



# Manufacturing Attractiveness: A Location Strategist's Perspective

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Presented to:



Port of Greater Cincinnati  
DEVELOPMENT AUTHORITY

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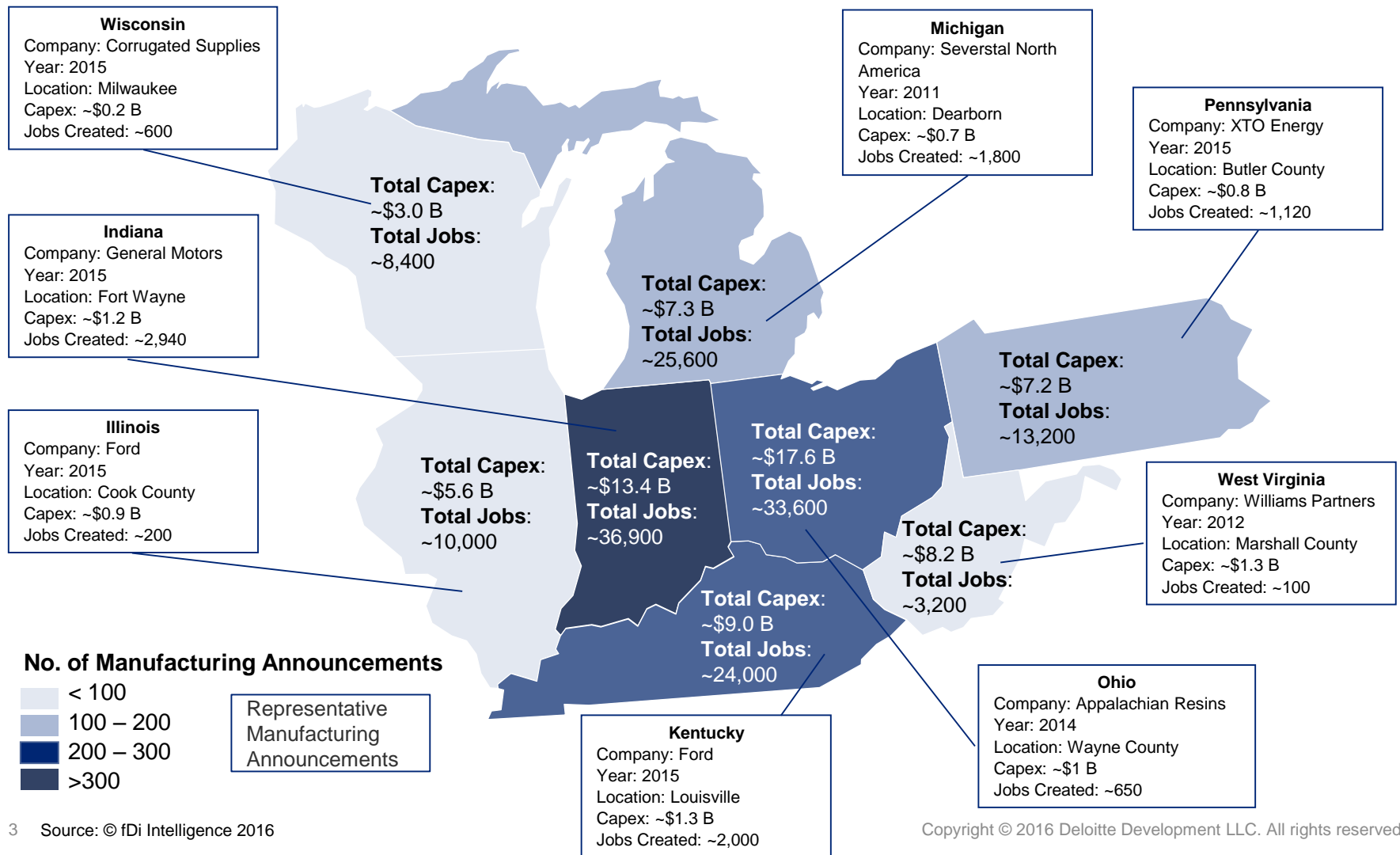


# Manufacturing Deployments

(Ohio and Surrounding States)

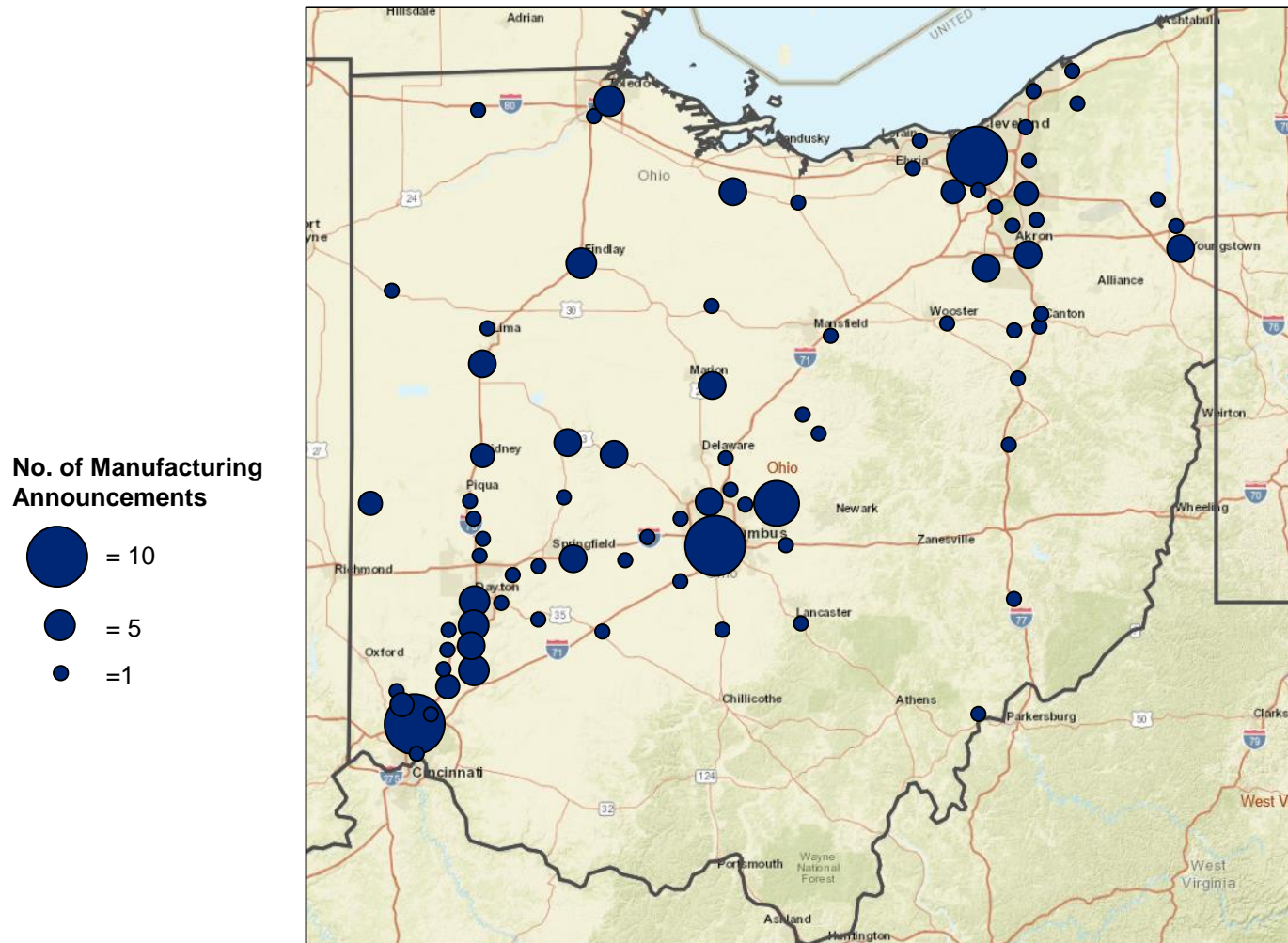
# Manufacturing Investments (Ohio Region 2011-2016)

In the past 5 years, the Great Lakes States have received over one thousand manufacturing projects, both new sitings and expansions



# Manufacturing Investments (Ohio 2011 – 2016)

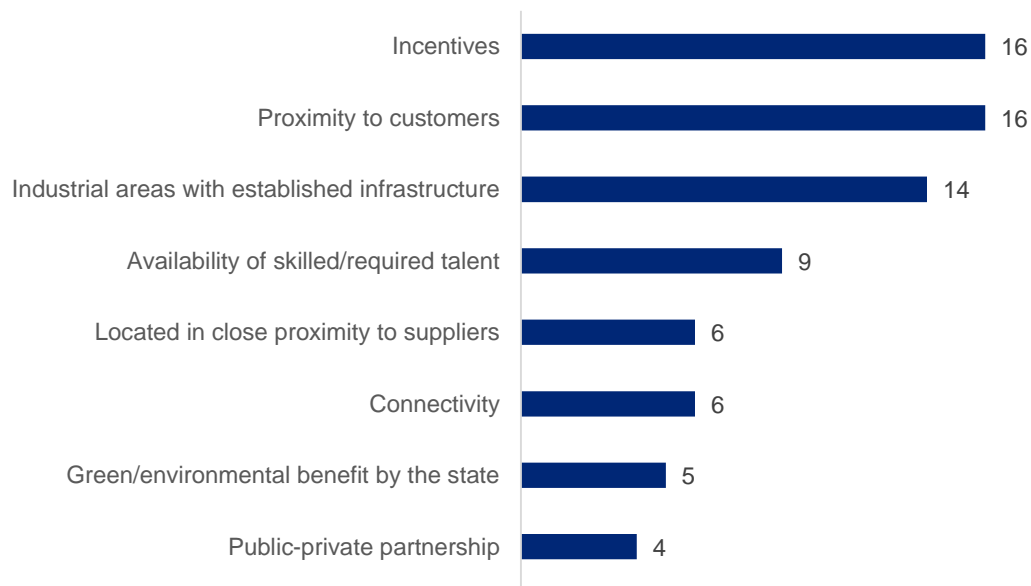
The majority of the manufacturing investments in Ohio over the past 5 years are spread throughout rural areas within commutable distances of large metropolitan areas (Cincinnati, Dayton, Columbus, Akron and Cleveland)



# Manufacturing Location Decision

Deloitte reviewed the location decision of 40 urban manufacturing deployment announcements<sup>1</sup> in Ohio and the surrounding states; The top reasons for the location decision focused on incentives, proximity to customers, and the ability to utilize established infrastructure

Select 40 Urban Manufacturing Deployments:  
No. of Companies Mentioning a Reason for  
Location Decision



- Incentives are a key driver in the decision between finalist locations but are typically **NOT a major factor** during initial screening of sites/ locations
- **Clear access to utility and transportation infrastructure** can drastically reduce a projects timeline and overall cost, **making a location highly favorable**

# Urban Manufacturing Case Studies

# Case Study 1

## New Belgium Brewery Selects the Asheville River Arts District in 2011

*America's fourth largest craft brewery sought to expand into a second brewery location in order to achieve national distribution goals while limiting the environmental impact.*

### **Initial Requirements:**

- 15-30 acres of urban re-use or brownfield land in the East Coast
- Walk, bike and bus access
- 100,000 gallons per day of water

### **Process:**

- Started with 10 community visits in person by New Belgium's Director of Sustainability
- Limited number of communities asked to respond to RFP (Evaluation parameters included utilities, workforce, real estate, sustainability initiatives, public transit patterns, neighborhood maps, etc.)
- 4 cities were shortlisted by a team of 8 employees (executives, sales, distribution, finance, and engineering personnel).
- Asheville and Philadelphia were determined as finalists locations

# Case Study 1

## New Belgium Brewery Opens Operations in 2016

### Outcomes:

- A 100,000 sq. ft. facility at the 17.5-acre site was opened in 2016
- ~150 new direct jobs and 260 new indirect jobs were created
- \$175 MM investment and \$44.1 MM collected annually through taxes

### Why Asheville?

- Community actively works towards making Asheville the top beer city in US
- The city is committed to sustainability and attracts innovative companies passionate towards environment
- The city, county and state provided a ~\$13 MM incentive and infrastructure improvement package (\$8.5 MM economic incentive grant, \$3.5 MM infrastructure grant, and \$1 MM grant from One North Carolina Fund)
- City of Asheville worked to design a multimodal roadway improvement in tandem with the construction of the brewery site





# Case Study 2

## Method Selects the Pullman District, Chicago in 2013

***San Francisco based planet-friendly and design-driven home, fabric and personal care manufacturer, Method sought the optimal location for its new and revolutionary soap factory.***

### **Initial Requirements:**

- 150,000-square-foot facility in the Midwest
- Plentiful water
- Proximate to distribution centers
- Urban area with access to local lower income workforce

### **Process:**

- Hired site selection consultant to define location criteria and issue RFI to target cities
- Method narrowed 150 potential sites to the top three, two of which were in Chicago
- Method personnel met with community members to discuss the social, economic, and environmental benefits of the project
- Chicago was selected as the finalist location despite the brownfield status of the land, which was littered with concrete and steel from the previous owner

# Case Study 2

## Method's Factory in the Pullman District, Chicago Opened in 2015

### Outcomes:

- ~100 manufacturing jobs (one third are reportedly Pullman residents) and \$48 MM in capital investment
- Method's factory opened in early 2015. The facility includes the manufacturing and bottling of formulas as well as an on-site distribution center
- New buildings cover five of the 22 acres, while the remaining acreage is greenery
- A series of investments followed: \$12 million in state and city funds to transform the adjacent property into a shopping center along with \$80 million in private investment.

### Why Pullman?

- Eco-friendly reputation of Chicago tied in with Method's Leadership objective to design an Energy and Environmental Design (LEED) Platinum factory
- Chicago Neighborhoods Initiative paid approximately \$10 million for the redevelopment of the site
- Pullman's community worked with Mayor Rahm Emanuel to secure \$8 million in tax-increment financing funds for Method
- Attracted by Pullman's community, highly skilled workforce, transportation system and diverse business climate along with its story of revitalization



# Case Study 3

## Re-inventing the Brooklyn Navy Yard (2010)

***The Brooklyn Navy Yard Development Corporation (BNYDC) saved the Navy Yard from bankruptcy by focusing on light industrial businesses as tenants which created well-paying urban jobs***

### **Initial Challenge:**

- The federal government decommissioned the 300-acre naval shipbuilding facility in 1966, causing a massive loss of urban manufacturing jobs in New York
- The yard was acquired by the City of New York in 1969. In 1980s BNYDC took over the management of the property

### **Process Undertaken by BNYD to Develop Property:**

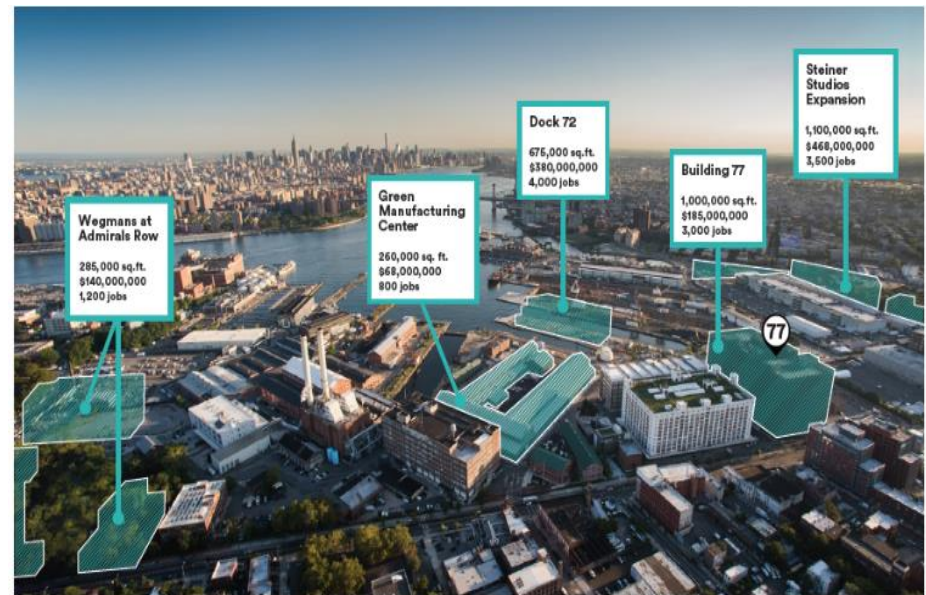
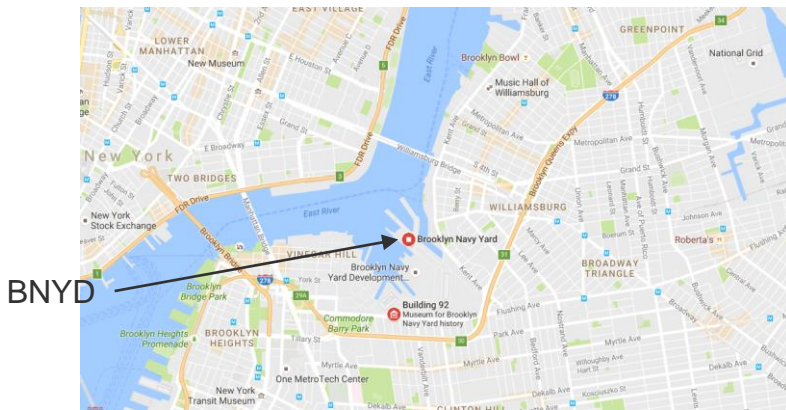
- Innovative leasing strategy: Yard management began focusing on attracting small businesses by demising larger spaces into smaller more manageable units. Industrial park status and long term leases enabled tenants to finance expansions
- Tenants are willing to pay a premium for small upper floor spaces with quality natural light so multi-story buildings were developed
- Investments by the City of New York: Large scale investments by the city (~\$200 MM) resulted in generating over \$500 MM of private sector investment
- The City made tax credit programs and innovative financing sources available to investors in the BNYD
- Investments in cutting-edge green infrastructure nurtured a rapidly growing cluster of green manufacturers lowered the Yard's carbon footprint, making it a lower impact neighbor nearby residential developments
- The Yard used environmental sustainability, historic preservation, improved community presence and access, and tenant promotion to build an attractive identity for the site

# Case Study 3

## Re-inventing the Brooklyn Navy Yard (2010)

### Outcomes:

- 7,000 people employed by ~330 companies and a 99% occupancy over the last ten years. Future plans are to expand operations in the Navy Yard to employ 16,000 people by 2020
- The diversity of Yard tenants includes high-end designers combined with on-site manufacturing, commercial artists, film and media companies, e-commerce fulfilment, maritime ship repair, warehouse distribution, green manufacturing, etc.

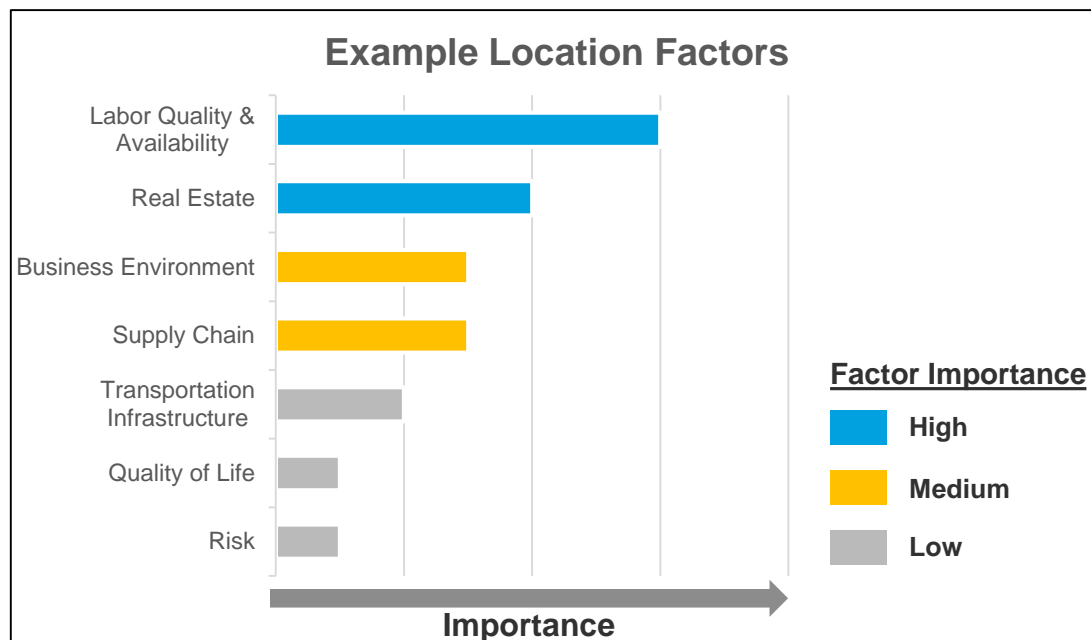


# Location Factors

- Advanced Manufacturing

# Example Location Factors: Advanced Manufacturing

Advanced manufacturers are highly interested in labor quality and availability as well as minimizing risk related to site development and neighboring use concerns



## Labor Quality and Availability

- Availability of operators & technicians
- Availability of engineers & management
- Scalability of workforce

## Real Estate

- Site readiness
- Capacity and availability of utilities
- Neighboring use/pollution

## Supply Chain

- Quality/complexity of supply chain
- Proximity to existing & future customer markets, suppliers, & industrial services

## Business/Regulatory Environment

- Operating permit process/timing/stringency
- Availability of grants and incentives & tax environment
- Level of unionization
- Ability to scale up the project
- Government and local support/fit

## Transportation Infrastructure

- Quality of and access to rail, port, highways & air

## General Risk

- Fiscal Stability
- State credit rating
- Natural Disaster Risk

## Quality of Life

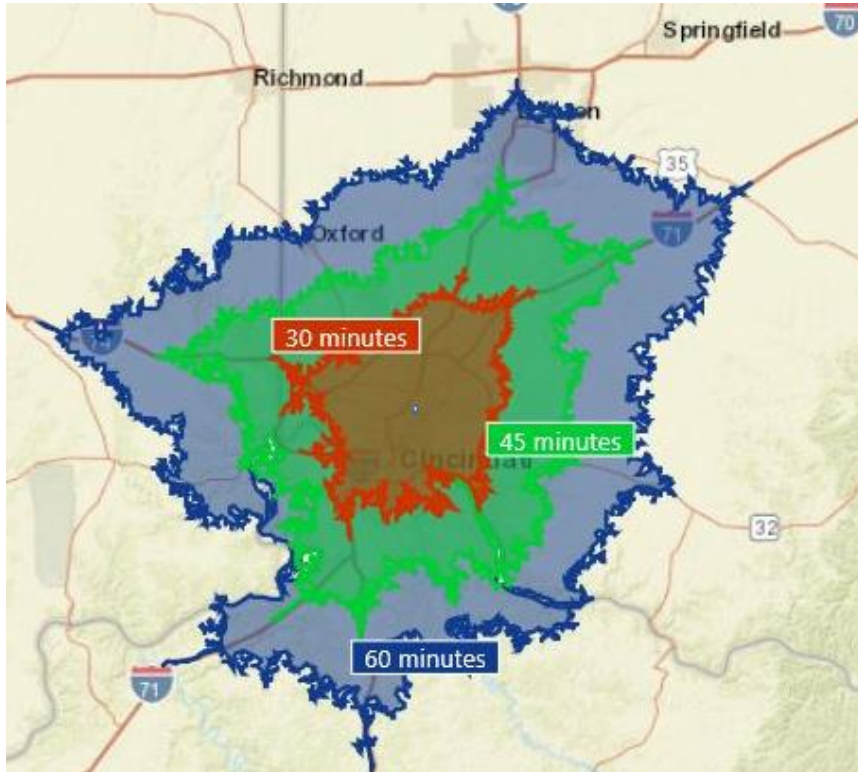
- Attractiveness for expats
- Crime and safety
- Cost of living
- Education system
- Healthcare

Notes: The above location factors are representative based on Deloitte experience with advanced manufacturing clients and should not be viewed as the definitive priority for all advanced manufacturers

# Cincinnati as Business Location

# Cincinnati: Location Profile

A 1-hr drive time from downtown Cincinnati allows access to a significant labor force, with over 2.5 million in population



Drive Time	Total Population
30 Mins.	1,240,888
45 Mins.	1,946,758
60 Mins.	2,586,608

## Demographics:

	USA	Cincinnati Metro	Hamilton County
Total Population	323,580,000	2,178,000	814,000
Annual Growth Rate (2016-2021)	0.84%	0.53%	0.30%
Total Population Age 18+	250,095,000	1,667,000	633,000
Unemployment Rate	5.9%	5.5%	6.4%
Manufacturing Employment	15,500,000	152,000	47,000
Manufacturing Industry	10.24%	14.34%	11.79%
Per Capita Income	\$29,472	\$29,839	\$30,847

## Education Trends:

	USA	Cincinnati	Hamilton County
High School Diploma (2016)	23.61%	26.08%	23.18%
Some College/No Degree (2016)	20.86%	19.63%	19.32%
Associate's Degree (2016)	8.25%	8.42%	8.22%
Bachelor's Degree (2016)	18.84%	20.12%	22.01%
Graduate/Professional Degree (2016)	11.61%	11.97%	14.26%

- Average commute to work from 2010 to 2014 was 24.3 minutes in Cincinnati and 22.8 minutes in Hamilton County



# Cincinnati: Availability of Manufacturing Skillsets

Cincinnati has a strategic advantage in the presence of industrial engineers, machinist and tool/ die makers; lower skilled production workers are also present

Job Titles	Availability Rating	Estimated Related Headcount in Metro <sup>1</sup>	Location Quotient in Metro <sup>1</sup>	CAGR of Employment in Skillset (2010-2015) <sup>1,2</sup>	CareerBuilder Hiring Indicator <sup>3</sup>
<b>Production Roles:</b>					
Production Worker	Strength	4,340	1.33	3.87%	82
Production Supervisor	Acceptable	4,910	1.09	0.45%	62
Cutter and Trimmers	Challenge	60	0.49	0.00%	NR
Molders	Challenge	140	0.50	14.87%	NR
Tool and Die Makers	Strength	810	1.46	3.56%	75
Electricians	Concern	4,230	0.96	0.0%	64
Machinist	Strength	5,310	1.79	3.37%	74
Welders	Concern	2,740	.95	8.06%	55
<b>Technician/ Engineering Roles:</b>					
Civil Engineering Technician	Concern	530	1.00	4.27%	71
Electrical Engineering Technician	Challenge	430	0.42	-9.80%	61
Industrial Engineering Technician	Strength	780	1.68	12.13%	69
Mechanical Engineering Technician	Concern	320	0.88	-6.59%	50
Civil Engineer	Concern	1,520	.74	7.89%	49
Electrical Engineer	Concern	1,080	.81	2.60%	37
Industrial Engineer	Strength	3,940	2.13	15.34%	54
Mechanical Engineer	Acceptable	2,190	1.06	2.35%	47
Chemical Engineer	Acceptable	250	1.02	-13.63%	59

1 Data sourced from BLS 2015 data for Cincinnati, OH MSA. Location Quotient is a measure of the relative concentration of a particular occupation in a metro area vs. national average presence. An LQ of 1.0 is national average, with an LQ greater than 1.0 indicating a higher than average concentration, and an LQ lower than 1.0 indicating a lower than average concentration

2 CAGR based on presence of related skillset in MSA on 2010 and of the same skillset in 2015. .

3 Careerbuilder Hiring Indicator indicates relative ease of recruiting where 100 is easiest to recruit and 1 is hardest to recruit in the local area. NR positions are so limited in hiring locally that no recruitment rating is given.



# Cincinnati: Salary Costs for Manufacturing Skillsets

Cincinnati is on par with the national average for cost of lower skilled production workers and significantly lower in cost for most higher skilled positions

Job Titles	Cost Rating	US Median Market Salary	Cincinnati Metro Median Market Salary	Cincinnati Metro 75 <sup>th</sup> Percentile Market Salary
<b>Production Roles:</b>				
Production Worker	Neutral	\$26,010	\$26,670	\$33,380
Production Supervisor	Neutral	\$59,930	\$61,000	\$74,130
Cutter and Trimmers	Strength	\$28,850	\$26,820	\$30,270
Molders	Neutral	\$31,690	\$32,140	\$38,280
Tool and Die Makers	Concern	\$51,130	\$55,110	\$65,250
Electricians	Strength	\$55,590	\$48,070	\$59,190
Machinist	Neutral	\$42,120	\$43,970	\$54,570
Welders	Acceptable	\$40,970	\$38,570	\$45,010
<b>Technician/ Engineering Roles:</b>				
Civil Engineering Technician	Acceptable	\$51,330	\$48,100	\$57,280
Electrical Engineering Technician	Acceptable	\$61,870	\$59,910	\$69,880
Industrial Engineering Technician	Concern	\$56,320	\$62,270	\$77,620
Mechanical Engineering Technician	Strength	\$56,390	\$49,220	\$66,550
Civil Engineer	Strength	\$87,940	\$77,760	\$94,730
Electrical Engineer	Strength	\$97,340	\$77,790	\$91,240
Industrial Engineer	Concern	\$86,990	\$90,970	\$105,560
Mechanical Engineer	Strength	\$88,190	\$78,710	\$94,130
Chemical Engineer	Strength	\$103,960	\$82,660	\$105,830

Source: BLS, 2015



# Summary

# Summary

- **Cincinnati has an advantage in the presence of industrial engineers, machinist and tool/die makers**, as well as a **large supply of lower skilled production workers**, giving the area a talent proposition to attract manufacturing deployments
- However, **a key driver of the evaluation process for manufacturing deployments is developable sites** (adequate acreage free from wetlands issues and outside of 100 year flood plain, utilities present on site, free from environmental concerns, clear ownership of site, easily accessible for trucks, etc.) and **Cincinnati currently lacks suitable real estate options** to entice most manufacturing operations
- Given **Cincinnati's availability in key manufacturing skill sets and low/average cost in several talent segments**, an investment program to prepare site options would enhance its ability to attract manufacturing investment

Contact

# Greater Cincinnati Industrial Manufacturing Site Contacts

**Port of Greater Cincinnati Development Authority**

**Melissa Johnson**

**Vice President, Industrial Development and Logistics**

**T (513) 632-3833**

**mjohnson@cincinnatiport.org**

**Cushman & Wakefield**

**Douglas Bolton**

**Managing Principal, Greater Cincinnati / Dayton**

**T (513) 763-3005**

**C (513) 910-2584**

**douglas.bolton@cushwake.com**