



New York has the **fastest**
growing semiconductor
ecosystem in the U.S.

Be a part of it.

Presented by



Why Semiconductors?

The chip industry is among the **largest in the world**

\$1T in annual revenues expected by 2030 – 4x the market cap of the global auto industry.

2nd most profitable sector in the world – and has the second highest R&D spend.

And one of the most **economically impactful**

60% of semiconductor jobs don't require a four-year degree.

25% higher wages for semiconductor manufacturing than in other manufacturing sectors.

6.7 chip industry jobs multiplier - one job in the semiconductor industry supports an additional 5.7 jobs in the wider economy.

Competition for investment is fierce.



AZ: 40% of semiconductor materials investments since 2022.



TX: ~1.4B in incentives via the Texas CHIPS Act.



OH: 2.2B in incentives to Intel in June 2022



\$380B in national subsidies across the world including China, Japan, and Taiwan.



New York's Semiconductor Ecosystem

AMD **SEMIKRON DANFOSS** *Wolfspeed*

INFICON
Inspired by visions. Proven by success.

DUPONT **micron** **GlobalFoundries**

TECH HUBS | OFFICIAL AWARDEE
NYSMART
I-CORRIDOR

AIM PHOTONICS **INDIUM CORPORATION**

EDWARDS **creates** **TEL TOKYO ELECTRON** **APPLIED MATERIALS**

Henkel **onsemi** **IBM**

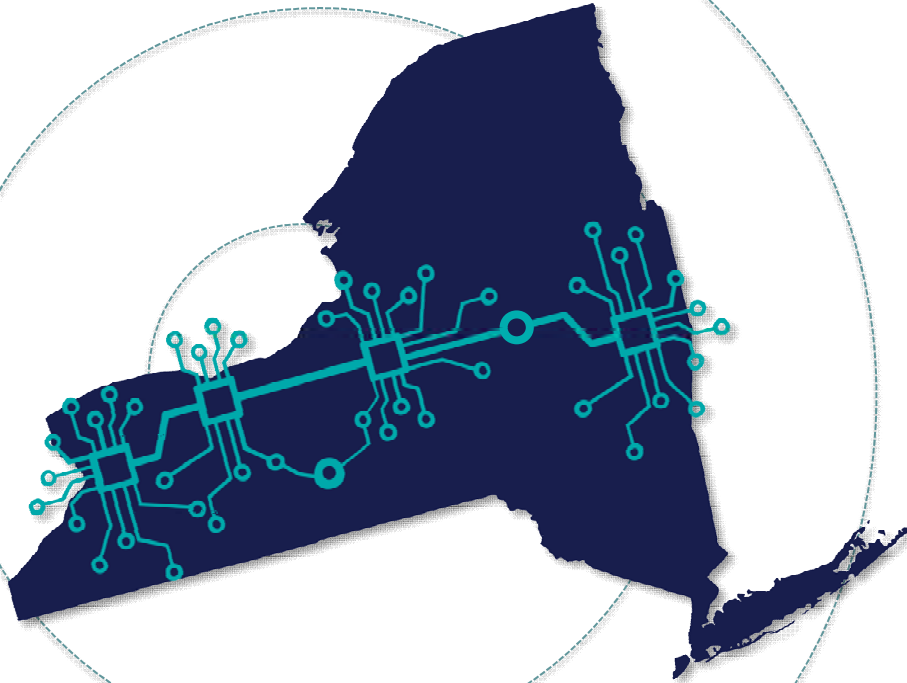
Universal Instruments

menlo micro

CORNING

GO-SEMI
GOVERNOR'S OFFICE OF SEMICONDUCTOR
EXPANSION, MANAGEMENT, AND INNOVATION

New York's Semiconductor Ecosystem



156+ **\$124B+**

semiconductor & supply chain
companies in NYS today

in new chip industry investment since
2022

1 in 4

U.S. made chips will be produced within 350 miles of
upstate New York

GO-SEMI Core Mission



The Micron Project

Serve as the central implementation office for Micron and other semiconductor-related projects



New York's Semiconductor Ecosystem

Lead a statewide **strategy to build a globally-leading semiconductor industry cluster.**

The GO-SEMI Team



Merideth Andreucci
SVP & Executive Director



Jeong Bae
Vice President of Utilization
& Supplier Readiness Lead



Rodney Smith
Director Semiconductor
Growth Accelerator
Program (SBRC)



Michelle Clarke
Vice President & Director of
Workforce Development



Deanine Lena
Sr. Director of Strategy &
Operations



Charles Hailer
Director of Strategic
Initiatives & Strategies



Jennifer Waters
Vice President of Business
Development



Mick Sicchio
Director of Regional Supply
Chain Development



Goutham Bikkumalla
CRM & Data Analytics
Manager, Supplier
Readiness



Matt Chatfield
Assistant Vice President of
Planning



John Taylor
Director of International
Supply Chain Development



Emily Shumar
Executive Assistant

The Path to Groundbreaking



Oct 2022
Governor
Announces
Micron is Coming
to New York

April 2024
Micron and
federal
government
agree to CHIPS
Act funding

June 2025
Micron submits
draft
Environmental
Impact Statement

Nov 2025
Micron's final
Environmental
Impact Statement
is accepted

Dec 2025
First permits are
awarded for
Micron's project

Jan 2026
Micron breaks
ground



The Path Forward

Total jobs

7,000
6,000
5,000
4,000
3,000
2,000
1,000

Tree Clearing & Site Prep



Q1 2026

Construction of Fab 1 Starts



Q2 2026

Construction of Fab 1 Continues



2028





The Path Forward

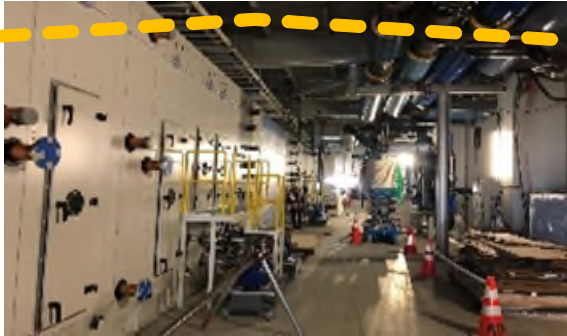
Total jobs

7,000
6,000
5,000
4,000
3,000
2,000
1,000

Buildout of Fab 1 Continues

Fab 1 Construction Ends

Feb 1 Operational & Fab 2 Construction Begins



2029

Q2 2030

Q4 2030



Why the Industry is Choosing New York



Globally competitive incentives and unparalleled industry support

\$13B

In performance-based incentives specifically targeting semiconductor & supply chain companies.



Robust high-tech workforce

\$550M

Invested in employer-driven workforce training programs with a focus on advanced manufacturing.



Sites ready for development

\$400M

Invested in developing new shovel ready sites built to semiconductor standards



World class R&D and innovation assets

\$1B+

Invested in NY Creates' High NA EUV R&D Center unlocking \$9B in private industry investment.



Abundant resources including freshwater and clean energy

#3

Cleanest grid in the US – upstate has reliable, redundant, clean, and affordable energy.

Opportunities to participate in the growth of the semiconductor supply chain

Topics



Near/Long-Term

The “When?”



Fab-Adjacent/Distant

The “Where?”



Industry Needs

The “How Much?”



**Key Site Readiness
Considerations**

The Gameplan



Wave 1: Fast Follow Suppliers

Anchor ecosystem + first materials cluster + tool service hubs

- ❖ Substantial flow of materials/tools from Asia via air transport
- Fast-follow 3rd party logistics and *distribution* facilities.
- Industrial wastewater users (chemicals/materials/tool cleaning).
- Construction support, fabrication/assembly.

ANTICIPATED 2026-2030

30-60

total companies

15 to 400+

employees each



Wave 1: Fast Follow **Logistics** Suppliers

Sector	Acres	Bldg Size	Notes
3PL Logistics (e.g. DSV)	40-80	500ksf+	Typically within a few miles of Fab and/or air freight logistics hub Does not require industrial sewer
Gas/Chemical Distribution	10-30	30k-120k	Some vendors may require industrial sewer as they phase-in production capabilities Typically within 15 miles of fab
OEM Service Hubs	20-30	100k-150ksf	Some vendors co-locate on Fab campus Very location specific, w/in a few miles of Fab Often located in existing buildings – retro-fit
Construction Support	5-30	20ksf+	Dedicated, off-site buildings for pre-assembling M/E/P (mechanical, electrical, plumbing) systems or structural components.



Wave 2: Industry Growth & Redundancy

Redundancy + volume scaling + 2nd source security + tool parts/refurb, warehouse

- ❖ **Less reliant on flow of materials/tools from Asia.**
- As future Fab cleanrooms come online, sufficient scale will be achieved to support a growing supply chain ecosystem.
- This will require organized supplier parks ready to meet demand.

ANTICIPATED 2028-2032+

60-100

total companies



Wave 2: Industry Growth & Redundancy

Sector	Acres	Bldg Size	Notes
Tool/Equip Refurb	20-30	100k-200ksf	Requires industrial sewer Can be up to a few hours from fab as the industry is moving to more regional hub service model Often in existing buildings
Gas/Chemical/Materials Production	20-100	100ksf+	Heavy wastewater/power, extensive pre-treatment required Can be 4 hours from Fab, pref. w/in 60 miles A few will require immediate adjacency due to fragility/volatility of product
Fab Infrastructure	20-30	200ksf+	Location is vendor-type specific Supplier-park setting likely preferred Typically require higher power



Supply Chain **Space Demand** Assessment

Wave 1: 2026-2030 (initial demand): ~250–600 acres

- Chemicals/materials cluster: 120–300 acres
- Gas + subfab cluster: 40–150 acres
- Tool/service ecosystem: 50–150 acres
- Construction/industrial services: 20–60 acres

Wave 2: 2028-2032+ (adds redundancy + 2nd-source plants): +200–500 acres

- Biggest add is chemicals + gas redundancy,
- Tool refurbishment/service depth.
- Materials production.
- Subfab infrastructure cluster buildout

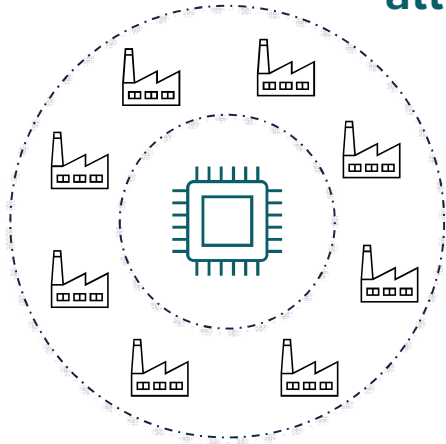
Goal is to have 750-1,000 acres ready to support semiconductor industry growth by 2033.





The Desire to Cluster Suppliers

Supplier Parks in targeted locations will benefit supply chain attraction efforts



A large portion of critical semiconductor supply chain companies will be locating from outside of the U.S., most notably originating from Asia.

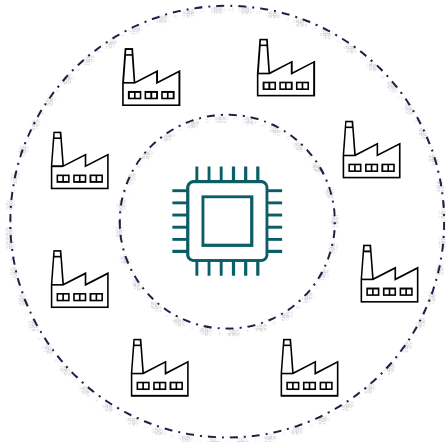
For companies originating from Taiwan, Singapore, Japan and Korea, the availability of supplier parks in the U.S. is not just a convenience but a **strategic necessity**:

- improved speed to market,
- overcome high operational costs,
- replicate the efficiency of their home markets.

Clusters need not be fully contiguous, but adjacent and proximate.



The Benefits of Supply Chain Clusters



1. Cost Mitigation and Operational Efficiency

- Centralized "hard" infrastructure (power, wastewater, purified water)
- "Soft" services (shared office buildings, professional management),
- One company's waste to become another's input.

2. Replication of High-Yield "Clustering Effects"

- Specialized clusters facilitate "knowledge spillovers"
- Proximity and face-to-face collaboration.

3. Specialized Labor Access

- Established parks build skilled labor pools in adjacent areas
- Improving success of firms to locate critical labor for advanced manufacturing.

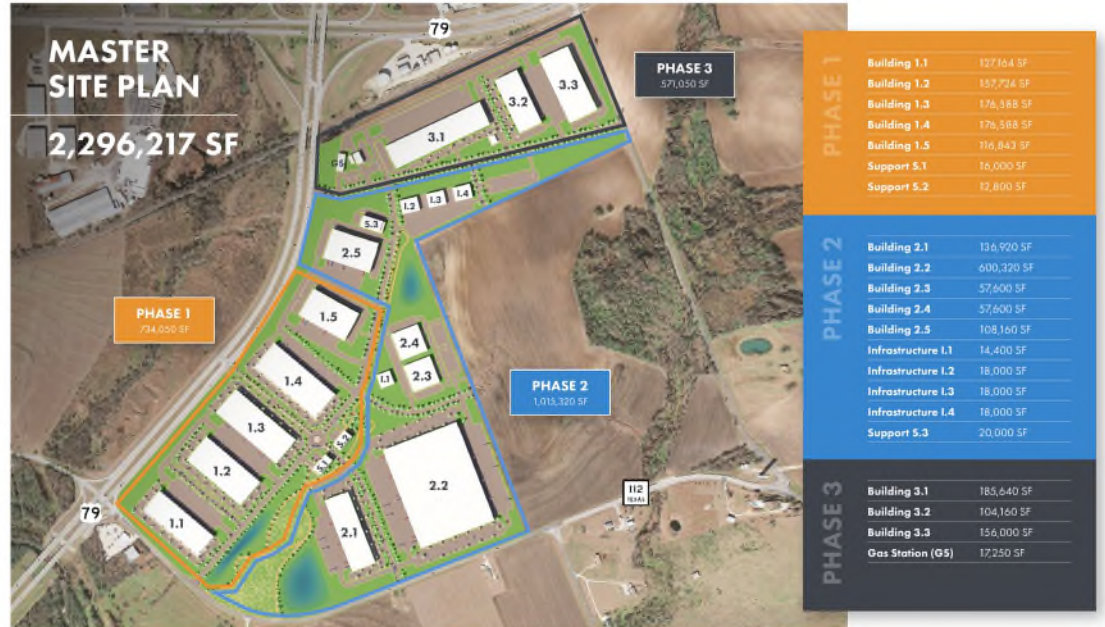


Supplier Park Examples

Gradiant Technology Park Taylor, TX

Robust infrastructure, including multiple power substations and ultra-pure water facility.

Located between 2 fabs.





Supplier Park Examples

Innovation Park Phoenix, AZ

Substantial spec-
buildings

Land Sale for BTS
options.

Cluster of non-contiguous
properties.





Supplier Park Examples

New Albany Tech Park New Albany, OH

Spec-buildings, BTS options,
land sales.

Fab adjacent.

Cluster of non-contiguous
properties.





Supply Chain Site Development Characteristics

Anticipated site/utility characteristics required to meet the needs of the supply chain

Characteristics	Front End Materials (Chem/Gas/Slurry)	FE Equipment	Fab Infrastructure	OSAT	Foundry/ IDM	Fabless	IP/EDA
SITE/LOCATION							
Greenfield/Brownfield	Greenfield	Greenfield Preferred	Either	Greenfield Preferred	Greenfield Preferred	N/A	N/A
Ownership	Own	Either	Either	Own	Own	Lease	Own
Employment Demand	50-150	150-1000	150-500	1000+	500-1000+	150-500	500-1000
Metro Area	w/in 25mi	w/in 25mi	w/in 25mi	w/in 25mi	w/in 25mi	w/in 10mi	w/in 10mi
Property Size	50-200	10-50	10-50	50-200	500	10-50	50-200
Distance to Airport	21-50mi	21-50mi	21-50mi	21-50mi	21-50mi	21-50mi	5-20mi
Distance to Highway	<5mi	<5mi	<5mi	<5mi	<5mi	<5mi	<1mi
Rail Service	Yes	Maybe	Maybe	Yes	Yes	No	No
Zoning Restrictions	Heavy Manufacturing/ Industrial	General Manufacturing/ Industrial	General Manufacturing/ Industrial	Heavy Manufacturing/ Industrial	Heavy Manufacturing/ Industrial	Commercial/ Office	General Manufacturing/ Industrial
Height Restrictions	Need 125' +	50' ok	50' ok	Need 125' +	Need 125' +	50' ok	50' ok
BUILDINGS							
Status	Build to Suit	Either	Either	Build to Suit	Build to Suit	Existing	Existing
Total Area (sf)	100ksf - 500ksf	100ksf - 500ksf	100ksf - 500ksf	100ksf - 500ksf	500ksf - 1Msf+	10ksf-50ksf	100ksf - 500ksf
Clean Room	ISO 7	ISO 6	ISO 7	ISO 7	ISO 3/4	ISO 5	ISO 7
Manufacturing	90ksf - 400ksf	90ksf - 400ksf	90ksf - 400ksf	90ksf - 400ksf	1Msf+	<50ksf	90ksf - 400ksf
Clear Height	16-30	16-30	16-30	16-30	16-30	10-15	16-30
UTILITIES							
Electric	49k-77k kWh	26k-65k kWh	26k-65k kWh	21k-60k kWh	400k kWh+	21k-60k kWh	21k-60k kWh
Natural Gas	21M-50M btu/hr	51M-150M btu/hr	21M-50M btu/hr	21M-50M btu/hr	300M btu/hr+	Typical	21M-50M btu/hr
Water	<100k GPD	500k-2.5M GPD	500k-2.5M GPD	<100k GPD	3M-20M GPD	<100k GPD	<100k GPD
Wastewater	<50k GPD	50k-130k GPD	50k-130k GPD	<50k GPD	1.3M GPD+	<50k GPD	<50k GPD






Supply Chain Site Development Characteristics

Anticipated site/utility characteristics required to meet the needs of the supply chain

SITE/LOCATION	
Greenfield/Brownfield	Greenfield
Ownership	Prefer to own, but BTS Lease an option
Employment Demand	Typically 50-150, up to 1,000+
Metro Area	w/in 25 miles
Property Size 	Typically 10-50 acres, up to 200 acres
Distance to Airport	21-50mi
Distance to Highway	<5mi
Rail Service	Required by many chemical/materials
Zoning Restrictions	General/Heavy Manufacturing
Height Restrictions	50' ok, but some need 125' for tanks/silos
Air Cargo	Prefer to be w/in 4 hours
Dist. to nearest Fab 	Some directly adjacent, many prefer to be w/in 3 hours

BUILDINGS	
Status	Build to Suit
Total Area (sf) 	100,000 to 500,000sf
Configuration	Often multiple structures
Clean Room	ISO 6/7, typically <10% of space needs
Manufacturing/Warehouse	typically >90% of space needs
Interiors	16-32' clear, 50x50 columns

 UTILITIES	
Electric	3MW to 25MW
Natural Gas	21M to 150M btu/hr
Water	100,000 GPD to 2.5 MGD
Wastewater	50,000 GPD to 130,000 GPD



Supply Chain Site Development Characteristics

Anticipated site/utility characteristics required to meet the needs of the supply chain

Semiconductor Supply Chain Site Needs Analysis Development/Energy Intensity Load Calculations

	Typical Acres	Typical SF	Typical SF/Ac	Typical MW Load
FE Materials/Chem/Gasses (high intensity)	63	500,000	8,000	25
FE Materials/Chem/Gasses (Low intensity)	25	100,000	4,000	4
Fab Equip/Infra (high intensity)	21	250,000	12,000	10
Fab Equip/Infra (Low intensity)	10	100,000	10,000	4
Logistics (high intensity)	83	1,000,000	12,000	4
Logistics (Low intensity)	31	250,000	8,000	1



Users for Existing Buildings

Anticipated Supply Chain Needs prioritized by GO-SEMI to meet needs of Micron/GF

Sector	Acres	Bldg Size	Notes
Tool/Equip Refurb	20-30	100k-200ksf	Requires industrial sewer Can be up to a few hours from fab
OEM Service Hubs	20-30	100k-150ksf	Some vendors co-locate on Fab campus Very location specific, w/in a few miles of Fab Often located in existing buildings – retro-fit
Fab Infrastructure	20-30	200ksf+	Location is vendor-type specific Typically require higher power
3PL Logistics	40-80	500ksf+	Typically within a few miles of Fab Does not require industrial sewer



The Gameplan | Key Site Readiness Considerations

1. SITE ASSEMBLAGE and DEVELOPMENT CONCEPTS

- Prepare concept development plans w/range of footprint sizes
- For larger sites, include concepts for a “Supplier Park” – often the industry prefers to be clustered together
- Share early with ESD & DEC for guidance on any necessary permitting

2. WETLANDS

- Obtain delineations and Jurisdictional Determination now...good for 5-years
- Identify strategies for any necessary mitigations

3. ROADS / RAIL

- Consider how multiple access points could be obtained
- If a site is adjacent to rail, obtain a concept for service/siding from the Railroad

4. SEWER / WATER / POWER

- Identify the capacity of the sewer conveyance network – flow studies / ID bottlenecks
- Identify specific strategies w/utility company to bring power to the site.



The Gameplan | State Resources Available

FAST NY

Track B: predevelopment due diligence activities

- Working capital grants of up to \$500,000 per site, 40 acre minimum.
- Necessary pre-development site planning and reviews for future shovel ready sites.

Track C: Capital Projects

- Capital grants improve the shovel-readiness of existing, mature sites.
- Funding for infrastructure improvements such as water, sewer, transportation, electricity, gas and other capital-eligible site improvement costs.

POWER UP

- Capital funding for critical infrastructure upgrades to enhance industrial site power readiness.
- Transformers, conductors, buses, switches, insulators, substations, and poles, utility conduits and duct banks.

Thank you.

More information:



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