



SMALL-SCALE MANUFACTURING

35

MUNICIPAL
IMPLEMENTATION
TOOL #35

MAY 2025

This brochure is one in a series of Municipal Implementation Tools (MITs) available to local governments and planning partners to assist in implementing the region's Long-Range Plan, *Connections 2050*, and Comprehensive Economic Development Strategy (CEDS), *Growing Greater Philadelphia*. Both of which were prepared and adopted by the Delaware Valley Regional Planning Commission (DVRPC) with considerable public and stakeholder input.

Municipal governments have the primary authority and responsibility to implement these policies. The series is designed to introduce local officials and citizens to planning techniques that may be useful in their communities. Each covers a different topic and provides an overview of the use of the tool, the benefits, and best practices from within the Greater Philadelphia region.

For additional information about *Connections 2050*, please visit www.dvrpc.org/plan, and visit www.dvrpc.org/economic/ceds to learn more about the CEDS. To download additional brochures, visit www.dvrpc.org/MIT.



Image Source: Spencer Gober, DVRPC.

Although no longer a small-scale manufacturer given their 30 locations across the United States, La Colombe coffee roasters first began roasting coffee at its flagship location in the Fishtown neighborhood of Philadelphia, PA.

Introduction

There are a multitude of benefits associated with small-scale manufacturing. To start with, it can help diversify local economies so that they withstand future economic shocks, as well as bring new energy to older commercial corridors. More broadly speaking, small-scale manufacturing has the capacity to:

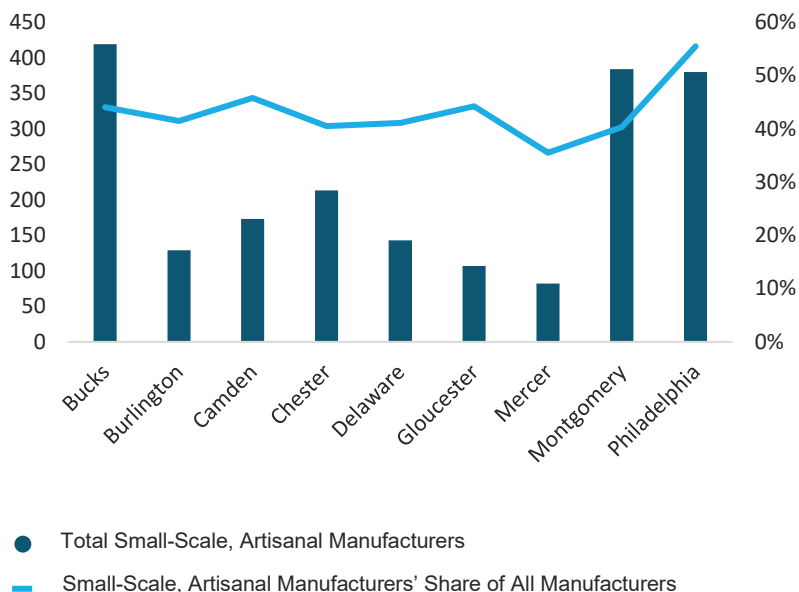
- generate and keep wealth within the community;
- empower communities to retain control of their economies; and
- give individuals authority over their own financial futures regardless of their background.

Small-scale, often referred to as artisan, manufacturers are typically defined as businesses within the manufacturing industry that have between one and 30 employees and that use more artisanal styles of production. Examples include bakers, small-batch brewers and distillers, weavers, woodworkers, furniture makers, and other similar artists and artisans.

Since 2018, the manufacturing industry overall declined by 3.8 percent in Greater Philadelphia. Meanwhile, several forms of artisanal

manufacturing has seen growth. For example, small-scale furniture and related product manufacturing grew by 1.2 percent at the national level, and at a significantly higher rate of 13.8 percent in Greater Philadelphia. Small-scale Beverage and Tobacco Product Manufacturing grew at a rate of 21.8 percent for the United States as a whole, and by an astonishing 79.0 percent for Greater Philadelphia.¹ This follows a general, decades-long trend of decline in the manufacturing industry across the country, yet a more recent rise in small-scale manufacturing.

Figure 1: The Total Number of Small-Scale Artisanal Manufacturers and Their Share of All Manufacturers, by County (2022)



Source: The United States Census Bureau, County Business Patterns, 2022.

¹ The United States Census Bureau, County Business Patterns, 2018 and 2022.

By its nature, growth in small-scale manufacturing is somewhat organic and grassroots driven, often relying on the self-motivated spirit of entrepreneurs. However, it is vital that local leaders take initial steps to ensure that local regulatory, economic, financial, and policy ecosystems are in place to encourage entrepreneurialism and support growth of the small-scale manufacturing economy.

Figure 2: Goals from the Region's Comprehensive Economic Development Strategy that can be Advanced through Small-Scale Manufacturing

01**PROSPERITY**

Foster a regulatory ecosystem that supports the cultivation of a diverse and local entrepreneurial talent pool.

02**LIVABILITY**

Employ placemaking initiatives that leverage and enhance the region's unique identity, natural environment, and cultural amenities.

03**ADAPTABILITY**

Diversify economic sectors to reduce the impacts of future economic downturns, regardless of causality.

04**ADAPTABILITY**

Prevent future development patterns from encroaching into ecologically sensitive and agriculturally productive areas.

**Advancing the
Goals of the CEDS**

Small-scale manufacturing can be an effective economic development tool and help to advance the goals of the region's comprehensive economic development strategy (CEDS), *Growing Greater Philadelphia*. This brochure leverages examples from across the country, as well as from within our own region, to outline a framework for fostering growth in small-scale manufacturing at the local level that aligns with the four CEDS goals, as outlined in Figure Two.

bakers | brewers | chandlers | chefs

Artisan Exchange
is a small business collaborative
with more than 60 members.

coffee roasters | confectioners | distillers

Located in West Chester, PA, Artisan Exchange was formed by a group of entrepreneurs in 2012 to leverage one another's resources and experiences for the benefit of their individual businesses. Since that time, Artisan Exchange has evolved into a space for other startups, small businesses, and entrepreneurs in the food manufacturing sector to get assistance with operations, marketing, negotiations, financing, regulatory compliance, and networking.

In addition to providing help with soft skills, Artisan Exchange is also home to a commercial kitchen and manufacturing space. Individual workstations are available for rent and range in size from 130 to 3,000 square feet. In addition to the physical space, membership includes access to a shared sanitation station, shipping and logistics infrastructure, and a commercial dishwashing system.

Since 2012, Artisan Exchange has been integral to the growth of more than 230 small businesses. More information can be found at www.artisanexchange.com.

Economic Concepts

Agglomeration Economy: This term refers to the innovation and transport cost-saving benefits that are realized when businesses and industries are located within proximity to one another, often in cities and more urbanized areas. Research suggests that despite declines in transport costs, other benefits of proximity continue to entice similar businesses to prioritize nearby locations.

Artisan: Used to describe someone who typically uses traditional methods, including by hand, to produce goods in limited quantities or small batches.

Food Desert: Often observed in low-income communities and places with greater socioeconomic need, food deserts are geographic areas where residents lack reliable access to healthy food, particularly due to the absence of a grocery store. The effects of which impact the overall health and productivity of the workforce, leading to negative economic impacts.



Perrystead Dairy, located in Philadelphia's Kensington neighborhood, opened in 2021 and produces cheeses made from small family farms.

Image Source: Spencer Gober, DVRPC.

Local Multiplier Effect: The local multiplier effect refers to the phenomenon where a dollar spent at a locally owned business generates more economic impact and increased wealth than a dollar spent at a chain store or online retailer. The reason being that locally owned businesses will turn around and either spend or reinvest that dollar back into the local community, and so on, while a dollar spent at the chain store essentially leaves the local economy.

MakerStudio@GCLS

With a desire to foster community-based innovation and entrepreneurialism, the Gloucester County Library System (GCLS) offers two publicly accessible makerspaces. Each space has a range of technologies available, including a digital media lab, 3D printers, and virtual reality development kits. More at www.gcls.org/make.

NextFAB Makerspace

Founded in 2009, NextFAB is a makerspace in Philadelphia. Although it started as part of the University City Science Center's business incubator, NextFAB now offers locations in the Kensington and Graduate Hospital neighborhoods.

Each location seeks to equip entrepreneurs, startups, and artisans with access to both traditional and digital tools and technologies needed to grow their skills and businesses. Additionally, the makerspaces provide shared workshops and studios, as well as offer classes. More information can be found at www.nextfab.com.

Maker Movement: Over the past decade, interest in local production and the manufacturing of goods has led to an organic rise in the number of people who actively manufacture small batch goods either for fun or for profit. Individually, these people are known as “makers” and collectively the trend is referred to as the Maker Movement.

Makerspace: In response to the Maker Movement, many local municipalities, nonprofit organizations, academic institutions, and private sector developers opened spaces where makers could produce their goods in a collaborative environment, while also utilizing tools and technologies provided in those spaces.

Micro-retail: The term micro-retail refers to a trend in the retail industry that prioritizes smaller retail spaces and storefronts over larger ones like traditional department stores and big box centers. Micro-retail has proven to be a successful business model for digital brands looking to open a physical store, as well as for established brands that are looking to balance their digital and brick-and-mortar business models. Micro-retail spaces can be as small as 50 square feet, or more akin to retail shops found along a traditional main street.

NAICS Code: The North American Industry Classification System (NAICS) is used in the United States to organize businesses into one of 20 unique industries by assigning a NAICS code to each business. Two-digit NAICS codes represent the highest level of classification, with the greatest detail provided in six-digit NAICS codes. For example, Manufacturing businesses are assigned to NAICS code 31, all Beverage and Tobacco Product Manufacturers are NAICS code 312, and Breweries specifically are classified as NAICS code 312120.

NAICS Codes for Small-Scale Manufacturing

Not all forms of manufacturing may be appropriate for commercial corridors due to the potential for negative operational impacts on their surroundings. In general, small-scale artisanal manufacturing is limited to the following three-digit NAICS codes:

- 311: Food manufacturing
- 312: Beverage and tobacco product manufacturing
- 313: Textile mills
- 314: Textile product mills
- 315: Apparel manufacturing
- 316: Leather and allied product manufacturing
- 321: Wood product manufacturing
- 322: Paper manufacturing
- 323: Printing and related support activities
- 332: Fabricated metal product manufacturing
- 337: Furniture and related product manufacturing
- 339: Miscellaneous manufacturing

Non-Tradable Job: Jobs that provide a good or service within a specific geographic area that cannot be exported or consumed elsewhere as referred to as non-tradable jobs. Examples include nurses, plumbers, teachers, and waitresses. Although the presence and growth of these types of jobs are critical within a local economy, they typically do not bring outside wealth into the economy because the goods they produce or services they provide are geographically constrained and cannot be exported.

Placemaking: The process of identifying, cultivating, and enhancing a community's sense of place, which is typically accomplished by leveraging local landmarks and assets, is referred to as placemaking.

Sense of Place: Characteristics that contribute to a location's sense of place may be difficult to pinpoint and may differ from person to person. However, in general the term is used to describe the overall meaning, value, and feeling of attachment that someone has for a place. This



Restored as part of an adaptive reuse project, the Harbison Dairies milk bottle shaped water tower now creates a sense of place in Philadelphia's Kensington neighborhood, even from its rooftop location, and demonstrates how private sector developers can implement placemaking strategies.

Image Source: Karin Morris, DVRPC.

sense of place leads to a dedication and commitment to preservation and protection by locals and visitors.

Spillover Effect: When businesses are located near one another they often benefit from knowledge sharing, a concentration of skilled labor, and access to suppliers. These benefits are collectively referred to as the spillover effect.

Tradable Job: Unlike non-tradable jobs, a tradable job provides a good or service that can be exported. As a result, these types of jobs can bring external wealth into the local economy. Examples of tradable jobs include accountants, engineers, small-scale manufacturers, and software developers.



Image Source: Spencer Gober, DVRPC.

Case Study: Fishtown, Philadelphia, PA

Fishtown is a neighborhood in Philadelphia, PA, that is now known for its eclectic mix of housing, restaurants, shops, and art galleries that have arisen after a decade of revitalization. The foundation for which has been a resurgence in small-scale manufacturing. For example, while total estimated employment in Fishtown accounts for just 1.4 percent of the city's total employment, an estimated 36.3 percent of the city's employment in "Beverage and Tobacco Product Manufacturing" is found within the Fishtown neighborhood.

Estimated change in employment from 2018 to 2023 within subsectors typically associated with small-scale, artisanal manufacturing.

19.4%

-8.2%

Fishtown

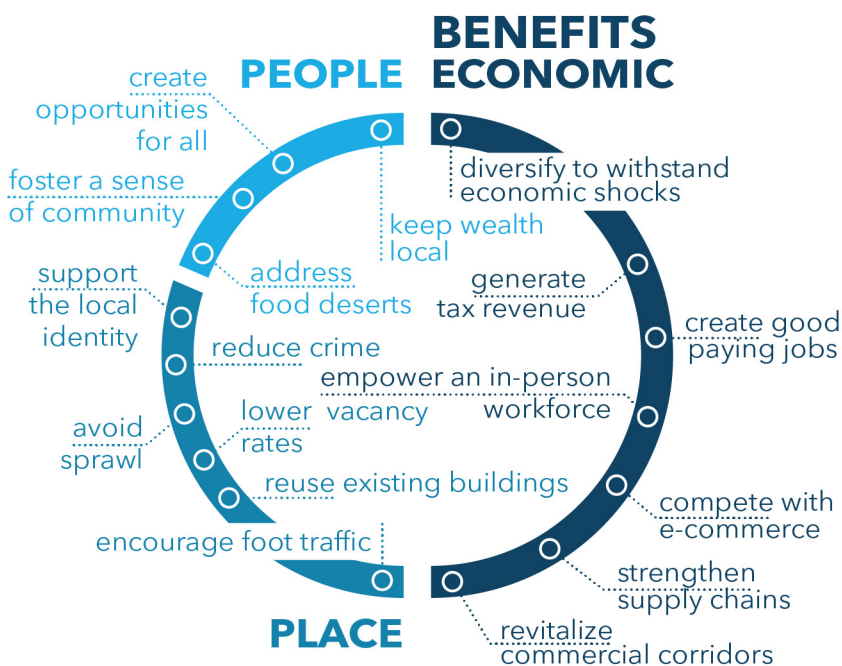
Philadelphia

Source: IMPLAN® model, 2018 and 2023 Data, using inputs provided by the user and IMPLAN Group LLC, IMPLAN System (data and software), www.IMPLAN.com; and DVRPC.

Benefits

Due to the spillover effect that high profile, easily accessible locations, like traditional commercial corridors, main streets, and retail districts can create, these types of commercial areas are often very attractive sites for small-scale manufacturers to set up shop. Conversely, traditional commercial corridors like main streets benefit from the increased activity that small-scale manufacturers generate through increased economic output, decreased vacancy rates, and increased foot traffic.

Figure 2: Benefits of Small-Scale Manufacturing



Furthermore, small-scale manufacturers can help offset the negative impacts that e-commerce can have on traditional brick-and-mortar retail districts. As employers, small-scale manufacturers are a source for good paying jobs that generate and keep wealth local. While as members of the community they can help create a sense of local identity and pride.

Challenges

Despite many benefits, it can be challenging to create a regulatory and economic environment that supports small-scale manufacturers. One reason is that manufacturing land uses were historically associated with a multitude of negative impacts, like air and noise pollution, traffic congestion, and waste management. As a result, zoning ordinances typically prohibit any form of manufacturing along commercial corridors, and/or mixed-use residential areas. Local zoning regulations also often lack the subtleties needed to distinguish small-scale artisanal manufacturing from heavier manufacturing.

Figure 3: Challenges to Small-Scale Manufacturing



Therefore, gathering community support needed to rezone and create other supportive policies for small-scale manufacturing may be challenging in the short term. Conversely, longer-term challenges related to displacement and room for expansion may present themselves once small-scale manufacturers are established.

Figure 4: Strategies for Developing a Small-Scale Manufacturing Economy



Strategies

Traditional approaches to economic development prioritize identifying existing companies and then enticing them to relocate to a community by providing the infrastructure and regulatory environments they require. However, growing the small-scale manufacturing industry is a much more grassroots process that capitalizes on local talent. It also requires a different approach. A community must first lay the foundation by supporting entrepreneurs, creating a local identity, and updating local regulations like zoning.

How to Define Small-Scale Manufacturing in Zoning

Philadelphia, PA: “Artist Studios and Artisan Industrial”

Spaces used by artists for the creation of art or the practice of their artistic endeavors, as well as uses that produce consumer goods, food, beverages, or wearing apparel or accessories by hand manufacturing, involving the use of hand tools and small-scale, light mechanical equipment in a completely enclosed building with no outdoor operations, storage or regular commercial truck parking/loading. There are no discernible external impacts in terms of noise, vibration, odor, hours of operation, or traffic.

Indianapolis, IN: “Artisan Food and Beverage”

Small-scale production or preparation of food made on site with limited to no automated processes involved and may include direct sales to or consumption by consumers. Including uses such as small-batch bakeries, micro-breweries (manufacturing 15,000 barrels per year or less), artisan distilleries (manufacturing 10,000 barrels per year or less), small-batch candy shops, and local cheese makers. This use may or may not have outdoor seating or patio as an accessory use depending on the zoning district in which it is located.

Bozeman, MT: “Artisan Manufacturing”

Production of goods by the use of hand tools or small-scale, light mechanical equipment occurring solely within an enclosed building where such production requires no outdoor operations or storage, and where the production, operations, and storage of materials related to production occupy no more than 3,500 square feet of gross floor area. Typical uses have negligible negative impact on surrounding properties and include woodworking and cabinet shops, ceramic studios, jewelry manufacturing and similar types of arts and crafts, production of alcohol, or food processing.

*Strategies Being Implemented in Our Region***SUPPORT:** Partner with Academic Institutions

Academic institutions are responsible for creating a pipeline of workforce talent, and they can also serve as a partner in local efforts to equip future entrepreneurs with the skills needed for small-scale manufacturing. For example, in 2017, Rowan University's School of Innovation and Entrepreneurship, located in Glassboro, NJ, created Studio 231, which is a makerspace defined as "an interdisciplinary hub for collaboration, ideation, rapid prototyping and research."² Additionally, the University's College of Science and Mathematics has a separate makerspace where students can utilize digital tools and technologies ranging from 3D printers to robotic arms.

CREATE: Host Festivals and Events

Local festivals and events are a great way to showcase local manufacturers and artisans, create a sense of place and local identity, and set the foundation for a more long-term economic development strategy based on small-scale manufacturing. The Bucks Beer Bash in Bucks County, PA, is a great example of a countywide event designed to bring attention to the local craft beverage industry. In 2025, more than 50 individual breweries, distilleries, and wineries participated.

ENACT: Amend Zoning

The City of Philadelphia identifies Artist Studios and Artisan Industrial as a distinct use in its zoning code. The use is allowed by right, meaning without any special exceptions, in six of eight commercial zones, and five of six industrial zones. Notably, the Industrial Residential Mixed-Use District (IRMX) is explicitly designed to "accommodate a mix of very low-impact industrial uses, including artists and artisan industrial, and residential and neighborhood-oriented commercial uses."³

² www.ent.rowan.edu/rcie/studio231.html.

³ City of Philadelphia, PA, Zoning Ordinance §14-403 Industrial and Industrial Mixed-Use Districts, 2021.



Image Source: Spencer Gober, DVRPC.

Case Study: The Weaver, Philadelphia, PA

The Weaver is a newly constructed mixed-use apartment building located in Philadelphia, PA. The developer leveraged the City of Philadelphia's Industrial Residential Mixed Use (IRMX) zoning district, which was created in 2010, to earn an additional floor for residential use. To do this, a share of the ground floor space was designed to accommodate an artisanal industrial use. Not only was a significant amount of square footage dedicated to small-scale manufacturing, but the floorplan also provided rear access for operational activities such as loading and unloading as well as a retail-oriented street presence.

The final product will deliver 127 transit-oriented, new construction rental apartments to the East Kensington neighborhood. Although a tenant for the ground floor has not yet been identified, the space is reserved for a small-scale manufacturing use.



Philadelphia's Edward W. Bok School is now home to over 200 small businesses and small-scale manufacturers, after it was converted into a makerspace in 2015. The rooftop restaurant is a popular destination and neighborhood asset. Image Source: Karin Morris, DVRPC.

Other Resources

Institute for Local Self-Reliance

ilsr.org

Main Street America

www.mainstreet.org

New Jersey Economic Development Authority

www.njeda.gov

Pennsylvania Department of Community and Economic Development

www.dced.pa.gov

Recast City

www.recastcity.com

Smart Growth America

smartgrowthamerica.org

Strong Towns

www.strongtowns.org

Urban Manufacturing Alliance

www.urbanmfg.org/project/artisan-zoning

U.S. Small Business Administration

www.sba.gov

Sources

American Independent Business Alliance. “The Local Multiplier Effect: How Independent Locally Owned Businesses Help Your Community Thrive.” www.amiba.net.

Brett-Harding, Will. “Making Sense of Services.” What Works Centre for Local Economic Growth. February 2024. www.whatworksgrowth.org.

Butler, Steve. “Encouraging Small-Scale Manufacturing During the COVID-19 Pandemic.” Municipal Research and Services Center. September 25, 2020.

City of Philadelphia, PA. Zoning Ordinance §14-403 Industrial Residential Mixed-Use District. 2021.

Deskera. “Small Scale Manufacturing: A Complete Guide.” www.deskera.com/blog/small-scale-manufacturing-a-complete-guide.

Glaeser, Edward L. Agglomeration Economics. February 2010. www.nber.org.

IMPLAN® model, 2018 and 2023 Data, using inputs provided by the user and IMPLAN Group LLC, IMPLAN System (data and software), 16905 Northcross Dr., Suite 120, Huntersville, NC 28078 www.IMPLAN.com.

Makerspaces. “What is a Makerspace?” www.makerspaces.com/what-is-a-makerspace.

Moore, Kaleigh. “What is Micro-Retailing? Why and How Retailers are Going Small.” Shopify. November 2020. www.shopify.com/retail/what-is-micro-retail.

Muro, Mark; and Peter Hirshberg. “Five Ways the Maker Movement Can Help Catalyze a Manufacturing Renaissance.” Brookings. January 2017.

Preuss, Ilana. “Small-Scale Manufacturing: A Key to Revitalizing Your Downtown.” Strong Towns. July 2021.

Public Broadcasting Service. The Socio-Economic Significance of Food Deserts. June 2011. www.pbs.org/newshour/arts/the-socio-economic-significance-of-food-deserts.

Smart Growth America. "Made in Place: Small-Scale Manufacturing and Neighborhood Revitalization."

Stumo-Langer, Nick. "Bloomberg Businessweek Profiles Cities that Restrict Chains to Free More Space for Local Businesses." Institute for Local Self-Reliance. January 2018. www.lsr.org/articles/bloomberg-restrict-chains.

Urban Manufacturing Alliance. "Policy Reports: Artisan Zoning." www.urbanmfg.org/project/artisan-zoning.

White, Olivia; Madgavkar, Anu; Kumar, Adi; Padhi, Asutosh; and Kanmani Chockalingam. "America's Small Businesses: Time to Think Big." McKinsey Global Institute. October 2024.

World Economic Development Forum. "Beyond Cost: Country Readiness for the Future of Manufacturing and Supply Chains." December 2024.

Sites Accessed

Artisan Exchange. Accessed February 2025. www.artisanexchange.com.

Bucks Beer Bash. Accessed February 2025. www.bucksbeerbash.com.

The Gloucester County Library System. Accessed February 2025. www.gcls.org/make.

La Colombe Coffee Roasters. Accessed January 2025. www.lacolombe.com.

NextFab. Accessed December 2024. www.nextfab.com.

Rowan University. Accessed February 2025. www.rowan.edu.

United States Census Bureau. Accessed December 2024. www.census.gov/naics.

The Weaver on East York. Accessed December 2024. www.theweaverphilly.com.

DVRPC is the federally designated Metropolitan Planning Organization for a diverse 9-county region in two states: Bucks, Chester, Delaware, Montgomery, Philadelphia in Pennsylvania and Burlington, Camden, Gloucester, and Mercer in New Jersey. DVRPC serves strictly as an advisory agency and actual authority for carrying out any planning proposals rests solely with the governing bodies of the states, local governments or authorities that have the primary responsibility to own, manage or maintain any transportation facility.

DVRPC fully complies with Title VI of the Civil Rights Act of 1964 and related nondiscrimination mandates in all activities. For more information about DVRPC's Title VI Program or to obtain a Title VI Complaint Form, visit www.dvrpc.org/GetInvolved/TitleVI, or contact DVRPC's ADA and Title VI Compliance Officer Shoshana Akins by calling 215-592-1800 or via email at public_affairs@dvrpc.org.

The authors are solely responsible for the findings and conclusions herein, which may not represent the official views or policies of the funding agencies.



190 N INDEPENDENCE MALL WEST
8TH FLOOR
PHILADELPHIA, PA 19106-1520
215.592.1800
www.dvrpc.org

Connect With Us! [f](#) | [@](#) | [in](#) | [v](#) | [X](#)

Publication #:	MIT035
Staff Contact:	Spencer Gober, Manager, Office of Community & Economic Development
Direct Phone:	215.238.2884
Email:	sgober@dvrpc.org
Web:	www.dvrpc.org