



**POLITECNICO  
DI TORINO**



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# **BRINGING INDUSTRY BACK TO DETROIT NEW OPPORTUNITIES FOR URBAN REVITALIZATION AND ECONOMIC DEVELOPMENT IN THE CITY.**

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# INTRODUCTION

Manufacturing has always played a crucial role in city development, economic growth and innovation change. Nowadays, there is a renewed interest in the manufacturing and urban-centered production, for its ability to boost economic development, employment opportunities and to attract investments, with important implications for cities.

This growing optimism about the return of industry in the city, after decades of development of industrial facilities located outside the existing urban fabric, rests on the dramatic shifts occurring in manufacturing, which might redefine its role and the location strategies of places of production.

Firstly, the rapid advances technology, including additive manufacturing, digital manufacturing, robotic are changing the economics of production. Additive manufacturing (AM), originally performed only for prototyping, is expanding in other stages of production. The significant price dropping in AM prices is enhancing its competitiveness, due to the increasing convenience between fixed and variable costs compared to conventional manufacturing. Moreover, since AM reduces the minimum efficient scale it may be decisive for the rise of small-to medium-batch firms, for providing them an efficient alternative production runs. (Cotteleer and Joyce, 2017)

Secondly, the customer's habits are orienting toward customized and local-based products. In fact, thanks to Internet, customized products became available to a wide range of consumers, raising their expectations to find precisely what that are looking for. This trend has fragmented the demand of goods and favored the extension of niche markets, which represent

a great opportunity not only for manufacturers but also for startup developers or technological companies. (Hagel et al., 2015)

Additionally, consumers are more concerned about the provenance of the goods, the “local buy” movement is growing and “Made in USA” brand is associated with higher quality and safer products that most often justify the higher price. These firms are both local clustered and traded clustered, meaning that serve both a local market and a regional, national and sometimes international market. (Van den Bossche et al. 2014)

Urban manufacturing (UM) firms benefit from competitive advantages that are derived from their proximity to other businesses, customers, and transportation infrastructure nodes (Porter, 2011). The reduced batch-size needed for producing goods and the reduced negative impacts on environment and people, allows manufacturers to relocate their firms into the city, often reusing old abandoned and large-scale factories.

Today, many cities as New York, San Francisco, Chicago, London are working the reconversion of the former industrial building. These cities among others are reshaping derelict historical industrial sections of the city into dynamic, vibrant and innovative district that mix residential uses, offices and urban manufacturing, attracting businesses and new population.

Between 2010 and 2015, most manufacturing industries have experienced a significant growth. As the figures shows, many of them are associated with urban manufacturing industries. (Reynolds, 2017)

Manufacturing firms in the US have an average of sixty employees, but provide higher than average wages compared to all US jobs (\$58,000 compared to \$47,000). The range wage is very wide from over \$100,000 to under \$40,000 depending on the role and the worker qualification. Most of the jobs requires less skilled labor (65% of all jobs are classified as less than moderately high tech) (Helper et al., 2012). For these reasons, urban manufacturing can be seen as an valuable opportunity to improve urban economies.

In spite of these promising beginnings, the industrial land available in the city shrunked and former industrial area have been converted in accordance with the real estate imperative “best use, high value”, and especially in cities hot real estate markets, city government are discussing about adopting measures to preserve industrial land.

Examples such as Greenpoint Manufacturing and Design Center in New York and SF Made in San Francisco represent large-scale urban redevelopment efforts that support urban manufacturing, preserve industrial land and provide affordable industrial spaces. Preserving industrial land means retain jobs in the city and create a vibrant community. (Pratt Center, 2016) In addition, there are several macroeconomic and domestic trends that enabling the comeback of production to United States and in particularly in the cities.

After few decades of off-shoring in developing countries. The global factors that are positively affecting the “re-shoring” of certain sector of productions are the rising value of Chinese yuan versus western currencies, the reduced competitiveness of China’s labor cost and the increasing concerns about supply interruption in consequences of the events of Fukushima’s earthquake and the Boeing 787 Dreamliner. Manufacturers are changing approach when evaluating the location of the place of production, going beyond the traditional costs and considering the “total costs”, which include proximity to customers, delivery time, quality, etc.

Furthermore, Obama’s Administration identified the American manufacturing revitalization a priority in his economic agenda, with the aim of establish the basis for a robust, long-term and broad economic growth. After a decade of recession started in 2001, since 2010 more than 800,000 new jobs were created thanks to Obama’s policies and the rescue of GM and Chrysler from bankruptcy in 2009. From 2001-2007, the worst peak-to-peak performance was registered after the Second World War and the Great Recession which struggled the recover worsening the critical situation, the loss of jobs in manufacturing between 2000 and 2009 was about 5.7 million. (Atkinson et al., 2012) *«Manufacturing output has increased by almost 30 percent since the end of the recession, growing at roughly twice the pace of the economy overall from the third quarter of 2009 when the economy began to expand through the first quarter of 2016, marking the longest period where manufacturing has outpaced U.S. economic output in fifty years.»* (National Economic Council, 2016 p.8)

Obama recognized the importance of manufacturing for the economy of the United States and the connection between a strong manufacturing sector and a developed and flourishing innovative economy. The policies had different implications at different scales, but overall they helped to change perspective about manufacturing and understand its importance in economic growth and development. These measures can’t ensure a continue and sustained growth, but the effort made by the

government for innovating was comprehensive and accurate, and refers to these four pillars:

1. *"Spurring innovation through next-generation technologies" to ensure that the powerful new technologies of tomorrow are developed and manufactured in the United States.*
2. *"Strengthening skills, communities, and supply chains to attract investment" to equip the manufacturing workforce and manufacturing firms with the skills needed for today's increasingly technology-oriented manufacturing opportunities, and to ensure communities large and small across the United States are well-positioned to compete for manufacturing investment.*
3. *"Making the United States more competitive for production" to create the best business environment in the world to enable capital investment.*
4. *"Expanding market access and leveling the playing field" to expand market access opportunities for U.S. manufacturers of all sizes at home and abroad, and to enforce trade rules and protect American workers and firms from unfair practices.*  
(National Economic Council, 2016 p.16)

The pillars which have more implication at the city level are the first and the second. In fact, to support the innovation the Administration created in 2012, the National Network for Manufacturing Innovation, now known as Manufacturing USA. Its aim is to create a connection between industry, academia, and government to co-invest in the newest and manufacturing technologies and capabilities, such as 3D printing, robotics, smart sensors, etc. and to improve the accessibility of these tools to the largest number of people and institute educational and training programs. The Federal government increased the investments in manufacturing research and development in order to push innovation and accelerate additional technologies. Another great with implication on the city is the establishment of the initiative Nation of Makers, *«a multi-stakeholder effort to ensure students, entrepreneurs, and Americans of all backgrounds have access to a new class of technologies.»* (National Economic Council, 2016 p.20)

This initiative has had a great impact all over the US, in larger and smaller community, *«the maker movement starts with the community; the ecosystem of makers and all that they do and create. More and more, we are seeing makers take on challenges both locally and globally, using their knowledge and skills to improve their lives and the lives of others in their communities.»*  
(<https://nationofmakers.us/about/>)

The second pillar take measures to increase the capabilities of manufacturing workforce, which needs to be more skilled than in the past since new technologies require higher levels of education and training. The Administration invests in grants for community colleges to improve their training programs and apprenticeships, which will ensure high-skill and high-paid occupation. Another topic covered in this pillar is the small manufacturers, which are essential for the economy and, according to the Economic Council, they represent the backbone of America's supply chain and employ. To support small manufacturers three investments programs have been started: the Manufacturing Extension Partnership, to create network centers that provide technology and engineering assistance to small and medium-size manufacturers to improve their capabilities and their competitiveness; Investing in Manufacturing Communities Partnership (IMCP), which aims to strengthen the capabilities of a given community to develop a specific area or region. The investments want to encourage «*local communities to develop comprehensive economic development strategies focused on manufacturing competitiveness by aligning local and Federal investments against local strategies.*» (National Economic Council, 2016 p.22)

Under these circumstances, cities have an essential role to play in creating an enabling environment for develop a strong urban manufacturing sector, which can empower communities, reshape education and workforce, create new jobs, sustain the economic growth and revitalizing neighborhoods. Nevertheless, only a minority of cities are adapting their tools, zoning and making policies to bring the manufacture back or ensuring affordable land and avoid real estate pressure.

This thesis wants to investigate the possible role of industry into the city of Detroit as an engine to promote urban revitalization and economic development. How urban planning and urban tools can contribute to redefine the role of industry in the city redevelopment and sustain the resurgence of distressed a neighborhood?

Detroit has been selected due to its glorious industrial past, which deeply influenced the growth of the city and shaped the urban pattern and areas. After the deindustrialization started, the city started shriking, and lost half of its population in thirty years, leaving behind blighted neighbrohoos and a critical economic situation. These events affected the city, which is investigating how to recover its economy and revitalize its blighted and vacant neighborhoods. The work is divided in four chapters:

- the first one investigates about the history of the Detroit

and the relationship between industry and city over time, considering the role of planning tools and policies in the industry location and city development, in order to understand the current situation.

- The second chapter tries to provide an overview of the rapid changes happening in the city right now, both from the point of view of urban development and economic point of view. In the last years Detroit has been under the spotlight of the media and 2017 has been an year of profound changes in the city's dynamics.
- The third chapter will provide an analysis of the study area: the former Lower Mt. Elliot Industrial Corridor and will provide information about its history, zoning building stock, population and economy.
- The fourth chapter is about defining new tools and policies to support urban manufacturing in the Corridor, spur economic development and urban revitalization
- The conclusions provides future long- term scenarios of the area and a reflexion about the effectiveness of new tools.



# 1. DETROIT

## CITY DEVELOPMENT, INDUSTRY AND PLANNING TOOLS

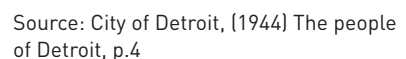
Detroit might be considered as one of city symbol of the deindustrialization: its glorious industrial past faded into decades of economic and social decline, jobs loss and depopulation. Despite the current situation, Detroit shows an incredible resilience and represents a complex environment with unexpressed significant potential. Reframe the decline as an opportunity and re-envision the city future is a challenge and a mission for planners, which need to explore innovative approaches.

### 1.1 FROM EARLY INDUSTRIALIZATION TO THE ARSENAL OF DEMOCRACY

The industrial development of Detroit began before its most known industrialization phase: the Auto Era, which transformed the city into the heart of American automotive industry. Since the half of nineteenth century, Detroit's industrialization began due to the opening of the Erie Canal, that has made Detroit a pivot point in the Lake Superior Trade, thanks to the availability of woods and to the discover of vast deposits of metals, as copper and iron. Many craftsman's shops opened and expanded through the city, until the 1873-1879 depression. When the economy recovered, the heavy industry replaced the activities and began to dominate Detroit. By the beginning of the 1900s, Detroit could be considered an industrial city, in fact if in 1870s the biggest industries in the state were lumber and clothing, by the turn of the century the lumber industry has disappeared. (Martelle, 2014) Most of the new small factories making a wide variety of goods were located along East Jefferson and drug manufacturing developed quickly.

The technological progress of engines was spurred by tinkers which wanted to create a new cart able to propel itself. Similar ongoing experiments were developing both in Europe France and Germany, and United States. Detroit was one of

The Twenties were a decade of outstanding development and expansion of the city, that annexed to its territory many suburbs, establishing the current boundaries. The urban pattern was formed: the most famous skyscrapers, offices, hotels, museum and libraries and the building defined the downtown landmark. New headquarters and plants by Gen-



eral Motors and Chrysler and the Ford's River Rouge plant in Dearborn were built.



The old GM Headquarters in New Center- Detroit  
Source: Unknown- Find on internet

The territory north of Grand Boulevard, with a good railway connections and large tracts of open land was attractive to manufacturers in search for a location. Outside Ford's achievement at Highland Park Plant and River Rouge, the most significant industrial growth in the city between 1900 and 1930 was the "Milwaukee Junction", located in the intersection between the Michigan Central Railroad and the Detroit Milwaukee Railroad. (City of Detroit, 1980) The development of heavy industry in the site is related to the city's population growth. The expansion of the city was influenced by the location of the automobile plants. Some of the industries built on the beginning of the 1900s, as the famous Packard Motor plant, have been totally engulfed in the dense fabric of the city. The emerging industries sought cheap land to establish the factories, usually highly accessible, located at the edge of the developed areas, along the rail lines and the mayoral lines of communication. This location strategy, favored the relocation of the factories from the original industrial area along the Detroit River to the major transport axis, leading to the creation of linear cities, mainly composed by industrial establishments and also an housing component. (Manning and Bekkering, 2015) The aim of the owners was to develop a new advanced environment, innovative both socially and technologically, but this utopian planning of the city only succeeded as advanced sites for production and failed in creating suitable residential areas, since housing built was conventional Federal Housing Administration houses and segregated

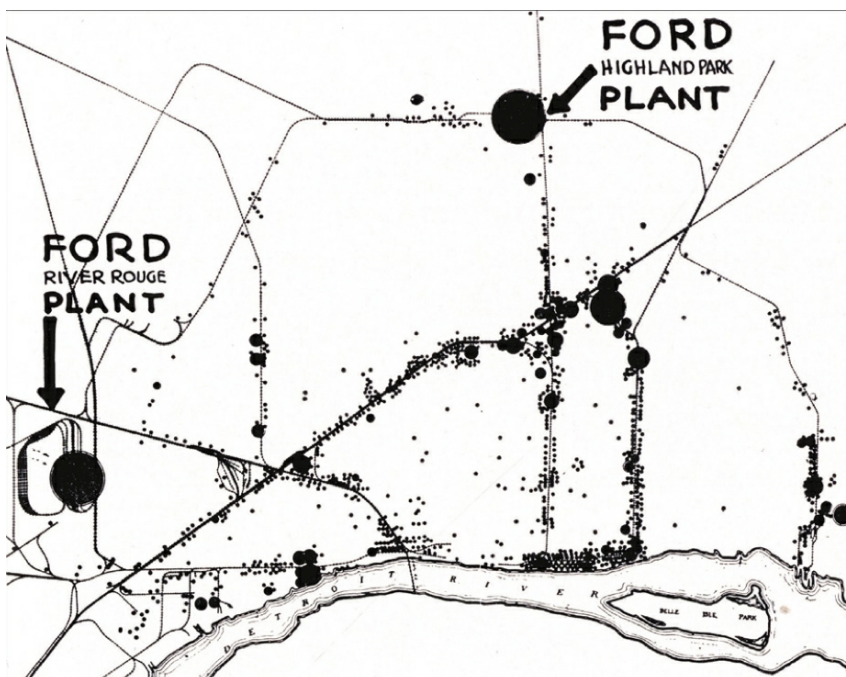


to exclude black population. (Manning and Bekkery, 2015) The linear city rapidly expanded beyond the Detroit borders, until 1920s the city annexed its suburbs but after that date, decentralization of industry and worker houses started, causing several problems to the city of Detroit.



Map of industrial uses, 1933

Source: Sert, J. [1942]. Can our cities survive? An ABC of urban problems, their analysis, their solution. Cambridge, MA: Harvard University Press, p. 113.



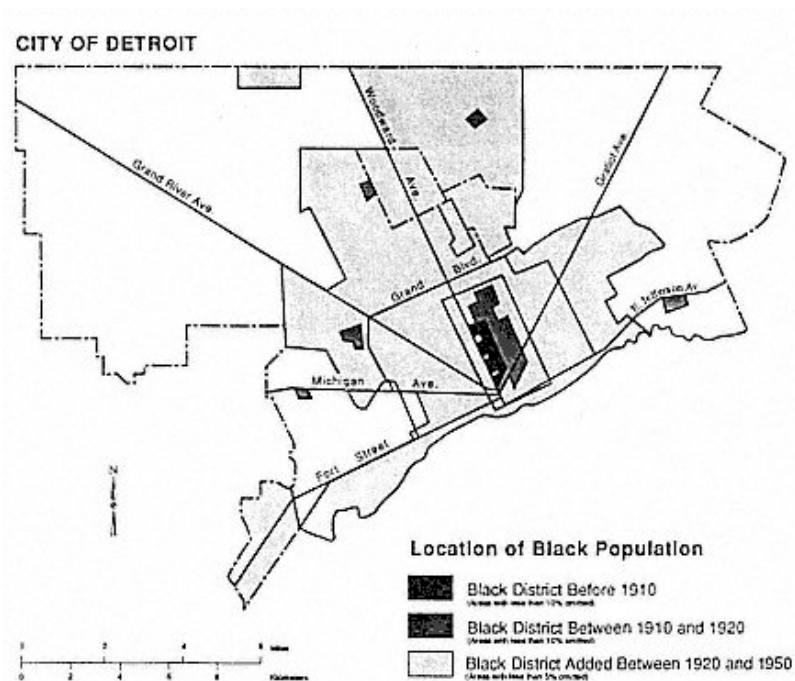
Location of Detroit's Industry

Source: Sert, J. [1942]. Can our cities survive? An ABC of urban problems, their analysis, their solution. Cambridge, MA: Harvard University Press, p. 113.

Due to the industrialization and the opportunities Detroit offered in terms of salary, recreation, services, during the first decades of the 1900s the city faced a massive population growth,

many rural African Americans came from the Deep South, both because they were escaping from racial tensions and searching for a better jobs to improve the quality of life. The migration included also foreign-born, who settled into different areas of the city, creating neighborhood such as Poletown, Corktown, Germantown and a percentage of native-born Americans coming from other states. (Boyd, 2017)

The city didn't have appropriate infrastructures for receiving immigrants under conditions of dignity, so most of them were living in poor condition, in working-class neighborhoods often overcrowded, worsen by ethnic tensions, especially between black and white people. The Great Depression aggravate the existing tensions, since the drop of auto production caused the loss of many jobs and exacerbated racial tension that often turned into violent conflicts and marginalization when it came to getting jobs or houses. The majority of black families lived in the east side of the city, in the neighborhood of Paradise Valley, Black Bottom and Hasting Street, as can be showed by the map. Until the early 1920's the black population was living in the neighborhoods above mentioned, the darkest in the map.



Location of Black population in the City of Detroit from 1910 to 1950

Source: Detroitography- Maps drawn by William Bundge  
<https://detroitography.com/2013/07/10/map-of-black-population-detroit-1910-1950/>

During the 1930s the economy did not improve much but there were federal efforts trying to respond to the Great Depression, in order to help the most disadvantaged people. In 1933, the new public agency the Public Work Administration's Federal Emergency Housing was founded, in order to promote large-

scale public projects. Born as a New Deal program it aimed to help revive the economy and provide employment. The money has been given in two waves 1933-35 and 1938. Its goals were to spend \$3.3 billion in the first year, and \$6 billion in all. This program led to the creation of Detroit Housing Commission, which was essential to develop the program promoted by Eleanor Roosevelt, the Brewster Homes, which wanted to replace the slum in Black Bottom (Martelle, 2014).



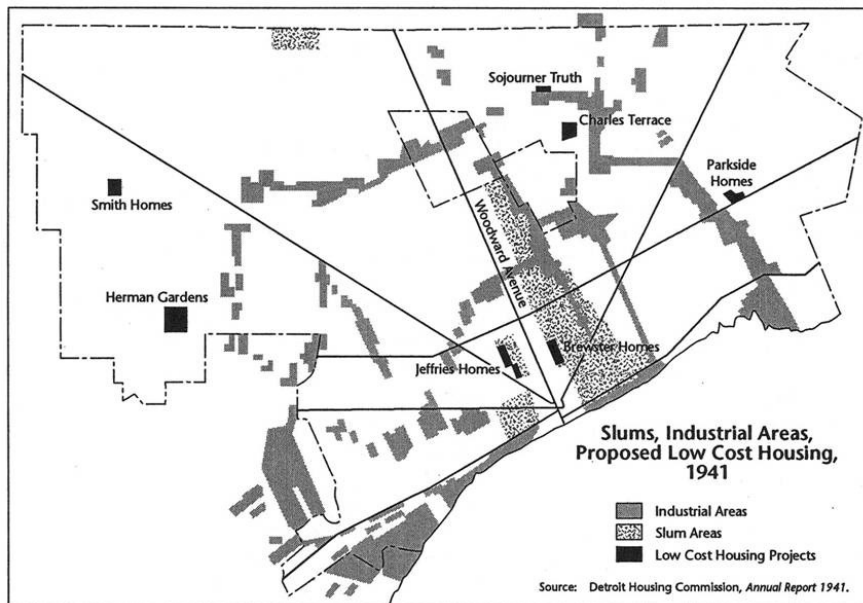
The ground-breaking ceremony for the Brewster Homes- 7 September 1935

Source: Detroit Free Press Archives

The program did not achieve the intended results, since after the demolition of the houses started in 1935, the new development began after months and many of the family that have been evicted, ended up living in houses as bad or worst then their original. In 1938, 701 units were built and in 1941 the buildings were 941, bounded by Beaubien, Hastings and Wilkins streets and Mack Avenue. (Austin, 2012)

The Detroit Housing Commission received from 1938 other 25million, so new the projects were design: John W. Smiths, Herman Gardens, Jefferies homes, Charles Terrace, Sojourner Truth. (Darden, 1987) These projects are represented in the following map, which shows the need of proximity between workers and their homes, wage and affordable housing and industry and land value in the surrounding areas.





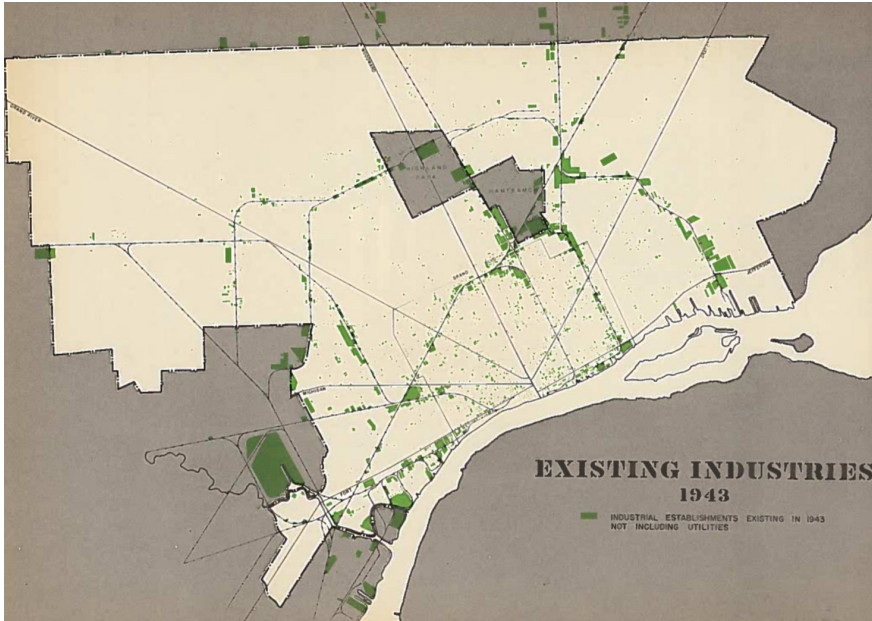
Slums, Industrial Areas, Proposed Low cost housing, 1941

Source: Detroit Housing Commission (1941) Annual Report

The recovery process of the nation's and Detroit's economy from the Great Depression started in the 1940s and the break-out of World War II accelerated it. When the President F.D Roosevelt talked about the "arsenal of democracy", Detroit, thanks to its strength as an automobile manufacturer, seized the opportunity to spur a new industrial development. It was the perfect city to set up the President's task. (Martelle, 2014) The auto factories shifted their production from car making to war machines: many facilities were converted and new factories were built, as the Chrysler tank factory in Warren or the Ford airplane factory in Willow Run, which by 1944 could produce one bomber an hour. Factories began rapidly producing jeeps, M-5 tanks, and B-24 bombers. (Detroit Historical Society- <https://detroithistorical.org/learn/encyclopedia-of-detroit/arsenal-democracy>)

The need of accommodating people and war shipments accelerated the constructions of freeways, to improve the access between Detroit and surrounding factories.

The war required a massive transformation of Detroit's industries, only the 12% of the existing machine tools could be used to produce war machines, so new industries had to be built. In 1943 hosted 4.898 acre of industrial land, distributed as the following map shows;



Existing industries in Detroit, 1943

Source: City of Detroit (1943), Proposed Generalized Land Use, p. 46

Since more than half Michigan's men were in war, and work-force was needed, the city was attracting for the second time unemployed people, especially African Americans and women. The demand for labor increased and new migration flow arrived in Detroit, generating a new housing emergency. As the foll map shows, with the exception of Downtown, all the mayor employment center were located by the industrial size. The 46% of the industrial workers in Detroit were employed by 18 concerns. [Detroit City Plan Commission, 1947].

The war allowed the process of re-industrialization, as the following but exacerbated existing problems in the city, as racial tensions, slums and overpopulated neighborhood, precarious hygienic conditions. Many neighborhoods, especially the blacks ones, even if already overcrowded as Bottom Black, took in even more families, because segregation made difficult finding an accommodation in non-black neighborhood or the surrounding areas. People were living in parks, others in abandoned factories, homeless have been sent back by the welfare department from where they had come from.

In the War years the racial tensions have grown until its peak in 1943, when three days of race riots upraised, killing 34 people- 25 African American and 9 White American, injuring 433 people and creating \$2 damage to buildings and factories. The US Army was called to restore the order between blacks and whites. (Martelle, 2014)



## 1.2 FROM POSTWAR YEARS UNTIL THE OIL EMBARGO

The end of the War in 1945 did not stop the racial and housing tensions, while helped to the rising economic boom of the city in postwar years. The Detroit Area grew by the addition of 200.000 industrial employment in the period since the World War II. (Detroit City Plan Commission, 1958) However, the industrial leaders decided to turn back to car production, and the city has returned to be a one-industry town, therefore susceptible to business fluctuation. Detroit lost its chance to diversify its economy and invest in other sectors. This choice is one of the main reasons of the economic crisis of the city.

The Detroit City Plan Commission tried to take measures in order to keep the industry in the city publishing different plans related to industry development. The proposed generalized use plan issued in 1947 aimed to create a better place for living and working. The importance given to the role of industry in retaining the population and to ensure a bright future for Detroit is clear when the plan states «Indeed, the future of the city as a population center rests primary on the strengths of its manufacturing enterprises. People live where they can find work. When opportunities disappear they drift away.» (Detroit City Plan Commission, 1947 p.33) The 1950 plan added new industrial areas in order to satisfy the present needs of the industry and to provide for its expansion. In fact, the plan marks more than the double acres of industrial land that then being utilized (from 4.898 acres in 1943 to 9.800 acres designated by the plan) (Detroit City Plan Commission, 1947 and 1950).



Land Use- Industria Areas

Source: City of Detroit (1950), Land Use Generalized Plan, p 12

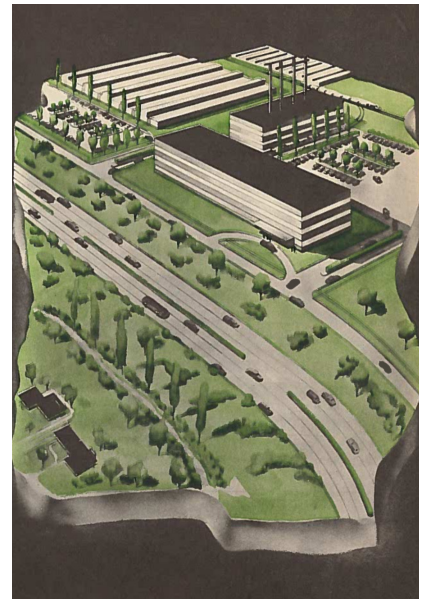
The optimism about the growth of the industrial sector in the generation ahead, led the Commission to increase the area, even if they were uncertain about the land needed. On the other hand, they were conscious about the large space required by modern factories, and it was hard to find in the city a number of vacant lots to assemble, which could match with the industrial needs.

Detroit industrial pattern was characterized by huge establishments engaged in heavy manufacturing, but the development of new giant factories within the consolidated pattern limits was still difficult. Moreover, the straight-line production methods were more efficient in a single-story factory building, which required more space per worker than the traditional multi-story structure typical of the industrial fabric of Detroit.

The city was aware of the fact that factories were locating outside the city limits, so they increase the acres of industrial land, even if they knew that only a marginal part of that land could be attractive for new modern factories. Losing industries in the city would have meant losing jobs, population and high taxes revenues. At the same time the plan wants to limit the negative effect of industry on residential areas, by concentrating the new facilities in the existing corridors. (Detroit City Planning Commission, 1947)

The plan and the new areas for industries did not achieve the goal of retaining the industries in the city and stop the location or relocation of industrial complex outside its core. New factories were built outside the limits of the city, north to the Eight Mile and in Wayne County and in Oakland County. There, rural land was cheaper than in Detroit, where also the existing factories were becoming outdated: in consequence the costs for buying new land, renovating the existing facilities or razing them to build new plants were too high compared to building new ones. The new facilities led to the construction of new houses close to the new plants, and veterans or qualified people preferred buying in suburbs than in the city, since houses were hard to find and expensive. The slums, especially the black ones, had serious sanitary issues and got worse as the tensions between black and white people. (Detroit Metropolitan Area Regional Planning Commission, 1951)

For these reasons, from the 1950s many people started moving from the city to the suburban areas and the city started its shrinkage, leaving behind vacant buildings, lots, polluted areas and brownfields. One significant example is



**Ideal of ample and well located working space**

Source: Detroit City Planning Commission (1947) Proposed Generalized Land Use Plan, p.13



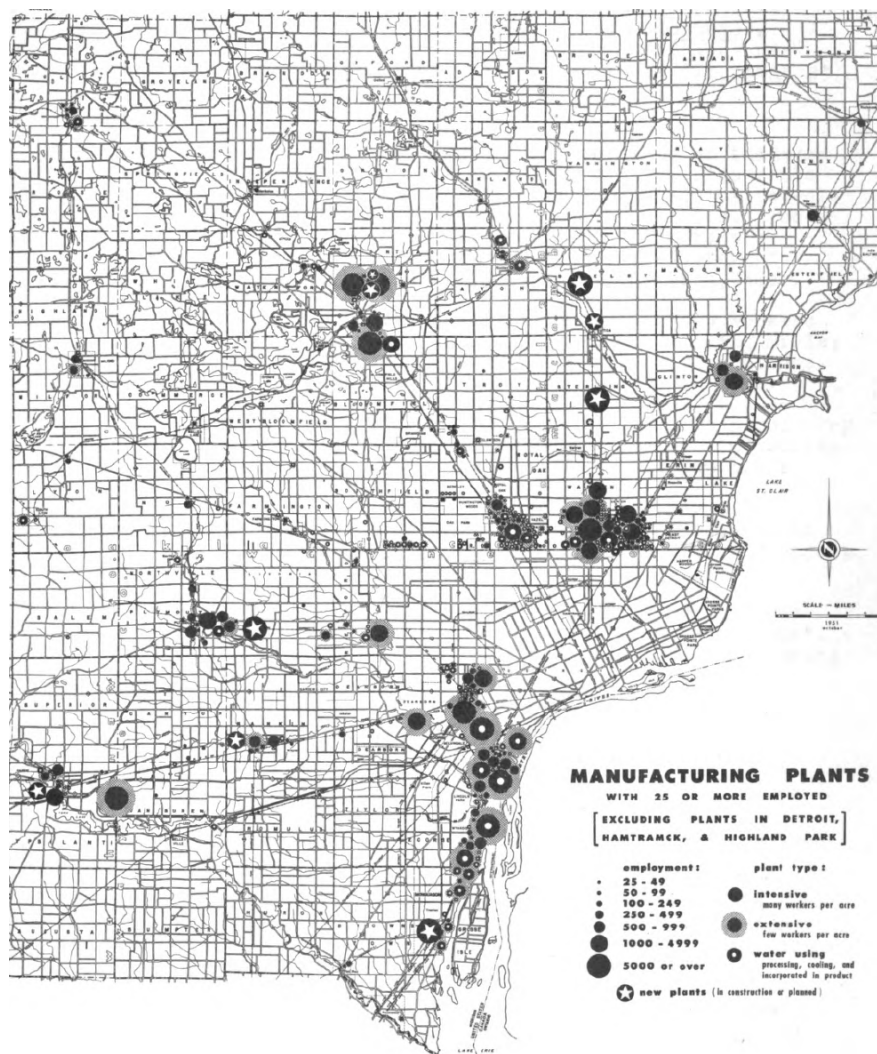
**Ideal city development to achieve through the Generalized Plan of Land Use**

Source: Detroit City Planning Commission (1947) Proposed Generalized Land Use Plan, p.14



Packard Plant, built 1906 and dismissed 1956. Despite many failed reconversion attempts, the Packard new reconversion and rehabilitation started in September 2017 by Arte Express Detroit, owned by Fernando Palazuelo. (<http://packardplant-project.com/history/index.html>)

Actually, the trend had begun before the 1950s, in part because of taxes, the spatial requirements for production, and the difficulty of inner-city expansion. The continued spread of manufacturing into the outlying communities and townships of the Detroit Region has not only raised new land use problems but is also laying the base for new patterns of both industrial and community development.



Manufacturing Plants with 25 or more employed [excluded the plants in Detroit, Hamtramck and Highland Park]

Source: Detroit Metropolitan Area Regional Planning Commission (1951), Industrial land use in the Detroit Region p. 6

The process, which has been in operation for years, has been accelerated by 4 main factors:

- The federal government's policy of dispersal to protect against atomic bomb attack, recommended that new ma

- manufacturing plants in industrial concentration has to maintain 10 miles between sites;
- The Michigan's morphological characteristics allowed the expansion in any direction;
- The outstandingly developed infrastructure network, which allowed workers to live ten to twenty miles from work- a common fact for that period;

The fact that the region was still expanding and growing stage, despite the process to diversify the economy was slow and difficult. In the period between 1945 and 1951, 349 new manufacturing constructions contracts were awarded in the Detroit Metro Area. (Detroit Metropolitan Area Regional Planning Commition, 1951)

In January 1952, a total of 142 Detroit Region plants involved in defense production had been granted certificates of necessity for additional plant facilities. The total five-year accelerated tax amortization allowed for these structures and new equipment but only 7.5% was for manufacturing firms within the center of the Region (Detroit, Hamtramck and Highland Park). (Detroit Metropolitan Area Regional Planning Commition, 1951)

The technological progress and new manufacturing processes changed the needs of some industrial types and consequently the footprints and the lot size, defining two main industrial types due to the character of their operations and the nature of their products. In addition to the traditional intensive industries, which operate efficiently with many workers concentrated in a comparatively small land, the new industries must spread their operations out over the land, with fewer workers for acres. The first type is characterized by the absence of a belt line production and light weight and small size of the products manufactured, as general hardware or lighting fixtures, which can be produced in multi-story buildings, while the second type call for one-story building for a modern and efficient industrial production. From 1929 to 1950 manufacturing employment in plants located outside the center of the Region grew from 26% to 35% of total manufacturing employment.

The location of new sites for plants influenced the social factors such as residence of employees and the developing community pattern of the Region have received scant consideration thus far. The employers and their families found convenient living in new communities, where new services needed to be provided as schools, shopping centers and other facilities. In ten years the population in the Detroit Metropolitan region rose from three millions to 3.8 millions.

Detroit started losing population and many areas of the city



Ford Rouge Plant, Dearborn 1955

Source: Pinterest  
<https://it.pinterest.com/pin/574279389956213939/>



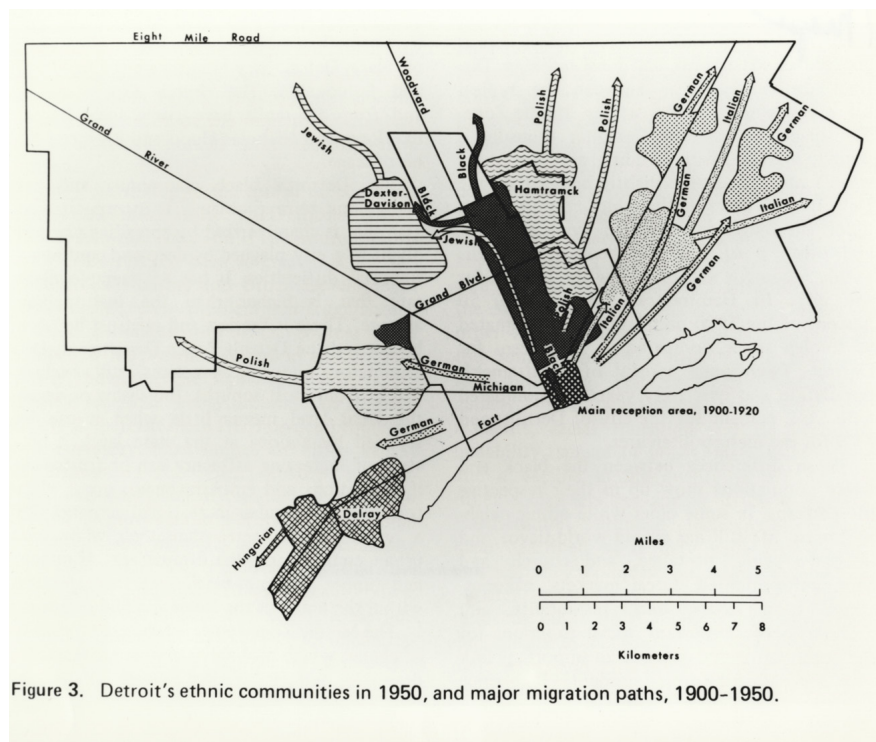
Final assembly line of a Detroit Plymouth plant in August 1954 is so large, it runs about half a mile indoors.

Source: <http://www.nydailynews.com/news/detroit-heyday-gallery-1.1405126?pmSlide=1.1405772>

were facing some of its major issues as slum clearance, public housing, redevelopment of blight areas. The municipality decided to take measures complementary to the industrial policies, by improving the neighborhoods' conditions to attract population and keep the industries in the city's core.

In 1949, Title I of the Housing Act provided federal funds for public housing and redevelopment, so the city government did not have to depend solely on local funding to support its plans. During the 1950s different areas of Detroit were targeted for redevelopment and urban renewal projects, promoted both by public and private institutions. The municipality was also concerned about the economic security of the Central Business District business, since the land on its boundaries was falling in value due to the presence of black population on the east and the white ethnics group on the west.

The first project realized was on the east of the Central Business District, the Gatrioit project, known today as Lafayette Park, subsequently followed by Elmwood I, Elmwood II and Elmwood III, all to the east of the CBD. The second project focused on the industrial project Corktown, on the west of CBD. In order to realize the Gratioit project, 1900 families have been evicted from the site, who were relocated into overcrowded nearby neighborhoods and affected many black-business, creating a profound discontent among the black community. (Manning, 2012)



Detroit's ethnic communities in 1950, and major migration paths, 1900-1950.

Source: Detroit Public Library Digital Collections – Burton Historical Collections



Lafayette Park was a project born on the clearance of a low income neighborhood between 1952 and 1956. The project is a mixed-use superblock project designed by the architect Mies van der Rohe and his design colleagues Ludwig Hilberseimer and Alfred Caldwell, according to neighborhood unit principles. It contains modernist townhouses and towers marking the boundaries of a linear park. In the sites there are shared parking lots for automobiles, and car-free pedestrian access to commercial facilities and an elementary school. (Manning and Bekkering, 2015)

The map in the following page shows the location of the urban renewal project in the city.



Redevelopment target areas in 1956, for expenditure of urban renewal funds for clearance and redevelopment.

Source: Scott Pitera, reworking of Parkins, M. (1958). *Neighborhood conservation: A pilot study*. Detroit, MI: Detroit Plan Commission in cooperation with U.S. Housing and Home Finance Agency. Manning and Bekkering (2015) *Mapping Detroit: Land, Community, and Shaping a City*, Wayne State University Press, Detroit

Compared to other US industrial cities that were living a similar situation, as Pittsburgh Detroit has a weak private-public partnership. The Big Three auto firms did not invest in the CBD, no corporations arose to push forward a strong central business initiative. The lack of investment and CBD attractiveness and many business owner and merchants, active in the 1940s and 1950s, soon moved to suburban shopping centers, hastening decentralization of the city's residents and capital. The city government wanted to replace deteriorated housing and businesses in low-income, minority-race areas with new housing, white middle-class residents, industries, and institutional buildings, in order to increase the revenues generated by the added-value land use.

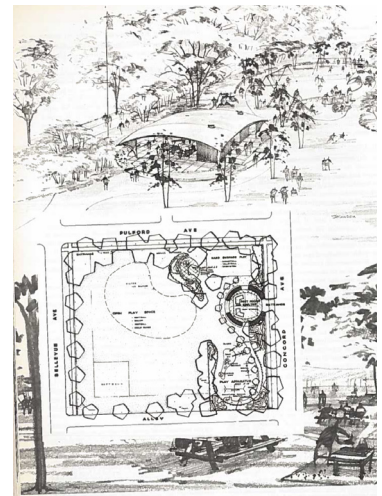
Nevertheless, as mentioned before, some privates decided to form a pro-growth coalition, the leaders of the Detroit In

stitute of Arts, the Detroit Medical Center, and Wayne State University were particularly important boosters. They worked with a succession of mayors and planning staff to redevelop their surroundings, forming the Cultural Center and the Medical Center. The first one became a bifurcated project with two parts: the Wayne State University and nearby University City residential areas located west of Woodward Avenue, and the Cultural Center project, including a museum district and nearby residential areas, located east of Woodward Avenue. The second project, the Detroit Medical Center housed four hospitals that were originally envisioned as needing expansion, and also several other medical institutions and businesses. Nowadays, these districts are one of the major employers in the city and most lively areas of Detroit, with more than 10,000 workers at any given time, students, business and restaurants. Despite the partial success of the renewal projects, they could never achieve the long-lasting effects desired, for two main reasons.

First of all, the city government and the mayor Albert Cobo, elected on January 1950, was not truly creating a stable environment that would support the city development or the formation private-public partnership or coalitions. He refused most of the public housing policies and vetoed some proposal already at work. His segregationist policy consisted in eradicate the existing slums, most of them black, without building any public houses, while impoverishing the already poor and disadvantages families. The city's planners adopted conservative initiatives, as the Neighborhood Conservation- Pilot Study by Maurice F. Parkings, provided an approach unsuitable that could not stop socioeconomic decline (Parkins 1958; Manning 2012). In fact, according to Mel Ravitz, a former conservation planner the conservation program of the 1950s failed because whites were unwilling to invest even in home repair in racially changing central-city neighborhoods when they could so easily leave. (Ravitz, 1955)

The city was facing an industrial job loss, due to the major auto companies' policy of decentralization and business integration, which contribute to the collapse of the Detroit's economy.

In 1940 Detroit had 625.456 residents working for pay. The next decade, thanks to the economic boom following the end of the war, the number rose to 757.772. In 1960, however, the employment in the city dropped to below the prewar levels-612.295. The employment continue to drop to 561.184 (US Census for Manufacturers, 1940-1970). The plants relocation weakened the fabric of existing neighborhoods, industrial districts, and



Draw extracted by the Neighborhood Conservation a Pilot Study

Source: Parkings M. (1958), Neighborhood Conservation, a Pilot Study, Detroit, p 122



Draw extracted by the Industrial Redevelopment Plan West Side Industrial District

Source: Detroit City Plan Commission (1958), industrial Redevelopment Plan in the West Side Industrial District, p. 14

commercial sectors, since they represented anchor of urbanization. In 1958 an Industrial Redevelopment Plan to redevelop in the West Side Industrial District, and provide industrial land suitable for the needs of the factories. The project, realized thanks to the federal assistance of the Housing Act, intended to clear one of the most blighted residential district for industrial use. The project *«It is intended to show why this district is an excellence location for certain industrial and warehousing activities, how the city is acquiring and preparing it for resale, and how those in search of plant location may secure sites in this modern industrial district.»* (Detroit City Plan Commission, 1958, p.1)

The redevelopment project failed, since it did not introduce any replacement functions that could have allowed the vitality and attractiveness of the neighborhood and they were often left standing, remaining confined by the project limits, surrounded by empty land as the city was shrinking. Despite the growth of the state, propelled by the auto industry revival, Detroit was shrinking. This trend began in 1960s and continued during the decades. In 1973 the Oil Embargo affected the city's economy, in a global framework in which manufacturing sector was shifting into the service sector and the labour pool was undereducated. The analyst Wilbur Rich identified the situation going on between the 1970s and the 1980s: *"The most dramatic shift in Detroit's economy has been in the area of producer service. Detroit has simply not been competitive in planning, management, financing, marketing, legal, or accounting services, in part because the city's economic elite have refused to recognize Detroit's potential as a center for such activities, and this have not backed any moves toward more producer services for the city. Another impediment has been the lack of a suitable work force and the amenities to attract workers from other areas. Industries that recruit heavily among college-educated twenty to forty-years-old have not seriously considered Detroit or its suburbs as a viable location."* (Rich, 1989 p.133)

### **1.3 DEINDUSTRIALIZATION AND CITY SHRINKAGE**

In 1974 the new municipal election were won by Coleman Young, the first black Mayor in Detroit. When Coleman took power, the city was collapsing: the oil embargo hit the city's economy, the city schools were failing, consequently the new workforce was unsuitable for the economy of services and producer business. His policy tried to reduce crime and segregation, and improve the chances for black people. Young also tried to spur industrial development. In fact, after the oil crises



inadequacy of the environmental standards, which excluded them from benefiting from the environmental protection laws, a way automotive companies had to reduce costs. Coleman tried to invert this process, truly convinced that it might have a positive impact on the city of Detroit. (Martelle, 2014)

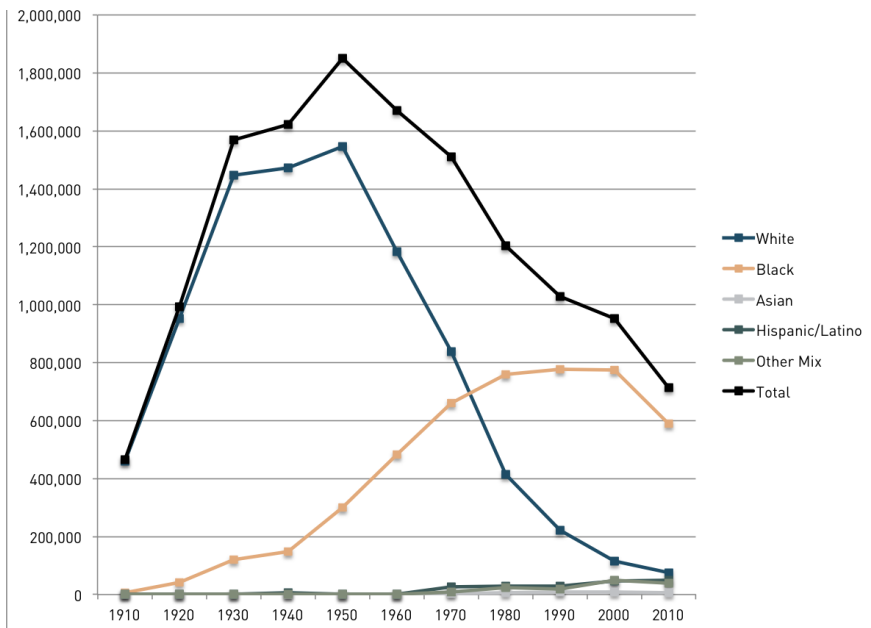
Over the past 30 years, Detroit was facing the same problem as other Rust Belt cities: aging and obsolete facilities, scarcity of inexpensive industrial land for expansion and changing markets have led to a reduction of industrial plants in the city, in favour of expansion of suburban areas.

Prior to the World War II, manufacturing provided half of all jobs in the city and much of the Detroit's tax base. In 1970's the deindustrialization hit the already struggling city. Firstly, the city assisted to extended workers layoff, then permanent terminations of portions of a plant's workforce as entire plants closed, as the examples of Chrysler, the Uniroyal complex and the Parke Davis Facilities. Along with the declining manufacturing, has been the associated decline of the other economic sector in the city as retail, wholesale, services and a general decline on population (City of Detroit, 1980)

The lack of an available industrial tax base and a declining workforce placed Detroit in a distressing fiscal position, and the city was forced to lay off essential police, fire and other service workers to the lowest in 50 years. Moreover, the situation was aggravated by the fact that both private and public social agencies were approaching depletion, since the families receiving a monthly aid was about 76.000. Other welfare programs were increasing due to the critical conditions of Detroit. There are several theories about the population drop in the 1970s including: racial tensions and reactions to the 1967 civil rebellions, white residents' hostility toward Coleman Young, even if he gained the support of white businessmen, a divisive school integration, the cumulative effects of racially exclusionary suburbanization started in 1950s, and the impact of the economic recession started after the 1973.

Detroit lost proportions of population from 1960 to 2010. The drop was racially selective; blacks represented the 44.5% of city population in 1970, their presence increase 63% by 1980 and 76% by 1990, 82.7% by 2010 and in 2016 the black population is the 79% of the total in Detroit. (US Census 1960-2010, Census Reporter 2016).

### POPULATION IN DETROIT 1910-2010 CLASSIFIED BY RACE



Population in Detroit classified by race in the period between 1910-2010

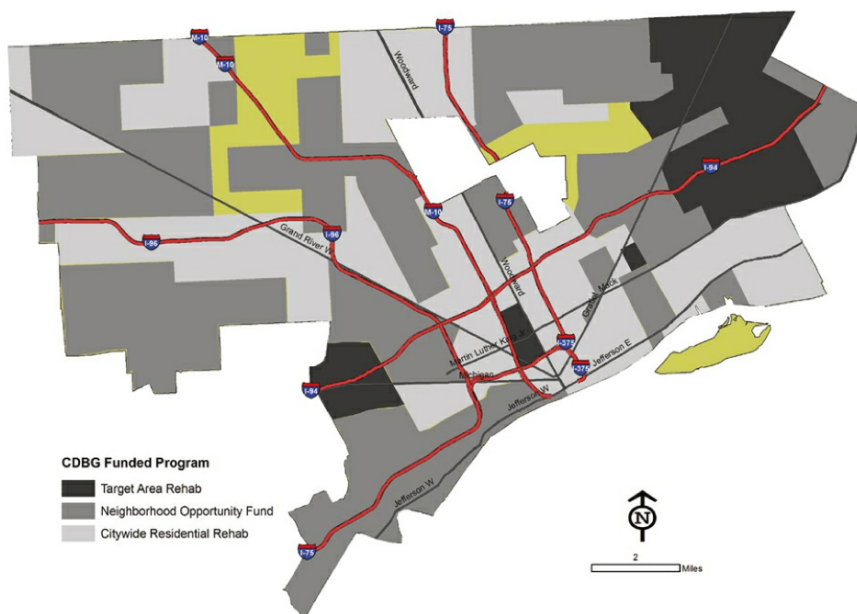
Source: Personal revision of Decennial Census Data on the population

Given this situation, Mayor Coleman proposed an Auto Recovery Program, in order to work with Chrysler Corporation and General Motors Corporation to assist their efforts in replace their obsolete facilities into competitive, modern and energetic efficient ones. To satisfy this purpose, the City of Detroit in conjunction with the City of Hamtramck developed a proposal for a Central Industrial Park project, and make space for a new GM factory, in the neighborhood of Poletown, near the Hamtramck border, bulldozing a part of the neighborhood and merging two Cadillac plants. In 1981, the GM Detroit-Hamtramck Assembly Plant was built through a joint public-private initiative, showing that major investment in assembly operations in the central city would take place only with significant public incentives (Manning, 2013). Otherwise, automotive firms were placing their operations at ever-greater distances from the city and its suburbs. Thereafter, in 1991 the same policy has been applied in order to allow the expansion of the Chrysler's plant in east Jefferson Avenue. Despite these projects were helpful for the city's economy, they had not the power of stopping the loss of population, jobs, business and neighborhoods health. (Martelle, 2014)

All the redevelopment efforts, both the ones at the neighborhood scale in the city, and the ones considered more salient as those realized in the CBD, riverfront, and industrial sectors were depending on federal funding and a the weaker coalition than operated in previous decades. Federal support for

redevelopment changed in 1974 with the introduction of Community Development Block Grants (CDBG). The Mayor agenda had important but limited effects, since the programs would have needed the support of a private dynamic market. The past efforts (public housing and urban renewal) supported by the previous administration highlighted endemic problems in the city as racial segregation and they did not improve the physical condition of neighborhoods, since the poor nature of built housing units. An Enterprise Zone<sup>1</sup> program was launched in 1994, had the intention to assist low-income population, but the results did not produce any local measurable improvement. This program aimed to complete or build on urban renewal projects. The municipal government tried to use these funds to allocate money to urban renewal project but also community development and key areas development.

Between 1975 and 1982, the city government put above average CDBG expenditures in sections of the city including urban renewal projects, such as the Jefferson-Chalmers neighborhood to the far southeast; the CBD; the East Central sector, which included Elmwood I, II, and III). Detroit invested the 16.2% of its CDBG funds-154\$ millions-to build the J Louis Arena, the Millender Center and apartment towers on the western riverfront. (Darden et al. 1987)



CDBG funded program areas.

Source: Scott Pitera, reworking of City of Detroit. (1991-92). Comprehensive housing affordability strategies performance report, p. 42. Manning and Bekkering (2015) Mapping Detroit: Land, Community, and Shaping a City, Wayne State University Press, Detroit

Moreover, the city government tried to allocate community funds beyond formal redevelopment projects. The municipality established a CDBG-funded program called the Neighborhood Op-

<sup>1</sup> [http://www.legislature.mi.gov/\(S{1301w4e1dg0fmhioynzom4qd}\)/mileg.aspx?page=GetObject&objectname=mcl-Act-147-of-1992](http://www.legislature.mi.gov/(S{1301w4e1dg0fmhioynzom4qd})/mileg.aspx?page=GetObject&objectname=mcl-Act-147-of-1992)

was possible to support for citizen district councils, advisory groups mandated under the state's urban renewal enabling legislation. However, the wide distribution of the funds made difficult to have a significant results in these areas.



Major development focus areas from 1956 to 1993. This map overlays some of the areas of the CDBG area, with the addition of plant sites for GM and Chrysler.

Source: Scott Pitera, reworking of City of Detroit. (1991–92). Comprehensive housing affordability strategies performance report, p. 42; Parkins, M. (1958). Neighborhood conservation: A pilot study. Detroit, MI: Detroit Plan Commission in cooperation with U.S. Housing and Home Finance Agency. Manning and Bekkering (2015) Mapping Detroit: Land, Community, and Shaping a City, Wayne State University Press, Detroit

To sum up, the council confirmed the continuity of the urban renewal agenda, both following the programs designed on the federal funds available and orienting the development of distressed area in new documents, as the city's master-plan in 1992. (City of Detroit 1992). Moreover, industry sector and its recover was one of the administration's goals. During his term, Coleman received support from a modest pro-growth coalition, which realized several projects during the 20 years he was in power, especially in the Central Business District and industrial sector, but the coalition had to deal with problems as mistrust and fragmentation. (Manning and Bekkering, 2015)

#### 1.4 REDEVELOPMENT EFFORTS AND THE RAISING OF THE CENTRAL BUSINESS DISTRICT

In 1994 Mayor Dennis Archer succeeded the seventyfive years old Coleman Young. Its political programme identified two action lines: a new land use plan and the successful application for the federal urban Empowerment Zone program, «a collection of tax incentives and block grants designed to encourage economic, physical, and social investment in the neediest urban areas of the United States.» (Busso et. al, 2013, p. 18) Compared to the ear-

had different criteria<sup>1</sup> as the involvement of community-based organizations, high rate poverty, unemployment and general distress. The funds' resources were \$100 million over ten years to the winning cities: Atlanta, Baltimore, Chicago, Detroit, New York, Philadelphia/Camden. In order to facilitate the more efficient use of the funds, cities could decide the investment's sectors. Detroit, with the commitment of private as General Motors Corps., invested mainly in economic development, housing, community development and transportation and the and but although this support, the results of the program were positive but not enough to generate relevant improvement in the areas. (Manning, 2014; McFarlane, 1995)

In the same years, the city received support from Michigan the Renaissance Zone Act<sup>2</sup> and the Michigan Neighborhood Enterprise Zone Act<sup>3</sup>. The first one designated 1,345 acres of city's region as virtually state and local tax free for any business or resident presently in or moving into a zone for a period of up to 15 years, while the second consisted in tax incentives for the development and rehabilitation of residential housing, in areas where it may not occur otherwise.



Major development focus areas from 1956 to 1993. This map overlays some of the areas of the CDBG area, with the addition of plant sites for GM and Chrysler.

Source: Scott Pitera, reworking of City of Detroit. (1991–92). Comprehensive housing affordability strategies performance report, p. 42; Parkins, M. (1958). Neighborhood conservation: A pilot study. Detroit, MI: Detroit Plan Commission in cooperation with U.S. Housing and Home Finance Agency. Manning and Bekkering (2015) Mapping Detroit: Land, Community, and Shaping a City, Wayne State University Press, Detroit

In 1994, the Mayor has established the Land Use Task Force, whose objective was to vision the future land use of the city and potential developemnt areas, by involving the residents in the

1 <https://clintonwhitehouse6.archives.gov/1994/01/1994-01-17-fact-sheets-on-empowerment-zone-and-enterprise-communities.html>

2 <https://www.legislature.mi.gov/documents/mcl/pdf/mcl-Act-376-of-1996.pdf>

3 [https://www.michigan.gov/documents/taxes/MEDCGuidelines\\_280249\\_7.pdf](https://www.michigan.gov/documents/taxes/MEDCGuidelines_280249_7.pdf)



planning process and in reinvestment recommendations, forming the Detroit Community Reinvestment Strategy (CRS). The city has been divided into ten clusters, for which of each a committee produced a report about reinvestment strategy, new land use and strengths for the next five or ten years. Completed in 1997, the implementation of these strategies was hard to achieve, since the lack of the private sector participation or public-private partnerships which could fund and support the initiatives. The city council did not adopt these volumes as official documents but in 2001 the Planning and Development Department incorporated the CRS recommendation into a revised Master Plan of Policies, updating the geographical organization for the current plan. (City of Detroit, 2017)

The mandate of Archer, who served for two four years term, has been positive for the city, in terms of urban development. Thanks to his policies the CBD saw new constructions, including Ford Field in 2002 and Comerica Park in 2000 and the important firm General Motors moved to Downtown. The sport stadia could not support the whole CBD area, but they created a modest impact on tourism industry. Three casinos were built but they did not spur further businesses growth. However, the urban renewal funds changed the nature of development, encouraging a gestional matrix led by major nonprofit institutions which to grow, expand and collaborate. In Detroit, the Midtown area development was promoted by Detroit Medical Center, Henry Ford Hospital System, Wayne State University, the College for Creative Studies, the Detroit Institute of Arts and associated institutions and businesses. This coalition encouraged the physical expansion of the neighborhood, creating built new buildings and expanding or rehabilitating the existing ones, spurring in some cases creating their own mini land-use plans for expansion and consolidation, and attracting nearby housing development. From an economical point of view, the auto industry did not recover from the critical situation and less jobs were available. This situation got worsened as Detroit as Archer's term ended.

The next Detroit's mayor, Kwame Kilpatrick, was the third black mayor of the city, he was elected in 2002 and prematurely terminated the mandate in 2008 due to issues related to political ethics and fiscal responsibility. Before its fall in a series of scandal-ridden court cases, Kilpatrick administration supported key redevelopment projects in the CBD and riverfront, such as the reconstruction of the Westin Book Cadillac Hotel. The corporations' and foundations' involvement in the city development was clear, especially in designated areas of the city, as



**Book-Cadillac Hotel, 2001 and 2014**

Source: Original photo: 2001, Lucas McGrail Current photo: March, 2014  
<http://detroiturbex.com/content/ba/feat/revival/12.html>

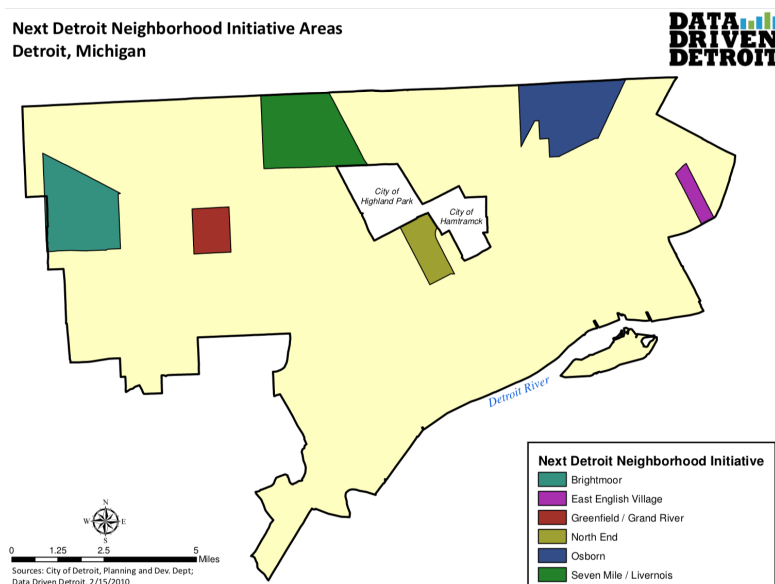


**The Dequindre Cut Greenway**

Source: Smith Group JJR (<http://www.smithgroupjjr.com/projects/dequindre-cut-greenway#.WlGmbah124>)

the Riverfront, Eastern Market and other strategic portions of the city. In fact, they have joint to creatw a new form of growth coalition, sometimes carrying out activities traditionally carried out by city governement, as the Detroit Riverfront Concervancy, a non-profit established in 2003, which collaborated and was supported by the municipality, foundations and the GM to realize the linked parks and public spaces in the riverfront or the greenway Dequindre Cat.

Its close collaboration with agencies, foundations and corporation working on Detroit was underlined in late in 2006, Kilpatrick adopt a development strategy for addressing increasing vacancy in 6 designated neighborhoods in other parts of the city relied on spotty demolition of abandoned housing. He launched the program Next Detroit Neighborhood Initiative (NDNI) that became a non-profit in order to recieve economic support by foundations, which lasted only a few years and faced limited resources. It focused on Northend, Brightmoor, Grand River-Greenfield, Obsorn Community, Sever Mile-Livernois, East English Village and offered \$225 million to create collaborative neighborhoods plans. NDNI staff work closely with communities and city agencies to implement the plan and ensure the funding but when in 2008 the scandal broke, the foundations and corporation, who had committed \$8 million dollars, stopped their commitment. (Deware, Thomas, 2012)



The NDNI Neighborhoods, the targeted areas

Source: Data Driven Detroit, 2010 (<http://datadrivendetroit.org/wp-content/uploads/2010/04/DetroitReferenceNDNI.pdf>)

In 2004 and 2005, the mayor's executive branch prepared revisions of the master plan, which failed to be adopted by the city council, since additional review considerations were provided

by the community during some meetings. The plan was revised by CPC based on the community input, twelve-years-old and adopted later in 2009 replacing the 1992 plan. The city missed the opportunity of involving the community and propose fresh development strategies. place. Detroit also adopted and updated its Master Plan of Policies in 2009, but that plan did not offer a full embrace of the “smaller” city, and the city’s staff planners had neither the resources nor the mandate to do this. Instead, the plan specified future land use that, for the most part, mirrored past uses. Even if this and Detroit’s previous land use plans had addressed issues of vacancy and redefinition of land use, this would not have been enough.

## 1.5 THE GREAT RECESSION AND THE BANKRUPTCY YEARS

Following Kilpatrick’s departure, the city council president Kenneth Cockrel Jr was sworn in as acting mayor for few months. He decided to development strategy, applying for the first round of Neighborhood Stabilization Program (NSP) funds.

Neighborhood Stabilization Program-Round I

Source: Scott Pitera, reworking of City of Detroit., Planning Commission Manning and Bekkering (2015) Mapping Detroit: Land, Community, and Shaping a City, Wayne State University Press, Detroit



Detroit requested \$47 million in the first phase, with a strategy based on demolishing vacant buildings. The targetd areas included huge portion of the city, so the amount gained was destinated to demolish houses spread through the boudaries, offering little chances to to ensure visible and effective results. To avoid the previous undesirable effect, the second-phase request focused its target on three areas, while during the



third-phase the targeted areas were smaller and mostly in peripheral areas of the city.

#### Neighborhood Stabilization Program-Round II

Source: Scott Pitera, reworking of City of Detroit., Planning Commission Manning and Bekkering (2015) Mapping Detroit: Land, Community, and Shaping a City, Wayne State University Press, Detroit

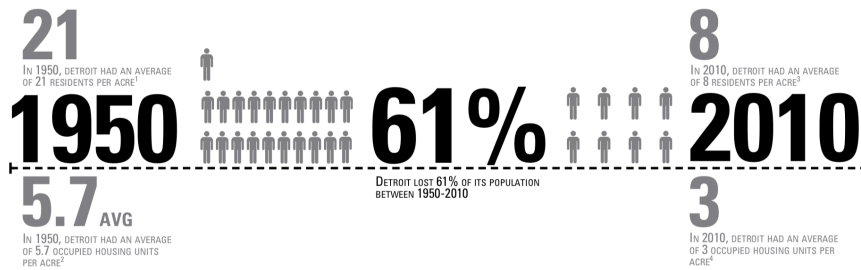


Cockrel was defeated by Dave Bing in the mayoral election on May 2009 and he was elected to complete former mayor Kwame Kilpatrick's term, which ended December 31, 2009. Bing was re-elected to a full term on November 3, 2009. Since being elected, Bing struggled to balance the city's budget and he decided to introduce plans to downsize the city, since providing municipal services through the extended urban core, mostly composed by abandoned and desert neighborhoods was too expensive, he decided to cut off them to stabilize city's finances. He also aimed to improve the quality of life for all citizens and to repopulate Detroit, focusing on five key sectors: public safety, public transportation, public lighting, neighborhood blight and recreation. (Clark, 2013)

The mayor David Bing started approaching to land use planning in a more aggressive way than the traditional one suggested by the 2009 masterplan. He established a cooperation between municipality and foundations, in order to sustain his planning initiative Detroit Works Project, «a process to create a shared, achievable vision for the future of Detroit that could serve as a guide for improving the physical, social and economic landscape of our city.» (<http://www.dcdc-udm.org/projects/strategies/dwltp/>). In 2011, the mayor decided to split this process into two initiatives: a short-term one, overseen by city government who dealt with the neighborhoods improvements based on their

market conditions working on city services using the available resources. The long-term initiative is the creation of a strategic framework for the future of the city and it was led by a steering committee appointed by the mayor composed by fourteen city leaders from different fields, and by the Detroit Economic Growth Corporation, including a team composed of major local and international planners, architects, engineers, landscapers. (DFC, 2012) The two-year planning process resulted in the Detroit Future City Strategic Framework, due to the complexity of the issues Detroit faces, the strategic plan did not focus only on the physical asset of the city -the land use- but it also considered the economic, infrastructural and environmental system in the city, to orient the decision making and the actions to create a sustainable, inclusive growth in all these assets. Thanks to the support of technical assistance from consultants, which collected and elaborated a large amount of qualitative and quantitative data, analysis, and mapped different situations in the city the team had a comprehensive overview at their disposal to the final recommendations. The strategic plan was realized by a team of experts which collaborated closely with community partners, public and quasi-public agencies as the DECG, and private consultants. Moreover, the team wanted to involve the community in the creation of the scenarios for Detroit's future, so that the planning process could offer a more complete overview, since recommendations or critical remarks are voiced from different point of view. The collaboration through meetings, workshops, brainstorming between experts and community, not usually captured in planning efforts of this scale, has been essential to define shared goals and values and the actions to transform the critical issues into strengths and catch the unexpressed opportunities.

At the time of a 2009 field survey the Detroit's situation was the following:



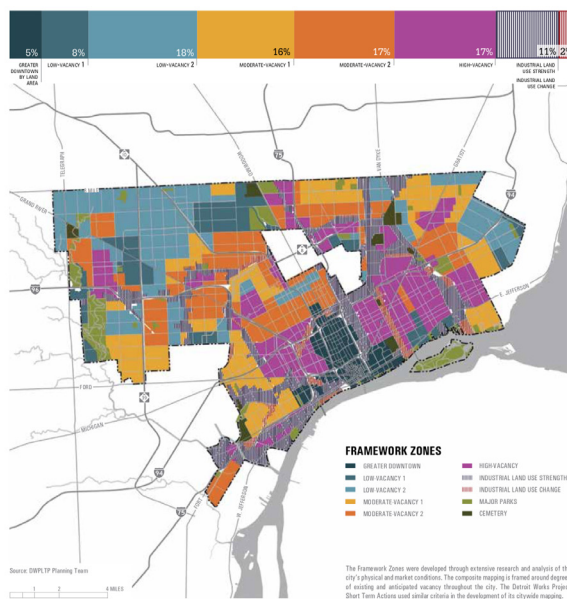
Infographic extracted by the Detroit Future City Framework analysis

Source: Detroit Future City (2012), Detroit Future City Framework, Inland Press, Detroit



The key elements of the plan are the following:

- **Economic Growth**- defines the economic sectors to support and provide equitable solutions for Detroiters, through an economic diversification and advancing in-town business and job creation;
- **Land Use**- suggest several land use type according to the characteristic of the areas, with special concern about a more sustainable distribution of population and density in the city and the redefinition of urban neighborhoods and open spaces;
- **City System**- concerns reforms for the improvement of the infrastructures to create an efficient service delivery;
- **Neighborhood**- elaborates strategies to stabilize and improve quality of life in all the areas of the city;
- **Civic Engagement**- articulates ways to enhance civic support for and participation in the implementation of the Strategic Framework as well as improvement in the city's overall civic capacity.



## Framework zones

Source: Detroit Future City (2012), Detroit Future City Framework, Inland Press, Detroit, p.22

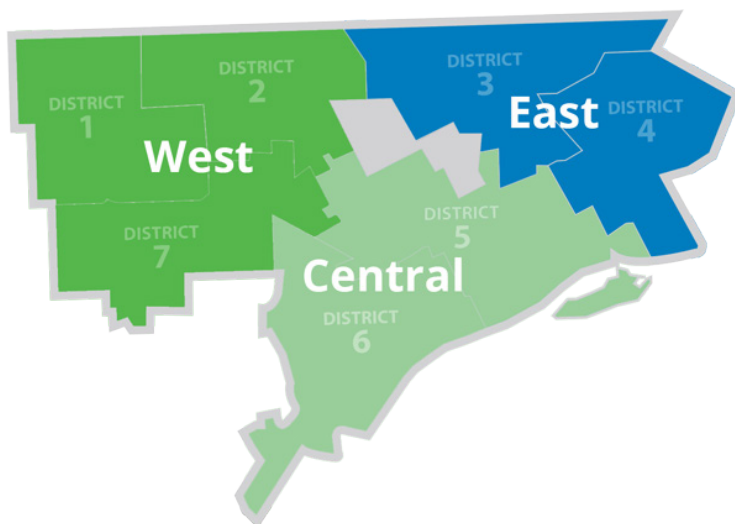
Despite the effort to draw the plan, the critical city's economical situation and an increasing number of vacancies prevented the plan to be implemented, especially after the city declared bankruptcy. In 2012 Michigan State Governor Rick Snyder appointed a team to examine Detroit's finances, meeting with opposition from the mayor. In March 2013, unconvinced by the mayor's arguments, Snyder appointed Kevyn Orr, a bankruptcy lawyer, as Detroit's emergency manager and invested him with considerable authority. Four months later, Orr used his authority and filed for bankruptcy. After the take-over by the emergency manager, Bing had been deprived of any real powers, but he decided to co-operate with Orr. However, the DFC Framework is important for two important fact: the first one is that after years of a total absence of a strategic vision which could orient policies, development and investment to achieve specific goals and after years of planning failed attempts to design the future of the city, a Mayor underline the necessity of creating a framework for the future and decide to set it as one of the key points of his political agenda. The mayor t the second is that there is an high belief that Detroit can be great again and can lead new innovative approaches to overcome the shrinkage typical of American post-industrial cities. This plan highlights the considerable human and social capital potential, which was evident and bright in the past thanks to leaders in fields as industry, music, creators, but it is still present today, and more than ever needs to emerge and exploid. In fact, even though Detroit is in a critical situation and faced the heavy deindustrialization severely affected both from an economical and social

point of view, the city is still the largest city in Michigan, with the highest concentration of workers, education, health and education and amusement institutions and a strategic point for the North America international trade. (Manning, 2013)

## 1.6 MIKE DUGGAN AND DETROIT'S RECOVERY

Bing decided not to stand for the municipal election in 2013, leaving the place to Mike Duggan, which started in November 2017 his second term as mayor. Duggan was the first white mayor from the 1970s in a city prevalently black. He decalred in his the campaign to ensure a future to every neighborhood in Detroit, working on financial turnaround, crime reduction, and economic development. (Woods, 2013)

Duggan hired Maurice Cox<sup>1</sup>, architect and urban planner from New Orleans, to lead the Planning and Development Department. The city has been divided into three Design Regions: East, West, Central to promote an inclusionary growth, economic opportunity and an atmosphere of trust. Every Region has specific plans and strategies, which principally involve zoning, landscape design, strategies for neighborhoods' revitalization and commercial corridors.



Detroit's Regions

Source: City of Detroit,  
<http://www.detroitmi.gov/Government/Departments-and-Agencies/Planning-and-Development-Department>

At the city level, the Departement strongly promotes the improvement of quality of life in disadvataged neighbrohoods, past interventions were addressed to enhance the security of through the installation of public-lighting and the demolition of vacant and abandoned houses. Detroit's demolition program is the largest in the US; since 2014, 13.220 buildings have been

<sup>1</sup> <https://nextcity.org/features/view/detroit-planning-department-architects-maurice-cox-steven-lewis>

razed to the ground. This strategy has allowed to raise the value of proprieties in distressed areas and has had a positive impact on crime. (Florida, 2914; <http://www.detroitmi.gov/demolition>) Duggan and his team also wanted to create an environment that well enable entrepreneurs to run their business and invest in the city. He said «*The entrepreneurs are showing up on their own. We need to build the ecosystem to extend it. [...] The loans to start the businesses in the commercial district feed the neighborhoods and as the houses fill up, the neighborhoods fill up, and the commercial district comes back.*» (Florida, 2014)

The municipality, in fact, in 2014 established the Innovation District and since 2016 is working on a pilot project of innovative zoning tool, the Pink Zoning, to spur redevelopment and create jobs. The Innovation Districts are areas where leading-edge anchor institutions, as Wayne State University, Detroit Medical Center, Detroit Institute of Art, College for Creative Studies, Henry Ford Health System and companies cluster and connect with start-ups, business incubators and accelerators, as Tech Town, Next Energy, DTE Energy. (Kats and Wagner, 2014) They are typical mixed-use neighborhoods, transit-accessible (QLine), compact and walkable. They provide plazas, open places, amenities, housing and jobs in.

On the other hand, the Pink Zoning is more community oriented and aims to increase jobs and quality of life working on a limited scale, affordable, and incremental urban development. The tool has born in response to the recent trend of small businesses returing to the corridors, in order to simplify the complex regime of regulatory requirements that might discourage the relocation of them in the city. These tools will be analyzed in more detail in the following chapter. The scheme summarizes the common points and the differences between the growth and development tools.



The municipality, however, did not take into consideration any policy concerning about urban manufacturing. Duggan, who has been re-elected on November 2017, with the 72% of the votes (Stafford, 2017) which means that the population is feeling that the city is going in the right direction. The mayor has eight main principles for the city's redevelopment:

- *«Everyone is welcome in our city.*
- *We won't support a development if Detroiters are moved out so others can move into their homes.*
- *We will fight economic segregation – every area of Detroit will have a place for people of all incomes.*
- *Blight removal is critical – but we must save every house we can.*
- *We will work to build neighborhoods of density – where your daily needs can be met within walking distance of your home.*
- *Those who stayed will have an active voice in shaping their neighborhood's redevelopment.*
- *Jobs and opportunities will be brought close to the neighborhoods whenever possible – and made available first to Detroiters.*
- *The Detroit Riverfront belongs to everyone.» (<http://dugganfordetroit.com/speech/>)*

Detroit is a city that is changing, developing, reinventing itself, many external factors are reshaping the city, its economy, its urban form, its society and politic should orient, support and control them, in order to achieve a liveable, equal and vibrant community.



## 2. IS DETROIT RESURGING?

### 2.1 URBAN DEVELOPMENT AND CONSTRUCTION BOOM

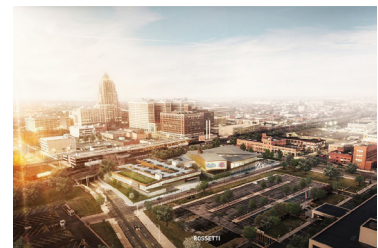
The latest news about Detroit's show that redevelopment projects are increasing day by day. The city is showing its singular resilience, the transformation in process is changing some parts of the city, creating more dynamic, dense, livable and safe neighborhoods and attracting new population. Detroit is facing a resurgence it has not seen in decades, although it is centered mainly in the Downtown area and Midtown area, which represent only the 5% of the 139 square miles of the city's extension. The large projects in process are about 25<sup>1</sup>, and two important projects, the QLine in May and the Little Caesar Arena in September have been completed (Runyan, 2017)

The majority are residential projects: condos, lofts, apartments, some of them include also offices, retail and open spaces, others are dealing with the creation of new services as hotels, sport structures, educational and entertainment buildings. The new projects are improving the quality of building heritage and the image of the Detroit, which is shifting from a shrunked, unsafe and depressed city to more appealing and modern metropolis.

However, even if the new projects bring a positive sign, the reality in the others neighborhoods cannot be considered as rosy: decline, unemployment, under-education, poverty, income disparities, vacancies are concrete and unsolved problems in most of the city's area. The recovery is essential but positive changes have to lead to robust growth that should affect the majority of the population and improve its quality of life, instead of increase inequality. Greater Downtown hosts the 73 percent of total pipeline projects. (HR & Advisory Inc, 2016)

The study conducted by Zimmerman/Volk Associates, Inc. in May 2017, "Residential Market Potential" reveals that 7,400 nearly new dwelling units have been proposed for development over the next few years in the Greater Downtown Area.

<sup>1</sup> <https://detroit.curbed.com/maps/map-detroit-construction-development>



New Pistons Training Facility in New Center that should be opened in 2019

Source: <http://www.rossetti.com/about/news/posts/detroit-pistons-hope-new-practice-facility-becomes-hub-new-center-neighborhood>



The Selden Corridor Initiative

Source: Rendering by VolumeOne Design Studio, Detroit  
<https://detroit.curbed.com/2017/8/30/16227300/midtown-development-selden-corridor>



Approximately, 880 are student housing built as additions to the Wayne State University ones, while 150 are proposed as for-sale housing. Of the remaining 6,350 new market-rate and affordable rental units, based on current plans, about 74 percent are likely to be market-rate and 24 percent are likely to be affordable or restricted units, following the lines of the “Inclusionary Housing Ordinance”, voted in September 2017. The ordinance draft<sup>2</sup> intends to «stimulate the private sector production of housing available to families within the range of 50 percent to 80 percent of the area median income, or lower». (City of Detroit, 2017)

The developer will receive financial assistance or could buy publicly owned land at less than the fair market price if he/she will establish twenty percent of the housing units as inclusionary housing. Of the 20% affordable units that the new developments have to provide, the 10% will be destined for those making 80% AMI<sup>3</sup>, 5% would be affordable to those making 60% AMI and another 5% would be affordable for those making 50% AMI. However, the ordinance subsidizes middle-income families, because “affordable” is typically defined as 80 percent of the average income of the region, or the median family income. The average household income of the metro region is \$56,142, while in Detroit is \$28,099. (Census data, 2016)

The proposed ordinance create housing for households with incomes at 80 percent of the regional average median income (AMI), about \$44,900, which is more almost two times higher than the average Detroit household income. This policy is not solving the affordable housing crisis and mitigating housing instability. Families earning less than \$28,099 (30 percent AMI) per year make up the largest demographic in Detroit, and about two out of every three families in Detroit earn less than 80 percent AMI.

The housing stock booming in the Greater Downtown should be absorbed over the next three years, according to the following overall distribution: 35 percent of the annual absorption in the Downtown core, Midtown should also capture approximately 35 percent and the remaining 30 percent distributed in the other areas of the GDA. «Home prices in Downtown and Midtown are clearly much higher than in Detroit’s neighborhoods and they are increasing much more rapidly. In 2010, the average sales price of

<sup>2</sup> <http://www.detroitmi.gov/Portals/0/docs/CM%205%20-%20Sheffield/Inclusionary%20housing.docx?ver=2015-12-11-104529-740>.

<sup>3</sup> “Area Median Income (AMI)”. The median family income for the Detroit-Warren-Livonia Metropolitan Statistical Area, as published by the U.S. Bureau of Census and the U.S. Department of Housing and Urban Development, unless otherwise specified. (Inclusionary Housing Ordinance, 2017- <http://www.detroitmi.gov/Portals/0/docs/CM%205%20-%20Sheffield/Inclusionary%20housing.docx?ver=2015-12-11-104529-740>.)



The Monroe Blocks, Downtown-should be completed in 2022

Source: Curbed Detroit  
<https://detroit.curbed.com/2017/8/21/16179002/monroe-block-renderings-dan-gilbert>



New Hudson

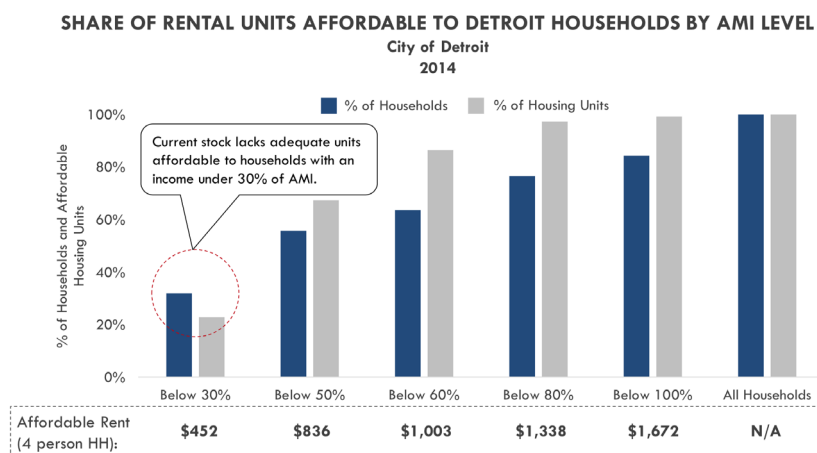
Source: Curbed Detroit  
<https://detroit.curbed.com/2017/9/13/16304114/hudsons-site-renderings-released>

a home (most likely a condominium) in Downtown Detroit was six and a half times the average sales price in the neighborhoods; in 2014, the ratio had increased to 7.6. In 2014 the average sales price in Midtown had risen to 5.8 times the neighborhood figure, from 4.2 times in 2010» (Reese et al, 2017, p, 7)

In the light of the recent development news, due to the construction of the new stadium, the Little Cesar Arena, and other development projects, home prices and values are dramatically growing. The households with incomes below the 30% of AMI, are not considered as able to pay to rent or purchase new dwelling units in the Greater Downtown Detroit Area. The potential market for new units is represented by approximately 24.4 percent 3,685 households of the target households have incomes between 30 and 80 percent AMI, and they represent the target markets for newly-constructed affordable rental housing units, while 75.6 percent 11,275 households have incomes above 80 percent AMI. (Zimmerman/Volk Associates, Inc, 2017).

Looking at the city scale, it can be noticed the lacking of units affordable to households with an income under 30% AMI

It is clear that the recent boom in construction and the recovery



is not reaching everybody. Despite it is undoubtedly in the best interest of Detroit to attract new residents and renovate the aging real estate, the redevelopment operation should avoid the recent experiences of other cities, as New York or Chicago, where resurgence and revitalization led to gentrification processes. (Sheffield, 2017)

Detroit can be seen as two different cities, one of the privileged, educated and mostly white and one of the disadvantaged, poor and black people. The growing polarization is increasing the distance between these two realities. The new upgrades and renovated neighborhoods are in contrast with the decay that

characterized the city, both in terms of urban landscape and economic growth, which don't share the limited prosperity. In considering the following data, it is important to remember that they are available only through 2013 and in the past four years Downtown and Midtown experienced a significant number of business opening, while the other neighborhoods suffered from the loss of retail and personal establishments, which directly affect the quality of life of the inhabitants. In three years, the city faced a decline of number of business

Change in Detroit economic indicators 2010–13.

	Establishments	Employees	Payroll	Average wage
Detroit	– 6.2%	3.7%	18.8%	13.9%
Downtown	– 11.5%	21.7%	42.6%	17.2%
Midtown	– 7.5%	– 6.5%	9.8%	17.5%
Neighborhoods	– 5.2%	– 0.9%	8.1%	7.0%

Source: ZIP Code Business Patterns.

	Unemployment rate		
	2010	2013	Change
Detroit	24.8%	27.1%	+ 2.3
Downtown	15.5%	13.0%	– 2.5
Midtown	22.8%	24.2%	+ 1.4
Neighborhoods	25.0%	27.4%	+ 2.4

Source: American Community Survey.

Employment 2007–2014.

	City of Detroit	Central Business District	Midtown	CBD + Midtown	Detroit balance
2007	245,230	73,365	48,428	121,793	123,437
2012	234,739	69,247	47,237	116,484	118,255
2014	234,552	72,618	45,296	117,914	116,638
Change 07–12	– 4.3%	– 5.6%	– 2.5%	– 4.4%	– 4.2%
Change 12–14	– 0.1%	4.9%	– 4.1%	1.2%	– 1.4%

Source: Data Driven Detroit.

Change in Detroit economic indicators 2010–2013

Unemployment rate 2010–2013  
Employment 2007–2014

Source: L.A. Reese et al., 2017, "It's safe to come, we've got lattes": Development disparities in Detroit, Cities 60, Elsevier

by about 6 % between, although the number jobs increased by 3.7% and annual payroll grew by 18.8%. As stated before, the growth is heterogeneous: the record for Downtown is substantially better than the other neighborhood of the city. In both Downtown and Midtown, average wages increased by over 17%, compared to just a 7% growth rate in the neighborhood. American Community Survey unemployment data for the same period indicate that the unemployment rate in Detroit's neighborhoods rose by 2.4% points; there was also a modest increase, 1.4% in the resident unemployment rate in Midtown. Downtown bucked the trend, showing a decrease in unemployment -2.5%. These trends point out the fact that the growth is highly limited to the areas, it doesn't spread to adjacent neigh-

neighborhood and it does not reduce the economic, social, and the building quality gap between the two parts of the city<sup>4</sup>. (Reese et al. 2017) The challenge is dual: to build new economies and to ensure that they create opportunities for many unemployed residents. Clearly, successful regeneration can easily create separated cities, with an increased employment in emerging economic sectors of well-educated in-migrants and suburbanites, while the city's poorer residents and their neighborhoods decline. (Mallach, Brachman, 2013)

Moreover, the recent increase in jobs in the city seems to have benefited mostly non-detroiters, workers living in the suburbs, with an increase of 16.6% from 2007 to 2014, while the jobs held by Detroiters suffered a loss of 35.5%, from 2010 to 2014 (Reese et al. 2017)

The scale of the redevelopment and the target of the ongoing projects may contribute only partially to the recovery of the city, which needs to attract investors and develop new comprehensive revitalization strategies also in distress areas, in order to benefit detroiters and support an inclusive and economic growth.

## 2.2 NEW ECONOMIC TRENDS IN THE CITY

Detroit has been one of the nation's traditional manufacturing hubs, it is a city of makers, of innovators and creative people in many fields, from manufacturing to music and arts. It is reasonable to think that the renaissance of Detroit might be dependent on the competitive adaptation of technology and the enhancement of talents and to the wide distribution of the Maker movement. The maker community, however, can be divided into subcategories, depending on the product being manufactured. (National League of Cities, 2016) Basically, we can identify two main branches: the first one is craft-oriented, composed by artist, designers, artisans, craftsmen who work on wood, textile, metal and so on; the second one is more technology-oriented who deals with materials science, 3D printing, bioengineering, biotechnology, design, and engineering. The city's DNA is attracting many firms, artists, makers, craftsmen, builders and people who are looking for workspaces at a cheap rent or moving to Detroit to increase their potential. For some years now, we have seen the economy changing until becoming a vibrant and attracting, as the article of Laura Snook (2017) shows. Google's announcement of moving its



Detroit Made- a floor dedicated to all the designers, manufacturers doing business in Detroit at Detroit Design Festival, 2014

Source: Detroit Daily, 2014  
<http://www.dailydetroit.com/2014/09/24/photos-detroit-design-festival-kicks-off-showcasing-detroit-made-goods/>

<sup>4</sup> <http://content-static.detroitnews.com/projects/boomtown-detroit/index.htm>

headquarter from Birmingham, where it established in 2007 to the tech-aspiring Detroit downtown area (Williams, 2017) are clear sign of the shift of city's economy.

There are different trends that are reshaping the city's economy and that might drive the revitalization of the city: design, urban manufacturing, startup companies. These businesses have the capacity to create jobs and sustain an inclusive growth.

### 2.2.1 DESIGN

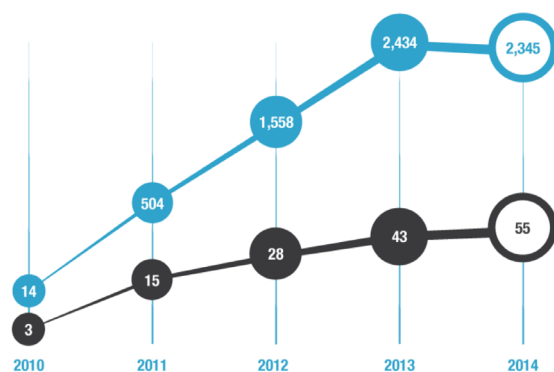
Detroit has built itself as a cradle of American modernist design. The industry of design has been a engine for the city's urban regeneration and represents a significant driver for economic growth by employing more than 45,000 people and generating \$US 2.5 billion in wages in the Detroit Metro Area, the highest for number of tradesmen and industrial designers in the country. (Knight Foundation , 2017)

The creative sector is the third largest private sector employer in Detroit – behind health care and general business services and ahead of manufacturing, metals and hospitality – employing approximately 12,300 individuals (<http://detroitc3.com/impact/>)

In 2010 the Detroit Creative Corridor Center was founded by College for Creative Studies and Business Leader for Michigan, to support creative industries, from architecture to product design, exploiting the rich legacy of the city worldwide. The non-profit organization provides leadership, resources, support, data and analytics necessary to sustain the city's creative economy and connect people to it.

(<http://detroitc3.com/about-dc3/>)

GROWTH IN DETROIT'S CREATIVE CORRIDOR (2010-2014) // CREATIVE CORRIDOR INITIATIVE RESULTS



55 FIRMS / 2,345 PEOPLE  
55 CREATIVE SECTOR FIRMS MOVED SIGNIFICANT OPERATIONS TO DETROIT'S CREATIVE CORRIDOR SINCE THE LAUNCH OF THE DETROIT CREATIVE CORRIDOR CENTER IN 2010, EMPLOYING MORE THAN 2,345 PEOPLE.

Impact on jobs creation in the Creative Corridor thanks to Creative Corridor Initiative Results (2010-2014)

Source: Detroit Creative Corridor Center <http://detroitc3.com/impact/>



The values of the organization are shared by the John S. and James L. Knight Foundation that funded \$1 million to create an economic development and inclusive strategy that will engage the community in shaping the city's future. The best practices shared in the network can represent a starting point to develop strategies to strengthen Detroit's economy through creative industries. Moreover, inclusive design can drive innovative and high quality urban revitalization projects that can become lessons and be shared in other communities.

The organization worked five years in order to obtain the UNESCO designation "City of Design", on December 2015, Detroit has been designated City of Design, becoming the first city in the US in the Creative Cities Network, due to its commitment to invest in creativity as a driver for urban development, social inclusion, and cultural vibrancy.

The cities in the network *«commit to collaborate and develop partnerships, promote creativity and cultural industries, share best practices, strengthen participation in cultural life and integrate culture in economic and social development strategies and plans»*. (<https://en.unesco.org/creative-cities/content/about-us>)

The DC3 launched a campaign "The Detroit City of Design", which wants to raise the public awareness about the value of design and will try to improve the perception of creative industries as luxuries; increase opportunities in the creative communities to build a coalition of talents that promotes an equitable and sustainable development. In addition, in 2016 the DC3 launched its UNESCO 10-years strategic plan, with the economic support of Kresge Foundation and the William Davidson Foundation; that aims to:

- *«Nurturing the pivotal role of industrial design for the city by reinforcing public policies, notably with the establishment of the Detroit Council of Arts, Cultural Affairs and Creative Industries and the Michigan Design Council;*
- *Creating new enterprises and opportunities for designers, and encouraging the next generation to follow careers in the creative industries;*
- *Launching the DC3 Creative Industries Roundtable to foster synergy between public-private stakeholders in the field of design, in order to conduct collective research and coordinate efforts for more participatory and human-centered approaches to design;*
- *Involving other Creative Cities of Design in the Detroit Design Festival and Industry Days, to share best practices and expe-*



UNESCO Detroit City of Design Logo

Source: <http://detroitc3.com/unesco-city-of-design/>



Detroit Design Festival- Unesco City of Design poster, 2017

Source: <https://www.detroitdesignfestival.com>

riences, notably on the linkages between design, manufacturing, regeneration of past industrial cities and sustainable urban development; and

- Opening competitions, including the Dlectricity, the CAMP Detroit and the Public Design Installation of the Detroit Design Festival, to emerging designers from the UCCN.» (<https://en.unesco.org/creative-cities/detroit>)

The work of the DC3 in create partnership with foundation achieved an investment of \$29 million for the Knight Arts Challenge<sup>5</sup> through 2018 and \$2.5 million for work to advance the creative community. These initiatives are supporting the creative sector, which is expecting to grow by 11.9% in the state of Michigan per year through 2018 (<http://detroitc3.com/impact/>)

## 2.2.2 URBAN MANUFACTURING

According to the Brookings Institute, Detroit is one of the nation's leading examples of a Maker City. (Katz and Wagner, 2014) Certainly, the reborn of Detroit's shift in economy was deeply influenced by the relocation, in 2009, of Quicken Loans owned by Dan Gilbert and 1700 employees, from suburbs into Downtown's new Compuware Building. During an interview, Gilbert says "This is an interim step that allows us to begin transforming Detroit into a high-tech hub of business and ingenuity." (Snook, 2017)

After the location of his firm, Gilbert began buying many buildings in Downtown, the same ones that today are under construction or renovation. The intuitions of Gilbert were supported five years later from the Mayor Mike Duggan, by the creation of the Detroit Innovation District, which hosts about 55% of the city's jobs in an area covering just 4.4 square miles. The aim of the District is to support the expansion of innovative economy, stimulate technology-oriented businesses and improve the industrial infrastructures. (<http://interface-studio.com/projects/detroit-innovation-district>)

The district is funded by the Community Foundation of Southeast Michigan as a part of their New Economy Initiative, it represents a collaboration among key organizations committed to place-making and economic growth including municipality, non-profits, educational institutions and private firms, so that economy, place-making and social networking come together



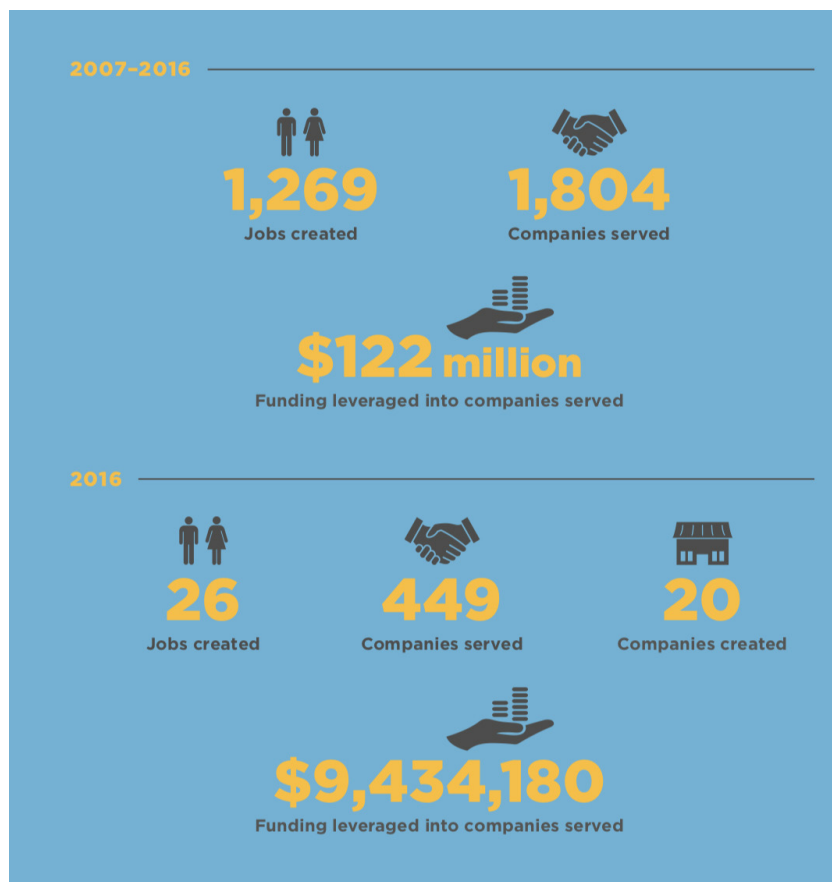
Innovation District and major stakeholders involved, 2014

Source: <http://www.detroitchamber.com/leading-the-innovation-district/>

5 <https://knightfoundation.org/challenges/knight-arts-challenge>

to envision and reshape neighborhoods.

In the District, the major business incubator<sup>6</sup> is Tech Town, the non profit founded in 2000 by Wayne State University, Henry Ford Health System and General Motors and incorporated in 2004 as a nonprofit. TechTown offers programs addressed both tech and neighborhood small businesses. They assist businesses at all stages, working with companies and startups. The work of the organization has produced outstanding results, summarized in the following info graphic from their 2016 Annual Report.



Impact of TechTown work with firms and startups from 2007-2016

Source: TechTown 2016 Annual Report  
[https://techtowndetroit.org/wp-content/uploads/2016/06/TT\\_Annual-Report\\_060617\\_pgs.pdf](https://techtowndetroit.org/wp-content/uploads/2016/06/TT_Annual-Report_060617_pgs.pdf)

Detroit, however, it is not only about technology and incubator. In fact, there are many entrepreneurs in the city realize products made in Detroit and support the local community, hiring disadvantaged people. Detroit has a strong maker community, with creative, artisans and firms making high-quality, hand made products.

Detroit is home of many small-size business and firms that manufacture items, craft works, clothing, jewelary, accessories, customized products and food/beverages products.

<sup>6</sup> <https://techtowndetroit.org>

Shinola<sup>7</sup>, the luxury brand Made in Detroit produces whatches, leather items and accessories of excellent quality; Detroit Denim<sup>8</sup> produces handmade jeans, bags, clothes; Cyber Optix Ties Lab<sup>9</sup> hand-makes ties of all kinds; Homes Eyeweare<sup>10</sup> manufactures wood sunglasses reusing the wood of demolished houses; Detroit Wallpaper Company<sup>11</sup> graphics company is specialized in customized wallpapers; Möbel Link Modern Furniture<sup>12</sup> produces handmade furnitures in the woodshop in the Möbel Link Russell Industrial Center; Floyd<sup>12</sup> is a furniture Detroit-based firm that manufactures its products in Detroit, Chicago and Akron. These are just examples of vibrant manufacturing scene and the companies producing a wide variety of goods in Detroit.

Moreover, Some of Detroit's entrepreneur can be classified as social entrepreneurs, people that are committed to the society and through to their businesses want to help the most disadvantaged, improving the social fabric of the city. Some of them act directly, providing jobs to certain minor cathegories, others making items or raising money to helps distressed communities.

A great example is the Rebel Nell social enterprise, which employees women and teaching them how to create jewelery form pieces of graffiti fallen from city murals. The firm is not limited exclusively to pays women livable wage and providing training in jewelry design, but offers housing, legal and financial resources to its team. Part of their program is created in order to develop skills they easily transfer to other jobs. (Denison, 2017)

Another firm who aims to improve life of most disadvantaged people is Empowerment, which focused on permanently elevating families from the generational cycle of homelessness. The company produces coats designed to improve the life of homeless, the coat can transform into a sleeping bag at night or an over- the-shoulder bag when not in use. They donate the coats to those in need and they hired 45 homeless individual, women single parents, provide them with training and full-time employment as seamstresses. In this way, workers can earn a stable income, find secure housing, and regain their independence.

Small Batch Detroit is an extension Detroit Food Academy, «a non-profit that works with local educators, chefs, and business owners to inspire young Detroiters (ages 13-24) through self-directed entrepreneurial experiences rooted in food- experiences which open doors, create connections, and spark confidence» (<http://detroitfoodacademy.com>). The company sells gift shop featuring delicious

7 <https://www.shinola.com>

8 <https://detroitdenim.com>

9 <https://www.cyberoptix.com/pages/press>

10 <http://www.homeseyewear.com>

11 <http://mobellink.com/about/>

12 <https://floyddetroit.com/ourstory>

artisan local foods but the profits are invested to fund the Detroit Food Academy, and offer a real-world employment and career opportunities for Detroit Food Academy high school graduates. \$0.30 of every dollar spent directly employs a young Detroiters at a minimum of \$12.50 per hour. (<https://www.smallbatchdetroit.com/pages/about-us>)

In addition, firms often provides training to their employees in order to create a skilled, talented and workforce who make the city a vibrant place with a skilled labor pool, where people choose to live in and establish their business. In Detroit, this practice has been implemented in a variety of ways: creating new forms of apprenticeship and internships, training programs, new forms of vocational education. Shinola, adopted a fluid and adaptive approach, a *«new form of apprenticeship, built around developing not one skill set or trade but around developing talent to work inside companies where making things by hand is an important part of the ethos»* (Hirshberg et al, 2016) Shinola strongly believes that huge resources have to be invested in training the workers, which need to develop critical thinking skills and the chance to improve and upgrade in their work. For this reason, they hired retired masters and artisan to teach the high level of expertise of quality production. The majority of the company's employees are locals, previously worked in the automotive business.

Many others firms provide training programs to their employees, as the above mentioned Quicker Loans where *«Ninety-one percent of employees say they receive the necessary training and development to progress in their careers, with IT and technology staff undergoing at least 200 hours of technical training every year.»* (Snook, 2017)

On February 2017, The municipality launched its program "Detroit at work" which *«aims to provide job and training opportunities for Detroiters across a wide range of growing sectors including construction, healthcare, manufacturing, and IT»* (<http://www.detroitmi.gov/News/ArticleID/1212/New-Detroit-at-Work-Program-Offers-Career-Paths-for-100-Detroiters-in-High-Demand-Transportation-and-Logistics-Field>) By creating a talented labor pool training the workforce and supporting partnerships and the municipality wants to give the possibility to all Detroiters at all levels of education and experience the access to jobs.

These are few examples of many firms that are adopting training policies and developing program, increasing the



human capital value in the city.

### **2.2.3 STRAT-UP COMPANIES**

As illustrated in the “2017 Detroit Entrepreneurial Study” (Michigan Venture Capital Association, 2017) Detroit’s attractiveness for entrepreneurs and investors is increasing: the recent trends show a positive and rapid growth, but the city is currently lacking of suitable access to capital to support the new companies and the demand for funding from new startup companies, in addition to the existing ones in need for follow-on funding, exceeds the funds available. In the last three years, however, there has been an increase of 50% of Detroit-based startups. There are 35 active venture-backed startups in Detroit (25% of the startup companies growing in Michigan), 14 of which revied among \$60M from venture capital firms in the last year. In addition, there are five venture firms headquartered or with an office in the Detroit area. (15% of venture firms located in Michigan). (Michigan Venture Capital Association, 2017)

This data underlying that geographic clustering is relevant and firms can gain a number of advantages, since the location of businesses in the same industry or related ones—along with the educational, R&D, business and labor institutions that support them— boosts innovation and gain easier access to such services as engineering, finance, legal services, and management consulting. (Helper, Krueger, Wial 2012)

In three years, the city has attracted many high-tech tenants: VisionIT, Stefanini, Lear Corp opened new innovation centers, spaces designed for collaboration and training, incubators, creating a new stimulating environment. The firms collaborate with the universities: College of Creative Studies and Wayne State University School of Engineering on next-gen products and applications. Moreover, the collaborations between companies and institutions are numerous and various, in order to promote a positive environment for innovation and benefit from the knowledge and experience of the partners. For example, Ford has partnered with TechShop in order to stimulate its employees to create something innovative, that the company could patent, by using the tools and the skills of makers. The workers who achieved with Ford’s goal received a free three-month membership to TechShop. (Flaherty, 2012) Others, as the Henty Ford Health System wanted to use innovation to improve healthcare and the patient experience, so they founded the Innovation Institute, which is located in the main hospital campus in Detroit (<http://henryfordinnovation.com/about/>)

## Why are entrepreneurs and investors attracted to Detroit?



Despite these favorable results described above, and in the view of the fact that these producers require small-batch or might relocate in abandoned buildings, creating well-paying jobs, the City of Detroit lacks of strong policies or innovative tools that substain these trends, and attract businesses to relocate in the city or in restored vacant industrial buildings (about 900<sup>13</sup> spread across the city.

Support these businesses sectors could generate new jobs, both for skilled and unskilled workers and new connection between educational institutions as the College of Creative Studies, DC3, business incubators and firms. Detroit could make the most from its talents and become again a leader in innovation, design and unrbn manufacturing,

<sup>13</sup> Detroit Industrial Parcel Survey, 2010 indicates 872 vacant industrial buildings in the city, and an analysis of Motor City Mapping data indicates that as of 2014 there were 891. (<http://mailchi.mp/detroitfuturecity/dfc-special-report-2-vacant-industrial-properties-an-opportunity-for-innovative-adaptive-reuse>)

### 3. FORMER INDUSTRIAL CORRIDOR A NEW ENGINE FOR ECONOMIC DEVELOPMENT AND URBAN REGENERATION

From the remarks made above, the thesis wants to create a favorable environment in Detroit, while seeking to limit three main issues: employment, education and vacancies, through a planning tool able to activate a former industrial corridor.

For this reason, the thesis will focus on the ex-corridor Lower Mt. Elliot comprised between MT Elliott Street on the West and East Grand Boulevard on the East, the Packard Plant in the North and the East Jefferson Ave on the South.

The tool wants to increase the attractiveness of the area for investors, no-profit and profit organizations, entrepreneurs, artisans and artists, startups, innovators, makers by designing a livable and attractive neighborhood and reuse the vacant buildings and establishing politics to implement the tool.

#### 3.1 LOWER MT. ELLIOT INDUSTRIAL CORRIDOR: THE STUDY

The aim is to spur economic growth, employment and urban development through the review of the planning tools, shaping them on the peculiar situation of Detroit, by dealing with **zoning, public policies** and their implementation.

In order to propose the new redevelopment for the area an analysis has been conducted on:

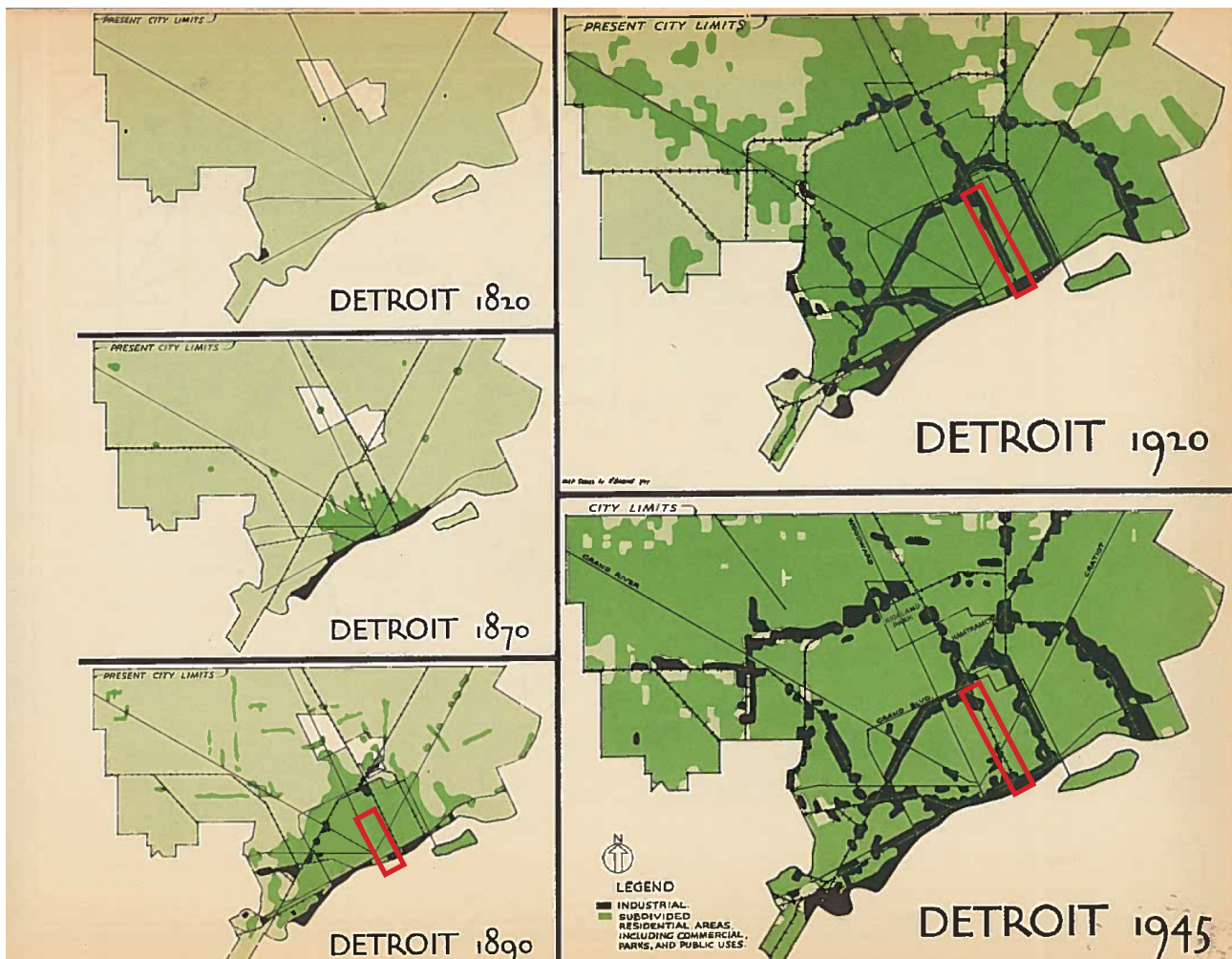
- Historical Zoning
- Current Zoning
- Building stock (type, ownership, year of construction, building condition)

The maps, with the exception of the Historical Zoning, have been created by using the ArcGIS program, thanks to the data provided by Driven Data Detroit. The data are not always precise

or consistent, as shown by the survey on the site; nevertheless, the maps have been drawn on the base of official sources. They represent the preliminary analysis that has resulted in the strategies, referred to in the following section.

### 3.2 HISTORICAL ZONING

The area in analysis, from the first planning documents available, was one of the first to prosper when Detroit's heavy industry boomed in the first decades of 1900, as show the maps below, since in the 1920s, the moment of full economic boom of the industrial sector, it had already developed as an industrial corridor.



In 1950, the new Generalized Land Use Plan recommends the Lower Mt. Elliot corridor for heavy industry. The plan aimed to offer suitable conditions for the establishment of industries,



since industry was the economic reason for the existence of the city. The pattern of industrial plan was formed by railways and their belts.

The plan wanted to separate the industries from residential areas, through buffer zones, open spaces and wanted to concentrate heavy industry at the core of industrial belts and lighter industry along the outer edges.



Land Use- Industria Areas

Source: City of Detroit (1950), Land Use Generalized Plan, p 12



Land Use- Trafficways

Source: City of Detroit (1950), Land Use Generalized Plan, p 14

The corridor, and in general industrial areas, needed to be the more accessible as possible, and interconnect the major em-



ployment areas with the residential neighborhoods and communities of the metropolitan area.

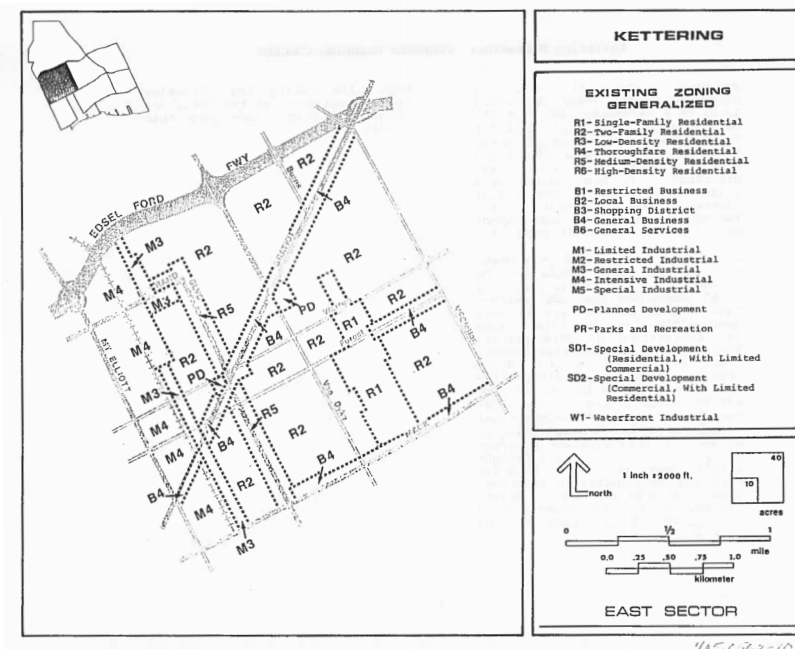
The study area was crossed by two expressways: the Vernor Expressway and the Ford Expressway, two six-lane major thoroughfares: E Grand Boulevard and Warren Ave, a four-major thoroughfare, Mt. Elliot street and a secondary thoroughfare, Bellevue street.

The data available on population, economy, and major features of the area often refers to the entire East Sector, since they are extracted by city's planning reports and they analyze wider portions of city. (City of Detroit, 1984)

The East Sector had a drop in population of 46% from 1950 to 1980 (291.061 to 185.315). The major decrease happened from 1970 to 1980 when the population fell by 35% (18% in the city). The Mt. Elliot Industrial Corridor, running from the River to East McNichols is part of a larger industrial complex, represented for many years a major center of employment, until the 1970s-80s, when due to the obsolescence of its facilities.

In 1982, the Lower Mt. Elliot counted 175 firms active in the firm, employing 3.400 workers. Almost half are engaged in the manufacture of durable goods, another 20 percent are engaged in wholesale and retail trade and the remaining buildings are vacant. The sixty percent of the firms are auto-related. (City of Detroit, 1984)

In 1984, in the Preliminary Study for the new Comprehensive Plan, the Lower Mt. Corridor has been divided into two sub-sector, the Kettering Sub-sector and the Butzel Sub-sector,

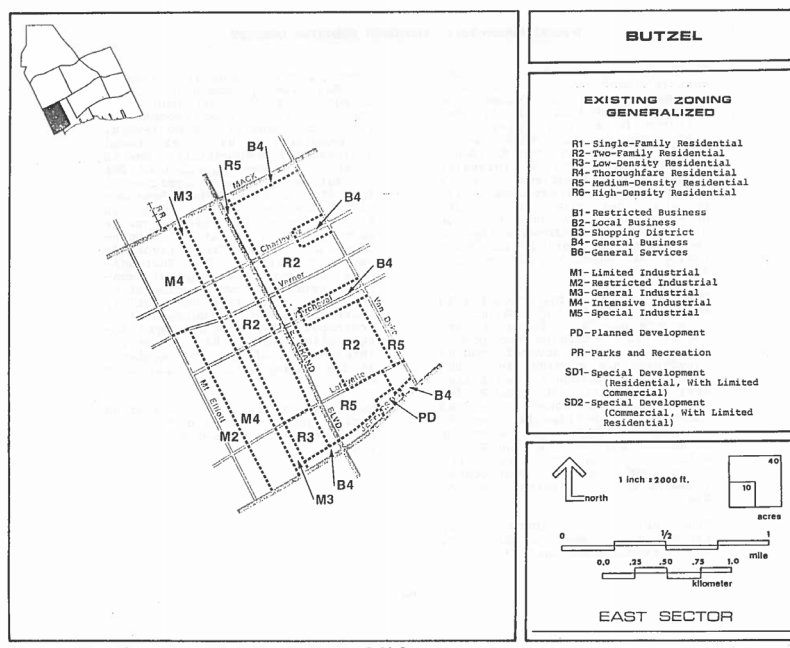


Kettering Subsector- Existing Zoning

Source: City of Detroit, (1984) The East Side, Planning Report, City of Detroit Printing Division, Detroit

This area has high consolidation of heavy industry engaged

in non durable or metal manufacturing. Many of the facilities were functionally obsolete for the purpose they were designed to fulfill. The vacancy rate of the subsection was 18%, the factories are among the oldest in the city. Over the past decade, Kettering sustained major losses of population and housing units. The area lost 3,800 residents between 1990 and 2000, the most in the cluster. The majority of owner-occupied housing values are less than \$29,000. The amount of vacant land creates opportunity for reinvestment. (City of Detroit, 2009)



#### Kettering Subsector- Existing Zoning

Source: City of Detroit, (1984) The East Side, Planning Report, City of Detroit Printing Division, Detroit

The Butzel Sub-sector was recognized as one of the Detroit's most distressed area. The median income in 1979 was about \$9.300 to \$13.900, compared with the \$17.000 of the city. In the decade between 1970 and 1980 the population fell by 37%.

The industries in this sub-sector were developed along the Michigan Central Railroad Belt Line. When in 1981 the tracks were abandoned, houses were built close by, so a mixed-use pattern was created with no clear boundaries between industrial and non-industrial uses. Between 1990 and 2000, the area lost more than ten percent of its population and nearly ten percent of its housing units. Thirty percent of the households in the cluster have an annual income less than \$10,000. (City of Detroit, 1984)

The area has a large percentage of elderly residents; twenty three percent of the population is at least 65 years old. Between 1990 and 2000, Butzel's elderly population grew by over twenty percent, the second highest growth rate in the city. (City

of Detroit, 2009) The most recent documents available about the two areas are the Master Plan of Policies and the 2009 Zoning Ordinance. The first document propose long term development goals to provide guidance for actions to be taken in the next ten years. The second regulates the land uses permitted or prohibited in the zones of the plan.

The Master Plan of Policies proposed and realized in 2004 and latest revised in 2009, to update the 1992 document, proposes some long range development goals for the areas in the cluster 3, that should be the following:

- Butzel

*«GOAL 1: Revitalize neighborhoods with poor housing conditions*

*GOAL 2: Increase residential density*

*GOAL 3: Increase the vitality of neighborhood commercial*

*GOAL 4: Develop a mixed-use activity node*

### ***Industrial Centers***

*Issues: The Mt. Elliot/Bellevue industrial corridor runs through the west side of the area. There are several functional facilities in the area along with vacant and underutilized land. Along the western edge of the area there is a mixture of residential and industrial uses. The boundaries separating the residential and industrial areas are not always clearly delineated.*

***GOAL 5: Increase the viability of industrial areas***

*Policy 5.1: Redevelop the under-utilized sites along the Mt. Elliott/Bellevue industrial corridor by attracting new and encouraging existing businesses to use the land for expansion or relocation.*

***GOAL 6: Reduce conflicts between industrial and residential areas***

*Policy 6.1: Establish and enforce designated truck routes to and from Mt. Elliott.*

*Policy 6.2: Buffer the negative impacts of industrial land uses upon residential areas to the east and west.*

***GOAL 7: Increase access to open space and recreational areas»***

[City of Detroit, 2009, p. 98-100]

- Kettering

«GOAL 1: Reinforce sound neighborhoods

GOAL 2: Revitalize neighborhoods with poor housing conditions

**GOAL 3: Conversion of obsolete industrial buildings**

***Policy 3.1: Rehabilitate vacant industrial buildings near Mt. Elliott and East Grand Boulevard into residential lofts.***

GOAL 4: Increase the vitality of commercial thoroughfares

GOAL 5: Increase the vitality of neighborhood commercial areas

### **Industrial Centers**

***Issues: There is a solid industrial presence along Beaufait and Bellevue. Further north, a group of industrial structures formerly occupied by the Packard Motor Plant, near Mt. Elliott and East Grand Boulevard, are underutilized.***

**GOAL 6: Increase the viability of industrial areas**

***Policy 6.1: Redevelopment the under-utilized sites along the Beaufait/Bellevue industrial corridor by attracting new and encouraging existing businesses to use the land for expansion or relocation.***

GOAL 7: Increase open space and recreational opportunities

GOAL 8: Increase access to open space and recreational areas

GOAL 9: Improve environmental quality» (City of Detroit, 2009, p. 114-116)

As can be seen from these development addresses, the formal industrial corridor is generically targeted as “redevelopment areas” but the future strategies are unclear and don’t provide any specific tool or action to achieve the viability of industrial areas. The plan concerns about the proximity of residential and industrial uses, and suggest to create a buffer.

In the following pages, the zoning ordinance with a special focus on the permitted industrial uses will be analyzed.

### 3.3 CURRENT LAND USE PLAN

The industrial uses permitted are those of the **M2 Restricted Industrial District** and the **Special Development District-Mixed Use**.

The Restricted Industrial District covers the area where the major of industries were located, along Bellevue St., Beaufait St. and Mt. Elliot. It «*[...]is designed for a wide range of industrial and related uses which can function with a minimum of undesirable effects. Industrial establishments of this type provide a buffer between residential districts and intensive industrial districts. New residential construction is excluded from this district with the exception of loft conversions of existing buildings and of residential uses combined in structures with permitted commercial uses. These requirements are both to protect residences from an undesirable environment and to ensure reservation of adequate areas for industrial development.*» (Division 3, Sec. 61-10-31, p. 251)

This definition and the industrial uses permitted<sup>1</sup> are coherent with the ones that are promoted urban manufacturing, since they have a low impact on the surroundings. However, the area is lacking of a strong strategy that exploit the corridor's full potential and attract investors or firms.

The northern part of the area, where the Packard Plant Project is ongoing, is classified as Special Development District-Mixed Use and «*is designed to encourage a complementary mixture of uses including residential, business, and office uses that are compatible in a neighborhood center. This zone will serve surrounding residential areas with consumer goods and services. It is the purpose of these regulations to encourage mixed-use developments that are compatible with the surrounding area and promote pedestrian activity.*» (Division, 10, Sec. 61-11-181)

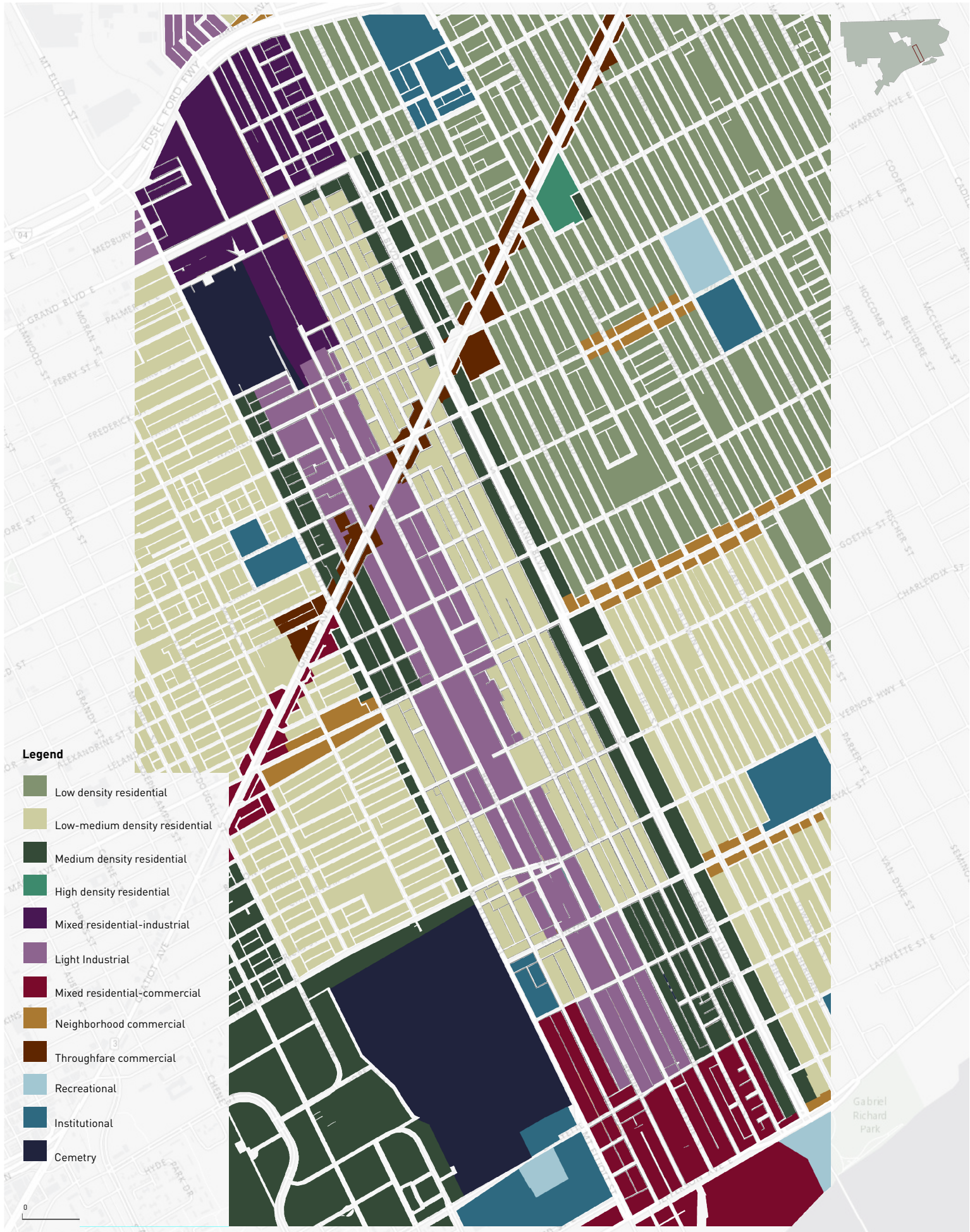
The purpose of this district is to create a mixed-use neighborhood services-retail oriented. It permits also industrial uses but they have area restrictions- max 5.000 square feet and they have to include a minimum of 10% of the gross floor area as retail store for the sale of goods produced- so that the allowed types need to be linked directly with the further commercialization of the product. This zone differs from the vision of the mixed-use neighborhood and the aim of the thesis.

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1 [http://detroitmi.gov/portals/0/docs/cpc/Ch%2061%20Jul%2011\\_%202015.pdf](http://detroitmi.gov/portals/0/docs/cpc/Ch%2061%20Jul%2011_%202015.pdf)



## LAND USE



### 3.4 BUILDING STOCK ANALYSIS

#### *Parcel's Propriety*

The parcels in the area are 3840. The publicly owned percentage of 36.5% is a strength point, since it allows to devise land use policies especially if the parcels are contiguous and can be agglomerated to develop projects that can drive the area's development.

#### *Building Types*

The corridor has a wide mix of building types, although the 80% of the buildings in the area are residential. The industrial buildings, the storage buildings, and the automotive services are located along the Bellevue and Beaufait axis, in correspondence with the dismissed tracks. The other types are spread throughout the area.

#### *Building Year Built*

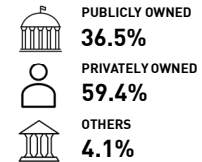
As mentioned at the beginning of the Section, the Lower Mt. Elliot Corridors was one of the first industrial corridor developed after the heavy industrial boom in the early 1900s. For this reason, in the area there are some of the oldest building in the city, both residential and industrial buildings. Most of the buildings have been built in the 1900-1920 time period.

#### *Building Conditions*

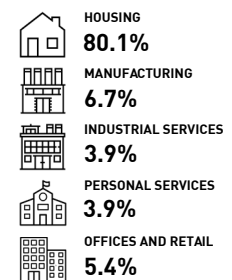
Despite the year built of many buildings, the building stock is mainly is good condition. The majority of the industrial buildings - with the exception of the Packard Plant complex, which is undergoing renovation, and few other buildings- are in good conditions.

The following maps show the spatial distribution of the stated analysis.

#### **TOT PARCELS: 3840**



#### **TOT BUILDINGS: 1955**

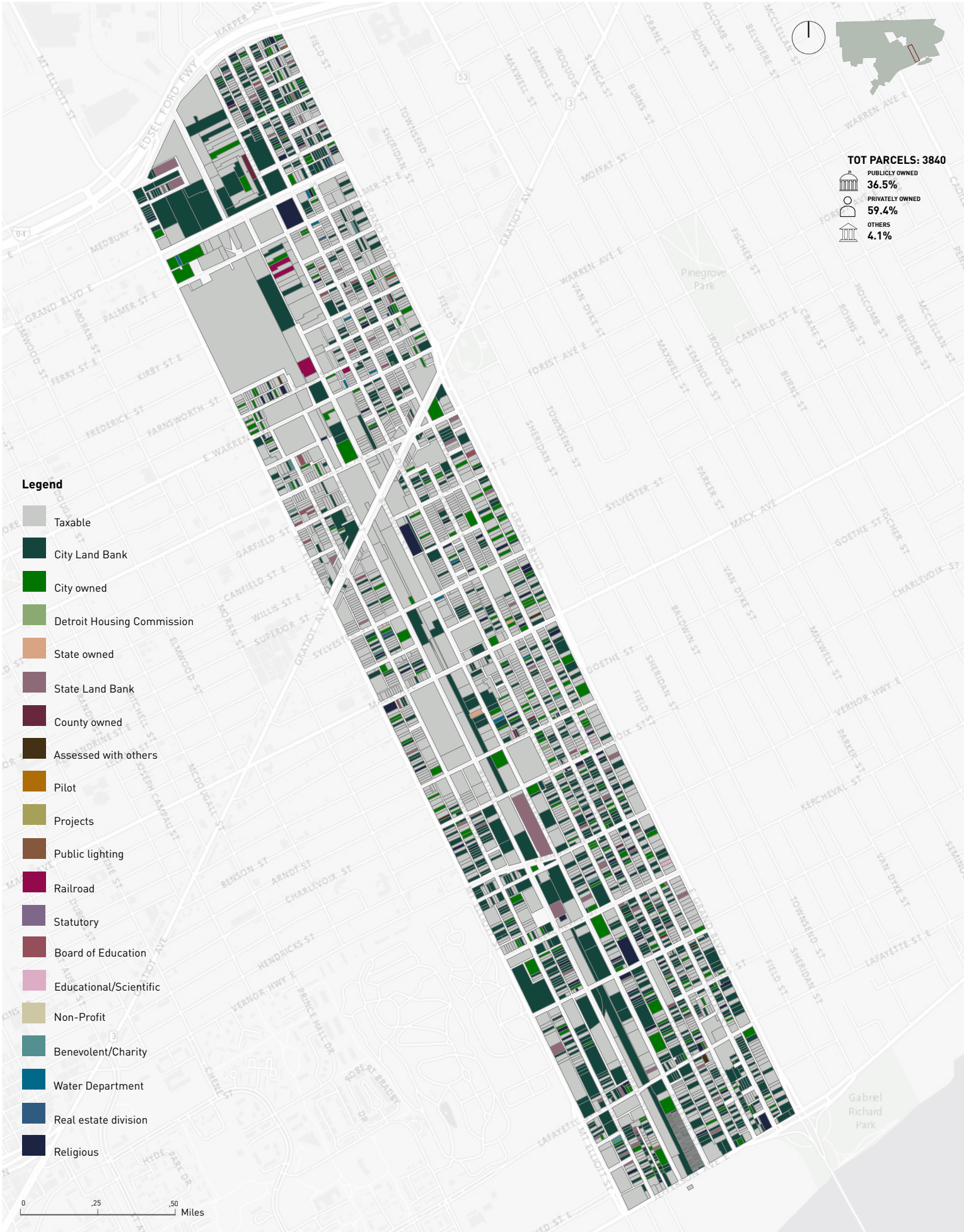


#### **TOT BUILDINGS: 1955**

#### **TOT BUILDINGS: 1955**



PARCELS PROPRIETY





BUILDING TYPE



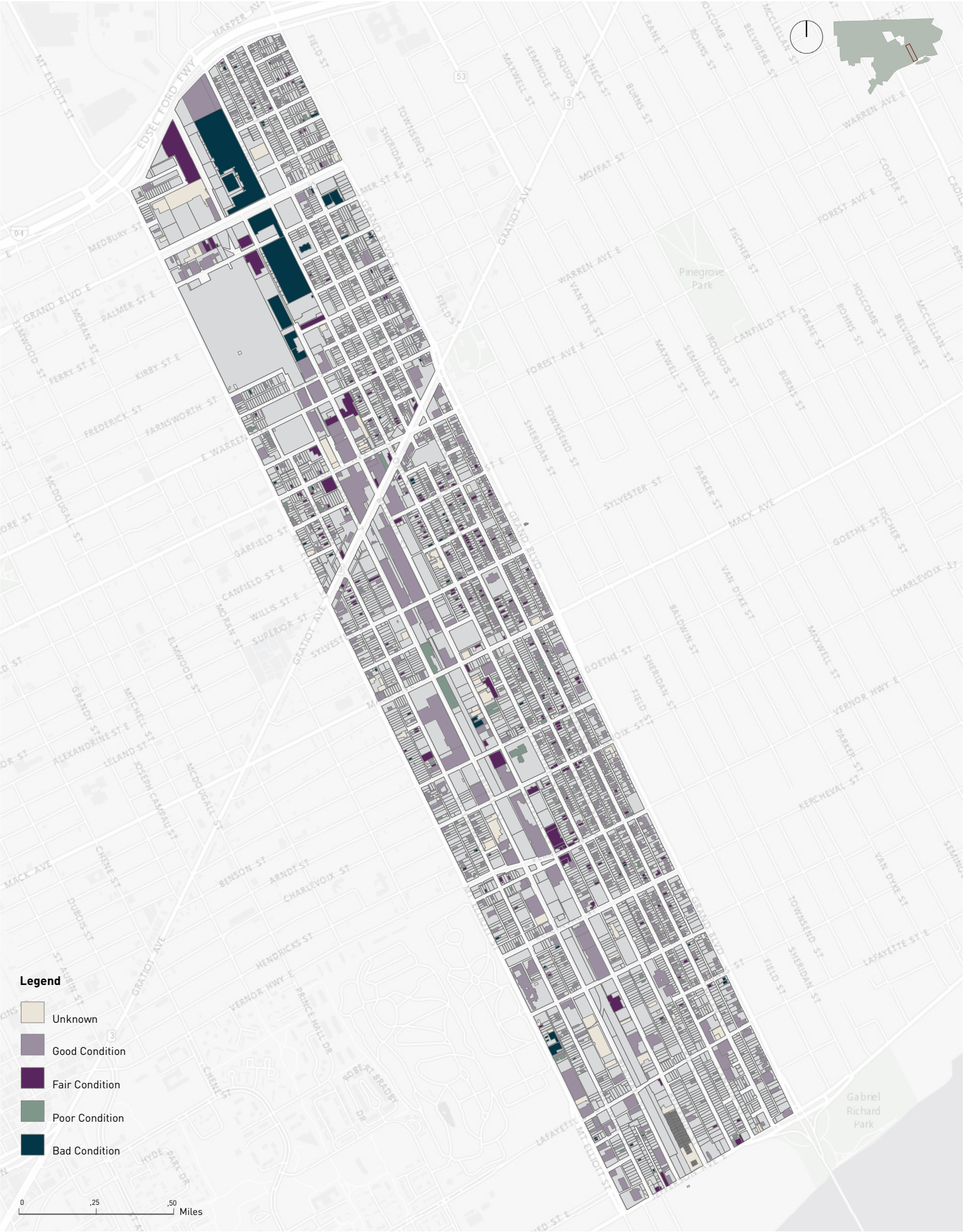


YEAR BUILT





BUILDING CONDITION



## 4. REDEVELOPMENT PROPOSAL

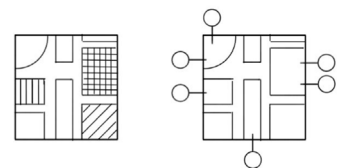
Detroit has evolved in tandem thanks to technological progress. The trends driving the development of urban manufacturing and the changes in the global and local market are reflected into some industrial firms in the city.

There is the need to support this change setting a framework that provides building land and the recovery of re-purposed historic industrial structures to develop smaller batches, low-impact production activities in neighborhoods where other uses are combined. Small manufacturing, artisan's workshops, creative studios are all compatible with housing and retail. These uses can generate a better quality of life, due to the possibility to create well-paid jobs with improved health and prosperity for Detroiters, and help create a more sustainable Detroit, bringing investments and urban regeneration in neighborhoods out of the targeted area for development: the Creative Corridor.

The project aims to spur the economic growth by supporting the trends in the city, employment and urban development through the review of the planning tools to support urban manufacturing, shaping them on the peculiar situation of Detroit, dealing with three main points: **zoning strategies**, **public policies** and **implementation** of these.

Detroit needs both short-term and long-term strategies to improve its local economy and quality of life, and needs to create new partnerships that provide the city the resources required to achieve them. Generate jobs is the first step in order to improve the condition of most of Detroiters and reduce the gap between the two Detroit. To do so it is essential to invest in education, transportation, job skill training, business incubators and to support development and entrepreneurship programs.

### STRATEGIES



#### ADOPT A NEW CODE



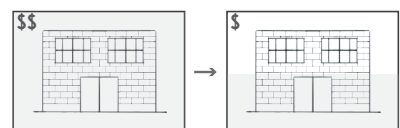
#### NON-PROFIT MANAGEMENT AND OWNERSHIP OF INDUSTRIAL BUILDINGS



#### CREATE DEMAND-DRIVEN AND TARGETED WORKFORCE DEVELOPMENT



#### IDENTIFY AND ENGAGE ANCHOR OR PHILANTHROPIC INSTITUTIONS



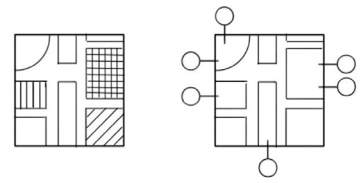
#### ENACT A PROPERTY TAX ABATEMENT PROGRAM FOR INFILL LOCATIONS

## 4.1 ADOPT A NEW CODE

Detroit's land use regulation is complex and incapable to transform distressed and vacant areas into breeding ground to sustain a long-term growth and increase value and productivity. The city lacks of a clear vision of its future. The attempt conducted by Detroit Future City team in 2013 is the latter long-term and city-wide planning exercise, which provided a comprehensive framework for future planning activities, strategies for investments, land uses decision making and urban policies. The recommendations, however, were never adopted by the administration as city policies and development in the city has continued without a cohered direction. Investors or individuals with plans and spending capacity have been given the freedom to operate with least restriction and absent consideration about the context in which they were operating or the project's impact on the local community. (Kaffer, 2017)

New approaches have to be adopted and tested, in order to attract investors and to promote development will generate future benefits. In 2016 the municipality decided to launch the pilot initiative of Pink Zoning<sup>1</sup> in regulatory reform, which «*aims to transform the City's complex web of land use regulation into a positive force for economic revitalization*». (<http://pinkzoningdetroit.org/what-is-pink-zoning/>) A call has been issued, to select three teams which had to research, design, propose the creative strategies to support high-quality place-making and drive economic development and subsequently compare their vision to the current tools, to revitalize Detroit's commercial corridors. «“Pink” refers to a lessening of the “red tape” that can quickly thwart revitalization initiatives. Process inefficiencies, outdated ordinances, and rigid code interpretations can strangle the most creative place-making projects, resulting in urban environments that fall short of their potential.» (<http://www.detroitmi.gov/Government/Departments-and-Agencies/Planning-and-Development-Department/Pink-Zoning>)

The Pink Zoning sprang on the reflection on the recent positive signs of recovery of the neighborhoods, led by small entrepreneurs and neighborhoods' projects and the city regulatory environment unable to fully support and nurture them. Despite the results of the call, closed on September 2016, are still unpublished and the Pink Zoning only deals with commercial corridors, the willing of the municipality shows the need of innovative tools to support growth and development and improve Detroiters' quality of life.



<sup>1</sup> <http://pinkzoningdetroit.org>

Through the years, many alternative techniques have been created, as a response to the failure of traditional zoning. The “Flexible Zoning<sup>2</sup>” and “Design-Oriented Codes<sup>3</sup>” try to overcome some critical points of the traditional zoning as inflexibility to address different site characteristics and surroundings or its difficult to respond effectively to the rapid changes in society and economy reflected in the city.

How can the city attract investment and developed other areas than the Creative Corridor? How can planning tools catalyze the economic trends and the activities ongoing while creating a planning framework for the future?

In order to answer to these questions, it has been conducted a survey of the mayor types of code, underlying their characteristics, advantages and disadvantages, which provided a clearer overview of the available flexible code solutions. The table in the next page summarize the outcome

The project does not want to apply one of the stated techniques in the area, but aims to create an hybrid tool which tries to reduce the disadvantages emerged from the codes’ analysis and support a durable development for the area.

The code will be composed of three main parts: Regulating Plan, Policies for industrial development and the Implementation Plan. The code will drawing up will require the collaboration between municipality, mayor investors, land owners and population.

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2 Flexible zoning techniques include: Overlay Zoning, Performance Zoning, Planned Development, Incentive Zoning, Floating Zoning, Unified Development Ordinances

3 Design-oriented codes includes: Form-based Zoning, Smart-code, Transit-Oriented-Development



TYPE OF CODE	CHARACTERISTICS	ADVANTAGES	DISADVANTAGES
<b>FLEXIBLE ZONING</b>			
Overlay Zoning	Applied over one or more previously established zoning districts, establishing additional or stricter standards and criteria	To impose specific requirements for area-specific or meet site-specific needs	To create inefficiencies and inequities by applying regulations only to some properties.  To increase time and expense both for developers and for the public bodies.
Performance Zoning	To regulate development by setting the goals to be achieved by regulation. Performance requirements allow any use that meets the set standard.	To address the impacts desired and accomplish values and goals without being overly restrictive	Flexibility of the standards makes setting standard ordinances difficult, expensive, and hard to implement.
Planned Development	To regulate development in a designated area by a negotiation between municipality and developers to set new standards not present in the zoning ordinance	To develop areas involving all parties in the solution  Flexibility to allow innovative design and creative solution to benefit the community  To negotiate public benefits that have not been considered by the municipality	Highly discretionary process  Negotiation can be perceived as "unbalanced", and to further the private interests without real benefits for the community  To use the planned development zone rather than update the zoning code
Incentive Zoning	To allow a private to develop in a way that the ordinance would not permit in exchange for a public benefit that would otherwise not be accomplished	Can produce an extended number of public goods available in the community	Incentives offered by the public government might not be considered always beneficial to the developer
Floating Zoning	Delineated amendment which must be met before that zoning district can be approved for an existing piece of land, which will be then added to the zoning map	To achieve public benefits by ensuring flexibility to developers, that might receive bonus to meet some specific goals	Lack of predictability of the zoning map which might favor private development over the public interest
Unified Development Ordinance	Instrument that unified local documents as traditional zoning and regulations, along with other desired city regulations into one document	To provide a comprehensive approach to meeting goals through land use and orient economic development	Slow and expensive process, hard to be adopted in small poor communities  Poor ordinance's accuracy in cities with a rate and diversity of development
<b>DESIGN-ORIENTED CODE</b>			
Form-Based Zoning	Regulation that base the transformation on physical forms and standards as the organizing principle for the code.	Predictable built results and a high-quality public realm	Not readily applicable to built-out urban or suburban areas.
Smartcode	Regulation based on environmental analysis. It is a transect-based model, which promotes understanding of the built environment as part of the natural environment, through the planning methodology of the rural-to-urban	Development addressed at all scales of design, from regional planning on the neighborhood.	Slow and expensive process
Transit-Oriented-Development	Strategy that promotes urban development creating compact, mixed-use, pedestrian- and bicycle-friendly neighborhoods, closely integrated with mass transit by clustering jobs, housing, services, and amenities around public transport stations	Improve the environment conditions Increase real estate values across the stations Enhances access to job opportunities and services	Negative externalities on nuisance  Negative direct effects generally restricted to low-income neighborhoods

Source: <https://www.planning.org/divisions/planningandlaw/propertytopics.htm#Unified>



## 4.2 A NEW TOOL FOR THE CORRIDOR

The new tool for the corridor, the Regulating Plan doesn't want to define zones in which uses permitted are regulated in the traditional categories -as of right, conditional, special permitted- rather, it is based on some principle of performing zoning and form based zoning.

The objective is to realize a flexible tool, capable of exploit the new economic trends in Detroit and address the future development to a vibrant and livable mixed- use neighborhood, by bringing the industry back into the city, well awarded that the current trend might change. In fact, since the technological progress and new findings and tools influencing the way of considering manufacturing and production processes are changing rapidly, it is necessary to create a tool capable of respond flexibly and in a resilient way to future changes and support urban development.

The spatial unit of the Regulating plan is the block, since it allows more flexibility in regulating areas already built. The idea is to permit uses in the blocks and foster development, according to its characteristics, as coverage ratio or the available land to agglomerate, in order to define suitable lots for urban manufacturing, thereby maximizing the vacant land in areas already built. However, the plan ensure flexibility so different use proposals differing from the ones stated will be evaluated case-by-case.

In the scenario that the lots will not be developed due to an unexpected default or due to technological shifts, a new purpose will be proposed for the area and the undeveloped blocks can change pattern to support the future objectives.

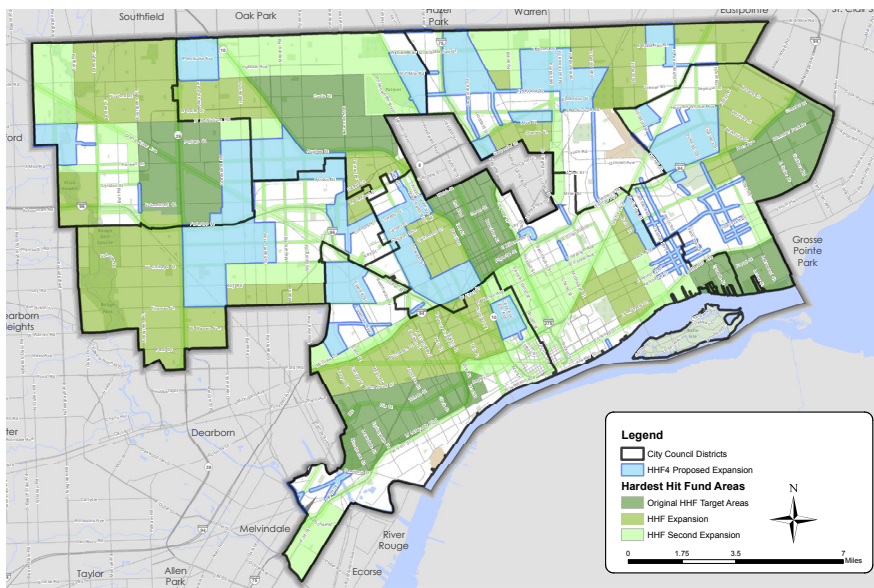
The choice to design at the block scale is motivated by other two choices, the first one is that in the area there are many vacant buildings. In the area the 30% of the buildings is vacant. 752 out of 2478 are vacant. 125 out oh 752 are businesses. (Detroit Data Driven)

The second is influenced by city's demolition program<sup>4</sup>, the Neighborhood Improvement, which aims to demolish blighted structures that can be dangerous for the public health and to increase the propriety values in area were demolitions are clustered strategically. The program is mainly funded by the Hardest Hit Funds (HHF), which, by law, can be spent only in federally-designated areas of the city. The study area is in the federal boundaries.

This means that the current space configuration is provisional and it can evolve, creating new pattern in the corridor.

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4 <http://www.detroitmi.gov/demolition>



The Nuisance Abatement Program (NAP) boundaries

Source: City of Detroit  
<http://www.detroitmi.gov/Portals/0/docs/Demolition/HHF4%20Proposed%20Expansion.pdf>

To pursue the objective of the Regulating plan is necessary to act both in the short-term and long-term period. In the short-term it is priority to activate the neighborhood, through temporary and permanent reuses of existing buildings, and to start attracting the firms to create jobs. Preserving industrial land and industrial buildings is fundamental to create new jobs for Detroiters and fulfill short-term objectives and long-term ones but alone it is not sufficient to ensure a durable future development.

Other requirements and strategies are needed to pursue long-term objectives, as increasing the density of the area and re-occupying the vacant buildings with functions suitable with the needs of the community, providing high quality of public space, improving the skills and the education of the workforce in the area. In the long term the area should become a new urban manufacturing hub, where education, work and live give life to a creative neighborhood, which attracts residents, workers, local and foreign talents.

For this reason, the plan integrates a set of policies that work in synergy with the spatial strategy, that will be explained on the next paragraphs.

## 4.2.1 CONCEPTS

Due to the analysis conducted in the area, zoning code for the Industrial Corridor is guided by four main concepts: block coverage ratio, density, durability and flexibility.

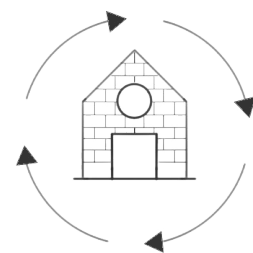
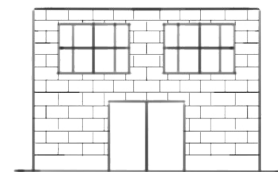
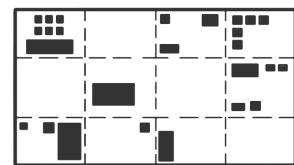
The **block coverage ratio** concept refers to the ratio determined by dividing the area of the block covered by the sum of the footprints of all the structures on the block, calculated in square feet.

The future land use pattern will be characterized not only by the relationship between built area and vacant area in the same block, but also by the concept of **concentration** of the buildings in the block. In fact, the distribution of the buildings throughout the block, gives or doesn't the possibility to have at disposal contiguous building lots, which have a suitable extension for the establishment of urban manufacture activities or dynamic mixed-use blocks.

The **durability** concept refers to the capability of a structure (FORM) to last in time. It depends on the construction characteristics, the materials the building is made, its structural elements and its purpose to last in time. The durability defines what to retain and to demolish. It is closely related to adaptive reuse. Historically significant buildings, buildings designed with high quality construction characteristics and standards, if can not be demolished. The temporary use is one of the tactic that can be used to populate the area and to preserve the buildings from abandonment.

The **flexibility** concept intend to set a framework who could easily adapt to future needs (TIME) in terms of uses, space standards, public space (FORM) due to economic and social changes, while encouraging and support the current city's economic trends mentioned in the previous chapter. Moreover, this concept can guide the transformation of existing buildings, through both permanent or temporary uses (TIME). They can become assets for the community and represent an opportunity to start revitalizing the neighborhood, supporting local economy and creating jobs by reusing them for urban manufacturing purposes and improving the quality of building and the space.

These concepts allow to define the available land to be developed and possible spatial configurations. They strike a balance between flexibility and rules for development and led to the drafting of the plan that will orient the future development of the area, and the creation of a creative and lively mixed-use.



## BLOCK COVERAGE RATIO

- ☐ LOW
- ☐ MEDIUM
- ☐ HIGH

## BLOCK CONCENTRATION

- ☐ LOW
- ☐ MEDIUM
- ☐ HIGH

## DURABILITY

- ☐ TIME
- ☐ FORM

## FLEXIBILITY

- ☐ TIME
- ☐ FORM

## BLOCK TYPE

- ☐ BCR
- ☐ DISCONTINUITY

- ☐ BUILDING LOT
- ☐ VACANT STRUCTURES
- ☐ EXISTING STRUCTURES

## VACANT STRUCTURE

- ☐ DURABILITY
  - ☐ NO — DEMOLITION
  - ☐ YES — ADAPTIVE REUSE ORDINANCE
- ☐ FLEXIBILITY
  - ☐ TIME
    - ☐ TEMPORARY USES
    - ☐ ADAPTABILITY
  - ☐ FORM
    - ☐ SUITABLE FOR INDUSTRIAL USES
    - ☐ UNSUITABLE FOR INDUSTRIAL USES

## BUILDING LOT

- ☐ DISCONTINUITY INFLUENCING THE AVAILABILITY OF OTHER EMPTY PARCELS TO CLUSTER
- ☐ DESIRED BCR

AVAILABLE LOTS TO BE DEVELOPED OF SUITABLE SIZE FOR INDUSTRIAL USES OR MIXED USES

#### 4.2.2 BLOCK COVERAGE RATIO AND BUILT CONCENTRATION

According to the ratio between the area of the block and the area of structures on it, the blocks have been classified into three categories:

Low BCR- Relationship between built area and vacant area is less than or equal to 20%



Medium BCR- Relationship between built area and vacant area is included in the interval (20%, 40%)



High BCR- Relationship between built area and vacant area is greater than 40%



After defining the BCR, it is possible to study how the built structures are distributed through the blocks, to identify the location for future development in the district. To do so, it has been conducted an analysis on the concentration's block, achievable with ArcGis tool.

The tool pinpoints the buildings and calculates the density of point features around each output raster cell. Density analysis takes known quantities of the buildings and spreads it across the corridor based on the quantity that is measured at each location and the spatial relationship of the locations of the measured quantities. The cell is a circular neighborhood is defined around a radius of 200ft, the number of points that fall within the neighborhood is totaled and divided by the area of the neighborhood. Only the points that fall within the neighborhood are considered when calculating the density. If no points fall within the neighborhood at a particular cell, that cell is assigned No Data.

These characteristics define the block's pattern present in the area. The results of these analysis are shown in the following axonometric projections that represent the block types and the maps that show where we can find the aforementioned characteristic.



BLOCK COVERAGE RATIO



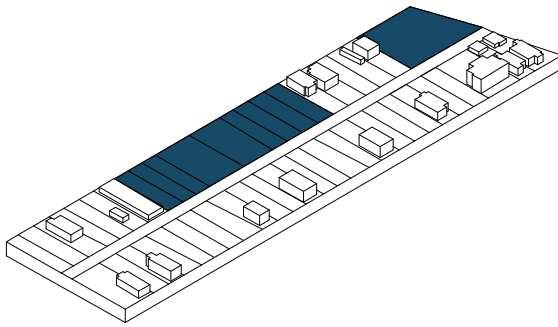
CONCENTRATION BLOCK





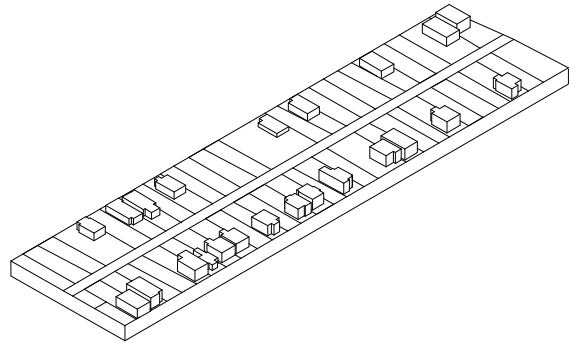
## BLOCK PATTERNS

### LOW BCR



#### LOW CONCENTRATION

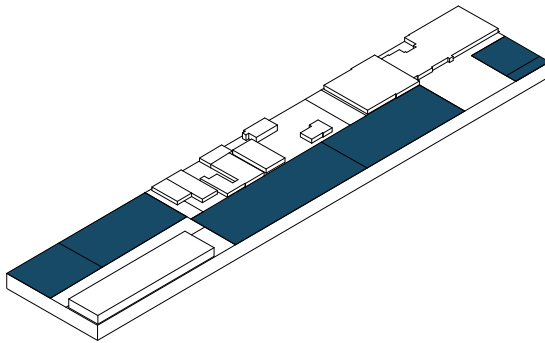
Contiguous land available with a size suitable for urban manufacturing and mixed-use purposes



#### MEDIUM/HIGH CONCENTRATION

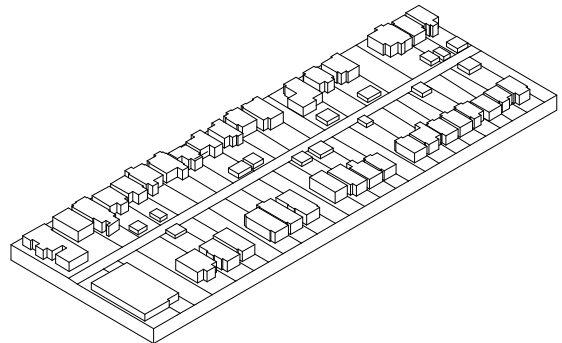
No continuous land available with a size suitable for urban manufacturing and mixed-use purposes

### MEDIUM BCR



#### LOW CONCENTRATION

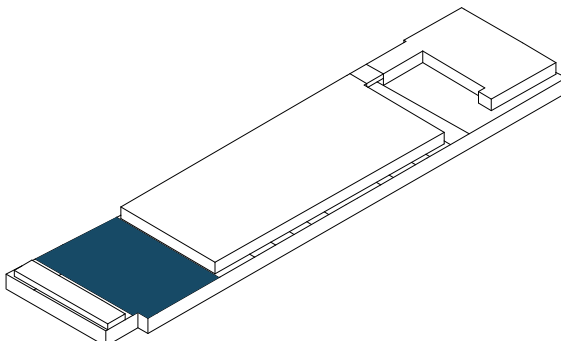
Contiguous land available with a size suitable for urban manufacturing and mixed-use purposes



#### MEDIUM/HIGH CONCENTRATION

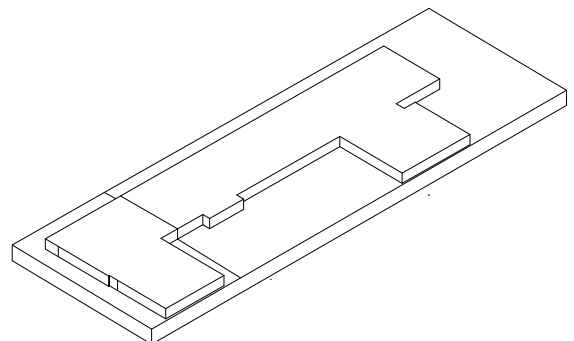
No continuous land available with a size suitable for urban manufacturing and mixed-use purposes

### HIGH BCR



#### MEDIUM CONCENTRATION

Contiguous land available with a size suitable for urban manufacturing and mixed-use purposes



#### HIGH CONCENTRATION

No continuous land available with a size suitable for urban manufacturing and mixed-use purposes

### 4.2.3 BUILDING LOTS

The corridor has shown a prevalence of low density blocks scattered throughout it. The medium density areas are mostly concentrated on the east side of the corridor, on the border with E Grand Boulevard. The denser blocks are the one occupied by industrial buildings, especially in the northern area of the corridor. The industrial area south the corridor is low density, therefore suitable for the establishment of new industrial sites.

The proposed lots are design based on the availability of empty plots and agglomerating the clustered or contiguous ones, when they could reach a suitable area for industrial buildings, mixed-uses buildings or other uses which might need a great development area.

They were designed in a way that makes best use of the space available, for this reason it is important when approving projects to be realized in the area to ensure a balanced development and approve projects the proper function to exploit the entire lot potential.

However, if necessary, the size can be adjusted based on the future needs or to provide suitable space for valuable projects that improve the urban quality of area and creates jobs, if no other areas satisfy the requirements.

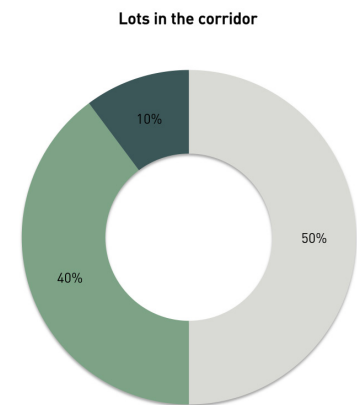
The lots have been classify into 3 size classes:

- 22.000- 70.000 Sq ft
- 70.000,1- 190.000 Sq ft
- 190.000,1- 410.000 Sq ft

The distribution of the different classes is represented in the chart. Half of lots available, 49 have an area between 22.000-70.000 sq ft. The middle-class size, with 39 lots, represent the 40% of the total available land for industry.

For last, only 10 lots with an area between 190.000,1- 410.000 sq ft are available. For this reason, this size class has to be preserved for industrial purposes.

The results are shown in the map in the following page.



Availability of lots to be developed for industrial and mixed uses according to their class size.

Source: Personal elaboration of data

PROPOSED LOTS TO BE DEVELOPED FOR INDUSTRIAL AND MIXED USE:

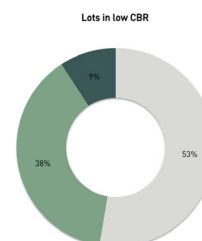




## 66 LOTS stand in LOW CBR AREAS

11 LOTS are located in blocks mainly occupied residential uses

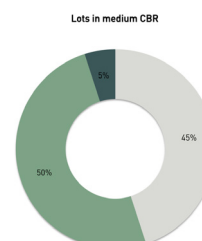
35 LOTS are located in blocks used primary for industry or in mixed-use blocks (industry + services or houses)



## 20 LOTS stand in MEDIUM CBR AREAS

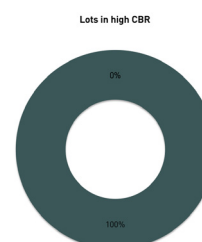
6 LOTS are in blocks mainly in residential areas

14 LOTS are located in blocks used primary for industry



## 2 LOTS stand in the HIGH CBR AREA

They both are in the larger area class. The existing buildings in the blocks are only related to manufacturing uses.



As mentioned before, the plan does not design zones for the permitted uses. The only restriction is made for the lots to be developed for industrial or mixed-use purposes.

### 4.2.4 INDUSTRIAL TYPES

When talking about industrial businesses, they include only those listed:

- Industrial designers
- Architects
- Furniture
- Clothing and textiles
- Web designers
- Food and beverage
- Artists
- Media and film
- Leather-working
- Printing and publishing
- Transportation services
- Electronics and Robotics
- Restoration services
- Import and export
- Cabinetry

- Sculptures and ceramics
- Lighting
- Metal fabrication
- Housewares
- Jewellery
- 3D printing
- Start-up
- Maker spaces and workshop spaces
- Woodworking (Caruso et al. 2015)

These businesses, and the demand for their products, is giving rise to a new generation of city makers and builders who need places to make, produce, design their products. They represent a new way to drive investment to empower communities and create new jobs. Several local organizations who are working in community development are bringing manufactures into neighborhoods. In some cities of United States, developers are integrating new uses within older structures, as in San Francisco, New York, Los Angeles and fostering local manufacturing businesses, as the following examples show.

#### **4.2.5 LOTS SIZE SURVEY**

Given the fact that there was no literature on the subject, in order to understand the most appropriate uses to be developed in the three classes, a study has been conducted on 10 cases of industrial and mixed-use facilities in the United States. The research has shown that based on the type of industrial facility or mixed-use facilities, there are preferred size.

### 100 Hooper, San Francisco, CA



**Lot size:**  
190.000 sq ft (4.3 acres)  
**Buildt area:**  
427.000 sqf  
**Year of construction:**  
Under costruction  
**Adaptive Reuse:**  
No

The project will be a mixed-use complex which includes a ground floor with 86.000 sq ft dedicated to innovative production areas for makers, innovators, and craftspeople performing design, light manufacturing, production, and distribution (PDR);, a public plaza and 10.000 sq ft of retail space, 10,000 sq ft available for potential sit-down restaurant, brewery. The three upper floors provide 315.000 sq ft of offices for rent, designed to create a dynamic environment. (<http://www.kilroyrealty.com/property/100-hooper>)

### American Industrial Center, San Fransisco , CA



**Lot size:**  
218.000 sq ft (5 acres)  
**Buildt area:**  
800,000 sq ft  
**Year of construction:**  
1915  
**Adaptive Reuse:**  
Yes

The buildings is becoming the a center of micro-manufacturing, the spaces provided act as incubator of makers, from designers and engineers to chefs, artists, and manufacturers. The space provides also offices spaces and warehouses. There are 300 units ranging from 250-35,000 sq ft until 5, 10, and in one case 45,000 sq ft. (<http://aicproperties.com/availability/>)



**Lot size:**  
40,000 sq ft

**Buildt area:**  
60,000 sq ft

**Year of construction:**  
1924

**Adaptive Reuse:**  
Yes

This factory is the result of the transformation of the ex Mission Linens into a multi-use design hub. In addition to the tile factory, located at the heart of the building, there is a surrounding area of 3,500-square-foot gallery-like store that is home to various shows and events throughout the year, a chef's kitchen, tile design bar, Blue Bottle Coffee outpost and a newsstand. (<http://www.heathceramics.com/san-francisco>)

### California Cotton Mill, Oakland, CA



**Lot size:**  
115.000 sq ft (2.64 acres)

**Buildt area:**  
138,000 sq ft

**Year of construction:**  
1883

**Adaptive Reuse:**  
Yes

This ex-cotton mill hosts today 74 work/live studios. The aim of the project is o serve as an "incubator for various enterprises" and add diversity to the mixed-use industrial neighborhood. In the lobby of the building has been located a small museum devoted to the history of the Cotton Mill. The units has been designed for working artists and entrepreneurs. (<http://live-work.com/projects/california-cotton-mills-studios/>)



## Lawrenceville Technology Center, Pittsburgh, PA



The Lawrenceville neighborhood is a 14 acre area divided into three parcels of 7 acres to be developed, 4 acres and 3 acres. On the area there are several buildings: Tech Forge a 64,000sq ft multi-tenant flex high-bay and office facility. The Heppenstall Building now seat of Carnegie Mellon robotics; the former Geoffrey Boehm Chocolates building was renovated into a multi occupancy, office/high tech manufacturing facility. The building is home to some of Pittsburgh's fastest growing firms. (<http://ridc.org/view-property/lawrenceville/>)

### Lot size:

305.000 sq ft (7 acres)  
175.000 sq ft (4 acres)  
130.000 sq ft (3 acres)

### Buildt area:

64.000 sq ft- Tech Forge  
30.000 sq ft- Carnegie Mellon Robotics  
71.000 sq ft- Chocolate Factory

### Year of construction:

2016- Tech Forge  
1920-Heppenstall Building  
1914- Chocolate Factory

### Adaptive Reuse:

No- Tech Forge  
Yes- Heppenstall Building  
Yes- Chocolate Factory

## Keystone Commons, Pittsburgh, PA



### Lot size:

38 Acres- 7 parcels  
222.000 sq ft/parcel (5.1 acres)

### Buildt area:

2.25 million sq ft

### Year of construction:

NA

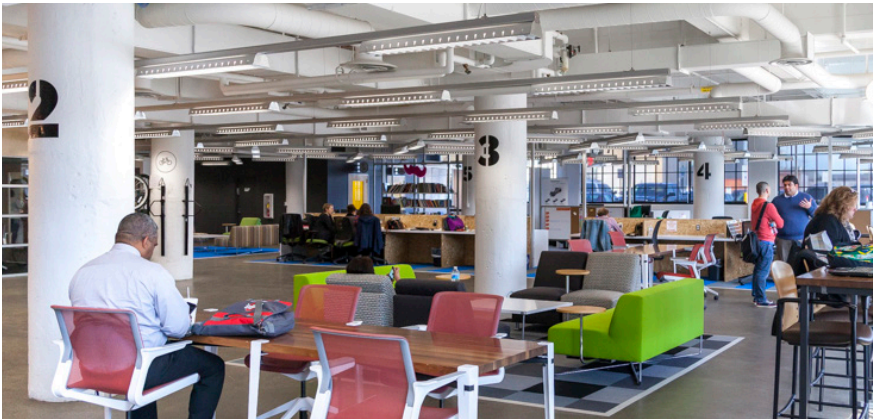
### Adaptive Reuse:

Yes

The Regional Industrial Development Corporation acquired the area in 1989. Rehabilitation of the property, was focused on specific buildings and the conversion of the overall complex into a multi-use urban industrial center. The site includes a number of multi-occupancy buildings owned and managed by RIDC for the benefit of both large and small industrial companies, as well as freestanding buildings for lease to specific industrial users seeking a good business environment. (<http://ridc.org/view-property/keystone-commons/>)



## Tech Town, Detroit, MI



**Lot size:**

30.320 sq ft

**Buildt area:**

140.000 sq ft

**Year of construction:**

1927

**Adaptive Reuse:**

Yes

Tech Town is a five-story building, where Detroit's entrepreneurial community converges, offering co-working spaces, meeting and event space for different occasion and sizes, and flexible offices and labs to suit every business. Tech Town is an incubator that has more than 50 members include high-tech enterprises, innovative small businesses and nonprofit and social impact organizations. The tenants can benefit of many services supporting the business and also to use common spaces, as kitchens. (<https://techtowndetroit.org/services/space/>)

## Ponyride, Detroit, MI



**Lot size:**

21.300 sq ft

**Buildt area:**

33.000 sq ft

**Year of construction:**

1935

**Adaptive Reuse:**

Yes

Ponyride is a building located in Corktown in which artists, craftsmen, creative entrepreneurs and makers can rent a space at a lower market rate. The project aims to create a dynamic environment working together to make communities in Detroit sustainable. The building was designed in 1935 with a 1950's addition. Today is home of wood-shop, co-working spaces, dance studio/event space. Ponyride tries to support Detroit local talent and the local economy, organizing markets and events in its spaces. (<https://www.ponyride.org/co-working-space/>)

## 25 Kent, New York, NY



**Lot size:**  
915.000 sq ft (21 acres)  
**Buildt area:**  
500,000 sq ft  
**Year of construction:**  
Under construction  
**Adaptive Reuse:**  
No

The new 8-story building will be a multiply-tenant building where retail spaces will be provided on the ground floor, while the other floors are design to host light manufacturing activities, co-working spaces, workshops, offices ans a rooftop terrace. The project wants to create a dynamic workplace, in front of the revitalized Williamsburg's waterfront. The facility should be inaugurated in early 2018. (<http://www.twentysfivekent.com/floor-plans/>)

## Industry City, New York, NY



**Lot size:**  
1.525.000 sq ft (35 acres)  
**Buildt area:**  
6.000.000 sq ft (16 buildings)  
**Year of construction:**  
1895  
**Adaptive Reuse:**  
Yes

This complex represent a hub of 16 buildings in the city of New York, that provide spaces for creative office spaces, production spaces, retail spaces and creative workshops. The area is home of tenants operating in different sectors as technology, fashion, design and production, photography. The spaces provided are very flexible, they range in size from 500 sq ft to 50.000 sq ft. The area has also outdoor spaces, that can be used as public spaces and

This overview of projects has been crucial to understand the space needed by different types of firms. The lot size and footprint required by the urban manufacturing businesses often overlaps with the ones of abandoned by traditional manufactures, as can be seen from the project's description.

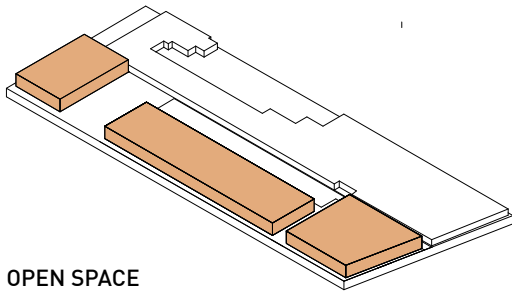
The result of the survey is summarized in the following table:

INDUSTRY TYPE	PROJECT	LOT SIZE	1st class	2nd class	3rd class
MIXED USE BUILDING (Various types)	100 Hooper	190.000 sq ft			X
	American Industrial Center	218.000 sq ft			X
	Keystone Commons	222.000 sq ft			X
	25 Kent	915.000 sq ft			X
	Industry City	1.525.000 sq ft			X
SCULPTURES AND CERAMICS	Heath Ceramics	40.000 sq ft	X		
MAKER SPACES AND WORKSHOPS, START UPS, EVENTS	Ponyride	21.300 sq ft	X		
	TechTown	30. 320 sq ft	X		
	Artisan's asylum	131,815 sq ft		X	
	Higher ground farm	160.000 sq ft		X	
FOOD AND BEVERAGE	Harpoon brewery	50.000 sq ft	X		
	Taza Chocolate	27.500 sq ft	X		
	Carnegie Mellon			X	
ELECTRONICS AND ROBOTICS	Robotics				
3D PRINTING	RadLab	11.165 sq ft	X		
LIVE AND WORK	Cotton Mills	115.000 sq ft		X	
	Factory Place 1300	180.000 sq ft		X	

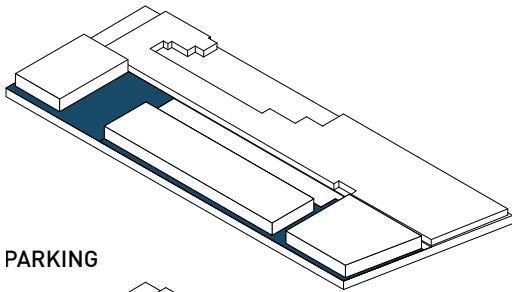
The survey leads to the following conclusions:

- In the lots ranging from 190.000,1 to 410.000 Sq ft should be supported the creation of mixed-use complex, with different spaces for production, offices, retail and housing. This complex, moreover, often provide public spaces or plazas for workers and users. These complexes are catalysts both for firms, which find a creative environment and benefit from the clustering, and users that are attracted by the functions as retail, or restaurants and cafés and the public spaces. They have to be preserved and designated exclusively to these functions.

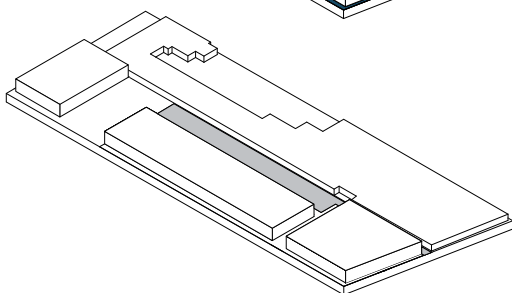
STRUCTURES



OPEN SPACE

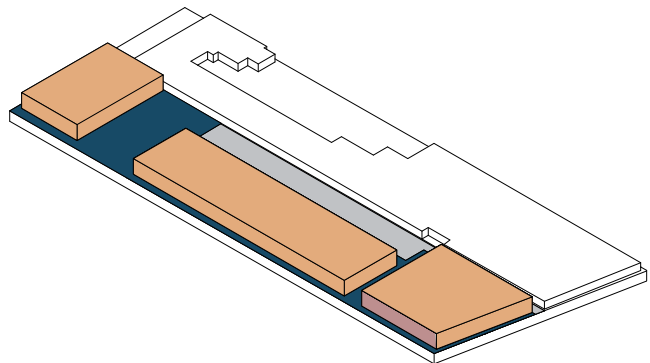


PARKING



LOT SIZE 190.001-410.000 SF

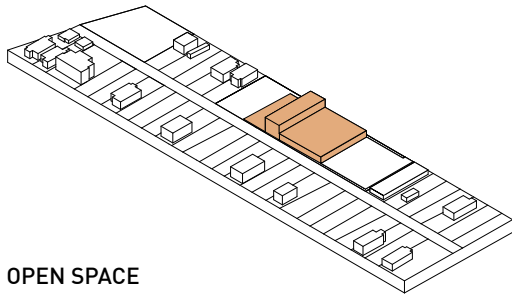
LOT TYPE SAMPLE



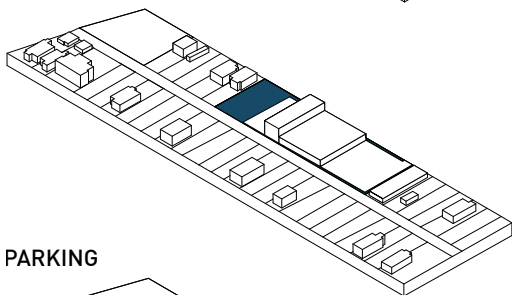


- In the lots ranging from 70.000 to 190.000 sq ft, many different uses can be located. In general, it can be said that all the type of industries which requires big machineries or have an intensive production can be located in this lots, or these size can host one multi-tenant or more buildings. If developed as single-tenant building it can be suitable for mixed use complex of smaller footprints, makers paces and workshops, co-working spaces, event and exhibition spaces, 3D printing and robotic firms, food and beverage production, especially if they grow their products in the lot.

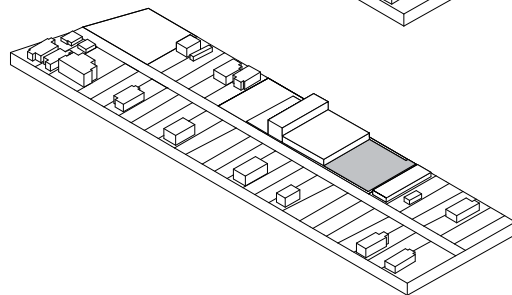
STRUCTURES



OPEN SPACE

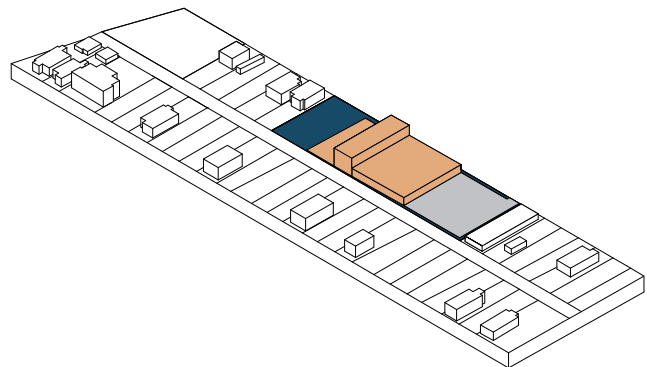


PARKING



LOT SIZE 70.001-190.000 SF

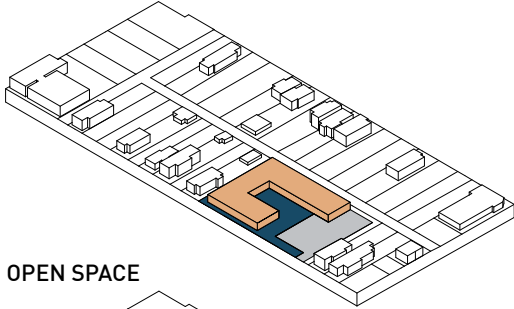
LOT TYPE SAMPLE



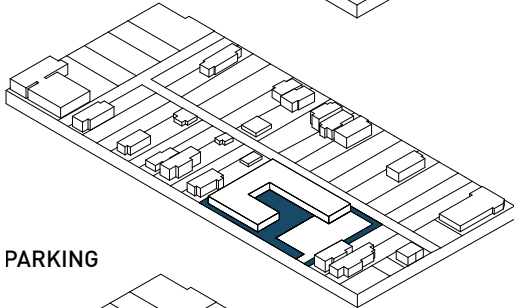


- The lots ranging from 22.000 to 70.001 sq ft are suitable with every industry type, operating on single-tenants buildings and live and work buildings with a reduced number of loft in it, co-working spaces and workshops.

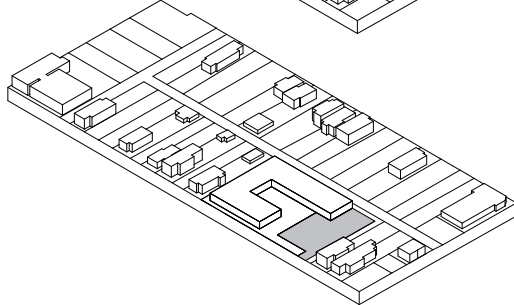
#### STRUCTURES



#### OPEN SPACE

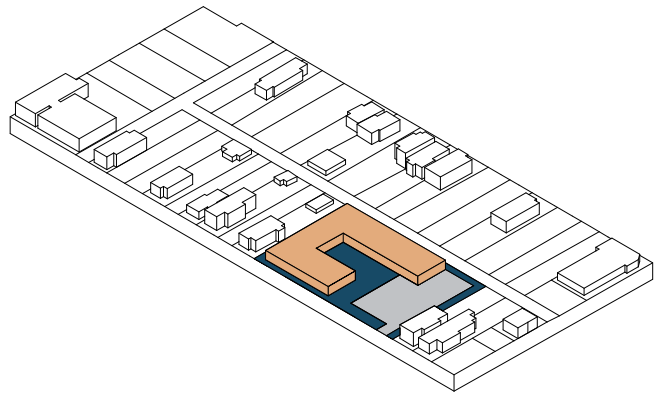


#### PARKING



#### LOT SIZE 22.000-70.000 SF

#### LOT TYPE SAMPLE



#### 4.2.6 PERMITTED USES

The permitted uses are the following:

- Industrial uses
- Mixed-uses (industrial and residential; industrial and industrial services; industrial and café/restaurants, industrial and small retail shops, industrial and offices)
- Industrial services buildings
- Residential uses
- Office uses
- Retail uses
- Live and Work
- Training ed educational facilities
- Sports facilities
- Cultural facilities/Exhibition Spaces
- Restaurants and Cafés
- Parks Pocket parks

All the vacant land in the area can be developed in accordance with the uses listed below. Every identified class is suitable to different industrial or non-industrial uses.

In order to preserve the industrial land and to attract investors, the third class (190.000,1- 410.000 Sq ft) will be reserved exclusively for industrial or mixed-uses including manufacturing.

Moreover, all the publicly owned lots identified on the map "Proposed lots to be developed for industrial or mixed use purposes" will be aggregated and designated as land for industrial development. This land will be transferred to a non-profit organization that will act as developer and manager of the industrial land. (Strategy 5.1)

In the remaining lots to be developed for industrial and mixed-use purposes, however, there is the right of first refusal on industrial uses than others.

In the renaming lots, the other permitted uses, with the exception of offices and residential if not in mixed-use buildings or live and work buildings, can be proposed through a development plan that have to be accepted case-by-case.

It is strongly encouraged to foster residential and offices development in the medium/high density lots, where there is not possibility to preserve industrial land, since they could help to infill the area.

With the exception of the industrial ones, which require a

strict regulation in order to fit in mixed-use neighborhoods, thereby are precisely listed by type, the other uses are regulated by their suitability in the lots with the available vacant land, for example, the regulating plan will not specify the type of residential use permitted in the blocks.

### ***BUSINESS TYPES ALLOWED IN THE INDUSTRIAL BUILDINGS***

The industrial business types allowed in the area and with residential and commercial uses are listed below. If a developer or manufacturer wants to propose a different type of business, it will be evaluated case by case, provided that the type not interfere with the other non-industrial uses or endanger the life of the area users and the environment, through the use of hazardous materials or the production of hazardous waste.

- Industrial designers
- Architects
- Furniture
- Clothing and textiles
- Web designers
- Food and beverage
- Artists
- Media and film
- Leather-working
- Printing and publishing toration services
- Electronics and Robotics
- Restoration services
- Import and export
- Cabinetry
- Sculptures and ceramics
- Lighting
- Metal fabrication
- Housewares
- Jewelery
- 3D printing
- Start-up
- Maker spaces and workshop spaces
- Woodworking (Caruso et al. 2015)

Industrial and mixed-use lots have to ensure narrow spaces for trucks, however in case of mixed-use buildings, load/unload system shall not interfere with the residential use. Trucks circulation shall be permissible only in specific days of the week and certain hours that will be negotiated between municipality

manufacturers and trader, in order to minimize possible negative impacts.

When a developer or a owner wants to build in the area, he/she has to propose to the project that will be evaluated by a Commission that will define if the project can be realized, as consistent with the objectives of the Regulating plan or cannot.

#### **4.2.7 PUBLIC SPACES AND PEDESTRIAN CIRCULATION**

2.500 sq ft public plaza will be provided on lots of 50,000 sq ft, 5000 sq ft on lots of 100.000 sq ft or 10.000 sq ft on lots of 150.000 sq ft greater. Design standards are also included to ensure that such plazas are inviting open spaces accessible both to building tenants and the general public, on the model of "The Hooper". The ordinance additionally contains a provision to improve pedestrian circulation through the introduction of pedestrian paseos. On blocks exceeding 400 feet in length, and where building frontages exceed 300 feet, development sites would be required to provide a pedestrian alley or pathway to facilitate improved circulation. Such pathways will not only improve walk-ability but also infuse life and activity on the sidewalk, creating additional opportunities for passive and active use of public space.

#### **4.2.8 HEIGHTS AND STORIES**

The ordinance proposes maximum building height limits and minimum floor-to-ceiling heights to ensure the functionality of interior spaces for productive functions, while promoting compatibility with existing development. Industrial mixed use areas are typically characterized by low- and mid- scale buildings. A minimum floor-to-ceiling height of 16 feet would be required on the ground floor and extended to the upper floors if required due to the production's needs. In case of residential, retail or offices uses, upper floors required to be a minimum of 10 feet in height to ensure flexibility for a diversity of uses. Buildings would be permitted a maximum height of 60 feet, which would typically allow a six-story building.



### 4.3 BUILDING'S DURABILITY - ADAPTIVE REUSE ORDINANCE

The purpose of this ordinance is to implement the Regulating Plan of the corridor by facilitating the conversion of older, economically distressed, or historically significant buildings, to maker spaces, fab-labs, manufacturing dwellings, artisans' or artists' workshop, small batch light manufacturing, live/work units or visitor-serving facilities or other temporary uses which can fulfill the emergent community needs.

This will help to reduce vacant lots and buildings as well as preserve the city's architectural and cultural past and encourage the development of mixed use neighborhood, where light manufacturing and advanced manufacturing is combined with live/work, residential and services in the industrial corridor. This revitalization will improve air quality and reduce vehicle trips and vehicle miles traveled by locating residents, jobs and services near each other.

In the area there are 49 vacant industrial buildings, for a total of 2,168,968 Sq ft. Their characteristics will be analyzed in the following pages.

#### *Relationship to provision of Detroit Municipal Code and other Regulations*

If the provisions of this specific ordinance conflict with those of the Detroit Municipal Code, then this specific ordinance shall prevail. In addition, if the provisions of this specific ordinance conflict with any Citywide regulation, height district, zone, zoning ordinance, limitation, any of which were adopted or imposed by City action prior to the date of entry into force then this specific ordinance shall prevail. If the provisions of this specific ordinance conflict with those of any historic preservation overlay zone, any other specific plan, or supplemental use district, then the provisions of the historic preservation overlay zone, other specific plan, or supplemental use district shall prevail.



YEAR BUILT-VACANT BUILDINGS





BUILDING CONDITION- VACANT BUILDINGS

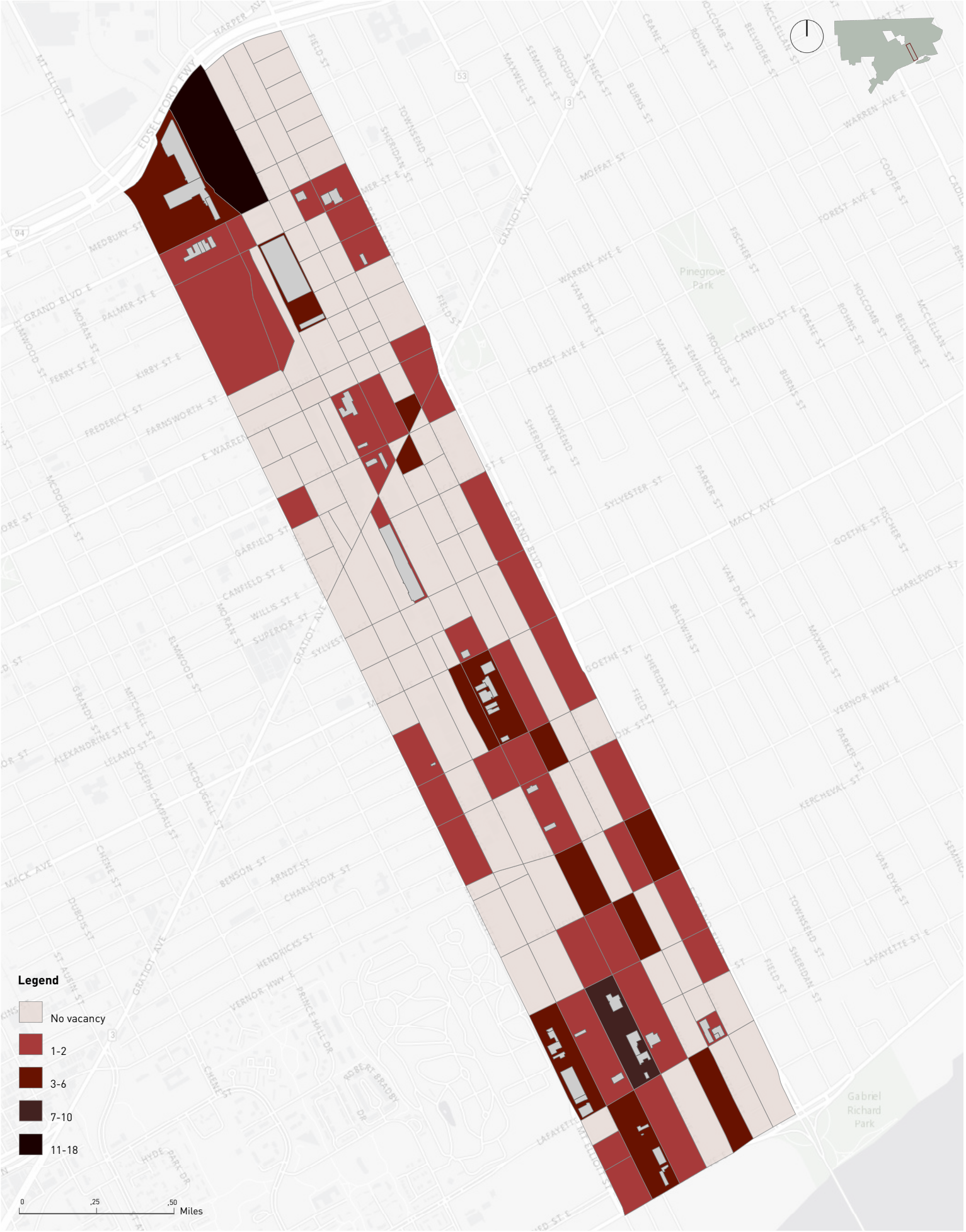




VACANCY RATE BY BLOCK



VACANT BUILDINGS AND VACANT BUSINESS BY BLOCK





## *Regulation*

The following regulations shall apply to Adaptive Reuse Projects in the Industrial Strip.

### *1) Development Standards*

- Adaptive reuse can be applied on the whole building or on portion of buildings, following the tactical preservation approach. Safety standards have to be respected while transforming the buildings or to use the building temporarily
- Allow mixed-use buildings, as live and work ensuring a maximum of 30% of the square footage for residential use; retail and manufacture ensuring a maximum of 30% of the square footage for retail use; manufacturing and office ensuring a maximum of 30% of the square footage for office use.
- Allow mixed-use buildings with a mix of manufacturing and the uses allowed in the area, ensuring a minimum of 50% of the square footage for manufacturing uses.
- Allow temporary uses of different nature, in buildings or part of the building which satisfy the safety standards (max 6 months);
- Encourage the reuse for industrial buildings which satisfy the needs of urban manufacturing firms;
- The residential units shall be a minimum of 500 square feet in size.

### *2) Incentives*

Adaptive Reuse Projects shall be entitled to the four incentives set forth below. Except for the first incentive concerning mezzanines, these incentives shall not apply to any new floor area that is added to an Adaptive Reuse Project:

- Mezzanines. Loft spaces in joint living and work quarters, dwelling units and guest rooms that do not exceed more than 33 percent of the floor area of the space below shall not be considered new floor area.
- Density. Dwelling units, joint living and work quarters and guest rooms shall not be subject to the lot area requirements of the zone or height district.

- **Off-Street Automobile Parking.** The required number of parking spaces shall be the same as the number of spaces that existed on the site on before the ordinance, and shall be maintained and not reduced. Any new square footage that includes any new units shall require additional parking at a minimum rate of 2 spaces per unit.
- **Loading Space.** A new loading zone shall not be required if the existing building does not have an existing loading zone, in conjunction with the development of an Adaptive Reuse Project.
- **Preservation tax incentive for historic buildings - 20% tax credit for the certified rehabilitation of certified historic structures.<sup>1</sup> (Federal Funds)**
- **Preservation tax incentive for non-historic buildings placed in service before 1936- 10% tax credit for the certified rehabilitation only on non residential-uses.<sup>2</sup> (Federal Funds)**

### **3) Exceptions**

The following exceptions shall apply to the Eligible Buildings in which Adaptive Reuse Projects are located. These exceptions shall also apply to any Eligible Building in which new floor area or height was added or observed yards changed:

- **Floor Area.** Existing floor area exceeding that permitted by the zone, height district, specific plan, supplemental use district, or any other land use regulation shall be permitted.
- **Height.** Existing height exceeding that permitted by the zone, height district, specific plan, supplemental use district, or any other land use regulation shall be permitted.

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<sup>1</sup> «The 20% rehabilitation tax credit applies to any project that the Secretary of the Interior designates a certified rehabilitation of a certified historic structure. The 20% credit is available for properties rehabilitated for commercial, industrial, agricultural, or rental residential purposes, but it is not available for properties used exclusively as the owner's private residence.» [Technical Preservation Services, 2012, p. 4]

<sup>2</sup> «The 10% credit applies only to buildings rehabilitated for non-residential uses. Rental housing would thus not qualify. Hotels, however, would qualify. They are considered to be in commercial use, not residential. [...] Furthermore, projects undertaken for the 10% credit must meet a specific physical test for retention of external walls and internal structural framework: »at least 50% of the building's external walls existing at the time the rehabilitation began must remain in place as external walls at the work's conclusion, and »at least 75% of the building's existing external walls must remain in place as either external or internal walls, and »at least 75% of the building's internal structural framework must remain in place.» [Technical Preservation Services, 2012, p. 16]

- Yards. Existing observed yards not meeting the yards required by the zone, height district, specific plan, supplemental use district, or any other land use regulation shall be permitted.

#### 4) Previous Manufacturing Zones

A Zoning Administrator may, upon application, permit Adaptive Reuse Projects in Industrial buildings, with the aim to adapt them to the new form of production, subject to the following:

Conditions and Findings. The Zoning Administrator shall:

- (i) Require that one or more signs or symbols of a size and design approved by the Fire Department are placed by the applicant at designated locations on the exterior of each Adaptive Reuse Project to indicate the presence of residential uses; and
- (ii) Limit the occupations permitted in joint living and work quarters to the following: accountants; architects; artists and artisans; attorneys; computer software and multimedia related professionals; consultants; engineers; fashion, graphic, interior and other designers; insurance, real estate and travel agents; photographers and other similar occupations or workers supported by social entrepreneurs; and
- (iii) Find that the uses of property surrounding the proposed location of the Adaptive Reuse Project will not be detrimental to the safety and welfare of prospective residents; and
- (iv) Find that the Adaptive Reuse Project will not displace viable industrial uses.



Jolly Pumpkin Brewery, located in the reused Willys building on West Canfield in Midtown, Detroit

Source: Eater Detroit, 2017  
<https://detroit.eater.com/2017/3/28/15086260/jolly-pumpkin-royal-oak-bastone-vinotec-ca-closing>

## 4.4 Policies for industrial development

### *Non-profit management and ownership of industrial buildings*

Establish a non-profit organization, based on the model of SF-Made<sup>1</sup> in San Francisco or Greenpoint Manufacturing and Design Center<sup>2</sup> and The Brooklyn Navy Yard<sup>3</sup> in New York, in order to provide affordable, flexible production space and a creative environment for small and medium-sized firms and create jobs. The Strip should have a non-profit organization dealing with the ownership, development and management of the industrial buildings and lands.

The organizations operating in New York and San Francisco have to face a problem Detroit is not experiencing yet, but given the recent Creative Corridor development, the riverfront development and the Packard, it is reasonable to think that the study area might turn into an “hot” real estate market, where sale prices and rents for industrial property are driven by the “highest and best” uses that are allowed under the zoning. (Pratt Center, 2016)

In Detroit, the non-profit agency might be a public or quasi-public organization that manage, develop and invest firstly in publicly owned land, then start acquiring land by privates, following the GMDC proven method that includes:

- «Acquiring, rehabilitating, and managing neglected industrial properties
- Acting as advocates through collaboration and coalition building among key stakeholders
- Creating and influencing industrial development policy
- Building the field and promoting its model by publishing, presenting at conferences, and providing technical assistance to other communities» (<https://gmdconline.org/about/>)

In the industrial strip, the nonprofit organization could, in addition to above mentioned points:

- Acquire the publicly owned land at a lower market price and create lots suitable for industrial uses, as emerged from the study. The land acquired by the organization must be used exclusively for industrial or mixed-use industrial purposes.

1 <https://sfmade.org>

2 <https://gmdconline.org>

3 <http://brooklynnavyyard.org>





Avoiding the loss of industrial land and to reduce the proliferation of non-industrial uses, it is important for real estate market stability, since non-industrial uses might cause adjacent property owners to reevaluate and price their properties in anticipation of conversion to non-industrial uses. (Pratt Center, 2015) This trend might deter investment by both the property owners and the industrial tenants, since the firsts are hesitant to invest in new equipment, training due to the uncertainty that they can recover their costs if they have to move; while the seconds might also curtail investment if they are beginning to look at a sale or use change. If there is no will to preserve industrial areas into a city, existing businesses will have to displace, and no firms will invest, generating a loss of well-paying jobs for people with limited educational attainment and English language skills.

The non-profit organization ensure the market stability. Moreover, the it can provide the industrial space at advantageous conditions, since the main interest it is not the profitability but also to create jobs, rebuild infrastructure or new manufacturing space while maintaining the financial stability. The returns or investments are lower than the one tolerated by the private market and in this way the organization can provide affordable industrial rents and spaces and not follow the real estate market rules. The non-profit organization aims to create an environment when firms and industrial business can grow, and expand, especially when businesses start operating.

In Detroit there are both nonprofit which aims to provide affordable, low-cost, flexible spaces for startups, makers, nonprofits, entrepreneurs, artists and artisans and creative and collaborative environments, as Ponyride<sup>4</sup> or TechTown<sup>5</sup>. Ponyride opened its space in 2011 in a 30,000 square foot building in Corktown, while Tech Town is located in New Center and provides a wide variety of spaces as co-working, meeting space and more. Both Ponyride and Tech Town offer to their clients many others services to support businesses and emerging companies. Moreover, other for profit organizations provide working spaces, the Detroit Creative Corridor Center, located in New Center, that offers a flexible, technology rich, design-forward workspace for creative sector businesses seeking a soft launch in a professional, inspiring and innovative environment.

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4 <https://www.ponyride.org>

5 <https://techtowndetroit.org>

### *Create demand-driven and targeted workforce development*



As Detroit economy shifts from automotive industry toward new industries and education is a critical issue for the city, displaced workers need help matching skills to existing jobs and accessing targeted training and certifications for new jobs. Considering that the 20% of Detroiters don't have an high school diploma and only the 14% receive an higher education or cannot pay for it (Census data: ACS 2016 1-year unless noted), it priority to provide educational alternatives to colleges or universities. In this way, also the people that have not access to higher education, can have the possibility to work and have a decent wage. Educational providers have to collect information about emerging jobs and their skill requirements, on the other hand employers need to better know the system for finding, evaluating, and arranging job-specific training. There are two main objectives: the first one is to create and skill talents that match the demand of the Detroit Metro Area's diverse industrial base, so that workers and firms can be matched efficiently; the second is to promote every level of education, so that every person with different background can decide to improve their skill, according to their vocation and wills. The key components of this strategy are:

- Favor the training of low educated, unemployed, local detroiters.
- Provide some publicly owned buildings to the non-profit organization that will manage the industrial land, to create training schools or reuse the existing buildings, in case of abandoned public schools. Ensure that the program fee is affordable for an unemployed or low income worker and design loans or alternative payment methods, as combining apprenticeship models that coordinate education with on-site training with subsidized wages. (Pratt Center, 2012)
- Rent training spaces, if required from the firms, in buildings owned by the non-profit organization. Firms can rent their own space or share it with other firms, as well as training programs. Many firms owners prefer to do their own training, particularly where manufacturing their products requires a sophisticated skill set.
- Offer some incentives in taxes to social entrepreneurs which combine work and training programs.

- *«Bring Production Into The Schools: Creating new types of technical training that teaches skills in the use of modern production equipment, along with entrepreneurship is a way to engage more young adults and strengthen academic performance. These educational opportunities can expand access to production jobs at a time when additive manufacturing technologies are requiring a whole new skill-set to enter the sector*
- *Produce and retain more graduates in engineering and technical fields by increasing the quantity and quality of applied science institutions, building interest in the fields, and providing connections to jobs and entrepreneurial activity*
- *Leverage colleges and universities to fuel maker ecosystems. We can catalyze manufacturing growth by encouraging neighborhood academic institutions to offer training in the modern tools of production (e.g. CNC tools, robotics) and to open up their facilities - particularly Maker spaces - to residents*
- *Guide providers and educators to create demand-driven curricula, programming, and counseling that clearly leads workers to sustainable careers.» (Hirshberg et al., 2016-<https://makercitybook.com/chapter-5-workforce-development-51226b58a1cc>)*
- Create New Forms of Apprenticeship and Internships around Making, as Shinola did to empower and train its workforce. (Hirshberg et al., 2016)

In Detroit, there are already some organizations, institutions, non-profits which try to offer training programs in order to skill workers. However, these programs are often addressed to undergrad students, as the Tech Town DTX Launch Detroit<sup>6</sup> program, which provides an intensive summer accelerator. Another training opportunity is held by the Tech Shop Detroit<sup>7</sup>, in Alley Park, where the interested people can pay a monthly or annual membership and attend all the classes and use the tools and the spaces of the building. The Detroit Creative Corridor Center, located in Detroit, with its program DETROIT MADE which offers «technical assistance, mentor ship and communications support for designers seeking to become manufacturers.» (<http://detroitc3.com/what-we-do/business-support/>)

6 <https://techtowndetroit.org/services/labs/>

7 <http://www.techshop.ws/index.html>

detroit-made/)

Training workforce doesn't come only from institution but also from firms and companies, as Shinola, which partnered with the Swiss company Ronda and brought into the company masters artisan from Switzerland, in order to train their workers to produce high quality watches and improve dramatically their skills. (Hirshberg et al., 2016)

It is necessary to think new forms of training and apprenticeship, which better fit with the social fabric of Detroit, giving the possibility to employed or unskilled labor pool looking for a job and often with a low educational level.

### *Identify and engage anchor or philanthropic institutions*

Stimulate the public-private partnership is essential to create a durable growth and fulfill the objectives for the development area. In the last years, Detroit saw a greater engagement of private institutions investing in the city to draw and build its future, improve the quality of Detroiters. The local government can start by identifying institutions that might have an interest on the development area and determining where their avocations overlap with the strategies of the industrial strip such as building stock rehabilitation, economic growth, educational programs, affordable housing. The anchor institutions could participate in existing programs in the area or create a new programs ad hoc to work on to pursue the strategies stated. In order to achieve the strategies, communities often need financial and technical assistance to reach their economic and development goals. There are different possible funding sources, some might be found in local and national organizations as that might have funding programs relevant to the community's development goals. Others can be found in philanthropic organizations which could partner in promoting and sponsoring community development. Many organizations operate in Detroit to support communities, economic growth rely on urban manufacturing, additive manufacturing, entrepreneurship. Great examples are the Detroit Economic Growth Corporation®, which operates in many fields, from advanced manufacturing to medical health, with the vision of spur economical development and create jobs. The local government should try to involve one or more organizations to boost the revitalization process and the economic growth. Another institution that might support the Corridor is Detroit Creative Corridor.





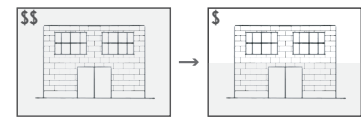
### *Enact a property tax abatement program for infill locations*

Detroit's property tax rate is one of the higher in the country. In fact, cities with high property values can impose a lower tax rate, since they would still collect at least as much revenues as a city with low property values. (Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence, 2016) Detroit has a median home value of \$41,900. For this reason the mill rate in Detroit for principal-residence homeowners is 67.76 mills, equal to an effective rate of 3.39% for house with a taxable value equal to assessed value. According to Lincoln Institute (2016) Detroit is the first city in the US for propriety tax rate (4,31%) for commercial proprieties worth \$1 million dollars (plus \$200k in fixtures), followed by New York City (NY), Providence (RI), Chicago (IL); it is also the second city in the country, after Columbia (SC) for industrial property taxes for effective tax rate for \$1-million valued property (plus \$1 million in personal property) with 3.23% of the total value. (Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence, 2016). Moreover, Detroit has a propriety tax delinquency rate exceptionally high, leading to a critical situation where revenues are insufficient to provide quality public services.

The city needs tax propriety income, however tax abatement programs might help to stimulate investors in consider areas out of the "hot market" target, and allow the municipality to collect money after the abatement tax expires.

Detroit already has introduced tax abatements measures of the tax burden on individual properties and encourage investment, Detroit has granted tax abatements to some 11,400 of its roughly 330,000 privately owned taxable properties, even though these abatements represent a substantial loss of property tax revenue for the city. Many of the abatements result from Detroit's use of the three previously mentioned state programs: Renaissance Zones (RZ), Neighborhood Enterprise Zones (NEZ), and the Industrial Facilities Tax (IFT) program. Notwithstanding, the efficiency of tax abatement is a controversial question, since exemptions narrow the tax base, as fewer properties contribute to the total. (Sands, Skidmore, 2015)

In the study area there is a NEZ, a program established by Public Act 147 of 1992. The program provides a tax incentive for the development and rehabilitation of residential housing, by reducing the taxes on propriety up to 15 years. The program aims to spur the development and rehabilitation of residential housing in areas where it may not otherwise occur. It also encourages owner occupied housing and new investment in com-



munities.

However, since the project aims to maintain and enhance the industrial character of the strip and stimulate the urban manufacturing economy growth, other tax abatement programs should be in the area. Given the characteristics of the area, as the high vacancy rate of existing building and empty lots, the program who could better fit is the Industrial Facilities Exemption<sup>9</sup>, in particular the Plant Rehabilitation District (PRD). This program favors the «[...]renovation and expansion of aging facilities, assist in the building of new facilities, and to promote the establishment of high tech facilities.» ([http://www.michigan.gov/documents/taxes/IFE\\_FAQ\\_276636\\_7.pdf](http://www.michigan.gov/documents/taxes/IFE_FAQ_276636_7.pdf), p.1)

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<sup>9</sup> [http://www.legislature.mi.gov/\[S\(44b45vrhcszxmfw3gvbrk\)\]/mileg.aspx?page=GetObject&objectname=mcl-Act-198-of-1974](http://www.legislature.mi.gov/[S(44b45vrhcszxmfw3gvbrk)]/mileg.aspx?page=GetObject&objectname=mcl-Act-198-of-1974)

## 4.5. Implementation of the Regulating plan

In order to allow the plan system to work it is essential to have a constantly updated database which shows which structures have been demolished or are in the pipeline, which contiguous lots have been aggregated, purchased or sold. In this way it is possible to have an official review of the area every two years. The data have to be public and visible, on the base of the demolitions Interactive demo map<sup>1</sup>. In this way, if a developer wants to propose a plan in a certain area before the annual update of the map, he/she is able to do it.

Every five years, the Regulating plan and Policies strategies should be discussed: the city planning department with the major stakeholders and the community will have workshops, public meetings to discuss about the trends on economics, city development, new needs that might emerge with the infill of the area, new projects at a city-scale or larger scale that are interested in the area.

The Regulating plan could be implemented with rules and standards for street specifications, public spaces and, included in a large-scale project, transporation. The project could not include these themes, since there was no time to go into detail on all the issues, but they could be implemented and specify in the next future. Moreover, once that the Riverfront project and the Packard Plant will be completed, it will be required to understand how the corridor can connect and interface with these projects, both physically than how can attract users in the corridor to experience the neighborhood.

The Regulating plan has tried to be designed in the most flexible, but yet defined and rigourous toolkit that can be easily adapt to eventual future needs.

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1 <https://data.detroitmi.gov/Government/Demolitions-Data-Lens/xhif-khyv>

## 5. CONCLUSIONS

Starting with the consideration that the current Detroit's redevelopment projects are mostly located in the Innovation Corridor, which is the area where 55% of the city's jobs are concentrated, (City of Detroit, 2014) it seems that this regeneration might contribute only partially to the recovery of the city and can reach a limited target of population. Detroit needs to attract investors and develop new comprehensive revitalization strategies also in distress areas, in order to support an inclusive and economic growth and benefit the wider possible target.

The City has not completely disregarded the neighborhoods, some improvements have been done as streetlights, blight reduction through demolitions, land use changes to support urban farming, improvements in public transportation and public security. Although, these efforts help recovering the urban form, much work still remains to be done to provide access to high quality education, jobs skills and employment opportunities. Detroit's current jobs deficit is over 100,000, the Detroit Public Schools has a low-quality instruction (Reese et al., 2017)

The first move must generate jobs, especially the low level employment, to improve the condition of most of Detroiters. Therefore, it is essential to invest in education, transportation, job skill training, business incubators and to support development and entrepreneurship programs. To recover the local economy new 100.000 jobs should be required. According to Reese «[...] if these added jobs paid just \$10 an hour, they would add more than \$2 billion annually to the local economy, an amount equal to approximately half of the total payroll for all private sector jobs in the neighborhoods in 2014.» (p.10) This growth could help generating positive externalities in other economic sector and increase the demand for services, houses, retail. For all these reasons, the project wants to spur economic growth in a distressed area of the city, with great potential to create a vibrant and livable mixed-use neighborhood, balancing the overall city's development.

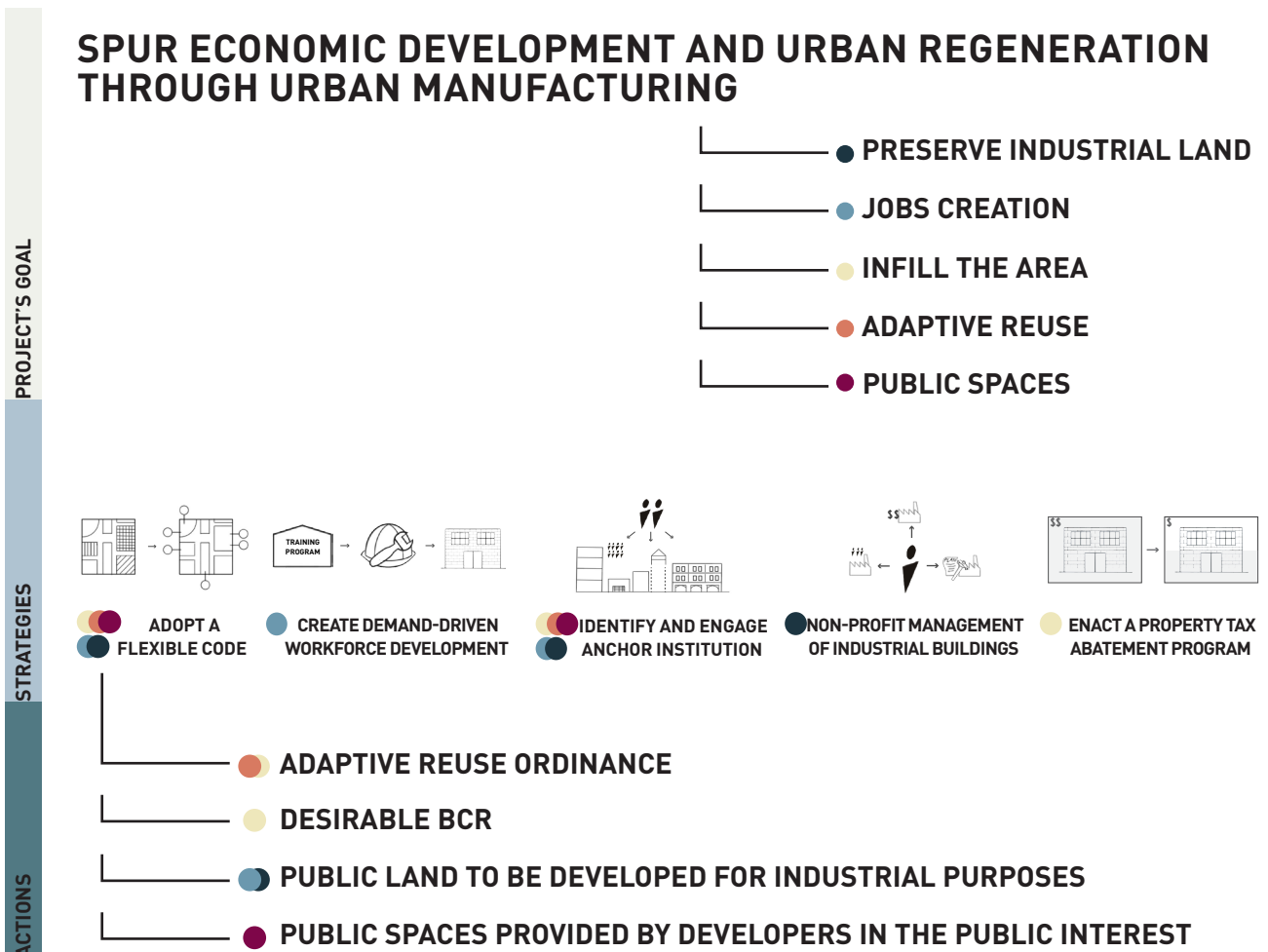
Urban manufacturing represents an urban regeneration engine, both physically and socially. In fact, urban manufacturing reshapes the neighborhoods and provides well-paid jobs for undereducated workers, compared to the retail sector. (Pratt, 2016)

The availability of abandoned industrial buildings and building land in the area, the strategic position in between two redevelopment projects -the Packard Plant Project and the Riverfront- made this corridor an excellence experimentation ground for new hybrid tool and industrial policies. Some city governments, recognizing this potentiality, have designed many policies to attract companies and talents and support their local urban firms, as San Francisco and New York.

The following scheme summarizes the project's aim, the strategies and the actions imple-



mented to achieve it. Two different long-term scenarios have been realized to understand how the development of the area, together with the application of the new code, could generate economic growth and urban regeneration in the area. The scenarios will add two outputs to the scheme.



The scenarios assume the available contiguous lots aggregated are to be developed will have:

- one-story buildings in the lots ranging from 22.000 to 70.000 (industrial use)
- three-story buildings in the lots ranging from 70.001 to 190.000 (mixed use: 1 floor industrial; 1 floor office/retail/other uses; 1 floor residential)
- six-story buildings in the lots ranging from 190,001 to 410.000 (mixed use: 2 floors industrial; 1 floors offices/retail/other uses; 2 floors residential)

To predict the building's footprint area, the 20% of the lot area and the plaza's area have been deducted from the total land available.

The evaluation of the jobs growth is based on the NAIOP research "Stabilization of the U.S. Manufacturing Sector and Its Impact on Industrial Space" data (2013). In order to estimate

the square feet per employee of a general urban manufacturing industry, it has been calculated a mean of the values in the following table.

MANUFACTURING INDUSTRY	1998	2002	2006
Food manufacturing	515	483	567
Beverage and tobacco product	990	874	1273
Textile mills and textile product mills	887	787	1552
Apparel manufacturing	534	230	704
Leather and allied product manufacturing	568	495	755
Wood product manufacturing	617	726	1091
Paper manufacturing	994	959	1132
Printing and related support activities	517	537	836
Petroleum and coal products manufacturing	714	633	570
Chemical manufacturing	1262	685	870
Plastics and rubber products manufacturing	899	807	1218
Nonmetallic mineral product manufacturing	785	904	973
Primary metal manufacturing	965	885	1306
Fabricated metal product manufacturing	757	729	964
Machinery manufacturing	708	566	860
Computer and electronic product manufacturing	360	365	429
Electrical equipment appliance and component manufacturing	2285	523	821
Transportation equipment manufacturing	544	540	999
Furniture and related product manufacturing	715	693	1558
Miscellaneous manufacturing	569	550	719
Manufacturing	744	617	892

#### Manufacturing Industries(Square Feet per Employee)

Source: NAIOP, (2013), Stabilization of the U.S. Manufacturing Sector and Its Impact on Industrial Space, NAIOP Research Foundation, Herndon, VA

## The mean is 960 SF/EMPLOYEE.

There are no most recent data available. The report does not provide another table but it envisions that in 2020, the average square feet per employee figures range from 250 to 1,400. The data source considered for the calculation of the square feet per employee the office's job is by Pinho<sup>1</sup> (2017), Crain's Detroit business.

## The office SF/EMPLOYEE in 250.

## The new inhabitants data is 1056 SF/PERSON<sup>2</sup>

<sup>1</sup> <http://www.crainsdetroit.com/article/20170730/news/635141/downtown-detroit-office-rates-still-a-bargain>

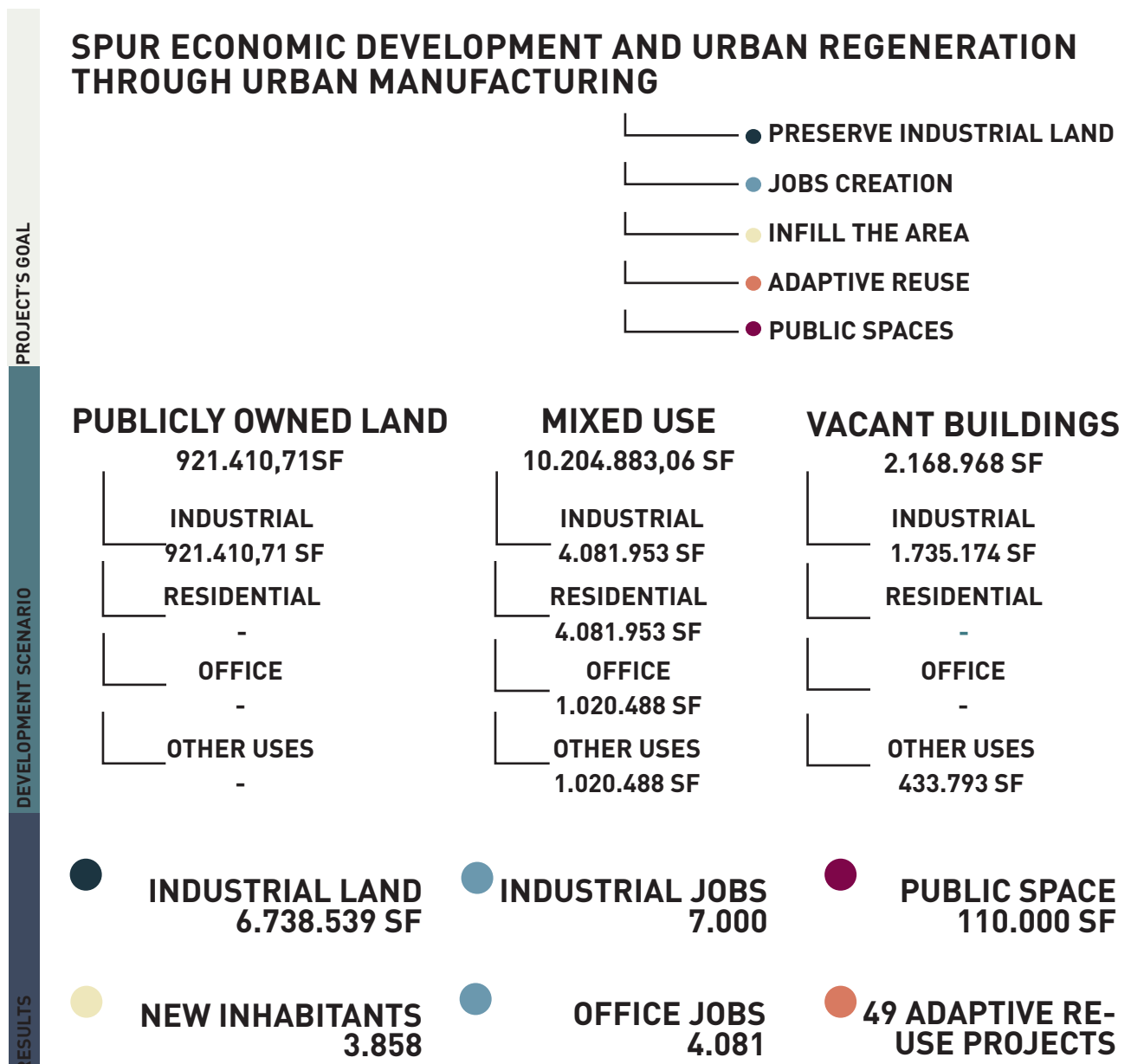
<sup>2</sup> <http://www.aei.org/publication/new-us-homes-today-are-1000-square-feet-larger-than-in-1973-and-living-space-per-person-has-nearly-doubled/>

## Scenario 1

The scenario 1 foresees in a period of 50 years:

- The total edification of the contiguous and publicly owned lots, enacted by the non-profit organization dealing with the management and ownership of industrial buildings.
- The edification of the mixed-uses lots, since possibility to create offices and houses. make it an interesting investment-
- Reuse of all the 49 industrial vacant buildings, with a 20% of the total square feet used other purposes.

The scheme below summarizes goals and expected outputs and results. The map the following page shows the future developed areas.



SCENARIO 1

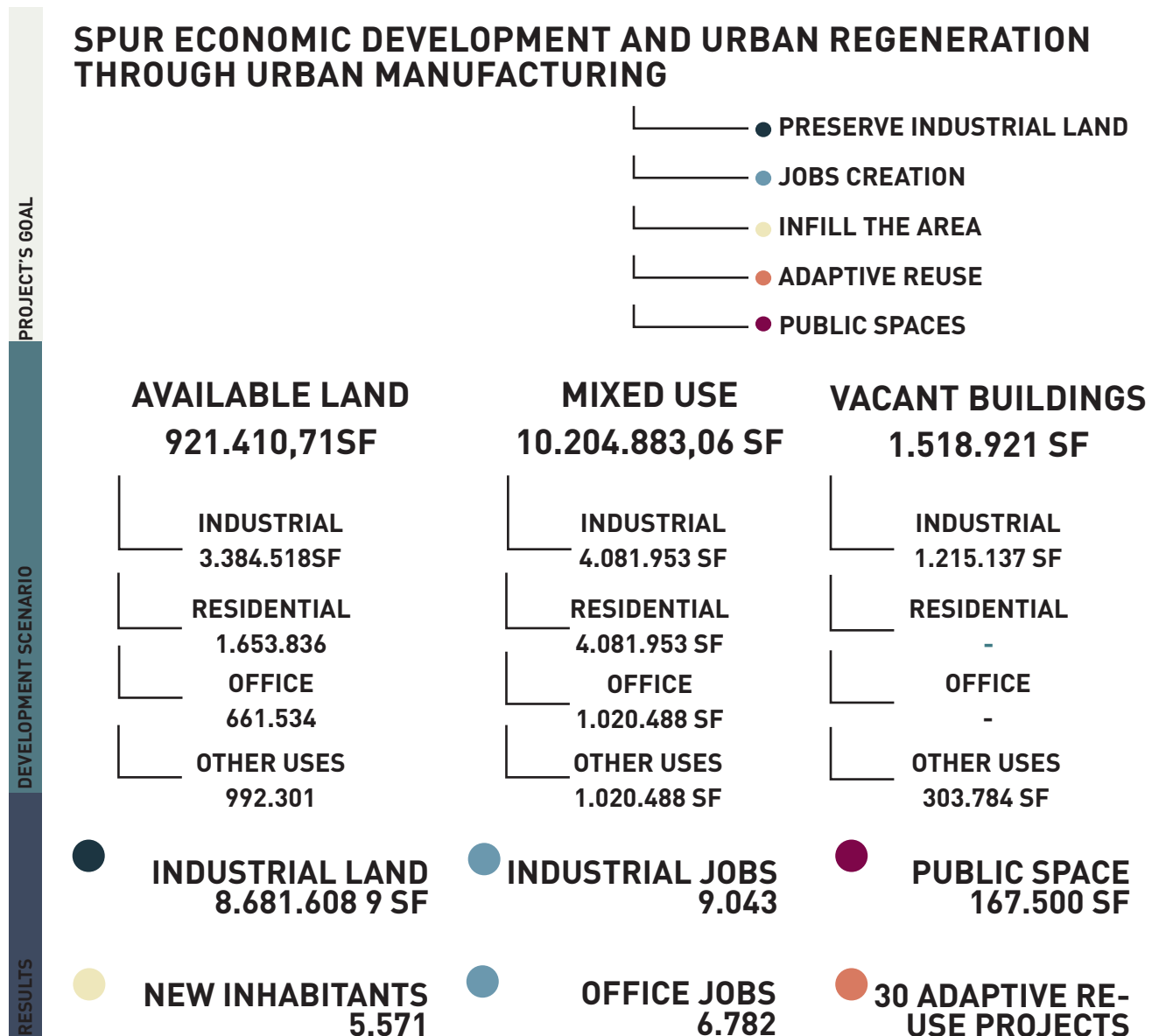




## Scenario 2

The second scenario foresees in a period of 50 years:

- The 60% edification of the contiguous and aggregated lots (40% of 1st class size 20% of the 2nd class size), enacted by the non-profit organization dealing with the management and ownership of industrial buildings and private investors.
- The total development of the mixed-uses lots, since the possibility to create offices and houses makes it an interesting investment;
- In residential areas are predicted 150 units of live and work. Every unit will have an area of 3000 sq ft. It will be assumed one person per unit.
- Reuse of all the 30 out of 49 industrial vacant buildings, with a 20% of the total square feet used other purposes.



SCENARIO 2



The second scenario is the most desirable one, since it requires a partnership between public and private parties. The impulse given by the development of the publicly owned lots has encouraged a cluster effect in the whole area, contributing to attract private investors and exploiting the potentialities of vacant land.

The suggested areas to be developed for industrial and mixed-use purposes have been identified according to their size, although the industrial development of all the appointed lots was highly unlikely. However, the industrial development is likely to occur around the publicly owned lots and in the corridor Bellevue-Beaufait streets, where the majority of the buildings are industrial and there is a greater chance to continue to move along the path of industrial development. For this reason the scenario assumes about 60% of the total proposed areas to be developed.

Moreover, in the light of future unpredictable events, such as: technology switch and innovation; different land use pattern developed on potential industrial areas; new development areas targeted by the municipality that might change investor's intentions or other possible causes, the total area cannot be considered in the future projections.

The heterogeneity of uses and the block patterns make sure that the area will be frequented by several users, encouraging the rise of services and complementary economies and will create a dynamic and creative environment, attractive both for residents and firms.

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