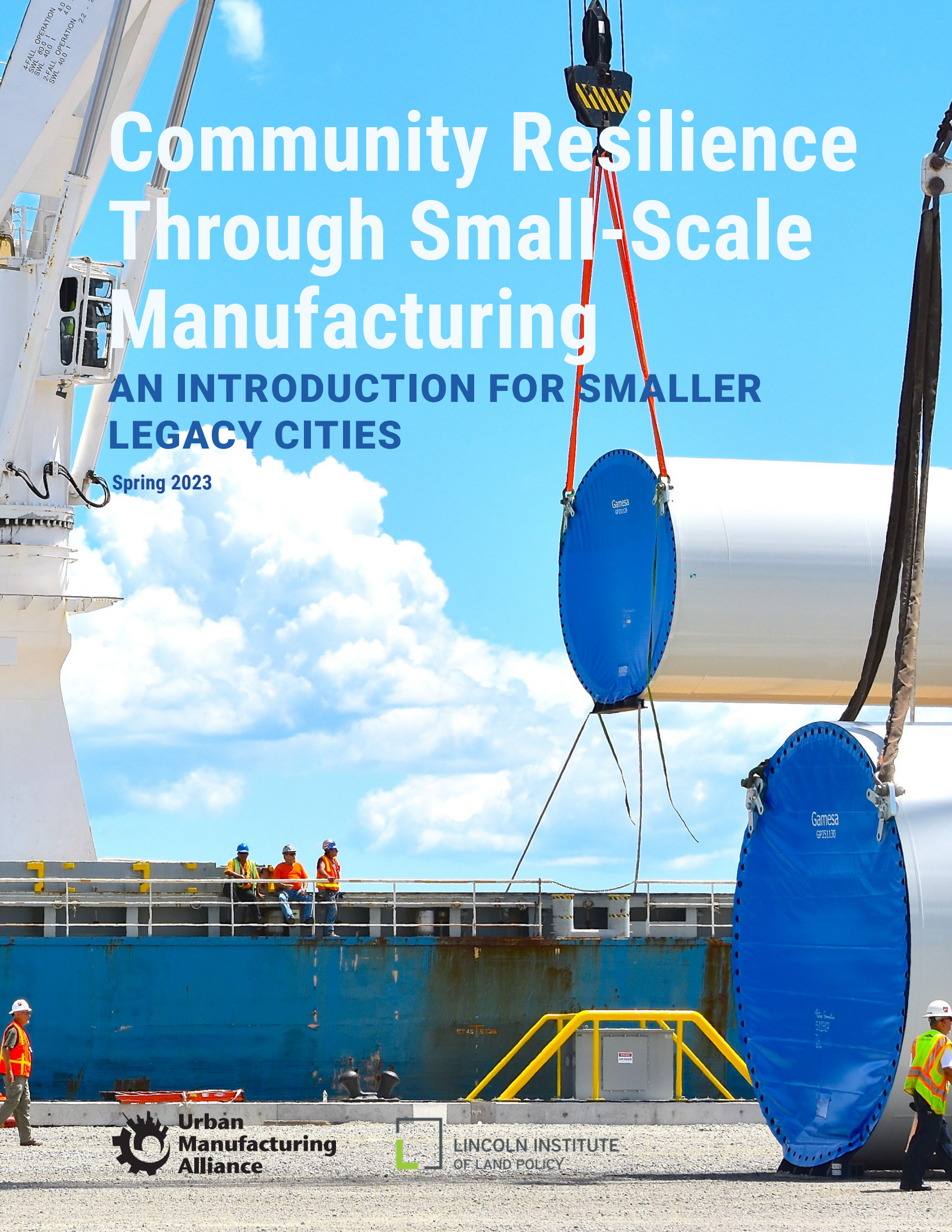

Community Resilience Through Small-Scale Manufacturing

AN INTRODUCTION FOR SMALLER LEGACY CITIES

Spring 2023

Urban Manufacturing Alliance

LINCOLN INSTITUTE OF LAND POLICY

Acknowledgments

This brief is the product of a partnership between the **Urban Manufacturing Alliance** and the **Lincoln Institute of Land Policy**.
The Urban Manufacturing Alliance (UMA) is a national network of partners building robust, equitable manufacturing economies fit for the 21st century. UMA's goal is to ensure that cities and towns continue to be the places where we make things—to create inclusive pathways to middle-class jobs, spark homegrown innovation, and lead to greater economic prosperity in communities. UMA takes a race-conscious approach to examining manufacturing growth strategies to create access for communities of color to build their own wealth through career pathways, ownership, and entrepreneurship.

The Lincoln Institute of Land Policy seeks to improve quality of life through the effective use, taxation, and stewardship of land. A nonprofit private operating foundation whose origins date to 1946, the Lincoln Institute researches and recommends creative approaches to land as a solution to economic, social, and environmental challenges. Through education, training, publications, and events, we integrate theory and practice to inform public policy decisions worldwide. The Legacy Cities Initiative, a Lincoln project, is a national network of community and government leaders working to create shared prosperity and bring attention to the common needs and collective importance of these older industrial centers. The initiative seeks to promote sustainable and equitable revitalization of legacy cities by convening leaders, stakeholders, and scholars; facilitating the exchange of ideas and practices; and researching and advancing new policy approaches**.**

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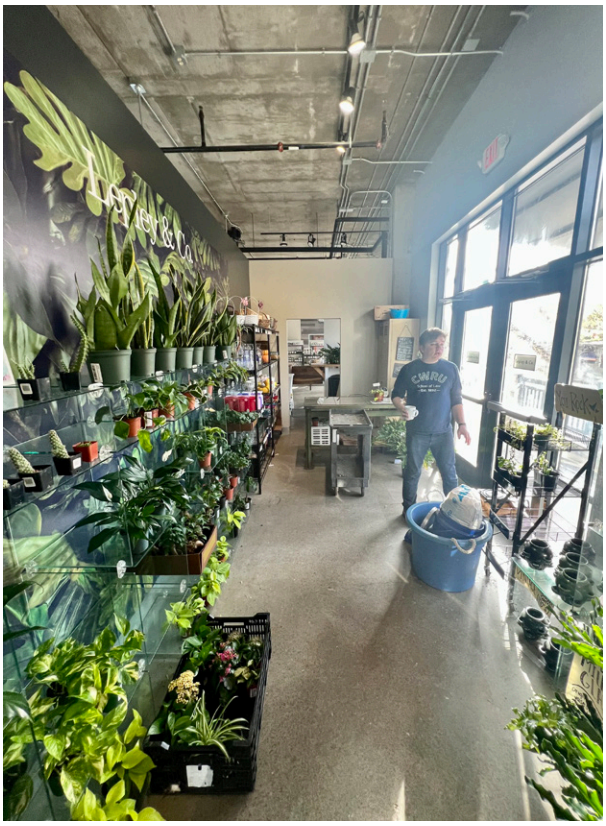
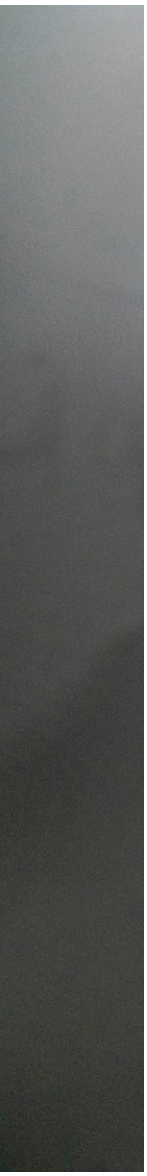


Executive Summary



Smaller legacy cities face shared and common challenges which have increased the urgency for economic development strategies that draw a stronger connection from growth to the prosperity of local communities. In these places, small-scale manufacturing is a strategy that has produced early results and demonstrated strong potential for supporting local economic growth. This brief offers a practical introduction to small-scale manufacturing as part of a strategy for community economic development. It highlights models across three case study cities of Akron, OH, Duluth, MN, and New Bedford, MA, that are utilizing an ecosystems-approach that helps small-scale manufacturing businesses start and scale where they are. It combines examples of ongoing small-scale manufacturing strategies with evidence-based data and proven strategies for implementation in order to offer a sense of possibility for smaller legacy cities, arguments to support advocacy for local small-scale manufacturing, and leads to start developing such ecosystems for peer cities. Within each case study city, it also examines the intersection of small-scale manufacturing work with sustainability and racial equity.

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Part 1: Small-Scale Manufacturing and Its Benefits for Smaller Legacy Cities

Introduction

Smaller Legacy Cities are places with shared histories of industrial dominance and loss, as well as common assets around industrial land, worker knowledge, and natural resources. They are defined as having populations between 30,000 to 200,000 residents and a history of population loss stemming in the latter half of the 20th century and which has continued throughout the 2000s and the Great Recession (Patras et al 2021). In the wake of the COVID-19 pandemic, smaller legacy cities face shared, familiar challenges with increased stakes, such as reduced tax revenue and budget cuts, job losses and housing instability. These challenges have increased the urgency for economic development strategies that draw a stronger connection from growth to the prosperity of local communities. In these places, small-scale manufacturing is a strategy that has produced early results and demonstrated strong potential for supporting local economic growth, environmental sustainability, and racial equity.

This report is structured in two parts. The first half begins with a profile of smaller legacy cities and a broad review of the benefits of small-scale manufacturing to tackle common challenges in smaller legacy cities from prior research. The second half explores three case studies—Duluth, MN, New Bedford, MA, and Akron, OH—delving into local small-scale manufacturing strategies based on interviews with local economic development practitioners. These are places where practitioners are beginning to examine emerging lessons and successes, and are seeing how small manufacturers are responding to other trends, such as tightening real estate and labor markets.

Within each case study city, we also examine the intersection of small-scale manufacturing work with sustainability and racial equity. Rather than limiting sustainability to narrow strategies for environmental protection, cities are defining sustainability as a more tempered, localized approach to growth. This includes how water access and port infrastructure enable cities to leverage additional resources, and how green energy sectors are offering new markets for small and local manufacturers. While many cities are interested in how to practically incorporate racial equity into an economic development strategy, time is often needed to develop relationships and let an understanding of a diverse set of needs inform practice. Throughout the case studies, we offer examples of racial equity strategies which

offer general lessons and encouragement for the smaller legacy city.

In response to stories of success, questions have arisen, such as, how can similar places leverage small-scale manufacturing as part of a vision for longer-term community economic development? How is small-scale manufacturing defined and what does it look like for modern firms facing rapidly shifting conditions? And finally, how can small-scale manufacturing come alongside racial equity and sustainability as pillars of the smaller legacy cities as it transitions to a post-pandemic world?

This brief is for audiences, particularly practitioners in smaller legacy cities, who want a practical introduction to small-scale manufacturing as part of a strategy for community economic development. It will delve into programs and organizations that are moving away from the traditional, and often zero-sum, approach of attracting and retaining large-scale firms through incentives that often fail to benefit local places. Instead, it will highlight models that are utilizing an ecosystems-approach that helps small-scale manufacturing businesses start and scale where they are. It combines examples of ongoing small-scale manufacturing strategies with evidence-based data and proven strategies for implementation in order to offer a sense of possibility for smaller legacy cities, arguments to support advocacy for local small-scale manufacturing, and leads to start developing such ecosystems for peer cities.

Smaller Legacy Cities

On their face, smaller legacy cities have many similarities to their larger counterparts. They have a shared history of prior dominance through industry, and during the deindustrialization of the 20th century, a history of disinvestment and job and population loss. They are concentrated in places where industry found it advantageous to locate: near natural resources, mostly in the Midwest and Northeast regions, as well as in the Great Lakes region, across the mid-Atlantic seaboard and down through the South.

Yet smaller legacy cities have unique challenges, and their paths to regeneration have received a much smaller share of attention. While they possess similar urban planning forms as their larger counterparts, including downtown cores and outlying suburbs, they have inherited similar infrastructure challenges, and must do more with less. From a fiscal perspective, they are not as efficient, and have higher proportions of non-tax-paying entities, while also confronting vacancy rates and remediation challenges. They often lack heavyweight, well-endowed anchors and

institutional assets such as large philanthropic entities, higher education, and businesses that have helped power recovery in larger cities. While some smaller legacy cities have seen remarkable revitalization, compared as a cohort with their larger counterparts, they have not demonstrated economic recovery to the same degree (Hollingsworth and Goebel 2017).

Despite a long-held reputation for affordability and availability of land and building stock, many smaller legacy cities are now facing significant affordable housing crises and industrial stock is increasingly squeezed by demand for distribution space from a range of businesses. This can place housing and industrial land uses in competing roles in a counterproductive way. While not a focus of this report, there are examples of smaller legacy cities that have successfully incorporated live/work housing strategies as part of small manufacturing plans. Increasingly, practitioners are acknowledging a direct relationship between housing and a successful economic development strategy. As one interviewee notes, “Housing is a workforce strategy” as the two are key, interdependent pillars of stability. As cities seek to assuage the crisis, increased coordination and understanding between affordable housing and workforce development strategies will result in more successful communities.

Place-based economic strategies in smaller legacy cities will find a unique playing field. Compared to large or even midsize legacy cities, comparatively small efforts can have outsized impacts, and even a single project can catalyze broader change. This quality also makes them living laboratories, places where civic leaders are more closely interconnected and where you can more quickly see the results of trying a new idea. Indeed, smaller legacy cities are often places of creativity and constant renewal, leveraging opportunities in their region and state, and even federal resources to develop their own specialized, local niches. Finally, research has found that these cities tend to have more extreme measures of struggle and success in terms of economic measures such as number of jobs, average income, and population growth or decline (Fox and Axel-Lute 2008).

Unique Benefits of Small-Scale Manufacturing

The word “manufacturing” often evokes images of heavy industry and economic and physical decline. Yet while large manufacturers remain in many smaller legacy cities, in the new economy, manufacturing has diversified and modernized. Broadly defined as “making things,” a diversity of businesses has risen based on methodologies such as craft, technology, and machine-based

or skill-intensive approaches. They are as likely to include the single entrepreneur testing a soap recipe in her home kitchen as a group of highly-skilled workers in a warehouse operating complex instruments to manufacture medical equipment. They fill different business niches, provide specialized components in supply chains, apply technology to bring improved processes to manufacturing, and can serve local and global markets.

Despite the benefits they bring, their unique needs and challenges tend to be overlooked in policy and land use discussions. UMA conducted surveys of small-scale manufacturers across six cities (State of Urban Manufacturing 2019) which found that many of these businesses are young and small—often microbusinesses—but growing. Many entrepreneurs don't consider themselves to be manufacturers, instead preferring to associate themselves with more explicitly creative categories such as designers, makers, and artisans. Some do not even view themselves as businesses. They need support to take advantage of market opportunities for craft or specialized products, to find locations that can support growth and operations, to identify a skilled workforce and to access capital for equipment and business expansion.

Yet smaller legacy cities have inherent advantages for cultivating small-scale manufacturing. They have inherited industrial land uses, a heritage of craft and manufacturing in local communities, and walkable urban cores. Particularly in the Northeast and Great Lakes regions, they can attract a significant population of migrants and immigrants, who are often people of color and of prime working age, seeking jobs and affordable living. Altogether, smaller legacy cities provide the place and people infrastructure for a new culture of "making things." In addition, while many places are being affected by the national affordable housing crisis, they still offer comparatively affordable and available land stock for small manufacturers. If cities learn and pay attention to their unique needs, small-scale manufacturing can be a powerful tool for local, inclusive economic development in smaller legacy cities, catalyzing main street revitalizations, providing pathways to build wealth for individuals, driving adaptive building and land use, and continuing to provide value and rationale for new infrastructure investments that benefit entire regions. Here are some ways that small manufacturers bring benefits to smaller legacy cities.

Infrastructure

Brownfields Redevelopment. Small-scale manufacturing can utilize existing building stock and can be an asset in a strategy for tackling vacancy and environmental contamination issues. A concentration of smaller brownfield sites in certain neighborhoods can affect large areas, extending a vicious cycle of disinvestment and becoming a barrier to revitalization. Small-scale manufacturers, especially ones in the growth stage, have a demand for small to midsize properties and can help be a part of development that preserves beneficial industrial use in markets which are increasingly prioritizing residential uses due to affordable housing crises. In some places, cities can leverage an existing small-scale manufacturing presence into a more impactful and strategic concentration. When cities provide support to current or prospective owners to understand remediation needs, secure public grants, and go through the process, as reflected in the Duluth case study, brownfields can become a platform for revitalization. If business owners are provided support, cities can also be the beneficiaries of businesses which are relocating manufacturing functions outside of higher-cost large urban centers, as reflected in the New Bedford case study.

Leveraging Port Infrastructure. Many smaller legacy cities have waterfront locations which in the past offered natural advantages for industry. Today, ports remain essential infrastructure and may have a direct or indirect relationship to small-scale manufacturing clusters which can be protected and further strengthened. Water access can also develop an appreciation for natural resources and the implications of climate change. In the Duluth and New Bedford case studies, both cities' water access confers natural advantages for attracting businesses to their cities as climate change affects ecology of seafood for fisheries in New Bedford, for example, and creates shifts in residential patterns.

Main Street Revitalization. Small manufacturers are diverse, and can be located in industrial parks as well as on main streets, or create visitor-oriented destinations in industrial areas. Craft and

beverage manufacturers such as breweries and distilleries can also include retail components and become visitor destinations. For struggling main streets, small manufacturers can help generate momentum and visitor traffic. But because they are not as dependent on visitor traffic as retailers or restaurants, they may be more willing to locate in markets which other businesses may consider risky.

In downtowns with large vacancies or facing shifting demand for commercial spaces in a post-pandemic economy, small-scale manufacturing can be a strategy to help fill these spaces and transition. They can easily replace retail users which were previously dependent on business from office users or take over office spaces which have downsized due to shifting trends towards remote work. They can provide a manufacturing-led use with retail components and create a self-sufficient economy which can be layered with destination and other types of businesses later. The Akron case study describes a new city program for the downtown district which will focus on attracting small manufacturers, among other businesses, to offset commercial vacancies.

Workforce

Good Jobs. In a new economy where jobs are increasingly bifurcated between low-income service jobs and high-income knowledge industries, small-scale manufacturing provides a rare pathway to a stable middle class income. NIST-MEP (The National Institute of Standards and Technology-Manufacturing Extension Partnership) operates a national network of 51 MEP Centers across the country. MEP Centers regularly collect data from the businesses in their state or territory. According to NIST, manufacturing jobs pay an average of $28.74 per hour and offer 32 percent more benefits per hour compared to employees in service industries. Many high-skilled, well-paying positions are in high demand. While skilled workers in legacy businesses

are aging out of the workforce, in a competitive labor market, small manufacturers are also more willing to invest in upskilling new workers and in retaining workers with high quality working conditions and benefits. However, cities must intentionally combat misperceptions that manufacturing jobs are not "good" jobs because they are dirty or based on manual or menial labor. They can start early to develop a pipeline of educated and skilled labor to fill employer demand around growing or developing industries, or support employers with apprenticeship programs such as the one described in the New Bedford case study.

Across the country, demand for labor means there is more willingness to train and upskill from within, which offers opportunities to economically vulnerable communities. Retainment is also a significant concern for manufacturing employers. According to Nate Robertson, previously of the Merrimack Valley Planning Commission, in Massachusetts, legacy businesses that have hired from extended social and familial networks of immigrants, and focus on creating high quality worker conditions, have tended to have higher rates of employer retention. For places that intentionally provide resources and support for integration, immigrants can be powerful drivers of economic development and fill a workforce pipeline.

Evolving Manufacturing Skill Sets. Even as many small legacy cities have diversified their economies beyond manufacturing, residents have retained or passed down manufacturing skill sets. A culture of "making things" often endures and may be practiced as a hobby rather than as livelihood. A small-manufacturing strategy can be a way for cities to activate this latent aspect of their local workforce. Rather than a one-to-one transferral of skills, it can be a way to build on and evolve past manufacturing skills for more modern practices and products. For example, in New Bedford, a history of fine machinery has evolved into medical device production and precision manufacturing. In addition, small manufacturing can

leverage local, skilled workers who commute to larger metropolitan areas but live in the community.

Regional Specialties. Identifying a cluster of small- or mid-market businesses around specific manufacturing sectors can be a way for cities to develop regional markets and beneficial relationships with larger markets. For example, New Bedford has identified and is focused on its historic strength in manufacturing medical equipment related to the robust healthcare and research institutions in Boston, and Akron has launched a new initiative focused on polymer companies which will convene businesses, research institutions, and the public sector to coordinate strategies for this industry.

New Economies

Accessible Entrepreneurship. Entrepreneurship through craft production can be accessible for individuals who lack formal training or education because these businesses can be built on skills they already have. Makerspaces such as Akron's Crafty Mart can be important places for members or the public to learn new skills and access more expensive equipment. Facilities such as commercial kitchen spaces, such as the one operated by The Well CDC in the Middlebury neighborhood of Akron, offer rented spaces for food-based entrepreneurs, and require less commitment to test concepts and learn skills without the burden of being fully responsible for maintaining regulatory compliance for health and safety in a kitchen. Smaller venues such as pop-up fairs and other craft-dedicated marketplaces can be opportunities for entrepreneurs to test their markets and refine products. Similarly, while people of color are often systematically excluded from business ownership, they have often passed down culinary and wellness practices within families or communities that can become the basis for product concepts. Home-based, small-batch production of food, beverages, holistic health, beauty, soft

goods, and other such products are increasingly frequent ways for entrepreneurs, particularly those of color, to build a business by tapping into their cultural identity and family traditions. While not for every business, the internet provides a pathway to connect manufacturers with a larger audience for specialty or craft products, a trend which was accelerated through the pandemic.

Culture and Pride. Finally, a small-scale manufacturing strategy allows for cities to tell a new story which resonates because it is based on historical manufacturing or entrepreneurship identity. It can be a building block in a broader strategy to help smaller legacy cities define their roles in the new economy. Research has shown that stories of past dominance and decline are powerful frameworks in legacy cities. A new narrative, with a sense of pride and continuity of place, can help interrupt patterns of disinvestment and identify the ways in which there are opportunities for local assets to grow or develop. In addition, it can form the basis of a new vision for manufacturing which is sustainable for local communities rather than being extractive. All the cities featured in this report take their inspiration from their histories, and interviewees all exhibited a sense of pride, opportunity, and optimism.

The case study cities are all creating ecosystems to support entrepreneurs and to embrace the idea that a cluster of small businesses can be more sustainable than one corporation. For example, a major focus of the economic development plan for Akron, Ohio has been to identify and coordinate all the major players that interface with businesses, including entrepreneurs and small businesses, in the region. Communities seek new economic paradigms to define success in more sustainable, locally palpable ways that support long-term resilience and equity. At its heart, small-scale manufacturing is aligned with the values of developing local assets, seeing those gains applied locally, and being part of a strong community network of neighbors.

Part 2: Case Studies

Three case studies were chosen as models for other smaller legacy cities and for diverse geographic representation. They reflect many of the shared common characteristics of smaller legacy cities, and the efforts they are undertaking can be replicated or taken as inspiration to seed other local strategies. They were also chosen for the presence of sustainability and racial equity efforts related to their small manufacturing work, in order to show how these two strategies can support economic development in conjunction with small manufacturing. Finally, these places demonstrate the breadth and diversity of small-scale manufacturing in terms of their land use, business development, and workforce needs.

Neighborhood Revitalization Powered by Craft

A Great Lakes city that is also a gateway to the west, Duluth's Lincoln Park neighborhood has experienced remarkable revitalization in the past few years through the development of a craft district. In this case study, you will find:

- Revitalization of the Lincoln Park neighborhood as a craft-based district using community economic development strategies;
- City efforts around brownfields planning and one-on-one support for brownfields redevelopment as a foundation for economic development;
- Sustainability as a citywide priority which is bringing investments into public utilities infrastructure, streets and neighborhood planning for future climate change;
- Learnings and innovations around cultivating entrepreneurship in the BIPOC community.

The Lincoln Park Craft District

Like many smaller legacy cities, Duluth, Minnesota has an impressive history rooted in access to natural resources and key transportation channels. Its location on the edge of Lake Superior, the largest body of freshwater in the world, and westernmost access for ocean freight, made it a natural gateway to the West in the mid-20th century for ore, the main natural resource that goes into steelmaking. According to the Duluth Seaway Port Authority, 80 percent of raw, accessible ore in the country comes from Minnesota, and Duluth was an important hub of steel manufacturing until the 1980s. Today, the port remains a key link in the supply chain to move ore to steelmaking facilities on the lower Great Lakes. While Duluth has since diversified its economy with healthcare and higher education, the manufacturing industry is still a powerful economic driver in the region.

The recent revitalization of the Lincoln Park neighborhood is a story of local business organizing, brownfields remediation planning, and the latent potential of a craft heritage in a place where families still value the skills of “making things.” A series of convenings, including a 2015 convening of local businesses, organized by community intermediary LISC, students from the

University of Minnesota Duluth's Cultural Entrepreneurship program led by Dr. Aparna Katre, local business service organization Entrepreneur Fund, and local non-profit Ecolibrium3, helped catalyze economic development planning. To seed local capacity for implementation of an economic development plan for a craft-based business district, LISC funded Ecolibrium3's first district coordinator position, launching an entirely new area of programming for the previously green energy-focused organization. In 2016, the City also adopted Lincoln Park Small Area Plan which changed local zoning to allow for more flexible land uses, including manufacturing and retail, which paved the way for a mixed-use district (Voltolini and Greenberg 2020).

Commercial Corridor Planning

Ecolibrium3 director Jodi Slick described an economic development plan with an initial strategy of expanding a base of self-sufficient, regional, destination businesses which could help to fill vacancies and begin to establish a functioning ecosystem. A core group of businesses wanted to focus on craft and maker activities that could build on its existing strengths, including in craft beer production, textiles, and leather. Corridor branding, individual business assistance, and corridor-wide promotions such as pop-ups led to a business district renaissance. With support from LISC, a collaborative of businesses and partners created a series of pop-up shopping events that helped launch the district. In consultation with businesses, Eco3 developed branding content, which included creating modern visuals for the corridor which could support a positive story and social media tools.

Eco3 also worked with a consultant to put together individual sessions with business owners which they called “property intensives,” where they would look at the business building and other branding feedback to help each business tell their brand story. For example, they worked with a local business to develop signage and images of their product to install on the outside of

their building and replace plywood which had been blocking their windows. They worked with another small business owner and property owner to brainstorm how to activate a parking lot in the front of the building and create a more pedestrian-friendly environment. Most businesses that they worked with owned their properties and therefore had more flexibility to make changes and an inherent interest in investing in them.

Today, the Superior Street corridor, where the main core of small-scale manufacturers resided, drives visitors from all over the region. Retailers and other businesses which are more reliant on pedestrian traffic have moved in. Ecolibrium3 is beginning to develop the type of mid-rise mixed-use housing and commercial spaces that was envisioned as a final stage in the long-range plan, and a long-awaited, full-service grocery store is finally in development and will provide food access to the local community.

Port Infrastructure

While much of the press around Lincoln Park focuses on the craft district, the neighborhood also includes the port, a reminder that major industry in the city is still an economic driver. The Port of Duluth works with a system of ports in the Great Lakes, particularly around the steelmaking supply chain which is oriented towards steelmaking facilities in the Lower Lakes. In addition, as an international port and the furthest freshwater inland port in North America, 80 percent of grain that moves through the port is exported. An economic powerhouse, the Duluth Seaway Port Authority (DSPA) serves more of a regional business market and finds supply chain solutions for companies so they can stay competitive globally, supporting internal trade. DPS also offers logistics support to industrial companies looking for land and as a participant in industrial land planning conversations has advocated for the importance of preserving and supporting industrial land development.

From the perspective of Deborah Deluca, the director at DSPA, the arc of Duluth's economic base since the steel plant closures in the 1980s has traced not only a diversification of manufacturing but also created an ecosystem of smaller manufacturers and supporting services in the region, such as engineering firms. In addition, she sees employees moving back and forth between small and larger manufacturers as they both serve as job incubators. A 2018 economic impact study found that the average annual income in the City was $69,000 for industrial jobs and $48,000 for other sectors.

While there are currently limited direct links between the activities at the Port and the more visitor-facing craft businesses, the Lincoln Park neighborhood is a reminder of the importance of small-scale manufacturing in its different forms and land uses.

Brownfields Planning

While the Lincoln group was planning its commercial corridor work, the City of Duluth had been working to tackle its deep portfolio of brownfields parcels. While most of the parcels were privately owned, lack of understanding around remediation needs were barriers to investment, redevelopment, and ultimately activation of the land, work that "set the table for other opportunities," says Heidi Timm-Bijold, who managed the brownfields efforts at the time. Working with its regional EPA office, the City was able to secure funds to do investigations in two target districts with a high number of brownfields, including Lincoln Park. This resulted in identification of brownfields parcels and investigations at the parcel level, which resulted in profiles outlining the nature and extent of anticipated remediation for parcels. The planning also explored potential opportunities for uses beyond economic development such as housing and open space planning.

The City provided one-on-one technical assistance for property owners to apply for remediation funds and carry out remediation processes. This support removed some initial obstacles to redevelopment of underutilized or vacant properties and having a specific contact in the City dedicated to tackling brownfields challenges helped property owners problem-solve with confidence. Heidi noted that these efforts involved developing a close relationship with their associated federal Environment Protection Agency (EPA) regional office and the agency's headquarters and keeping abreast of funding opportunities. Ultimately, she says, their sustained focus on brownfields was based on an assets-based approach and seeking to leverage brownfields properties to support new uses.

State and Federal Resources for Sustainability and Equity

Today, Duluth is focusing on sustainability more broadly. Under Mayor Emily Larson's administration, the city's first Sustainability Officer, Mindy Granley, describes sustainability as a broadly practical set of solutions to ensure that Duluth is a city which is attractive to invest in and to live in. She focuses on offering solutions across city departments such as lowering utility costs and making sure to invest in basic infrastructure maintenance alongside upgrades for future climate changes. Equity is also integrated into the decision making in the Mayor's office, with staff asked to reflect on who pays for and who benefits from policy decisions, with a focus on impacting the most vulnerable populations and communities.

Duluth looks to state and federal resources which are either environmentally focused or include sustainability and equity as incentives or requirements. Federal programs and agencies that Duluth has drawn from to support its sustainability goals include a disaster prevention program to replace water infrastructure with Federal Emergency Management Agency and the Department of Transportation's Redeveloping America's Infrastructure with

Sustainability and Equity program (RAISE), as well as future federal infrastructure programs through the Infrastructure and Investment Jobs Act of 2021 which will amount to new spending of $550 billion over the next decade.

At the state level, the City recently submitted an application for the Local Energy Efficiency Program (LEEP), a state program based in the Department of Commerce which provides assistance to complete investment grade audits (IGA) for local units of government in order to contribute to statewide energy use reduction goals and create jobs. If the city receives the grant, which would be applied to a climate change plan for the Lincoln Park neighborhood, it would allow it to assess the types of investments needed to keep the neighborhood prepared for future climate changes, which would have implications for planning across the city.

Mindy notes that local governments, especially in smaller places, often have heavy existing burdens such as aging infrastructure and high poverty rates. On their own, they lack the resources to prioritize sustainability or equity. “It’s never easy,” she says of state and federal processes. “But when the state or federal government puts sustainability requirements or equity requirements in those programs, it does help us meet [those types of] goals.”

Supporting BIPOC Entrepreneurs

While sustainability and equity incentives have enabled federal resources to flow to Lincoln Park, like many places, Duluth has struggled with converting those resources into meaningful gains for its most vulnerable, especially BIPOC individuals, and particularly BIPOC entrepreneurs. Lincoln Park's business revitalization has largely left out BIPOC businesses and workers, and with the neighborhood's strengthened real estate market, the low-income renters are uniquely vulnerable to displacement.

To address the gap, LISC and University of Minnesota-Duluth worked together to bring in a New Mexico-based entrepreneurship curriculum and piloted it for a cohort of BIPOC businesses. After the pilot program ended, one BIPOC-led organization in the community, Family Freedom Center, chose to adapt the curriculum for BIPOC youth entrepreneurs, and another group, Family Rise Together, developed its own curriculum from scratch.

For ChaQuana McEntyre, director of Family Rise Together in Lincoln Park, small business information is “already out there,” and the primary need is to create a supportive culture to bridge this content for the BIPOC community and especially the Black community. To that end, Family Rise Together seeks to create safe spaces where clients can envision and develop accountability around their success. The Family Rise Together business development curriculum decodes basic business concepts, presents examples of BIPOC business success, and also provides coaching and mentoring to instill confidence. They work in coordination with Family Freedom Center to provide education and technical assistance to entrepreneurs who have developed a basic business plan and vision and are taking concrete steps towards opening a business and commercializing a product.

ChaQuana notes that property and business ownership are the two major pathways to wealth building in the US. To that end, Family Rise Together focuses on building the capacity of communities of color to start businesses that can drive generational wealth. A key part of her mission is shifting the perception that Black individuals can be successful in business, so she started her outreach to an unusual audience: incarcerated individuals serving life terms. By working closely with this group, she was able to access their unique social, family, and community networks and to spread the gospel of intergenerational wealth building.

NEW BEDFORD

Long-Term Economic Strategy and the Ocean Clusters

This former whaling port, now a fishing port, is supporting small-scale manufacturers in the growth stages to expand or relocate to the city. In this case study, you will find:

- A long-term economic development strategy which sees small-scale manufacturing as a pathway to high-quality, stable jobs located in the region
- The evolution of New Bedford as a hub for manufacturing relocating from Boston and other others, particularly in medical instrument manufacturing
- The renewal of port infrastructure and the increasing complexity and sophistication of logistics and technology in the seafood processing industry
- How the city is positioning itself as the center of the newly developing offshore wind sector in the country

Focus on Entrepreneurship

In New Bedford, Massachusetts the ocean is past, present, and future. A former whaling and textiles town, the city has diversified its economy, and fishing and seafood processing now constitute major economic pillars. The two-mile stretch of waterfront which constitutes the port generates two percent of the state's GDP. The port itself is a revolving hub of recreational uses, including a 50-slip marina, but it remains key to marine-based economic activity with piers for fisheries, a break bulk pier, fish and seafood processing plants, and a smorgasbord of small businesses which service the fishing industry.

New Bedford's port is seeing increasing demand coming from the climate-driven northward migration of fishing waters. It also installed a breakwater in the 1960s to shield the port from major storms, which has made the port particularly attractive to recreational water vehicles. All of this adds up to a surplus of demand at the port and a deficit of space—a situation which is becoming all too familiar across the state.

New Bedford Economic Development Council (NBEDC) works with what it calls "ocean clusters" and has led a focus on small-scale manufacturing in New Bedford. NBEDC is a non-profit organization, which separates their economic development planning from the city's two-year electoral terms (a policy which was recently amended for the mayor's office). While they consider the city to be one of their most important partners, their organizational independence has enabled a long-term transition from an economic development vision that was focused on attracting large corporations to a more sustainable vision which focuses on identifying and developing assets for local benefits. The organization fields and manages external business and investor interests, and provides technical assistance and support to local businesses and businesses relocating into the region.

NBEDC sees small-scale manufacturing in New Bedford as particularly suitable for the city given its land and building stock and its historical supply of manufacturing workers. They welcome

these types of businesses because of their high quality jobs, and they also focus on developing and growing those businesses which are already in the city. The typical case they encounter is a small manufacturing company which has seen initial success and is looking to scale up production and relocate to a larger site. NBEDC director Derek Santos notes that small-scale manufacturers typically have strong technical expertise but that "there are costs to scaling up." NBEDC provides management support, business planning, and relocation support to find a new site.

NBEDC manages and is part of a larger network of regional partners through New Bedford SourceLink, a platform which connects a large network of primarily nonprofit service providers, offering a wide variety of business-building services for maritime, arts and culture, and main street entrepreneurs. In addition to the work that NBEDC provides directly to small businesses, they and the platform members also promote and connect small businesses to other network partners and services, such as business planning, loans/financing, and product development. By facilitating these direct connections, they can offer support across the spectrum for entrepreneurs and small businesses.

Regional Specialties in New Bedford

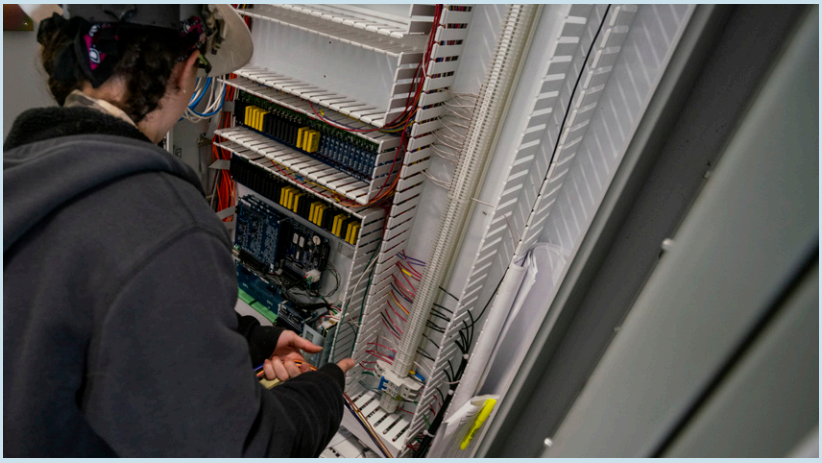
When it comes to specific small-scale manufacturing sectors, NBEDC stresses the evolution of existing strengths, particularly in the seafood processing industry. Fish processing involves sophisticated technology and innovation, and processing businesses also serve as logistics hubs. As Derek notes, “They have a global reach [and] a completely cloud-based application” to track a single product’s origin, destination, processing timeline, and steps along the way. Most of the seafood which is locally processed is not landed in the local port but trucked or railroaded in. Businesses use advanced technology to generate value added products, such as prepared and frozen seafood dinners.

As the fishing industry has evolved, so has local zoning. NBEDC worked with the City in 2021 to amend the zoning code which applies inside New Bedford’s business park area to allow for secondary fish processing. This is a way to supplement the areas along the waterfront which were only zoned for fish processing, and enable and encourage businesses that focus on value-add processing to locate those activities in the business park.

Another strong small-scale manufacturing sector is medical devices and instruments, along with other machinery parts. NBEDC points out that the city has been producing fine machinery since the 1890s. They encourage businesses to expand or relocate in the region because they offer high-paying, high-quality jobs. Joseph Lopes, deputy executive director of Greater New Bedford MassHire, the region’s workforce agency, notes that much of the activity in medical device production is being driven by businesses that are based in Boston but are outsourcing their manufacturing arm due to rising costs. This creates an opportunity to further strengthen New Bedford’s role as a small manufacturing hub.

Investing in Skills Training

Greater New Bedford MassHire works directly with small manufacturers through its apprenticeship program, a federal Department of Labor program funded through the American Rescue Plan Act (ARPA). This program supports workforce development through two main pathways, pre-apprenticeships for workers below 24 years to provide skills training, and apprenticeships for workers above 24 years who are working for a company and seeking to improve skills. Through the program, the company can upskill existing workforce and train them on machinery and technology to increase productivity in the factory. The employers follow standards set by the Department of Apprenticeships and MassHire acts as a conduit to work with companies and reduce paperwork. While this limited three-year program began last year, it has worked well for small manufacturers such as welders and solar technicians.



With labor being a primary concern right now for most employers, some small-scale manufacturers are providing their own on-the-job training as a form of long-term investment. According to Helena DaSilva Hughes, the president and CEO of the Immigrants' Assistance Center, established employers such as Precix, that manufactures elastomeric sealing products for aerospace and other industries, or Joseph Abbaud, the menswear company, can provide this kind of investment and do retain employees.

Supporting Immigrant Entrepreneurs

New Bedford has a historic identity as an immigrant destination. Prior to the 17th century, it was a fishing center for the Wampanoag tribe. Over the years, it experienced successive waves of immigrants from different regions. As a whaling town, it drew African, British, and Portuguese immigrants through the 18th century. In the mid-19th century, the city became a destination for Irish immigrants fleeing the potato famine, and the mill industry attracted additional British and Portuguese immigrants, as well as French Canadians. In more recent years, Dominican, Puerto Rican, South American, and Asian communities have established themselves in the city (New Bedford Whaling Museum).

Today, the immigrant business community is extremely diverse. Immigrant business owners are more likely to be limited English proficient, own microbusinesses of 10 people or less, and have limited business and technological literacy. Providing education and support is a deeply intensive process, but it is a resource that has not been provided in a meaningful way in New Bedford. For business owners with a higher level of capacity and literacy, it is important to increase awareness of resources. Others need much more intensive education and support, which is not currently being provided in New Bedford, but that IAC hopes to provide in partnership with other trusted interlocutors in the region. Of these

business owners, Helena says, “You can’t just give them a link and hope that they’ll be able to do this themselves.”

According to her, understanding the specific groups, their concerns, and the ways they consume and share information are key to targeting the audience and doing it consistently and to the level needed is the key to successfully serving them. Immigrants are often left out of the typical social media platforms utilized to distribute information about business resources because they may not utilize them, preferring platforms such as radio and television, or prefer alternative social media platforms such as WhatsApp. In 2020, many immigrant owned businesses never heard of PPP loans and most were not able to take advantage of resources they may have qualified for.

NBEDC recently received a $1MM from the Small Business Administration (SBA) through its Community Navigator Grant program, enacted through ARPA and aimed at supporting recovery for the nation’s smallest businesses through the COVID-19 pandemic. According to NBEDC, it has learned important lessons to implement this program through an organizational Diversity, Equity, and Inclusion (DEI) process, including how to better serve immigrants and communities of color. It has increased marketing of its programs to populations and places in the city that they have not traditionally focused on, and sought to work with trusted partners. Internally, it has shifted its recruitment strategy, and increased diversity among its staff and committees to better reflect the demographics of the city.

Leveraging Port Infrastructure: Offshore Wind

New Bedford has landed in the national spotlight for its role in the future offshore wind (OSW) sector, which has been developing in anticipation of federal and state renewable energy targets. The region has been preparing for years to host the country's first offshore wind facility. It takes about a decade to plan and carry out a wind farm as a major utility construction project, including two to three years of sea surveying, and a turbine has a lifespan of 20-25 years. This represents significant opportunities for the port of New Bedford, which is uniquely positioned to play a key role as a staging site for construction and eventually the base of operations and maintenance for the wind farms.

In addition to New Bedford's function as a deep-water port with a hurricane barrier that can accommodate and protect larger vessels, the offshore wind industry sees the region's thriving commercial fisheries industry, and related manufacturing and logistics businesses, as part of its inherent appeal. The port is already equipped with vessel services and suppliers, as well as supporting industries. New Bedford Ocean Cluster (NBOC) began in 2021 as a trade association to bring together New Bedford's various ocean clusters, and since its inception has focused on bridging OSW opportunities.

According to NBOC director Jennifer Downing, while offshore developers are largely foreign, European-based companies from the mature sector based in Northern Europe, the goal is to build capacity for a domestic sector and connect developers to immediate opportunities for the local supply chain and workforce, including small businesses. (To give a sense of the opportunities, each turbine has about 800 components, and turbines are located at sea, requiring ongoing use of vessels for surveying, maintenance, and operations.) The NBOC's At Local initiative focuses on: understanding local services and products, seeing where they can fit into the supply chain; communicating the opportunities and connecting businesses to resources that can help them to access opportunities; and preparing them for specific certifications and safety requirements of the industry. One local company, Intra, a marine ship supplier, is starting to supply some products to vessels working on the first substation located in Cape Cod.

Offshore wind is also an area where opportunities are large enough and the timeline is long enough to coordinate significant workforce development efforts, a key concern for offshore wind developers looking to enter into the space in New Bedford. Bristol Community College, a local college, has been a key actor in positioning the region to take advantage of offshore wind opportunities. They are establishing an offshore institute, a training and certification facility, opening in New Bedford in early 2023.

The port itself is pursuing opportunities to replace and update aging infrastructure. Due to ecological factors related to climate change, fish stock have continued to move north, bringing an influx of fishing vessels from all over the East Coast who drop off their catch in the port before returning to their port of origin. John Regan from the New Bedford Port Authority noted that thankfully, there has been an "extraordinary" amount of state and federal funding for offshore wind that has extended to infrastructure. Some of the state resources focused on offshore wind have included port infrastructure challenges. The Port Authority has leveraged many

of those resources, including for the six city owned wharfs that were at the end of their usable lives. For example, they received a $35MM infrastructure development project grant to rebuild one of its wharfs, and the Port Authority has applied for another program to raise, rebuild, and extend another of the wharfs. It also has plans to seek funding to update its safety and security, including vessel tracking technology.

Sustainability is reflected in different ways in the OSW and the fishing industries, both of which are bound together by ocean access. While the OSW industry is more explicitly driven by federal and state environmental policies, its local benefits are largely described through an economic opportunity lens and as a pathway to improve port infrastructure for the seafood industry. Fisheries undergird the port's significant economic strength and are dependent on the ocean for their livelihoods. As a result, they are invested in the maintenance and health of its ecosystems, which OSW development will temporarily disrupt.

As development of offshore wind often creates tensions with local fishing industries due to concerns over ecosystem and business disruptions, NBOC is focused on ensuring a smooth implementation process, mitigation of effects on fisheries, and a successful long-term co-existence of the industries. NBOC sees potential intersections for offshore and the other ocean clusters, including aquaculture and innovation and technology.

AKRON

Creating an Ecosystem of Support for Entrepreneurs

With a business friendly environment and a strong civic leadership capacity, Akron, once known as the "Rubber City," has turned its attention to polymers, entrepreneurs, and a broad racial equity focus. In this case study you'll find:

- A citywide commercial corridor program with a commercial space matchmaking function that identifies small-scale manufacturing as a way to jumpstart revitalization in stagnant markets and trim the city's stock of vacant office and retail space
- An evolution of the rubber industry and its related sectors from high volume businesses and low-margin consumables to a focus on service and local markets
- The rise of a coordinated regional effort to create an ecosystem of support for entrepreneurs
- Racial equity as a key goal integrated across partners and program strategies

Regional Specialties: From Rubber to Polymers

Akron, Ohio used to produce 90 percent of the rubber tires in North America. Companies pulled production out of Akron in the 1960s and moved to the American South or overseas, leading to closures of major factories and significant job and population loss. This left a void for small- and medium-sized manufacturers who served clients with niche, smaller orders as well as a local marketplace. The industry's geographic market change, along with the scale of production, forced Akron to become more reliant on service-oriented businesses.

According to Sam DeShazior from the City of Akron and Gregg Kramer from the Greater Akron Chamber, rubber and its related industries have also evolved and transitioned. The previously dominant "mold" industry, which produced low-margin consumer durables from rubber ducks to shoes, has largely departed, but opportunities are now developing in additive manufacturing[1]. These days, while Akron has kept major players such as Bridgestone and Goodyear, it has also gained international rubber companies who have placed their R&D and technical centers in Akron, and this has developed supporting a host of related companies at the midmarket level, including service providers and suppliers.

Akron's new Polymer Cluster Initiative, launched in 2021, is an attempt to convene and brand a set of polymer assets in the region that have evolved from the city's center of the rubber industry (rubber is a type of polymer). Members include the University of Akron (recently ranked as the top school for polymer engineering in the world), local manufacturers, and other related businesses and research institutions. Public partners such as the Chamber and

1 "Additive manufacturing uses data computer-aided-design (CAD) software or 3D object scanners to direct hardware to deposit material, layer upon layer, in precise geometric shapes. As its name implies, additive manufacturing adds material to create an object. By contrast, when you create an object by traditional means, it is often necessary to remove material through milling, machining, carving, shaping or other means." (Source: https://www.ge.com/additive/additive-manufacturing)

the City of Akron are leading conversations around collaborations such as workforce development and lab space and are connecting partners to different resources. The public conveners hope to harness the innovation of this sector, track and respond to trends, and focus on shared goals such as sustainability and finding a way to reuse polymers after their useful life. The Cluster has applied to the federal Economic Development Agency to support its work.

An Ecosystem of Support for Entrepreneurs

Bounce Innovation Hub, a nonprofit spun off from the city in 2017, drives impact through its 300,000 SF facility that is leased out to small and microbusinesses, as well as programming for the small business community. Currently, about half of the leasable space is being used for small manufacturing purposes, and that space is split between larger space users such as a hydroponics facility and small space users, mostly craft and creative entrepreneurs. Bounce was developed to meet the needs of start-up and growth businesses, and staff meets weekly with its collaborators and partners to share developments and collectively work towards regional economic development strategies. The city also works closely with partners such as MAGNET (Manufacturing Advocacy Growth Network), a nonprofit based in nearby Cleveland with a locally-based office that provides consulting and business development services to manufacturers across a range of sizes and industries, for a fee determined on a sliding scale.

Sam describes the typical small-scale manufacturer in Akron as “the football coach of a small school” who is playing a host of different roles and focused on implementation. Services provided

by these partners are a chance to focus on strategy and business development. “It helps them to be resilient in the market, to meet the new challenges of today and to face the challenges that are going to be coming in the future because they see that new wave of whatever is changing.”

Elevate Greater Akron, the economic development plan for the Chamber, city, and county at a time of executive leadership change in 2016, was one process that catalyzed a focus on entrepreneurship across the region. The plan identifies the major players that interface and provide support for businesses across the scale in Greater Akron, including small-scale manufacturers. The coordination across these different players has ensured that services are not duplicated and that the city is able to respond to needs efficiently and effectively.

While partnerships existed before the planning process, those partnerships became more visible through the plan and several distinct lines of programming emerged. “The work around entrepreneurship has become more intentional,” says Misty Rogers of the Akron Urban League. Today, while they are six years out from the plan, the partnerships and collective efforts that have come out still continue through regular committee meetings that are seen as opportunities to collaborate and work on Akron as a collective project. Says Sam, “Our conversations lead to action, not more conversation.”

Main Street Revival

Akron is focused on rebuilding the city's population and sees entrepreneurs as building blocks to generating denser, neighborhood-based live/work patterns across the city. The City of Akron's Great Streets program exemplifies this approach and encourages smart growth and community development across 13 business corridors in the city, with a focus on low-income areas where there is a concentration of communities of color. Great Streets works to fill commercial vacancies on these corridors through its Rubber City Match program, a matchmaking service for small businesses looking for space and building owners. Program participants can receive grants and loans through the city and its financing partners.

Mark Greer, who manages the Great Streets Program, sees small-scale manufacturing as a key strategy in revitalizing business corridors. Akron, like other cities, has suffered revenue loss from the significant decline in office and retail space use due to the shift to remote work. Given that Akron is unlikely to see demand in these uses fully recover, he sees small-scale manufacturing as a strategic way to pivot vacant spaces to other uses. Many of the small-scale manufacturing businesses that are coming to his office do not require extensive retrofits and as a result can quickly move in and activate the spaces.

In addition to having a shorter runway to operation, he also notes that many manufacturing businesses can operate retail elements but are not reliant on them, making them the perfect candidates to jumpstart a market which other retail-based businesses may view as risky or stagnant. A recent Rubber City Match grantee, Srina Tea, which roasts teas and makes organic holistic foods, is opening an expanded space in Tinmore District and will also operate a teahouse and community gathering space. They eventually plan to build a greenhouse on site. Another business, a coffee roaster looking for expanded space for his business, was connected to a building owner in the Merriman Valley neighborhood through Great Streets. The building owner convinced him to start a coffee shop on site.

The City of Akron is currently developing a version of Great Streets that will offer unique support to the downtown district. It will also include a focus on recruiting minority-owned and women-owned businesses, which the downtown district has historically lacked. Even in the past few months, they have had three minority-owned, small manufacturing businesses open downtown, including a home goods manufacturer that specializes in textiles, sewing, and pottery goods that it sells in a retail storefront.

The City is supporting Main Street development with zoning changes. In addition to transitioning to a more form-based zoning code in the near future, in some districts, they have already implemented form-based codes to encourage more pedestrian environments and street activation through allowing mixed uses, eliminating setback requirements and moving required parking to the rear of buildings. Recently, the City amended zoning in the West Hill neighborhood to allow for mixed-use in a more traditionally-residential area, as a result of demand from local residents who wanted to operate craft-based businesses on the first floor of their buildings.

Supporting Black Entrepreneurs Through Planning and Partnerships

Inclusivity emerged as a major priority of the Elevate Greater Akron plan. The plan showed that Black individuals had been left out of economic development and that was "part of the reason that Akron may not have grown as much as it should have," says Misty. She also notes that as Akron prioritizes its population and economic growth, it sees inclusivity is a major pathway to boosting that growth. The Urban League has been one of the most significant actors through its Minority Business Assistance Center (MBAC), one of seven regional, state-funded centers in Ohio supported by the Minority Business Development Division (MBDD). MBAC provides management, technical, and professional assistance, access to capital, surety bonding, connection to business opportunities, and assistance with certification. It has seen an increase in small-scale manufacturing emerging from this program.

Misty says that minority entrepreneurs come with a steeper learning curve. "For a minority entrepreneur, they may not have the entrepreneurial mindset passed down from generation to generation. It's them starting from scratch and trying to figure it all out. How to do business, protect their product... Maybe this has been a recipe in their family for a long time, but nobody took it to the level of manufacturing and selling." In addition, more than other entrepreneurs, they are typically still working full-time jobs and have less time to dedicate to developing their business and no other employees.

The Urban League not only provides a base of knowledge but also intensive support and opportunities to develop an entrepreneurial mindset. For example, a recent event was a roundtable meet-and-greet with lenders, which Misty noted helps entrepreneurs understand the importance of not only having a bank account but a relationship with your banker. For minority entrepreneurs in the manufacturing sector, most of their clients are in the start up stage and many of them have product concepts based on their cultural background. The Urban League connects them

to resources that can help them tackle basic challenges such as learning the process of mass production and applying for patents and trademarks. They also provide access to the range of manufacturing support in Akron such as Crafty Mart, a nonprofit makerspace that supports local makers and artisans. The State is an important partner in this work as well, and offers a number of low-interest capital loan programs. This includes the Ohio Capital Access Program and the Collateral Enhancement Program through which states partner with banks to take on loans that are guaranteed by public funds.

Many partners have integrated inclusivity into their programming and are intentionally targeting minority business owners. Bounce has also identified targeting Black-owned businesses as a major strategy of its work. In its inception, it licensed the entrepreneur curriculum of MORTAR, a nonprofit based in Cincinnati whose teaching is culturally competent and focused on reaching Black communities. In addition to adopting the MORTAR curriculum, which is based on a cohort program that provides a supportive alumni network, it also provides professional wraparound services to ensure that targeted areas such as accounting and legal are addressed for small businesses.

Part 3: Conclusion

Across the three cities highlighted in this report, common strategies for success in small-scale manufacturing in smaller legacy cities emerged: leveraging regional, state and federal resources; creating a common public-private vision; developing civic capacity; and assessment and planning for place-based economic strategies. Smaller legacy cities which utilize these strategies through the intersectional lens of racial equity and sustainability can leverage an opportunity for generating individual and community wealth.

There is significant interest, and oftentimes need, from individuals to start and scale a business through production. Whether they want to leverage existing skills, honor a cultural or family tradition, reach an entrepreneurial dream, or supplement their income, manufacturing can provide that pathway. However, each entrepreneur is coming from different backgrounds and may have significant challenges in terms of resources, networks, and knowledge. In particular, people of color who have been systemically and sometimes purposefully excluded from access may need a different approach. In addition, there is a need to better understand diverse migrant and immigrant communities and provide various pathways to support. The organizations featured in the case studies offer a glimpse into how smaller legacy cities can intentionally work to create these opportunities across and within public and private entities. For example, organizations are customizing their offerings and their outreach to communities, an approach reflected in the Family Rise Together social network-based outreach in Duluth and Bounce Innovation Hub's Black-focused curriculum in Akron.

Where relationships with communities of color are new or strained, it is critical to take time to develop trust and capacity. There is a need to recognize and invest in organizations which are rooted in community and led by people of color, in order to develop long-term capacity for these communities to overcome challenges. Organizations that have previously not focused on populations of color will also require time to assess their own culture and capacity to serve these individuals. These are important processes that can begin with city-level leadership, through small steps around changing culture such as creating reflexivity around examining basic measures of equity such as who benefits and who pays. For those bringing leadership and resources to this work, accountability measures which center on demonstrable gains are important for individuals of color as well as organizations which primarily focus on people of color.

At the same time, the United States is experiencing a once-in-a-lifetime moment of

support for manufacturing and green technology and infrastructure. It is imperative that smaller legacy cities receive support to leverage the funding coming down from the federal and state governments to carry out programs that will reach equity and sustainability goals. State-specific programs, such as Massachusetts' Gateway Cities program or Ohio's Minority Business Assistance Centers, can encourage resources to reach and support underserved populations that are characteristic of those states.

Two landmark federal resources are particularly attuned towards sustainability and equity elements: the State Small Business Credit Initiative (SSBCI) and the Inflation Reduction Act (IRA). SSBCI is deploying $10B to states (based on customized plans) to support small businesses and includes a focus on funding businesses led by **Socially and Economically Disadvantaged Individuals**. The IRA enables long-overdue infrastructure investments and includes "Make it in America" provisions for the use of American-made equipment for clean energy production, including bonus credits for businesses that pay workers a prevailing wage and use registered apprenticeship programs. Critically, both SSBCI and IRA can be specifically tied to manufacturing priorities (either through precise directives or creative application).

Further, these programs provide real and immediate opportunities for small legacy cities to tie racial equity and sustainability goals with manufacturing to take action, such as: repairing local physical and cultural infrastructure; connecting burgeoning businesses to supply chains (e.g. semiconductors and electric school buses); and supporting new business creation.

It is a unique moment in history for these cities to do what those profiled here are doing well. They are recasting histories into strengths, and combining those strengths with planning around the future to cast a new narrative. These places are strong advocates in making the case for manufacturing as an opportunity sector and a more sustainable and enduring vision of growth for local prosperity rather than for its own sake.

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