



Deutsche Bank
2021 Technology Conference



Gene Sheridan
Co-Founder & CEO

Electrify Our World™



Navitas

Energy • Efficiency • Sustainability



Proven, Highly Experienced Mgmt Team



Tenured Leadership With Over \$4 Billion Power Semiconductor Revenue Generated and 300 Years Combined Experience⁽¹⁾

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

>20
Generations
Of Power Semis

\$4B+
New Revenue
Created⁽²⁾

200+
Patents Issued

Co-inv. 1st commercial power DMOSFETS (1978)

Co-inventor of trench power MOSFET (1998)

Co-developer 1st cascode GaN power FET (2011)

Inventor 1st p-channel power MOSFET (1979)

Initiated 1st commercial power GaN on Si (2002)

Co-inv. 1st commercial GaN power IC (2014)

Co-inv. 1st commercial HV, half-bridge driver (1988)

Co-inventor 1st GaN DrMOS (2010)

Inventor 1st GaN power IC PDK (2015)



Nick Fichtenbaum, PhD
Co-Founder & VP Engineering



Todd Glickman
Senior VP, Finance



David Carroll
Senior VP, Worldwide Sales



Paul Delva
Sr. VP General Counsel & Secretary



Stephen Oliver
VP, Corporate Mktg & Investor Relations



Marco Giandalia
VP, IC Design Engineering



Anthony Schiro
VP, Quality



Charles Zha
VP & GM Navitas China

Experience at Leading Global Companies



Lucent Technologies
Bell Labs Innovations



(1) Based on cumulative professional experience of the Navitas senior management team.
(2) Navitas estimate based on co-founder accomplishments spanning their professional careers.

GaN Expected To Replace Silicon In Power Applications



20x
Faster Switching

3x
Smaller & Lighter

Up To **40%**
Energy Savings

Up To **3x**
Higher Power Density

3x
Faster Charging

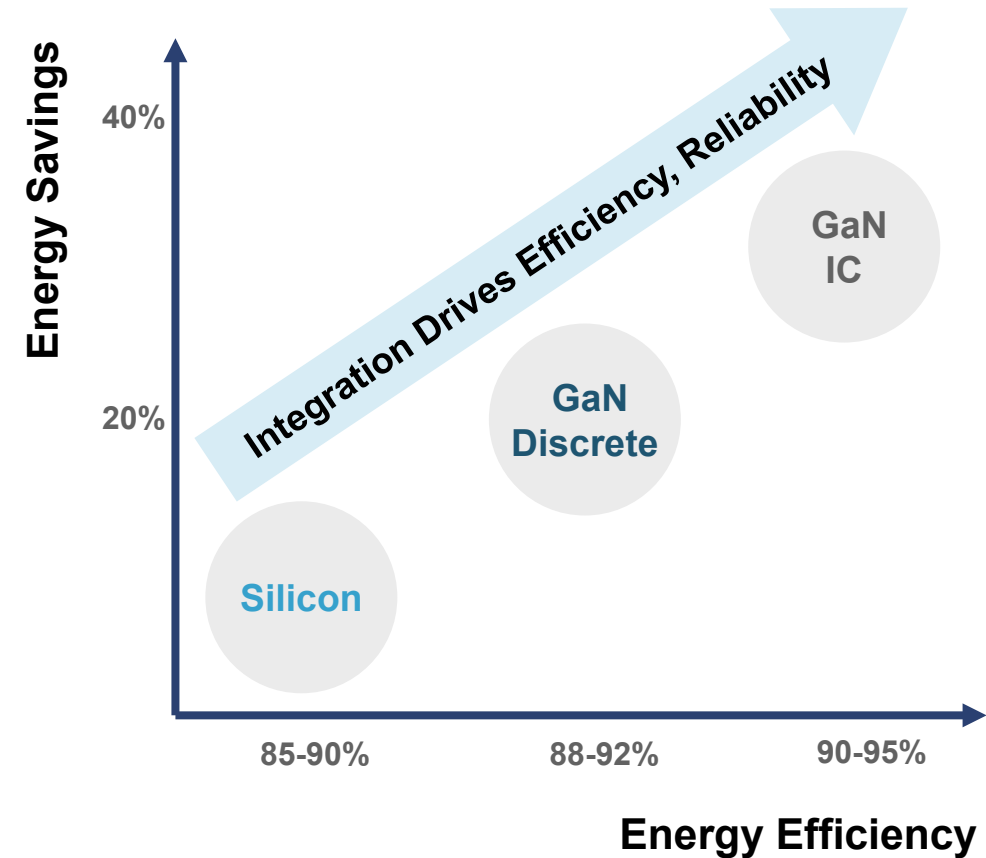
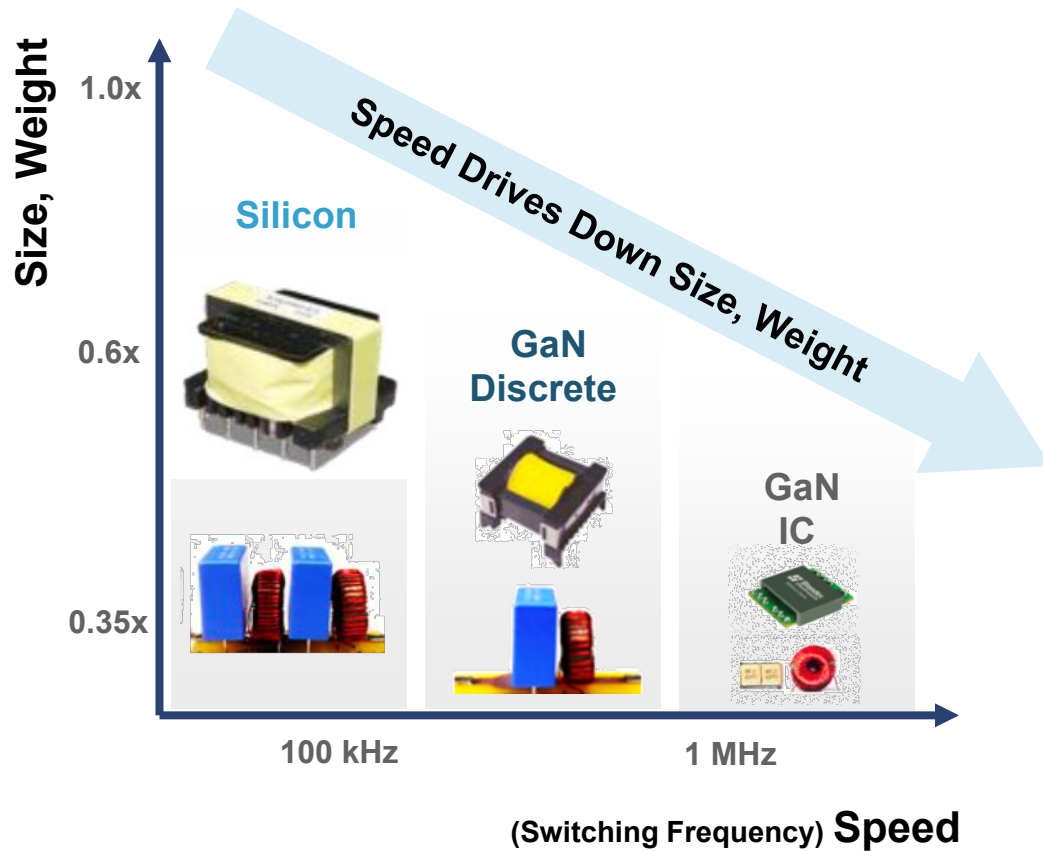
20%
Lower System Cost

Navitas GaN Is Empowering Efficiency In Industries Where Power Is Key⁽¹⁾

Note: Statistical data is based on Navitas estimate of GaN-based systems compared to Si-based 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.

(1) 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.

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.

GaN-Driver Integration is Critical

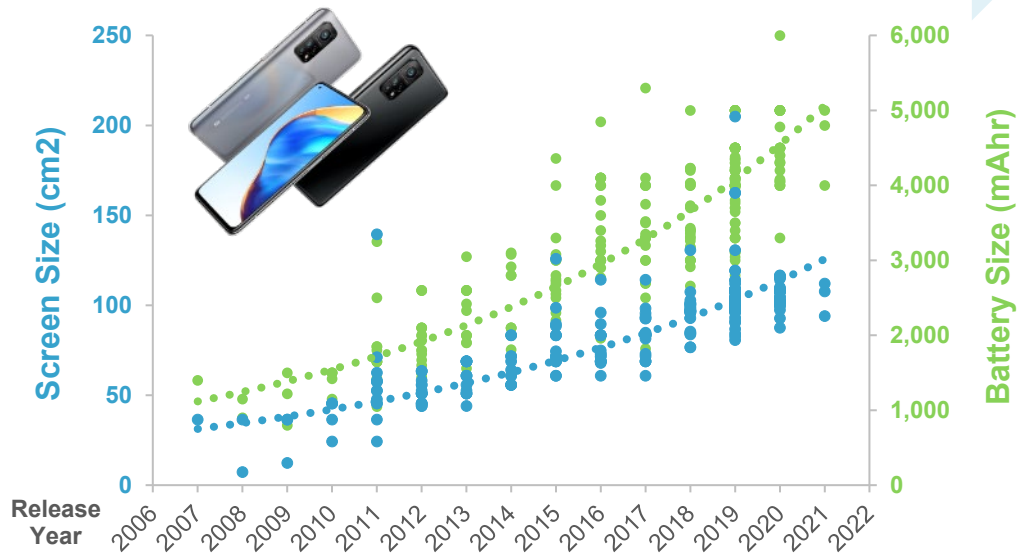
	Driver Drive, control & protection	Parasitics Limit speed & efficiency	Power Device Si or GaN	Speed Switching Frequency	Power Density Faster Charging, Smaller Size
Silicon Discrete	<p>(in system controller)</p>	$L_G R_G$		< 100 kHz	<p><0.5 W/cc</p>
GaN Discrete, MCM	<p>(complex circuit)</p>	$L_G R_G$		< 200 kHz	<p><1 W/cc</p>
Navitas GaN IC				<p>Up to 2 MHz (3-10x faster)</p>	<p>>>1 W/cc</p>

GaN: Positioned To Be The Future Of Mobile Charging



Larger Mobile Screens And Batteries Need More Power

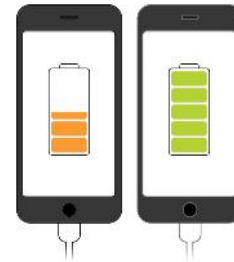
Screen Size and Battery Size Continue to Increase⁽¹⁾



Over \$2.5B GaN IC opportunity⁽³⁾

- 2.5Bu per year of mobile wall chargers shipped
- Over \$1 of GaN content per charger and increasing over time

Fast
Up to 3x more power
Up to 3x faster charging



Mobile
Half the size and weight
of traditional chargers



Universal (USB-C)
One charger for **ALL** your devices
One and Done!!

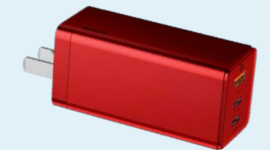


65W Multi-Port GaN Charger⁽²⁾

3 Silicon Chargers



1 GaN Charger



3x smaller, 3x lighter, and
less expensive

Mobile is Moving to GaN Fast Chargers, Creating a Multi-Billion Dollar GaN IC Opportunity

(1) Includes Huawei, Xiaomi, OPPO, OnePlus, RealMe, Samsung, Apple and Google.

(2) Based on Navitas measurements of select GaN-based mobile wall chargers compared to Si-based chargers with similar output power.

(3) Based on estimates from IDC PC Tracker, USB-C research, Yole Research and Navitas estimates.

Leading Customers Adopting Navitas GaN



Tier 1 OEMs



Aftermarket Examples



140+

GaN Chargers In Mass Production

150+

GaN Chargers In Development (MP 2021-2022)

90%+

Mobile OEMs Designing With Navitas GaN ICs

25M+

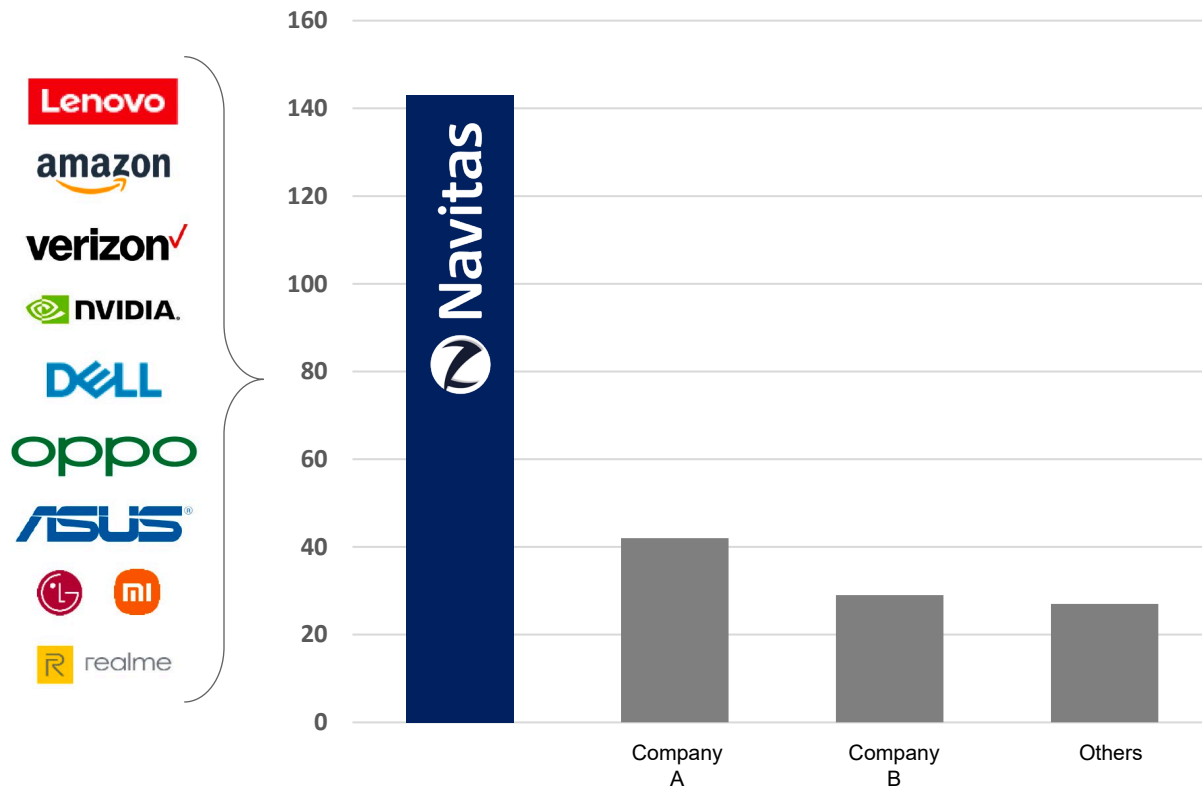
GaN ICs Shipped

Zero

GaN Field-Failures⁽¹⁾

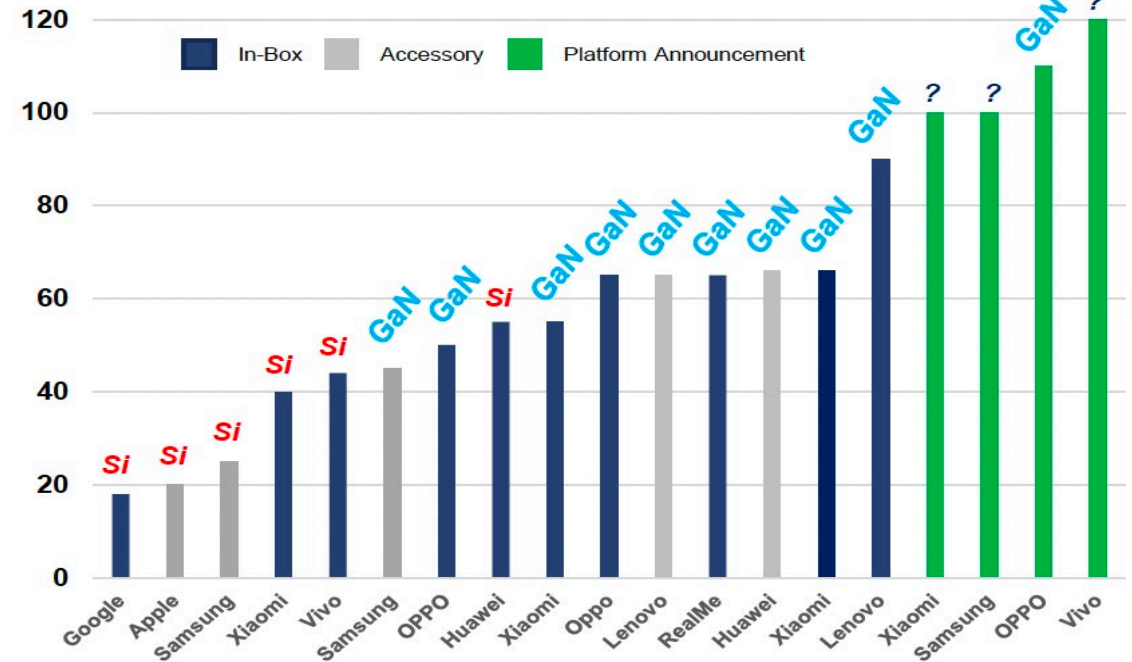
Leading the Way in GaN Chargers

Navitas Enables More GaN Chargers than All Competitors Combined ⁽¹⁾



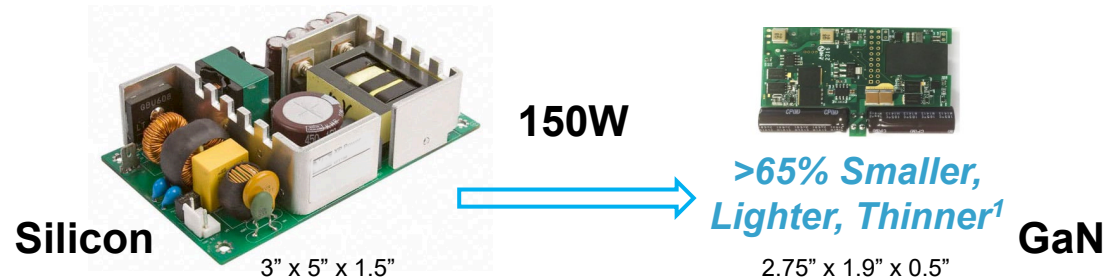
The Future of Chargers is GaN, Navitas GaN ICs are Used in 8 of 10 Leading-edge Designs

Charger Power⁽²⁾



(1) Estimated based on known Navitas designs released to mass production, other GaN designs based on tear-downs published on www.Chongdiantou.com and other public information, as of 7-7-21.
 (2) Navitas survey of public information March '21.

Consumer: More Power, Smaller Size, \$2B/yr Opportunity

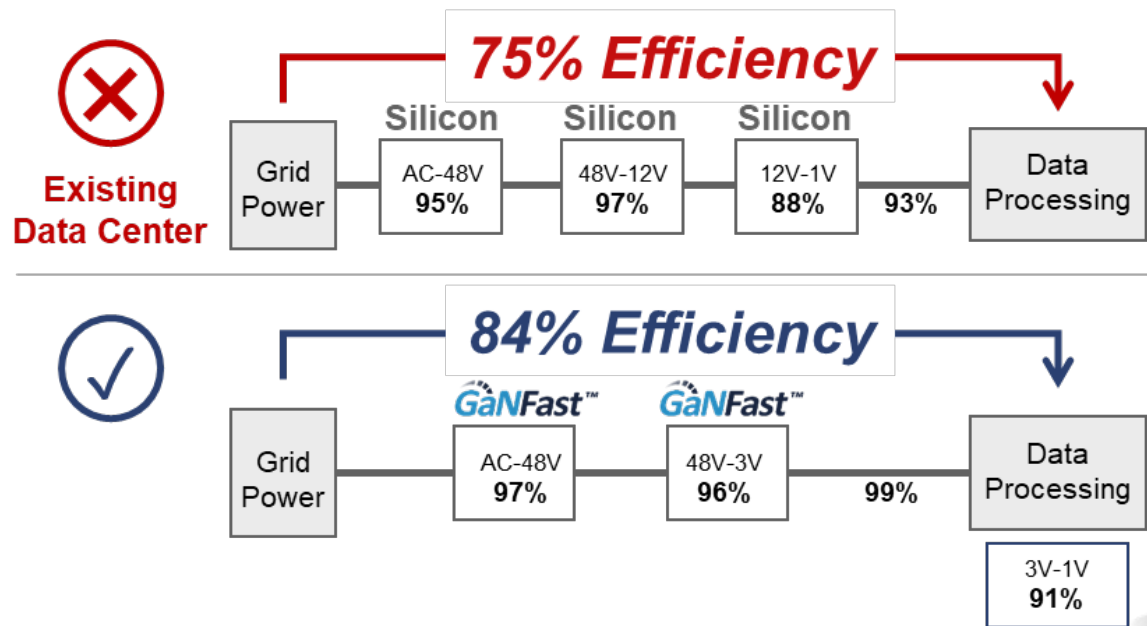


GaN Is The Answer As Consumers Demand More Power And Smaller Form Factors

- Need more power in smaller, slimmer sizes
 - Ultra-thin TVs, gaming, all-in-one PCs, smart home = 600M/yr
 - \$3/unit potential GaN
 - = **\$2B+ /yr opportunity⁽³⁾**
- GaN ICs make it possible
 - Up to 3x smaller and lighter, low-profile form factors
 - Up to 40% energy savings
- Lead opportunities in late-stage development⁽²⁾
 - Awarded Tier 1 LED TV
 - Awarded in-box Tier 1 All-in-one PC

(1) Based on Navitas measurements comparing typical 150W 65 kHz Si-based AC/DC power adapter to 150W 1MHz GaN-based power adapter prototype.
 (2) Based on information provided to management by potential customers.
 (3) Based on estimates from Gartner, Pulsenews, WitsView, Statista and Navitas estimates.

Data Centers: Save \$1.9B/yr (1)



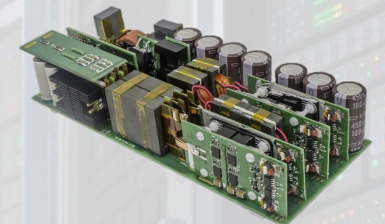
Silicon Power Supply



325 x 107 x 41 mm
2.2 W/cc

3,200W

GaN Power Supply(4)



210 x 81 x 43 mm
4.4 W/cc

- 2x higher power density
- 38% reduction in energy loss

- 44% of Data Center costs related to power (electricity, power & cooling)(3)
- Estimate GaN ICs can reduce electricity use by up to 10%(2)
- Worldwide, could save >15 TWh or \$1.9B in annual electricity costs (1-year ROI of 6x)(1)

(1) Navitas estimate based on a) Navitas server/datacom forecast & AAAS data, b) \$0.12/kWhr, c) Si vs. GaN \$/W and d) data center loading profile.

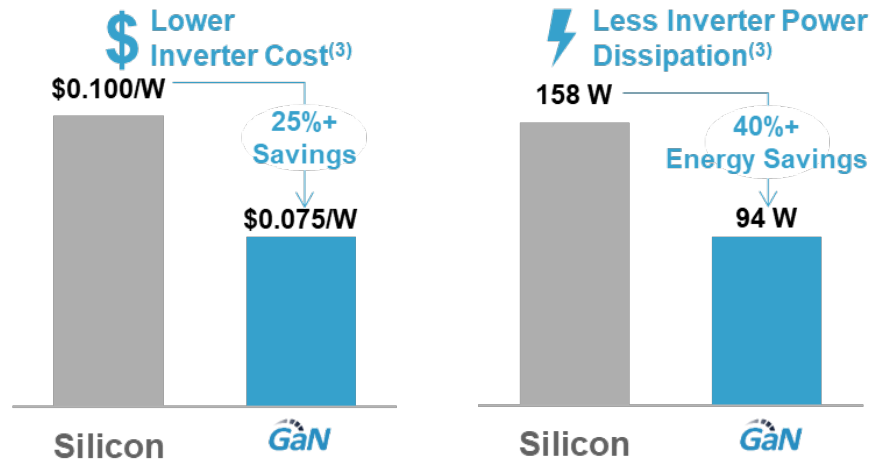
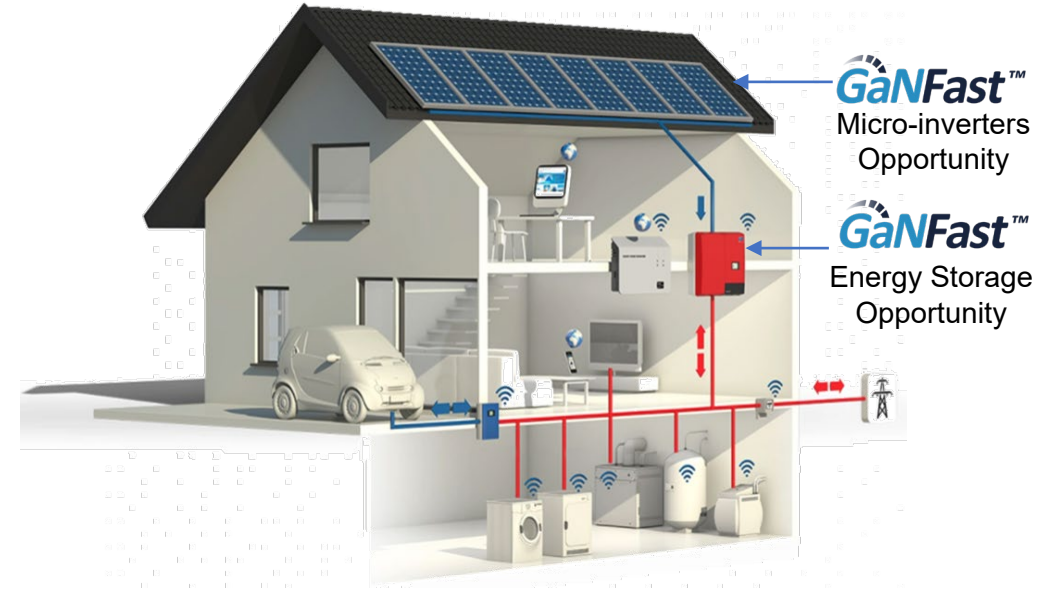
(2) Navitas estimated based on known existing Si-based solutions to deliver >500A next-generation data processors to Navitas targets for new GaN-based AC/DC and DC/DC for these same next-generation data processors.

(3) Schneider Electric. White Paper – Determining Total Cost of Ownership for Data Center and Network Room Infrastructure.

(4) Navitas measurements based on existing Si-based 3.2kW AC/DC server power supply to a 1 MHz GaN-based 3.2kW AC/DC prototype.

Solar: Up to 40% Energy Savings⁽²⁾

- Shrink microinverter size, weight & cost by 50%
 - Enables **25%+ cost reduction** of solar inverters⁽²⁾
 - Up to 40% energy savings
 - **Improve solar payback by 10%+** (vs. typical 8 years⁽¹⁾)
- Total residential solar GaN IC opportunity > \$1B/yr⁽⁴⁾
 - \$5-10M GaN IC sales potential per MW solar installation
- Leading player expected to adopt GaN IC in next-gen
 - >\$500M GaN IC revenue opportunity between 2023-2030



“It's the end of the road for silicon.”



“GaN offers >10x frequency and significant cost advantages.”

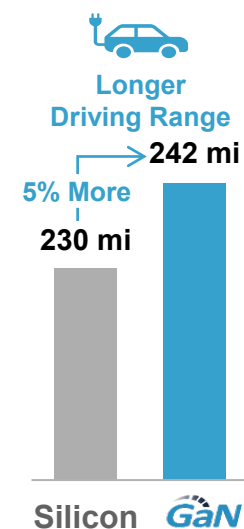
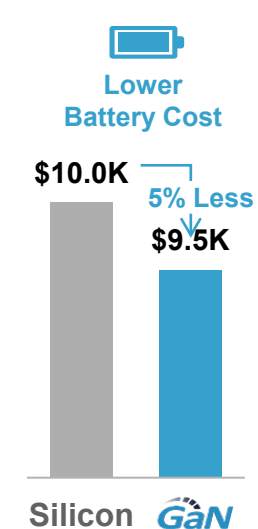
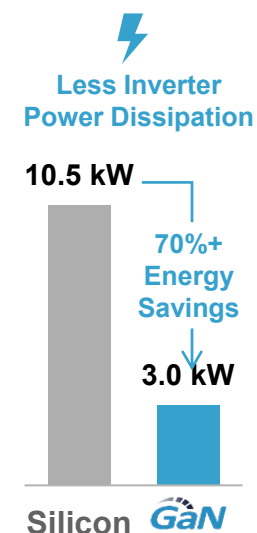
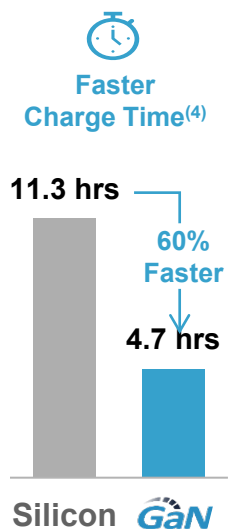
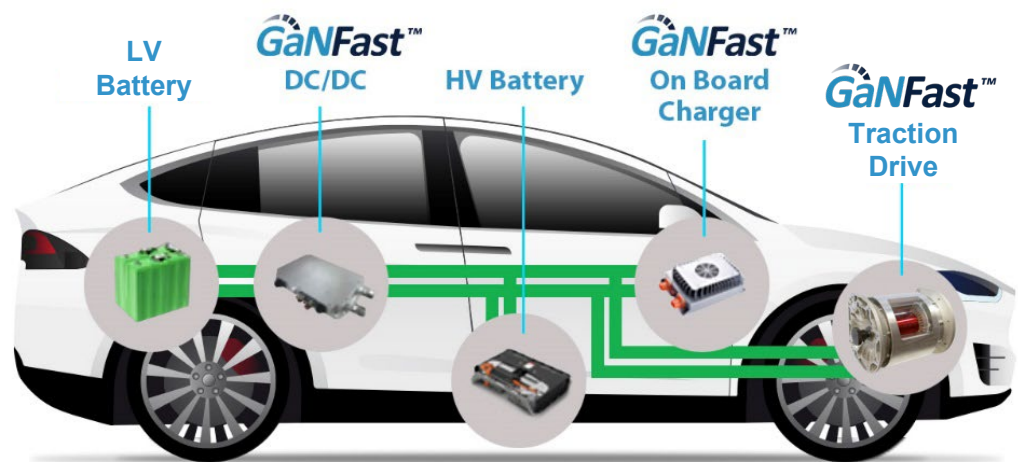
Michael Harrison,
Enphase Energy
Power Electronics Architect

(1) EnergySage Solar Marketplace, 2020.

(2) Navitas est. vs. Si-based 6.2kW residential inverters assuming GaN-based inverter enables 40% reduced power loss and 25% lower inverter costs

EV / eMobility: Accelerating Adoption by 3 Years⁽¹⁾

Longer Range, Lower Costs



- 3x faster charging⁽⁴⁾
- Extended range
 - 70% energy savings enables 5% extended driving range or 5% lower battery costs⁽³⁾
- >\$2.5B/yr GaN opportunity in 2025⁽²⁾
 - ~\$50 GaN in OBC, ~\$15 DC-DC, ~\$200 traction = **\$250+ GaN TAM per Pure-EV**
 - Over 50Mu per year of EV production (all types) projected by 2030
 - \$400M opportunity in development with lead 1st EV customer from 2025-30

“Our current OBC product line up is... Si & SiC.
GaN will enable us to *further improve*.”

“Navitas advantages are *simplicity of driving, high-speed, increased reliability and compact form factor*.”

Bernhard Budaker, VP Power Products
EV systems provider to BMW, VW, Porsche



Note: Assumes 150 kW traction inverter, 100 kWh battery, \$100/kWh battery cost and typical 230 mile range.

(1) Based on DNV and Navitas analysis

(2) Based on BCG Research, Yole Research and Navitas analysis.

(3) Navitas estimate based on discussions with major suppliers of power electronics to the electric vehicle industry.

(4) 6.6 kW Si OBC vs. 21 kW GaN OBC assuming a 90 kWh battery and 80A wall charge limit.

Industry-Leading IP Position

130+ Patents
Issued / Pending

Applications across mobile, consumer, EV, enterprise and renewables

Mature and Comprehensive GaN Integrated Circuit Process Design Kit (PDK)

Device Development / Library

- 650 eMode power FET
- 12-40V eMode power FET
- 650V dMode power FET
- 12-40V dMode power FET
- 2-DEG & SiCr resistors
- Gate capacitors
- MIM / hybrid capacitors
- Over 20 devices developed

Circuit Development / Library

- Logic gates and latch
- Linear regulators
- Comparators
- Voltage sensors
- Charge pump
- Bootstrap circuits
- Level-shifters
- Protection circuits
- Over 200 circuits developed

Characterization and Verification

- Dedicated and automated characterization stations (wafer level, package)
- Safe Operating Area (SOA)
- Layout Design Rule Checker (DRC)
- Layout Versus Schematic (LVS)
- Layout Parasitic Extraction and simulation tool (LPE)
- Over 1Mu characterized

Models and Simulation

- Device and circuit models with <5% accuracy
- Ultra-fast system simulations (Simplis)
- Accurate and fast device, circuit and system models cut design time from weeks to days and reduce design cycles by 50-75%

Accelerating Major Customers' NetZero Goals

GaN Power ICs Reduce CO₂ Emissions

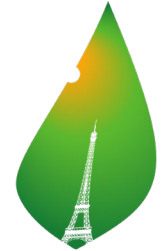
4x-10x lower component CO₂ footprint than silicon⁽¹⁾

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

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

GaN addresses **2.6 Gton / year** by 2050⁽⁵⁾

Every
GaNFast™ power IC
shipped saves⁽³⁾
4 kg CO₂



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11



(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

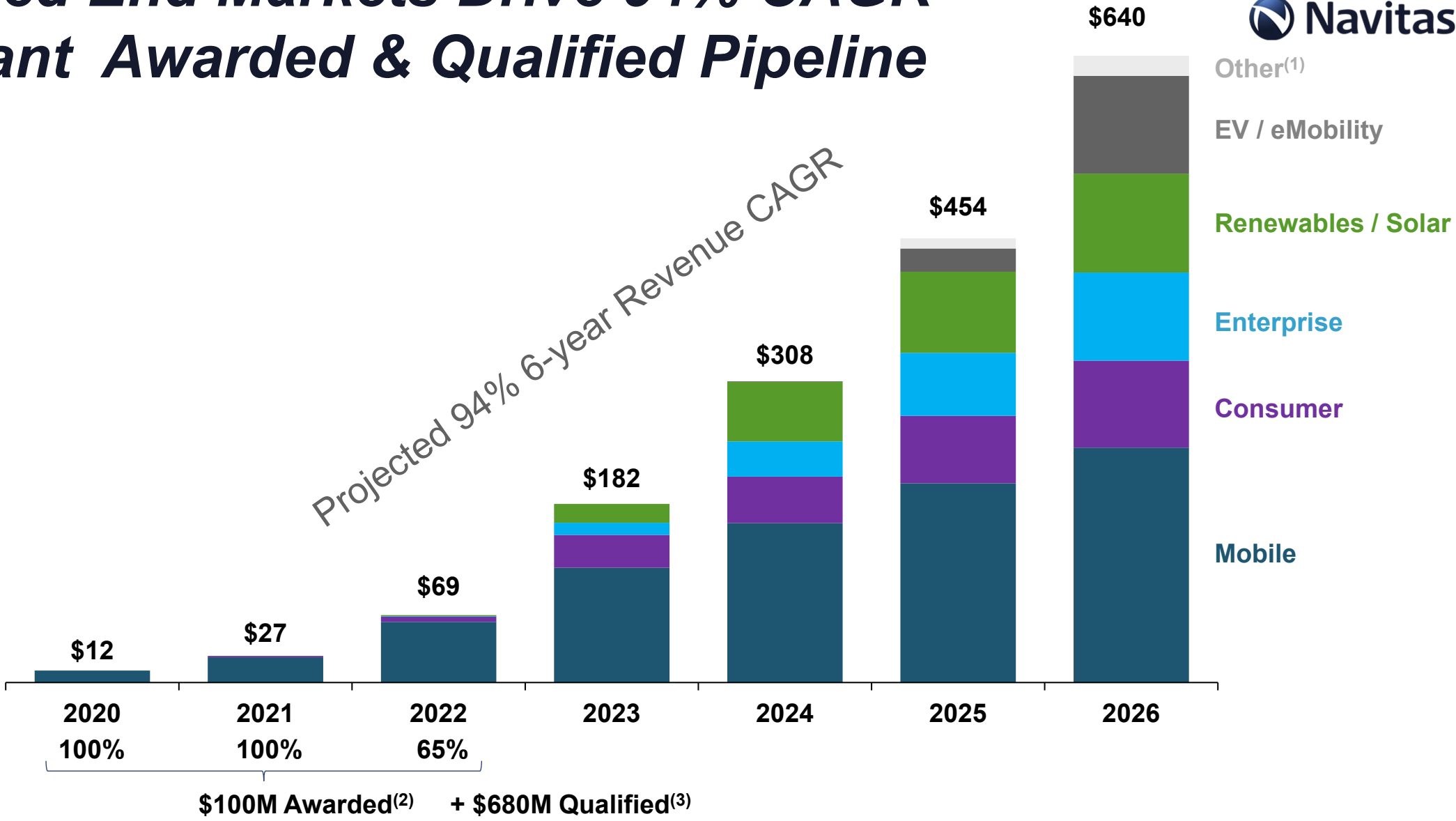
(3) Navitas estimate based on GaN vs Si total life-cycle analysis.

(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 and 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.

Diversified End Markets Drive 94% CAGR Significant Awarded & Qualified Pipeline



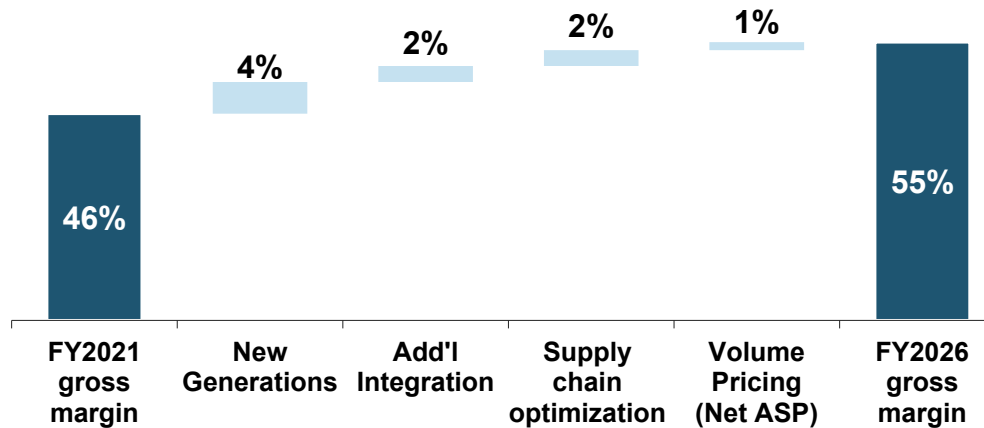
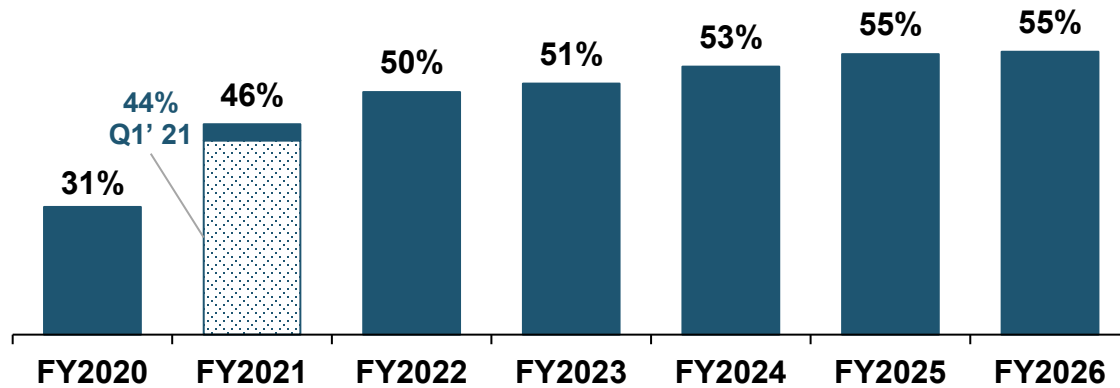
Source: Company projections.
 (1) Reflects additional end-market opportunities for industrial and other applications.
 (2) Based on design wins in production or committed to production through to end 2026
 (3) Based on Navitas assumptions concerning future demand from potential opportunities evaluated with new and existing customers, to end 2026

Summary Historical Financials and Projections

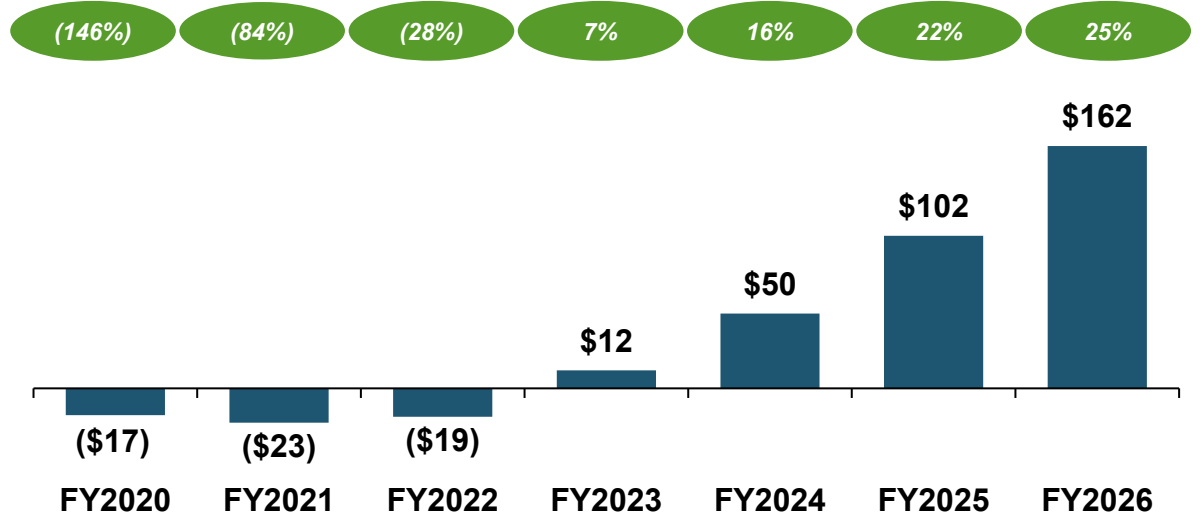


Gross margin (%)

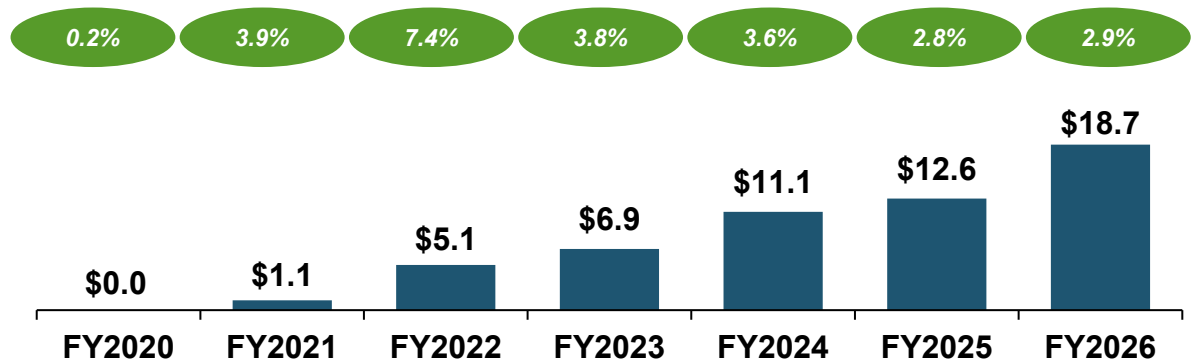
Fast transition to new generation of products is driving 20%+ YoY cost reductions in 2021.



EBITDA (\$mm)



Fabless Model - Capital expenditure (\$mm)





Deutsche Bank
2021 Technology Conference

Thank You

ir@navitassemi.com



Navitas

Energy • Efficiency • Sustainability

