Cosmopolis VUB – LOUISE ULB – AMRP UGent

Working and Living in the Brussels Metropolitan Area: Mixity and X-essibility for livable urbanization

BMiX

Wonen en werken in de Brusselse metropool : op zoek naar paden voor leefbare verstedelijking

2014 – prfb – 63

Final report

Final date of the period this report covers : 31/12/2016
Date of submission of the report: 20/02/2017

Starting date of the project: 01/01/2015
Duration of the project : 24 months
Period covered by the activity report: final report for the period 01/01/2015 - 31/12/2016

Abstract

This report discusses the activities and results obtained over the first 24 months of the BMiX project. Due to the non-renewal of the project, this is also the final report for this project. The report discusses the most important findings in relation to the initial project goals. Starting from the hypothesis that mixity and good inward connections between living and working activities are crucial for a livable metropolitan area, the first results of this project pointed to somewhat different conclusions. First of all, it appeared that contradictions in current spatial and economic development instruments in the Brussels Capital Region (BCR) tend to push out productive activities –and employment opportunities, especially from newly mixed (or up-zoned) formerly industrial areas. To counter this, the project
proposes to operationalize the concept of the 'foundational economy' in spatial and economic development instruments, as a means to anchor employment opportunities in the BCR and its poorer neighborhoods. Secondly, the research found workers' jobs growth for the wider Brussels Metropolitan Region, but a decrease in the inner-city areas. A spatial regression analysis showed that low accessibility of peripheral jobs contributes to unemployment chances. Therefore, this project suggests to investigate the concept of 'reverse Transit Oriented Development' to develop affordable housing on primary public transport nodes within the BCR, in order to make peripheral jobs more accessible. Finally, a first research-by-design on the integrated development of such a transit node –the West Station area- allowed to preliminarily test these concepts in spatial terms.

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9. Sample of West Station Research-by-Design results.


11. Concept for an economic activity matrix for the Brussels metropolitan region.

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Project summary

1. Identification of the project:

Title of the project: Wonen en werken in de Brusselse metropool : op zoek naar paden voor leefbare verstedelijkking / Working and Living in the Brussels Metropolitan Area: MiXity and X-essibility for livable urbanization
Acronym: BMiX

2. Contract:

Reference number of the project: 2014 – prfb – 63
Duration of the project (in months): 24

3. Project Coordinator

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4. Project objectives and intended results

How can urban and peri-urban restructuring of the Brussels metropolitan region (BMR) contribute to a better balance between working and living, to an increase in the quality of life and a reduction in car dependency?

- Research Question 1: Where and how can functional mixity and densification be realized without compromising the livability of the city in both mixed and not (yet) mixed areas?
- Research Question 2: How can transit-oriented spatial development in the suburbs be organized in a balanced way? What are the barriers to overcome? Which are the appropriate areas, and what spatial configurations are possible?

Intended results WP1:

Define a series of areas for mixed use, to make an inventory of potential business typologies and livable urban housing typologies that may be or may not be combined. Subsequently, an aggregation and evaluation of these typologies will result in different scenarios of complementarity and mixing. The final goals of this work package are firstly, to develop a vision for urban mixed use on a metropolitan scale and secondly to identify realistic examplary typologies of mixity in order to practically assist companies, urban planners, the government and residents.

At the end of this work package the following elements have been developed and valorized in collaboration with the stakeholders (businesses, government, residents):

- A vision of mixed use in the city.
• An inventory of potential sites, indicative for the location of future businesses.
• An inventory of criteria and conditions for mixing of functions linked to economic valorization and urban livability: which features lend themselves to different sorts of mixity?

The resulting hypotheses are tested in specific locations of the Brussels Region by means of research by design, complemented with stakeholder surveys of potential managers, residents and public institutions and administrations involved in planning and urban development.

**Intended results WP 2:**
How can well-balanced, transit-oriented, urbanization of the Brussels periphery be organized, and what barriers could be identified in this context? From this conception, the work package’s working hypothesis is derived, which argues that transit-oriented peripheral urban development could contribute to a better alignment of the regional housing stock and labour market, to reduce car dependency, and to a more livable urban agglomeration. The answer to the research question should be elaborated in a vision of a well-organized and sustainable process of urbanization of the Brussels metropolitan area, impeded as little as possible by the presence of the regional-administrative boundaries.

The vision will be elaborated in collaboration with work package 3. The visioning process is part of the research, but also establishes the basis for the social valorization and outreach. Research results will be disseminated also well beyond the academic journals in professional journals, popular science publications, and in the press.

**Intended results WP3:**
Analysis of the spatial policy visions in Brussels and the Flemish periphery and analysis of upcoming projects with a major expected impact on the urban fabric of living and working in the Brussels metropolitan area. Next, through research by design and involvement of the various partners, a vision will be developed, in coproduction with the stakeholders. This work package supports thus WP 1 and 2, and is particularly developing an integrated vision and synthesis on a regional scale for new configurations of living and working areas in the Brussels Capital Region (BCR) and its hinterland, with an emphasis on the periphery of the agglomeration. This work package includes:

• The mapping of the different visions, projects and planning tools.
• A project fact sheet of the various projects.
• Mapping the impact of the major projects on the urban fabric.
• A synthetic spatial vision on a regional scale or at least a specific spatial synthesis of the pros and cons of different scenarios for the organization of the urban fabric of working and living in the Brussels Capital Region and its hinterland, taking into account the priorities and conditions of represented by the different stakeholders.

5. **Update of the planning**

For a detailed status of the progress of this research project we refer to the activity report. This provides a detailed overview of the tasks, based on the original GANTT-chart, and an overview of the activities carried out by the researchers with external partners, and their relation to the work packages.
6. General conclusions on the development of the project in the past period

Development of the project in the past period

Even if the general objectives of the project have clearly guided the research activities in Y1-2 of the project, some adjustments occurred in the actually performed tasks for this project. These adjustments were the result of:

- new insights obtained during the literature study in the first phases of the project, that resulted in the re-orientation of some of the original hypotheses of the research. This mainly affected WP1 and also resulted in the shift of some tasks between the researcher responsible for WP3 and WP1 (i.e. study of policy documents, the set-up of a matrix linking company profiles to characteristics of locations)
- a personnel change in WP2 (among other things due to an excessive burden of the PhD-trajectory including substantial course work as per university regulations, leading to demotivation), leading to a temporary delay, a delay that is however almost completely caught up by the end of Y2 in WP2
- the establishment of the IABR, TOP.noordrand and Productive Brussels trajectory, with involvement of the BCR, the Brussels Bouwmeester, by AWB: this trajectory focused specifically on a research-by-design investigation in architectural models for mixity for the Brussels Canal Zone. Therefore, the research by design in the BMiX project (mainly within WP3) was reoriented to cover different levels of scale, taking into account various productive chains, the issue of mobility and urban development around transport nodes, focusing on the site of the West Station in Brussels. In WP3, mid 2016 the set-up of a matrix combining spatial characteristics of locations, and profiles of businesses was initiated, in order to support the selection of case studies for Y3-4. This research action was aborted upon the non-renewal of the project, as it became an obsolete action.
- a too ambitious and detailed translation of research goals into the work packages. While the original jury warned for this, this warning was only conveyed to the researchers after the intermediate jury leading to the non-renewal of the project

Most important findings of the work packages

A primary result of the initial literature study and policy document review of work package 1 is the discovery of a systemic error in the use of planning instrument between the ZEE (~ZEUS) and the EAUD (~ZEMU/OGSO). Understanding the contradicting dynamics between these planning instruments in the Brussels Canal Zone, and their relation with other Brussels planning instruments (like EFRO/FEDER, neighborhood contracts and zoning plans) is crucial to reach an integrated application of spatial planning measures and spatial economic development instruments in the BCR (see De Boeck, Bassens, Ryckewaert, 2017 (forthcoming) – annex 2). Therefore WP1 investigated in much more detail than anticipated in the original proposal the planning instruments present in the Canal Zone. This gave us the opportunity to create new and specific Brussels knowledge about the relation between planning instruments and the urban economy. In their current shape, both instruments contradict and risk to counteract each other (see De Boeck, Bassens, Ryckewaert, 2017 (forthcoming) - annex 2). This is a first important analytical and scientific result, but it is also important for a future economic and spatial development vision for the BCR that meets the goals -set out in this project- of integrated and liveable development of housing and jobs in the Brussels Metropolitan Area. These early results

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also contradicted the original hypothesis in the research proposal that this integration between jobs and housing can best be obtained via ‘mixed’ development (see also further). This led to an adjustment of the research program. It became clear that a much better understanding was needed of which jobs could benefit best the inhabitants of the neighborhoods of Brussels’ poor inner city crescent. For this, the fruitful concept of the foundational economy, seemed a promising avenue of investigation. The implementation and concretization of spatial concepts for the foundational economy would be an important research goal for Y3-4 of this project. It was only investigated in preliminary, case based approach in two design investigation in WP3 for the West Station area, where notably the economic activities in relation to food and in relation to the second hand car trade were tested on various spatial scales. These results of WP1 are highly appreciated by perspective.brussels (our research godfather, ADT/ATO is integrated in perspective.brussels). Sarah De Boeck is invited to present these results in a closed hearing to perspective.brussels and BISA on the 31st of January. A follow presentation at Citydev, the other godfather of this project will be planned in the first months of 2017. A special internal working group is created within perspective.brussels to discuss the results about these dynamics because they touch upon an important ongoing debate (residential versus economic development, mixity, productive city, etc.) within the Brussels planning departments (BISA, Brussels Bouwmeester, perspective.brussels).

Work package 2 developed new knowledge about reversed commuting, job decentralization and the spatial mismatch hypothesis for low skilled workers. This led to an important contribution to the international scientific literature on the spatial mismatch hypothesis, applied to Brussels, and questioned some of the results of former research (Van Hamme et al., 2011) (Sansen et al., 2017 - to be submitted to Brussels Studies – annex 3). The research finds clear evidence for the hypothesis of job-decentralisation, as well as the fact that decreased job accessibility plays a role in rising unemployment in the Brussels Capital Region.

These finding can have important implications for both the employment, housing and transportation policies in the BCR and the wider BMR.

• Invest in strategies to accommodate low-skilled employment within the Brussels Capital Region. Given the inefficient public transit system towards job opportunities in the urban fringe, the ongoing decentralization of low skilled jobs fuels the inner-city unemployment rates. The results and concepts (e.g. foundational economy) obtained in WP1 can be integrated with the question how a livable mixing of housing and low skilled jobs can be achieved.
• pay attention to accommodating the reverse commuting pattern in mobility policies, to increase the accessibility of jobs in the periphery for Brussels’ workers and unemployed
• pursue a strategy of TOD, that also includes what we would call ‘reverse TOD’, meaning that transport hubs within the capital region, should not only be conceived as business centres, but also as primary locations for the development of affordable housing, to increase job accessibility for the population (this vision is particularly interesting for the West Station, and was, as such, tested in the research-by-design exercise in WP3)

In essence, this should be translated in a planning vision that aims to increase home-job accessibility. Such a vision was not developed yet in the BMIx project (part of Y3-4), but a similar vision was developed for the Flemish
core region, including Brussels, in a collaboration between the BMiX and the ‘critical mass’-project.

The assessment of the reverse commute and the impact of trends of the accessibility of the metropolitan labour market and unemployment in the Brussels Capital Region is to be viewed as the development of a piece of additional knowledge in order to nourish the process of regional visioning. Since spatial planning exercises are by definition staged in a context of incomplete knowledge, this preliminary analysis does not aim to provide a complete knowledge base, but wants to add a new perspective.

In order to prepare the use of such a partial analysis in a planning exercise, synergies were sought with the Critical Mass project, in which the necessary skills were developed with the intention to apply these at a later stage in the BMiX project, after completion of the analysis of the reverse commute and labour market accessibility. The synergy with the project Critical Mass, which studies the Flemish-Brussels Metropolitan Core Area, consists of a similar regional visioning exercise, nourished by a partial accessibility analysis, with a selection of rail-oriented development options as an intermediate result.

The skills on regional design supported by research developed through this synergy allow to investigate possible future processes of trans-regional-boundary urbanization based on principles of transit oriented development, and were included in the paper “Planning for agglomeration economies in a polycentric region: envisioning an efficient metropolitan core area in Belgium” which is under review at the journal dISP - The Planning Review (by Kobe Boussauw and Joren Sansen, in collaboration with a team at Ghent University) and was presented at the Aesop 2016 conference (Boussauw et al., 2017 (forthcoming) - annex 1).

Beside the analytical work on the reverse commute originating from the Brussels Capital Region resulted in a number of new findings, including the important growth of the reverse flows (a significant amount of more than 60,000 trajectories going outward the Brussels region every day!) and a significant effect of trends in labour accessibility on the odds of being employed (Sansen et al., 2017 (forthcoming) – annex 3).

During the set-up of the project and the start of work package 3, the Brussels Capital Region initiated a new debate that is closely related to the visioning and design part of the BMiX research: the debate of the productive city by the Brussels Bouwmeester, strengthened by the work done about the productive city by Architectural Workroom Brussels (AWB) in preparation of the International Architectural Biennale of Rotterdam in 2016. At the same time, at the metropolitan level, the TOP Noordrand initiative started where the Flemish and the Brussels region develop a common development vision at the cross section of their regional borders.

We decided to work in dialogue with the existing and ongoing research and tried to be complementary. Therefore the researchers involved in both WP1 and WP3 participated intensely in these initiatives by giving lectures and through participation at (design) workshops (see list of activities). Since these ongoing initiatives work on small scales, especially on the architectural scale of the parcel, the BMiX-project investigated different scales, from the neighborhood to the metropolitan scale.

An important investigation conducted in the frame of WP3 was the development of alternative design strategies for the site of the West Station at the request of godfather ADT-ATO. ADT-ATO had developed a project definition for this site (ADT/ATO, Etude de définition, Gare de l'Ouest, 2015) and wanted to further investigate if the proposed program (dominated by high density housing) would result in a workable lay out and livable quarter. As a transport node, the West Station site provides an interesting testing ground for a livable, transit-oriented neighborhood that could support the ‘reverse Transit Oriented Development’ concept of WP2.
The results of the research by design conducted in framework of BMiX by students of the Master in Urban Design and Spatial Planning of VUB focused on the one hand on a reduction of housing density with greater attention on the spatial opportunities in the surrounding area (existing porosity) in order to decompress the heavy program on the West Station site; on the other hand they focused on the high need of public and green spaces in the extremely dense neighbourhoods around the site and on the parallel need of public-common facilities for specific groups (schools and creches; spaces for youngsters and women). Moreover, they focused on a more systematic investigation on the inclusion of productive activities in the development of the site (as opposed to generic working and office spaces in the original ADT-ATO project definition) (see annex 9 & 10). This resulted in possible scenario’s for -among other things- food-related activities as well as car-related activities. In each of these cases, the proposals did not only focus on a typological and volumetric investigation within the West Station site, but also on the wider activity networks related to these activities, linking the West Station site to other locations within the BCR and its fringe (e.g. Pajottenland in the case of food). This has introduced a more dynamic perspective than simply a parcel or site specific approach, by looking at different kinds of flows.

Another result of the investigation that could potentially lead to a highly effective tool in order to have an overview of the compatible economic activities for the BRC and its fringes was the set up of a matrix linking company profiles to locational characteristics, spatial-architectural features, human internal requirements and contextual overview (employment profile; neighbourhood social composition), externalities and other activities required (i.e. looking at the industrial filière in which the economic activity is embedded), as well as mobility conditions (WP2) and their compatibility with the policy framework (WP1). Linking the results of the three work-packages, the matrix discussed above should have become an essential part of this investigation (see annex 11).

This research step was however discontinued upon non-renewal of the project.

**Overarching results of the project**

Even if the development of an integrated vision aimed at a better integration of living and working place, with the aim of increasing livability, is not yet achieved in the first two years of this project, we have put a number of crucial and integrated elements on the table that draw some conditions to reach such a vision:

- economic development policy in the BCR –and specifically in the poor crescent- should develop a particular vision of types of ‘in situ’ economic activities that are best suited to address unemployment. The concept of the foundational economy provides an analytical lens to make this selection. Preliminary tests concern investigations into the spatial prerequisites of the food and second hand car activities, future research will focus on the possibilities of spatial integration of the construction sector.
- A second step is to mutually adapt economic development policy and the spatial planning (regulatory) framework to accommodate the coexistence of such activities with housing in the BCR / Canal Area / Poor crescent. While the project proposal started out from the hypothesis that a ‘mixed’ development is the best approach for this, the research results so far indicate that this is not necessarily the case. Also, the architectural models developed in the parallel trajectory ‘Productive Brussels’ are not completely convincing in that respect, and raise as much questions as they raise answers for the feasibility of a parcel-by-parcel mixity
- The findings on job decentralization and the impact of decreased job accessibility on unemployment, bring to the fore a spatial development perspective that takes into account reverse commuting, and could
be termed preliminarily as ‘reverse Transit Oriented Development’.

- It introduces a different spatial development perspective. Transportation hubs around main inner city train stations have predominantly been conceived as primary work (and even office) locations. The findings on ‘reverse Transit Oriented Development’ as well the research-by-design for the West Station in WP3 both support an alternative vision for such locations as affordable housing development, in combination with small to medium scale productive activities that belong to the ‘foundational economy’.

Even if these ingredients at present do not present a planning blue print, they form an internally coherent set of visioning elements that can benefit the spatial economic development of the BCR.

7. General expectations for the coming period

Although the budget for this research project is not prolonged, new funding and research projects were obtained that allow to build further on the results achieved within this project.

- The VUB funded research ‘Building Brussels’: in this project, the concept of the ‘foundational economy’ will be operationalized with an application to the construction sector in Brussels, searching for future developing scenarios.
- The JPI urban Europe project Cities of Making (JPI Urban Europe – Innoviris): a comparative research between Brussels (Latitude, VUB, ULB), London (UCL) and Rotterdam (TUDelft) aiming at investigating the reintroduction and reinforcement of industry (manufacturing) in the city.
- The ‘B-REL’ project (Innoviris): this project will further investigate the question of livability and housing, from the perspective of residential environments and life perspectives; also the issue of suburbanization within the Brussels Metropolitan area will be addressed in this project. Aspects of the literature study of WP2 will be an input for this project.
- Inspired by the BMiX project description on the Cosmopolis website, Anna Plyustheva, at that time working as a researcher at the University College London, and Kobe Boussauw submitted a proposal for a Marie Sklodowska-Curie incoming fellowship, dealing with the link between transport policy and access to Brussels’ and Sofia’s labour market by the lower skilled. The proposal was awarded with a full postdoc scholarship for two years (€ 172,800 EU budget + € 30,000 VUB cofinancing), starting at February 1st, 2017.

8. Valorization perspectives

The overarching project results discussed in section 6 lead to direct policy recommendations for economic and spatial development policy in the Brussels Capital Region.

The most important are:

- The operationalization of the concept of the foundational economy in Brussels economic support measures.
- Adaptations to the spatial planning regulatory framework in the Brussels Capital Region. In particular,
reviewing the regulations pertaining to the ZEMU/OGSO; a regulatory approach for mixed development at the level above that of the individual parcel; instruments to control land value and prices in mixed areas such as ZEMU/OGSO.

- The inclusion of the findings on ‘reverse commuting’ and the potentiality of the wider job-pool in Brussels periphery in the employment, as well as vocational training policies in Brussels.
- The inclusion of the concept of ‘reverse Transit Oriented Development’ in the development perspectives of important train stations and other transport hubs within the Brussels capital region.

As far as the first and second elements are concerned, intensive collaborations are already developed with Brussels government agencies Perspective.Brussels, and the Bouwmeester (see activity report and publications list) and underway with Citydev.

All preliminary results have been discussed at the BMIX seminar on 30 May, 2016. This seminar was co-organized by project godfather Citydev, in the context of the chair it funded for the Brussels Studies Institute. This seminar aided in further focusing the scope of the project and was a first step to work towards a co-production of a spatial vision for the integrated development of working and living in the BMR (see annex 8).
Activity report

1. Detailed status of the work packages

WP1: “Where and how can we mix the functions of working and living without weakening the livability of the Brussels metropolitan region?”

Researcher: Sarah De Boeck

Objective: 50 %
Realized: 50 %

Initial objective of the WP:

The research question of this WP was where and how can we mix the functions of living and working without weakening the livability of the Brussels metropolitan region?

Results and deliverables: Based on the literature review and studying spatial-economic development policy documents in the Brussels Capital Region, we identified a systemic error within the planning instruments of Brussels. As a result, a deeper understanding was needed of the relation between planning instruments and the urban economy. Contrary to the hypothesis in the original dossier, this research led to the important conclusion that mixity is not always beneficiary for residents and economic players alike. Indeed, the economic activities and businesses, as well as the more vulnerable residents risk to be pushed away. By understanding the Brussels dynamics of real estate and connecting them to the existing planning instruments, we came to a critical reading of the ZEMU/OGSO and the ZEUS (together with several other planning instruments in the Canal Zone like for ex. EFRO/FEDER, PPAS Biestebroeck, PPAS Tour & Taxis and the neighborhood contracts) and came to the conclusion that in their present form it is not possible to reach their preconceived goals.

This resulted in the following deliverables:

- A new urban vision about mixity and especially about what productive economic activities can be hosted in the Brussels Canal Zone (De Boeck, Bassens, Ryckewaert, 2017 (forthcoming) – annex 2).

  A critical reading of the planning instruments related to mixity in the Brussels Canal Zone, related to real estate dynamics and urban economic development, together with a first set of proposals to adjust the existing planning instruments (De Boeck, Bassens, Ryckewaert, 2017 (forthcoming) – annex 2).

  Testing this vision through research by design was originally planned in Y3 and Y4. Due to the non-renewal, these tasks will not be performed.

- Preliminary versions of this paper were:

- As stated in the original proposal, a first start is made with the creation of a matrix of the economic activities on the Brussels metropolitan scale (not the local scale yet), selecting possible locations of productive activities (Task 1.2.2). This was done in collaboration with the researcher responsible for WP3.
- Several master thesis’s about mixity in the Brussels Canal Zone (Stephanie Van Opstal/VUB, Korian Thomas/UGent) and urban productive activities in the Northern fringe (Thomas Scholliers/VUB). It is important to note that the field work conducted by Thomas Scholliers in relationship to the BMiX-project led to a new methodology for mapping productive activities in urban areas, that is further developed by Ruimte Vlaanderen in the context of the TOP Noordrand project. The results of this were presented in the exhibition 'A Good City Has Industry', BOZAR, 26/10/2016-15/01/2017, as part of the BCR funded project 'The Productive City' conducted by Architecture Workroom Brussels.

Problems encountered: As a result of the adjusted hypothesis, and based on the results of the first research steps and literature review (see also section 6 of the project summary), it was decided to cancel the resident and entrepreneur surveys (task 1.1.4) as a better understanding of the policy framework and dynamics of planning proved to be more urgent to answer the research questions. Furthermore, we decided to readjust the in-depth interviews (task 1.1.5), focusing on interviews with policy makers and entrepreneurs, and dropping the resident interviews. The inconsistency of the planning policy was confirmed in the first interviews we did with 3 entrepreneurs (Abattoir, Drukkerij Gillis, Visuality).

Impact on the planning and on the project in general: The jury of the renewal judged this change in tasks 1.1.4 and 1.1.5 as too fundamental, playing a role in the non-renewal of the project. The Tasks forseen for Y3-4 cannot be executed. As mentioned in section 7 of the Project Summary and in sections 4 and 5 of the Activity Report, the obtained results will be used in other projects, and consultancy to Regional Policy Stakeholders such as Perspective.Brussels and BISA is planned.

Detailed description:

WP 1 Task 1 – Socio-demographic and spatial analysis

What has been achieved?

- Screening of different national and international policies with a focus on economics, employment, housing and mobility. A part of this screening, foreseen in WP3, is also done by the researcher responsible for WP1.
- Screening of the Brussels planning policy and related academic literature (GPDO, PRAS, PPAS Biestebroek, PPAS Tour & Taxis, Wijkcontracten, Plan Canal, PIO, ZEMU, ZEUS...).
- Screening academic literature on mixity in relation to real estate dynamics.
• Screening of academic literature on urban economic development within competitive territorial logic and looking for alternative/complementary development logics.

• A round of in depth-interviews with policy makers (Citydev, ADT-ATO/perspective.brussels, SAU, Brussels Bouwmeester, impulse.brussels) about the relation between mixity, planning policy and urban economic development.

What has partially / not been achieved?

• The surveys of entrepreneurs and residents were cancelled because of the adjusted hypothesis about mixity that needed a better understanding.

• The in depth-interviews of residents was cancelled. The adjusted hypotheses necessitated a better understanding of the relationship between policy and economic development. We deemed this was a necessary step with a higher priority before resident interviews could be considered.

• Three entrepreneurs were interviewed (see activity report). These interviews confirmed the inconsistency of planning policy in Brussels. We were planning to do more interviews with entrepreneurs that were more carefully chosen within the economic activity matrix (that was in development).

• A start was made with the development of an economic activity matrix for the Brussels metropolitan region in collaboration with the researcher of WP3. We were in the stage of the conceptual designing of the matrix, with the help of academic literature on industrial location (for ex. Mc Dermott & Taylor, 2009) and urban economic development literature and the use of the concept of ‘foundational economy’ (Bentham et al., 2013). This conceptual thinking and the creation of a matrix will be completed on a local scale in the new B² research to study the construction sector in Brussels.

WP 1 Task 2 – Research-by-design

What has been achieved?

• A first proposal of cases were preselected: Biestebroek (as a case were a lot of Brussels planning instruments come together and new policy frameworks are used for the first time, such as for ex. the negotiation of the Bouwmeester), Buda (as an interregional case in collaboration with TOP Noordrand), Birmingham (as a case that through its centrality can host different scenario’s, from an enlarged TOD node related to the West Station to a central distribution unit for the Westside and the city center of the BCR), and West Station (as a TOD node in collaboration with WP2). These cases had to be double checked with the economic activity matrix we were developing.

What has partially / not been achieved?

• Starting the development of local design strategies was not yet done. In collaboration with WP3 we were developing already an economic activity matrix on the metropolitan scale and were planning to
go step by step to the local scale.

- It was planned to start assisting a Design Studio on one of the preselected cases during the fall of 2016, but since the budget was not prolonged we chose to finish the publication planned for 2018 over starting new things that could not be valorized within this research.
- The other tasks of this WP1 were foreseen for 2017 and 2018 and are thus not performed.

WP 1 Task 3 – Questioning stakeholders

What has been achieved?

- Although this task of the work package was only foreseen for 2017 and 2018, we had the opportunity to work with TOP Noordrand and Architecture Workroom Brussels, and to have access to several departments and government agencies of the BCR. A part of the valorization is already done through a series of public lectures, a close collaboration with the interregional economic collaboration initiative TOP Noordrand, a close collaboration with the BCR’s subsidized initiative of ‘The Productive City’ with Architecture Workroom Brussels. Both initiatives offered us on several occasions a platform to present our research results. We had the advantage of having immediate access to all the important (interregional) stakeholders at once. We refer to the activity report for all the detailed information.
- The organization of the BMiX excursion on 11 May 2015.
- Organization and participation of the BMiX seminar on 30 May 2016.
- A start of the creation of an alternative/complementary vision on urban economic development for the BCR, based on concepts such as ‘foundational economy’, ‘productive city’, etc.
- A series of workshops with policy makers (Citydev, SAU, Stedenbouw.brussels, Brussels Bouwmeester, Team Canal, impulse.brussels) about the conflicting policy instruments, mixity and urban economic development. In all workshops, there was a great interest to further develop a vision around ‘foundational economy’ for the BCR and operationalize it into a workable economic development instrument.
- An important part of the valorization is done in close collaboration with perspective.brussels and BISA where we were invited to present our research results in a closed hearing on the 31/01/2017.

What has partially / not been achieved?

/
WP2: “Chances and barriers for a Brussels peripheral public transportation development”

Researcher: Nicolas Dewulf (partim), Joren Sansen, Kobe Boussauw

Objective: 50 %

Realized: 40 %

Initial objective of the WP: Providing a completed analysis of the dynamics of the housing and labour market in relation to the mobility and accessibility issues in the Brussels metropolitan region; a method to use the results from the analysis in a research by design visioning exercise.

Results and deliverables: A literature review on reverse commuting and transport poverty (Dewulf, 2016); a research report and article for Brussels Studies on the impact of suburbanizing employment in the Brussels Metropolitan Region on unemployment in the Brussels Capital Region (Sansen et al., 2017 (forthcoming) – annex 3); the methodological part of the article “Planning for agglomeration economies in a polycentric region: envisioning an efficient metropolitan core area in Belgium” (Boussauw et al., forthcoming). Preliminary versions of these papers were presented at a number of conferences and workshops, including the Aesop conferences of 2015 and 2016, the Belgian Geography Days (2015), the Belgian Senate (2015), the Future of Mobility – Mobilities of the future’ conference (2015), the MIVB conference ‘40 years of metro in Brussels’ (2016), and the BMIx Seminar (2016).

Problems encountered: Researcher and PhD student Nicolas Dewulf has resigned in January 2016 because of personal reasons. However, the recruitment of Joren Sansen, a geographer with extensive experience in related research projects, from March 1, 2016 has enabled a virtually seamless continuation of the work of WP2. The literature review, as well as the enhanced problem statement and the contacts with providers of useful data, have all built on the results of the work of Nicolas Dewulf and provided a solid basis for continuation of the work.

Impact on the planning and on the project in general: Delay of a couple of months.

Detailed description:

WP 2 Task 1 - Analysis:

What has been achieved:

- screening of policy documents, summarized in the 44 page preliminary report ‘Wonen en werken: een sociaal-ruimtelijke mismatch hypothese - Case Brussel: vervoersarmoede en pendel’ by Nicolas Dewulf (January 2016 - annex 7)

- literature review on transport poverty and reverse commuting, partly included in the report mentioned above and partly in the paper on spatial mismatch by Joren Sansen

- draft paper 'Obstakels voor ruimtelijke integratie van de arbeidsmarkt in de Brusselse metropolitane regio', preliminary version presented at Plandag 2016, complete version to be submitted to Brussels Studies by Joren Sansen and Kobe Boussauw, which is based on cartographic and statistical data analysis

- data collection on travel and socio-economic characteristics in Belgium from Statbel, RSZ, FOD
Mobiliteit, and KBO

- development of synergies with the ‘Critical Mass’ project, joint forces reflected in the paper “Planning for agglomeration economies in a polycentric region: envisioning an efficient metropolitan core area in Belgium” which is under review at the journal diSP - The Planning Review (by Kobe Boussauw and Joren Sansen, in collaboration with a team at Ghent University) and was presented at the Aesop 2016 conference

- dissemination at various conferences and workshops, among which an intervention in the Belgian Senate and the STIB conference (see activities overview) about the celebration of 40 years of metro

What has not been done:

- comparative research based on case studies comparable to the Brussels metropolitan region - not yet done since literature review and data analysis on Brussels are still ongoing

- research on anti-urban attitude - a preliminary analysis of this was launched as a master thesis proposal but no master students appeared to be interested

WP 2 Task 2 - Design:
What has been achieved:

- skills on regional design supported by research have been developed through synergy with the Critical Mass project, investigating possible future processes of trans-regional-boundary urbanization based on principles of transit oriented development, and were included in the paper ‘Planning for agglomeration economies in a polycentric region: envisioning an efficient metropolitan core area in Belgium’ which is under review at the journal diSP - The Planning Review (by Kobe Boussauw and Joren Sansen, in collaboration with a team at Ghent University) and was presented at the Aesop 2016 conference

- a master thesis proposal on transit oriented trans-regional-boundary urbanization was launched as a master thesis proposal and was taken up by master student Freja De Backer, focusing on a possible case of metro extension towards the municipality of Wemmel in the Brussels fringe, under supervision of Kobe Boussauw

What has not been done:

- a comprehensive design proposal for transit oriented urbanization apart from the Critical Mass design - mainly because this was supposed to come later in the project timeline (Y3-4)

WP 2 Task 3 - Stakeholder survey:
What has been achieved:

- skills on working with stakeholder workshops in the context of regional design have been developed through synergy with the Critical Mass project, during which an expert-stakeholder workshop was organized mid-2015 which involved stakeholders from Flemish and Brussels institutions, the results of
this were included in the paper “Planning for agglomeration economies in a polycentric region: envisioning an efficient metropolitan core area in Belgium” which is under review at the journal diSP - The Planning Review (by Kobe Boussauw and Joren Sansen, In collaboration with a team at Ghent University) and was presented at the Aesop 2016 conference

What has not been done:
- a comprehensive regional design based stakeholder survey or workshop series - mainly because this needed to happen in synergy with design proposals developed in WP3 which were supposed to come later in the project timeline (Y3-4)

WP3 : “The co-production of a spatial vision for working and living in the Brussels region and its hinterland through research by design”

Researcher: Fabio Vanin

Objective : 50 %
Realized : 30 %

Initial objective of the WP:
- an analysis of the spatial policy visions in Brussels and the Flemish periphery
- analysis of ongoing and upcoming projects with major impact on the living of BMR
- scenarios and vision through design research and involvement of different partners developed in co-production with the stakeholders (integrated vision and synthesis on a regional scale for new configurations of living and working in the Brussels Region and its hinterland, with emphasis on the outskirts of the agglomeration)

Obtained results and deliverables: We provided a critical analysis of mixed developments and on ongoing projects and research projects that will be available in a paper to be submitted to Brussels Studies (Vanin forthcoming) – annex 4). Moreover, the results of the design studio on West Station that took advantage of insights coming from the results of WP1 and 2 have been presented and exhibited publicly during the Bmix-seminar (annexes 8 & 10) and are available as 7 self-produced booklets (see annex 9 for 3 samples).

Problems you encountered: The time needed to gather knowledge and develop critical reflections as a base to develop research by design proposals (also from WP1 and 2) didn’t allow to start with the construction of regional scenarios that could have a holistic and broad approach but suggested to rather proceed with research by design on a test case (West Station). A matrix combining company profiles with locational characteristics was initiated, but due to the non-renewal of the project this task (originally planned as task 1.2.2 in WP1 but
elaborated collaboratively by the researchers responsible for WP1 and WP3) was cancelled (see annex 11 for a tentative outline).

Impact on the planning and the project in general: Despite the non-renewal of the project the obtained results have been and will be used in other projects, such as the recently awarded JPI Urban Europe – Innoviris 'Cities of Making' that focuses on the return of industry (manufacturing) in cities and they will be further discussed with institutional partners such as BMA, CityDev, BECI.

Detailed description:

WP 3 Task 1 - Analysis:

What has been achieved:

Overview of policies and visions and ongoing projects (external data and own-produced data): as already stated, since the focus of WP1 was mainly on the effectiveness of policies and planning tools this has been carried out mainly in close collaboration with the researcher responsible for WP1:

- **Screening of different policies with a focus on economics, employment, housing and mobility to the different approaches to detect and analyze.** This was achieved in WP1 (see results WP1) and also in WP2 when it comes to mobility issues (see results WP2). The policy framework has been used as a base for the design research carried on in the frame of the design studio MaSter (see WP3 task 3).

- **study of the urban projects:** this is primarily a morphological study to unfold the relationship to the neighbourhoods, the potential pollution (visual, noise, waste ..), the possible enhancement (reconversion, recrudescence) map, etc. This task has been achieved via the design studio MaSter and as a screening and critical reading of on-going projects and research projects. This includes a critical review of design strategies at the level of the parcel as presented and exhibited in the 'Productive City' project conducted by Architecture Worksroom Brussels, of design strategies that use a ‘metabolical approach’, studying the role of material and energy flows and related productive activities in the city as presented at the BMIx seminar by Nadia Casabella of 1010 and Olv Klijn of FABRIC, based on their work for the IABR Rotterdam and Metrolab Brussels (see annex 8). The results of both the design studio and this critical review of urban design strategies dealing with the place of productive activities in the city will appear in a paper by Fabio Vanin submitted to Brussels Studies, entitled ‘Living-Working: in search of a balanced approach’ (see annex 4).

What has partially / not been achieved:

- In addition: a programmatic analysis where we look at similar (competitive) activities in the surroundings. This task was meant to be developed through a matrix of economic activities of Brussels and its fringes that was including key parameters identified by the three WP during the first research phase. That task was only partially developed due to the interruption of the research (see annex 11).
WP 3 Task 2 - Organization of co-production with stakeholders:

What has been achieved:
- December 2015 / January 2016: a focus group with stakeholders. The purpose of this focus group was to provide different levels of ambition, bottlenecks, detect potentials in order to record different ambitions in the field and a first input from the stakeholders that can be included in the design research. This task has been accomplished: 1) by Sarah de Boek 2) by Fabio Vanin since September 2015 thanks to a series of meeting with the godfather ADT-ATO (see the table with the overview of activities).
- The presentation of the design studio results via a presentation and exhibition during the BMIx seminar served as a first step in co-producing a vision on the integration of productive activities in the city, by sharing these results with stakeholders such as Citydev, ADT-ATO, the BMA and invited researcher. In particular, the contributions on research-by-design by 1010 (Nadia Casabella) and FABRIC (Olv Klijn) provided additional viewpoints for the integration of productive activities in the city (namely from an 'urban metabolism' perspective).

WP 3 Task 3 - research by design:

What has been achieved:
- STEP 1: Research by design carried on the academic educational context of the research (The stakeholders and godfathers will be invited at the beginning of the process to give an explanation and will also be invited to all juries). This task has been fully achieved in the frame of the design studio 1 and 2 of the Master (VUB). The involvement of the godfather ADT-ATO and other actors such as CityDev, Infrabel have fully contributed to the discussion of the research by design and the proposals and they have participated to the mid and final juries (see overview of activities).
- test different possible scenarios on the regional scale: This task has been partially developed: taking West Station as a preferred test case for the first research phase, different scenarios that cover part of the region have been tested in the frame of the design studio and in accordance of the early results of WP1 and 2 (see annexes 9 & 10).

What has partially / not been achieved:
- test different possible scenarios on the regional scale: this has been partially achieved as explained above but the development of maximal and minimal scenarios (to test the optimization of quality of life and quality of the living environment for job creation and economic added value for example versus priority) that had to happen in the second research phase was not carried out due to the interruption of the research.
- STEP 2: developed scenarios in collaboration with WP1 and WP2 (July 2017-Dec 2017). Since the task was planned in 2017 and thus beyond the scope of the assigned budget until 31/12/2016 it was not achieved.
- STEP 3: (2018) a long-term international workshop with the obtained information. Since the task was planned in 2018 and thus beyond the scope of the assigned budget until 31/12/2016 it was not achieved.
## 2. Overview of activities

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Researcher</th>
<th>Participants</th>
<th>Organization</th>
<th>Related to WP</th>
<th>Valorization</th>
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<tbody>
<tr>
<td>31/01/2017</td>
<td>Closed hearing to discuss the results of the research</td>
<td>S. De Boeck, M. Ryckewaert</td>
<td>Perspective.brussels &amp; Bisa</td>
<td>Perspective.brussels &amp; Bisa</td>
<td>WP1-T1.3.3.</td>
<td>Lecture &amp; discussion with BCR departments</td>
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<tr>
<td>17/01/2017</td>
<td>Preparatory meeting for closed hearing 31/01</td>
<td>S. De Boeck</td>
<td>Frédéric Raynaud</td>
<td>Perspective.brussels</td>
<td>WP1-T1.3.3.</td>
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<tr>
<td>12/01/2017</td>
<td>Participation at debate 'The Productive City'</td>
<td>S. De Boeck</td>
<td>Alain Deneef, Stijn Oosterlynck, Marco Broekman, Bleri Lhesi &amp; Roeland Dudal</td>
<td>Architecture Workroom Brussels</td>
<td>WP1-T1.3.3.</td>
<td>Public debate</td>
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<tr>
<td>12/01/2016</td>
<td>Participation at masterclass</td>
<td>S. De Boeck</td>
<td>Roeland Dudal &amp; several stakeholders</td>
<td>Architecture Workroom Brussels</td>
<td>WP1-T1.3.1.</td>
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<tr>
<td>27/11/2016</td>
<td>Participation at debate</td>
<td>S. De Boeck</td>
<td>Chris Kesteloot, Veerle Devos, Lieven Soete, Saliha Rais</td>
<td>Louis Paul Boonkring</td>
<td>WP1-T1.3.3.</td>
<td>Public debate</td>
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<tr>
<td>25/11/2016</td>
<td>Conference presentation</td>
<td>K. Boussauw</td>
<td>International audience of transport planners and policy makers</td>
<td>MIVB conference ‘40 years of metro in Brussels’</td>
<td>WP2</td>
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<tr>
<td>21/10/2016</td>
<td>Workshop</td>
<td>S. De Boeck</td>
<td>Martine Gossuin</td>
<td>Citydev.brussels</td>
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<td>17/10/2016</td>
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<td>S. De Boeck</td>
<td>Simon Thielen, Murielle Laurent</td>
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<td>WP1-T1.3.1.</td>
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<tr>
<td>27/09/2016</td>
<td>Meeting presentation</td>
<td>J. Sansen</td>
<td>Peer PhD students</td>
<td>Lunch seminar, AMRP, UGent</td>
<td>WP2</td>
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<td>Date</td>
<td>Event Description</td>
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<td>14/09/2016</td>
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<td>S. De Boeck</td>
<td>Dhr. Gillis, Anderlecht</td>
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<td>08/09/2016</td>
<td>Preparatory meeting for workshop 29/09</td>
<td>S. De Boeck</td>
<td>Claire Huygebaert, Sau.brussels</td>
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<td>25/08/2016</td>
<td>Preparatory meeting for closed hearing on 31/01/2017</td>
<td>S. De Boeck</td>
<td>Christophe Soil, Ann De Cannière, Perspective.brussels</td>
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<td>18/07/2016</td>
<td>Interview</td>
<td>S. De Boeck</td>
<td>Mara Callaert, Visuality, Sint-Jans-Molenbeek</td>
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<td>15/07/2016</td>
<td>Workshop about theoretical antecedents concept 'foundational economy'</td>
<td>S. De Boeck, J. Sansen, M. Ryckewaert, D. Bassens</td>
<td>Michiel Van Meeteren, VUB</td>
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<td>3-8/07/2016</td>
<td>Conference presentation</td>
<td>J. Sansen, K. Boussauw</td>
<td>International audience of planning academics, AESOP/ WPSC Conference</td>
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<tr>
<td>01/07/2016</td>
<td>Present at lecture about urban economic development</td>
<td>S. De Boeck</td>
<td>Ewald Engelen, VUB, UvA</td>
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<td>10/06/2016</td>
<td>Lecture &amp; participation at Buda &amp; Skills workshop</td>
<td>S. De Boeck</td>
<td>Jan Zaman &amp; stakeholders, Ruimte Vlaanderen, TOP Noordrand</td>
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<td>09/06/2016</td>
<td>Interview</td>
<td>S. De Boeck, F. Vanin</td>
<td>Sophie Deboucq, Mohammed Benzaouia, Interenvironment Bruxelles</td>
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<td>30/05/2016</td>
<td>Bmix-seminar: 'Perspectives on Functional Mixing and Accessibility for a Livable Metropolitan Region' + exhibition design studio results 'Designing for mixed development and transit access: the case of the Brussels West Station'</td>
<td>K. Boussauw, S. De Boeck, J. Sansen, F. Vanin, M. Ryckewaert, L. Boeens, B. Moritz</td>
<td>Stakeholders Bmix-research, academics, VUB, Brussels Studies &amp; Citydev.brussels</td>
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<td>22/05/2016</td>
<td>Final presentation, jury and discussion at West Station hall</td>
<td>F. Vanin, M. Ryckewaert</td>
<td>Students MA Ster, A. Degros, Elisa Donders, Juliette Duchange, Kim de Rijck, Fabienne Lontie</td>
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<td>15/03/2016</td>
<td>Participation at workshop</td>
<td>S. De Boeck</td>
<td>Invited stakeholders of 'Ateliers Productive City', Architecture Workroom Brussels</td>
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Reference number 2014 – PRFB – 63 – Report after 24 months
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<td>11/03/2016</td>
<td>Seminar Biestebroeck</td>
<td>S. De Boeck</td>
<td>Open for everybody</td>
<td>Brussels Academy</td>
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<td>Public lecture</td>
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<td>17/12/2015</td>
<td>Mid presentation and discussion</td>
<td>F. Vanin</td>
<td>students MA Ster, A. Degros, Elisa Donders</td>
<td>VUB, ADT-ATO</td>
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<td>3/12/2015</td>
<td>Lunch Seminar Cosmopolis</td>
<td>N. Dewulf</td>
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<td>30/11/2015</td>
<td>Conference presentation</td>
<td>N. Dewulf, K. Boussauw</td>
<td>Flemish professionals and civil society working in the mobility sector</td>
<td>Research Seminar ‘Future of Mobility – Mobilities of the future’</td>
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<td>27/11/2015</td>
<td>Conference presentation</td>
<td>S. De Boeck</td>
<td>Vlaamse Ruimtelijke Plannersvereniging</td>
<td>Werelddag Stedenbouw, Kortrijk</td>
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<td>Public lecture</td>
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<td>16/11/2015</td>
<td>Meeting presentation (Dogma)</td>
<td>F. Vanin</td>
<td>students MA Ster, A. Degros, M. Tattara</td>
<td>DOGMA</td>
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<td>13/11/2015</td>
<td>Conference presentation</td>
<td>N. Dewulf, K. Boussauw</td>
<td>academic geographers</td>
<td>Belgian Geography Days, VUB</td>
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<td>13/11/2015</td>
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<td>Academic geographers</td>
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<td>Lecture</td>
<td>S. De Boeck</td>
<td>Stakeholders of ‘Ateliers Productive City’ Brussels</td>
<td>Architecture Workroom Brussels</td>
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<td>12/11/2015</td>
<td>Interview</td>
<td>S. De Boeck</td>
<td>Kristiaan Borret</td>
<td>Brussels Bouwmeester</td>
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<td>29/10/2015</td>
<td>Meeting presentation discussion on Mobility</td>
<td>F. Vanin</td>
<td>students MA Ster, A. Degros, Kim de Rijck</td>
<td>VUB, Eurostation</td>
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<td>19/10/2015</td>
<td>Commissioned presentation</td>
<td>K. Boussauw</td>
<td>Belgian senators</td>
<td>Belgian Senate, Commission: Matières transversales - Compétences régionales</td>
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<td>10/10/2015</td>
<td>Public debate, moderator</td>
<td>S. De Boeck</td>
<td>Doug Saunders, Paul Scheffer, Paul Blondeel, Bruno Meeus &amp; Kurt Deruyter</td>
<td>Huis De Buren</td>
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<td>03/10/2015</td>
<td>On site West Station excursion</td>
<td>F. Vanin</td>
<td>students MA Ster, Elisa Donders, A. Degros</td>
<td>ADT-ATO</td>
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<td>01/10/2015</td>
<td>Meeting presentation discussion on Policies</td>
<td>F. Vanin, S. de Boek students MA Ster, A. Degros</td>
<td>VUB</td>
<td>WP3</td>
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<td>29/09/2015</td>
<td>participation ADT-ATO seminar ‘Brussels as ecosystem’</td>
<td>F. Vanin Stakeholders, local and international audience, experts, academics</td>
<td>ADT-ATO</td>
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<td>18/09/2015</td>
<td>Meeting discussion on case studies with ADT-ATO</td>
<td>F. Vanin Rien van de Wal</td>
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<td>24/08/2015</td>
<td>Meeting case studies discussion</td>
<td>F. Vanin Juliette Dchange, A. Degros</td>
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<td>13-16/07/2015</td>
<td>Conference presentation</td>
<td>N. Dewulf, K. Boussauw international audience of planning academics</td>
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<td>07/07/2015</td>
<td>Presentation</td>
<td>S. De Boeck International students + policy makers + Mark Brearly</td>
<td>Cass Summer Cities School</td>
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<td>05/06/2015</td>
<td>Meeting presentation</td>
<td>N. Dewulf peer PhD students</td>
<td>Joint research meeting with the University of Amsterdam</td>
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<td>21/05/2015</td>
<td>Conference presentation</td>
<td>S. De Boeck International audience of planning academics, policy makers &amp; developers</td>
<td>Plandag 2015</td>
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<td>11/05/2015</td>
<td>BMIX excursion</td>
<td>K. Boussauw, S. De Boeck, N. Dewulf, F. Vanin, M. Ryckewaert, L. Boelens Brussels policy makers and project mentors Stakeholders Bmix-research</td>
<td>WP1-2-3 (annex 12)</td>
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<td>28/04/2015</td>
<td>Interview</td>
<td>S. De Boeck Yves Rouyet</td>
<td>ADT-ATO</td>
<td>WP1</td>
<td></td>
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<tr>
<td>23/04/2015</td>
<td>Interview</td>
<td>S. De Boeck Dirk Vandeputte</td>
<td>ADT-ATO</td>
<td>WP1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24/03/2015</td>
<td>Participation at workshop</td>
<td>S. De Boeck Invited stakeholders of TOP Noordrand</td>
<td>TOP Noordrand, Ruimte Vlaanderen</td>
<td>WP1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Valorization report

Partnerships

- Partnership with TOP Noordrand: participation at several workshops, participation at preparatory meetings for the creation of an application for funding with the Europe Innovative Action project. The mapping of enterprises in the Brussels Canal Zone by Ruimte Vlaanderen will be used in the new B² research project.

- Partnership with Perspective.Brussels: ATO-ADT changed into perspective.brussels. The ‘parrainage’ of the Bmix research was continued within the new government agency. The results of WP1 are presented in a closed hearing on 31/01, where employees of BISA were also invited.

Conferences organized


  See Annex 8. for the seminar program, presentation handouts and list of participants.

List of publications, publicity and media contributions

Articles


Conference papers


Conference presentations


Posters


Internal reports, notes


Popular media contributions

General knowledge developed on transport-land use interaction in the Brussels Metropolitan Region that was developed during the BMiX project served as background for a number of popular media contributions, including:

- De Tijd, 25 mei 2016: Boelens, L., Boonstra, B., Boussauw, K., Coppens, T., De Blust, G., De Decker, P., ... Van

- Radio 1, 5 mei 2016: Boussauw, K., in: Hautekiet: Interview over de rol van de auto in de stad

**Lectures and workshop participation**

The researchers are frequently consulted by various policy actors in the Brussels Capital Region concerning the obtained research results. See the table with overview of activities for a complete list of lectures and contributions.

**Actions for the protection of intellectual properties rights of the project results**

A full partnership with AWB Brussels in the context of the wide-audience oriented program of the IABR and Productive Brussels, could not be achieved, due to un-clarities on the use of project results and earlier negative experiences with this organization in terms of the sharing of research results. Nonetheless, mutual exchange was achieved on various occasions.

4. **List of assignments in Belgium or abroad in relation to the project**

*Projects ‘Critical Mass’ (Kritische Massa) and ‘Top Amenities’ (Topvoorzieningen) (2015), Ruimte Vlaanderen, Brussel, 2015*

**Project participants:** Project managers Flemish Government, Department of Spatial Planning

**Content of the project:** In the context of this study ‘critical mass’ means that urban structures can only be efficient if the sizes of their population and labour market exceed a certain threshold in order to benefit from the economies of scale of an economically relevant metropolitan area. The extent to which urban regions in the ‘Metropolitan Core Area’ (the central, most urbanized part of Flanders, also called’ Flemish Diamond ’) jointly contribute to a sufficient critical mass to function as an economically efficient urban agglomeration, now and in the future, was the main research question behind this study. In addition, the question was what urban form would be the most appropriate to serve this goal.

**Relation to the BMiX project:** This project is closely related to BMiX, in the sense that it works on a regional cross-border spatial development vision for the Brussels metropolitan region from a regional
economic point of view, and has managed to mobilize a number of actors on this theme.

Scientific and valorization results of the project: Publication of a series of research reports and an article under review with the scientific journal disP - The Planning Review.

5. List of annexes


   - Program
   - Presentations
   - List of participants

9. Sample of West Station Research-by-Design results.
   - Socio-economic challenges in West Station neighborhood of Sint-Jans-Molenbeek
   - A. M. Chavez Villanueva, J. Leysen, K. Van Bunder, 'West Station Connected'
   - J. Dirckx, I. Lammens, A. Rekkers, 'Back on Track. A social urban development plan'
   - W. Geens, N. Attaf, G. Vanhoutte, 'A new "capital" project'


11. Concept for an economic activity matrix for the Brussels metropolitan region.