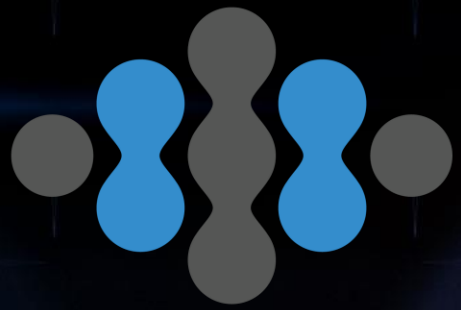

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Needham Growth Conference

January 16, 2025

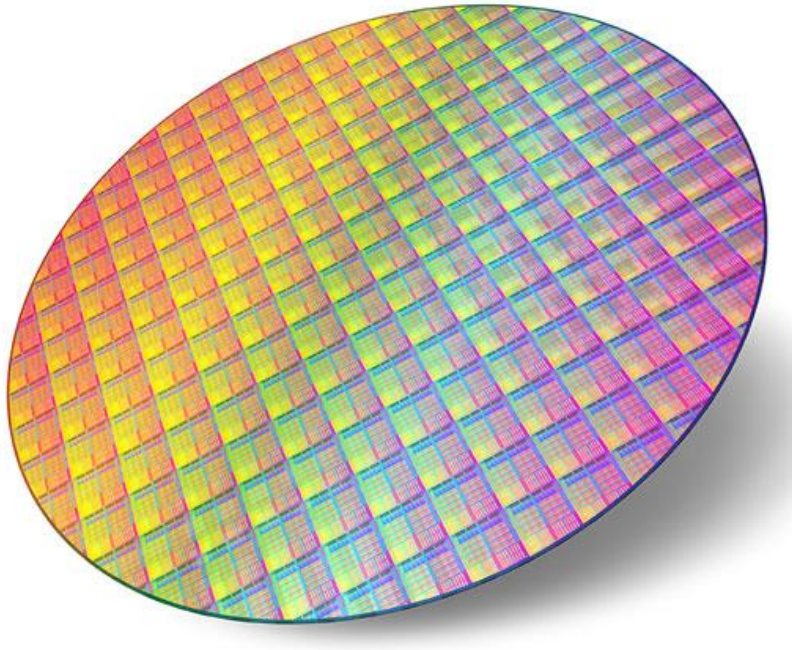
Safe Harbor

This presentation contains forward-looking statements concerning Atomera Incorporated (““Atomera,” the “Company,” “we,” “us,” and “our”). The words “believe,” “may,” “will,” “potentially,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “would,” “project,” “plan,” “expect” and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those disclosed in the section "Risk Factors" included in our Annual Report on Form 10-K filed with the SEC on February 15, 2024 (the “Annual Report”). In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this presentation may not occur and actual results could differ materially and adversely from those anticipated or implied in our forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur.

This presentation contains only basic information concerning Atomera. The Company’s filings with the Securities Exchange Commission, including the Annual Report, include more information about factors that could affect the Company’s operating and financial results. We assume no obligation to update information contained in this presentation. Although this presentation may remain available on the Company's website or elsewhere, its continued availability does not indicate that we are reaffirming or confirming any of the information contained herein.

Investment Overview

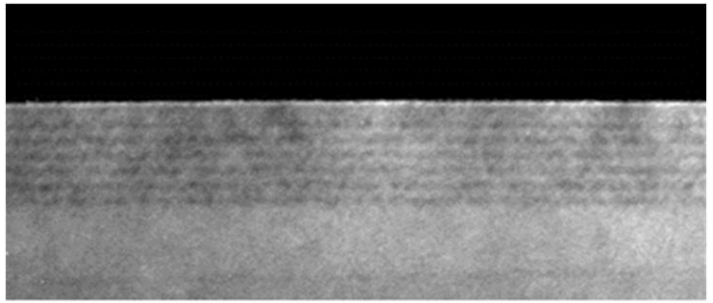
- **Mears Silicon Technology (MST®) is a thin film used to enhance semiconductors**
  - Results in higher performance, lower power, and lower costs for ICs
- **Capital-light IP and technology licensing business**
- **Engaged with 50% of world's top semiconductor makers**
- **Licenses with five companies including two JDAs**
- **Strong team to commercialize technology**



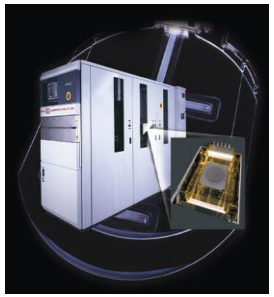
MST: Mears Silicon Technology

Quantum Engineered Silicon

Partial Monolayers of Oxygen in Silicon

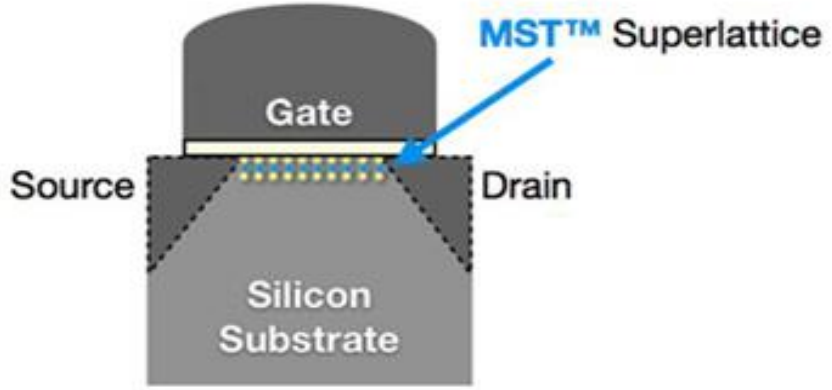


Supported by Major Semiconductor Tool Suppliers

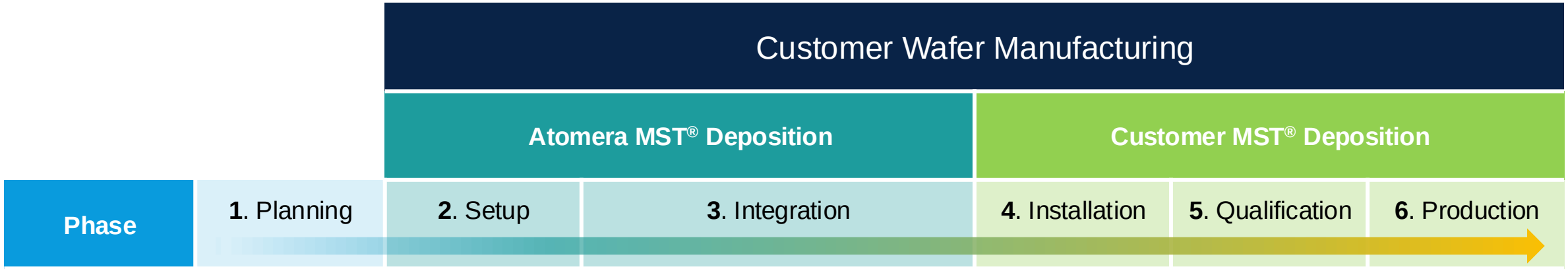


ASM KOKUSAI SEMICONDUCTOR EQUIPMENT CORPORATION APPLIED MATERIALS

MST Enhanced Transistors



Customer Engagement & Revenue Model



Engineering Service Fees

- MST deposition on customer wafers
- Integration consulting

License Fees

- Integration licenses
- R&D licenses
- HVM* licenses

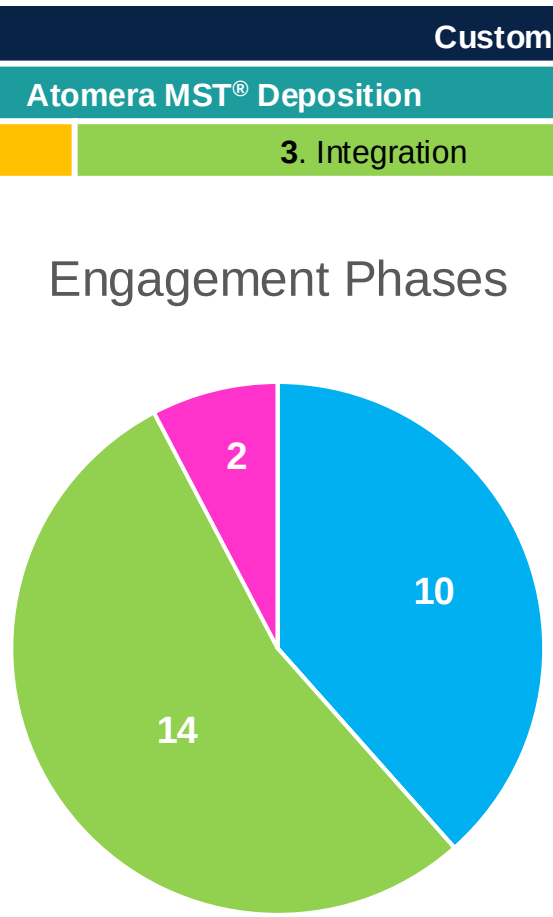
Joint Development Agreements

Royalties

* High Volume Manufacturing (HVM)

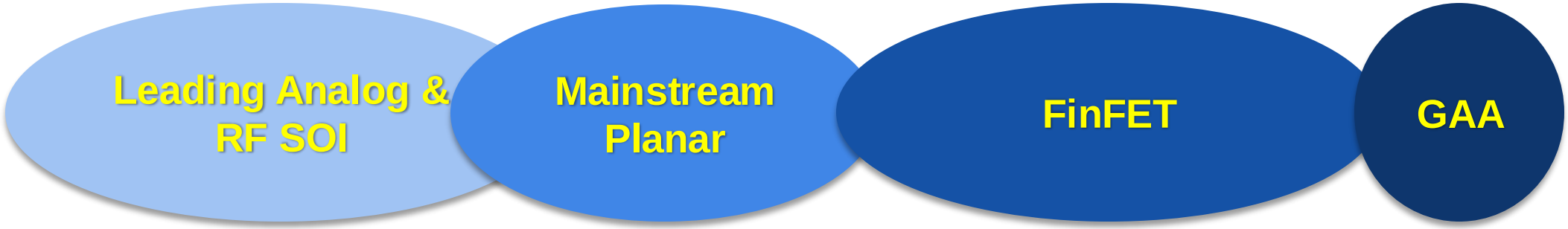
Customer Status

		Customer Wafer Manufacturing				
		Atomera MST® Deposition		Customer MST® Deposition		
Phase	**1**. Planning	**2**. Setup	**3**. Integration	**4**. Installation	**5**. Qualification	**6**. Production



- **20 customers, 26 engagements**
- **Working with more than half of the world's top semiconductor makers***

MST Key Benefits Across Nodes



	180nm	130nm	90nm	65nm	40nm	28nm	22nm	16/14nm	10nm	7nm	5nm	2nm
Mobility	8%			20%		25%		10%				15+%
Dopant Engineering	20%			15%		15%		15%				20%
Reliability (TDDB/BTI)				25%		25%		25%				25%

These Benefits are ADDITIVE & COMPLEMENTARY to other enhancement technologies

MST technology focus areas

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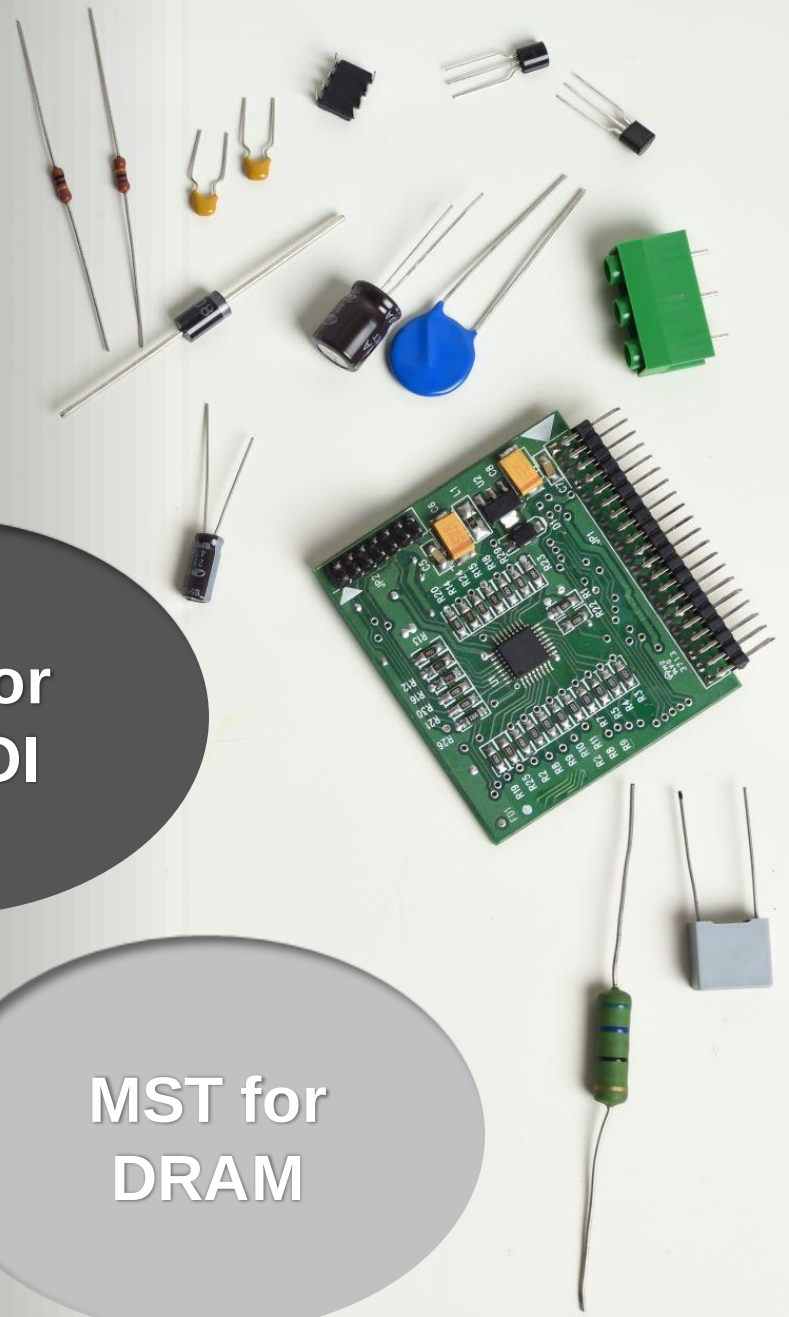
MST-SP, SPX for BCD

MST for RF-SOI

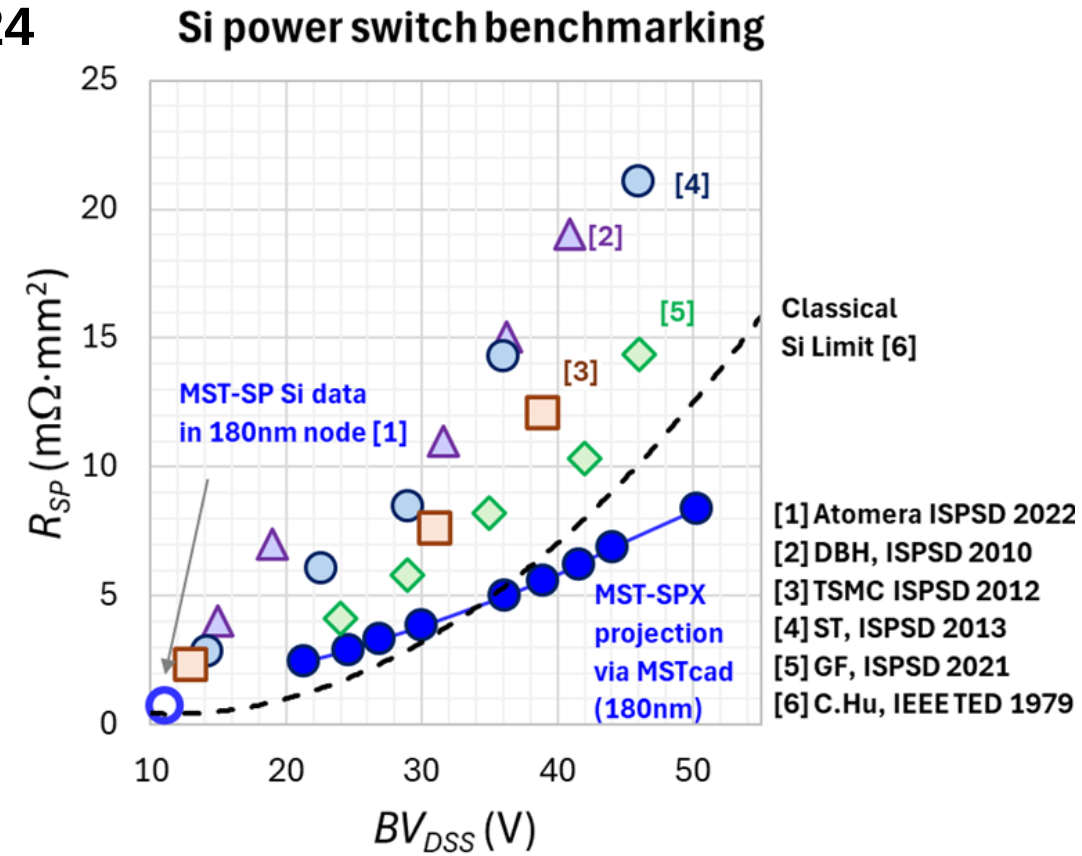
MST for Advanced Nodes

MST for DRAM

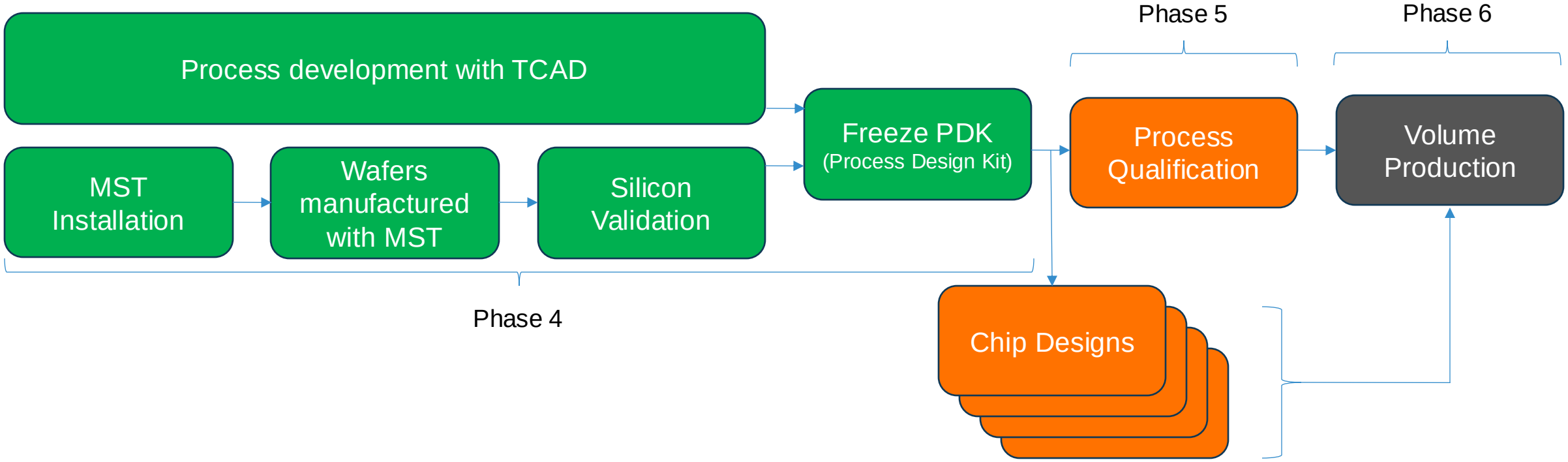


MST-SP/SPX for higher power BCD

- **Analog & Power market represents $52B in 2024**
- **Atomera introduced MST-SP for 5V in 2022**
- **In 2023 MST-SPX targeted 5-48V**
  - Area of highest customer interest
- **MST achieves best in class performance**
  - MST-SPX beat all published results
  - Simulations predict up to 20% improvement
- **ST Micro is one of the largest manufacturers**

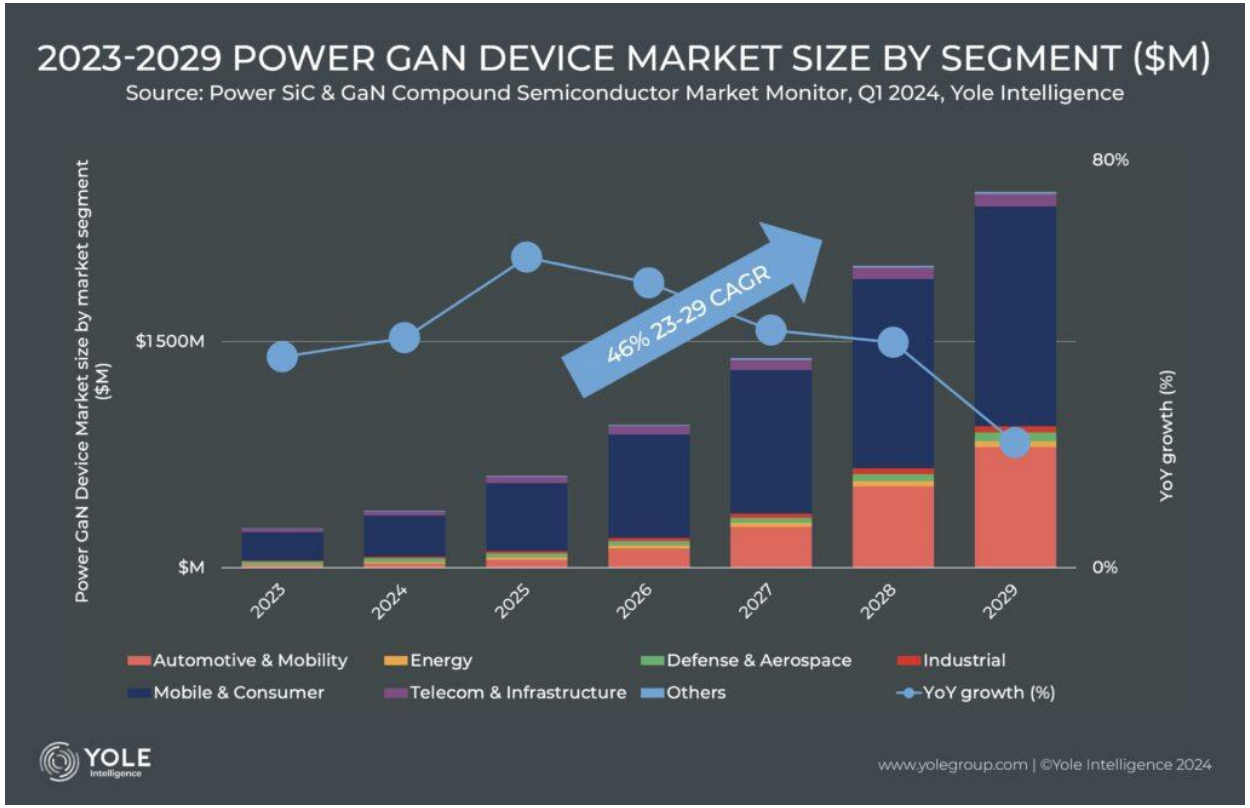


Typical Productization cycle



Compound Semiconductors

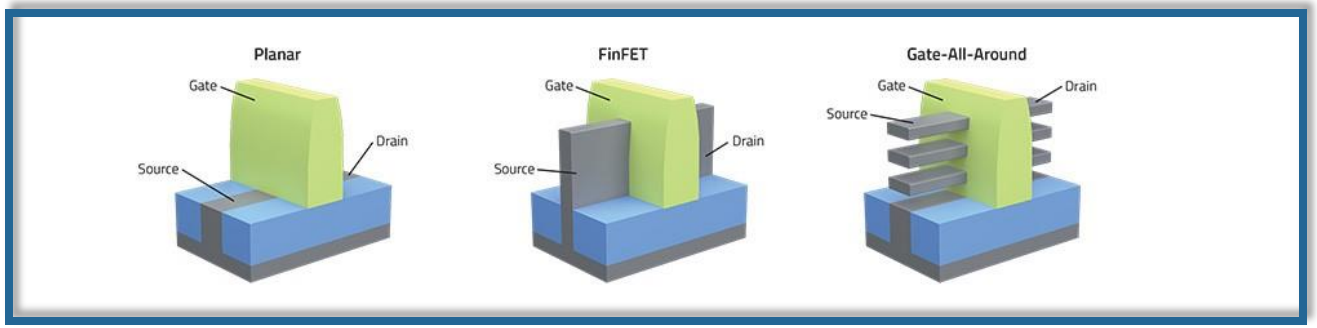
- **Compound semiconductor market growing rapidly**
- **Poor wafer substrate quality causes manufacturing challenges**
- **Atomera's MST may help to solve this problem**
- **Experiments of GaN on MST show promising results**
- **Pushing to productize quickly**



Advanced Node/GAA market

- **GAA technology rapidly replacing FINFETs**
  - In 3nm and below
- **3nm alone projected to be $26B by 2032**
  - Driven by AI chip demand
- **GAA structure requires extensive Epi**
  - Low cost opportunity to add MST

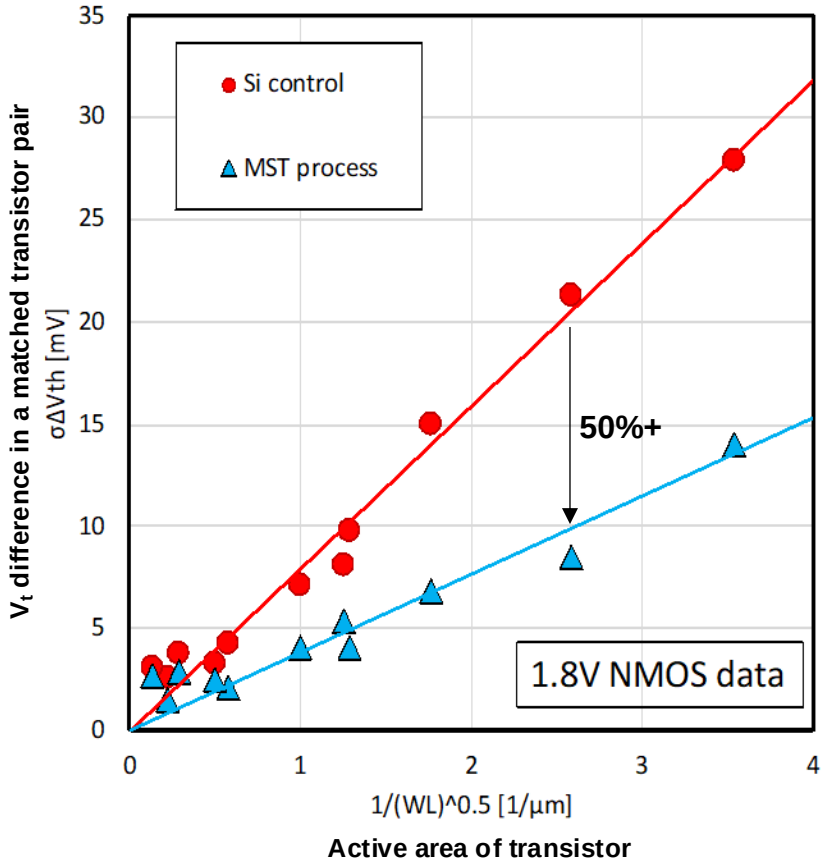
- **MST: Solving GAA Transistor Challenges**
  - Blocks source/drain dopant diffusion
  - Provides enhanced punch-through stop
  - Lowers contact resistance
  - Reduces HKMG stack height
  - Improves carrier mobility, gate leakage



Transistor Architectural Evolution

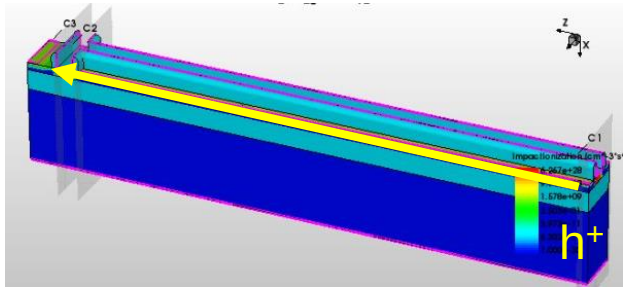
MST for DRAMs

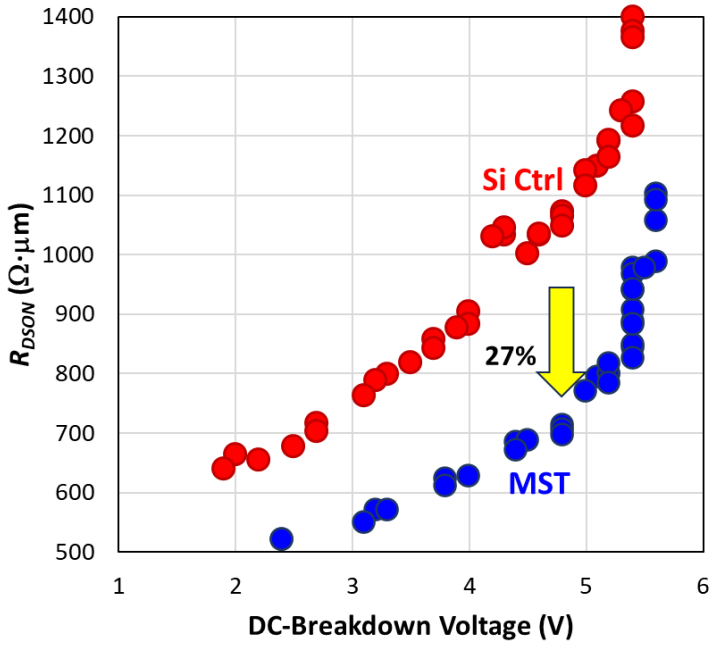
- **DRAM market size is ~$100B in 2024**
  - HBM is high growth segment focused on AI
- **High variability between transistors is a significant issue**
  - This increases costs and limits the minimum achievable voltage and power
- **DRAM sense-amp variability is a major design constraint**
  - Sense-amp margin defines refresh interval and resulting power
  - Improving variability allows smaller sense-amp and reduced power
- **MST can lower variability, critical in advanced nodes and memories**



MST for RFSOI Devices

- **RFSOI substrate market is ~$600M in 2024**
- **Used in RF front-end of consumer devices**
- **Continued improvements in RF devices are critical to support new cellular standards**
- **MST is a rare tool to achieve those goals**
- **Atomera deeply penetrated**
  - With RFSOI device manufacturers/designers
  - With RFSOI substrate suppliers





Financial Overview

Income Statement	Three Months Ended		
($ in thousands, except per-share data)	**September 30, 2024**	**June 30, 2024**	**September 30, 2023**
REVENUE	**$ 22**	**$ 72**	**$ -**
Gross Profit	19	(2)	-
OPERATING EXPENSES			
Research & Development	2,759	2,589	3,305
General and Administration	1,812	1,832	1,683
Selling and Marketing	248	207	365
TOTAL OPERATING EXPENSES	**4,819**	**4,628**	**5,353**
OPERATING LOSS	(4,800)	(4,630)	(5,353)
Other Income (Expense)	205	269	314
NET LOSS	**$ (4,595)**	**$ (4,361)**	**$ (5,039)**
Net Loss Per Share	$ (0.17)	$ (0.16)	$ (0.20)
Weighted average shares outstanding	27,406	26,467	25,255
ADJUSTED EBITDA (NON-GAAP)	**$ (3,881)**	**$ (3,630)**	**$ (4,292)**
ADJUSTED EBITDA PER SHARE	$ (0.14)	$ (0.14)	$ (0.17)
Balance Sheet Information			
Cash, equivalents & ST investments	**$ 17,342**	**$ 18,288**	**$ 20,389**
Debt	-	-	-

Summary

- High margin, recurring revenue financial model
- Strong technology, patent position, and balance sheet
- Traction with many top industry players and growing licensee base
- Ramping commercial license revenues

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Thank You