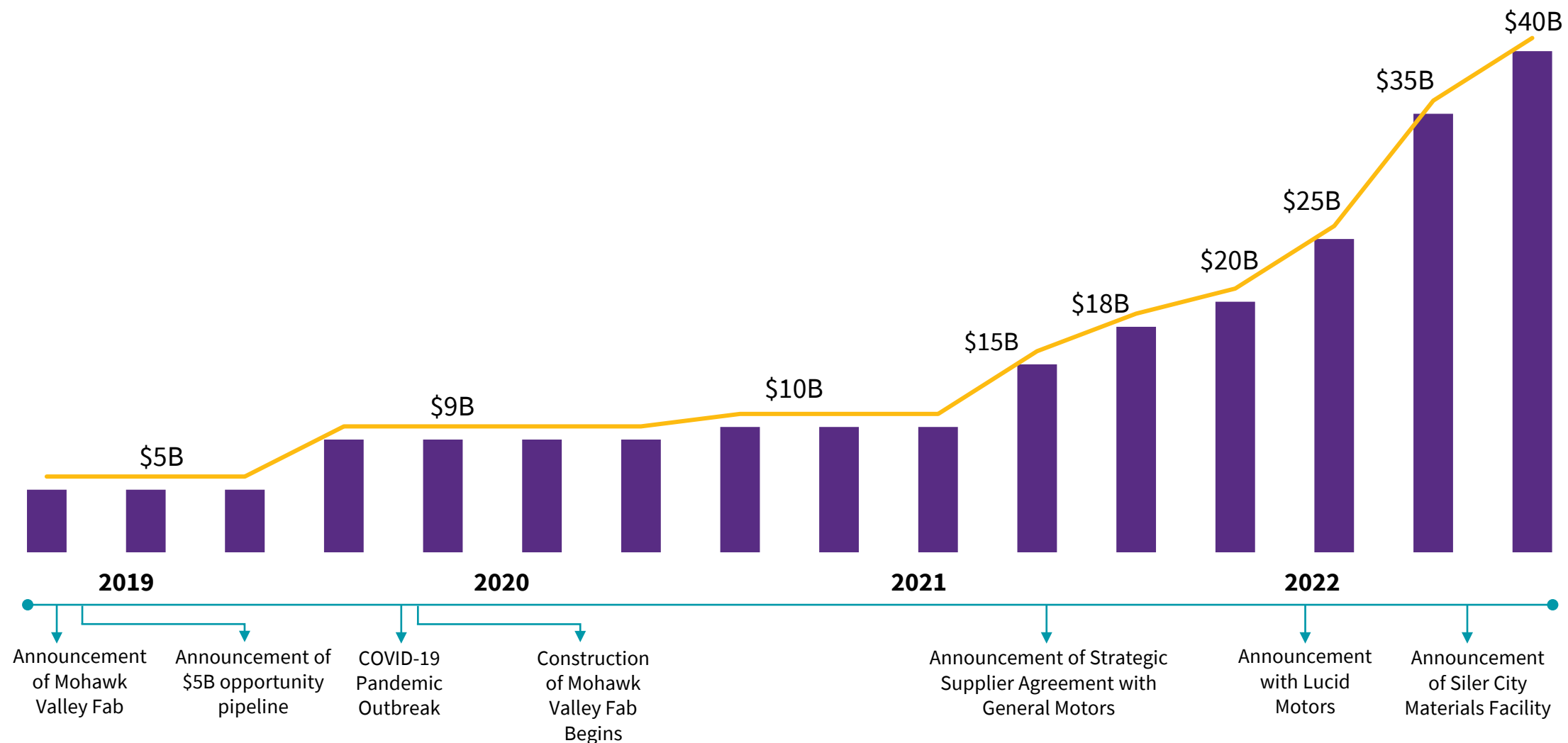


Arrow Electronics partnership has provided access to global sales force to enter new markets and expand customer base

<sup>1</sup>Yole Power SiC 2022 report

# MACRO TAILWINDS BOLSTER WOLFSPEED DEVICE OPPORTUNITY PIPELINE

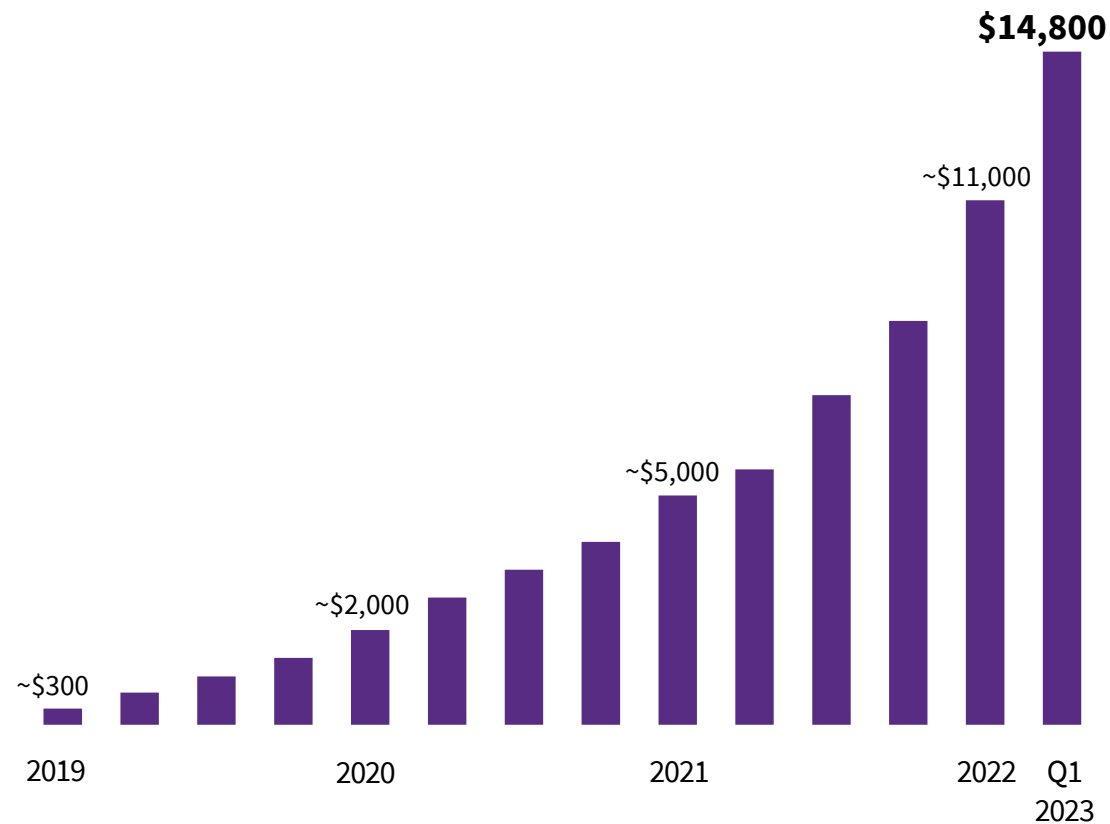
Announcing the construction of the world's largest Silicon Carbide device fab in 2019 helped build tremendous momentum, which resulted in a large and growing opportunity pipeline for Silicon Carbide devices





# WE CONTINUE TO CAPTURE DESIGN-INS AND CAPITALIZE ON THIS PIPELINE

Cumulative Design-Ins (\$M)



## Key Takeaways

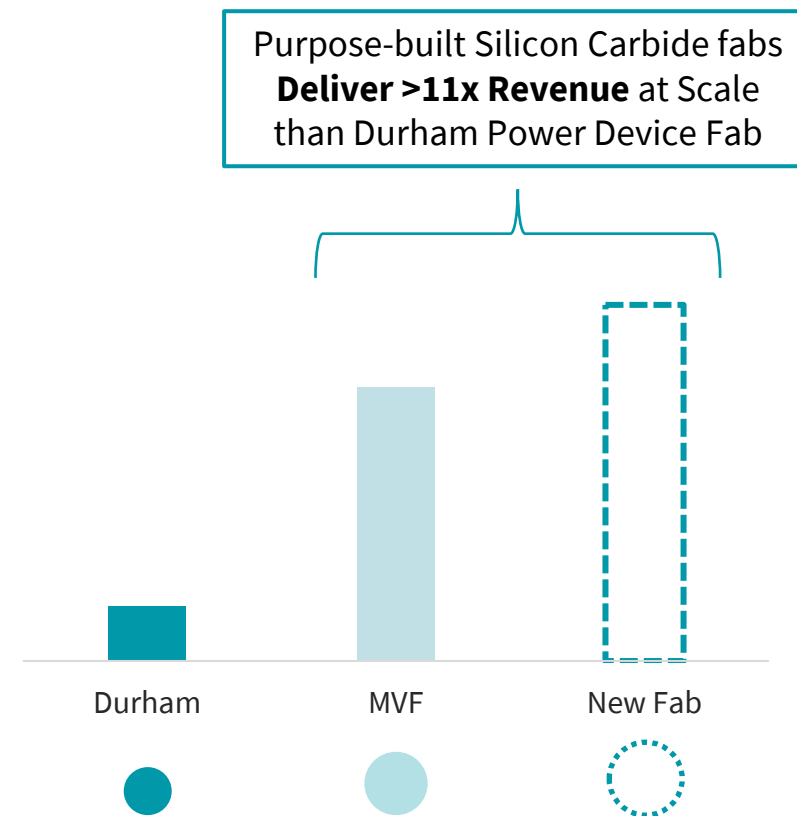
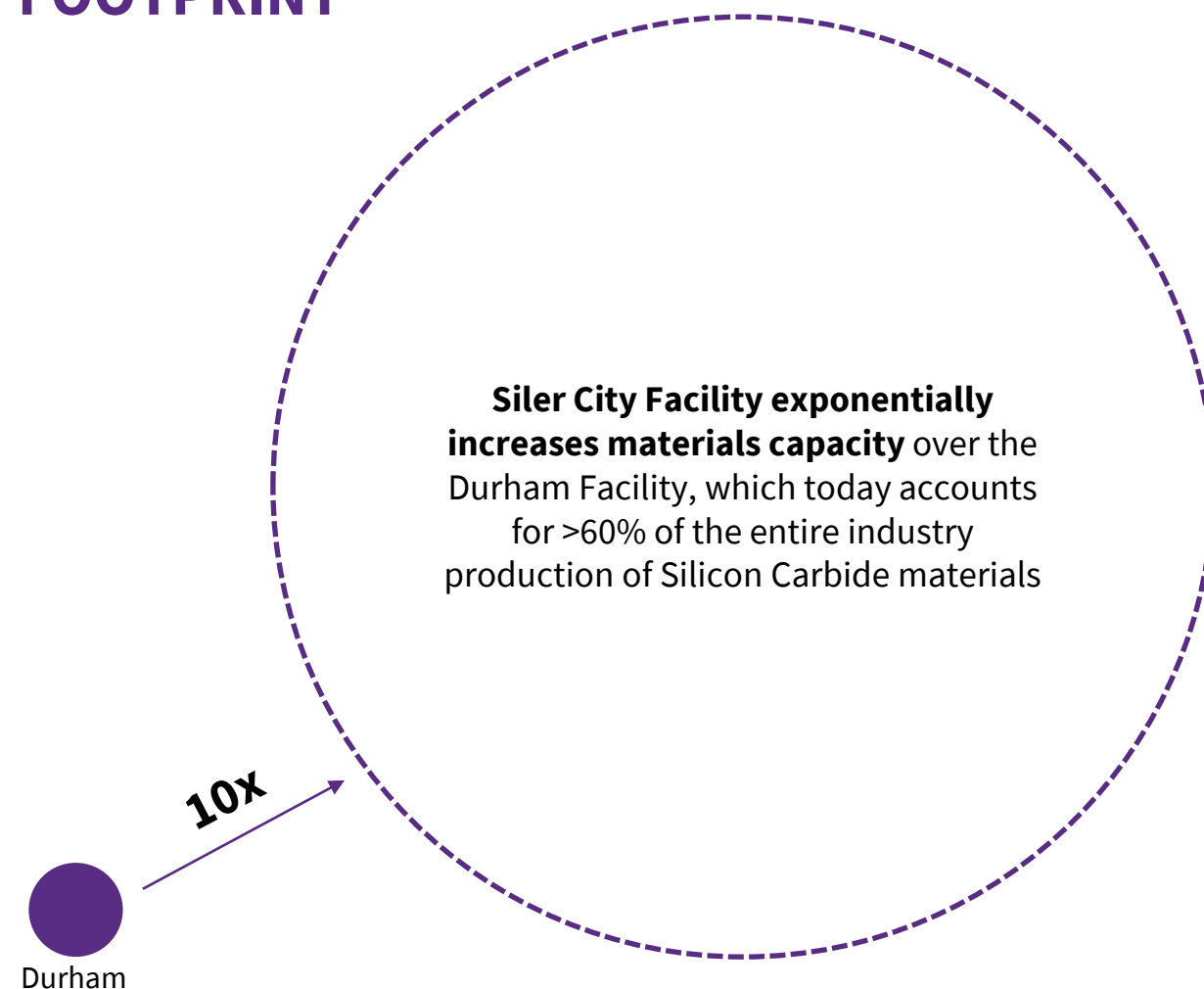
- **\$14.8 billion of cumulative Design-ins<sup>1</sup>** since 2019
- Design-in to Design-win **conversion rate of ~43%**
- Announcement of Siler City Materials Facility and buildout of Mohawk Valley Fab **allow for scale to keep up with growing demand**
- Silicon Carbide **continues to take share** from traditional silicon applications

<sup>1</sup>Design-in definition in appendix

## OUR EXPECTATIONS ONE YEAR AGO AT INVESTOR DAY 2021

	Investor Day 2021	Investor Day 2022	What's Happened
<b>Publicly Announced EV Investment Goals by 2030</b>	\$330B+	\$500B+	Pull forward in demand curve for Silicon Carbide driven by increasing adoption of EVs and increasing adoption of Silicon Carbide in EVs
<b>Opportunity Pipeline</b>	\$18B	\$40B	
<b>Cumulative Design-Ins</b>	\$5B	\$14.8B	

# LEADING TO THE WORLD'S LARGEST SILICON CARBIDE MANUFACTURING FOOTPRINT



Capacity expansion supports >5x revenue growth by 2027

# OUR FOCUS CAPITALIZES ON MASSIVE OPPORTUNITY



1

\$40 billion opportunity pipeline presents a window to expand our reach in the market

2

We are exponentially increasing capacity with greenfield fabs and facilities to support \$14.8 billion in Design-ins

3

We are exploring new markets, and we are excited to see what Silicon Carbide will unlock next

**LET'S REIMAGINE A MORE  
SUSTAINABLE WORLD.  
TOGETHER.**





# Technology Update



ELIF BALKAS | VP OF RESEARCH  
AND DEVELOPMENT, MATERIALS

# INTRODUCTION – ELIF BALKAS

**Invested leader in technology with the capacity to efficiently lead heterogeneous teams while respecting their uniqueness to collectively achieve what others say can't be done**



## About Me

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VP of Research and Development Materials, Wolfspeed

### EXPERIENCE AND EDUCATION

Silicon Carbide crystal growth

Silicon Carbide and Gallium Nitride epitaxy

The Wharton School

Executive Education

Product management and strategy, scaling a business and leadership development

North Carolina State University

Ph.D., Materials Science, minor in Electrical and Computer Engineering

Gallium Nitride crystal growth via physical vapor transport

# WOLFSPEED IS THE LEADING PURE PLAY, VERTICALLY INTEGRATED SILICON CARBIDE COMPANY

## Materials

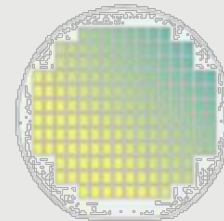
**Silicon Carbide Crystals**



**Wafers and Epitaxy**

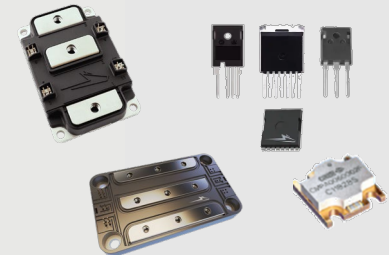


**Wafer Fabrication (Bare Die)**



## Devices

**Packaged Parts (MOSFETs, Diodes, Modules, GaN HEMTs, MMICs)**



# WHAT IS SILICON CARBIDE?

Combination of silicon and carbon in a crystalline structure

Crystalizes at very high temperature and can take many (>200) crystalline structures

Can be electrical insulator or conductor

Superior mechanical, chemical and thermal properties, all combined

Variety of applications including abrasive, ceramics, electronics and medical

Ultimate material to design and build Power, RF and optical devices



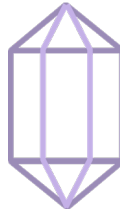
13	Al	Aluminum	26.981538	13
14	Si	Silicon	28.0855	14
15	P	Phosphorus	30.97376	15
16	S	Sulfur	32.06	16
17	Cl	Chlorine	35.45	17
18	Ar	Argon	39.948	18
19	K	Potassium	39.0983	19
20	Ca	Calcium	40.078	20
21	Sc	Scandium	44.955912	21
22	Ti	Titanium	47.88	22
23	V	Vanadium	50.9415	23
24	Cr	Chromium	51.9961	24
25	Mn	Manganese	54.938045	25
26	Fe	Iron	55.845	26
27	Co	Cobalt	58.933195	27
28	Ni	Nickel	58.6934	28
29	Cu	Copper	63.546	29
30	Zn	Zinc	65.38	30
31	Ga	Gallium	69.723	31
32	Ge	Germanium	72.64	32
33	As	Arsenic	74.9216	33
34	Se	Selenium	78.96	34
35	Br	Bromine	79.904	35
36	Kr	Krypton	83.80	36
37	Rb	Rubidium	85.4678	37
38	Sr	Strontium	87.62	38
39	Y	Yttrium	88.90584	39
40	Zr	Zirconium	91.224	40
41	Nb	Niobium	92.90638	41
42	Mo	Molybdenum	95.94	42
43	Tc	Technetium	98	43
44	Ru	Ruthenium	101.07	44
45	Rh	Rhodium	102.9055	45
46	Pd	Palladium	106.42	46
47	Ag	Silver	107.8682	47
48	Cd	Cadmium	112.411	48
49	In	Indium	114.818	49
50	Sn	Tin	118.710	50
51	Sb	Antimony	121.757	51
52	Te	Tellurium	127.6	52
53	I	Iodine	126.905	53
54	Xe	Xenon	131.29	54
55	Ba	Barium	137.327	55
56	La	Lanthanum	138.905	56
57	Ce	Cerium	140.12	57
58	Pr	Praseodymium	140.90765	58
59	Nd	Niobium	144.242	59
60	Pm	Promethium	144.9127	60
61	Sm	Samarium	150.36	61
62	Eu	Europium	151.964	62
63	Gd	Gadolinium	157.25	63
64	Tb	Terbium	158.92532	64
65	Dy	Dysprosium	162.5001	65
66	Ho	Holmium	164.93032	66
67	Er	Erbium	167.259	67
68	Tm	Thulium	168.93032	68
69	Yb	Ytterbium	173.054	69
70	Lu	Lutetium	174.967	70
71	Hf	Hafnium	178.49	71
72	Ta	Tantalum	180.94788	72
73	W	Tungsten	183.84	73
74	Re	Rhenium	186.207	74
75	Os	Osmium	190.23	75
76	Ir	Iridium	192.222	76
77	Pt	Pt	195.084	77
78	Au	Gold	196.966569	78
79	Hg	Mercury	200.59	79
80	Tl	Thallium	204.38	80
81	Pb	Lead	207.2	81
82	Bi	Bismuth	208.9804	82
83	Po	Polonium	209	83
84	At	Astatine	210	84
85	Fr	Francium	223	85
86	Ra	Radium	226	86
87	Ac	Actinium	227	87
88	Th	Thorium	232.0377	88
89	Pa	Protactinium	231.03688	89
90	U	Uranium	238.02891	90
91	Np	Neptunium	237.048173	91
92	Pu	Plutonium	244.06422	92
93	Am	Americium	243.061381	93
94	Cm	Curium	247.070353	94
95	Bk	Berkelium	247.070353	95
96	Cf	Californium	251.083288	96
97	Es	Einsteinium	252.083288	97
98	Fm	Fermium	257.10351	98
99	Md	Mendelevium	258.10351	99
100	No	Nobelium	259.10351	100
101	Lr	Lawrencium	262.10351	101
102	Uu	Ununbium	263	102
103	Uub	Ununbium	263	103
104	Uuq	Ununquadium	264	104
105	Uup	Ununpentium	264	105
106	Uuh	Ununhexium	265	106
107	Uus	Ununseptium	266	107
108	Uuo	Ununoctium	267	108
109	Uut	Ununtrium	268	109
110	Uuq	Ununquadium	269	110
111	Uup	Ununpentium	270	111
112	Uuh	Ununhexium	271	112
113	Uus	Ununseptium	272	113
114	Uuo	Ununoctium	273	114
115	Uut	Ununtrium	274	115
116	Uuq	Ununquadium	275	116
117	Uup	Ununpentium	276	117
118	Uuh	Ununhexium	277	118
119	Uus	Ununseptium	278	119
120	Uuo	Ununoctium	279	120

<sup>1</sup>Source: [Wolfspeed website](https://www.wolfspeed.com/)

# PRODUCING SILICON CARBIDE MATERIALS AT SCALE PRESENTS UNIQUE CHALLENGES



Growing Silicon Carbide crystals requires a controlled environment of 2500 °C, half the temperature of the sun



Silicon Carbide doesn't melt; unlike silicon, it evaporates requiring precision to create a quality crystal



Silicon Carbide can form 200+ crystal structures – only ONE polytype is usable for power applications



Producing Silicon Carbide requires experience and proprietary tools and processes



Wolfspeed wafer processing technology is critical for device design, performance and quality



**Wolfspeed has continuously refined low-defect Silicon Carbide production over the last 35 years**

## TECHNOLOGY

# Powering more, consuming less.<sup>TM</sup>

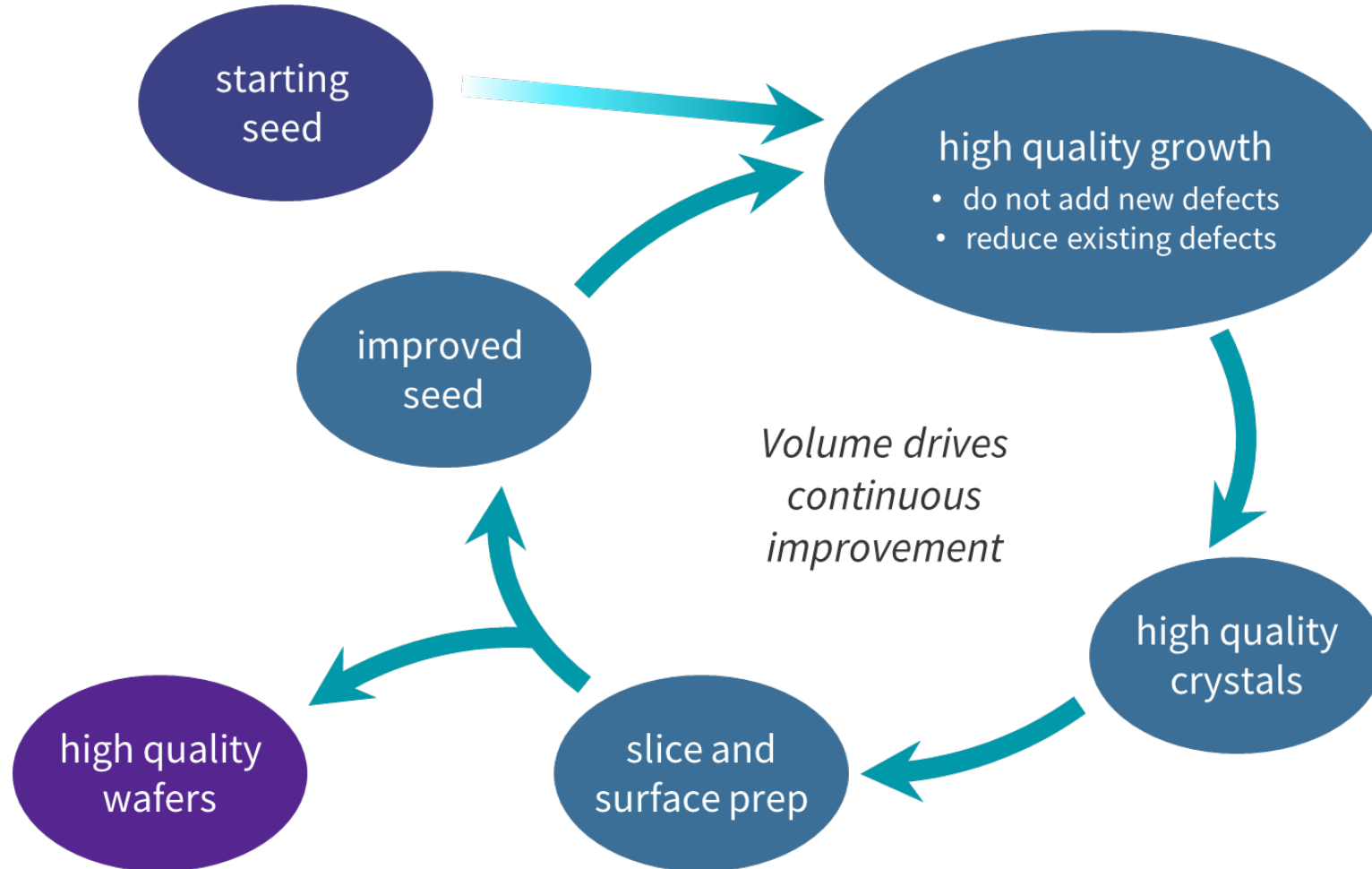
## Silicon Carbide is superior to Silicon

- Higher efficiency
- Faster switching
- Improved thermal performance
- Higher reliability
- Lower system costs

## WOLFSPEED SILICON CARBIDE IS THE FUTURE OF SEMICONDUCTORS

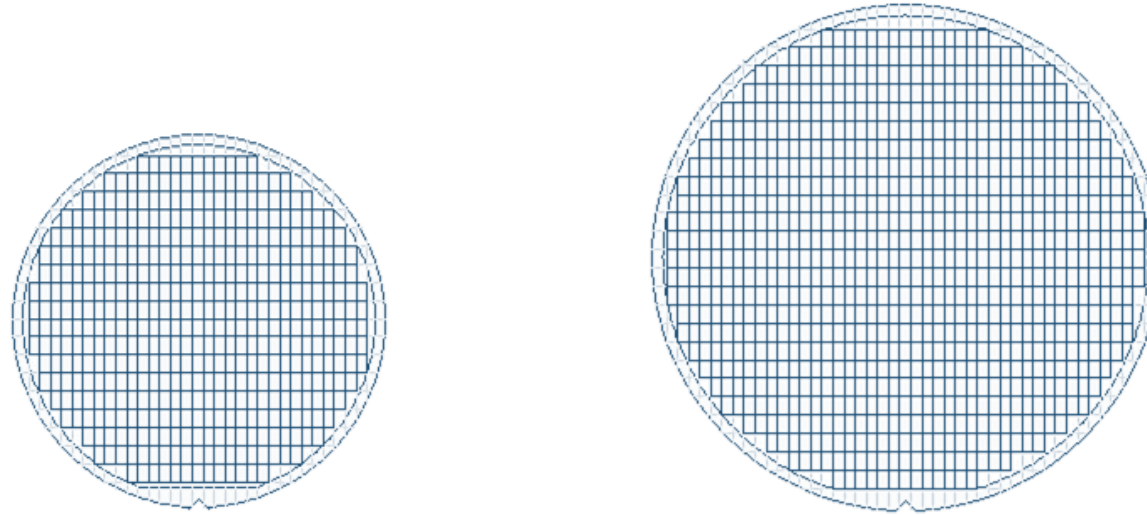


# CYCLES OF LEARNING ENABLE CONTINUAL OPTIMIZATION OF SILICON CARBIDE MATERIALS PRODUCTION



# DIE COUNT ADVANTAGE OF LARGE DIAMETER SILICON CARBIDE WAFERS

**32 mm<sup>2</sup> die**



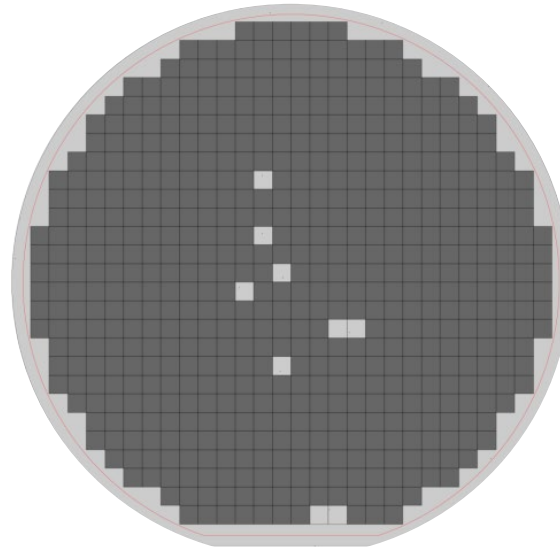
	150mm	200mm
# whole die	448	845
% edge die	14	7

More devices from a single wafer with enhanced productivity and efficiency

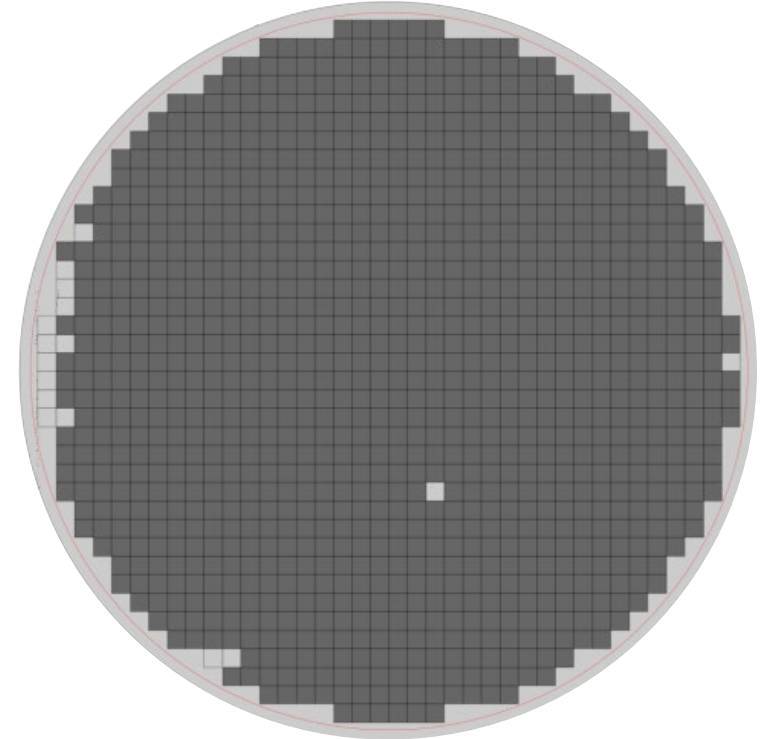
# MICROPIPES AND PROJECTED FAB DIE YIELD

## 5x5 die maps

Micropipe is an open-core structural defect and primary device killer



**150mm**

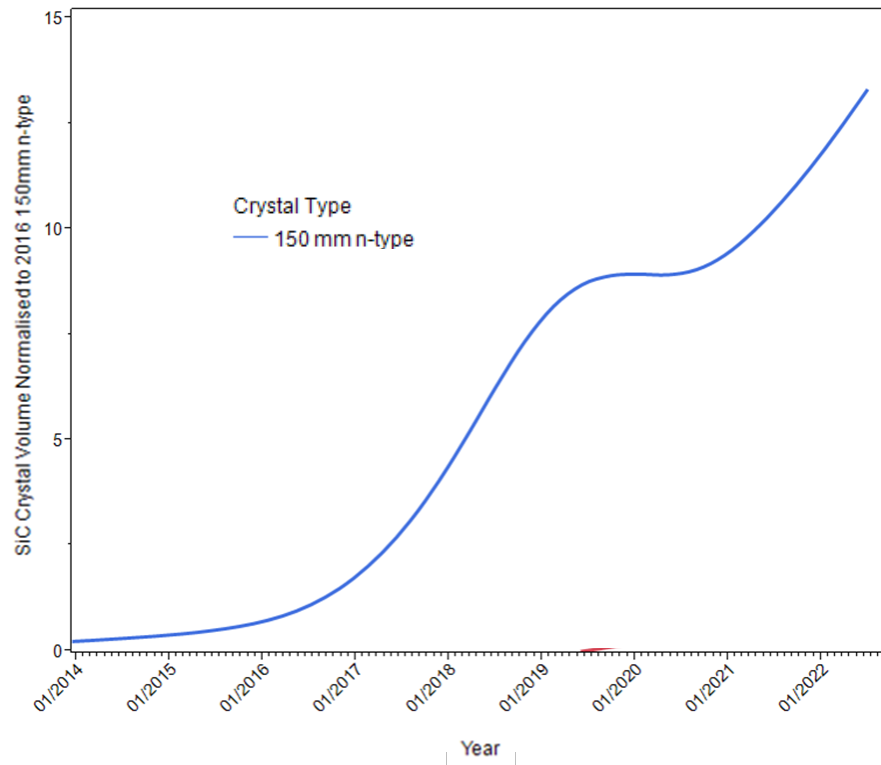


**200mm**

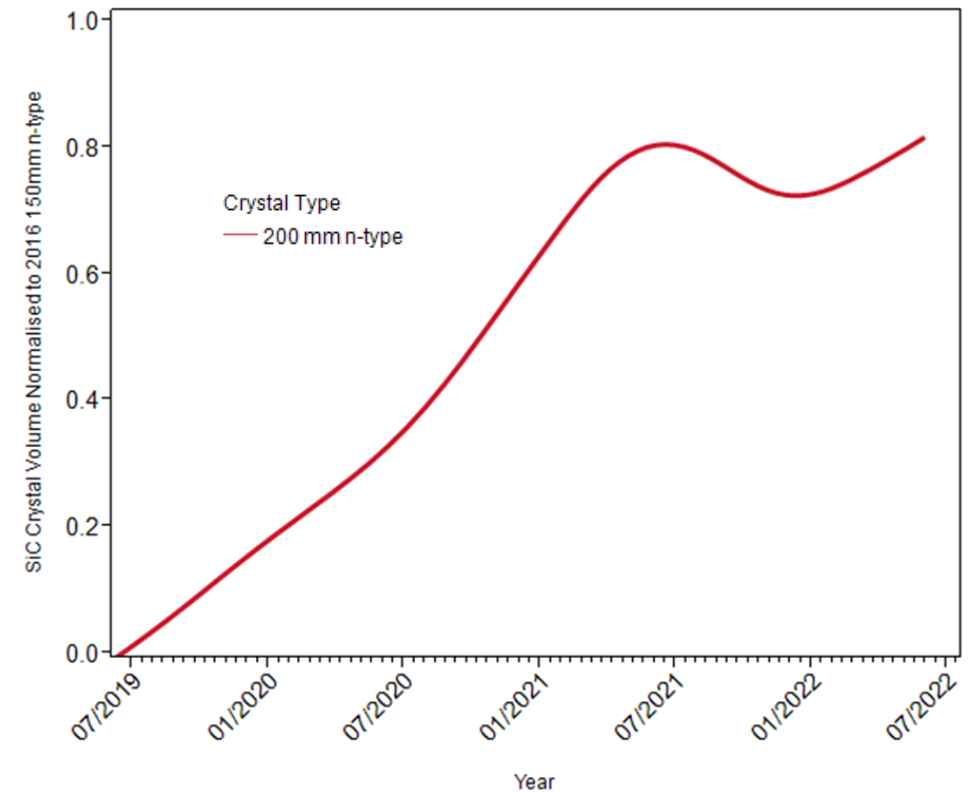
200mm Silicon Carbide quality is equal to or better than 150mm

# SILICON CARBIDE VOLUME AT WOLFSPEED

n-type 4H-SiC Crystal Volume Normalized to 2016



200mm Silicon Carbide Volume



200mm Silicon Carbide volume trajectory is now equivalent to 150mm volume in 2016

## LEVERAGING DEEP SILICON CARBIDE KNOWLEDGE AND TECHNICAL EXPERTISE AFTER 35 YEARS OF INDUSTRY LEADERSHIP

Silicon Carbide is **the new generation** semiconductor creating many advantages and opportunities

Our combined Silicon Carbide **expertise, technology and volume** are unmatched in the industry

200mm Silicon Carbide **quality equal to or better than** 150mm enabling the die count advantage of larger diameter

200mm Silicon Carbide **volume is increasing** with strong technology performance



**LET'S REIMAGINE A MORE  
SUSTAINABLE WORLD.  
TOGETHER.**



# Operations Update



REX FELTON | SVP GLOBAL OPERATIONS  
MISSY STIGALL | VP, NC FAB OPERATIONS  
ADAM MILTON | VP, MOHAWK VALLEY FAB  
LISA FRITZ | VP, GLOBAL QUALITY

# SPEAKERS



**REX FELTON**  
SENIOR VICE PRESIDENT,  
GLOBAL OPERATIONS



**MISSY STIGALL**  
VICE PRESIDENT,  
NC FAB OPERATIONS



**ADAM MILTON**  
VICE PRESIDENT,  
MOHAWK VALLEY FAB



**LISA FRITZ**  
VICE PRESIDENT,  
GLOBAL QUALITY



# WE ARE WOLFSPEED, WE ARE ONEPACK



## Global Operations Vision

- Safe, Right, Fast Mentality
- Nimble and Agile
- OnePack Culture: Make it Personal and Win
- Reaching for Perfection and Catching Excellence

# SILER CITY – WORLD’S LARGEST SILICON CARBIDE MATERIALS FACILITY



Wolfspeed Durham: current world's largest Silicon Carbide Materials facility

## Key Siler City Takeaways

- Site in excess of 400 acres; using 250 acres
- Between 1.5M-1.7M sq ft in the first phase
- Greater than 10X the current manufacturing capacity of the Durham facility
- This facility will be highly automated with an enhanced level of robotic processing, balanced with worker amenities





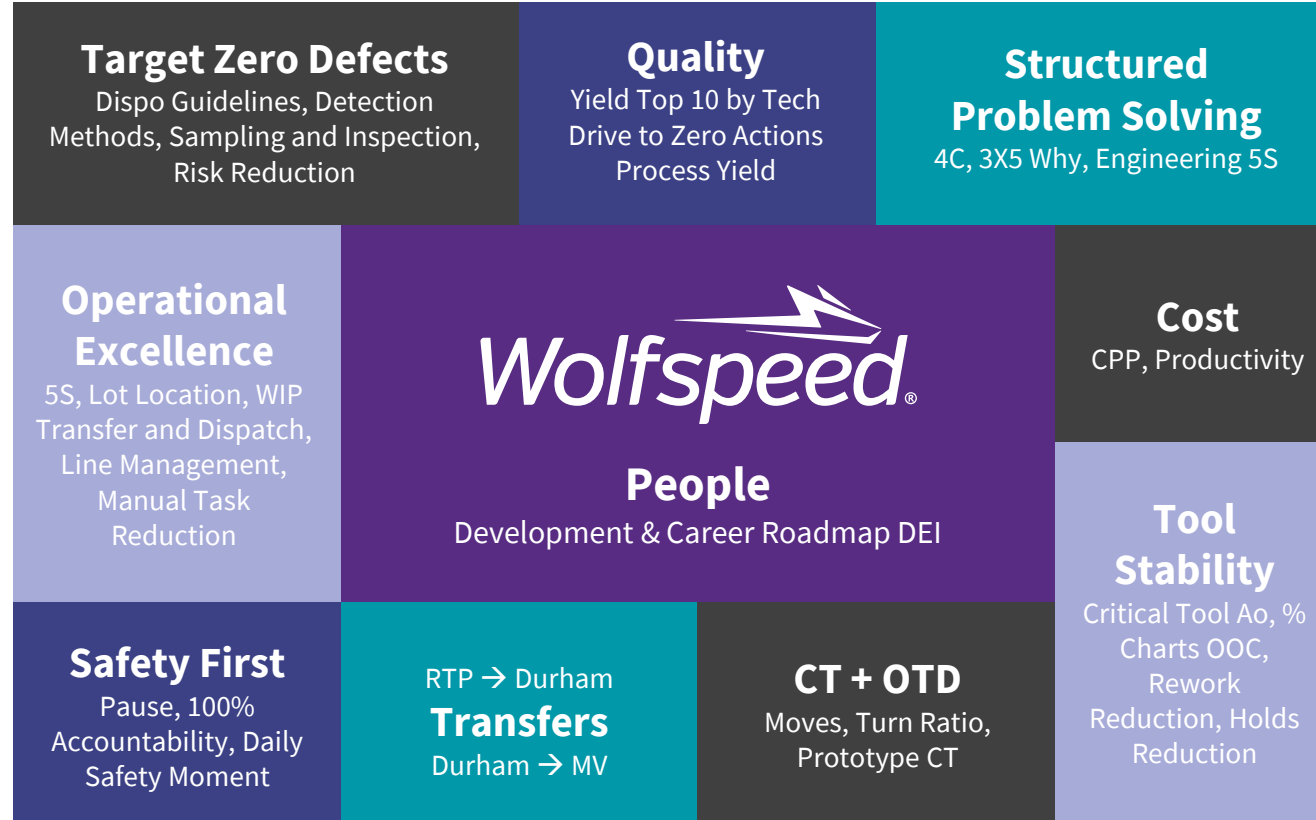
# SILER CITY VS DURHAM – MATERIALS MANUFACTURING SPACE COMPARISON



Current Durham Materials facility footprint overlaid on Siler City footprint

# WOLFSPEED WORLD CLASS MANUFACTURING

**OnePack culture of operations excellence, automotive quality and productivity**



**Safety First, Quality Mindset, Relentless Execution, 5S Foundation**

## Manufacturing Execution

- 10% reduction in Multi-Factory Flow through optimization in front end of the line
- 9% reduction in non-value add steps, improved overall cycle time by 2.5 days
- 550 trained on 5S fundamentals
- 67% increase in output from Q1 to Q4FY22

## Process and Equipment Stability

- 60% hold rate and 45% rework rate reduction YoY
- 16% reduction in long tool downs
- Overdue workorders reduced by 50%

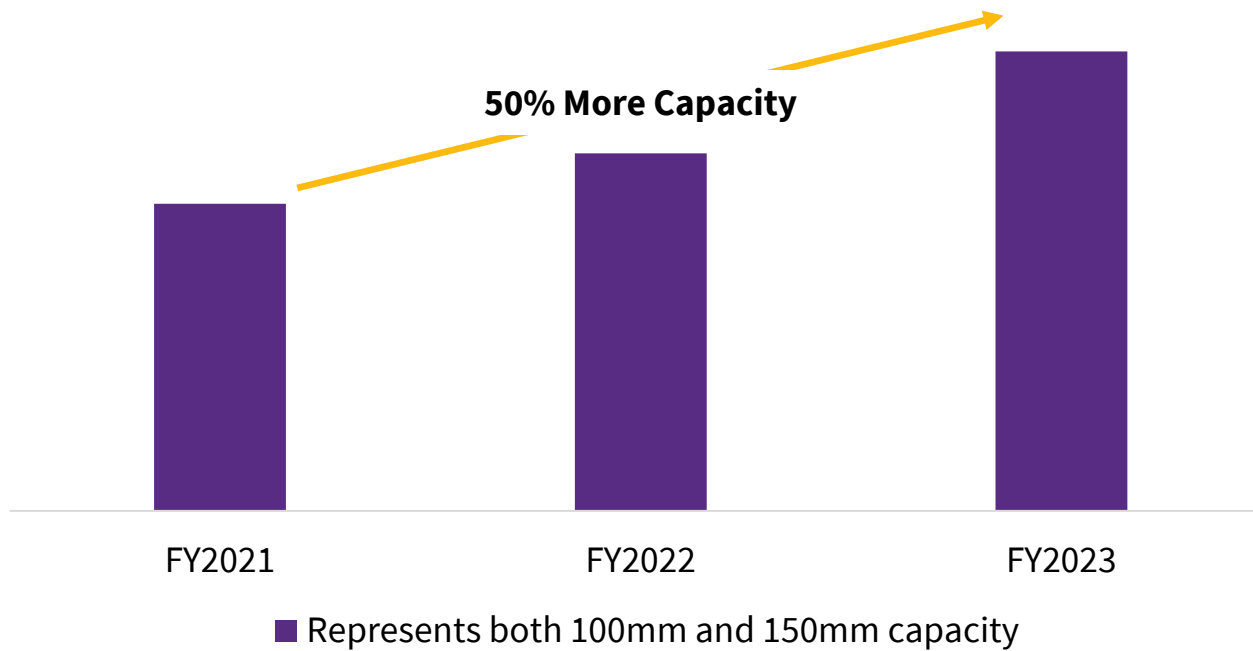
## Quality & Reliability

- 2000+ parameters added to SPC system
- 14% Improvement in overall Power yield



# NORTH CAROLINA DEVICE FAB CAPACITY

## Power Device Capacity



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Strategic capital investment in FY2021 increased output at a lower cost

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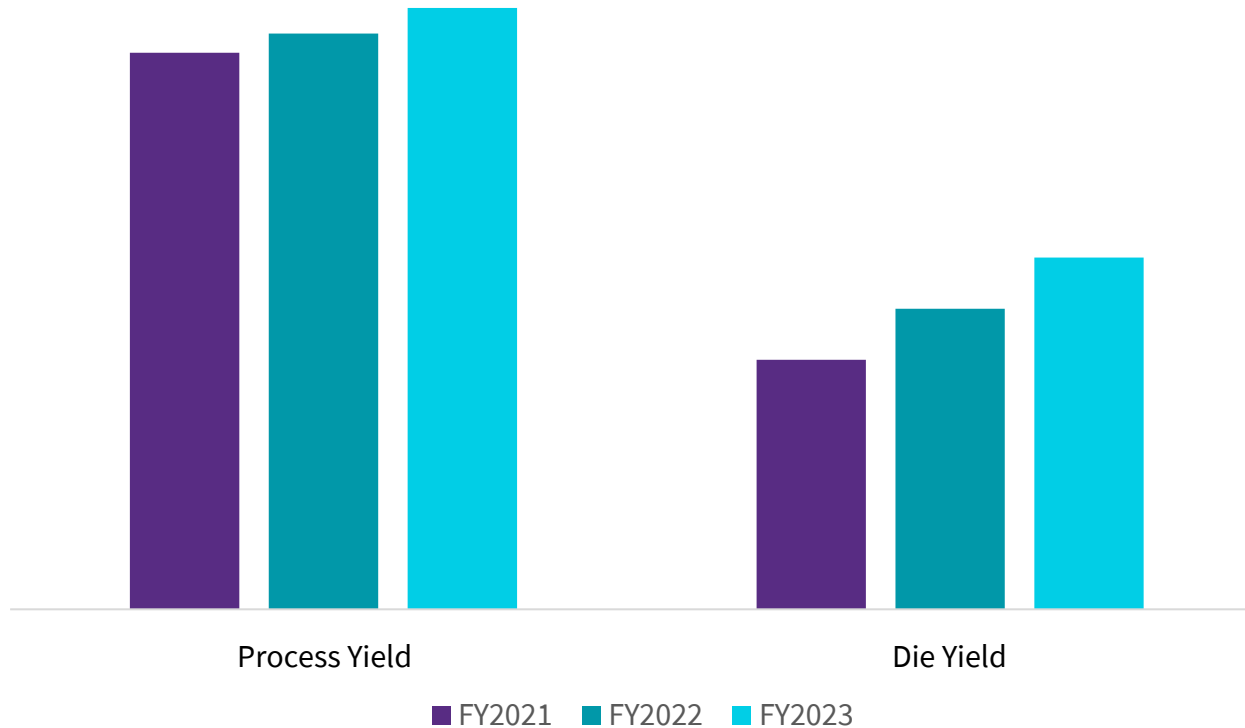
Ongoing process consolidations to get more out of the installed tool base and reduce single of a kind toolsets

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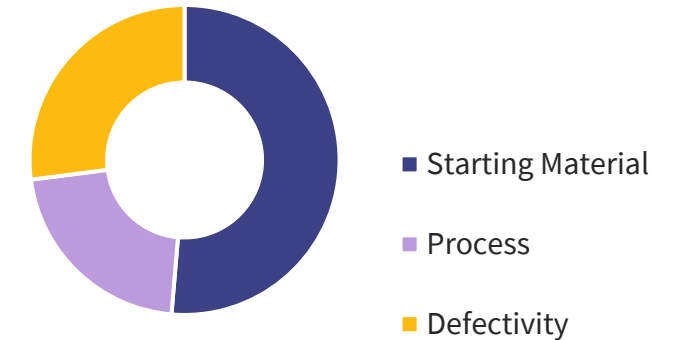
Continue to drive efficient tool stability through implementation of spare management and harvest strategy

# IMPROVING DURHAM DEVICE YIELDS

Process Yield and Die Yield



Continuous Improvement Opportunity



## Drivers

- Task Forces focused on reducing human error
- Tool Stability Teams driving better tool interactions with Silicon Carbide wafers
- Process cornering for better die performance
- Defectivity reduction through improved cycle time and inline layer teams

# MOHAWK VALLEY FAB – KEY DIFFERENTIATION

Mohawk Valley Fab was designed from the ground up for world class 200mm Silicon Carbide devices

## Best Quality

- Automotive quality systems by design
- IATF certified out of the gate

## Best People

- World class team combining decades of experience with Silicon Carbide, silicon HVM, and automotive

## Best Systems

- 300mm silicon-like automation retrofitted to work on 200mm Silicon Carbide
- Manufacturing systems supporting “big data” environment

## Best Silicon Carbide

- Yield and reliability demonstrated in pilot line
- Wafer handling expertise
- Vertically integrated feedback loop

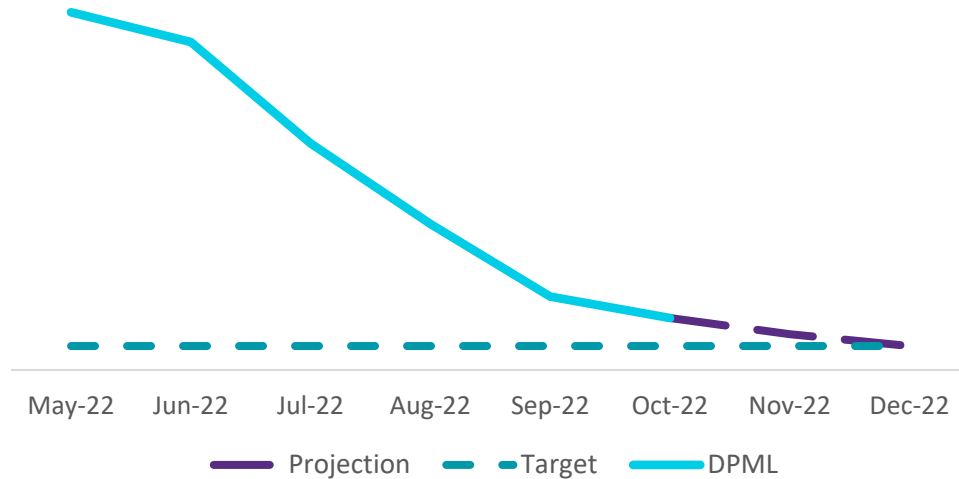






# MVF OPERATIONAL PERFORMANCE

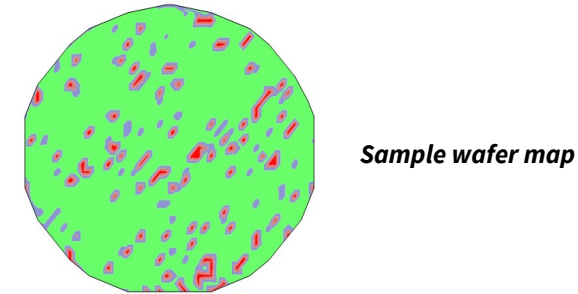
## Days per Mask Layer Roadmap



## Days per Mask Layer Roadmap

- Days / Mask Layer cycle metric continues to improve with equipment and facility turn ons and automation ramp up
- Expected to be at or below cycle time target for high volume manufacturing by end of CY22

## Yield Performance

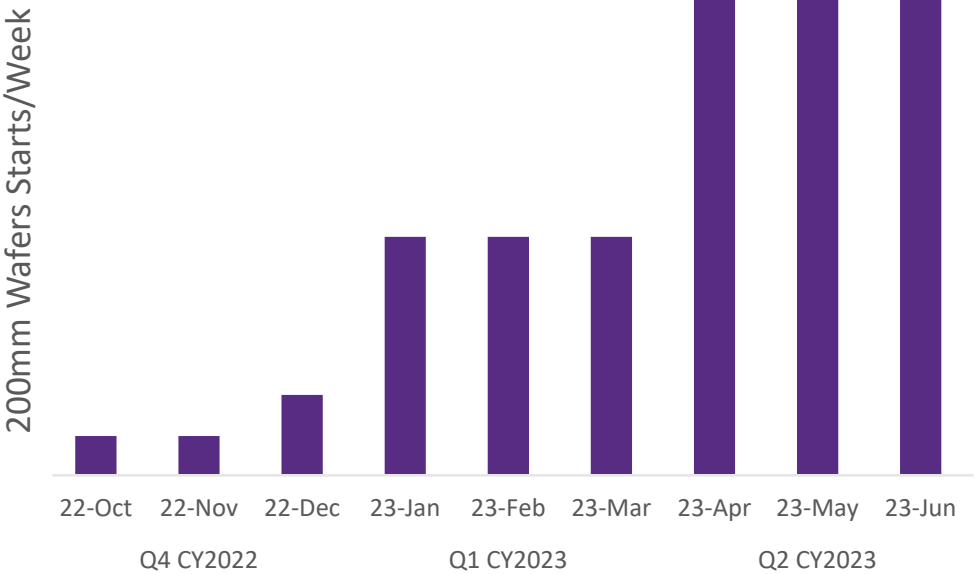


## Wafer Yield Progress

- **Time from startup to yield greatly reduced** by work in Albany pilot line.
- **All MOSFET lots producing yielding wafers** → 3 high volume product qualification lots in the fab
- Schottky Diodes also **yielding consistent with performance in the pilot line**
- **Wafer Handling breakage single digit** due to high level of automation

# MVF RAMP PLAN

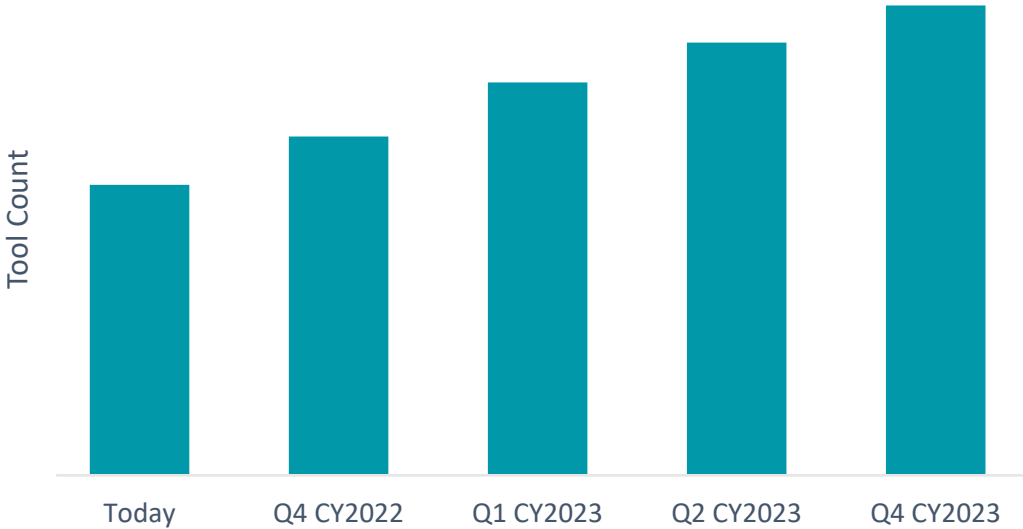
200mm Wafer Starts Ramp Plan



## Wafer Ramp

- Ramp continues to increase over coming months
- Product qualification and proliferations to support ramp

Production Equipment Installed

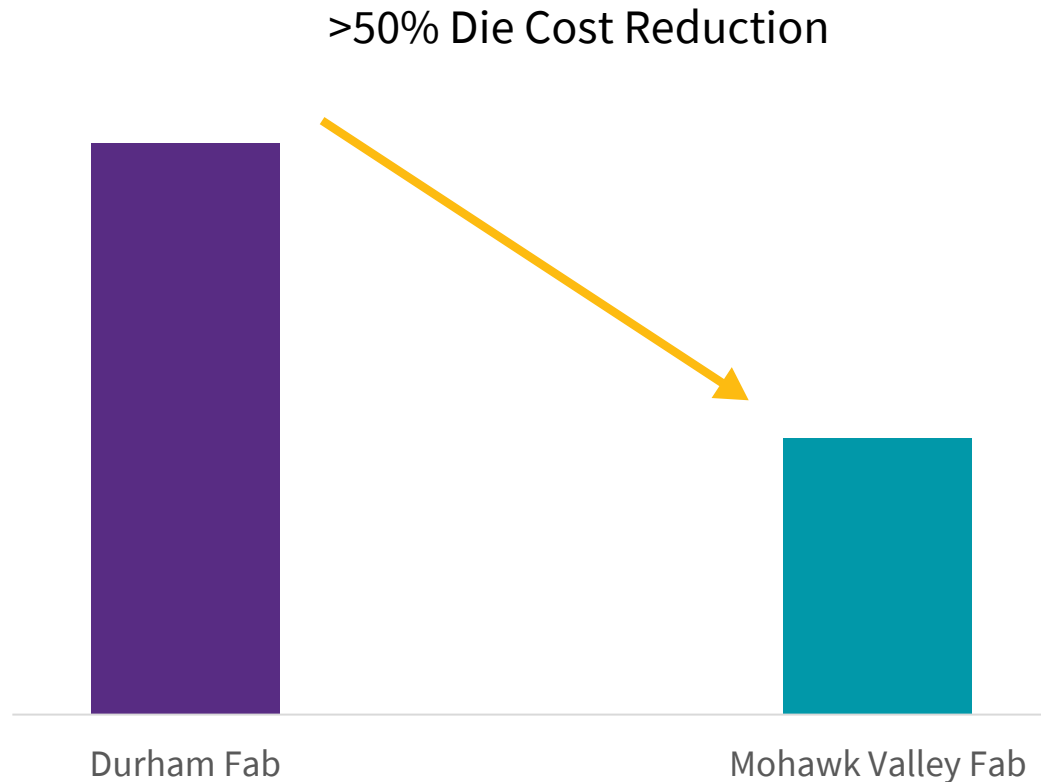


## Production Equipment Installation

- Equipment installed in MV Fab today to support qualification and ramp
- Installs continue through current planning horizon to support long range growth plans

# PURPOSE-BUILT SILICON CARBIDE FAB – IMPACT ON COSTS AND GROSS MARGINS

100% of Power Device revenue today is from Durham; by FY26 will be 80% from Mohawk Valley



	Durham	Mohawk Valley
Diameter	150mm	200mm
Clean room Space (Sq Ft)	68 K	125 K
Automation	Low	Full
Labor Costs	~40%	~10%
Yield	Base	Base * 1.25
Die cost	Base	Base * 0.5



# WOLFSPEED QUALITY FOCUS

**Our strategy to integrate our people, systems and culture is driving our competitive advantage**



Build out experienced  
quality engineering  
teams



Invest in scaling quality  
management systems  
and processes



Advance automotive  
culture through key  
quality initiatives

# SILICON CARBIDE AUTOMOTIVE QUALITY – A WOLFSPEED CULTURE

Leading the industry transformation and defining the roadmap for Silicon Carbide quality



## Advancing Industry Standards

- Leading Silicon Carbide engagement in industry standards organizations [JEDEC, ECPE (including AQC), ZVEI, ICE, SEMI]



## Wolfspeed's Commitment to Quality

- Automotive certified business and factories
- Global manufacturing, supplier, and customer quality teams
- Industry standard qualifications and metrics
- Compliance and continual improvement

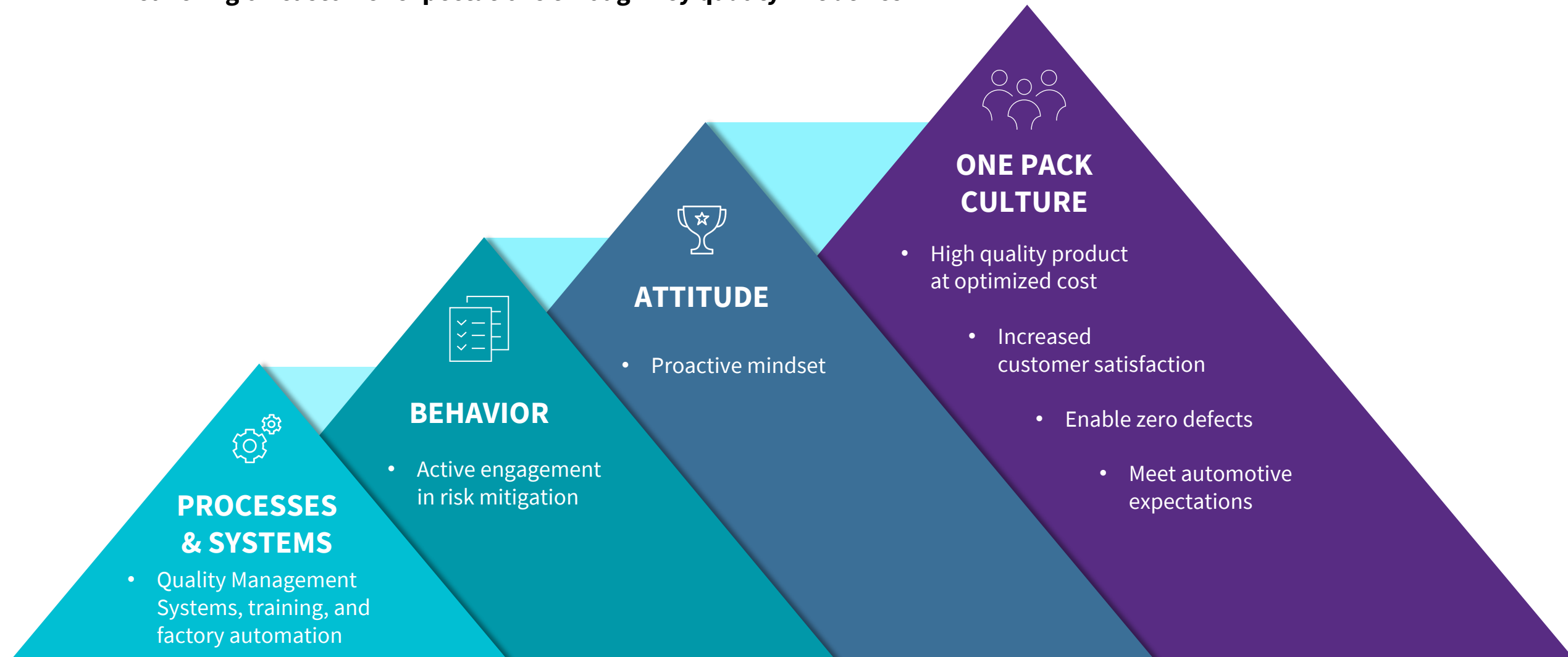


## Implementing Key Quality Initiatives

- Zero defect strategies
- Auto-centric Quality Management System
- Improved customer satisfaction

# BUILDING OUR QUALITY CULTURE

Delivering on customer expectations through key quality initiatives





**LET'S REIMAGINE A MORE  
SUSTAINABLE WORLD.  
TOGETHER.**



# Financial Overview

*Wolfspeed*  NEILL REYNOLDS | EVP & CFO

# STEEPENING DEMAND CURVE FOR SILICON CARBIDE SOLUTIONS DRIVES INVESTMENT AND IMPROVED OUTLOOK

**Expanding leading market position** with strong barriers to entry while driving the market transition to Silicon Carbide

**Executing on growth plans** to create a global semiconductor powerhouse

**Growing and diversified \$40B pipeline** supported by secular trends in attractive end markets

**Investing in capacity and people** to continue to operate as the leading vertically integrated Silicon Carbide provider

# WHAT'S CHANGED IN THE MARKET SINCE INVESTOR DAY 2021

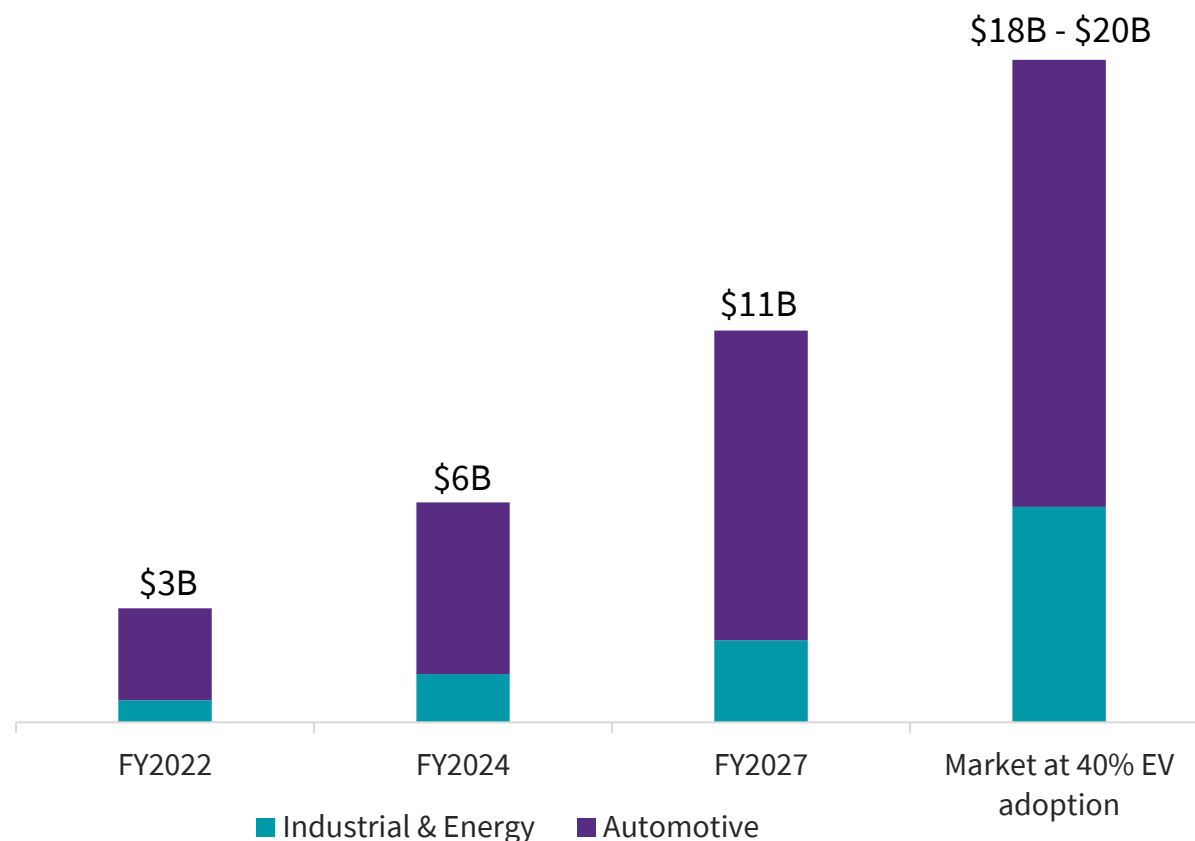
	Investor Day 2021	Investor Day 2022	What's Happened
<b>FY26 Power Device Market Outlook</b>	\$6B	\$9B	Increasing adoption of EVs and increasing adoption of Silicon Carbide in EVs
<b>Opportunity Pipeline</b>	\$18B	\$40B	
<b>Cumulative Design-Ins<sup>1</sup></b>	\$5B	\$14.8B	

<sup>1</sup>Design-in definition in appendix

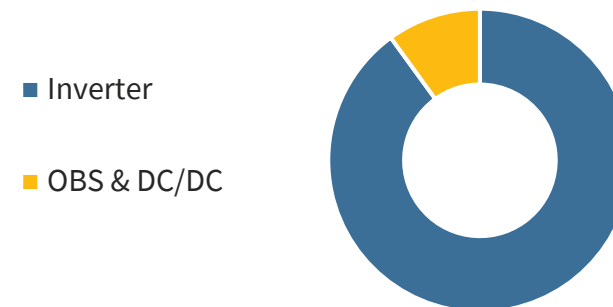


# MARKET IS RAPIDLY GROWING – UNIQUELY POSITIONED TO CAPTURE SHARE

## Power Device Market Outlook



## Automotive Device Opportunity in FY2027<sup>1</sup>



## Drivers & Assumptions

- Total Device market growing with a 28% CAGR
- Automotive growing at a 30% CAGR between FY22 - FY27, with EV adoption rates reaching 26%
- In FY27, Inverters expected to continue to be largest portion of Automotive market at ~90%
- Industrial & Energy expected to increase with a 27% CAGR between FY22 - FY27

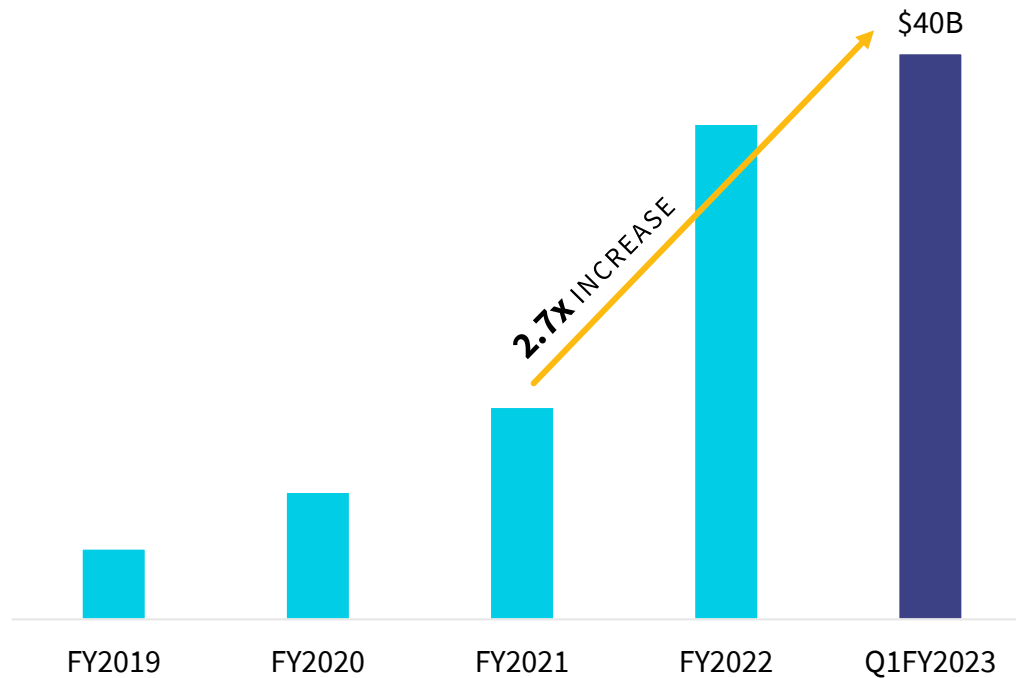
Data based on third-party and Company internal estimates

<sup>1</sup>Yole Power SiC 2022 report

# INCREASED DEMAND TRANSLATING INTO ACCELERATED DESIGN-INS

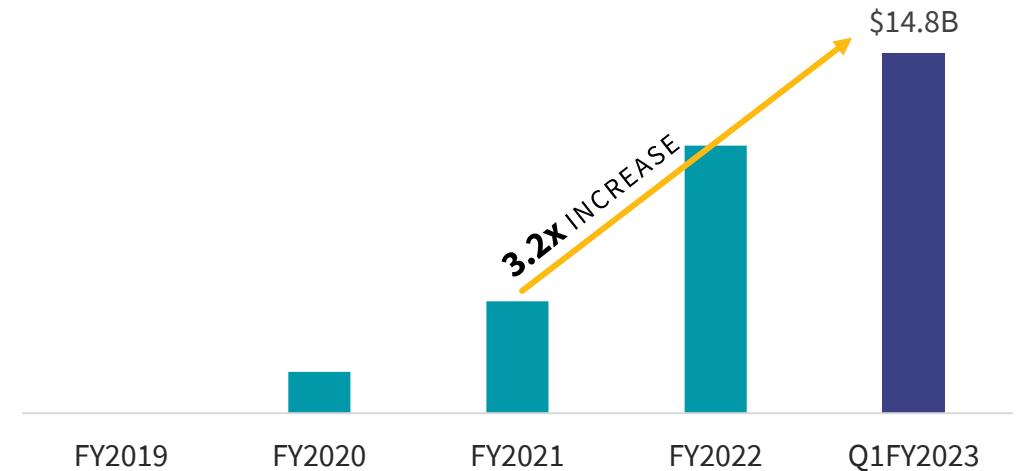
Opportunity pipeline for devices more than doubled over last fiscal year

## Opportunity Pipeline



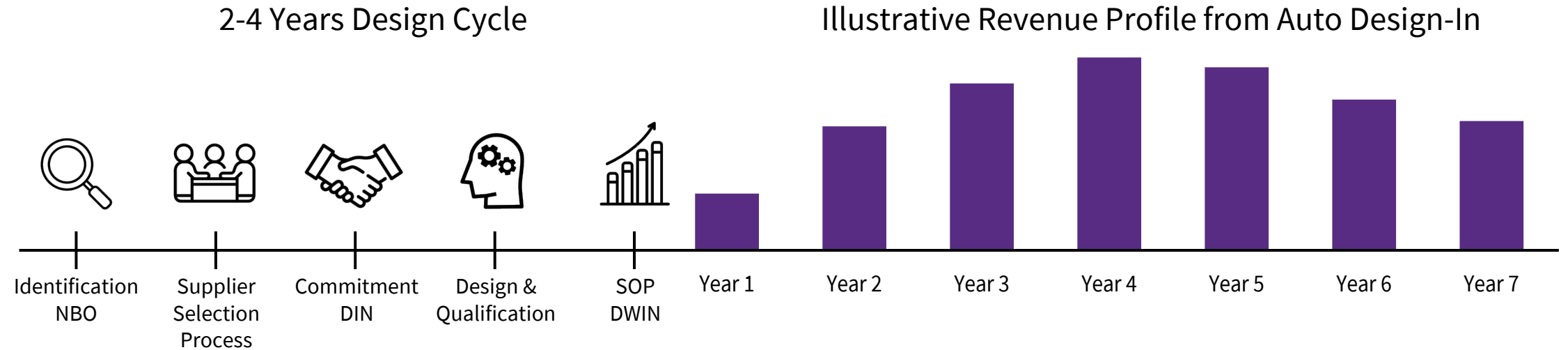
Sales team has continued to keep pace converting pipeline into Design-ins

## Cumulative Design-Ins



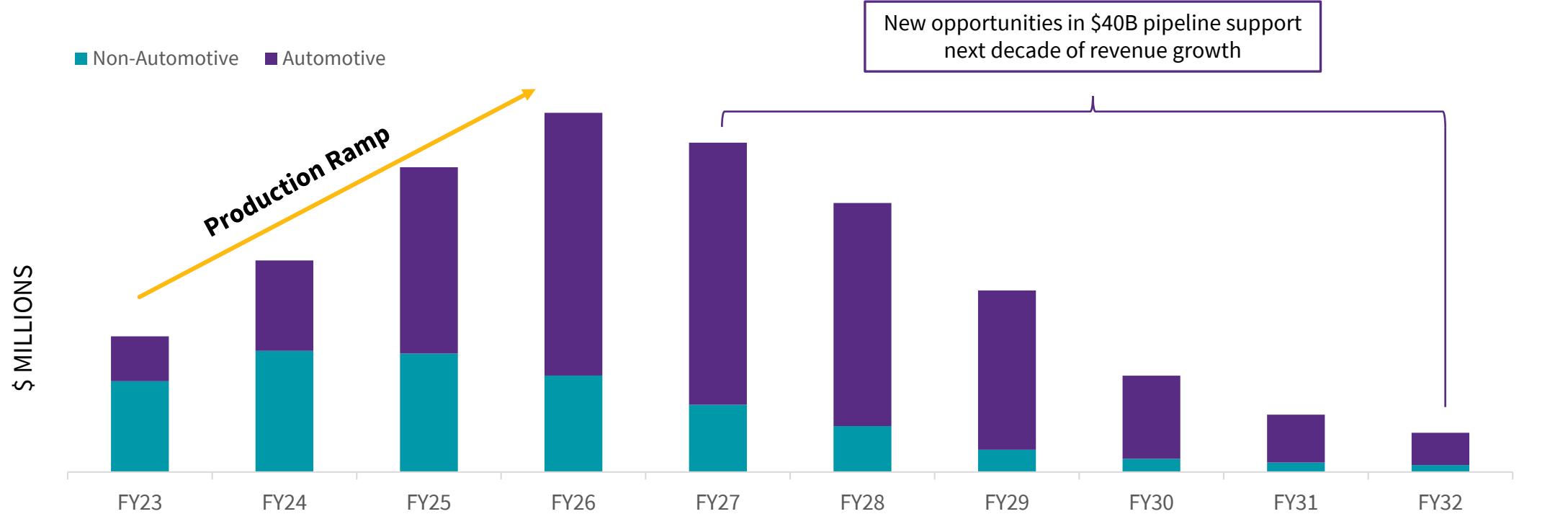
# ANNUAL DESIGN-INS DELIVER LONG TAIL REVENUE OPPORTUNITY

Design cycles, while long, are sticky and create multi-year revenue streams



# HIGH LEVELS OF REVENUE VISIBILITY THROUGH END OF THE DECADE

Illustrative snapshot of cumulative Design-ins (as of Q1FY23) translated to revenue



Annual Design-in cohorts create top-line backlog that begins to contribute materially in FY2025

Non-Automotive – top-line contribution more immediate, but majority of revenue recognized within 5-year timeline

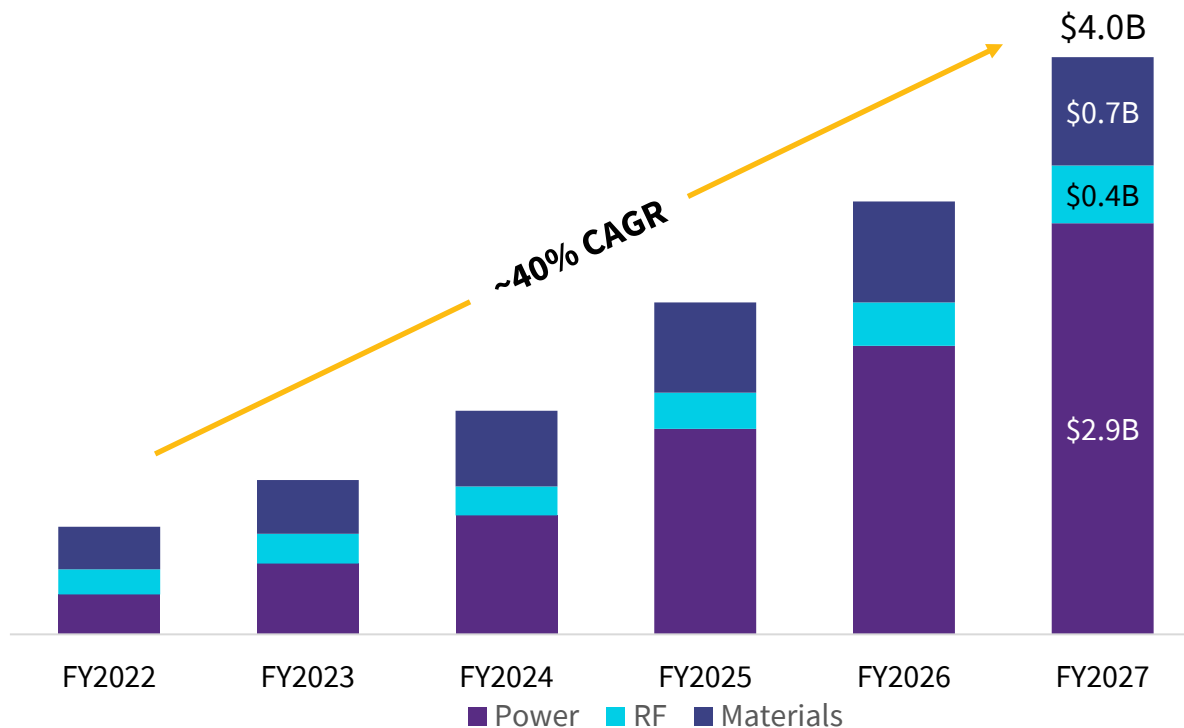
Automotive - Time to revenue 2x compared to non-Automotive, but much longer tail, with majority of revenue in FY2025 - FY2028

# WHAT'S CHANGED IN OUR REVENUE OUTLOOK AND CAPEX CADENCE SINCE INVESTOR DAY 2021

	Investor Day 2021	Investor Day 2022	What's Happened
<b>FY26 Power Device Market Outlook</b>	\$6B	\$9B	Increasing adoption of EVs and increasing adoption of Silicon Carbide in EVs
<b>Opportunity Pipeline</b>	\$18B	\$40B	
<b>Cumulative Design-Ins</b>	\$5B	\$14.8B	
<b>FY22 Revenue</b>	Initial Guide: \$700M	Actual: \$746M	Elevated device output from Durham
<b>FY26 Revenue Outlook</b>	\$2.1B	\$2.95B	Strong Design-in growth
<b>FY27 Revenue Outlook</b>	N/A	\$4B	
<b>FY23 CapEx Investment</b>	~\$230M	~\$1B	Announced Siler City, the world's largest Silicon Carbide Materials Facility; planning on launching a third Power Device fab

# WOLFSPEED REVENUE TARGETED TO GROW FASTER THAN THE MARKET

## Revenue Outlook

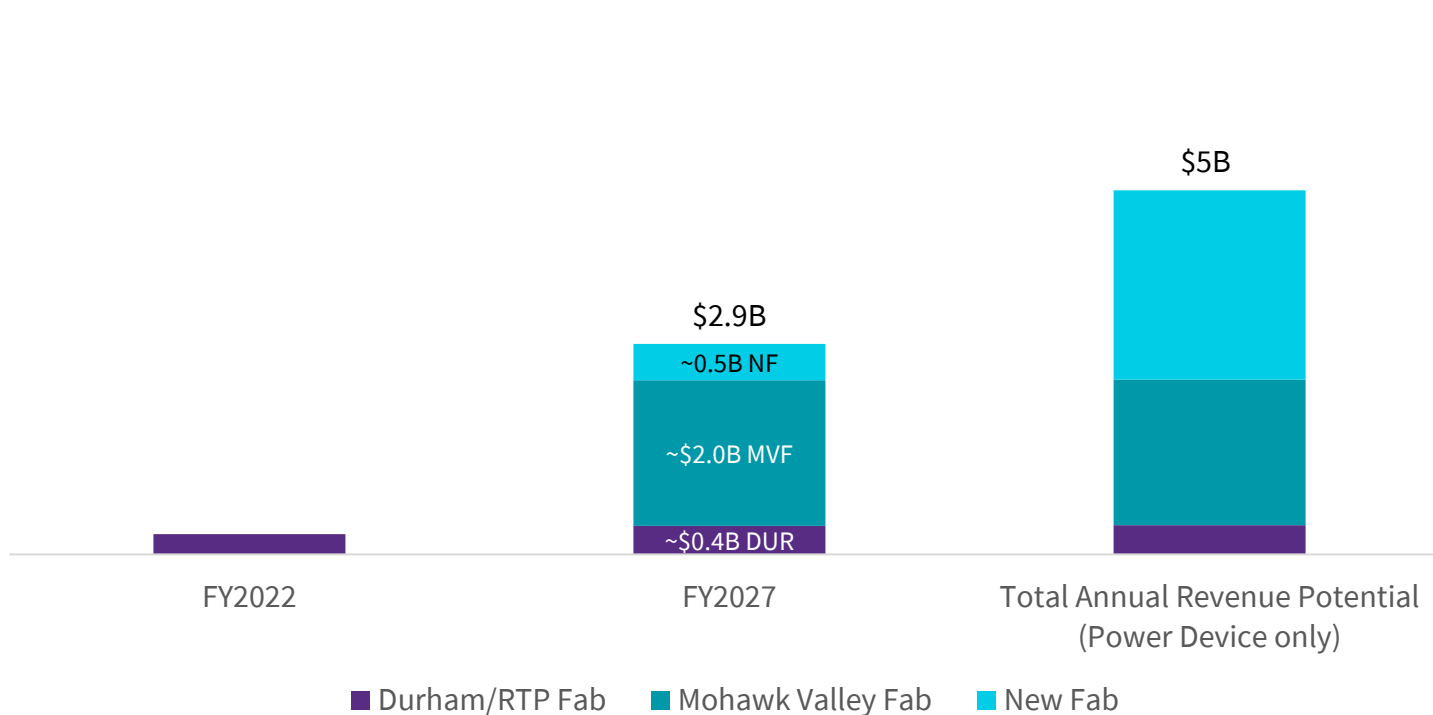


## Drivers & Assumptions

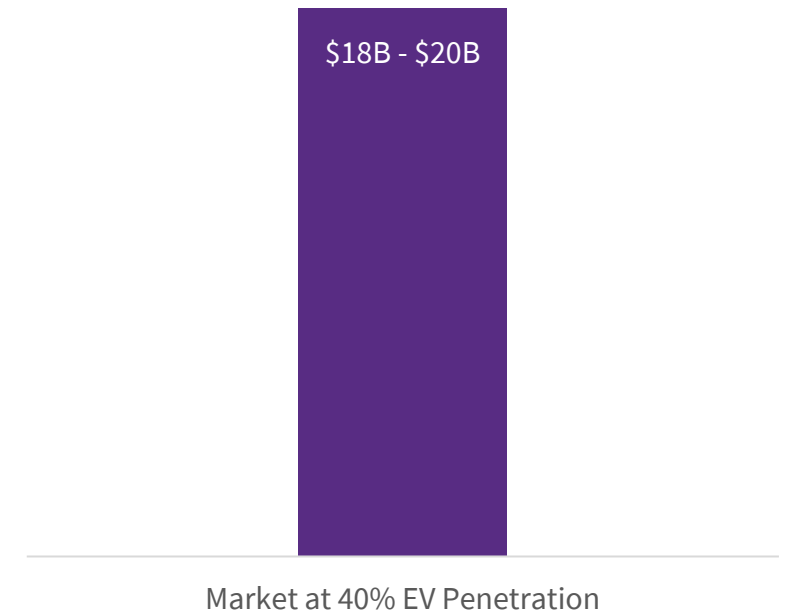
- Revenue driven by strength across all product lines led by Power
  - Power: ~60% CAGR
  - Materials: ~20% CAGR
  - RF: ~18% CAGR
- Devices expected to capture increasing share of revenue between FY24 - FY27
- Device revenue driven by strong demand for Automotive, as well as growing demand for Industrial & Energy and 5G/A&D

# BUILDING TOWARDS >\$5B POWER DEVICE FOOTPRINT TO CAPTURE MASSIVE MARKET OPPORTUNITY BY END OF THE DECADE

Total Annual Revenue Potential



Potential Power Device Market



## Fab Targets

### Durham

- No additional investment
- Supplies mainly I&E products

### Mohawk Valley

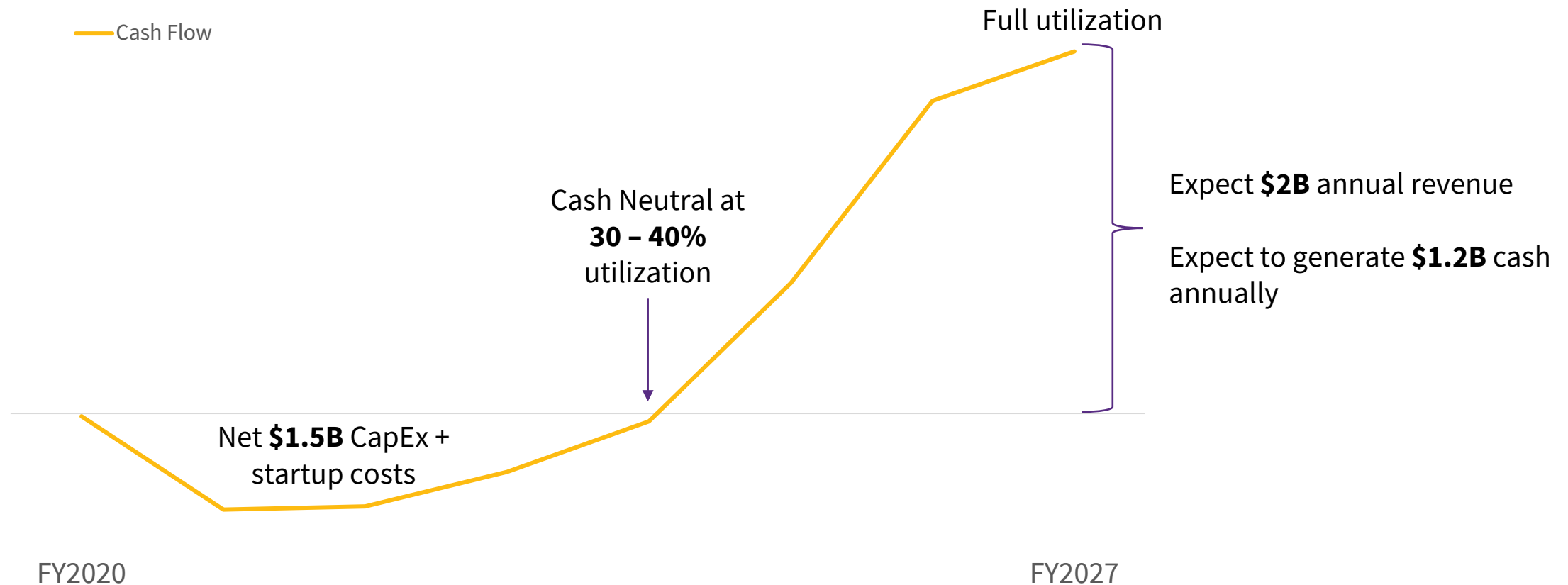
- Begins shipping 2HFY23
- Fully utilized by FY26

### Next Fab

- Construction begins early CY23
- Next Fab begins shipping FY27

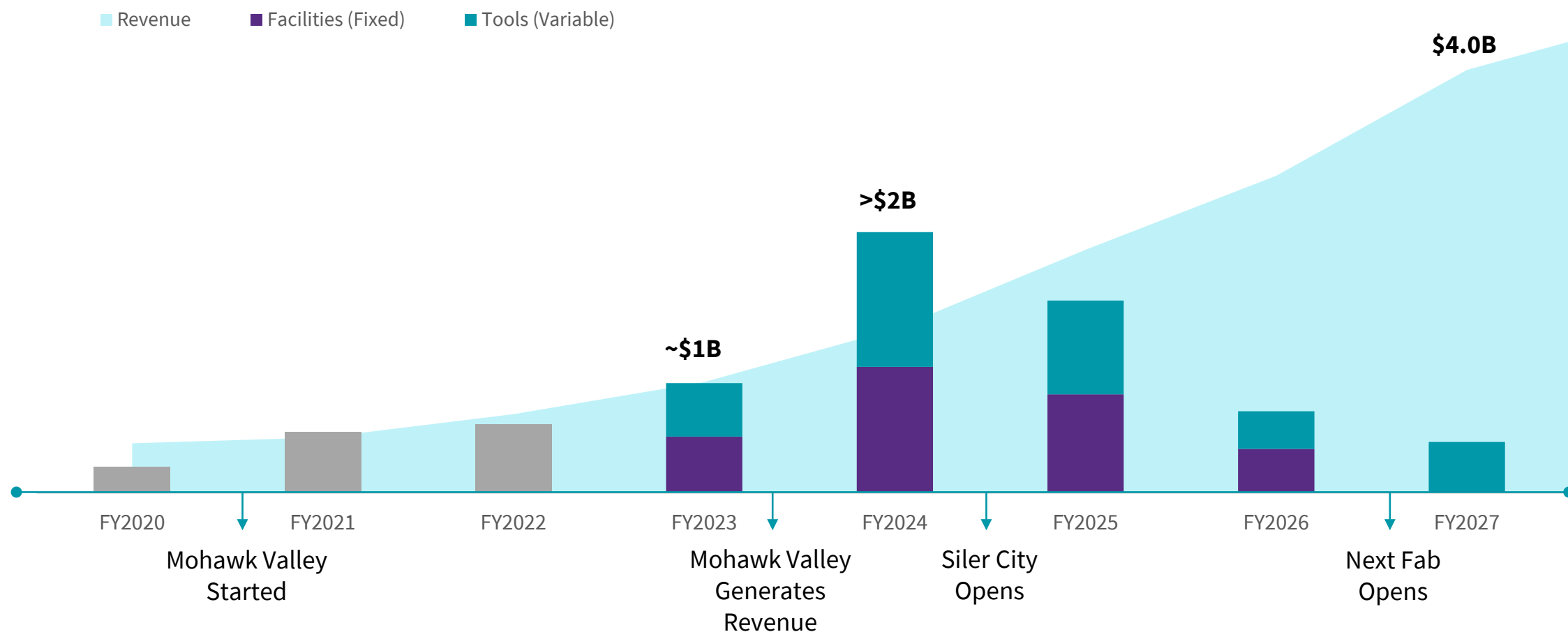


# MOHAWK VALLEY – PURPOSE BUILT → ROBUST CASH FLOW GENERATION VEHICLE



Mohawk Valley is the blueprint for future fab buildouts

# CAPEX CADENCE REQUIRES FACILITIES INVESTMENTS IN ADVANCE OF REVENUE GROWTH ... CAPITAL RETURNS IMPROVE POST FACILITIES BUILD OUT



# BUILDING LARGEST, STATE OF THE ART, AUTOMATED 200MM SILICON CARBIDE FOOTPRINT TO BEST SERVE INDUSTRY'S TOP CUSTOMERS



## Mohawk Valley

- ~\$2B annual Power Device revenue targeted
- 200mm Wafers
- Highly automated



## Next Fab

- ~\$2.6B annual Power Device revenue targeted
- 200mm Wafers
- Highly automated

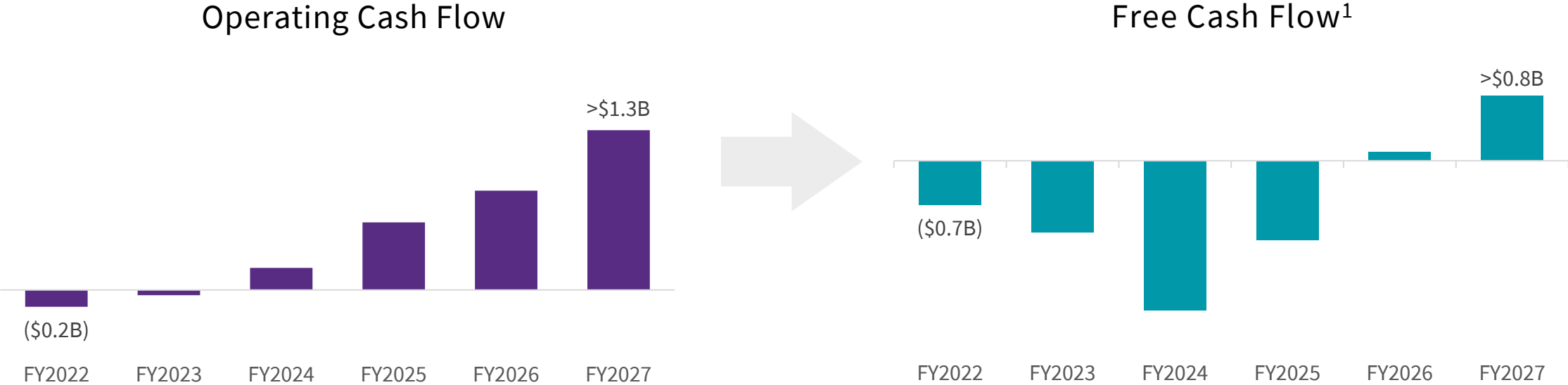


## Siler City

- **10x** increase in Materials capacity at scale
- 200mm & 150mm Wafers
- Highly automated

2:1 CapEx to revenue ratio equates to ~\$6.5B of CapEx by 2027

**THIS CREATES STRONG OPERATING CASH FLOWS NEARER TERM AND  
STRONG FREE CASH FLOW GENERATION FOR THE LONG TERM**



As fabs mature, they generate significant and sustainable free cash flow

1: Free Cash Flow calculated as Cash Flow from Continuing Operations less Purchases of property and equipment net of reimbursements and less Purchases of patent and licensing rights

# FUNDING PLAN - THOUGHTFULLY MANAGING DILUTION IS TOP OF MIND



## **Government Incentives**

---

Range of options from various government subsidies and bills



## **Customer Funding**

---

Expressed interest in funding to accelerate capacity expansion



## **Private / Project Financing**

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Private market & asset backed financing to reduce dilution



## **Public Markets**

---

Public equity and debt markets

Many funding options at our disposal, most of which have little or no dilution impact

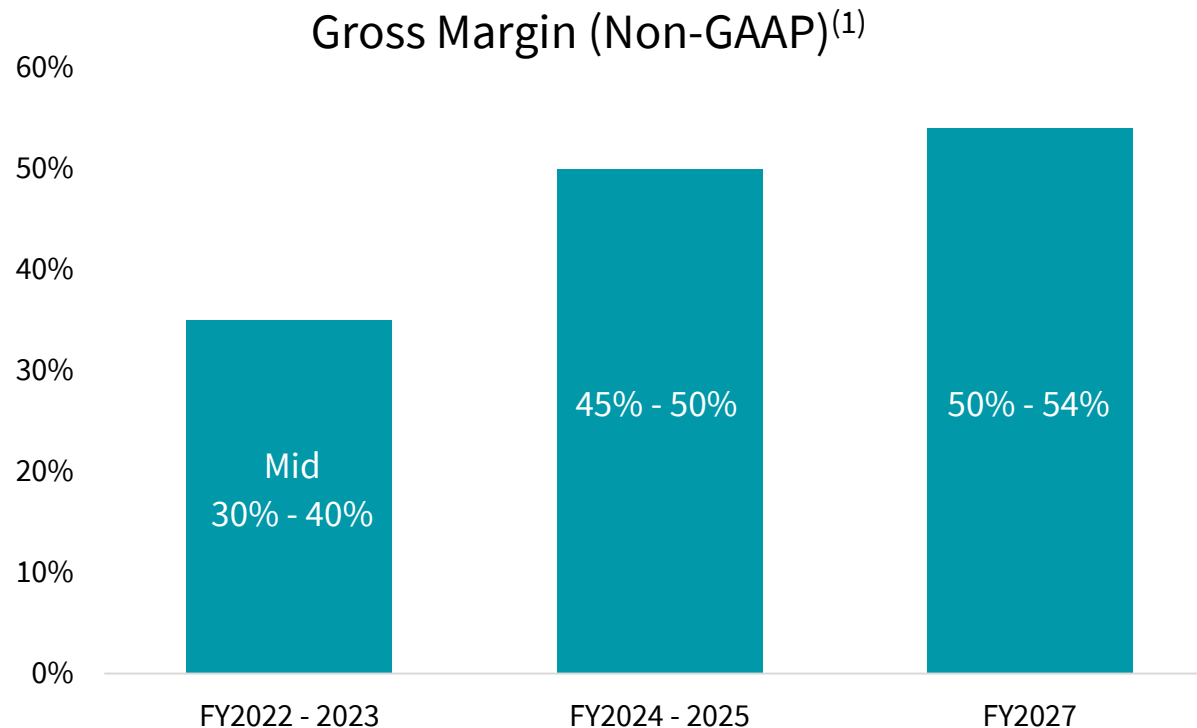
# WHAT'S CHANGED ON THE BOTTOM-LINE SINCE INVESTOR DAY 2021 AND WHAT DOES IT MEAN FOR OUR TARGET MODEL

	Investor Day 2021	Investor Day 2022	What's Happened
<b>FY26 Power Device Market Outlook</b>	\$6B	\$9B	Increasing adoption of EVs and increasing adoption of Silicon Carbide in EVs
<b>Opportunity Pipeline</b>	\$18B	\$40B	
<b>Cumulative Design-Ins</b>	\$5B	\$14.8B	
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<b>FY27 Revenue Outlook</b>	N/A	\$4B	
<b>FY23 CapEx Investment</b>	~\$230M	~\$1B	Announced Siler City, the world's largest Silicon Carbide Materials Facility; planning on launching a third Power Device fab
<b>Gross Margin (Non-GAAP)<sup>1</sup></b>	FY24 : 50% FY27: N/A	FY24 : 45% FY27: 50-54%	Continue to run Durham Fab; delayed RF transition to 150mm; MVF significantly drives margin improvements

<sup>1</sup>For non-GAAP measures relating to Investor Day 2022, see Appendix for a reconciliation to the most directly comparable GAAP measure. For non-GAAP measures relating to Investor Day 2021, see Appendix on our 2021 Investor Day presentation as filed with the SEC on Form 8-K on 11/17/21.



# MOHAWK VALLEY SCALE, 200MM DIAMETER CHANGE, AND IMPROVING YIELDS TO DRIVE GROSS MARGIN PERFORMANCE

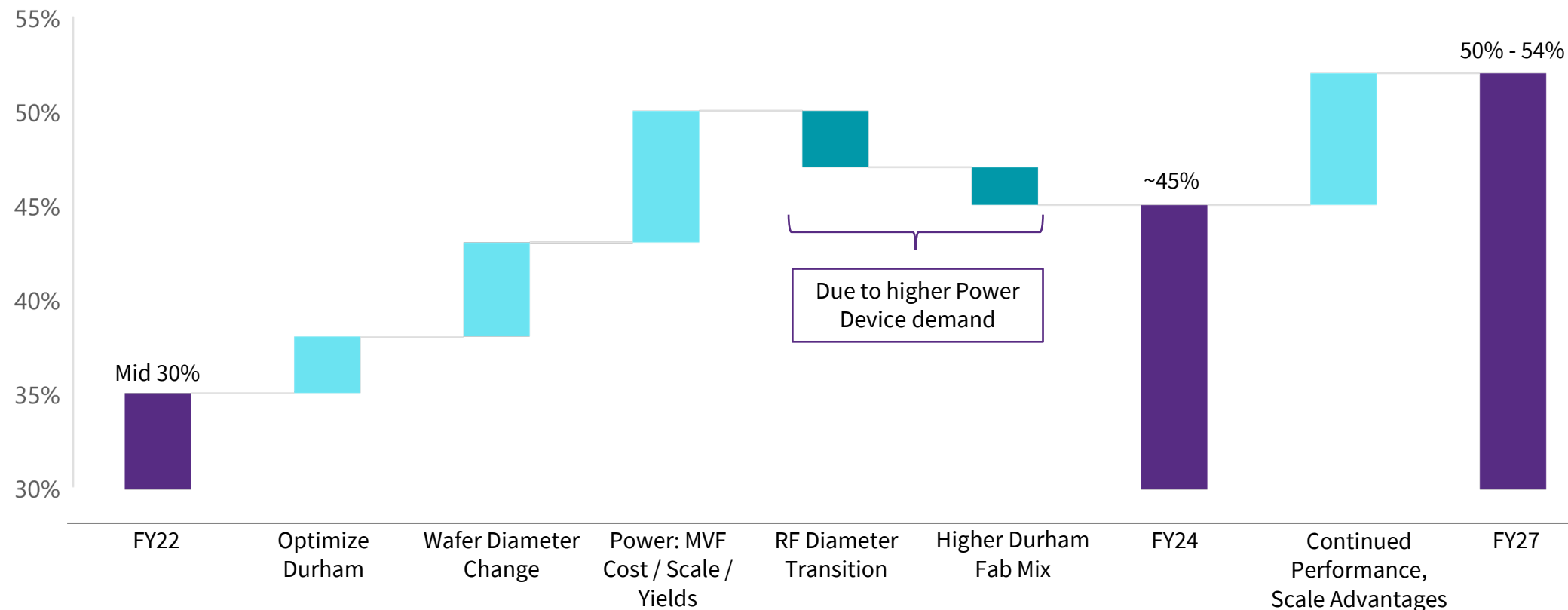


## Drivers & Assumptions

- Transition to Mohawk Valley: will have 50% lower processing costs; greater than 50% CT improvement; 20 to 30 points improved yields over Durham
- Expect to be shipping from MVF in 2HFY23
- Improved execution and output at Durham
- RF transition from 100mm to 150mm delayed

<sup>1</sup>For non-GAAP measures relating to Investor Day 2022, see Appendix for a reconciliation to the most directly comparable GAAP measure. For non-GAAP measures relating to Investor Day 2021, see Appendix on our 2021 Investor Day presentation as filed with the SEC on Form 8-K on 11/17/21.

# CLEAR PATH TO GROSS MARGIN (NON-GAAP)<sup>1</sup> EXPANSION



## Drivers & Assumptions

Leadership in Durham fab driving operational excellence. Fab will now run longer to support Power Device demand

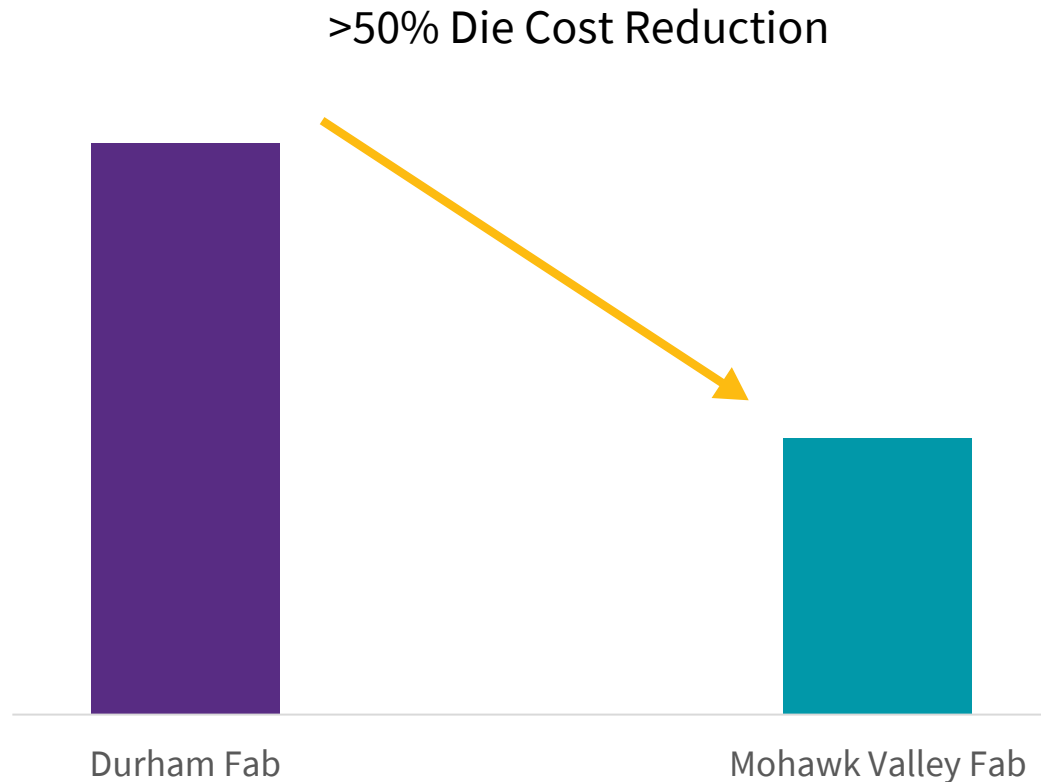
Benefits realized of shift to 200mm for Power; RF transition from 100mm to 150mm delayed

MVF cost/scale/yield improvements on track – world's largest 200mm Silicon Carbide fab

<sup>1</sup>For non-GAAP measures relating to Investor Day 2022, see Appendix for a reconciliation to the most directly comparable GAAP measure. For non-GAAP measures relating to Investor Day 2021, see Appendix on our 2021 Investor Day presentation as filed with the SEC on Form 8-K on 11/17/21.

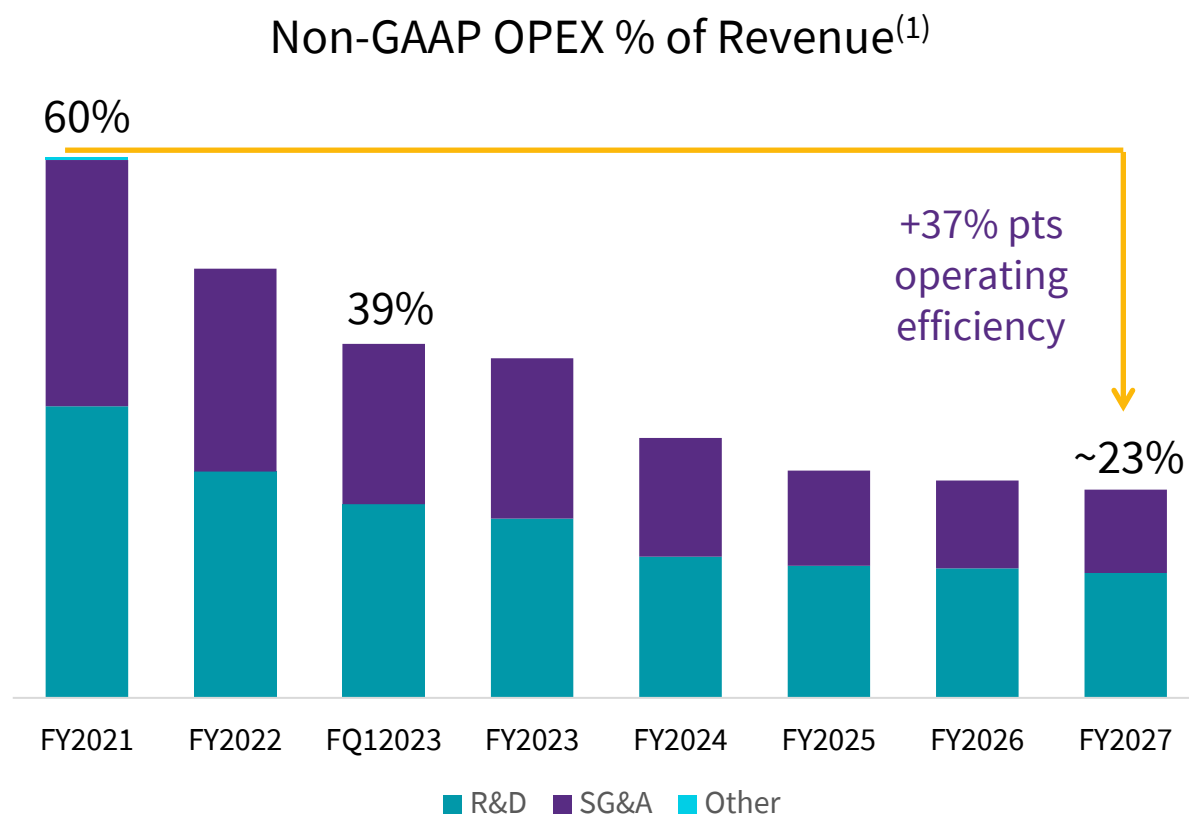
# PURPOSE-BUILT SILICON CARBIDE FAB – IMPACT ON COSTS AND GROSS MARGINS

100% of Power Device revenue today is from Durham; by FY26 will be 80% from Mohawk Valley



	Durham	Mohawk Valley
Diameter	150mm	200mm
Clean room Space (Sq Ft)	68 K	125 K
Automation	Low	Full
Labor Costs	~40%	~10%
Yield	Base	Base * 1.25
Die cost	Base	Base * 0.5

# REVENUE EXPANSION PROVIDES OPERATING LEVERAGE AS INVESTMENT PAYBACK REALIZED



## Drivers & Assumptions

- Improving operational scale and efficiency result in OpEx investments normalizing in long-term
- R&D investment dollars growing at 21% CAGR from FY22 to FY27, while reducing leverage by 2000 basis points
- SG&A CAGR of 17% to support business growth, while declining 1800 basis points as a percentage of revenue
- Driving operational efficiency through digital transformation, optimizing SG&A

<sup>1</sup>For non-GAAP measures relating to Investor Day 2022, see Appendix for a reconciliation to the most directly comparable GAAP measure. For non-GAAP measures relating to Investor Day 2021, see Appendix on our 2021 Investor Day presentation as filed with the SEC on Form 8-K on 11/17/21.

# WOLFSPEED TARGET OPERATING MODEL

	FY24	FY27
<b>Revenue</b>	\$1.6B	\$4.0B
<b>CAGR vs 2022</b>	~44%	~40%
<b>GM% (Non-GAAP)<sup>1</sup></b>	~45%	50-54%
<b>OPEX% (Non-GAAP)<sup>1</sup></b>	~29%	23-25%
<b>Adjusted EBITDA % (Non-GAAP)<sup>1</sup></b>	~26%	~45%
<b>FCF% (Non-GAAP)<sup>1</sup></b>	N/A	~20%

## Drivers & Assumptions

- Positioned to capitalize in key growth areas following significant period of investment
- Transition to MVF improves gross margin trajectory
- Powerful secular trends and operating scale driving revenue expansion and entry into new markets for Power and RF
- Deep domain expertise in Silicon Carbide bolsters our leadership position

<sup>1</sup>For non-GAAP measures relating to Investor Day 2022, see Appendix for a reconciliation to the most directly comparable GAAP measure. For non-GAAP measures relating to Investor Day 2021, see Appendix on our 2021 Investor Day presentation as filed with the SEC on Form 8-K on 11/17/21.

# STEEPENING DEMAND CURVE FOR SILICON CARBIDE SOLUTIONS DRIVES INVESTMENT AND IMPROVED OUTLOOK

**Expanding leading market position** with strong barriers to entry while driving the market transition to Silicon Carbide

**Executing on growth plans** to create a global semiconductor powerhouse

**Growing and diversified \$40B pipeline** supported by secular trends in attractive end markets

**Investing in capacity and people** to continue to operate as the leading vertically integrated Silicon Carbide provider



# Fireside Chat



GREGG LOWE | CEO, WOLFSPEED

THIERRY BOLLORÉ | CEO, JAGUAR LAND ROVER

# Audience Q&A



GREGG LOWE | PRESIDENT & CEO  
NEILL REYNOLDS | EVP & CFO

# Appendix



# NON-GAAP ADJUSTMENTS

Wolfspeed excludes the following items from one or more of its non-GAAP measures when applicable:

- *Stock-based compensation expense.* This expense consists of expenses for stock options, restricted stock, performance stock awards and employee stock purchases through its Employee Stock Purchase Program. Wolfspeed excludes stock-based compensation expenses from its non-GAAP measures because they are non-cash expenses that Wolfspeed does not believe are reflective of ongoing operating results.
- *Amortization or impairment of acquisition-related intangibles.* Wolfspeed incurs amortization or impairment of acquisition-related intangibles in connection with acquisitions. Wolfspeed excludes these items because they arise from Wolfspeed's prior acquisitions and have no direct correlation to the ongoing operating results of Wolfspeed's business.
- *Abandonment of long-lived assets.* In the fourth quarter of fiscal 2021, Wolfspeed modified its long-range plan regarding a portion of its Durham, North Carolina campus. As a result, Wolfspeed decided it will no longer complete the construction of certain buildings on the Durham campus. The carrying value of the abandoned assets has been reduced to an estimated salvage value. Wolfspeed does not believe this expense is reflective of ongoing operating results.
- *Factory optimization restructuring.* In May 2019, the Company started a significant, multi-year factory optimization plan to be anchored by a state-of-the-art, automated 200mm Silicon Carbide device fabrication facility. In September 2019, the Company announced the intent to build the new fabrication facility in Marcy, New York to complement the factory expansion underway at its U.S. campus headquarters in Durham, North Carolina. As part of the plan, the Company incurred restructuring costs associated with the movement of equipment as well as disposals on certain long-lived assets. Because these charges relate to assets which had been retired prior to the end of their estimated useful lives, Wolfspeed does not believe these costs are reflective of ongoing operating results. Similarly, Wolfspeed does not consider the realized net losses on sale of assets relating to the restructuring to be reflective of ongoing operating results. The factory optimization plan concluded in the fourth quarter of fiscal 2022.
- *Factory start-up and underutilization costs.* The Company has incurred and will incur start-up costs relating to the Company's new device fabrication facility in Marcy, New York. Additionally, as part of the factory optimization plan, the Company incurred start-up costs relating to the Company's materials factory expansion in Durham, North Carolina. Wolfspeed does not believe these costs are reflective of ongoing operating results. In the second quarter of fiscal 2023, Wolfspeed expects to start incurring factory underutilization costs associated with the ramping of production at the Marcy, New York facility. These costs represent significant fixed and indirect operating costs of the facility incurred after production begins but before the facility is able to produce at its full utilization. Wolfspeed does not believe these costs are reflective of ongoing operating results.
- *Severance and other restructuring.* These costs relate to the Company's realignment of certain resources as part of the Company's transition to a more focused semiconductor company. Wolfspeed does not believe these costs are reflective of ongoing operating results.
- *Project, transformation and transaction costs.* The Company has incurred professional services fees and other costs associated with completed and potential acquisitions and divestitures, as well as internal transformation programs focused on optimizing the Company's administrative processes. Wolfspeed excludes these items because Wolfspeed believes they are not reflective of the ongoing operating results of Wolfspeed's business.
- *Transition service agreement costs.* As a result of the sale of the Lighting Products business unit, the Company is providing certain information technology services under a transition services agreement which will not be reimbursed. Wolfspeed excludes the costs of these services because Wolfspeed believes they are not reflective of the ongoing operating results of Wolfspeed's business.
- *Accretion on convertible notes, net of capitalized interest.* The issuance of the Company's convertible senior notes in August 2018 and April 2020 results in interest accretion on the convertible notes' issue costs and discount [issue costs only for periods after fiscal year 2022 in accordance with ASC 2020-06]. Wolfspeed considers these items as either limited in term or having no impact on the Company's cash flows, and therefore has excluded such items to facilitate a review of current operating performance and comparisons to the Company's past operating performance.

## NON-GAAP RECONCILIATION: GROSS MARGIN %

	<u>FY2022-FY2023</u>	<u>FY2024-FY2025</u>	<u>FY2027+</u>
GAAP Gross Margin%	Low to mid 30s	~40%	48%-52%
Adjustments:			
Stock-based compensation expense	2%	1%	1%
Factory underutilization costs	5%	4%	1%
Non-GAAP Gross Margin%	Mid 30s to 40%	45-50%	50%-54%

	<u>FY2024</u>	<u>FY2026</u>	<u>FY2027</u>
GAAP Gross Margin%	~39%	46%-50%	48%-52%
Adjustments:			
Stock-based compensation expense	2%	1%	1%
Factory underutilization costs	6%	3%	1%
Non-GAAP Gross Margin%	~45%	50%-54%	50%-54%

*References Non-GAAP Gross Margin figures presented on slide 62, 63, 64, 67*

## NON-GAAP RECONCILIATION: OPERATING EXPENSE % OF REVENUE

(\$M)	<u>FY2021</u>	<u>FQ1'2023</u>	<u>FY2027</u>
GAAP OPEX %	91%	64%	~25%
Adjustments:			
Stock-based compensation expense	7%	7%	2%
Amortization or impairment of acquisition-related intangibles	3%	1%	0%
Abandonment of long-lived assets	14%	0%	0%
Factory optimization restructuring	2%	0%	0%
Factory start-up costs	1%	16%	0%
Project, transformation and transaction costs	2%	1%	0%
Severance and other restructuring	1%	0%	0%
Transition service agreement costs	1%	0%	0%
Non-GAAP OPEX%	60%	39%	~23%

*References Operating Expenses figures presented on slide 66*

(\$M)	<u>FY2024</u>	<u>FY2027</u>
GAAP OPEX %	~36%	~25-27%
Adjustments:		
Stock-based compensation expense	4%	2%
Factory start-up costs	1%	0%
Amortization or impairment of acquisition-related intangibles	1%	0%
Project, transformation and transaction costs	1%	0%
Non-GAAP OPEX%	~29%	~23-25%

*References Operating Expenses figures presented on slide 67*



# NON-GAAP RECONCILIATION: ADJUSTED EBITDA

(\$M)	<u>FY2024</u>	<u>FY2027</u>
<b>GAAP Net Income</b>	<b>~\$(9)</b>	<b>~\$788</b>
Depreciation & amortization	201	619
Income tax expense	\$2	\$188
Net interest expense	\$25	\$35
<b>EBITDA</b>	<b>\$219</b>	<b>\$1,630</b>
Adjustments:		
Stock-based compensation expense		
COGS	\$26	\$30
OPEX	\$64	\$76
Total Stock-Based Compensation	\$90	\$106
Accretion on convertible notes, net of capitalized interest	\$8	\$10
Factory start-up costs	\$7	\$0
Factory underutilization costs	\$47	\$38
Loss on Wafer Supply Agreement	\$20	\$0
Project, transformation and transaction costs	\$10	\$10
<b>Adjusted EBITDA\$</b>	<b>401</b>	<b>\$1,794</b>
<b>Adjusted EBITDA%</b>	<b>~26%</b>	<b>~45%</b>
<i>Factory underutilization costs reduced for depreciation component</i>		
<i>References Adjusted EBITDA figures presented on slide 67</i>		

# RECONCILIATION: FREE CASH FLOW

	<b>(\$M)</b>	<b><u>FY2022</u></b>	<b><u>FY2027</u></b>
Cash Provided by Operating Activities	(\$154)		-
Purchases of PP&E and Patents, Net of Reimbursements	(\$512)		~(\$500)
<b>Free Cash Flow</b>		<b>(\$666)</b>	<b>&gt;\$800</b>
<b>Free Cash Flow% of Revenue</b>		<b>(-89%)</b>	<b>&gt;20%</b>

*References Free Cash Flow figures presented on slide 60 and 67*

# GLOSSARY OF TERMS

**Design-ins:** customer commitments to purchase our product and are one of the factors we use to forecast long-term demand and future revenue. To meet the qualification of a design-in, the customer provides us with documentation (e.g., a letter of intent, statement of work or developmental contract) that can include details such as the expected delivery timeline, estimated price, necessary capacity and required support. A design-in, even with a formal commitment, does not always convert to future revenue for a variety of reasons, including, but not limited to, the customer delaying or abandoning the project, capacity constraints, timeline challenges, and/or technology changes. Therefore management uses the design-in amount as a guide to forecast future demand but it should not be taken as an absolute indicator of future revenue.