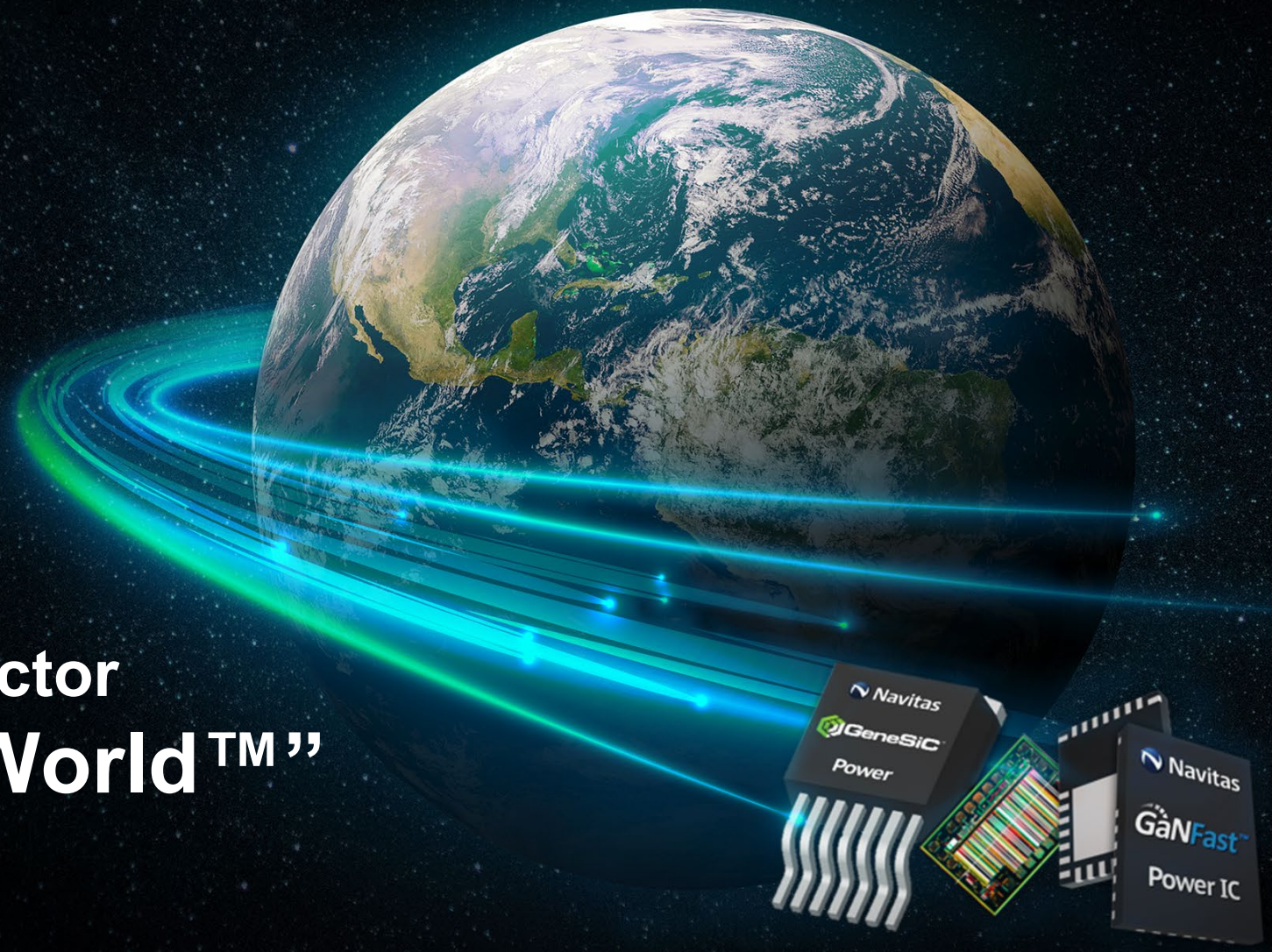
*Energy Savings & New Energy Markets Driving Added Growth*

Navitas




# Navitas Semiconductor
# “Electrify Our World™”

***The Pure-Play, Next-Gen Power Semiconductor Company***

**May 2023**

# Disclaimers

This presentation includes “forward-looking statements” within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements may be identified by the use of words such as “we expect” or “are expected to be,” “estimate,” “plan,” “project,” “forecast,” “intend,” “anticipate,” “believe,” “seek,” or other similar expressions that predict or indicate future events or trends or that are not statements of historical matters. These forward-looking statements include, but are not limited to, statements regarding estimates and forecasts of other financial and performance metrics and projections of market opportunity and market share. These statements are based on various assumptions, whether or not identified in this presentation. These statements are also based on current expectations of our management and are not predictions of actual performance. Such forward-looking statements are provided for illustrative purposes only and are not intended to serve as, and must not be relied on by any investor as, a guarantee, an assurance, a prediction or a definitive statement of fact or probability. Actual events and circumstances are difficult or impossible to predict and will differ from assumptions and expectations. Many actual events and circumstances that affect performance are beyond our control. Forward-looking statements are subject to a number of risks and uncertainties, including the possibility that the expected growth of our business will not be realized, or will not be realized within expected time periods, due to, among other things, the failure to successfully integrate acquired businesses into our business and operational systems; the effect of acquisitions on customer and supplier relationships or the failure to retain and expand those relationships; the success or failure of other business development efforts; our financial condition and results of operations; our ability to accurately predict future revenues for the purpose of appropriately budgeting and adjusting our expenses; our ability to diversify our customer base and develop relationships in new markets; our ability to scale our technology into new markets and applications; our ability to realize our potential pipeline opportunities; the effects of competition on our business, including actions of competitors with an established presence and resources in markets we hope to penetrate, including silicon carbide markets; the level of demand in our customers’ end markets, both generally and with respect to successive generations of products or technology; our ability to attract, train and retain key qualified personnel; changes in government trade policies, including the imposition of tariffs; the impact of the COVID-19 pandemic on our business, results of operations and financial condition; the impact of the COVID-19 pandemic on the global economy, including but not limited to our supply chain and the supply chains of customers and suppliers; regulatory developments in the United States and foreign countries; and our ability to protect our intellectual property rights. These and other risk factors are discussed in the Risk Factors section beginning on p. 15 of our annual report on Form 10-K for the year ended December 31, 2022, which we filed with the Securities and Exchange Commission (the “SEC”) on April 3, 2022 and as thereafter amended, and in other documents we file with the SEC, including our quarterly reports on Form 10-Q. If any of these risks materialize or our assumptions prove incorrect, actual results could differ materially from the results implied by these forward-looking statements. There may be additional risks that we are not aware of or that we currently believe are immaterial that could also cause actual results to differ materially from those contained in the forward-looking statements. In addition, forward-looking statements reflect our expectations, plans or forecasts of future events and views as of the date of this presentation. We anticipate that subsequent events and developments will cause our assessments to change. However, while we may elect to update these forward-looking statements at some point in the future, we specifically disclaim any obligation to do so. These forward-looking statements should not be relied upon as representing our assessments as of any date subsequent to the date of this presentation.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Neither we nor any other person makes any representation as to the accuracy or completeness of such data or undertakes any obligation to update such data after the date of this presentation. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

For further information with respect to our company, we refer you to our most recent annual report on Form 10-K and our most recent quarterly report on Form 10-Q, filed with the SEC. In addition, we are subject to the information and reporting requirements of the Securities Exchange Act of 1934, as amended, and, accordingly, we file periodic reports, current reports, proxy statements and other information with the SEC. These periodic reports, current reports, proxy statements and other information are available for review at the SEC’s website at http://www.sec.gov.



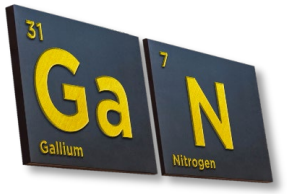
This presentation shall not constitute an offer to sell or the solicitation of an offer to buy any securities of Navitas Semiconductor.

Navitas

**The Pure-Play, Next-Gen Power Semiconductor Company**

# *Decade of Disruptive Changes in Technology Displacement & New Energy Markets*

GaNFast™




GeneSiC


| Up to 20x | Up to 3x | Up to 40% | Up to 3x | Up to 3x | Up to 25% |
|---|---|---|---|---|---|
| Faster Switching(1) | Smaller & Lighter(1) | Energy Savings(1) | Higher Power Density(1) | Faster Charging(1) | Lower System Cost(2) |


**GaN and SiC Replacing Si in Next-Gen Power Applications**

**Notes:**
1. Statistical data is based on Navitas estimates of GaN-based systems compared to Si-based estimates in the 2024-2025 timeframe. Based on Navitas measurements of select GaN-based mobile wall chargers compared to Si-based chargers with similar output power, incl. 2019 study of 65W fast chargers, 2022 customer statement re 2.7 kW data center AC-DC
2. Navitas estimates based on customer feedback as the expected system cost saving overtime as of April 2023

# Investment Highlights


The **pure-play, next-gen power semiconductor company** with leading-edge GaN and SiC technologies

**$22B+[1] GaN and SiC potential total opportunity in 2026** driven by electrification, energy savings, sustainability and AI / cloud

Highly differentiated technologies deliver **efficiency, density, integration and reliability**, backed by **185+ patent portfolio[2]**

**Unique system design center model** drives potential industry-leading customer intimacy and accelerates GaN / SiC adoption

Robust, flexible, fabless supply chain with **capacity expected to support 3-5x growth** in coming years[3]

Proven leadership team with **decades of potential industry-leading innovation** and execution in power semis

**Strong revenue growth** with attractive margin expansion and we believe we have **$760MM+ of potential pipeline opportunities** across diverse markets and regions[4]

**Notes:**
1. Based on internal company estimates, Navitas believes that the potential market opportunity in 2026 is $22B+ for GaN and SiC, replacing certain of the silicon market share
2. Issued or pending, as of Q1 2023
3. 3x refers to TSMC's internal commitment to expand GaN fab capacity by 3.27x following 2020. 5x refers to Navitas' expectations based on XFAB's communicated expansion plans and binding capacity reservations for EPI services.
4. Pipeline opportunities reflects estimated potential future business based on interest expressed by potential customers

*Decade of Disruptive Changes in Technology Displacement & New Energy Markets*

# World's Need for Efficient Power Rapidly Changing

## Data Growth and Climate Change are Driving a Long-term Secular Need for GaN and SiC

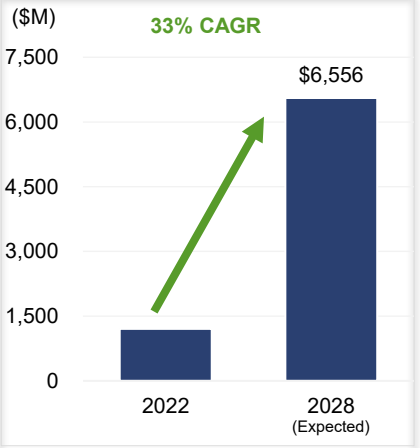
**Connectivity / AI** | **Electrification** | **Sustainability**

Power GaN and SiC Device Market Size

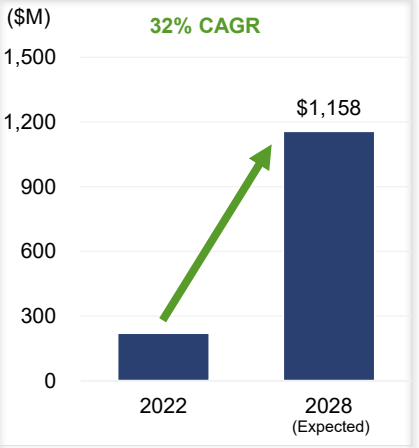
### Mobile & Consumer


### Telecom & Infrastructure

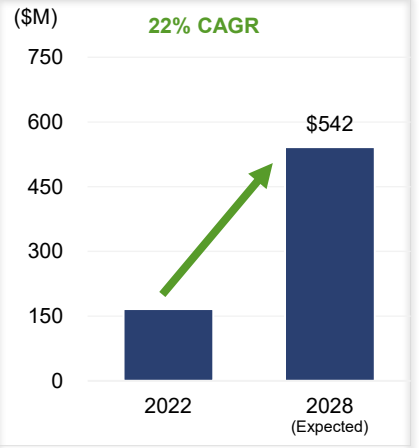

### Automotive & Mobility




### Industrial




### Energy




**Tomorrow's Power Requirements Demand Faster Delivery, Less Weight and Greater Efficiency**

**Source:** Power SiC/GaN Compound Semiconductor Market Monitor, Q1 2023, Yole Intelligence

# GaN and SiC Are Key To Efficient Electrification…

## Electricity Must Be Converted Efficiently For Many Use Cases

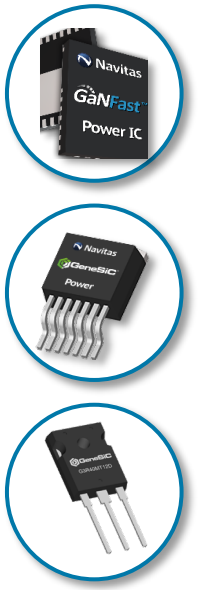

**Power Converted for Specific Applications**


**$22B+**[1]

2026E GaN and SiC Potential Total Opportunity Driven by Electrification, Energy Savings, Sustainability and AI / Cloud

## GaN / SiC Technology Enables Efficient Power Conversion

***Significant Impact on System Efficiency…***

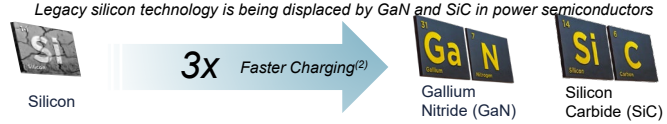



**System Benefits from GaN / SiC Power Semiconductors**

- *FASTER CHARGING*
- *SMALLER & LIGHTER SYSTEMS*
- *ENERGY SAVINGS*
- *HIGHER POWER DENSITY*
- *GREATER RELIABILITY*
- *LOWER SYSTEM COST*

***… Amid A Broader Shift To Advanced Technology***

*Legacy silicon technology is being displaced by GaN and SiC in power semiconductors*




**Notes:**
1. Based on internal company estimates, Navitas believes that the potential market opportunity in 2026 is $22B+ for GaN and SiC, replacing certain of the silicon market share
2. Navitas estimate of GaN & SiC-based power systems compared to silicon-based power systems as of April 2023

# …And Navitas is Leading A New Era of Power Efficiency

## Advanced Technologies Unlocking A New Generation of Performance and Applications

**Superior Technology is Revolutionizing Power Efficiency**

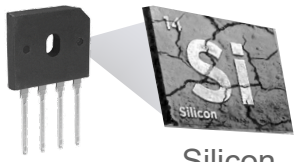
**Navitas**
**Well-positioned for Leadership in an Estimated $22B+[1] GaN and SiC Potential Total Opportunity by 2026**

**Semiconductor Technology**

**End Markets**

**Unique Advantages and Achievements**

### YESTERDAY




Silicon

**Si-Based MOSFETs & Diodes Low-Voltage: DC-DC Converters, PMICs, Point-of-Load**

- *Slower Charging*
- *Heavy / Large Components*
- *Unreliable Performance*
- *Higher TCO*
- *Energy Loss / Waste*

### TODAY


**Gallium Nitride (GaN)**


**Silicon Carbide (SiC)**

*Lower Power* ⟷ *Higher Power*

**GaNFast™**

- Integrated solution providing high speed, efficiency, and stability
- 75+ million GaN units shipped since 2018 to date with 90%+ yields[2]
- 6-16 week typical lead-times to forecasted customers with 3x GaN capacity expansion starting in 2023[3]

**GeneSiC**

- Broad industry offering of SiC FET with fast, cool and rugged performance
- 10+ million SiC units shipped since 2015 to date with 90%+ yields[2]
- 16-26 week typical lead-times to forecasted customers with 5x SiC capacity expansion starting in 2023[4]

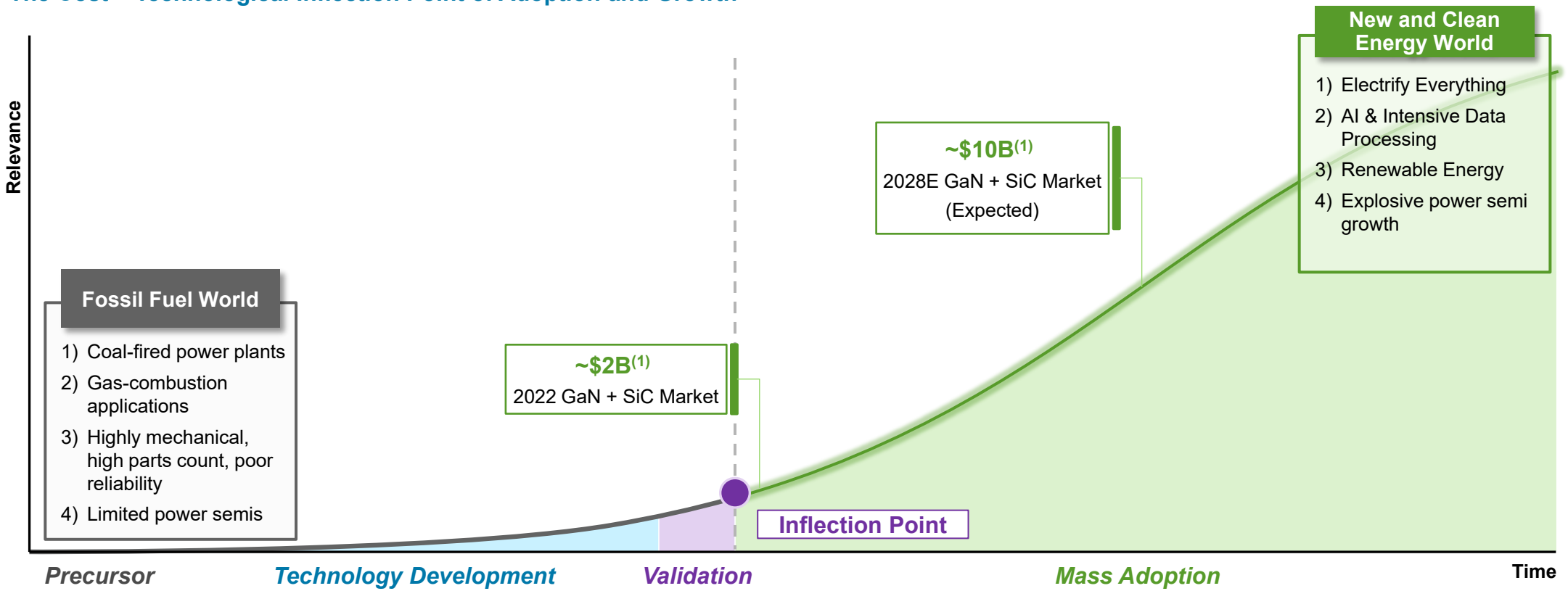
Unique system design center model drives potential industry-leading customer intimacy and accelerates GaN / SiC adoption

**Notes:**
1. Based on internal company estimates, Navitas believes that the potential market opportunity in 2026 is $22B+ for GaN and SiC, replacing certain of the silicon market share
2. Representing the % of the units tested in production at final test that pass all electrical requirements from 2022 to 2023 for SiC and 2022 for GaN
3. 3x refers to TSMC's internal commitment to expand GaN fab capacity by 3.27x following 2020
4. 5x refers to Navitas' expectations based on XFAB's communicated expansion plans and binding capacity reservations for EPI services

*Decade of Disruptive Changes in Technology Displacement & New Energy Markets*

# Compound Semis Entering Mass Market Adoption Phase

## The Cost + Technological Inflection Point of Adoption and Growth

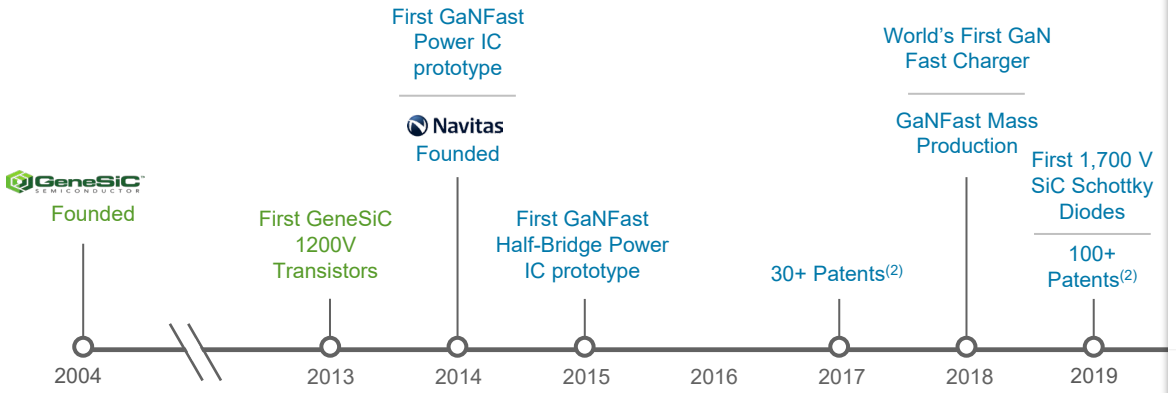



**Source:** Power SiC/GaN Compound Semiconductor Market Monitor, Q1 2023, Yole Intelligence

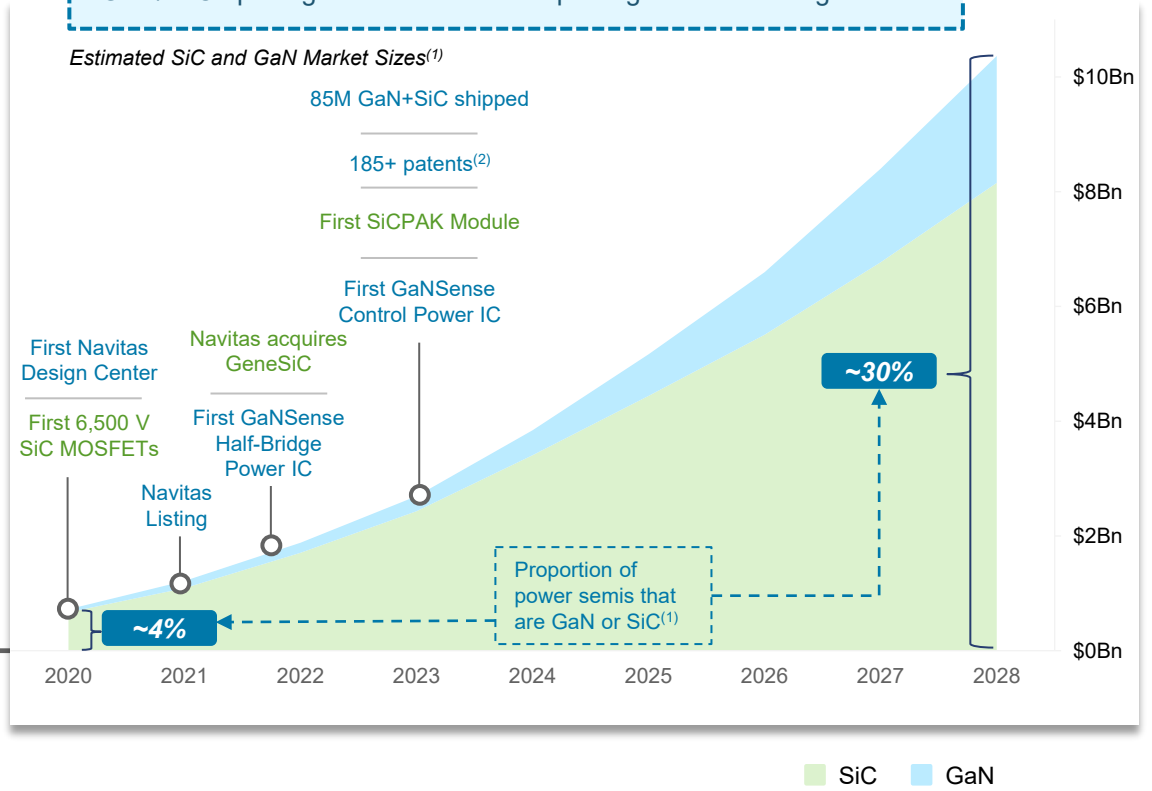
# The Time Is Now For Navitas

**Navitas empowering the electrification of the world**

Pre-cursor | Technology Development | Validation | Mass Adoption

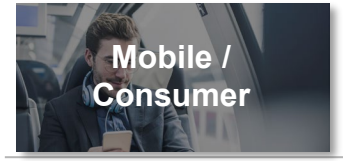
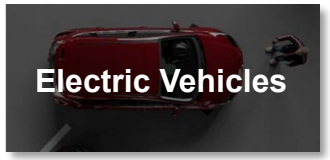



Gan / SiC opening new markets and replacing Si from existing markets



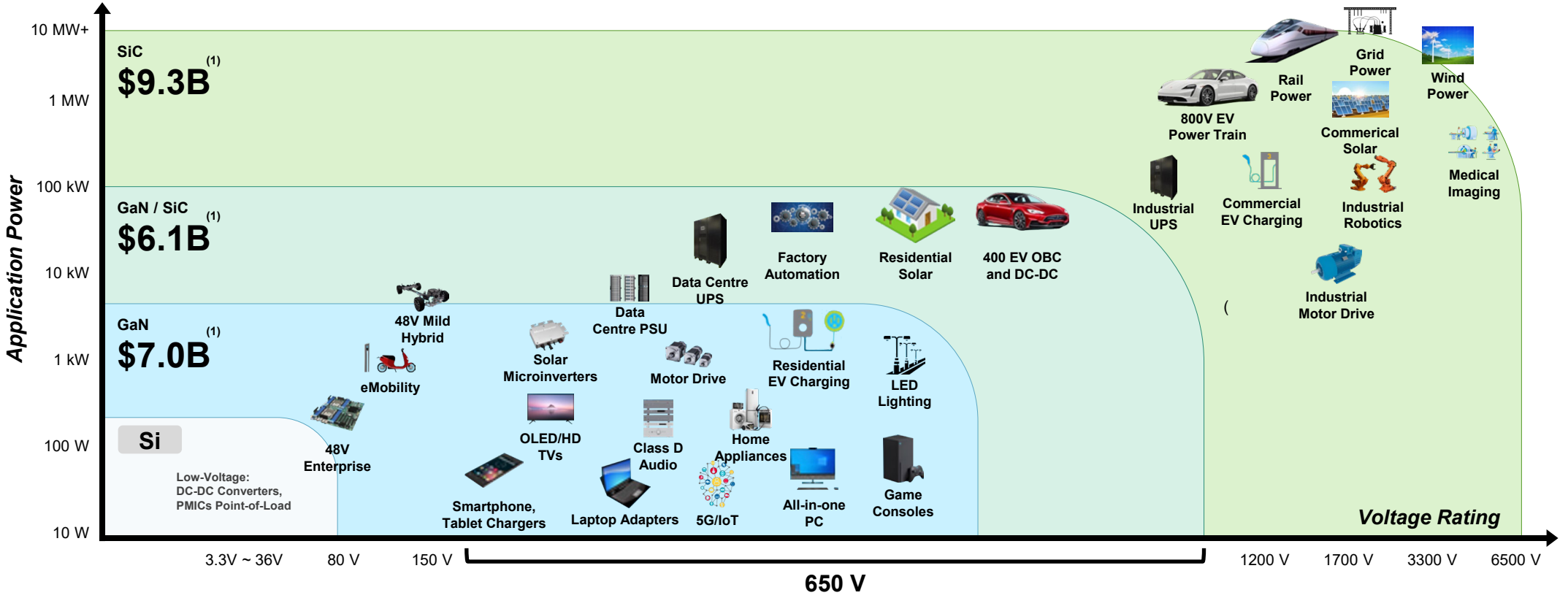

**Notes:**
1. Estimated based on Power SiC/GaN Compound Semiconductor Market Monitor, Q1 2023, Yole Intelligence
2. Granted or pending

# Demand for More Efficient, Fast and Low-Cost Power Solutions Accelerates GaN and SiC Adoption

| | Silicon Solutions Pain Points | GaN / SiC Value Drivers[1] |
|---|---|---|
|   | Demand for **higher power with fast charging** | **Up to 3x** Faster Charging[2]; **Up to 3x** More Power[2]; **50%** Size & Weight[2] |
|   | Demand for **higher & more efficient power** | **+9%** Efficiency[4]; **100%** Density Improvement |
|   | Demand for **energy savings & lower cost** | **~25%** Estimated Cost Reduction[3] |
|   | Demand for **higher efficiency** | **>70%** Energy Savings |
|   | Demand for **faster charging, extended range and lower cost** | **Up to 3x** Faster Charging[2]; **10%+** More Range |

**Notes:**
1. Navitas estimates based on GaN and SiC performance metrics (unless otherwise noted)
2. Compared to silicon chargers with the same output power
3. Navitas estimate based on customer feedback as the expected system cost saving overtime
4. Navitas estimate based on underlying survey conducted by the company

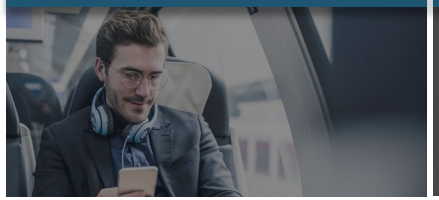
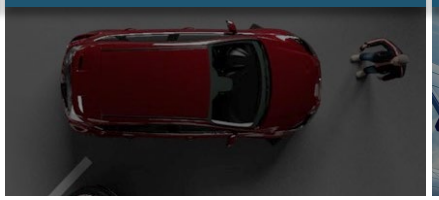
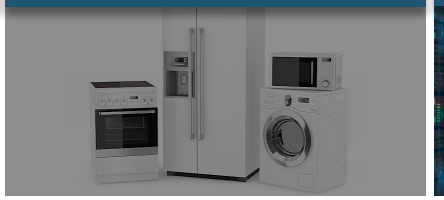
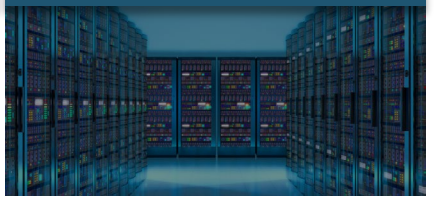
# $22B+[(1)] GaN and SiC 'Pure-Play' Potential Opportunity Expected By 2026




**Notes:** Axes not to scale

1. Based on internal company estimates, Navitas believes that the potential market opportunity in 2026 is $22B+ for GaN and SiC, replacing certain of the silicon market share

# Well-Positioned for Rapid Multi-market Expansion

| Mobile / Consumer | EV / eMobility | Solar / Energy Storage Systems | Appliance / Industrial | Data Center |
|---|---|---|---|---|
|  |  |  |  |  |
| **Top 5/5 smartphone OEMs and top 5/5 notebook OEMs in development or production[1]**<br>**20 new fast & ultra-fast mobile chargers launched in Q1; 150 project opportunities in development**<br>ANKER, DELL, Lenovo, oppo, SAMSUNG, xiaomi | **Tier-1 customers and engagements[1]**<br>**25 on-board and roadside project opportunities**<br>BorgWarner, HYUNDAI MOBIS, ABB, GEELY, chargepoint+, AMG, LG-MAGNA, BYD | **Majority of top 10 OEMs engaged[1]**<br>**35 major project opportunities in production or development**<br>steca A KATEK Brand, CanadianSolar, solis, SUNGROW Clean power for all, GROWATT, Bloomenergy, APsystems ALTENERGY POWER | **Top 7/10 OEMs engaged[2]**<br>**45+ project opportunities in production or development**<br>In Development | **Tier-1 PSU ODMs in development[1]**<br>**15 project opportunities expected to ramp in 2023/24**<br>*Power System Engagements*: DELL, LITEON, Chicony<br>*End Customer Targets*: aws, Google Cloud, Azure |
| **Potential Navitas Pipeline Opportunity[3]** | **$100M+[4]** | **$300M+[4]** | **$150M+[4]** | **$150M+[4]** | **$60M+[4]** |

**Notes:**
1. Based on internal Navitas estimates of top OEMs in each respective market and their existing customer engagements
2. Based on internal Navitas estimates of who they believe to be top OEMs in the appliance/industrial segment
3. "Pipeline opportunity" reflects estimated potential future business based on interest expressed by potential customers for qualified programs, stated in terms of estimated revenue that may be realized in one or more future periods. Pipeline opportunity is not a proxy for backlog or future revenue or other measure or indicator of financial performance. Rather, Navitas uses customer pipeline as a statistical metric to indicate relative changes in future potential business across various product markets. Time horizons vary accordingly, based on product type and application. Actual business realized depends on ultimate customer selection, program share and other factors
4. Based on Navitas internal estimates for potential customer revenue across GaN or SiC in the market stated

# GaN Revolutionizes Fast Charging For Mobile Devices

## Charge 3x Faster in Half the Size and Weight(1)

**Before**

**Hours of Charge Time**


**Today**

**9 min 30 sec Charge Time(3)**

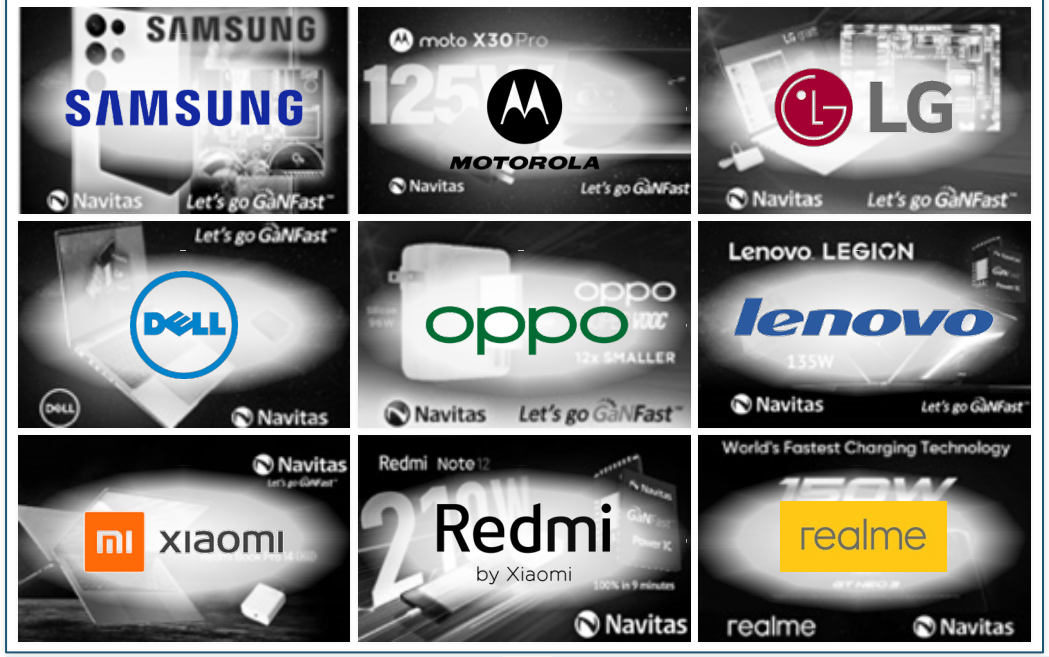

**260**
**Chargers In Mass Production(2)**

**150**
**Chargers In Development(2)**


**Notes:**
1. Compared to silicon chargers with the same output power
2. As of 5/15/2023
3. Realme GT3 with 240W charger

# Design Wins with Tier 1 Mobile/Consumer OEMs Prove Our Technology

## Tier 1 OEMs




## Aftermarket Examples


**260**
GaN Chargers
Mass Production(1)

**150**
GaN Chargers
In Development(1)

**100%**
Top 5/5 Smartphone OEMs and Top 5/5 Notebook OEMs Designing With Navitas(2)

**75M+**
GaN ICs Shipped(1)

**Notes:**
1. As of 5/15/2023
2. Based on internal Navitas estimates of top mobile OEMs and their existing customer engagements

# Market Opportunities in Pure-Play EV

## >$11B/year Opportunity in 2030[1]

(On-board >$9B/yr[1] + Roadside >$1B/yr[1])

**Immediate SiC revenue, GaN revenue from 2025**

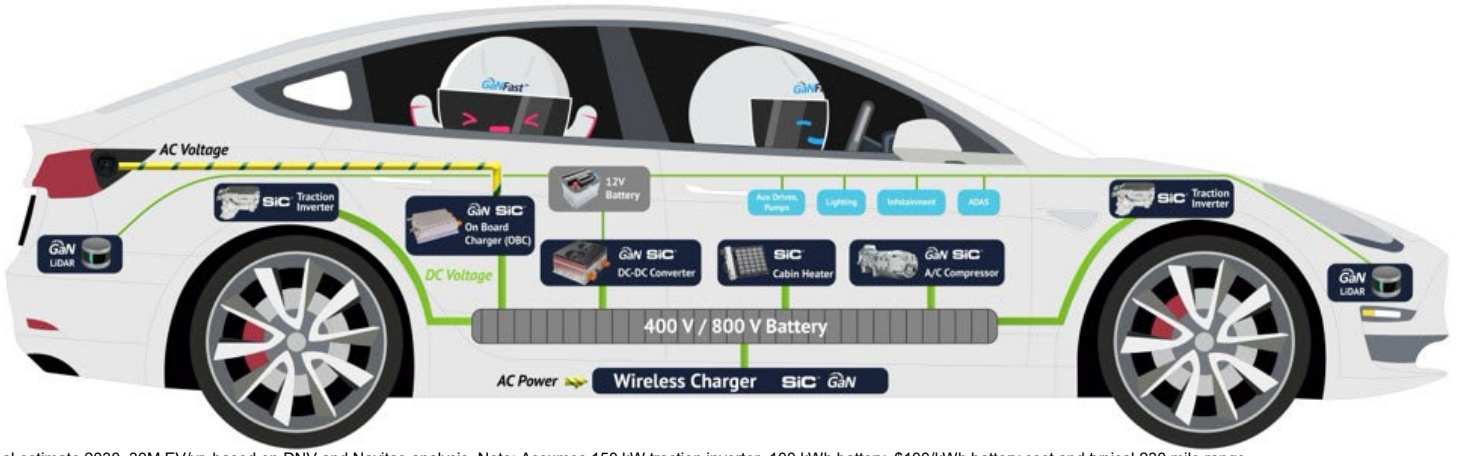
**Navitas EV System Design Center**

- 5 platforms, for 10 pipeline opportunities[3], including:
- 400V, 800V and 6.6–22 kW, bi-di charger (2-in-1), bi-di + DC-DC (3-in-1)

**Navitas + Geely Joint EV Design Center**

## Customers in Production, Engagement[4]

DYNEX Power through Innovation · BYD · BRUSA · INOVANCE Automotive · Rhombus Energy Solutions · ZEEKR · vitesco TECHNOLOGIES · SHINRY 欣锐科技 · ABB · AccoPower · GEELY · DELTA · VINFAST · HYUNDAI MOBIS · TRITIUM · SK signet · alpitronic · LG-MAGNA · chargepoint · AMG · BorgWarner · solaredge





***"10–80% charge in only 18 minutes!"*** [2]

**Notes:**

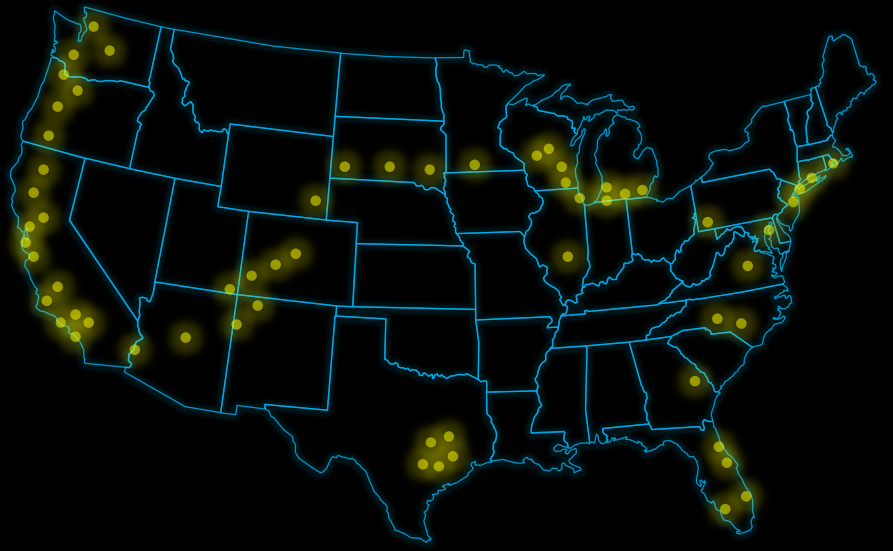
1. Company internal estimate 2030, 30M EV/yr, based on DNV and Navitas analysis. Note: Assumes 150 kW traction inverter, 100 kWh battery, $100/kWh battery cost and typical 230 mile range.
2. Level 3 800V 350 kW DC charger 10–80% in 18 minutes for Genesis GV70 SUV.
3. This reflects estimated potential future business based on interest expressed by potential customers for qualified programs, stated in terms of estimated revenue that may be realized in one or more future periods. Pipeline opportunity is not a proxy for backlog or future revenue or other measure or indicator of financial performance. Rather, Navitas uses customer pipeline as a statistical metric to indicate relative changes in future potential business across various product markets. Time horizons vary accordingly, based on product type and application. Actual business realized depends on ultimate customer selection, program share and other factors
4. Represent select potential customers Navitas is in discussions with currently. Representative logos do not indicate binding long-term agreements with any of the companies

# Fast EV Chargers Have Created An All New SiC Market

## EV Charger Adoption(1)

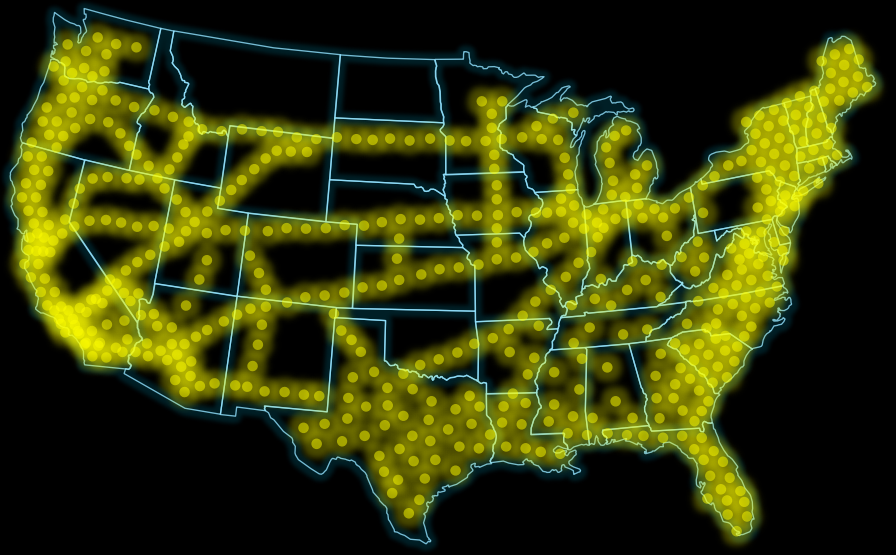
### Before

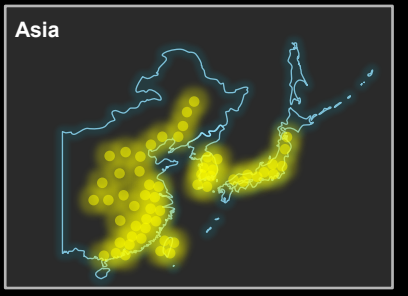
<2K Fast EV Chargers(2)

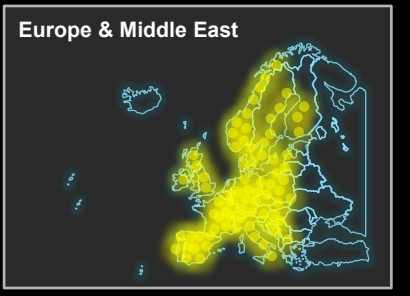


### Today

20K+ Fast EV Chargers(3)



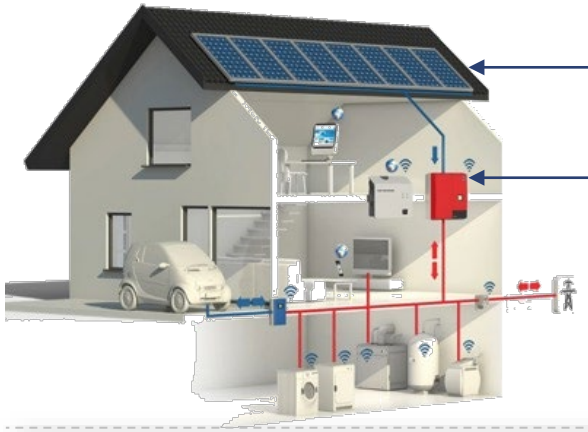



**Notes:**
1. Charger locations are illustrative; Fast EV chargers include AC 43 kW chargers, DC chargers, Tesla Superchargers and inductive chargers
2. Number of publicly available fast electric vehicle chargers (EVSE) in the United States in 2013 (in units) from Statista
3. Number of publicly available fast electric vehicle chargers (EVSE) in the United States in 2021 (in units) from Statista

Navitas

# Market Opportunities in Solar & Energy Storage



GeneSiC GaNFast™ Solar Inverters(1)

GeneSiC GaNFast™ Energy Storage


**>$4.65B**

**Market Potential for GaN and SiC (2)**

## 35 Customers in Production, Engagement(3)

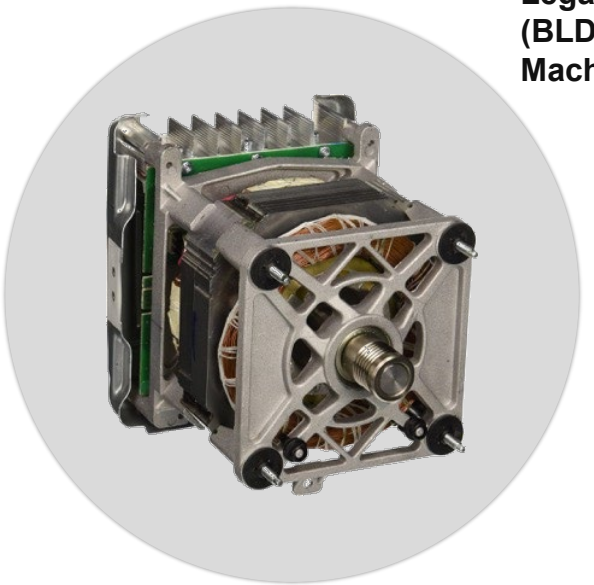
APsystems, Bloomenergy, CanadianSolar, solis, Power Electronics, solis, CHINT, GROWATT, steca A KATEK Brand, SUNGROW, Q CELLS, CATL, SOFAR SOLAR, CRRC, GOODWE, solaredge

## Navitas Strength & Potential Opportunities

- **Solar up an estimated 3x 2022–2027, more capacity than natural gas by 2026, coal by 2027**
- **Inflation Reduction Act: >$50B to solar, storage and wind**
- **Navitas estimates that bus voltages will rise to 1,500V – matches GeneSiC 3,300V capability** (4)
- **Immediate SiC revenue, GaN revenue starting from 2024**

**Notes:**
1. Navitas est. 6.2 kW residential installation with silicon inverter at 97.5%, GaN at 98.5% efficiency
2. Based on internal Navitas estimates of the market potential by 2030.
3. Represent select potential customers Navitas is in discussions with currently. Representative logos do not indicate binding long-term agreements with any of the companies
4. Based on discussions with Navitas customers

# Market Opportunities in Appliance & Industrial



**Legacy Si-Based Brush-less DC (BLDC) Motor & Inverter for Washing Machine (~80% efficiency)**

**Navitas 400W 3-phase Platform for Inverter-Motor Integration**

- 2x higher frequency
- >60% fewer components, PCB area
- 95–97% efficiency
- 80% energy savings vs Silicon BLDC
- 90% energy savings vs AC motors
- High reliability
- Fast time to market

**>$1.5Bn/Yr Opportunity for 50–750W Motors(1)**

- **Engaged with 7 of top 10 home appliance manufacturers worldwide(2)**
  - Includes energy efficiency upgrades to washers, dryers, refrigerators, cooking appliances, floor care, hair care, HVAC, and heat pumps
- **45 new motor-drive pipeline opportunities (GaN+SiC)(3)**
- **Inflation Reduction Act: $9B to upgrade US home appliance efficiencies**

**Notes:**
1. Navitas estimate (for NY Investor Day 9-13-22) 50-750W motors, including circulators, hydronic pumps, aircon IDU/ODU fans, HVAC, air purifiers, hair dryers, refrigerator compressors, dishwashers, washing machines, and $/unit for GaN power Ics
2. Based on internal Navitas estimates of who they believe to be the 7 of top 10 global home appliance manufacturers
3. This reflects estimated potential future business based on interest expressed by potential customers for qualified programs, stated in terms of estimated revenue that may be realized in one or more future periods. Pipeline opportunity is not a proxy for backlog or future revenue or other measure or indicator of financial performance. Rather, Navitas uses customer pipeline as a statistical metric to indicate relative changes in future potential business across various product markets. Time horizons vary accordingly, based on product type and application. Actual business realized depends on ultimate customer selection, program share and other factors

# Market Opportunities in Data Center

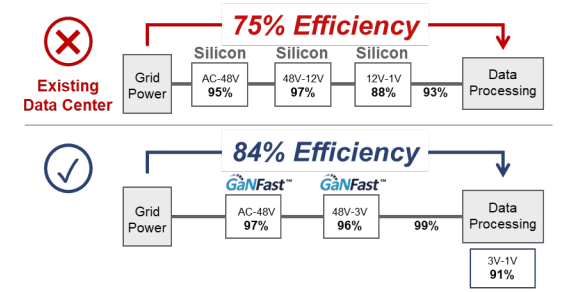
## Market Potential

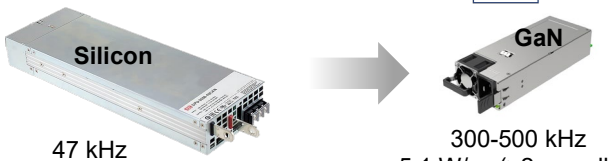
- **Power/size needs:** AI power up 2x-3x per rack, to 100kW+[1]. GaN saves 2x size and lower system cost than silicon[2]
- ***Efficiency needs:*** GaN can reduce electricity use by up to 10%,save >15 TWh or $1.9B/yr[3]
- ***Legislation drive:*** EU 'Titanium plus' efficiency standard in force[4]
- ***Privacy concerns, edge traffic:*** drive private / localized data centers

OpenAI · Bing · AUTONOMOUS VEHICLES 4000GB

## Navitas Developments

- **15** pipeline opportunities[5] currently in development (1.3-3.2 kW)
- **$60M** potential pipeline opportunities, initial revenue ramp late 2023[5]
- SiC (1,700-3,300 V):
  - 480 VAC 3-ph to 400 V UPS / ESS
  - 220 VAC / 400 V PDU to racks
- GaN (700, 150 V) for AC-DC and 48 V




47 kHz
2.2 W/cc

300-500 kHz
5.1 W/cc (>2x smaller)
>30% energy savings

***Power System Engagements*** — DELL · DELTA · LITEON · Chicony

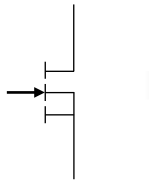
***End Customer Targets*** — EQUINIX · Google · NTT · HYVE · KDDI · ORACLE · Azure · CyrusOne · Meta · DIGITAL REALTY · aws · NVIDIA

**Notes:**
1. TD Cowen, per "AI to drive data center investments", LightReading.com, 4-26-23
2. Navitas estimate based on Navitas Design Center 2.7 kW CRPS GaN vs 3.2 kW silicon AC-DC. Cost statement per Navitas customer
3. European Union 'Directive 2009/125/EC, 2019 Annex', power supplies must be >96% efficiency peak, as of 1-1-23
4. Navitas estimate based on a) Navitas server/datacom forecast & AAAS data, b) $0.12/kWhr, c) Si vs. GaN $/W and d) D/C loading profile. Known Si solutions to deliver >500A next-gen processors vs Navitas targets for new GaN-based AC/DC and DC/DC
5. Pipeline opportunity" reflects estimated potential future business based on interest expressed by potential customers for qualified programs, stated in terms of estimated revenue that may be realized in one or more future periods. Pipeline opportunity is not a proxy for backlog or future revenue or other measure or indicator of financial performance. Rather, Navitas uses customer pipeline as a statistical metric to indicate relative changes in future potential business across various product markets. Time horizons vary accordingly, based on product type and application. Actual business realized depends on ultimate customer selection, program share and other factors

# A Potential Market Leading Product Portfolio in GaN…

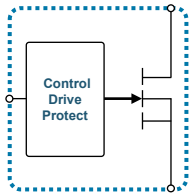
## High Voltage Integrated GaN Circuits

**Discrete GaN**



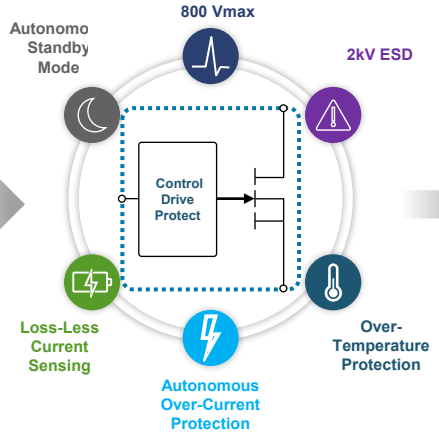
- Vulnerable
- Difficult to use
- Unknown reliability

**GaNFast™**




- ✓ Robust
- ✓ Easy to use
- ✓ Proven reliability

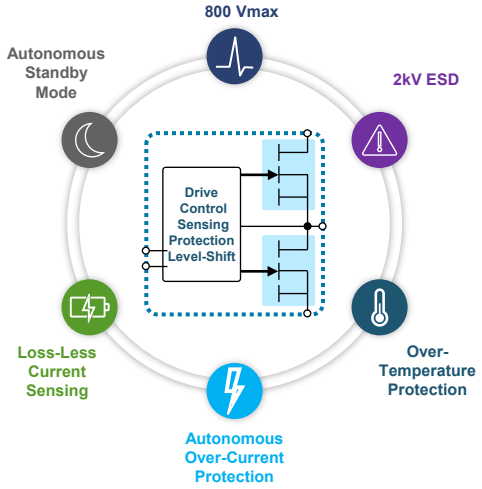
**GaNSense™**




*GaNFast plus:*

- ✓ Autonomous protection
- ✓ Loss-less current sensing

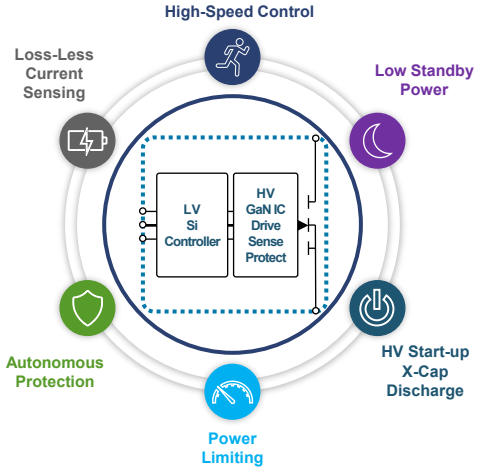
**GaNSense Half-Bridge**




*GaNSense plus:*

- ✓ Integrated HS, LS, level-shift isolation
- ✓ Complete protection

**GaNSense Control**




*GaNSense plus:*

- ✓ LV silicon system controller
- ✓ Fewest components


**Note:** Based on Navitas estimates on functionality

# …and Critical Technology Advantages in SiC

## Potential Industry-leading High-temperature / In-circuit Performance and Robustness

GeneSiC™

Patented Trench-Assisted Planar SiC MOSFETs

### UP TO 6.5kV

Largest range of SiC FETs & diodes *(650 V to 6.5 kV)*

### FAST SWITCHING

High efficiency hard-switch, soft-switch

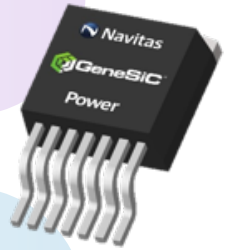
*(Lowest $E_{ON}$, $E_{OFF}$, $E_{ZVS}$ losses)*


- ✓ Cool.
- ✓ Fast.
- ✓ Rugged.

### COOL OPERATION

Lowest $R_{DS(ON)}$ at high temperature

*(25% lower than industry typical)*




### 100%-TESTED ROBUST AVALANCHE

Highest published capability to handle excess energy in fault condition

### LONG SHORT-CIRCUIT WITHSTAND TIME

Long survival duration in fault condition

### HIGH-POWER PARALLELING

Matching currents (Stable $V_{TH}$)

**Notes:** Based on Navitas testing of 1200V SiC MOSFETs vs. competitor products

# GeneSiC MOSFETs Offer Leading High-temperature, In-circuit Performance with Strong Robustness

Reliable, High-Speed Operation

Up to 20% Energy Savings, Up to 25°C Cooler

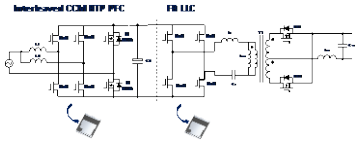
Wide Range

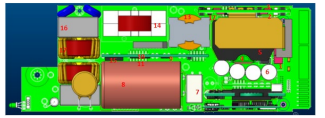

| | Other Suppliers | GeneSiC MOSFETs |
|---|---|---|
| **Voltage Range[1]** | Up to 3,300 V | 2x, up to 6,500 V |
| **Proprietary Technology** (manufacturing, performance, reliability) | Planar or Trench (trade-offs) | Trench-Assisted Planar (no compromise) |
| **High-Temperature Reliability[2]** | **1x** | **3x** |
| **Robustness[3]** | **1x** | **3x** |
| **Energy Savings[4]** | **-** | **+20%** |

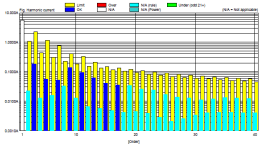
**Notes:**
1. Navitas survey of competitor portfolio August 2022.
2. Navitas application test: 1,200V, 40 mOhm, D2PAK SiC MOSFET, competition vs. Navitas G3R40MT12J at 150 kHz, 7,500 W half-bridge. 25°C cooler equates to 3x longer expected lifetime
3. Navitas 100%-tested avalanche rating vs published competition data
4. Navitas G3R40MT12J vs competitor survey (datasheet comparison and measured data), 20% lower high-temperature on-resistance

# Unique System Design Centers

## Accelerates Application-Specific Semi Innovations and GaN / SiC Customer Adoption



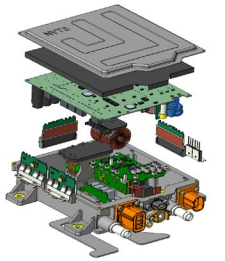




**System Design**
*High Frequency, High Efficiency, High Density, High Integration*

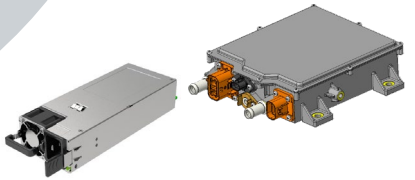
*Electrical, thermal, mechanical, EMI, BOM cost, manufacturing and yields*

**Customer Co-Development**
*Joint Labs / Joint Development*



*Close customer co-op for qualification, certifications, production readiness*

**Mass Production**
*Fast time to market*

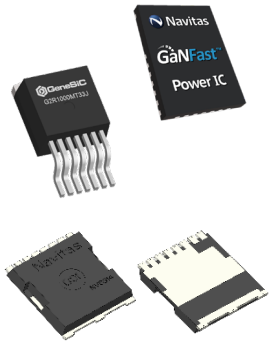


Customer

Revenue Ramp

*System know-how drives semi innovation*

**Semi Design**
*Application-specific GaN / SiC*




*System design evaluation & feedback*

# Navitas' Competitive Edge


## *Key Patents in GaN and SiC*

185+ Patents issued or pending encompassing key aspects of GaN power circuitry, analog and digital integration, and SiC device design(1)

## *Proprietary Design Process*

Led by pioneers in SiC and GaN, the Navitas team has a proprietary in-house design process

## *Rate of Innovation*

Rapid design process and rate of commercialization create customer value and outpace competitors

Historically, new generation released every 12-15 months

**Notes:**
1. Issued or pending, as of Q1 2023

# Capital Efficient and Flexible Supply Chain

## 3-5x Capacity Increases Enable Significant Revenue Potential

GaNFast™

GaNFast Power ICs

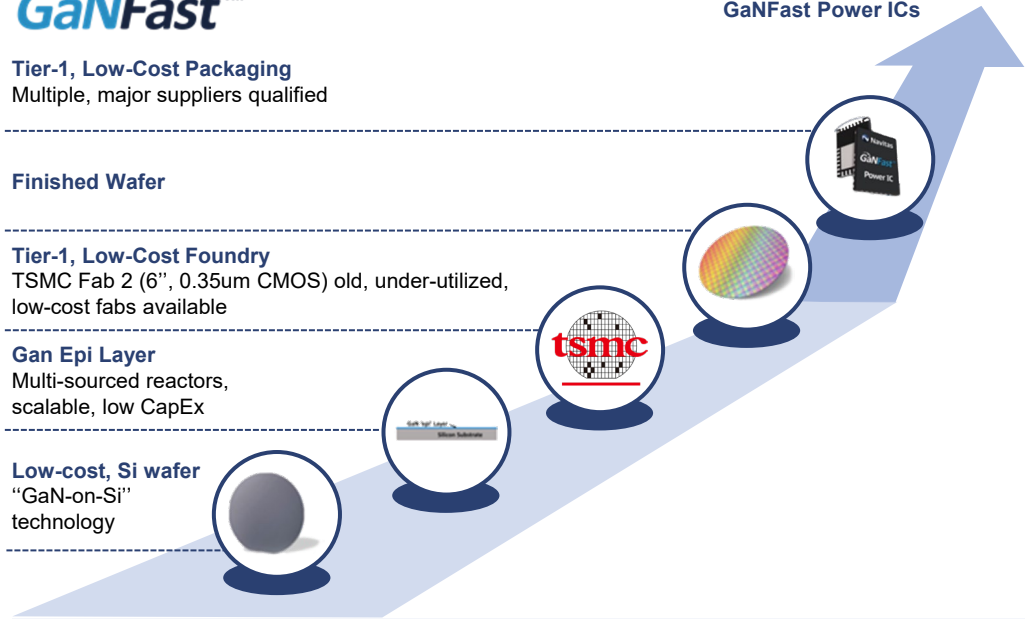
**Tier-1, Low-Cost Packaging**
Multiple, major suppliers qualified

**Finished Wafer**

**Tier-1, Low-Cost Foundry**
TSMC Fab 2 (6'', 0.35um CMOS) old, under-utilized, low-cost fabs available

**Gan Epi Layer**
Multi-sourced reactors, scalable, low CapEx

**Low-cost, Si wafer**
''GaN-on-Si'' technology




**90%** (1)(2)
Yields

**75M+** (1)
shipped

**3x** (3)
capacity increase in CY23

**6-16** (1)
Weeks typical lead-times to forecasted customers

GeneSiC™

Leading SiC Devices

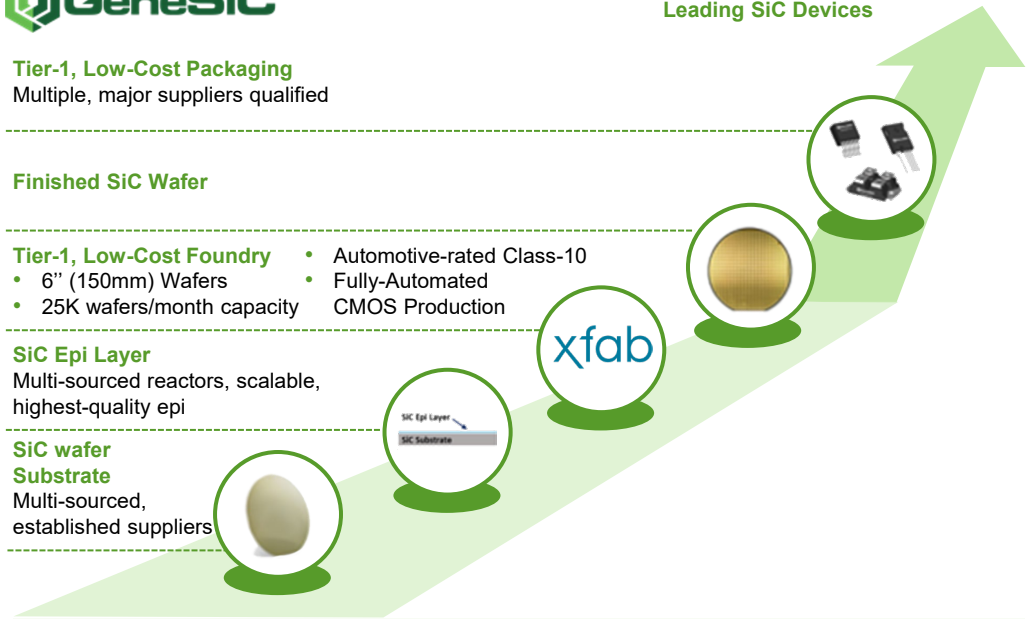
**Tier-1, Low-Cost Packaging**
Multiple, major suppliers qualified

**Finished SiC Wafer**

**Tier-1, Low-Cost Foundry**
- 6'' (150mm) Wafers
- 25K wafers/month capacity
- Automotive-rated Class-10
- Fully-Automated CMOS Production

**SiC Epi Layer**
Multi-sourced reactors, scalable, highest-quality epi

**SiC wafer Substrate**
Multi-sourced, established suppliers




**90%+** (1)(2)
yields

**12+** (1)
combinations of substrate, epi and foundry qualified

**5x** (4)
capacity agreement signed starting CY23

**16-26** (1)
Weeks typical lead-times to forecasted customers

**Notes:**
1. As of 5/15/2023, 75+ million GaN units shipped since 2018 to date
2. Representing the % of the units tested in production at final test that pass all electrical requirements from 2022 to 2023 for SiC and 2022 for GaN
3. 3x refers to TSMC's internal commitment to expand GaN fab capacity by 3.27x following 2020
4. 5x refers to Navitas' expectations based on XFAB's communicated expansion plans and binding capacity reservations for EPI services

# Leader in Sustainability(1)


February '22 First GaN sustainability report based on global standards.

**Every GaNFast™ IC saves 4 kg $CO_2$**


**4x-10x** lower component $CO_2$ footprint than silicon

**28% lower** lifetime $CO_2$ footprint for chargers / adapters

**Accelerates** transition from ICE to EV by **3 years**, saving **20%/yr** of road-sector emissions by 2050

GaN + SiC offers the potential to save up to **2.6 Gton / year** by 2050


May '22 World's first semiconductor company CarbonNeutral® certified


August '22 First 100,000 tons $CO_2$ saved


October '22 Recognized for industry-leading sustainability reporting

**Notes:**
1. Navitas estimates based on Earth-Shift Global, DNV life-cycle analysis, market growth. See 2021 Sustainability Report for more details

# World-class GaN and SiC Experts Leading the Revolution

## Tenured Leadership With Over $4Bn Power Semiconductor Revenue Generated and Decades of Combined Experience

### 3 of 4 Navitas Founders Have Worked Closely Together For Over 30 Years

**Gene Sheridan**
Co-Founder
& CEO

**Dan Kinzer**
Co-Founder & CTO /
COO

**Jason Zhang**
Co-Founder & VP,
Apps & Tech Mktg

**Ron Shelton**
CFO & Treasurer
*(Joined in May 2022)*

**Ranbir Singh, PhD**
EVP GeneSiC & Founder
of GeneSiC
*(GeneSiC acq. in Aug 2022)*

## Leading Global Semiconductor Experience

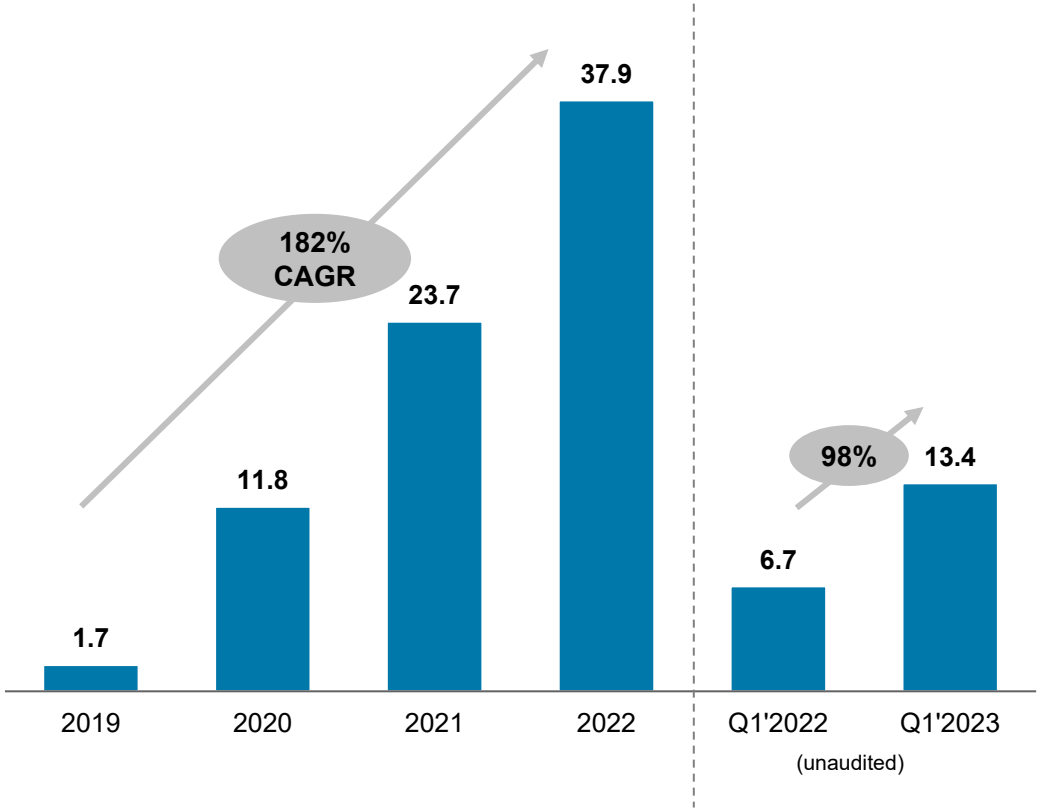
**Dan Kinzer**, co-founder, CTO and COO, was inducted into the International Symposium on Power Semiconductor Devices and ICs (ISPSD) **inaugural Hall of Fame** in 2018. He was recognized for his **contributions to power MOSFET technology** and his **leadership in organizing ISPSD conferences.**

**Dr. Ranbir Singh**, EVP of the GeneSiC business unit, was inducted into the North Carolina State University's Department of Electrical and Computer Engineering (ECE) **Alumni Hall of Fame** in 2022. He was recognized for his pioneering career in **high-performance, high-reliability silicon carbide (SiC) semiconductors for high-power, high-voltage applications.**

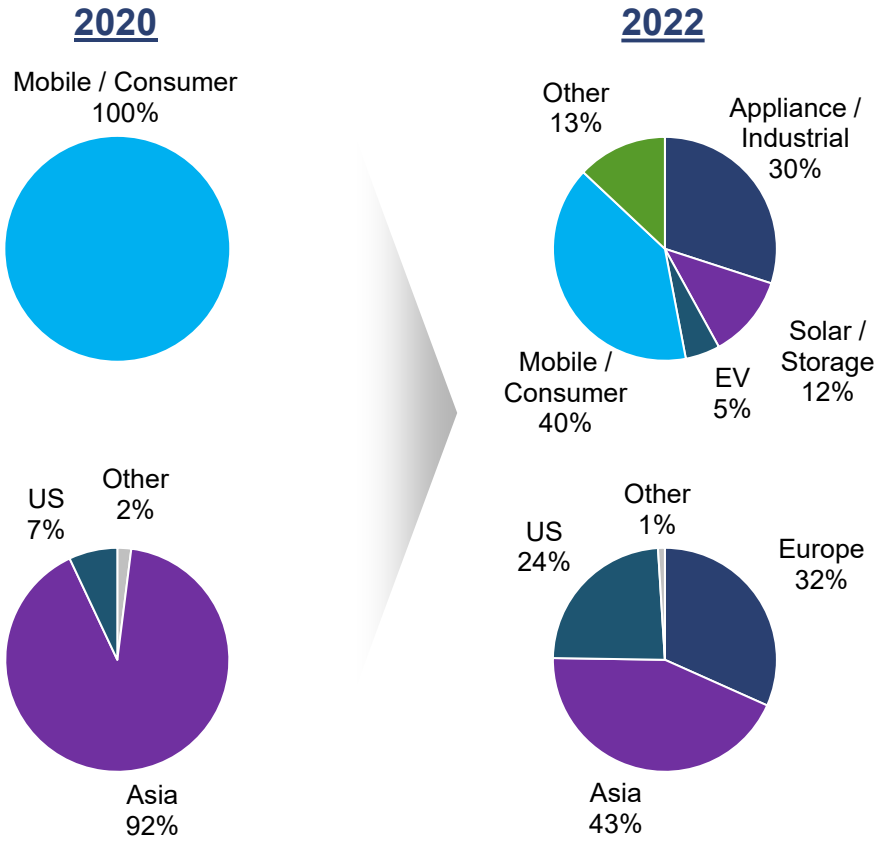
Adesto · BROADCOM · CIRRUS LOGIC · FAIRCHILD SEMICONDUCTOR · GIGOPTIX · Infineon · International IOR Rectifier · Lucent Technologies Bell Labs Innovations · NXP · onsemi · PHILIPS · Quantenna · SMSC SUCCESS BY DESIGN · transphorm · VICOR · Wolfspeed

# Extraordinary Growth and Diversity

## Reported Revenue[1] ($M)




## Revenue Mix[1]




**Notes:**

1. Reported revenue is not pro forma for GeneSiC financials for the period prior to the close of the acquisition of GeneSiC on 8/15/2022. Only includes GeneSiC revenue for the period post transaction close (8/15/2022 – 12/31/2022)


*Decade of Disruptive Changes in Technology Displacement & New Energy Markets*