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Linking Regional Economic Clusters With Targeted Urban Places: Final Report

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Introduction

Three decades of economic change are reshaping economic activity and land demand in cities across the United States. Key among these changes is the vast de-industrialization of the U.S. economy; between 1990 and 2013, U.S. manufacturing employment declined by one-third and entire industries from apparel to textiles to electronics began to offshore most of their production.[1] Although declines in and around Indianapolis have been less severe, they have still been significant: between 1990 and 2013, the region lost about one-quarter of its manufacturing jobs while the State of Indiana lost about one-fifth of its manufacturing jobs.[2] Regionally and nationally, there have also been dramatic changes within the industrial sector—whether rapid growth in artisanal food production or the emergence of mega-distribution centers in transportation, distribution, and logistics (TDL)—that have shifted the relative demand for different types of industrial land. Facility demands within the industrial sector have also changed, making it difficult for new investments to utilize buildings constructed in earlier decades, contributing to a lack of urban turnkey sites that could bring new jobs to cities.[3] Together, these changes have created a surplus of industrial land and high vacancies that create blight, drive further disinvestment in urban cores, and undermine the economic and fiscal health of cities.

Against the backdrop of great change in industrial markets is the beginning of a reframing of the role of cities in the U.S. economy. A large number of factors—from high gas costs to the lifestyle preferences of Millennials to the demands for density and proximity by tech- and innovation-based firms—are beginning to shift population and firms back towards cities, creating what many believe is the start of an urban resurgence across the United States.[4] In some of the country's most successful regions, this process is already well underway. In Eastern Massachusetts, for example, Boston and Cambridge landed over 60% of the region's new software tech jobs in 2013 compared to only 25% in 2004, when the vast majority of the region's software jobs still landed on and around Route 128.[5] As a result of rapid tech- and innovation-based job creation, Boston's Innovation District saw rents increase by 40% in just a few years, with firms decamping to the city's Downtown Crossing area, [6] where office availability declined by 40% in just two years.[7] Shifts like these, which are likely to be replicated to some degree in successful regions all across the country, place a great premium on addressing issues around land vacancy, land availability, and real estate costs in U.S. cities.

Addressing the challenges and opportunities for re-activating urban industrial areas generated by these disparate trends will require a better understanding of industrial real estate dynamics, both today and in the future. This project seeks first to find the urban opportunities among targeted economic clusters then to develop location profiles that capture the location preferences, site characteristics, and building requirements demanded by firms in promising economic clusters in Indianapolis. The project is

[1] Calculated from U.S. Bureau of Labor Statistics (BLS), Current Employment Statistics, 1990-2013
[2] BLS, ibid.
[3] See Lynch, et al., Detroit Industrial Strategy, 2014
[4] Bruce Katz and Julie Wager, "The Rise of Innovation Districts: A New Geography of Innovation in America," Brookings Institution, June 2014
[5] http://winterwyman.com/blog/where-are-best-technology-jobs-boston
[6] Ross, Casey. Jan 10, 2014. http://www.bostonglobe.com/business/2014/01/10/rents-soaring-city-innovation-district/nqeKNcRiLJiyjKEEGog8GP/story.html?s_campaign=sm_tw.
[7] http://www.bizjournals.com/boston/print-edition/2013/06/07/wave-of-startups-fills-up-downtown.html?page=all

experimental and methodological in nature: it aims to utilize existing data and information to develop methods to assess the market feasibility of individual industrial parcels as well as larger industrial corridors in Indianapolis. These assessments can then be used to position industrial parcels and corridors for employer attraction through strategic allocation of predevelopment resources and creation of business attraction strategies targeted to specific economic clusters and industrial corridors. Over time, the identification and support of strong corridors can help re-concentrate the city's industrial activity while allowing land with little industrial future to be transitioned to higher and better uses, whether residential, retail and services, green/open space, or jobs-producing activities in tech- and innovation-based activities. In short, the project aims to create tools that can help transform vacant and under-utilized industrial land from an economic liability into an asset that can be used for 21st century economic growth.

The project had three phases. In the first phase, the project team scanned previous research and existing data on local clusters before selecting two economic clusters to examine, Food Manufacturing and Distribution and Local Business-to-Business Services (Local B2B), based on their economic and land use characteristics. After identifying these clusters offering significant urban opportunity, the project team performed a thorough analysis of the location patterns and site (land) and building requirements of firms in these clusters using real estate databases, firm databases, Googlemaps and other on-line tools; reviews of secondary literature; and four roundtables and 22 interviews with firms and local experts. In all, 54 individuals participated in a roundtable or interview. Using the information culled from these sources, the project team developed detailed location, site, and building profiles of the Food Manufacturing and Distribution and Local B2B clusters. In the last phase, the project team provided recommendations on promoting growth of the Food Manufacturing and Distribution and Local B2B clusters in existing industrial areas in Indianapolis and proposed methodologies for the next round of cluster development and industrial land analysis.

Cluster Selection

Over the past decade, there have been several well-regarded studies of the Indianapolis regional economy and its most promising growth clusters.[8] Based on review of these studies and interviews with local experts, the project team identified ten high-potential economic clusters to evaluate for further study of their location, site, and building demands: Advanced Manufacturing (excluding Defense and Aerospace); Biosciences; Clean Energy; Defense and Aerospace; Food Manufacturing and Distribution; Local B2B; Motorsports (Industrial Component Only); TDL: Distribution and Electronic Commerce; TDL: Transportation and Logistics; and Technology. These clusters were evaluated based on five sets of criteria: expected *cluster growth* in the region; *urban contribution*, especially cluster/sub-cluster strength in Marion County; *job quality*, including wages and training opportunities; *job accessibility*, especially for local low- and moderate-income (LMI) populations; and a high-level preliminary assessment of

[8] The project team thoroughly reviewed several existing reports pertaining to the Indianapolis regional economy, including the Indy Partnership Competitive Assessment Study (2009); Nurturing Central Indiana's Pillar Industries for 21st Century Midwestern Preeminence (2000), produced by the Battelle Memorial Institute on behalf of the Central Indiana Corporate Partnership; and Indy FastTrack: Freight and Industrial Land Use, prepared by AECOM (2013), among others. With LISC's assistance, the project team also held several discussions with various individuals knowledgeable about the existing reports and data.

locational preferences and building and site requirements of firms in the cluster. (See Appendix A for details on cluster definitions and data sources used in the evaluation.) The goal was not to re-evaluate the region's strongest clusters but to identify two clusters that would make strong case studies for this project based on economic growth, social equity, and land use considerations.

Based on the first four sets of criteria, i.e., the non-land related criteria, the top five ranked clusters were Biosciences, Technology, Local B2B, Food Manufacturing and Distribution, and Defense and Aerospace. All four ranked high in Urban Contribution, i.e., the strength of Marion County and its contribution to regional cluster activity, and each of the top five clusters ranked very high in either job quality, which is driven largely by wages, or job accessibility, i.e., the ability of lower-skilled workers to secure jobs in the cluster. The Technology cluster was removed from consideration for this study based on its poor ranking on job accessibility metrics—it ranked lowest among the ten clusters in job availability for those with high school degrees or less and for those with two-year degrees.

After narrowing the field to four clusters, local cluster experts were interviewed to assess their relevance for this study. Based on these findings, the Biosciences and Defense and Aerospace clusters were deemed less than optimal choices for this study. In the case of Biosciences, two factors weighed strongly. The first was expert opinion that Biosciences activities would not be a good fit with the city's industrial corridors for a number of reasons including the perception that there might be break-ins in the industrial corridors, which in heavily regulated industries like pharma, could trigger a requirement that production equipment go offline; FDA regulations that make it easier to expand at existing facilities than to build new ones; and little demand for the types of facilities that might fit the industrial corridors, such as incubator space.[9] In Defense and Aerospace, local experts feared that industry dynamics, including contraction in defense contracting and supply chain consolidation in the public and commercial portions of the business could limit new opportunities. In addition, regional Defense and Aerospace firms that have experienced growth tend to expand at their existing sites and at least within the region, there are very few spin-offs.[10]

Although we concluded that cluster dynamics and land use patterns in Biosciences and Defense and Aerospace make them unlikely to absorb significant amount of the existing industrial land in Indianapolis in the near future, future studies should revisit opportunities in these clusters. In the case of Biosciences, the Bio-Logistics and Testing Labs sub-clusters could over time create demand for land in the industrial corridors. Similarly, Defense and Aerospace is in a "workout" period but commercial aerospace is currently strong. Moreover, if an increase in collaboration between small and large firms in the cluster ever materializes—some say it's currently just "anecdotes and wishful thinking"—spin-off activity could increase.[11] As summarized by one expert, "We don't know what the next five to ten years will look like."[12] Similarly, as will be discussed in the recommendations, the strength of the Technology cluster in all aspects except job accessibility make it a good candidate for assessing its potential as an urban land use opportunity near downtown.

[9] Project interviews, 2014
[10] Project interviews, 2014
[11] Project interviews, 2014
[12] Project interviews, 2014

This left two clusters, Local B2B and Food Manufacturing and Distribution, which were deemed good cases for this study. Each of these clusters had high overall ratings based on the four sets of (non-land) criteria listed above and each cluster ranked among the highest in job accessibility, an important factor given the on-going jobs crisis for workers without college degrees. Together, Food Manufacturing and Distribution and Local B2B make strong first case studies for aligning regional economic growth trends with available industrial land by providing one local (B2B) and one traded (Food Manufacturing and Distribution) cluster, both of which have strong and somewhat predictable projected growth over the next decade. The two clusters span a wide variety of activities, which provides a useful window for evaluating future absorption of the city's industrial land, and both clusters rank highly on equity criteria, including accessibility of jobs and entrepreneurship to LMI populations.

Overview of Food Manufacturing and Distribution Cluster

The Food Manufacturing and Distribution cluster is comprised of three sub-clusters – Food Manufacturing, Beverage Manufacturing, and Food/Beverage Distribution. Food Manufacturing includes industries that manufacture sugar and confectionary, fruit and vegetable, dairy, meat, seafood, baked, and milled food products; Beverage Manufacturing includes ice, water, soft drink, and alcoholic beverage manufacturing; and Food/Beverage Distribution is composed of industries involved in the wholesaling, warehousing, and storage of food, beverage, and farming products. (A complete listing of the industries that comprise each sub-cluster is available in Appendix A.)

Within Food and Beverage Manufacturing, the site characteristics and trends differ considerably between two types of firms: large-scale manufacturers running production lines on an industrial scale and artisanal producers of smaller-batch, specialty foods. Large-scale manufactures employ large numbers of workers in facilities designed to realize economies of scale. Artisanal producers tend to utilize smaller sites, and with less mechanized production methods, can more easily take advantage of former industrial space along urban corridors. Consumer-facing artisanal firms will demand urban locations that can access and/or attract residential and daytime customers and creative workers.

Firms in the food cluster face competing pressures when deciding between urban/suburban or repurposed/greenfield sites. On the one hand, limited capital availability, lower renovation costs, and reduced space needs associated with state-of-the-art equipment can convince some traditional manufacturers to repurpose vacant urban buildings or renovate existing plants in cities. The high cost of greenfield construction and the imperative to locate near suppliers and consumers also make urban locations attractive for some major producers. At the same time, however, businesses can find it challenging to repurpose buildings from non-food to food uses, in part because of FDA and USDA regulations that require drainage, waste segregation, and certain HVAC configurations to limit dust and contamination in the food processing area. Ameliorating these concerns can quickly become very costly, and acts to discourage re-use of vacant industrial buildings. Ultimately, the repurpose vs. build-to-suit decision depends on the needs and resources of the individual firm, but policies that lower the costs or uncertainty associated with refitting older, urban, industrial buildings can make them a viable option for more firms.

In the Indianapolis region, the food cluster employs 17.5K people and grew over 10% between 2003 and 2012, outpacing the U.S. growth rate of 3%. The cluster represents a strong opportunity for Marion County, where jobs in the cluster are projected to grow 7% from 2012 to 2022. Some of this projected growth reflects trends toward smaller, entrepreneurial firms that meet the growing consumer demand for locally sourced, ethnic, and specialty food and beverages. (Nationally, Specialty Food Sales alone grew 22% between 2010 and 2012, with most produced by smaller establishments with average sales of $1.7 million annually.[13]) As of 2012, average wages in the food cluster were about $50K in both Marion County and the broader region. Wage growth was 25% between 2003 to 2012, somewhat less than the 34% average wage growth across the region's manufacturing sector, but keeping pace with overall wage growth in the region (24%). Food jobs are also the most accessible of any of the evaluated clusters: over 46% of jobs only require a high school diploma or less and over 75% of jobs require an associate's degree or less.

Local B2B

The Local B2B "blue collar" cluster is composed of sixteen sub-clusters including eight wholesale sub-clusters, Warehousing and Storage, Rental and Leasing, Repair and Servicing, Facilities Management, Other Business Services, Local Transportation and Logistics, Waste, and Local Trucking. These can be categorized into two groups: "off-site" activities (B2B/Off-site), such as building maintenance that take place at client sites rather than on the grounds of B2B firms themselves; and "on-site" activities (B2B/On-site), such as warehousing, for which the majority of work-related activity takes place at the B2B firms themselves.

B2B/Off-site companies dispatch workers to clients across the Indianapolis regions. Growing use of technology and outsourcing has enabled many of these firms to operate as "virtual businesses."[14] These businesses can operate without a large physical footprint, as they use technology to help coordinate fleets of trucks or technicians who go directly to client sites from their homes.[15] They need central locations near customers and suppliers that are convenient for their typically dispersed workforces. Such companies can operate with little more than an office and a parking lot, and since clients rarely come on-site, firms have fewer hesitations about locating in neighborhoods considered "rough-around-the-edges."[16] Along with trends toward outsourcing facilitated by information technology, site needs for many of the B2B/Off-site businesses may get even less demanding.

B2B/On-site companies, such as those in printing or logistics, tend to have more significant building and site requirements than businesses that do most of their work at the client's location. With more work taking place on site, whether it involves digital printing, repacking and loading, or machine repair, these businesses will generally need more space, specialized building configurations, or utility needs than firms that mainly use their brick-and-mortar location for dispatching and occasional parking and storage. Like B2B/Off-site, however, B2B/On-site businesses have few walk-up customers. Surroundings and safety, while still important, are less critical than for businesses with a substantial retail component or frequent

[13] Specialty Foods at a Glance, https://www.specialtyfood.com/association/press-office/industry-facts/, 2013
[14] The World of Virtual Work: Facts and Statistics, Manpower
[15] Project interviews, 2014
[16] Top 10 Business Trends, BusinessBurrito.com, 2013

client visits. As such, B2B/On-site businesses can take advantage of formerly industrial buildings, given their similar site and building needs. In addition, compared to the food and some other clusters, B2B businesses of all types face little regulation and often do not need to make as large investments when re-purposing industrial buildings.

B2B/Off-site firms have a strong incentive to locate in central areas with good highway access, as this makes them accessible to the widest range of customers and suppliers and in fact, concentrations of B2B/Off-site firms in Indianapolis are located very near highways. While interviewees noted proximity to customers was crucial, the fact that they performed most work at client sites made it possible to locate in somewhat distressed areas. Some managers cited concerns with neighborhood safety and the poor aesthetics of nearby vacant buildings, but none had a specific instance in which this had driven away customers. Firms did express interest in neighborhood development and noted that they would welcome infill around their current locations.[17]

Local B2B blue collar activities employ 106K people in the Indianapolis region—accounting for 12% of total employment--split evenly between Local B2B/Off-Site and Local B2B/On-Site. Local B2B blue collar grew by over 8% between 2003 and 2012, outpacing the U.S. growth rate of 5%. Together, Local B2B/Off-Site and Local B2B/On-Site are projected to grow by ~9% in Marion County and the region over the next decade, adding over 6,000 jobs to the region. B2B blue collar jobs are highly accessible—43% require only a high school diploma or less and over 73% of jobs require an associate's degree or less. Generally, jobs in the Local B2B/Off-Site sub-clusters are more accessible than those in the Local B2B/On-Site grouping. Nationally, average wages in the B2B cluster are $45,600, which is not especially high for an industrial cluster, but is well above the average national wage of $41,800. Creating opportunities for workers without college degrees is important in the Indianapolis region, which according to the Brookings Institution, ranks relatively high among large U.S. metropolitan areas in terms of college attainment (31st of 100) and years of education attained by average adult (47th of 100) but creates few opportunities for unemployed workers with a high school degree or less (72nd of 100).[18]

B2B activity also plays an important role in creating small business and entrepreneurship opportunities, both directly and indirectly. Across B2B, self-employment rates tend to be about 50% higher than in the economy as a whole and because many of the activities require relatively little start-up capital, the cluster creates entrepreneurship opportunities for low- and moderate-income (LMI) groups. Strong Local B2B also supports start-up firms, which require a web of suppliers to handle functions like payroll, tax preparation, building maintenance, and catering in order to be successful.[19]

From an economic development perspective, a strong Local B2B cluster plays multiple roles in supporting export-oriented firms across the region. As traded cluster firms focus on their core competence and outsource myriad functions, the cost and quality of the services they receive from Local B2B firms will affect their competitiveness in national and global markets. As cluster guru Michael Porter notes,

[17] Project interviews, 2014

[18] Jonathan Rothwell, "Education, Job Openings, and Unemployment in Metropolitan America," Brookings Institution, August 29, 2012. Rankings calculated by Mass Economics from accompanying data files (http://www.brookings.edu/research/papers/2012/08/29-education-gap-rothwell#M10420)

[19] See for example, Edward L. Glaeser, "Entrepreneurship and the City," NBER Working Paper 13551, Cambridge, MA; October 2007 (http://www.nber.org/papers/w13551)

B2B firms "improve the operating environment" for all businesses,[20] including higher-wage, traded clusters. Moreover, in an age of extreme competition and seemingly endless threats to local job bases, Local B2B blue collar firms are not "footloose" and are generally not subject to national or global competition; in fact, it is difficult to envision how functions like facilities maintenance, could be serviced by firms outside the region.

Location Profiles

Overview

As a city, Indianapolis has very good highway infrastructure and in general, easy access to highway on/off ramps; in fact, almost the entire city (97% by land area) is within an eight-minute drive of a highway on/off ramp along the street network; 79% of land area is within five minutes; 51% within three minutes; 30% within two minutes; and 10% of land area is within a minute of an on/off ramp. Table 1 below shows the "as the crow flies" distance to and from interstates and interstates with major state routes and the distance and time to and from interstate exits along the street network for the industry groupings. In general, Food and B2B firms tend to locate very close to highways, with an estimated average time to interstate exits of three minutes or less across all of the sub-clusters.[21]

Table 1. Average Distance and Time from Highways and Interstate Exits by Cluster Groupings

	Local B2B/Off-Site	**Local B2B/On-Site**	**Food/ Beverage Distribution**	**Food Manufacturing**	**Beverage Manufacturing**
Distance (Miles) from Interstates	1.6	1.3	0.9	1.9	1.3
Distance (Miles) from Interstates and State Routes	0.9	0.9	0.7	0.7	0.1
Distance (Miles) from Interstate Exit Along Streets	2.1	1.9	1.6	1.9	1.0
Time (Minutes) from Interstate Exit Along Streets	3.0	2.9	2.6	3.0	1.5

The sub-clusters do show somewhat distinct location patterns. In the Food Manufacturing sub-cluster, smaller firms are scattered throughout Indianapolis while most of the larger food manufacturing firms are located near interstates and/or railroads. Seven of the fifteen largest Food Manufacturing firms are located in the southwest quadrant of Indianapolis along I-70. There is also a cluster of firms located at the intersection of I-70 and I-465 on the east side of the city and a cluster of Food Manufacturing firms in and around Park 100 in northwest Indianapolis.

According to the NETS data, Indianapolis has eight Beverage Manufacturing firms. The two largest firms are both bottling factories and located in Park 100. There is also a cluster of small breweries (like Sun

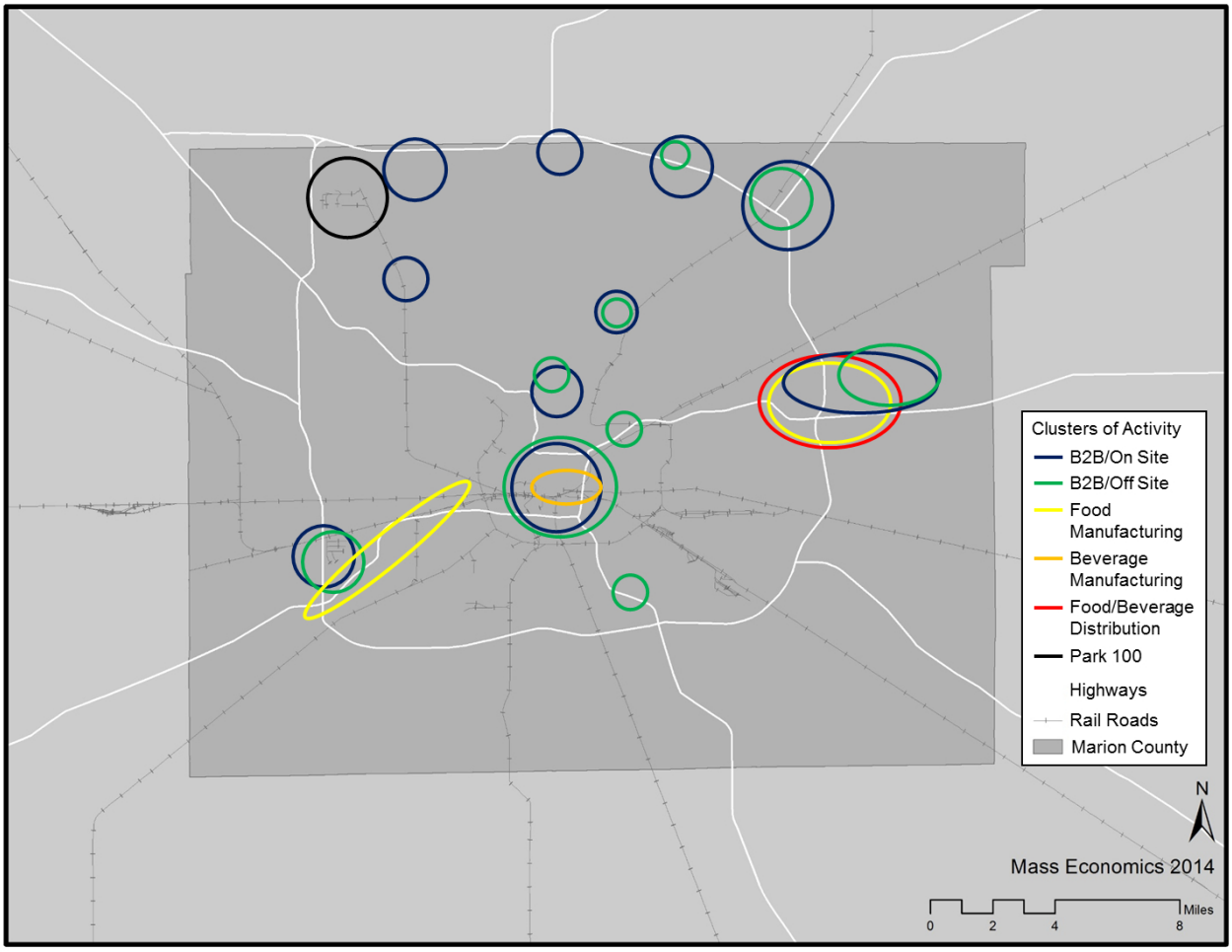
[20] Michael E. Porter, "Cluster-based Approach to Inner City Economic Development." Presentation at Inner City Economic Summit, October 4th, 2011

[21] The first two entries in the table were calculated using simple distance buffers off of the highways utilizing GIS software while the last two entries in the table utilized GIS software to calculate distance and time buffers along the street network to and from the interstate exits. As the last two statistics reflect the actual distance and time to the interstate access points (the on/off ramps), these are the preferred units of measurement.

King Brewery and Indiana City Brewery) in downtown and the western portion of the E. Washington St. Urban Industrial Revitalization Area (UIRA).

There is a strong cluster of relatively large Food/Beverage Distribution firms in and around Park 100. There is a less tightly defined cluster of firms along I-70 directly to the west and east of the intersection with I-465 on the east side of the city. The majority of the larger Distribution firms are within a half mile of an interstate. There is also some co-location of Food/Beverage Distribution and Food and Beverage Manufacturing firms throughout Indianapolis: Park 100, the I-70 corridor in the southwest, and the area around the intersection of I-70 and I-465 in the northeast. With the aforementioned breweries and food distributors like Smoking Goose Meatery, the western portion of the E. Washington St. UIRA seems to be a nascent cluster of "artisanal foods."

Figure 1. Centers of Cluster Groupings Activity in Indianapolis, IN



Local B2B/On-Site firms are clustered in Downtown, around Park 100, and along railroad corridors and highways. There are clusters of firms at both the east and west intersections of I-70 and I-465, along I-465 in the northeast and out along I-69 (continuing outside of Marion County towards Fishers, IN), along the Massachusetts Ave./railroad corridor northeast through Lawrence, IN, and southeast along Route 31,

Madison Ave., and the railroad corridor. There is also a strong presence of Local B2B/On-Site firms in all of the UIRAs. Local B2B/Off-Site firms are most strongly clustered in Downtown, Park 100, the intersection of I-465 and I-69 in the northeast, the intersection of I-465 and I-70 in the southwest and in the western portion of the E Washington St. UIRA. In addition to the aforementioned E Washington St. UIRA, there is also a strong presence of Local B2B/Off-Site firms in the Near West and Mass Ave. UIRAs. In general, the number and variety of locations that can accommodate B2B firms is striking, but not wholly unexpected. For a number of reasons, these firms tend to have flexible location—and often site and building—demands, allowing them to operate in many areas in Indianapolis.

Although most firms in the target clusters are sited within close proximity of highways, there are distinct patterns across sub-cluster activities. (See Table 2.) For example, transportation-intensive activities across clusters—including Food and Beverage Distribution, Local Transportation and Logistics, and Local Trucking—also tend to locate at sites with good interstate access. With the exception of the energy/chemical specialization, wholesaling activities tend to be sited in areas with less direct highway access. Beverage Manufacturing firms have the best overall access, which can likely be explained by the fact that most of these firms are relatively new or recently relocated and are part of a growing "artisanal food" and craft beer trend that favors infill developments in existing neighborhoods and mixed-use areas.

When we look at firms that started at their current locations sometime in the 2000-2007 period and compare those to firms that have been at their locations only since 2008 or later, some interesting patterns emerge within the B2B cluster. (The number sample sizes are too small in food-related activities to draw conclusions.) Since 2008, B2B/Off-site firms have been moving closer to highway access points while B2B/On-site firms have on average, been locating further from highway access points. (See Table 3.) We hypothesize that these trends reflect some combination of two factors. The first is rising transportation costs, especially gas costs; as these costs rise, those activities that are most transportation-intensive are likely to place a higher value on proximity to highways, thus driving up the relative cost of industrial land with better access. In response, firms that are not as transportation-intensive will be more likely to locate in (presumably) lower-cost sites with less direct highway access. In general, these patterns suggest that there has likely been a permanent increase in the value of and demand for industrial land with better access to highways. The second potential explanatory factor is a relative shift in customers from outside of Marion County to those inside Marion County; while the former would be most easily reached by highways and interstates, the latter might be more easily reached via local roads, resulting in reduced dependence on and value of interstate access.

Table 2. Rank of Average Distance, Time from Highways and Interstate Exits by Sub-cluster

	Sample Size	Rank of Avg. Distance (Miles) from Interstates	Rank of Avg. Distance (Miles) from Interstates and State Routes	Rank of Avg. Distance (Miles) from Interstate Exit Along Streets	Rank of Avg. Time (Minutes) from Interstate Exit Along Streets
Food					
Beverage Manufacturing	6	8	1	1	1
Food Manufacturing	7	14	11	10	12
Food/Beverage Distribution	15	5	8	4	7
Local B2B/On-Site					
Wholesale - Construction	32	9	15	11	11
Wholesale - Other Industrial	19	7	3	8	10
Wholesale - Food	14	4	10	5	8
Wholesale - Consumer and Business	6	15	18	14	14
Wholesale - Healthcare	4	18	16	17	17
Rental and Leasing (B2B)	3	3	13	6	5
Wholesale - Auto	3	17	12	14	16
Wholesale - Energy / Chemical	3	10	5	6	5
Warehousing and Storage (B2B)	2	2	7	12	2
Local B2B/Off-Site					
Repair and Servicing	9	16	17	16	15
Local Trucking	7	6	6	3	4
Waste	7	10	9	13	13
Facilities Management	6	13	4	9	9
Other Business Services	5	12	14	18	18
Local Transportation and Logistics	3	1	2	2	2

Notes: statistics with a sample size of less than 5 should be used with caution

Table 3. Change in Average Distance, Time from Highways/Interstate Exits, 2000-2007 to 2008-2014

	Change for Local B2B/Off-Site	**Change for Local B2B/On-Site**	**Change for Food/ Beverage Distribution**	**Change for Food Manufacturing ***	**Change for Beverage Manufacturing ****
Distance (Miles) from Interstates	-0.40	0.43	0.26	1.33	0.33
Distance (Miles) from Interstates and State Routes	-0.25	0.33	0.14	-0.18	0.00
Distance (Miles) from Interstate Exit Along Streets	-0.17	0.55	-0.03	-0.25	-0.05
Time (Minutes) from Interstate Exit Along Streets	-0.23	0.86	0.94	-1.17	-0.60

*Notes: * sample size of 3 for 2000-2007 and sample size of 4 for 2008-2014; ** sample size of 1 for 2000-2007 and sample size of 5 for 2008-2014*

Site Characteristics

When we examine parcel and building characteristics, we find great variety but also some common characteristics across the economic activities examined in this study. The first commonality is the high utilization of relatively small sites. Across Food and B2B sub-clusters, median site size ranges from 1.1 to 3.7 acres, indicating across clusters, at least half of all firms—and likely many more—are on sites that are smaller than 3.7 acres. The floor-to-area ratio (FARs) associated with these sub-clusters in Indianapolis seem relatively low, especially by urban standards: FARs range from 0.20 to 0.34 indicating

that on the median site, buildings cover only between one-fifth (FAR of 0.2) and about one-third (FAR of 0.34) of land area. In Food Manufacturing the median building class is 2.5 (based on assignments of Class A = 1, Class B = 2, Class C =3) indicating that half of the firms are in Class B space and the other half in Class C space. In all of the other sub-clusters, the median building class is C, while the average building class ranges between 2.3 and 3.0, indicating that the majority of firms (and in some cases, all of the firms) in each of these sub-clusters is located in Class C space. This suggests that the food-related and B2B uses are good clusters for absorbing excess building stock, even of lower quality, an important consideration give the large number of Class C buildings in Indianapolis industrial stock.[22]

The data in Tables 4, 5, and 6 also illuminate important differences in building and land demand of firms across cluster groupings. For example, there is a large range in loading dock requirements; the median number of loading docks at parcels utilized by B2B/Off-site firms is 2.5 compared with 11.5 for Food Distribution firms. There is also great variation in the median amount of land per employee, a measure of land-intensity. B2B/Off-site supports only one (1.0) worker per acre compared to almost six (5.9) in Food Distribution. Land intensity metrics are important because they shape revenue and value added per acre and thus, what firms are willing and able to pay for land.

Table 4. Median Building and Site Density Characteristics by Cluster Groupings

	Group:	**Local B2B/Off-Site, Median**	**Local B2B/On-Site, Median**	**Food/Beverage Distribution, Median**	**Food Manufacturing. Median**	**Beverage Manufacturing, Median**
Building Characteristics	Building Area (Sq Ft)	16,200	25,700	24,500	30,000	10,100
	Number of Stories	1.0	1.0	1.0	1.0	1.0
	Ceiling Heights	18.0	20.0	19.0	28.0 *	11.5 *
	Building Class [A=1; B=2; C=3]	3.0	3.0	3.0	2.5	3.0 *
Parking/Loading	Loading Docks	2.5	4.0	11.5	4.0 *	5.0 *
	Parking Spaces	25.0	30.0	40.0	30.0	40.0 *
	Parking Spaces / 1000 Sq Ft	1.4	1.1	1.0	0.7	2.3 *
Site	Land Area (Acres)	2.5	3.0	3.4	3.7	1.1
	FAR	0.21	0.25	0.20	0.34	0.30
Employment Density	Employees / Building Area (1K Sq Ft)	0.2	0.5	0.7	0.1 *	1.8 *
	Employees / Land Area (Acre)	1.0	4.2	5.9	1.0 *	25.0 *
	Employees Per Parking Space	0.1	0.4	0.6 *	0.3 *	0.7 *

*Note: statistics with an * are based on a sample of less than 5 and should be used with caution*

[22] The distribution for all sites for which we have data is: 4 Class A (3%); 36 Class B (24%); 107 Class C (73%)

Table 5. Average Site and Building Characteristics by Cluster Groupings

	Group:	Local B2B/Off-Site, Average	Local B2B/On-Site, Average	Food/ Beverage Distribution Average	Food Manufacturing, Average	Beverage Manufacturing, Average
Building Characteristics	Building Area (Sq Ft)	38,500	55,400	65,600	176,600	13,400
	Number of Stories	1.1	1.1	1.1	1.0	1.2
	Ceiling Heights	18.2	19.6	20.7	28.0 *	11.5 *
	Building Class [A=1; B=2; C=3]	2.7	2.7	3.0	2.3	3.0 *
Parking/Loading	Loading Docks	5.0	7.0	9.5	17.7 *	5.0 *
	Parking Spaces	49.9	47.9	49.2	85.5	40.3 *
	Parking Spaces / 1000 Sq Ft	1.9	1.5	1.5	1.4	2.0 *
Site	Land Area (Acres)	4.7	6.1	5.7	10.2	1.9
	FAR	0.23	0.29	0.26	0.34	0.32
Employment Density	Employees / Building Area (1K Sq Ft)	1.0	1.0	2.4	0.6 *	1.8 *
	Employees / Land Area (Acre)	4.7	9.1	21.8	1.5 *	25.0 *
	Employees Per Parking Space	0.7	0.7	2.0 *	0.6 *	0.7 *

*Note: statistics with an * are based on a sample of less than 5 and should be used with caution*

Table 6. Quartile Building and Site Characteristics by Cluster Groupings

	Group:	Local B2B/Off-Site	Local B2B/On-Site	Food/ Beverage Distribution	Food Manufacturing	Beverage Manufacturing
Building Characteristics	25% Building Area (Sq Ft)	10,000	12,800	12,000	8,400	3,800
	Median Building Area (Sq Ft)	16,200	25,700	24,500	30,000	10,100
	75% Building Area (Sq Ft)	49,800	53,800	61,200	294,000	23,500
Site	25% Land Area (Acres)	1.4	1.7	1.6	2.0	0.2
	Median Land Area (Acres)	2.5	3.0	3.4	3.7	1.1
	75% Land Area (Acres)	4.7	6.7	6.4	11.3	2.8

Sub-cluster Profiles

Food Manufacturing: Seven out of the ten Food Manufacturing firms in our sample occupy stand-alone sites, with the remaining three in industrial parks. Among stand-alone firms, the median Food Manufacturing firm utilizes a 30,000 square foot, one story, class B-/C+ building with 28' ceilings on a 3.7 acre site. The sub-cluster has relatively low land intensity with a FAR of 0.34 (building covers just over a third of the land area) but only has an employment density of one job per acre. As shown in Table 7, the group of newer firms — those that have only been at their site since 2008 or later — have larger median building and parcel size but smaller average building and parcel size indicating a decline in the number of firms that utilize large amounts of land and building space. Median and average FARs have both increased by over 50% from ~0.25 to ~0.40, indicating that building footprints are increasing faster than parcel size. Although the sample sizes are small, the employees/building area and employees/land area have both increased dramatically, indicating that newer firms have higher employment densities. Consistent with this, average and median number of parking spaces and parking spaces/1,000 sq. ft. of building have increased dramatically. Newer Food Manufacturing firms are more likely to utilize Class C space than in the past. The number of loading docks at Food Manufacturing firms has increased significantly as well, from only four per firm pre-2008 to about 25 since then.

Table 7. Change in Median and Average Building and Site Characteristics for Food Manufacturing

	2000-2007 Median	2008-2014 Median	2000-2007 Average	2008-2014 Average
Land Area (Acres)	3.7	4.6	15.2	6.5
Building Area (Sq Ft)	30,000	53,000	213,600	148,900
FAR	0.27	0.44	0.26	0.40
Parking Spaces	20.0	125.0	19.3	151.7
Parking Spaces / 1000 Sq Ft	0.7	1.3	0.5	2.3
Loading Docks	4.0	24.5	4.0	24.5
Building Class [A=1; B=2; C=3]	2.0	3.0	2.0	2.7
Number of Stories	1.0	1.0	1.0	1.0
Ceiling Heights (takes max if range provided)	N/A	28.0	N/A	28.0
Employees / Building Area (1K Sq Ft)	0.1	0.8	0.1	0.8
Employees / Land Area (Acre)	1.0	1.8	1.0	1.8
Employees Per Parking Space	1.3	0.2	1.3	0.2

Note: all statistics are based on a sample of less than 5 and should be used with caution

Beverage Manufacturing: Beverage Manufacturing firms that were started or relocated in the 2000-2007 period tended to locate in smaller buildings and on smaller sites than firms in other sub-clusters and since 2008, both building and parcel sizes have shrunk further. (See Table 8.) The median building size has fallen by more than 50%, from 14,000 square feet to 6,200 square feet, while the average has declined by about 800 square feet. Median parcel land area has decreased even more dramatically—by over 90%, from about three acres pre-2008 to one-quarter of an acre since then—while the average declined by over 40%. Because the parcel area shrunk faster than the building area, median and average FARs have roughly tripled (from 0.11 to 0.32 and from 0.11 to 0.37, respectively). Beverage Manufacturing firms continue to locate in Class C buildings and all but one firm is located in a single story building. The median and average number of parking spaces has increased by a factor of five while parking spaces per 1,000 square feet have tripled.

Two other firms in our sample, a bottled water manufacturer and an ice manufacturer, are both located on significantly larger sites (six acres and three acres, respectively) but have smaller building areas than the largest brewery. Both are located in less dense, vehicle-centric areas along major thoroughfares and represent more traditional Beverage Manufacturing industries. There were no examples of Beverage Manufacturing firms located in industrial parks in our dataset.

It is important to note that the sample for this grouping is almost entirely composed of firms sited since 2008 and that these patterns can be explained in large part by the fact that the firms sited since 2008 are mainly breweries and a winery, which are consumer-oriented and are located in higher density, more mixed-use areas like the east side of downtown and the E. Washington St. corridor. These more recently sited firms are part of a growing “artisanal food” and craft beer trend in Indianapolis and the U.S. and reflect the fact that Beverage Manufacturing firms are ideal for utilizing smaller industrial sites, particularly for infill in existing neighborhoods and mixed-use areas.

Table 8. Change in Median and Average Building and Site Characteristics for Beverage Manufacturing

	2000-2007 Median	2008-2014 Median	2000-2007 Average	2008-2014 Average
Land Area (Acres)	3.0 *	0.3	3.0 *	1.7
Building Area (Sq Ft)	14,000 *	6,200	14,000 *	13,200
FAR	0.11 *	0.32	0.11 *	0.37
Parking Spaces	10.0 *	70.0 *	10.0 *	50.3 *
Parking Spaces / 1000 Sq Ft	0.7 *	2.6 *	0.7 *	2.4 *
Loading Docks	N/A	5.0 *	N/A	5.0 *
Building Class [A=1; B=2; C=3]	3.0 *	3.0 *	3.0 *	3.0 *
Number of Stories	1.0 *	1.0	1.0 *	1.2
Ceiling Heights (takes max if range provided)	N/A	11.5 *	N/A	11.5 *
Employees / Building Area (1K Sq Ft)	N/A	1.8 *	N/A	1.8 *
Employees / Land Area (Acre)	N/A	25.0 *	N/A	25.0 *
Employees Per Parking Space	N/A	0.7 *	N/A	0.7 *

*Note: all statistics with an * are based on a sample of less than 5 and should be used with caution. Additionally, all 2000-2007 statistics are based on a sample of 1*

Food/Beverage Distribution: Three-quarters of Food/Beverage Distribution firms in the sample occupy stand-alone sites, with the remainder in industrial parks. Among the stand-alone firms, the median Food/Beverage Distribution firm utilizes a 24,500 square foot, one story, class C building with 19' ceilings on a three-acre site. This sub-cluster has the lowest median land intensity with a FAR of 0.20 (the building covers just one fifth of the land area) but has an employment density of almost 6 employees per acre. The average employees per building square foot is actually the highest of any of the cluster groupings. Since 2008, both building and parcel size have increased, with average building size increasing from 41,500 sq. ft. for firms sited in the 2000-2007 period versus over 100,000 sq. ft. for newer firms; average parcel size also increased, from 4.3 acres to 7.7 acres. (See Table 9.) Because average building size has grown faster than average parcel size (145% vs. 78%), average FARS have also increased, from 0.20 to 0.36. The average number of loading docks has increased dramatically, from 6 to 13 (median increased from 3 to 12), while the average number of parking spaces has declined slightly (although the median has grown significantly). The average and median number of parking spaces per 1,000 square feet of building, however, have both declined dramatically from 1.8 to 1.1 and from 1.2 to 0.5, respectively. Both pre-2008 and 2008-2014 firms continue to inhabit mostly Class C, one-story buildings although average ceiling heights have increased by over 17% from approximately 19' to 23'.

Table 9. Change in Median and Average Building, Site Characteristics for Food/Beverage Distribution

	2000-2007 Median	2008-2014 Median	2000-2007 Average	2008-2014 Average
Land Area (Acres)	3.4	4.2	4.3	7.7
Building Area (Sq Ft)	24,500	36,200	41,500	101,800
FAR	0.19	0.28	0.20	0.36
Parking Spaces	35.0	50.0	50.0	48.0
Parking Spaces / 1000 Sq Ft	1.2	0.5	1.8	1.1
Loading Docks	3.0 *	12.0 *	6.0 *	13.0 *
Building Class [A=1; B=2; C=3]	3.0	3.0	3.0	3.0
Number of Stories	1.0	1.0	1.2	1.0
Ceiling Heights (takes max if range provided)	18.5 *	24.0 *	19.3 *	22.7 *
Employees / Building Area (1K Sq Ft)	0.7	N/A	2.4	N/A
Employees / Land Area (Acre)	5.9	N/A	21.8	N/A
Employees Per Parking Space	0.6 *	N/A	2.0 *	N/A

*Note: statistics with an * are based on a sample of less than 5 and should be used with caution*

Five of the Food/Beverage Distribution firms are in industrial parks; each of these started at their current site in the 2008-2014 period. These firms are significantly smaller in land and building area than stand-alone firms, with an average building size of 7,700 sq. ft. and land area of 0.4 acres. The median building size is only 2,600 square feet and the median land area is only 0.2 acres. The median and average FARs are significantly higher than those for the stand-alone firms with a median FAR of 0.35 compared to 0.20 and an average FAR of 0.41 compared to 0.26. It should be noted that both the FARs and land area statistics are somewhat more difficult to interpret for industrial parks, as in many cases these firms have access to additional, shared parking spaces and/or loading areas. Median and average ceiling heights are significantly lower than they are for stand-alone firms (14' vs. 19' and 17.6' vs. 20.7', respectively). These firms are all located in single story buildings and are mostly located in Class B spaces.

Qualitative Factors: Within Food and Beverage Manufacturing and Food Distribution sub-clusters is a trend towards bifurcation around site/building size and location decisions. Consumer demand, new regulations, and the emergence of shared space models like kitchen incubators increase opportunities for small-scale, urban producers while automation and food safety regulations create incentives for capital-intensive plant construction on large sites in industrial parks or on greenfield sites (usually) outside city centers. This bifurcation is likely to continue: consumer demand is likely to support further growth of small, artisan producers while traditional food processors expect automation and food safety regulations to be the major forces affecting operations and location decisions over at least the next five years.

Food manufacturers, like other firms, benefit from a robust business-to-business (B2B) sector and local suppliers, which Indianapolis offers. For example, one firm interviewed sources flour from nearby mills, contracts out trucking services to a local company, and sources some equipment and plumbing services from Indianapolis firms, while another spends most of its B2B dollars within Indianapolis. Safety is another important concern of food manufacturers, and several interviewees suggested that locating in an urban industrial site would require investments in 24-hour security and fencing. One interviewee noted that vacant industrial buildings were eyesores but also represented opportunities for infill or expansion.

Although generally ranked below logistics concerns, access to an able workforce at relatively low cost was cited as an important criterion for plant location. Interviewed firms hire workers from across the metropolitan area, but as one firm noted, Indianapolis' poor public transit makes it difficult for workers without a car to easily commute to their facilities. Two of the manufacturing firms interviewed for this project mentioned difficulty in finding skilled staff to address issues around an aging workforce and often high turnover in the food cluster. Firms mentioned that the available training programs at IVY tech and other institutions were helpful, but complained that existing programs lack the capacity to meet demand. High turnover was also cited as a factor discouraging investment in substantial on-the-job training and creating an on-going need for additional workers.

At many firms in food manufacturing, wages can be in the $12-$14/hour range, well above minimum wage but only 72% to 83% of the local median wage,[23] a factor that could contribute to the high turnover rates reported by some firms interviewed for this project. Competition from other low-skilled work such as construction and landscaping and a general lack of knowledge about food manufacturing careers add to the workforce challenge. Within food manufacturing, the most common jobs include baker, machine operators and slaughterers, relatively low-skill jobs. However, one firm cited a particular need for qualified repair, mechanical, electrical, and electronic technician workers.

Local B2B/On-Site: The median B2B/On-Site firm uses a 25,700 sq. ft. building on three acres of land and supports an employment density of 4.2 jobs per acre. However, there is huge variation within this grouping and multiple examples of firms with 200,000 sq. ft. buildings on ten acres of land. As shown in Table 10, the group of newer firms—those that have been at their site since 2008 or later—have smaller median building and parcel size but larger average building and parcel size indicating an increase in the number of very large firms (in terms of building and site utilization). Despite these trends, there has not been much change in the physical lay-out or characteristics of firms: FARs, number of loading docks, number of floors, and average ceiling height have changed very little. There has been a significant decline in employment density—both average and median jobs per acre are about 40% lower for firms that located at their site in 2008 or later compared to those that located in the 2000-2007 period.

[23] According to the Bureau of Labor Statistic's Occupational Employment Statistics Program, the median hourly wage for private sector jobs in the Indianapolis MSA was $16.78 in 2013.

Table 10. Change in Median and Average Building, Site Characteristics for Local B2B/On-Site

	2000-2007 Median	2008-2014 Median	2000-2007 Average	2008-2014 Average
Land Area (Acres)	3.0	2.4	4.6	8.0
Building Area (Sq Ft)	29,900	23,400	47,000	70,600
FAR	0.23	0.27	0.28	0.31
Parking Spaces	30.0	25.0	47.5	49.7
Parking Spaces / 1000 Sq Ft	1.1	1.0	1.5	1.4
Loading Docks	3.5	4.0	6.2	8.0
Building Class [A=1; B=2; C=3]	3.0	3.0	2.6	2.7
Number of Stories	1.0	1.0	1.2	1.0
Ceiling Heights (takes max if range provided)	20.5	20.0	20.5	18.8
Employees / Building Area (1K Sq Ft)	0.6	0.2	1.2	0.7
Employees / Land Area (Acre)	5.2	3.3	10.7	6.7
Employees Per Parking Space	0.5	0.3	0.9	0.3

B2B/On-site firms located in industrial parks tend to use much less building space and land than stand-alone sites — the median firm in an industrial park is in a 13,000 sq. ft. building on 0.8 acres — but tends to utilize Class B space, while virtually all stand-alone B2B/On-site firms are in Class C space.

Local B2B/Off-Site: The median B2B/Off-Site firm sites on a 2.5 acre parcel with 16,200 sq. ft. one story, Class C building with 18'ceilings. The median use is land-intensive, with a FAR of 0.21 (building covers only 21% of parcel area), and jobs per acre of 1.0. However, there is great variety within this group, with median building sizes ranging from 10,000 (Facilities Management) to 35,900 (Waste); median parcel sizes from 1.3 acres (Facilities Management) to 3.8 acres (Repair); median employees per acre from 0.1 (Waste) to 6.2 (Transportation and Logistics); and average number of parking spaces per 1,000 sq. ft. of building from 1.1 (Waste) to 4.8 (Facilities Management).

Firms that located at their site in 2008 or later are on average, located in buildings and on sites that are significantly smaller, with land area declining even faster than building area. (See Table 11.) The median new or relocated firm has a 14,000 sq. ft. building that sits on 2.0 acres. Median employment intensity (jobs/acre) is declining while mean is increasing, reflecting the influence of a couple of new sites with very high employment densities. Most B2B/Off-Site firms utilize Class C space, but this is even more pronounced among newer firms.

The post-2008 trends towards smaller buildings and sites and higher employment intensities can be explained by two factors. The first is the general decline in average land and building size of B2B/Off-site activities; of the six activities, three (Repair and Servicing, Local Transportation and Logistics, Other Business Services) experienced dramatic declines in land/building size; two (Local Trucking, Facilities Management) were more or less unchanged; and only one (Waste) grew, albeit significantly.

Many of the newer B2B/Off-Site firms have opted for industrial parks. Firms in industrial parks have almost identical median building sizes as newer stand-alone firms (13,600 sq. ft.) but utilize much less land (median parcel size of 0.6 acres). Firms in industrial parks are much more likely to be in Class B than in Class C space and tend to be in buildings with ceiling heights of about 20' rather than the 17'-18'that is common among stand-alone firms.

Infrastructure needs for sites of these firms included high-speed internet to support the "virtual" nature of B2B/Off-site businesses, and sufficient water and electric access. One firm encountered water infrastructure so inadequate that they were unable to install a sprinkler system for their building.

Table 11. Change in Median and Average Building and Site Characteristics for Local B2B/Off-Site

	2000-2007 Median	**2008-2014 Median**	**2000-2007 Average**	**2008-2014 Average**
Land Area (Acres)	3.5	2.0	6.0	3.5
Building Area (Sq Ft)	32,600	14,000	47,000	33,000
FAR	0.25	0.18	0.26	0.21
Parking Spaces	38.0	25.0	50.8	57.8
Parking Spaces / 1000 Sq Ft	1.4	1.8	1.4	2.8
Loading Docks	3.0 *	2.0 *	7.0 *	4.0 *
Building Class [A=1; B=2; C=3]	3.0	3.0	2.6	2.8
Number of Stories	1.0	1.0	1.0	1.2
Ceiling Heights (takes max if range provided)	18.0	17.0	17.0	18.3
Employees / Building Area (1K Sq Ft)	0.3	0.1	0.5	1.9
Employees / Land Area (Acre)	2.4	1.0	3.4	6.5
Employees Per Parking Space	0.3 *	0.1	0.3 *	1.0

*Note: statistics with an * are based on a sample of less than 5 and should be used with caution*

Qualitative Factors: B2B/Off-site companies often operate as "virtual businesses," dispatching workers to clients across the Indianapolis region. As such, they need central locations near customers and suppliers that are also convenient for often-dispersed workforces, but they do not necessarily require pristine storefronts in prosperous neighborhoods. They also have relatively limited site needs, as little work actually takes place at the central location; some require not much more than a small parking lot and a dispatcher's office.

B2B/On-site businesses, such as printing or logistics, tend to have more significant building and site requirements. These kinds of businesses, however, like the B2B/Off-site, have few walk-up customers. Surroundings and safety, while still important, are less critical than for businesses with a substantial retail component or frequent client visits. As such, on site blue-collar services can take advantage of formerly industrial buildings given their similar space needs. Many of the interviewed firms require technically-trained workers, such as experts in HVAC, security system installation or digital printing and several expressed difficulty with finding adequately trained workers within Marion County and expressed concern about an aging workforce coupled with little technical aptitude among younger potential replacements.[24] B2B/Off-site firms, in particular, face logistical challenges in providing training: workers are scattered throughout the region at client sites and many firms maintain only rudimentary central office facilities; in short, these firms often lack the "extra" workers and space needed to provide training at a central location.

Industrial corridors can present challenges for B2B cluster growth. Functionally obsolete industrial buildings and concerns about the cost of environmental remediation limit business expansion, and

[24] Six B2B firms were interviewed for this project, including a transportation and logistics company, a printing company, two security/safety system firms, a commercial HVAC and plumbing company, and a company that services industrial motors and equipment.

security issues dissuade firms that do have frequent on-site interactions with customers. Many of the service firms interviewed also had difficulty finding trained workers to employ in Marion County. Near-downtown neighborhoods, however, present the offsetting benefits of a central location and ready to develop sites for firms willing to locate in neighborhoods with rough edges.

Partially because of these challenges, local firms expressed interest in training programs to generate more technically skilled workers who live locally and would not require long commutes. IVY Tech's trainings are well regarded, but some interviewees believe that the scale of existing programs is inadequate relative to demand and that curricula are often not sufficiently targeted to the needs of existing businesses.

Recommendations

Growing the Blue Collar B2B Cluster: B2B is very flexible in terms of location, site, and building requirements and as such, represents a huge opportunity for repurposing industrial land. Marion County expected to add over 6,000 B2B jobs over the next decade; the project team estimates that this growth could absorb between 500 and 2,000 acres of industrial land. B2B/Offsite firms can absorb land in distressed areas with less than ideal highway access. Providing B2B firms with lower-cost options with slightly reduced highway access will improve bottom lines and open up spaces for firms that require excellent highway access. One option is to identify industrial corridors and even industrial park settings that are designed to reduce operating costs by sharing land and facilities, such as storage and parking and to address key challenges facing B2B firms, especially the need for spaces and curricula for training workers. Finally, the city and other local stakeholders should develop real estate options for local B2B firms with downtown customer bases: access to downtown is critical for a number of local B2B firms serving downtown customers. These firms often require only limited space and modest building amenities but face issues with security and neighborhood relations that could be addressed by clustering these firms in sites and buildings designed to manage these issues.

As part of B2B growth strategies, local education, medical, and corporate anchors should be engaged in a local buying program, perhaps modeled after Detroit's B2B Initiative (aptly named "D2D"). As part of an Indy2Indy (or "I2I") strategy, areas developed for B2B firms could also house land-intensive functions for major anchor institutions, such as warehousing, vehicle and other repair, or other functions that anchors would prefer to move off-site.

Growing the Food Manufacturing and Distribution Cluster: The city and local stakeholders should consider using industrial land investments to modify the low-wage, low-skilled model that defines parts of the food cluster in Marion County and likely keeps firms from growing and workers from advancing. Stakeholders should consider absorbing build-out or other capital costs for food-related businesses in return for these businesses agreeing to offer training and higher wages to workers for a minimum period of time. Over time, this should reduce turnover and increase profitability of firms, making the model self-sustaining. In addition, local stakeholders should encourage the formation of a Food Manufacturing and Distribution Cluster Working Group, which could support sub-groups on real estate needs and challenges, as well as workforce and training.

A second strategy would focus on creating more shared spaces and/or a targeted district for artisanal food manufacturers: this would help build on the momentum created by Goose Meats, Sun King Brewery, and others. Currently, there is limited infrastructure to help these types of firms succeed and grow, but also a clear need to support smaller firms with things like refrigerated space, processing facilities, distribution, etc. A district approach could provide a vehicle to better integrate the emerging food scene with existing neighborhoods by investing in general physical upkeep and aesthetics.

Study the feasibility of further Tech cluster growth near downtown: There already exists a strong geographic cluster of Tech firms near the downtown. This pattern likely reflects some combination of worker preferences, access to key assets like universities, and the need for firms to be proximate in order to collaborate. Although the Tech cluster was not examined in this study because of the limited job opportunities it creates for those without college degrees, the cluster is strong in the city and region and is projected to grow. Combined with projected growth, the strong geographic clustering pattern of Tech firms suggests that it might be able to utilize significant amounts of industrial land that lies close to downtown. Examination of Tech cluster potential could be part of a larger examination of the feasibility of an innovation district in one of the industrial corridors close to downtown. Such a district could support growth in the Tech cluster but also provide space and buildings to promote collaboration between small and large firms, for example in the Aerospace and Defense cluster.

Lower the cost of industrial land revitalization and repurposing: Currently, many firms pay market rates for this expertise or develop it in-house and absorb upfront costs in creating capabilities that might not be utilized again. This imposes costs and risks on individual firms, making it less likely that they will repurpose existing buildings or sites. One possible corrective would be to explore the feasibility of creating reasonably priced, easily accessible expertise around industrial building re-use and conversion, including advice on addressing contamination, other environmental issues/barriers, and energy efficiency options. Such a service might also include knowledge of available public, philanthropic and even private sector grants or low-cost capital. Such a program could be modeled on national models. For example, in Memphis, Community LIFT has proposed a façade program for core city businesses that would provide forgivable loans but also require that the businesses engage approved architects, thus ensuring quality, keeping costs low, and aggregating experience into a small number of architectural firms, creating deep local expertise.[25]

Assess the potential of white collar B2B to absorb industrial land: White collar B2B activities are also important to the city's economy, accounting for about almost 35,000 jobs in 2012. Most of these jobs will be located in office settings, but across the country, the variety of marketable office settings has expanded greatly to include shared spaces and repurposed industrial buildings. As such, white collar B2B could create significant opportunities for adaptive reuse of buildings in the city's industrial corridors. The assessment of the potential for white collar B2B to absorb industrial spaces should follow identification of the corridors and sites with greatest potential for continued industrial use.

[25] Mass Economics and Community LIFT, Mayor's Core City Incentives Report, June 20th, 2013 http://www.communitylift.org/sites/default/files/datafiles/Core%20City%20Incentives%20Report.pdf