



# SEMI Webinar Analyzing AI-Driven Growth: \$1T and Beyond

November 20, 2024

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# Unprecedented Growth Opportunities



1<sup>ST</sup> WAVE

**IoT**

**\$4.4T**

global market by 2030



2<sup>ND</sup> WAVE

**AI**

**~ 50%**

of overall semiconductor market growth will be driven by GenAI until 2030

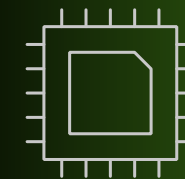


3<sup>RD</sup> WAVE

**Quantum**

Growth beyond 2030?

Tech Disruptions



**\$1 Trillion  
by 2030**

powered  
by chips

Sources: SEMI and McKinsey & Co.

# 108 New Fabs Coming Online through 2027

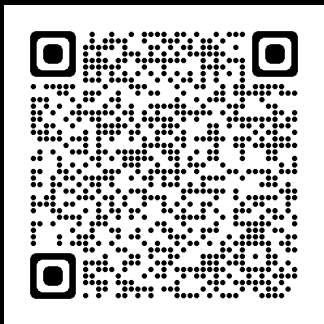
50+ Additional fabs still needed through 2030 for the **AI Wave**



# Advancing a Virtuous Cycle for AI and Chips

## 2018 SEMI Article: The Rebirth of the Semiconductor Industry

- AI would “**change everything**” and transform entire industries
- Diverse AI applications will drive the semiconductor industry to **\$1 trillion by 2030**
- AI knowledge / cognition will spark new modes of systems transformations & Industry 4.0



## 2024 SEMI Article: Semiconductors Accelerate the AI Revolution

- AI development has accelerated due to advances in semiconductors
- We need a **virtuous cycle** – AI helping to advance chips to run more powerful AI
- **SEMI Smart Data-AI initiative** driving collaboration and sharing of best practices

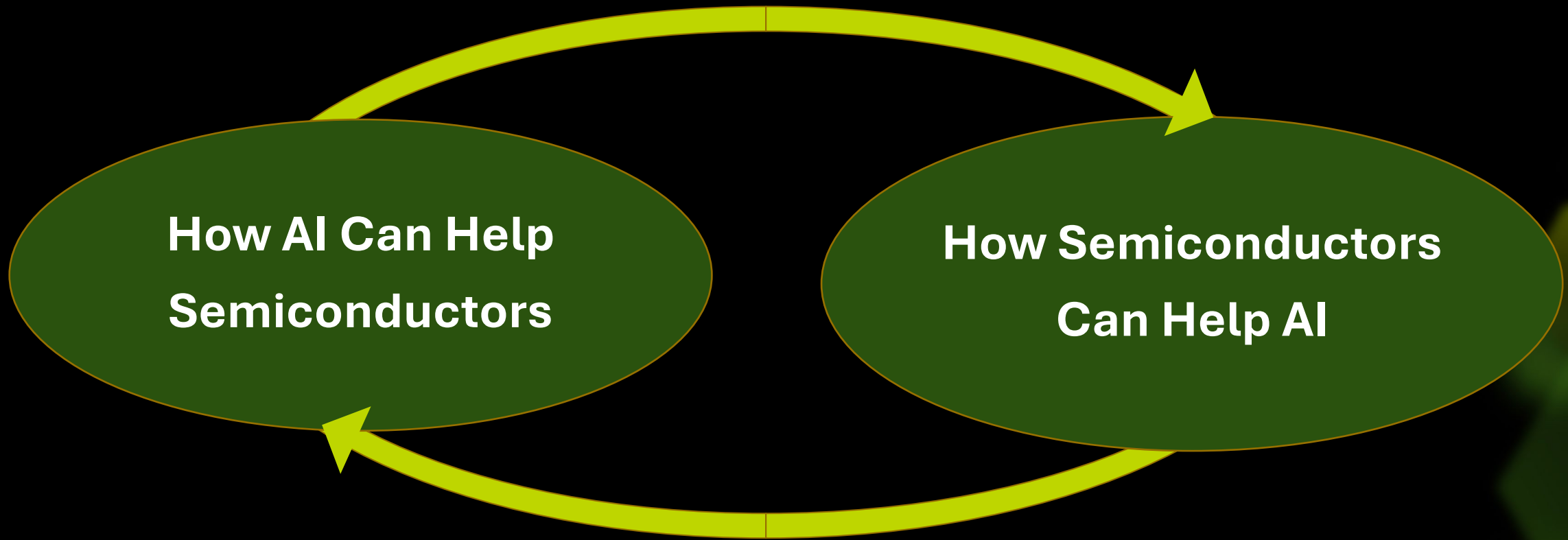


# SEMI Smart Data-AI Initiative and Future of Computing Update

Pushkar Apte, Strategic Technology Advisor,  
Smart Data-AI, SEMI

Melissa Grupen-Shemansky, VP & CTO,  
SEMI

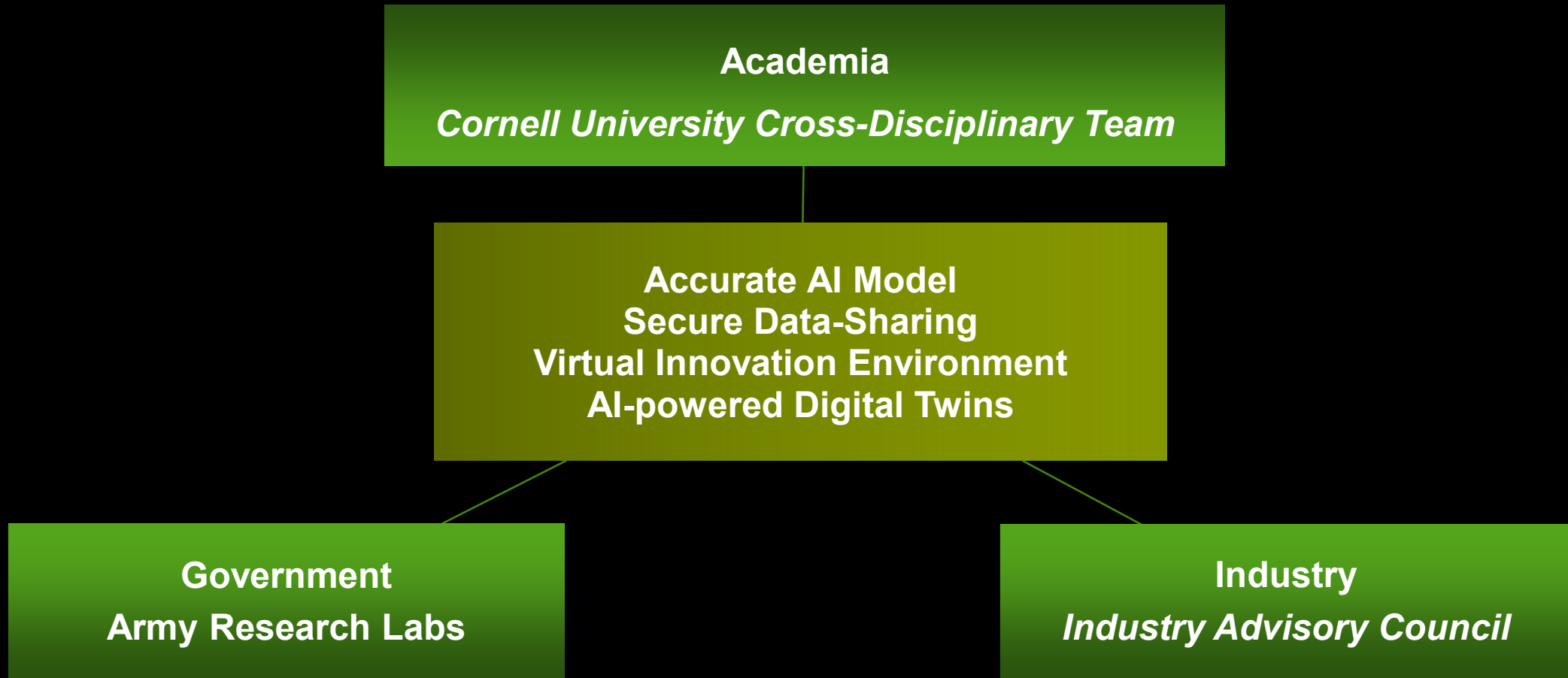
# SEMI Smart Data-AI Initiative Focus Areas



*Accelerate Virtuous Cycle of Semiconductors & AI*

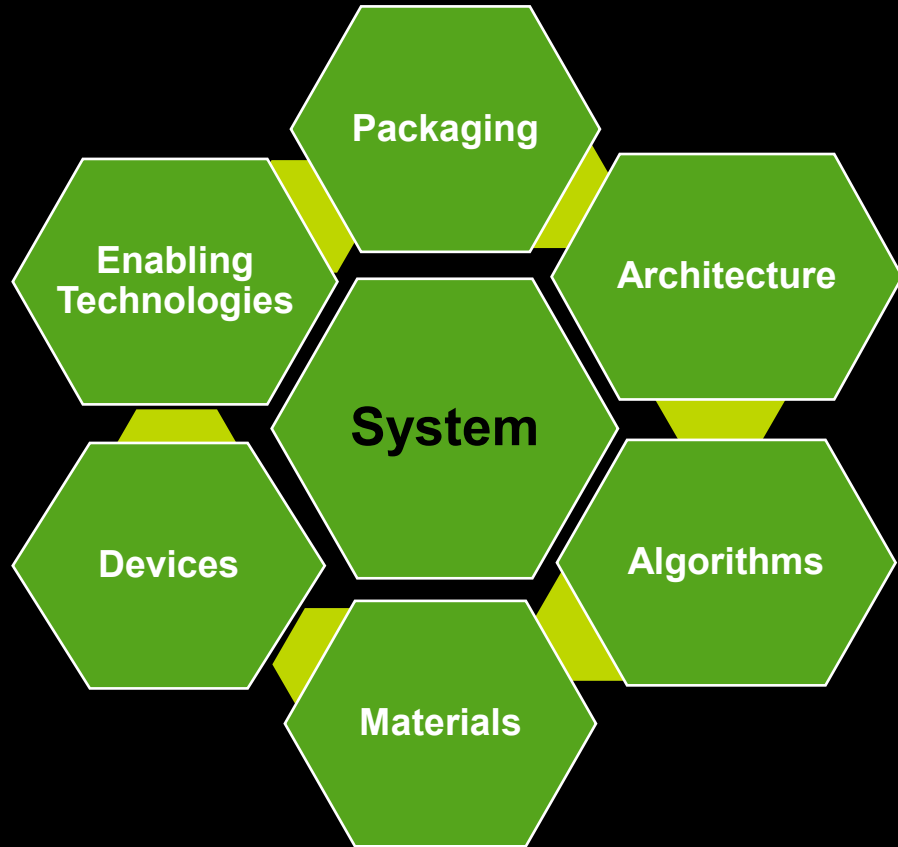
# How AI Can Help Semiconductors

Proof-of-Concept (POC) Project Using AI to Reduce Cost & Improve Efficiency



# How Semiconductors Can Help AI

Enabling Future Computing Systems for Sustainable AI Growth & Path to \$1T



## Future of Computing:

Sustainable AI Systems

In-Person



Milpitas, CA  
March 19, 2025  
9:00am - 6:45pm PST





**THANK YOU!**