

Navitas Semiconductor

(Nasdaq: NVTX)

Corporate Update May 2022

Includes Q1'22 financials

“Electrify Our World™”



Navitas

Energy • Efficiency • Sustainability



The Enabling Force



20x

Faster
Switching

3x

Smaller &
Lighter

Up To
40%

Energy
Savings

Up To
3x

Higher
Power Density

3x

Faster
Charging

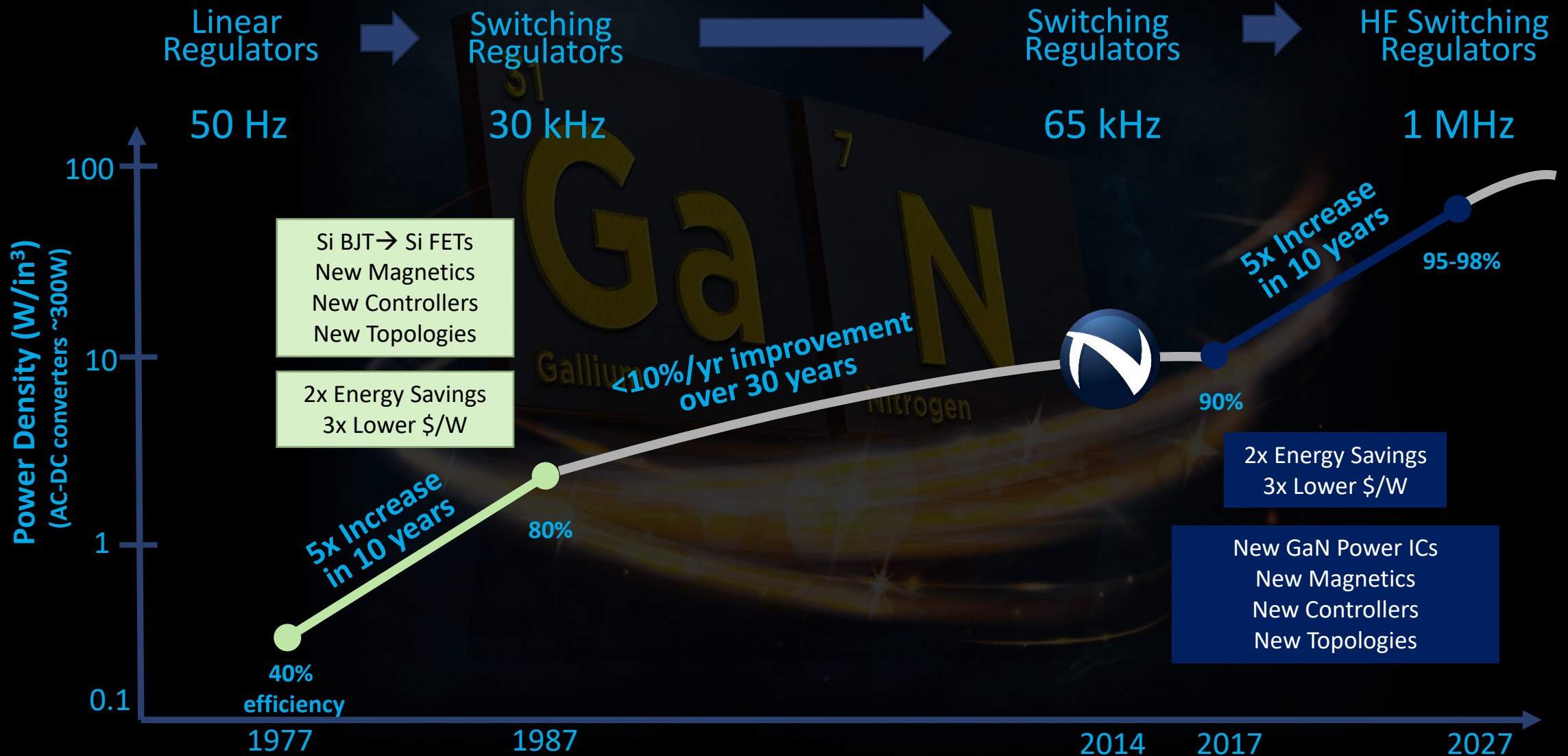
20%

Lower
System Cost

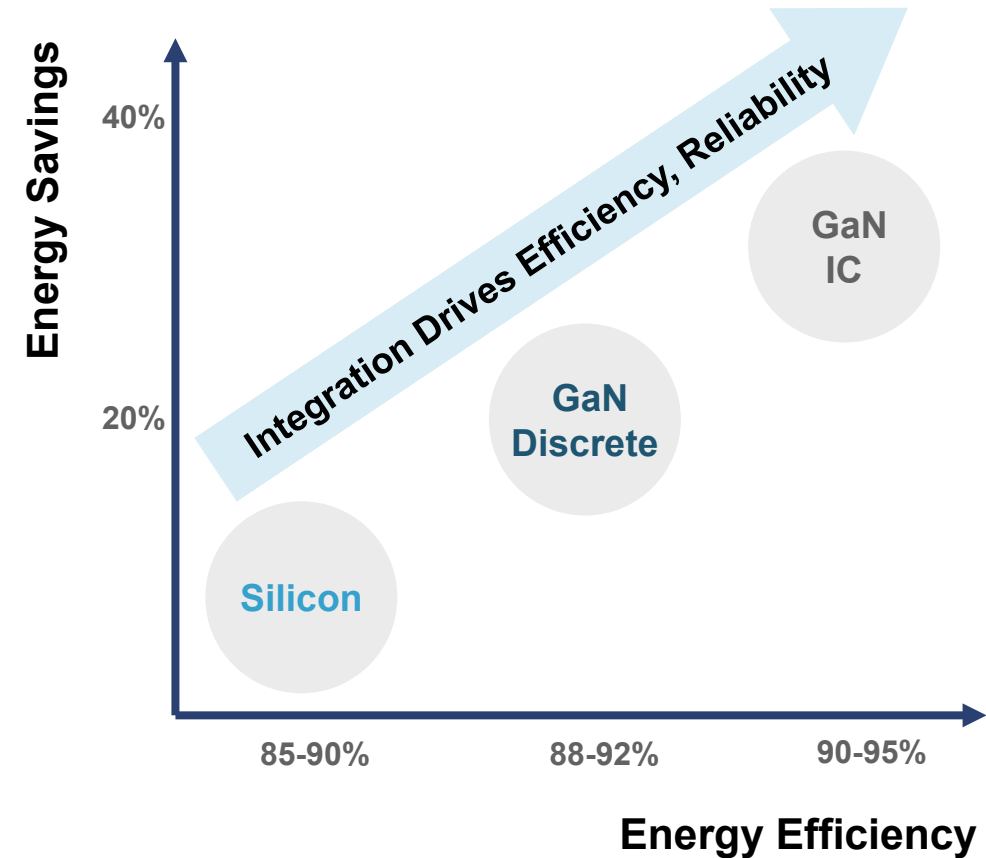
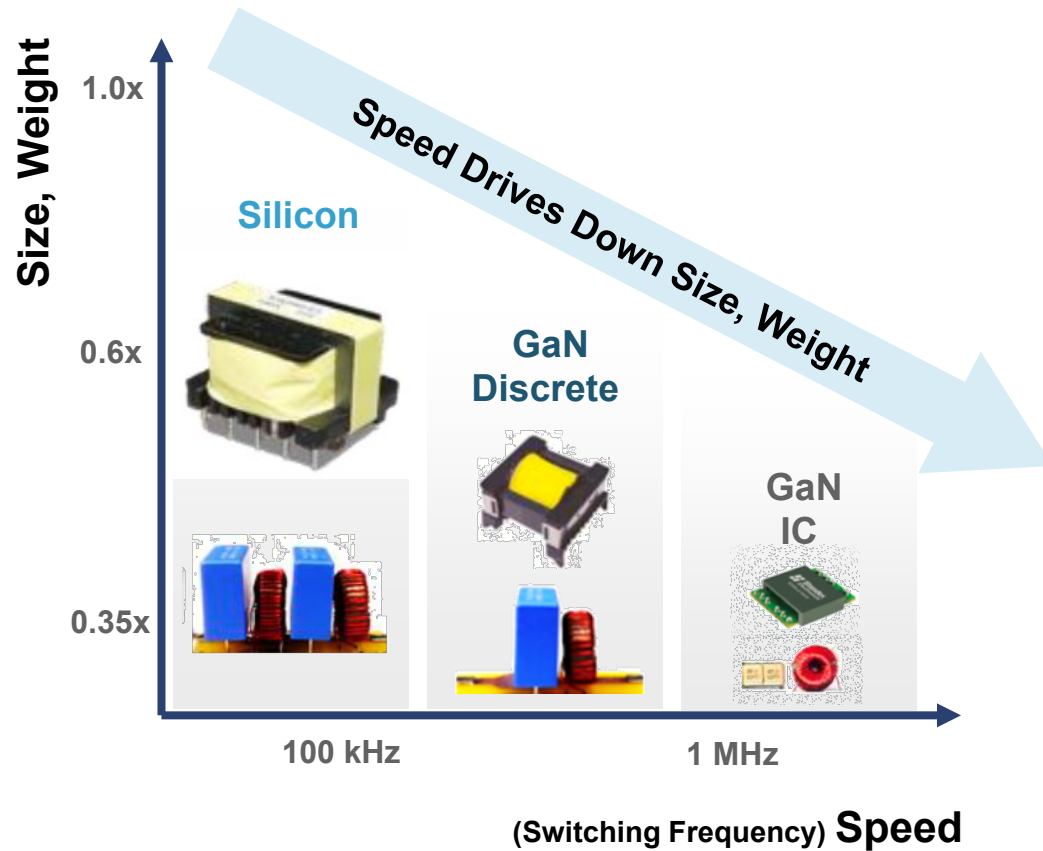
Note: Statistical data is based on Navitas estimate of GaN-based power systems compared to Si-based systems in the 2024-2025 timeframe. Based on Navitas measurements of select GaN-based mobile wall chargers compared to Si-based chargers with similar output power. Relative to silicon, GaN has 10x stronger electrical fields and 2x greater electron mobility, enabling high voltages in fast chips and fast switching with high energy savings.

Once every 40 years...

Second Revolution in Power



Speed and Efficiency Drive Value



GaN power ICs enable up to 3x smaller, lighter ⁽¹⁾

GaN ICs save 40% energy ⁽²⁾, 100x more reliable ⁽³⁾

(1) Based on Navitas measurements of GaN-based chargers compared to Si-based chargers with the same output power.

(2) Navitas estimate of GaN-based power systems compared to Si-based systems in the 2024-2025 timeframe, Navitas measurements of select GaN-based chargers vs. Si-based chargers with similar power.

(3) V_{GS} failure distribution based on Navitas internal characterization of Discrete GaN Transistors compared to GaN power ICs.

Critical Integration: GaN Discrete → GaN Power IC

GaN Discrete (MCM) 45W

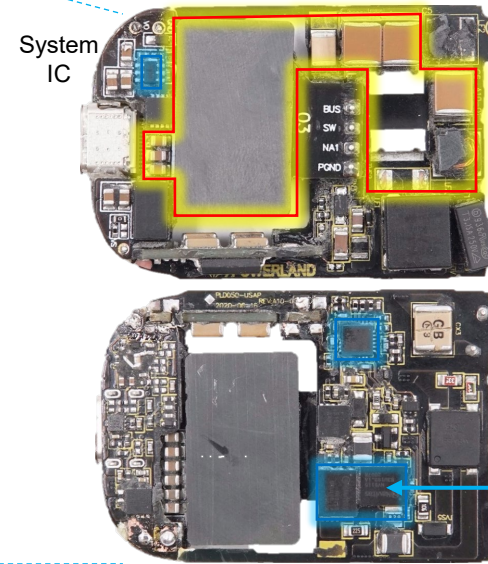


Passive Components



GaN Discrete in Multi-Chip-Module (MCM)

Speed Shrinks Passives



System IC

Passive Components

System IC

GaN ICs

GaN IC 50W



65 kHz
Bobbin Transformer (23 mm thick)
Electrolytic Capacitors
 52 x 53.1 x 30.1 mm = 83 cc Case + pins
0.5 W/cc

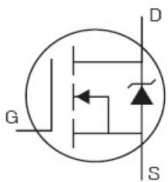
6x Faster
3x Smaller

400 kHz
Planar Transformer (8 mm thin)
No Electrolytic Caps
 82.2 x 39.0 x 10.5 mm = 34 cc Case
1.5 W/cc

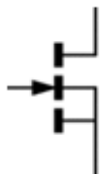
(1) Samsung 45W charger (GaN MCM) vs. OPPO 50W SuperVOOC Cookie (Navitas GaN IC)

GaNFast Evolution

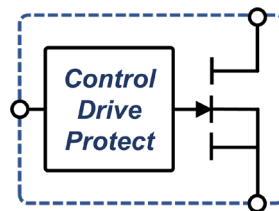
Silicon FET



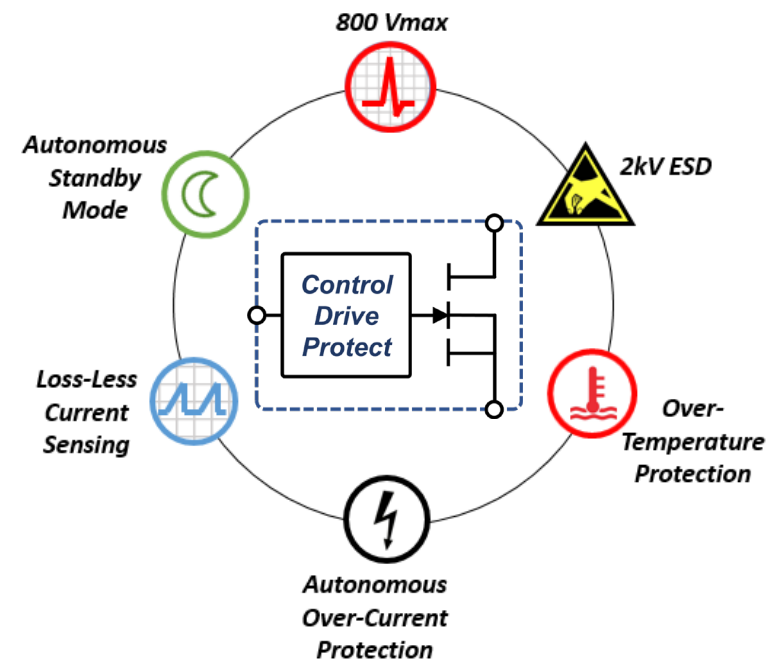
Unprotected GaN



GaNFast™



GaNFast™ with GaNSense™



- Old, slow technology
- High Q_g
- High C_{oss}
- $F_{sw} < 100$ kHz

- Exposed gate
- External gate drive
- dV/dt sensitivity
- Layout sensitivity
- ESD sensitivity
- Unknown reliability
- Unknown robustness

- ✓ Internal gate
- ✓ Integrated gate drive
- ✓ dV/dt immunity
- ✓ Layout insensitive
- ✓ 2KV ESD rating
- ✓ Proven reliability
- ✓ Proven robustness

- ✓ Autonomous standby
- ✓ Autonomous protection
- ✓ Loss-less current sensing
- ✓ High precision
- ✓ High efficiency

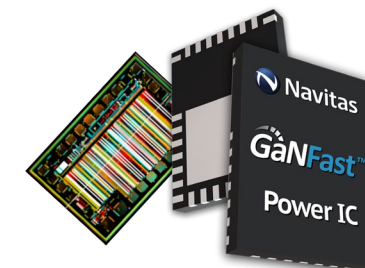
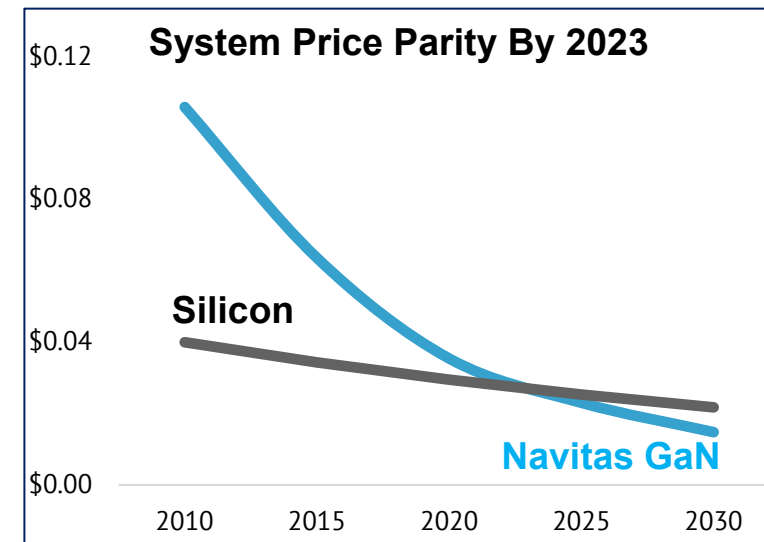
Innovation Drives System Value & Cost



- Industry pioneer in GaN ICs
- Proprietary AllGaN™ Process Design Kit (PDK)
- 150+ patents awarded or pending



- New generation every year
 - Gen 3 GaNSense™ in production
 - V_{DS} upgraded to 700V (800V transient)
 - Gen 3 high power sampled Q4'21
 - Application-specific Data Center, Solar, EV
 - Gen 4 sampled Q2'22



High-Volume, Low-Cost, High-Reliability Manufacturing

Navitas' 20+ years of GaN experience

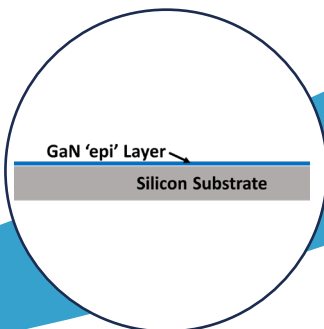
Solved complex issues with:

- Manufacturing
- Reliability
- Materials
- Capacity
- Cost

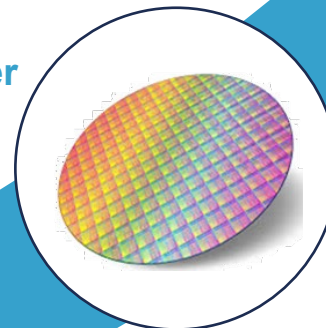
Low-cost, Si wafer
"GaN-on-Si" technology



GaN Epi Layer
Multi-sourced reactors,
scalable, low CapEx



Finished Wafer



tsmc

Tier-1, Low-Cost Foundry
TSMC Fab 2 (6", 0.35µm CMOS)
Old, available, under-utilized,
low-cost fabs available

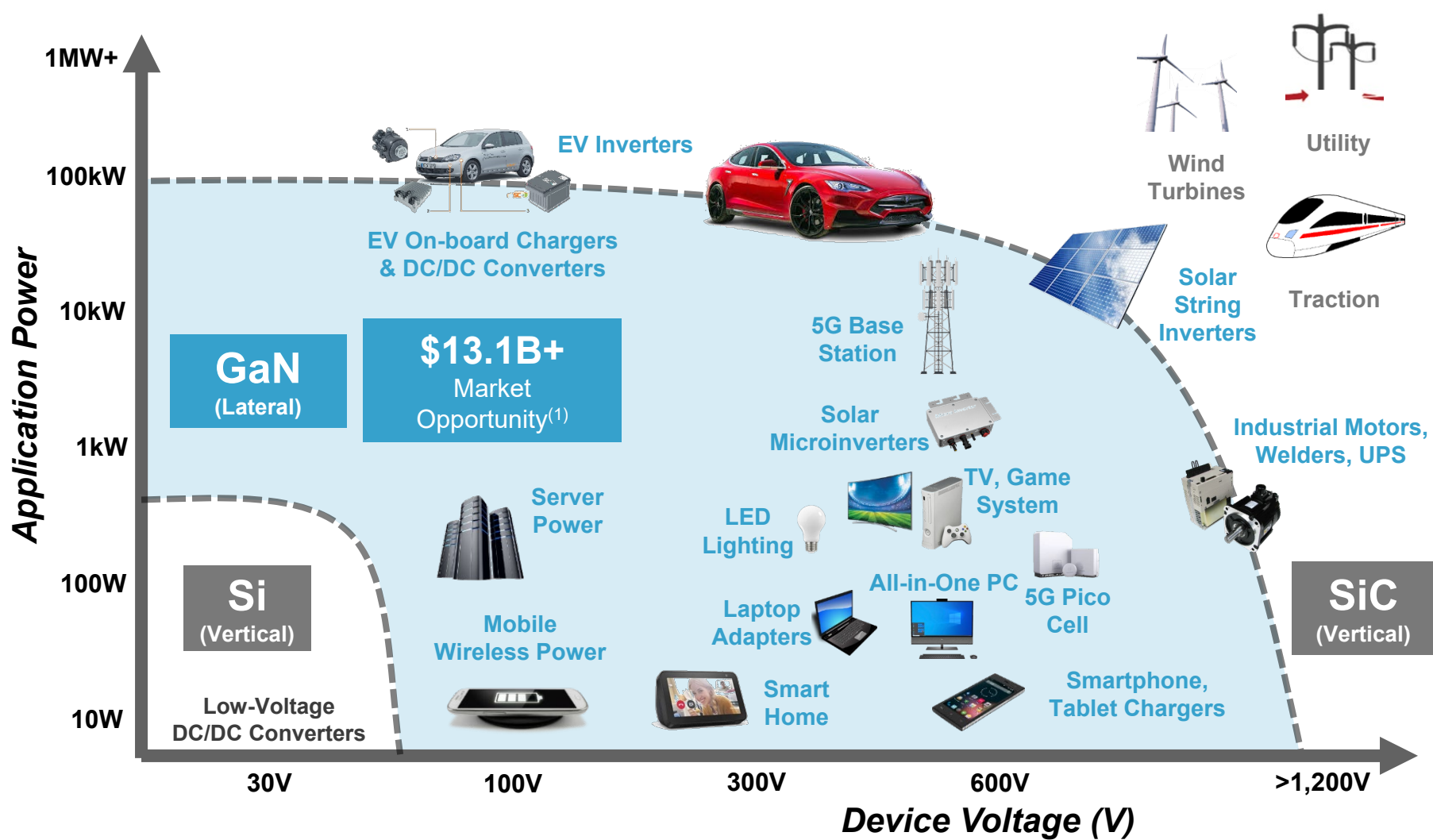


GaNFast Power ICs

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

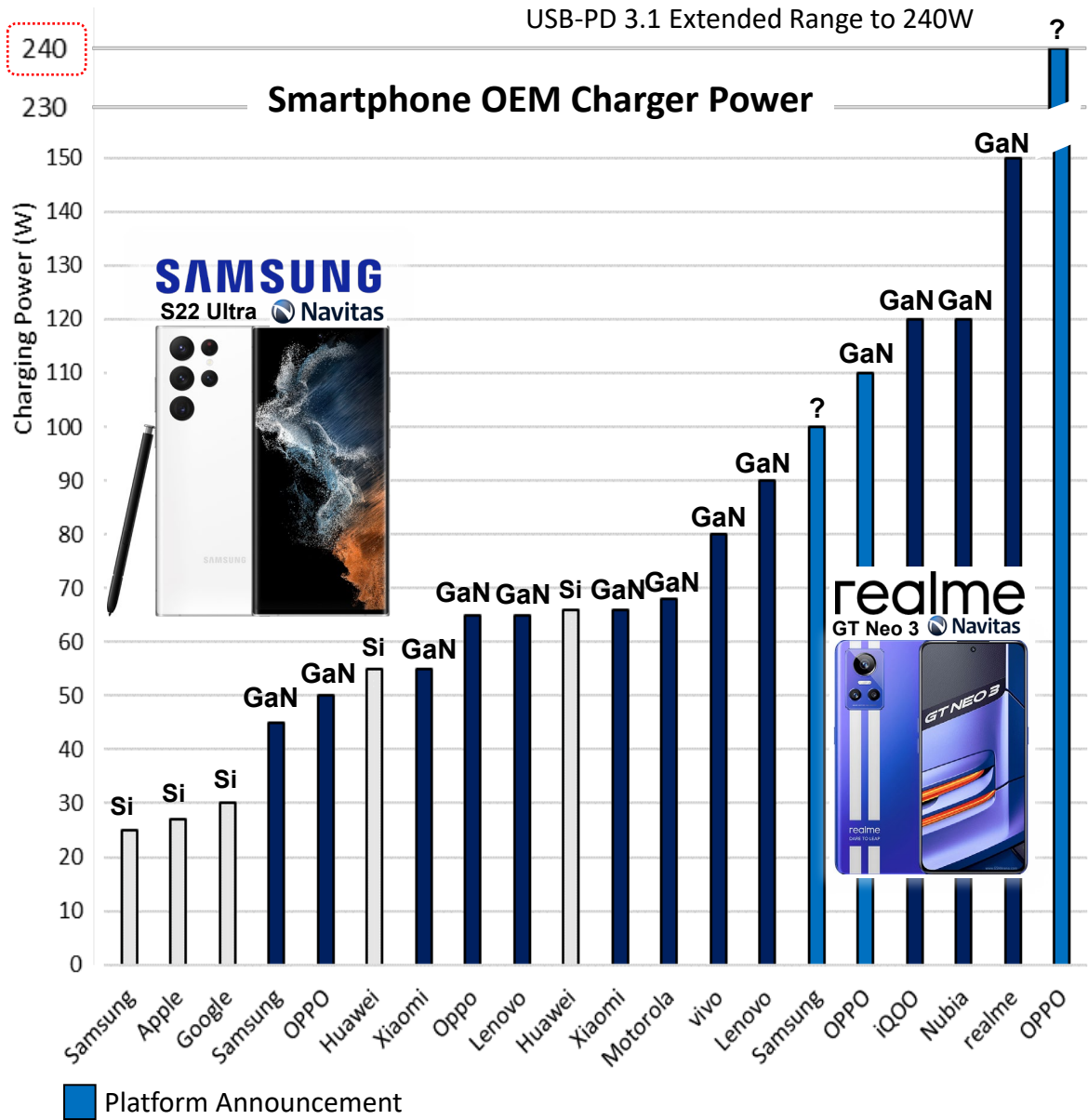
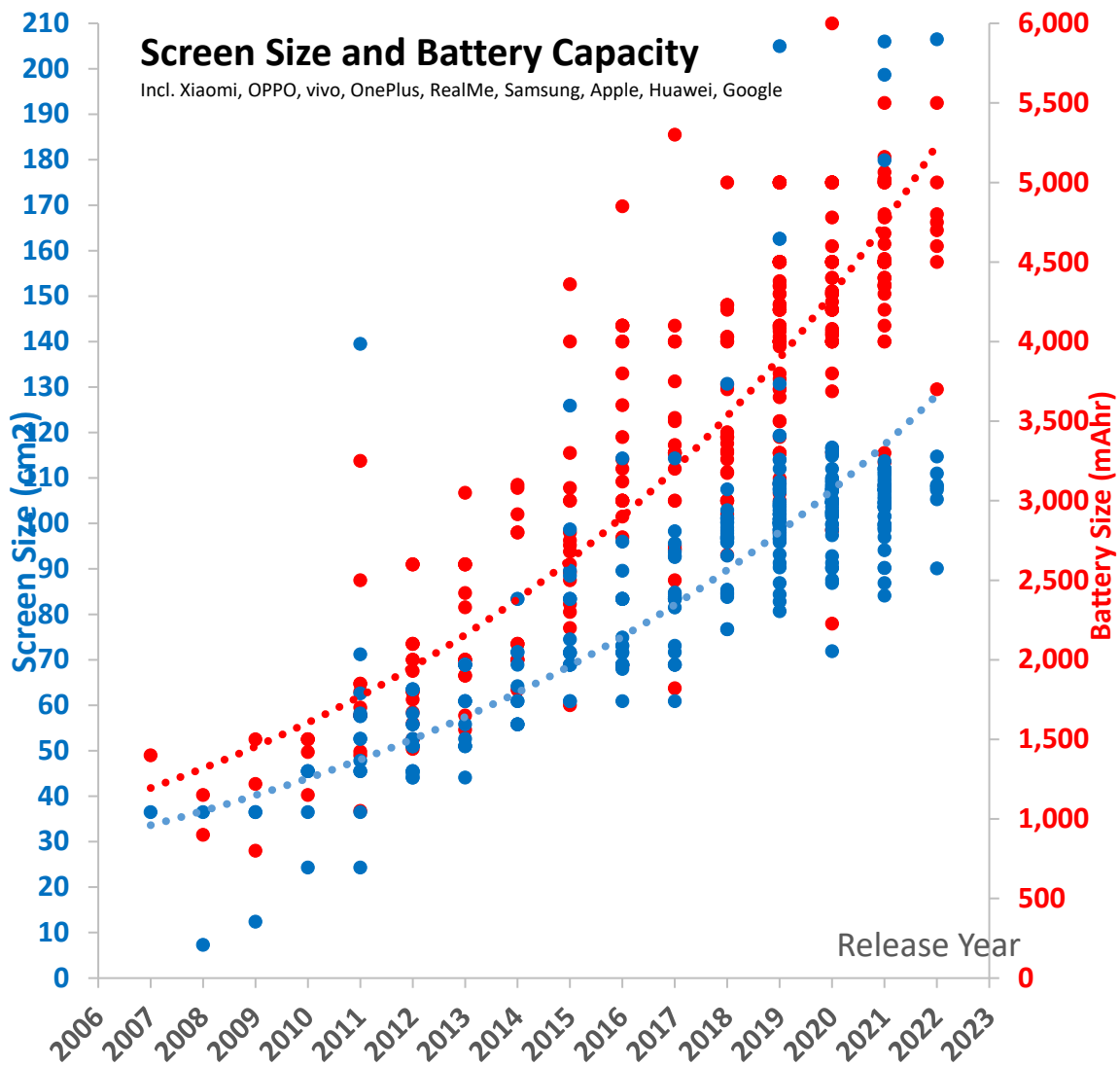
- ✓ 90%+ yields
- ✓ 50M+ shipped⁽¹⁾
- ✓ 0 GaN-related field-failures⁽¹⁾
- ✓ Committed capacity, with significant upside
- ✓ 6- to 16-week lead-times for select / forecasted customers

GaN: An Expansive Market Opportunity



	GaN	SiC
Device Structure	Lateral	Vertical
Circuit Integration	Yes (Power + Analog)	No
Switching Frequency	Highest (200 kHz – 2 MHz)	Medium (100 – 300 kHz)
Cost	Si substrate (very low cost)	SiC substrate (10x cost vs Si)
Thermal performance	Same as Silicon (1.3 W/cmK)	Highest (3.8 W/cmK)

Big Batteries, Fast Charging Need GaN



Source: Navitas, GSMArena to May 2022 (flagship phones)

Now Ultra-Fast Chargers

- New, fast-growth market: \$1B opportunity by 2025⁽¹⁾
- Full charge in <10 mins (150W), <20 mins (120W)
- Increased GaN potential per charger
- World's highest power density 120W, 150W



Realme GT Neo 3, 150W



Xiaomi Note 11 Pro+, 120W



vivo iQOO 9, 120W



Redmi F1 Mercedes AMG, 120W

Beyond Chargers: \$1B+ Potential Markets

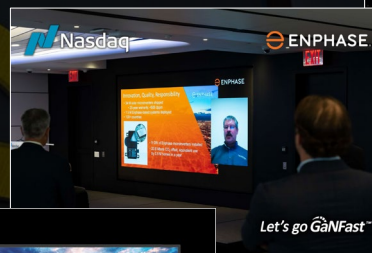
\$2B EV*



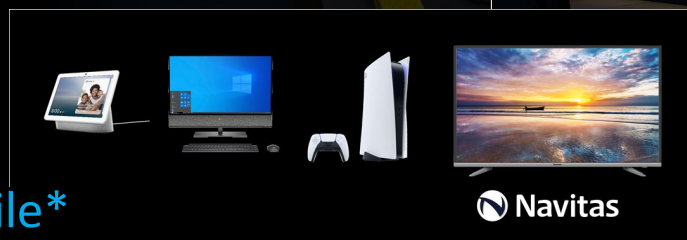
\$1B Data Center*



\$1B Solar



\$2B Consumer



\$2B Mobile*

Fast Chargers

Ultra-Fast



20W

100W

240W

500W

1,200W

3,200W

22,000W

"It's the end of the road for silicon."

"GaN offers >10x frequency, significant cost advantages" Enphase

"Navitas advantages: simplicity of driving, high-speed, reliability & compact form factor." Brusa

"GaN is a breakthrough new technology"

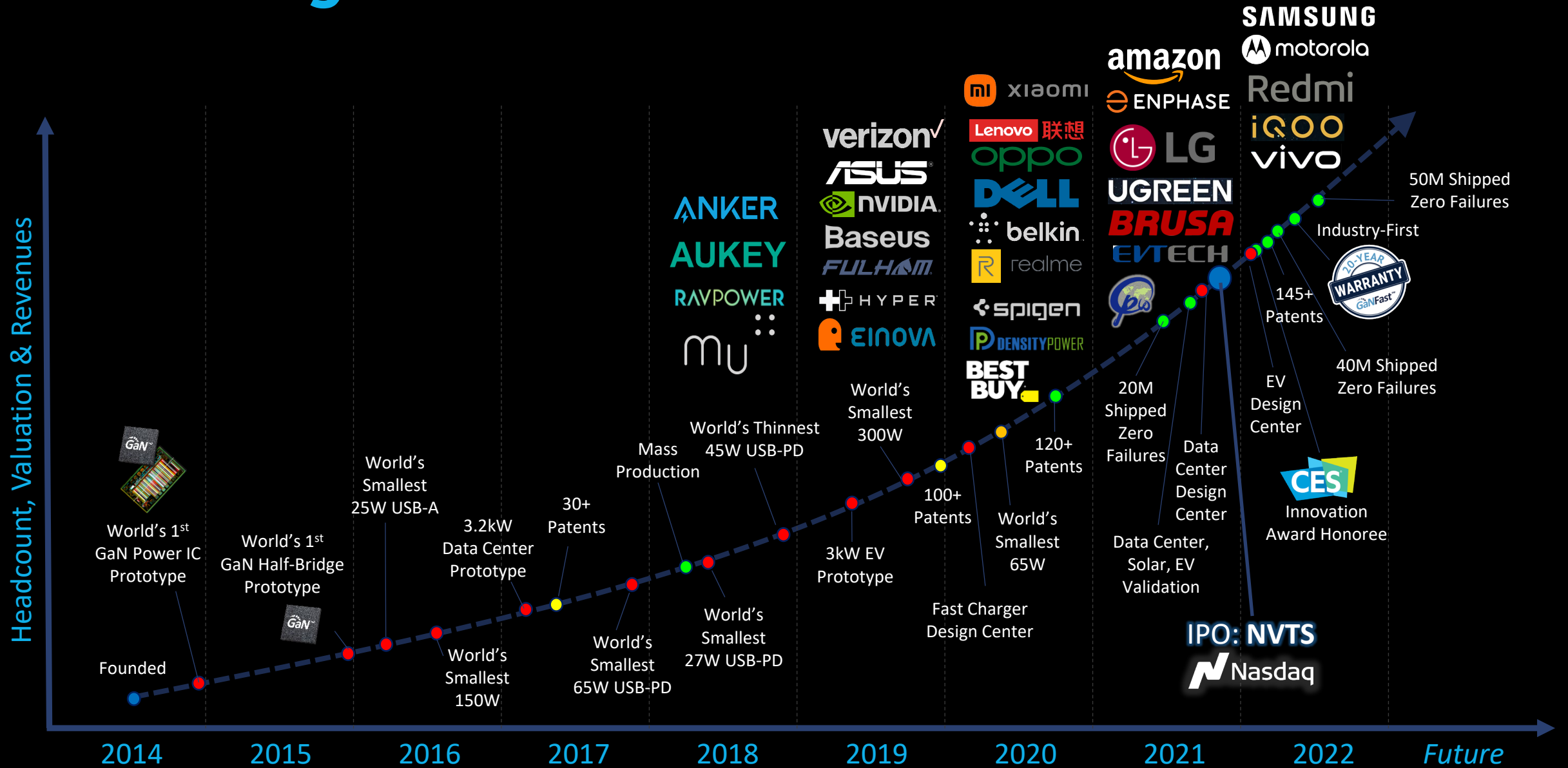
"Navitas: excellent partner, industry-leading GaN ICs" Compuware

*Dedicated System Design Center

Potential GaN market opportunity estimated in 2026 (2030 for EV). Figures refer to whole market, not any named customers. Navitas estimates



Pioneering Growth: #1 in GaN



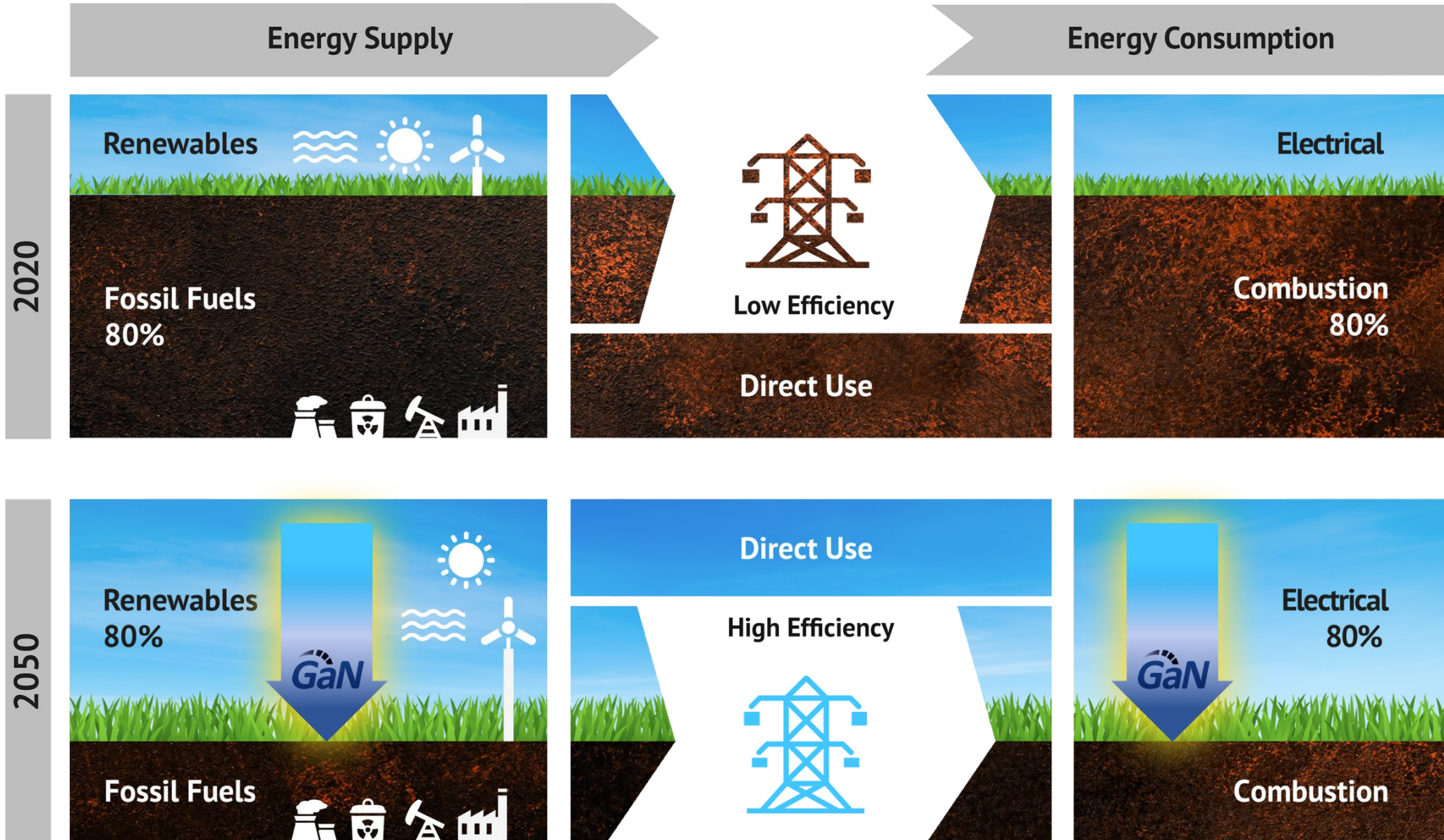


50,000,000
Shipped

vivo

 Navitas
Let's go GaNFast™

Electrify Our World™



Industry-Leaders in Sustainability



Every
GaNFast™
IC saves⁽³⁾
4 kg CO₂



GaN industry's first Sustainability Report to quantify the positive impact of GaN on climate change, per global standards

First semiconductor company worldwide to achieve CarbonNeutral® company status

4x-10x lower component CO₂ footprint than silicon⁽¹⁾

Accelerates transition from ICE to EV by **3 years**, saving **20%/yr** of road-sector emissions by 2050 ⁽⁴⁾

28% lower lifetime CO₂ footprint for chargers / adapters⁽²⁾

GaN saves up to **2.6 Gton / year** by 2050⁽⁵⁾

(1) Navitas and Earth-Shift Global analysis. 4x lower for 2021, 10x lower by 2022 per life-cycle analysis

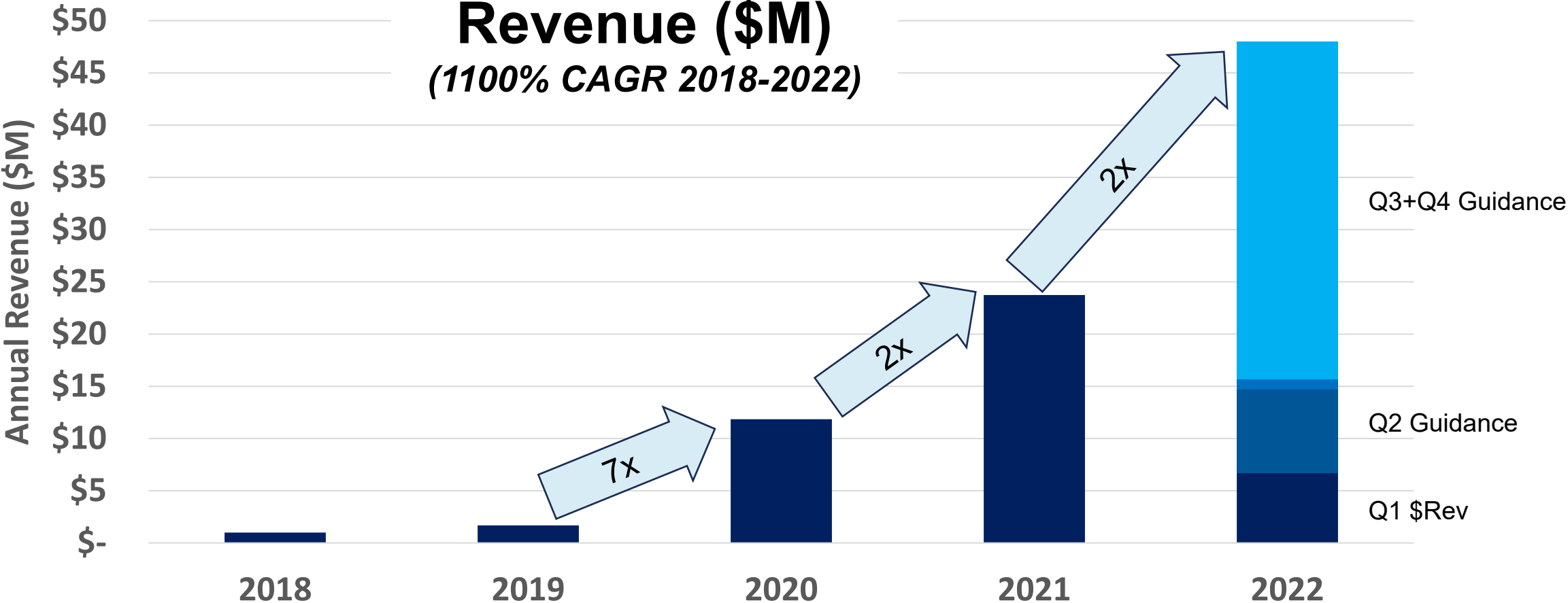
(2) Navitas and Earth-Shift Global estimated based on 65W charger per life-cycle analysis

(3) Navitas estimate based on GaN vs Si total life-cycle analysis.

(4) DNV estimate for 75%-adoption milestone pull-in, total road sector benefit

(5) Company information, DNV GL, EPA, IEA, International Renewable Energy Agency (IRENA). See 5-7-21 Investor presentation for details (filed with SEC). Derived from demand & energy efficiency CO₂ reduction of 1.4 Gt; assumes a \$0.12 / kWh cost of electricity and a carbon to energy ratio of 0.00071 tons / kWh, aligned with the EPA's marginal emission rate.

2x Revenue Plan



* Guidance valid only at time of Q1'22 earnings (May 12th, 2022). No updates provided outside of earnings.

Navitas Fundamentals

#1 in GaN

- **#1 Market share in a \$13B market**
 - **9/10** top mobile customers in production
 - **10/10** in development
 - 50Mu shipped, **zero** GaN-related field failures
 - Expansion markets on track
 - Data center revenue starts early '23, solar late '23, EV in '25
 - Short 6-16-week lead-times, 3x capacity in 2022
- **#1 Technology, # Sustainability**
 - Multi-year, sustainable lead
 - >150 Patents, plus proprietary PDK
 - Dedicated design centers: Mobile, Data Center, EV
 - First 20-year warranty
 - First Sustainability Report
 - First CarbonNeutral™ semiconductor company
 - Save 4 kg CO₂ per GaNFast IC

- **Strong Financial Performance**

- Q1'22 revenue +27% yr-on-yr
 - Guiding \$48M (2x) revenue in '22
- Q1'22 gross margin 44%+
 - Guiding 42% +/-1% in '22, long-term 55%
- 123.5M shares outstanding (Mar'21)
- >\$250M cash, low burn rate



Disclaimer rev, 4-20-22

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This presentation includes “forward-looking statements” within the meaning of the “safe harbor” provisions of the United States Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by the use of words such as “estimate,” “plan,” “project,” “forecast,” “intend,” “expect,” “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 the management of Navitas Semiconductor Corporation (formerly known as Live Oak Acquisition Corp. II) (“Navitas” or the “Company”) 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 the control of Navitas. Forward-looking statements are subject to a number of risks and uncertainties, including the possibility that the expected growth of Navitas’ business will not be realized, or will not be realized within the expected time period, due to, among other things: Navitas’ goals and strategies and its ability to achieve and implement them, the success or failure of current or future business development efforts; Navitas’ financial condition and results of operations; Navitas’ customer relationships and ability to retain and expand these customer relationships; Navitas’ ability to accurately predict future revenues for the purpose of appropriately budgeting and adjusting Navitas’ expenses; Navitas’ ability to diversify its customer base and develop relationships in new markets; Navitas’ ability to scale its technology into new markets and applications; the effects of competition on Navitas’ business, including actions of competitors with an established presence and resources in markets we hope to penetrate; the level of demand in Navitas’ customers’ end markets, both generally and with respect to successive generations of products or technology; Navitas’ 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 Navitas’ business, results of operations and financial condition; the impact of the COVID-19 pandemic on the global economy, including but not limited to Navitas’ supply chain and the supply chains of customers and suppliers; the ability of Navitas to maintain compliance with certain U.S. Government contracting requirements; regulatory developments in the United States and foreign countries; Navitas’ ability to protect its intellectual property rights; and the risk of inadvertently infringing the intellectual property rights of others. These and other risk factors are discussed in more detail in filings we make with the Securities and Exchange Commission (“SEC”), including, for example, the Risk Factors section beginning on p. 11 of our [annual report on Form 10-K](#), which we filed with the SEC on March 31, 2022 and [as thereafter amended](#), as well as in other SEC filings. 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 Navitas is not aware of or that Navitas currently believes are immaterial that could also cause actual results to differ materially from those contained in the forward-looking statements.

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Let's go GaNFast™

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Navitas

Energy • Efficiency • Sustainability

