Politecnico di Torino

Corso di Laurea Magistrale Architettura, Costruzione Città

Luglio 2018

Tesi di Laurea Magistrale / Master Thesis

RE-THINKING Detroit, a new economic approach

RELATORI:
Prof.ssa R.Ingaramo
Prof.ssa M.C. Bottero

CANDIDATO:
Daniele Fazzari
228894

INDEX

INTRODUCTION

INTRODUCTION

The proposed thesis identifies, through the theme of adaptive reuse, a new reflection on the city of Detroit through a new socio-economic-work approach.

After the World War II, the European city never reached the excesses of the shrinking American cities with the center emptied, with uninhabited lots where previously residential neighborhoods were populated and a reversal of open and constructed spaces which look like the other paradoxical side of modernists dreams.

Nonetheless, even the European city must come to terms with a change that finds expression in that specific demobilization of fixed capital that takes the name of industrial divestment: a substantial change in the scenario that shuffles the cards, contradicts destinations and functions, changes the economic conditions and symbolic practices.

The dynamics of today's Detroit present themselves not only as a threat, but as an opportunity to reflect on the paradigms of growth and urban development, starting from a city that was the metaphor of the "American dream", and that in the arc of the last seventy years has gone through a complex process of urban dismantling. In Detroit, the legacy of an economic system that after having configured and permeated its organization, the logical space of the city withdraws to move elsewhere, finds a dramatic expression in the progressive de-industrialization of the city and the increasing dynamics of impoverishment, depopulation and abandonment that affect almost all the municipal territory. The aim of the thesis is therefore to tackle the search for new community-based dynamics, which rejects the individuality experimented up to now, for a new economic-working development of the city.

The thesis is divided into three main parts: the first part analyzes the process of de-industrialization of the cities of the Rust Belt and of how they present themselves today, focusing on the case study of Detroit. The second part proposes a new approach to rethink the urban manufacturing spread throughout the city supported by the catalyst, the element of urban regeneration project,

In the cover: 1998 Architecture Salvage Warehouse, Grand River Avenue, personal photo archive

located in the district of Corktown. The third and last part refers to the strategic evaluation of the three thesis projects located in the same area through a multicriteria analysis.

Lastly, a photographic survey was carried out that consists of a collection supported by a semiotic research that accompanies all the logical progression of the thesis.

FROM MOTOWN TO GHOSTOWN

FROM MOTOWN TO GHOSTOWN

THE RUST BELT ECONOMY

During the twentieth century, there has been an exponential growth of the whole country, but in an unequal way. If the Northeast and Midwest have doubled their population in the first part, the South and the West have experienced growth quadrupling the population in the second half of the century, shifting the demographic center of gravity significantly. So, what are the reasons for this shift? In aid of the thesis, geographer Edward Ullman elaborates a net division of the country defining a ¨core¨ the states of the North-East and Midwest (the states bordering the Great Lakes region) and the ¨fringe¨ of the South and the west of the United States; in the 40s, in fact, the United States concentrated in its core of 68% of production and employment for more than 90% of the value generated by the five hundred largest industrial companies of the country[1]. This supply of labor generated by the flourishing economy of the nucleus therefore created a massive migratory flow from the marginal states. The Core represented the status quo of the American dream, and not only for the work boom, but these states were able to guarantee higher salaries, prestigious universities a better quality of life, producing what they consumed. However, starting from the post-war period, the-

re is an inversion of the phenomenon in favor of the fringe states, which brought the core states of the Great Lakes region to a progressive decline, connoting them with the new term of ´Rust Belt´.

In fact, no region of the United States went worse in the post-war period than the heavy production region that borders the Great
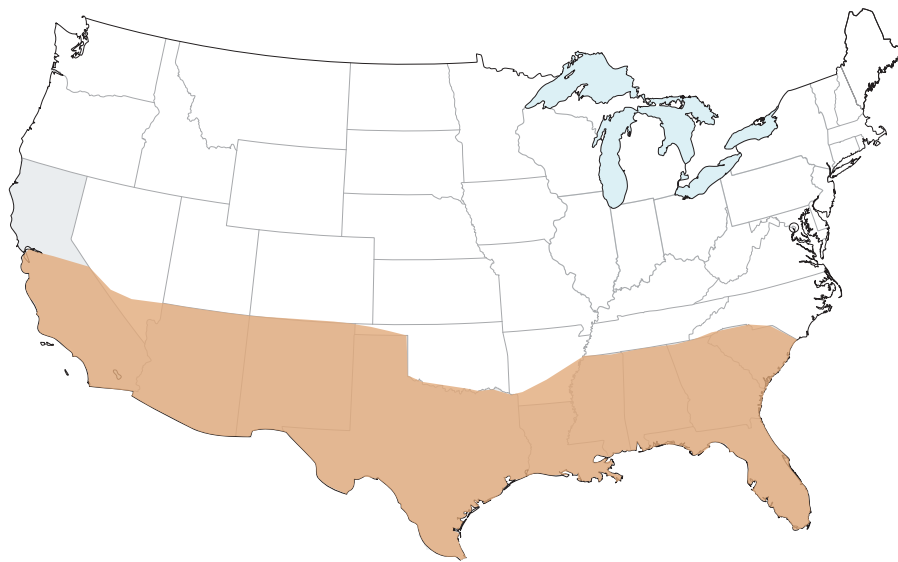
Lakes. This theory on the decline of the Rust Belt focuses on the lack of competitive pressure in labor markets and manufacturing production that once represented the main workforce[2]. Pratically, the lack of competition was a salient feature of the post-war economy of the region against the technological advancement and the arrival on the US markets of Japanese automotive companies. The need for diversification leads to the search of new markets: states such as California and Texas (and other Southern states) are seen as new settlements to be colonized, assisted by new highway networks and New Deal economic policies that promote development of certain areas of the country. For the first time, national politics turned its back on the states of the Rust Belt, ignoring the sad heritage of the following years. The Manifacturing Belt gave way to the new economy of the Sun Belt, due to its prevalence in the tertiary sector.

To fully understand the reasons for this shift, it is therefore necessary to analyze the characteristic aspects of the Rust Belt economy, identified in the states of Illinois, Indiana, Michigan, New York, Ohio, Pennsylvania, West Virginia and Wisconsin. In the analysis carried out in the Alder text, the main data of the study are the US censuses from 1950 to 2000, available through the series of microdata with integrated public use (IPUMS). The research focuses only on a sample of private sector workers who are not primarily self-employed.

2: Alder S., Lagakos D., Ohanian L., 2015, Competitive Pressure and the Decline of the Rust Belt, pp.2
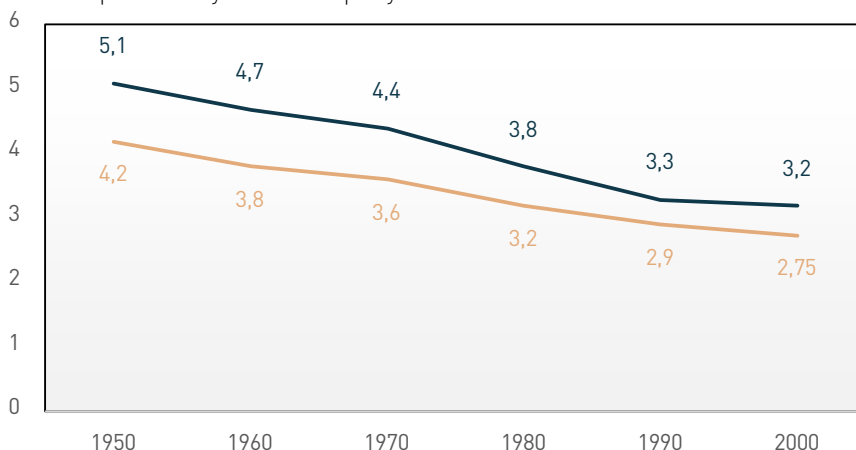
.Figure 1: Rust Belt employment Rate
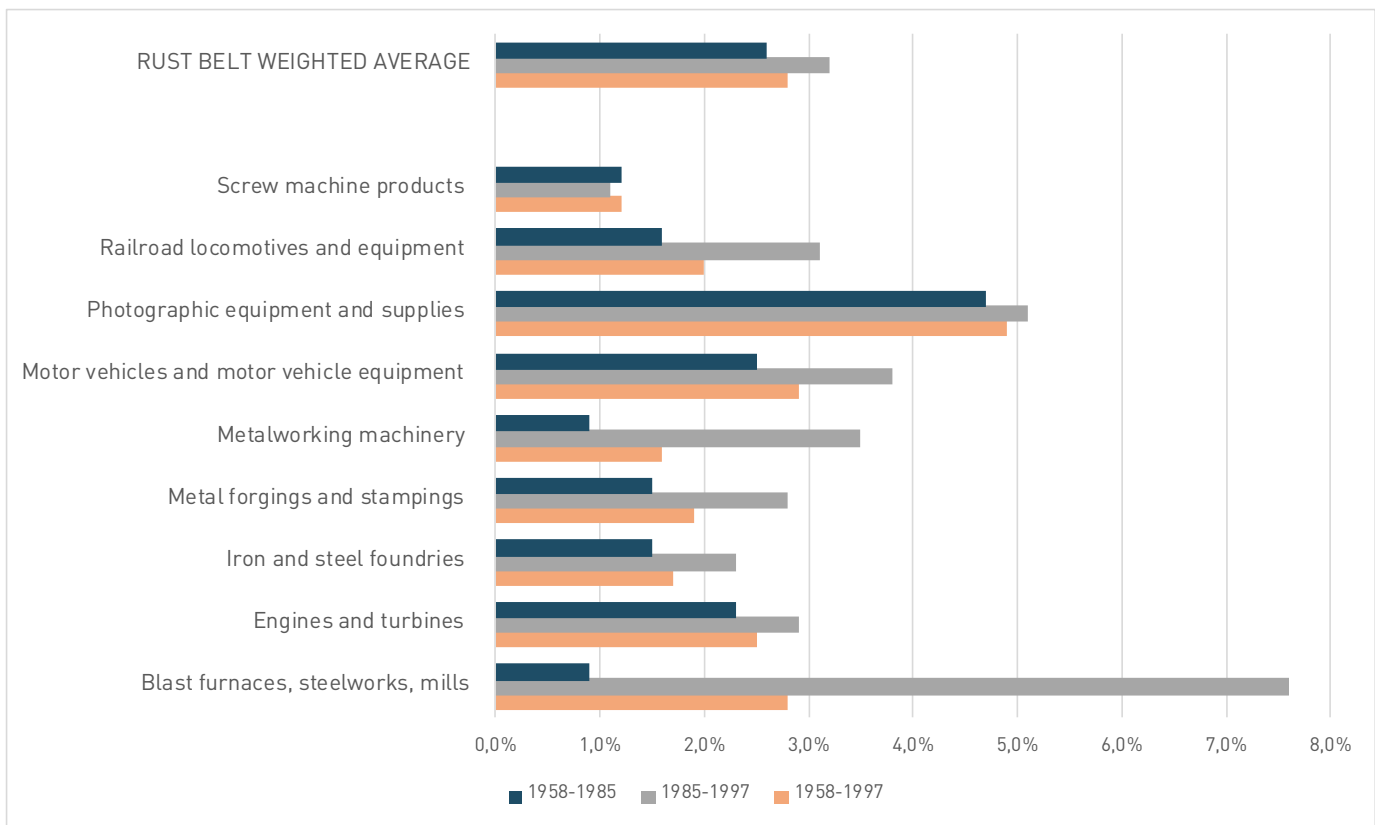
The first fact is that the Rust Belt's share of employment decreased secularly over the postwar period. Figure 1 shows the Rust Belt's share of employment from 1950 through 2000 by two main different metrics. The aggregate employment share of the Rust Belt began at 43 percent in 1950, and declined to 27 percent in 2000 (orange line). The manufacturing share of the Rust Belt (blue line) began at 51 percent in 1950 and declined to 34 percent in the 2000s. The fact that the Rust Belt's share of manufacturing employment dropped so much indicates that the research of the reason of the decline is not just imputable to a structural shift out of manufacturing. Of the seven states with the largest drops in their share of aggregate employment between 1950 and 2000, six are in the Rust Belt, also, no region in the U.S. declined as much as the Rust Belt. Of the seven states with the sharpest decline in manufacturing employment, five are in the Rust Belt. Finally, taken individually, every single Rust Belt state experienced a substantial fall in aggregate and manufacturing employment relative to the rest of the country.

The other question to study in order to better for understand the decline reasons, it's indentifiable with to a low productivity growth in the Rust Belt industries: on the next page, they were collected relating to the major production companies of the Rust Belt (blast furnaces/ steelworks/mills, engines and turbines, iron and steel foundries , metal forgings and stampings metalworking machinery, motor vehicles and motor vehicle equipment, photographic equipment and supplies, railroad locomotives/equipment and screw machine products). In this graph, the interesting factor is the weighted average growth between these industries (orange

line): in almost 40 years, it's possible to see an increment of just of 2,8% points, an unthinkable rate compared to scientific/technological progress of that period. These data can be related to a lack of competition in the Rust Belt: The most prominent Rust Belt industries were dominated by just a handful of firms in the decades after WWII. The three largest steel producers – U.S. Steel, Bethlehem Steel, and National Steel – accounted for nearly all U.S. market share after World War II and had at least half of domestic capacity through 1980 (Crandall, 1981; Tiffany, 1988).

The "Big Three" car companies – General Motors, Ford and Chrysler – accounted for 90 percent of automobile sales in the United States in 1958, and at least 75 percent until around 1980 (Klier, 2009). Rubber tire production was similarly concentrated by their own big four – Goodyear, Firestone, U.S. Rubber, and Goodrich – which controlled at least 90 percent of the market from 1950 to 1970. Also, the shift-out of the industries it was due to the fertile ground for the economical development of enterprises in the Sun belt area, guaranteed by a series of policies that promoted the shifting. Also, in the seventies, the fiscal pressure in the Rust Belt was significantly higher than in the South and the West, as well as the costs related to environmental legislation, high in the Northeast, almost absent in the Sun Belt. Industrial migration was therefore a phenomenon driven not only by what companies saved, but also by what they earned through these state policies and substantial contributions; the shifting from an urban to sub-urban space.

These aspects, if related all togheter, represent a serious lack of ability by the Rust Belt to re-invent itself as a new economy to support the abandonment of their cities.

.Figure 3: Rust Belt cities population comparison between Sun Belt cities trough the 1960-2008

CITIES	POPULATION (1960)	POPULATION (2008)	PERCENT GAIN/LOSS	LAND AREA ADDED
Chicago	3.550.404	2.853.114	-20%	NO
Detroit	1.670.144	912.062	-45%	NO
Cleveland	876.050	433.748	-50%	NO
Pittsburgh	604.332	310.037	-49%	NO
Buffalo	532.759	270.919	-49%	NO
Dallas	679.684	1.279.910	88%	YES
Houston	938.219	2.242.193	139%	YES
San Antonio	587.718	1.351.305	130%	YES
San Diego	573.224	1.279.329	123%	YES
Los Angeles	2.479.015	3.833.995	55%	YES

CONSTRUCTION-DECONSTRUCTION OF THE CITY

In the past Detroit placed itself as a refence point for the Rust Belt economy: geographically, the close position to the Canadian border and the Detroit River allowed an interchange city, able to create relations to the inner United States. For this main reason, Detroit became the natural development-land for a new economy; then, starting from the beginning of the twentieth century, Henry Ford founded the Ford Motor Company in 1903; after that, other automotive founders, like General Motors (1908) and Chrysler Automobilies (1925) chose the city, consecrating Detroit as a world automotive capital where it was possible to assist at the first Fordism industrial model in history.

This resulted in a population growth since the 1900 to 1950 from 285.700 to 1.8 million inhabitants, witnessing an expansion of the city, motivated by the working demand, even the boundaries of Detroit grew up (between 1900 and 1930, Detroit's total land area grew from 121 Km^2 to the actual size, 370 Km^2). This demand of expansion allowed the planners of Detroit to think a way of growth based on a Taylorism approach: 'city as machine' when the Fordism philosophy was a winning aspect in the city: a model that consumes the products of its work, and at the same time creates a surplus of requests, ensuring a nomadic model, operational, and continually repeated.

Soon, this strong expansion led to relocation of factories outside the city served by a new freeway network, the factory moves away from the city. Adjacent to the new production poles, new workers' settlements are created, thus presenting one of the very first cases of de-localization, emptying the city.

Jane Jacobs explains: "Virtually all of Detroit is as weak on vitality and diversity as Bronx. It is ring superimposed upon ring of failed grey belts. Even Detroit's downtown itself cannot produce a respectable amount of diversity. It is dispireited and dull, and almost deserted by seven o'clock of an evening[3]". She Complaint about the homogeneity of the city where the life doesn't exist. With the crisis of the Rust belt economy, in the period after the Second World War a new season was inaugurated for the city: the season of post-modernism manifests itself by emerging from the dialogue of architecture and urban planning, also reflecting on the social aspects of the population. The rigor and homogeneity promoted by the Fordist system in previous decades are rejected, the aftermath derived from the prominent war economy and the diversification of the automotive economy (by the rapid growth of the Japaneses car firms) were reflected to the city by

3: Jacobs J., 1969 , Life and death of american cities, pp.150

an ever-increasing closure of small factories in the sector and the displacement of the largest outside the city. A new pheno-menon of de-construction of Detroit was observed, leading to a high unemployment rate in the automotive industry that was also reflected in the support sectors.

**SUBURBS AND EXCLUSION STRATEGIES**

Even before the population migrated to the Sun Belt, the inhabi-tants of the Rust cities had already started moving to suburban areas. The suburb takes away that part of the white population that wanted to escape from neighborhoods dominated more and more by the African-Americans; the distancing and the will to live in a new socially and racially homogeneous environment will therefore be the fundamental keys to this migration outsi-de the borders of Detroit. The new motorway network, promoted by the funds allocated by the ¨National Interstate Highway and Defense Act¨ in 1956 definitively separates what was conside-red the workplace from the residence: the working class, com-posed mainly of the Afro-American population remains trapped in the inner city as impossible to transfer. In thus observing the reasons for this clear separation, it is right to analyze the rea-sons. In the economic boom years of the auto industry, Detroit suffered a massive wave of migration from the southern United States. So the African Americans had settled in the eastern part of the city, and then moved to the east of Downtown, where the white owners rented at very high prices for these people, thus creating a ghetto. The situation in the city was tense, because all the law and integration were denied to African Americans. This process of ¨racial invasion and succession, largely deter-mined by the discriminatory practices of African-Americans and by the racist instincts of most of the white majority, has caused the African-American component to pass from 16% to 81% in a few decades. This condition was also exacerbated by American segregation in the post-war period: in the meantime, blacks in the city increased from 4% in 1920 to 28% in 1960 (from a number of 40,800 to 482,000 people, data obtained from US census), thus bringing the black population out of their neighborhoods.It is one of the first cases to observe the blockbusting process: white re-sidents were encouraged to sell quickly (at a loss) and emigrate to generally more racially homogeneous suburbs tactics inclu-ded: hiring black women to push baby carriages into white nei-ghborhoods, thus encouraging white fear of depreciated property

to hire young blacks to stage street fights in front of white-owner houses to generate feelings of a dangerous atmosphere, to sell a home to a black family in a bourgeois white neighborhood to provoke white flight, before the community's properties diminish considerably by selling homes white houses in the neighborhood, and then place the real estate agent's business cards in the neighbors' mailboxes and saturate the neighborhood area with flyers that quickly offer money to developers of houses that buy houses and residential buildings, and leave them free to make the abandoned district appear - like a ghetto or a shanty town.
Such practices can be described as a psychological manipulation that usually frightened the white residents who remained in the sale of their property. This element is linked to the redlining strategy: which involved the removal of the necessary services (supermarkets, banks, insurance companies, schools, etc.). Simple actions such as purchases become difficult for low-income families, leaving within the inner city, small grocery stores and fast food restaurants that promote a low quality diet. Each of these aspects, linked to an incremental unemployment rate, is the result of a massive abandonment by whites outside the city limits. On the next page, you can see the ethnic percentage of black people in the city and in the suburbs. With this massive phenomenon of abandonment, the great American city begins to dissolve.

.Policemen arrest black suspects in a Detroit street on July 25, 1967 during riots that erupted in Detroit following a police operation. Photo credit: Getty Images.

MUNICIPALITY	TOTAL POPULATION (n.er)	MEDIAN FAMILY INCOME ($)	WHITE (%)	NON WHITE (%)
Detroit	1.203.339	17.033	34,40	65,60
Warren	161.134	26.535	98,20	1,80
Sterling Heights	108.999	29.662	97,40	2,60
Livonia	104.814	31.673	98,50	1,50
Dearborn	90.660	26.935	98,40	1,60
Dearborn	84.603	25.216	95,80	4,20
Taylor	77.568	23.932	96,20	3,80
Pontiac	76.715	18.630	57,80	42,20
St. Clair Shores	76.210	26.817	98,80	1,20
Southfield	75.568	31.603	88,30	11,70
Royal Oak	70.893	26.421	98,60	1,40
Dearborn Heights	67.706	27.639	98,20	1,80
Troy	67.102	34.192	94,50	5,50
Roseville	54.311	23.173	97,60	2,40
Lincoln Park	45.105	27.171	98,00	2,00
East Detroit	38.280	23.843	99,10	0,90
Garden City	35.640	26.895	99,00	1,00
Madison Heights	35.375	24.650	96,90	3,10
Inkster	35.190	20.170	42,00	58,00
Allen Park	34.196	29.411	98,10	1,90
Wyandotte	34.006	23.042	98,90	1,10
Port Huron	33.981	18.618	91,10	8,90
Southgate	32.058	27.299	97,50	2,50
Oak Park	31.537	24.447	85,70	14,30
Highland Park	27.909	13.180	14,20	85,80
Ferndale	26.227	19.919	97,90	2,10
Trenton	22.762	30.148	99,00	1,00
Novi	22.525	30.169	97,80	2,20
Birmingham	21.689	33.968	98,60	1,40
Hamtramck	21.300	16.462	82,20	17,80
Wayne	21.159	23.913	93,40	6,60
Hazel Park	20.914	19.495	98,00	2,00
Grosse Pointe Woods	18.886	35.673	98,90	1,10
Mount Clemens	18.806	21.354	80,00	20,00

RE-THINKING Detroit, a new economic approach
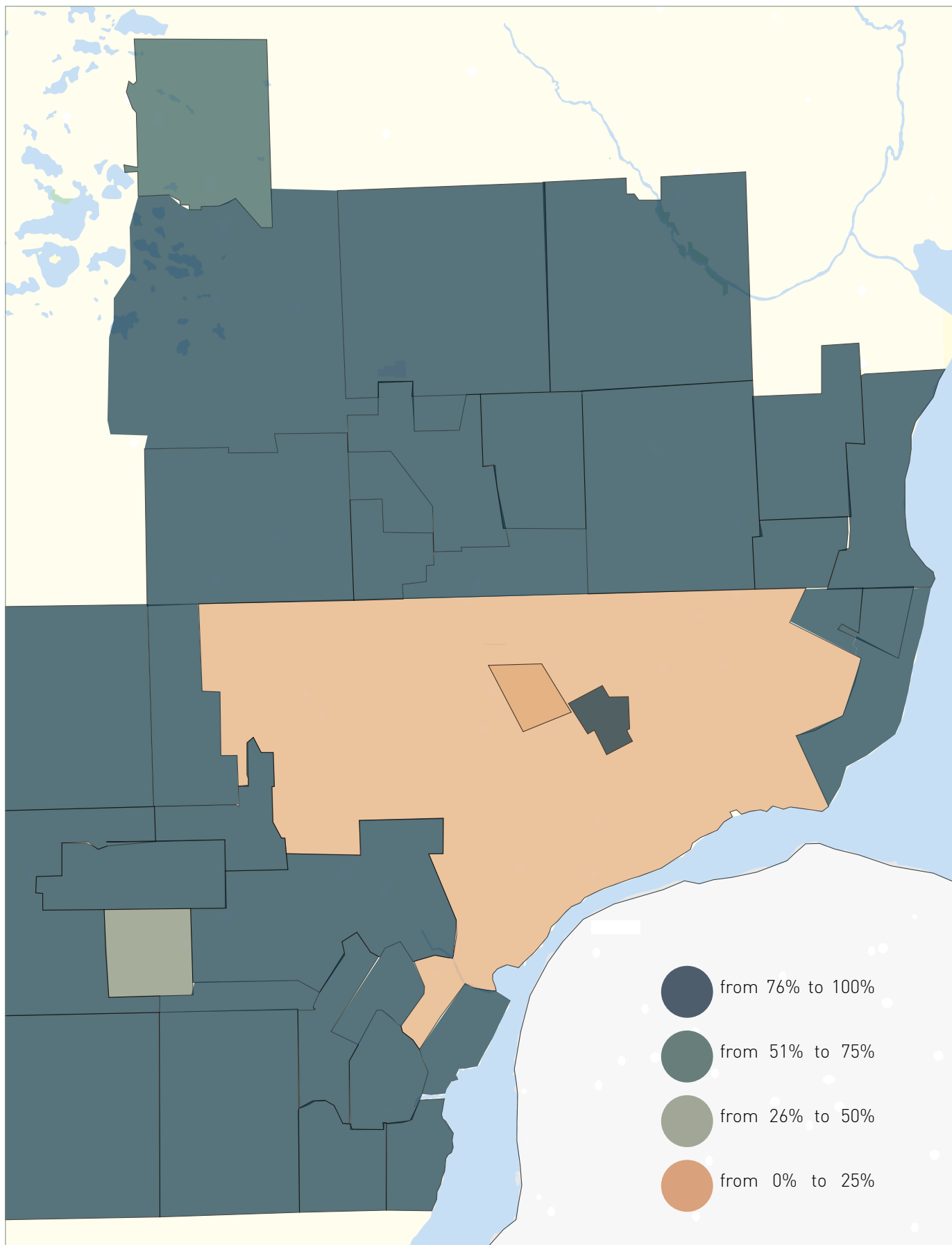
.Figure 5-6: Percentage of white people
inside Detroit and suburbs (data obtained
by Statistical Atlas, Detroit Area). In the
previous page, class and race inequality in
Detroit Area in 1980 (data obtained from US
Bureau of Census)

THE SHRINKING CITY AND THE VACANT LOTS

In the United States, shrinkage is not just a Rust Belt phenomenon. New Orleans lost about half its population after Hurricane Katrina(Gallagher, 2010). Even in Europe it was possible to see the effects of shrinkage, from the collapse of Roman Empire to the post-war Germany: however, the main difference between the continents, Europe has learned to metabolize the ripercussion of the shrinkage, by taking it as a normal part of the citiy's life cycle. But, what it means shrinkage for a city? 'To shrink' means become smaller; the city's downsizing produces a waste land, places where the memory of the past dominates over the present, an indetermined terrain vague incapable of doing anything other than introducing violent transformations, changing estrangements into citizenship[4]. Also, it is not correct to think that these landscapes are a return to nature, on the contrary, the state of indeterminacy[5],

Then, the cities of the Rust belt undergoes an emptying of their urban core by the white population, with very important socio-economic consequences. The dissolution of the city increases the costs of managing the landscape: services such as water, electricity and public transport are subject to rapid wear and tear in the face of a disadvantageous per-capita incidence given the decrease in population (Coppola, 2012). The services to the citizens therefore decrease and worsen, the insurance on houses and cars increase according to the territorial rating, a system that takes into account the territorial risk for the definition of insurance premiums. The vacant and abandoned properties produce a gradually increasing depression in the value of the adjacent buildings: a phenomenon amplified considering that the ownership of the house at the time was considered as the backbone of the American society and economy, and Detroit arrives to hold the highest percentage of single-family homes in all US cities in the 1930s. Suburbanization and the policies implemented in the post-war period therefore lead the city to face a massive abandonment of its real estate capital.

Another unpopular phenomenon was the 'Devil's Night' during Halloween festivities. The night of harmless pranks was tranformed in massive arsons through the city: abandoned houses, cars, brush or rubbish were the favourite subjects. The phenomenon began in the first years of 80s for almost twenty years. at the time, it was reasonable to think that the Devils night were the outburst of an increasingly poor and desperate community. The

4: I. Solà-Morales, Terrain vague, 1996, pp.122

5: G.Daskalakis, C.Waldheim, J. Young, Stalking Detroit, 2001, pp. 84

.In the next page: 1990 Vacant lot survey realized by the City Planning Commission (credit: City Planning Commission)
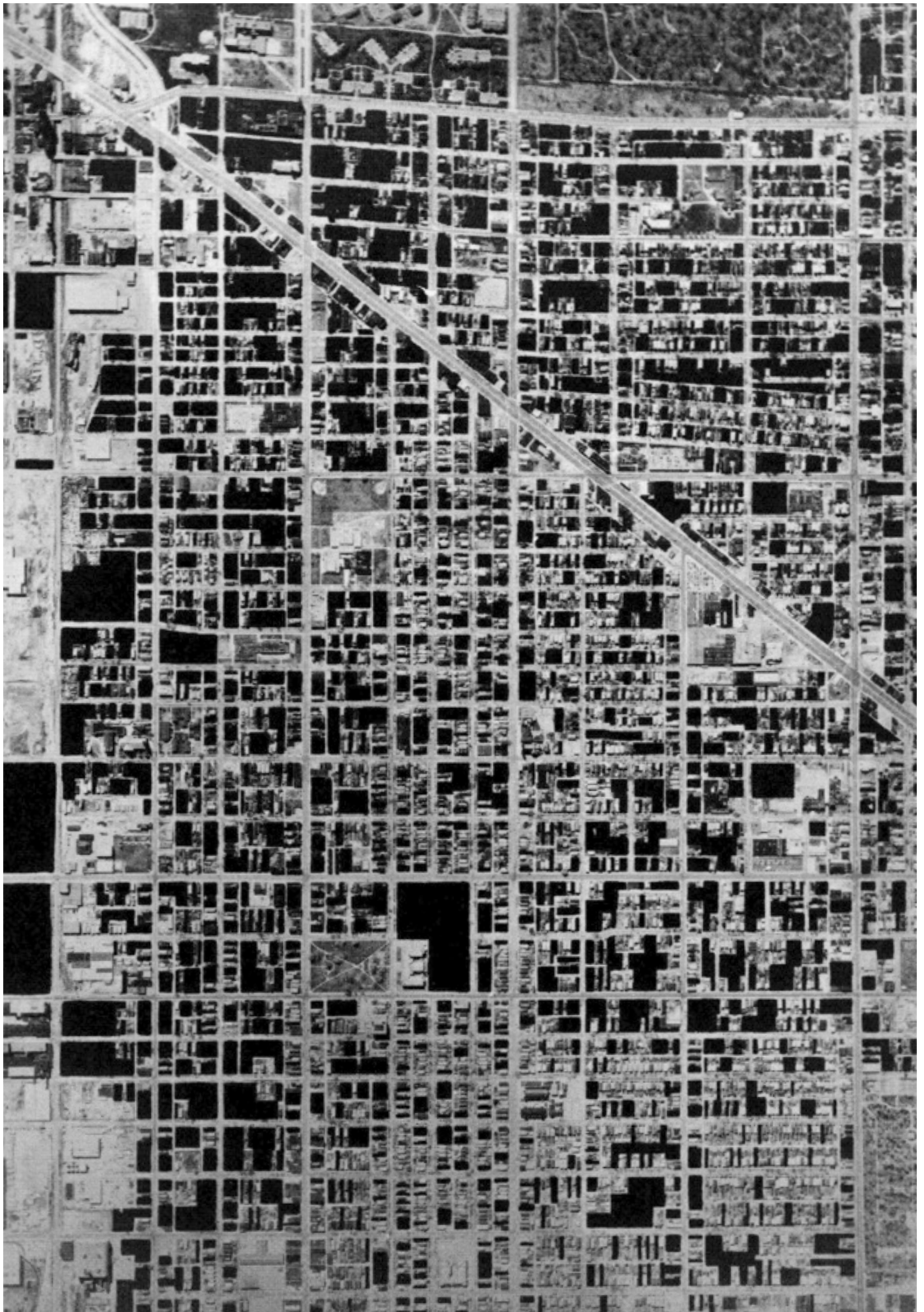
mayor of the past, Coleman Young wrote about "The high unemployment rate created feelings of desperation and depression among Detroiters[6]"; the gap between the inner city and suburbs exasperated the isolation sense and the malaise of the population. Hollywood had inflicted the negative Robocop image on Detroit in depicting random urban mayhem, but the local Detroit tradition of Devil night was a self-inflicted image disaster (W.J.V. Neil,1993), as a reflection of a real situation of the times. In 1985, the municipality start to appoint the Devil's Night Task Force: an anti-arson initiative created to prevent arsons, help and support the undersized firefighter departments. Other initiatives, like the Angel's night, promoted by the community with many volunteers (in 1995 estimated more than 25.000 people), have allowed a drastic reduction of the arsons. It's important to understand initiatives like the Angel's Night campaign, because during the years, had become a positive tradition in Detroit: it allows the population to invest in their communities and unifies the city trough a successful anti-arson campaign. Resuming, in the twenty-year period (1983-2003), city had lost more than 5000 buildings just in the 3-day Halloween period.

6: C.A.Young, L. Wheeler, Hard Stuff: the autobiography of Coleman Young, 1994, pp. 282

With a strong and fragmented scenario, in the 90s the term "unbuilding" was coined as result of a massive demolition campaign, replacing terms such as destruction or demolition, connoting the shrinkage of the city as a systematic operation to remove the past urban landscape. Indeed, between 1978 and 1998, 9000 building permits and 108,000 demolition permits were granted. The demolition industry is thriving to remove parts of the city, enough to make the City Planning Commission of Detroit City necessary in an unprecedented investigation: it is the first time that a survey of the city's gaps is made through lots no longer built. The Planning Commission then realize was its unsentimental and surprinsigly clear-sighted aknowledgement of a process of post-industrial de-densification that continues to this day in the cities produced by modern industry[7]. The demolition has not stabilized the market, on the contrary, has increased the amount of free land as other buildings continue to be abandoned. As a result, these cities are faced with vast inventories of surplus unused land and land for which there is no apparent demand on the market. Moreover, the demolition program was hurt by a seriously fragmented administrative structure, and the cost of demolishing vacant homes had doubled in ten years[8].

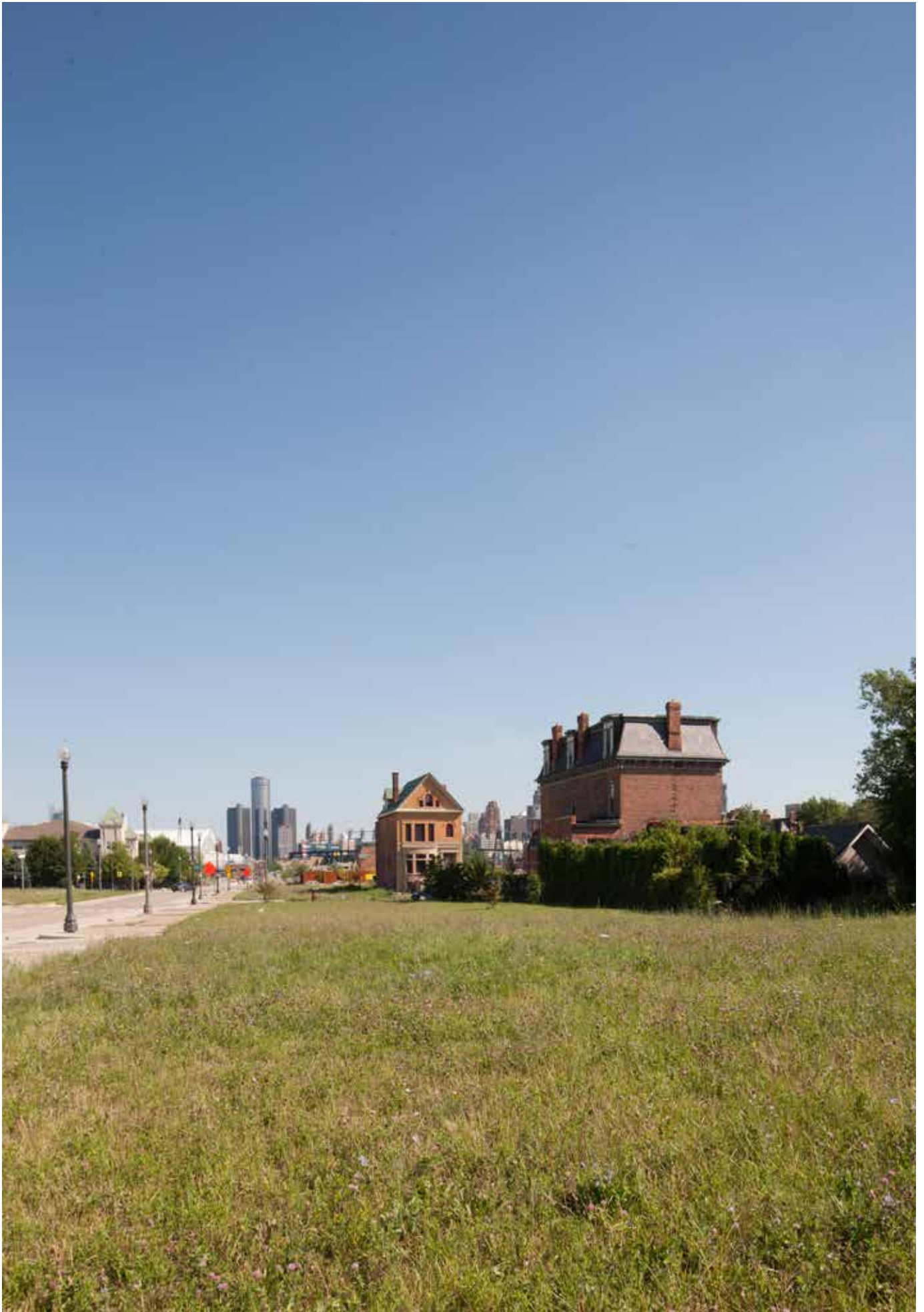7: G.Daskalakis, C.Waldheim, J. Young, Stalking Detroit, 2001, pp. 104

8: J. Gallagher, Reimagining Detroit, 2010, pp. 33

.In the next page: An abandoned house in a deconstruction process (personal photo archive)

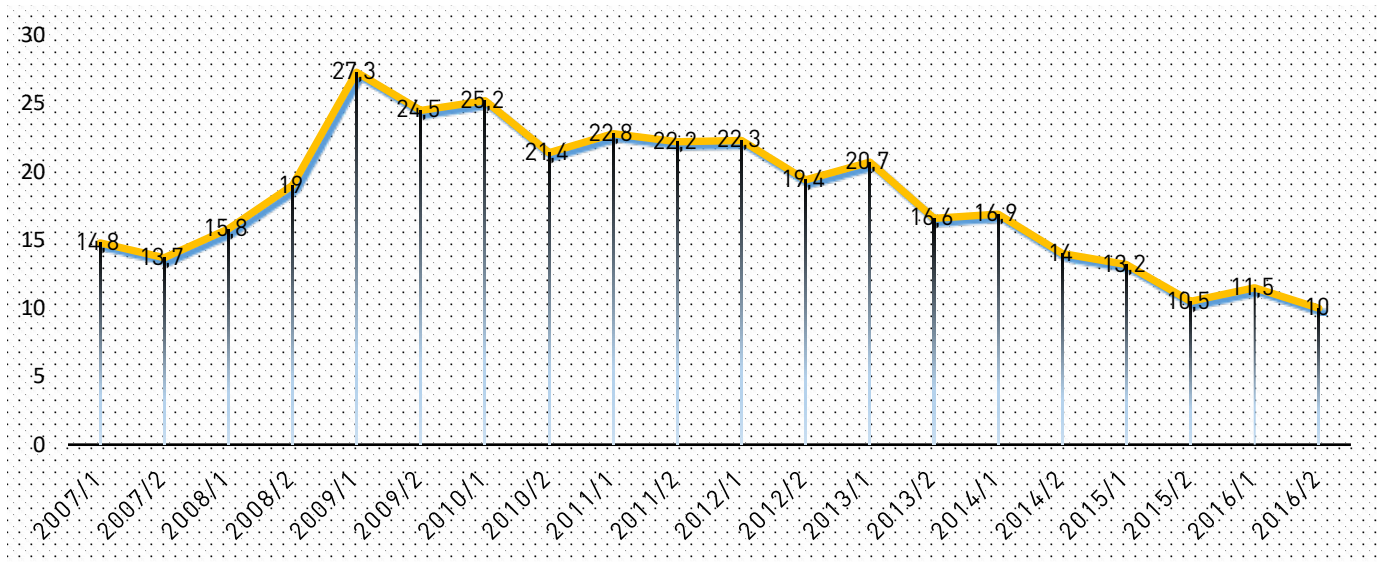While the Rust Belts cities kept shrinking, the Sun Belt economy
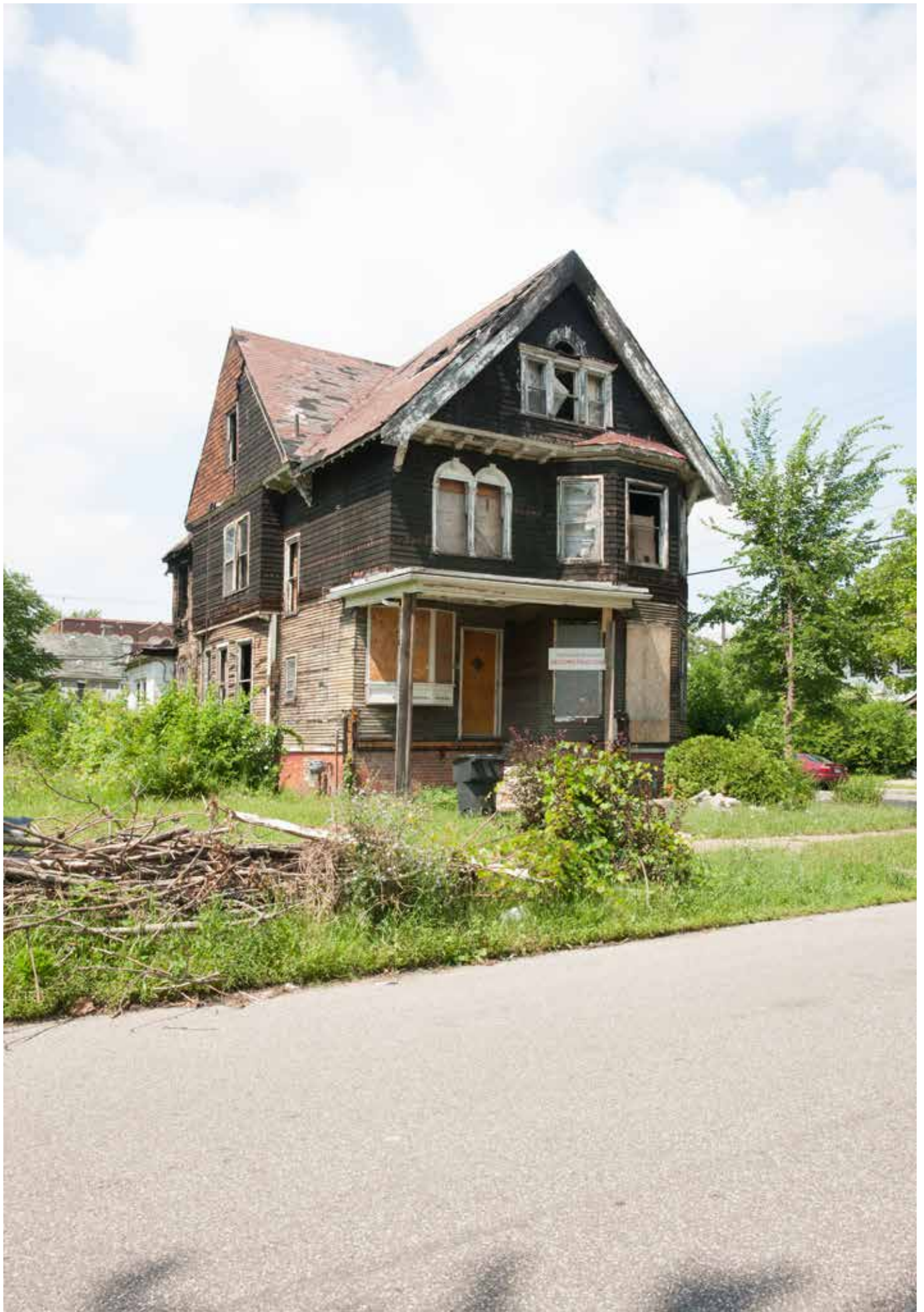
kept growing without impediments. The Sun Belt cities, due to their nature of strongly suburban connotation, continued to expand their real estate capital, denying the inner city. This phenomenon it manifested up to 2006 and it completely stopped in 2008 with the sub prime mortgage crisis. The collapse of the real estate market had worldwide repercussions, but if the real estate bubble thus abruptly brakes the development of the Sun Belt - which for the first time in history finds itself having to deal with a violent depopulation of its suburbs - in the Rust Belt unleashes a crisis in the crisis. House prices fell further. The transactions took place every day on Ebay, where it was possible to buy a single-family home for only a thousand dollars (Coppola, 2012). The crisis foreclosure created the increasingly increasing supply in a market already exhausted and with a demand perhaps unable to bear the costs due to the high unemployment rate of the city (which in 2009 - post-crisis year - recorded peaks around 30 % on the inhabitants of Detroit). the continuous depopulation of the city, further accentuated by the crisis, will therefore lead the municipality to declare bankruptcy in 2013 due to heavy debts and administrative inability.

In about sixty years it has been possible to witness a slow and inexorable decline of a city through a phenomenon of shrinkage so vast that in Europe it can only be compared to the immediate post-war period or the post-hurricane landscape of New Orleans. Then, what will be the future of Detroit? How the city can cope with shrinkage and live with it? Until now we have discussed about the demolition strategy, but as we have seen, this policy has led to several issues such as the total cancellation in certain areas of the real estate market and the negative impact that the properties / land vacant have on the houses still occupied: The demolition strategy has failed, leaving room for other alternatives. Let's imagine then three possible scenarios such as a conscious decrease, the do-nothing-policy and the promotion of a new urban development and growth. "If we cut the grass in abandoned lots once a year - D'Avignon continues - we had the money and the staff to do it twice before. Same story for street cleaning or for snow removal, which is less frequent. And in many areas of the city, instead of completely redoing the road surface, we limit ourselves more often than not to patches[9]», the unplanned shrinkage then costs a lot. The idea is therefore based on the realization that the city has more possibilities than in the past. A smaller population has smaller impacts, so the need for roads and services is reduced. The strategy then resides in

9: Coppola A., 2013 , Apocalypse Town, pp.60

Chart data points (Unemployment rate in Detroit, 2007-2016):
- 2007/1: 14.8
- 2007/2: 13.7
- 2008/1: 15.8
- 2008/2: 18
- 2009/1: 27.3
- 2009/2: 24.5
- 2010/1: 25.2
- 2010/2: 21.4
- 2011/1: 22.8
- 2011/2: 22.2
- 2012/1: 22.3
- 2012/2: 19.4
- 2013/1: 20.7
- 2013/2: 16.6
- 2014/1: 16.9
- 2014/2: 14
- 2015/1: 13.2
- 2015/2: 10.5
- 2016/1: 11.5
- 2016/2: 10

.Figure 7: Unemployment rate in Detroit during 2007-2016 decade. It's possible to see the high percentage rate immediately after the 2008 crisis.(Source: US Bureau of Lavor Statistics, Detroit Area Economic Summary 2017)

densifying neighborhoods and concentrate investments for re-qualification in these areas: for example an owner of an adjacent empty lot has the opportunity to buy it giving the opportunity to improve their living conditions (through the enlargement of the house, a larger garden, etc.). The land bank is a first tool towards smart shrinkage: a sort of state-owned company in charge of inventorying and managing the lots / properties acquired from the foreclosure, facilitating the acquisition through a single judicial act (Coppola, 2012).

The do-nothing-policy represents the cheapest strategy to be implemented: do nothing means an action as a function of time where deliberately do not promote services and assistance in areas of the city, leaving them in a continuous decline and the inhabitants aging will abandon (even behind the administrations' facilities to leave).However, the depopulation of these areas has repercussions in the adjacent neighborhoods, a phenomenon like wildfire that must be managed through very targeted choices by the administration.

The last one strategy is to promote a new development of deter-mined areas of the city: the strategic geographic targeting is a different approach compared to those implemented in previous years. The choice of the area falls on those parts where they have not been excessively affected by the disinvestment of real estate, strengthening them from new investment and development poli-cies by investors. Referred to Detroit city, it's possible to assume the Corktown as a virtuous example of that strategy. We there-fore tried to analyze the strategies that can be implemented in the future of shrinking cities, but returning to the main question: What will be the future of Detroit?
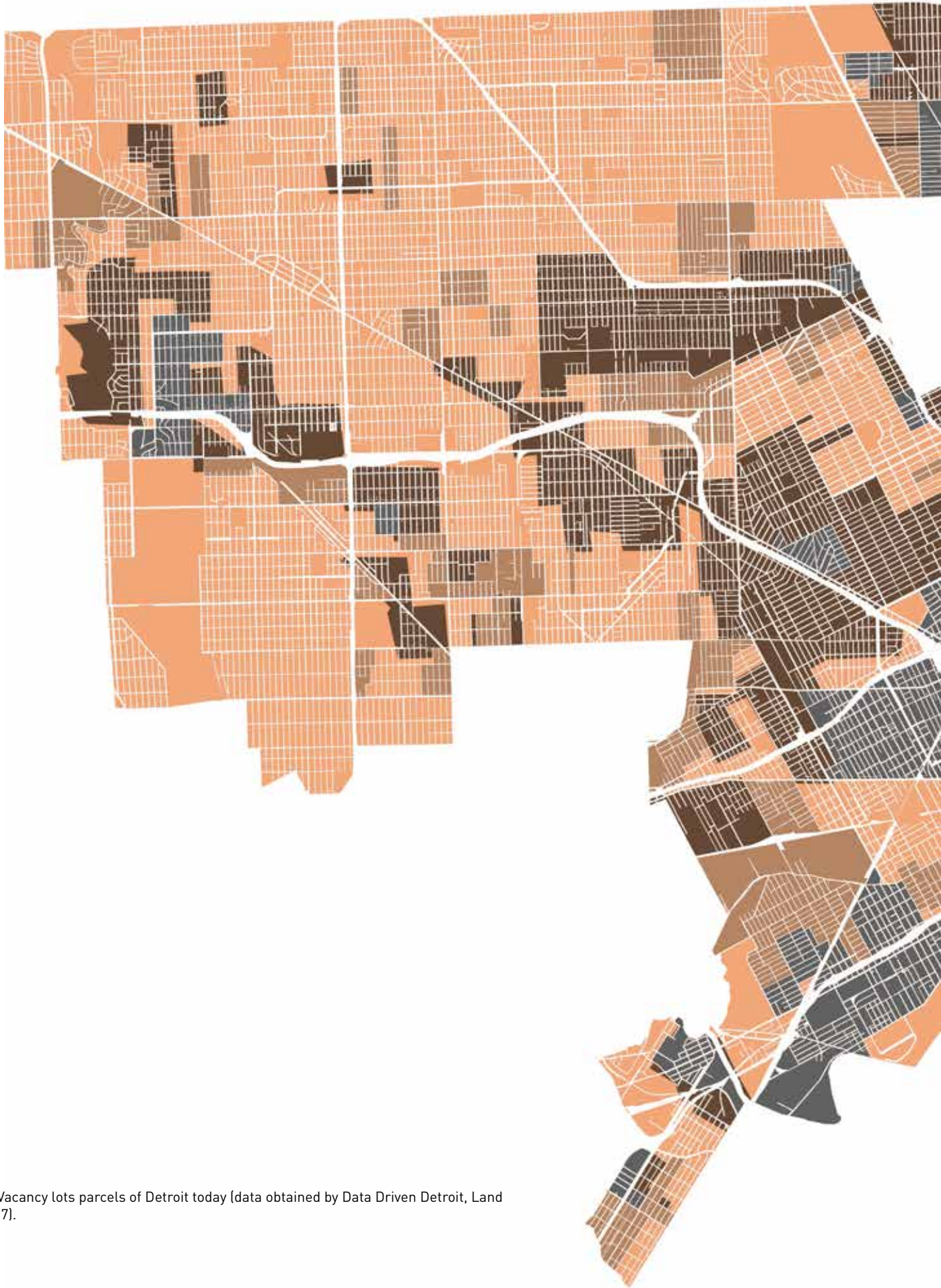
.Figure 8: Vacancy lots parcels of Detroit today (data obtained by Data Driven Detroit, Land survey 2017).
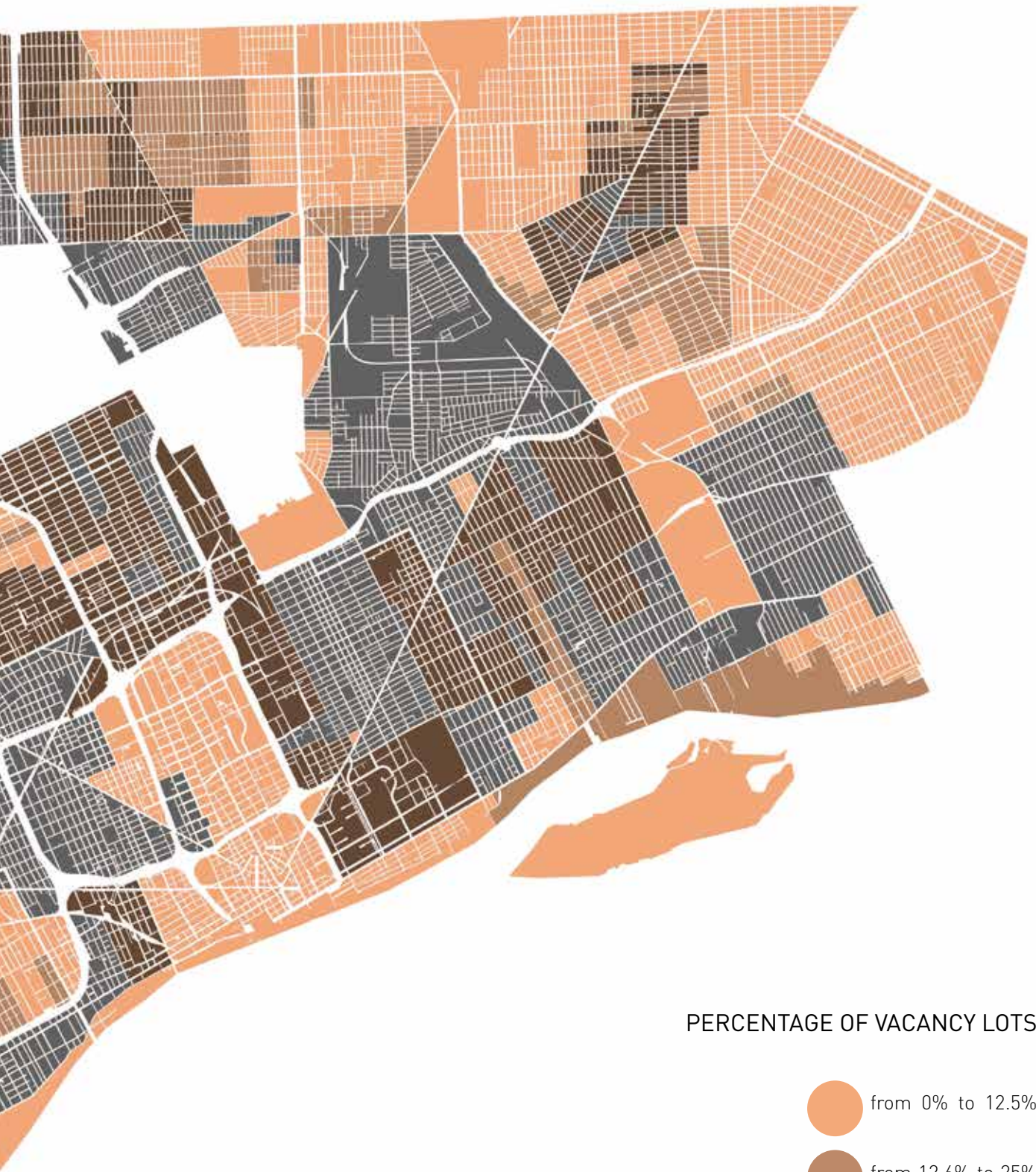
PERCENTAGE OF VACANCY LOTS

from 0% to 12.5%

from 12.6% to 25%

from 26% to 50%

from 51% to 100%

0   2.5   5   7.5   10 km
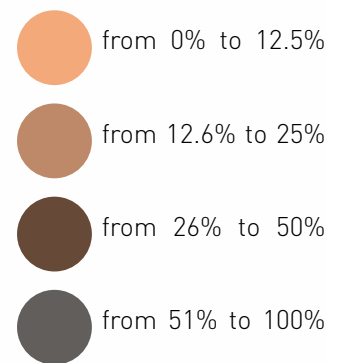
DETROIT TODAY - A SMALL BUSINESS CITY

A NEW LIFE FOR THE CITY

As already described in the previous chapter, the Rust Belt cities were unable to re-invent theirselves as a new form of economy to support the abandonment of their cities. Detroit, then, needs to change it's strategy to promote a new and different kind of economic growth. Detroit still today presents itself to the eyes of visitors as a non-urban landscape: a new landscape where the vegetation has covered the burned houses and the local fauna (from squirrels to pheasants) cross roads more and more degraded and deprived of their purpose. This scenario is present throughout the city, from the downtown to the border of the 8 mile road, the 'prairie' takes the place of empty lots, making Detroit a unique scenario impervious to normal planning approaches. It is therefore possible to think of the inner city of the future as a rural landscape where agriculture is used to manage shrinkage: where the do-nothing policy is replaced by actions with a low environmental impact. Garden communities (initiative of residents to redevelop certain areas of the city through the cultivation of small individual urban gardens) have become an answer to counteract shrinkage and food deserts, a widespread phenomenon in all the United States: in fact, real hunger is a rare phenomenon in the United States[10]. The inner city eats badly, the supermarkets have moved away to the suburbs: turning around the city, you can see how deficient the offer of these services as opposed to liquor shops and low quality fast food chains. The distance from the supermarkets and the lack of transport services in the city makes the population fall in favor of their food choices in favor of junk food. Community gardens are the side effect of eating badly in the inner city: in addition to producing fresh food for the population, the gardens also serve as social aggregators by tightening the relationships between people and developing a new sense of civic. It is very common that the materials used to furnish the gardens are recycled: bathtubs to raise plants and flowers, bed nets as entry gates, car tires to raise barriers[11]. Even from the past it's possibile to observe community initiati-

10: Coppola A., 2013 , Apocalypse Town, pp.127

11: Coppola A., 2013 , Apocalypse Town, pp.145

ves like Greening Detroit, a non-profit organizazion that has been planting and rescuing vacant lots in the city since the '70s, planting thousands of trees every year and educating people to take care of the regenerated land. How can this help, anyway, to increase the 'urban forest' in a landscape so strongly wild? The smart shrinkage of the city can be thought as a new return to the wilderness, where just a few parts of the city have kept it, decreasing management costs and focusing investments on upgrading the infrastructure of surviving neighborhoods, a city can shrink and grow at the same time.

In 2009, the Dequindre Cut, a 3.2 Km recreational path has opened as a new pedestrian and bicycle greenway: historically, it was an old railway line that connected Detroit to Pontiac city in the north, a perfect example of adaptive re-use project with a small impact: indeed the morphology of the defunct railway allowed to realize a continous line from Eastern Market to the riverfront. Adaptive re-use philosophy has replaced terms like demolition with a more responsible term like de-construction, is the first time that in the Rust Belt no one no longer competes on the number of building units removed[12], recycling and reuse have become common terms that help hope for a post-urban destiny. Abandoned houses are 'dismantled' and the materials are reused. Companies such as the Architectural Salvage Warehouse of Detroit, a non-pro, which keeps environmental resources out of the waste stream, and to make decent, affordable housing materials available to low- and moderate-income families.

12: Coppola A., 2013 , Apocalypse Town, pp.97

.In the previous page: Architectural Salvage
Warehouse Detroit, interior
(personal photo archive)
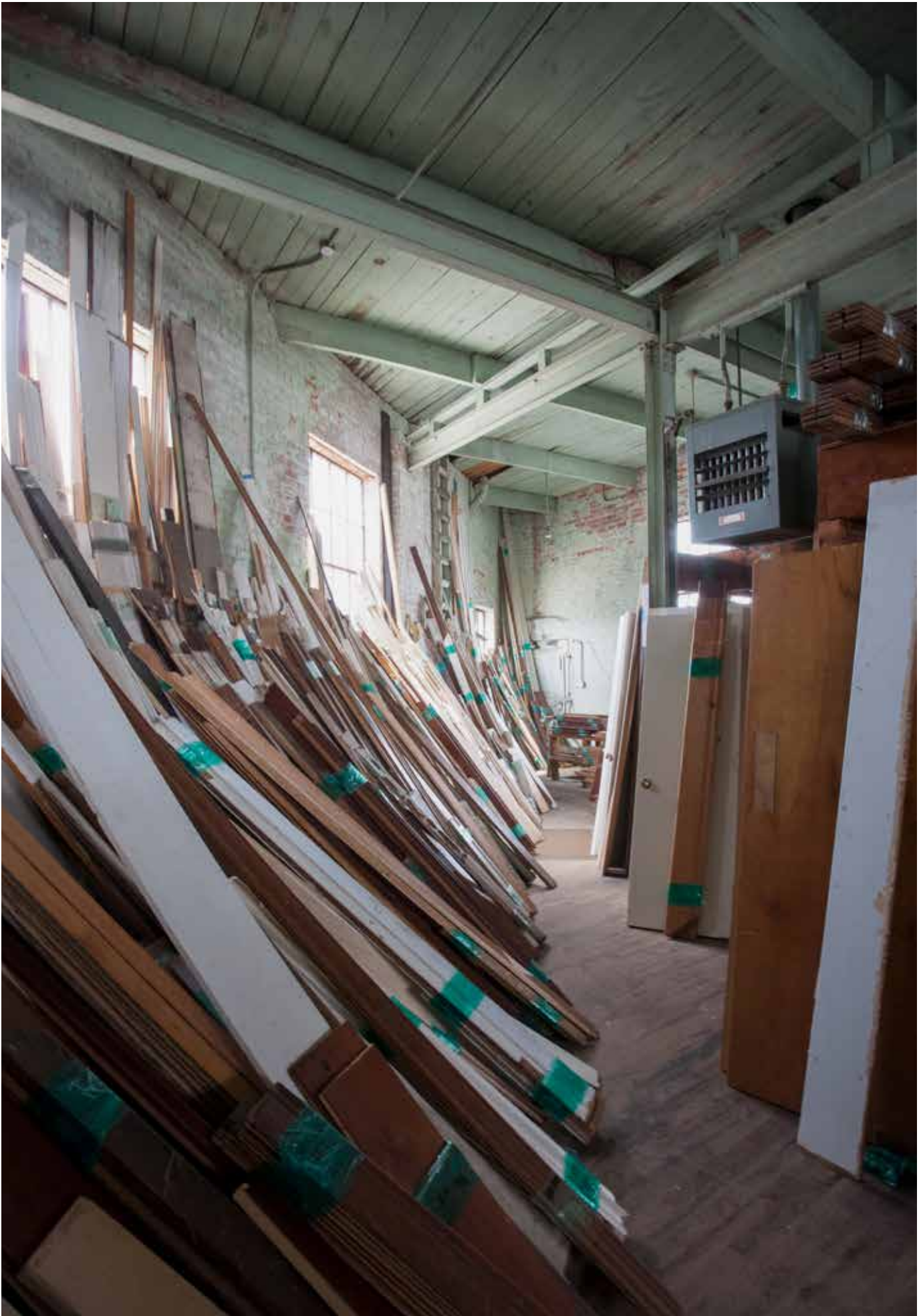
A COMMUNITY HOPE

Continuing the question: what will be the future of Detroit? Pro-bably a part of correct answer passes from the community. As already noted, examples of social cohesion have worked, from Angel's night during Halloween to the latest examples of urban farming. Detroit needs the communities' movement for growing up again, leaving aside the individualism promoted by the American dream of the last century. Today, Motown has learned this lesson: from decadent tourist destination for industrial archaeology (the ruin porn), to a new reference city for artists from all the world. People want their city back through their actions; guerrilla art installations, created by often-anonymous artists on vacant lots or abandoned factories. Even the Riverfront Conservancy in 2009 engaged local graffiti artists to paint the abuments that remained on the Dequindre Cut greenway (Gallagher, 2012). To fight back the frightening abandonment of Heildelberg Street, the artist Tyree Guyton created the famous outdoor installation called Heildelberg Project; inside the book of Dennis Alan Nawrocki 'the Art in Detroit Public Places, notes that the HP is even more remarkable given its grassroots origin versus the corporate foundation money that supports projects like Millenium Park and Citygarden[13]. The project, still today continues evolving with new installations, like colorful and textured adorned houses and trees. Buildings like the Russell Industrial Center are besieged by street artists who paint their degraded walls, art as a form of struggle against abandonment. The population wants to resume their city. During the administration of Mayor Duggan, a new initiative called Motorcity Makeover was launched, a community program with the goal to clean up the city one neighborhood at a time. Every year, during the weekends of May, thousands of business owners and volunteer students take care of the maintenance city areas (divided into 7 districts): during these days the grass is cut in vacancy lots, the streets and the garbage pavements are cleaned and broken windows, abandoned houses are put in security etc. There is a sense of collaboration on the part of citizens in these initiatives or others like the Detroit Soup. The Detroit SOUP is a microgranting dinner celebrating and supporting creative projects in Detroit. For a donation of $5 attendees receive soup, salad, bread and a vote and hear from four presentations ranging from art, urban agriculture, social justice, social entrepreneurs, education, technology and more. Each presenter has four minutes to share their idea and answer four questions from the audience. At the event, attendees eat, talk, share re-

13: J. Gallagher, Reimagining Detroit, 2010, pp. 108

.In the previous page: Lawnmowers during
Motorcity Makeover Day
(personal photo archive)
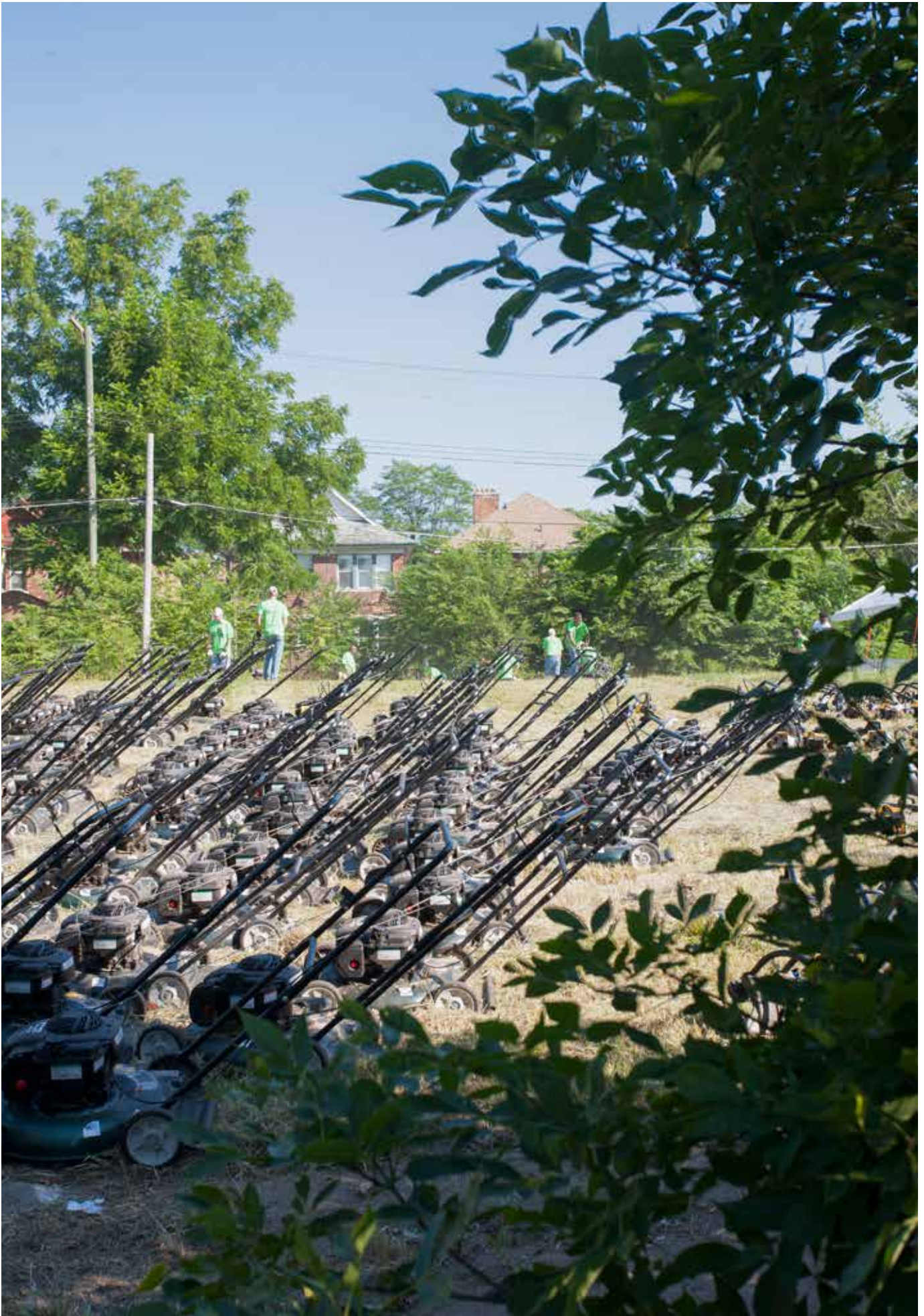
sources, enjoy art and vote on the project they think benefits the city the most. At the end of the night, ballots are counted and the winner goes home with all of the money raised to carry out their project. Winners come back to a future SOUP dinner to report their project's progress. The response of a new social growth of Motown goes through the community, how is it possible to promote new economic growth?

SMART MANUFACTURING AND THE SMALL BUSINESS CITY

The economy of the Rust Belt has failed, the old automotive industries can no longer take root in Motown. Detroit needs to diversify its economy through small businesses to promote new economic diversification within the city: Detroit is not too big, its economy is too small[14].

With the installation in the white house of Donald Trump in 2016, the new president was able to gather of those left behind by the demise of manufacturing and transform it in a efficient political weapon. Suddenly, the cities of the Rust Belt once again became one of the important themes of American national politics. Rust cities have become smart cities, the term 'rustbelt' is replaced by the 'brainbelt' neologism. Cities like Pittsburgh had a classic story of rapid growth in manufacturing, sudden decline into rustbelt status, and an amazing revival as a brainbelt. Pittsburgh had no choice but to look for a different future. Its hospital system and universities would become the biggest employers and magnets for a new generation of "smart" companies such as Google and Uber[15]. These new cities are based on the concept of sharing knowledge: with an increasingly open source technology and low costs, roads open up to new methods of production, new materials and new discoveries. Investors in the US such as NASA (National Aeronautics and Space Administration), DARPA (Defense Advanced Research Projects Agency) and the NIH (National Institutes of Health) focus on innovations driven by start-up companies. As we have already seen, the city of Youngstown in Ohio was one of the cities most affected by the decline of the Rust Belt; today it has subverted this trend: through the establishment of the National Additive Manufacturing Innovation Institute (NAMII) - an institution created during the Obama administration in 2013 - it offers the training of new professional figures specialized in 3D modeling-printing systems(Agtmael, 2016). 3D printing, then, has revolutionized the prototyping process: the production of objects has greatly accelerated by drastically reducing waste, paving the way for new design techniques; open-source electronics allows new approaches to robotic automation in a much more acces-

14: Detroit Future City, DFC Framework Plan 2012, pp. 72

15: A.Agtmael, A.Bakker, The Smartest Places on Earth, 2012, pp. 14

Industry	Small Firms	Total Firms	Small Firm % of Industry Employment
Health care & social assistance	274,01	583,243	47
Manufacturing	248,727	500,754	49,7
Accommodation & food services	215,83	344,293	62,7
Retail trade	181,45	442,346	41
Other services (except public admin.)	138,997	153,139	90,8
Professional, scientific, & tech. svcs.	133,722	237,934	56,2
Admin., supp., waste mgt., remed. svcs.	121,154	308,55	39,3
Wholesale trade	100,535	159,964	62,8
Construction	99,997	113,862	87,8
Finance & insurance	58,452	150,733	38,8
Transportation & warehousing	40,457	99,079	40,8
Arts, entertainment, & recreation	34,375	44,557	77,1
Real estate & rental & leasing	34,354	49,597	69,3
Educational services	33,21	72,295	45,9
Information	19,793	68,346	29
Management of comp. & enterprises	12,421	108,965	11,4
Forestry, etc. & agriculture support	3,192	3,364	94,9
Mining, quarrying, and oil & gas extraction	3,091	6,255	49,4
Utilities	1,974	D	D
Unclassified	D	D	D
Total	**1,755,901**	**3,468,089**	**50,6**

.Figure 9: Employment in Michigan by Industry and Firm Size, 2012. Source: Statistics of U.S. Businesses, U.S. Census Bureau, SUBS

sible way than the past, the internet of things has created new virtual relationships in which everything is interconnected and shared. All combined, all these technologies allow us to rethink the manufacturing sector in a completely radical form, elevating it to the new concept of 'smartfacturing' (Agtmael, 2016); new research laboratories, startups and new companies are the promoters of this new industrial philosophy that, with progress, not only survive, but become nodal points for large global companies.

Large legacy organizations make such acquisitions mainly be-

cause they can't match the innovative spirit of small research firms and rely on their acquisitions to do much of the innovative research, usually with better results and lower costs. Large organizations tend to be siloed, slow, and hierarchical, places where researchers get punished for being wrong rather than for being late.

From a study carried out by the U.S. small business administration, a data collection was made in the state of Michigan where small businesses created 73,858 net new jobs in 2012. The biggest gain was in the smallest firm size category of 1-4 employees. (Source: Business Dynamics Statistics, U.S. Census Bureau, BDS). 2013 The number of people who were primarily self-employed decreased by 1.1 percent related to the previous year. In 2010, 13,901 establishments opened in Michigan, and 66.7 percent survived through 2012. In 2013, 13,206 establishments opened, and 79.6 percent survived through 2014. In figure 9, it's possibile to see the three Michigan industries with the smallest business employment which were: health care and social assistance; manufacturing; accommodation and food services. Referring to the city of Detroit, therefore, it is interesting to analyze the aspects related to its manufacturing industry: Detroit offers a fertile soil, from manufacturing and technology to healthcare, the arts and more. The universities and a robust workforce training programs continue to grow and train workers.

The Detroit region today is a home for 4 million people, including 2 million workers. Of those, 347,000 are employed in industries related to advanced manufacturing, over 87,000 are employed in architecture and engineering, 97,000 are employed in creative and design industries, 18,000 are employed in higher education, 45,000 are employed in defense-related industries. 210,000 are employed in medical services, 50,000 are employed in information technology and 18,000 are employed in research and development. What can the city therefore need to evolve permanently into a smart city? The answer lies in promoting this type of smart / small business through new policies that incentivize the community to invest in new forms of activities; the innovation hubs become catalysts for all the new start-ups that share the knowledge of each other proposing a new form of economic growth.

.In the previous page: Ponyride seen from
Vermont St.
(personal photo archive)
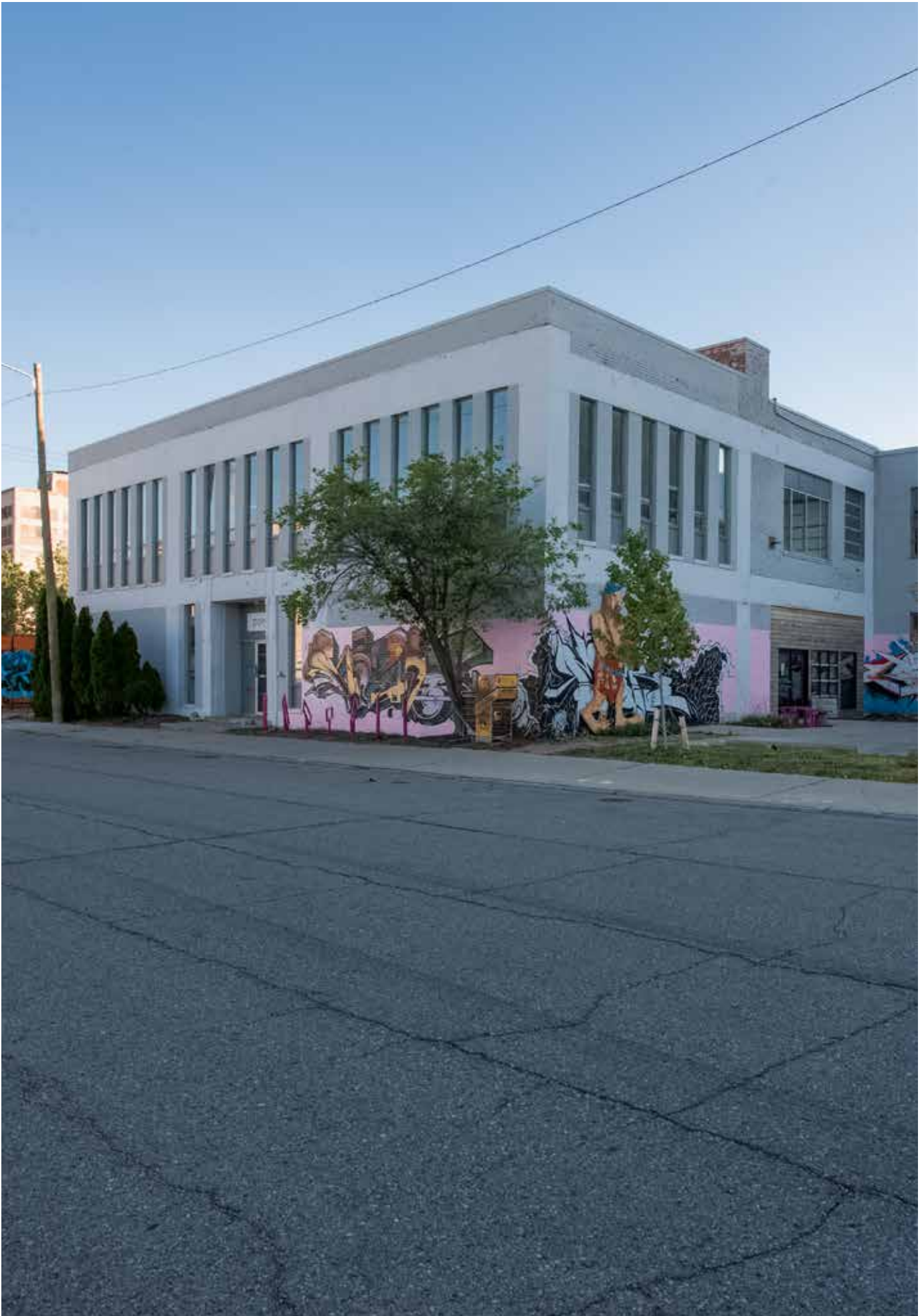
THE PONYRIDE EXPERIENCE

As anticipated in the previous paragraph, the role played by incubators in smart cities is essential for their growth. The growing demand for smart products of all kinds and the development of new techniques requires the knowledge that goes through the sharing of the brainpower. Detroit's manufacturing heritage is still strong, but it's wrong to talk about a return, but rather a re-invention.

The Ponyride incubator it's a perfect case study: a non-profit organization, located in a 2,800 m2 (30,000 sq. Ft) building in the Corktown district of Detroit. The building was purchased in 2011 during a judicial auction for $ 100,000 and the transformation began immediately. It was built in 1935 to house a typography for automotive graphics, the project is by Smith, Hinchman and Grylls, now Smith Group JJR. The interior spaces are divided into Co-Working space, Dance studio, Event Space, Woodshop and Resident Space. The Co-Working space is open to all tenants of the building, currently houses for 15 tenants who regularly pay the rent to use it, and have available an open space in which to work, two conference rooms, two for calls and all comforts needed. The dance studio hosts numerous dance groups, school classes and theater groups. The dance studio has a dual function, it can become for the occasion a photographic studio, and it is where most of the events take place. The event space is inside the loading and unloading area on the ground floor. The carpentry workshop is the throbbing heart of the building, and it is where the founder, Phillip Cooley, has the seat of his work, and where other small activities are based. This space supports many educational activities of Lawrence Tech University and Western International High school. The resident space is the rented manufacturing space at a price halved to allow the tenants to start their own businesses, this space gives priority to business and projects that do something to help the community. Inside it is also positioned a space for residences, that has been created to provide accommodation for Ponyride tenants who need it. These spaces are offered at economic prices to artists and entrepreneurs who use them to start their activities. The building was recovered with the work of the owners as of many volunteers in a year, they were used for the most of the material recovery work, taken from the rubble throughout the city.
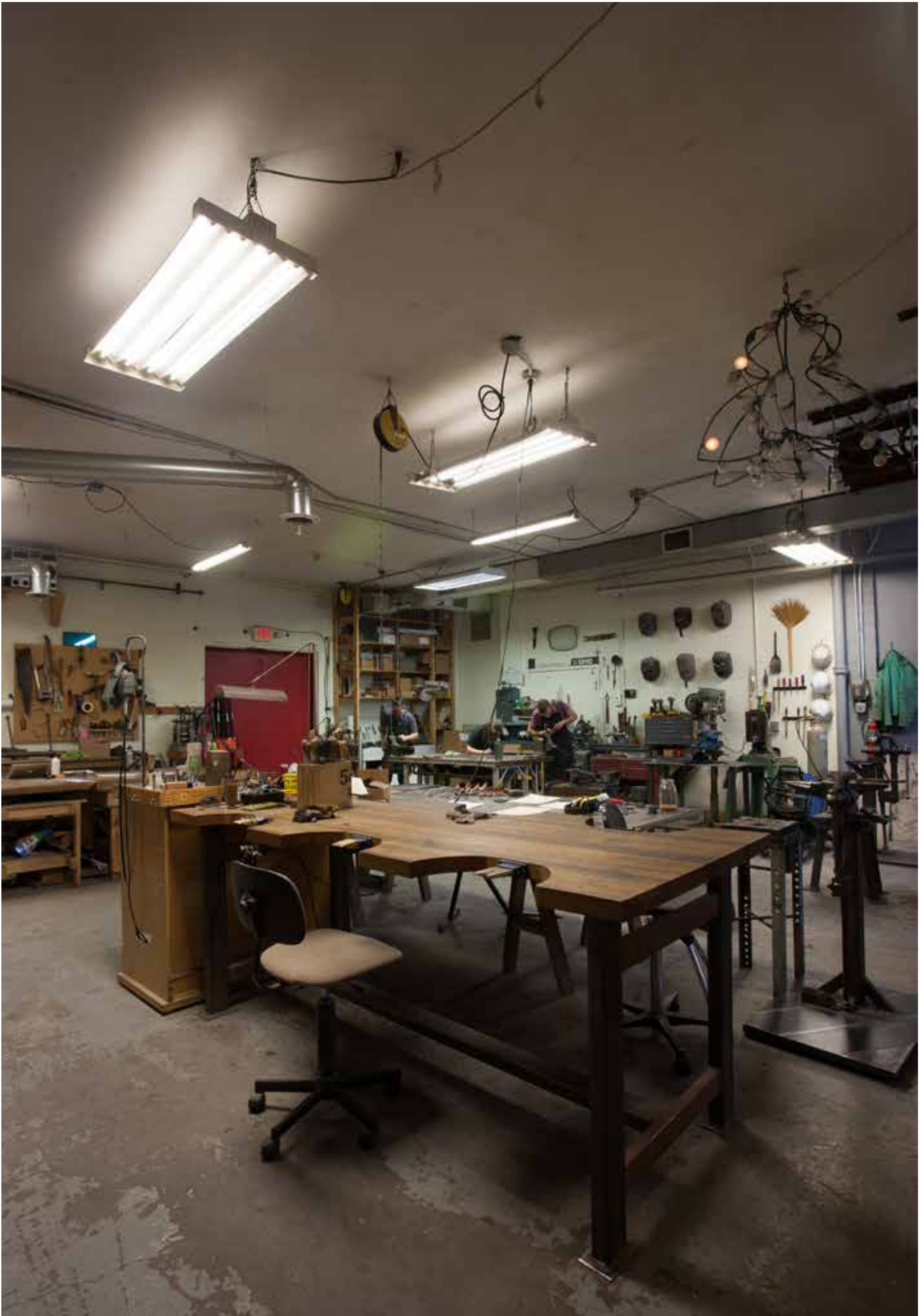
DETROIT FUTURE CITY

Detroit therefore, needs a new approach to rethink the city, Both
economically and on a planning level that have never been expe-
rienced before.
There is no longer a place for the great industries of the past, in
fact Deb Olson writes: Detroit has been the seat of the biggest
global corporations in the world for a long time, and we are ba-
sed on our economy on that [...] But they're in trouble, they're
growing elsewhere. So, what do you think of, do we do, in a gras-
sroots way, make a local economy here? [13]'

16: J. Gallagher, Reimagining Detroit,
2010, pp. 130

A local economy that is able to move a new development of the
city through its differentiation, a set of small business for new
growth supported by flexible municipality administrations and
also new flexible regulamentations about the zoning. To give a
new approach to the reconsideration of the city, in 2012 the De-
troit Future City (DFC) - a non-profit organization - publishes a
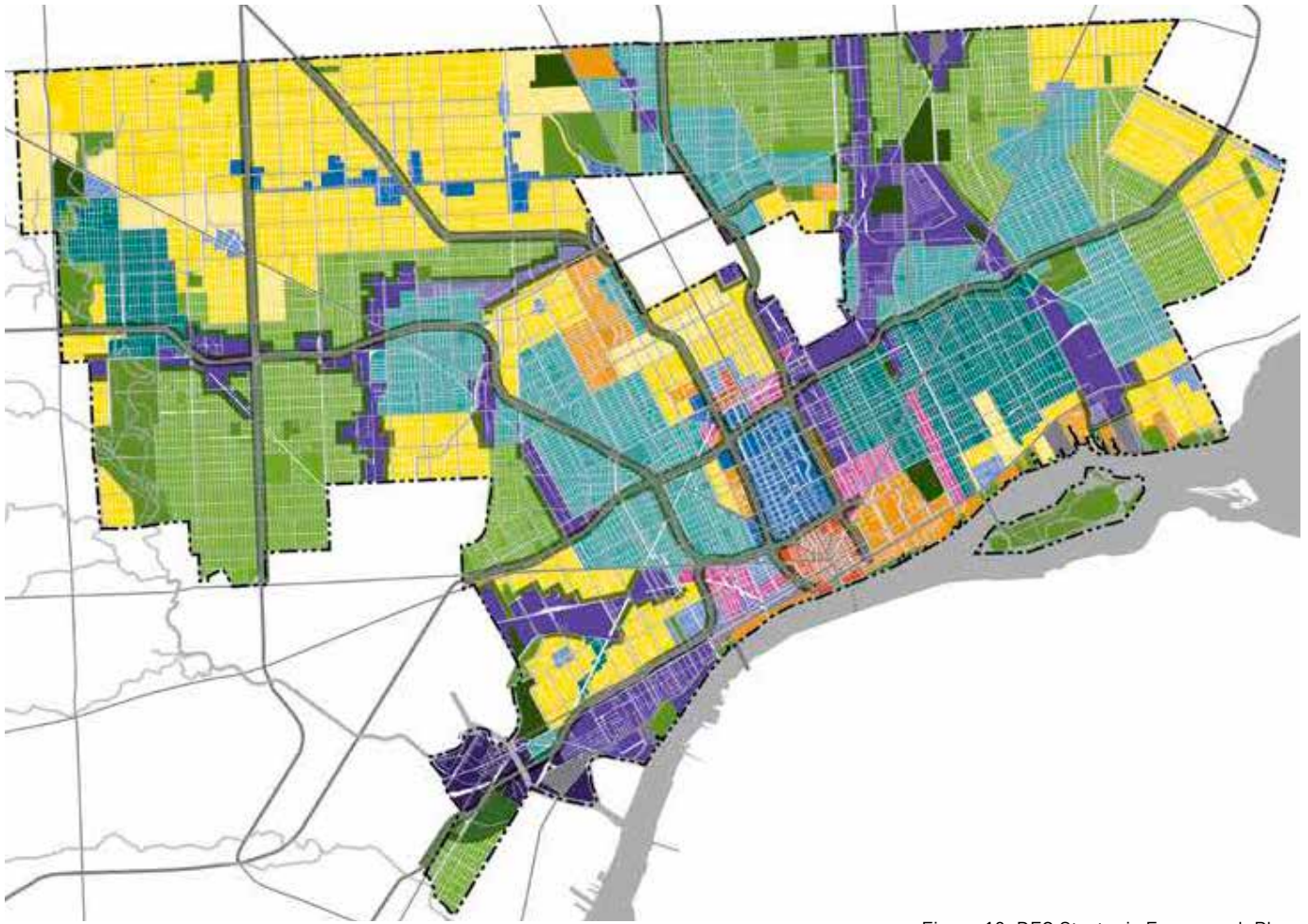50-years vision strategic framework plan.
The Framework Plan, then, defines a set of strategies through
new policies and actions designed for a sustainable and concrete
Detroit future, a shared vision that addresses the community and
all decision makers, entrepreneurs and stakeholders of the city.
the DFC is subdivided into 5 planning elements, each of which
highlights certain intervention proposals related to the strategy
Just as the Strategic Framework is intended to offer recommen-
dations and approaches that can adapt to changing realities in
Detroit, so also the 10-, 20-, and 50-year Horizons adopted for
the Framework are intended not as literal forecasts, but as aspi-
rational possibilities and an aid to imagining the city's changes
over time. These Horizons also offer four useful ways to look at
progress and change in Detroit: Stabilization, Improvement, Su-
stainability, and Transformation[17].

17: Detroit Future City, DFC
Exxecutive Summary
2012, pp. 17

The planning elements are divided in these main categories:

- THE LAND USE ELEMENT: offers land use strategies that are
  situated between the city's existing conditions and a range of
  preferred futures. The DetroitStrategic Framework organizes
  a wide variety ofpotential land use types within three levels of
  scale and purpose: Framework zones, Land use typologies
  and Development types.
- THE CITY SYSTEM ELEMENT: describes the imperative of
  moving towards a more affordable, efficient, and environ-
  mentally sustainable city through reforms to service delivery
  throughout the city, and through the transformation of the sy-

stems and networks that carry the city's water, waste, energy, and transportation.

- THE NEIGHBORHOOD ELEMENT proposes six specific strategies to create a diverse range of neighborhood styles and choices that will appeal to a wide variety of people, while strengthening all neighborhoods across the city

- THE LAND AND BUILDINGS ASSETS ELEMENT: transforms the vacant land of Detroit into a potential asset for the city's future, the Land and Building Assets Element calls for all the different public agencies that hold land to align their missions around a single, shared vision.

- THE ECONOMIC GROWTH ELEMENT: proposes five strategies to grow Detroit's economy in a way that is equitable for all Detroiters, supports Detroit's economic sectors, and can attract new residents and businesses: Support the four economic growth pillars(eds and meds, digital and creative jobs, industrial employment and local entrepreneurship), create new core investment and employment centers, encourage local entrepreneurship, improve education and skills development and transform the city's land into an economic asset.
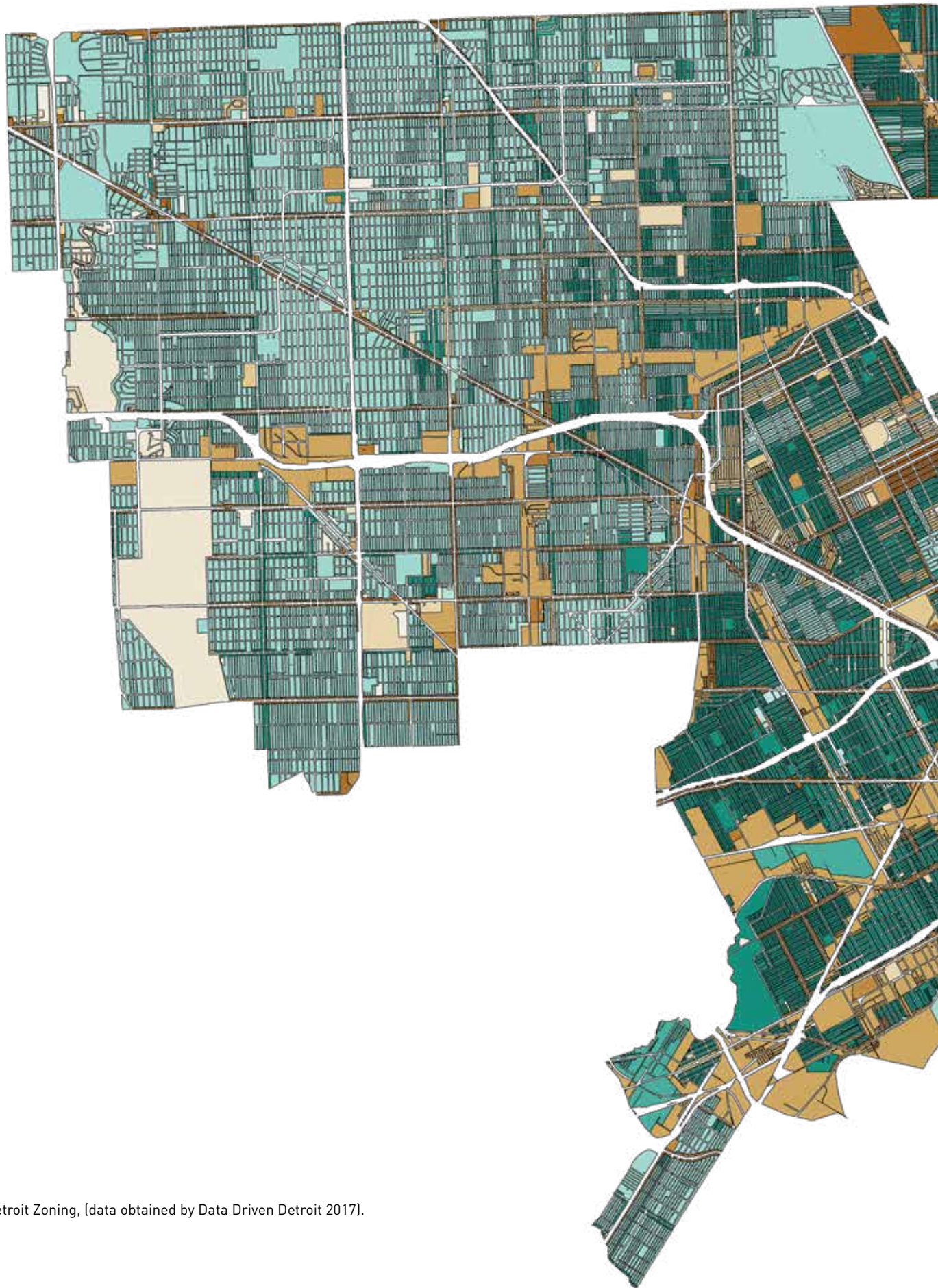
.Figure 11: Detroit Zoning, (data obtained by Data Driven Detroit 2017).
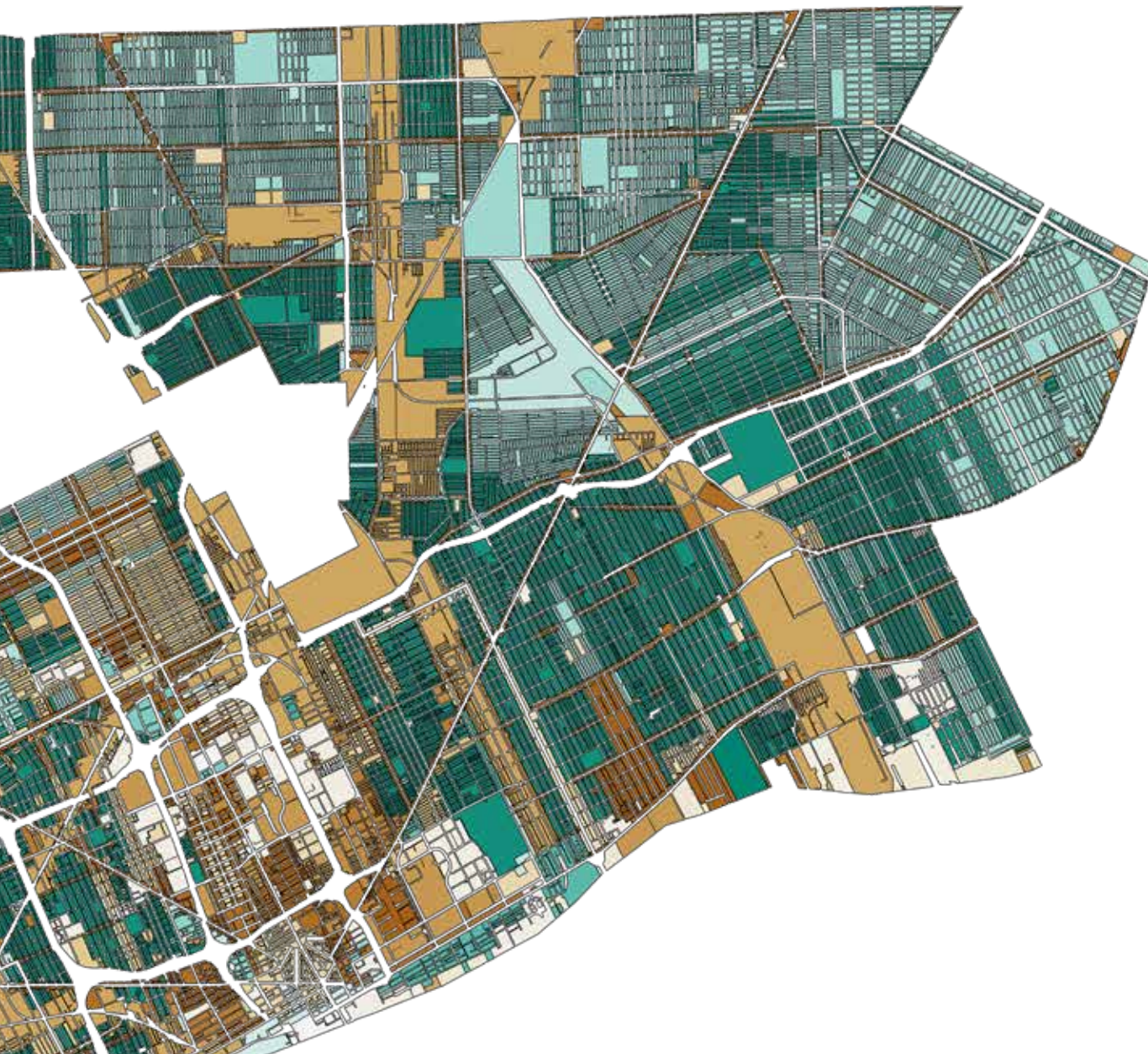
Legenda

Detroit_Zoning

- ▬
- General Business District
- General Industrial District
- General Services District
- High Density Residential District
- Intensive Industrial District
- Limited Industrial District
- Local Business and Residential District
- Low Density Residential District
- Major Business District
- Medium Density Residential District
- Open Parking District
- Parks and Recreation
- Planned Development District

- Public Center District
- Restricted Business District
- Restricted Central Business District
- Restricted Industrial District
- Shopping District
- Single-Family Residential District
- Special Development District, Casinos
- Special Development District, Commercial/Residential
- Special Development District, Residential/Commercial
- Special Development District, Riverfront Mixed Use
- Special Industrial District
- Thoroughfare Residential District
- Transitional-Industrial District
- Two-Family Residential District
- Waterfront-Industrial District

CORKTOWN ATLAS
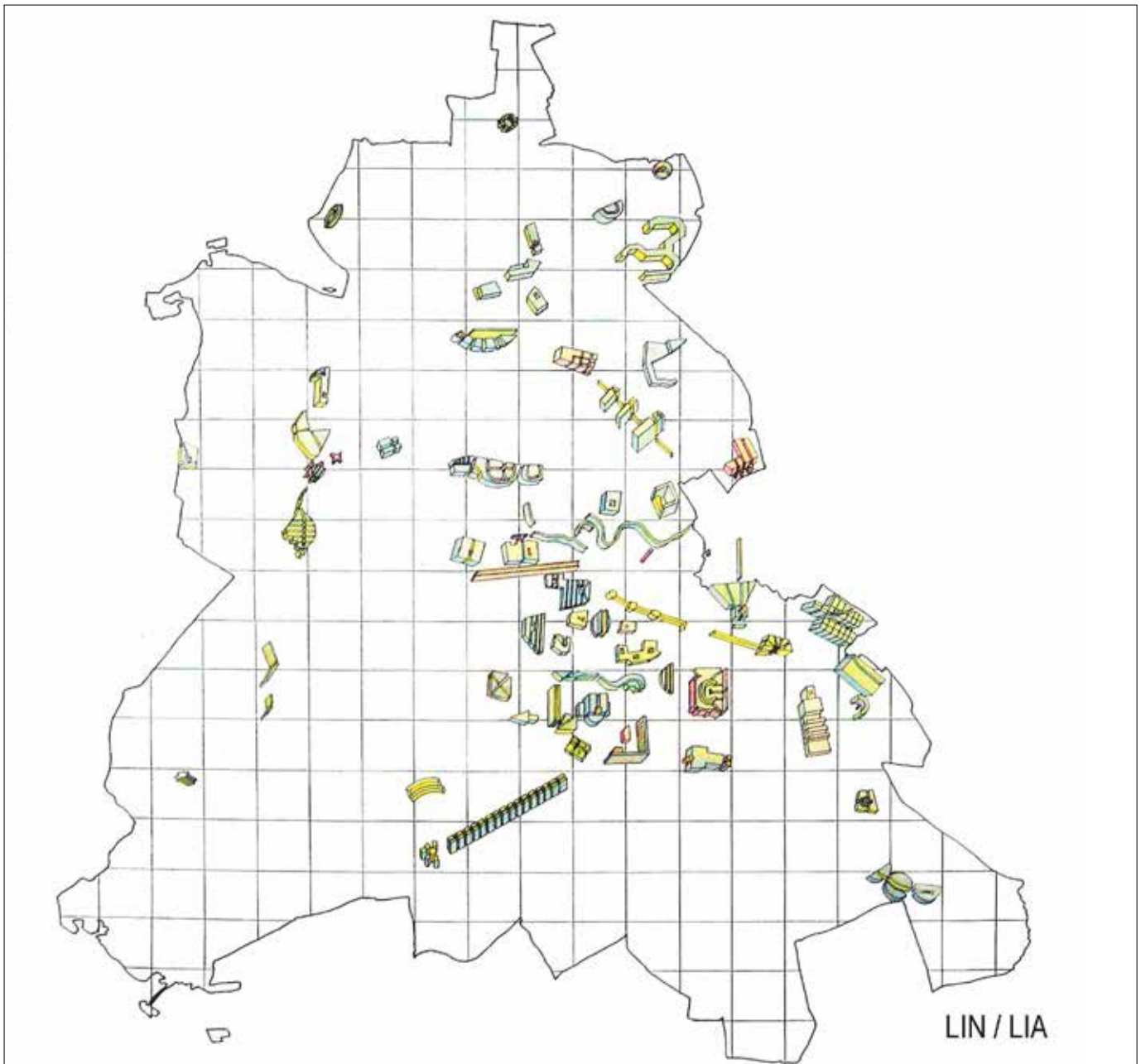
.In the cover: Michigan Central Station, front view
(personal photo archive)

.Figure 12:Green Arcipelago,illustration
Source: The city in the city - Berlin:
A Green Arcipelago, manifesto

DETROIT AS INDUSTRIAL ARCHIPELAGO

As described in the previous chapters, today's Detroit presents itself to us through a complex and fragmented urban context, with similarities to the violent sprawl of post-war European cities. Taking the model of the comparison, the city of Berlin, in the immediate post-war period, showed a strong demographic decline as a result of the suburbanization processes due to the danger of the urban center. It was therefore impossible to think of a reconstruction of the pre-war city: the econo-

mic and social repercussions left no room for new remedial strategies. the new vision on the future of Berlin was elaborated by a group of urban planners and architects led by Oswald Mathias Ungers in 1977. With their idea of "city in the city", the authors of the thesis have proposed a radical vision of Berlin that projected it into the future drawing on its deeper meaning. Instead of "repairing" the city, filling all the voids, it was necessary to make Berlin an "urban archipelago" that would definitively accept its fragmentary character, the result of its own history. degrowth for the first
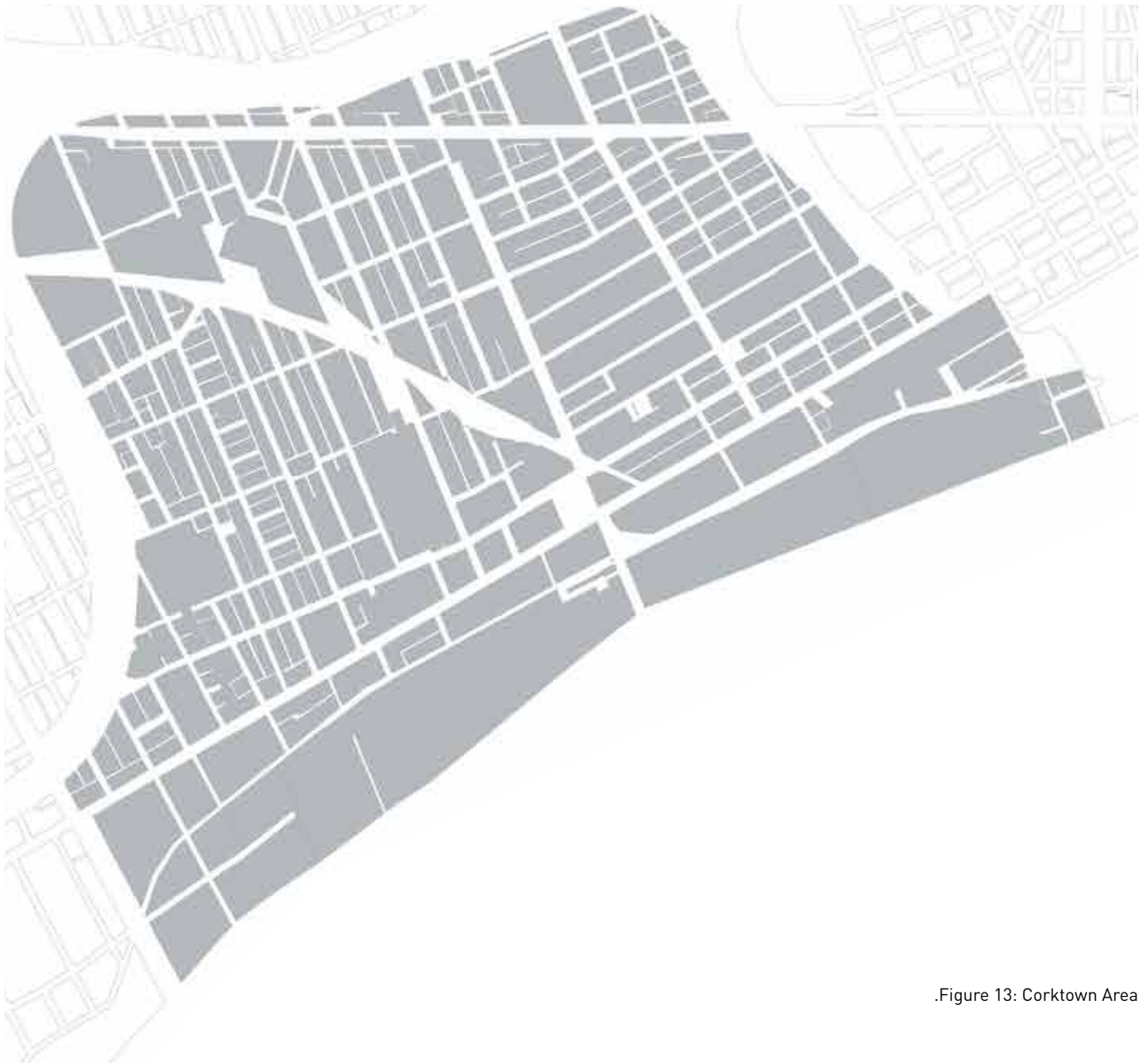
.Figure 13: Corktown Area

time is seen as a conscious strategy and a new opportunity: the reduction is carefully planned, guaranteeing better services for the communities that are no longer conceived as unicum, but assimilated as a series of densified islands (archipelago), separated from the "lagoon", or the spaces - vague terrain - left to nature able to host woods, nature parks, hunting reserves, etc. It is therefore legitimate to conceive the vision of Ungers and it is interesting to report it to Motown: the strong abandonment of the city has left scars much deeper than the post-war Berlin, leaving spaces no longer of common

interest to a drift where nature starts to grow uninterruptedly 'submerging' the urban legacy, and to save important neighborhoods that resist the narrowing. Virtuous examples of the first 'islands' of the Detroit archipelago are evident: the eastern market district attracts more than 45,000 visitors every weekend with an offer of over 150 vendors, restaurants and small businesses (Coppola, 2012), or neighborhoods such as Corktown who have been able to reinvent themselves through the philosophy of Live-Make, diversifying and thickening their activities wherever possible. Located in the south-west

NC

New residences

Commercial buildings

Industrial sheds

Industrial warehouses

Mixed use
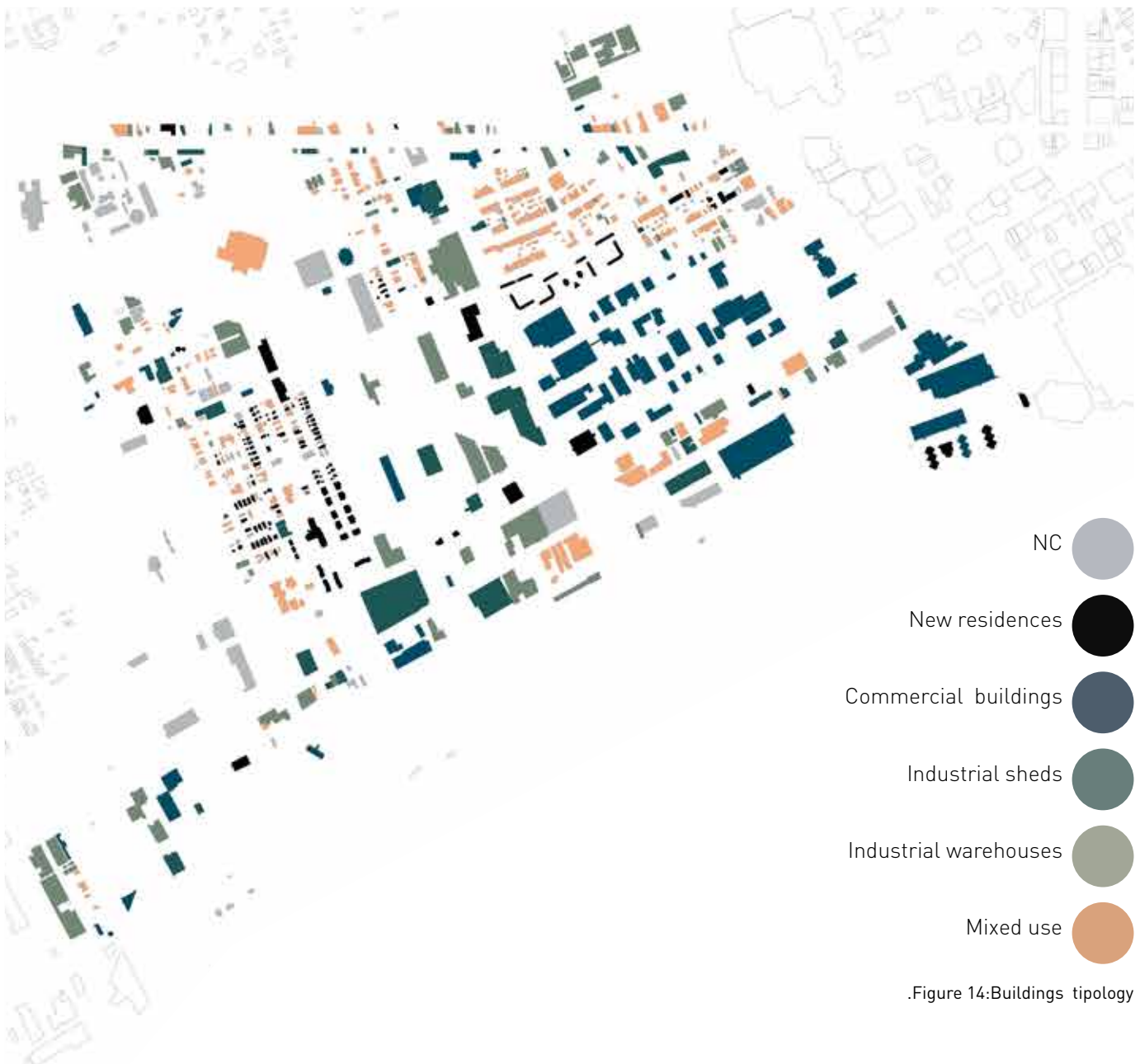
.Figure 14:Buildings tipology

part of the city, Corktown becomes a high-density district (referred to in Detroit) thanks to the efforts of many communities such as Corktown Historical Society, Greater Corktown Residents Council, Detroit Hispanic Development Corporation, Greater Corktown Development Corporation, Old Tiger Stadium Conservancy, Roosevelt Park Conservancy, Church of the Holy Trinity and The Greening in Detroit and many others. Corktown, in fact, today is the workplace for over 3000 workers respectively in the transport of goods, material and material handling, sales and supplies, truck drivers, pu-

blishers, sales agents and artists (source: Statistical Atlas: Corktown, Detroit , Michigan). With existing companies operating close to capacity, further employment in Corktown will take place through the strategic re-proposal of empty buildings and new constructions on targeted sites. Likewise, with a lack of housing in the community, the future growth of Corktown will be fostered by the development of critical land lots currently held by speculators and other private landowners. " The growing development of the district, leads to a greater demand from entrepreneurs in the desire to invest and / or
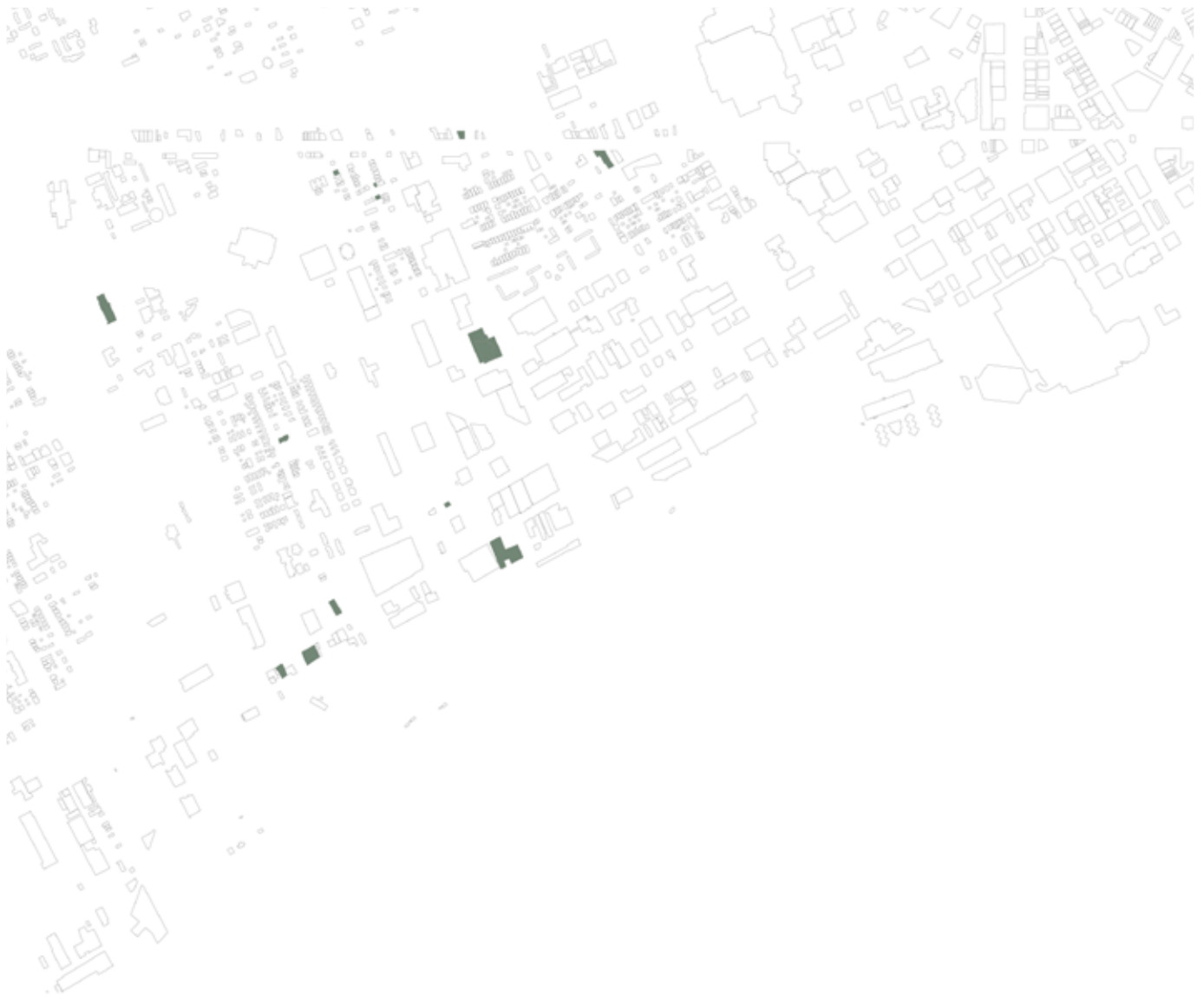
.Figure 15: Buildings notificaticated to demolition

open new businesses. The real estate market is also growing: the proposals for the redevelopment of abandoned buildings - made available to the land bank - are accepted to make room for new types of apartments for young or individual small families: the most widespread contractual formula is rent: an indicator of a district of changing and young character.

Special development

Two-family residential

Planned development

Restricted industrial

Low density residential

Intensive industrial

General business

.Figure 16: Zoning map

.Figure 17: Percentage of the civilian
employed population aged 16 and older in
Corktown (data obtained by Statistical Atlas:
Corktown, Detroit, Michigan)
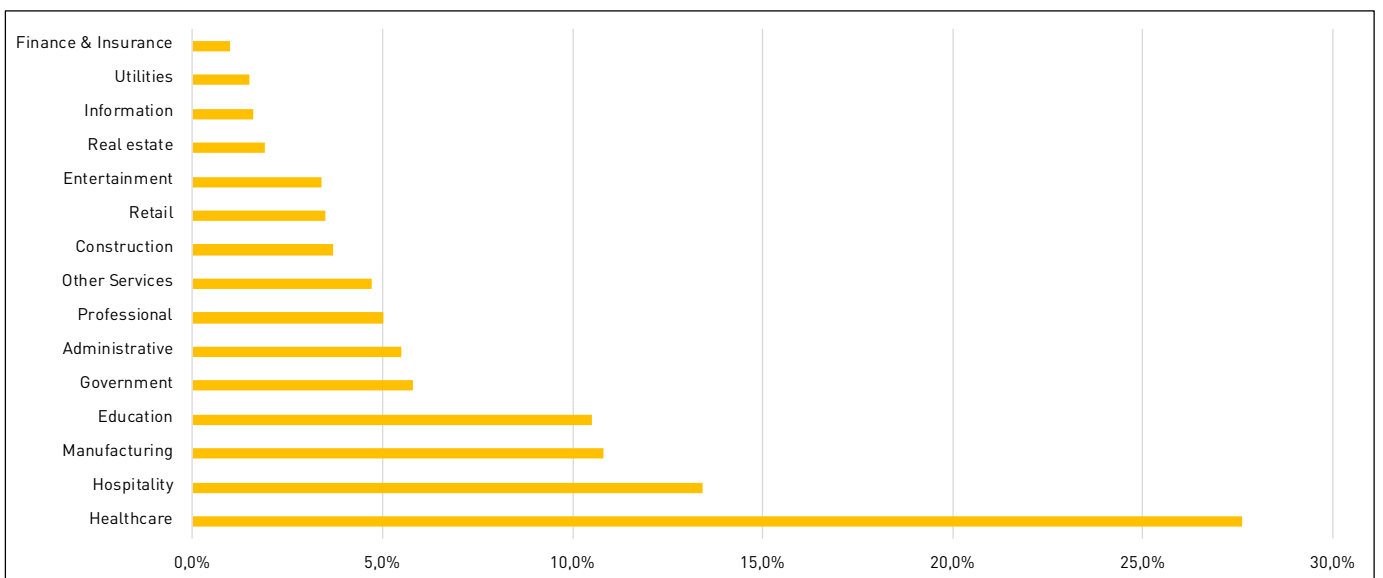
.Figure 17: Abandoned buildings

CORKTOWN - URBAN ANALYSIS

With the foundation of the city produced by Woodward's compact urban drawing, the territory was constituted by agricultural land subdivided perpendicularly to the river. The area where Corktown is located today was located within these lots. In 1850, with the demographic expansion and the economic growth the first partitions take place, the political plot resumes the rural subdivision creating a compact road network within which a mixed system is developed of single-family houses and multi-storey buildings. The functional program was distributed uni-formally in the various areas of the district. Small-sized buildings, different in function and shape, occupied the grid in a granular and porous, public and private way, were integrated proportionally and continuously. The urban design, although different from the raiderial plot hypothesized by Woodward, intersects with it, integrating itself and offering continuity to the city, allowing the possibility of expressing itself in the streets, meeting place of the inhabitants, and extension of private life within the urban space. In a first phase the grid

is placed parallel to the axis of the 5 fingers and then rotates on the axis of the rural subdivision. The urban fabric will then be modified during the urban growth of the city to create warehouses for the storage of products transported along the railway, thus breaking down the continuity of the city, and creating spaces that today are empty urban areas. The urban system with which the city is born is a classical model, with an orderly and proportionate relationship between public and private space; different architectural typologies that generate sequences varied in the program and in the form, where the private space is able to relate in harmony with the public one. With the demographic and industrial growth the city needs storage spaces along the railway, thus beginning to create a system of interruption in the urban space. The scale of the buildings does not increase drastically and the public space is canceled. The continued rise of industry as an economic engine of the city means that industrial buildings that destroy the pre-existing space continue to increase, leading to a model of development that is increasingly less compact and more wi-

.Figure 19: Terrain vague

despread, based on the linear Fordist model. In the fifties, prefabricated concrete boxes replaced historic houses in the neighborhood. The city changed appearance, the road the role. In the era of suburbanism, the dogma of petrol dominates the urban space, which becomes a distant space from the concept of place and at the same time of the city, now in the post-urban era. The proliferation of the sub-urban model; within the city the new projects are developed by an increasingly dominant real estate market in the city, which creates neighborhoods of houses all the same characterized by lack of identity and monotony, which rejects the concept of city as a complex body of forms and programs . The urban space of the district is characterized by different architectural typologies, which responds to precise functions and characterizes the space in a different way. In a homogeneous and isotropic political plane, the railway and warehouse space breaks the continuity of the city. Empty buildings and undefined spaces constitute a scenario that can be defined as terrain vague. Residential, commercial and empty areas are clearly divided by the image that the city. The abandoned railway area
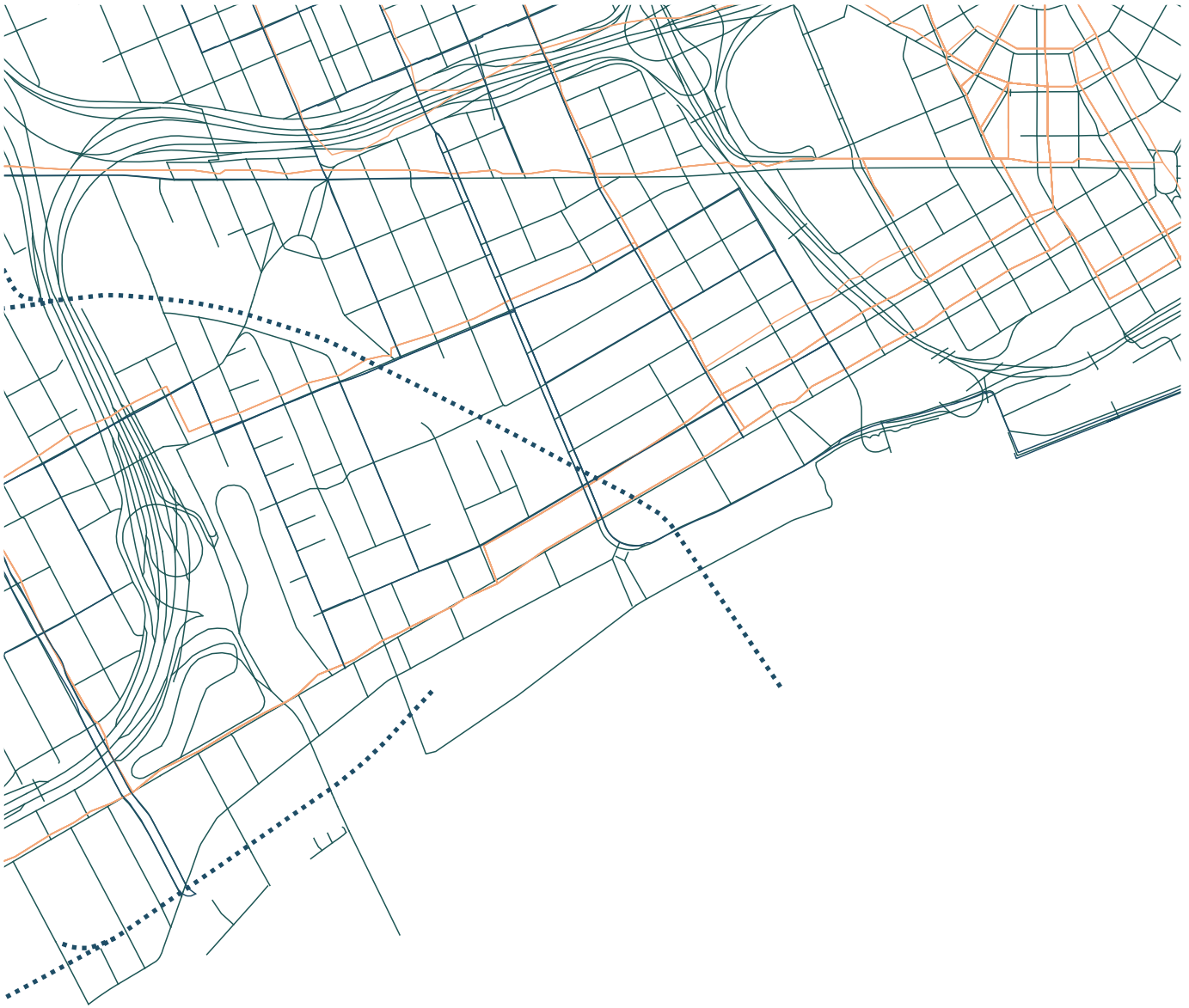
is part of the industrial heritage of the abando-
ned city, within which it is possible to imagine
new working poles that generate a new way of
living the urban space, creating continuity in
the neighborhood and other parts of the city.
The existing voids and the infratructures, stu-
died according to the principle of maximum ef-
ficiency, leads to focus on the abandoned sec-
tors of the railway area. We need to rethink the
functional programs of this space and the new
typologies that will characterize the space in
the future, in order to create a city within whi-
ch public space is qualitative and diversity of-

fers urban resilience, which has not characte-
rized the development of the city in the past.
The zoning of the city divides the city through
a governmental territorial stance, defining the
most suitable functions for the different are-
as, imposing functional systems, which may
be limiting in the development of a mixed and
dense urban system, which promove soft mo-
bility systems . For this reason, in this distri-
ct the maps of the areas are divided into ma-
cro categories, which distinguish urban areas
dedicated to work and others to residence.
In this way it is difficult in some situations to

.Figure 21: Main axes in Corktown

develop redevelopment processes that imagine complex and articulated systems within the city, making everything work as an isotropic body and not divided sectors. According to the morphological and functional characteristics of the city, the project is specifically addressed of urban space as an architectural system. The Detroit Future City, addresses the theme of urban redevelopment of Detroit in a more strategic way, offering spatial and programmatic solutions, observing the specific problems of types of urban space defined according to the existing

condition. To create these categories we observe data related to abandonment, location in the city and the types of existing buildings. Following the considerations made on urban development tools, it is proposed to offer a vision of an urban scale architectonic project, which enters the specific problems of the place observing the existing state of the city and rethinking functional programs, which are put in relation through the urban space and not government systems. The district, crossed by the railway line connecting with Canada, is cut in two parts by an industrial area of old warehou-

ses and sorting poles almost completely abandoned. This scenario, common to the city of Detroit, is located in the center of the district creating a separation line that can be the object of the architectural project. Different types of industrial buildings line the railway creating an interesting typological variety, an element to be considered in the reflection in the urban project of the district to redefine the importance of these objects in the urban space and create a system of inculcation of the city.

.Figure 23:Relationship between terrain vague and programmed space

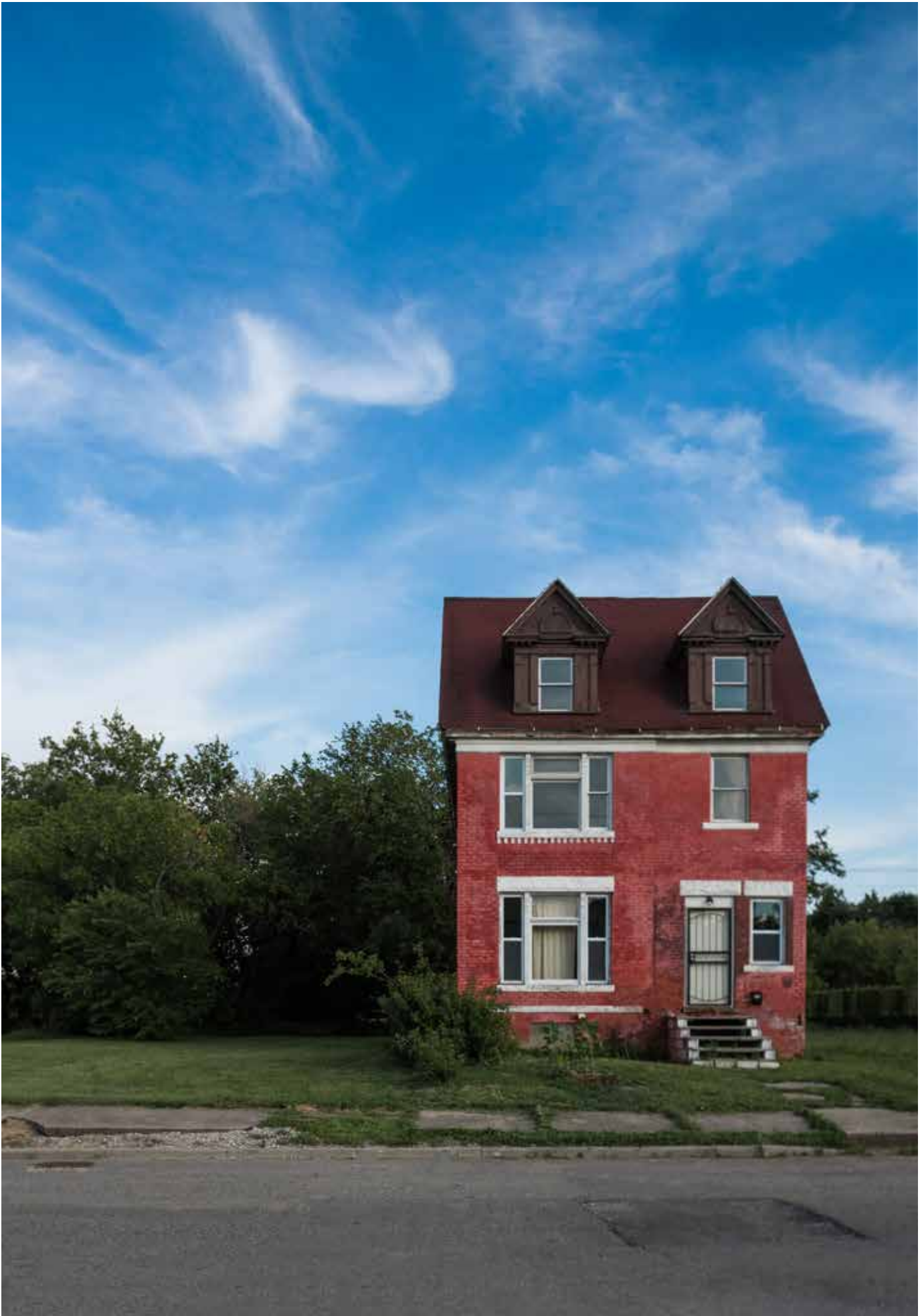.In the previous page: a view of the historic district of Corktown (personal photo archive)

.In the next page: Michigan Central Station viewed by 16th Street (personal photo archive)
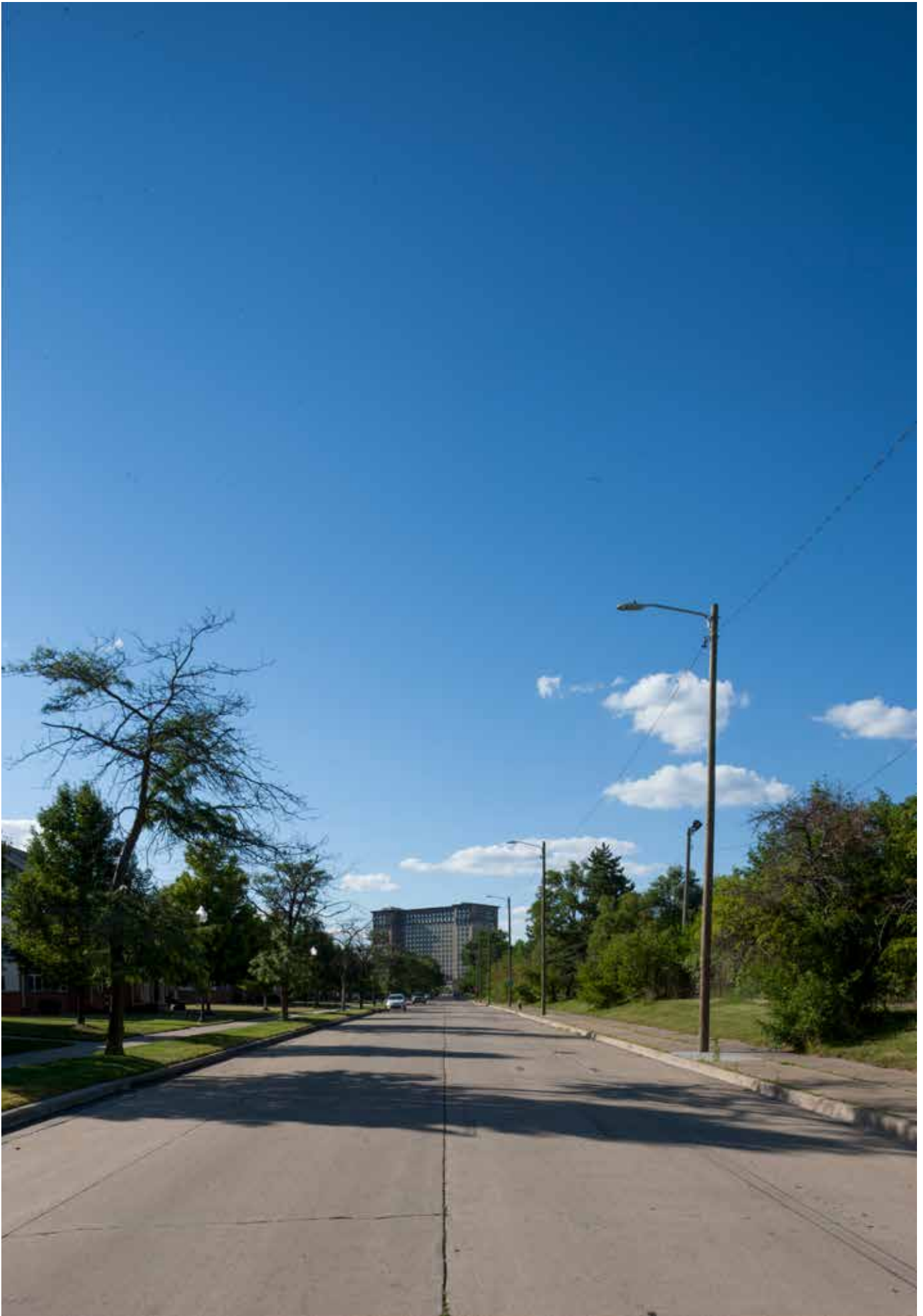
RE-THINKING Detroit, a new economic approach

URBAN REGENERATION

URBAN REGENERATION

STRATEGIES FOR DETROIT

Starting from the Ungers vision of the green archipelago, it is therefore possible to imagine a conscious decrease in the Motown of the future. The automotive industry boom of the past has made Detroit a car-friendly city, leaving a road infrastructure to date widely oversized; paradoxically, unused roads tend to become more expensive as management compared to normally trafficked roads: the vegetation is cut more frequently and during the winter the snow plows are forced to clean them, which in economic terms represents a spending by the municipality. Thus, promoting a new type of slow mobility can be a winning solution for shrinkage. The abandoned roads can be restored to nature by using them as new bike paths; where main roads are too wide, eliminate a lane in favor of greater pedestrian space on the sides or create new leafy islands to reduce noise and pollution ; road intersections can be replaced with roundabouts to increase road safety and improve traffic (Gallagher, 2013).
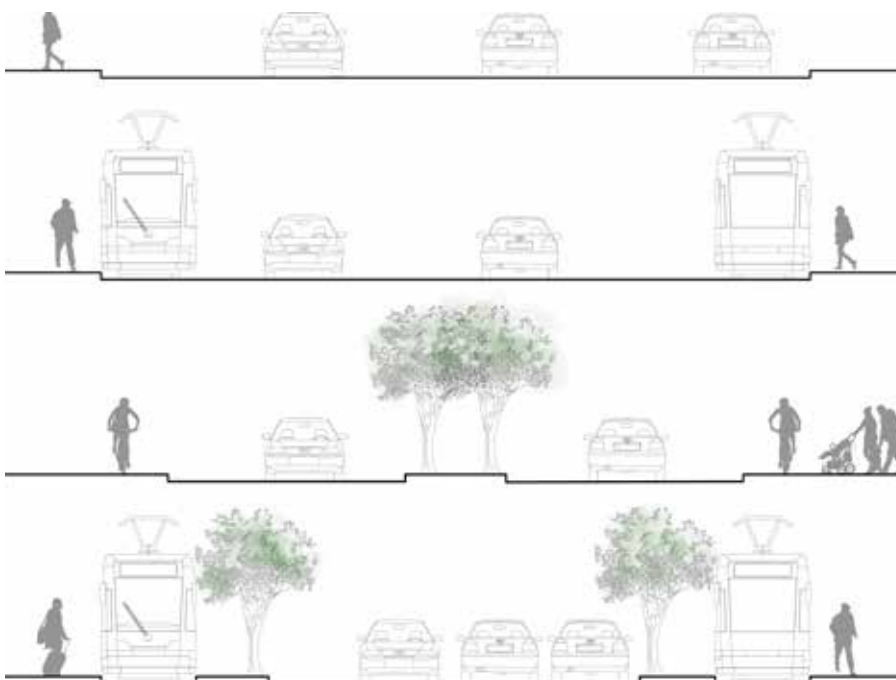
.Figure 24: Some proposals for the narrowing of Woodward Avenue. The Woodward Avenue (or M-1) is one of the main streets of the city with a total of 6 lanes about 34 km long that connects Downtown directly to the 8 Mile road, the border of the city

Virtuous examples in favor of the development of a new type of mobility we have seen and appreciated by the Detroiters: the Detroit River Conservancy (the same non-profit organization that runs the Dequindre Cut), which today cares for the pedestrian / cycle riverfront that runs from Corktown to Indian Village, has announced the new riverfront expansion plan that should create a new direct connection between the Ambassador Bridge on west and the Belle Isle Bridge on east, the grand opening is estimated in the spring of 2019[20].

As already discussed in the previous chapters, the Land Bank assumes the role of simplification tool for the acquisition of abandoned or foreclosed lots by individuals, entrepreneurs or communities; If on one hand an abandoned lot can be acquired by the owner of the adjoining house for more space, in the other can be converted back to the neighborhood's public vegetable garden or a community park through a simple municipal act (Coppola, 2012).

Where abandonment is excessive, planning can represent a new challenge that passes through a return to the nature of the

20: J. Terry, Major construction projects planned to improve Detroit riverfront, 2018
https://www.clickondetroit.com/news/major-construction-projects-planned-to-improve-detroit-riverfront
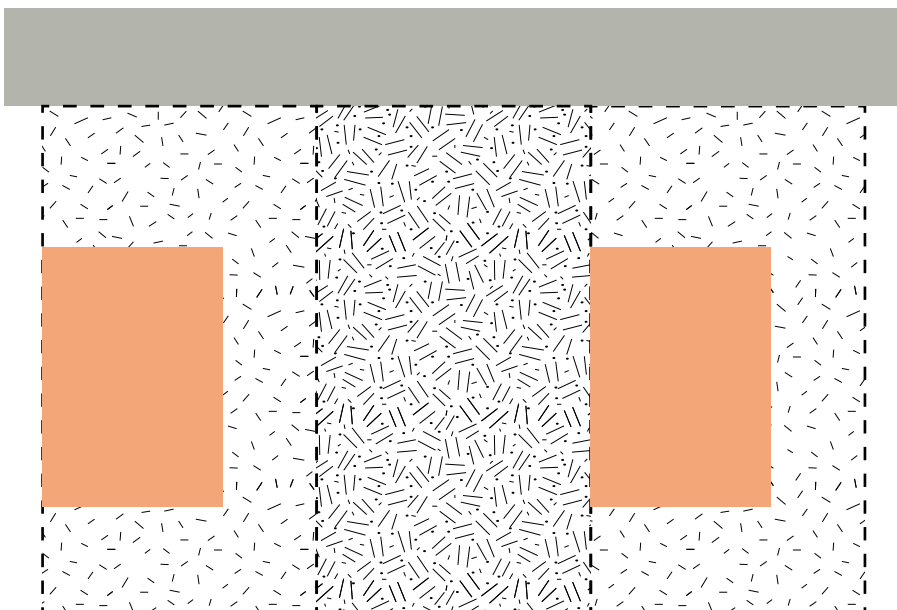
.Figure 25: Conceptual schemes for the reuse of an abandoned parcel (in the center),
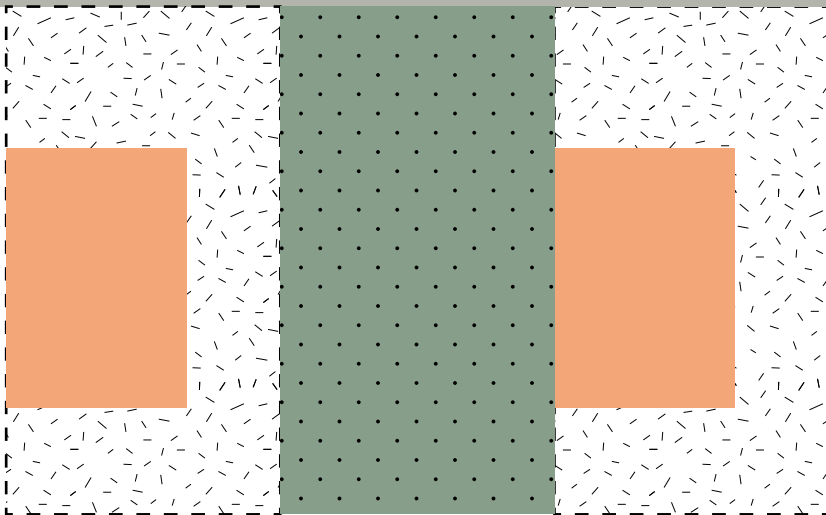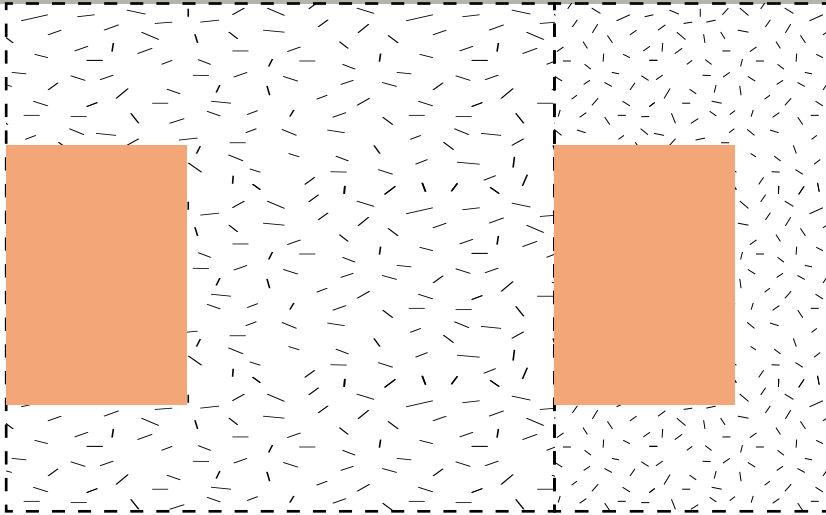
anthropized landscape, creating a buffer between the different densified neighborhoods used as carbon forest to reduce pollution (DFC,2012) or new greenways-greenbelts to increase the pedestrian and cycle paths. this series of interventions mentioned above, represent some examples of strategies that can be implemented in a broader vision of urban regeneration: the transformation of areas through strategies and actions determined by the communities and stakeholders. In the proposal of urban regeneration of the Corktown scenario, a vision is developed on urban manufacturing and how this can be related to the Detroit of the future through the reading of 3 different thesis projects: Re-Learning Detroit (author: Filippo Gemmi), Re-Maker Detroit (Vittorio Gemignani) and Re-Thinking Detroit (author: Daniele Fazzari).

URBAN REGENERATION: CORKTOWN

If Detroit sees new jobs it will have to create them alone and social enterprises will offer a promising way to do it (Gallagher, 2013). In the historic district of Corktown a potential area has been chosen for future developments: as already analyzed in the previous chapters, the district shows a morphological break dictated by the old railway system between north and south and a strong deterioration situation defined by the abandonment of the built in medium / large size (Michigan Central Station, Roosevelt Post Office and 1448 Wabash St. Warehouse) which separate the eastern part of the district from the west side.

The old railway, now oversized - used for the transport of goods between Detroit and Windsor (United States and Canada) - will be eliminated due to the closure of the underground tunnel linking the two states, to the new railway bridge (Gordie Howe International Bridge) from open in 2020[21]. The disposal thus offers a way to rethink the area: the program that re-establishes the continuity of the district through the railway axis and the reconnection of the city with its waterfront with the north-south union of the 14th street axis. Both programmatic lines define the base of work for urban

AMBASSADOR BRIDGE

WAREHOUSE

RAILWAY

development, removing the urban centrality of Michigan Avenue - where most of the commercial activities are concentrated to date - and moving it to the interior of the Corktown district, becoming a new urban reference. .
The diversification of the current scenario leads to a topic to create a new socio-cultural mixité through spaces dedicated not only to work use, but also through new areas of aggregation that promote the action made by the user (bike parks, playgrounds, basketball, etc.), and new residential spaces that aim to invite a new, secure urban center throu-

gh a mixed and complex urban structure. The design of the new green plant shapes a new identity of the territory that creates a series of buffers within the scenario, breaking the unscheduled green screen; urban agriculture also develops through the creation of urban gardens and greenhouses for community use. The densification process takes place through the adaptive reuse of the three project buildings (MCS, Roosevelt and 1448 Wabash St.) becoming new catalysts for working and social life, in addition to the creation of new residential types of new construction and multi-tenants recovered .

BRIDGE

U.S. POST OFFICE
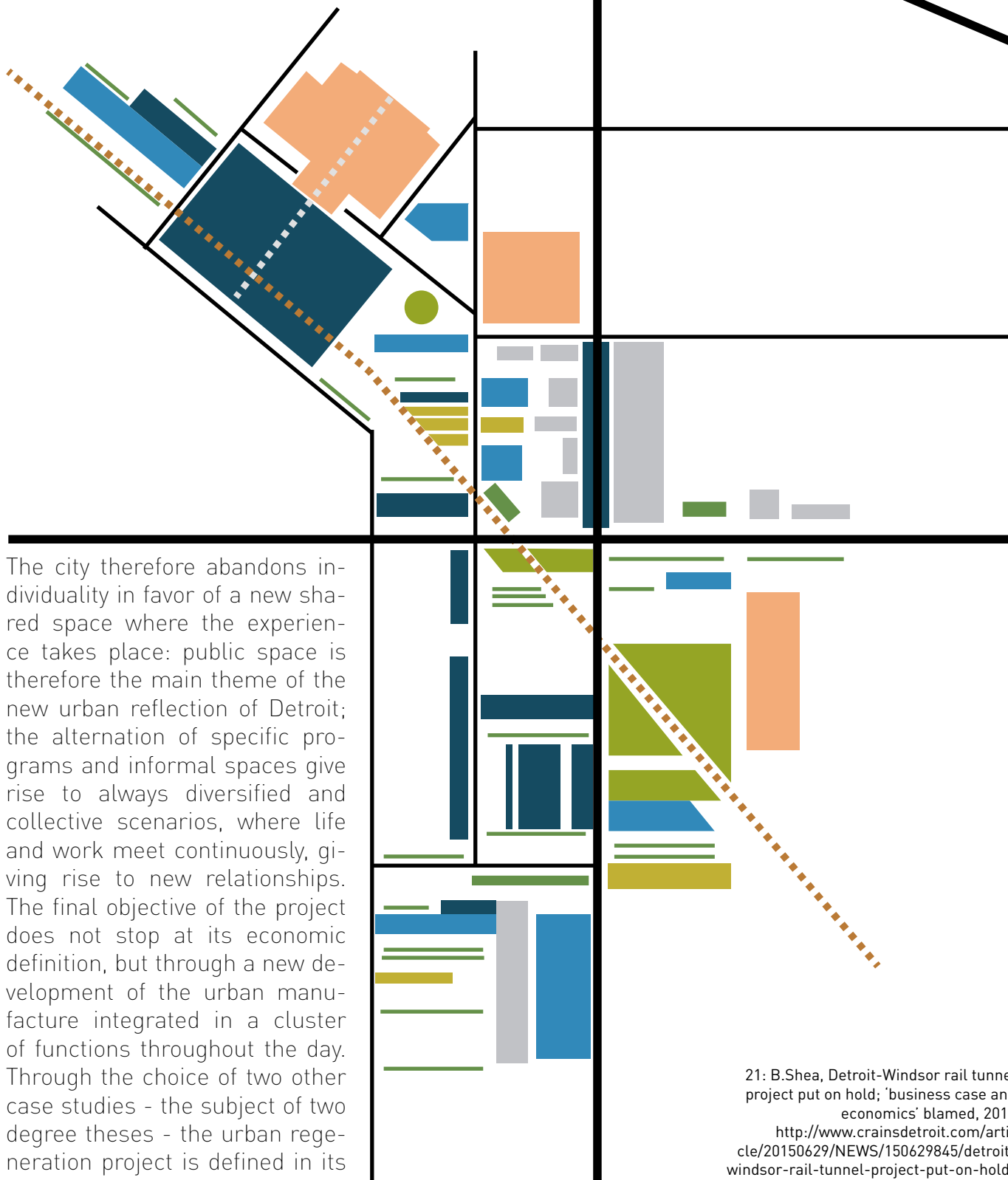
MICHIGAN CENTRAL STATION
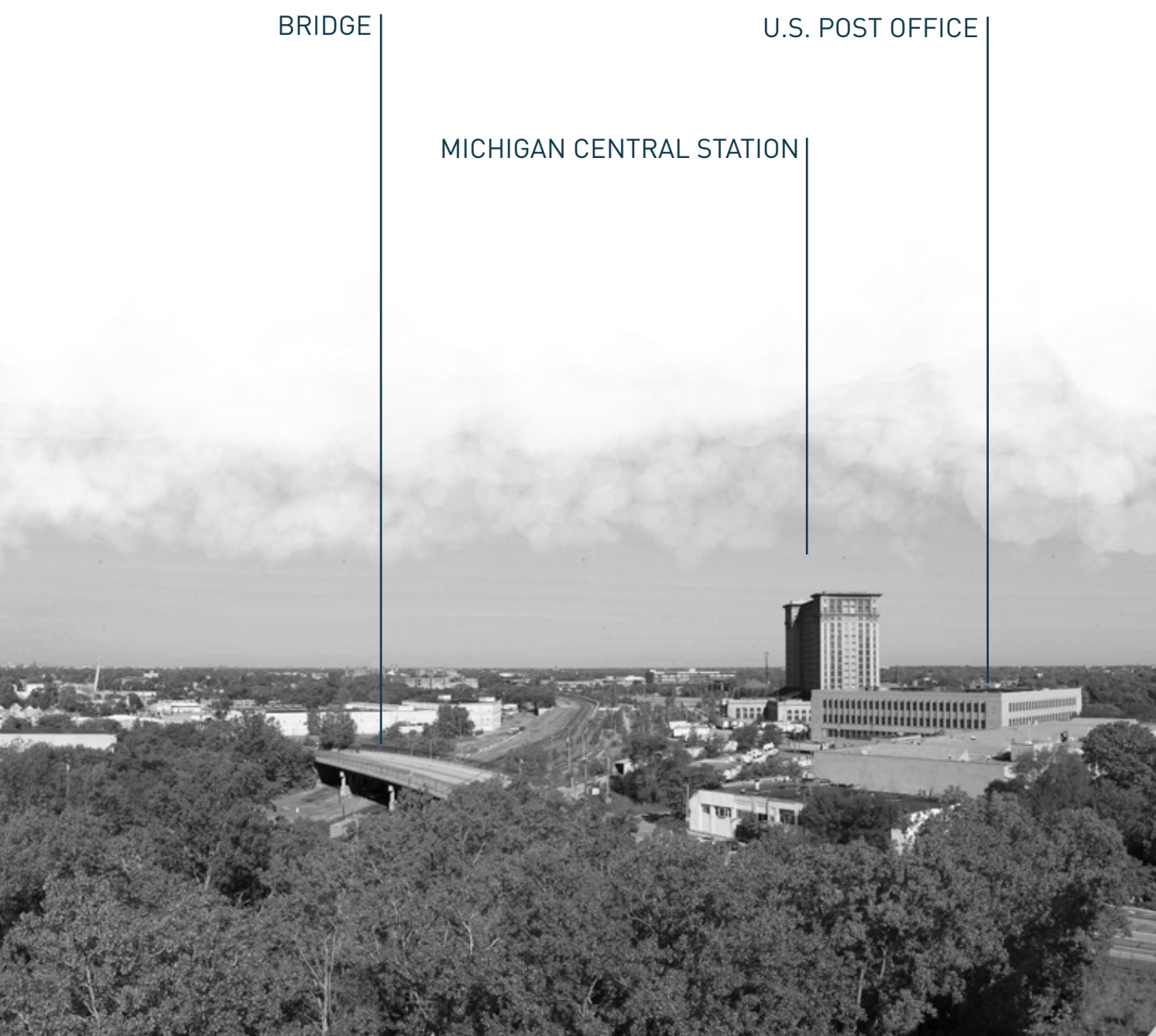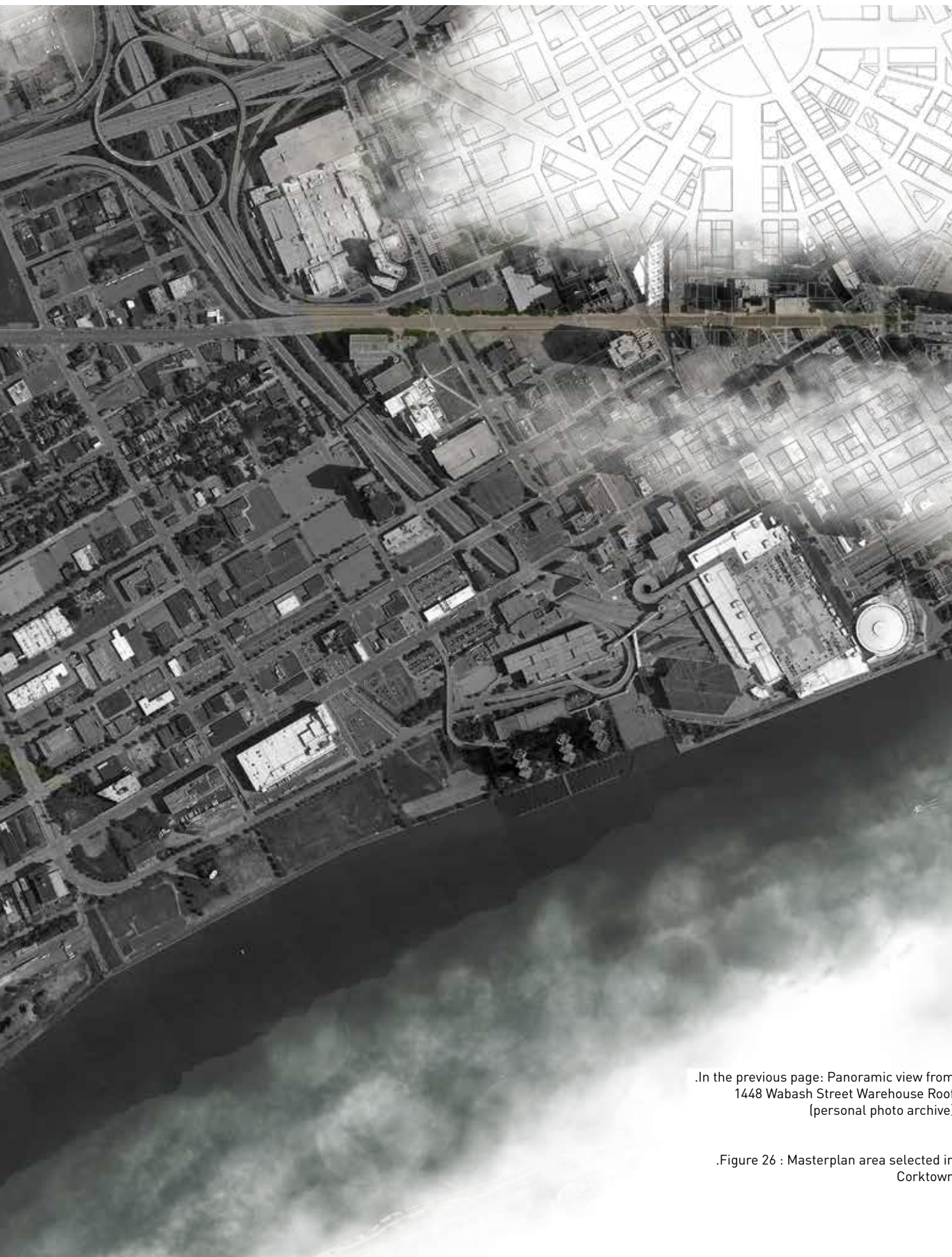
.In the previous page: Panoramic view from
1448 Wabash Street Warehouse Roof
(personal photo archive)

.Figure 26 : Masterplan area selected in
Corktown

The city therefore abandons in-dividuality in favor of a new sha-red space where the experien-ce takes place: public space is therefore the main theme of the new urban reflection of Detroit; the alternation of specific pro-grams and informal spaces give rise to always diversified and collective scenarios, where life and work meet continuously, gi-ving rise to new relationships. The final objective of the project does not stop at its economic definition, but through a new de-velopment of the urban manu-facture integrated in a cluster of functions throughout the day. Through the choice of two other case studies - the subject of two degree theses - the urban rege-neration project is defined in its entirety.

21: B.Shea, Detroit-Windsor rail tunnel project put on hold; 'business case and economics' blamed, 2017 http://www.crainsdetroit.com/arti-cle/20150629/NEWS/150629845/detroit-windsor-rail-tunnel-project-put-on-hold-business-case-and

±0.00

-5.00

±0.00

-4.00

-4.00

±0.00

±0.00

-5.50

±0.00

±0.00

±0.00

±0.00

±0.00

±0.00

+6.22

±0.00

±0.00

±0.00

RE-THINKING Detroit, a new economic approach

RE-MAKE(R)

Maker-Learning Spaces - Startup
Commercial sales activities
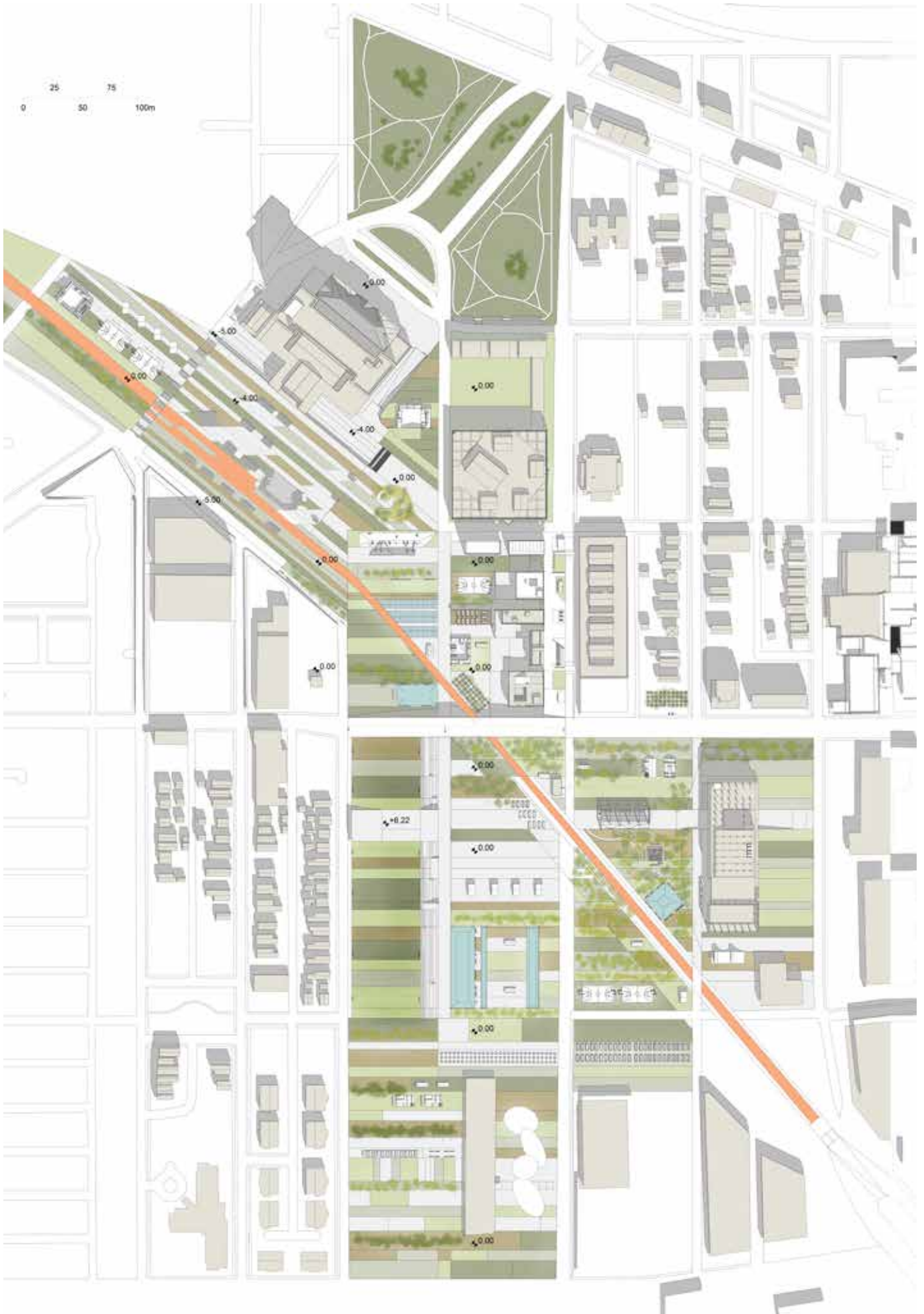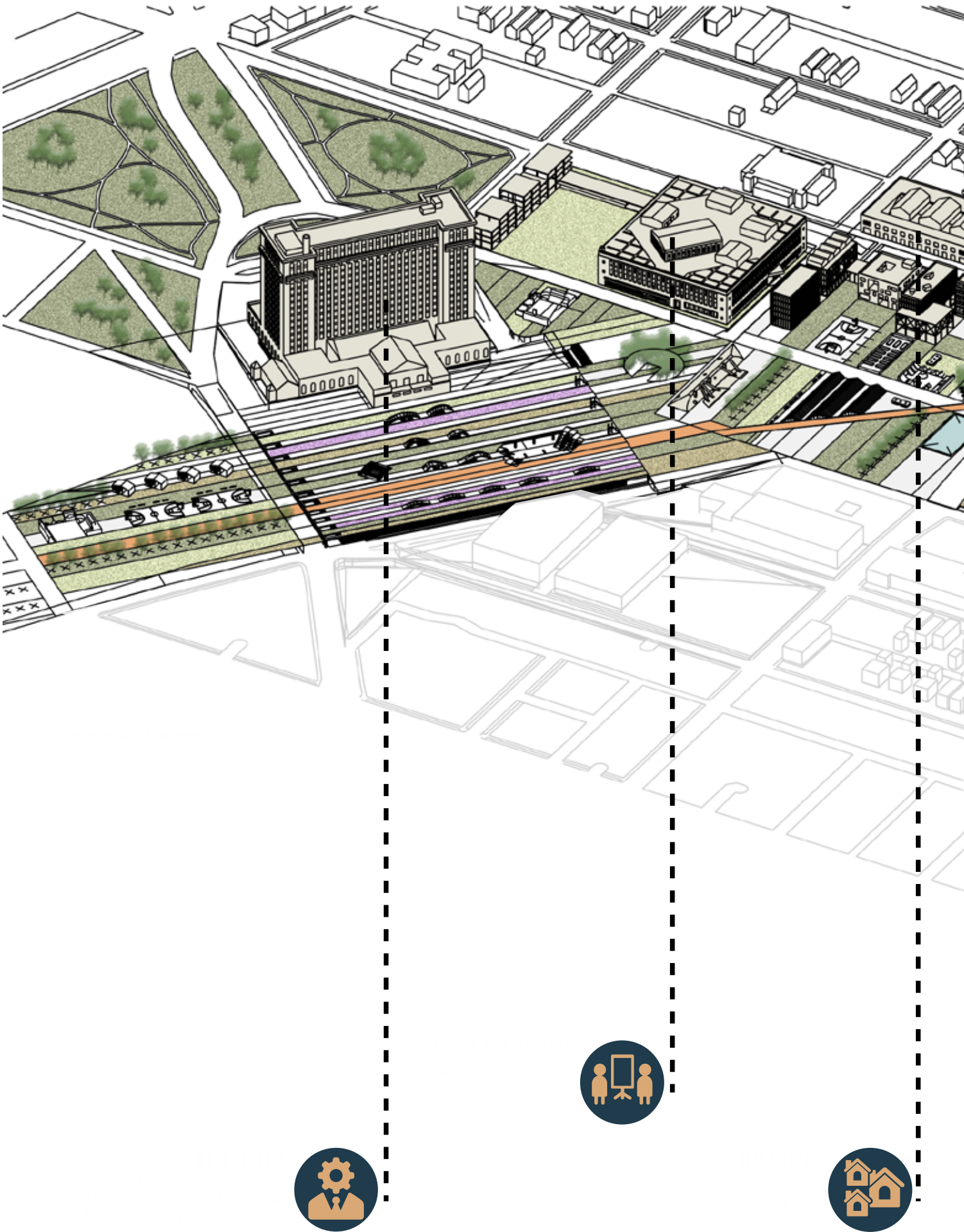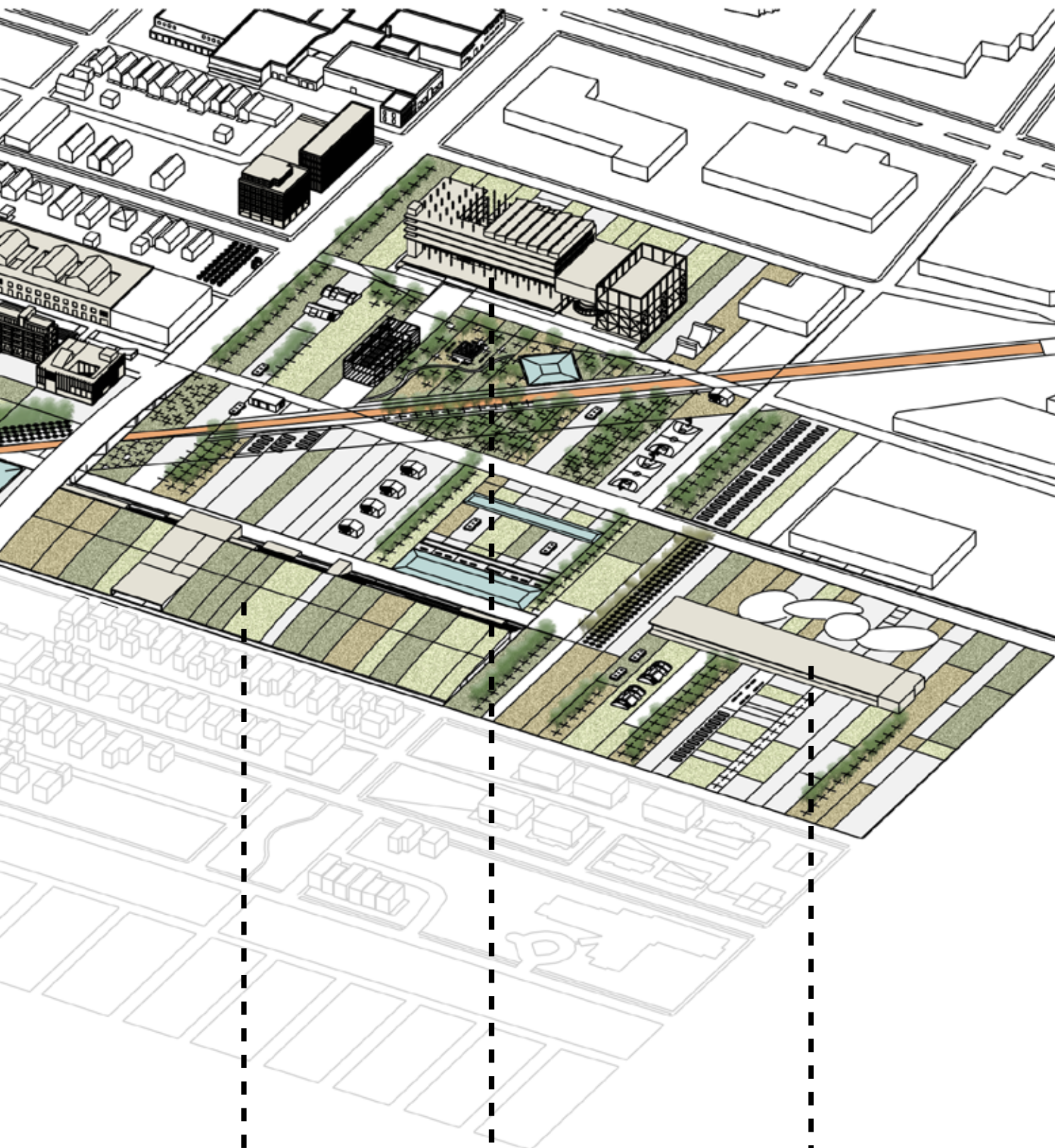
PARKING

Covered parking for the whole area

HOUSING

Affordable residences
Multi-tenant
Re-used building
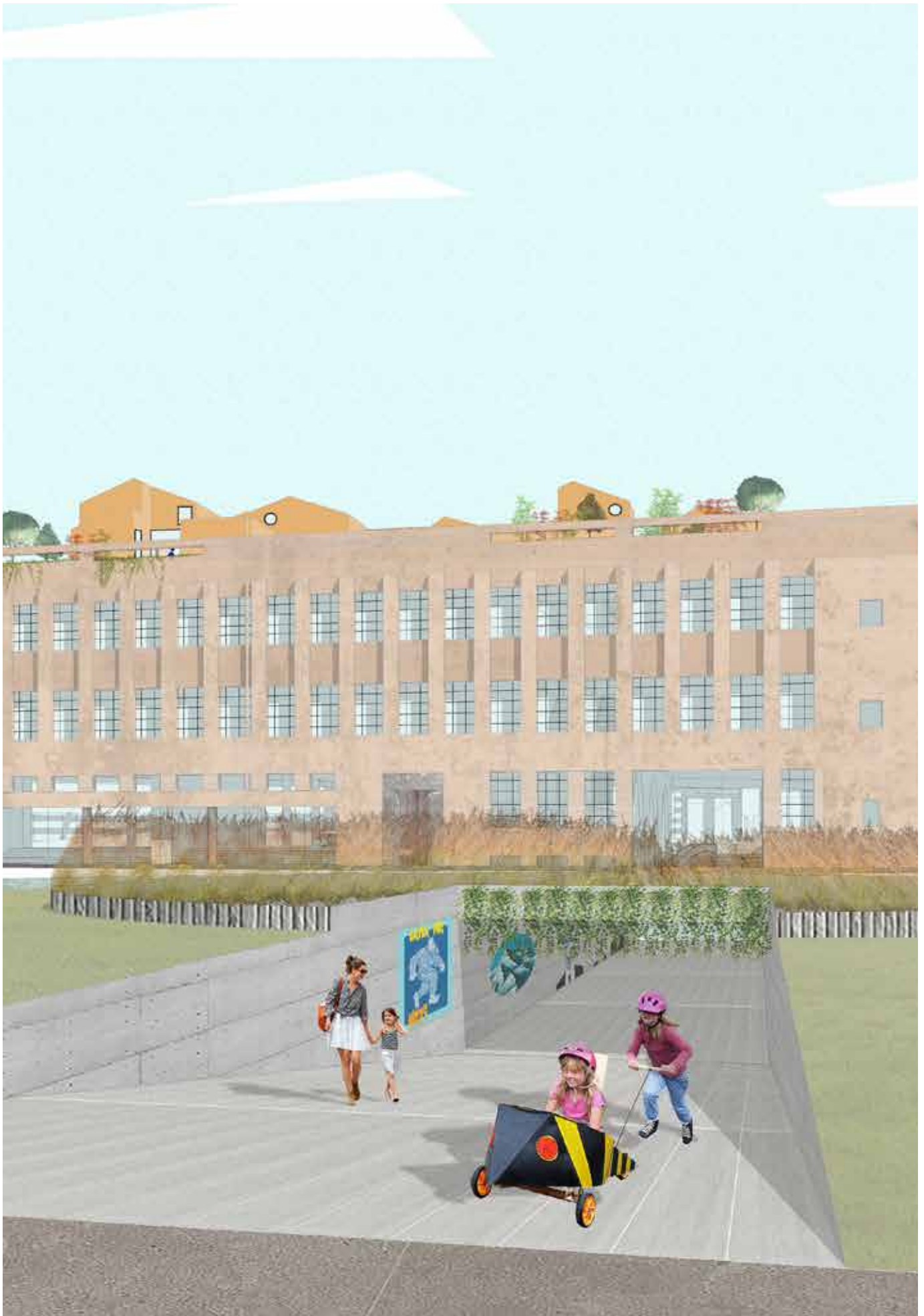
RE-LEARNING DETROIT

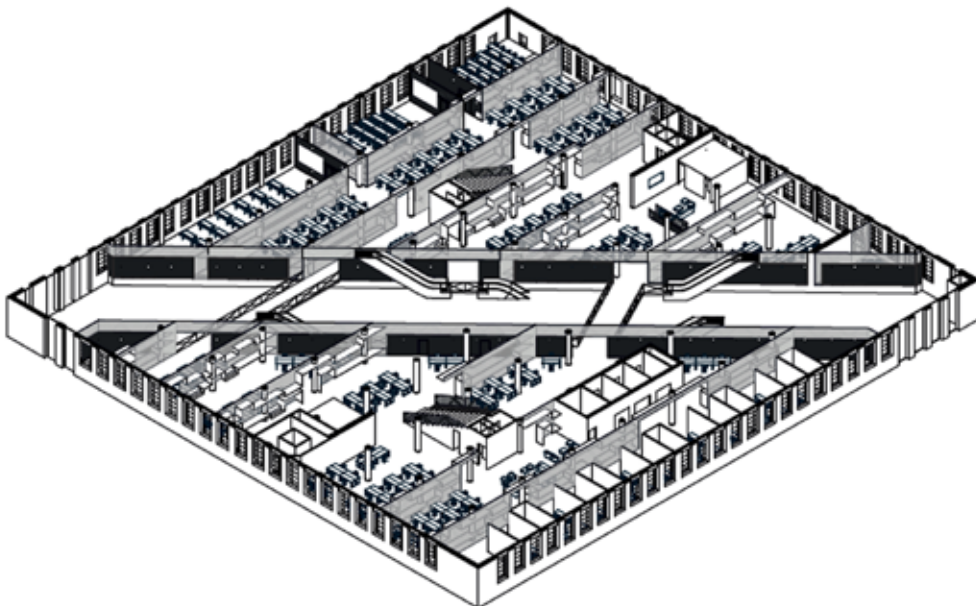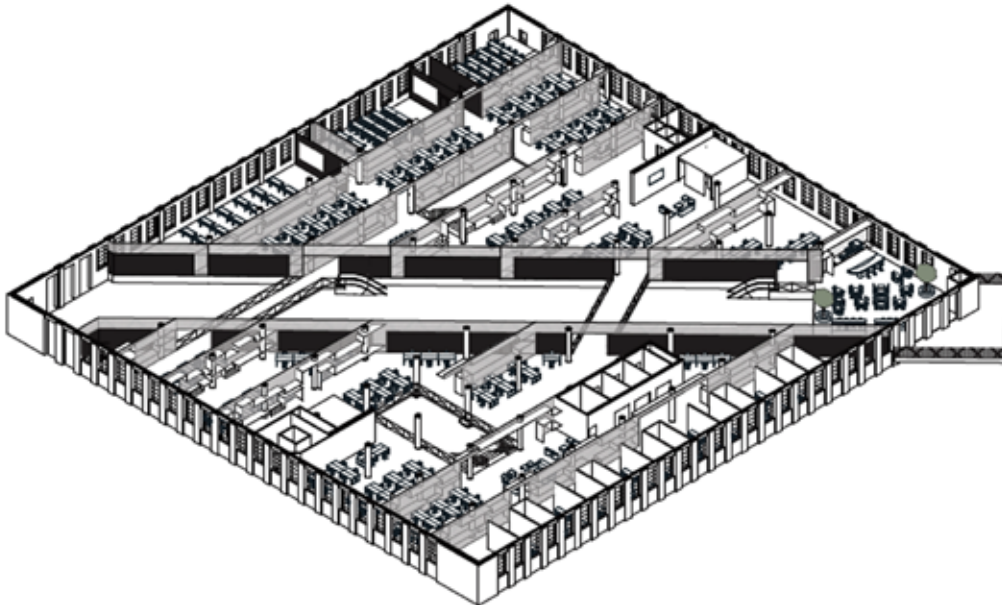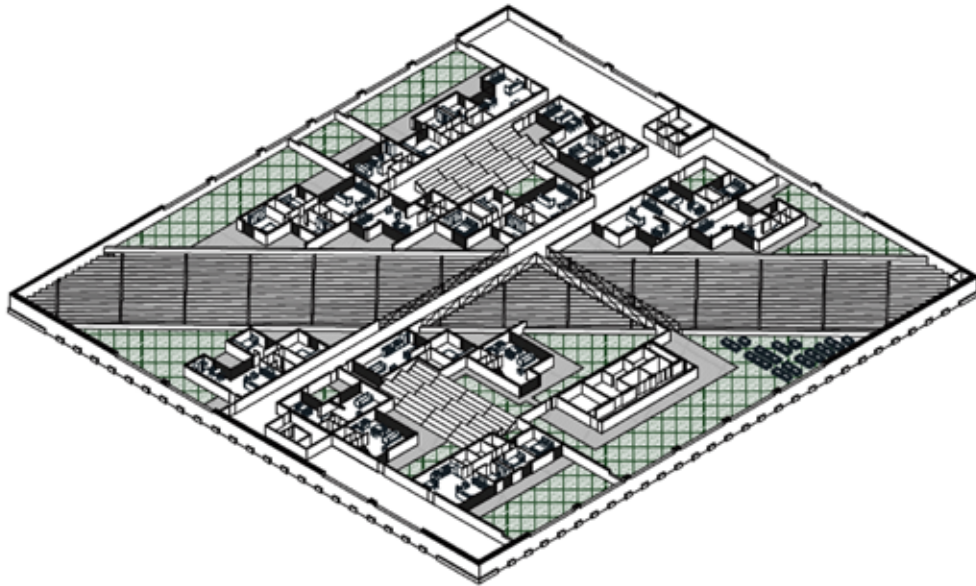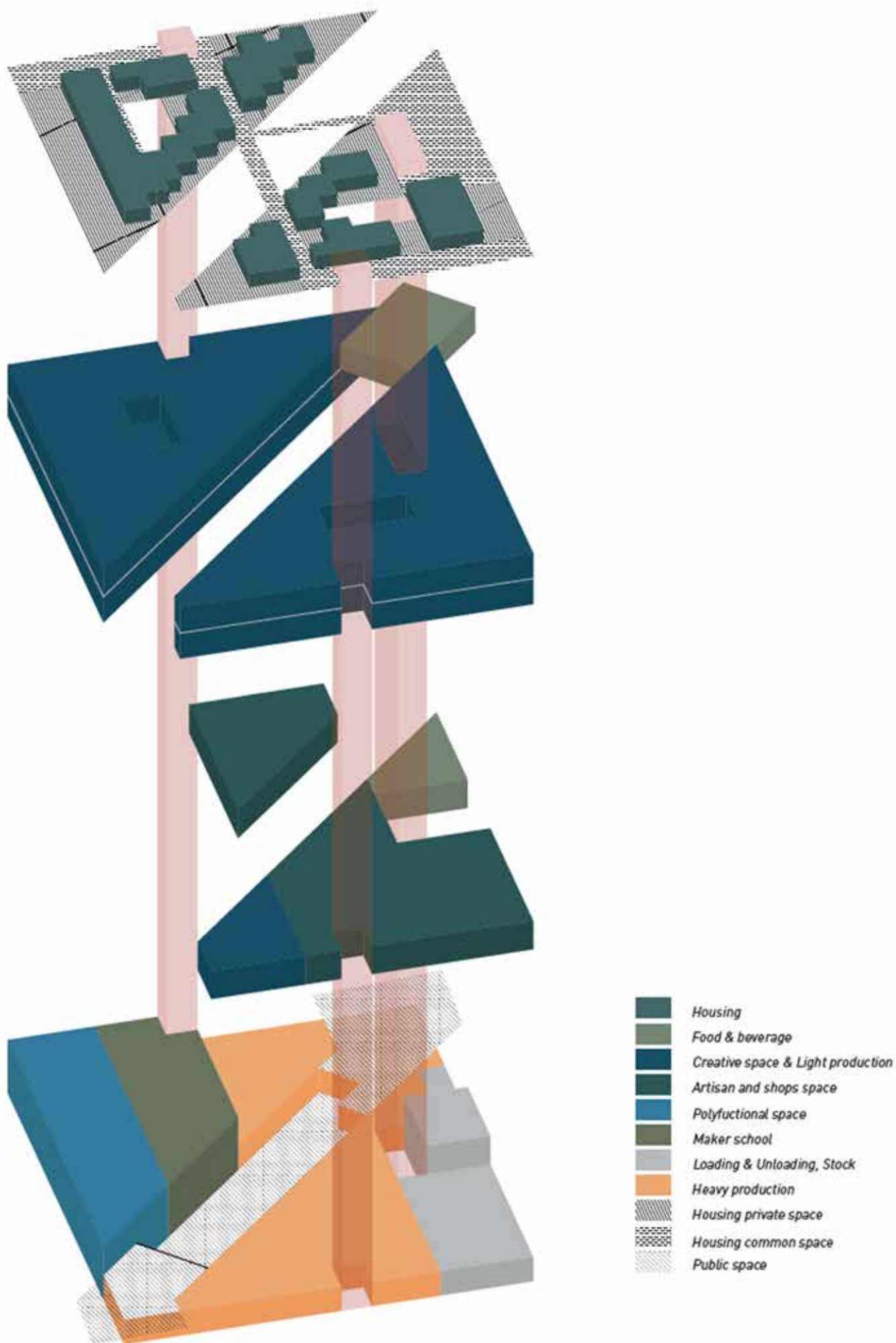The basis of this thesis is the study of the reuse of abandoned buildings to reintroduce production in the post-industrial cities of the Rust Belt. In particular, attention is focused on the city of Detroit and on the development of the maker movement, a worldwide community of DIY producers (Do It Yourself) that has been imposing itself in the manufacturing environment of the city for many years. In particular, one of the main points of the manifesto of this movement is studied, the sharing of their knowledge, in this case to help the precarious situations of K-12 schools (from 6 to 17 years of age) in Detroit.

The design part begins with the elaboration of a project masterplan of the new manufacturing area, which collects the three large abandoned buildings in the area of the railway connecting Canada and the USA. Next, the reuse project, in which it is proposed to intervene in order to create a space that accommodates both a vertical factory, with all its characteristics, but also a part of informal education that develops throughout the building, so as to create a prototype of school-factory that can then be applied to other buildings abandoned recovered for the same purpose.

The large and flat large volume of the Roosevelt Warehouse, included in the urban project that presents the recovery of the decommissioned railway area. It represents a fulcrum of manufacturing production and education. The structures of the old warehouse are maintained and modified for the needs of the new functions.The building has a dimension of an isolated medium and as a consequence an internal micro-environment is created, the project is divided, therefore, for the most part inside the old existing brick walls.

The type of Roosevelt Warehouse has changed, starting from the old post office, storage and sorting building, resulting in a vertical and social factory, an integral part of the district of Corktown and the city of Detroit, and becoming a container for activities and events, stage of industrial rebirth.

Housing

Food & beverage

Creative space & Light production

Artisan and shops space

Polyfuctional space

Maker school

Loading & Unloading, Stock

Heavy production

Housing private space

Housing common space

Public space

RE-THINKING Detroit, a new economic approach

RE-MAKE(R) DETROIT

The thesis identifies in the subject of industrial recovery a possible and partial solution to the problems of urban segregation, unemployment, lack of attractiveness and lack of quality of the urban space that nowadays affect the city of Detroit.
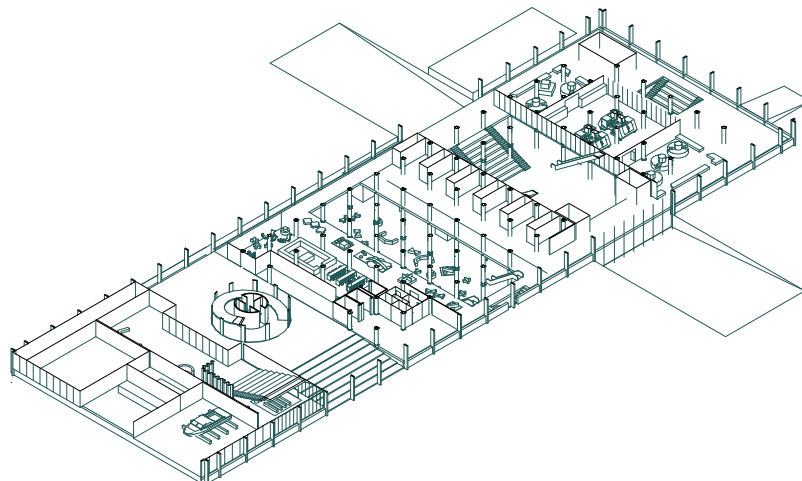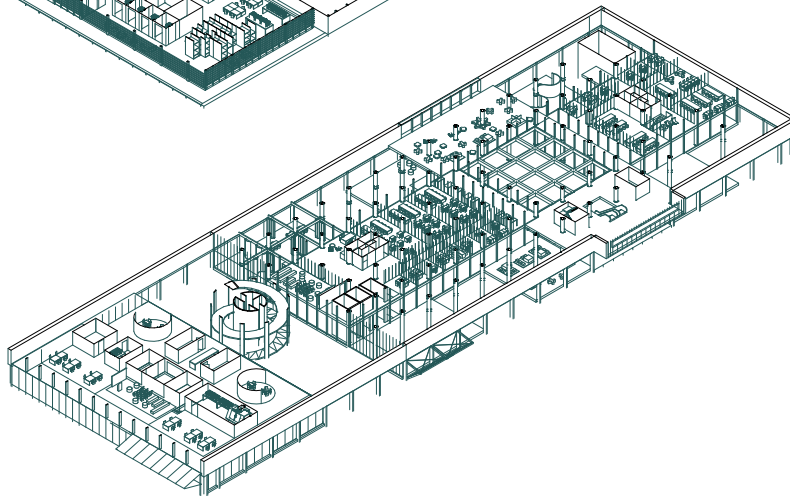
Through an analysis of the type of industrial building, its relationship with the city and the consequent effects generated on the territory, it is proposed to recreate a local and urban production system that occupies part of the industrial areas of the city.

The factory is redesigned in an urban key, creating a proposal that, considering the examples of American vertical factories and the principles on which their relationship with the city is based, generates a typological complexity with the aim of creating greater dialogue with the context .

The thesis ends with the presentation of a prototype of this type, which does not want to be seen as an absolute solution to the problem, but as a design response referable to a well-defined context (the Detroit one), which clearly states those that are the principles of urban and architectural planning.

"Remake (r) Urban Manufacturing in Detroit", is a research that proposes to understand the relationship that exists in the history of the city of Detroit between the typology of the factory and the development of the city.

At 1448 Wabash street, Corktown, Detroit is located in an old abandoned twenties warehouse. An impressive 8-storey structure that stands out in the neighborhood's skyline, second only to Michigan Central Station and the residential towers along the River Front. The typological change of the building is therefore the reflection of the urban thought that it is proposes to be adopted for the design of this object. A building completely detached from the urban and social space, a consequence of Motorcity, is transformed with the idea of creating a city made for people. The elements of the city, generating the segregation of this, must be transformed to become part of the creation of a new type of city, inclusive and measured for humans.

RE-THINKING Detroit, a new economic approach

vertical communication system
public space
semi-public space
productive space
Co-working offices
informal space
bar

THE MAKING NET

THE MAKING NET

In the cover: Anaya's Pallet & Transport Inc, personal photo archive
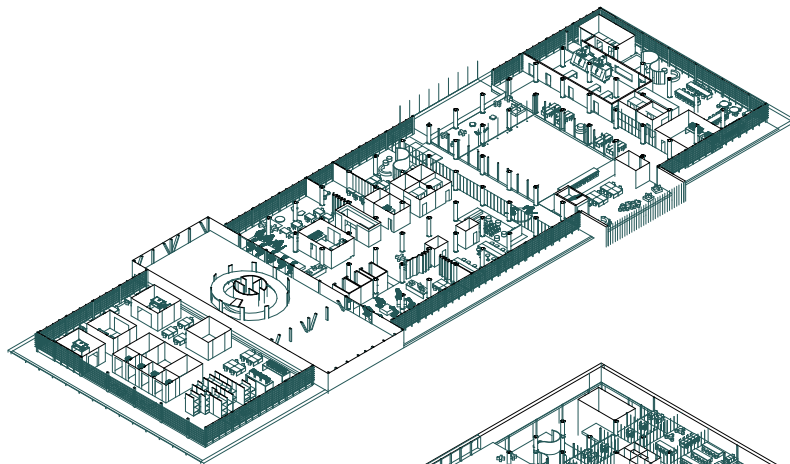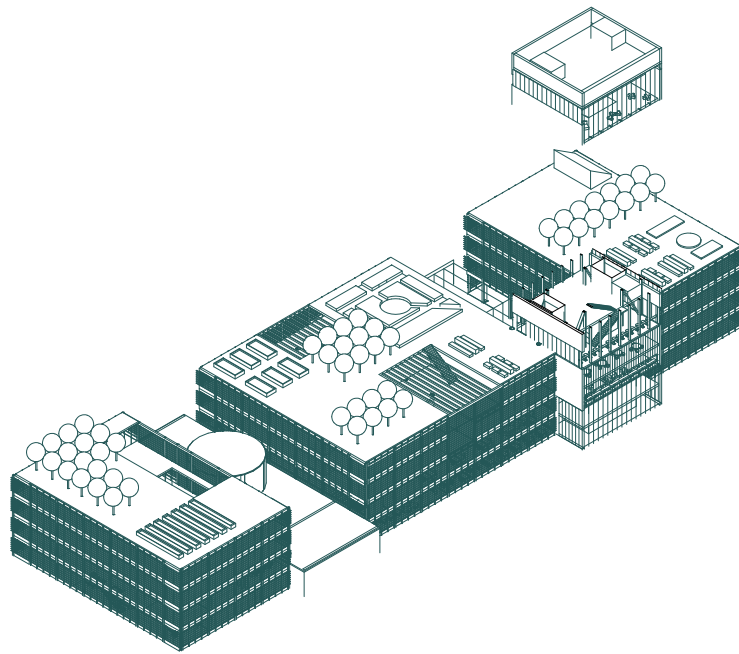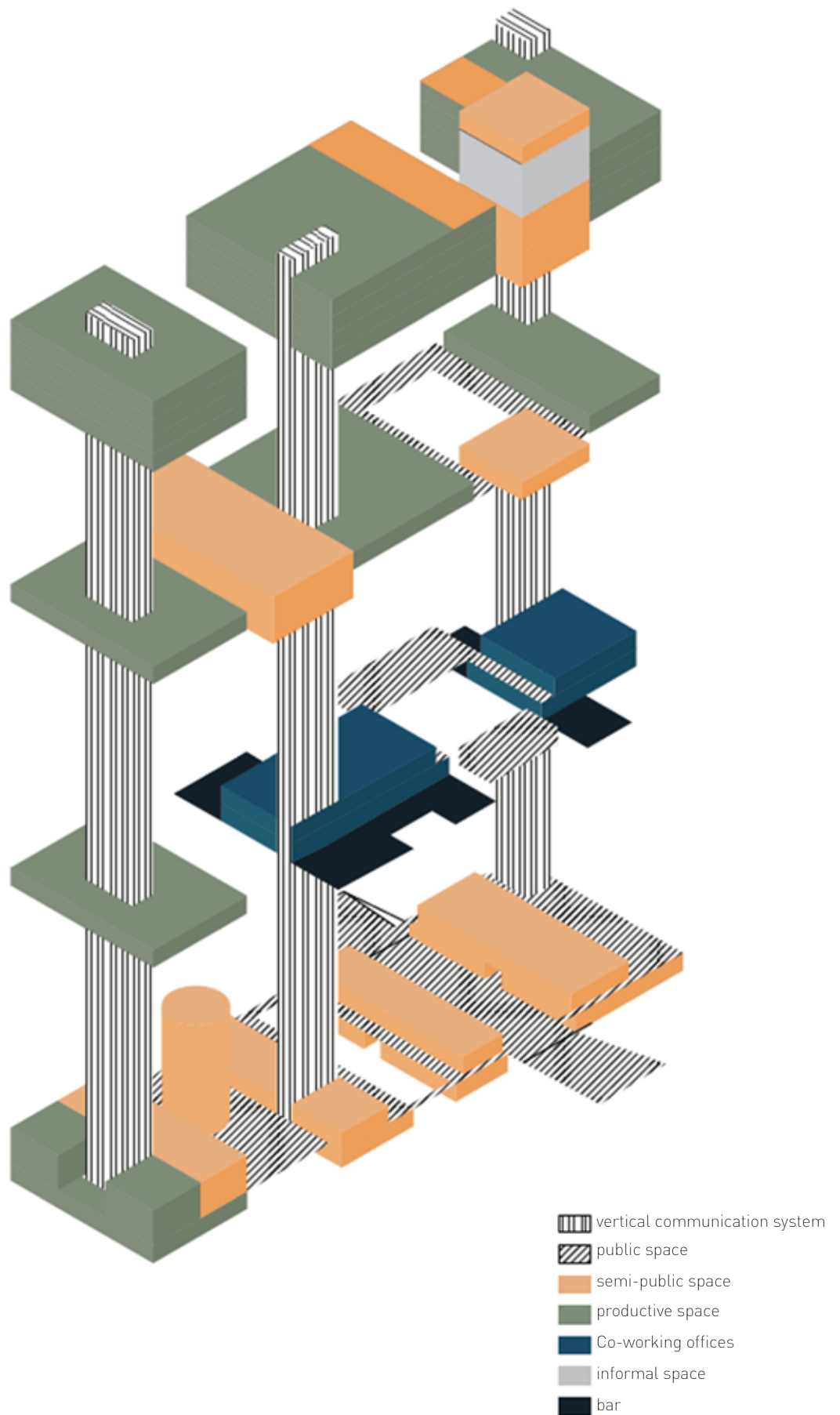
RETHINKING A NEW URBAN MANIFACTURING

Through a new and profound rethinking of urban manufacturing, attention is given to the current economic-working situation of the city. As already highlighted, the unemployment rate within Motown has been continuously decreasing since 2008, reaching around 10% today; it is possible, however, to imagine a future of the city with an -almost- zero unemployment that proposes diversification of manufacturing across the entire city. The Corktown scenario therefore assumes a further importance, placing itself as a nodal point of a new work development: the creation of a new hub located inside the Michigan Central Station with the function of incubator and learning spaces to support all the small businesses / startups in the city. The use of maker spaces allows a more concrete approach to the idea of startups in a historical moment where the development of a new product can be complex, expensive and require a multidisciplinary approach: cheap was giving way to smart, and the only way is through sharing spaces and ideas.
big companies like Apple or Google are taken as virtuous examples where in their centres they concentrate most of the development and research activities through sharing also with other external companies, making net plays a very similar role to these companies, acting as a support infrastructure for new entrepreneurs.
The MN can therefore guarantee a new ecosystem for the economy of the city through these strategies:

•   The sharing of knowledge shared by all the actors within it and external contributors, through collaboration with universities, local government authorities;
•   The overall management of the network is managed by the main hub that promotes its philosophy and a future vision of the whole and in continuous evolution;
•   Through the adaptive reuse of abandoned buildings around the city, create new incubators with the function of being re-

MAKING NET

ference structures for the neighborhoods;
* Promote a new environment that can be a new attraction for young entrepreneurs who want to start a new business
* Having capital and guarantee facilities for investments in start-up companies;
* Share a development of an overall vision through the development of smart manifacturing;
* Guarantee services and tools that can not be acquired by young startups;

The dynamism of this proposed system represents one of the greatest strengths: the MN is conceived as an evolving system, able to adapt itself to the changes of the future through its resilience; neighborhood Clusters can develop by providing services and technologies that could only be used within the Hub, start-up companies can be joined to cooperatives, and social enterprises can become employee owned.

MAKING NET CONCEPT

The concept of MN derives from the telecommunications sector in computer science, where the network allows the interconnection between several devices, allowing the transmission and reception of information. A network topology, then, is how computers, printers, and other devices are connected over a network. There are several topological configurations, One of the most popular topologies for the star and extended star topology. one of the evolution of the other; the exclusive advantage of this configuration is the possibility of integration with new systems without affecting the existing structures, allowing an expansion with almost infinite possibilities and solutions. The network is therefore proposed as a capillary infrastructure that develops throughout the urban fabric of the city, composing itself from the following elements:

* The HUB: In information technology and telecommunications, in the technology of computer networks, a hub (literal-
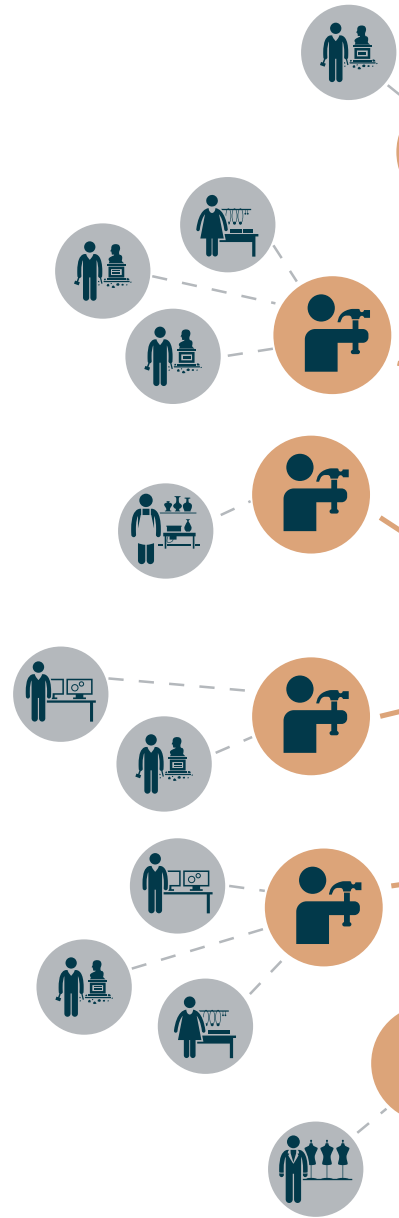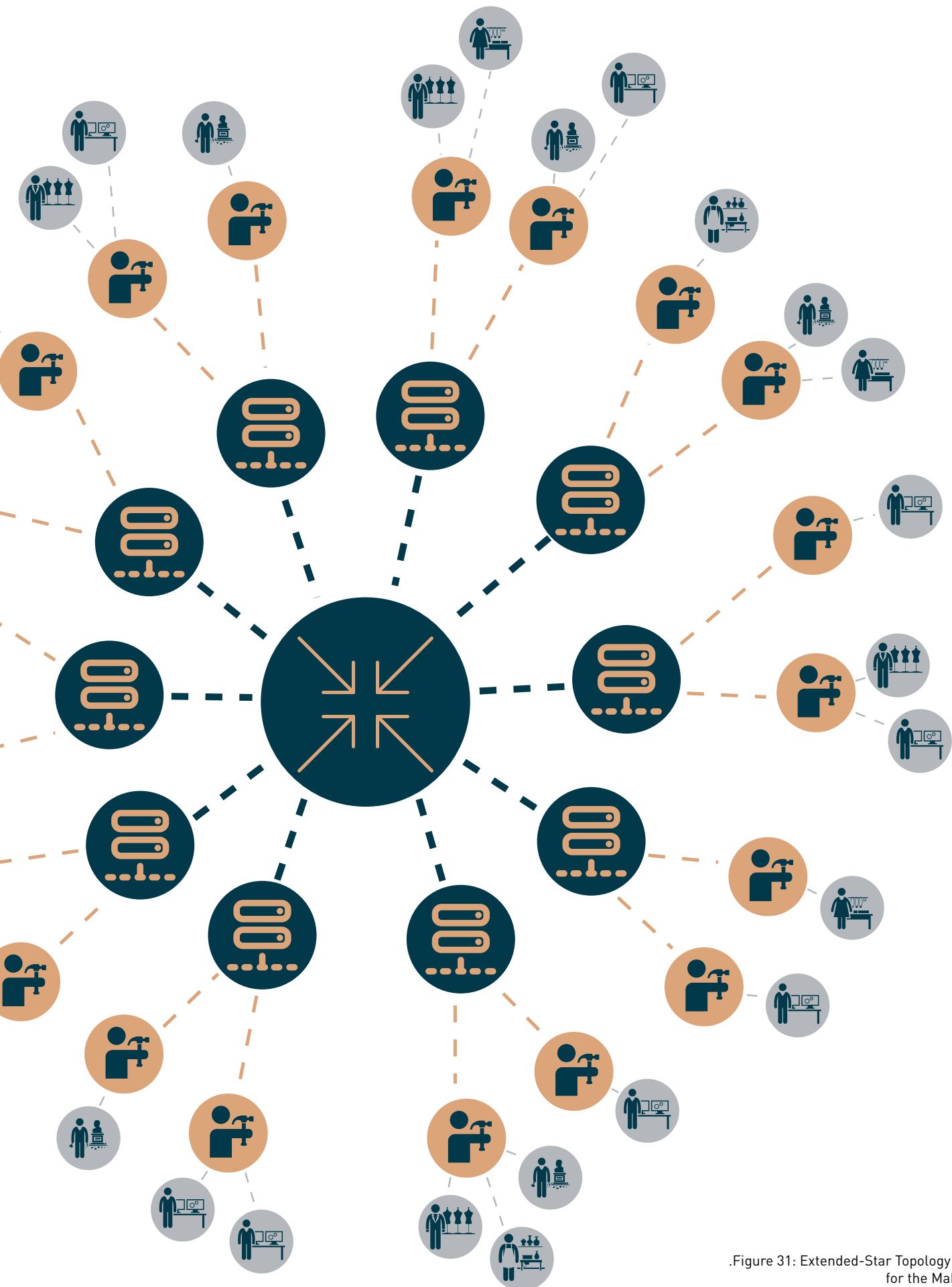
.Figure 31: Extended-Star Topology concept
for the Making Net
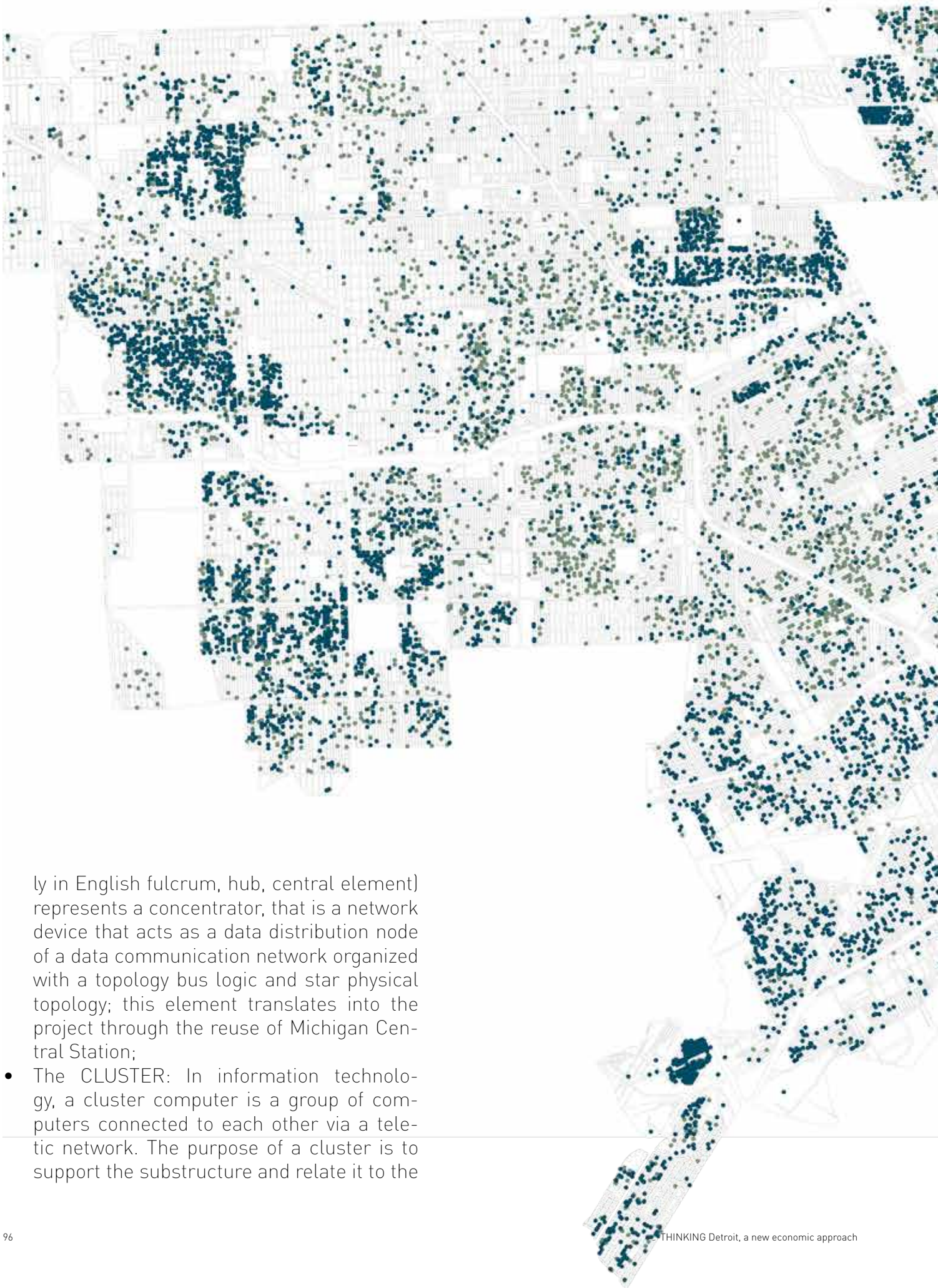
ly in English fulcrum, hub, central element) represents a concentrator, that is a network device that acts as a data distribution node of a data communication network organized with a topology bus logic and star physical topology; this element translates into the project through the reuse of Michigan Central Station;

• The CLUSTER: In information technology, a cluster computer is a group of computers connected to each other via a teletic network. The purpose of a cluster is to support the substructure and relate it to the

THINKING Detroit, a new economic approach

.Figure 31: Buildings Foreclosure and notified to demolition (Data obtained from Data Driven Detroit, 2016)

Foreclosure   Buildings

Buildings notified to demolition
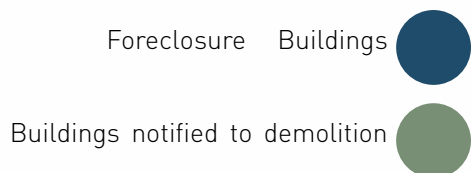
HUB. Within the project it translates into the adaptive reuse of buildings able to guarantee sufficient spaces for the management of incubators / learning spaces in the neighborhood (for example: factories and abandoned schools);

- STARTUPS / CRAFTSMANSHIPS: the lowest level of the network where most of the small businness of the city is developed. In the project they translate through the adaptive reuse of small factories and / or abandoned homes.

0   2.5   5   7.5   10 km
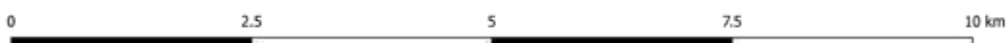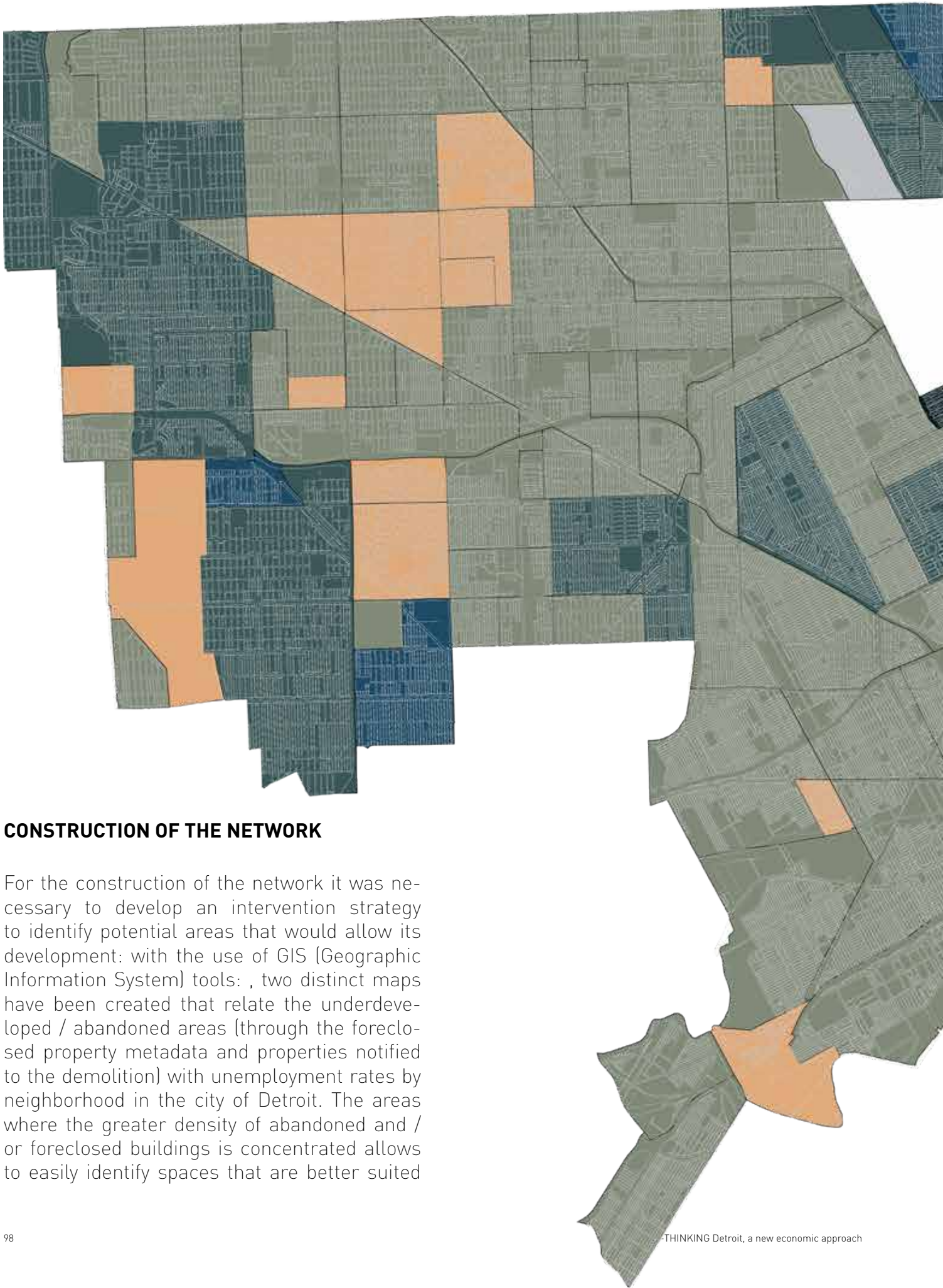
CONSTRUCTION OF THE NETWORK

For the construction of the network it was ne-
cessary to develop an intervention strategy
to identify potential areas that would allow its
development: with the use of GIS (Geographic
Information System) tools: , two distinct maps
have been created that relate the underdeve-
loped / abandoned areas (through the foreclo-
sed property metadata and properties notified
to the demolition) with unemployment rates by
neighborhood in the city of Detroit. The areas
where the greater density of abandoned and /
or foreclosed buildings is concentrated allows
to easily identify spaces that are better suited
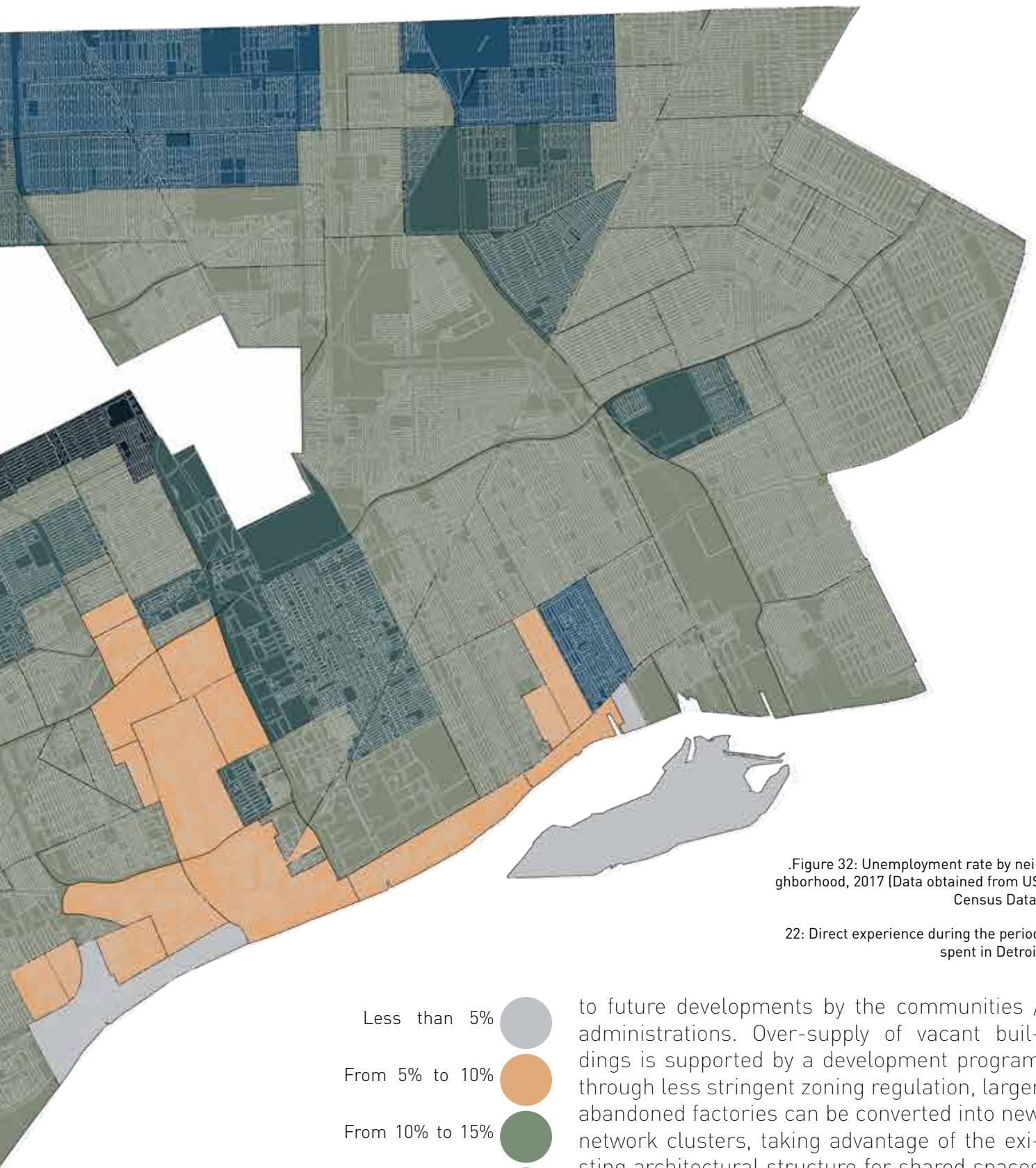
.Figure 32: Unemployment rate by nei-
ghborhood, 2017 (Data obtained from US
Census Data)

22: Direct experience during the period
spent in Detroit

Less than 5%

From 5% to 10%

From 10% to 15%

From 15% to 20%

From 20% to 25%

More than 25%

to future developments by the communities /
administrations. Over-supply of vacant buil-
dings is supported by a development program
through less stringent zoning regulation, larger
abandoned factories can be converted into new
network clusters, taking advantage of the exi-
sting architectural structure for shared spaces
between co-working and maker-spaces; homes
can be redesigned as craft workshops and new
start-up companies. An example, in Lawrence
Street, inside some houses of the street the-
re are service offices for the reception of new
tenants through the Airbnb service[22]. The cre-

0   2.5   5   7.5   10 km
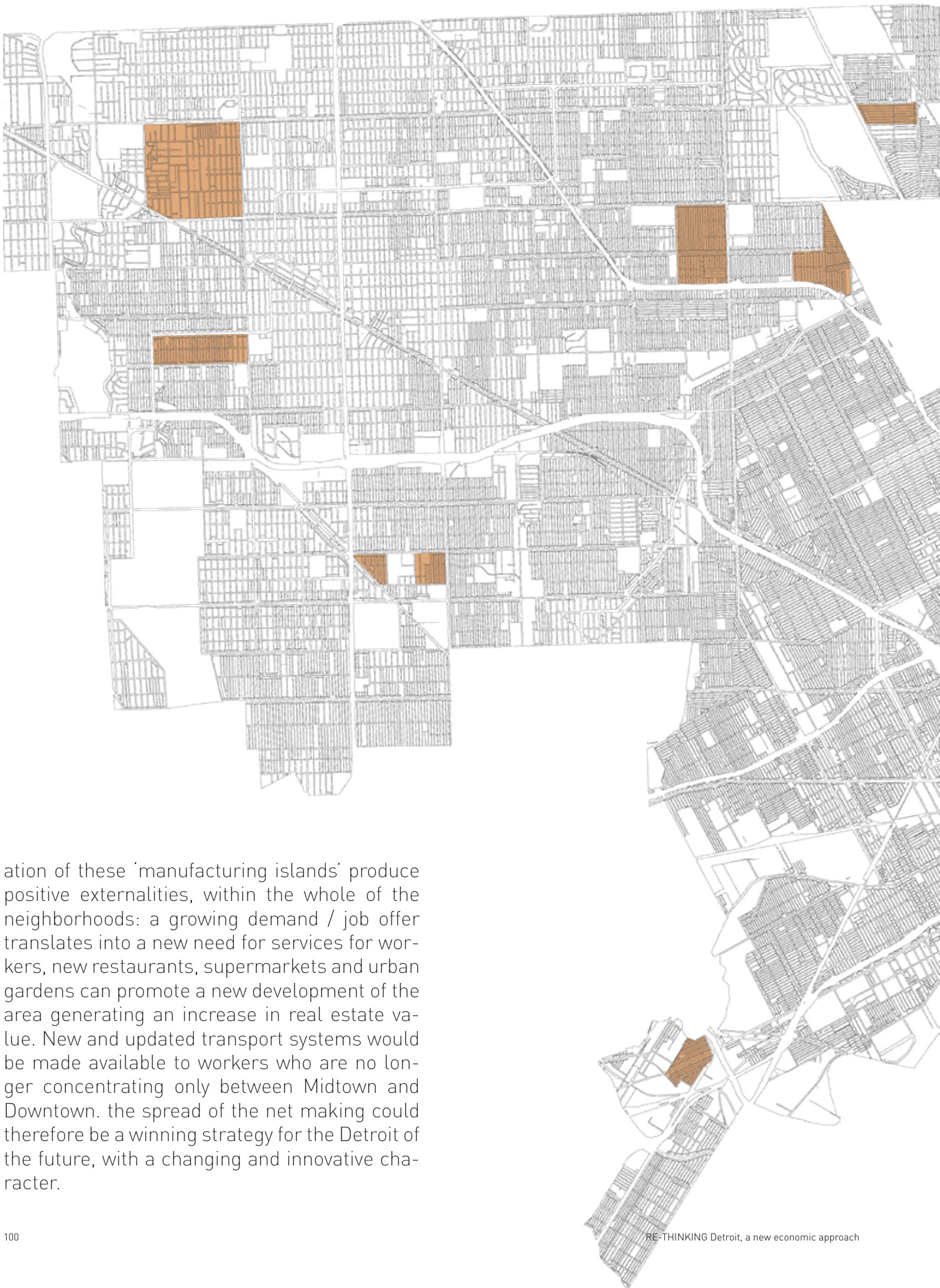
ation of these 'manufacturing islands' produce positive externalities, within the whole of the neighborhoods: a growing demand / job offer translates into a new need for services for workers, new restaurants, supermarkets and urban gardens can promote a new development of the area generating an increase in real estate value. New and updated transport systems would be made available to workers who are no longer concentrating only between Midtown and Downtown. the spread of the net making could therefore be a winning strategy for the Detroit of the future, with a changing and innovative character.
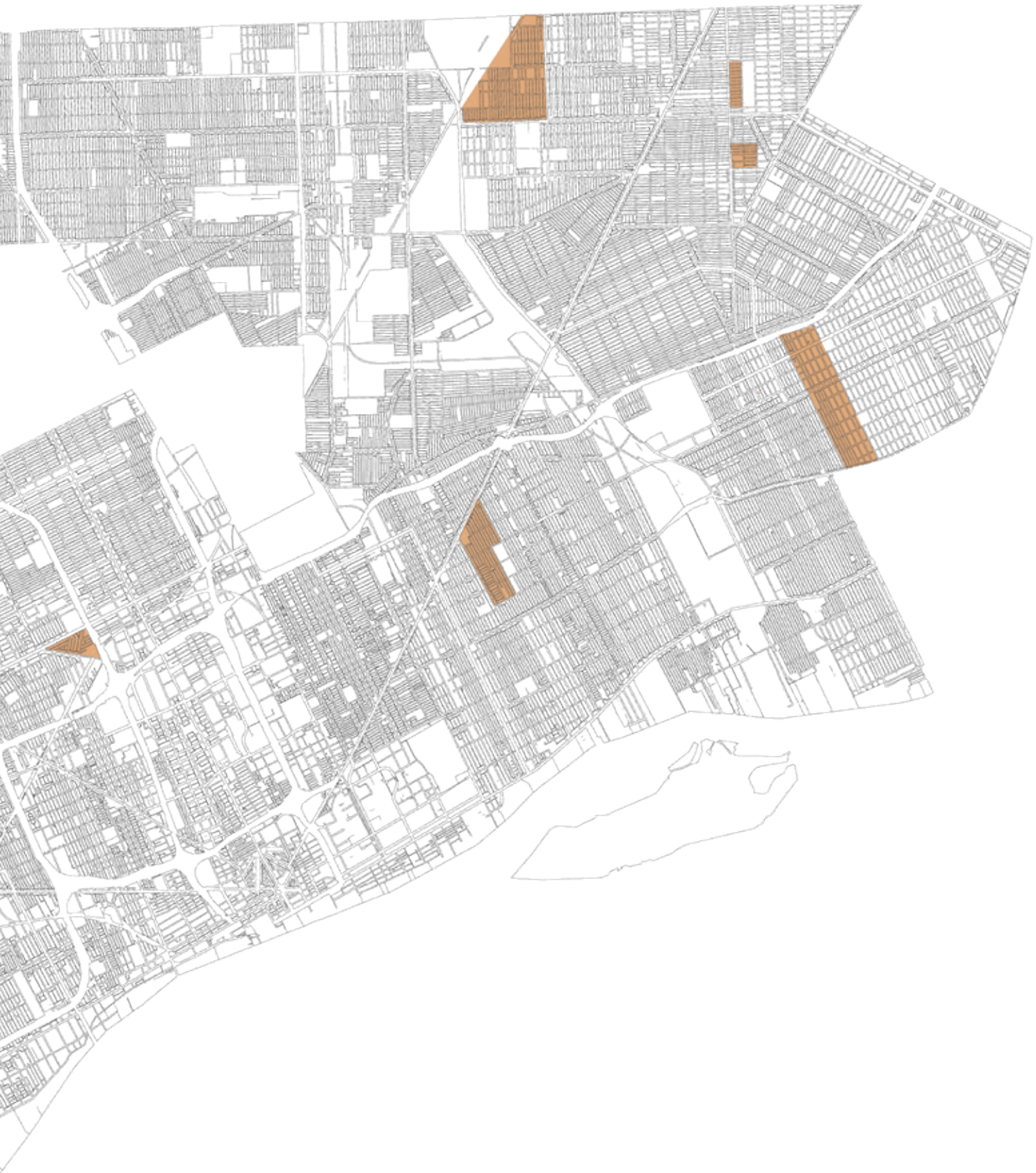
.Figure 33: Selected areas in the city for the net development

| 0 | 2.5 | 5 | 7.5 | 10 km |

THINKING Detroit, a new economic approach

Less than 5%

From 5% to 10%

From 10% to 15%

From 15% to 20%

From 20% to 25%

More than 25%
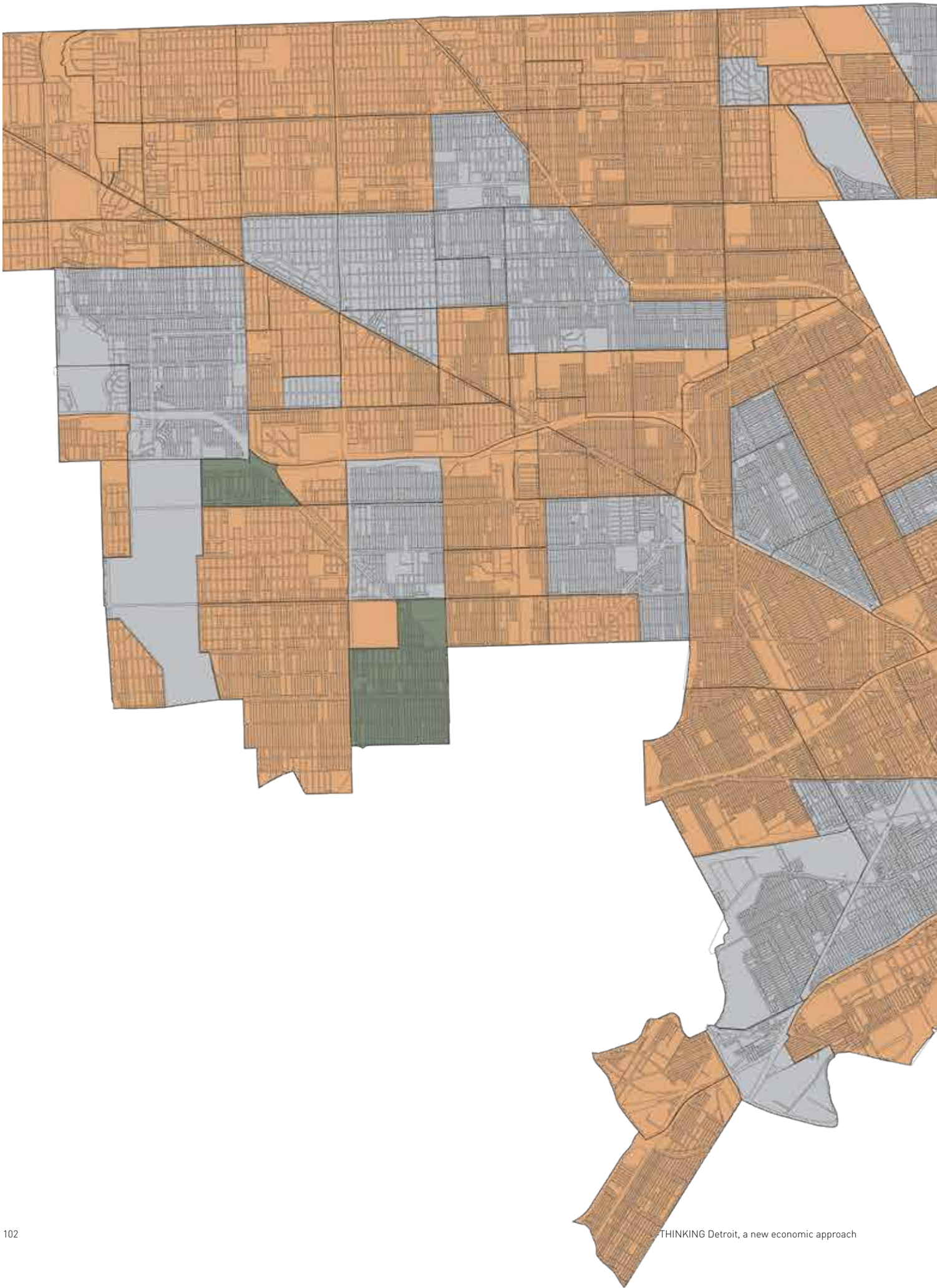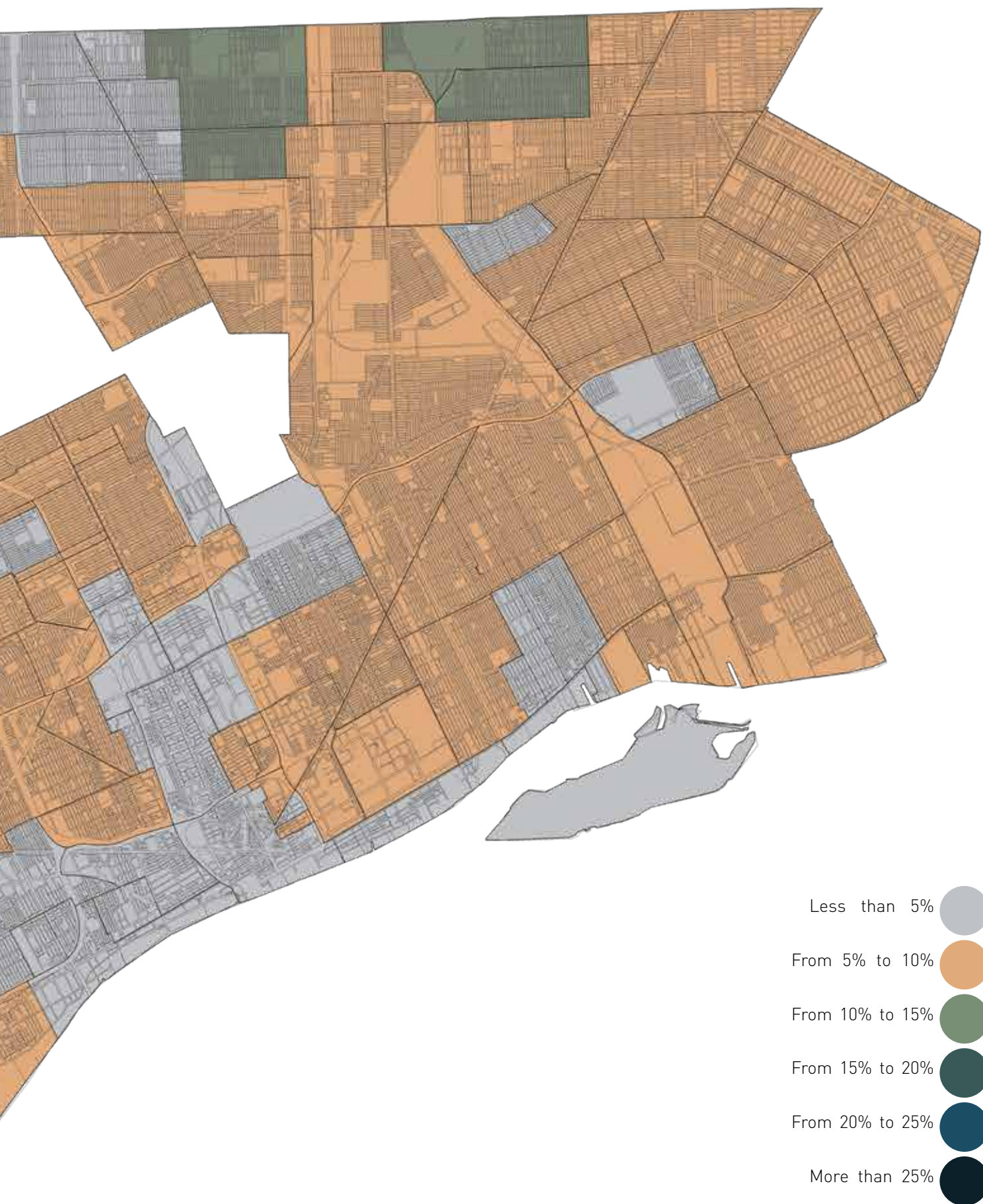
.Figure 34: Unemployment rate by nei-
ghborhood vision after the Making Net
development

0   2.5   5   7.5   10 km

RE-THINKING Detroit, a new economic approach

FACTORY CLUSTER

In previous pages: Car garage Depot, Liver-
noise Avenue
An abandoned shop in Midtown
personal photo archive

This kind of cluster are think to reuse the whole factory (or some parts) as a spaces of production / prototyping. The main difference between a residential cluster is the reuse of bigger spaces / areas, which allow the use of other functions (conference rooms, warehouses, areas for large machines) that normally could not be realized within the residential cluster; all the main functions are concentrated inside the factory. The reuse of old abandoned factories makes it possible to exploit the existing architectural structure for the purposes of work production (such as: service rooms, load areas, etc.).

RECEPTION
common areas for use by multiple startups and companies in the cluster

WORKSHOP
services and equipment for common use (CNC, 3D printers, milling cutter, laser scanner, etc.)

SYSTEMS
the old systems plants can be converted and reused for the new plants in the cluster

SYSTEMS
the old systems plants can be converted and reused for the new plants in the cluster

DEPOTS
old factory depots can be reused by cluster companies, providing a single loading area and various storage systems

RESIDENTIAL
CLUSTER

This kind of cluster are think to renovate some parts of the residential neighborhoods with an high-level vacancy. The houses can be converted as a offices, as a small craftsmanship laboratories . The vacant land between the houses can be used as a common warehouse / storage area. Unlike the cluster factory, the residential cluster allows not much sharing of workspaces, as the greater sharing of public spaces, creating a more widespread system within the neighborhood.

MANAGEMENT
a house can be used for cluster management and serves as a reference for the neighborhood

LEARNING
Learning spaces can be created as new attractions for unemployed or first-time neighborhood residents

ROADS
The existing road system in the neighborhood is the means of sharing the cluster

CRAFTSMAN
The houses can be adapted to small laboratories: carpentry, blacksmith, startup etc.

PARCEL
The vacant lots can be used for the storage of bulky materials, etc. by all work activities

THE HUB AND THE PUBLIC SPACE

THE HUB AND THE PUBLIC SPACE

MICHIGAN CENTRAL STATION HISTORY

The presence of such an important railway infrastructure derives from the geographical position of the city: a border town with Canada that served as an interchange for all the states of the inner USA, besides being one of the first products for the great transport of the industrial society of the 1800.

From its beginning in the 1830s, Michigan's railroad system increased to a high of more than 15000 route kilometers by the early 1900s. However, as the road system improved and use of automobiles and trucks increased, the number of miles of track began to contract. Today, Michigan's railroad system has some 6000 route kilometers of track[23].

The railway infrastructure, however, also following the car boom, continued to be a capillary and fundamental system for the economic development of the state; passenger and freight rail service in Michigan provides significant economic and environmental benefits to the state: industrial development could have been hampered by the lack of railway service, therefore becoming a key localization factor for many new companies seeking to locate or expand in the state. Even the environmental benefits could be observed: rail transport can handle transport three times more efficiently than trucks on a ton-mile basis. The United States Environmental Protection Agency (EPA) estimates that a typical freight train emits only a third than trucks. Rail transport saves about $ 266 million a year in pavement damage and reduces truck congestion on Michigan roads[24].

The strong railway infrastructure of the time also branched into Detroit, creating direct links to the large factories of the city; the major companies of the Rust Belt were directly connected to each other by rail.

The creation of the underground tunnel between Windsor and Detroit in 1910 simplified the connections between the two states, significantly increasing the traffic volumes, so as to make it necessary a new hub for the sorting of goods (and people) departing and arriving from the city. As already noted, the expansion of

In the cover: 1998 Michigan Central Station, Roosvelt Post Office and the railway system seen by the roof of the 1448 Wabash St Warehouse, panoramic photo, personal photographic archive

23: MDOT, Michigan's Railroad History, p.4

24: MDOT, Michigan State Rail Plan, p.5
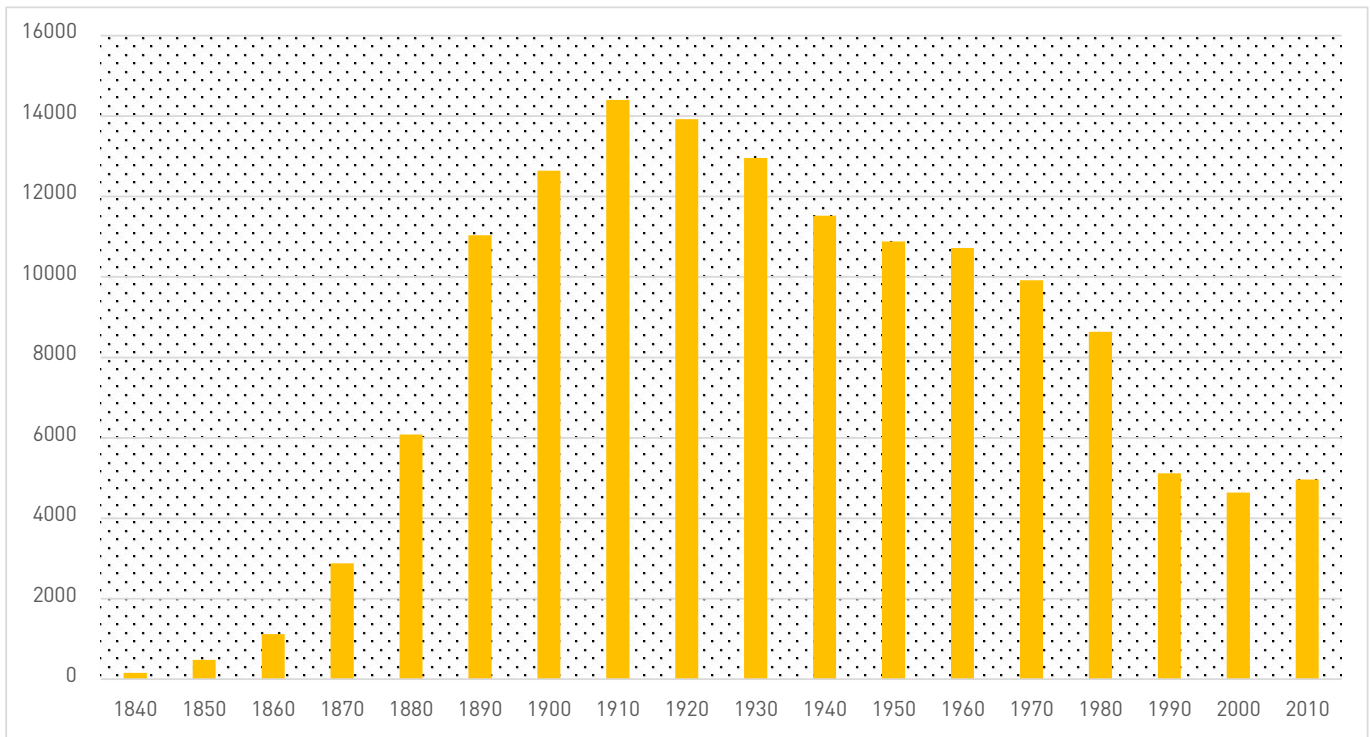
the automotive market and the 1956 Highway act contributed to the gradual restriction of the railway network: the car had created a decline in demand for public transport by rail: suddenly the car supplanted the railway innovation and speed of connection, qualities held by the train for more than a century. Freight transportation continue to be regularly used, as well as lines that directly link the factories; however, the continuous decrease in demand by the inhabitants of Michigan, leads to downsizing / dismantling a whole series of ancillary services: the large railway stations are less and less frequented by travelers, sections of itineraries reserved for public transport are closed considered no longer remunerative , forcing to close at the smaller stations served by them. In the case of Detroit, the MCS was closed in 1988 after the last passenger train left Chicago: therefore we find ourselves faced with a structure that is difficult to manage for the administrations, impotent in reproducing new functions; ; the externalities result in an overall depression of the neighboring area, now oversized and underutilized: with the closure of the MCS, also the Roosevelt post office became totally unusable due to a fire the year before, and was no longer reused. At the same time, with the decentralization of companies outside the inner city, the railway system also assumes a collateral connotation, which is also oversized. Detroit therefore finds itself having to manage an ever greater quantity of railway sediments in strong and degraded and in a state of decommissioning: a series of terrain vague that fragment a landscape for years strongly in a state of progressive abandonment.

In the last twenty years of the station, the MCS is targeted by vandals, squatters and writers, accentuating the degradation; in 1996, Controlled Terminal Inc. (co-owner of the Ambassador Bridge) acquired the property; which demolishes the train shel-

.Figure 37: Kilometers of route track in Michigan, 1840-2010 (source: Michigan State Rail Plan, Final report, Michigan Department of Transportation - MDOT, 2011)
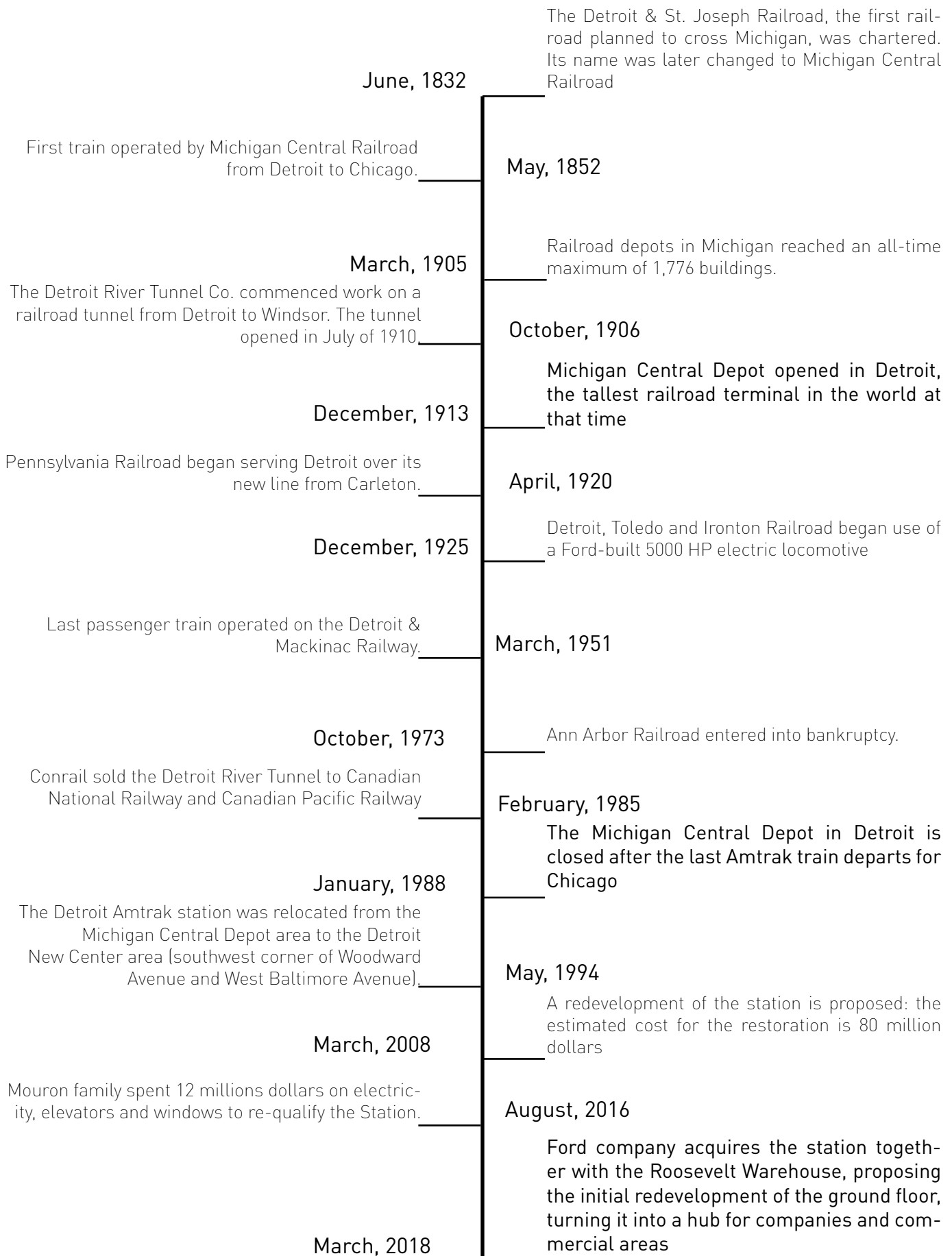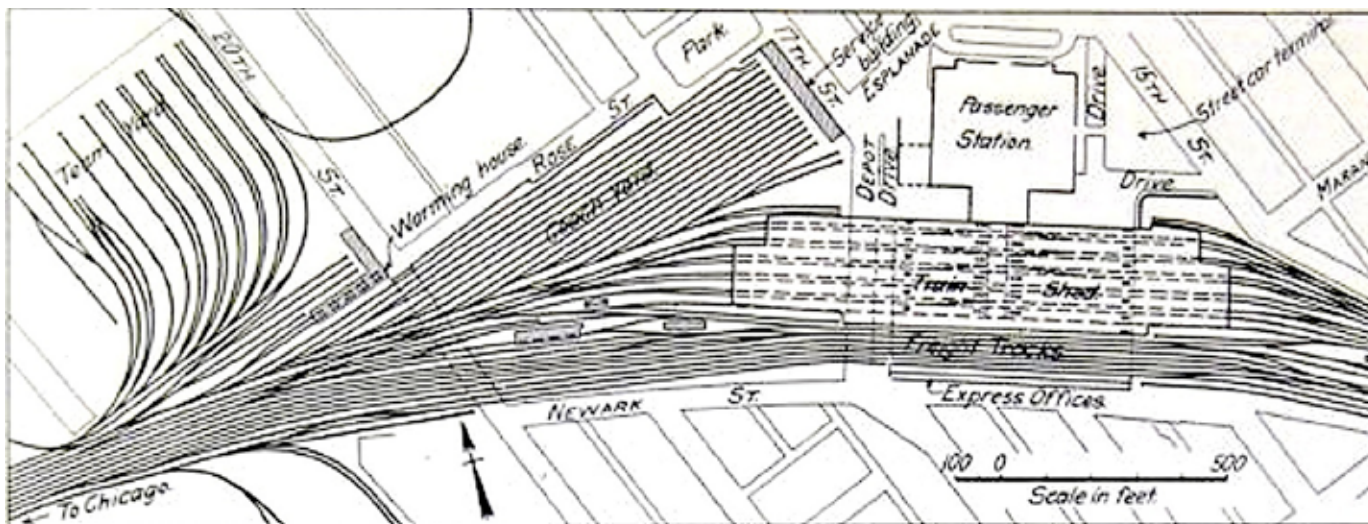
June, 1832

The Detroit & St. Joseph Railroad, the first railroad planned to cross Michigan, was chartered. Its name was later changed to Michigan Central Railroad

First train operated by Michigan Central Railroad from Detroit to Chicago.

May, 1852

March, 1905

Railroad depots in Michigan reached an all-time maximum of 1,776 buildings.

The Detroit River Tunnel Co. commenced work on a railroad tunnel from Detroit to Windsor. The tunnel opened in July of 1910.

October, 1906

Michigan Central Depot opened in Detroit, the tallest railroad terminal in the world at that time

December, 1913

Pennsylvania Railroad began serving Detroit over its new line from Carleton.

April, 1920

Detroit, Toledo and Ironton Railroad began use of a Ford-built 5000 HP electric locomotive

December, 1925

Last passenger train operated on the Detroit & Mackinac Railway.

March, 1951

October, 1973

Ann Arbor Railroad entered into bankruptcy.

Conrail sold the Detroit River Tunnel to Canadian National Railway and Canadian Pacific Railway

February, 1985

The Michigan Central Depot in Detroit is closed after the last Amtrak train departs for Chicago

January, 1988

The Detroit Amtrak station was relocated from the Michigan Central Depot area to the Detroit New Center area (southwest corner of Woodward Avenue and West Baltimore Avenue).

May, 1994

A redevelopment of the station is proposed: the estimated cost for the restoration is 80 million dollars

March, 2008

Mouron family spent 12 millions dollars on electricity, elevators and windows to re-qualify the Station.

August, 2016

Ford company acquires the station together with the Roosevelt Warehouse, proposing the initial redevelopment of the ground floor, turning it into a hub for companies and commercial areas

March, 2018

ters and dismantles the old cargo area for freight transportation. The character and dimension of the MCS prevails over the will of the community to demolish it: in 2006, the Detroit municipality elaborates a list of artefacts of historical and cultural interest within a masterplan proposal, inserting the station[25]. Therefore, the protection of the new historical heritage becomes a priority: different intervention plans are proposed for the redevelopment of the station, none of them, however, will come to life due to funding problems. In 2016, the Mouron administration completes the rehabilitation works (which included the reinstallation of electricity, new windows, and freight elevators) after spending more than 12 million dollars.

25: City of Detroit, Non-motorized Urban Tranportation Master Plan, p.23

Only in 2017, through an initiative of the Detroit Homecoming, the MCS hosted its first legal event since the building shut down in 1988, a show of lights and colors through the windows[26]. Finally, in June 2018, the Moroun administration ceded the ownership of the station to Ford, announcing a new plan that will provide for the re-use of the MCS turning it into a new research hub for autonomous vehicles of the company a new reference campus for the community of Corktown (together with the acquisition of the Roosevelt Post Office), where there will be shops and restaurants located in corrispondence to the atrium, with the official opening in 2022[27].

26: https://www.metrotimes.com/the-scene/archives/2017/09/14/the-michigan-central-station-light-show-is-the-coolest-thing-youll-see-all-week

27: http://www.crainsdetroit.com/article/20180617/news/663776/fords-future-train-station-to-be-part-of-new-transportation-model

MICHIGAN CENTRAL STATION COMPOSITION

Unlike the city's built heritage, Michigan Central Station has been able to withstand the demolition policies of previous years. With the inauguration in 1913, it immediately became known as the highest railway station on the American scene; the leap in scale between the Corktown buildings and the MCS is considerable: Designed in the Beaux Arts style by the firms of Warren and Wetmore and Reed and Stem (who also designed New York's Grand Central Terminal of the company) it towers over the landscape of modest height residential and commercial buildings. Structurally the building is steel framed, encased in concrete, and clad in
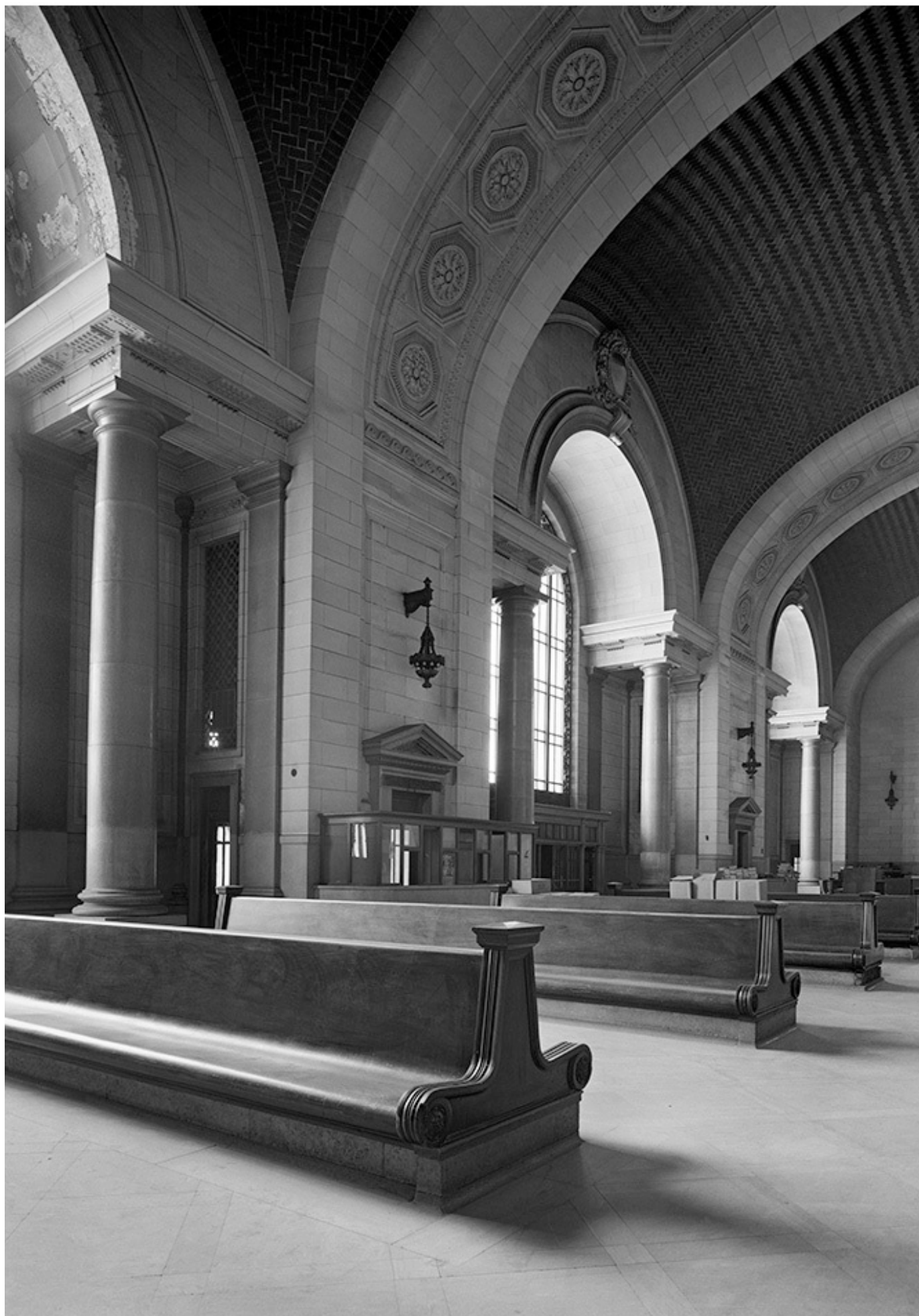
Driveway

Reading room — Telephones

Cafe

General waiting room

Women's room

Service

Telephones — Telegraph

Telephones

Newsstand

Restaurant

Lunch counter

Vault

Ticket office

Ticket lobby

Arcade

Drug store

Toilets

Baths

Elevator hall

Boiler flue

Parcels

Cigars

Bar-ber shop

Information

Baths

Concourse

Coal and ash tunnel

Carriage entrance

Cab office

Baggage Master

Station Master

Men's room

Cabmen

Smoking room

Toilets

Baggage room

Ramp (down) to trains

Ramp

Covered bridge over drive

Streetcar terminal

Scale: 0   50   100 ft.

Customs

Edge of loading platform

Roll-up doors

Teamsters clerk

Postal clerks

Lavatory

Railroad porters

Parcel Post

Elevators

Supply room

U.S. Mail

Elevators

Stairs (up) to trains

Baggage

Bonded room

Lamp room

Unclaimed baggage

Telegraph room

Elevators

Icebox

Refrigerator

Bonded room

Value room

American Express

Perishable room

Value room

6-ton scale

Waybill coops

Money room

Sorting bins

Scales

On-hand room

Drivers

Bad-order room

Sheet writers
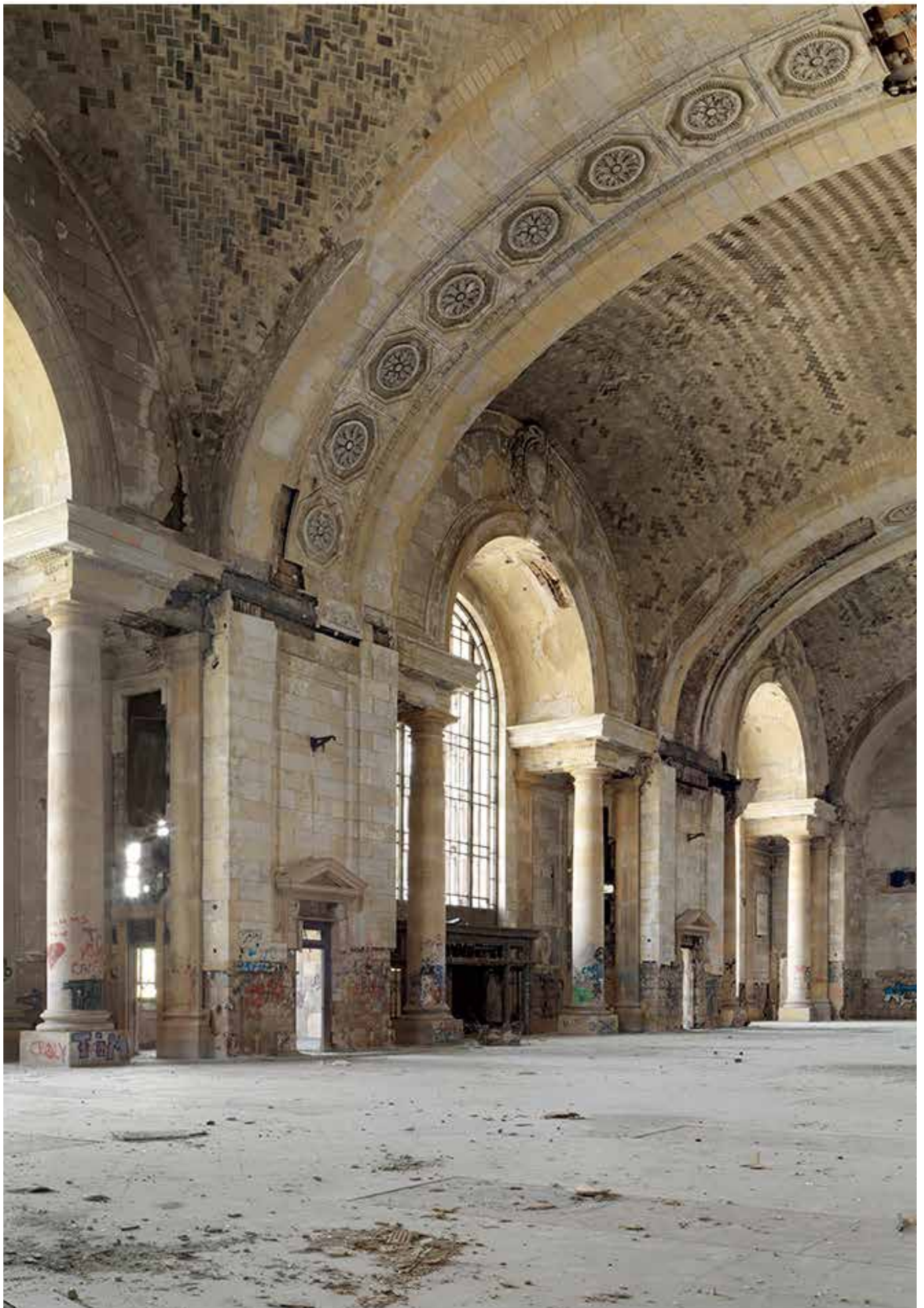
.Figure 39: MCS actual floor plan plus
undertrack basement
personal photo archive

.Figure 40: MCS programmatic diagram of
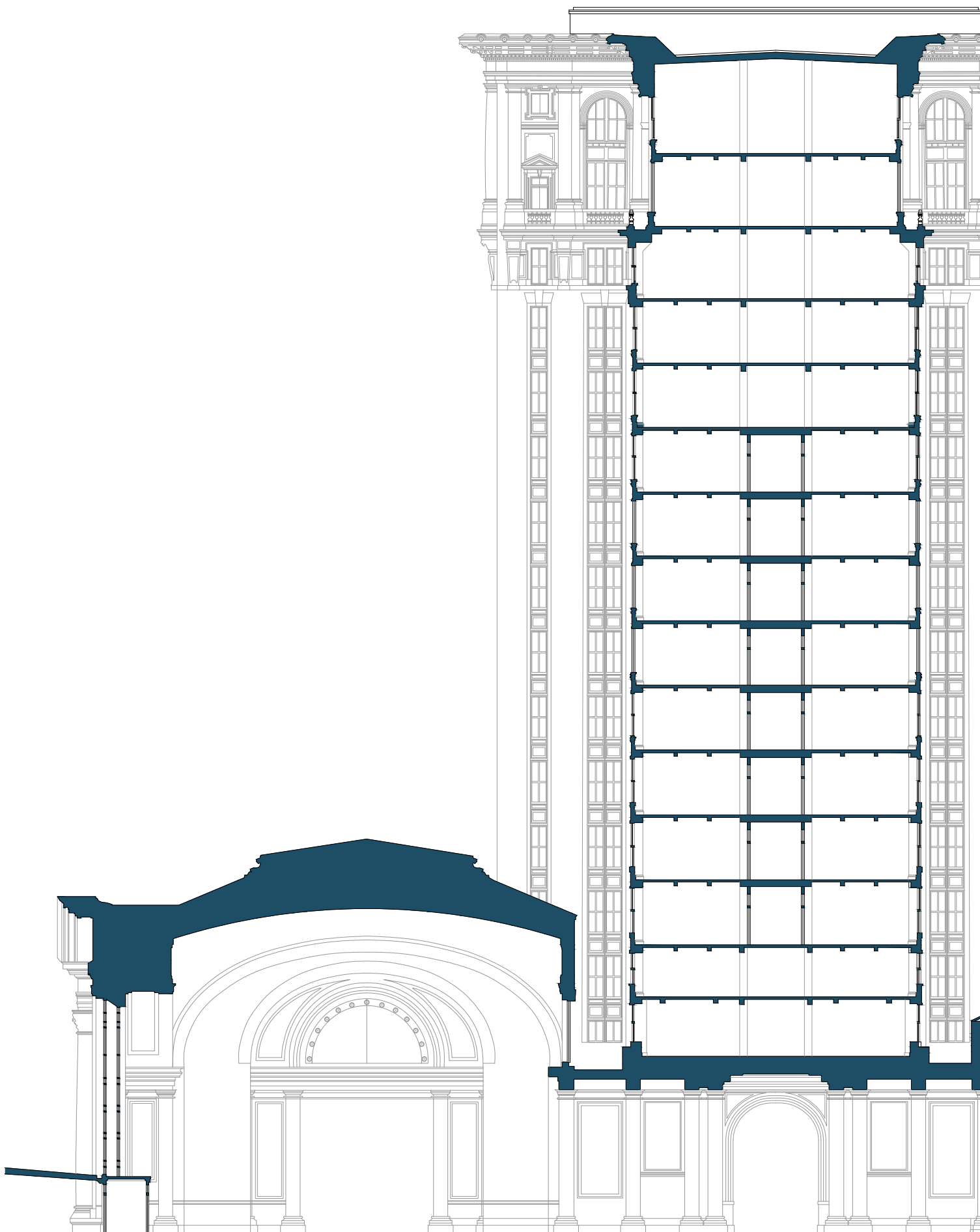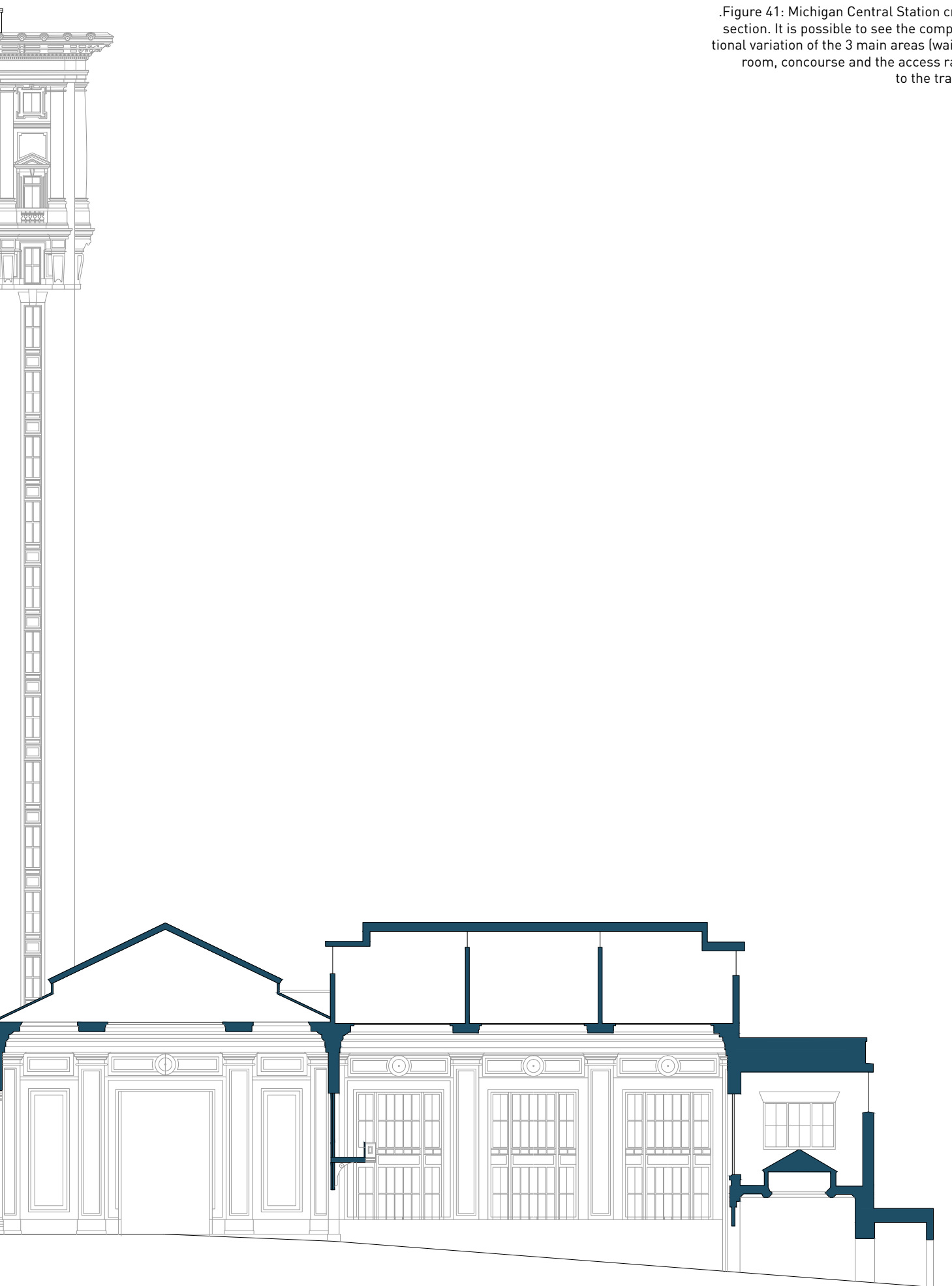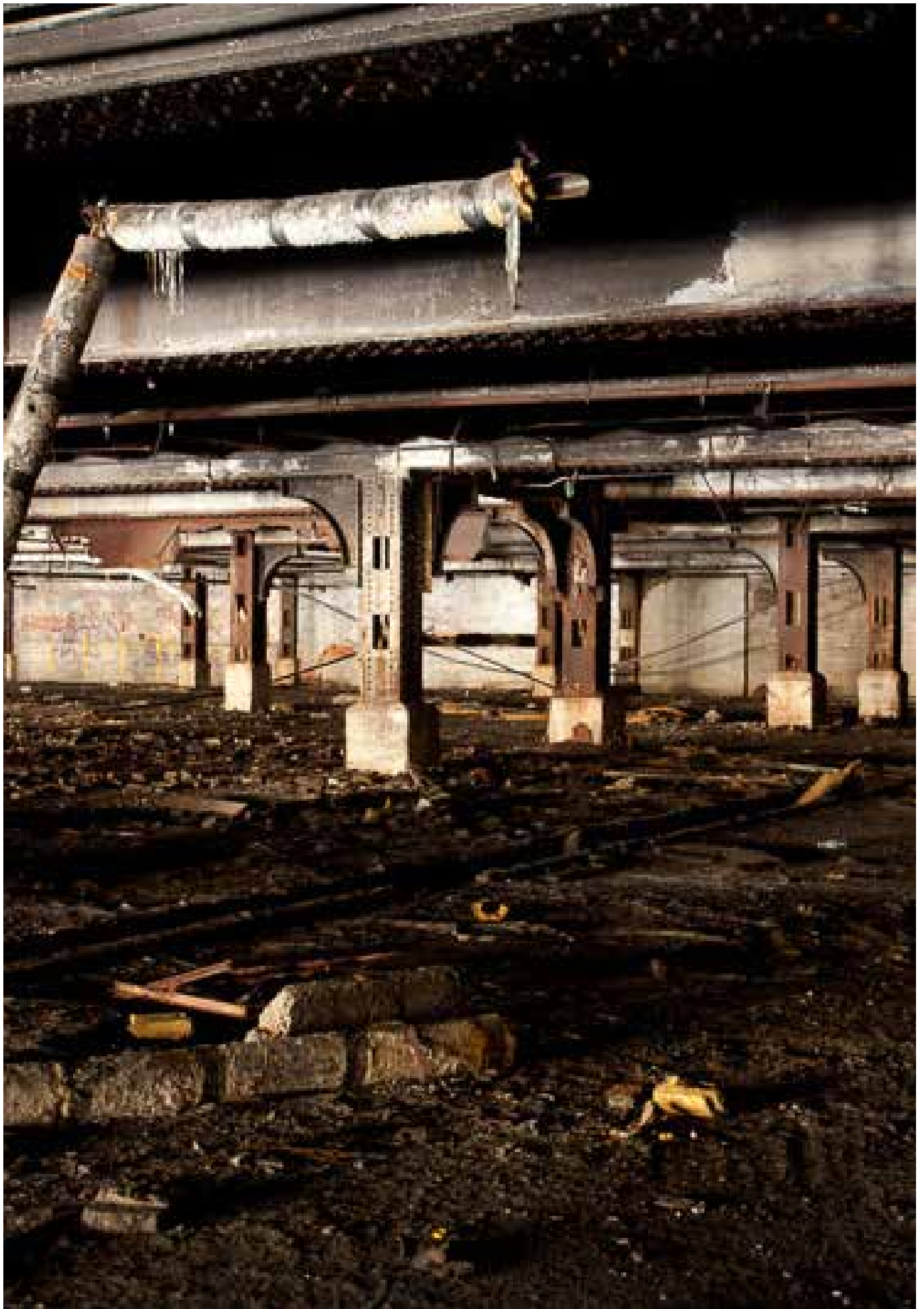the MCS
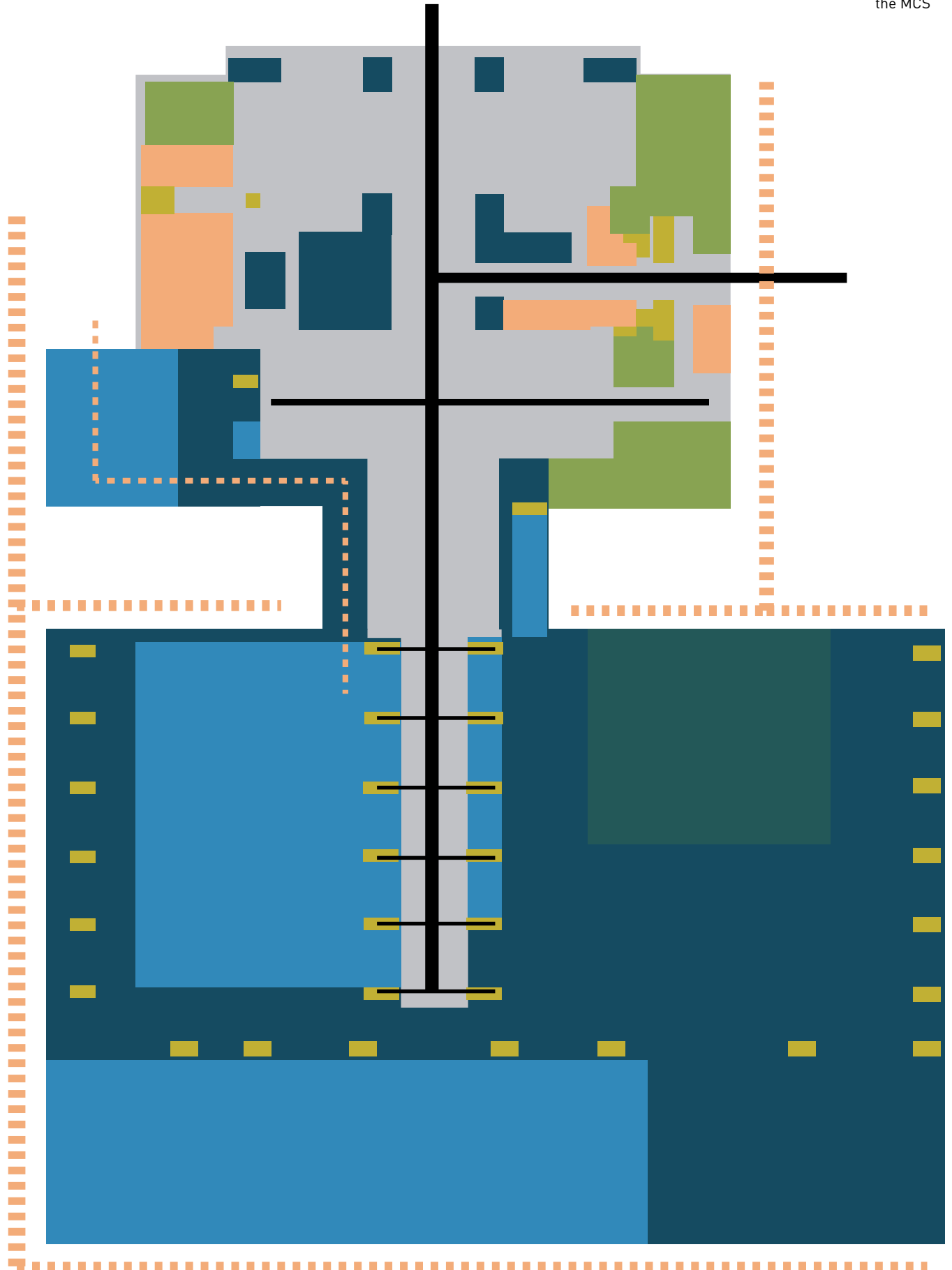
THE HUB AND THE PUBLIC SPACE

RE-THINKING Detroit, a new economic approach

RE-THINKING Detroit, a new economic approach

In the previous pages: structural mesh of the
MCS railway system, seen from the subway
on Vernor St. and in the basement
personal photo archive
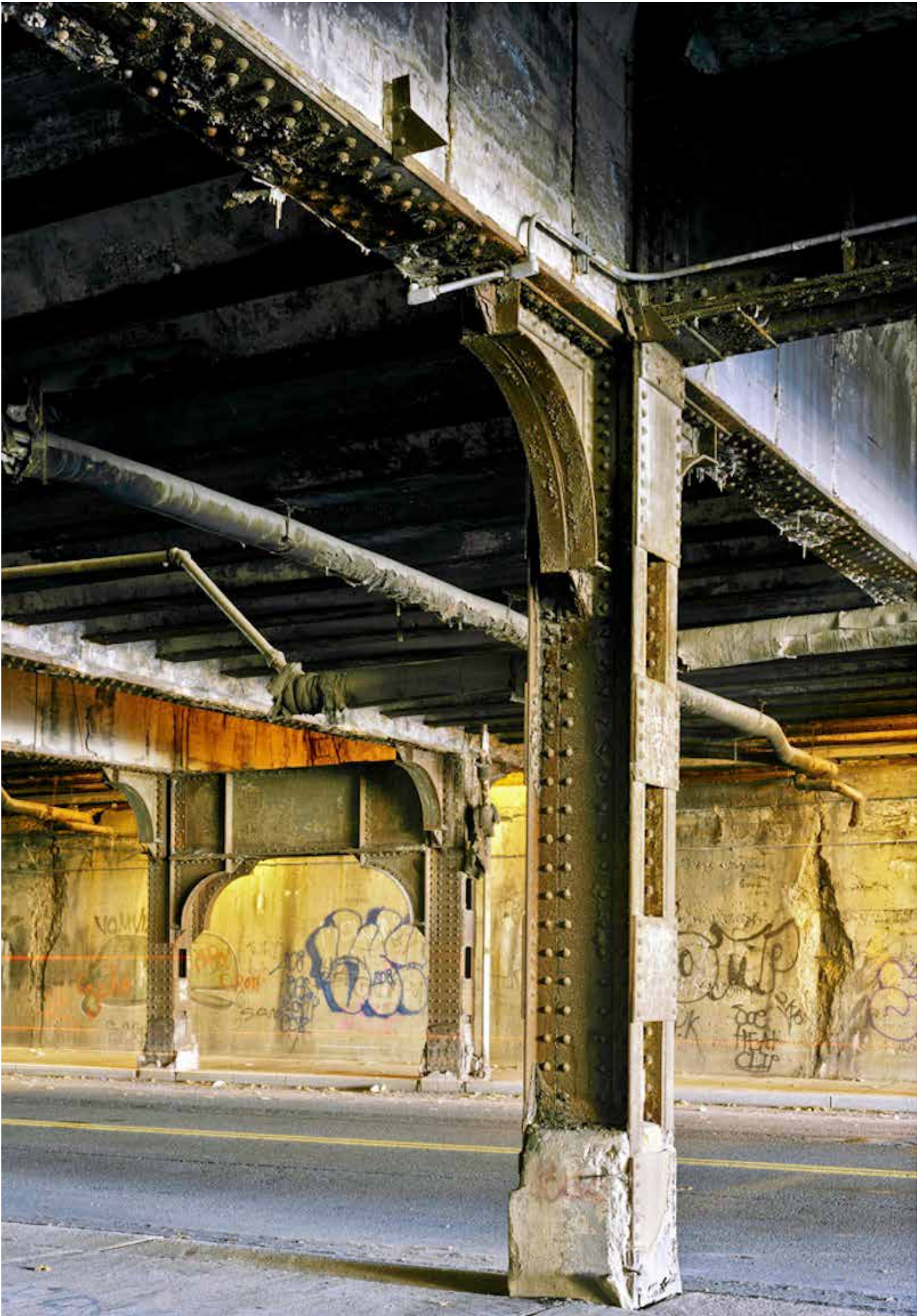
either stone or tan veneer brick. The basement level was designed to serve as the passenger train terminal connection.

The formal relationship between the ground floor and the basement under the tracks is defined by the programmatic axis that runs in a straight line the length of the whole system, interrupted only by the function of a barrier for ticketing control in the first years. After that, the change in height between the two floors is resolved through the ramp that led directly to the tunnel. The factory can be conceived as a dual dichotomy between ground floor - upper levels, and between ground floor - railway basement: where the programs of the two main masses begin to conflict(ground floor - upper levels) is at the junction of the two. The tower does seem to float producing inconvenient spatial gaps between the two masses because of setback and the high ceilings of the waiting room and main concourse below.

Each of the fifteen floors has a capacity of almost 1700 square meters. The first two levels were for mechanical use and the other thirteen were office levels; of those office levels five were never wholly completed and the top two floors never occupied.
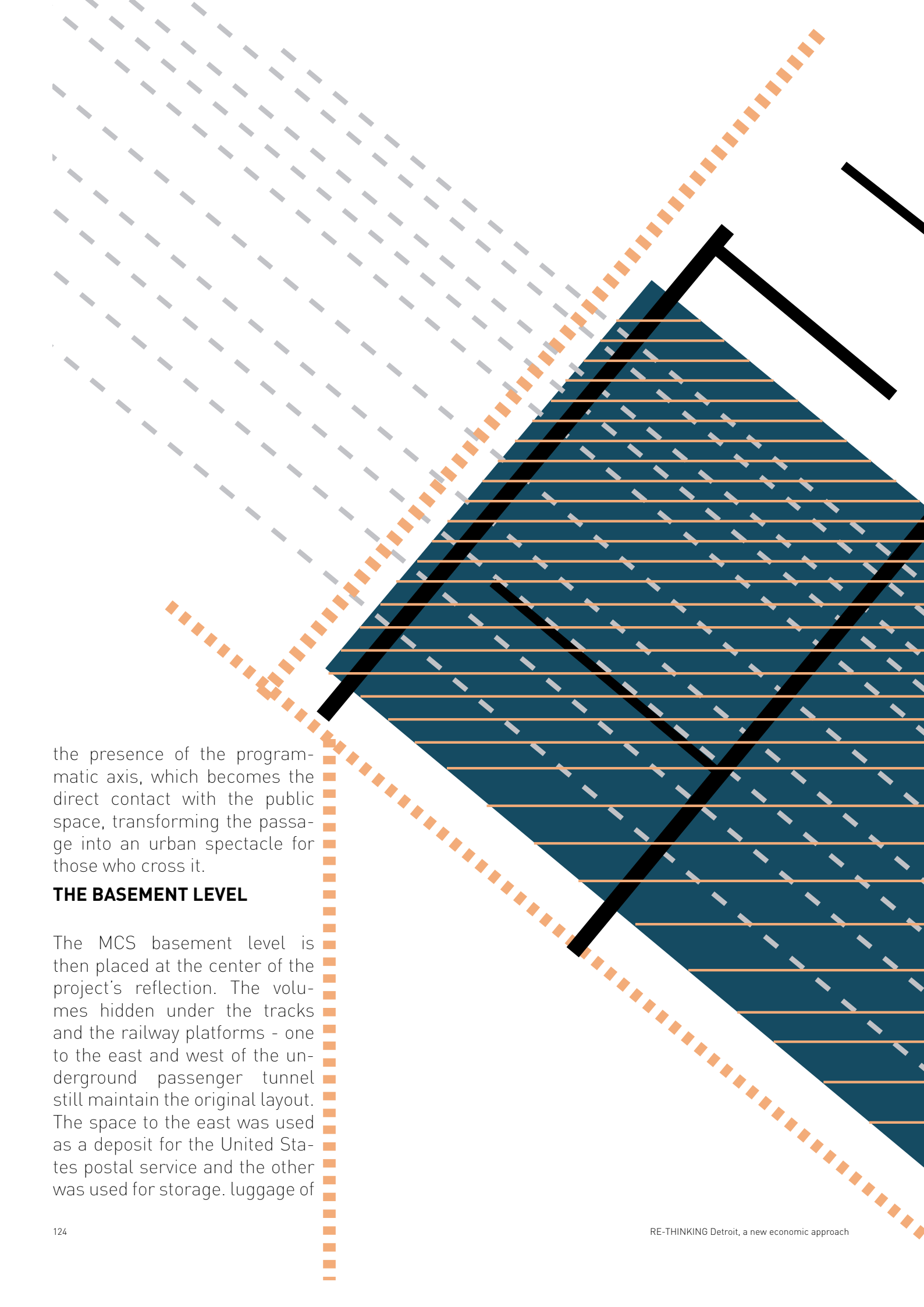
Along the programmatic axis of the ground floor, the traveler was involved in an always variable spatial sequence starting from the large vaulted space of the waiting room to the lower corridor for access to the railway lines.

FROM MCS TO THE HUB

The political and morphological space of the city is dominated by a grid, which incorporates the continuity of the city and the original rural system. In this subdivision where the private sphere of the city develops, public space aims to break the continuity of the scheme through dimension and orientation. The architectonical object is endowed with its own autonomy and identity in order to move the political grid, making it complex. However, the station established an orientation for its approach that had no relation with the previous network system, nor with the perpendicular to the diagonal Michigan Avenue. In the process of demolition, entire blocks of residential and commercial activities are taken away,
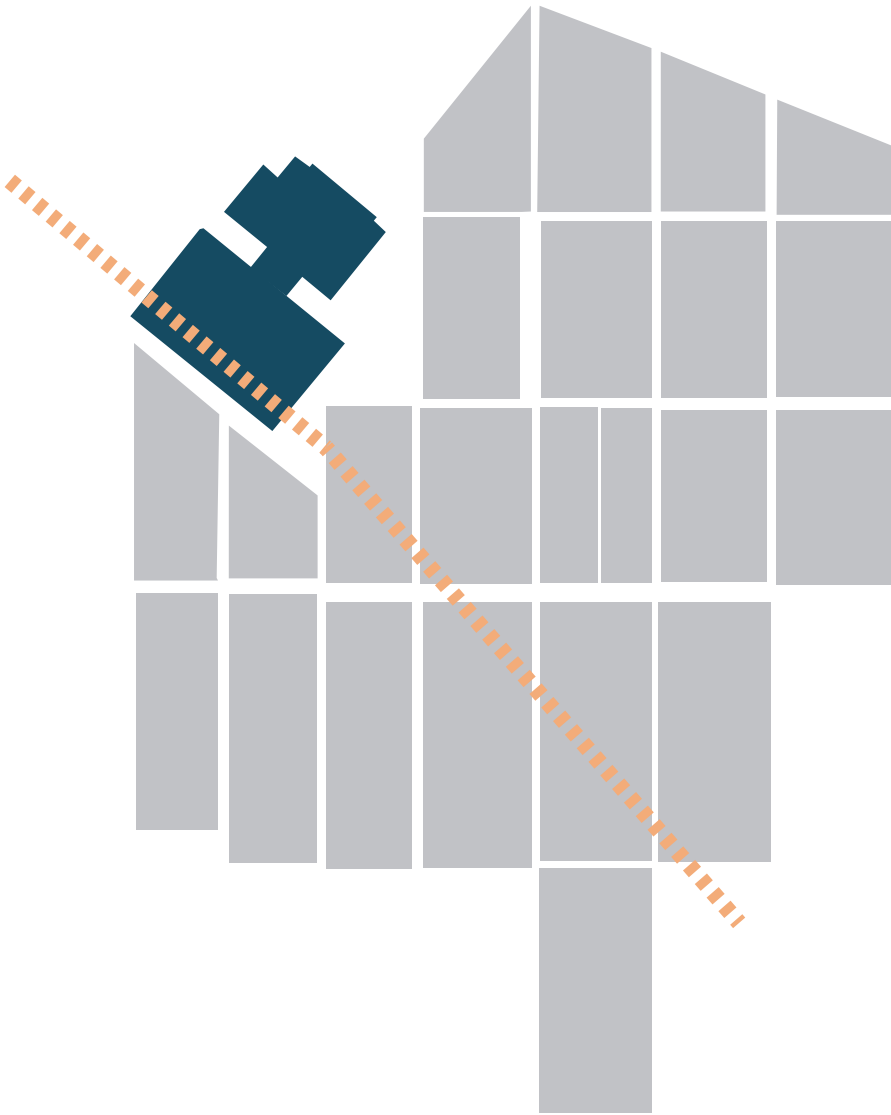
thus initiating a fragmentation of the district accentuated by the presence of a barrier like the railway system. However, the misalignment is considered within the project proposal no longer as an element of separation but a new design element: the program dictated by the railing of the railway is maintained, on which the original grid of the urban system is superimposed, giving rise to a new network used as a parameter generating the project rules. The integration of the existing public programmatic axes (Vernor St. and 14th St.) on the matrix defines its boundaries, through their new reuse; the main programmatic axis that runs the entire length of the MCS takes on a new meaning as a semi-public space covered through the opening that directly faces Newark St., presenting itself as a new space for relations between the north-south part of the district. Also in this case, the project again assumes a dichotomy between the intervention of the ground floor of the MCS and the railway underground level: as already noted, the MCS program has already been extensively studied and structured, therefore the type of intervention within it it will be mainly conservative, unlike the basement level, where interventions will be more oriented towards an adaptive reuse of space. Separation between the two elements is however mitigated by
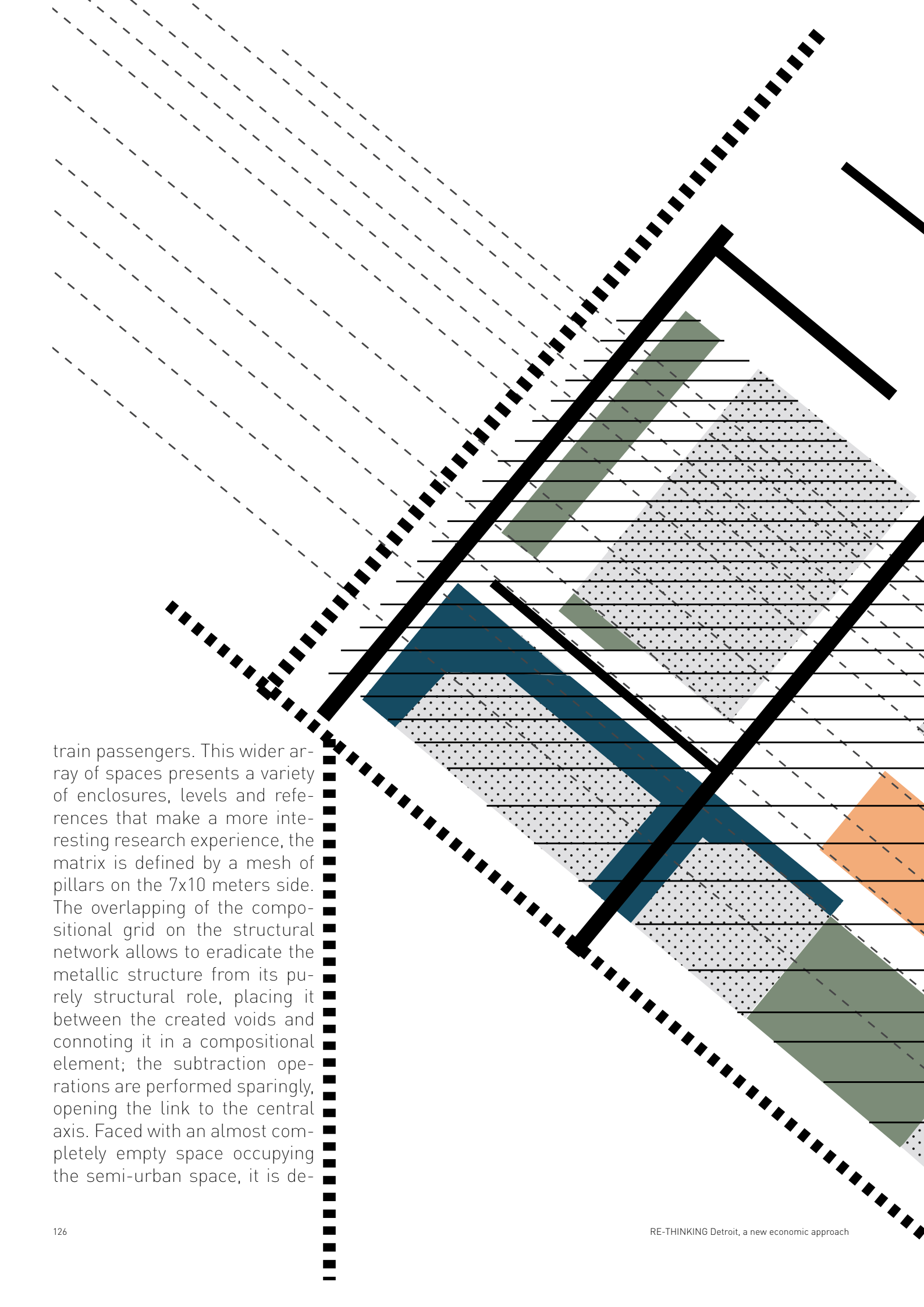
the presence of the program-matic axis, which becomes the direct contact with the public space, transforming the passa-ge into an urban spectacle for those who cross it.

THE BASEMENT LEVEL

The MCS basement level is then placed at the center of the project's reflection. The volu-mes hidden under the tracks and the railway platforms - one to the east and west of the un-derground passenger tunnel still maintain the original layout. The space to the east was used as a deposit for the United Sta-tes postal service and the other was used for storage. luggage of
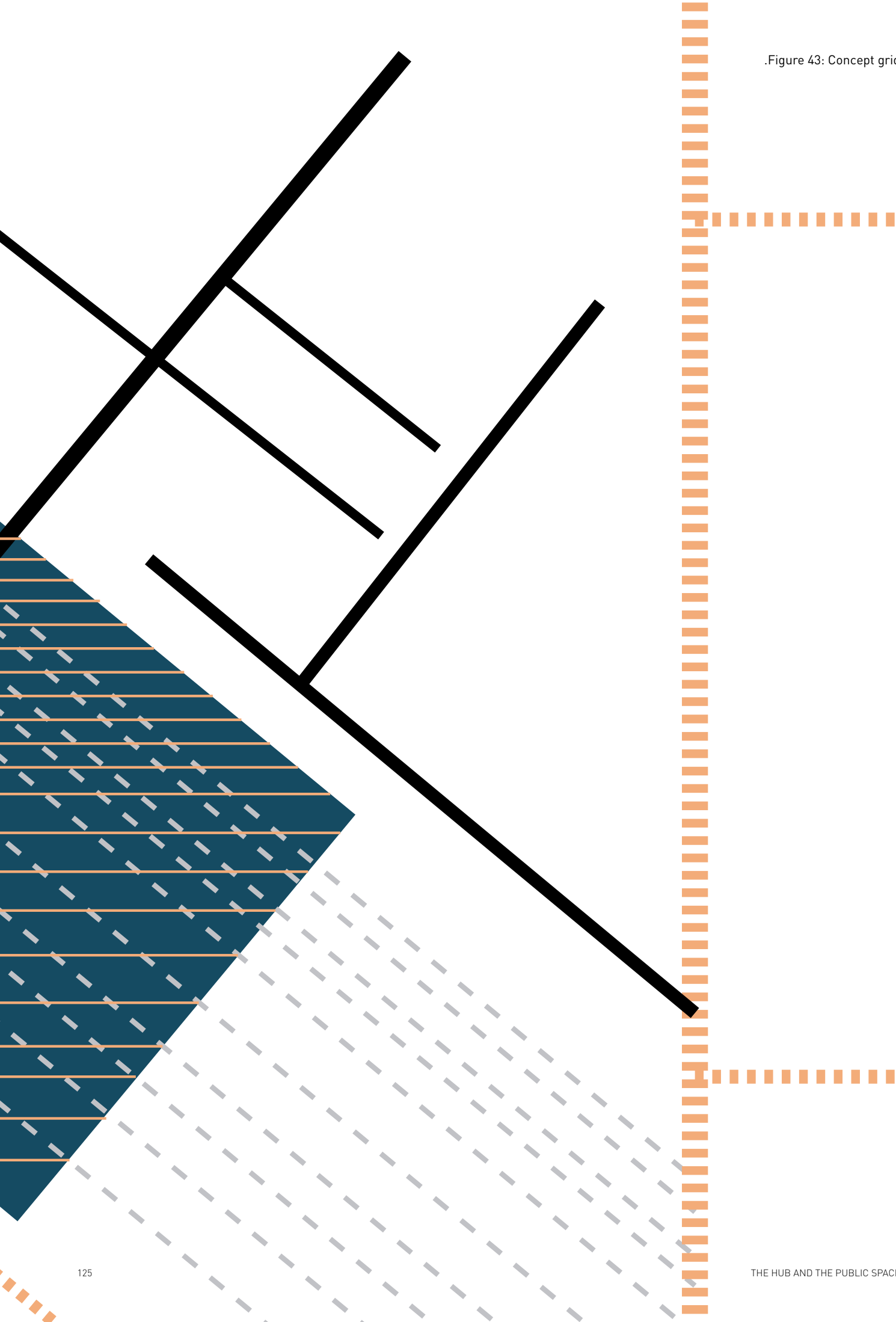
train passengers. This wider array of spaces presents a variety of enclosures, levels and references that make a more interesting research experience, the matrix is defined by a mesh of pillars on the 7x10 meters side. The overlapping of the compositional grid on the structural network allows to eradicate the metallic structure from its purely structural role, placing it between the created voids and connoting it in a compositional element; the subtraction operations are performed sparingly, opening the link to the central axis. Faced with an almost completely empty space occupying the semi-urban space, it is de-

.Figure 44: Concept interventions

THE HUB AND THE PUBLIC SPACE

12.5   37.5

0   25   50m

-5.00

0.00

-4.00

-5.00

RE-THINKING Detroit, a new economic approach

0.00

0.00

-4.00

0.00

0.00

0.00

RE-THINKING Detroit, a new economic approach

RE-THINKING Detroit, a new economic approach

semi-public spaces

congress spaces

learning/production spaces

commercial activities

exhibit spaces

HUB management offices

informal spaces

promenade emphasized by the colored drawing of the ground and enlivened by the play of light and shadows generated by the holes in the overhanging railway system; the modifications to the existing architectural system are minimal and reduced to light metal elements that act as a bridge that adjusts the level of the road surface with the old base for loading the goods. The relationship to the outside is also emphasized by the main entrance to the basement at the end of the main axis, which creates an additional internal promenade that allows the crossing of the entire complex from the South (on Newark St)

to the North (on Roosevelt Park) and vice versa; also in this case, the height difference of the base is resolved through a metal footbridge that defines the entrance design. To the south of the plant are the HUB management offices and the server rooms, illuminated directly through the openings on Newark St and indirectly through solar tunnels formed by the holes in the overlying railway system. a new business incubator, a laboratory for VR applications and a conference room available to HUB users. The post center is then converted with the creation of a new gym and a temporary exhibition space. The square is

instead the result of a subtraction system of the upper level railway system with which a first relation develops, creating a gap where there was no programmed function without removing the existing structural mesh; all actions on the artifact are carried out through the idea of adaptive reuse of the system, distorted in its program but protected in its memory with simple and minimally invasive interventions. On the upper floor the base is reconnected by means of the old access stairs (reduced from 12 to 6) and the old freight elevators - to date elevators - covered by light metal elements that immediately identify the connection function. The urban layout is presented with minimal variations, through a conservative redesign of the railway system, which creates green areas in the presence of the tracks, maintaining their axiality. The duality between the railway floor and the base is then highlighted by the design dictated by the design of overlapping grids, creating a unique that fulfills the function of creating new dynamic and futuristic spaces for the community of Detroit.cided to intervene by inserting a complex programming system, which mixes public and private functions, making sure that these are in-

dependent of each other for their operation. The project is considered in terms of a large area of integration for the community where relationships and actions are developed; a space that repudiates its past of junkspace, opening squares, rest areas and commercial activities related to production that allow these hypotheses to be made in space.

Once the strategy has been defined, the new program is conceived: through the creation of temporary shops (linked to the production of HUB activities) on the pedestrian underpass of Vernor St., which reuse the old shutters of the loading area for the new windows and guaranteeing their fruition also in the closing moments of the base, connoting the underpass as a new public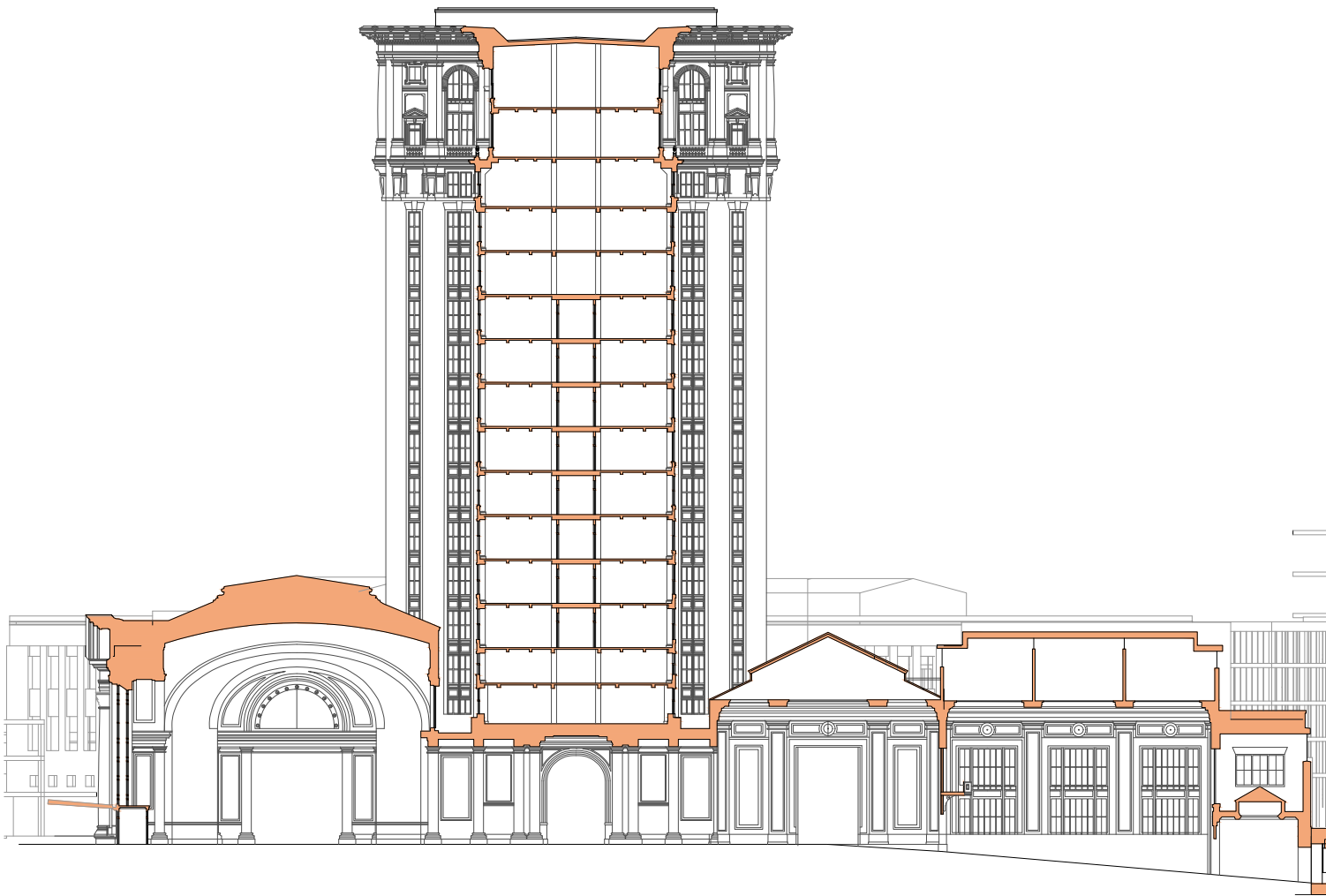 urban promenade emphasized by the colored drawing of the ground and enlivened by the play of light and shadows generated by the holes in the overhanging railway system; the modifications to the existing architectural system are minimal and reduced to light metal elements that act as a bridge that adjusts the level of the road surface with the old base for loading the goods. The relationship to the outside is also emphasized by the main entran-

ce to the basement at the end of the main axis, which creates an additional internal promenade that allows the crossing of the entire complex from the South (on Newark St) to the North (on Roosevelt Park) and vice versa; also in this case, the height difference of the base is resolved through a metal footbridge that defines the entrance design. To the south of the plant are the HUB management offices and the server rooms, illuminated directly through the openings on Newark St and indirectly through solar tunnels formed by the holes in the overlying railway system. a new business incubator, a laboratory for VR applications and a conference room available to HUB users. The post center is then converted with the creation of a new gy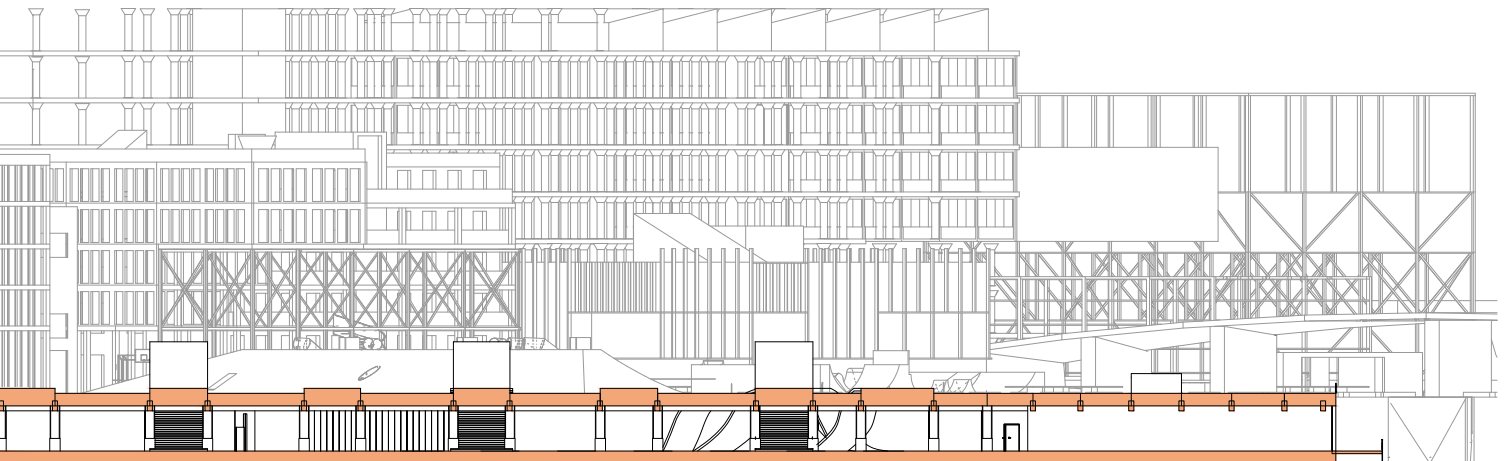m and a temporary exhibition space. The square is instead the result of a subtraction system of the upper level railway system with which a first relation develops, creating a gap where there was no programmed function without removing the existing structural mesh; all actions on the artifact are carried out through the idea of adaptive reuse of the system, distorted in its program but protected in its memory with simple and minimally invasive interventions. On the upper floor

the base is reconnected by means of the old access stairs (reduced from 12 to 6) and the old freight elevators - to date elevators - covered by light metal elements that immediately identify the connection function. The urban layout is presented with minimal variations, through a conservative redesign of the railway system, which creates green areas in the presence of the tracks, maintaining their axiality. The duality between the railway floor and the base is then highlighted by the design dictated by the design of overlapping grids, creating a unique that fulfills the function of creating new dynamic and futuristic spaces for the community of Detroit.function. The urban layout is presented with minimal variations, through a conservative redesign of the railway system, which creates green areas in the presence of the tracks, maintaining their axiality. The duality between the railway floor and the base is then highlighted by the design dictated by the design of overlapping grids, creating a unique that fulfills the function of creating new dynamic and futuristic spaces for the community of Detroit.

RE-THINKING Detroit, a new economic approach

RE-THINKING Detroit, a new economic approach
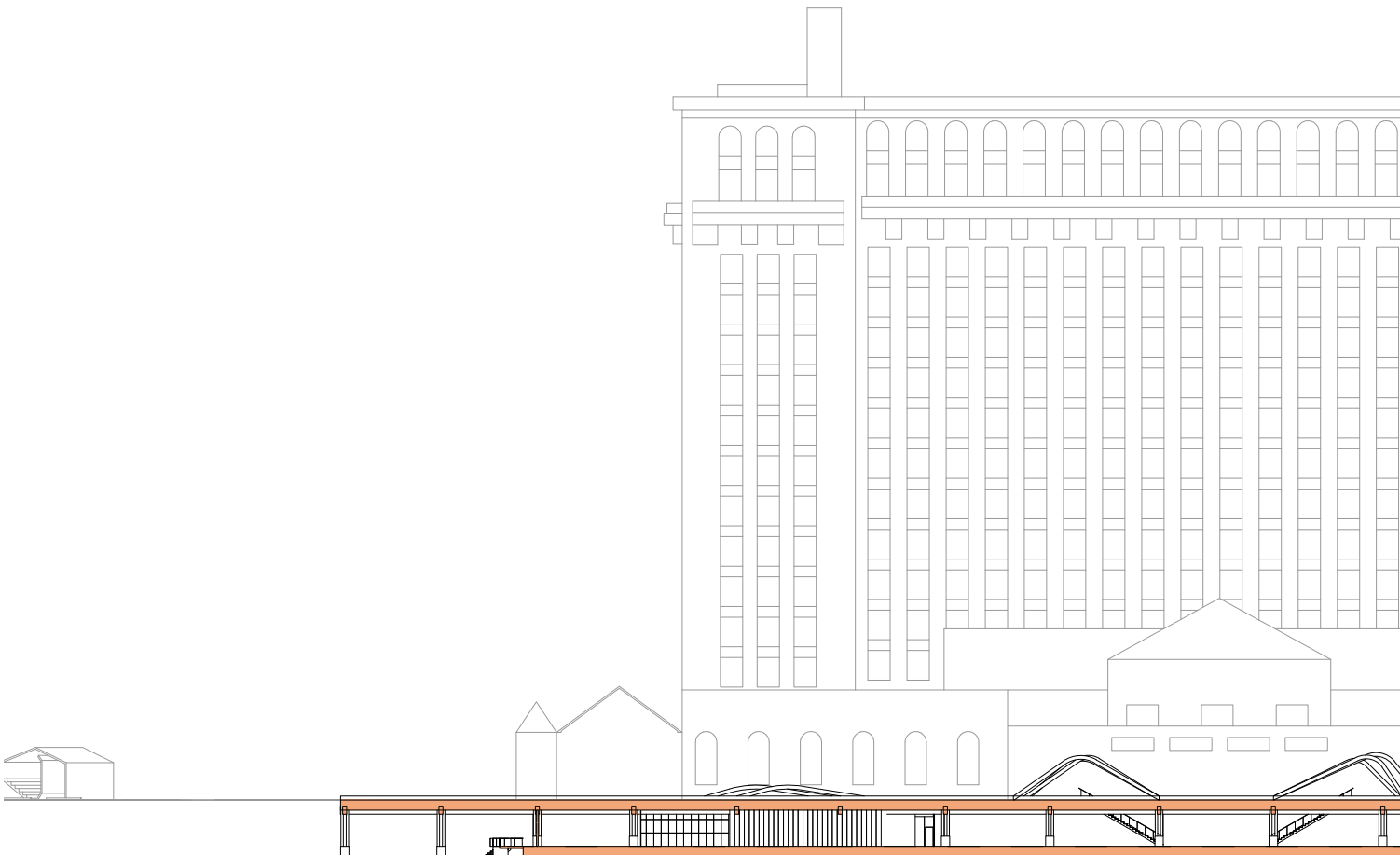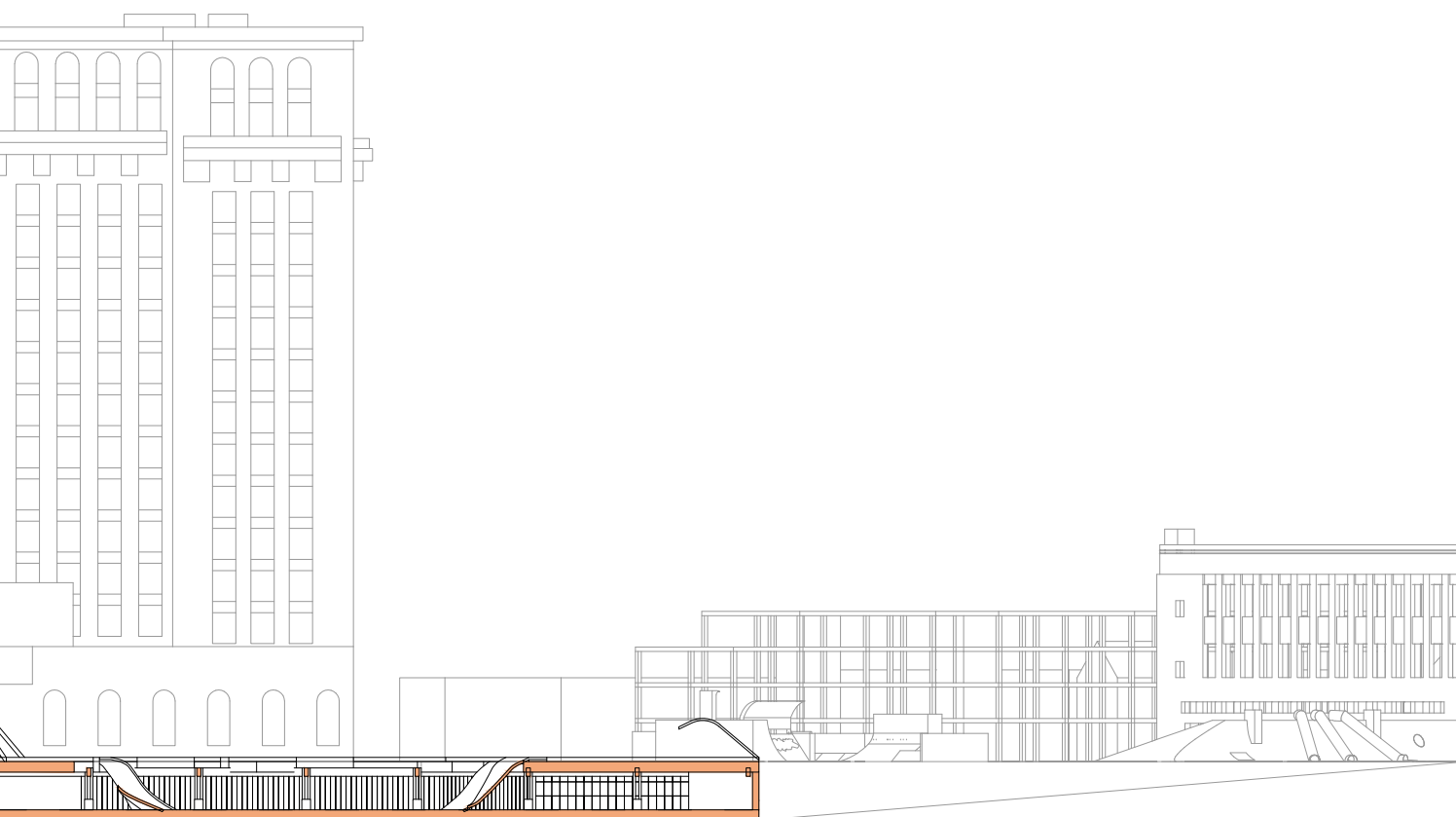
STRATEGIC DECISIONS PROCESS

STRATEGIC DECISIONS PROCESS

INTRODUCTION TO THE PROCESS

As we have seen in previous chapters, the need for a new regenerative approach in the Corktown district must be supported by decision-making tools that help the process of territorial transformation.

In a territorial / strategic planning scenario, the decision-making process requires to consider many elements: from tangible aspects such as the optimization of environmental resources or the reduction of land consumption, to the intangible aspects such as the promotion of economic activities or the benefits generated by the element transformed. For this reason, problems related to spatial planning and environmental decision-making are inherently complex because they involve multiple attributes that are defined by subjective elements (Marttunen and Hamalainen, 1995).

To help it, the use of multi-criteria decision analysis (MCDA) (Roy & Bouyssou, 1993; Figueira, 2005) makes it possible to consider criteria of a different nature, qualitative and quantitative, to offer to stakeholders (or stakeholders) a rational basis for weighing decision-making problems that normally can not be measured by their conflictual nature.

The MCDA, unlike the monovalent monetary valuations, is based on the comparison of the differences between different criteria, including monetary one. Hence, the MCDA is able to collect different data on nature, which can refer to conflicting aspects and also combined together.

This type of analysis emerges with the birth of new socio-economic, political and territorial problems (after the Second World War), and the success of this lies in the ability to respond to these aspects in a unique way, resulting more effective than traditional analysis (as Cost-Benefit Analysis).

In the context of territorial transformation, the MCDA guarantees an ex-ante approach in the assessment phase, which allows to identify possible transformation alternatives and the advantages and disadvantages that could derive from their implementation[28].

28: R.Roscelli, Manuale di Estimo, p.228

MULTI ATTRIBUTE VALUE THEORY

The Multi Attribute Value Theory (MAVT, developed by Kenney and Raiffa, 1976) is a specific MCDA used to respond to problems with a closed-number and discreet alternative options which can be evaluated on a base of multiple and conflictual aspects. the MAVT, as the others MCDA methods, can handle qualitative and quantitative data.

Methodologically, the MAVT process is divided in 5 main steps(-Beinat, 1997):

• DEFINITION OF FUNDAMENTAL OBJECTIVES: Objectives are ¨statements of something that one desires to achieve¨ (Keeney, 1992) and they depend on the problem to be analysed, on the actors involved in the decision process, andon the environment in which the decision process takes place. The degree to which objectives are achieved is measured through a set of attributes, which may be natural (they follow directlyfrom the definition of the objective), constructed (they specify a finite number of degrees to which objectives are met), and proxy (they are only indirectly linked to the definition of the objective) (Keeney, 1992; Beinat, 1997).

• IDENTIFICATION OF ALTERNATIVE OPTIONS: The second step consists in the identification and creation of alternative options.The alternatives are the potential solutions to the decision problem. Methods and models suchas visioning, problem structuring methods and scenario planning can help to promote creativity for the generation of good strategies and strategic options (Montibeller & Franco, 2007). Once the alternative options have been identified, it is necessary to assign scores for each alternative in terms of each attribute. The performances of each alternative specify for each attribute the outcome of the alternative. In some cases, the performances are readily available, in some other cases they have

to be computed or estimated ad hoc for the problem at hand.

- **PERFORMANCE MATRIX CONSTRUCTION:** The next step might consist in the definition of a panel of experts for the development ofthe evaluation. The use of experts' panels expands the knowledge basis and may serve to avoid possible biases, which characterizes the situation with a single expert. On the other side, the use of experts' panels has a range of problems associated with it, such as the panel composition, theinteraction mode between panel members and, above all, the aggregation of panel responses intoa form useful for the decision (Beinat, 1997).

- **PREFERENCE MODELLING:** The following step consists in the modelling of preferences and value trade-offs and different strategies are available for this task. The holistic scaling and the decomposed scaling strategies are the most used in practice (Beinat, 1997). According to the former, an overall value judgment has to be expressed of multi-attribute profiles, which can be either the real alternatives or artificially designed profiles. Weights (i.e. scaling constants) and marginal value functions (which translate the performances of the alternatives into a value score representing the degree to which a decision objective is achieved) are then estimated through optimal fitting techniques (e.g. regression analysis or linear optimisation) and are the best representation of the assessor's judgments. According instead to the decomposed scaling technique, the multi-attribute value function is broken down into simpler sub-tasks (the marginal value functions and the weights) which are assessed separately. The aim of decomposed scaling is to construct the multi-attribute model for evaluating decision alternatives while the aim of holistic scaling is to make an inference about the underlying value functions and weights (Beinat, 1997). The case study illustrated in the present paper will follow the decomposed scaling approach.

- **ALTERNATIVES SORTING**: The final step consists in the aggregation of the results in order to obtain the ranking of alternatives. To this end, MAVT includes different aggregation models, but the simplest and most used one is the additive model (Belton & Stewart, 2002) as it is represented in Equation (1): $V(a) = w_i \times v_i(a_i)$ (1), where $V(a)$ is the overall value of alternative a, $v_i(a_i)$ is the single attribute value function reflecting alternative a's performance on attribute i, and w_i is the weight assigned to reflect theimportance of attribute i .By aggregating the options' performance across all the attributes to form an overall assessment, MAVT is thus a compensatory technique. Finally, a sensitivity analysis is recommended in order to test the stability of the obtained results with regards to variations in the inputs. As a result, a final recommendation can be obtained and further discussed with the Decision Makers and stakeholders.

MULTI ATTRIBUTE VALUE THEORY - CORKTOWN MASTERPLAN

DEFINING THE SCENARIOS
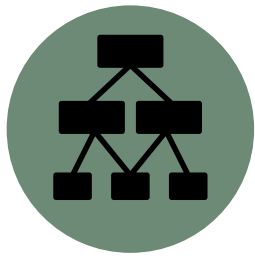
CONSTRUCTION OF THE MODEL

WEIGHING ATTRIBUTES

SURVEY

SENSITIVITY ANALYSYS

BEST SCENARIO PERFORMED

.Figure 50: MAVT evaluation
process scheme

MULTI ATTRIBUTE VALUE THEORY - CORKTOWN MASTERPLAN

CASE STUDY INTRODUCTION

The subject of MAVT evaluation is located in the city of Detroit (Michigan), inside the historical Corktown District. The district is one of the oldest neighborhoods in the city and in a continuous renewal by municipality politcs that will invest after the bankrupt of 2013. The proposal of this masterplan will be to re-think about the strategies that could be applied in the future inside the neighborhood.

The Corktown district is defined within its boundaries clearly by the road infrastructure (the Highway net) and it's crossed by one of the five major axes of the city (Michigan Avenue). The district presents a good functional mixitè but it's strongly located in defined areas: on the Michigan Avenue, most of activities are commercial ones (restaurants, shops etc.), in the north-east there is the historical-residential part of the district and in the center-south-west there is the old railway net and the factories (used and abandoned).
The masterplan is part of a collection of theses (RE-MAKE(R) Urban Manifacturing Detroit (Author: Vittorio Gemignani), RE-LEARNING Urban Manifacturing Detroit (Author: Filippo Gemmi), and the last, RE-THINKING, a new economic approach Detroit) aimed at upgrading the adjacent area to the old railway tracks that are still operating in small part and being decommissioned over the next few years for new USA-CANADA link projects. Through the Adaptive Re-Use Strategies, the 3 projects focus on as many buildings are adjacent to the railway axes: the US Post Office, the abandoned Warehouse located in 1448 of Wabash Street and, lastly, the Michigan Central Station. All case studies are in a deep state of abandon. Even all the proposal projects promote a functional mix strengthened (housing, working, making spaces, incubators, startup, etc.) inside the factory part of the district.

DEFINING THE SCENARIOS

INERTIAL SCENARIO: this scenario proposes the present condition. In this situation, there is no intervention in any part of the master plan and there are two main work activities (the US Post vehicle maintenance facility and the Ponyride incubator). Each building proposed in the intervention is not used and is in a state of high neglect. For analysis, the area will be subject to an increase in decay and dismantling of the railway system in the next few years due to the dismantling of the Michigan Central Railway Tunnel, replaced by the new project of the Gordie Howe International Bridge between USA-CANADA border[29].

29: http://www.crainsdetroit.com/article/20150629/NEWS/150629845/detroit-windsor-rail-tunnel-project-put-on-hold-business-case-and

- **MICHIGAN CENTRAL STATION SCENARIO:** This scenario offers a strong urban regeneration through a renovation of the iconic building inside Corktown: the abandoned Michigan Central Station. Through adaptive reuse and urban regeneration strategies, the project will be a new focal point of work activities for the community, including through a high quality design of the two main public spaces: the first public floor of the MCS and the old basement railway, transformed into a large, mixed-use space. The project is divided into two different times: the upper floors of the MCS will be developed after the completion of the basement project. In the southern part of the scenario, a multi-tenant re-functionalized building for future housing development is also proposed.

- POST OFFICE ROOSVELT SCENARIO: This scenario proposes, through an adaptive reuse strategy, a functional rethinking of the spaces inside the old post office. Regarding the MCS scenario, the post office promotes a new network to make the spaces focused on a learning approach (philosophy of what-do and how to do). On the roof, a new construction for residential use is proposed, even with 4 new buildings.

- **WABASH STREET 1448 SCENARIO:** The last scenario proposes a mixed use inside a Warehouse (considered by the author of the scenario as a 'large scale' building) focused on an urban production approaching the vertical production system. Even in this scenario, public spaces are concentrated on the ground floor. The residential parts are proposed in 2 other new buildings.

CONSTRUCTION OF THE DECISIONAL PROBLEM

Through the nature of the process of multicriteria analysis, it is therefore necessary to identify the critical issues and the elements of evaluation through the creation of the decision problem.
Given the diversified and conflicting nature of the scenarios, it is therefore necessary to elaborate a logical and rational basis on which the evaluations can be expressed: four main aspects have been drawn up which collect the evaluation criteria:

- **ENVIRONMENTAL ASPECTS**: these are the aspects linked to the development of environmental elements, such as the redevelopment of areas subject to brownfield (and therefore a restorative intervention), or the development of new green areas (and therefore, interventions aimed at increasing the attribute).
- **PROJECT ASPECTS:** are the aspects related to the development of the project actions of the scenarios. Within this category of criteria, the areas related to the intended use (such as work spaces, residential spaces, etc.) are mainly considered.
- **ECONOMIC ASPECTS:** are the aspects related to the economic factors of the scenarios: in this case, qualitative criteria (economic benefit and investment risk) were also considered, rather than just quantitative criteria (project cost).
- **SOCIAL ASPECTS:** As in the economic criteria, qualitative criteria (low, medium, high, etc.) are also considered in this case. In social aspects, spaces dedicated to community use (quantified in sqm) are also considered.

RE-THINKING DETROIT
Michigan Central Station Scenario
Author: Daniele Fazzari
Area developed: 159379 sqm.

RE-LEARNING DETROIT
Roosevelt Post Office Scenario
Author: Filippo Gemmi
Area developed: 56815 sqm.

RE-MAKE(R) DETROIT
1448 Wabash St Warehouse Scenario
Author: Vittorio Gemignani
Area developed: 57883 sqm.

.Figure 52:Division of the 3 intervention scenarios within the master plan
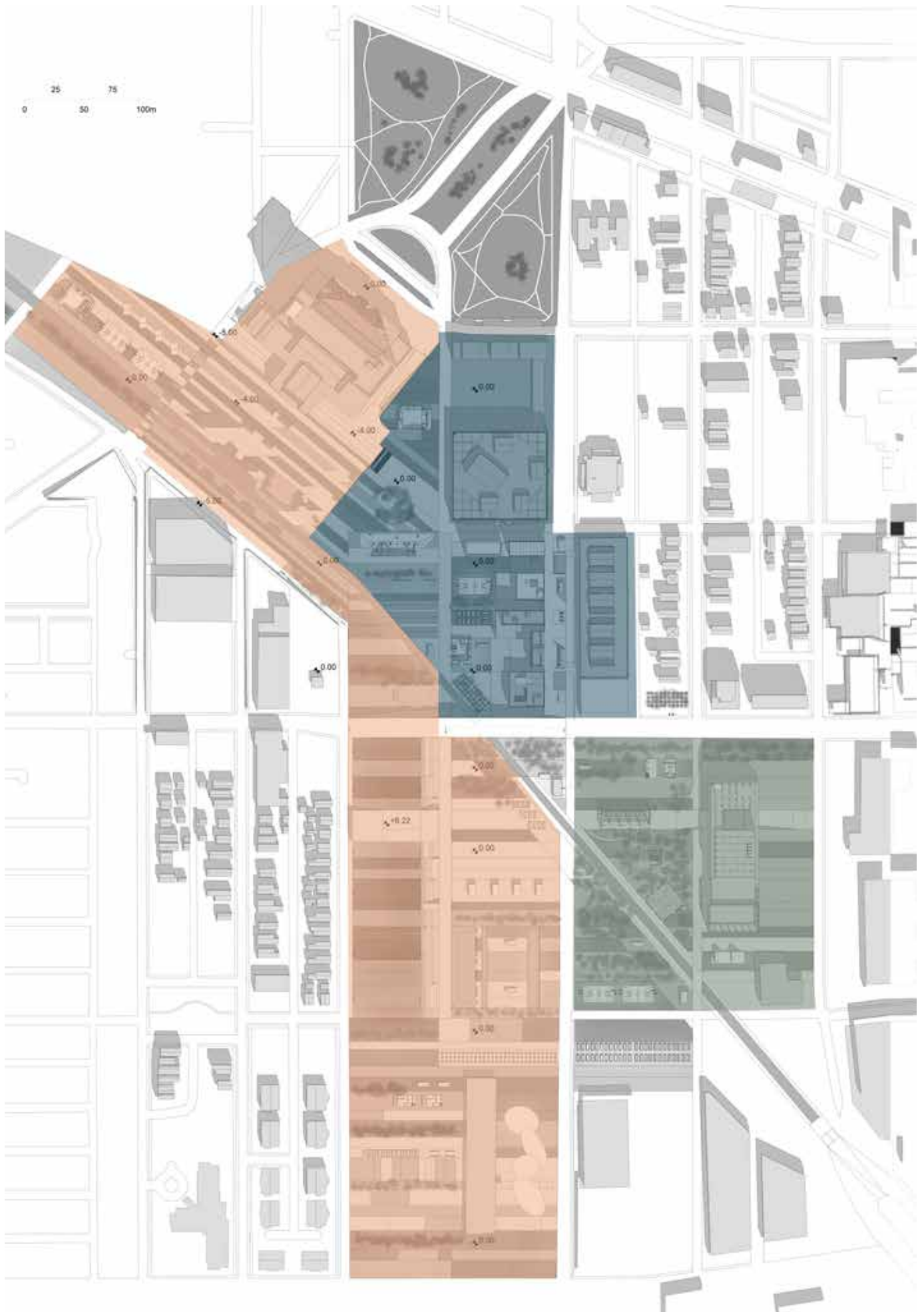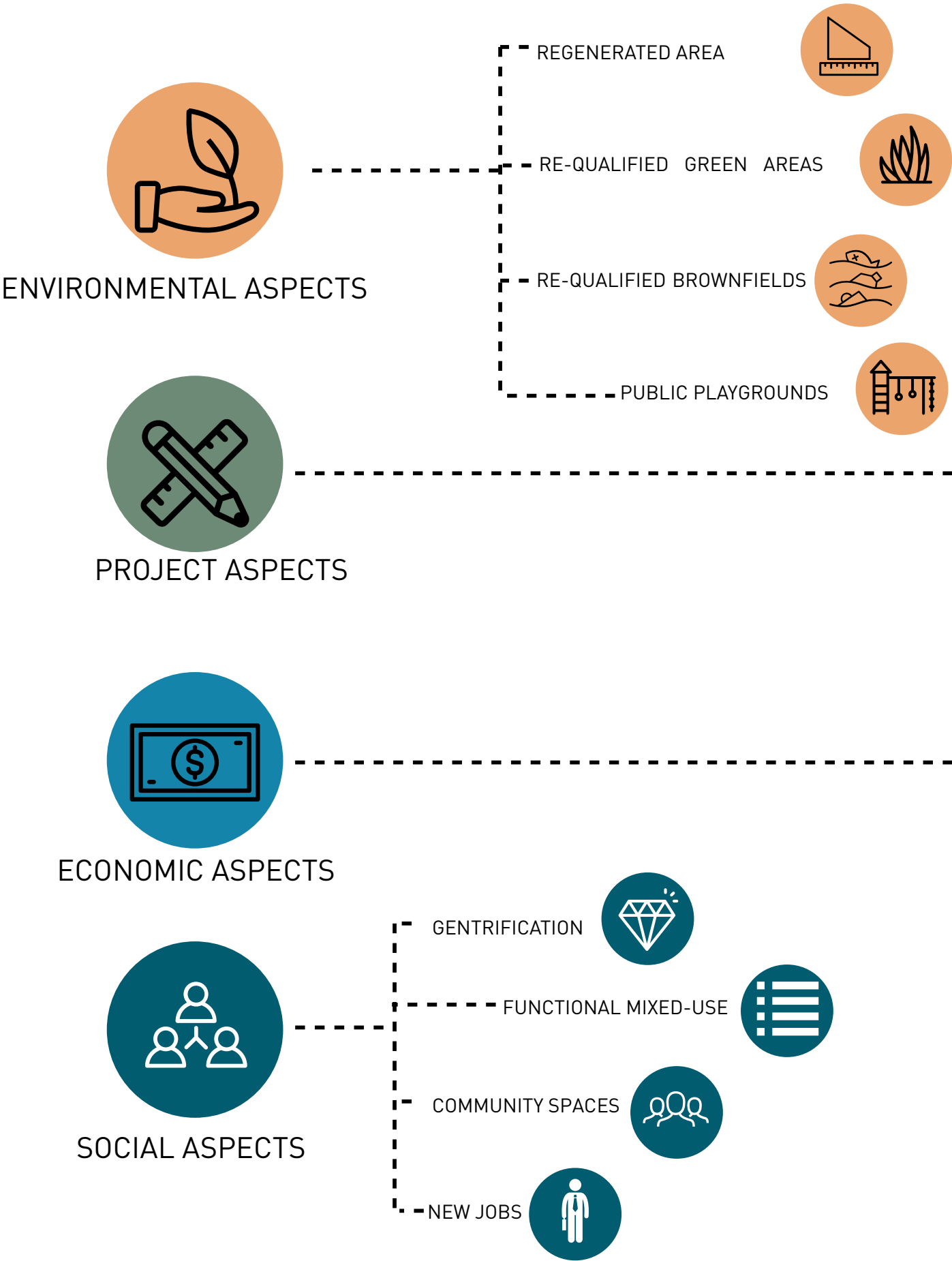
MULTI ATTRIBUTE VALUE THEORY - CORKTOWN MASTERPLAN

ENVIRONMENTAL ASPECTS

- REGENERATED AREA
- RE-QUALIFIED GREEN AREAS
- RE-QUALIFIED BROWNFIELDS
- PUBLIC PLAYGROUNDS

PROJECT ASPECTS

ECONOMIC ASPECTS

SOCIAL ASPECTS

- GENTRIFICATION
- FUNCTIONAL MIXED-USE
- COMMUNITY SPACES
- NEW JOBS

RE-THINKING Detroit, a new economic approach

PUBLIC SPACE

PUBLIC/PRIVATE RATIO

WORKING SPACES

COMMERCIAL AREAS

TIME   CONSTRUCTION

LEARNING SPACES

NEW RESIDENTIAL SPACES

ECONOMIC BENEFITS

PROJECT COST

INVESTMENT RISK
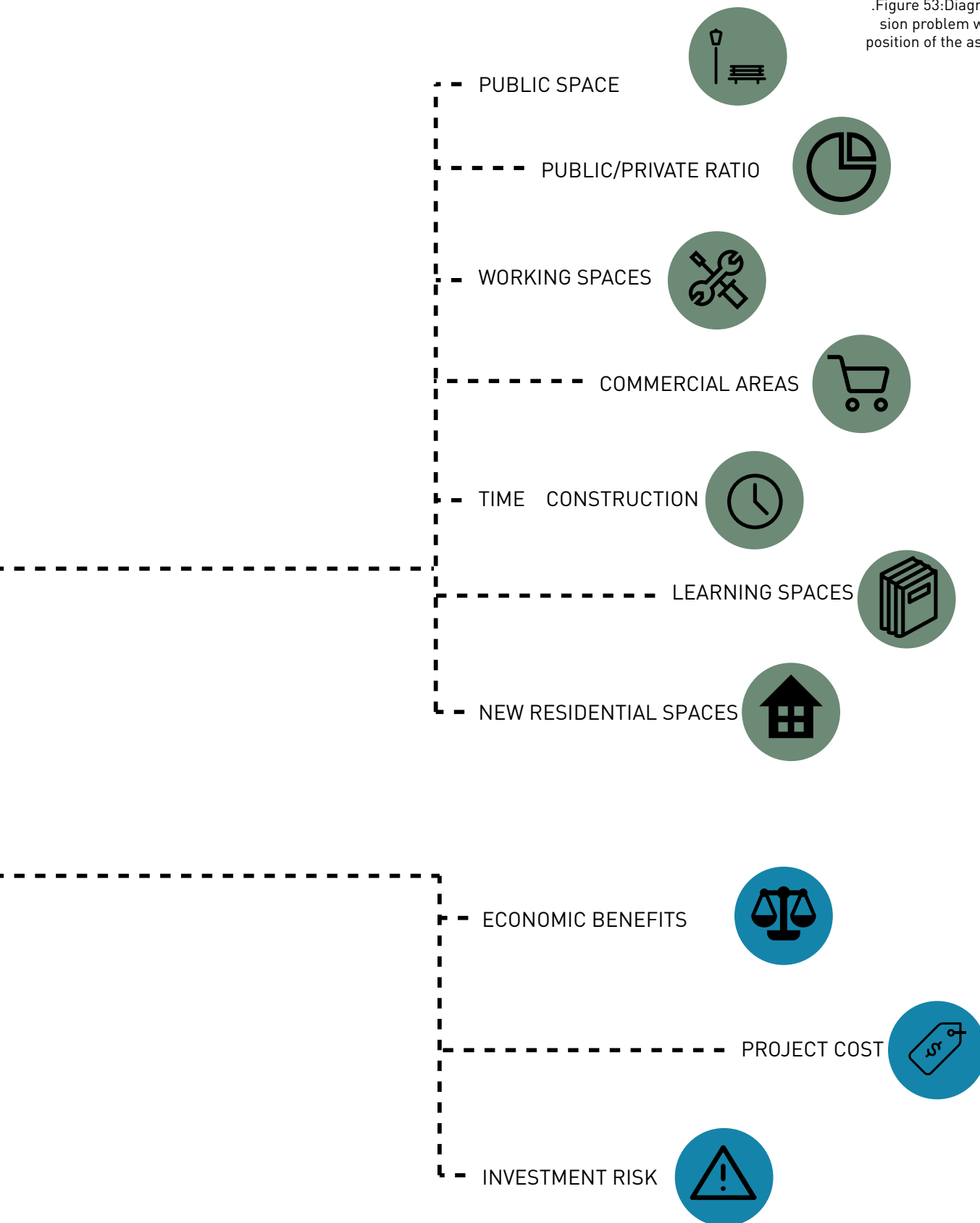
CONSTRUCTION OF THE MODEL - DEFINING PREFERENCE FUNCTIONS

For each criterion a preference function P(a,b) is applied to decide how much the alternative a is preferred to the alternative b.The value of preference function varies between 0 and 1.The value 1 means that there is a strict preference of an alternative over another alternative, while the value 0 means that the DM is indifferent between the alternatives.

MULTI ATTRIBUTE VALUE THEORY - CORKTOWN MASTERPLAN

ENV.1: Regenerated area [sqm]

Regenerated area inside the project masterplan

Values:

MCS: 159379 sqm
ROOS: 56815 sqm
1448 WAB: 57883 sqm
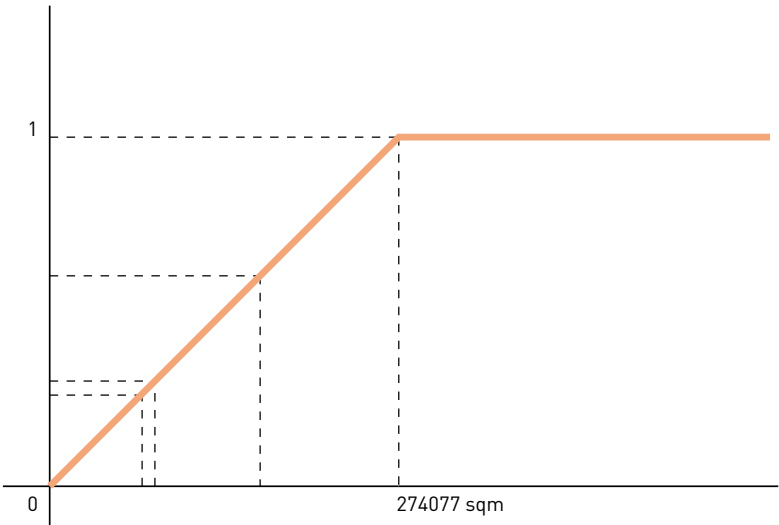
ENV.2: Re-qualified green areas [sqm]

Green areas requalified inside the project masterplan

Values:

MCS: 56057 sqm
ROOS: 14887 sqm
1448 WAB: 15849 sqm
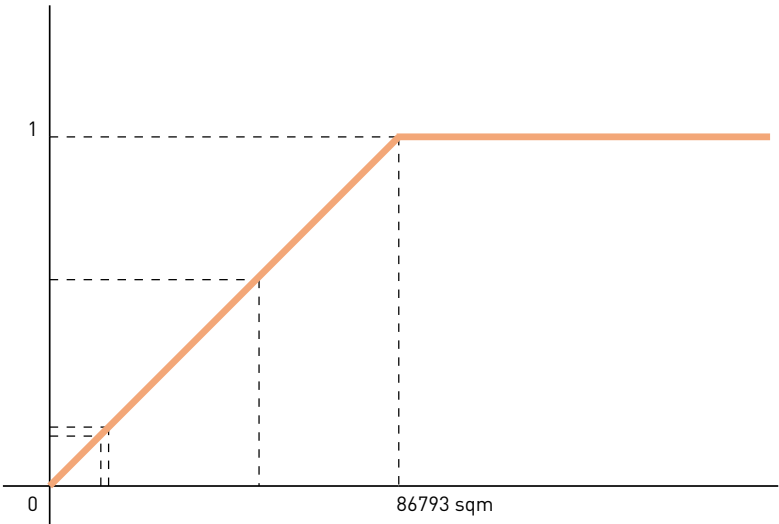
ENV.3: Re-qualified brownfields [sqm]

Brownfields requalified inside the project masterplan

Values:

MCS: 42773 sqm
ROOS: 20535 sqm
1448 WAB: 2192 sqm
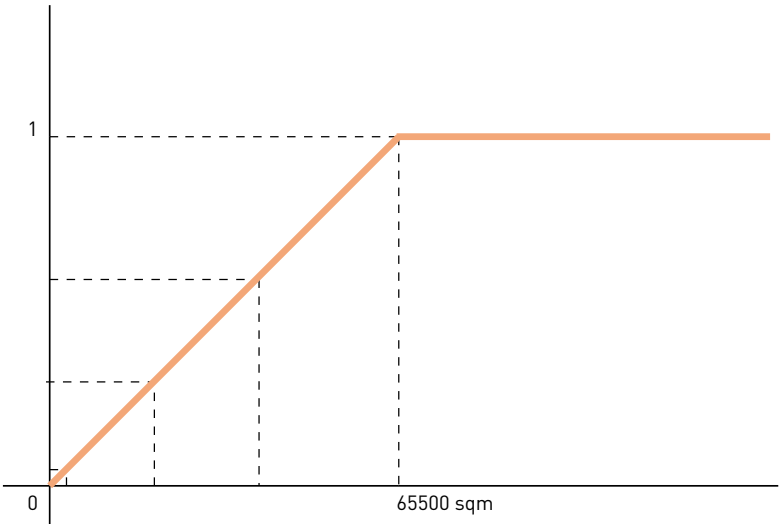
ENV.4: Public Playgrounds [sqm]

New playgrounds developed inside the project masterplan

Values:

MCS: 855 sqm
ROOS: 2480 sqm
1448 WAB: 687 sqm
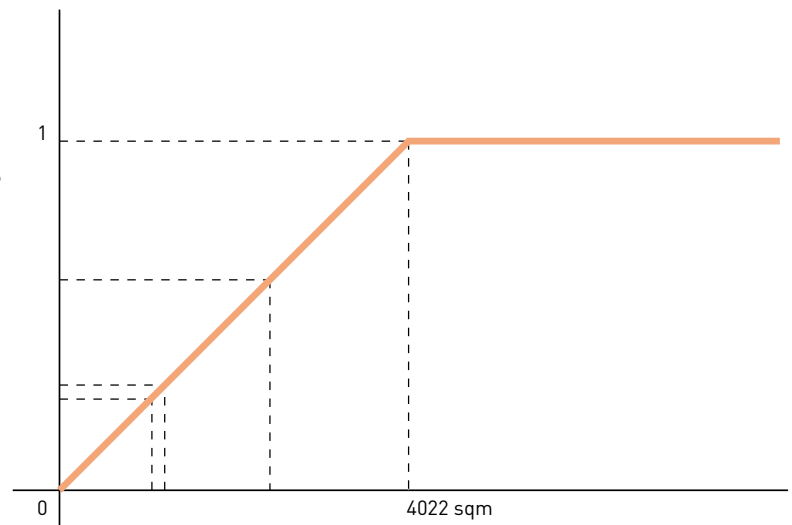
ENV.5: Territorial Index [-]

-
Values:

MCS: 1.32
ROOS: 1.53
1448 WAB: 1.31
INERTIAL: 1.06
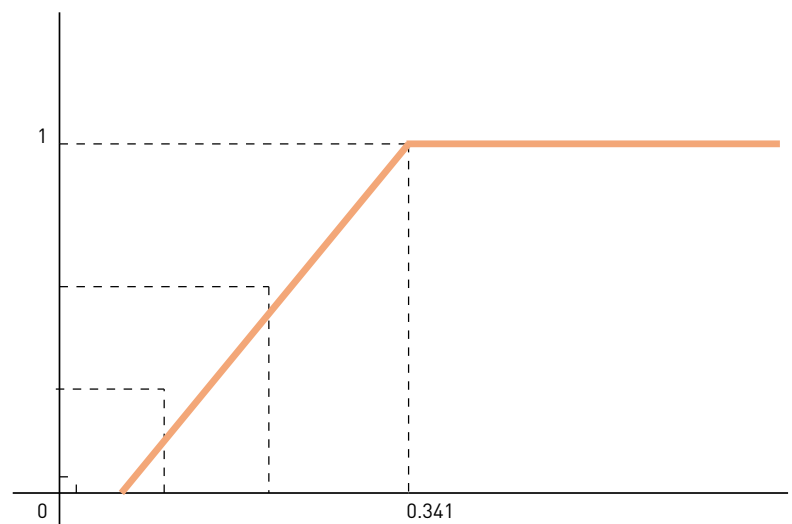
PR.1: Public spaces [sqm]

Public spaces developed inside the project masterplan

Values:

MCS: 124590 sqm
ROOS: 47928 sqm
1448 WAB: 49690 sqm
INERTIAL: 15603 sqm
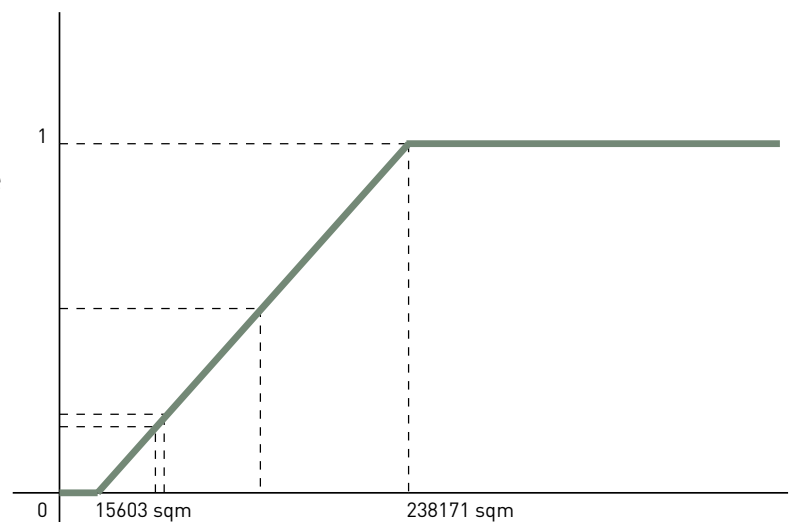
PR.2: Public/Private ratio [-]

-

Values:

MCS: 2.4
ROOS: 1.6
1448 WAB: 2.8
INERTIAL: 1

[graph: x-axis marks at 15603 sqm and 238171 sqm, y-axis mark at 1]
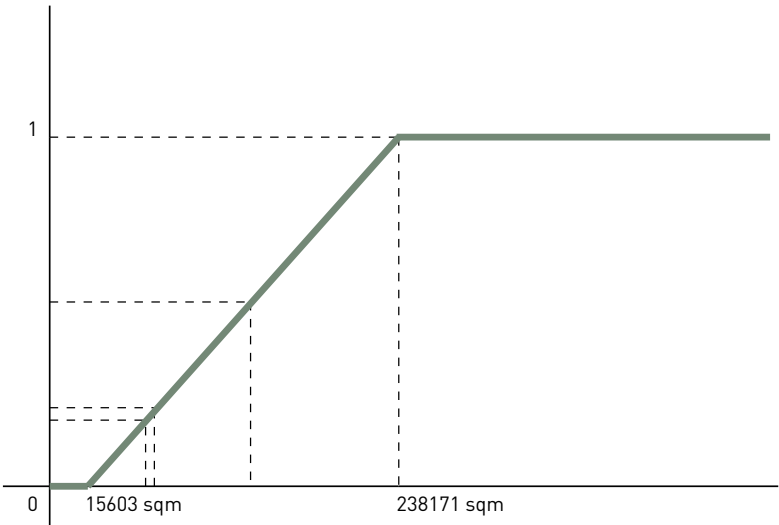
PR.3: Working space [sqm]

Commercial and exhibit areas developed for each scenario inside the project masterplan

Values:

MCS: 37355 sqm
ROOS: 12025 sqm
1448 WAB: 12141 sqm
INERTIAL: 16120 sqm

[graph: x-axis marks at 16120 sqm and 77641 sqm, y-axis mark at 1]
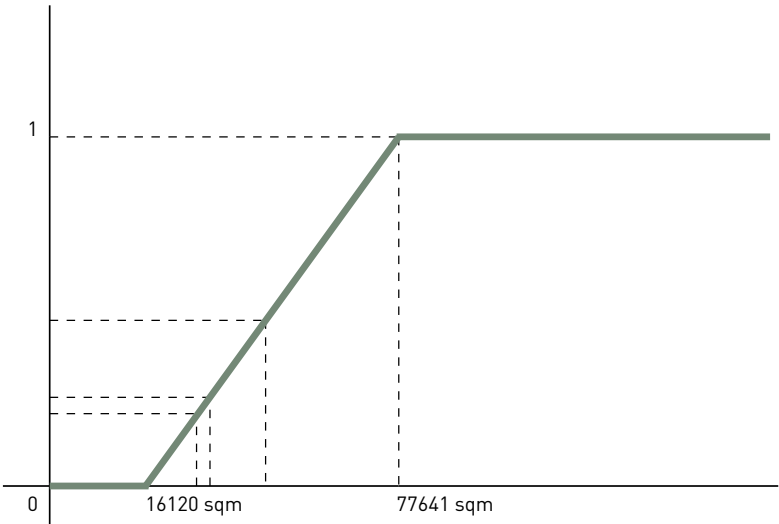
PR.4: Commercial-exhibit areas [sqm]

Commercial and exhibit areas developed for each scenario inside the project masterplan

Values:

MCS: 4830 sqm
ROOS: 1496 sqm
1448 WAB: 329 sqm

[graph: x-axis mark at 6655 sqm, y-axis mark at 1]
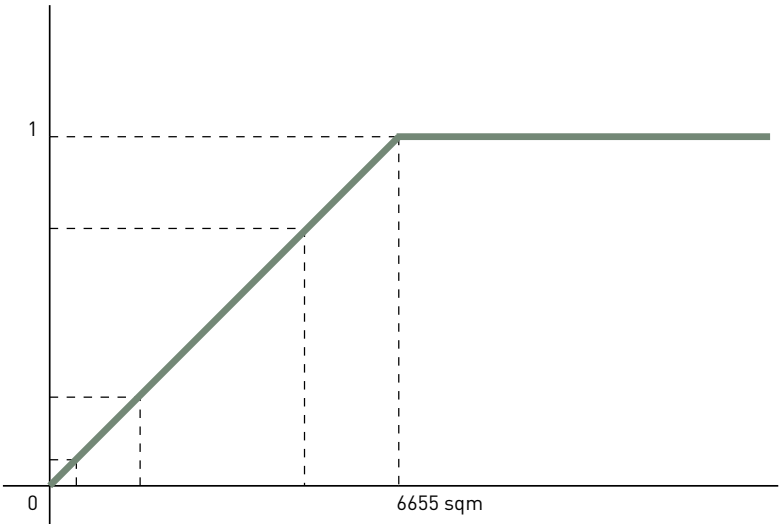
PR.5: Time construction [months]

Time construction for each scenario inside the project masterplan

Values:

MCS: 36 months
ROOS: 26 months
1448 WAB: 20 months
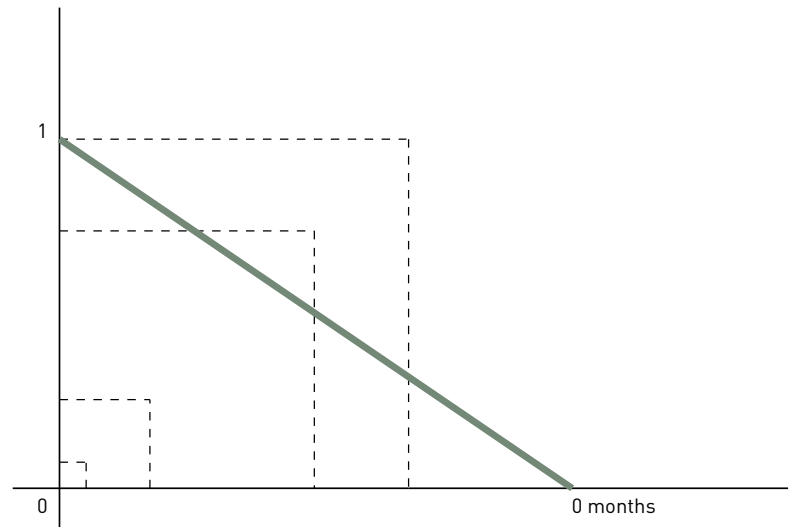
PR.6: Learning/Educational spaces [sqm]

Learning and educational spaces developed for each scenario inside the project masterplan

Values:

MCS: 37355 sqm
ROOS: 12025 sqm
1448 WAB: 12141 sqm
INERTIAL: 16120 sqm
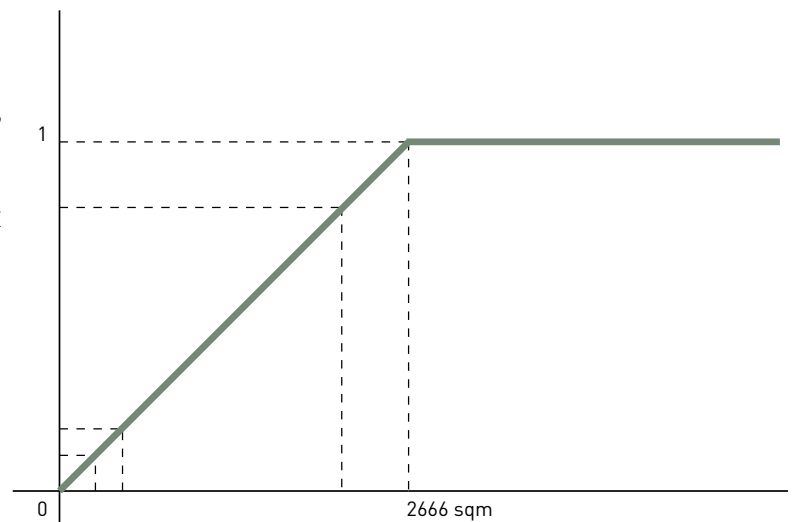
PR.7: New residential spaces [sqm]

New homes developed for each scenario inside the project masterplan

Values:

MCS: 3500 sqm
ROOS: 14468 sqm
1448 WAB: 4704 sqm
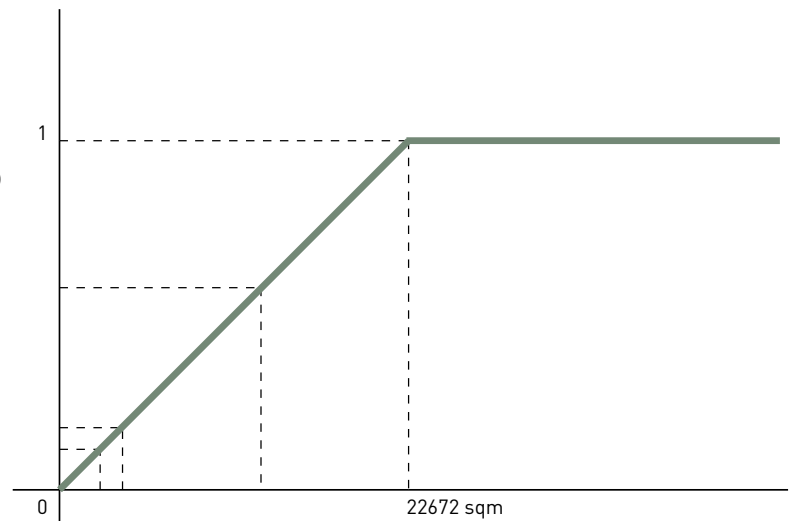
EC.1: Economic benefits delivered by the project [-]

Return of investment delivered by each scenario inside the project masterplan

Values (qualitative):

MCS: high
ROOS: medium
1448 WAB: very high
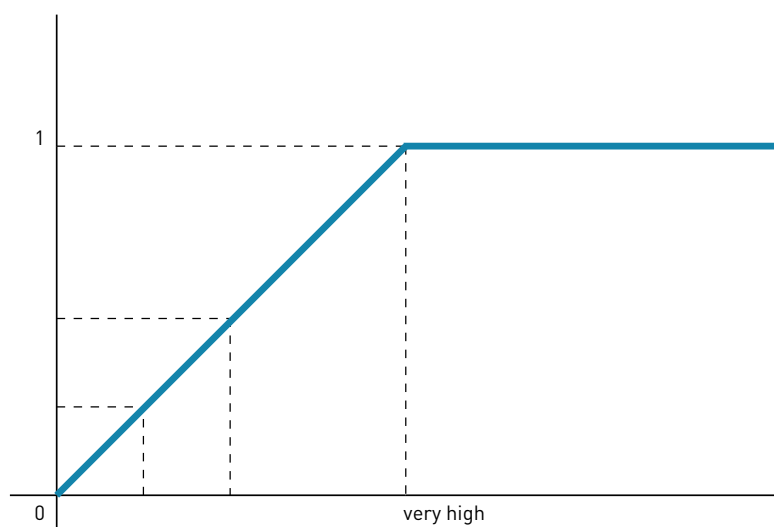
EC.2: Project cost [$]

Cost of each project scenario

Values:

MCS: 179.765.297 $
ROOS: 86.233.984 $
1448 WAB: 70.581.093 $
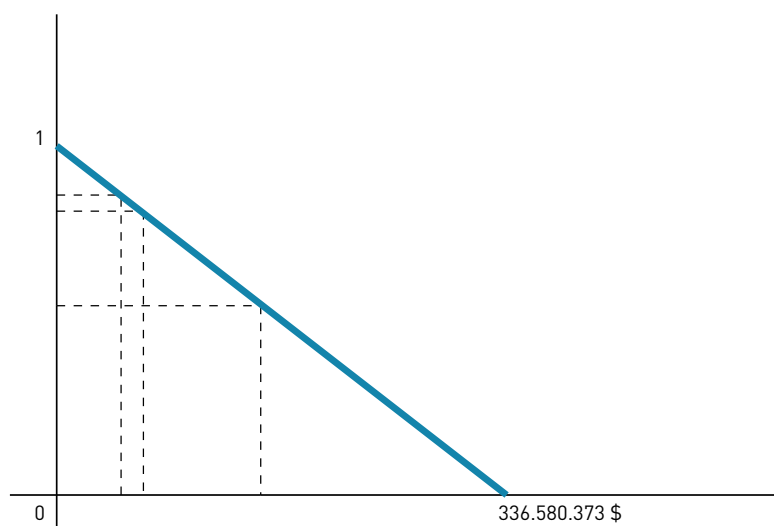
EC.3: Investment risk

Investment risk of each project scenario

Values (qualitative):

MCS: very high
ROOS: medium
1448 WAB: high

MULTI ATTRIBUTE VALUE THEORY - CORKTOWN MASTERPLAN
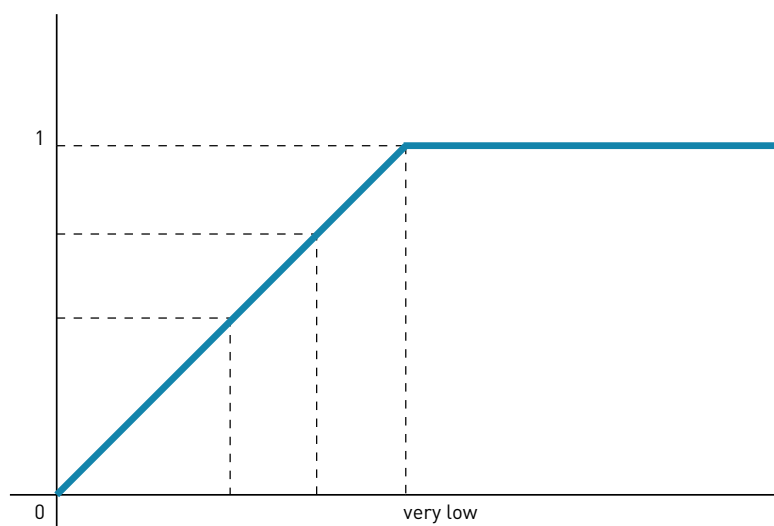
S.1: New Jobs [n.er]

New number of workers engaged for each scenario

Values:

MCS: 2200
ROOS: 770
1448 WAB: 3100
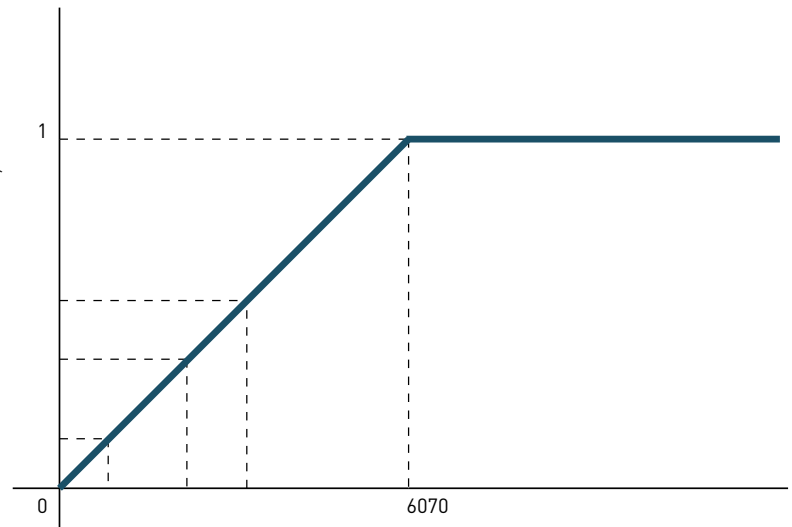
S.2: Gentrification [-]

urban changes implemented by population growth within each scenario

Values(qualitative):

MCS: medium
ROOS: very high
1448 WAB: high
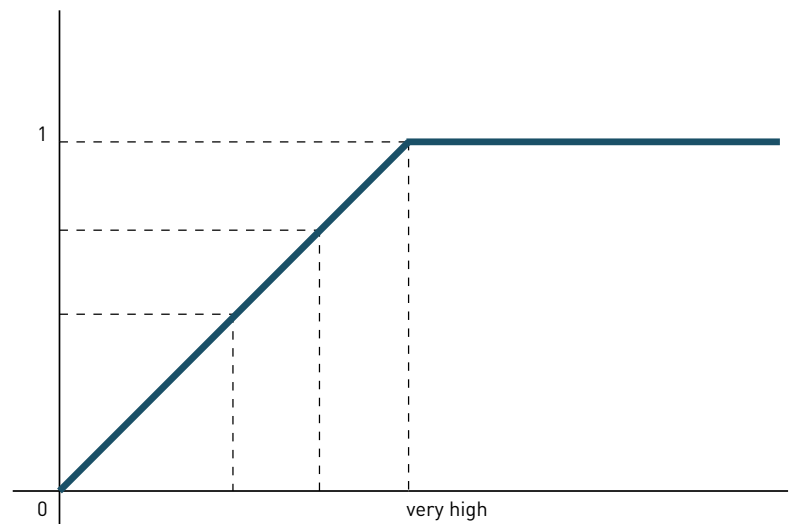
S.3: Functional mixed-use index [-]

Uses developed for each scenario(comparet to: residential, commercial, productive, sport, cultural/educational, service industry, healthcare)

Values:
MCS: 0,9
ROOS: 0,7
1448 WAB: 0,6
INERTIAL: 0,34
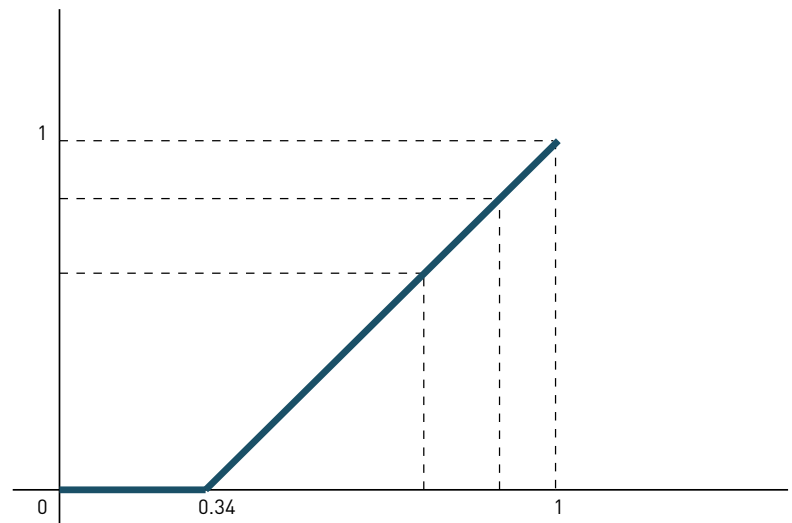
S.4: Community spaces [sqm]

Spaces reserved for social/community initiatives

Values:

MCS: 3955 sqm
ROOS: 1800 sqm
1448 WAB: 522 sqm
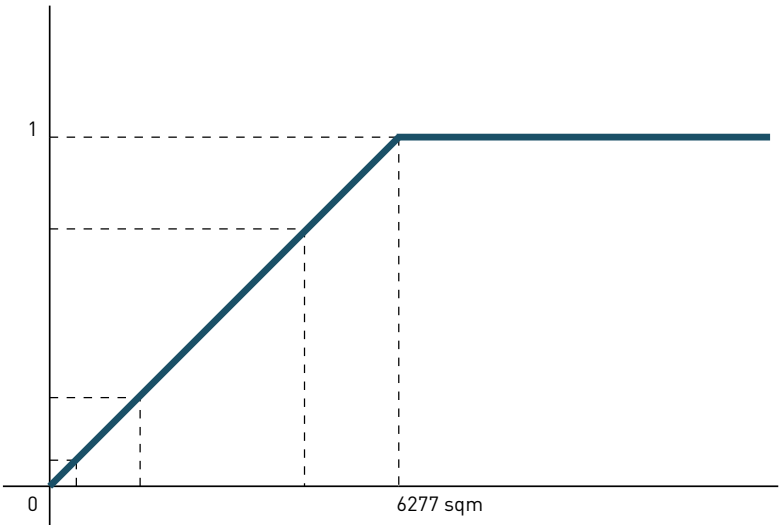
S.5: Inhabitants increase[n.er]

Increase of inhabitants for each scenario inside the masterplan

Values:

MCS: 70
ROOS: 289
1448 WAB: 94
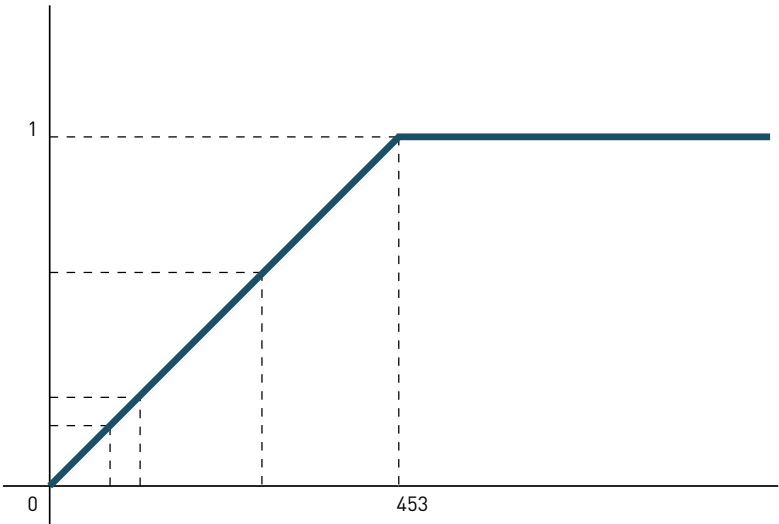
COST-TIME EVALUATION

Refer to the 'Project cost' attribute, it was necessary to construct a model that summarizes the cost values of each element present in the scenarios. Then, it was then used the italian price list DEI: 'Typology Price Construction 2017'. The intervention are divided in two main categories: building interventions and public interventions. Furthermore, it's been obtained the construction times for each elements that allowed the realization of Gantt diagram for the project schedule for every scenario (the construction time is considered just for the buildings intervention).

Michigan Central Station - Cost Summary

BUILDINGS INTERVENTIONS	CONSTRUCTION TIME	QUANTITY [SQM]	CONSTRUCTION COST[€/SQM]	REFERENCE	COST
MCS first floor (main entrance)	20 months	14373	€ 991	D21_D	€ 14.243.643
MCS basement floor (railway)	20 months	38055	€ 1.597	D24	€ 60.773.835
MCS upper floors	16 months	40656	€ 1.597	D24	€ 64.928.006
Multi tenant proposal	16 months	3500	€ 991	D21_D	€ 3.468.500
					€ 143.413.984
				CONVERTED COST	$ 176.316.737
PUBLIC INTERVENTIONS	CONSTRUCTION TIME	QUANTITY [SQM]	CONSTRUCTION COST[€/SQM]	REFERENCE	COST
Roads	-	2677	€ 94	DEI I4	€ 251.638
Bicycle lanes	-	4211	€ 18	FIAB	€ 74.998
sidewalks	-	15937	€ 5	DEI I4	€ 79.685
parking lots	-	24500	€ 49	DEI H3	€ 1.200.500
Green areas	-	27351	€ 33	DEI I1	€ 902.583
Green park	-	8958	€ 33	DEI I1	€ 295.614
					€ 2.805.018
				CONVERTED COST	$ 3.448.559
				TOTAL AMOUNT	$ 179.765.297

MULTI ATTRIBUTE VALUE THEORY - CORKTOWN MASTERPLAN

Michigan Central Station - Time construction Summary

Gantt diagram - MCS interventions	1st year			2nd year			3rd year		
	1°	2°	3°	4°	5°	6°	7°	8°	9°
Mcs first Floor (main entrance)									
Mcs basement Floor (railway)									
Mcs upper Floors									
Multi tenant proposal									
Months amount:									**36**

Roosvelt Post Office - Cost Summary

BUILDINGS INTERVENTIONS	CONSTRUCTION TIME	QUANTITY [SQM]	CONSTRUCTION COST[€/SQM]	REFERENCE	COST
Roosvelt Post Office Building	20 months	59298,50	€ 920	D21_C	€ 54.554.620
Roosvelt Post Office Multi Tenant	20 months	14468	€ 920	D21_C	€ 13.310.560
Roosvelt Post Office residential buildings	19 months	2130	€ 920	D21_C	€ 1.959.600
					€ 69.824.780
				CONVERTED COST	**$ 85.844.330**

PUBLIC INTERVENTIONS	CONSTRUCTION TIME	QUANTITY [SQM]	CONSTRUCTION COST[€/SQM]	REFERENCE	COST
Roads	-	0	€ 94	DEI I4	€ 0
Bicycle lanes	-	682,09	€ 18	FIAB	€ 12.148
sidewalks	-	5681	€ 5	DEI I4	€ 28.405
underground parkings	-	2946	€ 49	DEI H3	€ 144.354
Green areas	-	4001	€ 33	DEI I1	€ 132.033
Green park	-	0	€ 33	DEI I1	€ 0
					€ 316.940
				CONVERTED COST	**$ 389.654**
				TOTAL AMOUNT	**$ 86.233.984**

MULTI ATTRIBUTE VALUE THEORY - CORKTOWN MASTERPLAN

Roosvelt Post Office - Time construction Summary

Gantt diagram - Roosvelt interventions	1st year			2nd year			3rd year		
	1°	2°	3°	4°	5°	6°	7°	8°	9°
Roosvelt Post Office Building									
Roosvelt Post Office Multi Tenant									
Roosvelt Post Office Residential Buildings									
Months amount:									26

1448 Wabash Street - Cost Summary

BUILDINGS INTERVENTIONS	CONSTRUCTION TIME	QUANTITY [SQM]	CONSTRUCTION COST[€/SQM]	REFERENCE	COST
1448 Wabash Street building	20 months	56363,06	€ 920	D21_C	€ 51.854.016
1448 Wabash Street new construction	15 months	4704	€ 1.038	A1	€ 4.882.752
					€ 56.736.768
				CONVERTED COST	$ 69.753.601

PUBLIC INTERVENTIONS	CONSTRUCTION TIME	QUANTITY [SQM]	CONSTRUCTION COST[€/SQM]	REFERENCE	COST
Roads	-	2791	€ 94	DEI I4	€ 262.354
Bicycle lanes	-	1563,90	€ 18	FIAB	€ 27.853
sidewalks	-	4963	€ 5	DEI I4	€ 24.815
underground parkings	-	0	€ 49	DEI H3	€ 0
Green areas	-	5000	€ 33	DEI I1	€ 165.000
Green park	-	5850	€ 33	DEI I1	€ 193.050
					€ 673.072
				CONVERTED COST	$ 827.492
				TOTAL AMOUNT	$ 70.581.093

1448 Wabash Street - Time construction Summary

Gantt diagram – 1448 Wabash St. interventions	1st year			2nd year			3rd year		
	1°	2°	3°	4°	5°	6°	7°	8°	9°
1448 Wabash Street building									
1448 Wabash Street new construction									
Months amount:									**20**

WEIGHING ATTRIBUTES - PERFORMING THE SURVEY

Once the value functions have been defined, the criteria are weighed using the Swing Weights technique. The following technique takes into account the variation of the attributes: the method works by optimizing the attribute from the worst to the best level using the reference level in which the attributes are at the worst level and then asking the respondent to assign a score (0 -100) based on your interest in improving the level of performance of the attribute.

The main advantage obtained using the Swing Weights technique derives from the simple iterativity of the process in order to obtain the weights of all criteria regardless of their nature (whether qualitative or quantitative), which will be proportional to the scores obtained, regardless of their function of value. On the contrary, the disadvantage consists in the weighing of the criticism through the drafting of a very selective type of questionnaire and of not immediate understanding that requires a greater cognitive effort. Therefore, the choice of the sample of experts required special attention as it requires a good ability to read the questionnaire and a thorough knowledge of the intervention area. The selection was then completed by a sample of experts who for years have been studying the complexities and dynamics of the city of Detroit, knowing the Corktown area thoroughly, dividing them in the following way: for the assessment of environmental aspects, Dr. Jaqueline Taylor (Specialist of Cultural Landscape and General and Strategic Planning at the City of Detroit), for the design aspects Dr. Scott Shall (Associate Dean and Associate

MAVT SURVEY - ENVIRONMENTAL ASPECTS

In this survey, they will evaluated the specific attributes refer to the Environmental Aspects. This method asks to value each improvment from the lowest to the highest level of each attribute, by using a reference state in which all attributes are at their worst level and asking interviewee to assign points (in the range 0-100) to states in which one attribute at a time moves to best state.

WORST ALTERNATIVE:

	REGENERATED AREA	RE-QUALIFIED GREEN AREA	RE-QUALIFIED BROWNFIELD AREA	PUBLIC PLAYGROUNDS	TERRITORIAL INDEX
	0 SQM	0 SQM	0 SQM	0 SQM	1,05

RANKING SCORE: 0

1ST ALTERNATIVE:

REGENERATED AREA		RE-QUALIFIED GREEN AREA	RE-QUALIFIED BROWNFIELD AREA	PUBLIC PLAYGROUNDS	TERRITORIAL INDEX
274077 SQM	↑	0 SQM	0 SQM	0 SQM	1,05

RANKING SCORE: 65

2ND ALTERNATIVE:

	RE-QUALIFIED GREEN AREA				
	86793 SQM				
REGENERATED AREA	↑	RE-QUALIFIED BROWNFIELD AREA	PUBLIC PLAYGROUNDS	TERRITORIAL INDEX	
0 SQM		0 SQM	0 SQM	1,05	

RANKING SCORE: 30

MAVT SURVEY - ENVIRONMENTAL ASPECTS

3RD ALTERNATIVE:

	RE-QUALIFIED BROWNFIELD AREA
	65500 SQM

	REGENERATED AREA	RE-QUALIFIED GREEN AREA	↑	PUBLIC PLAYGROUNDS	TERRITORIAL INDEX
	0 SQM	0 SQM		0 SQM	1,05

RANKING SCORE: 40

4TH ALTERNATIVE:

	PUBLIC PLAYGROUNDS
	4022 SQM

	REGENERATED AREA	RE-QUALIFIED GREEN AREA	RE-QUALIFIED BROWNFIELD AREA	↑	TERRITORIAL INDEX
	0 SQM	0 SQM	0 SQM		1,05

RANKING SCORE: 20

5TH ALTERNATIVE:

	TERRITORIAL INDEX
	0,42

	REGENERATED AREA	RE-QUALIFIED GREEN AREA	RE-QUALIFIED BROWNFIELD AREA	PUBLIC PLAYGROUNDS	↑
	0 SQM	0 SQM	0 SQM	0 SQM	

RANKING SCORE: 60

MAVT SURVEY - PROJECT ASPECTS

In this survey, they will evaluated the specific attributes refer to the Project Aspects. This method asks to value each improvment from the lowest to the highest level of each attribute, by using a reference state in which all attributes are at their worst level and asking interviewee to assign points (in the range 0-100) to states in which one attribute at a time moves to best state.

WORST ALTERNATIVE:

	NEW PUBLIC SPACES	PUBLIC/PRIVATE RATIO	WORKING SPACES	COMMERCIAL/ EXHIBIT AREA	TIME CONSTRUCTION	LEARNING/ EDUCATIONAL SPACES	NEW RESIDENTIAL SPACES
	15603 SQM	1	16120 SQM	0 SQM	0 MONTHS	0 SQM	0 SQM

RANKING SCORE: 0

1ST ALTERNATIVE:

PUBLIC SPACES		PUBLIC/PRIVATE RATIO	WORKING SPACES	COMMERCIAL/ EXHIBIT AREA	TIME CONSTRUCTION	LEARNING/ EDUCATIONAL SPACES	NEW RESIDENTIAL SPACES
238171 SQM	↑	1	16120 SQM	0 SQM	0 MONTHS	0 SQM	0 SQM

RANKING SCORE: 50

2ND ALTERNATIVE:

	PUBLIC/PRIVATE RATIO					
	2.1					

PUBLIC SPACES		WORKING SPACES	COMMERCIAL/ EXHIBIT AREA	TIME CONSTRUCTION	LEARNING/ EDUCATIONAL SPACES	NEW RESIDENTIAL SPACES
15603 SQM	↑	16120 SQM	0 SQM	0 MONTHS	0 SQM	0 SQM

RANKING SCORE: 30

MAVT SURVEY - PROJECT ASPECTS

3RD ALTERNATIVE:

	WORKING SPACES						
	77641 SQM						

	PUBLIC SPACES	PUBLIC/PRIVATE RATIO	↑	COMMERCIAL/ EXHIBIT AREA	TIME CONSTRUCTION	LEARNING/ EDUCATIONAL SPACES	NEW RESIDENTIAL SPACES
	15603 SQM	1		0 SQM	0 MONTHS	0 SQM	0 SQM

RANKING SCORE: **40**

4TH ALTERNATIVE:

	COMMERCIAL/ EXHIBIT AREA						
	6655 SQM						

	PUBLIC SPACES	PUBLIC/PRIVATE RATIO	WORKING SPACES	↑	TIME CONSTRUCTION	LEARNING/ EDUCATIONAL SPACES	NEW RESIDENTIAL SPACES
	15603 SQM	1	16120 SQM		0 MONTHS	0 SQM	0 SQM

RANKING SCORE: **80**

5TH ALTERNATIVE:

	TIME CONSTRUCTION						
	36 MONTHS						

	PUBLIC SPACES	PUBLIC/PRIVATE RATIO	WORKING SPACES	COMMERCIAL/ EXHIBIT AREA	↑	LEARNING/ EDUCATIONAL SPACES	NEW RESIDENTIAL SPACES
	15603 SQM	1	16120 SQM	0 SQM		0 SQM	0 SQM
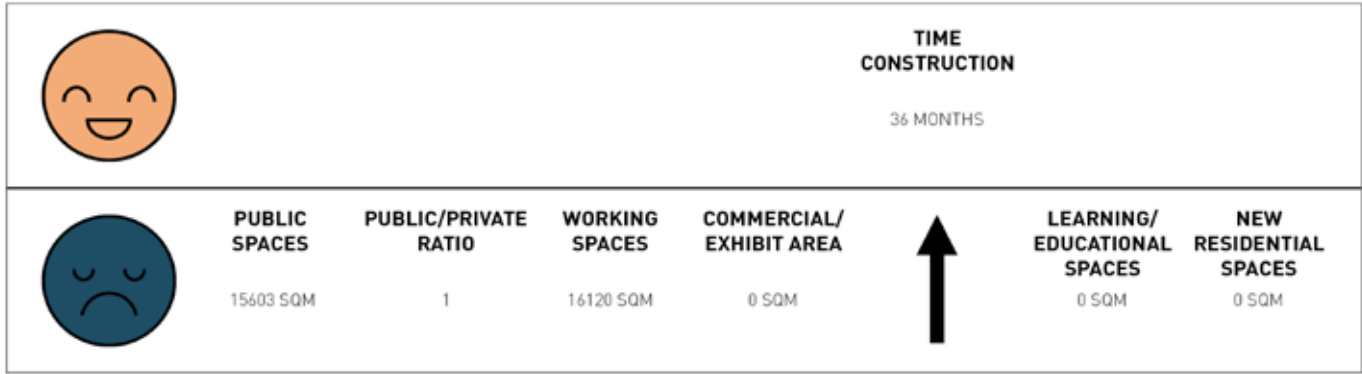
RANKING SCORE: **50**

MAVT SURVEY - PROJECT ASPECTS

6TH ALTERNATIVE:

						LEARNING/ EDUCATIONAL SPACES 2424 SQM
	PUBLIC SPACES	PUBLIC/PRIVATE RATIO	WORKING SPACES	COMMERCIAL/ EXHIBIT AREA	TIME CONSTRUCTION	↑	NEW RESIDENTIAL SPACES
	15603 SQM	1	16120 SQM	0 SQM	0 MONTHS		0 SQM

RANKING SCORE: **70**

7TH ALTERNATIVE:

						NEW RESIDENTIAL SPACES 22672 SQM
	PUBLIC SPACES	PUBLIC/PRIVATE RATIO	WORKING SPACES	COMMERCIAL/ EXHIBIT AREA	TIME CONSTRUCTION	LEARNING/ EDUCATIONAL SPACES	↑
	15603 SQM	1	16120 SQM	0 SQM	0 MONTHS	0 SQM	

RANKING SCORE: **60**

MAVT SURVEY - ECONOMIC ASPECTS

In this survey, they will evaluated the specific attributes refer to the Economic Aspects. This method asks to value each improvment from the lowest to the highest level of each attribute, by using a reference state in which all attributes are at their worst level and asking interviewee to assign points (in the range 0-100) to states in which one attribute at a time moves to best state.

WORST ALTERNATIVE:

	ECONOMIC BENEFITS DELIVERED BY PROJECT	PROJECT COST	INVESTMENT RISK
	VERY LOW	0 $	VERY LOW

RANKING SCORE: 0

1ST ALTERNATIVE:

	ECONOMIC BENEFITS DELIVERED BY PROJECT		
	VERY HIGH		
	↑	PROJECT COST	INVESTMENT RISK
		0 $	VERY LOW

RANKING SCORE: 100

2ND ALTERNATIVE:

		PROJECT COST	
		336.306.654 $	
	ECONOMIC BENEFITS DELIVERED BY PROJECT	↑	INVESTMENT RISK
	VERY LOW		VERY LOW

RANKING SCORE: 70

MAVT SURVEY - ECONOMIC ASPECTS

3RD ALTERNATIVE:

INVESTMENT RISK

VERY HIGH

ECONOMIC BENEFITS
DELIVERED BY
PROJECT

VERY LOW

PROJECT COST

0 $

RANKING SCORE: **30**

MAVT SURVEY - SOCIAL ASPECTS

In this survey, they will evaluated the specific attributes refer to the Social Aspects. This method asks to value each improvment from the lowest to the highest level of each attribute, by using a reference state in which all attributes are at their worst level and asking interviewee to assign points (in the range 0-100) to states in which one attribute at a time moves to best state.

WORST ALTERNATIVE:

	NEW JOBS	GENTRIFICATION	FUNCTIONAL MIXED-USE INDEX	COMMUNITY SPACES	INHABITANTS INCREASE
	0	VERY LOW	0,4	0 SQM	0 SQM

RANKING SCORE: 0

1ST ALTERNATIVE:

NEW JOBS				
6070				

	GENTRIFICATION	FUNCTIONAL MIXED-USE INDEX	COMMUNITY SPACES	INHABITANTS INCREASE
↑	VERY LOW	0,4	0 SQM	0 SQM

RANKING SCORE: 10

2ND ALTERNATIVE:

GENTRIFICATION			
VERY HIGH			

NEW JOBS		FUNCTIONAL MIXED-USE INDEX	COMMUNITY SPACES	INHABITANTS INCREASE
0	↑	0,4	0 SQM	0 SQM

RANKING SCORE: 30

MAVT SURVEY - SOCIAL ASPECTS

3RD ALTERNATIVE:

	NEW JOBS	GENTRIFICATION	FUNCTIONAL MIXED-USE INDEX 1	COMMUNITY SPACES	INHABITANTS INCREASE
	0	VERY LOW	↑	0 SQM	0 SQM
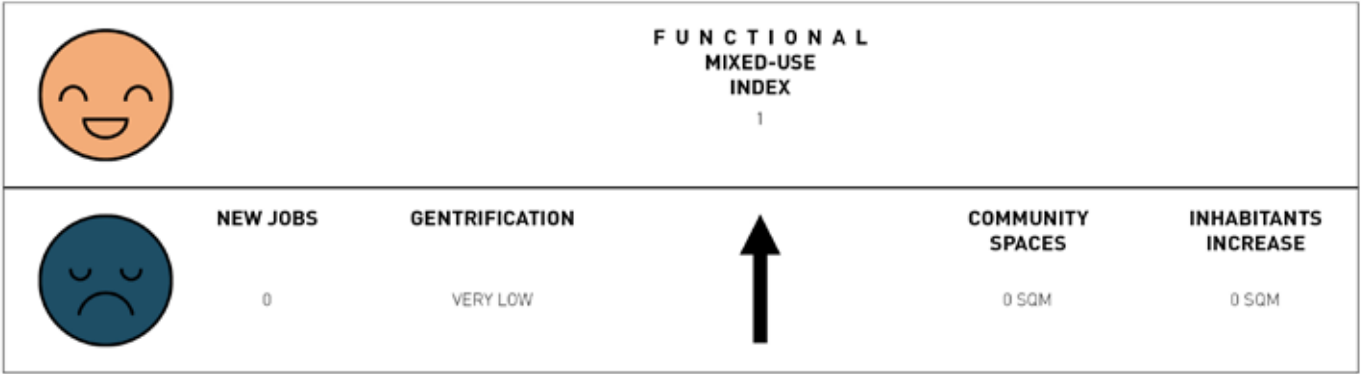
RANKING SCORE: **20**

4TH ALTERNATIVE:

	NEW JOBS	GENTRIFICATION	FUNCTIONAL MIXED-USE INDEX	COMMUNITY SPACES 6277 SQM	INHABITANTS INCREASE
	0	VERY LOW	0,4	↑	0 SQM

RANKING SCORE: **50**

5TH ALTERNATIVE:

	NEW JOBS	GENTRIFICATION	FUNCTIONAL MIXED-USE INDEX	COMMUNITY SPACES	INHABITANTS INCREASE 453
	0	VERY LOW	0,4	0 SQM	↑

RANKING SCORE: **60**

MAVT SURVEY - ASPECTS SUMMARY

In this survey, they will evaluated the attributes refer for each aspect . This method asks to value each improvment from the lowest to the highest level of each attribute, by using a reference state in which all attributes are at their worst level and asking interviewee to assign points (in the range 0-100) to states in which one attribute at a time moves to best state.

WORST ALTERNATIVE:

ENVIRONMENTAL ASPECTS

regenerated area 0 SQM;re-qualified green area 0 SQM; re-qualified brownfield 0 SQM; public playgrounds 0 SQM; territorial index 1,05

PROJECT ASPECTS

public spaces 15603 SQM; public/private ratio 1; working spaces 16120 SQM; commercial/exhibit area 0 SQM; time construction 0; learning/educational spaces 0 SQM, new residential spaces 0 SQM

ECONOMICAL ASPECTS

economic benefits delivered by the project very low; project cost 0$; investment risk very low

SOCIAL ASPECTS

no new jobs; no gentrification; functional mixed-use index 0,4; community spaces 0 SQM; no inhabitants increase

RANKING SCORE: **0**

1ST ALTERNATIVE:

ENVIRONMENTAL ASPECTS

regenerated area 274077 SQM;re-qualified green area 86793 SQM; re-qualified brownfield 65500 SQM; public playgrounds 4022 SQM; territorial index 0,422

PROJECT ASPECTS

public spaces 15603 SQM; public/private ratio 1; working spaces 16120 SQM; commercial/exhibit area 0 SQM; time construction 0; learning/educational spaces 0 SQM, new residential spaces 0 SQM

ECONOMICAL ASPECTS

economic benefits delivered by the project very low; project cost 0$; investment risk very low

SOCIAL ASPECTS

no new jobs; no gentrification; functional mixed-use index 0; community spaces 0 SQM; no inhabitants increase
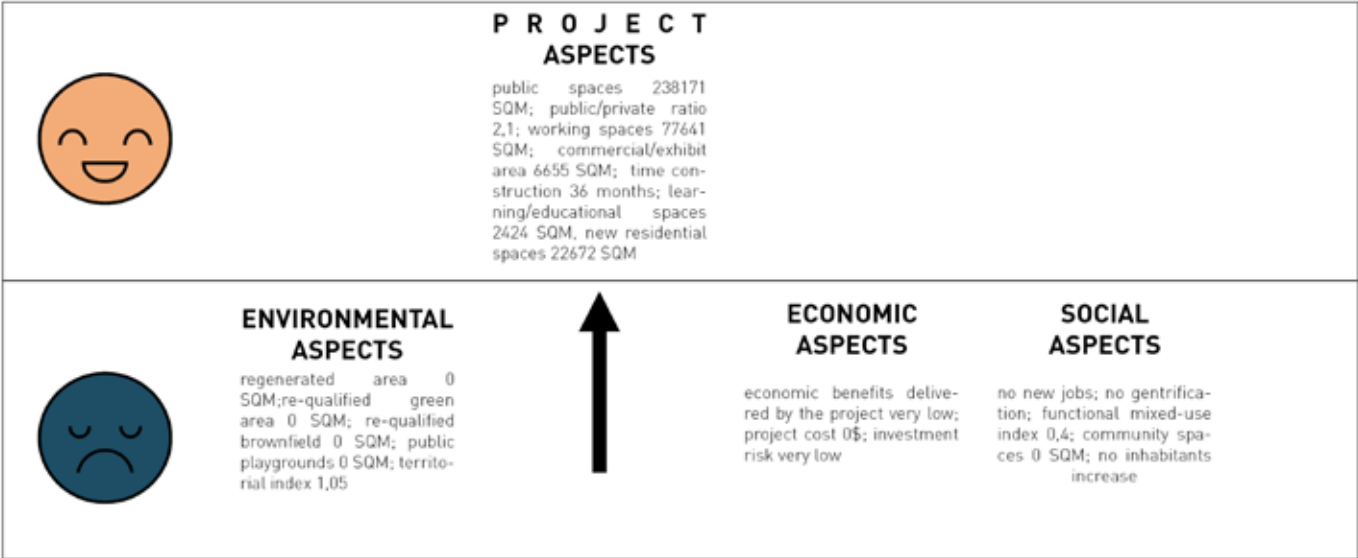
RANKING SCORE: **80**

MAVT SURVEY - ASPECTS SUMMARY

2ND ALTERNATIVE:

P R O J E C T ASPECTS

public spaces 238171 SQM; public/private ratio 2,1; working spaces 77641 SQM; commercial/exhibit area 6655 SQM; time construction 36 months; learning/educational spaces 2424 SQM, new residential spaces 22672 SQM

ENVIRONMENTAL ASPECTS

regenerated area 0 SQM;re-qualified green area 0 SQM; re-qualified brownfield 0 SQM; public playgrounds 0 SQM; territorial index 1,05

ECONOMIC ASPECTS

economic benefits delivered by the project very low; project cost 0$; investment risk very low

SOCIAL ASPECTS

no new jobs; no gentrification; functional mixed-use index 0,4; community spaces 0 SQM; no inhabitants increase

RANKING SCORE: **50**

3RD ALTERNATIVE:

E C O N O M I C A L ASPECTS

economic benefits delivered by the project very high; project cost 336.306.654 $; investment risk very high

ENVIRONMENTAL ASPECTS

regenerated area 0 SQM;re-qualified green area 0 SQM; re-qualified brownfield 0 SQM; public playgrounds 0 SQM; territorial index 1,05

P R O J E C T ASPECTS

public spaces 15603 SQM; public/private ratio 1; working spaces 16120 SQM; commercial/exhibit area 0 SQM; time construction 0; learning/educational spaces 0 SQM, new residential spaces 0 SQM

SOCIAL ASPECTS

no new jobs; no gentrification; functional mixed-use index 0; community spaces 0 SQM; no inhabitants increase
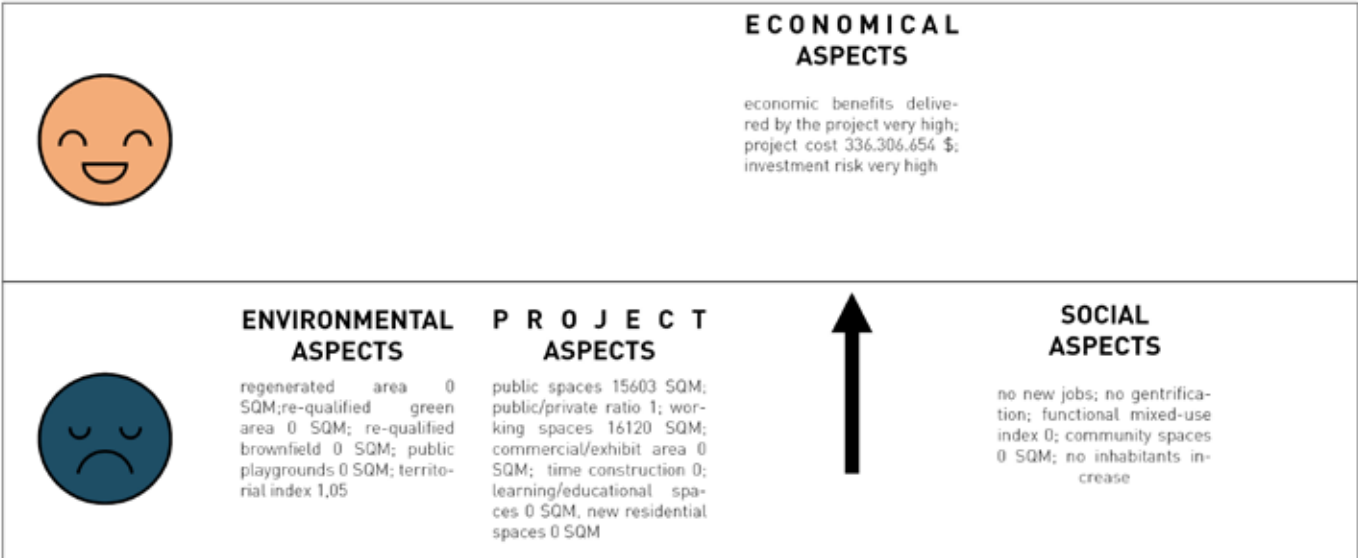
RANKING SCORE: **30**

MAVT SURVEY - ASPECTS SUMMARY

4TH ALTERNATIVE:

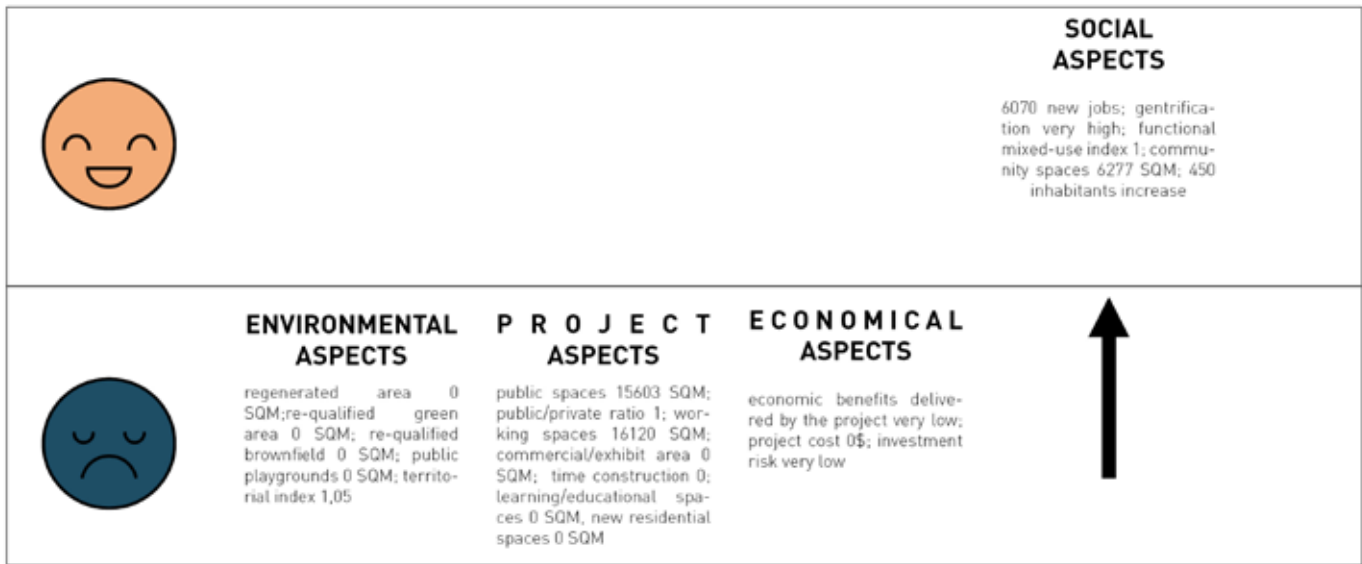

SOCIAL ASPECTS

6070 new jobs; gentrification very high; functional mixed-use index 1; community spaces 6277 SQM; 450 inhabitants increase

ENVIRONMENTAL ASPECTS

regenerated area 0 SQM;re-qualified green area 0 SQM; re-qualified brownfield 0 SQM; public playgrounds 0 SQM; territorial index 1,05

PROJECT ASPECTS

public spaces 15603 SQM; public/private ratio 1; working spaces 16120 SQM; commercial/exhibit area 0 SQM; time construction 0; learning/educational spaces 0 SQM, new residential spaces 0 SQM

ECONOMICAL ASPECTS

economic benefits delivered by the project very low; project cost 0$; investment risk very low

RANKING SCORE: **70**

Professor of Architecture and Design College at Lawrence Tech University of Southfield), for the economic aspects Mr. Noah Elliott Morrison (Director of the Ponyride Incubator), and, for social aspects Dr. Joongsub Kim (Professor and Director of the Master of Urban Design Program Architecture at Lawrence Tech University).

After completion of the questionnaires, we proceed with the weighing of the criteria from the scores obtained in order to obtain the total weighing of each element. The weighted values obtained for each criterion are then summed for each aspect, thus obtaining four distinct values (environmental, design, economic and social) on which the sensitivity graph is drawn, finally, the average of the four values defines the overall score obtained for each scenario, on which the priority of development of the project will be chosen based on the highest value.
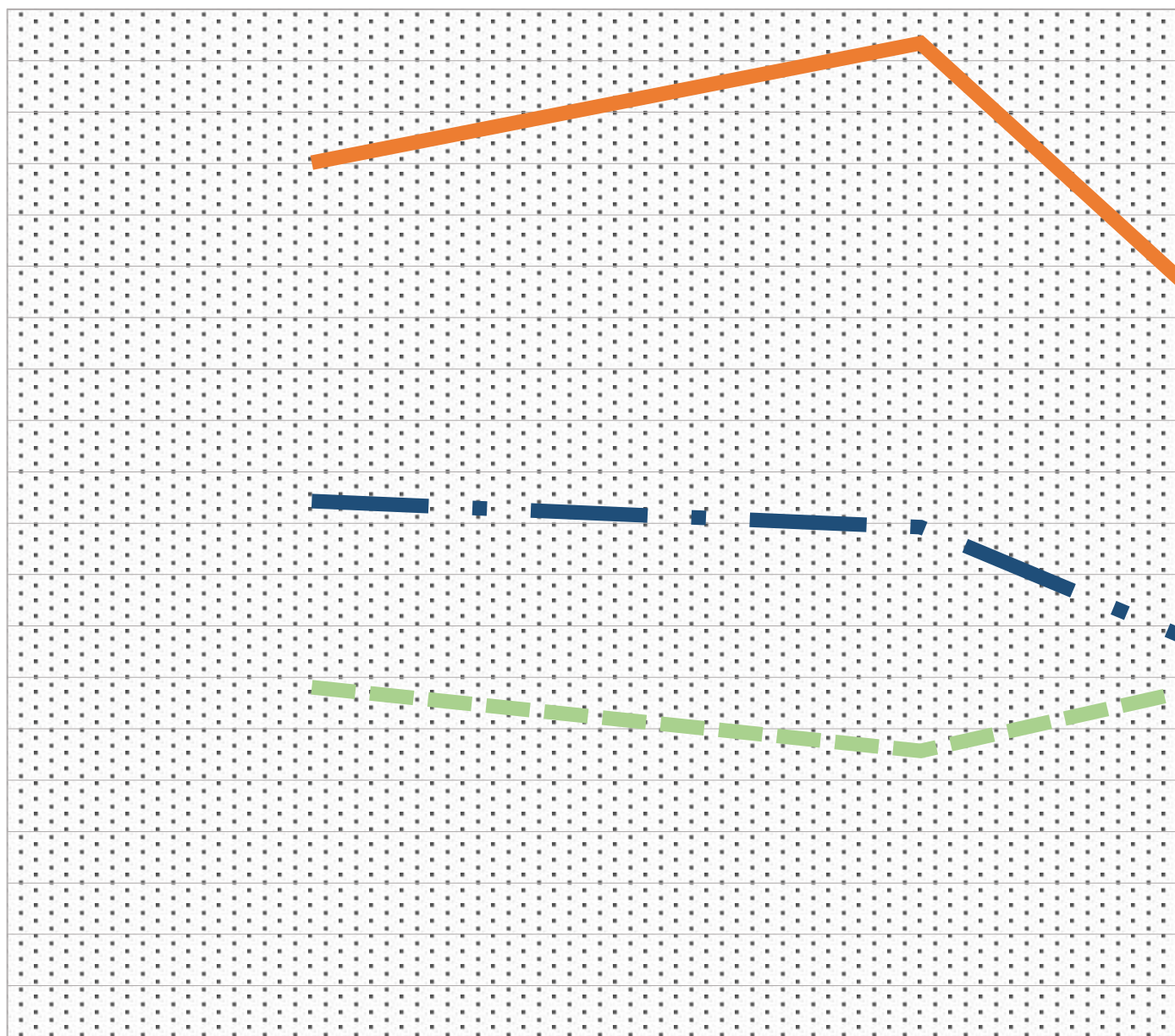
	ENVIRONMENTAL ASPECTS	PROJECT ASPECTS	ECONOMIC ASPECTS	SOCIAL ASPECTS	FINAL PRIORITY
MICHIGAN CENTRAL STATION	0,85	0,97	0,43	0,50	**0,69**
ROOSVELT POST OFFICE	0,52	0,50	0,25	0,64	**0,48**
1448 WABASH STREET	0,34	0,28	0,41	0,36	**0,35**

.Figure 54: Final priorities
aspects and final results

EVALUATION RESULTS

The results of the MAVT analysis highlighted the best scenario for the Michigan Central Station (with a total score of 0.69), defining it as the top priority in the Corktown context, after the Roosevelt Post Office (0.48) and finally , 1448 Wabash St. (with a score of 0.35). The trend of the high scores relative to the scenario of the Michigan central station is highlighted in the environmental and design aspects: this confirms the proportions with respect to the other scenarios related to the parameter of the regenerated area (environmental aspect) and the parameter of the exhibition area (aspect of the project), with much higher quantities compared to the other scenarios; the result of the worst case scenario (Wabash St) derives from the lack of commercial areas, a parameter that significantly affects the valuation. With reference to the economic aspects, there is a trend between 0.25 and 0.43 among all scenarios, which derives from an evaluation of the non-priority economic aspect among the experts; moreover, the Roosevelt scenario turns out to be the worst because it affects the low value of the parameter related to the economic benefits derived, as a result of the presence of numerous learning spaces that do not generate monetary externality. Finally, as regards the social aspects, a clear separation is promulgated from the Roosevelt Post Office scenario, which promotes through the new houses an increase of the inhabitants in the masterplan (prevalent on the parameter of increase of the inhabitants). The following pages show the sensitivity analysis that relates the trend of the aspects for each individual scenario analyzed
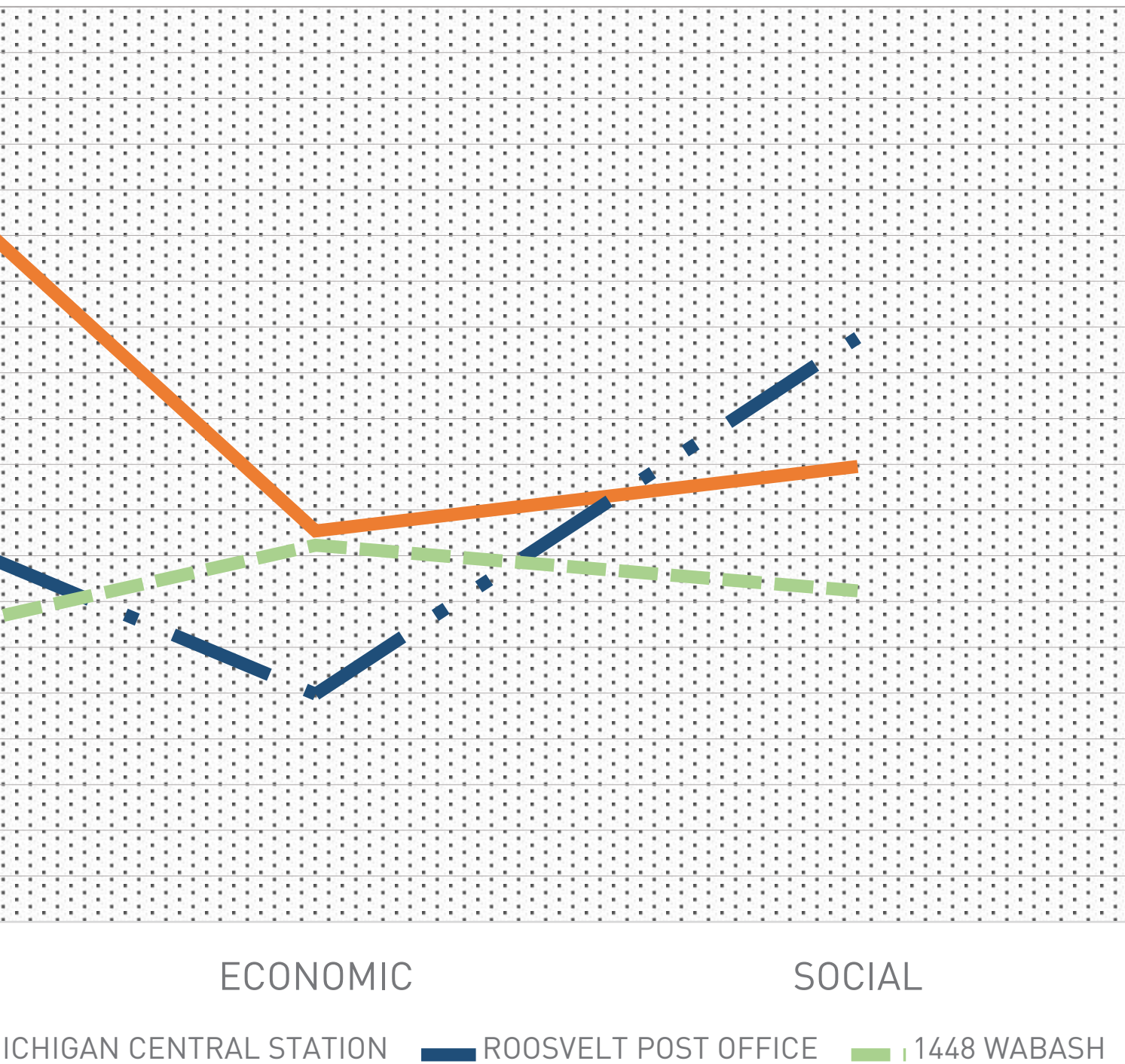
RE-THINKING Detroit, a new economic approach

ECONOMIC   SOCIAL

ICHIGAN CENTRAL STATION ▬▬ ROOSVELT POST OFFICE ▬ 1448 WABASH

.Figure 55: Sensitivity analysis

CONCLUSIONS

Within this thesis the theme of work was discussed in the city of Detroit to support the new economic development. The study focused on historical research that is based on the phenomenon of abandonment of the cities of the Rust Belt and on the reasons why the manufacturing industry has abandoned the infrastructures in favor of the new economic markets. It is therefore not correct to think of a restoration of urban manufacture in the city without having considered the failure of the last century and ignoring new forms of strategy.

Rethinking Detroit therefore represents a new socio-economic approach in the American city that promotes a new form of urban manufacture spread throughout the city; the historical center is deprived of its antisocial character so widespread in the past, rising to a new urban pole that promotes aggregation instead of segregation, sharing rather than the individuality inherited from the 'American dream'.

The Making Net is therefore conceived as a new system for promoting education and work through an environment that encourages the development and dynamism of the city's economy. The choice of incubator development in the depressed areas of Detroit, guarantees a new attraction for the inhabitants of the district. This approach to the city therefore represents a new vision that is futuristic and coherent with the policies of development of Motown. The scenario of a future Corktown therefore presents itself as the perfect test bench that summarizes the philosophy of this approach, shifting the attention from the urbanized center and optimized for work activities towards a new system that makes adaptive reuse a strong point, giving life to urban spaces in favor of new forms of aggregation and slow mobility.

Answering then to the initial question: What will be the future of Detroit? It is possible to imagine a future of the city as a new urban factory system, as in the mural of the artist Diego Rivera, but through a new collaborative community that shares a common future vision of the city.

.In the next Pages: Detroit Industry Mural, Detroit Institute of Arts, painting made by Diego Rivera artist.
(Panoramic shot, personal photo archive)

RE-THINKING Detroit, a new economic approach

BIBLIOGRAPHY

Alessandro Coppola, Apocalypse town: cronache dalla fine della civiltà urbana, Laterza, Roma, 2013, 235 p.

Simeon Alder, David Lagakos, Lee Ohanian, Competitive Pressure and the Decline of the Rust Belt, National Bureau of Economic Research, Cambridge, 2015, 44p.

John Gallagher, Reimagining Detroit: Opportunities for Redefining an American City, Wayne State University Press, 2010, 176 p.

Ignasi de Solà-Morales, Terrain vague, in Cynthia C. Davidson, Anyplace, MIT Press, Cambridge 1996

Georgia Daskalakis, Charles Waldheim and Jason Young, Stalking Detroit, ACTAR, Barcelona 2001, 157 p.

Dennis Alan Nawrocki, Art in Detroit Public Places: Third Edition, Wayne State University Press, Detroit, 2008, 256 p.

Detroit Future City, 2012 Detroit Strategic Framework Plan, Brandon List, Detroit, 2012, 354 p

Antoine van Agtmael, Alfred Bakker, The Smartest Places on Earth: Why Rustbelts Are the Emerging Hotspots of Global Innovation, PublicAffairs, New York, 2016, 320 p.

Detroit Future City, 2012 Detroit Strategic Framework Plan, Executive Summary, Brandon List, Detroit, 2013, 36 p

Florian Hertweck, Sébastien Marot, A manifesto (1977) by Oswald Mathias Ungers and Rem Koolhaas, THE CITY IN THE CITY / BERLIN: A GREEN ARCHIPELAGO, Lars Müller Publisher, Zurich, 2013, 176 p

Michigan Department of Transportation (MDOT), Michigan's Railroad History: 1825-2014, MDOT, Lansing, 2015, 36 p

Michigan Department of Transportation (MDOT), Michigan State Rail Plan, MDOT, Lansing, 2011, 36 p

City of Detroit, Non-motorized Transportation Master Plan, City of Detroit, Detroit, 2006, 65 p

Peter Roberts, Peter W.Roberts, Hugh Sykes, Urban Regeneration: a Handbook, Sage,London, 2000, 320 p.

Peter Tyler, Colin Warnock, Allan Provins, Bruno Lanz, Valuing the Benefits of Urban Regeneration, Urban Studies Journal, 2012 22 p.

Tahl Kaminer, The decline of the industrial city: The limits of neo-liberal Urban Regeneration, Edinburgh College of Art, Edimburgh, 2009, 143 p.

Riccardo Roscelli, Manuale di Estimo, valutazioni economiche ed esercizio della professione, UTET, Torino, 2014, 461 p.

Sergio Conti, Dopo la città industriale, Detroit tra crisi urbana e crisi dell'automobile, Angeli, Milano, 1983, 254 p.

Ivan Tognarini, Angelo Nesti, Archeologia industriale : l' oggetto, i metodi, le figure professionali, Carocci, Roma, 2003, 262 p.

Cristina Paredes, Usines reconverties, L'ineditè, Parigi, 2006, 286 p.

Renata Valente, La riqualificazione delle aree dismesse : conversazioni sull'ecosistema urbano, Liguori, Napoli, 2006, 154 p.

Egidio Dansero, Carolina Giaimo, Agata Spaziante, Se i vuoti si riempiono : aree industriali dismesse: temi e ricerche, Alinea, Firenze, 2001, 259 p.

Detroit resist, digital occupation of the U.S. Pavilion, 2016 Venice Biennale, Stati Uniti, 2016, 23p.

Dora Arpel, Beautiful terrible ruins : Detroit and the anxiety of decline, Rutgers University press, New Jersey, 2015, 185 p.

Andrea Signoretti, Fabbriche globali, un confronto tra Torino e Detroit, Il Mulino, Bologna, 2014, 252 p.

Francesca Berardi, Detour in Detroit, Humbolt Books, 2015, 288

Gilles Clement, Manifesto del Terzo Paesaggio, Quodlibet, Macerata, 2006, 96 p.

Joe Darden, Detroit: Race and Uneven Development (Comparitive American Cities), Temple University Press,Philadelphia, 1990, 229 p.

Jane Jacobs, The Death and Life of Great American Cities, Random House, New York, 1961, 458 p.

Rem Koolhaas, Junkspace, Quodlibet, Macerata, 2006, 123 p.

Tom Wolfe, Maledetti Architetti.Dal Bauhaus a casa nostra, Bompiani, Milano, 2001, 144 p.

Francesco Careri, Walkscapes. Camminare come pratica estetica, Einaudi, Torino, 2006, 167 p.

City of Detroit, Four Year Financial Plan 2016-2019, City of Detroit, Detroit, 2016, 753 p.

Jeffrey S Nesbit, Post Industrial Landscapes, as urban interventions, Texas Tech University, Lubbock, 2012, 105 p.

JP Morgan Chase & Co., The big of small businesses on Urna Job Creation: Evidence from Five Cities, ICIC, 2016, 18 p.

David Neumark, Brandon Wall, Junfu Zhang, Do small businesses create more Jobs? New evidence for the United States from the National Establishment Time Series, Forschungsinstitut zur Zukunft der Arbeit Institute for the Study of Labor, Bonn, 2008, 47 p.

Laura Bianconi, Valeria Moreschi, La memoria delal fotografia, Fondazione Forma per la Fotografia, Milano, 2015, 38 p.

SITOGRAPHY

Liz Wells, Photography - a critical introduction, Routledge, New York, 2015, 442 p.

Karen Beckman, Liliane Weissberg, On Writing with Photography, University of Minnesota Press, Minneapolis, 2013, 364 p.

---

https://www.clickondetroit.com/news/major-construction-projects-planned-to-improve-detroit-riverfront

https://eu.detroitnews.com/story/business/2018/04/10/detroit-west-riverfront-winning-design/33697541/

http://www.crainsdetroit.com/article/20150629/NEWS/150629845/detroit-windsor-rail-tunnel-project-put-on-hold-business-case-and

http://www.michiganrailroads.com/

https://www.metrotimes.com/the-scene/archives/2017/09/14/the-michigan-central-station-light-show-is-the-coolest-thing-youll-see-all-week

http://parallelprojections.com/

http://ilgiornaledellarchitettura.com/web/2016/04/15/gli-usa-alla-biennale-affrontare-detroit-in-crisi-col-potere-dellimmaginazione/

http://detroiturbanism.blogspot.it/

http://www.stoss.net/projects/29/detroit-future-city/

http://scenariojournal.com/article/wild-innovation-stoss-in-detroit/

http://www.thearchitecturalimagination.org/

http://newsroom.ucla.edu/stories/ucla-architect-greg-lynn-reenvisions-site-of-abandoned-factory-in-detroit

http://www.humboldtbooks.com/special-projects/detour-in-detroit/

http://divisare.com/projects/286660-cooperativa-detroit-sta-

PHOTOGRAPHIC SURVEY

PHOTOGRAPHIC SURVEY

During my stay in Detroit in 2017, I had the opportunity to develop a new, more conscious approach between architecture and photography. The objective of this photographic survey is the storytelling of a direct testimony of the city in a given historical moment, supported by the development of the thesis work. The progression of the images is presented in line with the thematic progression of the topics of this thesis through a semiological research that identifies the story through the architecture represented. Most of the photographic material inside the thesis is the result of my continuous urban exploration structured in the city of Detroit through my travel by bike (data obtained by GPS tracking), highlighted in the map in the following pages.
What struck my photographic experience was the lack of the human figure in most of my works, leaving the narration of the city only and exclusively to residual landscapes and abandoned architectures. However, stories like the Detroit Soup and the MotorCity Makeover testify through events that promote the aggregation of citizens, the desire to return owners of their landscapes without ignoring their historical heritage.

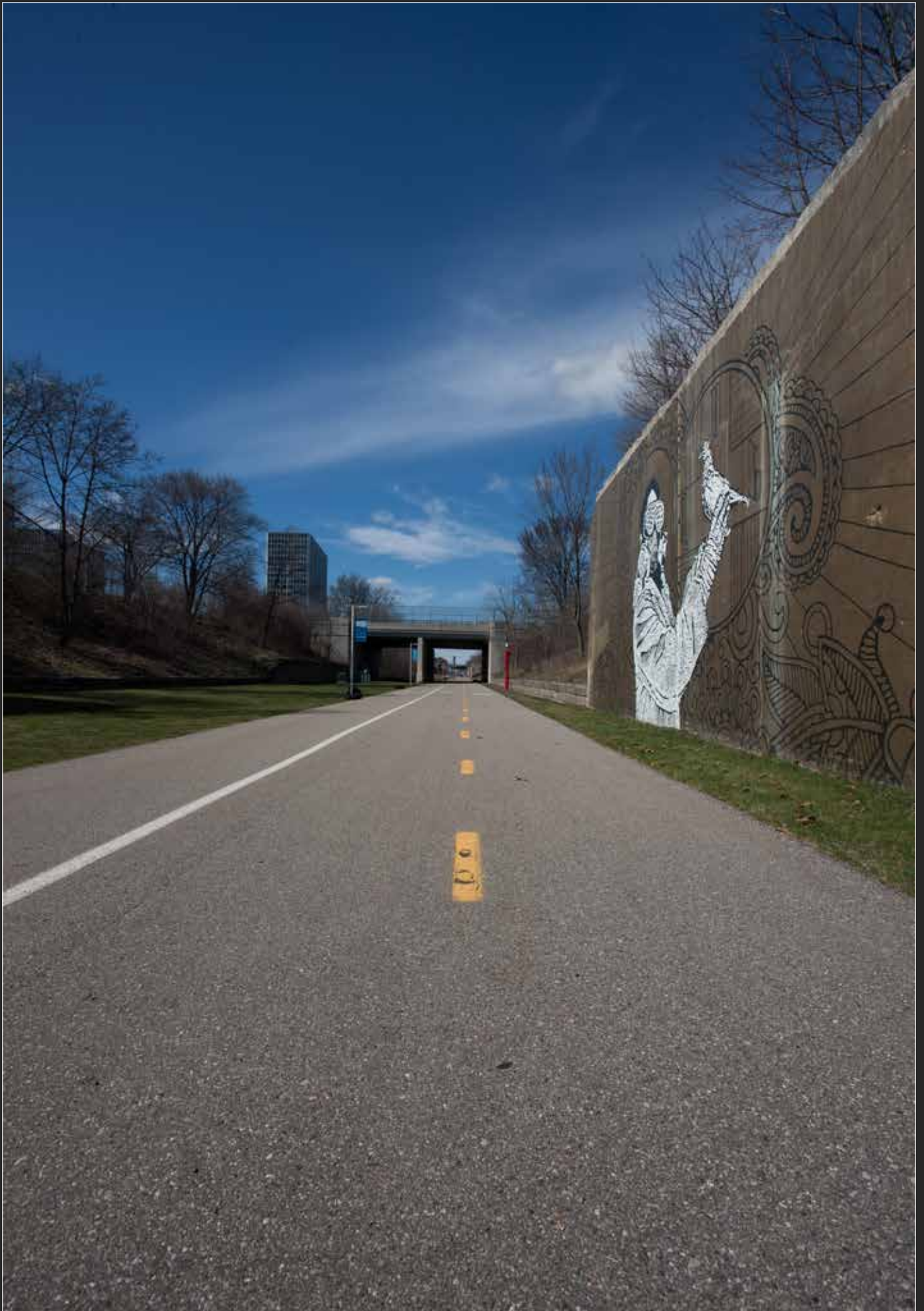*Detroit, has a future in its rethinking, and this future passes through its community.*

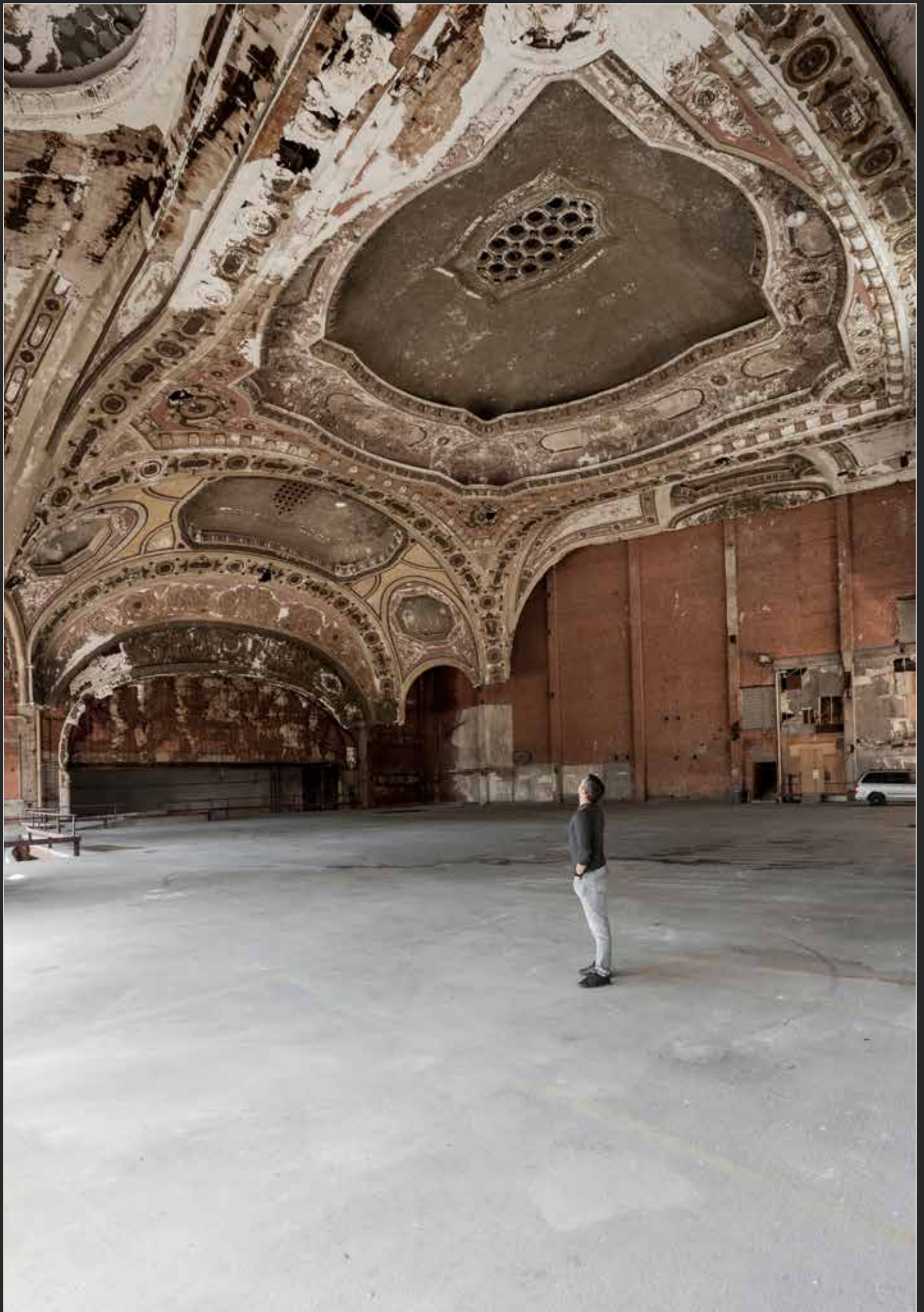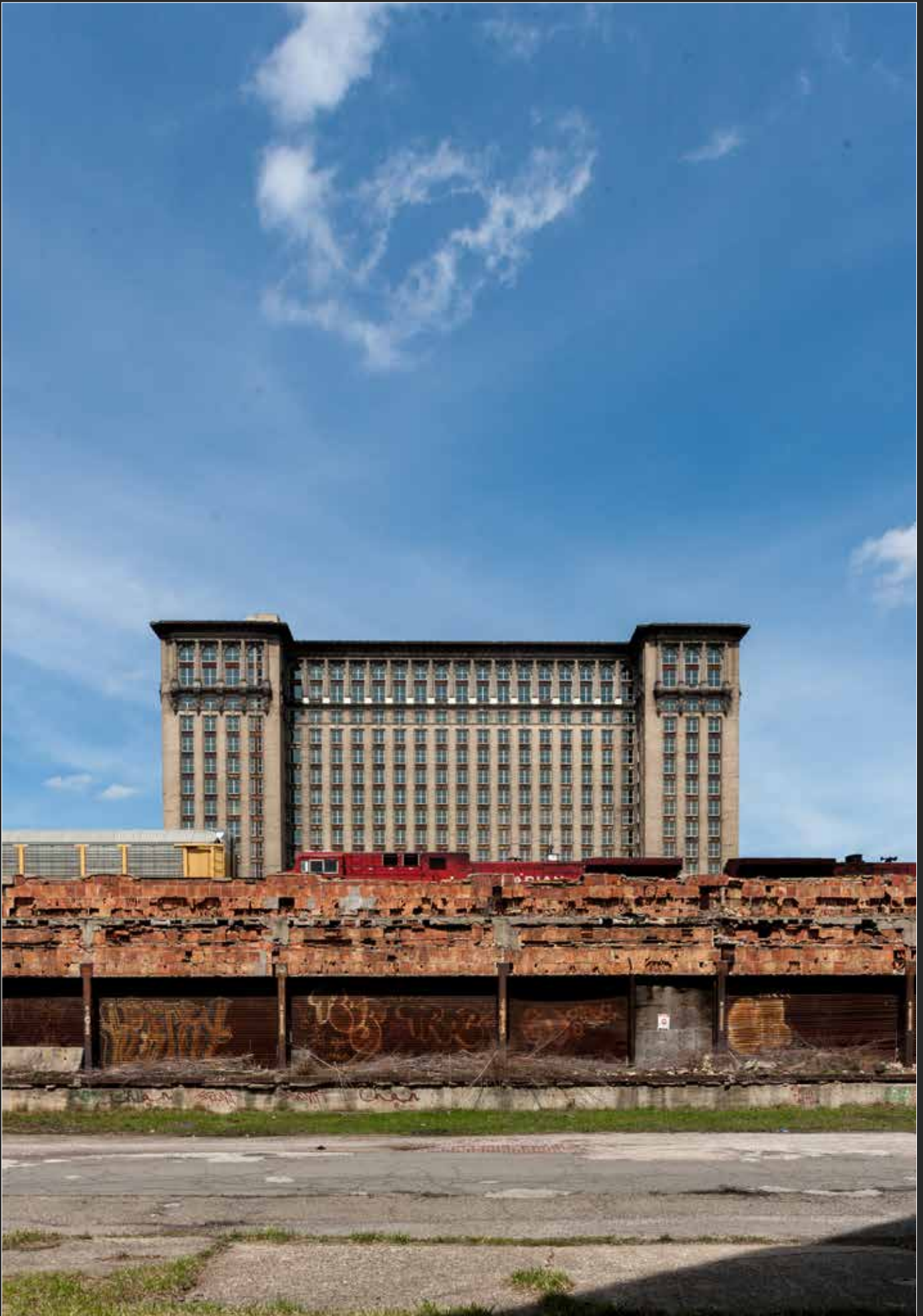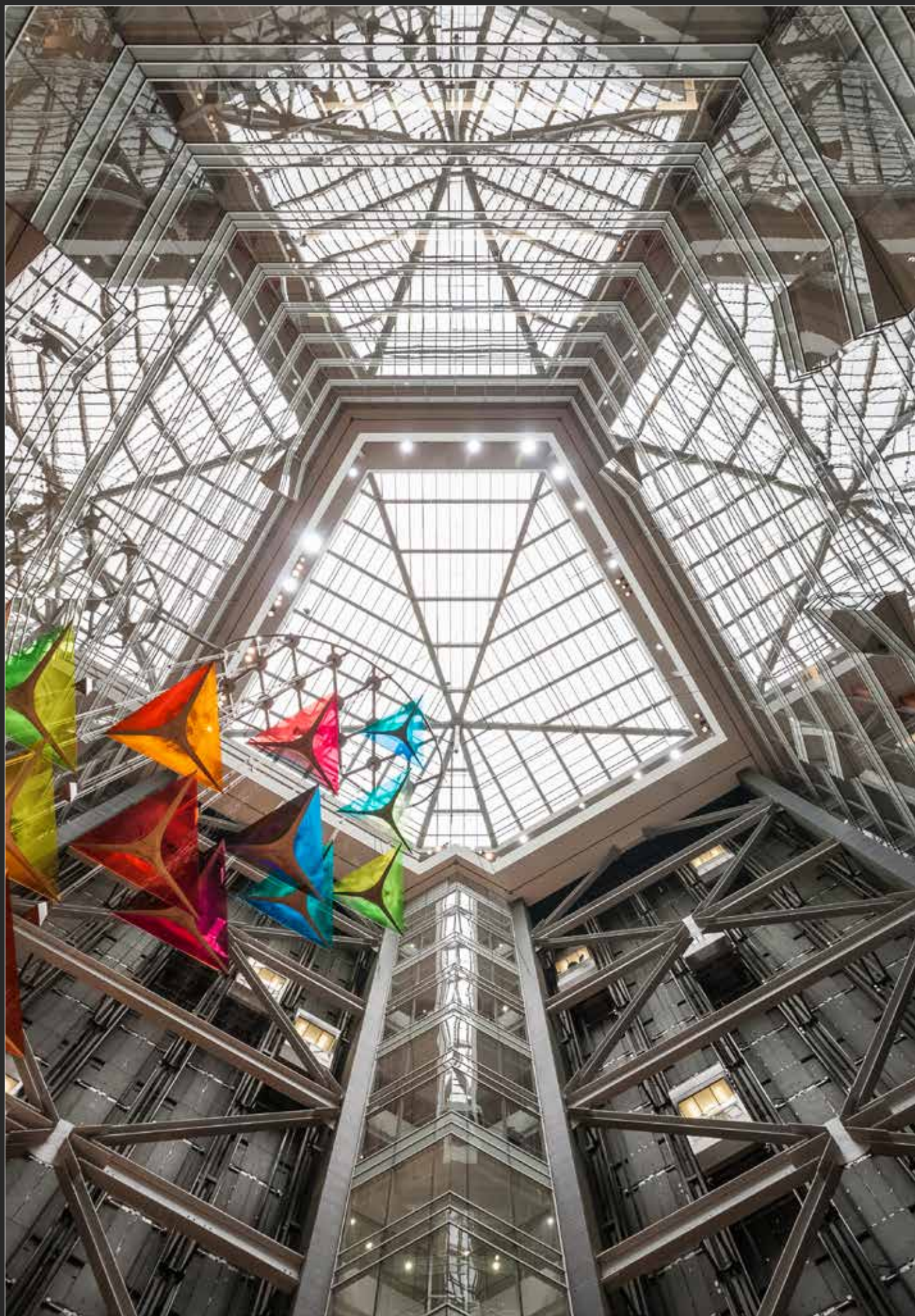RE-THINKING Detroit, a new economic approach
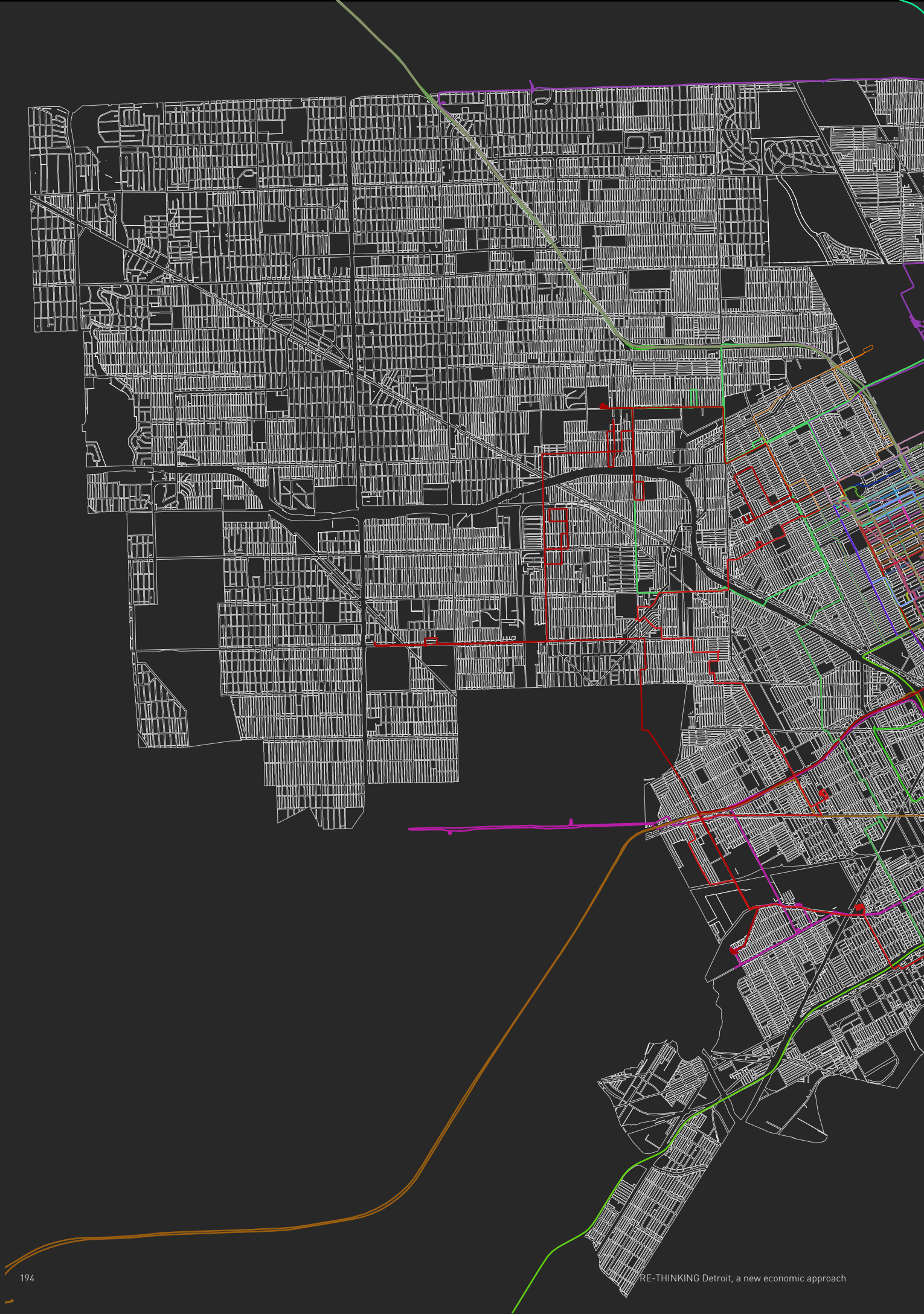
PHOTOGRAPHY INDEX

- An abandoned house in being deconstructed, Corktown

- Fisher Body Plant facade

- Urban neighborhood vegetable garden, Brush Park

- Dequindre Cut bicycle/pedestrian path

- A spontaneous artistic representation, The Heildelberg

  Project

- Michigan Theater, used today as car parking, Downtown

- Detroit Soup, North Corktown

- Motorcity Makeover at work

- Michigan Central Station, Corktown

- Campus Martius ceiling, Downtown

ACKNOWLEDGEMENTS