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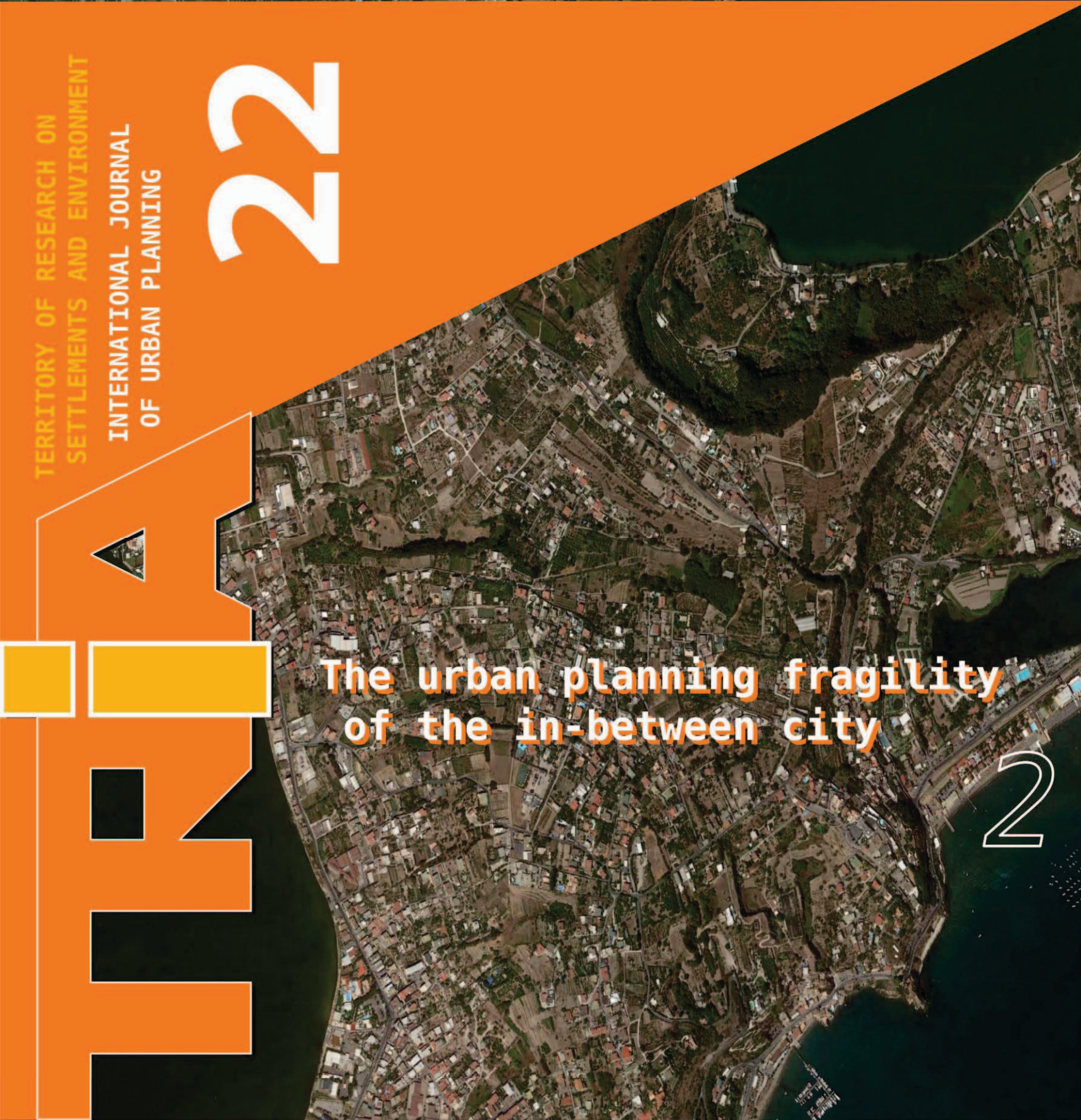

The urban planning fragility of the in-between city

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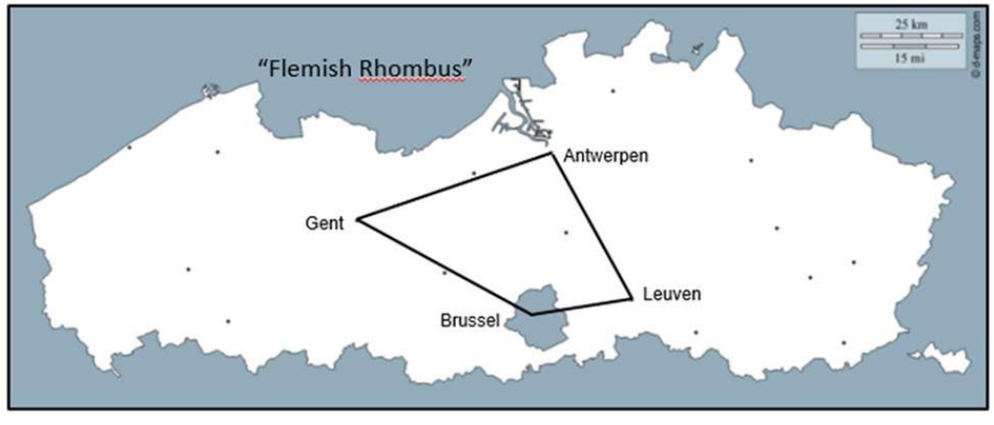
abstract

In-between urban zone South of Antwerp: the path towards sustainability

Marc Moehlig

Abstract

In-between urban zone South of Antwerp is located in a dispersed urban city environment called the “Flemish Rhombus”. It is a problematic zone dominated by traffic. It hosts a large number of large scale retail shops and several industrial parks bordering on residential areas. Township centers lack attractiveness, in particular the city center of Boom. Regional and local spatial plans have several strenghts but are not sufficiently dynamic and proactive to solve all the issues. In order to promote a sustainable future for the zone, there is a need for a positive comprehensive image encompassing the objective and subjective characteristics the zone should have. This image should be marketed to the relevant stakeholders and should be the basis for action. It would be beneficial for the entire dispersed city and for the in-between zone in particular if the



government took appropriate measures to discourage motorised traffic and to encourage the development of the local economy.

Keywords:
in-between city, sustainable development, territorial governance

In-between zone urbane a sud di Anversa: il percorso verso la sostenibilità

La zona urbana intermedia di South of Antwerp si trova in un ambiente urbano disperso chiamato “Rhombus fiammingo”. È una zona problematica dominata dal traffico. Ospita un gran numero di negozi al dettaglio di grandi dimensioni e diversi parchi industriali confinanti con aree residenziali. I centri delle township sono poco attraenti, in particolare il centro della città di Boom. I piani territoriali regionali e locali hanno diversi punti di forza, ma non sono sufficientemente dinamici e proattivi per risolvere tutti i problemi. Al fine di promuovere un futuro sostenibile per la zona, è necessaria un’immagine positiva e completa che comprenda le caratteristiche oggettive e soggettive che la zona dovrebbe avere. Questa immagine dovrebbe essere commercializzata alle parti interessate e dovrebbe essere la base per l’azione. Sarebbe utile per l’intera città dispersa e per la zona intermedia, in particolare se il governo adottasse misure appropriate per scoraggiare il traffico motorizzato e incoraggiare lo sviluppo dell’economia locale.

Parole chiave:
città di mezzo, sviluppo sostenibile, governance del territorio

In-between urban zone South of Antwerp: the path towards sustainability

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"Flemish rhombus": a dispersed city

City of Antwerp is the Northern edge of a dispersed urban landscape connecting 4 major Flemish cities; the three other ones being the capital Brussels in the South, Ghent in the West and Leuven in the East. Four other second tier cities are also part of this dispersed urban landscape: Beveren, Sint-Niklaas, Aalst en Mechelen. On top of that there is a number of smaller townships that are officially named cities but are much less important in size. This rhombus-like dispersed urban landscape ("Vlaamse ruit" or "Flemish Rhombus") hosts more than half of the Flemish population and nearly 30 % of the total Belgian population. Total number of inhabitants is estimated at 3,5 Million people. "Flemish Rhombus" occupies approximately one quarter of the total surface of Flanders, which is 13 500 km2. Whereas the average density of population in Flanders is close to 500 inhabitants/km2, in the "Flemish Rhombus" it is estimated to be twice as high. "Flemish Rhombus" is in the top 5 of the richest urban regions in Europe.

Origins for this dispersed urban landscape go back tot he 19th century. Following elements were at the basis of its creation (Bruggeman, 2016):

- Political decision to give the same level of autonomy to local townships and cities, thus putting them at an equal footing;
- The fast development of railroads and local railway stations allowing workers to live in rural areas and commute to work;
- Virtually simultaneous introduction of electricity in cities and in the countryside;
- Political promotion by the catholic party of the concept of an individual house with a garden.

In the twentieth century the creation of a motorway network further encouraged the development of this dispersed urban landscape. Copying the Italian autostrada model, the first motorways were opened in Belgium in the late 1930ies but the biggest motorway development spur happened in the 1970ies and 80ies.

In recent years Belgium has been detaining the doubtful record of being one of the most congested countries of Europe. Fact that there is a dispersed urban landscape is not the only reason. New Jersey model shows that dispersed urban landscapes can function well in terms of mobility if people live in one part of an urban landscape and work in the same or in a neighbouring part of that same urban landscape.

"Flemish Rhombus" is a very different dispersed urban landscape than the New Jersey one:

- There is a much higher density of population;
- A vast quantity of goods imported via the ports of Rotterdam and Antwerp are

shipped by truck to the South of Europe and have to cross the Flemish Rhombus;
- There is a high concentration of office jobs in Brussels, which means that a total of 340.000 commuters travel to Brussels every working day, 200.000 of which are Flemish.

European fiscal policies still discourage local work and encourage import and transporation of goods. Fiscal pressure on work is extremely high and transport, especially maritime transport, is still receiving a favourable fiscal treatment: "bunker", the technical name for the fuel used by sea going vessels, is still exempt of taxes. Road transport of containers and goods in no way pays for the "externalities", meaning the negative impact of road transport on the environment, on health and safety and in terms of lost time. Impact on Flanders is enormous: increasing number of trucks cross the region and are at the basis of massive traffic jams, especially on and around the ring roads of Antwerp and Brussels.

Commuting is encouraged by high taxes on house purchasing. These high taxes strongly discourage people to move house if they get a job in another region and encourage them to commute. On top of that, because of the high cost of labour to employers (both private and public) tend to go for economies of scale by reducing the number of local subsidiaries and by centralizing a lot of activities in central head offices, either in the Brussels area or in one of Belgium's major cities. Result is that a lot of people commute by car.

Apart from the mobility issues, quality of life in most parts of the "Flemish Rhombus" is fairly good and this translates in high housing prices. There are however some in-between zones that are far less attractive and can be seen as problem areas.

Fig. 1 – Description of the in-between zone South of Antwerp

The present article focuses on the geographic zone in between Antwerp and Boom.This area proves to be a much more problematic zone than the fairly harmonious suburban zone on the South-East side of Antwerp. Antwerp is the second major city of Belgium and the entire agglomeration hosts approximately one million inhabitants. Antwerp is located 50 kilometers North of Brussels and is connected with the capital by means of one railway and two motorways, the A2 and the E19.

Whereas the relatively new E19 (opened to traffic in 1974) crosses the traditional rural and suburban areas before ending on the South-Eastern limits of the city of Antwerp, the much older A2 (it goes back tot the late 1930ies) passes an area that can only be qualified as an in-between zone. This zone stretches from the city of Boom, or more precisely from the exit of the Rupel tunnel, to the Southern confines of Antwerp city. Total lenght of this in-between zone is approximately 15 kilometers; the exact width is more

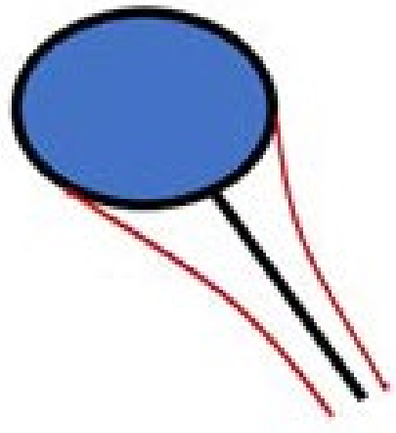

Fig. 2 – "Funzional" in between zone

difficult to determine. On both sides of the A12, there are 70 km/hr traffic lanes (N117).

This geographic area can be qualified as a functional in-between zone (Grey, 2014) that extends out of Antwerp along the A12. Special feature of this in-between zone is that it links a major city, Antwerp, to a city of much lesser importance, Boom.

Most striking feature of the in-between zone is that over a distance of more than 10 kilometers the A2 is bordered by large scale retail (not shown on the map). Road layout makes this possible: between Boom and Antwerp the motorway is flanked on both sides by two traffic lanes with a speed limit of 70 kilometers/hour whereas the speed limit on the four central lanes is either 120 or 90 kilometers/hour. During the 1970ies there were a handful of mainly local large scale retail shops in the in-between zone. The nineties saw the arrival of international large scale retail shops like Ikea and Decathlon. New phenomenon arose around the turn of the century: the creation of large scale retail clusters. These clusters consist of a handful of major international retail shops that have a common street access and car park. Multiplication of major retail shops and retail clusters led to the creation of what might be one of the longest shopping streets in Europe.

On both sides of the A12 there is a mixture of residential, industrial and rural areas.

Especially on the West side there is a lot of industry. Starting from the North, you first have the industry park of Wilrijk and then the scenery opens up a bit towards the Rupel area. Rupel is a small river that ends up in the more important river Schelde. In the nineteenth century there was quite a lot of industrial activity along the banks of the Rupel. Factories were scattered along the banks but left a lot of room for agricultural and natural zones.

On the East side there is the densily populated township of Wilrijk and further South there is the residential township of Aartselaar, which is characterised by a high share of detached homes.

South of Aartselaar, the city of Boom is located. Boom used to be a thriving small industrial city focusing primarily on brick manufacturing (Boom, 2019). At the end of the 1970ies virtually all of the small brick factories had to close their doors because they could no longer compete with larger automated brick factories elsewhere in the country and in Europe. Most of the older factories on the banks of Rupel were closed. The main shopping streets of Boom show a lack of investment and virtual absence of international retail chains. There are several unoccupied shops for rent.

In recent years Boom became known to youngsters across the globe because it hosts the famous dance festival Tomorrowland during two weekends in July. Festival is organized in a nature reserve close to the city center, called "the Schorre". Whereas other festival cities or townships manage to obtain lasting carry-over effects in terms of image, this does not seem to be the case in Boom.

Lack of attractiveness of Boom can be quantified:

- Housing prices in Boom were in 2017 on average 30% lower than in suburban townships like Edegem, Hove and Boechout (kadaster, 2018). Boom and neighbouring local communities like Niel and Schelle provided homes to a lot of

factory workers in the past. There still are a large number of small old houses that have not been correctly renovated or updated.

- Crime rate in Boom was significantly higher than in other small townships in the zone. In 2017 there was on average 1 crime for every 7 local citizens. This figure is consistent with the data for earlier years. For comparison purposes the township Boechout was added: it is a township that was to a certain extent the object of a gentrification process. Boechout does not have a lower score than most of the townships in the in-between zone, with the exception of Boom.

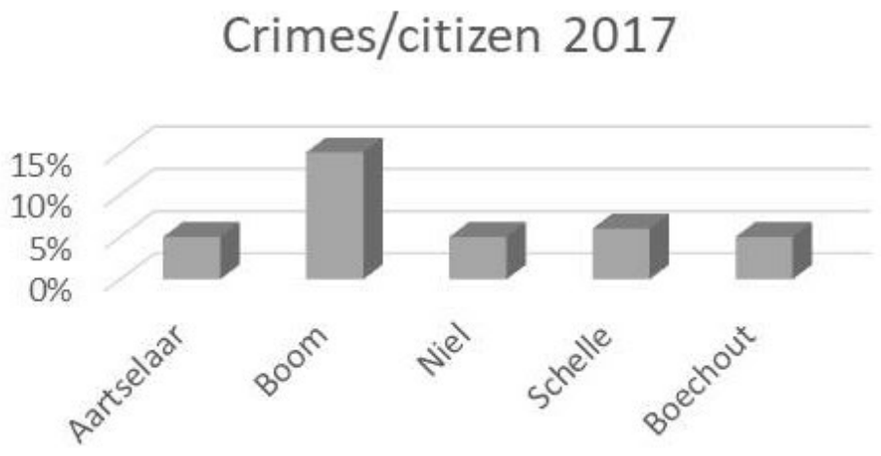

Fig. 3 – Crimes and citizen in 2017 Source: Federal Police and Internal Affairs websites

Measures taken by the authorities to manage the spatial layout of the in-between zone

In 1962 the "Wet of Stedebouw" ("Law on Urbanism") mandated that national and regional plans (two levels) would need to be defined. These plans needed to be complemented with more detailed general and specific planning schemes. Most regional plans were approved in the late seventies but the overriding plan for Flanders as a whole remained absent until 1999 (Coppens, 2007). In the meantime a so-called in-fill rule allowed to built houses in between existing ones. This lead to further ribbon development.

"Ruimtelijk Structuurplan Vlaanderen", the overriding plan for Flanders, meant the start of a more professional management of space (RSV, 2019). Last revision happened in 2010-2011 but the more local plans for the subregions and the specific planning schemes were not necessarily revised accordingly.

In fact most plans and planning schemes for the in-between zone South of Antwerp predate the last revison of the overriding plan for Flanders. Only the city of Antwerp, that also comprises the township of Wilrijk, made updates as recent as 2018.

That does not mean the plans and planning schemes do not have strong points (RUP Anwerpen-Wilrijk, Aartselaar, Boom, Niel, Schelle):

- There is a clear functional separation between housing, industrial and green zones.

- A number of obsolete industrial properties were transformed into green zone. A number of old factory buildings that were located on the banks of the river Rupel were demolished and the land was cleaned up in order for it to become a green zone. Former brick manufacturing site located on the Eastern side of the city of Boom was transformed in a natural reserve called “the Schorre”. A part of this natural reserve regularly hosts music festivals like e.g. the internationally known music festival Tomorrowland. These initiatives are part of a program to make the Rupel area a more natural recreation zone equipped with cycle paths on the river banks.
- A so called “green finger” was created: it is an interconnected parkzone that runs from West to East through the in-between zone.
- •Clear limits to the housing zones prevented them to spread like oil patches throughout the zone. Residential growth was consciously limited to ensure that the residential role of the city of Antwerp would not be compromised. In the province of Antwerp 65% of houses/appartments need to be build in urban centers and 35% of houses/appartments can be build decentrally. There is a minimum target density of 25 houses/appartments per hectare in the urban part.
- New tram line is supposed to be built to link the township of Wilrijk, which is officially part of Antwerp, to the Antwerp city center.

There are obvious disadvantages though:

•Regional plans and planning schemes are not modified in function of the evolution of criteria like crime rate, traffic density, housing prices, etc... Most of the regional plans predate the “Ruimtelijk Structuurplan Vlaanderen” and do not take into account the massive increase in both trucks and passenger cars that pass through the zone. On top of that the regional plans were not very ambitious in terms of concentrating manufacturing plants, offices and warehouses. Scattered pattern of so-called industry parks creates a situation where trucks and vans need to pass housing areas. Regional plans advocate a more intense use of the railway connection linking Boom to Antwerp but hardly any practical measure is taken to translate that intention into action. There is no efficient and direct public transport connection between the zone and the capital Brussels.

- Large scale retail shops along the A12 have tremendously increased in number and in importance since the regional plans were approved. These huge shops attract a large number of customers who nearly all come by car. Townships like Aartselaar and Wilrijk are struggling to keep the commercial function alive in their historic centers. The pedestrian commercial zone of the city of Boom is a planning failure: few customers, a visible lack of investment and a large number of shops for rent do not help to liven up the city center of Boom. Whereas the townships close to the E19 motorway, only a few kilometers East of the A12, have undergone a “gentrification” process, this is clearly not the case in the chosen In-between zone: there are no large scale additions of fashionable cafes, restaurants and shops.
- Apart from the new cycling paths along the Rupel river, the regional plans do not build on bicycles as a means of transportation for commuters. Cycle paths left and right of the A12 are unpleasant and dangerous because of multiple entries and exits

to large scale retail shops and because of the pollution of a total of 8 lanes of traffic.

- City center of Boom does not benefit from the creation of the natural reserve on the East side of the city: there is no housing estate that connects to or has a view over the natural reserve. On the South end of the city center, old houses, car parks and small warehouses shield the square in front of the main church from the riverfront.
- Region plan mentions a project to cover parts of the A12 with a roof in order to able to protect the city center of Boom from the noise and the pollution of the motorway. This new land surface was supposed to be used for residential development. Financial and practical feasibility of the project was never extensively tested. Consequence is that nearly 15 years after mentioning this project in the regional plan, this project remains a purely theoretical one.

In-between zone as a failure in terms of sustainability

Thomas Sieverts (Sieverts, 1997) points out that the dispersed city appears to be the result of a total absence of urban planning but is in reality the result of a large number of small scale rational decisions. In-between zone South of Antwerp as it looks now is the result of 2 elements: the decay of the industry along the Rupel (mainly but not exclusively brick manufacturing) and the existence of a motorway flanked by medium speed traffic lanes on either side. Latter helped to attract small and medium size companies (manufacturing, logistics, offices), large scale retail shops and people looking for cheap housing. Regional plans ensured that functions did not mix at the neighbourhood level and prevented people to build houses randomly across the in-between zone. Some green areas were preserved or created but sustainability was never a key driver for the development of the zone.

As pointed out earlier, a dispersed city like the Flemish Rhombus is not the best setup in terms of sustainability and the in-between zone South of Antwerp is an area where all the sustainability issues that can be associated with a dispersed city become visible. Conceptual origin of the dispersed city is that as the public space became less attractive, people wanted a larger and more attractive private space to compensate. This search for more private space resulted in a decentralized and dispersed city. Citizens living in a dispersed city have to use their cars more often and are thus rendering the public space even less attractive. System that is at work does not automatically veer towards a new equilibrium, to the contrary: as people increase their mileage and spend more time in their cars, they make the residential areas they cross less attractive, thus invading other people's private space. At the same time, they spend less time at home and the benefit of their own private space decreases accordingly. The in-between zone is also home to less well-off people who cannot afford car ownership but are the victims of other people's car use 24 hours a day.

A significant part of the houses and apartments of the in-between zone South of Antwerp is close to major connecting roads with a high traffic density. Typical Belgian ribbon development increases the exposure to the negative effects of high density traffic.

Path towards sustainability

Sieverts draws the attention to the conflict between the "System" and the "Agora" (Sieverts, 1997) - "System" being all the rational elements in a dispersed city that are linked to production, supply and disposal of goods and services; "Agora" being the "Lebensraum" or living space where human encounters take place, where we experience sensory experiences and that we identify as our immediate environment. "System" and "Agora" refer to the objective and subjective elements that define the dispersed city. This means that if we want to define a path towards sustainability, it needs to be done both in objective and subjective terms.

Sieverts also points out that work needs to be done on "Innenbildern", or interior images, that become "Leitbilder" or guiding principles in the evolution of the dispersed city. These guiding principles must take into account what is "Machbar" or feasible and what is "Wuenschbar" or desirable. Practical example of a city that has worked on defining a powerful image is Amsterdam (slideshare, 2018). Amsterdam is the global benchmark in terms of city marketing. City succeeded to create an image that brings together elements that looked conflicting at the start: preservation and innovation, traditional values and openness to different sexual expressions and the creation of an aesthetics that mixes 18th century buildings with modernist avant-garde architecture. Stength of this imagery is that the same multi-dimensional concept exerts an appeal to people with different needs and wishes. Sustainability is also woven into the concept: in no other city the use of bicycles is such an essential part of mobility. Bicycles travel by ferry boat and train and, when not used, can be stored in multi-level bicycle parks.

Is it easy to define an attractive image for a problematic part of a dispersed city? It most certainly is not.

What are the characteristics the in-between zone has that can be built on:

- Presence of nature: natural banks of the two rivers, a couple of parks, a natural reserve called the "Schorre" and a large number of open fields bordered with trees;
- Employment and housing opportunities also for people with lower income;
- All generations present in the zone;
- Positive international community ambiance thanks to the yearly Tomorrowland festival.

What positive elements could be added:

-Give the township centers of Wilrijk, Aartselaar en Boom a special flair by financially encouraging people to open up cafes, restaurants and shops that refer to different foreign countries and offer an excellent quality/price proposal. It is absolutely essential to have a clear differentiation between the retail function of the township centers and the large scale retail shops along the N117.

- Add bicycle lanes that link the townships centers, the retail clusters and the green zones; create safe bicycle parkings at railway, bus and tram stations. Where there is a lack of space, special bike streets could be created: residential streets that are designed in such a way that car traffic can not pass through but that allow

car access to residents. This can be realized by dividing the street in two parts by means of adding small posts to separate the halves. Bike lanes could be painted in the middle of the street to force cars to adapt their speed to bicycle speed. People could be encouraged to plan family excursions by bike to the large scale retail shops. They will only do so if bicycle circuits are created that keep bicycles away from main roads. Shops could be encouraged to do free home deliveries of items purchased by cyclists. Large retail shops have the internet shopping technology to make this possible. Infrastructure measures need to go hand in hand with marketing campaigns to encourage people to cycle (Munoz et alii, 2016).

- Encourage community building initiatives at township level and stage low budget cultural events. Young artists should be motivated to live in the in-between zone. US cities like Austin and Detroit have proved that the presence of artists adds to the attractiveness of a city, even to an extent that it leads to excessive gentrification (Way et alii, 2018). At a much more modest scale, the small township of Boechout has benefited for many years from the culturally open image of the yearly world music festival. Boom is hosting the world famous Tomorrowland festival but has not been able to transfer the positive international community feel of the festival to the city of Boom itself. Additional initiatives throughout the year need to be taken to benefit from the carry-over effect.
- Community building should not only happen at township level but should also be encouraged at neighbourhood level. A social mix strategy (Mu, 2017) can be beneficial to creating a more healthy and cohesive community. Attracting people with an artistic background, who are looking for inexpensive places to live and work, may be a stepping stone towards luring the younger middle class to live in the region. Shared housing can also help to create a stronger sense of community (Cho et alii, 2019). Residents in shared housing in Seoul show a higher level of residential satisfaction, thanks to a stronger community attachment.
- Residents should be encouraged to bring nature closer to their homes. An Australian study (Sushinsky and Rhodes, 2017) suggests that if you decrease the importance of public green space to increase private garden size, bird species richness decreases. For birds and insects to thrive, people should plant more trees, shrubs and flowers. Similarly local farmers can be stimulated to grow diverse bio-crops to create the conditions for species diversity. It is not sufficient to reserve a certain percentage of land to green space; quality and diversity of vegetation is also of importance.

Adhesion to the desired image will not exist however if the main stakeholders are not consulted. Regional and local authorities should join hands to organize these consultation rounds. In a second stage, the authorities need to create a powerful taskforce that can market the image and accompany change.

It would be helpful however if at a broader level fiscal measures would be taken to discourage freight transport by lorry and to stimulate local employment. As described by the author in an earlier edition of this journal in 2017, it would be beneficial for the

development of a sustainable urban society to progressively increase taxes on transport (mainly maritime and road transport) and to simultaneously decrease taxes on labour. This would be a major lever towards more local employment. Ideally these measures should be taken at the European level.

At the national and regional level, other fiscal measures can be helpful to reduce car traffic:

- decreasing the registration fees you have to pay when you buy a house, will encourage people to live closer to their work;
- increasing taxes on car use and decreasing the cost of public transport, will encourage people to use their cars less.

On top of that the public transport connection between the zone and the capital should be improved. It would also be beneficial if the administration inversed the move to centralizing education, healthcare and other public services and went for a more local approach.

Conclusion

Transforming a problem area like an in-between zone (in this particular case one that is part of a dispersed city) into a sustainable one that performs well, both in terms of efficiency as in terms of citizen well-being, is not an easy task. It does not only need a well coordinated planning approach but also requires an effort to mobilize the collective imagination to come up with a vision, a positive image, of what the area could become. It is no longer possible and acceptable that citizens try to find shelter from the problems of the public spaces by hiding in increasingly large private spaces. Communities have to conquer the public spaces again and need to make them work to their benefit. It would be helpful if these local efforts were part of a much broader public change process towards more sustainability, preferably at the European scale.

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- https://www.niel.be/Wonen & welzijn/Wonen/Bouwen en verbouwen/Bouwen en verbouwen/Ruimtelijke uitvoeringsplannen (RUP's) en verkavelingen
- https://www.schelle.be/Wonen & Ruimtelijke ordening/Bestemmingsplannen: gewestplan en RUP

Marc Moehlig

Marc Moehlig, a trained economist and a former executive in the chemical industry, gained expertise in areas like strategy, marketing, innovation and sustainability. He created a strategy consultancy firm, moved on to building management and is now preparing for other new ventures.