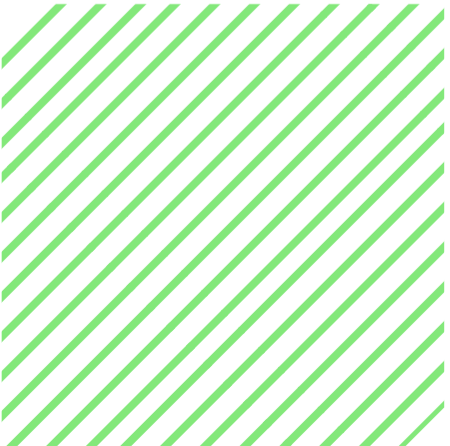
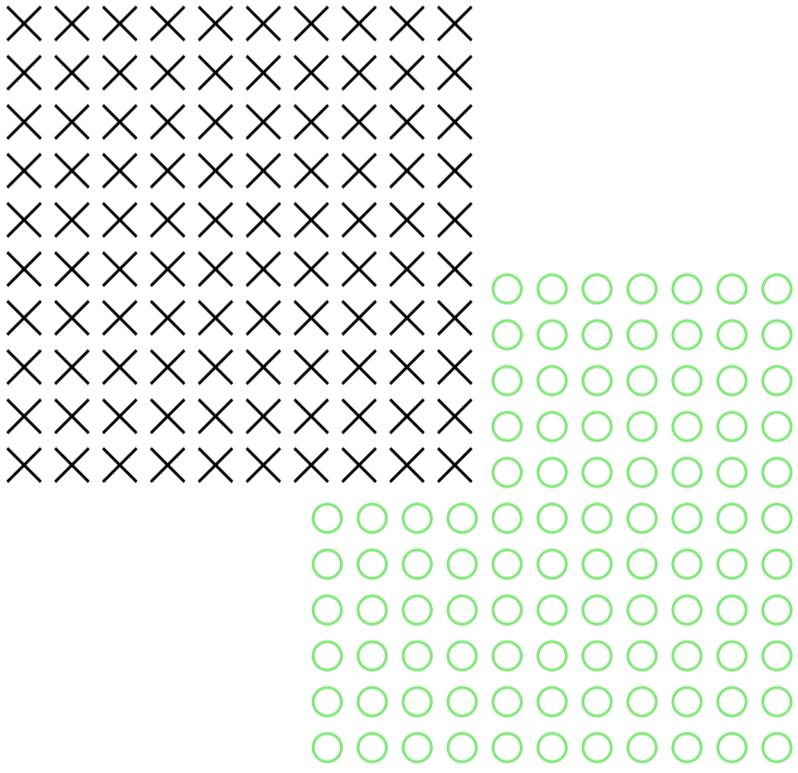
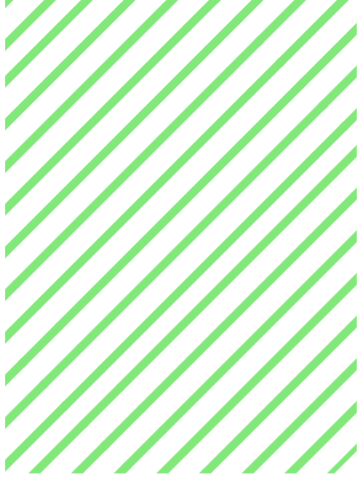
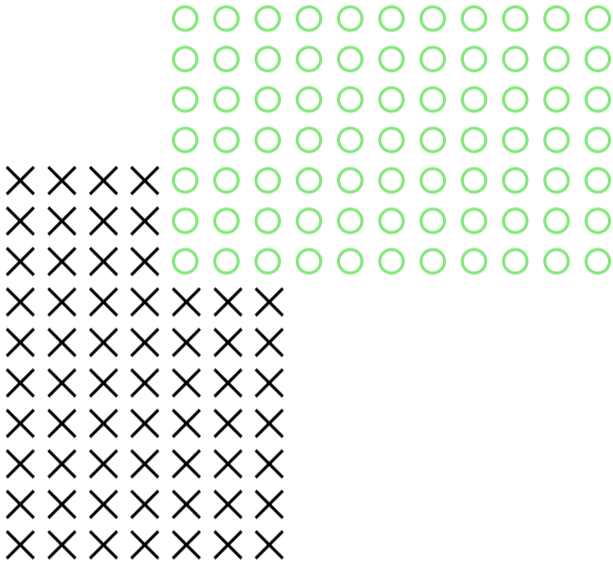


The shape of Manufacturing

Brussels Atlas



**Cities
of Making**

Brussels Atlas

COM

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For more information.
www.citiesofmaking.com

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Introduction



EXCEPTE
UITGEZONDERD



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THE MAGNETISM OF MANUFACTURING IN BRUXELLES

Brussels is dotted with remnants of a manufacturing past known as *l'industrie manufacturiere* in French or the *stedelijk maakindustrie* in Dutch. Brussels was once one of the leading industrial centres in Europe, including numerous car factories, metal workers, cloth and clothing factories, breweries, food processing and producers of almost every ingredient required to build a house. In the 1960's, some 60% of the population were connected to some kind of manufacturing work - which has now fallen dramatically. The many former workshops and warehouses witness how manufacturing once was a normal part of urban life. Working and living naturally co-existed within the same neighbourhood, on the same site, and even within the same building.

The twentieth century, however, initiated a radical shift. Manufacturing activities were pushed and pulled towards the urban fringe and beyond. The costs of this evolution have now become clear. Importing goods and services leads to congestion, wastes energy and eliminates local employment opportunities for makers. Few cities have acknowledged the links between manufacturing and other parts of their economies. Few provide the necessary support and resources for existing manufacturers, while new start-ups often struggle to find the necessary space to develop into long-term businesses. Furthermore, many local and regional level governments both intentionally and unintentionally push manufacturing out of cities because the tax base and public image of housing and offices is generally far more attractive.

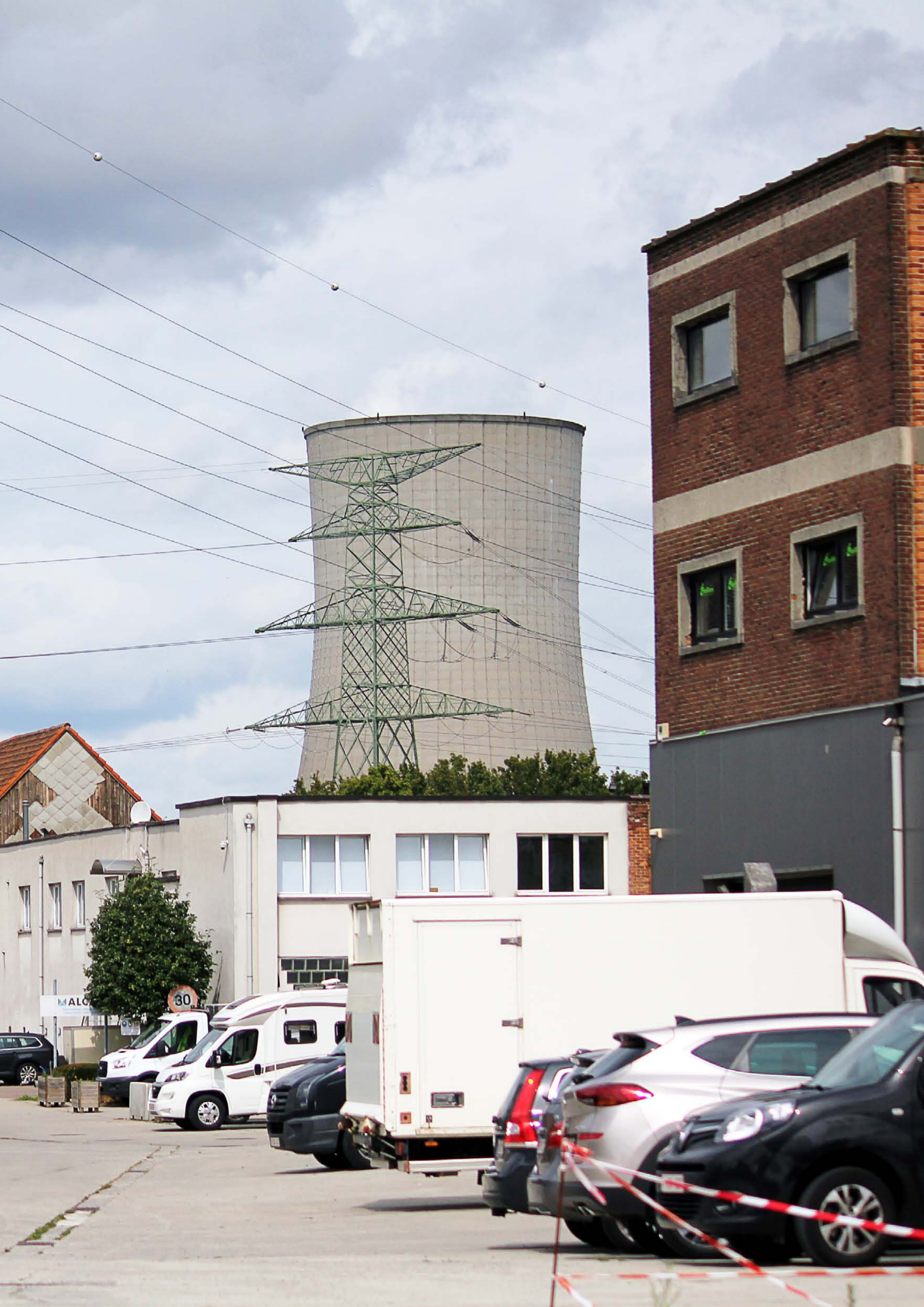
For manufacturing to stay relevant, it needs to be given a stronger place in the twenty-first century urban economy. Manufacturing offers a vast range of benefits for cities in terms of providing a diversity of jobs, allowing cities to manage waste streams, providing the technical capacity to solve urban problems and at the same time support a vibrant and diverse urban economy.

To stimulate its return, both former and contemporary workplaces demonstrate how manufacturing can still be organised within a dense urban fabric. For some, it might have become obscured and forgotten, but manufacturing activities indeed still have their place in Brussels. Many of these businesses are both rooted in a century-old tradition of a natural co-existence of living and working in the city.

Drogenbos



1



DROGENBOS

Drogenbos-Stalle is a cross-border area located in the southwest fringe of Brussels. It is representative of one of the many mixed zones within the region's boundaries and its surroundings, embodying a cocktail of small manufacturing areas, services, large and small retail, housing and recreation spaces. Not far from the Canal zone and strategically close to one of the Brussels' ring road (the E19), the area investigated by Cities of Making is composed by three main areas: a large-medium retail area between Paul Gilsonlaan and Stallestraat and a mixed productive zone to the north, both located almost entirely in the Flemish territory, and the Bempt Site developed by Citydev (the region's public developer) within the Brussels region that clusters ten businesses.

The area includes a number of other large public facilities and services such as the recycling park (Recypark) from the region's waste management agency (Bruxelles Propreté / Net Brussel), a regional tram depot (Marconi) and sport centres (Bempt and Uccle) highlighting the area's border condition, this is the result of a radical transformation over the last 50 years. Today, as overseen by neighborhood committees in Drogenbos (Boomgraad), Forest and Uccle, the area primarily suffers from a lack of vision and coordination between the two regions, and secondly between the municipalities and numerous other local actors. Miscommunication and the absence of governance, according to many, has led to the result of a cross-border area characterised by a diffuse laissez-faire attitude, where single initiatives dominated by a high degree of uncoordinated development .

That is directly reflected in the spatial configuration of the zone, where it is possible to find a high number of unused and underused spaces (fringes and dross-spaces) both in the public and private realm. The research has looked at the existing companies and their yards, mapping their formal and informal parking spaces, truck maneuvering areas, storage and waste zones, the resulting account shows a large amount of leftover or underused space. Moreover, the presence of physical and visual barriers interfacing public and private spaces, the poor architectural and urban quality of many sites, the discontinuities in the soft mobility network between the two regions, has turned the area into an unattractive and even unsafe zone, especially at night.

Except for the better exploited Bempt Site, the rest of Drogenbos-Stalle area reveals the contradictions and the potentials of a strategically and highly accessible area and with a good number of surrounding services that is currently suffering from a strong disconnection between industrial activities and residential areas. Where companies are affected by a sense of isolation, they have a lack of shared infrastructure and miss support from public authorities.





0 0.2 km

DROGENBOS

The delayering of the analysed 1x1 km area shows the historical evolution of manufacturing (located to the east), and housing (west). Services and retail create a transition zone along Verlengde Stallestraat/rue de Stalle, an important artery linking the E19 to Uccle and the Brussels's centre. Based on the traffic analysis, that one of the most critical issues for manufacturers in the area is congestion.

Flanders
Brussels



0 0.2 km

Category	Surface [m ²]	Percentage [%]
Manufacture	145,000	19%
Housing	355,000	46%
Retail	151,000	20%
Services	98,000	13%
Transit	19,000	2%
Total	768,000	100%

USES - MANUFACTURE

Flanders
Brussels

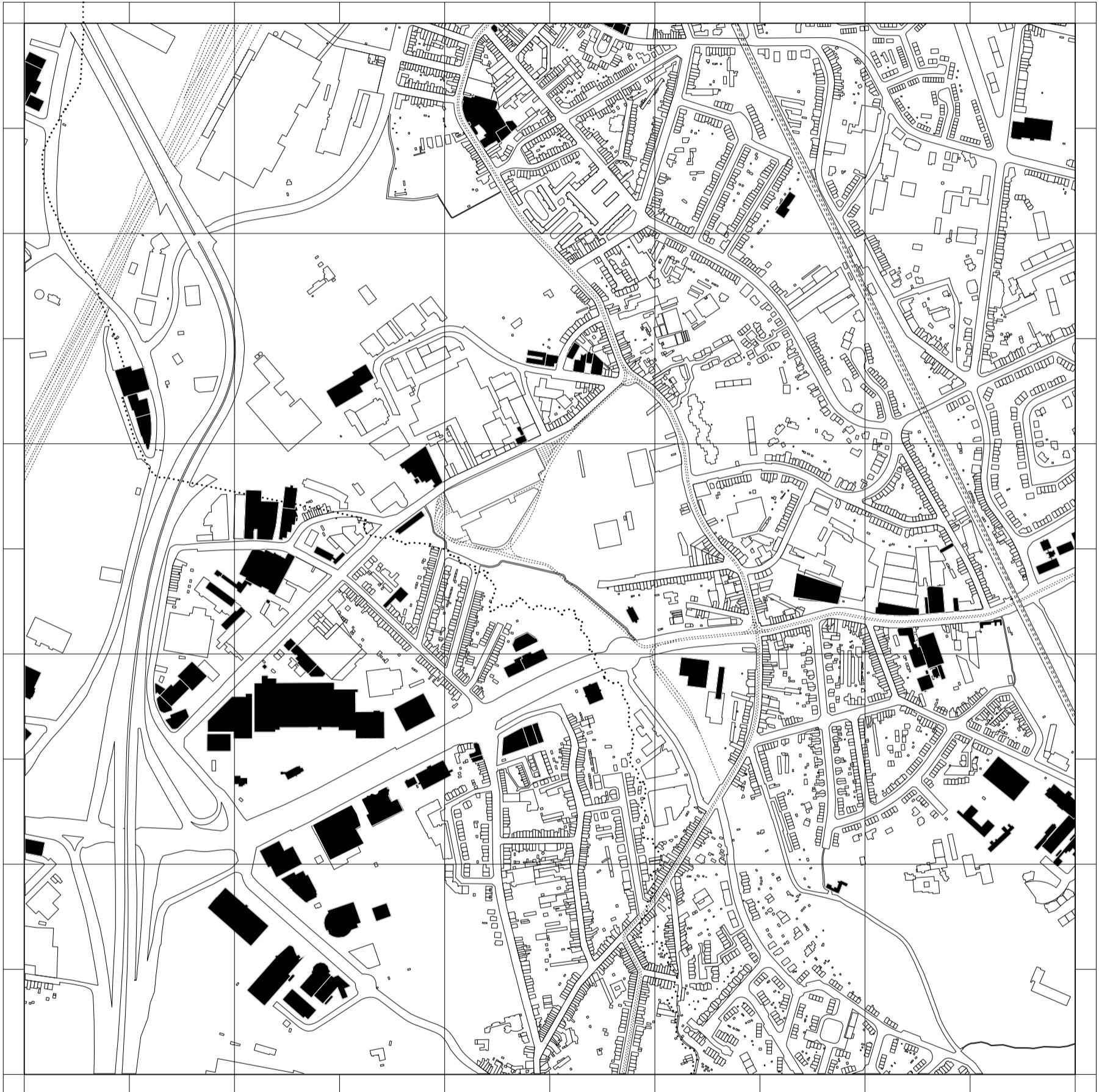


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Category	Surface [m ²]	Percentage [%]
Manufacture	145,000	19%
Housing	355,000	46%
Retail	151,000	20%
Services	98,000	13%
Transit	19,000	2%
Total	768,000	100%

USES - HOUSING

Flanders
Brussels

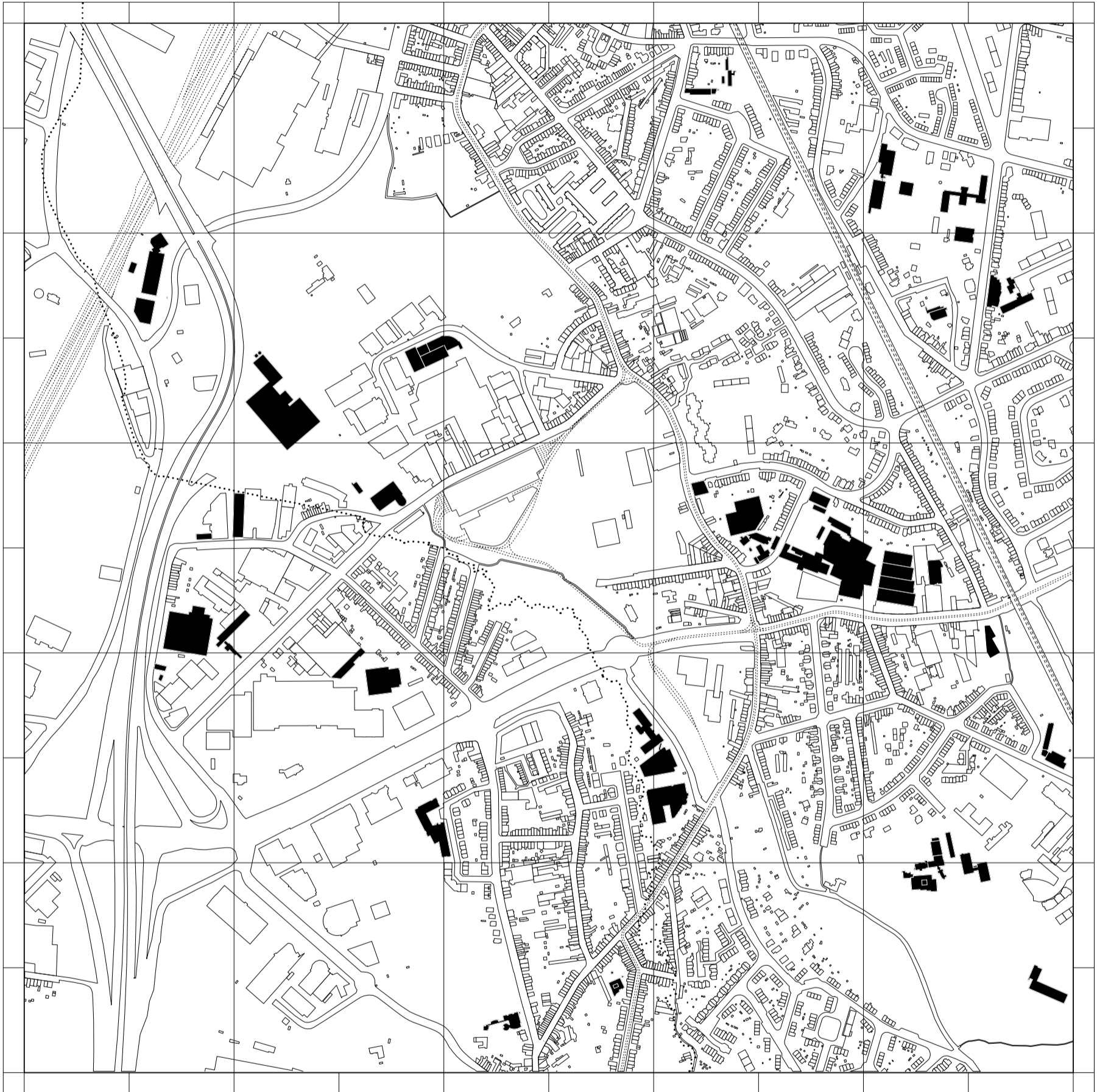


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Category	Surface [m ²]	Percentage [%]
Manufacture	145,000	19%
Housing	355,000	46%
Retail	151,000	20%
Services	98,000	13%
Transit	19,000	2%
Total	768,000	100%

USES - RETAIL

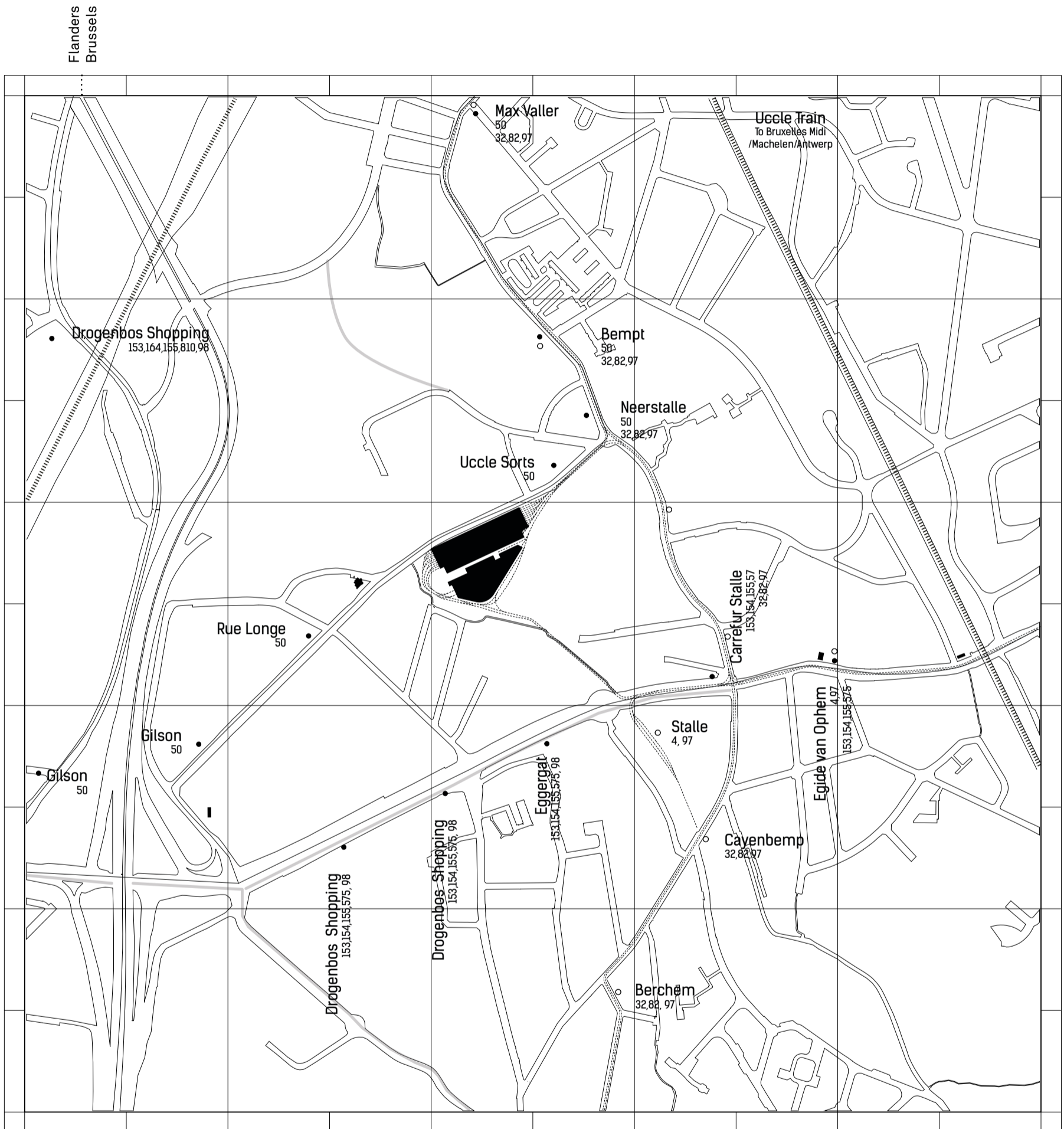
Flanders
Brussels



0 0.2 km

Category	Surface [m ²]	Percentage [%]
Manufacture	145,000	19%
Housing	355,000	46%
Retail	151,000	20%
Services	98,000	13%
Transit	19,000	2%
Total	768,000	100%

USES - SERVICES



0 0.2 km

Flanders
Brussels



0 0.2 km

- Very High
- High
- Medium
- Low

MOBILITY - TRAFFIC CONGESTION



P VISITEURS
BEZOEKERS

P VISITEURS
BEZOEKERS



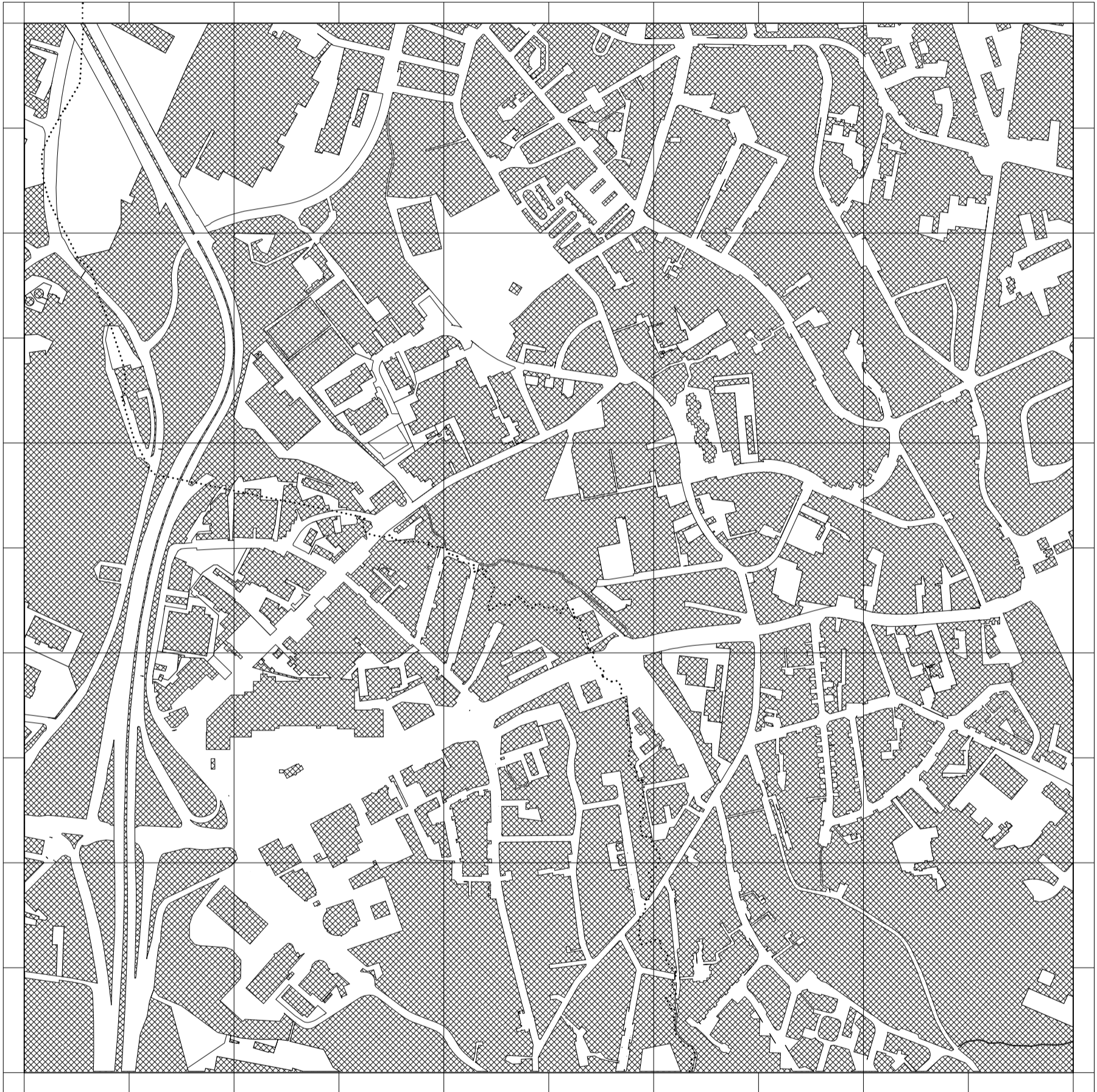
DE CLIPPEL
SA NV





BUILT - UNBUILT SPACE

The map shows the potentially accessible space as opposed to the non-accessible one. This theme is particularly relevant for the border area due to its fragmented nature, caused by a series of very different uses and physical patchwork, which result in spatial discontinuity, lack of clarity and grey zones.

Flanders
Brussels



0 0.2 km

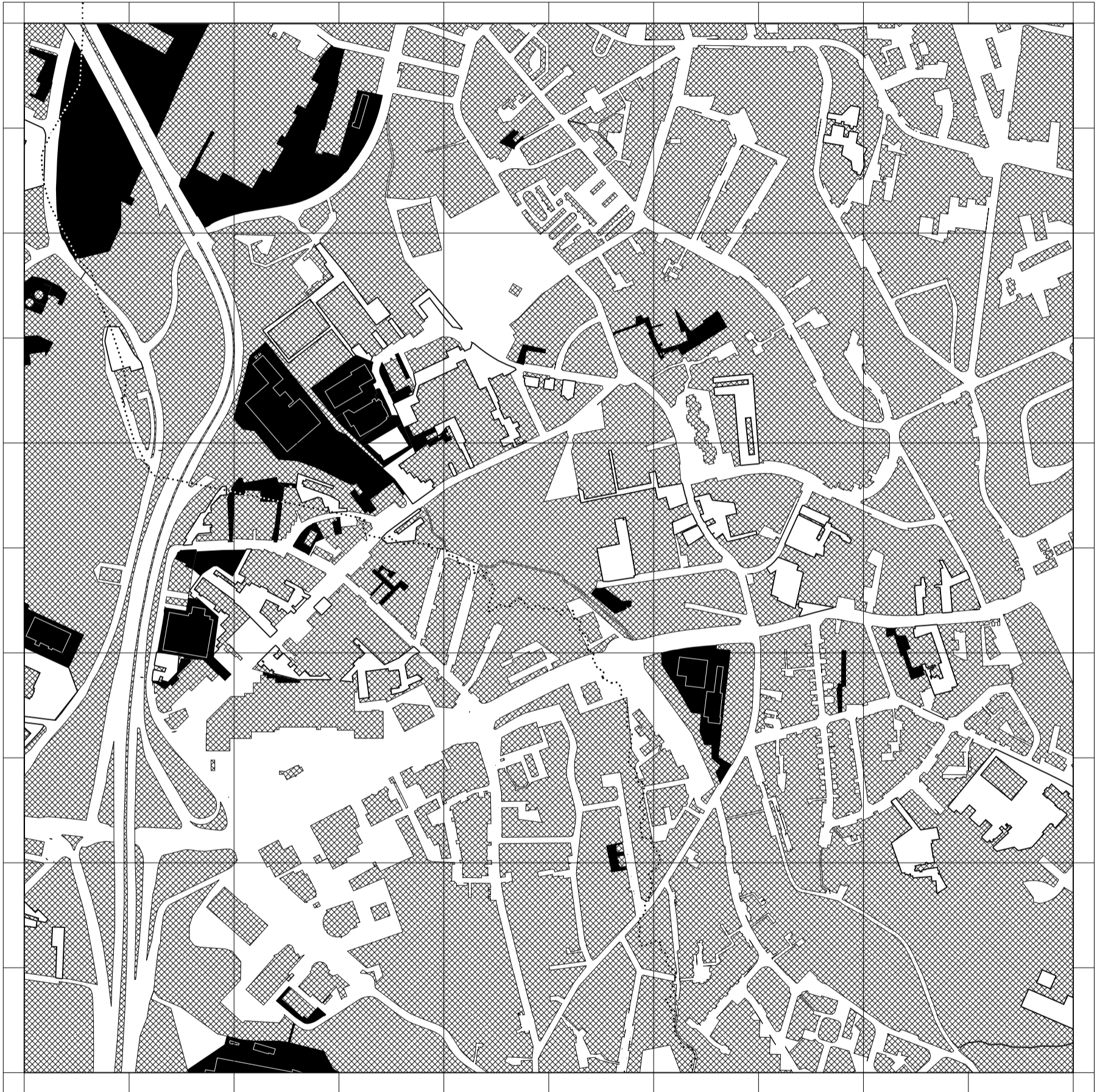
Category	Surface [m ²]	Percentage [%]
 Filled Space	2,837,600	71%
 Void	1,162,400	29%
Total	4,000,000	

The following series of interpretative maps aim at analysing some of the most pressing issues that affect the area. The border zone between Droegnbos and Stalle is in fact characterised by spatial fragmentation, complex accessibility and informal use of dross spaces. Moreover, it is formed by a patchwork of productive yards that question the overall socio-spatial vision of the area.




VOID - ACCESSIBILITY

Amongst the overall potentially accessible spaces in the area, some are either restricted or forbidden. That amount of surface area, in certain cases under or unused, reveals a stock of space that could be reorganised, opened and shared with other manufacturers and/or be beneficial for the local community.

Flanders
Brussels



0 0.2 km

Category	Surface [m ²]	Percentage [%]
 Forbidden Access	205,200	18%
 Restrained Access	126,400	11%
 Accessible	830,800	71%
Total	1,162,400	100%

VOID - VERTICAL BARRIERS

Gates and fences are in many cases misplaced or unnecessary. The mapping of the vertical and horizontal barriers highlights the spatial fragmentation of the area and points out the need for a fluid continuity for users and producers.

Flanders
Brussels



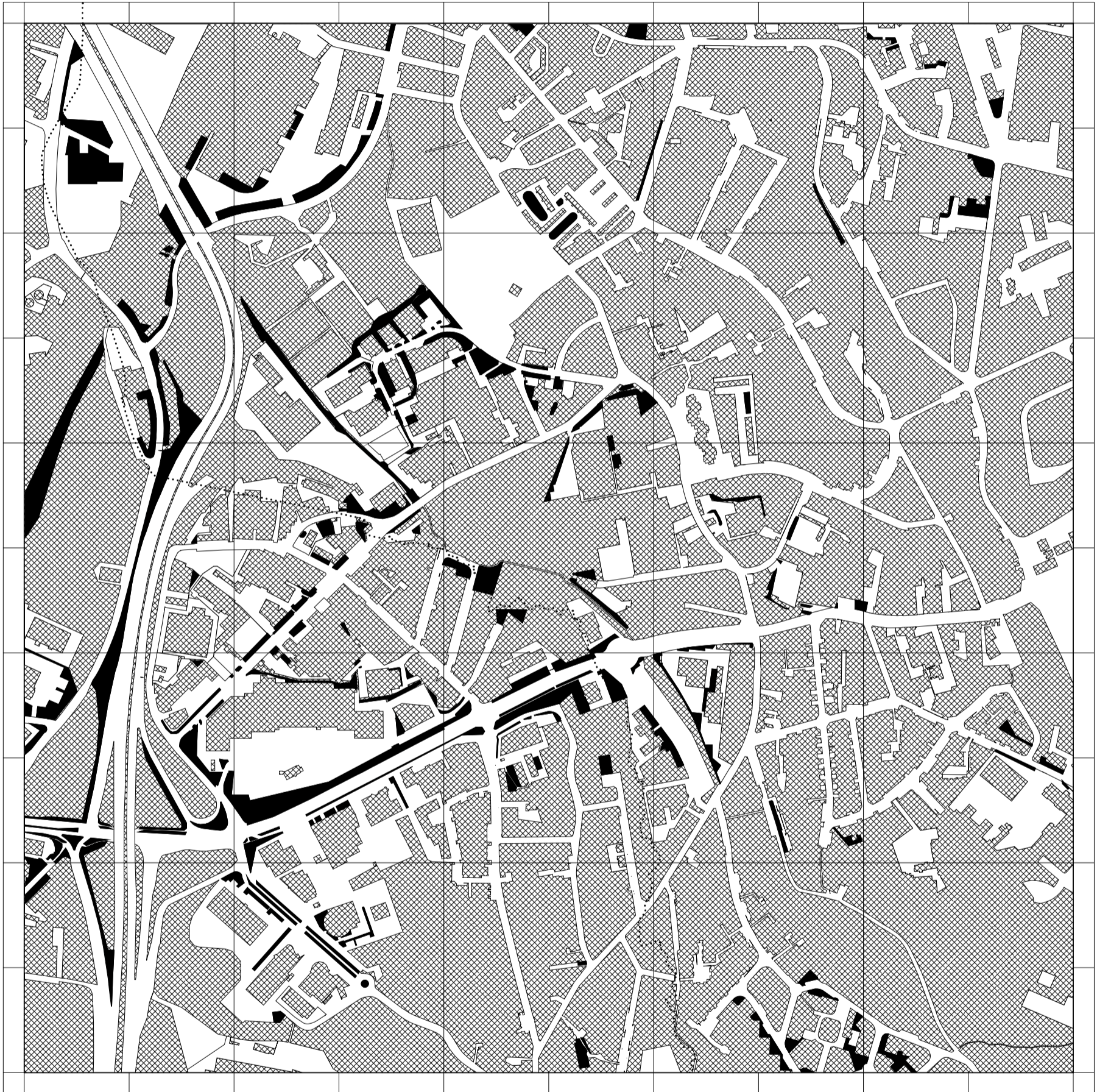
0 0.2 km

Category	Length [m]	Percentage [%]
— Fixed Fences	5,060	90%
- - - Gates	530	10%
Total	5,590	100%



VOID - HORIZONTAL BARRIERS

The amount of inaccessible and unused horizontal spaces in the area, mainly concentrated along the roads, reveal a clear potential to enhance the quality of public space and to provide collective and shared service spaces for manufacturers and the inhabitants.

Flanders
Brussels



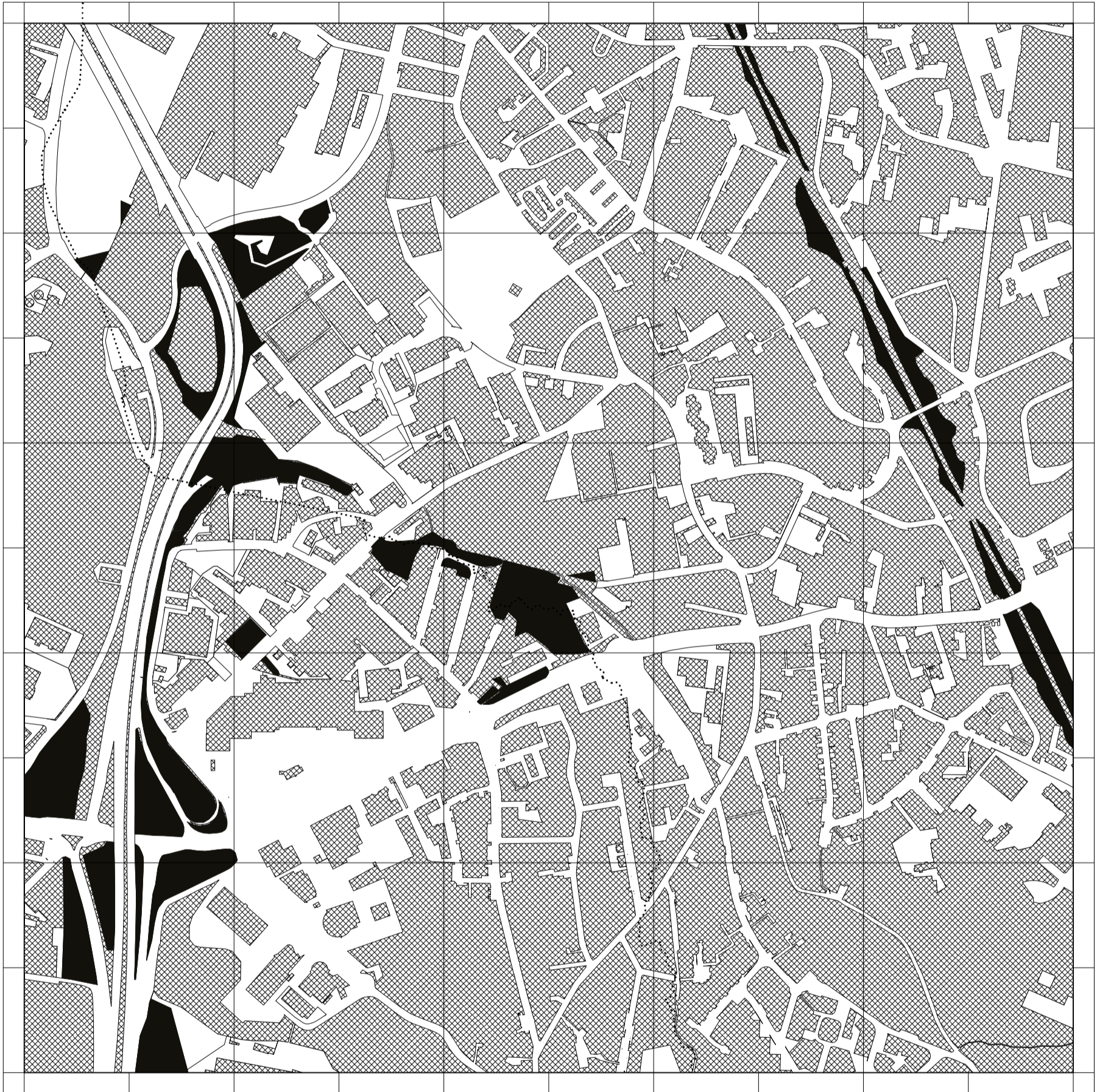
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Category	Surface [m ²]	Percentage [%]
 Filled Space	2,707,900	95%
 Horizontal Barriers	129,700	5%
Total	2,837,600	100%



VOID - RESIDUAL SPACE

Residual spaces in the area, often constituted by buffer zones along roads and railways, are in many cases leftovers and sometimes used as dumping grounds. However, their presence shows a potential that could be reviewed.

Flanders
Brussels



0 0.2 km

Category	Surface [m ²]	Percentage [%]
 Filled Space	2,597,000	91%
 Residual space	240,600	9%
Total	2,837,600	100%


YARD - TOTAL

Together with public space, the companies' yard is a form of private functional open space. Understanding the use and nature of the yards is key to enhance the quality, efficiency and organisation of open space in the area.

Flanders
Brussels



0 0.2 km

Category	Surface [m ²]	Percentage [%]
 Total Yard	495,000	91%





YARD - FORMAL/INFORMAL USE

The map shows the use rates of the yards in the area, revealing the high amount of underused and/or informally used private space. This includes temporary storage space and informal parking.

Flanders
Brussels






0 0.2 km

Category	Surface [m ²]	Percentage [%]
 Yard Leftover	418,170	84.5%
 Formal Parking	54,150	11%
 Informal Parking	14,590	3%
 Temporary Deposit	8,090	1.5%
Total	495,000	100%

Flanders
Brussels



0 0.2 km


Category	Surface [m ²]	Percentage [%]
 Yard Leftover	417,400	84%
 Truck Maneuver	77,600	16%
 Total	495,000	100%

YARD - TRUCK MANEUVERS

An important use of the yard space is to allow for truck manoeuvres. Large amounts of vacant space are required for large turning vehicles, which may not be feasible in public space due to the size of the road carriage or due to the potential dangerous disruption of traffic.



0 0.2 km

Category	Surface [m ²]	Percentage [%]
 Total Yard	340,570	

YARD - LEFTOVER

This map shows the total amount of residual spaces within the yards, excluding the areas actively used for parking, truck manoeuvres and storage. The total area reveals a huge potential for manufacturers to reorganise their space individually and to create shared uses.

DROGENBOS COMPANIES

Urban manufacturing in Drogenbos is influenced by its location on the periphery of the region of Brussels. There are advantages in terms of larger available spaces and lower prices. At the same time, the proximity to the Brussels-Capital Region makes a sought after site for manufacturing businesses.

While the mobility situation is not as bad as in the city center, it is still a concerning issue for businesses. Close to the ring road, the zone is affected on a daily basis. Urbanisation (particularly housing) is also putting pressure on Drogenbos, with real estate projects or the installation of public infrastructure (Brussels' regional waste agency) that increases car traffic. The new tram depot (Marconi), despite improving public transport accessibility for workers, seems to only lightly counterbalance congestion and puts additional pressure on parking. Trucks and their requirement for large parking and turning space are not well regarded in this context. Complaints from car drivers or inhabitants have been observed and can be particularly challenging for companies offering onsite installation, such as the construction sector.

Besides mobility, the Drogenbos area is located at the regional border. Depending on what side they are, businesses can experience very different conditions in terms of taxes and subsidies. Labour market services of organisations such as the regional employment agency, Actiris, or work placement agencies will still be served if the company has moved across the border. The institutional boundary has however had a harmful effect on urban development. Regional policies only take into account the social and economic impact of a project on their immediate territory and neglect the inhabitants and companies on others, even if it is located a few meters away. That is why businesses in Drogenbos feel abandoned by regional institutions.

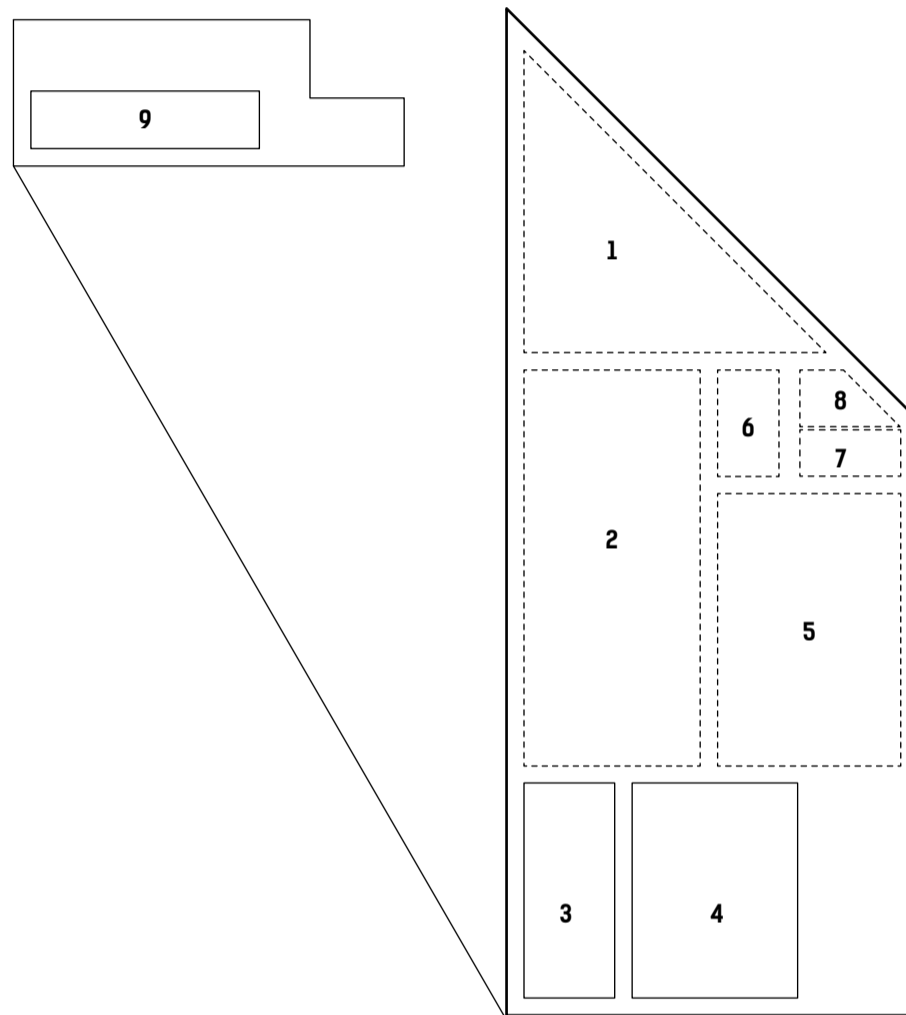
The Drogenbos case study exposes interesting insights into the dynamics of the integration of manufacturing activities in a functionally mixed area. On the one hand, residential spaces are losing ground in certain zones that are encircled by big retail sites and manufacturing companies. Some houses have been bought by companies and transformed for commercial or industrial purposes with. It has been observed that this characteristic of semi-zoning

is showing less problems in terms of nuisance than in more central urban locations. On the other hand, residential real estate projects are developing in other zones closer to the center of Drogenbos, adding pressure on congestion, which concerns inhabitants, public authorities and companies.

The role of public authorities in industrial sites is inconsistent. There is a will from municipal actors to take care of congestion issues, limiting expansion of housing and to develop the local economy. But there is little evidence of the existing companies and on their activities or possible impacts - a situation also observed in more central areas such as Cureghem. Meanwhile regional institutions are not paying so much attention to this, making it both out of site and out of mind. The only exception is the "Bemt" site, managed by Citydev, the regional public developer, and located in Forest (Brussels). The regional institution is taking care of renting spaces, which gives a guarantee of quality of public spaces and access to logistics, providing also other development services. We have met companies on this site that are very satisfied with the management and the available spaces at acceptable prices. But we have also met companies, previously located on a Citydev site, which were very disappointed by their experience.

III
ROQUIGNY
ENTREPRISES GÉNÉRALES
02 535 55 10



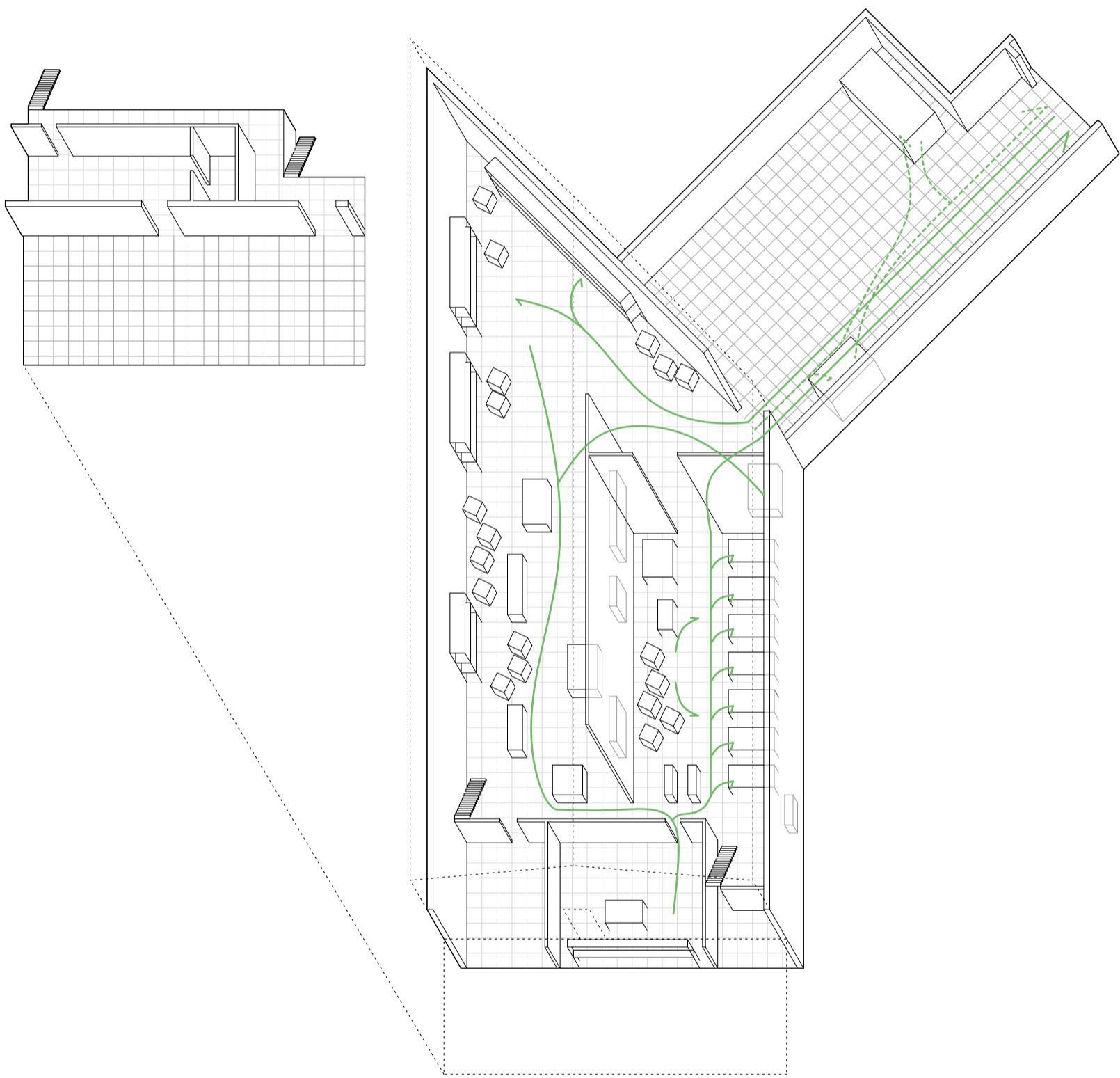


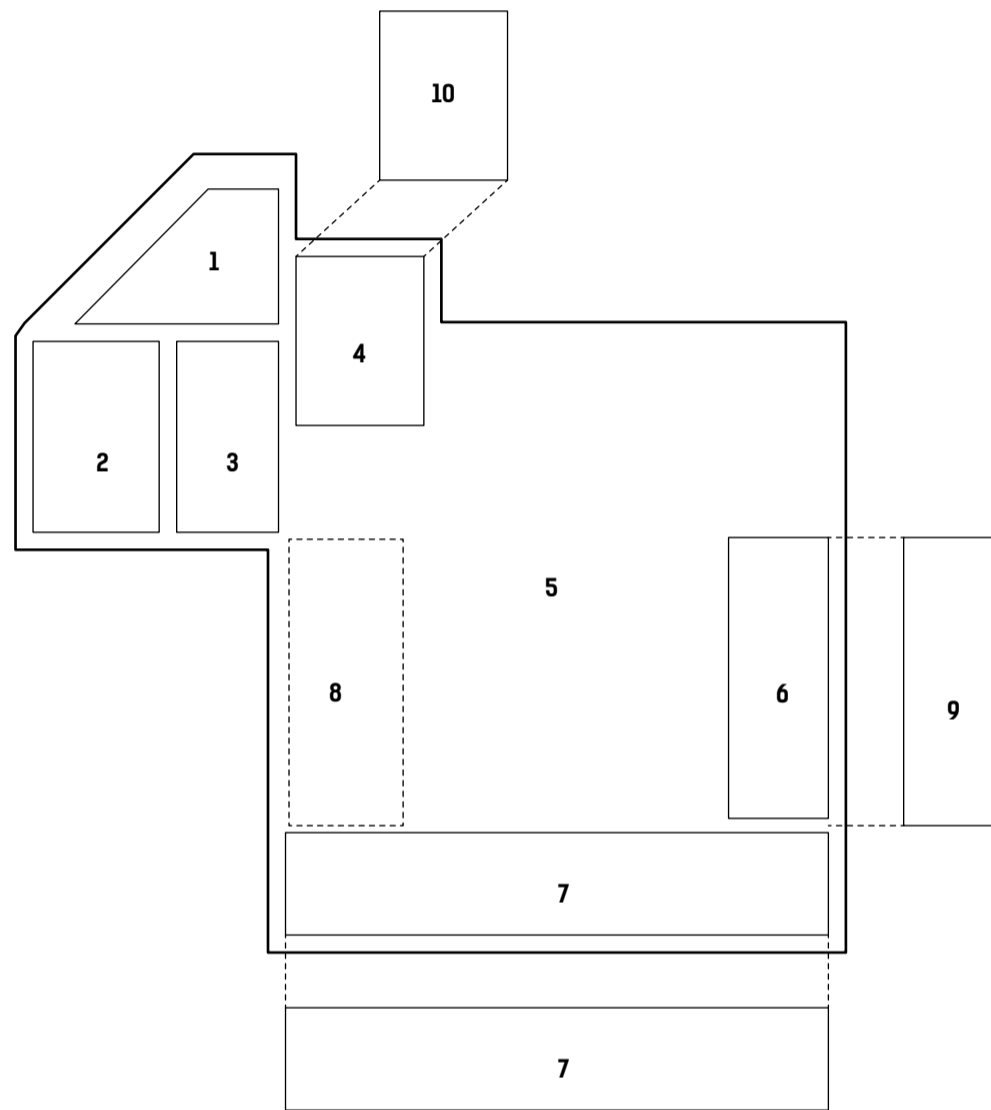
- 1. Storage
- 2. Cutting area
- 3. Changing room
- 4. Gluing room
- 5. Assembling area
- 6. Finished elevator waiting area
- 7. Compressing area
- 8. Pick-up area
- 9. Welcome room - Office

XIII / PRAGMA PLEXI

XIII builds the interiors of lifts and Pragma Plexi is focused on plexiglas (plastic) objects. Both businesses have the same management, they share the same building and equipment. A level of complementarity can be observed between the two activities, with machines being used both for lift preparation and production of plexiglas objects.

A major outcome from observations of PragmaPlexi/XIII is the strong, but not necessarily symbiotic connection between the businesses and the city. First there is the direct client base. Fabrice Corneux, the director, explained the inevitable link between lifts and cities, tall buildings are more frequently used in dense areas. There is then relative interest to be close to their clients, notably for logistics issues. Secondly, there is the concentration of suppliers. Once built in the workshop, XIII's workers need to install the lift on-site. This last step is an important part of their job, as is the transport in the urban environment. But their clients are also in other cities across Belgium. Finding suppliers nearby is important for Pragma Plexi/ XIII, making it possible to easily find missing materials, increasing flexibility and speed. Thirdly, there is the concentration of labor. Workers mostly come from Brussels and have often been trained in the city center, however the company struggles to find suitable employees. The role of local work placement agencies is expensive but unavoidable.

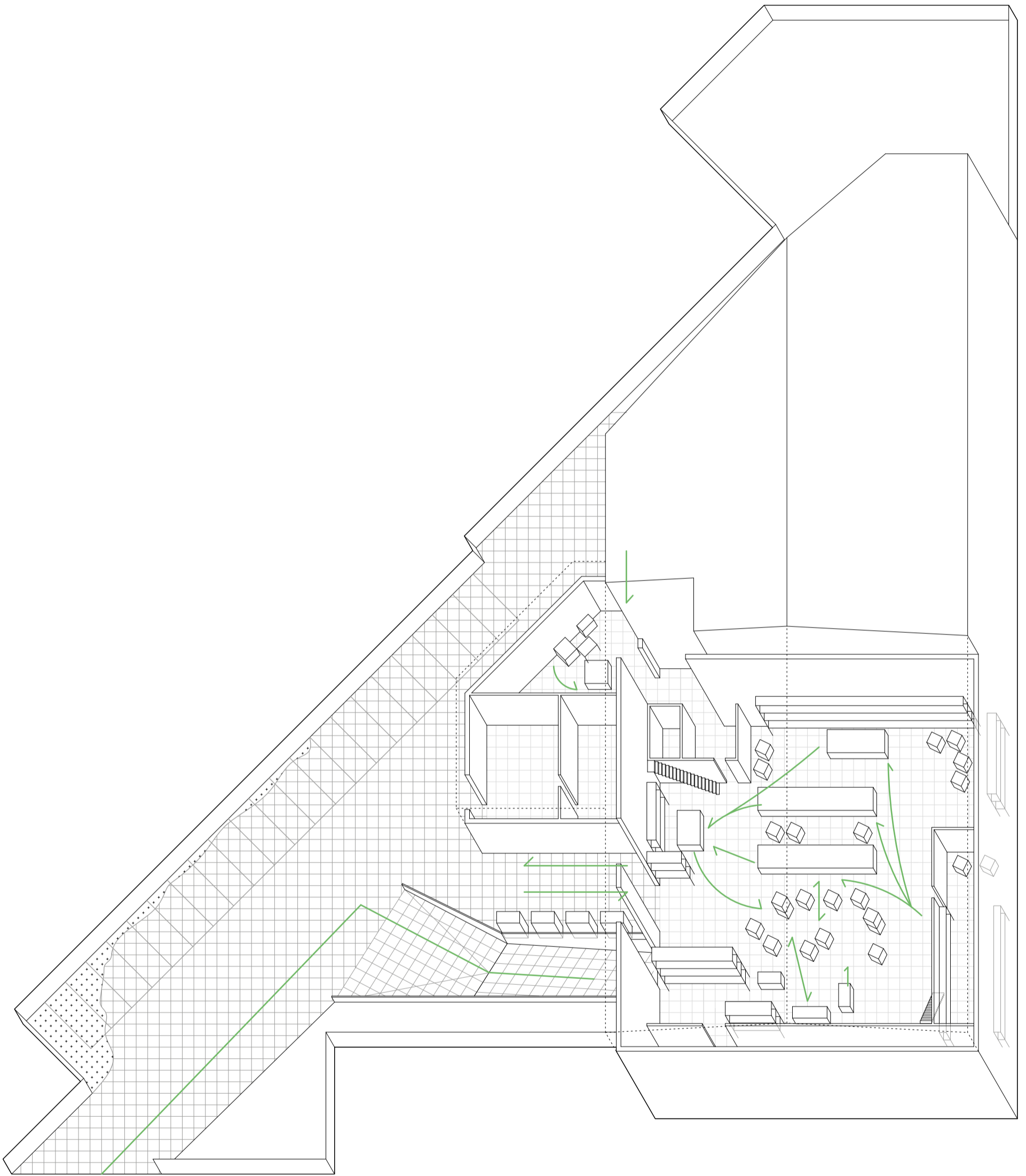


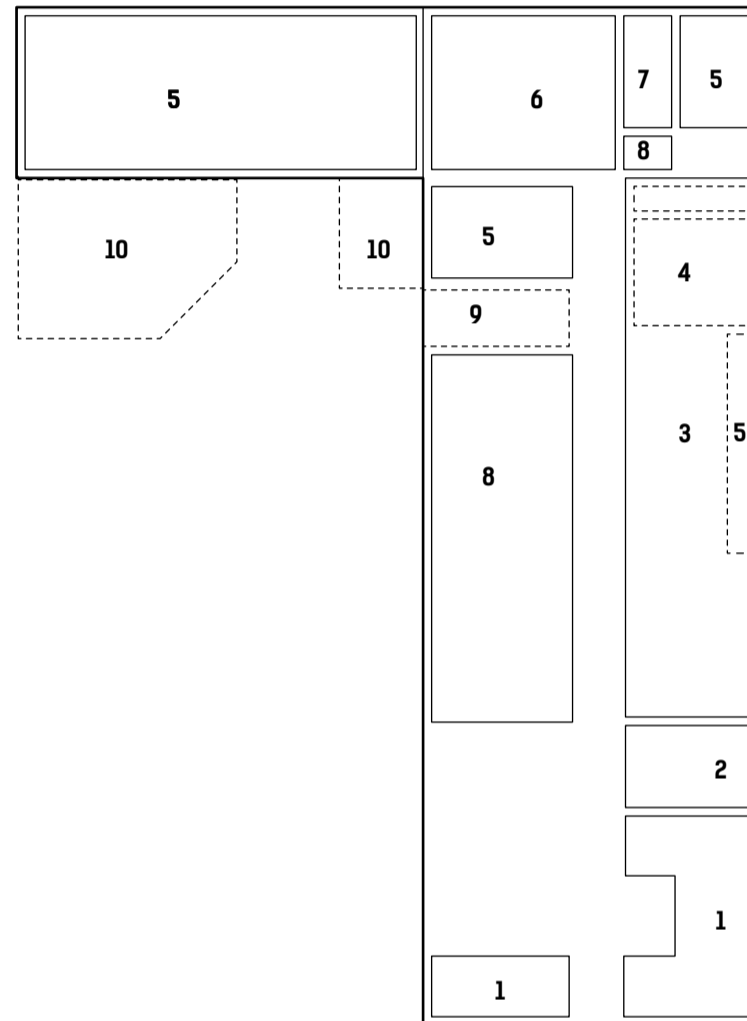


- 1. Digital printing
- 2. Welcome exhibition
- 3. Office
- 4. Wet room
- 5. Production
- 6. Ink storage
- 7. Storage
- 8. Pick-up area
- 9. Refectory
- 10. Office

SCREEN GROUP

Screen Group is a printing company specialized in serigraphy. They are located in Drogenbos in a building adapted to their needs, with large and high spaces and good logistics access. Daniel Daneels, director of Screen Group, has been a printer since the 80's and witnessed the impacts of Internet and digitalisation. Firstly there were impacts in terms of changes to the market. Internet and digitalisation means less demand for paper. Numerous companies had to close and the remaining ones are in serious competition, with a decrease of market prices and a general concentration of capital in larger businesses (operating online). Companies such as Screen Group need to systematically accept clients requests to retain clients, while specialising in order to minimise costs. Second, there are impacts in terms of production processes. New communication technology implies a distance in the communication between sellers and buyers; face-to-face contact has become very rare. At the same time, the internet became the main window to new clients. Clients' culture is also evolving, expecting always shorter lead times to answer their needs. Furthermore, manual labour is required to keep existing machines that can not be automated or that are not profitable. Finally, there are impacts in terms of development perspectives. Daniel Daneels doesn't anticipate particular developments for the serigraphy sector in the following years. To adapt, the business has merged with another company in order to enlarge its market, resources and production opportunities.





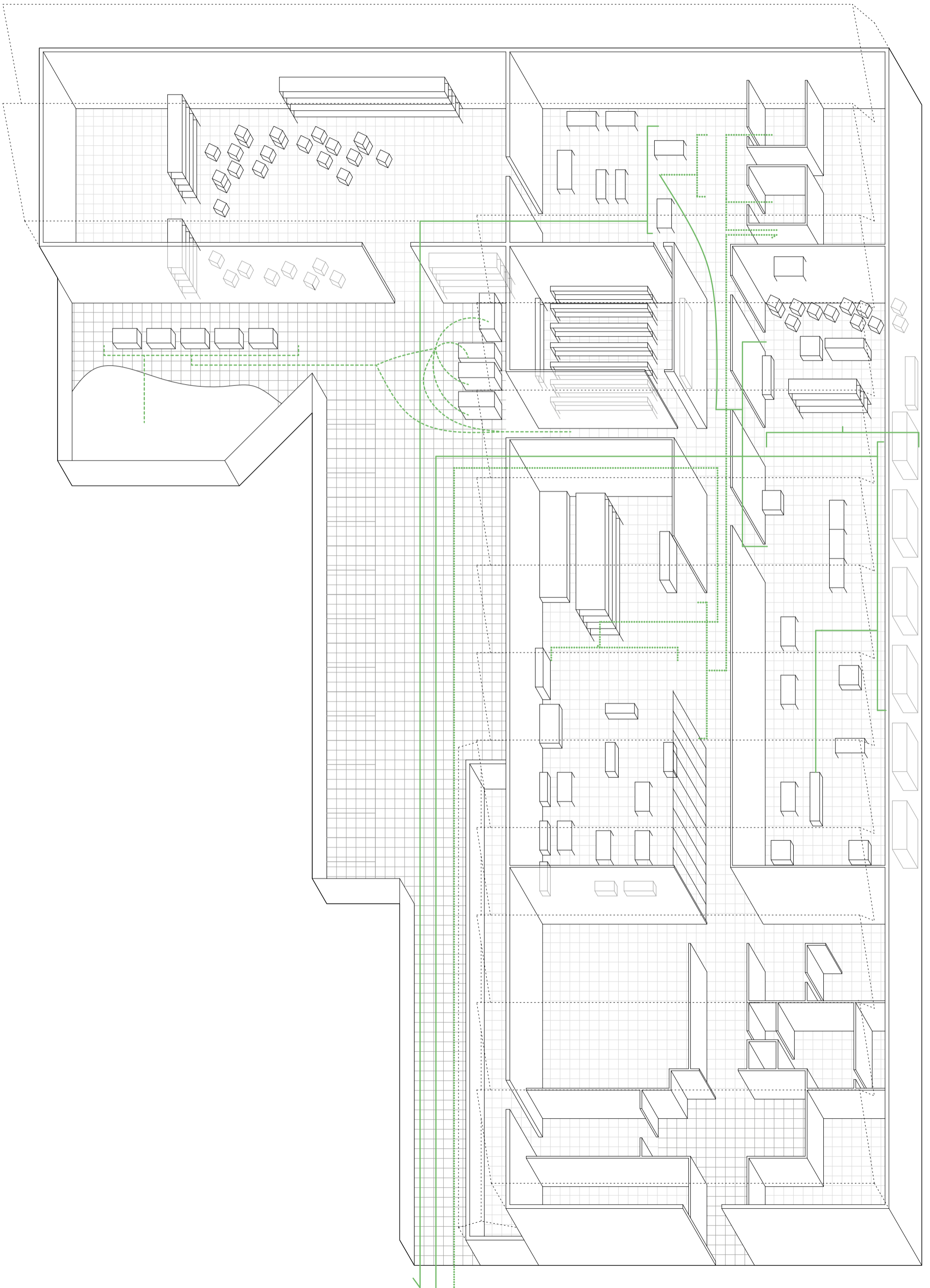
- 1. Office
- 2. Printing + Stickers area
- 3. Aluminium working area
- 4. Precision cut
- 5. Storage
- 6. Electrical + finishing area
- 7. Painting cabins
- 8. Plexiglas sanding area
- 9. Pick-up area
- 10. Plexiglas + lettering working area
- 11. Waste area

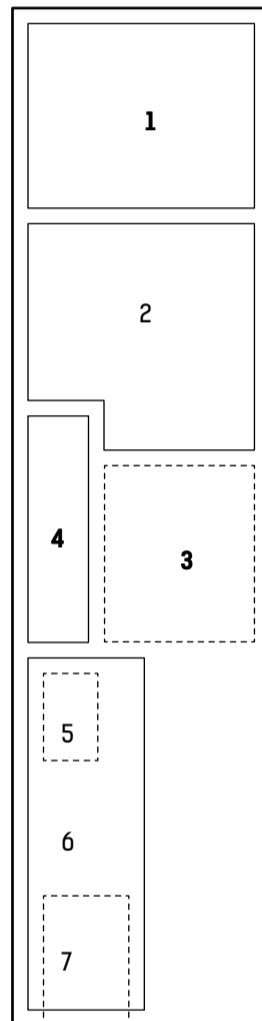
PETRUS NEON

Petrus Neon is a medium-sized, full service signage company, providing design, on-site installation and maintenance.

The Petrus Neon case provides insights into how an urban location can impose pressures on manufacturing businesses, especially in terms of mobility. First, since the company developed stable and long-term contracts with large retail businesses, they have a network of installation sites distributed across the country. To have a workshop on the edge of the city, that is in the subject to congestion problems, seems less relevant to the business, even with direct access to the highway. Traffic jams also affect logistics in order for suppliers to deliver materials and for employees needing to get around urban areas while many of the workers live outside of the city.

The director, Bruno Hanquet, sees many disadvantages for being located in Brussels. For example: tense relations with municipal urbanism services due to public space use during installations (such as the bureaucracy of using Brussels’ Osiris Platform), numerous taxes that are considered unreasonable and do not exist in regions nearby, several building adaptations required for environmental purposes, and so forth. With all these problems associated with an urban location, Petrus Neon is ready to move.





- 1. Workshop
- 2. Machine storage
- 3. New machine show room
- 4. Office
- 5. Awaiting machine
- 6. Arrival + pick-up area
- 7. Truck parking

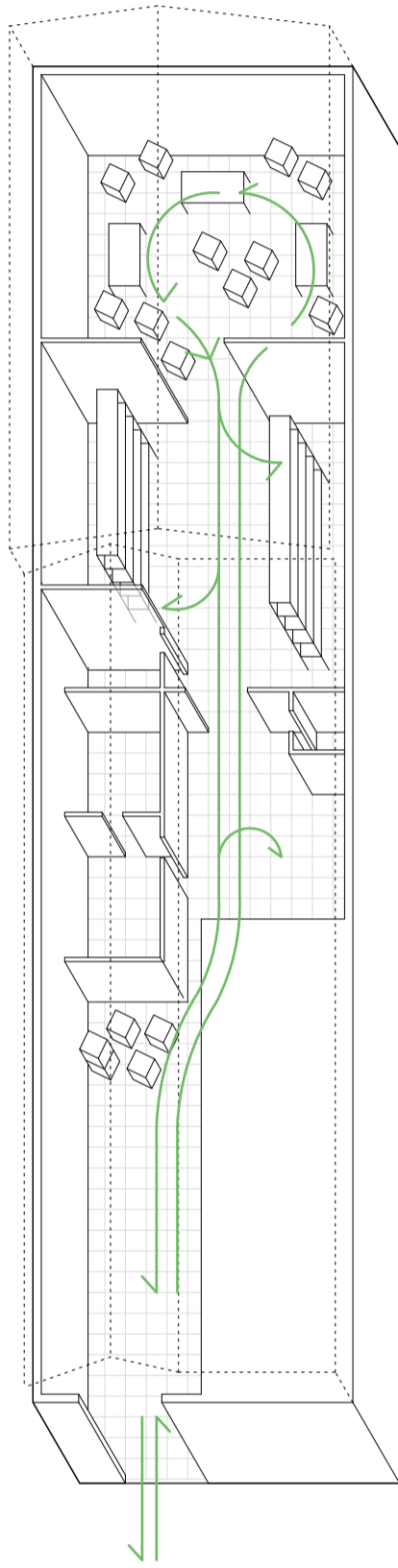
LOEWENSTEIN

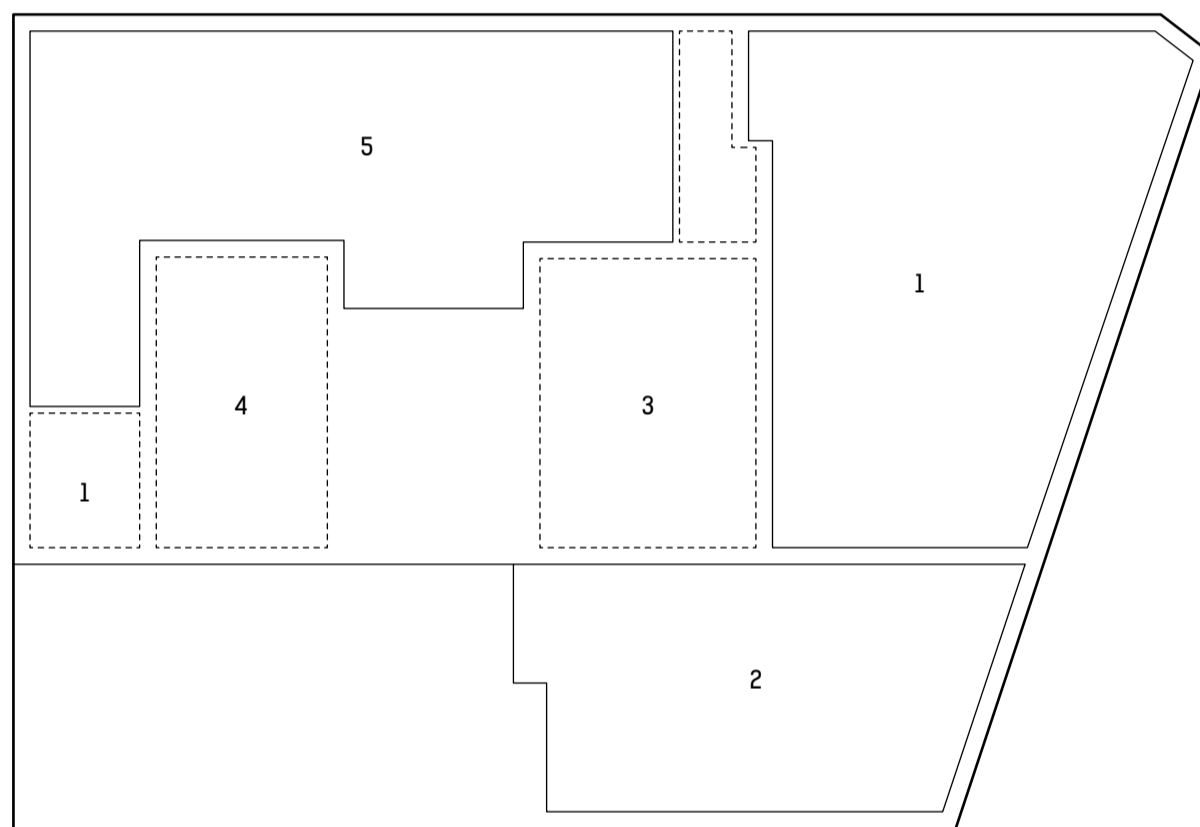
Loewenstein Machines is a family business that sells, installs and repairs industrial woodworking machines. Machines are at the core of contemporary manufacturing activities and this kind of service is essential. They work both in their workshops and at the sites of other companies.

Above all, Loewenstein shows how mobility plays a challenging role in their businesses' operations. Clients generally come directly to the shop to order products and parts, therefore their premises is easily accessible and has good street visibility. There is not a lot of local competition so clients travel from across Belgium. Their products mainly come from Bruges, Italy and the Netherlands. By contrast, this family business is providing a critical services for the construction and carpentry sector but depends on a few employees and has very few competitors. This shows how the sector could be vulnerable if something happens to companies like Loewenstein.

Over the last few years, Loewenstein Machines has experienced increased traffic issues, which means less space for truck maneuvers. According to the director of Loewenstein, the lack of parking spaces can be related to the occupation of a site by the regional waste agency (Bruxelles Propreté/Net Brussel). Furthermore, the region's public transport provider (STIB/MIVB), is improving the quality of mobility for workers from Brussels but this comes into conflict with vehicle movements.

Due to constraints and challenges, the company is considering moving to Nivelles, closer to Wallonian clients and with a better warehouse space.





- 1. Storage
- 2. Cutting
- 3. Assembly
- 4. Old machine hand work
- 5. Office

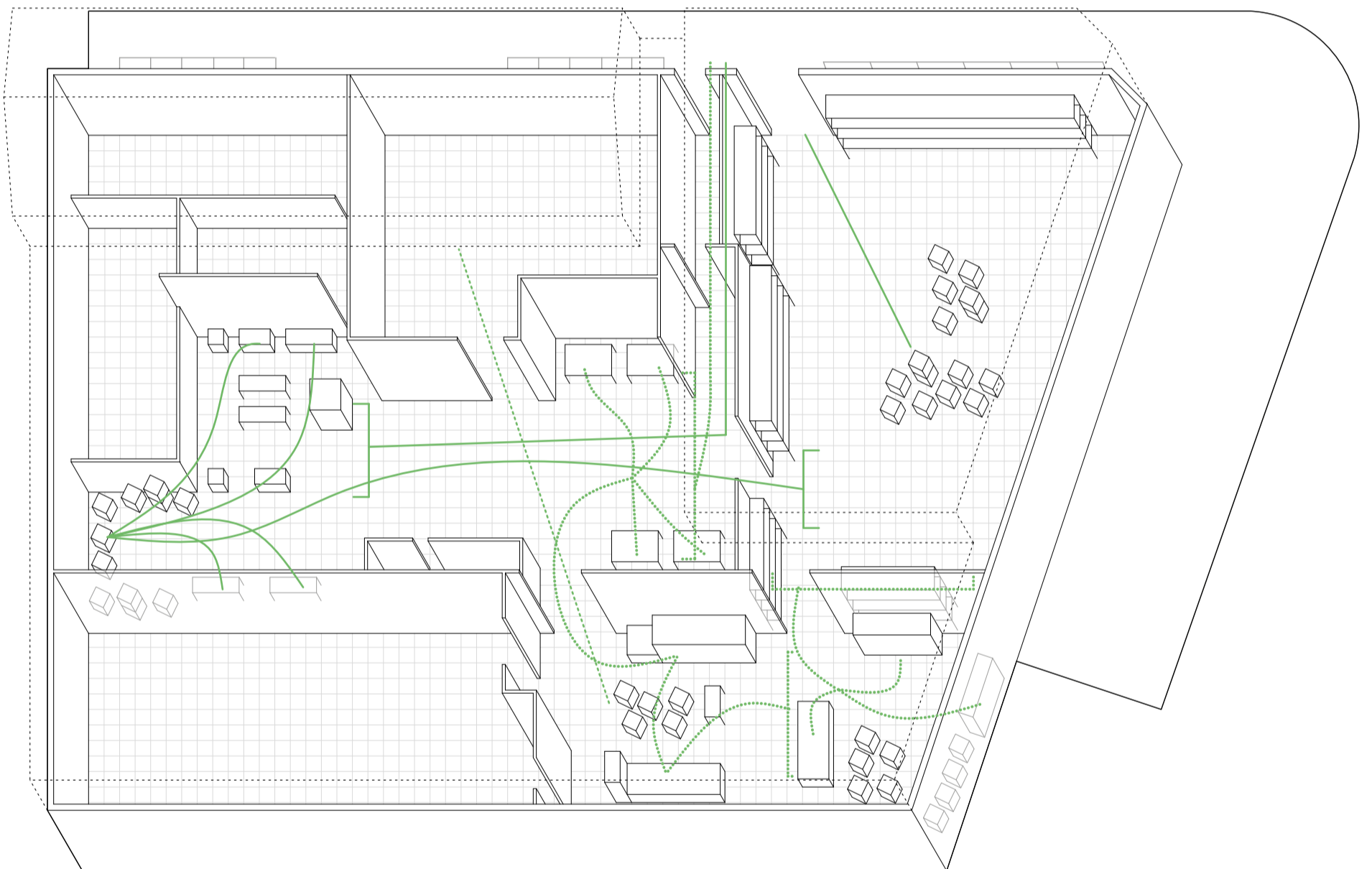
VERBRUGGEN

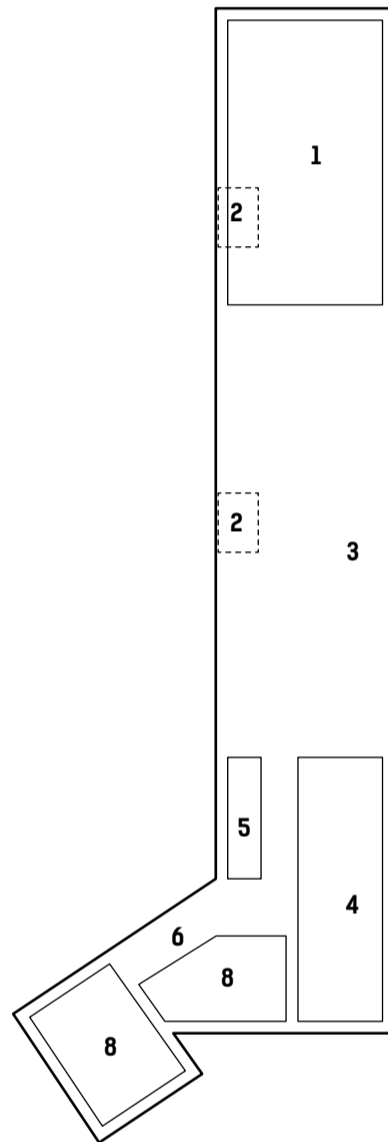
Verbruggen is a building company specialized in wood. The workshop of this family business is located in Drogenbos, where they prepare structures from raw materials. They also take care of the installation of their structures on-site with large machines and trucks.

The company’s integration of innovation in the organisation of labour is particularly interesting. Ongoing investment has been made in new machines (such as a laser machine to do precise and quick wood cutting) in order to increase their productivity and retain competitiveness.

This is particularly important because Verbruggen is a subcontractor of large institutions and companies. At the same time, the integration of new machines means new workflows. Verbruggen, has decided to convert workshop workers into installation workers. This makes it possible for the company to increase their production, in parallel to their development in high security markets. For workers, it involves additional training that improves their position on the labour market, even if they retain a degree of loyalty to the company, with a large number of skilled employees and low turn-over.

In this way, Yves Ackermann, commercial director at Verbruggen, has emphasized the support that institutions could provide to companies in terms of training programs, support with exports (such as from the chamber of commerce) and streamlining administration, to help this kind of holistic innovation process to occur. Furthermore, the new investment in technology encouraged Ackermann of the future of the company.





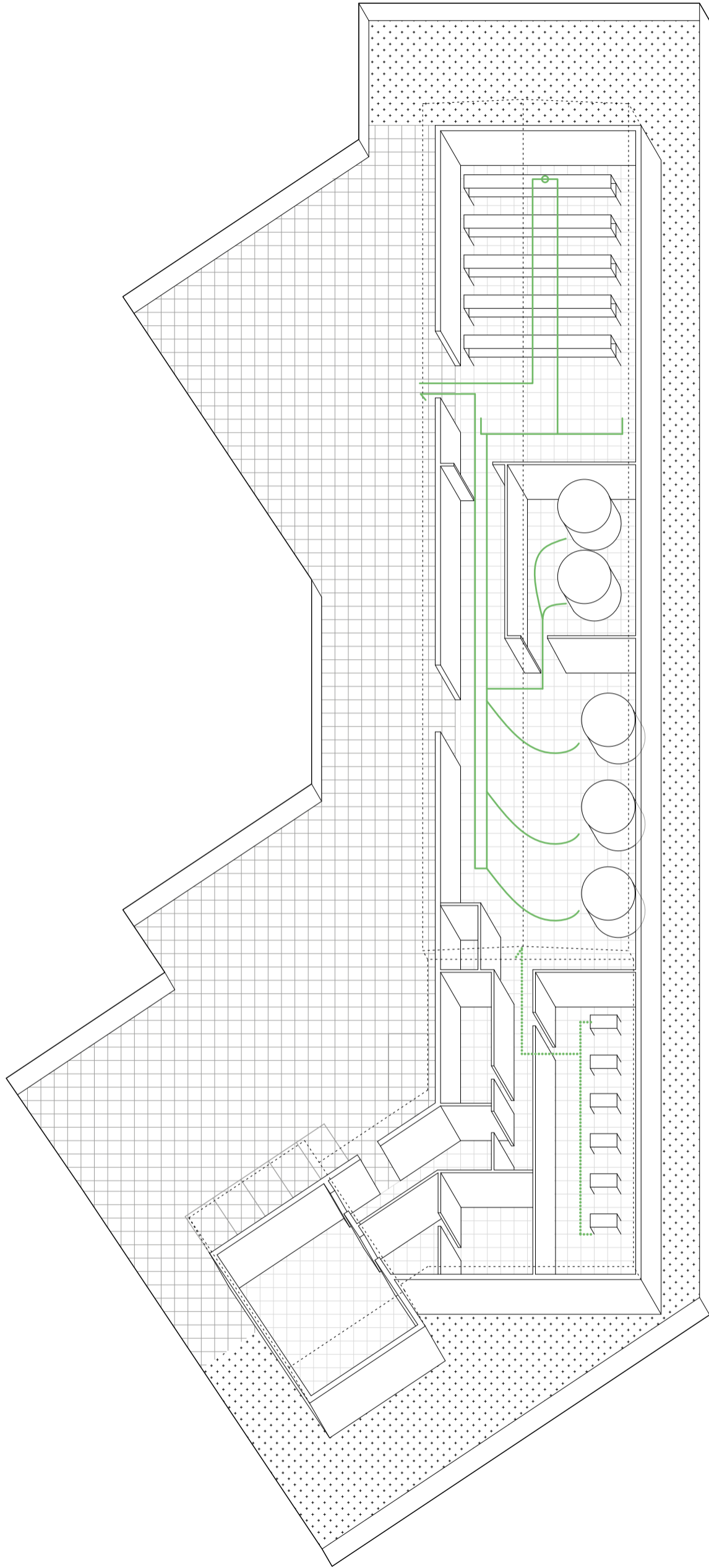
- 1. Storage
- 2. Delivery
- 3. Production space
- 4. laboratory
- 5. Changing room
- 6. Welcome area
- 7. Office

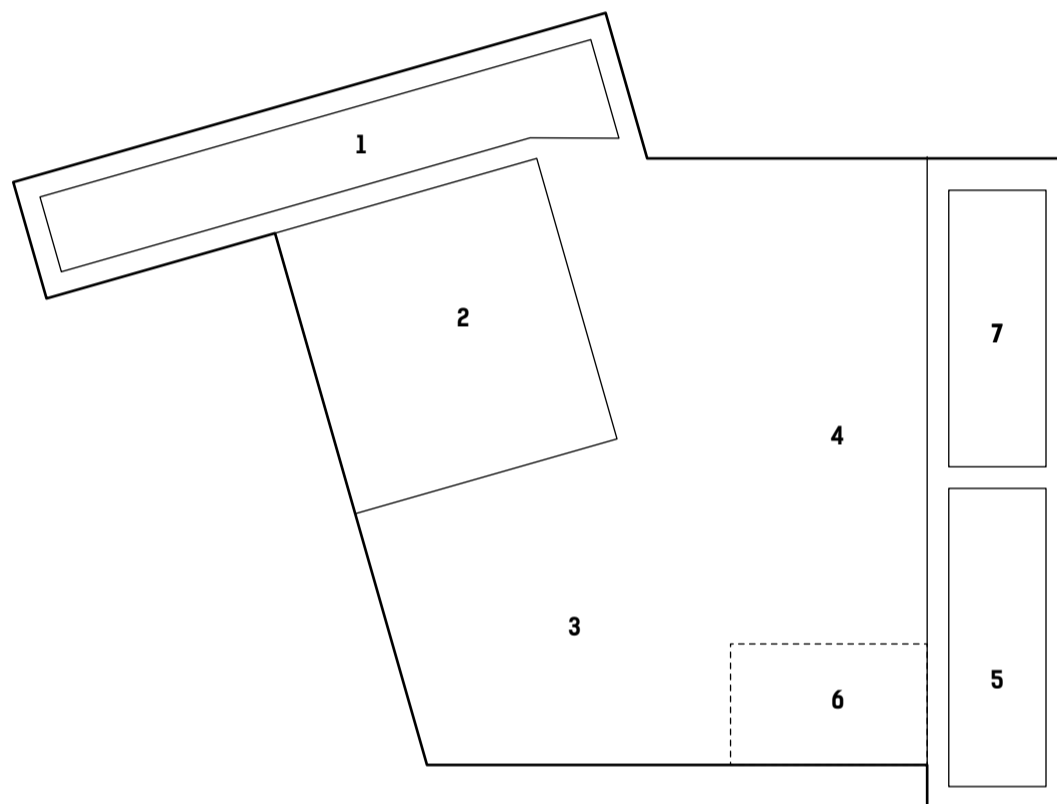
METAROM

Metarom Benelux is a subsidiary of a global company producing aromas and caramels t. R&D is a very important part of the process, in order to develop aromas meeting expectations of the clients.

The company provides insights into the importance of safety norms and its consequences for certain types of manufacturing. In the 90's, the Metarom Benelux' building near the city centre showed some serious issues, especially in terms of security and available space. The company decided to move to this site on the edge of the city (Drogenbos), with the advantages of the proximity to the highway and the location within Brussels, notably for regional subsidies. Metarom Benelux designed and built the factory according to their needs including: large production spaces for the mixing tanks and other machines adapted to security norms (notably with their very common use of alcohols), significant stock with thousands of different components for flavours, a lab to develop new aromas to safety and hygiene standards and logistic spaces to load and unload goods.

The Metarom Benelux's installation has now been used for decades without any serious problem. Investments are planned. First they want to improve the the lab's security standards, due to the evolution of safety norms (toxic component concentration, ventilation, sufficient space for people). Secondly, they are going to buy neighbouring houses and convert them for industrial purposes, contrary to general trends in the region (from industry to residential).

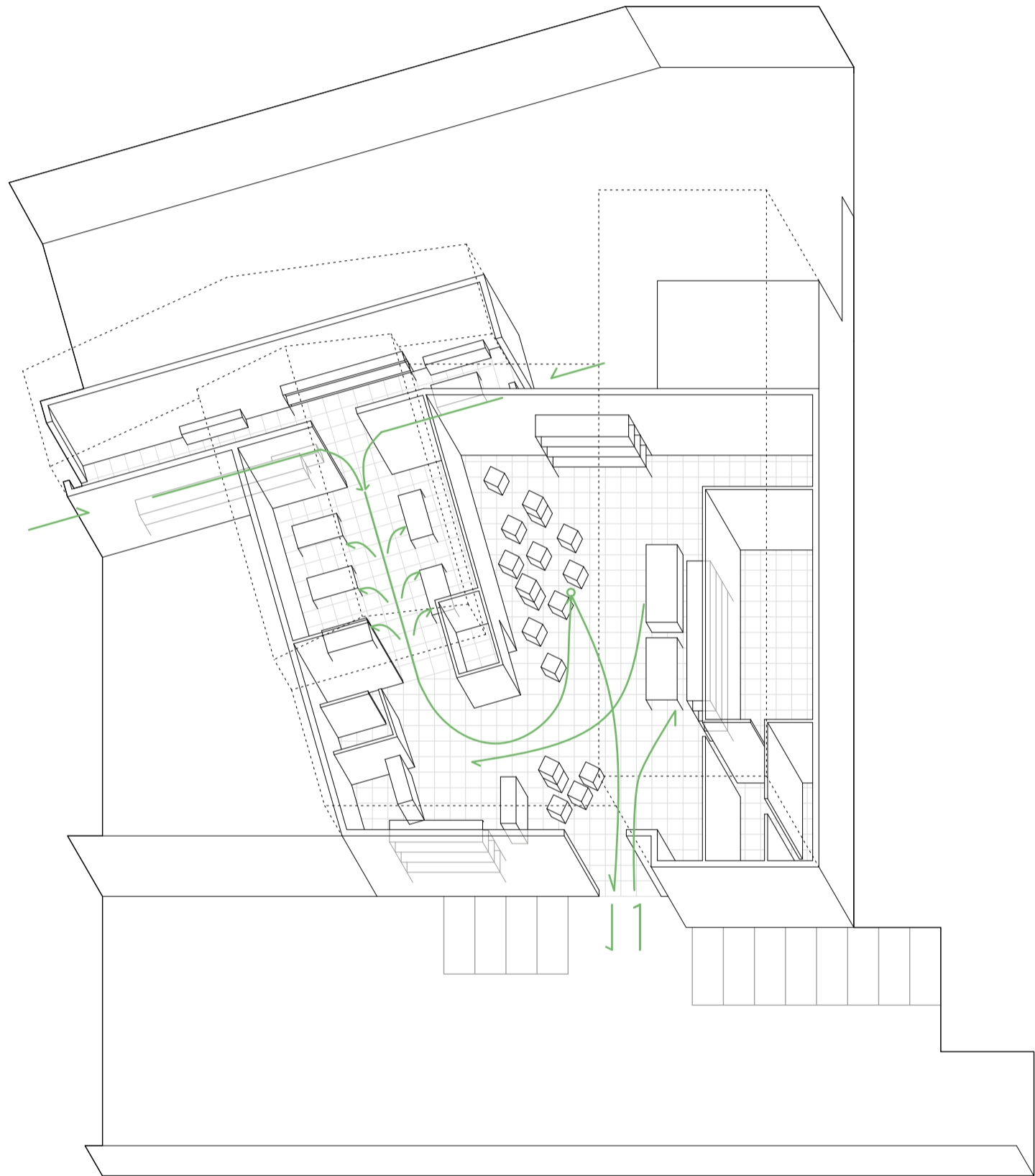


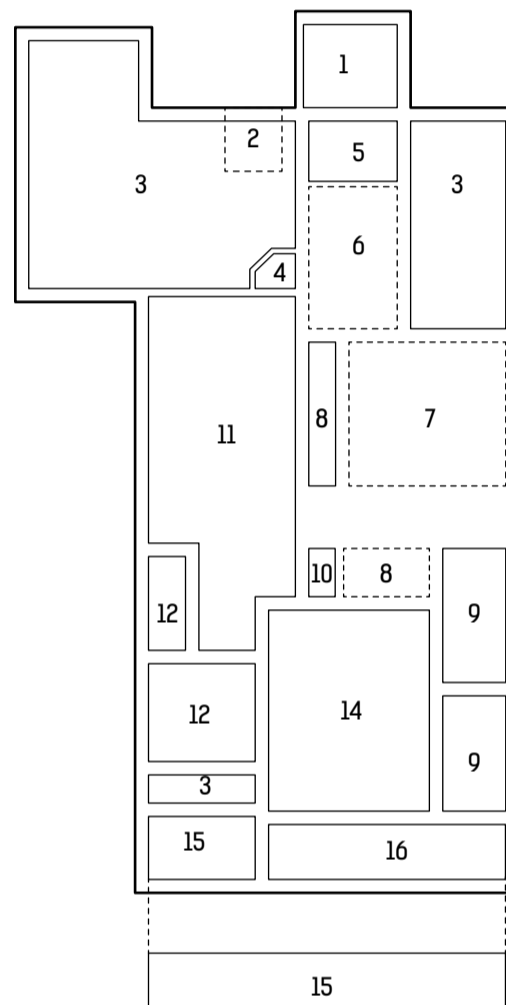


- 1. Metal pipe cutting area
- 2. Assembly area
- 3. Cutting area
- 4. Folding area
- 5. Office
- 6. Pick-up area
- 7. Storage

INOX PLUS

InoxPlus is a small company producing steel furniture. They work in their workshop in Drogenbos and then send the products to retailers. Previously, the business was located on a site owned by the region (Citydev). However Dimitri Gaune, the director of the company decided to leave. He got disappointed by the “commercial” aim of the regional institution, which was looking for increasing numbers of jobs and economic performances while Inox Plus was facing market difficulties. It contrasts with other cases showing the legitimacy of keeping a public authority on the ownership of industrial land in order to protect a common good. Besides that, the case of InoxPlus addresses the issue of training, which is creating a paradoxical link between the city and the company. On the one hand, training in Brussels is seen as a problem. Finding skilled workers, able to use all the required tools and machines directly after training, is very difficult. On another hand, training in Brussels is seen as a solution, if not a necessity. Training centers and local work placement agencies allow InoxPlus to find workers with a strong connection to the urban environment. In order to stabilize the company’s activity and its balance sheets, the director is thinking to invest in the visibility of the company with improved signage, especially considering their good location next to a busy road.





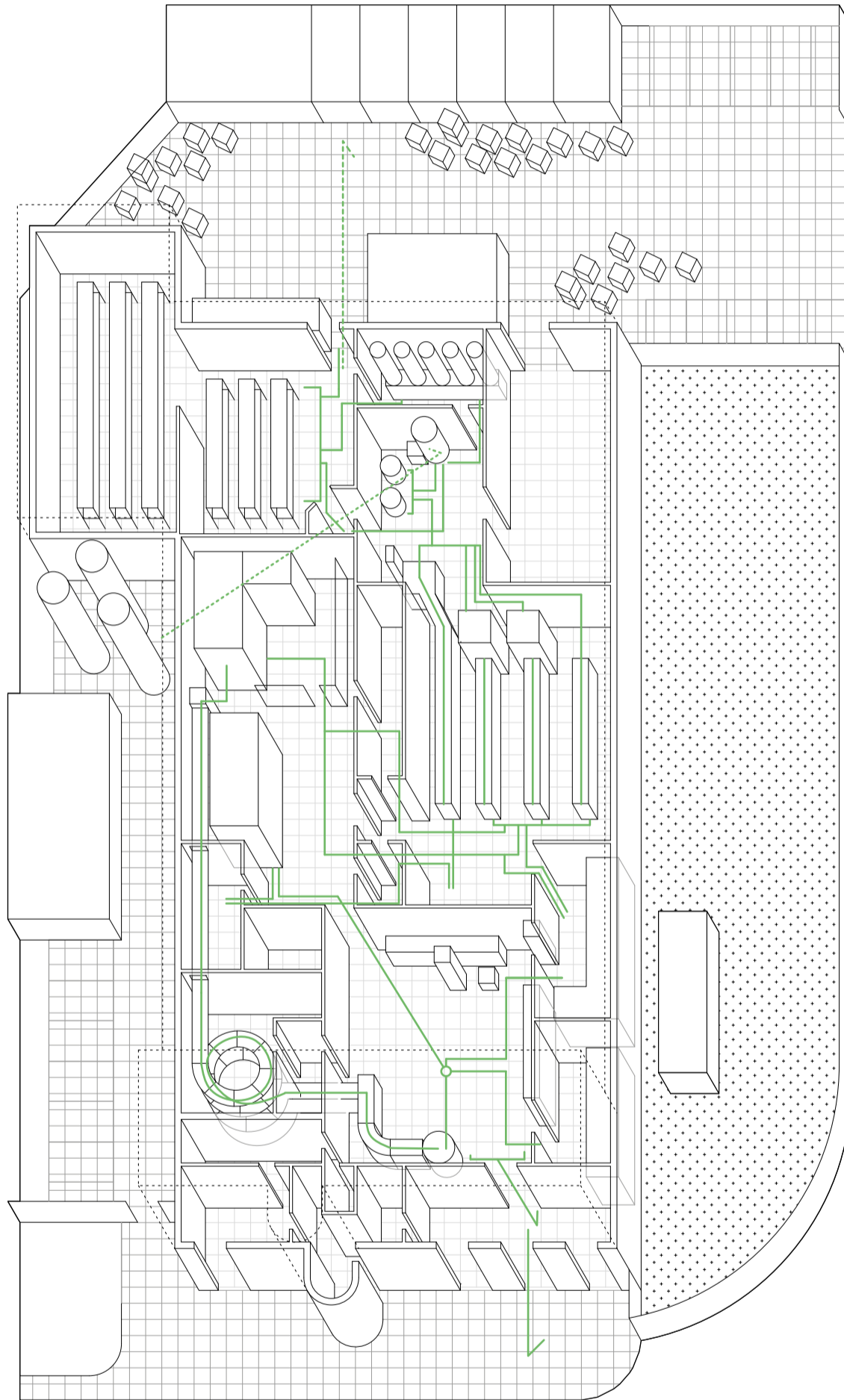
- 1. Freezer
- 2. Delivery
- 3. Storage
- 4. Deconditioning chamber
- 5. Microsilos
- 6. Preparation area
- 7. Production lines
- 8. Lifting
- 9. Cold room
- 10. Eggs gilding
- 11. Oven area
- 12. Viennoiserie lifting
- 13. Ventilating chamber
- 14. Packaging
- 15. Office
- 16. Pick-up area

LOWY / LA WETTERENOISE

Lowy/La Wetterenoise is an artisanal, semi-industrial bakery located on a site owned by the regional development agency (Citydev). The company is a good example of resilience. Originally established closer to the city centre (in the Heyvaert neighbourhood), the facility suffered from a serious fire. Despite losing their facility, they managed to produce and sell with the help of other bakers, while they found a new site on an industrial site on the edge of the city (Drogenbos). The new site was half the size of the previous one, however due to a more efficient workflow and improved technology after the fire, they were able to quickly pick up to full capacity.

Lowy/La Wetterenoise has experienced tensions with larger industrial bakers. A significant concentration of capital with bigger businesses and consequently their growing market share is imposing pressure on prices even on artisanal bakers like Lowy. However, these large dominant companies have lost two things in their growing process which have created space for Lowy. First they have less flexibility of production, unable to answer small orders of various products. Secondly they have difficulties to offer high quality products. Two characteristics that Lowy/La Wetterenoise has developed, in order to satisfy supermarket clients that are looking for this quality and horeca and catering businesses (Hotels, Restaurants and Cafes) that are looking for more flexibility. In return, these partnerships impose an adaptation of their production process in terms of hygiene norms, quantity output of price.

Since the fire, Lowy/La Wetterenoise has been very prudent in terms of safety norms. Their director, Sebastien Delvaux, has the ambition to increase production and improve quality. To do so, there may be a need to reduce costs or increase production speed such as through automation..



Cureghem





VECTRA
3770
5000
10/2004



CUREGHEM

Cureghem has the characteristics of a dense industrial area, with a large mix of housing and small to middle scale manufacturing companies. There is a history of industrial activity dating back to the beginning of the 19th century when the production occurred outside of the city walls. The Abattoir, the location for leather and the meat sector, has played a major role in the economic evolution of the neighbourhood. Other sectors have also developed, such as paper, breweries and textiles. In parallel, Cureghem has also been an arrival place for migrants. Several waves of immigration have followed one another in the 20th century, such as Jewish immigrants from Eastern Europe then Italians, Spanish, Moroccans, Turkish and more recently West African.

In the 1960s, Cureghem started to suffer from the relocation of businesses and suburbanization. The municipality decided to ban factories because of nuisances and several companies left the area. Meanwhile, wealthy people from Cureghem moved to less dense and greener areas outside of the city. The Abattoir started a long period of decline, notably with a decreasing demand and requirements for higher hygiene and safety standards. Several meat companies have closed but the site still plays an important role within the economy of the neighborhood.

Combined with the petrol crisis and the municipality's feeble financial situation since the 1970's, public authorities lost interest in the neighborhood. A neighborhood of unemployed people and immigrants was not representing a great opportunity for politicians. Little support was offered to improve the quality of public and private spaces, while some plans were never implemented. This mix of problems led to an increase of poverty levels, blight and criminality.

Heyvaert, the north-east part of Cureghem, is one of the most diverse areas, evolving through several waves of immigration. Ethnic shops, wholesale outlets, associations and religious centres have appeared. Second hand car dealers emerged in the 1980s. Cureghem quickly became an international hub for trading used cars and related activities, attracting international clients and a range of associated retail businesses. In contrast, the paper factories, breweries, textile production and other industries became increasingly rare.

After years of work from non-profit organisations, the shock of the Cureghem riots (1997-1998) and the arrival of a new generation of politicians with immigrant backgrounds, public institutions started to reinvest time, work and money into the neighborhood from the end of the 1990s. The policy of Contrat de Quartier is the most emblematic example of this new interest for Cureghem involving regional public development. Urban manufacturing has not been integrated into the economic dimension of these plans, as development has favoured more profitable office, housing and retail space. Deindustrialisation is continuing and vast manufacturing spaces are being driven by the market to be converted into middle-class housing.

Today the neighborhood is under significant pressure in terms of urban development. Real estate developers are interested in its central location within the city. As part of the canal zone, Cureghem has also been targeted by regional institutions since the 1990's through planning and implementing massive transformation: middle and upper class housing, new public spaces (such as parks) and leisure or socio-cultural amenities. The economic structure of Cureghem is also transforming. Second hand car dealerships are not considered positively by public institutions and politicians, who are trying to discuss potential relocation of car related activities out of the city-centre. The abattoir site has also an uncertain future, with a masterplan including housing while retaining a hub for the food sector without any clear commitment to existing users.

BRICO & BRIC

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HAVELANGE

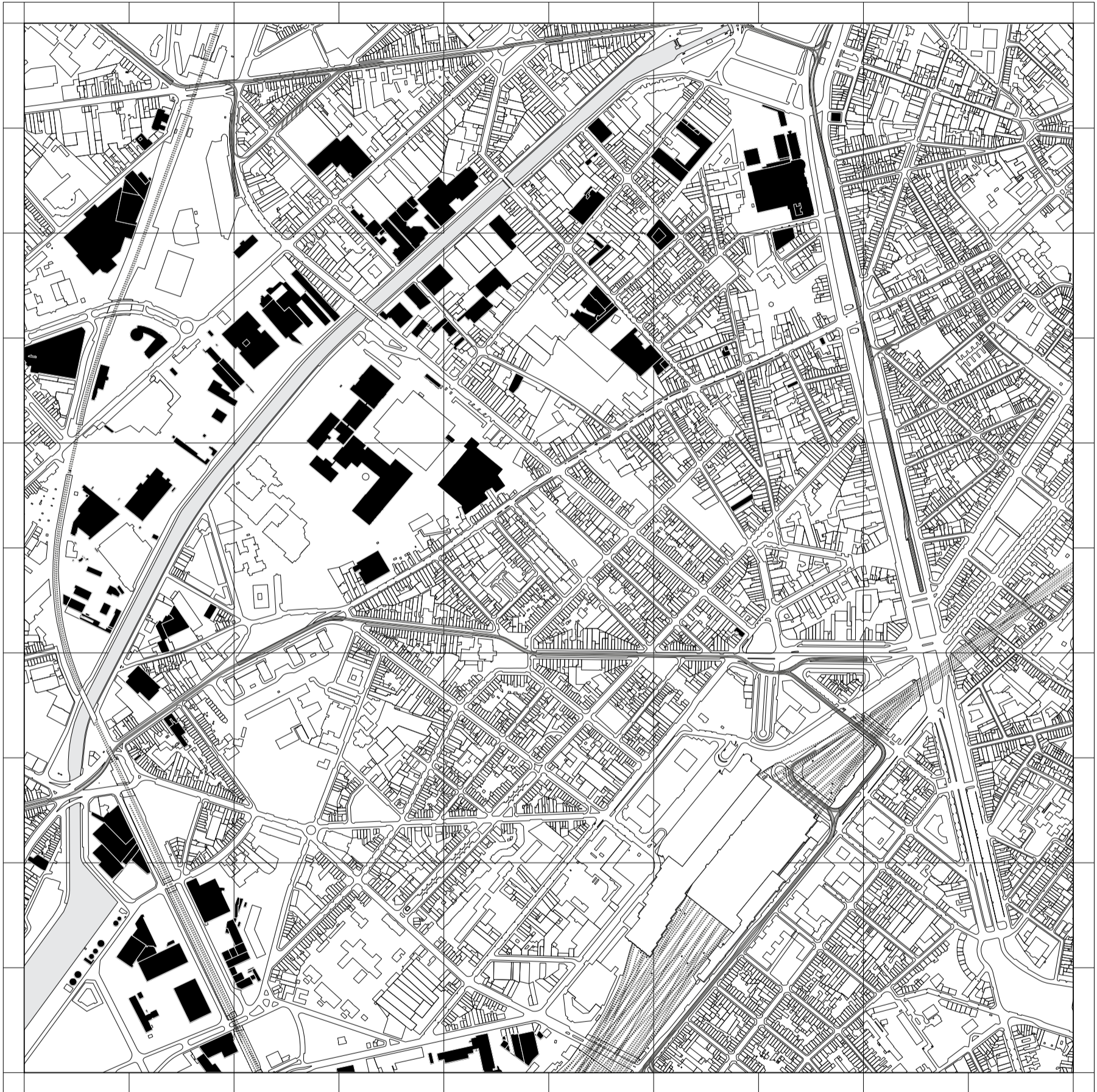
TCM
HAVELANGE



0 0.2 km

CUREGHEM

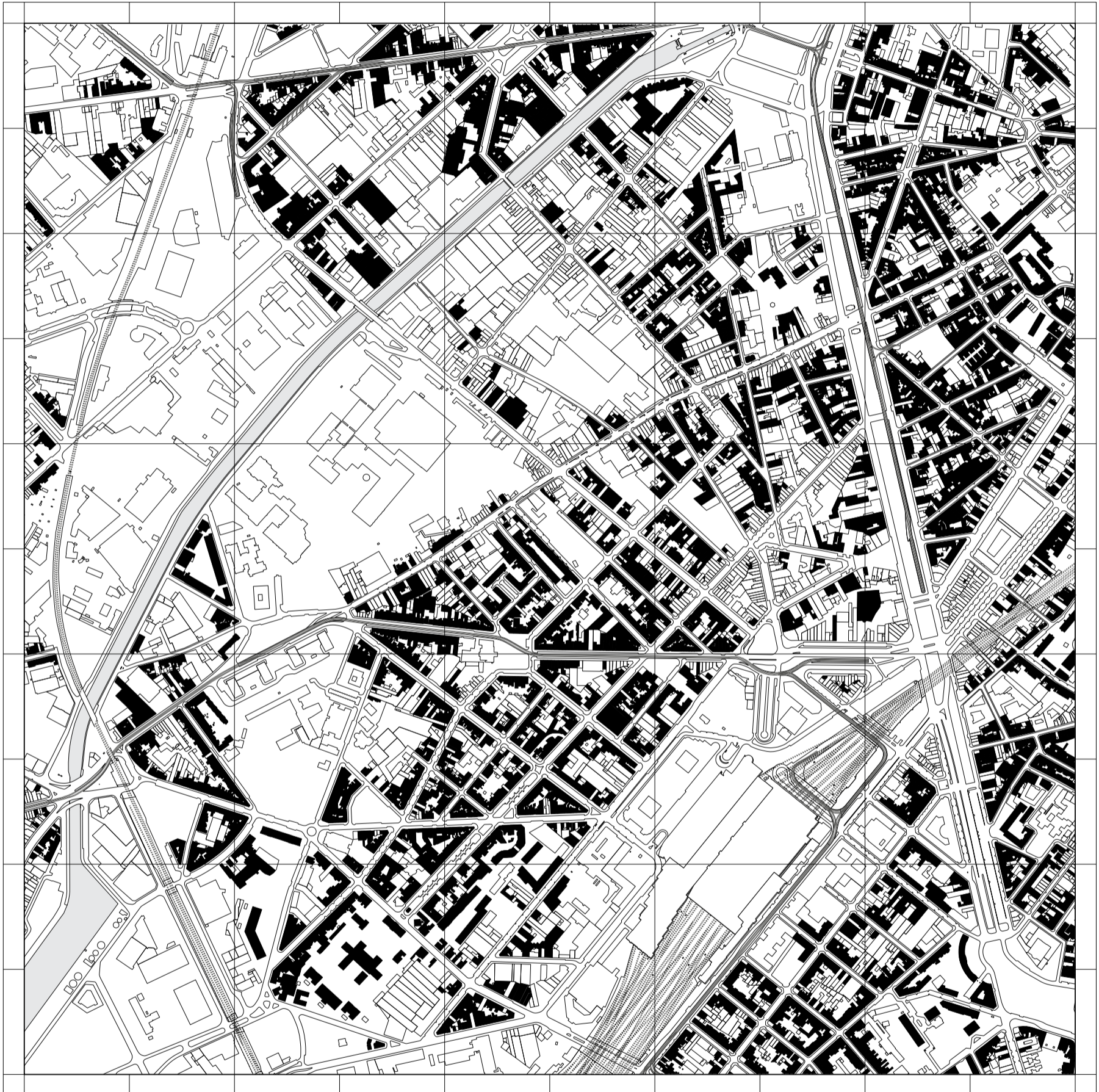
The delayering of the analysed area of 1x1 km shows the concentration of large to medium manufacturers long the canal, while some of the remaining small businesses remain embedded within the area's very dense residential tissue (housing). That is due to the historical development of the canal zone and the recent housing pressure that has led to the disappearance of small-family based businesses. While retail concentrates along the main streets, services are spread evenly, characterising one of the most densely populated and vibrant neighbourhoods of Brussels.



0 0.2 km

Category	Surface [m ²]	Percentage [%]
Manufacture	381,000	24%
Housing	640,000	41%
Retail	221,000	21%
Services	230,000	15%
Transit	96,000	6%
Total	1,568,000	100%

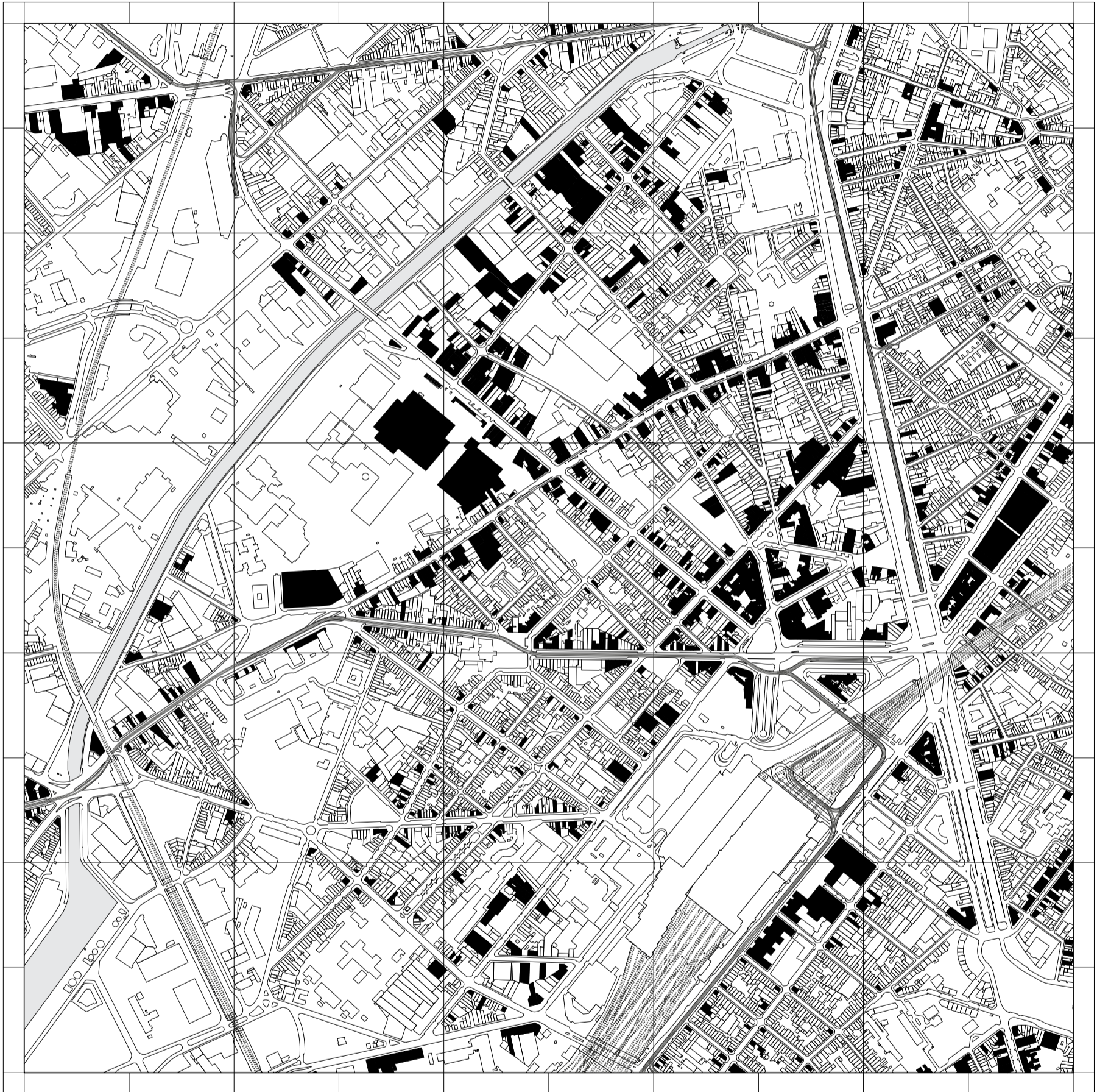
USES - MANUFACTURE



0 0.2 km

Category	Surface [m ²]	Percentage [%]
Manufacture	381,000	24%
Housing	640,000	41%
Retail	221,000	21%
Services	230,000	15%
Transit	96,000	6%
Total	1,568,000	100%

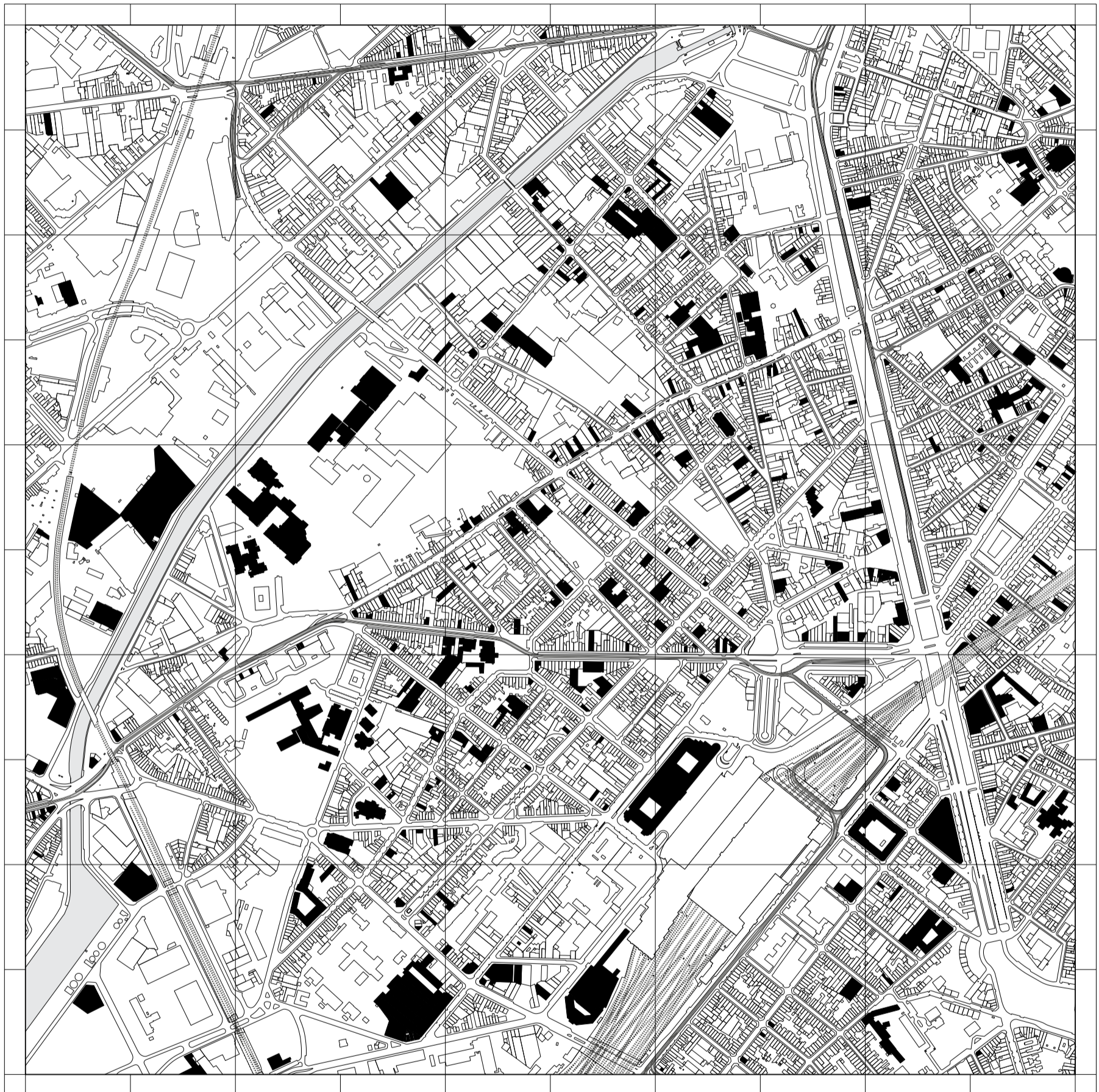
USES - HOUSING



0 0.2 km

Category	Surface [m ²]	Percentage [%]
Manufacture	381,000	24%
Housing	640,000	41%
Retail	221,000	21%
Services	230,000	15%
Transit	96,000	6%
Total	1,568,000	100%

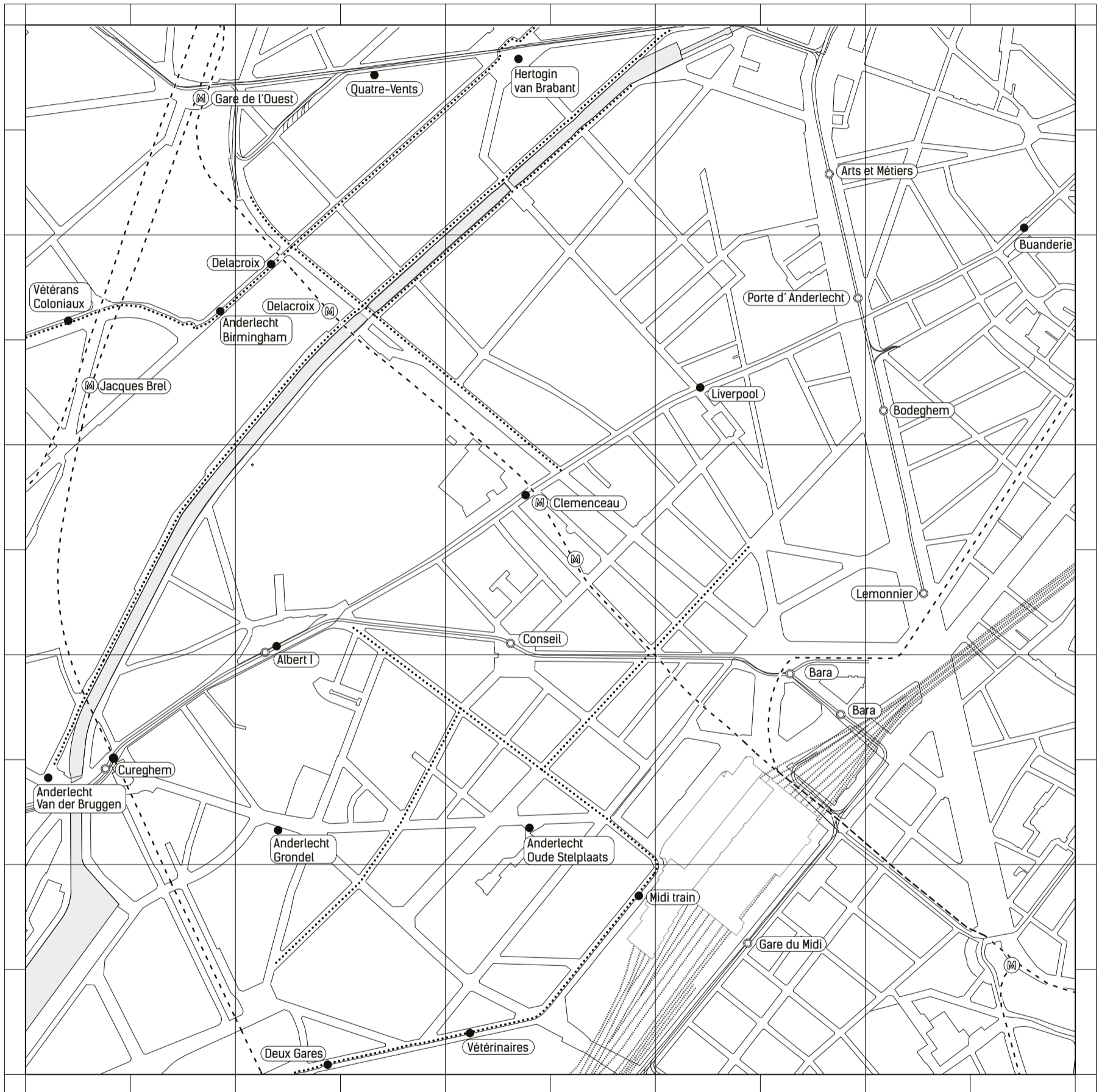
USES - RETAIL



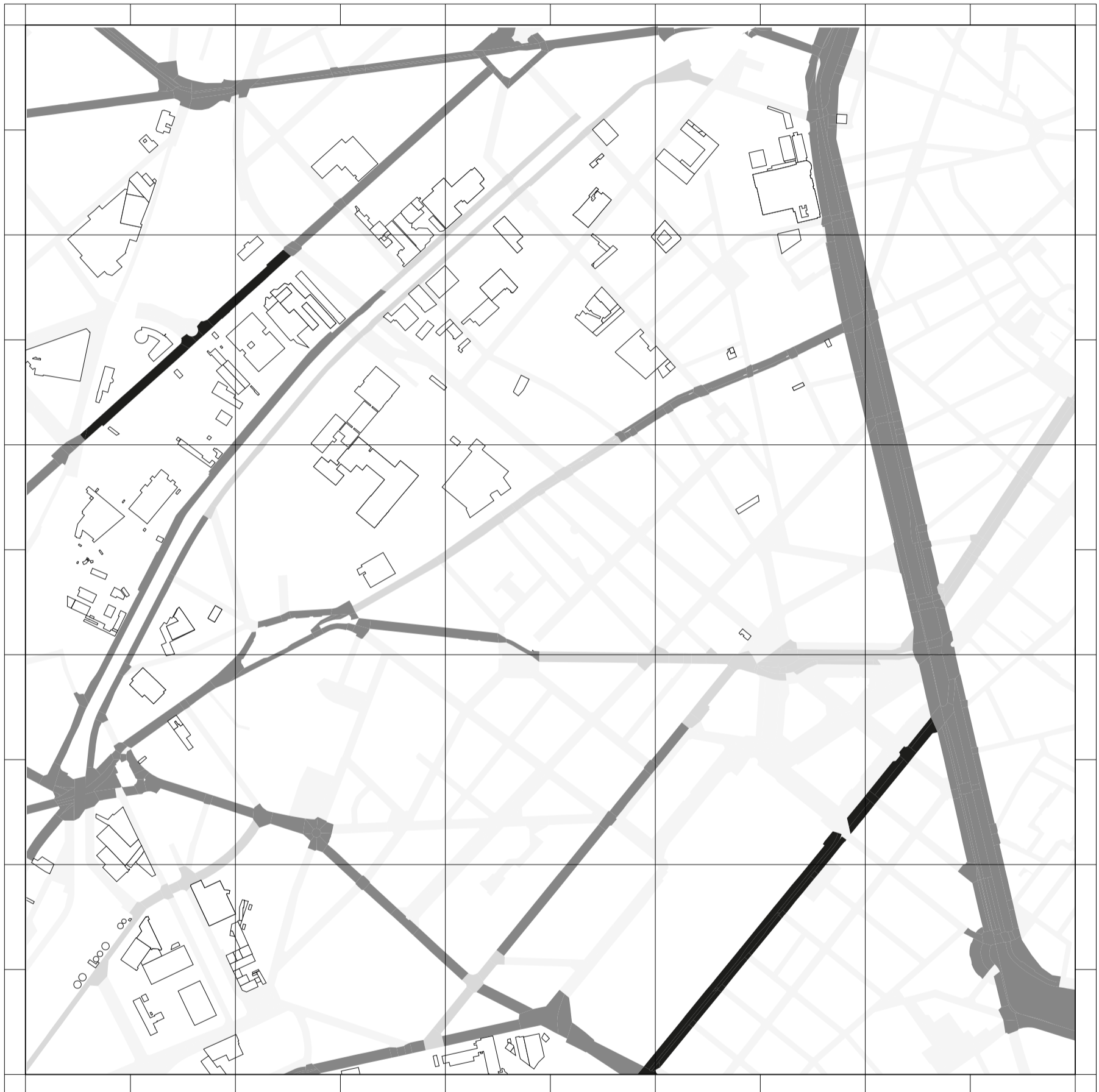
0 0.2 km

Category	Surface [m ²]	Percentage [%]
Manufacture	381,000	24%
Housing	640,000	41%
Retail	221,000	21%
Services	230,000	15%
Transit	96,000	6%
Total	1,568,000	100%

USES - SERVICES



0 0.2 km



0 0.2 km

- Very High
- High
- Medium
- Low

MOBILITY - TRAFFIC CONGESTION

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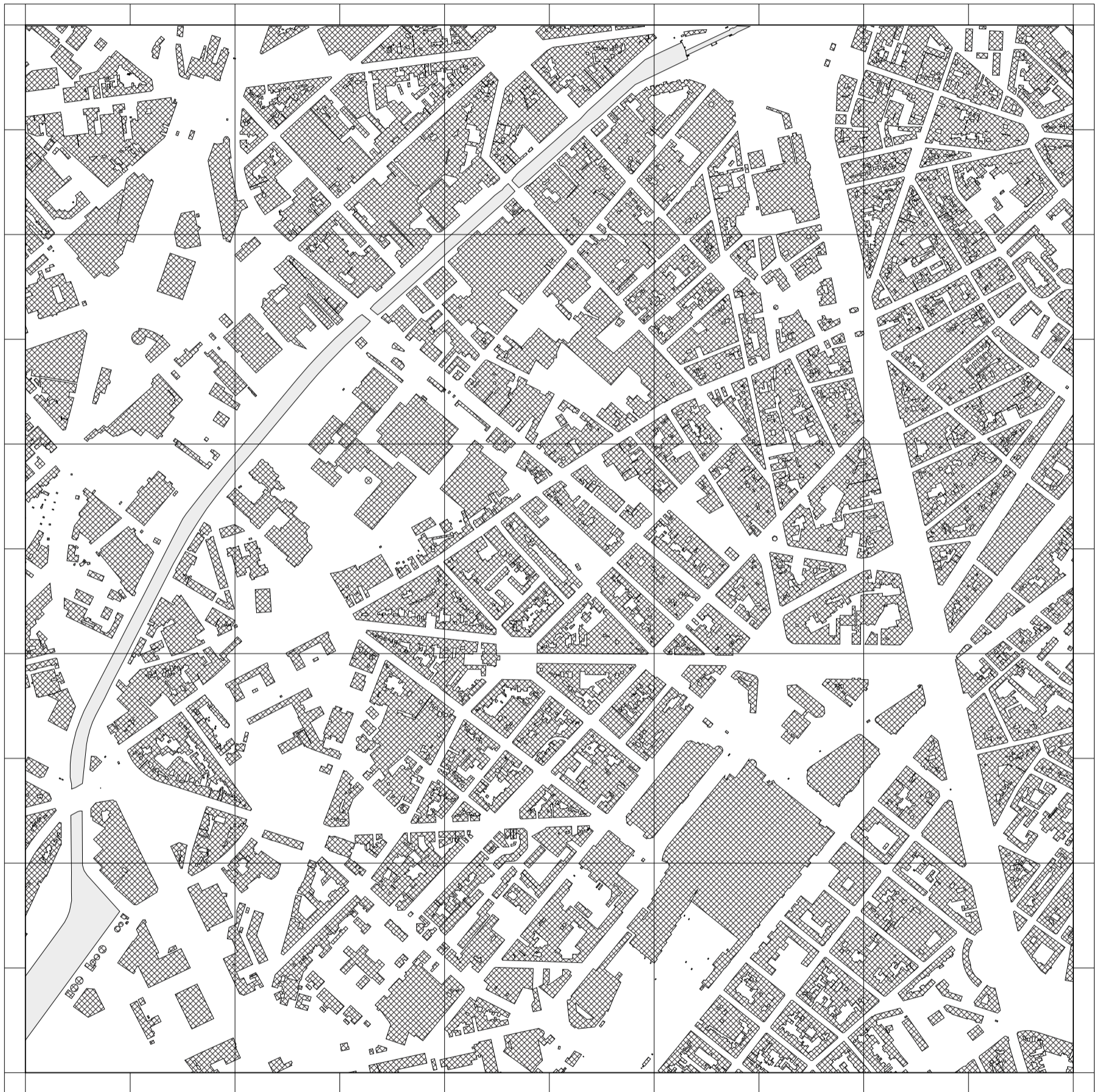
EXPORT

INESA





BUILT - UNBUILT SPACE

The map shows the potentially accessible space as opposed to the non-accessible one. This theme is particularly relevant for the border area due to its fragmented nature, caused by a series of very different uses and physical patchwork, which result in spatial discontinuity, lack of clarity and grey zones.

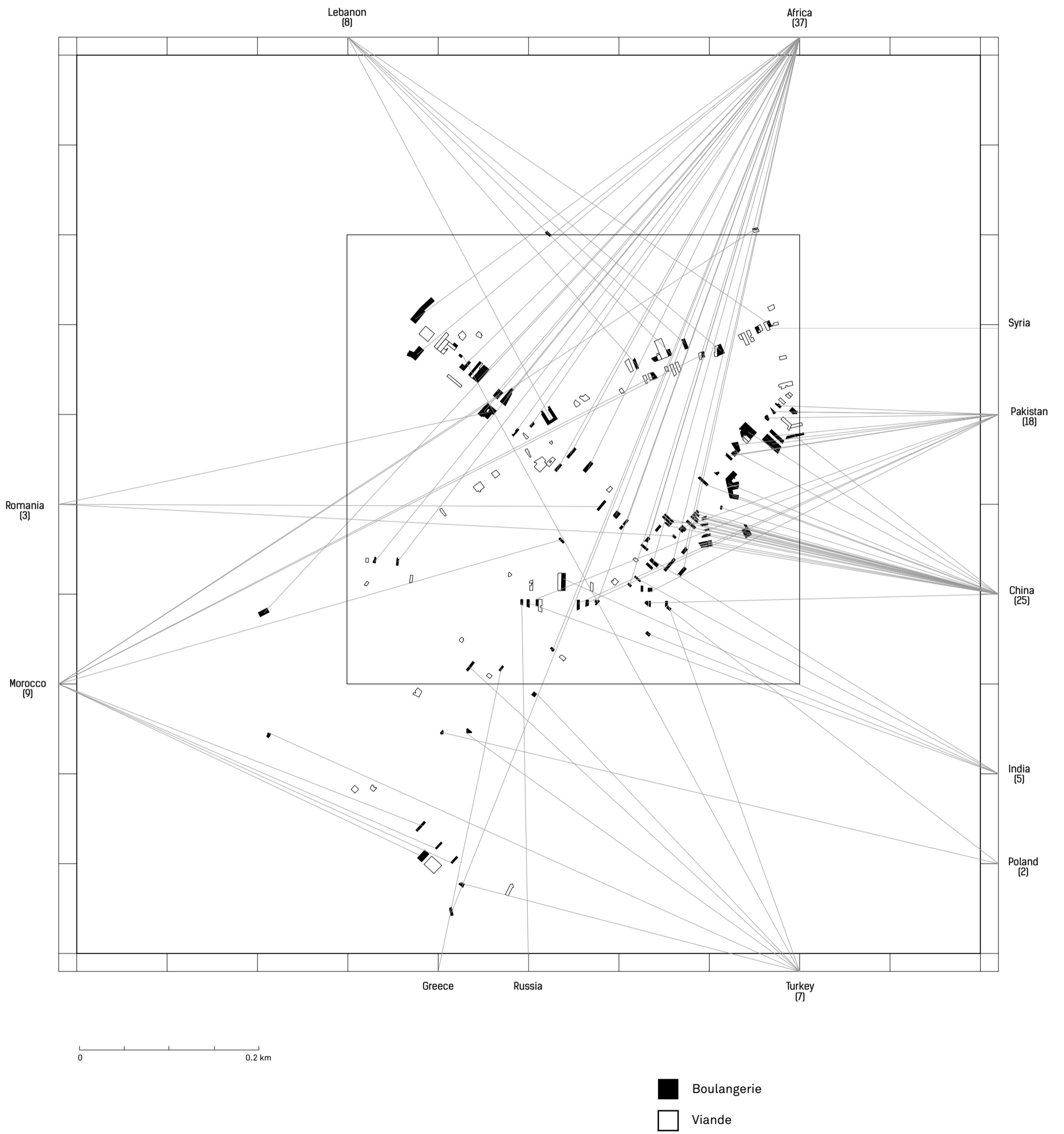


0 0.2 km

Category	Surface [m ²]	Percentage [%]
 Filled Space	2,215,600	20%
 Void	1,784,400	80%
Total	4,000,000	100%

SOCIOCULTURAL DIVERSITY - RETAIL WINDOW SIGNS ORIGIN

Cureghem is characterised by a cosmopolitan socio-economic community. This is shown in mapping the different origin of retail premises in the area, based simply on their.



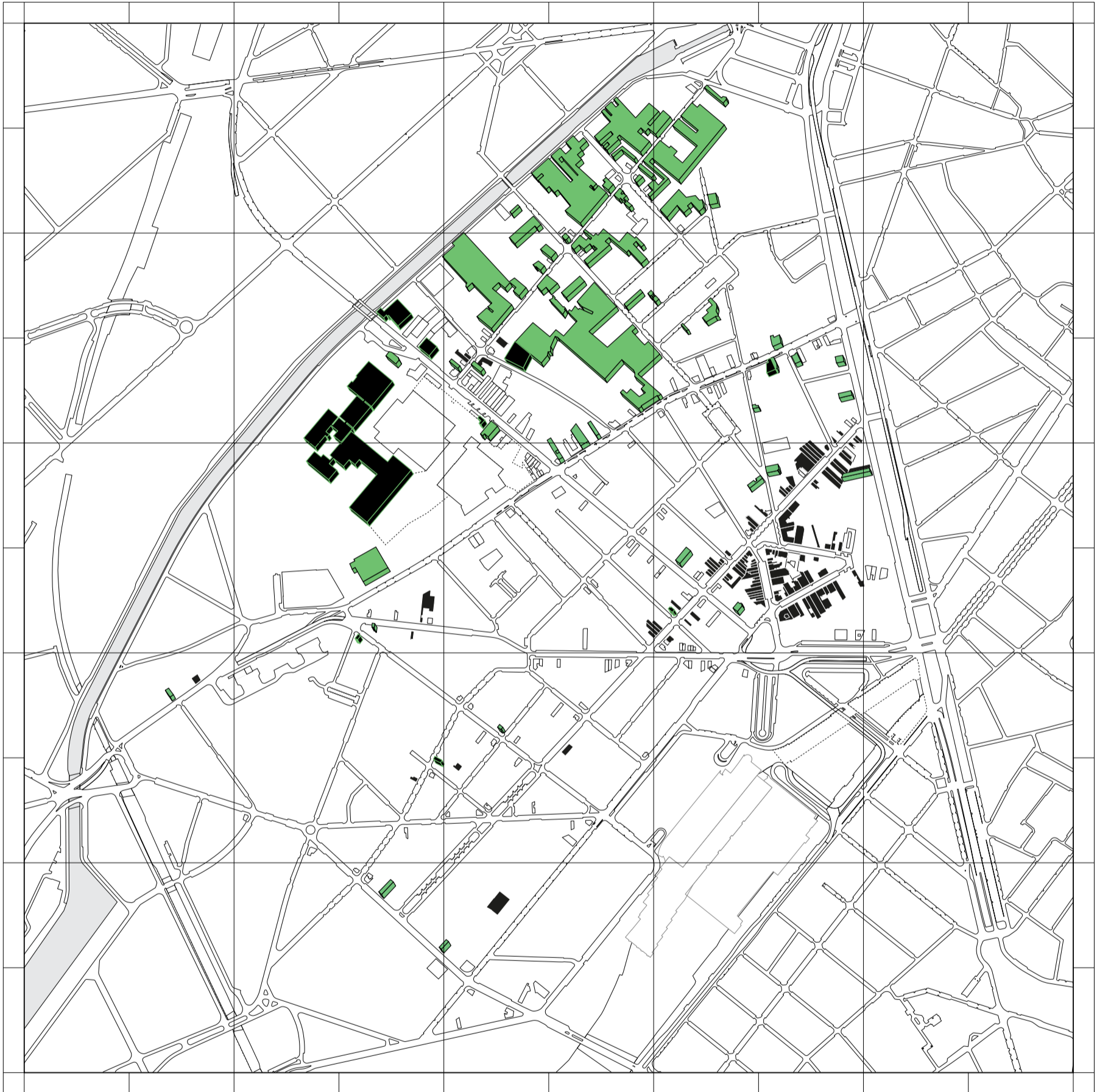
SOCIOCULTURAL DIVERSITY – RETAIL WINDOW SIGNS NAME

The zoomed map shows the actual name of the retail premises in the central area of Cureghem. Writing in native languages reveals the presence of specific communities and their customers, as well as national or cultural-linguistic clusters that depict the specific social geography of the neighbourhood.



The following series of interpretative maps aim at analysing some of the most pressing issues that affect the area. The border zone between Droegnbos and Stalle is in fact characterised by spatial fragmentation, complex accessibility and informal use of dross spaces. Moreover, it is formed by a patchwork of productive yards that question the overall socio-spatial vision of the area.

CARS & MEAT BUSINESS ECOLOGY

Cureghem is dominated by two main businesses: second hand vehicles and meat. They are clustered around specific sites, such as the one around the slaughter house (food) and along Rue de Heyvaret (vehicles). Both clusters contain business ecologies formed by services, wholesale and other dependent functions.

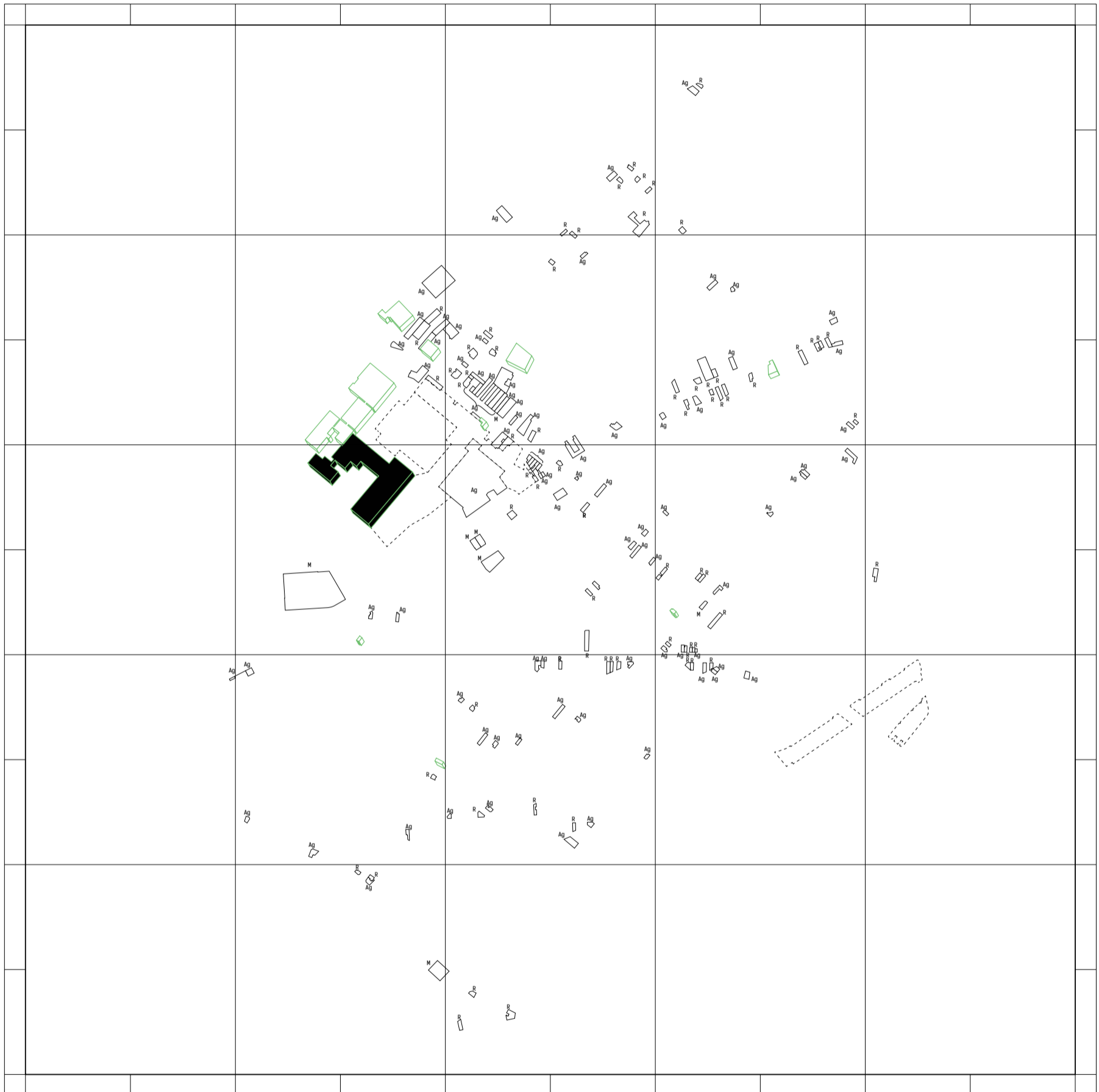


0 0.2 km

-  Car Business
-  Meet Business
-  Wholesale
-  Support Services

MEAT BUSINESS ECOLOGY

The meat business ecology revolves around the core site of the Abattoir (slaughterhouse) that includes a series of related businesses such as butchers and services (including restaurants and food shops). Recently, a number of new businesses have appeared that are not connected to the abattoir but are using new technology to produce or process food.

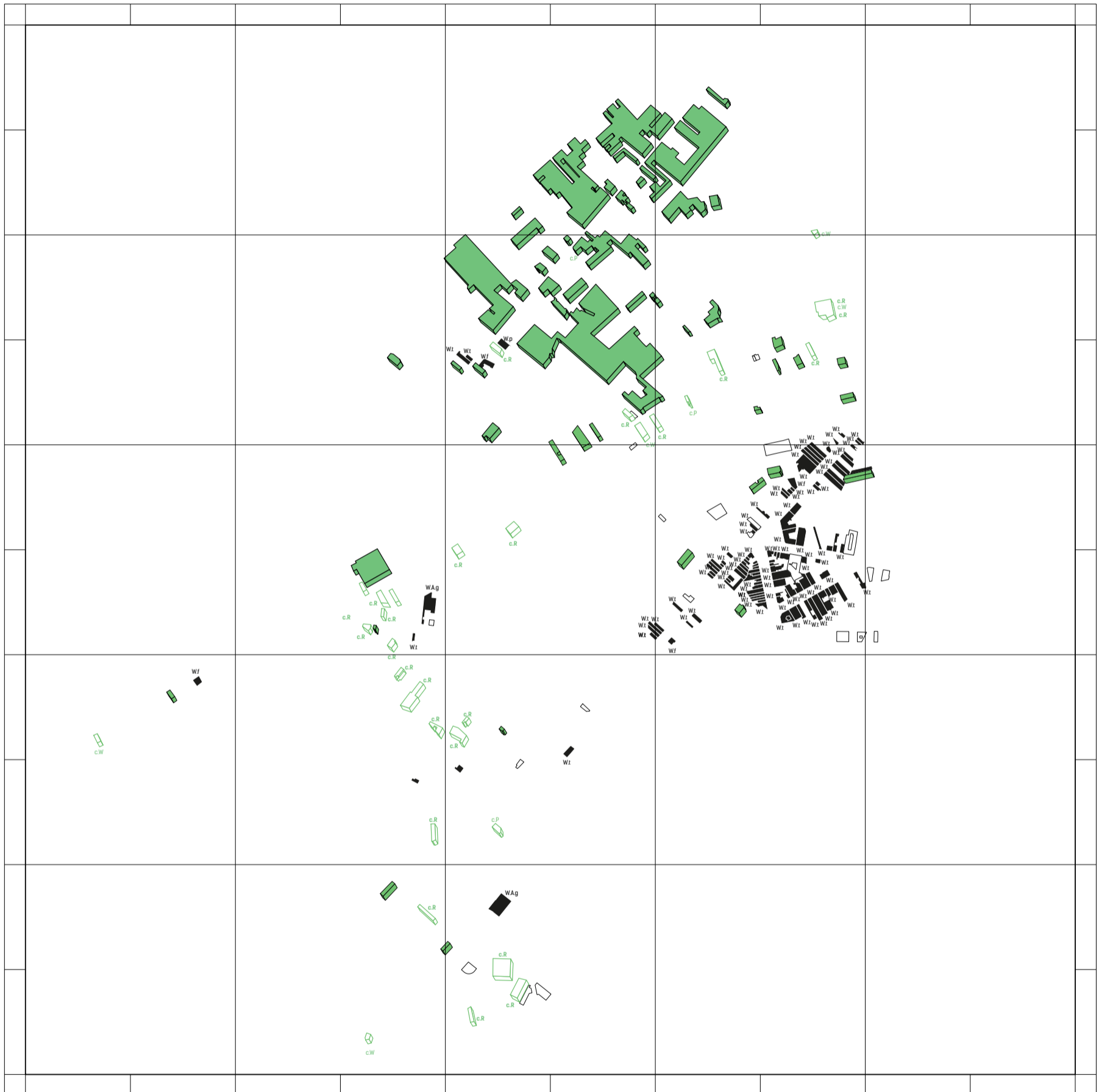


0 0.2 km




-  Abattoir
-  Boucherie
-  Services
 - R Restaurant
 - Ag Alimentation General
 - M Supermarket

CARS BUSINESS ECOLOGY

Understanding the spatial relations of the vehicle business ecology unfolds two clear clusters: the one of second hand import-export, being the main economic activity; and the one of wholesale, which is highly dependent from the first, due to the combined/simultaneous shipping of goods. Other services such as hotels and restaurants are dependent from these businesses.

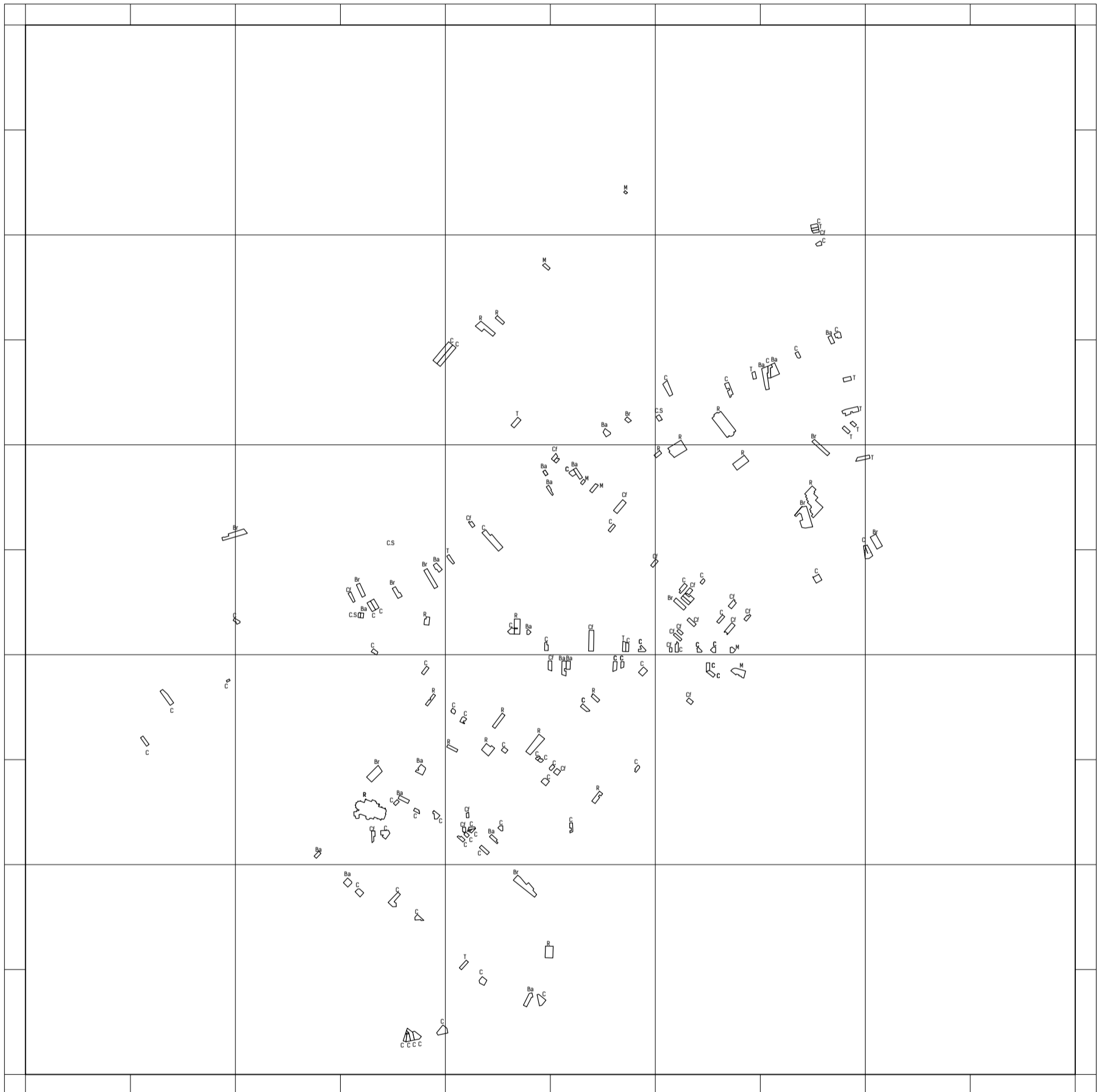


0 0.2 km

-  Car import export
-  Car services
 - cW Restaurant
 - cR Alimentation General
 - cP Supermarket
-  Services
 - Wt Wholesale Textile
 - Wf Wholesale
 - WAg Wholesale Alimentation General
-  Services Hotel

NEIGHBORHOOD SUPPORT SERVICES

The even distribution of services shows the extent to which the fine grain activities existing in Cureghem are deeply inserted within the very residential and productive tissue of the neighbourhood.







- Ba Bakery
- C Bar Cafe
- Br Brico
- R Religion Centre
- T Travel Agency
- M Money Gram
- CS Call Shop
- CF Coiffeur

TRANSFORMATION PROJECTS

Recent, ongoing and future transformations of Cureghem's public space is reshaping the neighbourhood. This is impacting the function and the existence of the current productive activities due to the introduction of restrictions and spatial arrangements that discourage truck-car circulation and logistics.



0 0.2 km

-  Building sites
-  Recent transformation
-  Permis d'urbanisme
-  Pending approval

CUREGHEM COMPANIES

The economy of the neighborhood is partially concentrated in formal or informal clusters or hubs.

The main hub is the food sector, mainly located on the Abattoir site. The site is managed by Abattoir Pty Ltd. a private company holding a 30 year leasehold which manages the businesses occupying the site including the slaughterhouse, the weekend fresh food market and numerous manufacturing businesses. It has played an historical role in keeping the meat sector in Cureghem notably thanks to its shareholders dominated by small, local businesses. Management has been investing in the renovation of manufacturing spaces, logistics facilities and shared infrastructure (fridges, cutting machines, etc.).

Such a concentration of activities can mean competition amongst similar types of businesses but can also mean forms of solidarity, such as helping to develop complementary products, to share logistics, to organize cultural events or to have common marketing. For decades the companies on the site were primarily related to meat (refrigeration, leather, soaps, etc.). However recently a second group of businesses focused on food transformation and urban agriculture has arrived (companies such as BIGH, Champignon de Bruxelles, Urban Harvest, Envie Atelier). These two groups of companies are not only selling different products, they also have distinct education, socio-cultural clientele and sources of economic capital.

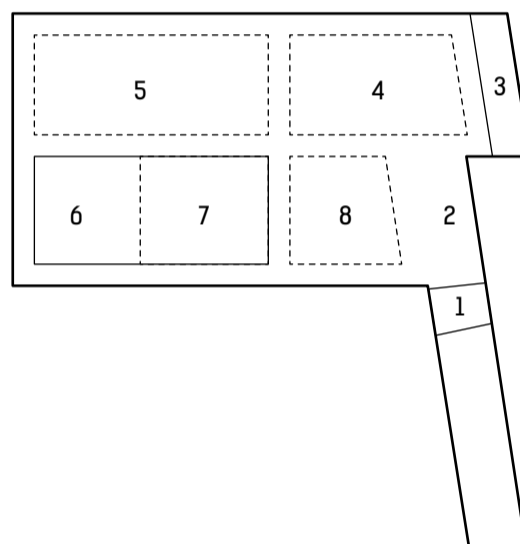
Another manufacturing hub is located on the Recy-K site, managed by Bruxelles Propreté (the regional waste agency), focusing on recycling and the social enterprise, attracting relatively young organisations. In parallel, there are numerous established businesses that remain in the neighbourhood associated with paper and metal fabrication, and have grown around access to workers or mobility. While second hand car dealers are often very informal and considered problematic for public authorities, they provide accessible employment for new migrants while finding a use for older vehicles. Clothing wholesalers are located close to the South Station but are focused largely on imported goods.

We observe gaps between established companies (involved with meat, metal fabrication and paper sectors) and new companies (that are building on urban agriculture and recycling in the circular economy philosophy). Established companies are having increasing problems with logistics where trucks are impaired by 'improvements' in public space design such as larger pedestrian paths or new bicycle lanes. While this may not be communicated as improving quality of life in the neighbourhood, the actual effect is that gentrification is pushing out the jobs that local inhabitants rely on, many of whom are poor and vulnerable. Newer businesses have accepted limited mobility as a fact, while established businesses are struggling to adapt.

Furthermore, established manufacturers and their suppliers are more vulnerable to housing development, as the new middle-class occupants have less tolerance for noise and trucks while also having a stronger capacity to communicate with policymakers. New small companies seem to be suited to the available spaces in this dense area or in new mixed use projects, because of their size but also because of the nature of their activities.

There is a gap between the social impact of new versus the established businesses. With exception to specific social economy cases, new manufacturers are usually less connected with lower class and local inhabitants. Some newer businesses have higher prices than what can be afforded by the local market; some have a business model related to a white middle-class culture; some organise paid events, attracting a richer public. While established companies are often considered as an obstacle to gentrification, new ones seem to have stimulated the process while not necessarily helping to secure space for manufacturing in the long-term. Finally, there is a gap in public support. Public institutions are giving more subsidies to new manufacturers while stimulating new development that places stress on established businesses. New companies come with big financial backing while established businesses are more inclined to focus on a family financial model. The new and old businesses are moving further and further apart.





1. Reception
2. Wood delivery
3. Wc
4. Awaiting material + dismanteling
5. Workshop + storage
6. Office area
7. Meeting area + show room
8. Out going project

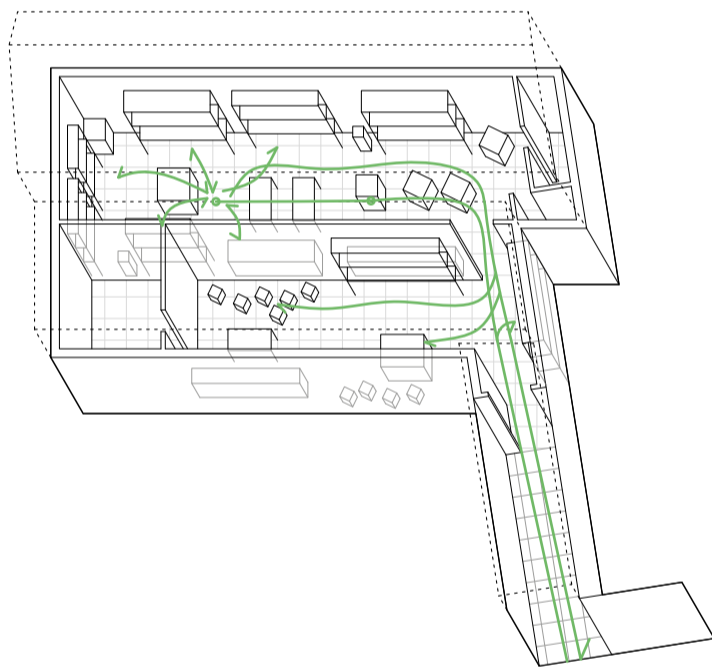
WIM

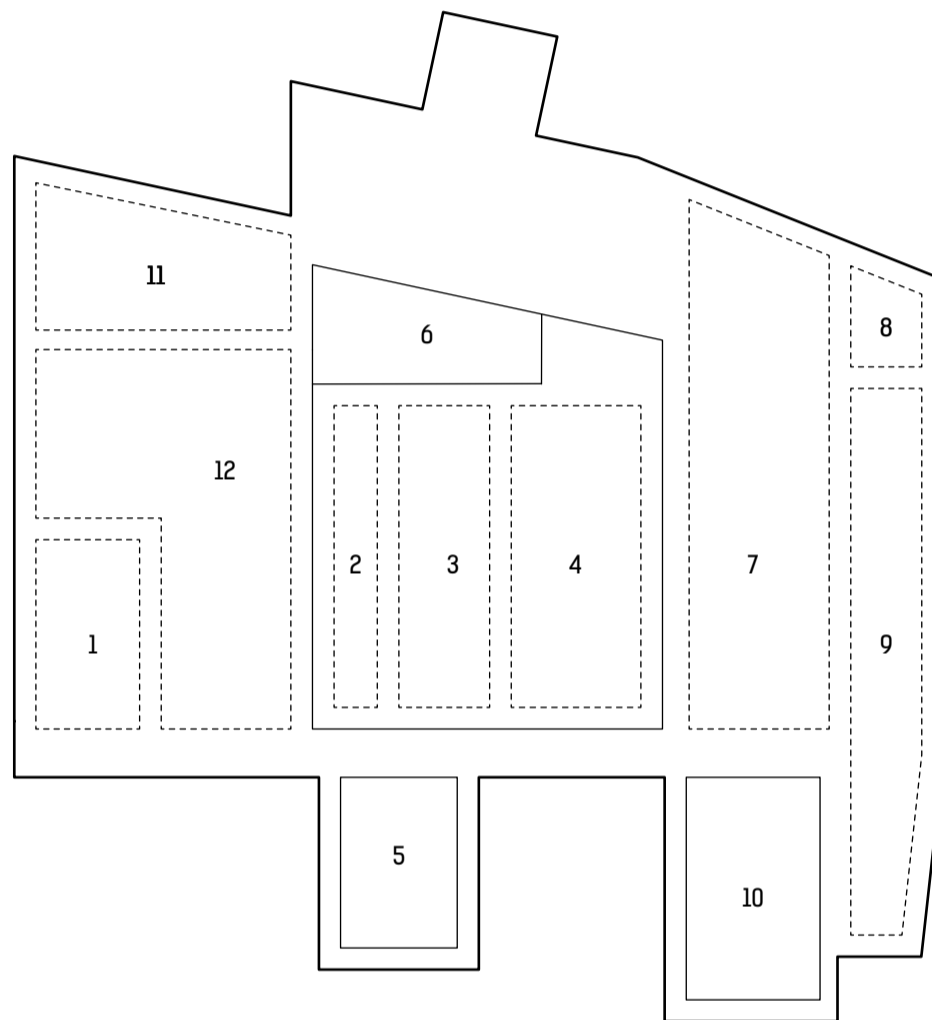
Wood In Molenbeek (WIM) is a publicly financed action-research project focused on the use/re-use of wood. It was launched by two non-profit organizations and academics and located in a building owned by the municipality. This project is exclusively accessible to Cureghem's inhabitants and their entire communication policy has been developed in this way. The scope of WIM can be considered a means for resisting gentrification through community building in a poor and disadvantaged neighborhood.

The workshop has become a significant place of social interaction, inciting people to share knowledge and meals. It has integrated circular practices, such as the collection of local wood waste, mainly from local building sites. There is also an informal network of inhabitants reusing WIM's own waste materials.

The relationship with neighbouring workers in the second hand car trade is not always easy. On the one hand, they are regularly communicating with workers from WIM and inhabitants, which is positive. Moreover, WIM's wood waste is also used by the garages, who use it to treat oil spills or for heating. On other hand, drivers often drive quickly in the narrow and poorly policed streets, making it uncomfortable for some inhabitants and WIM's workers.

WIM's project is slowly arriving to an end of its funding and the municipality has other plans for the building. They are therefore looking for new sources of financing and a new place to develop their initiative.





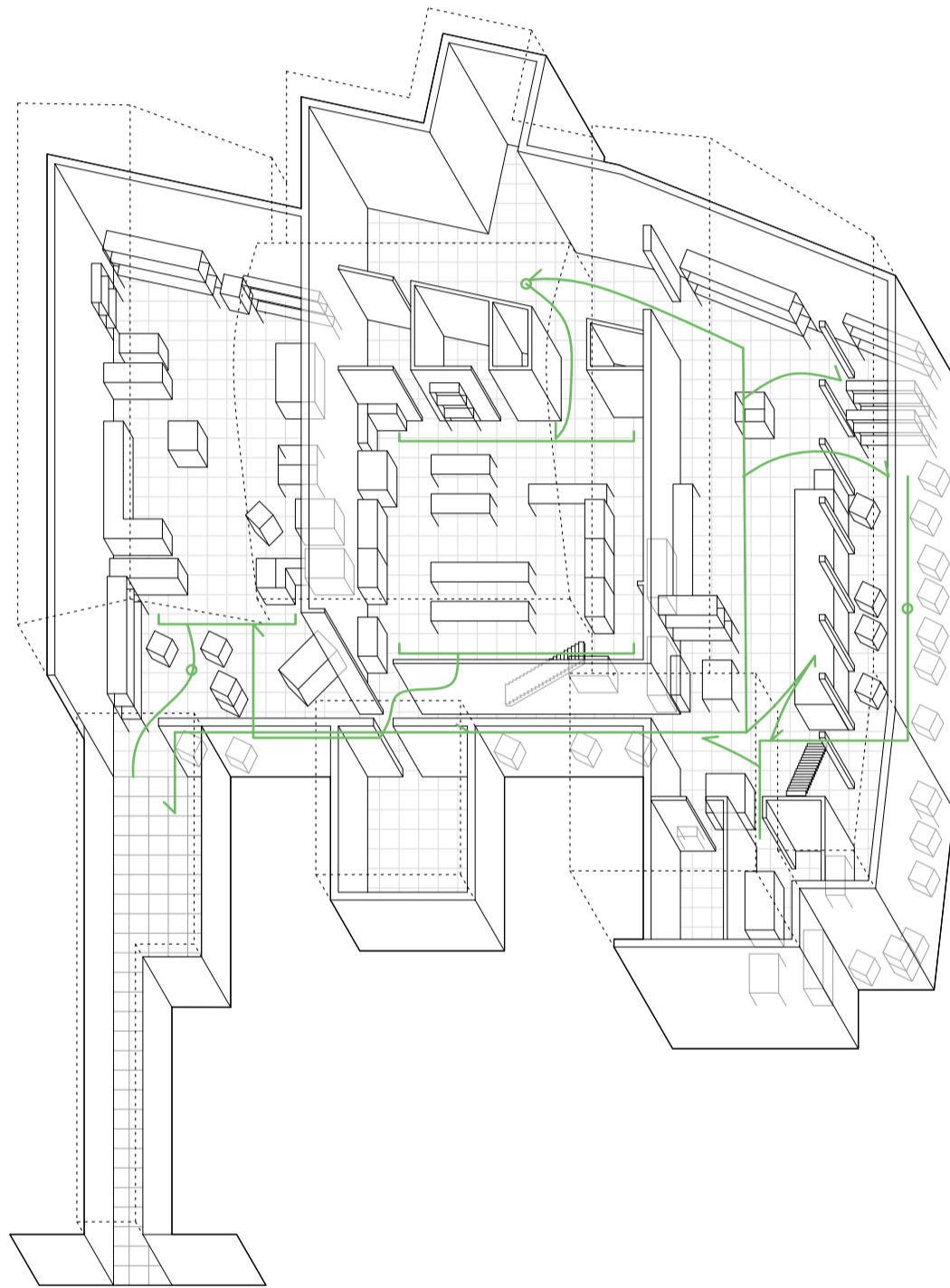
- 1. Storage + pick up area
- 2. Laser print
- 3. Prepress output
- 4. Inkjet print
- 5. Office
- 6. WC + Changing area
- 7. Offset press area
- 8. Ink storage
- 9. Paper stok
- 10. Digital printing

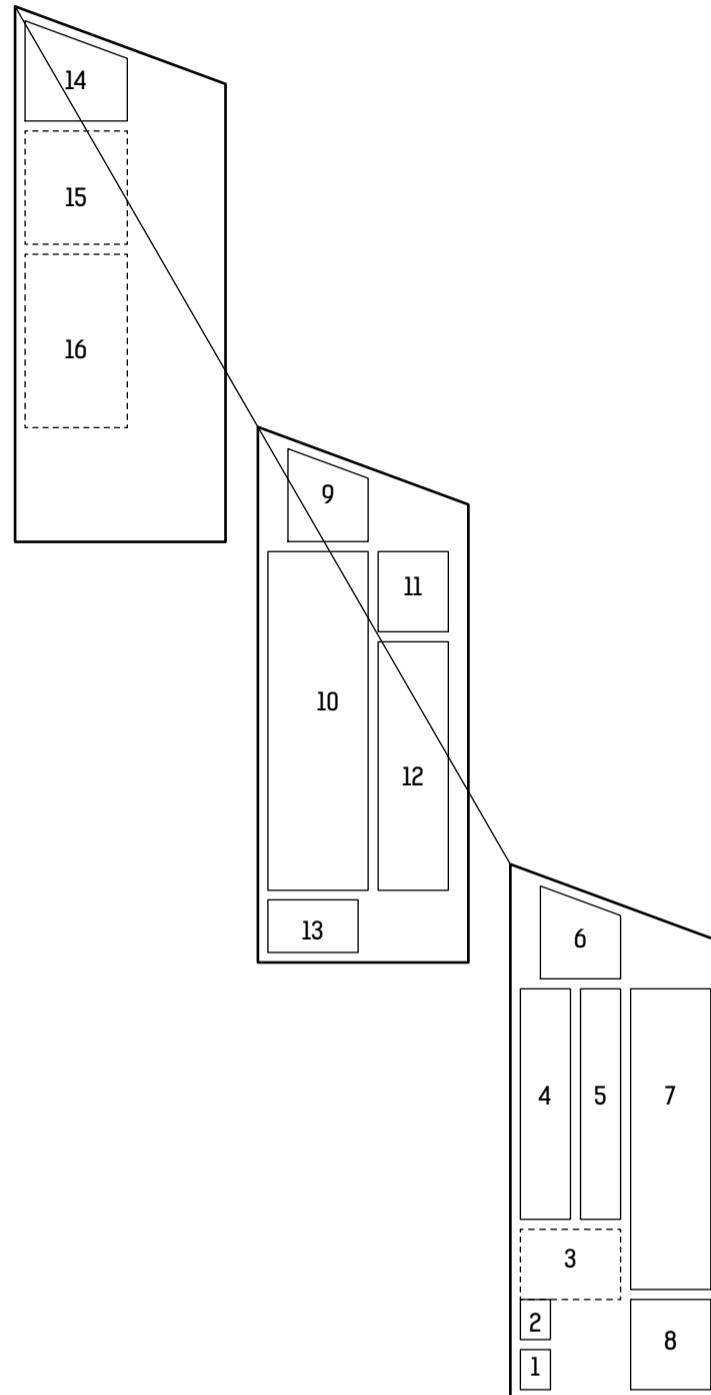
GILLIS

Gillis is a printing company specialised in high quality products for other companies. Technological innovation and transformation of working conditions is a constant process for this family business. The CEO, Dirk Gillis, has been living in the same building as the workshop for decades and has seen the transformation of the neighborhood.

In the 1960s, authorities publicly expressed interest in acquisition of buildings to realise urban development plans along Chaussee de Mons. This threat has had a very negative effect on the neighborhood. Housing and business owners have not invested in the quality of their land, which has led to years of deterioration and blight. The number of vacant spaces increased while informal activities and criminality developed. It resulted in an unsettling socio-economic conditions that were not very profitable for an industrial activity such as Gillis. Today, crime has reduced and conditions have improved.

At the same time, Gillis has felt the impact of gentrification in surrounding neighbourhoods such as the movement of poor populations to Cureghem from Saint-Gilles (the adjoining neighbourhood) or the center. This kind of process does not help the company to find clients. Gillis is not thinking to move, because it's difficult to find adapted and big spaces suited to their work. The fact that the CEO lives onsite also represents a motivation to stay.





FIRST FLOOR:

- 1. Office
- 2. Bar
- 3. Client area
- 4. Bottling process
- 5. Maturarion bottle storage
- 6. First phase production - massing room
- 7. Storage + barrel cleaning
- 8. Raw material reception area

SECOND FLOOR:

- 9. Second phase production - hop addiotion + boiling
- 10. Beer fermentation area
- 11. Museum stock
- 12. Barrel filling area
- 13. Event area

THIRD FLOOR

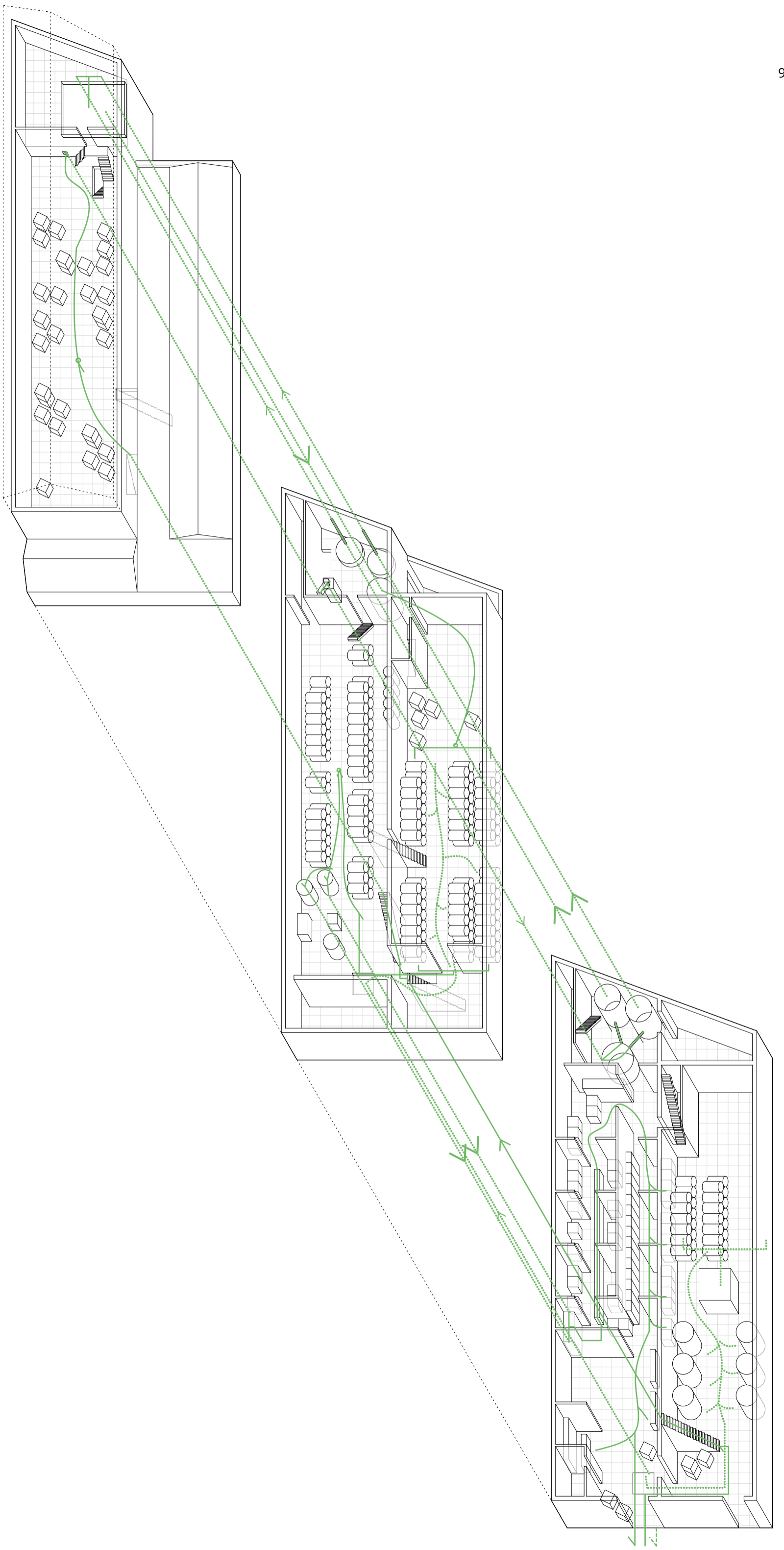
- 14.Third phase production- beer fertilization
- 15. Museum
- 16. Cereal storage

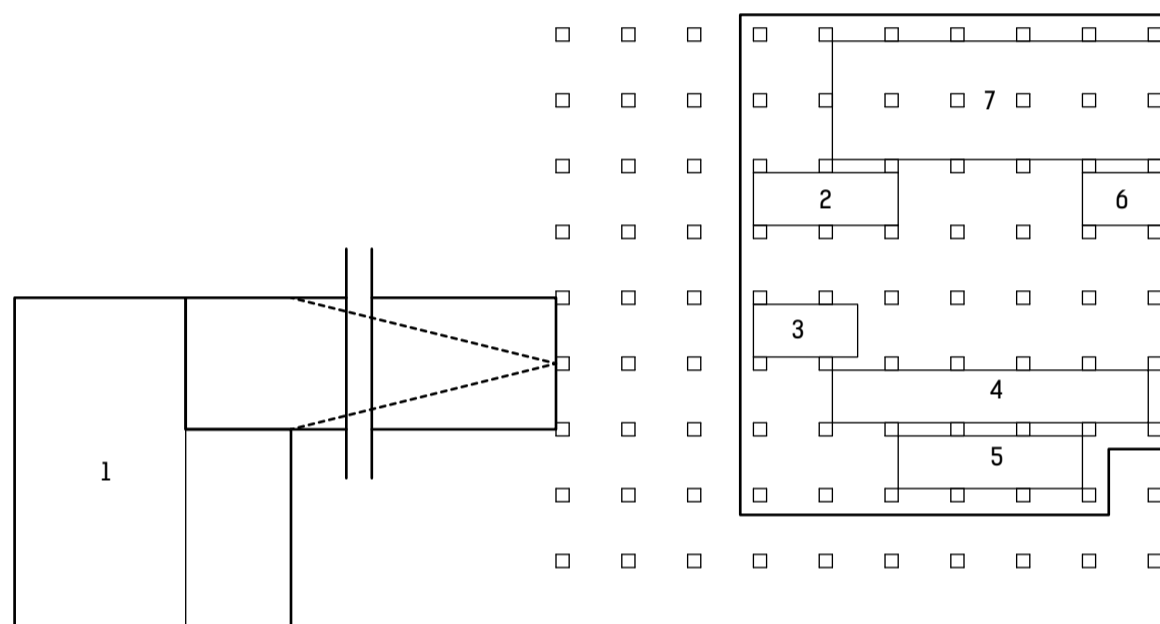
CANTILLON

Brasserie Cantillon is a family brewery specialized in traditional beer. It has been located in Cureghem for decades, with a site that has been renovated several times and production infrastructure that has literally become a part of the building.

Brasserie Cantillon is a good example of cultural resilience of a manufacturing activity. In the 60's, the company was facing less and less demand for their products, with competition from big industrial groups. Supported by local events, journalists and politicians, Brasserie Cantillon started in the end of the 70's to integrate paid tours of the brewery as a part of their business-model. At the same time, they were burdened with debt . In the 80's, visibility, profitability and productivity slowly increased, in addition to the number of visitors. Tours have attracted local and international interest. Finally their situation significantly improved during the 90's which covered their debts and made it possible to increase production.

The company is today in a very comfortable position. The demand for their traditional products is so high that Brasserie Cantillon can impose its own trade conditions. They also intend to develop their cultural dimension, with the creation of the Musée de la Geuze, dedicated to traditional beer manufacturing and its history.





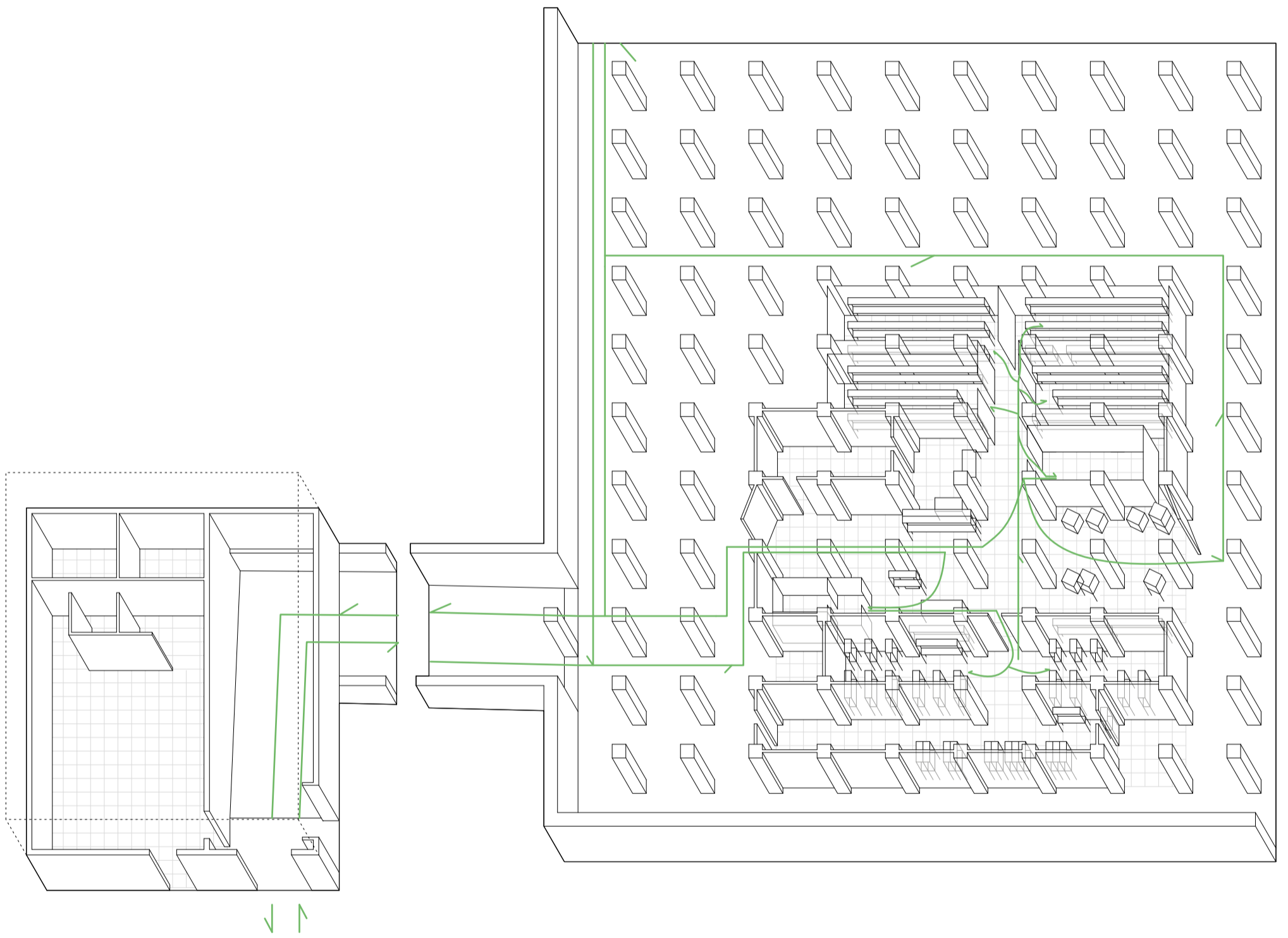
- 1. Shared office
- 2. Office + worker area
- 3. Pasturized
- 4. Maturing room
- 5. Micro Sprouts
- 6. Cold room
- 7. Fructification room

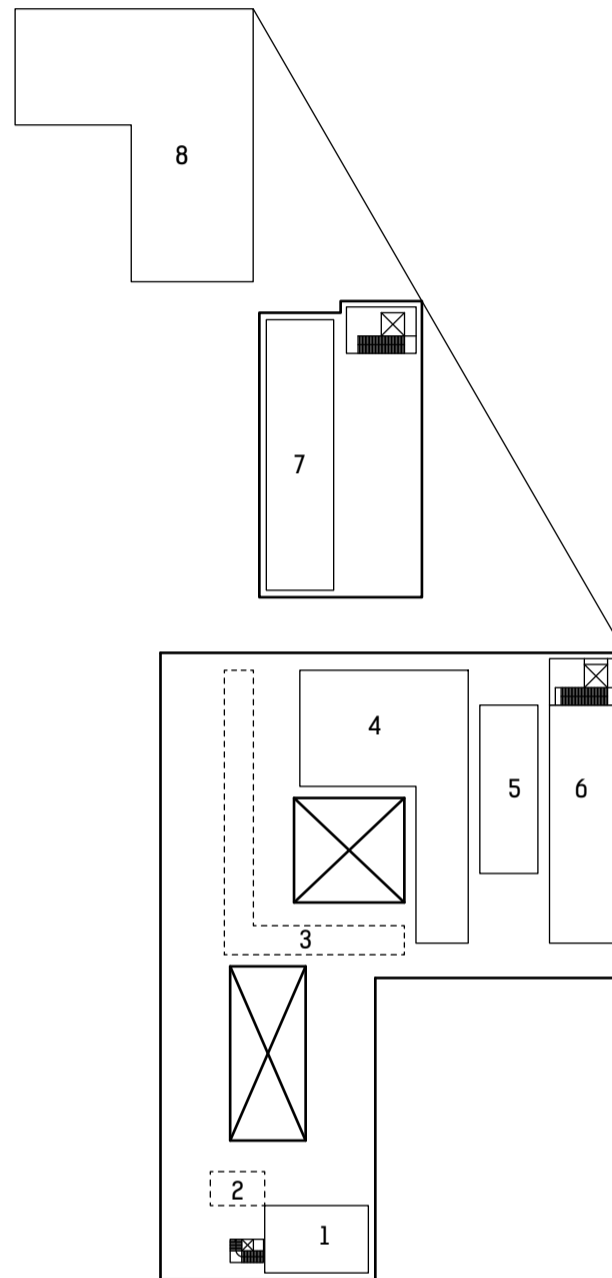
CHAMPIGNONS DE BRUXELLES

Le Champignon de Bruxelles is a small start-up growing mushrooms and microgreens. Their workshop is located in the 'caves de Cureghem', the basement of the abattoir. While Abattoir S.A., the manager of the site, had difficulties to find users for the basement, it has proven a success for Champignon. Indeed, the environmental conditions in terms of temperature and moisture turned out to be well suited for mushrooms and microgreens. Furthermore, le Champignon de Bruxelles implements circular practices, such as using auto-produced substrate and organic waste from breweries such as Cantillon. Organic waste from the start-up is also sent to farms at the periphery of Brussels.

In terms of their integration in the neighborhood, the company maintains good relations with other businesses (BIGH, Cantillon) and cultural associations (Cultureghem). However due to differences of cultural capital, prices and type of products, it has not found a successful market within the neighbourhood.

In addition, le Champignon de Bruxelles has felt a bit limited in the Brussels' organic market to find a stability and a profitability. Therefore, they stressed contracts with organic wholesalers in Wallonia and Flanders to spread their products and grow as a company. Le Champignon de Bruxelles is also trying to establish agreements with big retail groups. According to the CEO of the company, Hadrien Velge, the problem is that the prices are a bit higher than in supermarkets. Increasing capacity to raise output could help them to decrease the prices and to distribute their product on a broader scale.





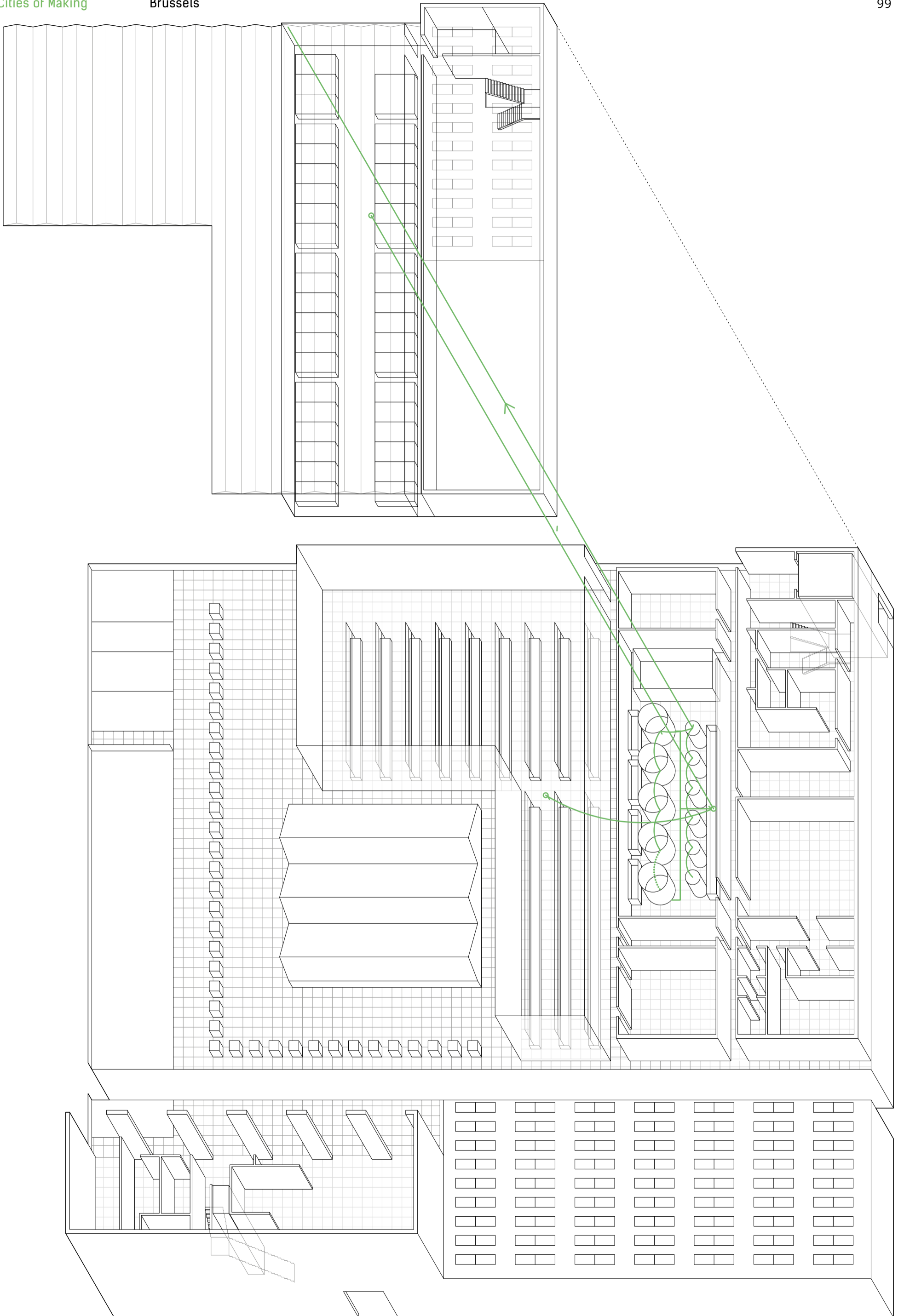
- 1. Auditorium
- 2. Delivery pick-up
- 3. Herbs
- 4. Green house (tomatos)
- 5. Fish tanks
- 6. Office + teaching
- 7. Green house (aromatic herbes)
- 8. Solar paneles

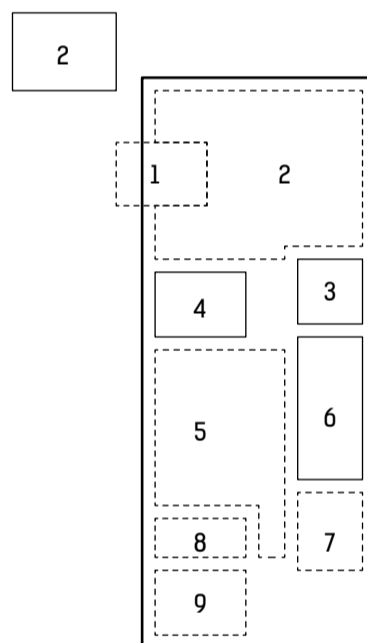
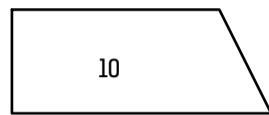
BIGH

Building Integrated GreenHouses (BIGH) is an urban agriculture start-up, launched in 2018, focusing on aquaponic cultivation of vegetables, herbs and fish. It is located on the rooftop of the Foodmet, on the Abattoir site. Their infrastructure has been designed according to circular principles (solar panels, harvesting systems of water and heat, bio-management of parasites, etc.). This type of architecture does not abide by urbanism norms, but regional support has helped them to find workable loopholes.

BIGH has been privately financed by real estate developers and the building sector. It also benefits from some public support including regional programs such as Be.Circular (circular economy) or Good Food (local food production). Private financing and public support have helped BIGH to grow but this reliance is an obstacle towards long-term autonomy.

The company leans on a valuable network of professionals. Their seed supplier is specialized in old varieties of vegetables that can not be found in mainstream retail. Carrefour Produit Locaux has a contract with BIGH to sell their products in their supermarkets and is considering to install a greenhouse above a supermarket at a commercial center in Auderghem, in the South-West of Brussels. There is also an agreement with Champignon de Bruxelles, a business also located at the Abattoir, to share a part of logistics and marketing work. Finally, numerous businesses and institutions are paying to visit BIGH's facilities and or host events, providing an alternative income stream.





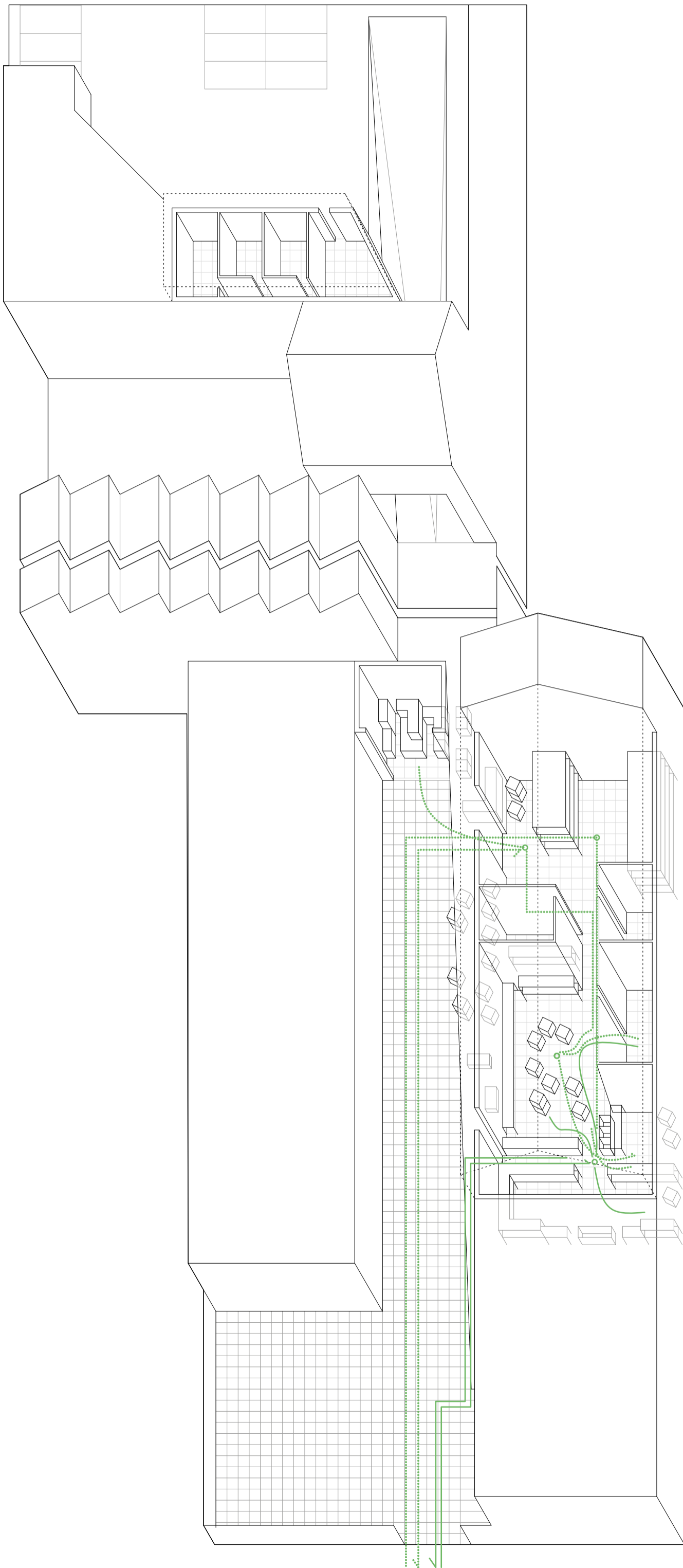
- 1. Pick-up area
- 2. Storage area
- 3. Worker area
- 4. Repair workshop
- 5. Informal storage
- 6. Laboratory
- 7. Dismantling area
- 8. Welcome + selling desk
- 9. Network area
- 10. Office

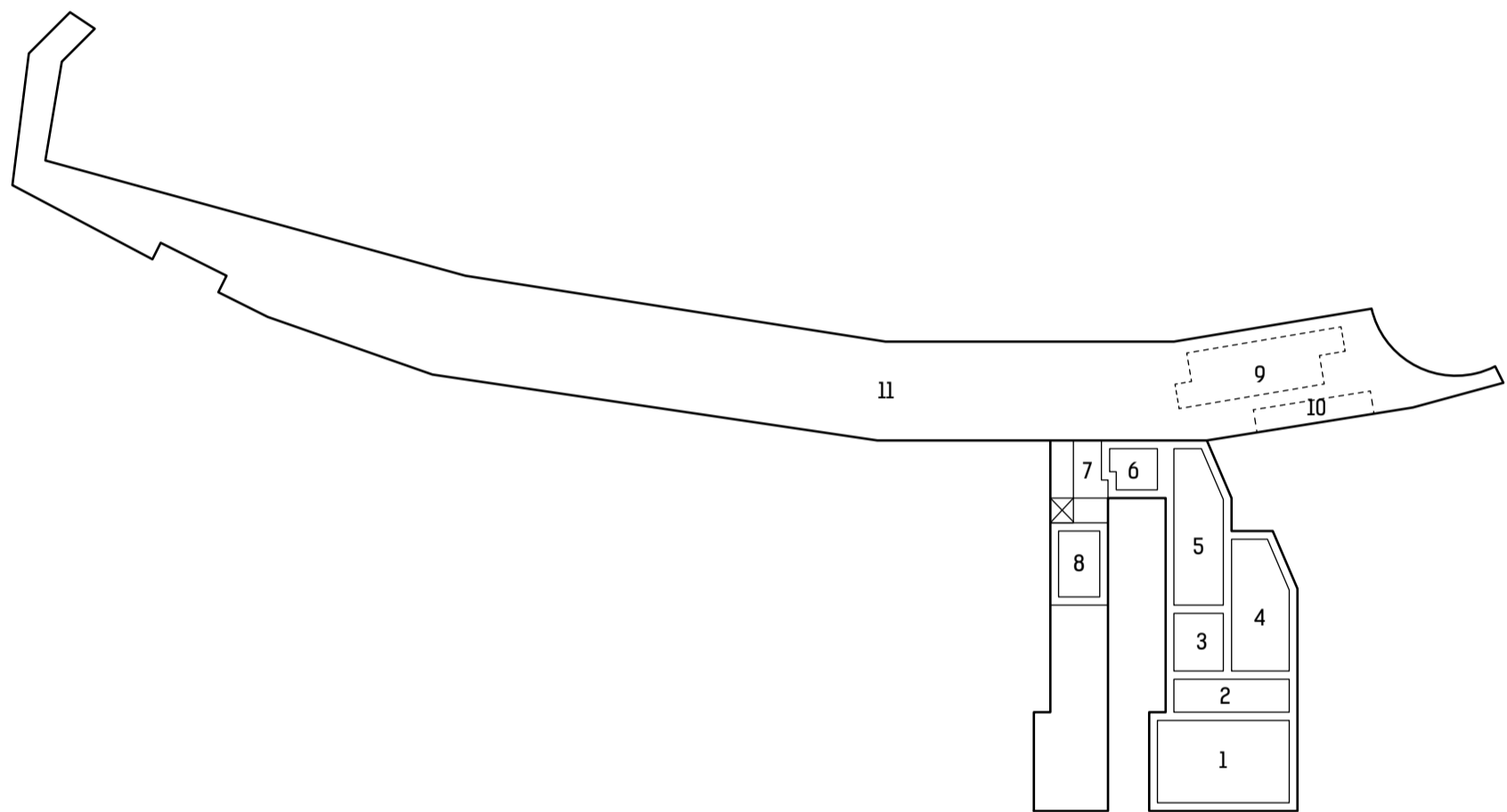
CF2D

CF2D is a social economy company involved in repair and recycling of electronic components. The workshop is located on the Recy-K site managed by the region’s waste management agency (Bruxelles-Propreté), a site that clusters businesses working with waste materials. CF2D has many agreements with private companies and administrations to collect their old technology but it also has a service desk for retail clients.

The core of CF2D involves training low-income people through manual work based on social and environmental motivations. The social economy model, with partially subsidized jobs, allows material with significant environmental value to be recycled, which cannot be done by commercial operators because of a lack of profitability. At the same time, staff accumulate skills and experience, providing pathways to new jobs and can promote circular practices to other domains.

However, jobs created in the company do not involve not long-term contracts, while absenteeism is a problem. In parallel, CF2D has a growing demand for its services and would need far more resources and spaces to address it. The organization is therefore developing projects with other actors to try to resolve these contradictions. They’re also trying to improve productivity, through research partnerships with the ULB, and improve their training program with initiatives such as a shared training platform for local social enterprises.





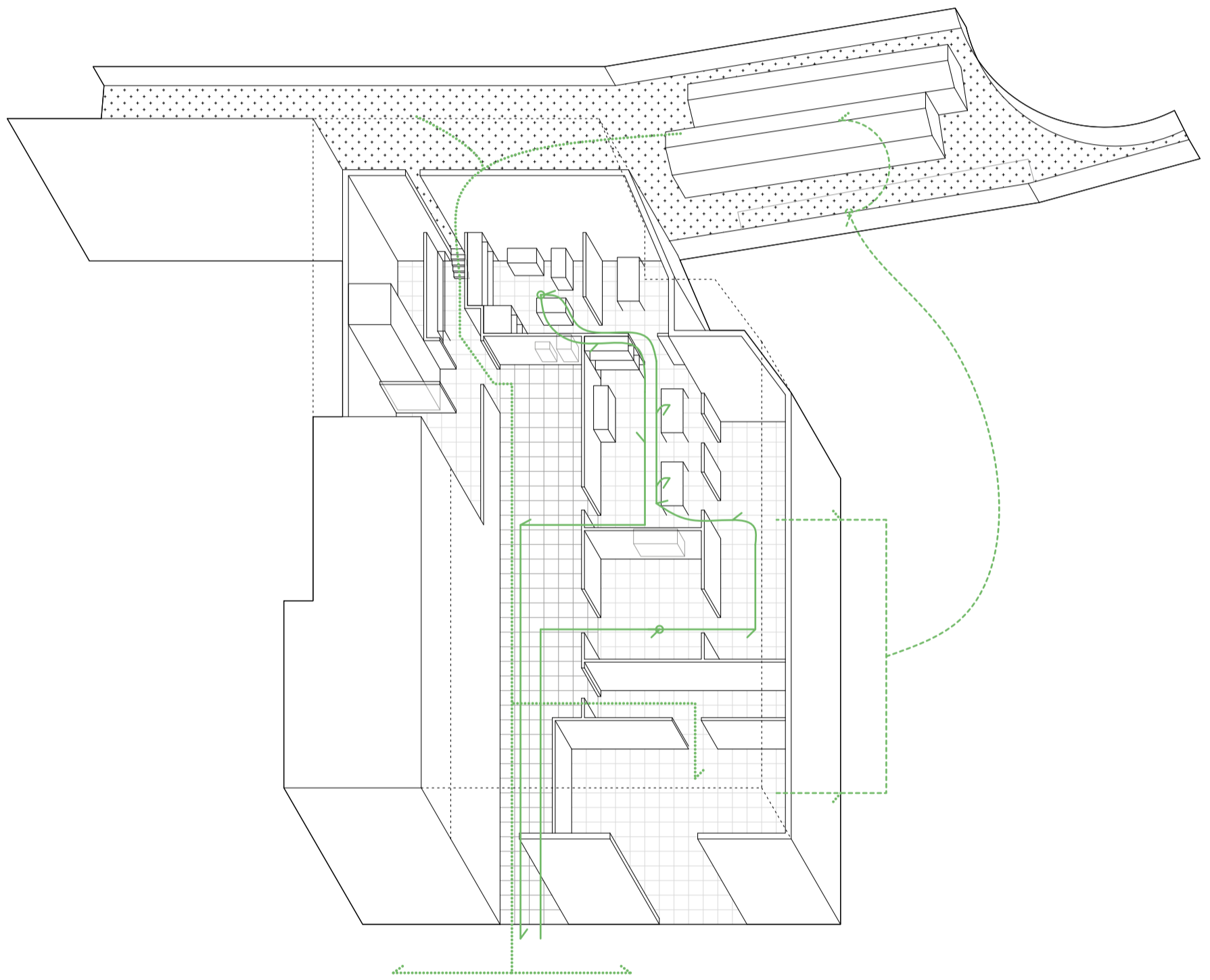
- 1. Belo social restaurant
- 2. Kitchens
- 3. Wood delivery
- 4. Wood workshop + storage
- 5. Wood workshop
- 6. Pallets area
- 7. Garden desk
- 8. Break area
- 9. Green houses
- 10. Compost area
- 11. Vegetables garden

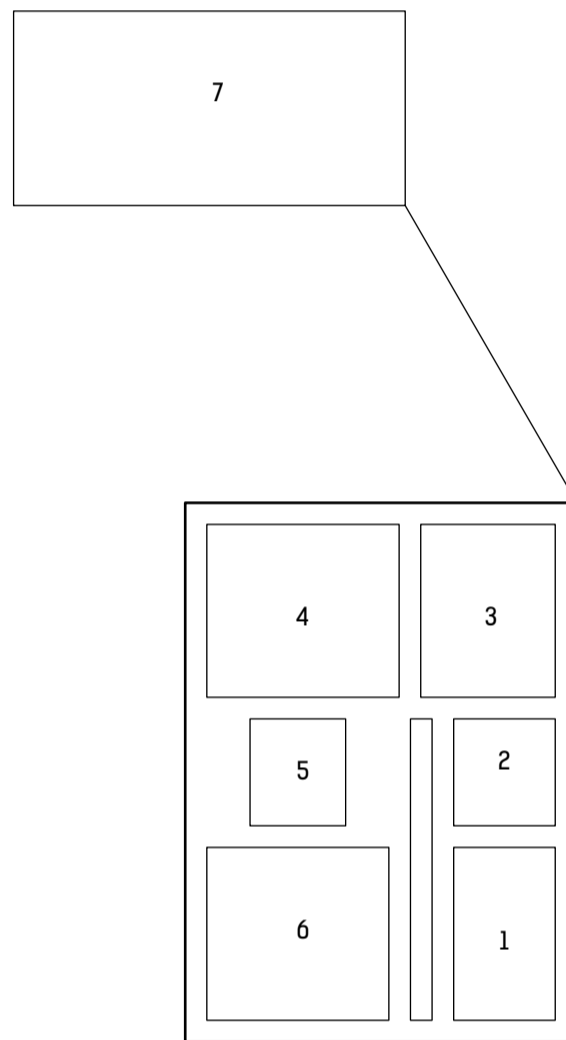
ATELIER GROOTE EILAND

Atelier Groot Eiland is a non-profit organization involved in the social economy sector through urban farming, food transformation and production of wood furniture. The organisation is mainly located in Molenbeek along the canal, but they also share the rooftop of the Foodmet with BIGH, on the Abattoir site. Handicapped and low-income people can follow a training program or find work.

For Atelier Groot Eiland, the key is to integrate several steps of the value chain in a circular and local way. Their urban farming produce is going to a restaurant, a snack bar and an organic supermarket. Waste from the wood workshop and food processing is turned into compost for agriculture, closing the loop. Moreover, Atelier Groot Eiland has adopted practices for short value chains. They try to find clients that are only a few kilometers away in order to limit transport and its environmental impacts. In addition they try to use cargo bikes as much as possible.

The success of this type of circular production doesn't only depend on the willingness of one organization but also of societal and cultural changes. For instance, Atelier Groot Eiland has tried to collect the organic waste from horeca (hotels, restaurants and cafes) in order to buy less compost. However, it did not work because clients could not sort waste or did it in a wrong way.



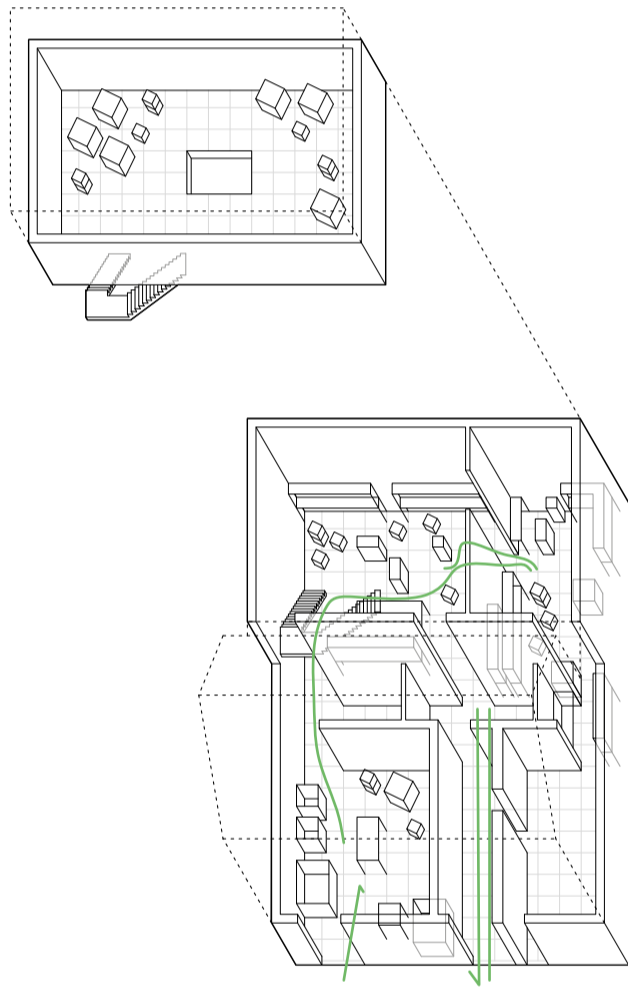


VOETS

Voets is a small metal fabrication company for the building and design sectors located in Cureghem. It is a family business that is used to work with several specialized partners. For years, Voets has tried to adapt to the transformation of the neighborhood. First, mobility changed, expanding pedestrian and bicycle space while reducing truck accessibility. This problem has forced Voets to stop parts of its manufacturing activity and to decrease the number of its workers. Second, the development of housing has also put its operations under pressure. Some inhabitants complain about nuisances and public authorities feel forced to intervene, for instance forcing the company to change its production space. Third, Voets must regularly renew its permits. Yet the permits require increasing effort (administrative work, controls, transformation of its processes, etc.) to be accepted, which is taking a lot of time and work.

The director of Voets, Christophe Voets, hopes to be able to maintain his business, but his company is in a difficult situation. The authorization for a new permit and other urbanism norms will define what kind of work he can perform and if he will be able to hire new people, especially since moving to another place would be too big of an investment and finding buyers would not be easy

- 1. Office
- 2. Drilling
- 3. Assembling - grinderling
- 4. Finishin - polishing
- 5. Storage
- 6. Electrolysis bath
- 7. Storage



Buda





BUDA

Buda represents a typical, almost mono functional industrial zone within the Brussels metropolitan area. Its spatial and socio-economic composition is typical of industrial areas that cluster manufacturing activities. For over a century, this site has been the preferred location for polluting or less urban activities. Connected to the airport, the canal and the highway, the area plays a key role also on the national and international scale, with companies often working with import-export within local and global networks.

BUDA is one of the largest industrial areas of the 161km² of the Brussels Capital Region, spreading into the neighbouring region of Flanders and located in four municipalities. The loosely defined cross-regional area with some 300-400 business, belongs mainly to the Flemish municipality of Vilvoorde, Zaventem and Machelen with around 1/3 of the area located in Brussels. Being a border-area, located between two regions that collaborate rarely at a planning level, Buda has been largely overlooked and received under-investment. Multi-level governance therefore presents a serious challenge in terms of aligning interest from across the political spectrum.

Today, Buda is confronted with several challenges. Many manufacturing activities have left the area, leaving behind dilapidated industrial buildings, empty offices and vacant and polluted areas. Additionally, a considerable number of potentially useful spaces for manufacturing are used for (temporary) storage and Buda has also attracted 'informal' activities, some with questionable environmental practices. Despite its strategic location, the site has struggled to shed its messy old industrial heritage character, which makes it difficult to attract a new generation of entrepreneurs. Finally, land values are not high enough to attract multi-storey development which means that there is a lack of intensity of activity considering the site's location.

The area is in need of a vision that takes advantage of its strategic potential and overcomes political differences. It has the capacity of becoming a strategic location for new types of manufacturing activities and which could focus around resource management and circular economy activities to embrace initiatives within both regions (the Regional Circular Economy Plan in Brussels and Flanders Circular). Acknowledging this potential, ten institutions from Flanders and Brussels are now collaborating on the development of Buda's future through a range of initiatives under a framework called BUDA+.

BUDA+ is one of the focus areas within the context of the T.OP Noordrand program - a joint initiative of the Flemish department of spatial planning (Departement Omgeving), the Brussels territorial planning agency (Perspective.Brussels), the province of Vlaams Brabant and the Flemish public waste management agency (OVAM), the four municipalities and the two regional chambers of commerce (BECl and VOKA). The process has included collaboration with universities and businesses, workshops, lectures and explorative research-by-design projects to develop a shared vision for the dynamic and complex territory of the northern fringe of Brussels.

The Province of Flemish-Brabant is coordinating a study on the optimisation of the industrial area, defining the spatial framework for different redevelopment opportunities. OVAM and Université Libre de Bruxelles have collaborated to map the flows of materials between different companies in the area. Citydev is working on a database of vacant workspaces, offices and commercial spaces in the Brussels territory, while POM Vlaams-Brabant (a public planning agency) is exploring how different flows of goods can be bundled between different companies. The Flemish department of spatial planning (Departement Omgeving) has been working on the mapping existing economic activities, not only in the Buda area but in the Brussels region at large, categorising them systematically based on a visual analysis on the terrain, constructing a precious dataset.

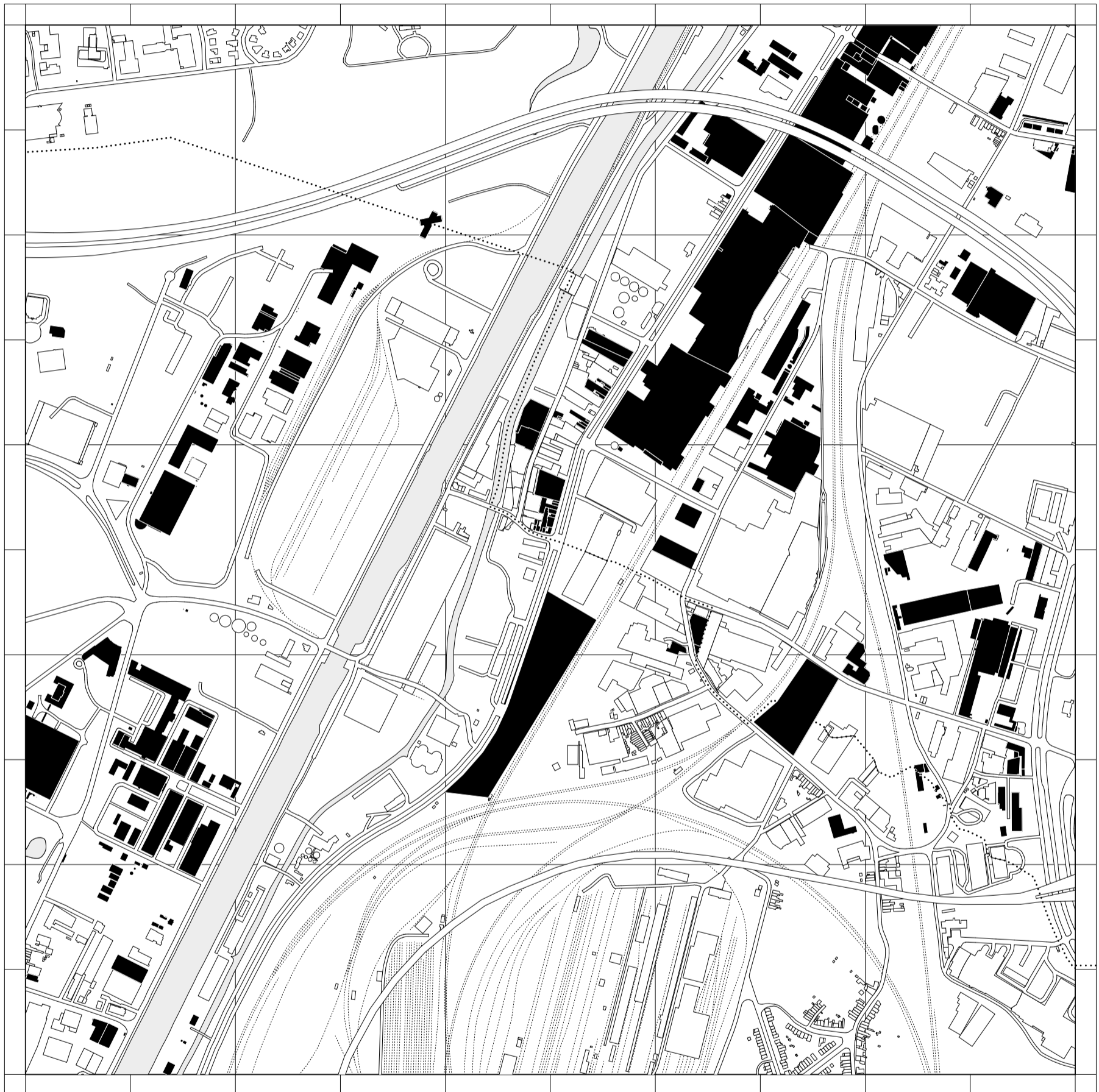




0 0.2 km

BUDA

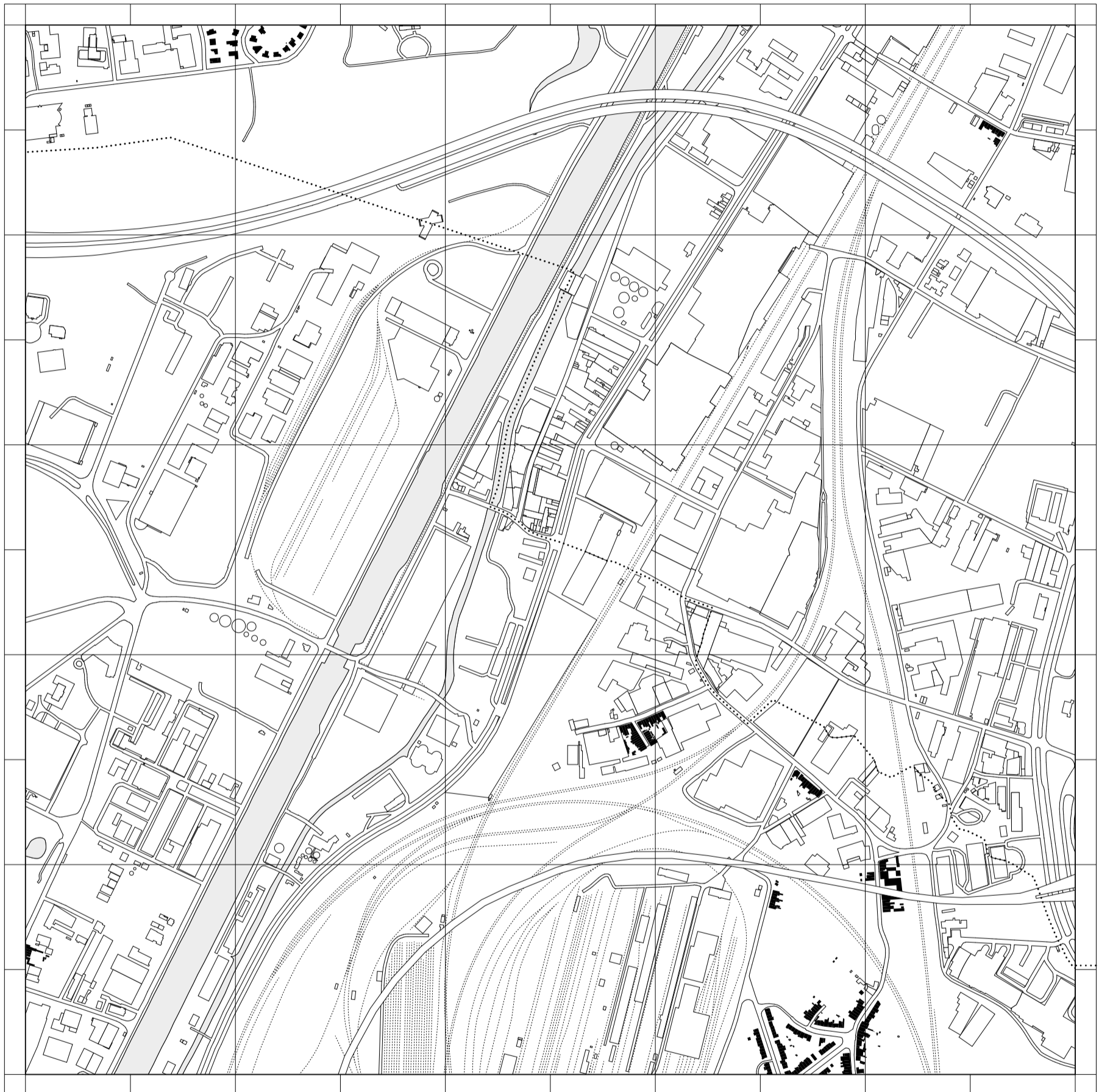
The delayering of the analysed area of 1x1 km shows the presence of a thick grain made of large buildings and wide-open spaces. Being mostly a productive zone, it is dominated by manufacturing, services and retail, while the presence of housing is very limited. Even if the area is highly accessible by car, public transport is quite scarce.



0 0.2 km

Category	Surface [m ²]	Percentage [%]
Manufacture	300,000	38%
Housing	18,000	2%
Retail	166,000	21%
Services	290,000	36%
Transit	24,000	3%
Total	798,000	100%

USES - MANUFACTURE

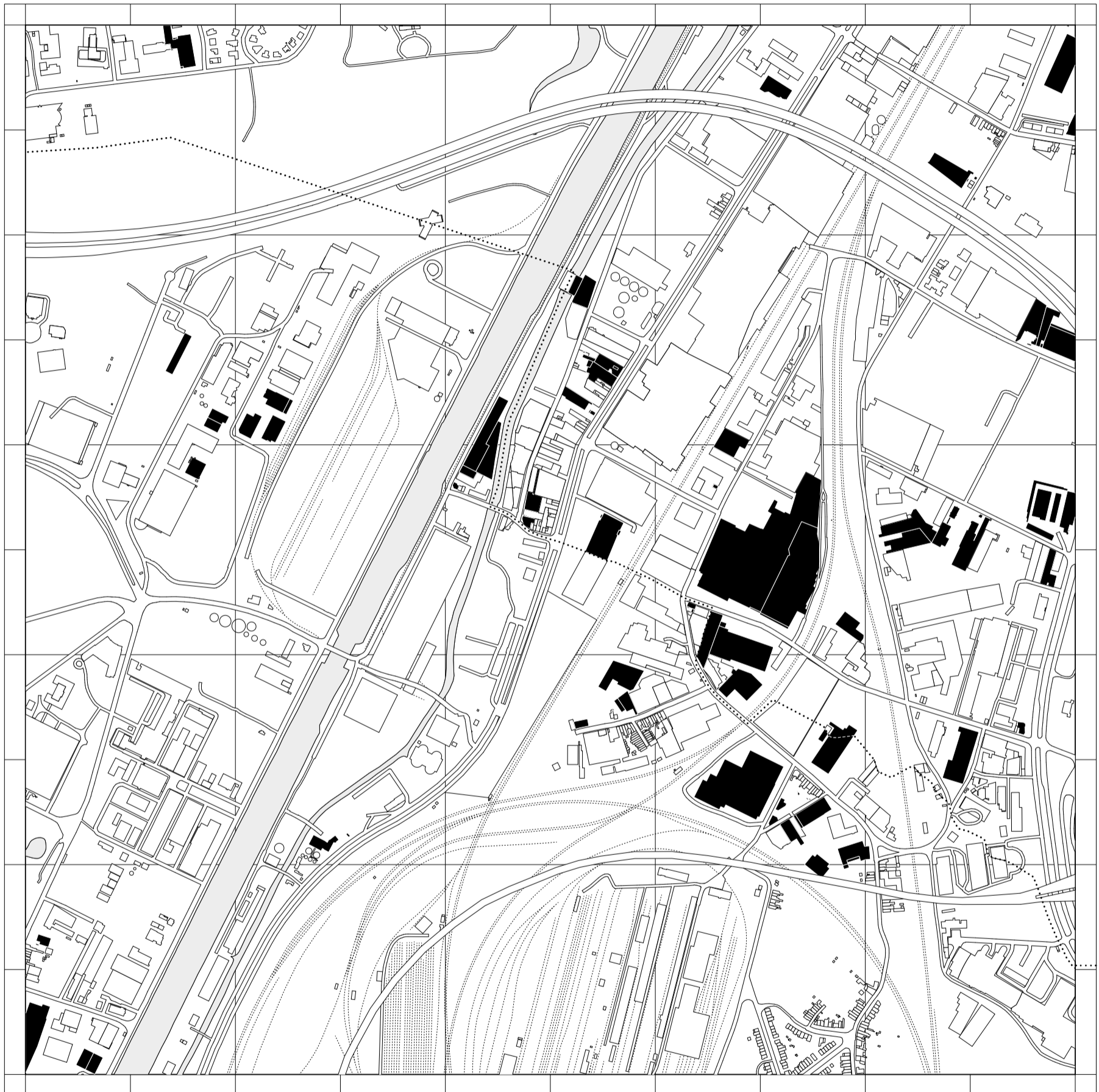


Flanders
Brussels

0 0.4 km

Category	Surface [m ²]	Percentage [%]
Manufacture	300,000	38%
Housing	18,000	2%
Retail	166,000	21%
Services	290,000	36%
Transit	24,000	3%
Total	798,000	100%

USES - HOUSING



Flanders
Brussels

0 0.2 km

Category	Surface [m ²]	Percentage [%]
Manufacture	300,000	38%
Housing	18,000	2%
Retail	166,000	21%
Services	290,000	36%
Transit	24,000	3%
Total	798,000	100%

USES - RETAIL



0 0.4 km

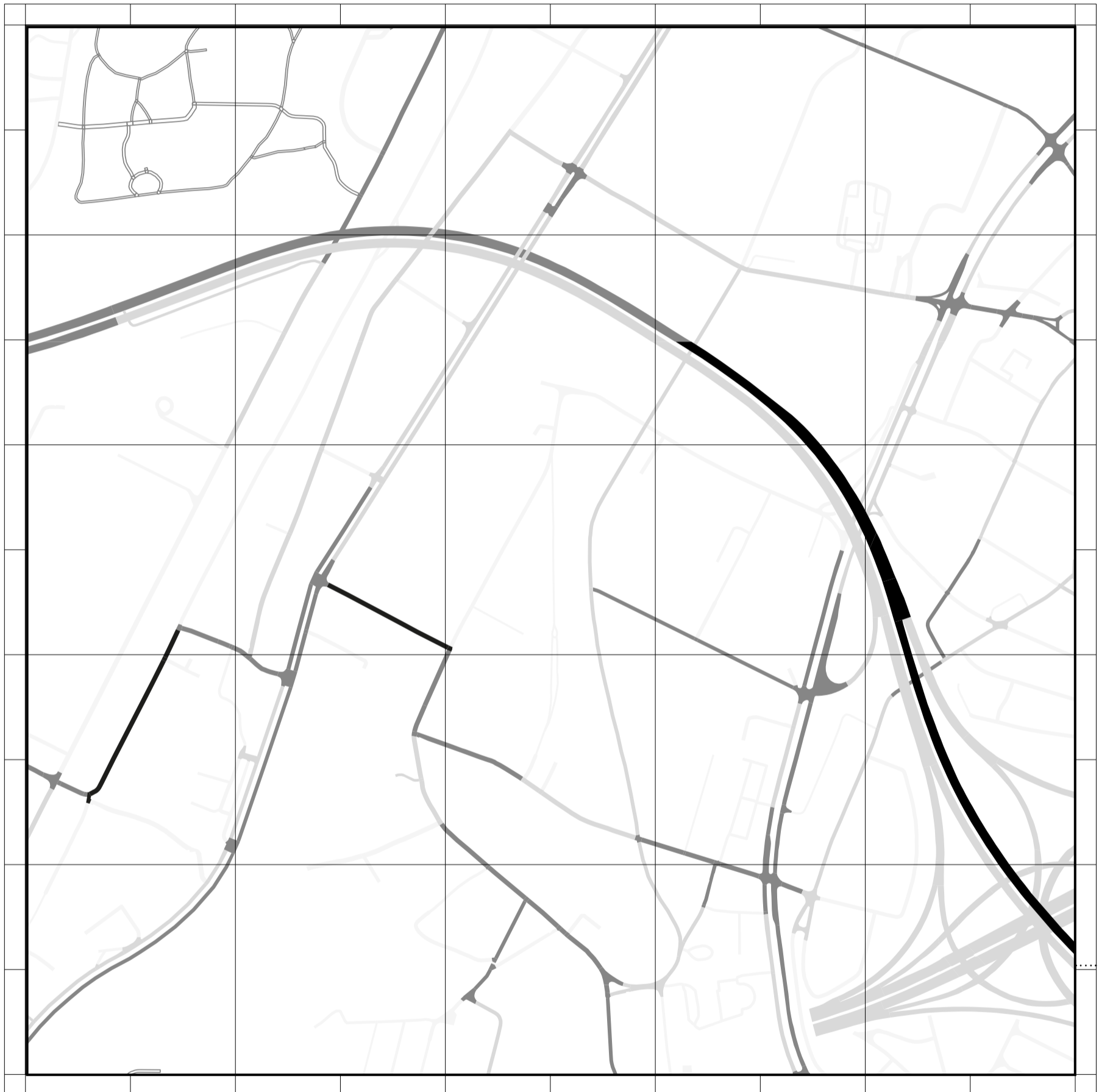
Category	Surface [m ²]	Percentage [%]
Manufacture	300,000	38%
Housing	18,000	2%
Retail	166,000	21%
Services	290,000	36%
Transit	24,000	3%
Total	798,000	100%

USES - SERVICES



Flanders
Brussels

0 0.2 km



Flanders
Brussels

0 0.4 km

- Very High
- High
- Medium
- Low

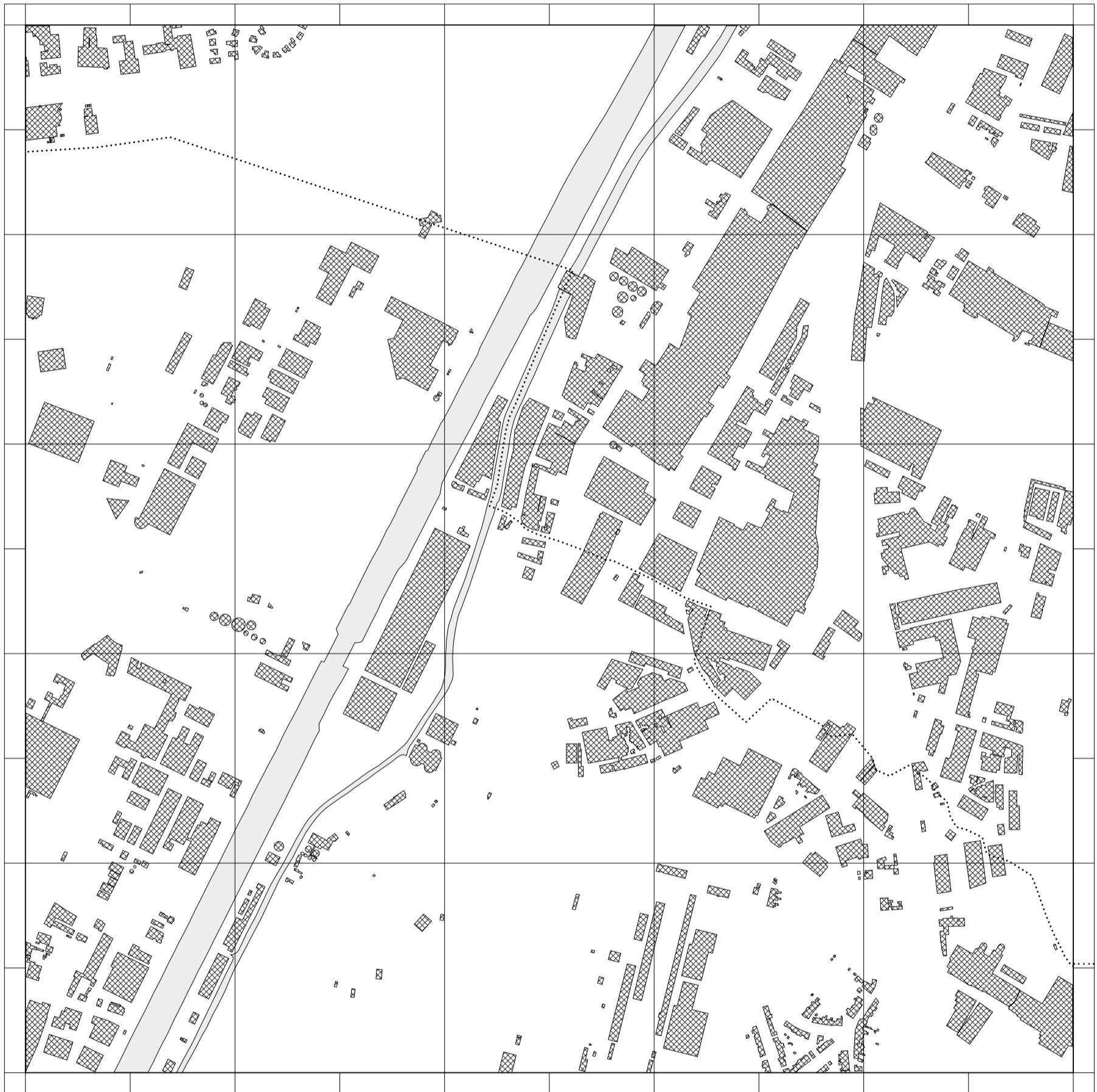
MOBILITY - TRAFFIC CONGESTION



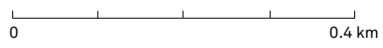




BUILT - UNBUILT SPACE

The map shows the potentially accessible space as opposed to the non-accessible one. This theme is particularly relevant for the border area due to its fragmented nature, caused by a series of very different uses and physical patchwork, which result in spatial discontinuity, lack of clarity and grey zones.



Flanders
Brussels

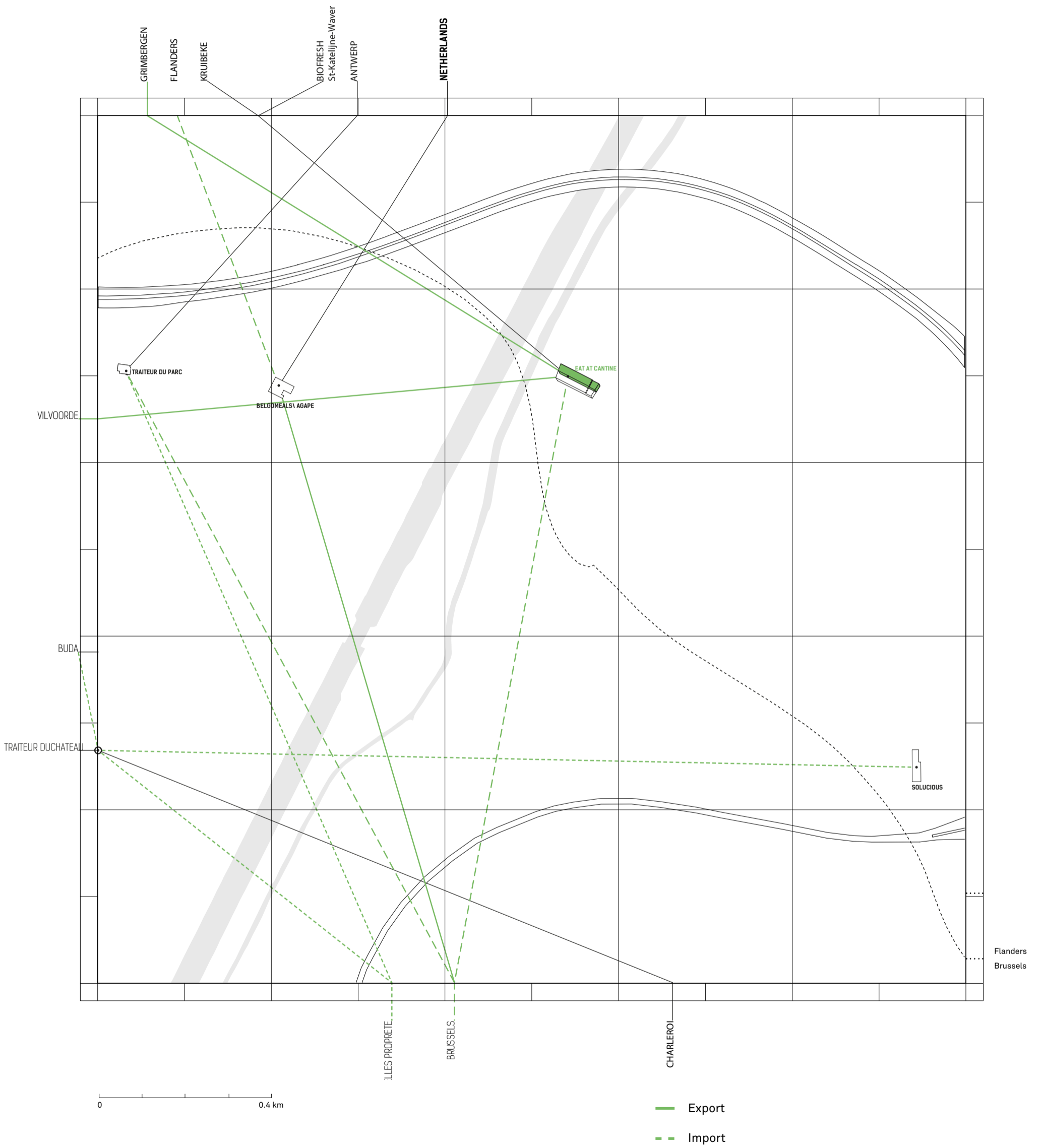


Category	Surface [m ²]	Percentage [%]
 Filled Space	798,000	20%
 Void	3,202,000	80%
Total	4,000,000	100%

The following series of interpretative maps aim at analysing some of the most pressing issues that affect the area. The border zone between Droegnbos and Stalle is in fact characterised by spatial fragmentation, complex accessibility and informal use of cross spaces. Moreover, it is formed by a patchwork of productive yards that question the overall socio-spatial vision of the area.

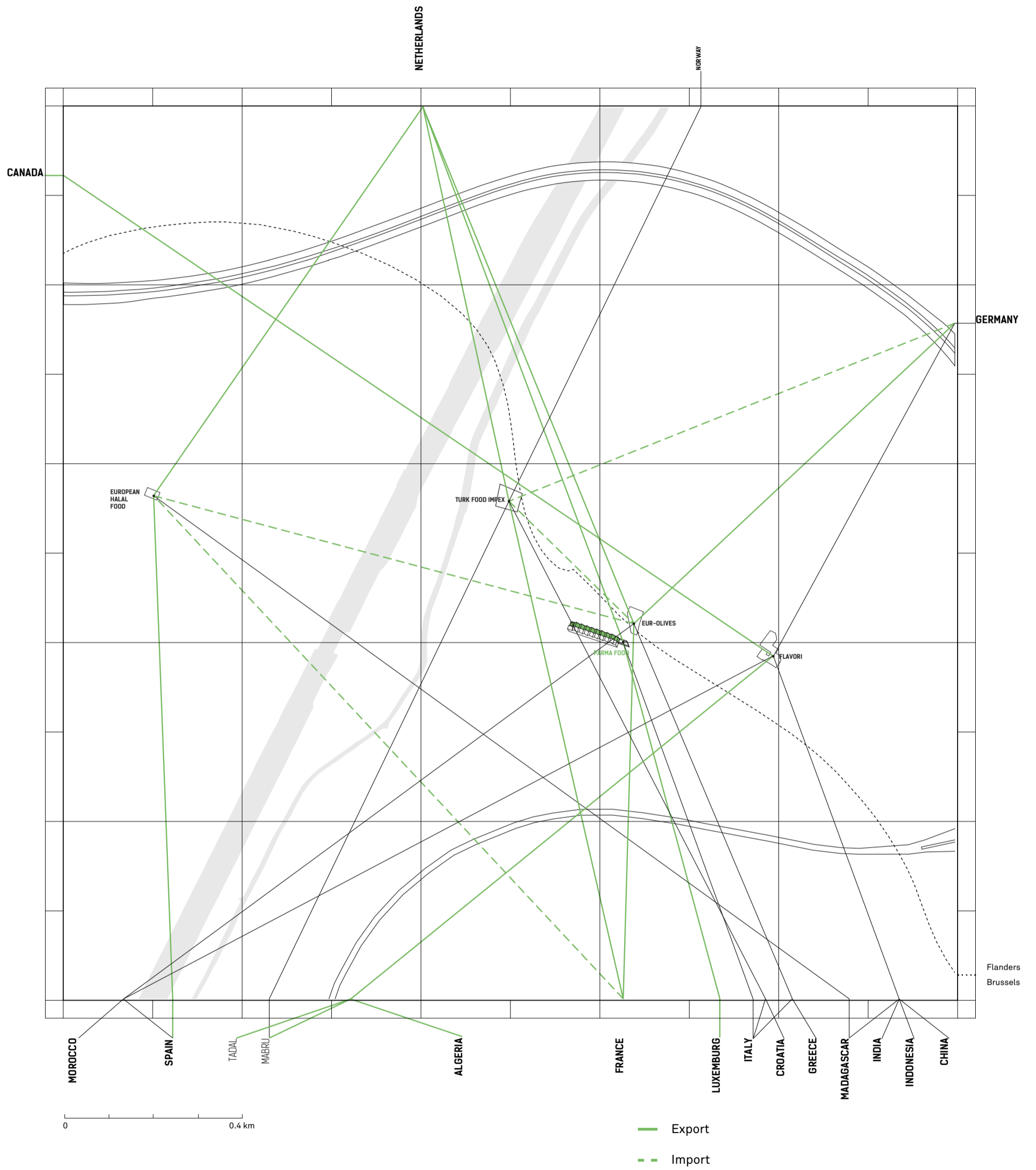
MULTI-SCALAR CENTRALITY AND DISTRIBUTION NODE – CATERING

The catering companies located in Buda work both locally and on a wider scale. They engage with local producers, although suppliers are mainly located in Flanders and catering services are mostly oriented both to Flanders and the Brussels Capital Region. While Eat at Cantine plays a peculiar role, serving as a social space for the area, the other catering companies tend to work independently. Thus, the geographical proximity does not indicate the existence of a cluster: cheap ground and the proximity to the ring-road have been the main reasons for locating in the area. The fast connection to Brussels centre, where most clients are located, the easy access by truck for goods and meals delivery by van are key for the sector. Traiteur du Parc and Belgomeals/Agape Scholengroep do not interact with customers on site whereas Traiteur Duchateau and Eat at Cantine offer daily meals on top of their catering business. Catering companies do not share facilities nor customers and therefore do not profit from their proximity, with the exception of Traiteur du Parc, Traiteur Duchateau and B/AS which refer clients if the demand is too high.



MULTI-SCALAR CENTRALITY AND DISTRIBUTION NODE - WHOLESALE

The majority of wholesale products arriving in Buda's companies are imported through harbours from other European countries and are brought in container by truck, while Mabru - Brussels morning market - plays also a relevant role as secondary supplier. After processing their products, each company transports them individually to the customers, small wholesalers mostly located in Brussels, Gent, and Antwerp, as well as to other parts of Belgium and abroad. Local business relations do exist: Flavori provides companies in Buda with herbs and spices and collaborates with Demo for waste collection, Eur-olives delivers olives to European Halal Food and Turk Food, EHF supplies halal sausages to Turk Food. Moreover, the companies do make use of the services on the site for the maintenance of their delivery trucks, machines and even buildings. The sector could be clearly reinforced in the area, forming a general federation, exploiting the potential offered by the canal for goods transport and rethinking the companies production chain which can be vertically organized.



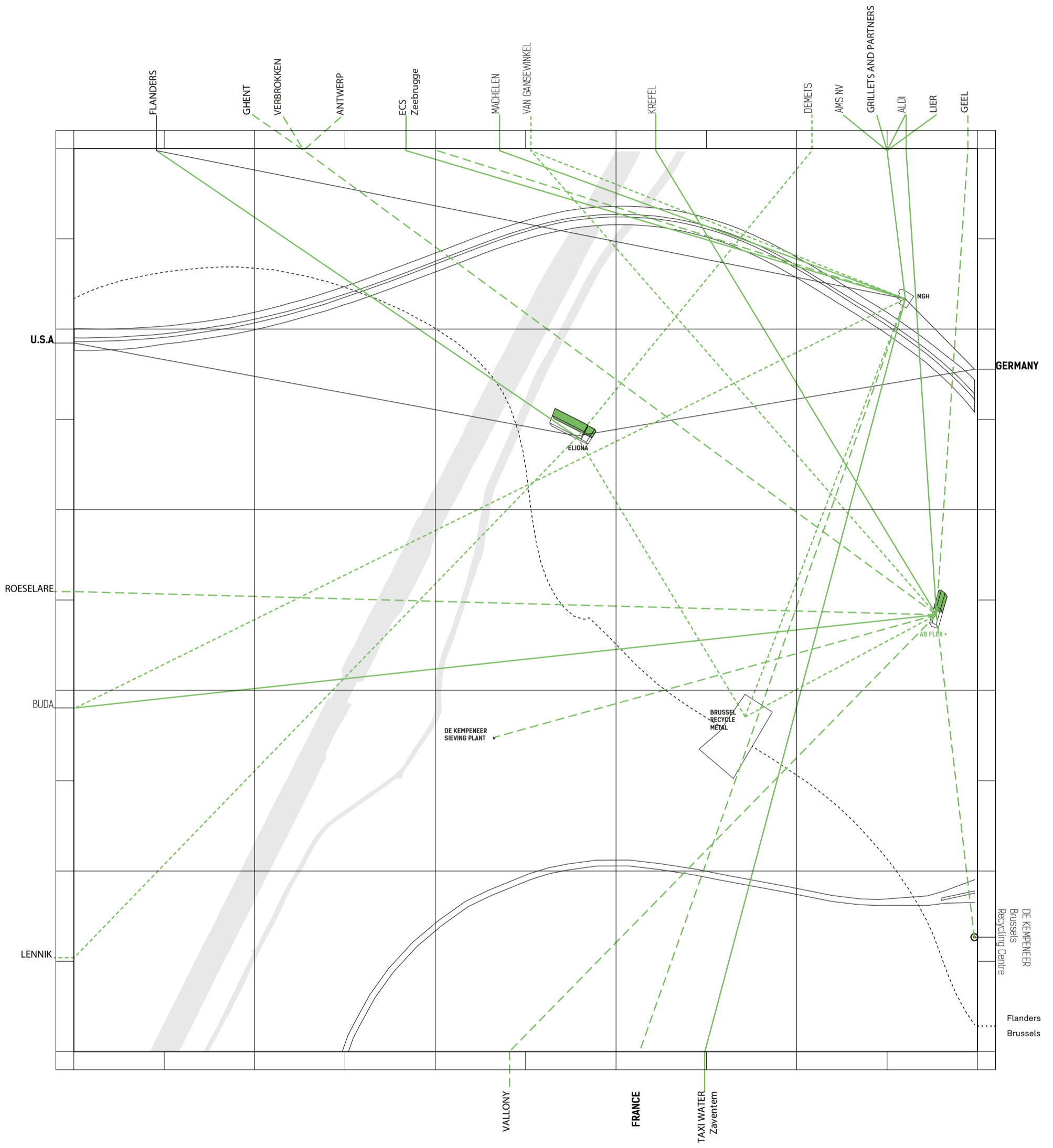
MULTI-SCALAR CENTRALITY AND DISTRIBUTION NODE – SERVICES

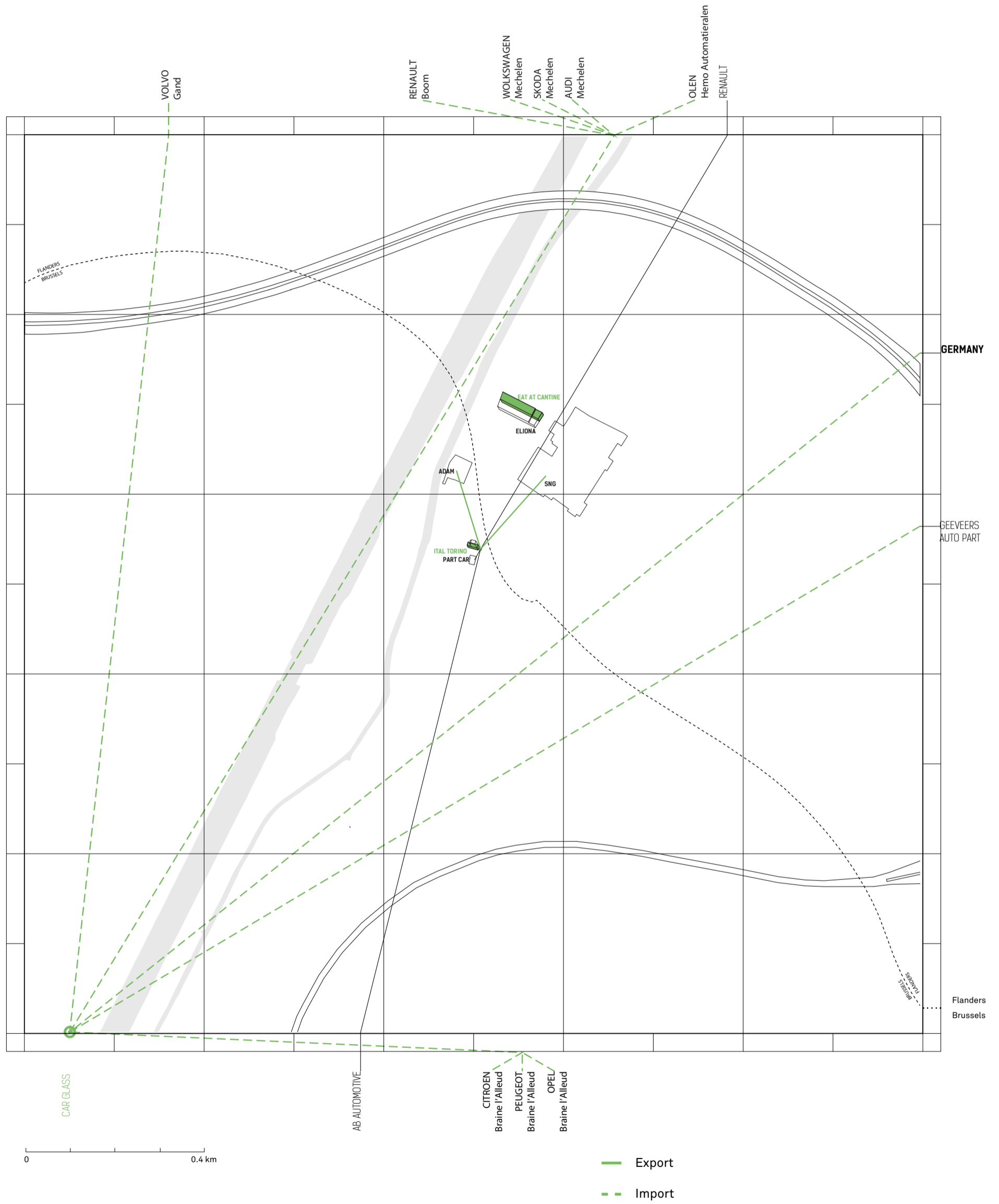
These firms are important for the infrastructure and livability of Buda, because of their contribution to the production chain of other companies located in Buda and beyond. Moreover, the provided services are so specific that would be too expensive if a company implement them by itself.

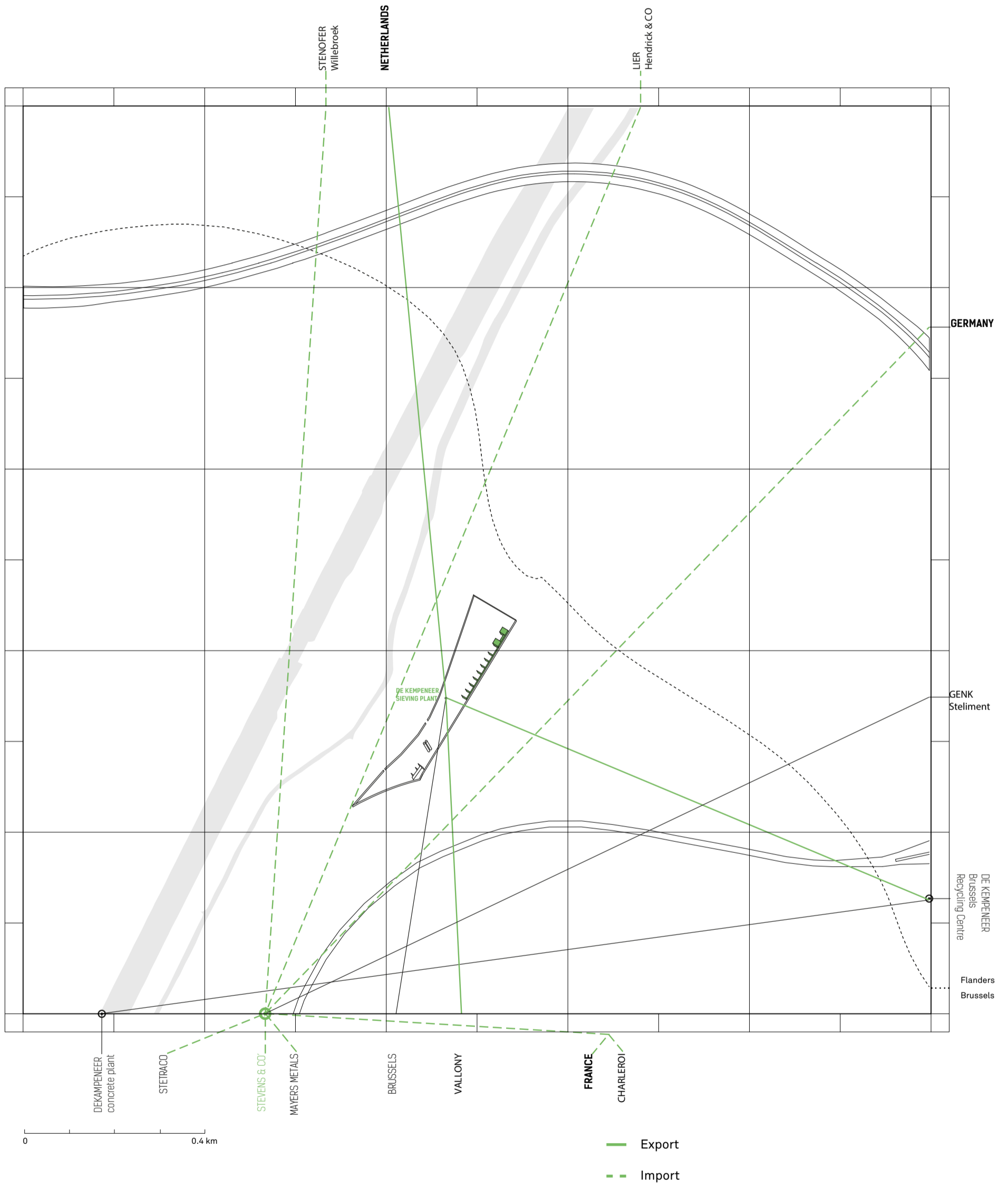
MGH is that the latter provides a total complete service: design, sale and repair. it manage some partnerships projects, by outsourcing a part of the production process: - Manufacture of chassis - AMS NV in Eppegem; -Turning and milling work- Grillet and Partners in Vilvoorde; -Dyeing the Machines-company in Lier; -Sandblasting-Buda Cars in Machelen. These collaborations permits the business to be highly technical and specialized. Moreover, the necessary transfers of products, which count from 5 to 10 trucks per day, are managed by local transporters: Taxi Walter - Zaventem - and ECS - Zeebrugge. These transfers mainly consist in moving defective gearboxes from the owner to the Machelen site and vice versa. centrality of Buda is the main reason behind the choice to locate there the headquarter of the company. gearbox is then transported by an external transport firm to the service center in Buda or to the service center in the port of Antwerp, where the gearbox will be repaired. 5-10 trucks arrive every day with parts. Often under the guise of groupage transport. These components mainly come from Germany, the Netherlands and France, but also from Flanders. Between 7:30 am and 5:30 pm there can be loaded and unloaded in Machelen.

ELIONA

The 24 technicians all drive in a service car of the company. Eliona NV cooperates with transport companies, of which Esser is one of the most important, which transports the spare parts or even the dishwashers to the technician's home address or to the address of the customer.







BUDA COMPANIES

Amongst the wide range of companies present in Buda, we have chosen to deepen the investigation on a selection representative of activities/sectors that do not fall within the classical definition of manufacturing or of key spatial, architectural, social, economical challenges. For example services for industry, recycling or wholesale businesses. For some of the studied 'sectors', it was necessary to couple an associated business next to the Buda ones (Carglass, Brochage Rénaitre, Stevens), in order to reveal existing interdependencies and relevant common issues that have a larger scale effect. In fact, within its boundaries, Buda includes a diverse spectrum of companies that work independently but also occupy different sites (i.e. De Kempeneer) and/or belong to (large) sectoral clusters that are more or less formal.

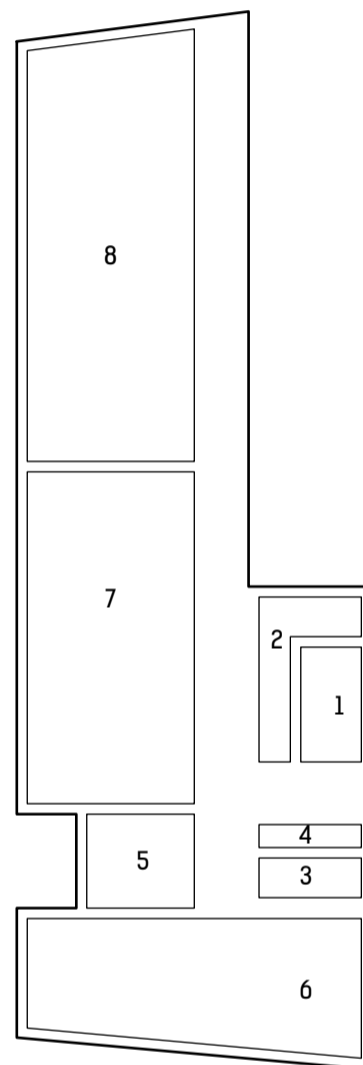
Firstly, the car sector, which is traditionally one of the most important economic drivers in the region. It is present in the area with a multitude of workshops, car-wash and other car related businesses (sales, repair, airport parking). A closer look into a small car-repair (Ital-Torino) and a major company (Carglass Evere) draws a bleak picture. Small scale businesses are struggling to position themselves in relation to future sectoral related challenges (automation, car-sharing), while bigger companies seem to have lost their direct connection to the surroundings, including proximity to clients and other nearby car body repair companies.

Another key sector that is present in Buda and beyond is the construction, demolition and recycling sector. This sector is mostly developed along the Belgian waterways and plays a strategic (or foundational) role for urban development and waste management. Through the case of Groep Dekempeneer (a company with 4 sites in and around the Buda on the border between Brussels, Vilvoorde and Machelen) and the one of Stevens (on the Vergote basin located closer to Brussels), it was possible to reveal specific problems such as the perceived incompatibility with housing, underuse of their sites, the fragility and informality of the companies' infrastructure and key values such as their role for the construction sector and proximity to community value (Stevens allows the general public to drop off recycling waste and employs low-skilled labour).

Buda's food sector represent an interesting collection of wholesale and catering companies. Although they do not belong to the core food manufacturing process, they play a key role in the overall food chain. Wholesalers such as Parmafood, import products from abroad and distribute them to shops in Belgium and beyond with potential growth in the European market. Similarly, there are a series of catering companies. Eat at Cantine offers an important service to local communities, providing meeting a space (with a restaurant / café) for workers and inhabitants, while playing a key role in food processing delivering meals for a variety of clients (schools, offices) in the Brussels Capital Region and surroundings.

Finally, Brochage Rénaitre, one of the few social businesses in the region, even if located on the fringe of Buda, was taken into account as a reference for the future development of existing vacant spaces. For example the former Renault premises, that have the high potential to be turned into training centres with a strategic socio-economic role both for Brussels and Flanders. The upgrading and investment in socially oriented businesses is considered to be one of the most important cross-regional actions to be politically addressed to solve high unemployment rates and unskilled labour. However issues such as public transport are a major limitation stopping business offering low paid, easily accessible work, to find employees.

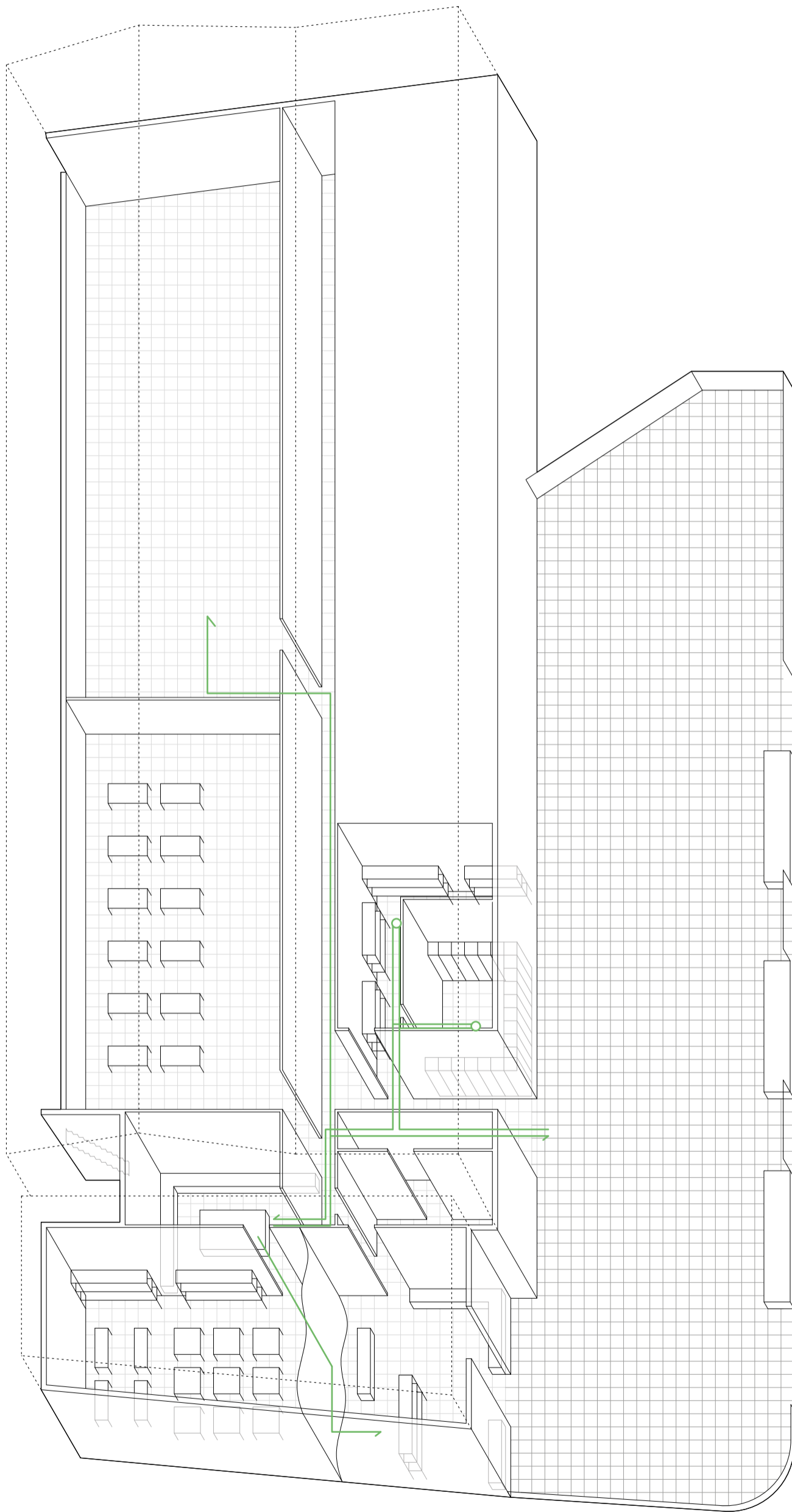




- 1. Cold room
- 2. Dry food
- 3. Wc
- 4. Shower
- 5. Kitchen
- 6. Bar
- 7. Workshop
- 8. Event space

EAT AT CANTINE

Eat at Cantine is a recent business created in partnership with Firma, a coworking space occupying a former industrial area in Vilvoorde. It offers daily lunch and coffee options to coworkers and other customers to eat on the spot or to take away and it caters to events in or off premises, to companies or individual customers. Eat at Cantine is one of the catering companies located in Buda that works both locally and on a wider scale. It aims at working with local producers, although due to the lack of suppliers, its sources are mainly located in Flanders while its catering services are oriented both to Flanders and the Brussels Capital Region. The company employs a small permanent staff (5) hiring extra workers according to catering needs. Workers mobility is one of the main weaknesses due to the difficult accessibility by public transport and bob bike, turning into an additional limitation for the costumers. However, Eat at Cantine has a strong image ranging from online communication to packaging and interior design, contributing to its attractiveness despite the location. Moreover, together with Firma is an important change maker, being a reference gathering space for creatives, workers and other business opportunities, with a clear orientation in the application of social and circular economy principles.

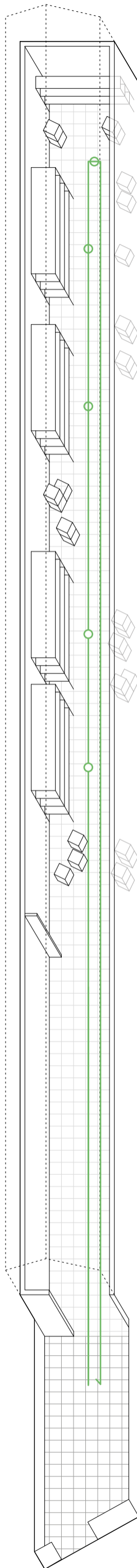


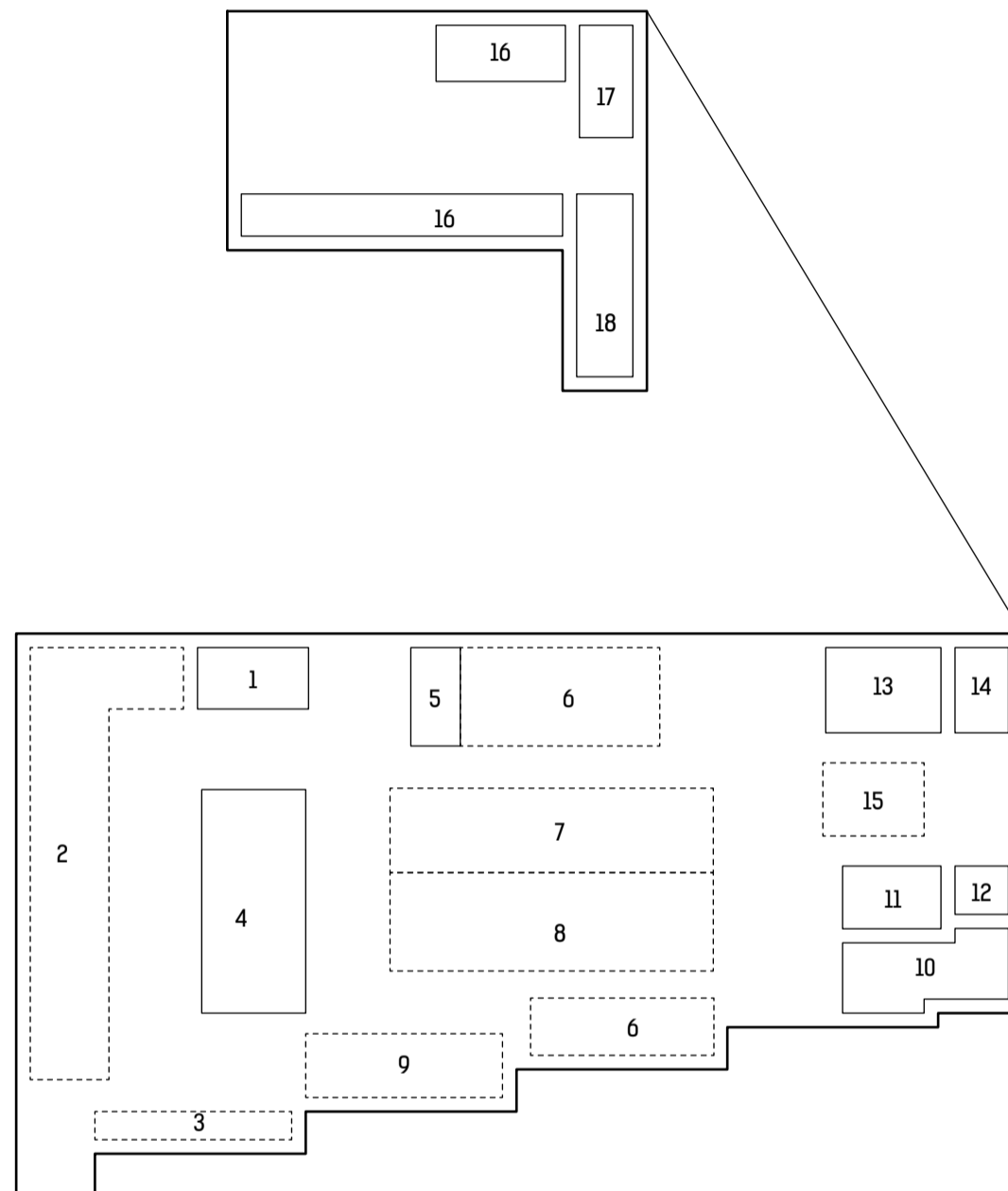


1. Office
2. Stock

PARMAFOOD

Parmafood is specialised in storage and distribution of Italian products such as wine, pasta and flour to horeca businesses. It belongs to food wholesale activities that consist in buying, (sometimes repackaging) and selling goods in large quantities and therefore at cheaper prices, usually to shopkeepers who resell them to their customers. Their importance is twofold: it is strategic in the food chain and it implies a degree of manufacturing that does not require highly skilled labour. Other companies of a similar kind, such as Turk Food Impex, Flavori, Eur-Olives or European Halal Food, share a similar background, having moved from city centre locations to Buda due to spatial limitations and the chance of finding cheaper yet strategic sites for their business. They often keep a ‘facade’ in the city while having a ‘back’ in Buda. Parmafood imports products from Italy and distributes them to shops mainly located in Brussels and in Belgium. The company moved to Buda in 1978 and started buying over the site part by part, recently renting out extra spaces to other companies due to the contraction of its activities. In fact, the spatial organisation of their business highlights the key issue of companies’ spatial expansion-shrinking and, in the case of wholesale, the possibility of being organised vertically

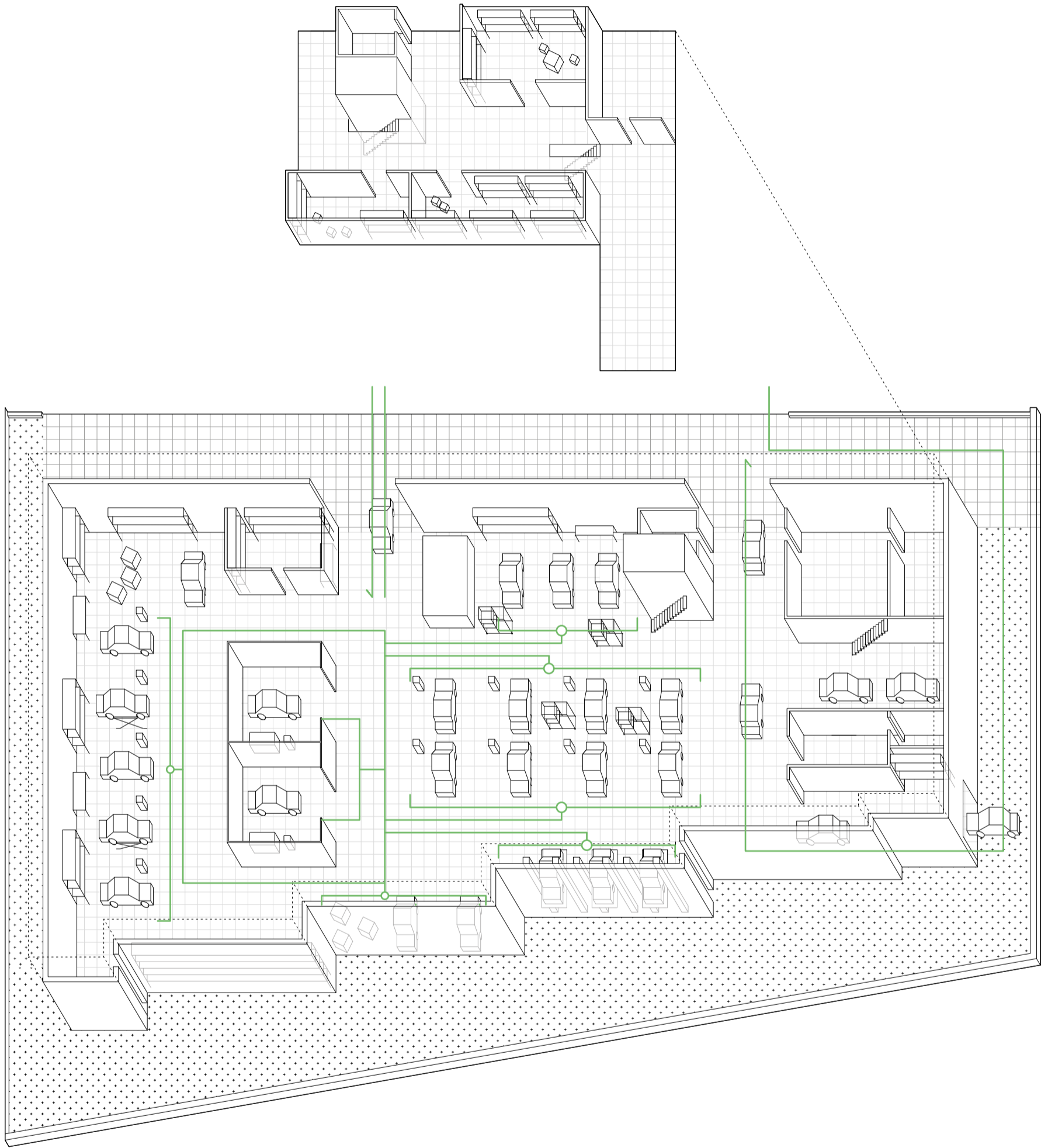


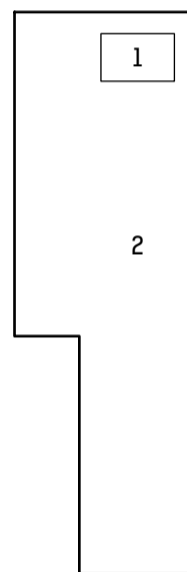


CARGLASS

Carglass Evere, situated in the north of the Brussels Capital Region in a rather isolated location surrounded by housing blocks, represents the counter-case of Ital-Torino (see later), being a major car body repair company with several branches in Belgium. It belongs to two identifiable regional zones characterized by a dense network of roads and a concentration of car repair companies, connecting the two major industrial sites of Brussels (Buda and Anderlecht-Forest), each with a dominant car industry sector. Following today’s clear tendency towards repair in Belgium, Carglass adapted to the more profitable repairing over substituting. Thus, Carglass Evere is specifically designed as car body repair company and as almost all cases observed it is organized horizontally, as opposed to vertical organization, and relocation to a new site over reinvesting in the existing one. In fact, despite the absence redevelopment pressure, threats from strict regulation or complaints from neighbours, signs of colonization of the neighbourhood are evident in the informal use of public spaces surrounding the company, mainly for parking, which highlights a general issue related to car repair activities and their claim for space. That is due to ‘full-package’ service offers, which have spatial consequences: the need of parking space, inner and outer circulation space, as well as public (street side) office space.

- 1. Paint lab
- 2. Preparation polishing and filling
- 3. Bumpers storage
- 4. Paint cabin
- 5. Waste
- 6. Demontage
- 7. Cutting
- 8. Polishing\wax\shine
- 9. Drying zone
- 10. Car wash
- 11. Office
- 12. Wc
- 13. Reception
- 14. Call center
- 15. Finishing area
- 16. Stock
- 17. Kantoor manager
- 18. Refectory

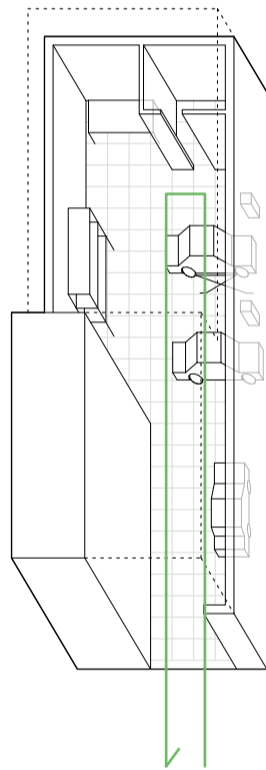


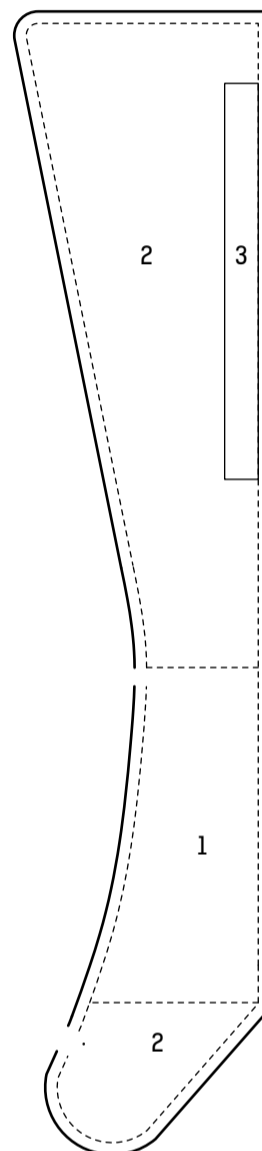


GARAGE ITAL-TORINO

Small car-repairs, like Garage Ital-Torino, which does maintenance and repair mainly for passenger cars, are typical examples of foundational activities that are spread all over the Brussels Capital region, with a high degree of adaptability and the employment of low skilled labour. However, these small scale companies are, especially in recent times, often unwanted by public and private actors under housing and redevelopment pressure (as the infamous case of Heyvaert), struggling to position themselves in relation to future sectorial challenges (such as automation and car-sharing). The case of Ital-Torino is particularly interesting to reflect on the resilience, adaptability and future of small businesses in the car sector as complementary to bigger players in repair (Carglass) or producers (Audi). As the multitude of car-repairs, car-wash and other car-related businesses (sales, workshops, airport parking) it holds a degree of informality in the way the activity is organised within and around its premises, suffering from the lack of parking, difficulties to find Dutch speaking staff and a lack of socio-economical development in the area. However, It's an independent garage well integrated in Buda, with a highly visible site, there is an advantage of being a Flemish company with cooperations with other related companies such as the tire centre across the street, Dépannage Adam, SNG Cars and AB Automotive.

1. Office
2. Workshop

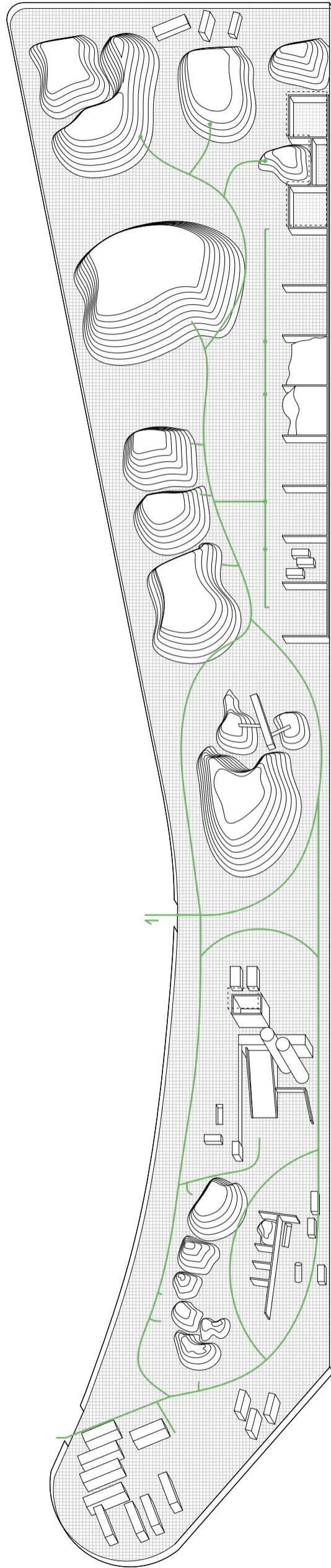


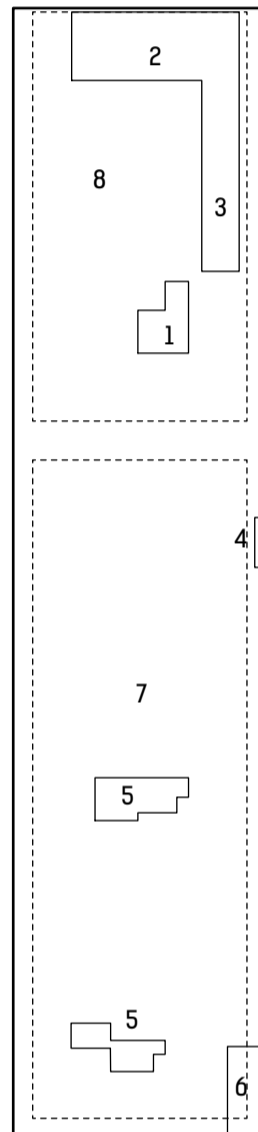


1. Concrete production
2. Storage
3. Containing walls storage

DEKAMPENEER

Groep Dekampeneer, is representative of a diffuse approach to organising the business within the construction and demolition sector and it highlights questions of spatial optimisation and integration. Founded in 1975 with a specialisation in road and sewage works, the company expanded its business with the addition of the Recycling Centre for rubble and the production of lean concrete (around 1985). Later on, Groep Dekampeneer specialised in the transportation of goods in bulk and in 2013 the sieving plant was established. The expansion of activities went hand in hand with the recruitment of or movement to new locations more than once. Today the company uses four sites for different activities: a concrete plant, a sieving plant, both situated in Brussels, a repository of materials and trucks on the border between Brussels and Flanders and finally the head office and the Brussels Recycling Centre in Flanders (Diegem). Due to the different expansions of the company over time, Groep Dekampeneer has a large variety of activities that also includes the import of decorative gravel, the maintenance and repair of its own machinery, container service and the provision of road sweeping and winter service. Despite the activities, spatial optimisation is an emerging issue due to external pressure and internal interests. The four sites present a large amount of underused areas that are prone to accommodate other functions within the same sector or possible redevelopments..

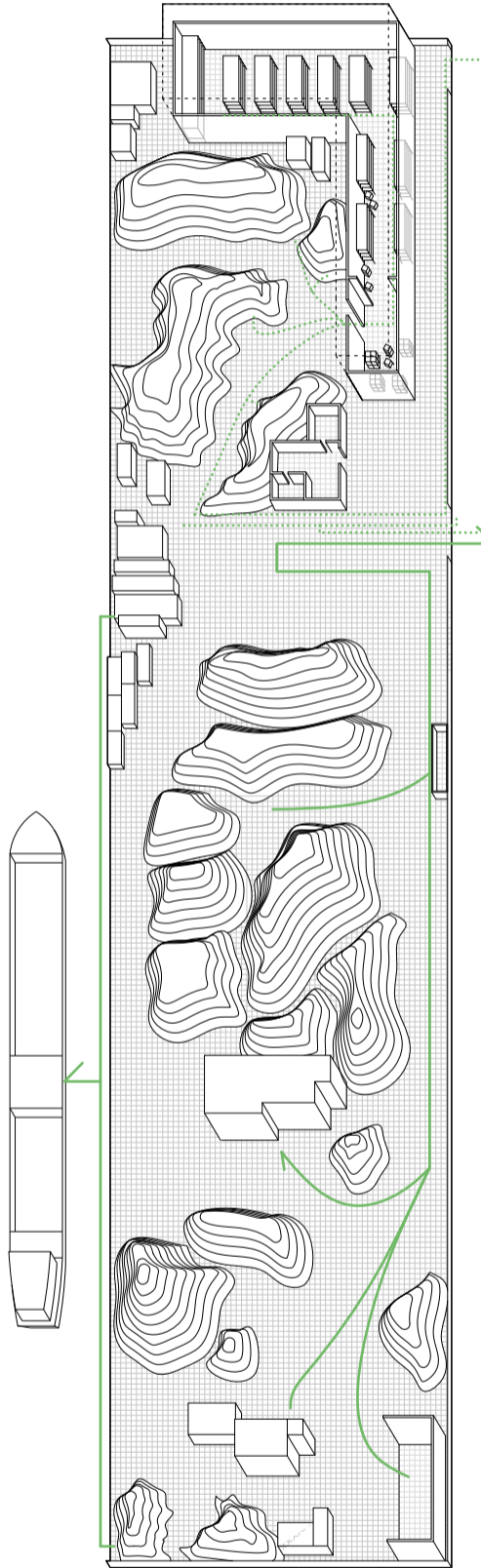


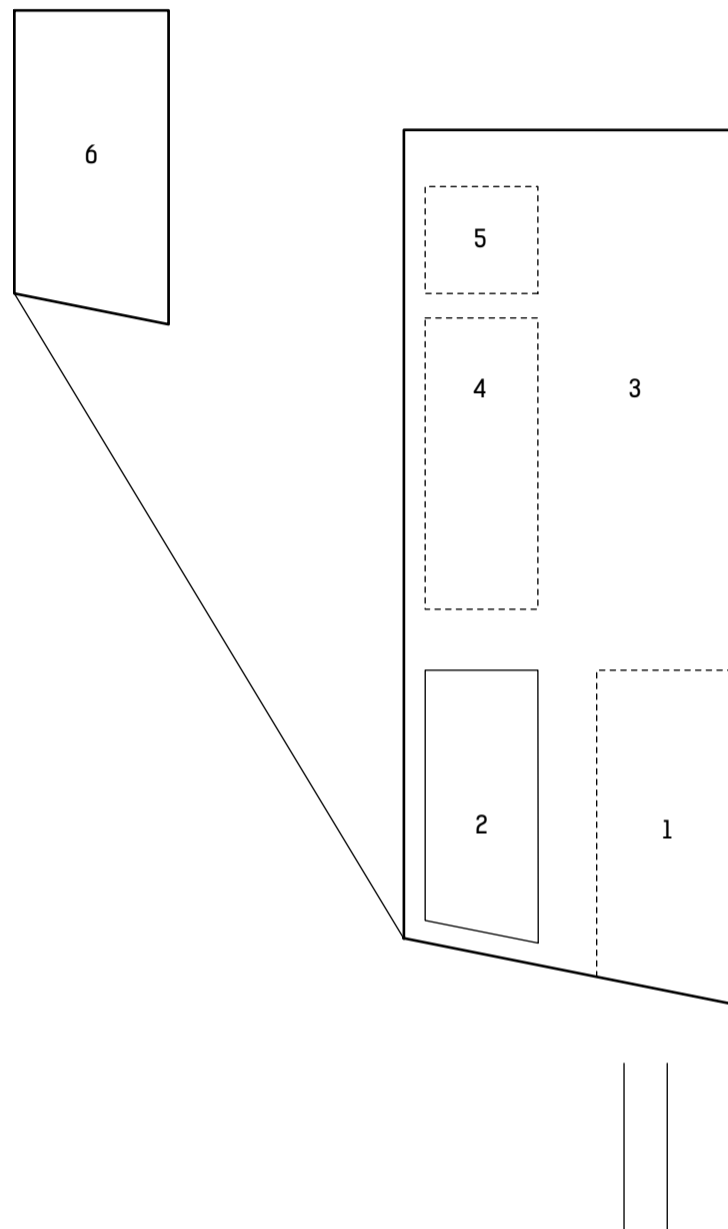


- 1. Office
- 2. Storage
- 3. Storage vehicle scale
- 4. high- voltage cabin
- 5. Cutting baling machine
- 6. Car depolution center
- 7. Ferro area
- 8. Non ferro area

STEVENS & CO

A. Stevens & Co is a scrap dealer in the Northern part of the city of Brussels facing the Vergote Basin and it is an exemplary case of the metal recycling sector performing ‘Urban Mining’ while subjected to difficult relation with its surroundings and the city. The scrap metal-recycling industry encompasses the recovery and processing of used metal that originates either from production processes or from end of life products, with the purpose to re-introduce it as a raw material in the production process. According to Stephanie Thomaes at A. Stevens & Co, around 60% of all raw material are now obtained from recycled goods. The company plays both a key role in the urban metabolism of Brussels and a relevant social function at the neighbourhood scale, being a proximity service. It also highlights the strong relation with the existing waterways and their potential future exploitation for the whole sector, to reduce car traffic. However, due to negative perceptions the company tends to hide from the public view being surrounded by tall blind fences. Moreover, recently constructed middle-class oriented residential developments at the south end of the basin, and their amenities, inevitably placing greater pressure on established manufacturing companies that have remained close to the city, such as Stevens or the close by Interbéton (cement).

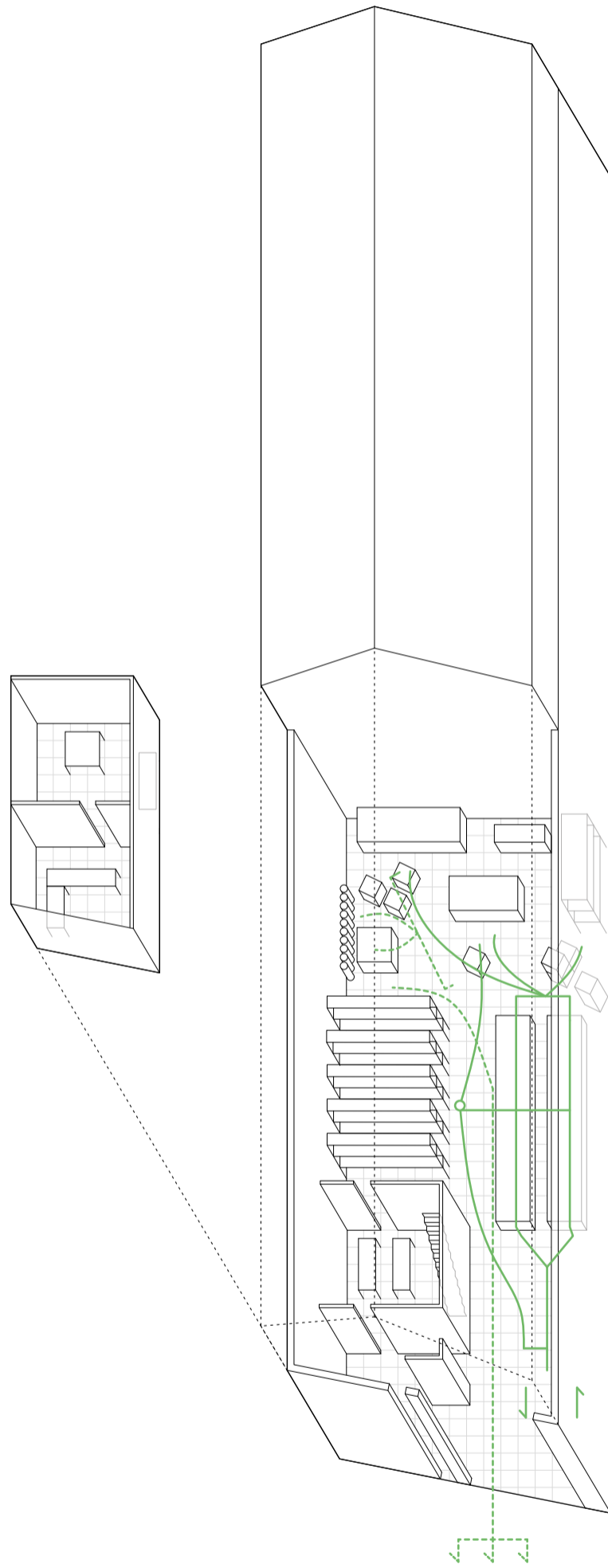


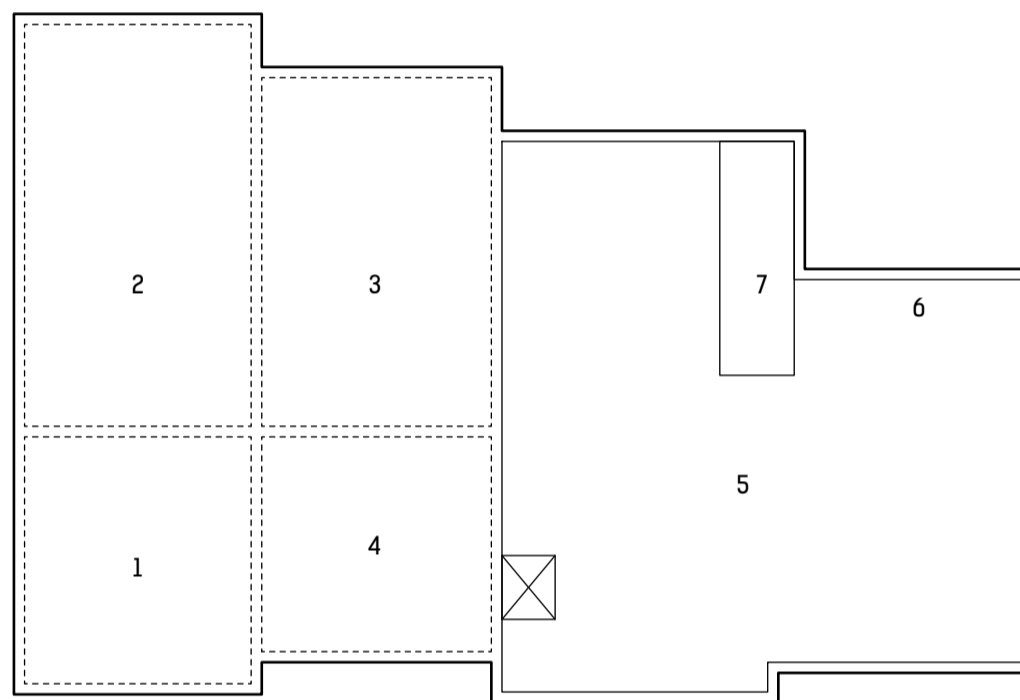


- 1.Truck parking
- 2. Shop
- 3. Workshop
- 4. Storage
- 5. Waste
- 6. Office

AB FLEX+

AB Flex+ is well known in Buda for the replacement and maintenance of piping for a wide range of applications. The company has eight branches in Belgium and an extensive fleet of service cars. It defines itself as a “company in movement” because of the fast repair on site. The branch in Buda is ideally located near the ring road and it consists of a large elongated shed, which is divided into two parts: a workshop with a small shop and the administration, and a rear unused shed. However, there is a lack of outdoor space that is compensated by informal parking on public space, leading to occasional conflict. An additional limitation has been the a problem of finding skilled workers in the region, which pushed the company to create a dispersed model with different employees in Flanders and the Walloon periphery taking advantage of their location to perform quick technical interventions. Despite the limited space, Buda remains a key location for the company as the presence of industries and their trucks represents potential future clients (i.e. De Kempeneer needs daily services). By providing a very specific and focused activity, AB Flex+ offers a strategic service for manufacture at the Belgian scale.



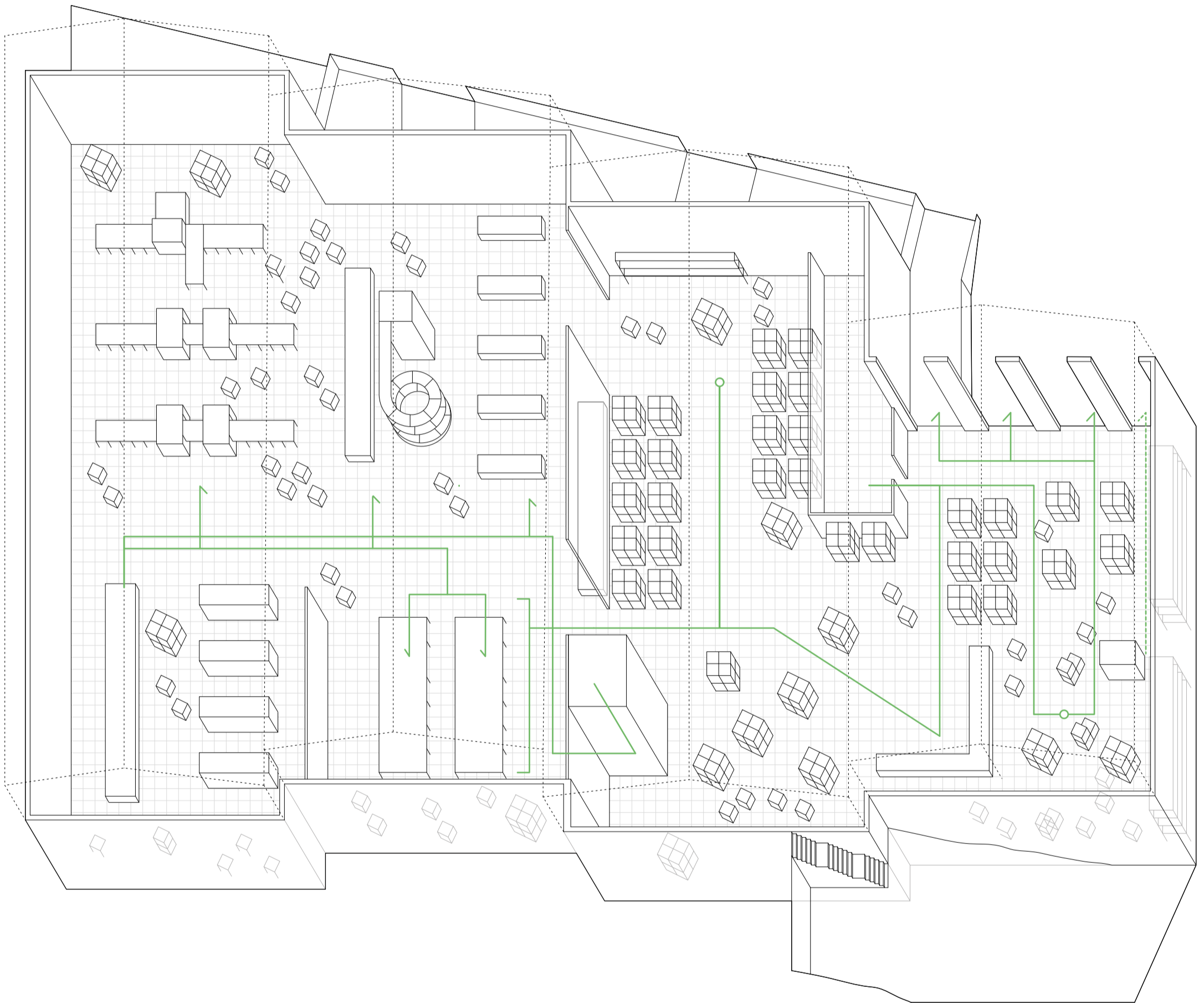


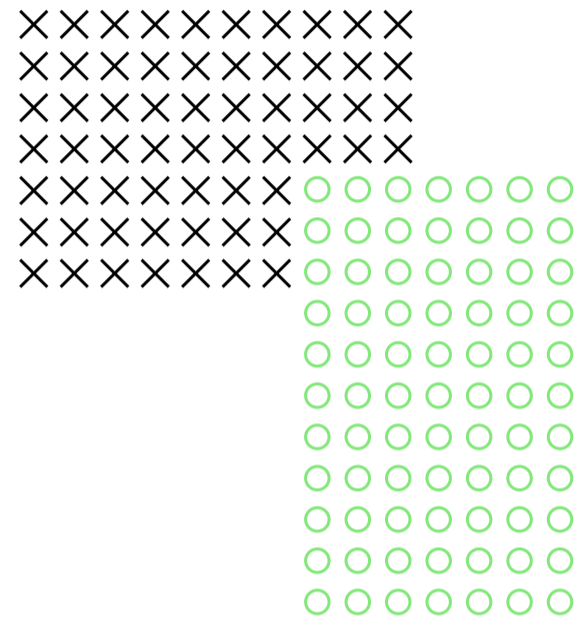
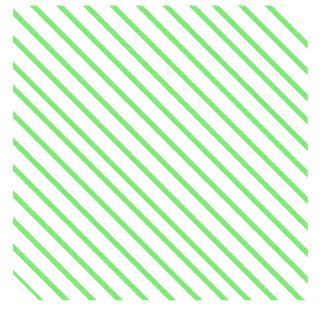
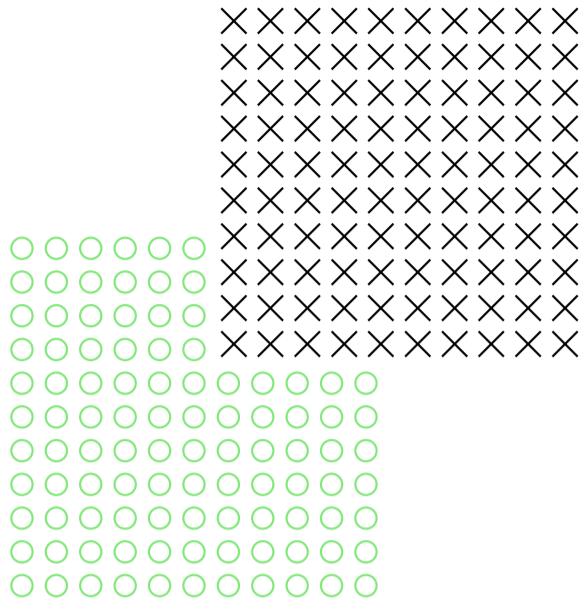
1. Mass folding
2. Mass stamp area
3. Mass thread binding
4. Packaging
5. Storage
6. Delivery
7. Call center

BROCHAGE RENAITRE

Brochage-Renaître is one of the “entreprises de travail adapté” (ETA) in Brussels, that provides employment for persons with an handicap and it is specialised in print finishing techniques, such as binding and glueing, cutting and folding, packaging and other handcraft elements, as well as mailing, logistics and storage. Despite not falling into Buda’s perimeter, it represents a good reference for the future development of social economy in the area. Brochage is a business of the nine out of twelve government recognised adaptive workplaces in Brussels. It is one of the larger, more advanced social enterprises in Brussels, very strongly resembling regular companies.

The need to focus more on activation and coaching is one of the founding principles of the company, where adapted workplaces aim at the activation and education of those people who find it most difficult to secure their place on the labour market. Within Brussels’ social economy sector, several ETAs reported big losses in the last couple of years (including Brochage) which lead to two tendencies: less specialization and fusions, which highlight the tension between the economic viability and providing social services. However, Brochage-Renaître is a reference for newly built specific typologies of the adapted workplace and profitable business embedded into a constructive social economy sector.





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