NEWMARK GLOBAL STRATEGY & CONSULTING

Dublin Semiconductor Supply Chain Positioning Study

Prepared for: City of Dublin | ECONOMIC DEVELOPMENT

May 30, 2023

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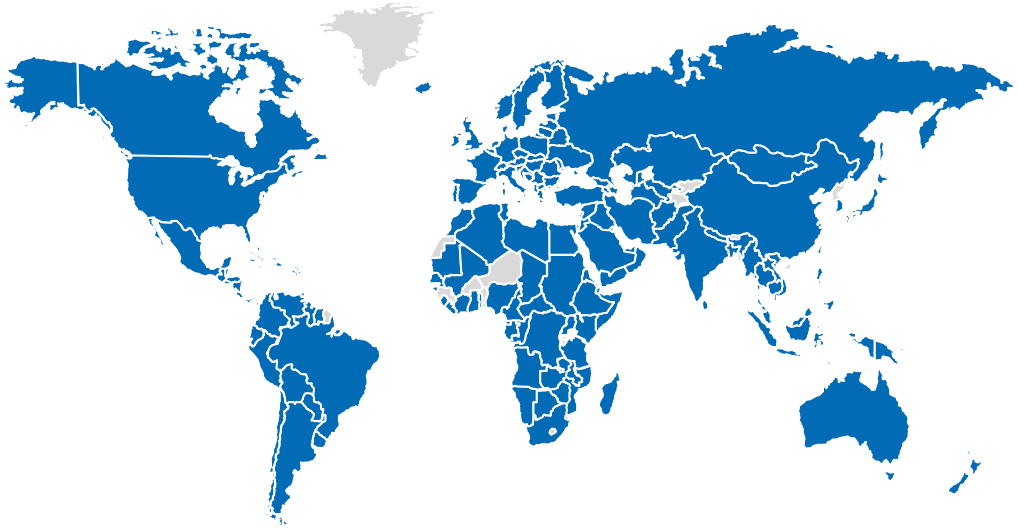
1. Project Team & Background

Global Reach: Locally Expert, Globally Connected

Entrepreneurial spirit and **future-facing** vision.

99% of your locations directly **serviced by Newmark**

One of the **world's leading** commercial real estate platforms.



Complete **suite of services** is tailored to every type of client:

- Brokerage & Transaction Management
- Lease Administration & Audit Services
- **Global Strategy & Consulting**
- Workplace Strategy & Human Experience
- Technology & Innovation
- Program & Project Management
- Facilities Management

Delivery of Services:

Global delivery in over 100 countries with **best in market commitment**

92
years in business

100+
countries

$3.0B+
annualized revenue

~140
offices worldwide

4

500M
square feet managed worldwide

Integrated Service Delivery

Newmark is a full-service firm with both consulting and delivery capabilities at every stage of the real estate lifecycle.

Newmark Global Strategy will be the lead service for this engagement and can support downstream execution of the project as needed.

Global Strategy & Consulting

What Do We Do: We are **management consultants** who help companies determine **what** facilities they need, **where** they are needed, and **how** those facilities' **operating conditions** should be organized geographically, functionally, and socially while **optimizing costs** to the business.

Portfolio Strategy

- Strategic Portfolio Assessment
- Cost Reduction Strategy
- Asset Optimization & Capital Planning
- M&A Due Diligence and Integration

Supply Chain Optimization

- Supply Chain Strategy & Analytics
- Logistics & Network
- Optimization
- Operations Strategy & Warehouse Design
- Outsourcing, Spend & Vendor Management

Location Strategy & Site Selection

- Corporate Location Strategy & Site Selection
- Relocation, Expansion and Consolidation Feasibility
- Community & Site Due Diligence
- Workforce and Labor Analytics

Economic Incentives Advisory

- Program Research and Feasibility
- Negotiation and Optimization Strategy
- Compliance Management
- Portfolio-Wide Incentives Evaluation

Workplace Strategy and Human Experience

- Workplace Scenario Planning and Venue
- Space Utilization and Efficiency Benchmarking
- Facility Master Planning
- Workflow and Business Process Improvement
- Change Management

Economic Development Consulting

- Strategic Planning and Target Industry Analysis
- Workforce and Talent Development
- Asset-Based Community Development Advisory
- Stakeholder and Community Engagement

500+	15-20	10-30%	$15B+
CLIENTS ACROSS MULTIPLE INDUSTRIES	AVG YEARS OF CONSULTANT EXPERIENCE	OPERATING COST SAVINGS ACROSS ALL ENGAGEMENTS	IN ECONOMIC INCENTIVES NEGOTIATED

Project Team – Newmark Experts

Robert Hess
Vice Chairman

Kim Moore
Executive Managing Director

Gregg Wassmansdorf
Senior Managing Director

Brian Peterson
Managing Director

Kevin Nesburg
Managing Director

Gillian Apps
Senior Analyst

2. Semiconductor Supply Chain Fundamentals

Semiconductor Industry: What's the big deal about something so small?

What is a Semiconductor?

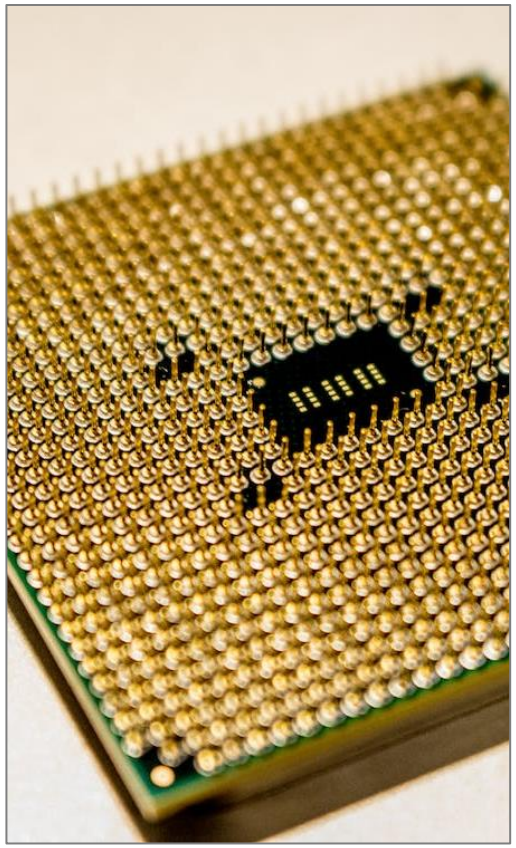
A semiconductor is a material that can either conduct or insulate the flow of electricity.

Today, the term "semiconductor" is frequently used to refer to computer chips, which contain semiconductors, resistors, capacitors, and other components needed to carry out specific processes, such as reading barcodes, operating a camera lens, receiving wireless signals, or coordinating the operations of other chips.

Why do we need Semiconductors?

Semiconductors are an essential component of electronic devices, enabling advances in communications, computing, healthcare, military systems, transportation, clean energy, and countless other applications.

The industry lives—and dies—by a simple creed: smaller, faster, and cheaper.



Source: Jeremy Waterhouse, Pexels.

Semiconductor Manufacturing Process

The semiconductor manufacturing process consists of three main stages: design; fabrication; and assembly, testing, and packaging. The largest portion of value added in the manufacturing process occurs in the design and fabrication stages. The fabrication and assembly, testing, and packaging stages are capital intensive and require expensive specialized machinery.

Companies invent new products and conceive of circuit designs for manufacture.

Design

Semiconductor circuit designs are etched onto silicon wafers.

Front-End Fabrication

Wafers are sliced into individual chips, tested, and packaged. High labor intensity. Typically not completed in U.S.

Assembly, Testing, & Packaging

Roughly 90% of the industry value added occurs in these two phases.

Requires significant capital investment.

Semiconductor Industry Product Types

The semiconductor industry has many product types and applications. There are four major categories of products that semiconductor businesses manufacture.

Microprocessors

Used for the interchange and manipulation of data in computers, communication devices, and consumer electronics.

Most technically advanced, highest cost, and highest profit margin.

Memory Devices

Used for storing information on computers, smartphones, tablets, and other devices.

Less technically advanced than microprocessors. High volumes, low profit margins. Subject to boom-bust cycles.

Analog Devices

Used to translate analog signals to digital form.

Optoelectronics, Sensors, and Discretes (OSD)

Used to generate or sense light, such as in traffic lights or cameras.

Semiconductor Manufacturing Business Models

Some semiconductor businesses, like Intel, design and fabricate their own computer chips. Other businesses like AMD or Apple design chips but outsource their production. Fabrication business like Taiwan Semiconductor (TSMC) or Global Foundries focus exclusively on manufacturing semiconductors for fabless clients.

Integrated Device Manufacturers

Design and manufactures computer chips in-house.

Major players

Intel

Samsung

Texas Instruments

Infineon

Fabless Manufacturers

Design computer chips. Contract their manufacturing to a foundry.

Major players

AMD

Apple

Qualcomm

Nvidia

Semiconductor Foundries

Manufacture computer chips.

Major players

Taiwan Semiconductor Mfg. Corp. (TSMC)

UMC

Global Foundries

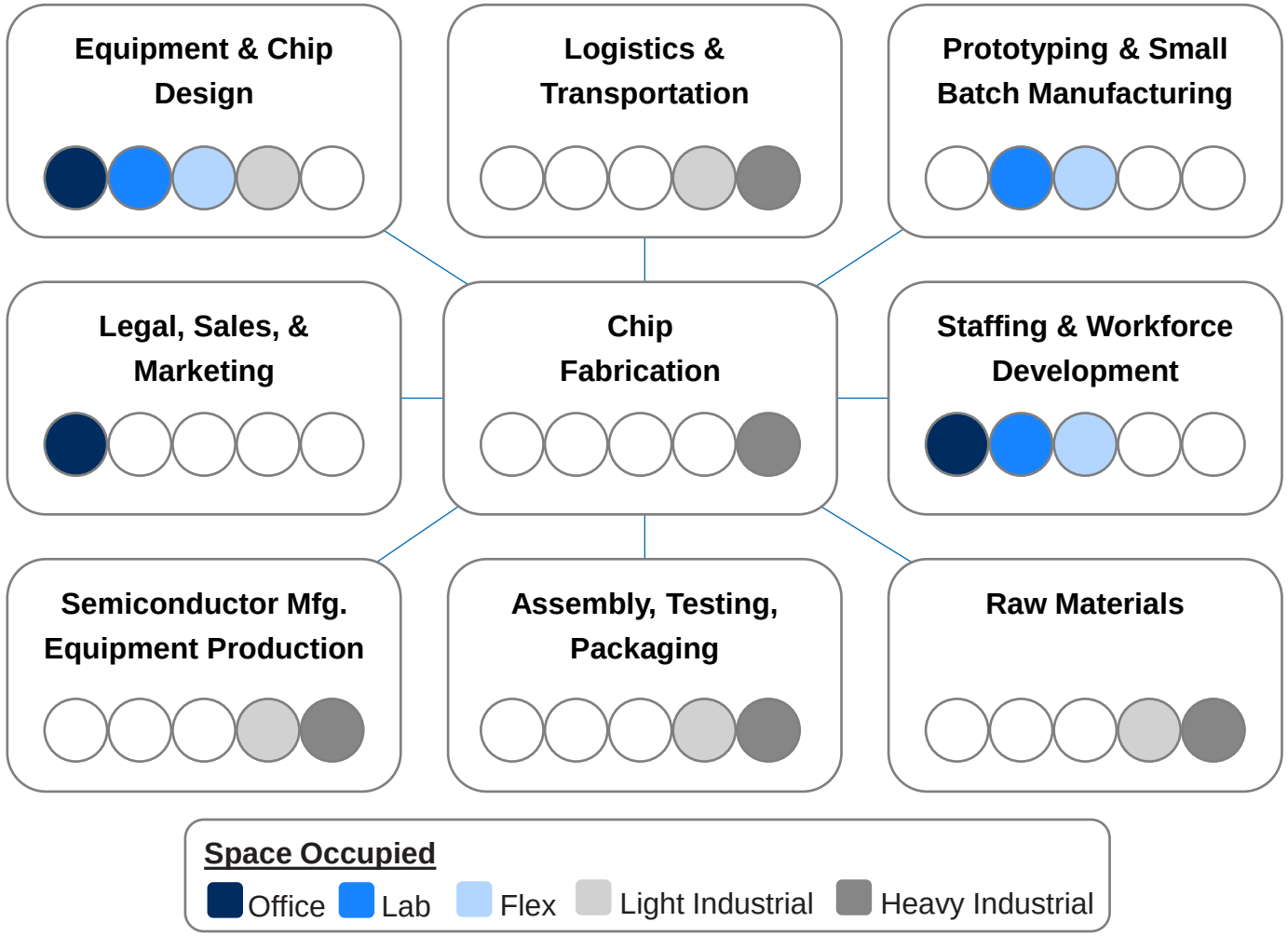
Semiconductor Mfg. Intl. Corp. (SMIC)

Semiconductor Industry Ecosystem

Computer chip fabrication is only one part of a much larger ecosystem that includes a multitude of supporting supply chain businesses.

These supply chain businesses have site and location needs that affect where they locate. Intel's "tier 1" suppliers – those suppliers Intel has a direct relationship with – require heavy industrial sites with land buffers, access to large volumes of water and electricity, and access to multiple transportation options. Smaller operations like R&D and design tend to locate in office, lab, or flex space.

Semiconductor Industry Ecosystem



Semiconductor Industry Employment Composition

The semiconductor industry consists of occupations with a variety of pay ranges. Many of the industry's entry level positions, such as assemblers and processing technicians, are located at semiconductor fabs. Higher paying occupations in the industry, like software developers or engineers, may be located at the fab or at supply chain businesses.

Corporate HQ Industry Common Occupations in Ohio

Job Title	% of Industry Employment	Average Wage, 2021 (Ohio)
Customer Service Representatives	5%	$43,100
Accountants and Auditors	4%	$77,700
Bookkeeping and Auditing Clerks	4%	$44,100
General and Operations Managers	4%	$151,700
Financial Managers	3%	$146,500
Software Developers	3%	$99,700
Human Resources Specialists	3%	$71,400
Market Research Analysts	3%	$79,100
Computer Systems Analysts	3%	$94,600
Office Supervisors	2%	$71,700

Semiconductor Industry Common Occupations in Ohio

Job Title	% of Industry Employment	Average Wage, 2021 (Ohio)
Electrical Assemblers	16%	$34,100
Semiconductor Processing Technicians	6%	$44,700
Inspectors, Testers, and Weighers	5%	$41,000
Industrial Engineers	4%	$95,400
Software Developers	3%	$112,800
Team Assemblers	3%	$32,400
Electronics Engineers	3%	$111,00
Electronics Assembly Supervisors	2%	$65,000
Industrial Engineering Technicians	2%	$60,300
Electrical Engineering Technicians	2%	$62,700

Source: JobsEQ

Semiconductor Industry

Several recent events have spurred a restructuring in the global semiconductor supply chain. These include:

1. The COVID-19 pandemic exposed the pitfalls of geographic fragmentation in the semiconductor supply chain.
2. Increasing geopolitical tension, especially between China and the U.S., has led to U.S. sanctions that significantly limit the import of Chinese computer chips to the U.S.
3. Many countries have begun to subsidize their semiconductor industry to encourage domestic chip production in response to these tensions. Semiconductor self-sufficiency has become a national defense priority.

In response to these challenges, the U.S. government enacted the Creating Helpful Incentives to Produce Semiconductors and Science Act of 2022 (CHIPS Act) in August 2022. The goal of the CHIPS Act is to boost U.S. competitiveness, innovation, and national security. The CHIPS Act invests $280 billion to bolster U.S. semiconductor capacity, catalyze R&D, create regional high-tech hubs, and crate a bigger, more inclusive STEM workforce.

The chip industry and national security
-Asia Times, December 7, 2022

U.S. Makes National Security Priority of CHIPS Subsidies
-Electronic Engineering Times, March 3, 2023

US would destroy Taiwan's semiconductor factories rather than letting them fall into China's hands, a former national security advisor says
-Business Insider, March 14, 2023

The U.S.-China chip race heats up
-The GIS Report, April 6, 2023

COVID-fuelled semiconductor crunch chips away at carmakers
-Reuters, August 19, 2021

Biden Stunts Growth in China for Chipmakers Getting US Funds
-Bloomberg, March 22, 2023

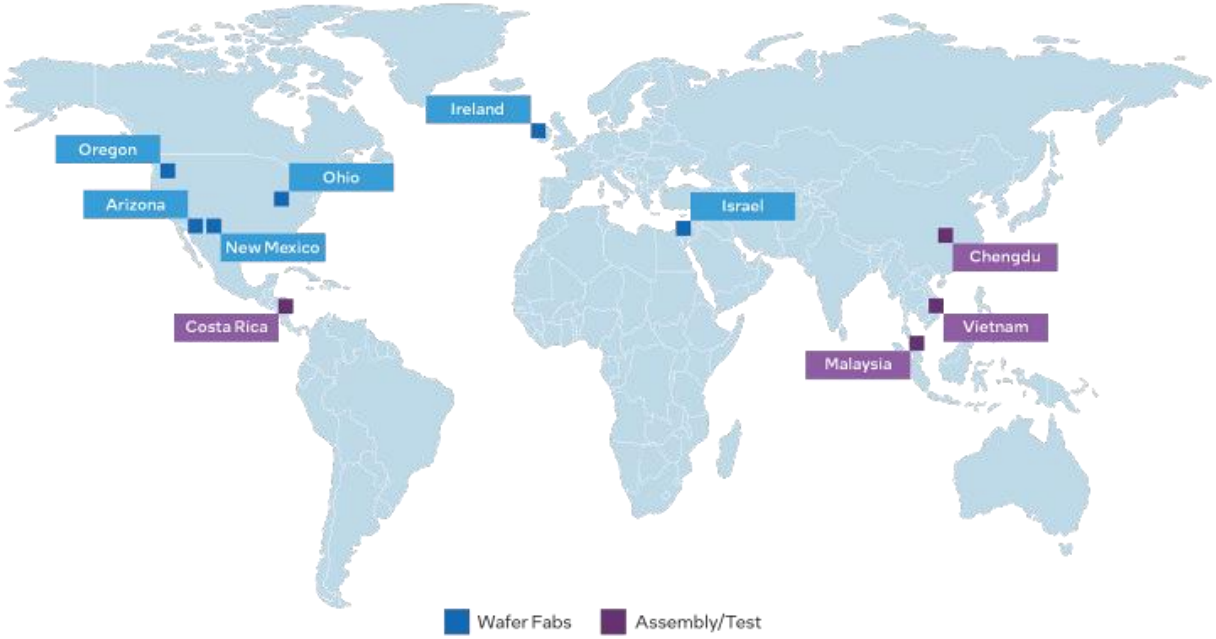
Intel Integrated Device Manufacturing (IDM) 2.0

In response to global supply chain issues and geopolitical tension, Intel announced in 2021 that it would make major investments to expand its semiconductor production capacity as part of the company's "IDM 2.0" strategy.

The IDM 2.0 announcement included two new fab facilities in Chandler, Arizona, and has since been expanded to include two fab facilities in New Albany, Ohio.

IDM 2.0 represents the combination of three components that will enable the company to drive sustained technology and product leadership:

1. Intel's global, internal factory network for at-scale manufacturing is a key competitive advantage that enables product optimization, improved economics and supply resilience. Intel will continue to manufacture the majority of its products internally.
2. Intel will increase its utilization of third-party fabs to include manufacturing for a range of products, including those at the core of Intel's computing offerings for both client and data center segments beginning in 2023.
3. Intel will establish a standalone business unit known as "Intel Foundry Services" to provide leading-edge foundry services to clients.



Intel Ohio Investment Overview

In January 2022, Intel announced it would invest approximately $20 billion to build two fab facilities in New Albany, making Ohio one of four states with an Intel fab facility (Oregon, Arizona, New Mexico).

The project broke ground in September 2022. Production will begin in 2025.

The fabs will build Intel's new "Angstrom era chips." An Angstrom is a unit of measure one-tenth of a nanometer (nm), used to denote the distance between transistors on a semiconductor chip. Angstrom era chips will have an initial distance between transistors of 2 nm or less. Intel currently manufacturers 10 nm chips.

Intel New Albany Facility Details

Site size:	1,000 Acres
Number of fab facilities:	2 by 2025 Up to 8 by 2030
Total Investment:	$20 billion by 2025 Up to $100 billion by 2030
Direct Employment:	3,000
Average annual wage:	$135,000

Source: Intel, Office of the Ohio Governor.

Intel New Albany Fab Renderings

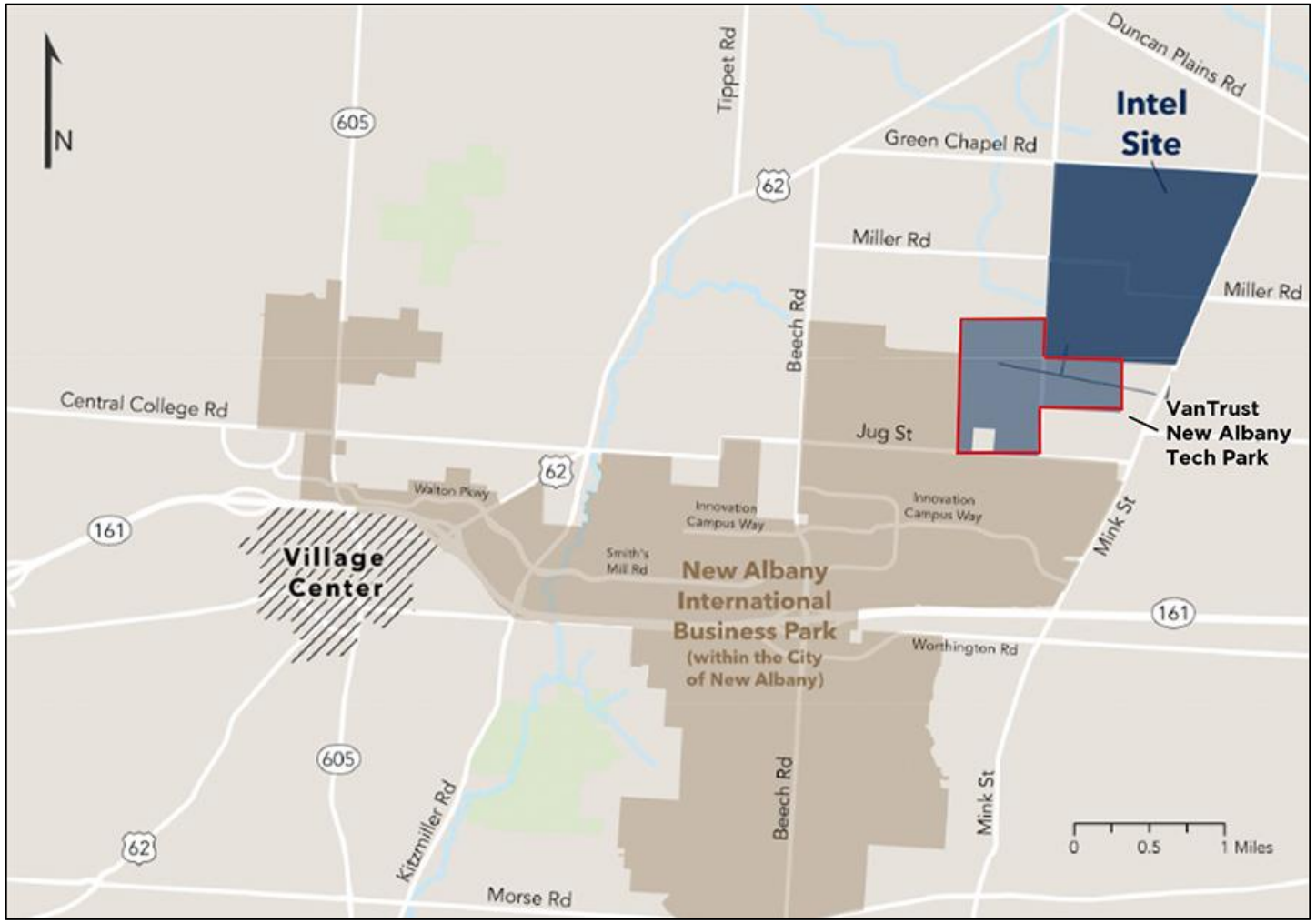
Source: Intel

3. Semiconductor Business Location Dynamics

Semiconductor Location Dynamics | Supplier Park

Intel's expansion into Central Ohio presents immediate opportunities for Dublin and other Columbus area communities to attract semiconductor supply chain businesses.

For some of these businesses, proximity to the fab will be critical. VanTrust is currently developing a 500-acre technology park for Intel suppliers. The park's first spec building will be completed in 2023. The business park could contain up to 5 million square feet of space once completed.



Source: VanTrust.

Semiconductor Location Dynamics for Selected Semiconductor Metros

In other communities, semiconductor fabs have attracted scores of suppliers. News reports suggest that the New Albany fab will attract roughly 40 companies. The Newmark team identified less than five major suppliers in the region today.

The Newmark team also examined how supply chains have evolved in other semiconductor communities across the country to determine how many supply chain businesses may locate in the region.

Two other Intel communities – Chandler, Arizona and Hillsboro, Oregon – are home to more than 60 suppliers. Other IDMs like Samsung and Texas Instruments are home to more than 70 suppliers.

Semiconductor Business Proximity to Fabs

Company	Fab Location	Suppliers Within 1-Hr Drive
Samsung	Austin, TX	92
Intel	Chandler, AZ	88
Texas Instruments	Richardson, TX	77
Intel	Hillsboro, OR	61
Micron	Boise, ID	19
Global Foundries	Malta, NY	11

Source: ESRI Business Analyst, Newmark research.

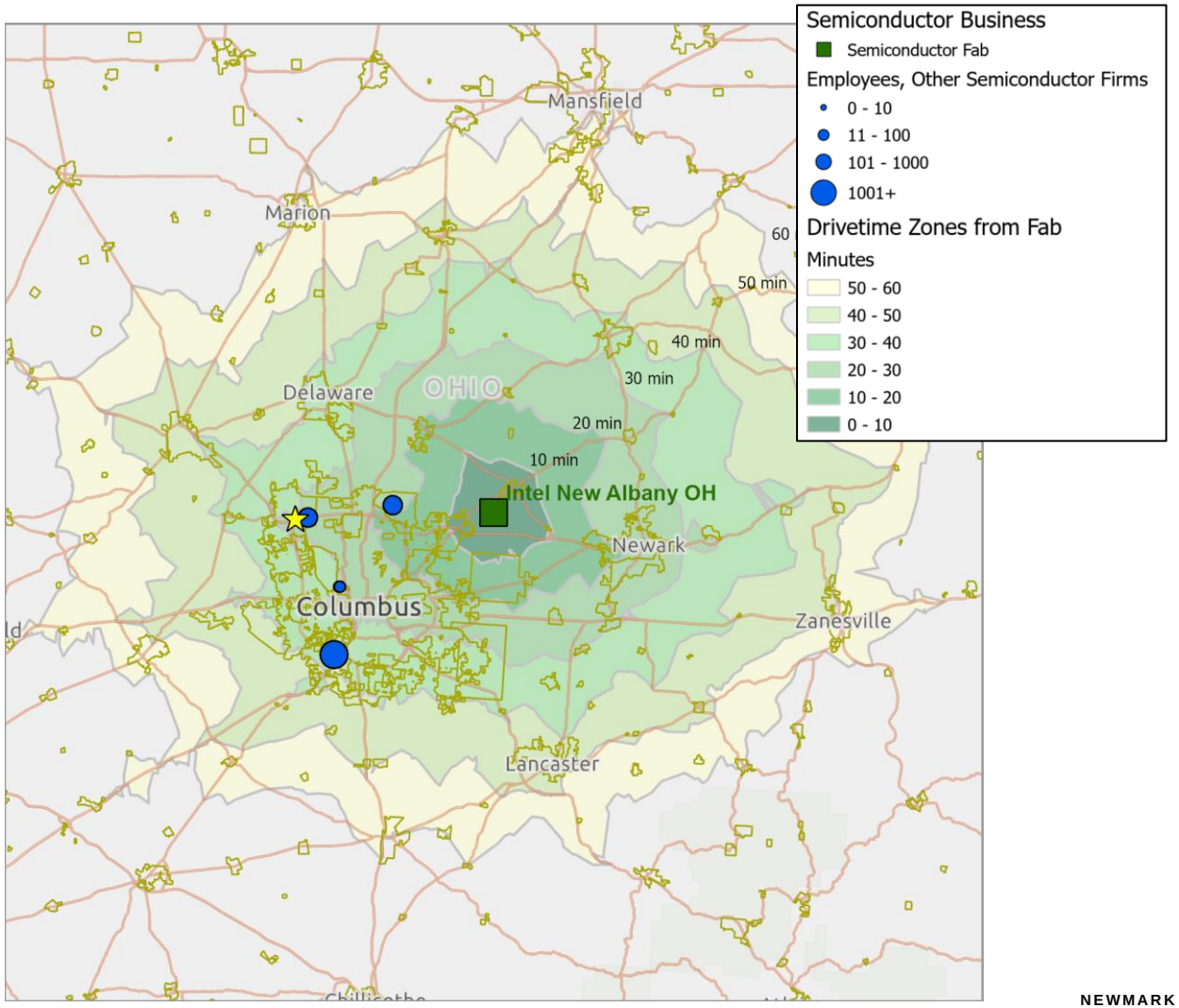
Semiconductor Location Dynamics | Columbus, OH

The Columbus region is home to only a handful of semiconductor businesses today.

Supplier Location Characteristics

Drive Time from Fab (mins)	Number of Suppliers
<10	0
10-20	1
20-30	1
30-60	2

Source: ESRI Business Analyst, Newmark research.



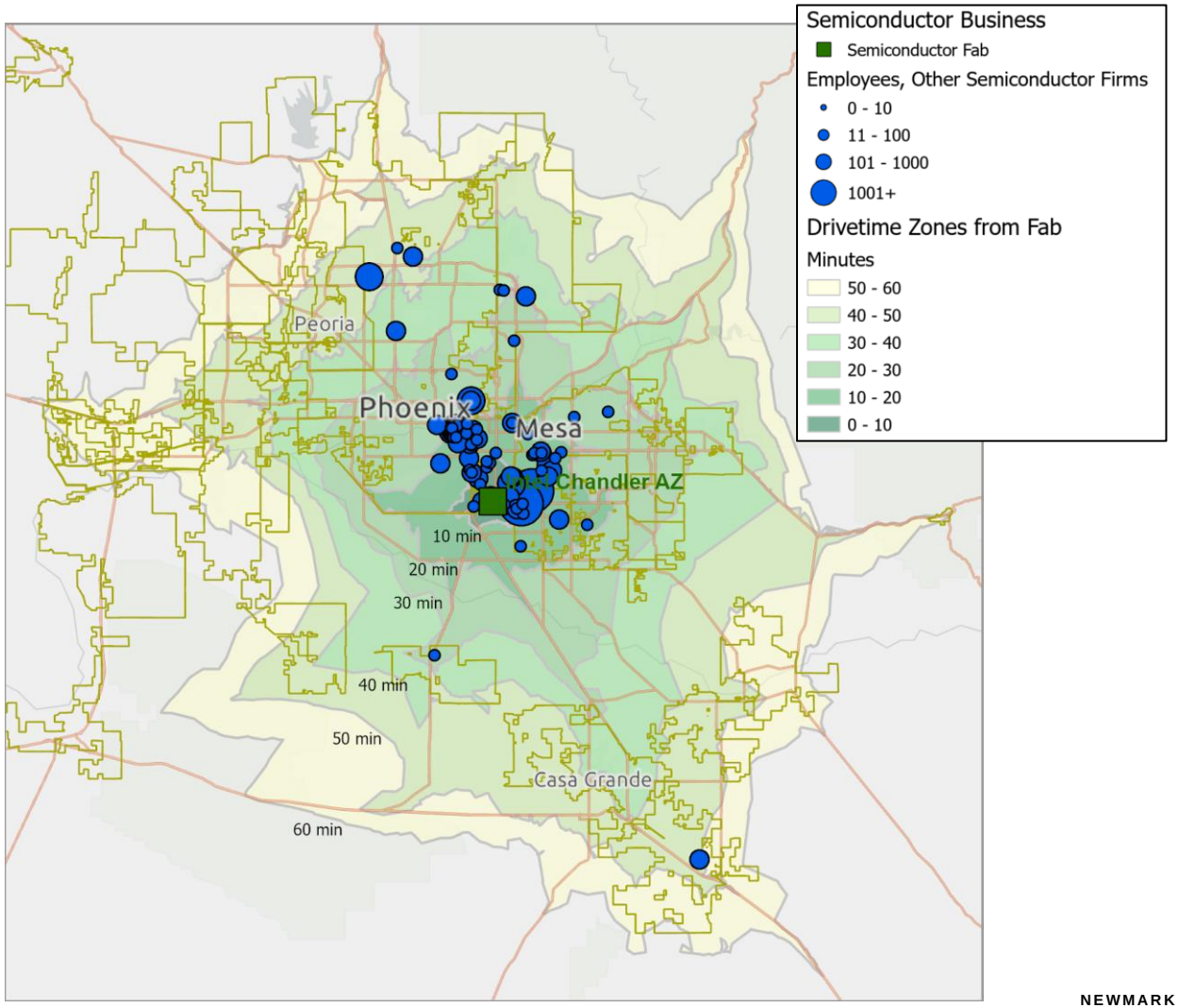
Semiconductor Location Dynamics | Chandler, AZ

Chandler is home to four Intel fabs, the oldest of which began production 1996. Intel's Chandler facilities produce Xeon microprocessors used in servers. There are 88 suppliers within a 1-hour drive of these facilities.

Supplier Location Characteristics

Drive Time from Fab (mins)	Number of Suppliers
<10	20
10-20	51
20-30	9
30-60	8

Source: ESRI Business Analyst, Newmark research.



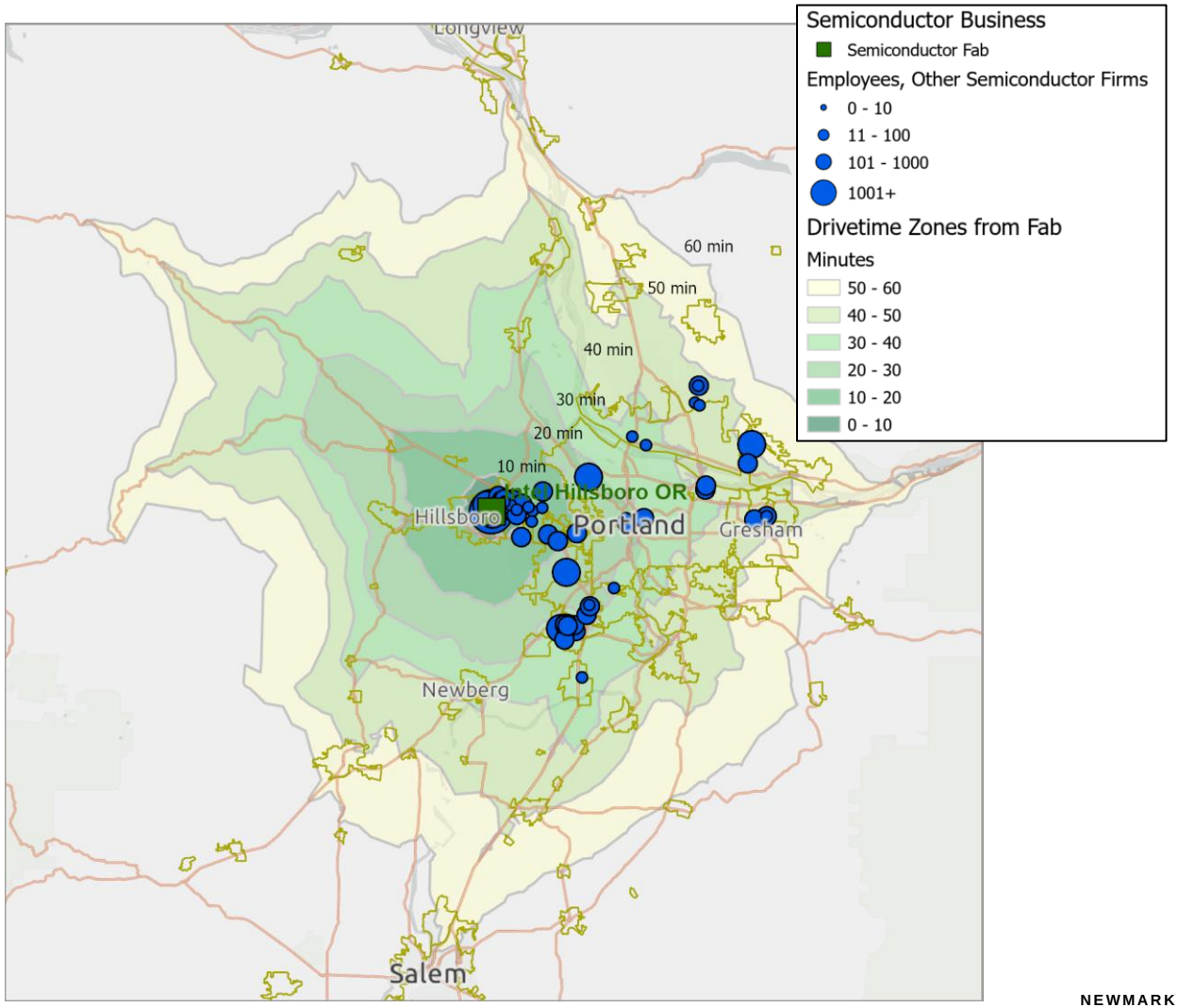
Semiconductor Location Dynamics | Hillsboro, OR

Hillsboro is home to four Intel fabs, the oldest of which began manufacturing in 1996. There are 61 suppliers located within a 1-hour drive of the fabs.

Supplier Location Characteristics

Drive Time from Fab (mins)	Number of Suppliers
<10	16
10-20	11
20-30	7
30-60	27

Source: ESRI Business Analyst, Newmark research.



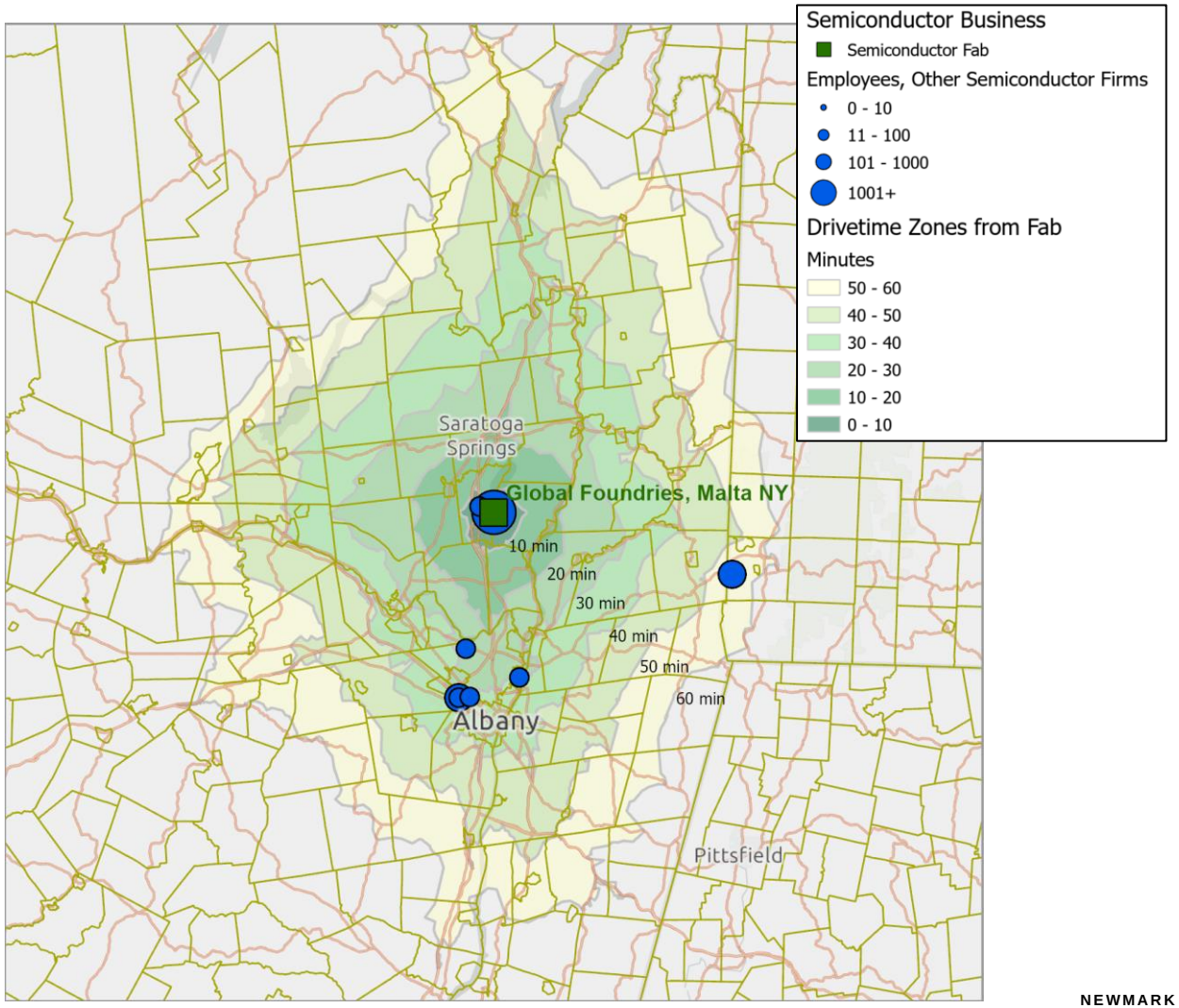
Semiconductor Location Dynamics | Malta, NY

Malta is home to GlobalFoundries' sole U.S.-based fab. The fab began production in 2012. There are 11 suppliers within a 1-hour drive of the facility.

Supplier Location Characteristics

Drive Time from Fab (mins)	Number of Suppliers
<10	3
10-20	1
20-30	2
30-60	5

Source: ESRI Business Analyst, Newmark research.



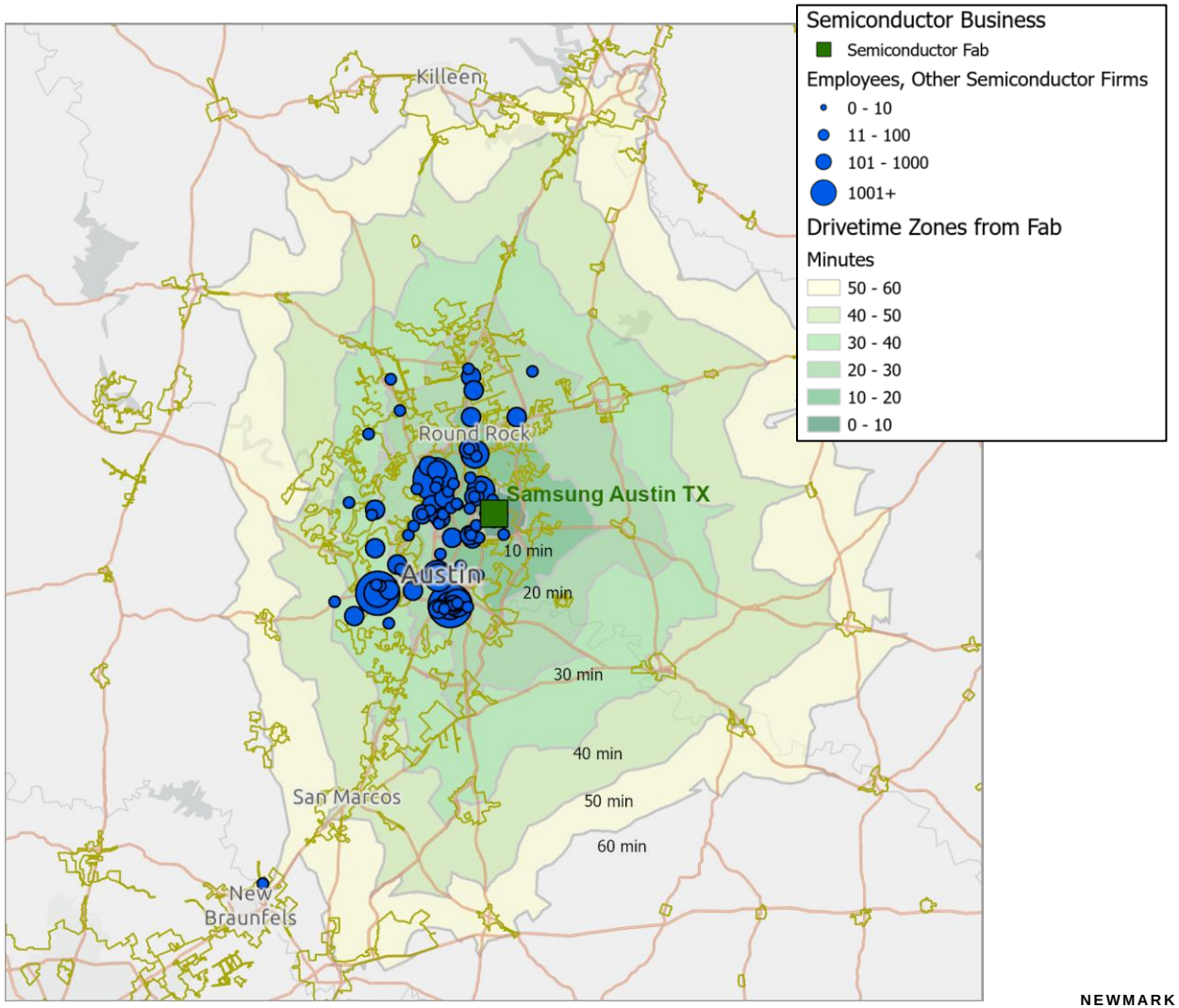
Semiconductor Location Dynamics | Austin, TX

Austin is home to Samsung's "S-2" fab, which began production in 2011. The fab manufactures microprocessors and flash memory chips used in consumer electronics like mobile phones and digital cameras. There are over 90 suppliers located within a 1-hour drive. Some suppliers may also be servicing Texas Instruments in Dallas/Richardson.

Supplier Location Characteristics

Drive Time from Fab (mins)	Number of Suppliers
<10	7
10-20	34
20-30	38
30-60	13

Source: ESRI Business Analyst, Newmark research.



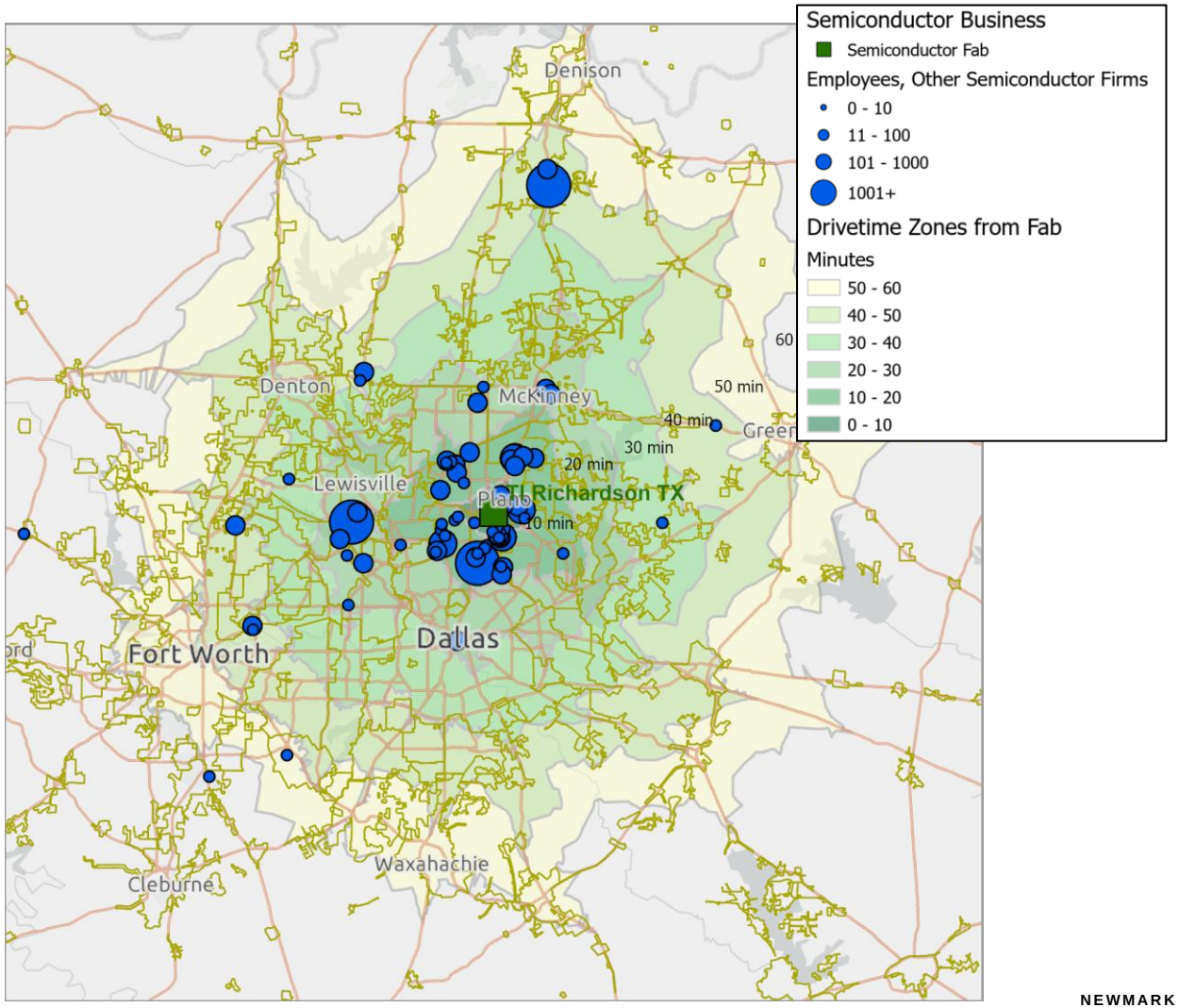
Semiconductor Location Dynamics | Richardson, TX

Richardson is home to two Texas Instruments fabs, the oldest of which began production in 2009. Texas Instruments manufactures analog semiconductors that are used in a wide range of consumer and business products. There are 77 suppliers within a 1-hour drive of the fabs.

Supplier Location Characteristics

Drive Time from Fab (mins)	Number of Suppliers
<10	22
10-20	32
20-30	12
30-60	11

Source: ESRI Business Analyst, Newmark research.



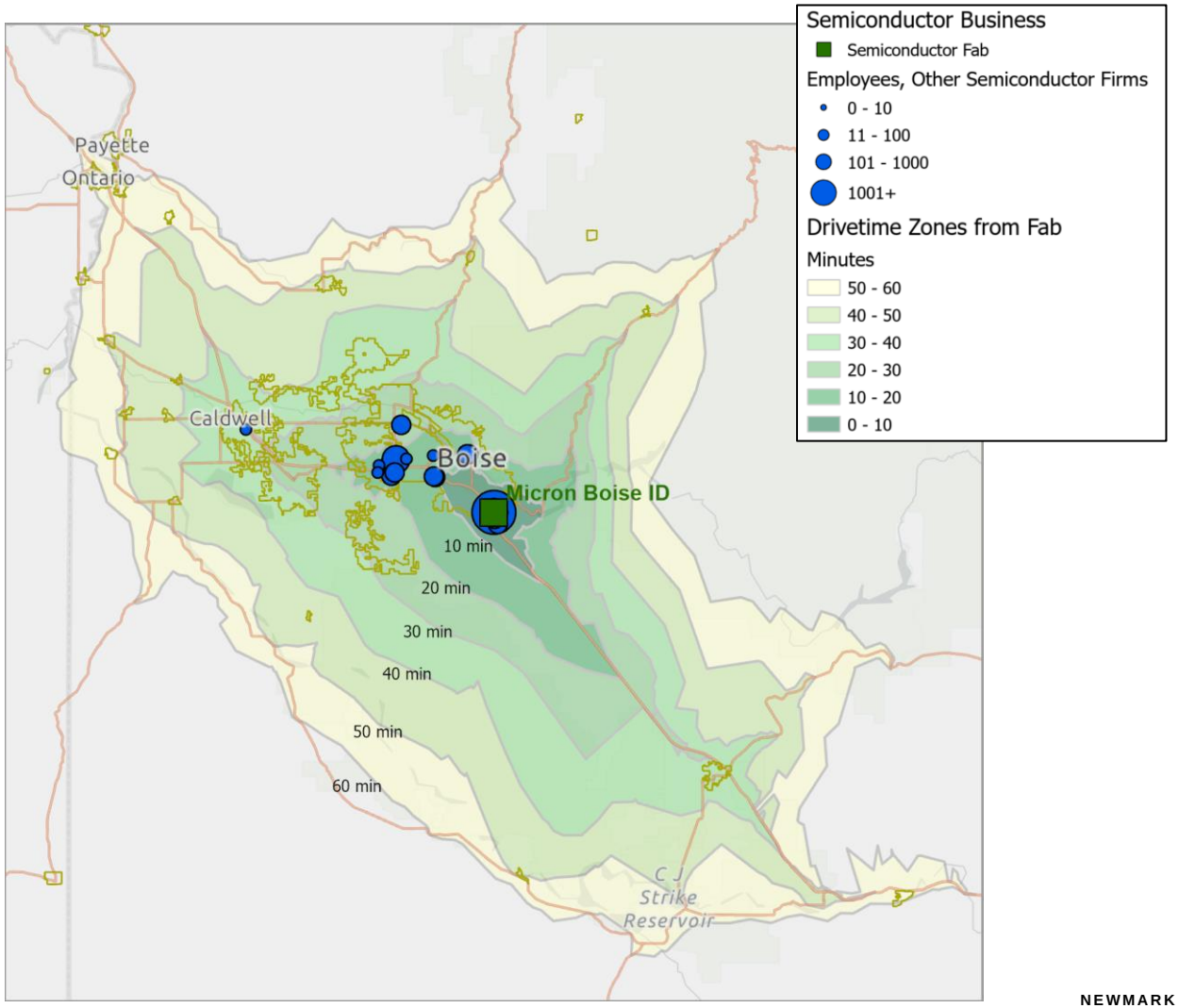
Semiconductor Location Dynamics | Boise, ID

Boise is home to one Micron fab that produces computer and flash memory devices. The facility has been in operation since the early 1980s. There are 19 suppliers located within a 1-hour drive.

Supplier Location Characteristics

Drive Time from Fab (mins)	Number of Suppliers
<10	7
10-20	10
20-30	1
30-60	1

Source: ESRI Business Analyst, Newmark research.



4. Semiconductor Sector Property Types

Semiconductor Property Types

Semiconductor industry activity occurs across multiple property types. These property types each have unique characteristics that guide location choices.

Property Type	Site Characteristics	Built Form	Worker Description
Office	Site size varies significantly – may be large standalone sites or mixed-use high density. Can be situated near other offices or residential uses.	Self-contained building with attractive architectural features. Minimal traffic flow outside of employees.	Predominantly professional occupations. Work occurs mostly during the day.
Lab	Small to medium sized sites. May exist as part of office or industrial sites.	Some venting/stacks but maintains strong “office-like” appearance.	A mixture of office professionals and technical workers. Work occurs during the day.
Flex	Smaller scale sites. Fits near office, lab, or industrial uses.	Primarily focused on industrial activities but maintains many characteristics of office buildings. Some rear truck bays for shipments.	A combination of office professionals and production workers. Production work may include testing, prototyping, or other light manufacturing. Work occurs during the day.
Light Industrial	Medium scale sites. Typically located away from residential uses. May be adjacent or co-located with other industrial uses. Transportation access is important.	Design elements focused on ease of production first, aesthetics second. High ceilings. Venting/stacks. Rear truck bays support moderate volume of traffic.	A mixture of office professionals and production workers. Work may occur around the clock.
Heavy Industrial	Large scale sites. Shielded from residential uses through land buffers or other uses like offices. Transportation access is critical.	Design elements focused on ease of production rather than aesthetics. High ceilings. Venting/stacks. Visible truck bays. Outdoor storage.	Mostly production workers. Work occurs around the clock.

Semiconductor **Office** Properties (1 of 3)

Business services, sales, engineering, and some R&D activities occur in office buildings and settings familiar to Dublin, OH.

Moov Technologies, Phoenix, AZ

- 83 North Mill Ave, Tempe, AZ
- Moov is an online software platform that matches buyers and sellers of semiconductor manufacturing equipment.
- 32,000 SF space inside large high-rise office building.
- Total employment expected to reach over 100 by end of 2022.

ON Semiconductor, Meridian, Idaho

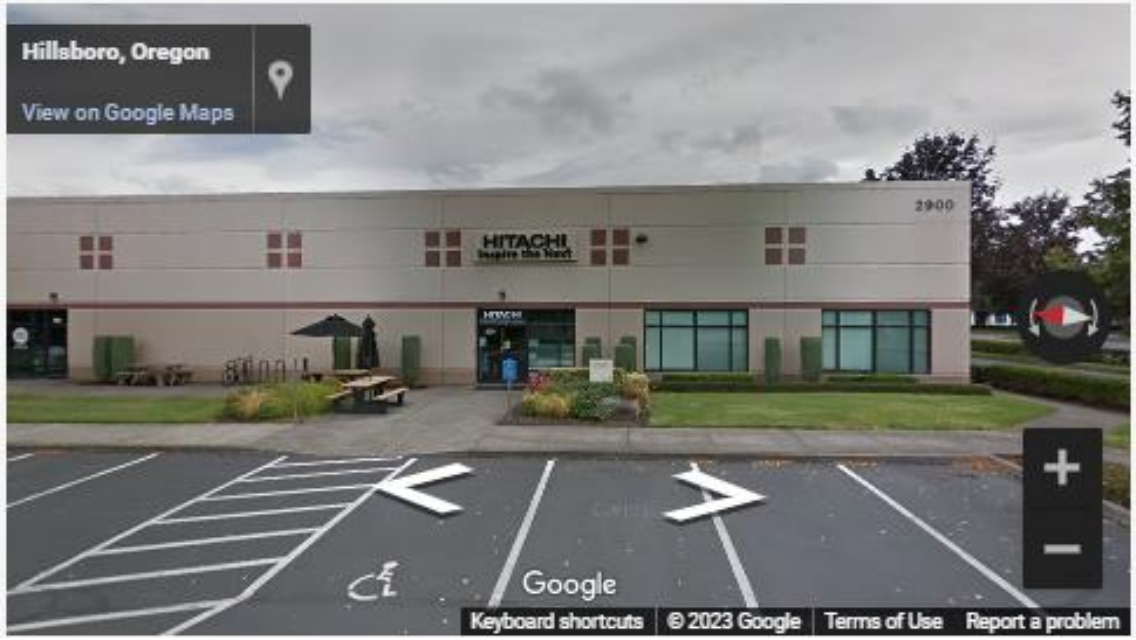
- 3405 E Overland Rd, Meridian, ID
- Onsemi is a supplier of silicon solutions for energy efficient electronics, including EV automotive, LED lighting, communications, medical, and aerospace industries.
- Corporate Campus: Design and Solution Engineering.
- Onsemi occupies 5,900 SF of the 124,000 SF building.

Semiconductor **Office** Properties (2 of 3)

Business services, sales, engineering, and some R&D activities occur in office buildings and settings familiar to Dublin, OH.

Hitachi High-Tech America, Hillsboro, OR

- 2900 NE Century Blvd Ste 200, Hillsboro, OR 97124
- Hitachi High-Tech America sells and services semiconductor manufacturing equipment.
- Hillsboro location serves as corporate office.
- 43,700 SF building. Hitachi occupies several suites within the building.



Analog Devices, Inc., Dallas, TX

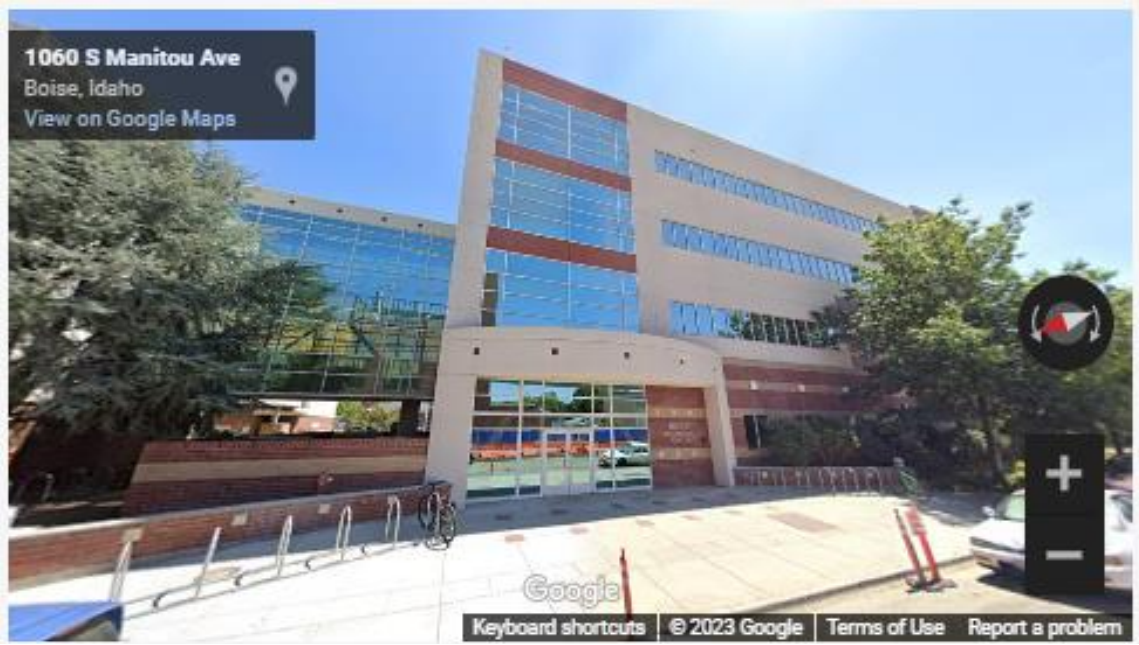
- 14675 Dallas Pkwy Suite 300, Dallas, TX 75254
- Analog Devices is a multinational semiconductor company specializing in data conversion, signal processing and power management technology.
- Dallas location serves as corporate office.
- 197,000 SF multi-tenant building. Analog occupies one suite.

Semiconductor **Office** Properties (3 of 3)

Business services, sales, engineering, and some R&D activities occur in office buildings and settings familiar to Dublin, OH.

Micron Technology, Inc., Boise, ID

- 1060 S Manitou Ave, Boise, ID 83706
- Micron Technology is a semiconductor manufacturing company.
- Boise location serves as an engineering center comprised of offices and classrooms.
- 18,000 SF space located at Boise State University campus.



Semiconductor **Lab** Properties

Business activities primarily focused on product design and testing.

Lawrence Semiconductor Labs, Tempe, AZ

- 2300 W Huntington Dr, Tempe, AZ 85282
- Lawrence Semiconductor Labs specializes in epitaxial manufacturing, characterization, research and development services.
- Tempe location serves as a testing laboratory.
- 15,000 SF building.

Qrona Technologies, Eden Prairie, MN

- 7622 Executive Dr, Eden Prairie, MN 55344
- Qrona Technologies provides expertise and equipment for thin-film disposition and characterization to reduce R&D time and cost.
- Eden Prairie location serves as a research and product development laboratory.
- 112,332 SF flex building. Qrona Technologies occupies one suite.

Semiconductor **Flex Industrial** Properties (1 of 2)

Many office functions, R&D, and light industrial activities occur in Flex Industrial buildings with a variety of multi-use features.

Valin Corporation, Chandler, AZ

- 2900 S Gilbert Rd Suite 2, Chandler, AZ 85286
- Valin Corporation is a leading technical solutions provider.
- Chandler location serves operations and logistics staffing, warehousing, electrical assembly, gauge certification and distribution.
- 32,000 SF building.

Micron Semiconductor Products Inc., Round Rock, TX

- 1 Chisholm Trail Rd # 2200, Round Rock, TX 78681
- Micron Semiconductor Products manufactures and distributes electronic components.
- Round Rock location serves as a corporate office and parts supplier
- 80,504 SF multi-tenant building. They lease approximately 35,000 SF.

Semiconductor **Flex Industrial** Properties (2 of 2)

Many office functions, R&D, and light industrial activities occur in Flex Industrial buildings with a variety of multi-use features.

ASML Holding, Hillsboro, OR

- 7451 NE Evergreen Pkwy, Hillsboro, OR 97124
- ASML is the largest supplier for the semiconductor industry.
- Hillsboro location is the largest US Customer Support Site, focusing on office, maintenance, installations, and upgrades.
- 25,303 SF building.

netMercury, Dallas, TX

- 13438 Floyd Cir, Dallas, TX 75243
- netMercury is a semiconductor supplier.
- Dallas location serves as a critical parts, materials, equipment, repairs and value-added service supplier.
- 6,676 SF building.

Semiconductor **Light Industrial** Properties (1 of 2)

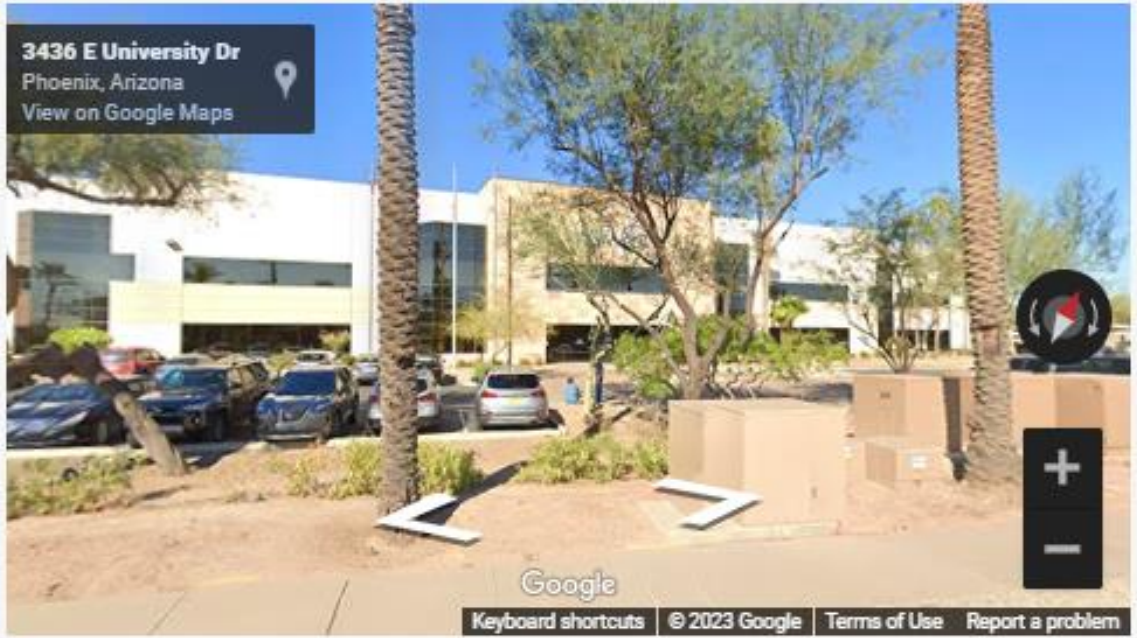
Activities including R&D, light manufacturing, and distribution in highly-accessible industrial park settings.

Banner Industries, Hillsboro, OR

- 7205 NE Evergreen Pkwy Ste 900, Hillsboro, OR 97124
- Banner Industries is a stocking distribution service.
- Hillsboro location is a center for distribution service of high purity and industrial flow components.
- 75,000 SF multi-tenant building. Banner occupies a portion of this space.

ASM America, Phoenix, AZ

- 3440 E University Dr, Phoenix, AZ 85034
- ASM specializes in design, manufacturing, sales and service of semiconductor wafer processing equipment.
- Phoenix location serves as the ASM America headquarters.
- 130,282 SF building.

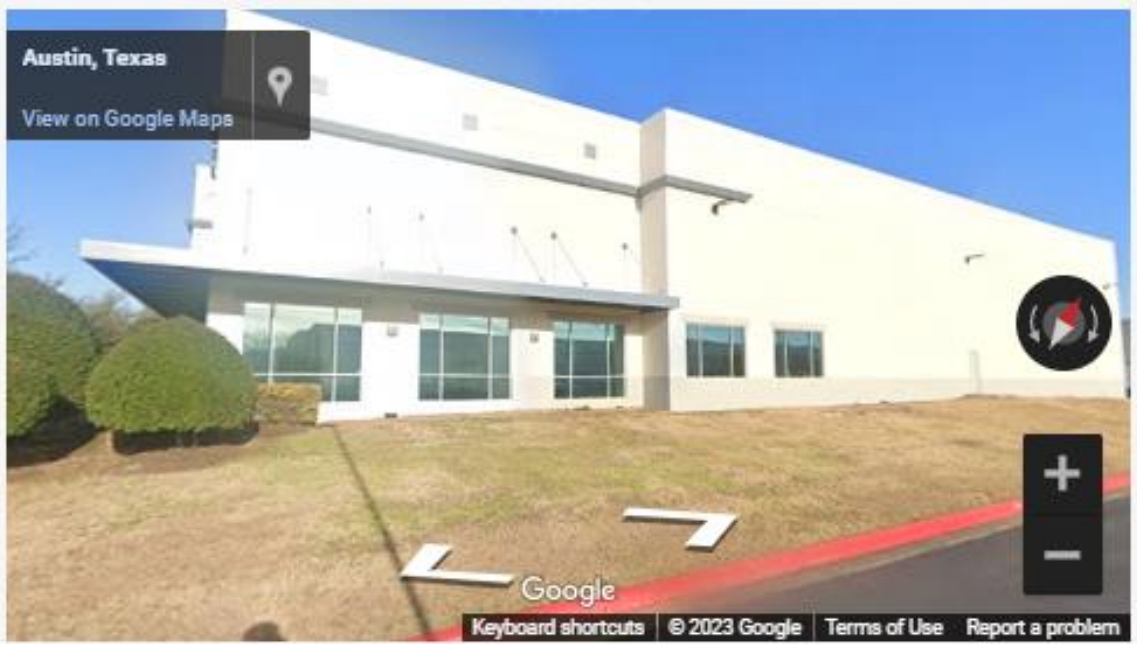


Semiconductor **Light Industrial** Properties (2 of 2)

Activities including R&D, light manufacturing, and distribution in highly-accessible industrial park settings.

Omni Logistics, Austin, TX

- 4801 Freidrich Ln Bldg 3 Suite 250, Austin, TX 78744
- Omni Logistics is a global logistics company.
- Austin location serves as warehousing and distribution.
- 205,176 SF multi-tenant building. Omni Logistics occupies a warehouse suite.



Semiconductor **Medium & Heavy Industrial** Properties (1 of 2)

Heavier manufacturing uses with large utility, infrastructure, and transportation needs that require distinct land use planning considerations.

Intel, Hillsboro OR

- 1798 NE Shute Rd, Hillsboro, OR
- Intel (Hawthorn Farm Campus) is home to 3 semiconductor fabs.
- Heavy manufacturing is located across the street from quality residential housing (NE Shute Road) and shielded by berms and landscaping.

Edwards Vacuum, Chandler, AZ

- 2350 E Germann Rd #30, Chandler, AZ 85286
- Edwards is a leading semiconductor supplier of vacuum equipment.
- Chandler location serves manufacturing, warehousing, factory areas and training.
- 200,000 SF building.

Semiconductor **Medium & Heavy Industrial** Properties (2 of 2)

Heavier manufacturing uses with large utility, infrastructure, and transportation needs that require distinct land use planning considerations.

LTD Material, Austin, TX

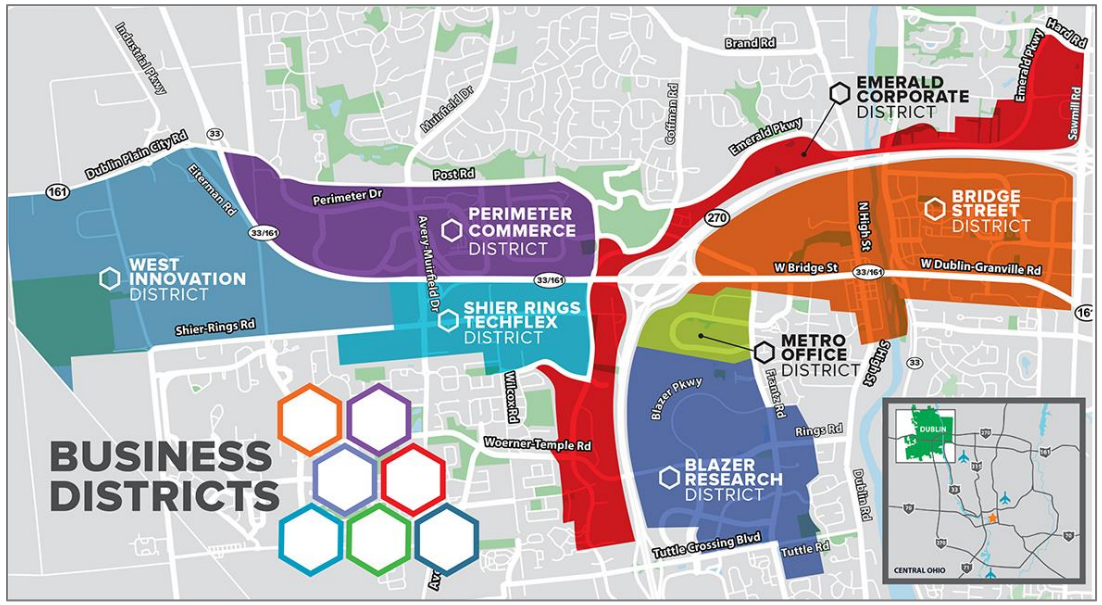
- 8115 Altoga Dr A, Austin, TX 78724
- LTD Material provides products and services to the semiconductor industry.
- Austin location is a machine shop.
- 38,000 SF space.

5. Dublin Planning District Assessments

Planning District Assessments for Semiconductor Investment

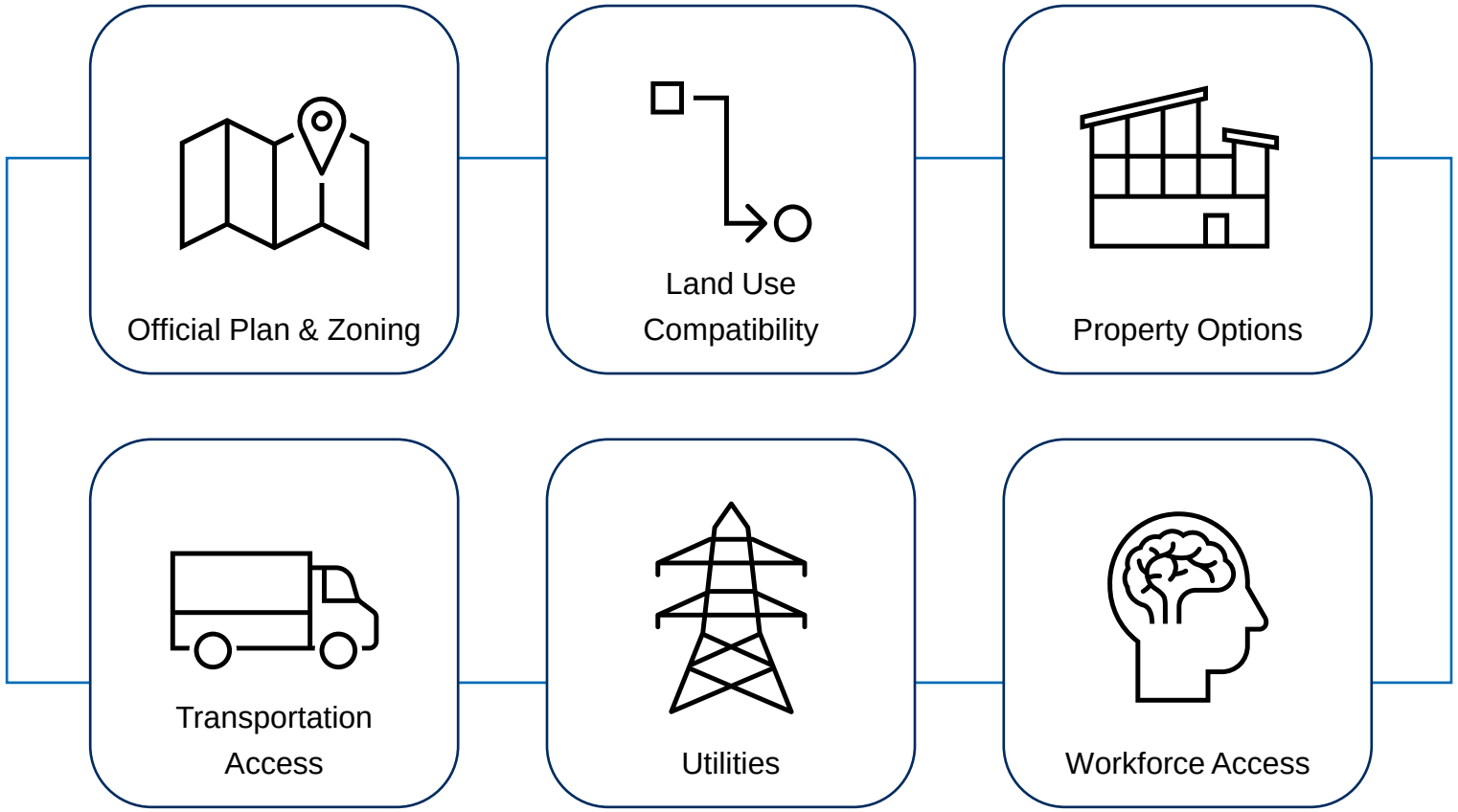
The Newmark team participated in a brief tour of each of Dublin's business districts to become familiar with the general development characteristics of each part of the city. The team made preliminary assessments of available sites and infrastructure from a site selector's perspective. The team conducted desktop research and collaborated with Dublin Economic Development and Planning professionals to determine each district's suitability to support the development of various semiconductor asset types.

Suitability Level	Indicator	Notes
Low	●	Significant challenges for this property type. Not recommended for marketing efforts. Challenges may include infrastructure, available space, zoning, public opposition, etc.
Medium	●●	Area provides some suitability for semiconductor types but may have some disadvantages or challenges.
High	●●●	Area satisfies many criteria required for semiconductor supply chain investment activity. Recommended as an area to market to semiconductor suppliers.



Planning District Assessment Criteria for Semiconductor Investment

The Newmark team leveraged their expertise as site selectors and economic developers to review each of Dublin's planning districts. The team considered the following criteria in assessing suitability for various semiconductor asset types:



Planning District Assessments for Semiconductor Investment | Overall Summary

The sums of Newmark's suitability scores are indicative of development potential of various assets types in Dublin. Office uses are clearly favored, and Heavy Industrial uses have constrained prospects. However, Lab, Flex, and Light Industrial uses have more investment potential than currently projected by city staff.

Area	Office	Lab	Flex	Light Industrial	Heavy Industrial
Blazer Research District	●●●	●●●	●●	●	DQ
Bridge Street District	●●●	●	●	DQ	DQ
Emerald Corporate District	●●●	●●●	●●	●	DQ
Metro Office District	●●	●	●	●	DQ
Perimeter Commerce District	●●●	●●	●	●	DQ
Shier Rings Techflex District	●●●	●●●	●●●	●●	DQ
West Innovation District	●●●	●●●	●●●	●●	DQ
Potential Annexation Lands	●●	●●●	●●●	●●●	●●●
Sum of Suitability Scores:	**22**	**19**	**16**	**11**	**3**

DQ = Disqualified. Land use not suitable for district development based on discussions with City of Dublin Planning and Economic Development.

City of Dublin

Assessment: West Innovation District

Strengths:

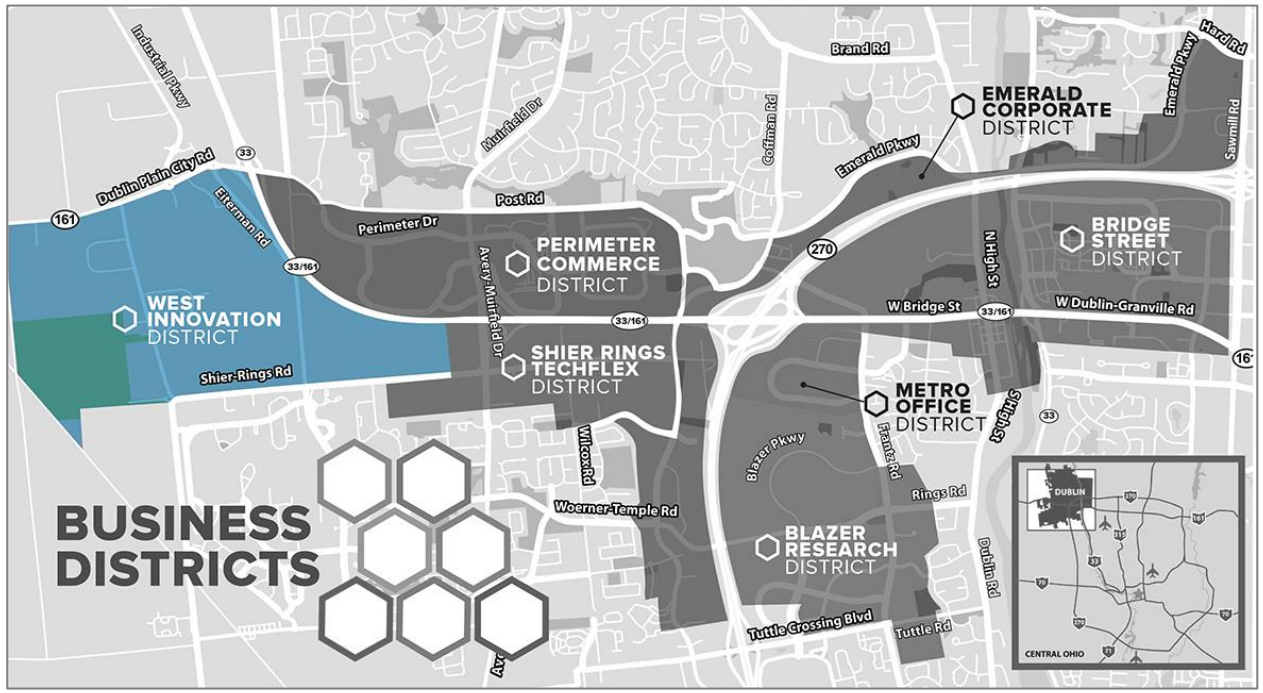
- District remains mostly undeveloped. Potential for larger site greenfield projects.
- Current zoning permits a variety of uses including office, lab, flex, and light industrial.
- Potential for annexation of extraterritorial lands west of Houchard Road.
- Direct access to CN rail.
- Access to high voltage transmission lines and substation.
- Excellent access to Hwy 33.
- Industrial building under construction indicates demand for flex/industrial space.
- Expedited development review process.

Challenges:

- Potential local opposition to industrial use, especially if near to Darree Fields or residential uses.
- Water/Wastewater capacity unknown, with some reports of low water pressure.
- Roads & utilities not fully developed, especially in areas most suited to industrial.
- Pockets of residential use nearby, with conflicting interests in future land uses.

Opportunities/Recommendations:

- The WID has the greatest potential among all districts for industrial use. The area should be marketed toward semiconductor suppliers that require high power or water use (contingent upon capacity study findings).
- The City should work with the City of Columbus to proactively understand water/wastewater load capacities and thresholds for potential projects.
- Develop development capacity studies on 2-4 sites.



District Assessment

Office	Lab	Flex	Light Industrial	Heavy Industrial
●●●	●●●	●●●	●●	DQ

Assessment: Perimeter Commerce District

Strengths:

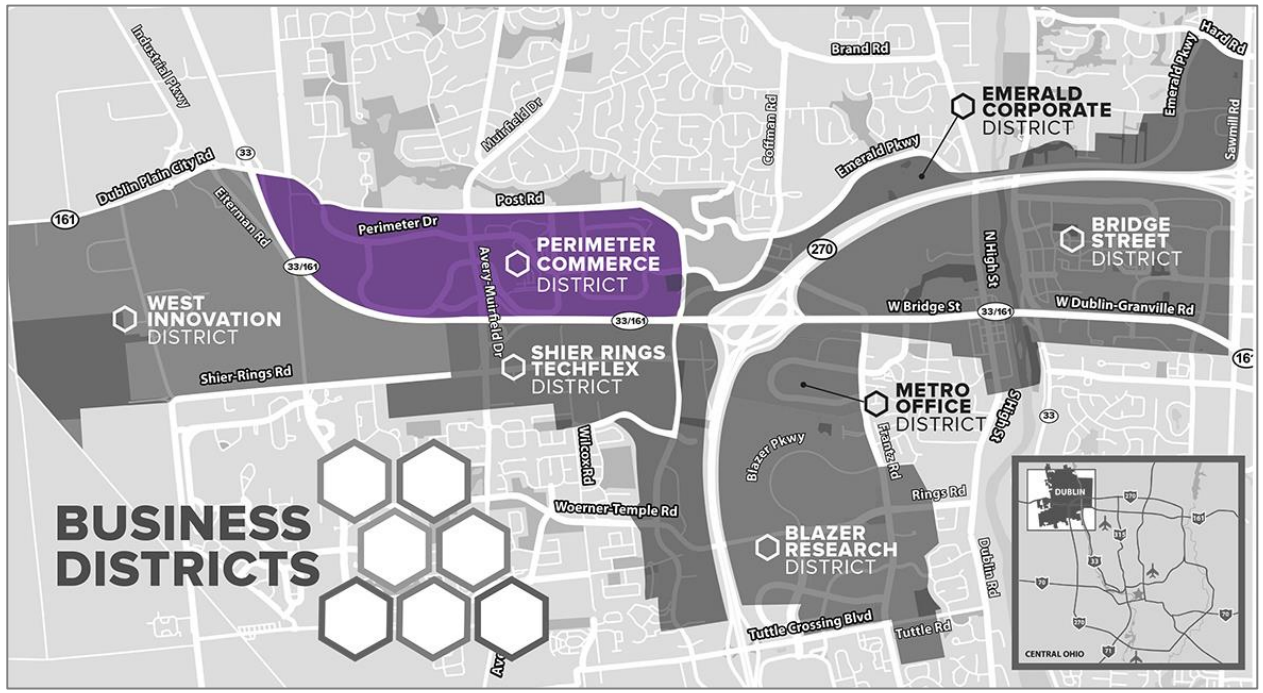
- Concentration of hospital/medical uses.
- Presence of a small number of larger undeveloped/vacant office properties.
- Good access to consumer services.
- Excellent highway access.
- Utility system built out to accommodate community plan.
- Most of the district buffered from residential uses.

Challenges:

- Consolidated land ownership (few players with large parcels).
- Planned Unit Development District. Development requires compliance with previously approved development text requirements as part of the zoning review process.
- Mostly built out.

Opportunities/Recommendations:

- District has potential for new large-scale office or lab development.
- City should work with the City of Columbus to proactively understand water/wastewater load capacities and thresholds for project types.
- Identify electricity and gas utility capacity constraints for industrial uses.
- Identify developable parcels and conduct development capacity studies for Lab and Office options.



District Assessment

Office	Lab	Flex	Light Industrial	Heavy Industrial
●●●	●●	●	●	**DQ**

Assessment: Shier Rings Techflex District

Strengths:

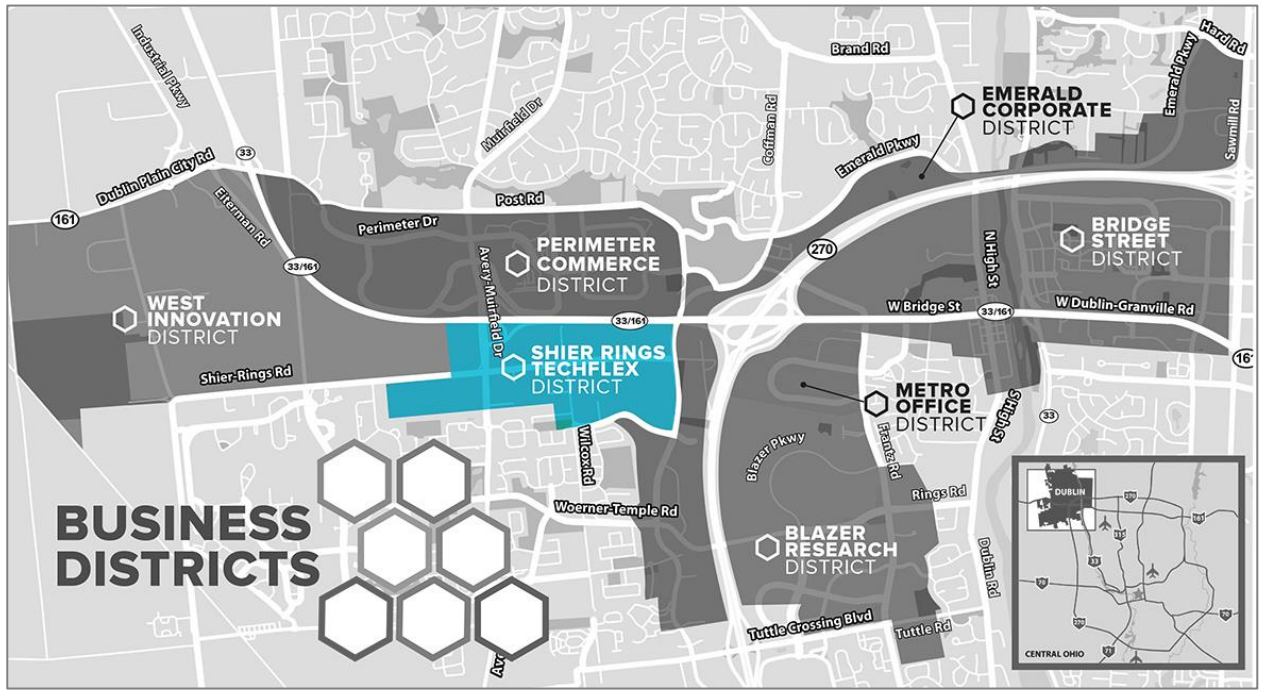
- Dublin's original industrial corridor, presence of existing small industrial/flex spaces could be complimented by additional industrial development.
- Standard zoning throughout most of the district (Technology Flex) allows for by-right development, supports multiple property uses, including lab and clean manufacturing.
- Excellent access to Hwy 33 and interstate highway system.
- Access to some consumer services.

Challenges:

- Mostly built-out, difficult to find vacant parcels.
- Most developable parcels are smaller sized.
- Heavily wooded area with high tree replacement fees.
- Height and setback ratios limit scale and intensity of new development.

Opportunities/Recommendations:

- Identify utility capacity constraints for industrial uses.
- Identify developable parcels and conduct development capacity studies for Lab and Flex Industrial project options.



District Assessment

Office	Lab	Flex	Light Industrial	Heavy Industrial
●●●	●●●	●●●	●●	DQ

City of Dublin

Assessment: Emerald Corporate District

Strengths:

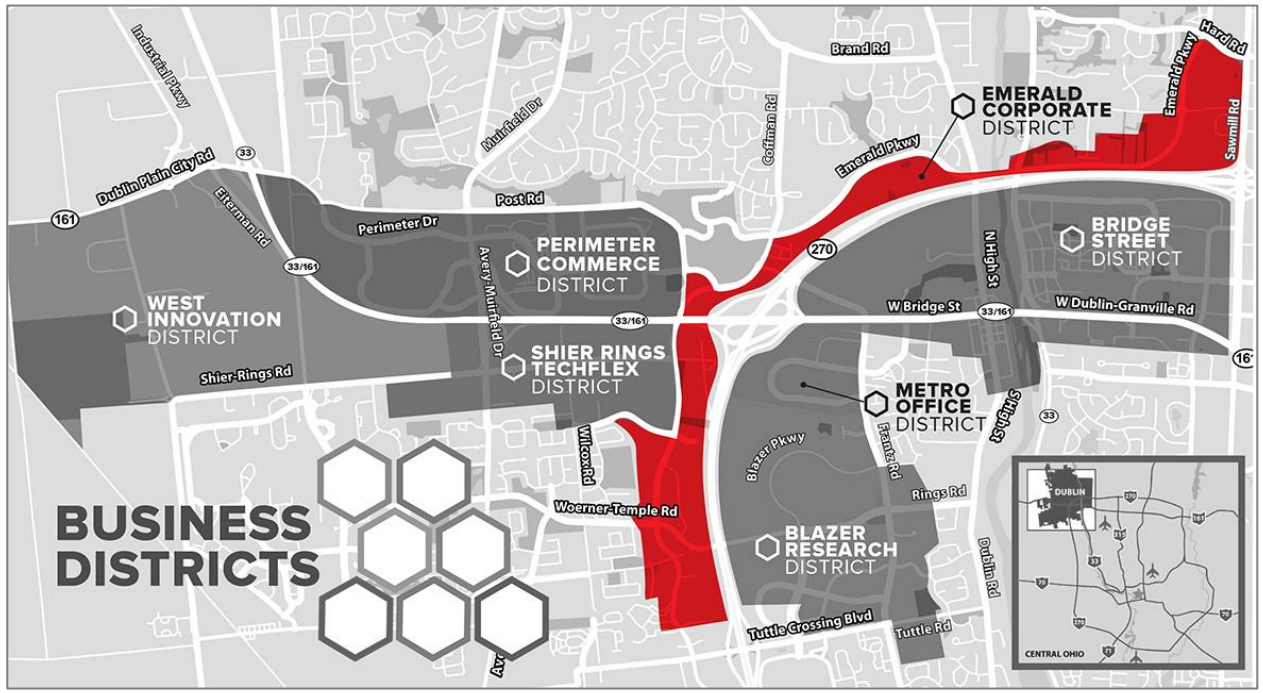
- Excellent access to U.S. 33 and Interstate 270.
- Historic presence of high visibility office space, potential draw for companies wanting to be seen.

Challenges:

- Mostly built-out, little vacant land.
- Mostly Planned Unit Development District. Development requires compliance with previously approved development text requirements as part of the zoning review process.

Opportunities/Recommendations:

- Consider opportunities to accommodate Lab or Flex uses that are co-located with corporate headquarters functions.
- Refresh existing capacity studies for selected sites with more diverse use cases to accommodate semiconductor sector needs.
- Identify any potential utility capacity challenges for flex or light industrial uses.



District Assessment

Office	Lab	Flex	Light Industrial	Heavy Industrial
●●●	●●●	●●	●	DQ

Assessment: Blazer Research District

Strengths:

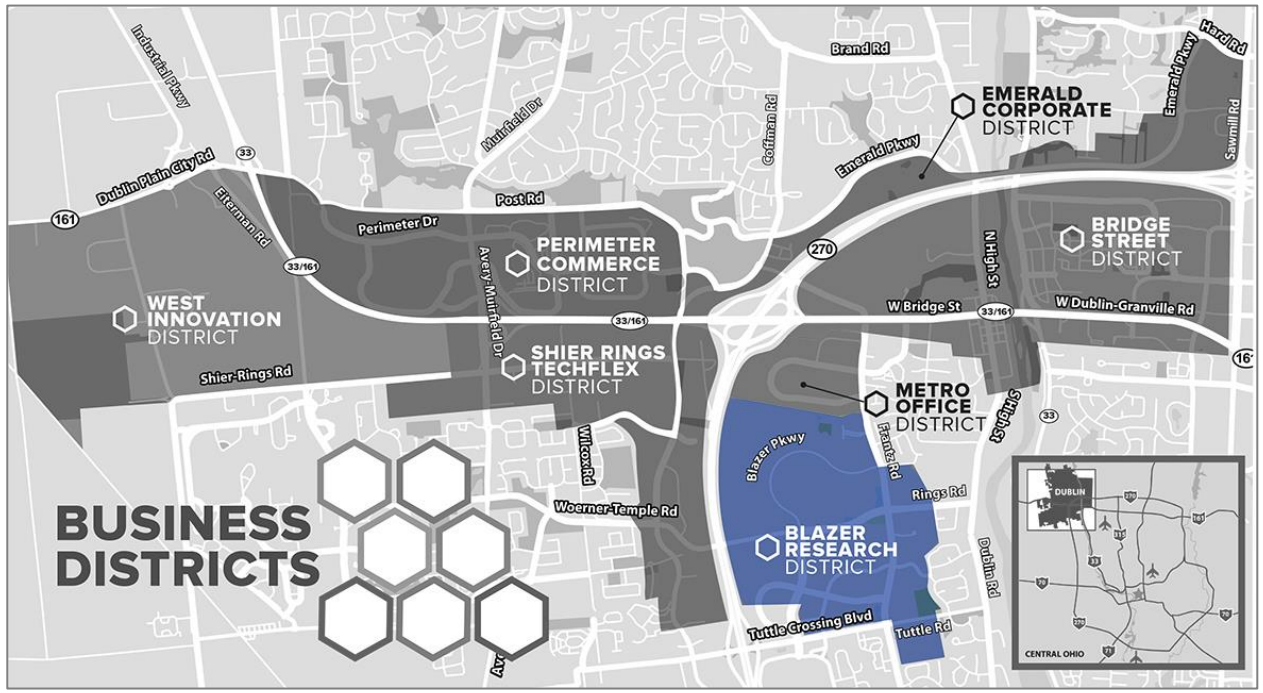
- District contains larger properties buffered from residential uses.
- Current zoning allows for by-right development of Office, Laboratory, and R&D, which is unique in the city.
- Vacant sites allow for customized development.

Challenges:

- Current zoning may limit larger projects with more industrial functions.
- Limited access to consumer amenities. Future studies underway to improve connectivity and broaden land use options.
- Dated office space and site planning not designed for walkability.

Opportunities/Recommendations:

- Identify utility capacity constraints for flex, lab, and light industrial development.
- Update current capacity studies to include lab and flex uses.



District Assessment

Office	Lab	Flex	Light Industrial	Heavy Industrial
●●●	●●●	●●	●	DQ

Assessment: Metro Office District

Strengths:

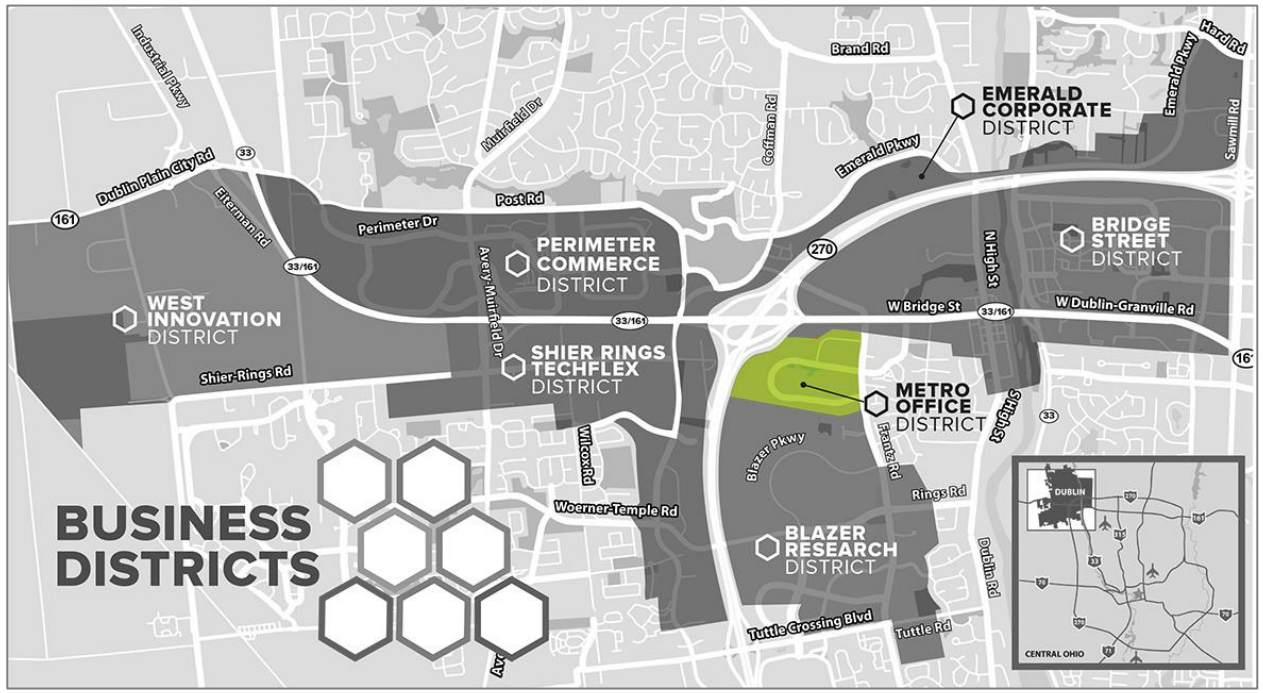
- Available office space.

Challenges:

- Fully built-out based on legacy “campus” site planning.
- Planned Unit Development District. Development requires compliance with previously approved development text requirements as part of the zoning review process.
- Limited access to consumer services. Future studies underway to broaden land use options within a larger redevelopment framework for the area.
- Dated office designs not designed for walkability or access to services.
- Local Business Association must approve changes to common areas.

Opportunities/Recommendations:

- Current abundance of vacancies in the district (“as-is, where-is”) may provide immediate leasing opportunities for certain semiconductor supply chain companies seeking affordable office space.
- The City adopted an updated vision for the area that identifies what a redeveloped district could look like. The vision includes implementation steps that the City should continue working toward. A redeveloped district could attract semiconductor office users looking for Class A office space.



District Assessment

Office	Lab	Flex	Light Industrial	Heavy Industrial
●●	●	●	●	**DQ**

Assessment: Bridge Street District

Strengths:

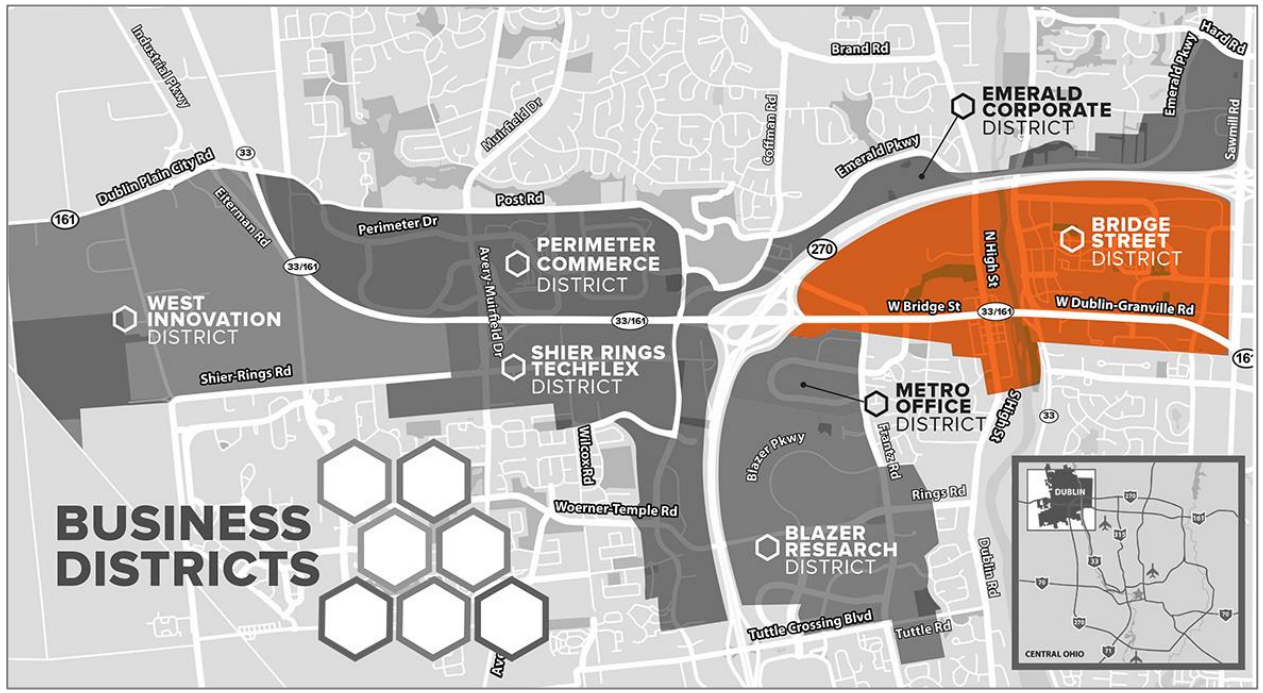
- Vibrant quality of life in new Bridge Street neighborhood area.
- Walkability with commercial and social amenities.
- Attractiveness to younger workforce.
- Good access to Interstate 270.

Challenges:

- Current zoning may limit larger development.
- Proximity to residential uses poses challenges for non-office uses.
- Development must meet existing form-based code.

Opportunities/Recommendations:

- District has strong potential to attract smaller office users doing business with Intel and other companies within the semiconductor supply chain. This includes existing businesses, as well as startups.



District Assessment

Office	Lab	Flex	Light Industrial	Heavy Industrial
●●●	●	●	**DQ**	**DQ**

Assessment: Potential Annexation Lands

The City has expressed interest in potentially annexing property west of its current corporate boundary. These lands are mostly unserviced, undeveloped, and used for agriculture.

Strengths:

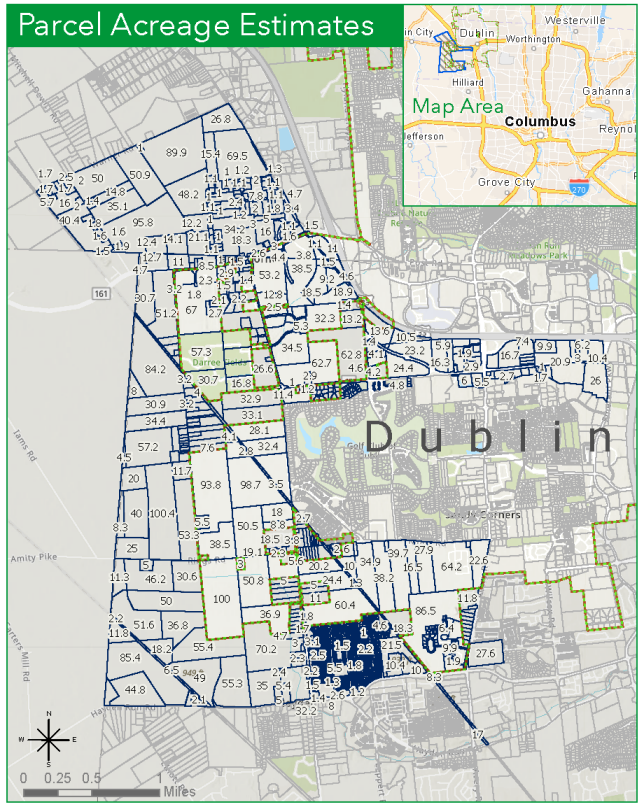
- Undeveloped land allows for strategic, long-range planning and targeted development objectives.
- Excellent access to high-voltage electricity and freight rail.
- Limited constraints to utility rights-of-way and road planning corridors.

Challenges:

- Lands not under City control. Multiple owners and jurisdictions.
- Neither roads nor utilities planned and at scale to support large development.
- Requires detailed analysis within the City's Community Plan process.
- Residential and other uses encroaching on unique industrial infrastructure.

Opportunities/Recommendations:

- Pause further residential development near rail and electricity assets.
- Examine Dublin's rare opportunity for large site assembly for "Heavy Industrial" development that is clean, high-tech, in the semiconductor or other targeted sectors, and needing existing major power and rail assets.
- Maintain strong planning principles while diversifying Dublin's economy with large site options complementary to the adjacent WID.



Parcel Boundary from Union County, Franklin County.
Acreages are approximate, for details reference the respective County Auditor.

District Assessment

Office	Lab	Flex	Light Industrial	Heavy Industrial
●●	●●●	●●●	●●●	●●●

City of Dublin

6. Semiconductor Sector Attraction Practices

Semiconductor Attraction Best Practices

The Newmark team identified a set of leading communities in other metropolitan areas that have had success attracting semiconductor industry businesses. The team discussed attraction efforts with these communities to determine key “lessons learned” from their semiconductor attraction strategies.

	Dublin, OH	Tualatin, OR	Clay, NY	McKinney, TX	Allen, TX	Peoria, AZ
						
Community Context	Client	Mid-sized urban fringe community & recognized semiconductor employment center.	Syracuse's most populous suburb, and one of Money Magazine’s “100 best places to live in the country.”	Robust community with “name brand” employers and large industrial base. Diversifying toward office.	Prosperous suburban community focused on data centers, advanced manufacturing, and corporate headquarters.	Suburban community marketing to small and large semiconductor businesses.
Population (2020 Census)	49,328	27,942	60,527	195,308	104,627	190,985
Total Employment (Q3 2022)	47,719	29,171	41,340	63,816	38,137	47,842
Average Wage Across all Industries	$55,872	$83,831	$38,948	$76,683	$78,023	$66,384

Sources: Data – JobsEQ, U.S. Census Bureau. Images – City of Dublin, City of Tualatin, City of Clay, City of McKinney, City of Allen, TX CVB, Visit Peoria.

Semiconductor Attraction: Tualatin, OR

Tualatin is a growing community located 12 miles southwest of downtown Portland and 22 miles southeast of Intel's Hillsboro fab. The community is considered a major employment hub in the semiconductor industry and is home to major semiconductor suppliers like Lam Research and Fujimi Corporation, as well as smaller contract manufacturers including JAE Connectors and Calmax Technology. These companies have co-located near one another at the city's western edge near State Route 99W, which provides access to other thoroughfares leading to the Intel campus.

The community is known for its high quality of life with good housing stock, access to the Tualatin River, and presence of high-end boutique shopping.

Source: Greater Portland, Inc.

Value Proposition

- Proximity to Hillsboro fab.
- Strong housing values and options for all income levels.
- Good transportation access with rail service and highway connectivity to major interstates.
- Widely respected school district.
- Presence of industrial-focused Tax Increment Financing district in western portion of the city has helped fund infrastructure to support semiconductor businesses.

Key Takeaways

- Lead with emphasis on quality of life and low tax base.
- Annexation of county lands to the west of the city in 1980s enabled development of semiconductor-focused sites.
- Build on success with anchor tenants like Lam Research, which has existed in the city since 1990s and has grown significantly.

Area of Supply Chain Focus

- Semiconductor Manufacturing Equipment
- Research & Development
- Precision Contract Manufacturing and Prototyping

Semiconductor Attraction: Clay, NY

Clay is the most populous suburban community in Syracuse, New York, with a town population over 60,000. Employment opportunities include small, family-owned businesses, national retail chains, and a wide variety of service-sector and manufacturing operations. The town is adjacent to Syracuse, NY (population 149,000 and ranked by Forbes as the 4th best place in the United States to raise a family) and situated at the north end of Onondaga County, which has 470,000 people within its boundaries.

The region has a long history of company attraction and local business growth in the inter-related fields of software, manufacturing, and services related to electronics, automotive, defensive, semiconductors, and more.

Value Proposition

- Emphasis on local land use and development planning that is fast, responsive to investor needs.
- County funds dedicated to engineering studies to anticipate project needs and allow for scalable development in multiple phases.
- Easy commuting access to high-skill workforce and higher education resources in Syracuse metro.
- Multi-faceted focus on skills training & upskilling.
- Proximity and access to high-voltage power, rail, and development lands.

Key Takeaways

- Long-term focus on quality of life in Upstate New York and historically skilled workforce in advanced manufacturing and technology.
- Strategic local economic development focus on semiconductor supply chain as an opportunity for diverse investment opportunities.
- Direct investments by County in land bank and infrastructure planning to entice future projects, while maintaining strong focus on “home rule” local planning.

Area of Supply Chain Focus

- New 2022 Micron announcement to invest up to $100 billion over 20+ years to construct 4 fabs, creating 9,000 direct Micron jobs and indirect employment exceeding 50,000 jobs.
- Prior to Micron, Onondaga County spent 6 years planning and investing in industrial lands to land significant manufacturing and spin-off office jobs.

Semiconductor Attraction: McKinney, TX

McKinney is a growing northeastern suburb of Dallas-Fort Worth with a population of nearly 200,000 residents. McKinney is a 30-minute drive south of Sherman, TX, which is home to a new $30 billion Texas Instruments fab and a $5 billion GlobiTech fab.

McKinney is transitioning from a quiet bedroom community into a major employment center in Dallas. The community is developing an industrial base along with lab, flex, and office, some of which is focused on Raytheon's local advanced manufacturing facility. The community has been approached by semiconductor suppliers looking to provide goods and services to Samsung in Austin and Texas Instruments in Sherman.

Source: Discover Collin County

Value Proposition

- Strong stock of executive housing.
- Proximity to fabs in Sherman and Austin.
- Available R&D and engineering workforce.
- City has a dedicated Project Expeditor position that focuses on guiding large projects through from introduction to occupancy.
- Strong partnerships with University of Texas Dallas, which was built with the intent of developing an engineering talent pipeline for Texas Instruments. City helps form relationships between businesses and university talent.

Key Takeaways

- Lead with emphasis on workforce and local talent pool.
- Partnerships with higher education are critical. City acts as a relationship builder, especially with relocating businesses.
- Dedicated "expeditor" staff make McKinney competitive among peers.

Area of Supply Chain Focus

- Research and Development, Engineering
- Lab (wet, dry, clean)
- 15,000-30,000 SF tenants

Semiconductor Attraction: Allen, TX

Allen is a northeastern suburb of Dallas-Fort Worth with a population of 105,000. The city is located 12 miles north of Richardson, which is home to two Texas Instruments fabs. The first fab began operations in 2009. The second fab began production in late 2022. Allen is also 40 miles south of Sherman, which will be home to new fabs from Texas Instruments and GlobiTech.

The City's target industries include technology, data centers, and semiconductor suppliers. The community has focused on marketing its Class A industrial and office space to major suppliers. The Allen Economic Development Corporation is currently working to find space for Littelfuse, a global manufacturing company that manufactures power protection solutions for circuit boards.

Source: Allen TX CVB

Value Proposition

- Available Class A flex, industrial, and office space.
- Strong technically-focused local community college with electrical engineering program (Collin College).
- Presence of mixed-use industrial space allows for office and manufacturing in the same building. This is especially attractive to global semiconductor suppliers, who typically look for strong connections between management and production workers.

Key Takeaways

- Strong relationship with regional EDC.
- Meets regularly with existing businesses to ensure retention.
- Attends semiconductor trade shows, including CES, SEMICON, ISS.
- Uses proximity to fab as key selling point for attraction.

Area of Supply Chain Focus

- Research and Development.
- Assembly, Testing, & Packaging.
- Industrial Process Chemicals.

Semiconductor Attraction: Peoria, AZ

Peoria is a western suburb of Phoenix with a population of 191,000 residents. The community is located within a 10-minute drive of Taiwan Semiconductor's newly-announced Phoenix fab, which will begin production in 2024. Peoria is also located 40 minutes northwest of Intel's Chandler fab.

The City's economic development team has aggressively marketed Peoria to Intel and TSMC suppliers, leading with the community's quality of life, available talent, workforce pipeline, and proximity to fabs.

Source: Peoria Arizona Economic Development.

Value Proposition

- Strong quality of life, access to multiple amenities including lakes, hiking, spring training baseball.
- Good supply of modern mixed-use office space that many technology companies are seeking.
- Several large developable sites with example site plans prepared.
- Local community college offers two-week semiconductor manufacturing certificate.
- Short development review timeline. Flexibility in zoning.

Key Takeaways

- Proactive marketing has brought semiconductor wins to the community. Economic Development team maintains prospect list and conducts regular in-person outreach in target markets.
- Economic Development meets regularly with Planning and Engineering to discuss prospect pipeline, ensure adequate utility infrastructure.
- Strong relationships with local brokers is critical. Economic Development works with brokers to show them what semiconductor prospects are looking for.
- "Reverse timeline" approach – city departments work together to determine when review and feedback must be completed based on needs of prospect.

Example Project

- In 2023, landed California-based HyRel Technologies expansion project. HyRel provides semiconductor modification services.
- HyRel chose Peoria because of the city's proximity to TSMC and Intel.
- 20,000 SF, $15 million project, 50 jobs.
- Occupying one suite in multi-tenant flex building.

7. Promoting Dublin's Value Proposition

Dublin Value Proposition: Strengths (1 of 2)

In addition to desktop research, the Newmark team conducted a visit to Dublin to assess the community's strengths, challenges, and opportunities. During the visit, the team spoke with key City and regional stakeholders. The team identified the following strengths for Dublin.

Strengths ➔ Lead with These

	Strength	Newmark Comments
1.	Strong quality of life	Dublin is a carefully curated community. The City's efforts in this regard have made it a very desirable place to live. The local school district is well regarded, home values are strong, and residents enjoy the community's public and private amenities.
2.	Ethnic & linguistic diversity	The community's ethnic diversity is a strong selling point in attracting international semiconductor suppliers that could expand to the region.
3.	Dublink Fiber Infrastructure	Dublink Fiber is unique in the Columbus region, providing reliable and affordable high speed data transfer. Many semiconductor industry companies depend on high throughput internet, making Dublink a selling point in attraction efforts.
4.	Vacant land for annexation	Dublin's unique location on the northwestern edge of the Columbus MSA may allow the City to annex vacant land to grow. Sites to the west of the city are especially promising due to their proximity to freight rail and high voltage electricity. These lands are also separated from residential uses.
5.	Vacant land within city boundaries	The City has some vacant land within its boundaries – of public and private ownership – that could accommodate custom-built semiconductor supply chain projects of various types.

Dublin Value Proposition: Strengths (2 of 2)

	Strength	Newmark Comments
6.	Proximity to Honda, Beta District, Smart Mobility Corridor, and Intel	The community is centrally located to many “high-tech” corporate investments. Proximity to these assets could be attractive to semiconductor and other electronics suppliers that will service Intel and Honda, or businesses that will participate in the Smart Mobility Corridor and Beta District.
7.	Available and successful mixed-use development	The Bridge Street District serves as a major quality of life asset for young talent and provides desirable “new format” Class A office space.
8.	Access to high-voltage electricity and rail	West Innovation District and potential future annexation lands provide a rare mix of strong electrical infrastructure and access to rail that is critical to some industrial users.
9.	Expedited development review process for WID	Expedited planning and development review processes could help attract semiconductor suppliers who face tight timelines to begin operations in the region and meet demand from the New Albany fab.
10.	Strong local and regional education assets	The region has several strong education and training assets that will support workforce needs of semiconductor businesses. Dublin can leverage their existing institutional relationships and amplify messaging about the benefits of collaborating with these educational institutions while the City works with semiconductor project leads.

Dublin Value Proposition: Challenges/Opportunities (1 of 2)

In addition to desktop research, the Newmark team conducted a visit to Dublin to assess the community's strengths, challenges, and opportunities. During the visit, the team spoke with key City and regional stakeholders. The team identified the following challenges and opportunities for Dublin.

Challenges/Opportunities ➔ Continue to Address

	Challenge / Opportunity	Newmark Comments
1.	Rigorous planning & development process is thorough but also lengthy and unpredictable	Semiconductor suppliers face tight timelines to establish operations in the region given Intel's aggressive 2025 production timeline. Dublin development projects are known for delays and last-minute planning or zoning issues. This is a major impediment to development in the community.
2.	Community Plan not current	An out-of-date Community Plan does not provide sufficient guidance to businesses or developers on the City's vision for future development. Developers and businesses face risks that an updated plan may recommend zoning changes or envision different land use strategies. The City is in the process of updating its plan.
3.	Property capacity studies unavailable or not utilized	Dublin has developed property capacity studies, but these studies are not readily available, nor are they actively used to encourage development. Studies are unavailable for many vacant properties. Existing studies focus heavily on retail and office uses, leaving no guidance for lab or flex/light industrial uses.
4.	Lack of available industrial zoned property	The city has a very small stock of existing industrial property, along with low industrial vacancy rates and only one industrial project underway, severely limiting the city's potential to attract flex, lab, or industrial users in the highly valuable and fast-growing semiconductor industry and other high-value sectors like automotive.

Dublin Value Proposition: Challenges/Opportunities (2 of 2)

	Challenge / Opportunity	Newmark Comments
5.	Political/social opposition to industrial development	Public opposition has inhibited new industrial development, perhaps based on limited conceptions of industrial uses that may fit well within Dublin's urban fabric and create high-skill, high-wage employment.
6.	Stagnant office market with barriers to redevelopment in some areas	High vacancies in office market. Much of the city's office stock is aging. Some areas (Metro Office, Blazer Research) have significant ownership/political/procedural barriers that limit potential for redevelopment.
7.	Limited availability of manufacturing-focused high school programs within City boundaries.	Dublin City Schools does not directly offer manufacturing-focused career education, though this is supplemented by program offerings through Tolles. Columbus State Community College offers certificates and associate degrees in manufacturing, engineering, and related disciplines to support Columbus area students interested in entering manufacturing sectors, with a semiconductor program announced and in development.
8.	Presence of other competitive "development ready" communities throughout the region	The Columbus region is home to several competitive communities that have experience attracting lab, flex, and industrial users. These communities have property that will become available and ready faster and with greater certainty for new developments than is possible in Dublin.
9.	Columbus-controlled water and sanity sewer utility requires dual agreement	Water and wastewater utilities not being under Dublin control adds uncertainty in the site selection process. This may deter businesses that have large water or wastewater needs from locating in Dublin.

8. Recommendations

Recommendations

The Newmark team developed a set of recommendations for Dublin to consider as it pursues the semiconductor supply chain. The opportunity to attract suppliers is immediate and will accelerate for the next 12-24 months.

These recommendations are based on multiple considerations, including:

- The timelines that suppliers face in opening facilities in Central Ohio
- Newmark's experience working with semiconductor businesses across the country
- Our Dublin community tour and assessment
- Analysis of clustering patterns of the semiconductor supply chain across the country
- Conversations with communities that have successfully attracted semiconductor suppliers.

The **17 recommendations** span across **5 themes**, with suggested **High**, **Medium**, and **Low** priorities.

Development Planning
Recommendations regarding land use in Dublin. Specific actions to prepare community areas for semiconductor businesses.

Marketing
Recommendations for identifying, communicating with, and responding to prospects and site selectors.

Site Readiness
Recommendations for preparing priority sites for semiconductor businesses.

Workforce
Recommendations for supporting workforce development in the semiconductor space.

Organizational
Recommendations to address internal City structure to support semiconductor industry development.

Recommendations

Num.	Category	Recommendation	Priority	Notes
1.	Development Planning	Create an inventory of all vacant lands and City-owned parcels that could potentially be (re)developed for semiconductor sector and other high-priority uses.	High	The City does not have a comprehensive inventory of private and public land that could be (re)developed for investment attraction purposes. The inventory should identify all privately-owned parcels (not just broker listed options). Site capacity studies should be prepared for all high-priority options, not just office uses. Private property owners should be encouraged (possibly through incentives) to undertake required due diligence studies.
2.	Development Planning	Develop an annexation and infrastructure service strategy for lands west of the city as part of the current Community Plan update.	High	For annexation to move forward, the City, at a minimum, should develop a plan that identifies which parcels could be annexed in the future, who owns each parcel, and what utility requirements each parcel could have. Discussions should occur as part of the Community Plan update.
3.	Development Planning	As part of the Community Plan update, identify any areas of the community that could be rezoned to allow development by right, rather than requiring additional approval.	High	Much of the city's land does not allow for development by right and must receive additional approval. The City should reassess whether areas requiring additional approval are necessary, and if not, remove this uncertainty to encourage new development.

Recommendations

Num.	Category	Recommendation	Priority	Notes
4.	Marketing	Generate semiconductor-focused content for the Dublin Economic Development webpage.	High	Dublin's Economic Development page must be updated to market directly toward semiconductor suppliers using the strengths outlined in this report. The industry should be clearly identified as a priority on the website, noting Dublin's proximity to New Albany. The website should also declare Dublin as development ready. Note the presence of existing high-tech companies and provide a "call to action" for suppliers to be a part of the cluster build-out happening in Dublin.
5.	Marketing	Identify a set of tech-focused companies/manufacturers that could serve as ambassadors for future site selector visits.	High	The City should identify a set of companies that can be relied upon to "sell" Dublin to site selectors. The City should maintain regular contact with these companies and conduct preparatory meetings prior to site selector visits to ensure a unified message is told about the benefits of Dublin.
6.	Marketing	Identify the top sites in each of Dublin's community areas/districts that should be the emphasis for marketing.	High	Using the District Assessments as a foundation, identify a set of top sites to be marketed to semiconductor prospects. Review these sites for any deficits (utilities, transportation, zoning) and work to address deficits where possible.
7.	Marketing	Organize familiarization (“fam”) tours for site selectors and companies around major events. Consultants can be targeted through the Site Selectors Guild, and company prospects in the semiconductor supply chain can be identified in association with One Columbus and JobsOhio.	Medium	Organize semiconductor site selector visits around major events such as the Dublin Irish Festival or Memorial Golf Tournament to exhibit quality of life amenities to site selectors.

Recommendations

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8.	Marketing	Develop a list of semiconductor prospects in other communities and proactively market Dublin to those prospects.	Low	Develop prospect lists based on conversations with One Columbus and JobsOhio, the City's partners that have the most details on Intel's supply chain. Also consider visiting other semiconductor communities for market intelligence.
9.	Marketing	Attend key semiconductor trade shows to market Dublin as a community of choice for semiconductor business relocation. The leading event in North America is SEMICON West. Other event schedules can be sourced through the semiconductor industry association called Semi (www.semi.org), and through JobsOhio.	Low	Prospects at trade shows may differ from prospects through JobsOhio or One Columbus, offering more opportunity to attract suppliers than working through RFPs/RFIs alone.
10.	Organizational	Create a rapid response team for semiconductor projects. This team might include representatives from Economic Development, Planning, Engineering, the City Manager, and Planning & Zoning Commission.	High	Time-to-market will be a critical factor for attracting semiconductor suppliers to Dublin given Intel's aggressive project timeline. The City should develop a "rapid response" team to ensure it responds to RFI/RFPs and development inquiries as quickly as possible to improve chances of attracting suppliers.
11.	Organizational	Hold regular internal collaboration meetings between Economic Development, Planning, Engineering, and Transportation and Mobility to coordinate goals and efforts, and to discuss the City's prospect pipeline in order to ensure the City can respond quickly and effectively to leads.	Medium	Attracting a major semiconductor project will require a high level of cooperation and understanding among City departments. Greater communication between all departments will help ensure the best response to prospects.

Recommendations

Num.	Category	Recommendation	Priority	Notes
12.	Site Readiness	Develop industrial/flex/lab-focused property capacity studies for priority sites. Encourage private property owners (possibly through incentives) to undertake required due diligence studies.	High	The City has developed property capacity studies focused on office development. These studies are helpful for site selectors to understand the City's intention and development feasibility. The City should develop property capacity studies with a focus on other uses (lab, flex/light industrial) where feasible.
13.	Site Readiness	Continue to cultivate relationships and information sharing protocols with utility providers to improve readiness to handle complex project inquiries.	High	Continue to foster a strong relationship with utility providers. Ensure that providers will respond to inquiries and contribute to the completion of property capacity studies the moment that they are needed.
14.	Site Readiness	Conduct water/sanitary sewer capacity studies in West Innovation District	Medium	Water and sanitary sewer capacity were cited as major constraints in the West Innovation District, although the extent of the issue is not fully known. The City should conduct an engineering study to determine what capacity could be supported at sites across the district.
15.	Site Readiness	Demonstrate that the City is not only responsive to inbound project opportunities but can also improve its ability to satisfy information requests from complex project inquiries and execute projects with speed and certainty when semiconductor prospects arise.	High	State and regional leadership do not see Dublin as a key player in the future semiconductor supply chain. The City needs to improve the way that economic development partners view Dublin's ability to complete projects with the pace and confidence required by semiconductor suppliers.

Recommendations

Num.	Category	Recommendation	Priority	Notes
16.	Workforce	Continue to engage with Dublin City Schools to support their expansion into semiconductor manufacturing training for high school students.	Medium	Emerald Campus has expressed interest in expanding its programming into advanced manufacturing, and Tolles is already active in technical education. The City should cultivate its relationships with both entities and support the development of this programming.
17.	Workforce	Continue to cultivate two-way relationships with higher education institutions to (1) amplify the positive messages that the schools can deliver about Dublin, and (2) improve the City's ability to deliver value to its own businesses and new semiconductor prospects.	Medium	City staff should continue to deepen their relationships with area colleges and universities. Being able to call on schools (and specific programs) when prospects visit will signal Dublin's intentional approach to attracting semiconductor businesses. This relationship may also be helpful in addressing current businesses' unmet workforce needs. Activities to further cultivate this relationship include involving Dublin businesses with area Business Advisory Councils, attending meetings open to economic developers, communicating local business' workforce needs to those institutions, facilitating meetings between "higher ed" and local high schools, etc.

New York Headquarters
125 Park Avenue
New York, NY 10017
t 212-372-2000

Bob Hess
Vice Chairman
Robert.Hess@nmrk.com

Kim Moore
Executive Managing Director
Kim.Moore@nmrk.com

Gregg Wassmansdorf
Senior Managing Director
Gregg.Wassmansdorf@nmrk.com

Brian Peterson
Managing Director
Brian.Peterson@nmrk.com

nmrk.com

NEWMARK