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THE GOVERNANCE OF ECONOMIC RESILIENCE: 20 YEARS OF URBAN ADAPTATION PROJECTS IN BRUSSELS

Stephan KAMPELMANN
Sarah VAN HOLLEBEKE
Paula VANDERGERT

DULBEA I Université Libre de Bruxelles
Avenue F.D. Roosevelt, 50 - CP-140 I B-1050 Brussels I Belgium
THE GOVERNANCE OF ECONOMIC RESILIENCE:
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Stephan Kampelmann
*Université libre de Bruxelles / SBS-EM, DULBEA, CEB*

Sarah Van Hollebeke
*Université Catholique de Louvain*

Paula Vandergert
*University East London*

Abstract

This paper is an empirical investigation on how cities use urban renovation projects to adapt to structural economic change. We use methodological triangulation with case study evidence from Brussels to investigate causal links between the governance and the implementation of a large ongoing urban renovation programme that started in 1993. Having classified all investments in our database according to a list of urban adaptation tools, we are able to document how the governance of the programme influenced a) the allocation of funds to different adaptation tools; b) the content of intangible investments; c) the link between tangible and intangible investments. We conclude that urban renovation in Brussels is similar to policies in other cities in that it invested substantial resources both at the top and the bottom of adaptation governance, but that a disconnection between bottom-up and top-down strategies risks foregoing potential complementarities and synergies.

JEL codes: R11, R38, R58
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1. INTRODUCTION

Adaptation to structural economic change is a major challenge for urban economies: the secular decline of crafts, retail and industry has still not been digested in many European and North American cities, both in terms of labour market outcomes and the use of land and buildings. In this context, urban renovation projects are used by public authorities as strategic tools to adapt urban social-ecological systems to structural change, often with mitigated success. Different authors have argued that local economic policies are chronically prone to fads, mimicry and group-think (Lerner 2009), partly because planning professionals and local decision makers frequently lack a proper understanding of how urban adaptation projects are related to socio-economic outcomes. Instead of being opportunities for value creation and improved well-being they can even amplify inequities within the city.

Academic research has mainly focused on the relationships between “place-based” socioeconomic policies, on the one hand, and labour and housing market outcomes on the other hand (Bartik 1991; Nolan and Wong 2004; Glaeser and Gottlieb 2008; Busso et al 2013). Our paper adopts a different perspective and shows how urban renovation projects are influenced by the governance framework in which they are implemented. This is an important but so far neglected nexus given that understanding the link between governance and implementation is arguably a necessary condition for policy improvement.

Our empirical evidence on the governance-implementation nexus draws on the case of the main urban renovation programme in Brussels between 1994 and 2014, the “Neighbourhood Contracts” (NCs), a cooperation between local, regional and federal public authorities that is structurally similar to the “City Deals” in the UK and the “Empowerment Zone Program” in the US. The paper uses methodological triangulation based on 1) an exhaustive administrative database with all geolocalised urban renovation investments between 1994 and 2014; 2) a series of qualitative interviews with key stakeholders that we carried out in 2013 and 2014; 3) and action research addressing specific challenges related to local economic adaptation in three NCs in 2014.

The paper is structured as follows. First, we define the notion of structural economic change and its implications for urban renovation programmes. Second, we describe how Brussels urban renovation programme works, i.e. we present the key features of its governance framework and their evolution over time. Third, we present the administrative database and a classification of urban adaptation operations. Fourth, we draw on our qualitative and quantitative information to show the relationships between the governance framework and the main adaptation tools. Finally, the paper provides specific recommendations for Brussels’ and conclusions on the governance of urban adaptation policies in general.
2. REGIONAL STRUCTURAL CHANGE AND URBAN ADAPTATION

2.1 THE URBAN ECONOMY IN SOCIAL-ECOLOGICAL SYSTEMS

One of the central tenets of ecological economics is to stress the embeddedness of the economy in society and biophysical systems (Daly and Farley 2004). Research in urban ecology stresses the interactions between humans and nature in cities and provides models to distinguish two different forms of biophysical environment in urbanised contexts: the built environment - including houses, factories and infrastructures etc - and ecosystems - including trees, green spaces, lakes etc (Marzluff et al. 2008). In this paper we use a simple model in which the urban economy is wholly contained in the social environment, which in turn is wholly contained in the built and natural environments. Together, these different components form the urban ‘social-ecological system’ (Folke et al. 2005) that encompasses humans and their social and economic activities. The urban social-ecological system is a human-dominated system in which the economic, social and built systems (anthroposphere) exert large direct and indirect effects on ecosystems (atmosphere, biosphere, pedosphere, lithosphere, hydrosphere).

The urban economy and its interactions with other subsystems of the urban social-ecological system are in constant evolution in response to both endogenous and exogenous factors. Drawing on the terminology of evolutionary theory, a key relationship between economic activities and the surrounding social and biophysical systems can be expressed with the concept of ‘fitness’. A biological species that adapts through evolutionary processes to the conditions of the biotope in which it evolves displays a certain level of fitness, which often entails that the species’ behaviour, abilities and physical characteristics fit to surrounding conditions. Similarly, the evolutionary success of economic activities carried out in a given city depends on the extent to which they fit to the internal and external social and biophysical systems in which they develop. A change in the social, economic, political or environmental conditions, however, can challenge the fit between the city’s different subsystems and, as a consequence, require a process of adaptation.

2.2 THE CHALLENGE OF REGIONAL STRUCTURAL CHANGE

There are many endogeneous and exogeneous factors that challenge the ‘economic fitness’ of a city and potentially create a mismatch between the city's economic activities and its social and biophysical subsystems. Since the 1970s, urban agglomerations all over Europe were forced to adapt to ‘regional structural change’, a term used in economic geography to describe the consequences of strong social, economic, political or environmental forces that lead to fundamental changes in the overall structure of regional economies (Funder, 1996). These forces often develop over a period of several decades, are mostly exogeneous to the evolution of the regional economy and therefore are mostly beyond the control of city-regions (Moretti 2013; Clayton et al 2014). Economic drivers of such changes include the globalisation of production chains, financialisation, deindustrialisation/tertiarisation and the rising importance of...
agglomeration effects (many of these economic factors affected for example the industrial decline of the Ruhrgebiet in Germany); a political driver can be a country's decision to move its capital (as happened for example to the city of Bonn); demographic change and migration can be powerful social drivers (for instance in Los Angeles); and the depletion of natural resources such as the development and/or pollution of agricultural peri-urban land are environmental drivers of regional structural change.

Over the last three or four decades, regional structural change linked to secular economic drivers has challenged the fit of local economies to social and biophysical subsystems in virtually every large city in the Northern hemisphere. Some cities have been less successful than others in responding to regional structural change: agglomerations like Detroit, Cleveland or Rochester in the United States, for instance, that had previously prospered during the global boom in industrial machines and automobiles, have experienced prolonged social and economic crises and lost both population and employment since the 1980s (Hill et al. 2012, Cowell 2013). Also cities like Norilsk in Russia or Charleroi in Belgium have been slow in adapting to the secular decline of demand for their manufacturing and industrial production. By contrast, cities like Toronto in Canada (which is situated less than 400 km away from Detroit) and Lille in France (which is less than 150 km from Charleroi) provide more employment today than in the mid-1970s and have increased their population size over the last two decades. The contrasting evolution of Toronto/Detroit and Lille/Charleroi is not only striking in light of their geographical proximity, but also because their respective social and economic structure in the 1970s and their exposure to similar external economic forces over the last forty years.

The capacity of city-regions to adapt successfully to changing economic conditions has been associated with economic resilience (Chinitz 1961). While mainstream economists define resilience as 'bouncing back to previous growth paths' (Briguglio et al. 2009, Hill et al. 2012), researchers from other disciplines use the term to refer to dynamic shifts in systems with multiple equilibria (Pendall et al. 2010). In the study of regional structural change, economic resilience can be defined as a city's adaptive capacity to reduce mismatches between the city's economic, social and biophysical subsystems. Unfortunately, since the empirical literature on regional structural change is scattered across different academic disciplines and a patchwork of case studies with incommensurate scope and epistemology, there is currently no consensus regarding the empirical operationalisation of a city's capacity for economic adaptation.

2.3 The governance of urban adaptation

The capacity of cities to shape some of the features of their social-ecological systems invariably raises the question of who decides among alternative options and how such choices are made, i.e. questions about the politics and the policies that underlie change and adaptation (Newig et al. 2007). In the social sciences the analysis of these questions is increasingly framed as a governance problem and a rapidly expanding body of research addresses the relationships between the adaptation and the governance of social-ecological systems (Holling 2006, Kemp and Parto 2005, Brunner 2010). We define governance loosely as the confluence of policies and politics that involve interactions, participation and negotiation between a multiplicity of actors.

In the remainder of this section we distinguish between two complementary approaches to urban adaptation policies: the 'species perspective' and the 'system perspective'.

The 'species perspective' draws on analogies with the adaptation of species in evolutionary biology. A textbook example of this type of adaptation to regional structural change is industrial melanism. This adaptation mechanism has been famously observed by Bernard Kettlewell in
Biston betularia f., or peppered moth. Prior to the Industrial Revolution, the dominant melanic phenotype of the peppered moth population in Northern English cities was *Biston betularia f. typica*, whose body and wings are light grey and speckled (see Figure 2). However, in cities like Birmingham the massive combustion of coal in the second half of the 19th century and the ensuing pollution darkened both built and natural environments with thick layers of dust and soot, thus challenging the fitness of the light gray peppered moth but increasing the fitness of a darker phenotype of the same species called *Biston betularia f. carbonaria*. As a consequence, the relative frequency of *Biston betularia f. carbonaria* first increased during the Industrial Revolution and decreased again with the decline of English manufacturing industries and the advent of cleaner technologies (Majerus 2008).

**Figure 2: Biston betularia f. typica and Biston betularia f. carbonaria on a soot-covered oak tree.**

Industrial melanism refers to an adaptation process that occurs in populations of individual biological species; economic analogies referring to this type of adaptation can be associated with the ‘species perspective’. The literature in evolutionary economics sometimes employs analogies between the evolution of individual biological species and specific economic activities (e.g. an individual business) or a certain type of relatively similar economic activities (e.g. a business sector). But researchers also draw analogies between the evolution of biological species and larger social structures, for instance when analysing the evolution of institutions (Hodgson and Huang 2012). The ‘species perspective’ therefore focuses on adaptation strategies of individual actors/species, for instance when strategic decision of a business to switch from shipping goods by water to using roads as a response to changes in transportation technology and the relative costs of different transportation means.

The ‘system perspective’ on the adaptation of urban economies looks at the city as a social-ecological system. This viewpoint builds on analyses in system theory and scientific ecology, for instance on theories of cycles in system adaptation and change (Holling et al. 2002). Applied to the case of urban social-ecological systems, the ‘system perspective’ draws attention to the evolution of the urban system as a whole and in particular to changes that simultaneously affect the fitness of many different actors. While an individual company typically has to choose between water and road transport given the available infrastructure, the city as a whole can change this infrastructure and thereby alter the relative costs of different transportation technologies, for instance by building a modern port allowing larger ships to enter the city. Unlike the peppered moth which has to adapt to the consequences of fluctuations in soot

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1 The light typica phenotype is more visible to predators than the carbonaria phenotype. From the experiments of Dr. H.B.D. Kettlewell, University of Oxford; photograph by John S. Haywood.
emissions or the individual company that cannot build a new port on its own, anthropogenic systems such as cities have some discretion as to the quantity of coal they burn or the type of infrastructure they build. The level of this discretion is generally a function of the city’s own resources, but is chiefly influenced by the city's dependence on other, more encompassing social-ecological systems: for instance, a city can only build a new port if national or supranational bodies provide for a system of waterways or maritime routes that connects it to other ports.

To some extent, the study of the governance of urban adaptation arguably boils down to understanding the link between adaptation strategies that are emphasised in the 'species perspective' (e.g. the reaction of a company to switch from water to road transport as a response to changes in relative costs) and those that concern the system as a whole (e.g. a reconfiguration of the city's maritime infrastructure that affects relative costs of water and road transport). Indeed, both types of adaptations are constantly interacting: not only because changes at the system level need to anticipate the behaviour and needs of the different actors (it would not make sense to build a new port if there is no demand for water transportation), but also because decisions about the adaptation of the social-ecological system are ultimately taken and implemented by specific actors and not by an abstract ‘system’ (a coalition of business owners might lobby the city to invest in a bigger port). As a consequence, understanding the adaptation strategies of urban economies necessitates understanding governance framework in which these strategies are formulated (Hendricks and Grin 2007). A prominent strand of research in this area has developed ‘Transition Management’ as a normative tool for steering different social-ecological systems towards more sustainable configurations (Loorbach 2007).

Despite the increasing academic and policy interest for the governance of urban systems, empirical studies in this area are still rare. This can be partly attributed to the traditional focus of the governance literature on issues related to natural resource management such as forests or fishing stocks; indeed, only recently researchers have started to study urban social-ecological systems from a governance perspective (Vandergert et al. forthcoming). Our study therefore contributes significantly to the literature by providing a comprehensive empirical description of 1) the governance of the main planning tool through which the city-region Brussels tried to respond to regional structural change; 2) how this adaptation tool was implemented over the last twenty years; and 3) the causal links between the governance and the implementation of the city’s adaptation strategy.

3. BRUSSELS’ URBAN RENOVATION PROGRAMME

This section provides the background information on how the NC programme works and how its governance has evolved over time. Our account is mainly based on qualitative data collected in interviews with ten stakeholders from different levels of governance; observations of several local NC meetings; and the analysis of the academic and grey literature on the programme.2

2 So far several in-depth evaluations of the NC framework have been published: the 1994-1998 series was evaluated by Deloitte & Touche and Aries in cooperation with Benoît Moritz; the period 1997-2003 was evaluated by Archi+i: the series 1999-2001 by an academic team from UCL and ULB; Guérin et al (2007) is an overall overview over the entire period between the early 1990s until the mid
3.1. ORIGIN AND CONTEXT

The ideological and political underpinning of the NC developed over several decades (Lenel, 2013). It was in part a response to the city's long history of large-scale projects that have caused considerable nuisances and hardship to groups of the resident population and left visible scars in the urban tissue of central Brussels: the tunneling of the Senne river and the construction of the central boulevards, the construction of the maritime port, the railway junction between South and North stations and the new Central station, the complete reconfiguration of the Monts des Arts, the construction of the metro... each of these projects came with its share of uncertainties, expropriations, demolitions and large construction sites that lasted for years, sometimes even for decades (Demey 1990).

These projects arguably exacerbated the two historical features of the urbanization of Brussels since the mid-19th century, namely a) the centrifugal movement of middle- and upper-class households towards the periphery and b) the contrast between the relatively poor working class population in the former wetlands of the Western Senne valley (the “poor crescent”) and the bourgeoisie in the East. Since the disappearance of the Senne river from the public space, the Canal is generally considered as a physical and symbolic border between these two sectors.

After the 1970, structural economic change further accentuated the bipolarity of the city: the manufacturing industries in the canal area, traditionally the main employers of (to a large extent immigrant) workers, slowly but steadily declined. Having reached its maximum capacity in the mid-1970, the port lost much of its importance as the city’s transportation hub.

Mapping studies of Brussels that consider indicators of housing quality (physical decay of buildings, lack of green space, abandoned buildings etc) and indicators of "social disadvantages" (position on the labour market, income etc) continue to reveal the separation between the "poor crescent" and the rest of the city (Noël 2009, 222; Donzelot 2006, 13). Figure 3.1 shows the distribution of average income in tax declaration for different neighbourhoods and illustrates that outer neighbourhoods still tend to be richer than more central ones and that the concentration of relatively poorer neighbourhoods in the canal area.

2000s; Berger (2009) documents the participatory elements of the NC; Rossy (2004) is a first study on the integration of sustainable development criteria.
In 1989 the Region of Brussels-Capital was created, an institution that helped to articulate and defend the interests of the City of Brussels and 18 surrounding municipalities vis-à-vis the federal government and the other two regions of Belgium. The NC was one of the first important policy instruments developed by the young Region. Its inception was nurtured by a general consensus of the urgent need “to repair” parts of central Brussels. Indeed, since the 1970s residents and other local stakeholders had started to resist against some of the grand urban projects in movements organised by neighbourhood committees and other civil society associations such as the ARAU and Inter-Environnement Bruxelles. During the 1980s, rising social tensions and youth riots, especially in suburban France, added to the saliency of urban revitalisation in declining neighbourhoods. In fact, the conception of the initial NC framework was explicitly inspired by the French approach to social improvement to urban neighborhoods.3

The legislative basis of the programme was written in the early 1990s: the instrument was officially created in 1993 with the Ordonnance du 7 octobre 1993 organique de la revitalisation des quartiers. The first wave of NCs started in 1994, the second and third generations in 1997 and 1999. Since then, a new wave of NCs starts every year (Noël, 2009).

3 Interview with regional administrator, L., on 1 april 2015.
Initially, the stated political intention of the NC programme was to enhance the quality of life in precarious neighbourhoods by making them more attractive both for new residents and the incumbent population.

In order to target the neighbourhoods most in need of revitalisation, the regional authorities used a series of socio-economic criteria to define a priority zone from which each year neighbourhoods are selected. This perimeter was initially called *Espace de développement renforcé du logement et de la rénovation* (EDRLR, Figure 3.2) and defined in the first two *Plans Régionaux de Développement* in 1995 and 2002. This area covers neighbourhoods situated in the municipalities of Anderlecht, Auderghem, the City of Brussels, Etterbeek, Forest, Ixelles, Jette, Koekelberg, Molenbeek-Saint-Jean, Saint-Gilles, Saint-Josse-ten-Noode and Schaerbeek. The priority area has been redefined in the PRDD 2013 based on new socio-economic criteria (population density, unemployment, income); the new perimeter is called *Zone de revitalisation urbaine* (ZRU, Figure 3.3). Comparing the EDRLR and the ZRU, one observes that the intervention area has been expanded to the east and is less focused on neighbourhoods in the center of the city.

**Figure 3.2 EDRLR**

**Figure 3.3 ZRU**

Over the 1990s and 2000s, relatively new socio-demographic developments have arguably complexified the historically determined dichotomies of East-West and Centre-Periphery. Like other service-oriented urban economies, Brussels witnesses an influx of young professionals with high cultural capital who prefer living in inner city neighbourhoods to commuting to peripheral suburbs. A more idiosyncratic factor is a predicted “demographic boom” in neighborhoods with high unemployment and immigrant rates. Expected population growth is now firmly integrated into a political consensus in favour of increased supply of (social) housing and densification (Guerin, Maufroy and Raynaud 2007). It is crucial to note that these factors have not defused the social tensions but rather spurred new forms of “socio-spatial dualization”. One interviewee described the latter rather gloomily as follows:

“There is a dualization of the society and, in my opinion, it will end badly. In science fiction books, everything has already been written 10 times. It will end with private army, it will end with “gated communities”. I can already see how it goes in Molenbeek, the ‘gentrifiers’ renovate an old factory into lofts and then they barricade themselves with digital codes and grids.”

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4 Interview with a geographer and urban planner - regional agency on 1 February 2013.
In light of these developments, the NC remains a key policy for addressing the multiple socio-economic issues related to the neighbourhoods in the EDRLR/ZRU. It is widely regarded as a central instrument to improve the “territorial cohesion” of Brussels by undermining some of the socioeconomic segregations discussed above. Its often stated ideal is to create “urban and social mixity” in which groups with different socio-economic status and diverse origins live together (*vivre-ensemble*).

### 3.2. Key Actors and Relationships

The NC involves many actors at several levels, including federal actors (notably the Beliris investment fund), regional actors (the ministry and administration in charge of the programme and regional organisations), communal, local, associative and private actors. This section is an overview on the role of these actors in the NC programme and their interactions.

The cabinet of the regional ministry in charge of NC’s programme and its administration define the overall strategy and objectives of the programme through different services (BDU, DRU, ADT); these institutions provide the policy framework and are often perceived as operating at a certain distance and neutrality with respect to the interventions on the ground. The region contributes the largest share to the budget and controls to a large extent its allocation. The region has also “the final word” in the decision-making process on all important aspects of the programme. During the first 20 years of the NC, the authority of the Region was represented through the figure of its director Patrick Crahay and a small group of department officers. This first generation has built strong links with other emergent actors such as architecture companies, municipalities and associations who progressively developed in-depth knowledge of the programme. The NC are carried out according to predictable procedures and there has been relatively few controversies as to the overall policy framework and its effects on the participating neighbourhoods. Recently, however, the first generation of administrators has progressively been renewed⁵, which could give rise to a deeper evaluation and reform of the policy.

A second important pole of the programme are the municipalities. The latter are closer to the ground and implement regional decisions. Each municipality is divided into several departments with their own specialities (urban renovation, public spaces, participation, administration). Nevertheless, since 2004 each municipality is represented through the figure of the local programme manager who is the coordinator and the principal interlocutor of the responsible administrator in the Region. This function was created to simplify the interaction between the Region and the municipalities. The local programme managers represent and defend the interests of the municipalities during meetings with region. In practice, the local programme managers play an intermediary role between the region, their municipality respective municipality and the other actors who participate to the NC programmes such as associations and inhabitants.

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⁵ Interview with B. on 18 March 2014
The local programme managers are financed by the NC budget and are in general on four year contracts for the duration of a local programme. This turnover often provides new energy and a new perspective on the neighborhood that strengthen the municipality's adaptability to the evolutions in the neighborhood. Nevertheless, in interviews with local programme managers we also identified disadvantages to the turnover. The two most important are problems with the transmission of information, skills and experience between the programme managers, as well as the time pressure from having to implement all projects in only four years. Another difficulty faced by local programme managers is due to their role as intermediary between different levels of governance: in some situations they have to represent the viewpoint and interest of the region in front of inhabitants and associations, sometimes they have to communicate municipal or local interests. They are thus often the target of criticism and discontentments for decisions that are not necessarily their own.6

While the overall framework of the NC is fixed in regional regulation, we know from our interviews that the municipal perspective regularly clashes with regional interests. These clashes often involve political differences (e.g. the promotion of private or public services) and power games between the different stakeholders. There is spatial and temporal variation between different NC programmes given that their design and implementation depends to some extent on the vision and capabilities of the local municipality of the selected neighbourhood and on the sensibility of other persons present around the table (NC's minister, the local programme manager and his hierarchy). For instance, the regional administration tends to view socio-economic operations as answers to important socio-economic issues at the regional level (such as unemployment, demographic boom, aging population,...). For field actors, however, socioeconomic operations involve associations that are subsidised independently from the ability to respond to regional objectives. For them, the priority is to identify the needs of the neighbourhood which could vary from regional socio-economic needs.7

In order to attenuate these conflicts, different modes of participation in the NC programme have been systematically improved and extended (Berger 2009). All involved actors have also adjusted their interactions due to learning effects and the accumulated experience of administrations, planners and civil society actors with the NC procedures (Moritz 2011).

3.4. LIFECYCLE AND DECISION-MAKING PROCESS OF LOCAL PROGRAMMES

A local NC programme covers a project phase of 4 years, preceded by nine months during which the programme is established and succeeded by two years to complete all interventions. The total duration of a local NC programme spans thus around 7 years. It should be noted that this is a relatively short period of time to carry out some of the more complex operations, especially if projects involve the acquisition/expropriation of privately owned land or real estate (CREAT 2008).

A local programme starts with a preparatory phase referred to as "year zero" in which the local municipality is the central actor. The municipal service in charge of urban renovation typically begins by identifying a physical parameter with recognizable needs and opportunities for

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6 Interview with S. on 15 may 2014
7 Interview with S. on 15 may 2014
neighbourhood revitalisation. For example, a local programme manager described to us the case where a municipality identified a stock of old social housing in a neighbourhood as an investment opportunity that led to the decision of applying for a NC in this neighbourhood. This preparatory work by the municipality then feeds into the official application in the annual call for proposals issued by the Region, who evaluates the incoming applications from all municipalities and selects three or four perimeters in different municipalities for funding. Shortly after this decision the Region and the municipalities set up a joint steering committee; most municipalities hire the local programme manager at this point.

The majority of strategic decisions on the general orientation and budget allocation of a local NC are taken in “year 1” leading to a “base programme”, i.e. a comprehensive document listing all envisaged projects and financial envelopes necessary for their implementation. The process of drafting this base programme is generally delegated to a professional planning company which works closely with the local programme manager and his unit at the municipality. The methodology with which the planning company drafts this programme differs between NCs and is partly determined by the criteria in the public tender through which the company is selected. In one NC in Molenbeek, for instance, the municipality worked with an external academic from the UCL to develop a participatory process including surveys and focus groups through which the planning companies (in this case the companies Art engineering and Urban Platform) had to interact with the resident population and other local stakeholders. Other municipalities are less inclined to use additional participatory methods other than those fixed by the regional regulation. A regional administrator told us that this phase of the project is very dense, as numerous local organisations and municipal services try to influence the base programme in order to include projects and budget lines that correspond to their activities. Another interviewee from the regional administration argued that the development of the base programme should be described as an “informational process” rather than a co-decision with stakeholders from the neighbourhood, thus emphasising the limited power of the local population to influence municipal or regional investment priorities. Once the planning company finishes the base programme it is submitted for approval to the municipal council and the regional government.

In “year 2” some projects start to be implemented. This mainly concerns intangible operations that do not require further planning or permissions and means that the chronology of tangible and intangible operations differs markedly: the latter are concentrated in years 2-4, whereas most of the former do not start before year 4. Moreover, the "year 2" is pivotal because it marks the latest moment after which no further modifications to the base programme are possible. Indeed, it is common that municipalities request one or several modifications to the initial programme.

Each year concludes with a process of formal reporting through which the municipalities and regional administration collect information on how the annual budget was spent. During the year, regular meetings with local stakeholders are organised in order to present updates on past or future interventions.

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8 Interview with local programme manager, S., on 15 May 2014.
9 Interview with regional administrator, M., on 1 April 2014.
10 Interview with regional administrator, L., on 1 April 2014.
All investments in the base programme have to be spent until the end of year 4. For tangible operations this means that the contractor has to be selected and the associated expense validated by the municipality. Projects that have not reached this stage at the end of year 4 lose all funds and disappear. However, many of the actual physical interventions are carried out in the two years after the end of the official NC programme. Some NC programmes take advantage of this sequence of intangible and tangible operations by first using buildings for socio-economic activities (such as temporary sport workshops) before they are converted to their final purpose (such as a school or kindergarten), as is done in the NC “Bockstael” in Laeken.

3.5. ECONOMIC, ENVIRONMENTAL AND TERRITORIAL DIMENSIONS

The overall governance framework of the NC has been relatively stable over the last 20 years. The elements of the programme that arguably evolved the most relate to the economic, environmental and territorial dimensions of the NC that we briefly describe in the remainder of this section.

Economic dimension

Following the example of French neighbourhood revitalisation programmes, the initial set-up of the programme already foresaw actions favouring the social cohesion in the selection neighbourhoods, such as neighbourhood gatherings, sport or cultural activities for youth, other socio-cultural events etc. Many local socio-economic projects in the NC were designed to help residents in establishing social contacts and provide them with more information on their immediate environment\(^{11}\) and targeted three groups in particular, namely unemployed individuals, youth and women.

While no scientific evaluation regarding the effects of NC programmes on local labour and housing markets has been undertaken, in the late 1990s policy makers started to raise concerns about the socio-economic performance of framework; the programme was notably appearing to fail in helping to provide basic needs such as decent housing and employment. To address these concerns, a modification of the regulation attempted to improve the conception and implementation of social cohesion initiatives in the NC by reinforcing their socio-economic dimension in 2001. Comhaire and Sacco (2007) go as far as describing the corresponding modifications as the “socio-economic turn” of the NC programme. On any account, there is a general consensus that the importance of the socio-economic element of the policy has increased over time.

Although the political objectives of the NC are formulated in terms of rather general outcomes such as “quality of life” and “social mixity”, most local programme managers emphasise that the local labour market is seen as the top priority for the residents in NC neighbourhoods. One interviewee even considered employment as the main vector of integration and fulfilment:

\(^{11}\) Interview with H. on 15 may 2014
“When the individual has a job, he has more income and then can have its housing, have activities with her family,... So employment is really the key (...) Because when you have a job it is easier to be integrated on the social level”.\textsuperscript{12}

Despite such prioritization of the local economy, we have to bear in mind that the NC programme is not an economic policy. This is underlined by the fact that it is not overseen by the Ministry of Economy and Employment but by successive regional ministerial portfolios without explicit competence in economic matters: during the mandates of Evelyne Huytebroeck (2004-2009 and 2009-2014) it was overseen by the Ministry of Environment; since 2014 it is part of the portfolio of Minister-President Rudi Vervoort. Moreover, important regional economic agencies such as Impulse or the Agence Bruxelloise pour l’Entreprise do not intervene in any capacity in the NC programme.

The fact that the regional authorities in charge of the urban renovation programme have no competence in economic affairs does of course not preclude that the NC programme aims to improve the economic conditions in the neighbourhoods in which it invests. But instead of addressing economic issues frontally, local programmes often include indirect strategies to improve the local business environment (e.g. by investing into commercial space or amenities), the employability of residents (e.g. by providing specialised training programmes) or the impact of lower incomes and labour market chances (e.g. by increasing the supply of social housing and subsidized services). In many cases, the strategy for local economic improvement is based on the premise that employability, especially of young individuals in relatively poor neighbourhoods, requires socialisation and integration in the public life in the neighbourhood.\textsuperscript{13} Moreover, the NC programmes are regarded as a laboratory in which innovative economic policies can be experimented before they are up-scaled to other neighbourhoods. Finally, even with no explicit mandate for economic affairs the substantial place-based investments of the urban renovation policy are bound generate a series of economic effects in the neighbourhoods in question. For example, we interviewed the owner of several industrial buildings on the canal in Molenbeek who said that the NC in this neighbourhood had “obvious” and “considerable” positive effects on the value of his real estate assets.\textsuperscript{14}

\textit{Environmental dimension}

Over the past 20 years, the environmental aspects of neighbourhood revitalisation have moved from the periphery to the core of the vocabulary related to the NC programme. While the initial objective of the policy did not include any explicit reference to sustainable development (Rossy 2004), since 2010 the latter have been declared as the transversal backbone of the entire framework, which consequently has been renamed \textit{Sustainable Neighbourhood Contracts}.

This being said, the reference to sustainability probably reflects a rebranding or reinforcement rather than a fundamental change in the governance of the programme. Although the initial ambition of the NC was not chiefly environmental, there is a range of potential channels through which all neighbourhood programmes impacted on local ecosystems. The initial absence of explicit sustainable development criteria was in practice often replaced with implicit criteria, in

\textsuperscript{12} Interview with H. on 15 may 2014  
\textsuperscript{13} Interview with ministerial cabinet member, B., on 18 march 2014.  
\textsuperscript{14} Interview with property owner in canal area, B., on 6 november 2014.
many places through the knowledge and vision of the involved actors (see the interviews with administrators and planners by Rossy, 2004).

Indeed, from the beginning the NC adopted a voluntaristic stance on replacement ecosystem services in buildings, notably by reducing the energy demand through ecological heating systems, insulation and rainwater management. Moreover, the conception of new or re-conception of existing green spaces within the neighbourhood has obvious impacts on local ecosystems, for instance through the choice of vegetation, their extent and envisaged use. The objective of creating new housing also affects the environment by potentially increasing the extent of impervious surfaces in the neighbourhood (Kampelmann 2014).

**Territorial dimension**

Prior to the NC programme, the scale of urban renovation interventions was at the level of a block of buildings (îlot). This policy came to be regarded as ineffective, notably because the multitude of stakeholders and owners involved in a typical block created a range of legal and procedural difficulties that blocked or delayed numerous projects in the 1980s.

Instead of focusing on a single block, local NC programmes target an entire neighbourhood comprised of several streets or blocks. This allowed for the responding to investment opportunities, such as a brownfields or abandoned buildings, that are scattered across a neighbourhood. Recently, a modification of this territorial strategy was initiated in 2013 through the *Plan Guide de la Rénovation urbaine durable*. This *Plan Guide* provides the basis for a new urban renovation governance in which new types of territorial strategies could complement or even replace the territorial strategy of neighbourhood contracts, for instance by targeting blocks or topographical axes. Instead of implementing the NCs in individual municipalities, the Plan Guide also foresees partnerships between municipalities. This being said, it is still too early to assess which elements of the Plan Guide will actually be implemented and how exactly it will affect urban renovation in Brussels.

### 4. DATABASE AND DESCRIPTIVE STATISTICS

In this section we describe the database we used for our analysis. We also provide detailed information on the data treatments we made to classify the individual urban renovation investments.

#### 4.1 DESCRIPTION OF DATABASE

This paper is the first to exploit an exhaustive administrative dataset on all urban renovation investments under the Neighbourhood Contracts programme (NC) that have been carried out in the Brussels region between 1994 and 2014. The data has been collected and provided to us by the Directorate for Urban Renovation (DRU), the public agency in charge of running the programme for the regional government. All municipalities and local project managers directly report programme statistics to the DRU through standardised procedures. The database covers all completed and on-going operations since the start of the programme in 1994.
The structure of the database reflects the structure of the NC: information on each individual investments (e.g. the construction of a new kindergarten) is nested in a Neighbourhood Contract (e.g. the perimeter “Small Senne”) which in turn is located in one of the 19 municipalities of the Brussels region. This means that all investments can be localised within the perimeter of the Neighbourhood Contract in which they were made. Moreover, investments that involve physical interventions on buildings or public space can be localised even more precisely through GIS. The DRU further collects data on the date, type and subtype of each investment. For most operations it is also possible to identify the organisation that was involved in its implementation (e.g. a planning or construction company, a local NGO, municipal services etc). For certain types of investments the DRU has information on key characteristics that it collects for internal project evaluation, such as the number, size and types of housing units in housing operations or the number of kindergarten places in public facility operations.

The data quality is closely monitored by the regional administration and generally very high. We detected only minor inconsistencies that are probably due to data entry mistakes and concerned less than 1% of observations. A more relevant lacuna of the database is missing information for operations financed by the federal government through the Beliris programme. Although in all cases the type of investment can still be identified, information on subtypes is often not available. A minor problem is that some investments concerning a single object (e.g. a new kindergarten) have been split into several operations (e.g. the acquisition of the land and the construction of the building are counted as two separate operations). As a consequence, the information on the number of operations per type of investment is artificially inflated. The total financial amounts per spending category are not affected by this issue.

In order to be able to compare financial variables over time we have deflated all monetary values with the Belgian consumer price index based in 2013. All financial statistics shown in this paper are based on deflated values.

By the end of 2014, a total of 75 Neighbourhood Contracts have been signed between the regional and local administrations. In 80% of them all investments are either already completed or underway; in the remaining 20% of NCs the investments are only partially completed and some of the planned investments are therefore potentially subject to modifications at a later stage (see Section 3).

The total cumulated investment for all NCs that started in the last 20 years is 1.14 billion euros. The average size of a NC is 15.14 million euros, but many local programmes are much smaller or bigger compared to this average. The total bill was cheapest for the NC "Wielemans“ in Forest that started in 1994 (3.85 million euros) and highest for the NC "Jardin aux Fleurs" in Bruxelles-Ville from 2011 (40.41 million euros).

The funds were spent on 1,933 different operations so that each NC combines on average 26 individual operations. Some of the operations in the database refer to the local management of the NC rather than genuine urban renovation investments. According to our calculations, this concerns 188 operations totalling 30.79 million euros.15

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15 Two types of operations were counted as related to local project management. First, operations that the DRU categorises as "Coordination", which in most cases refers to the salary of the local project manager. Second, we also included operations that the DRU categorises as
More than half of the total NC programme has been financed by the Brussels Capital Region (55%). The group of municipalities is the second largest source of funding (22%). The initial regulation foresaw that municipalities had to co-finance the instrument at 30%, but this was soon perceived as too heavy a burden for the relatively poor EDRLR municipalities so the co-financing quota was reduced to 10 percent in 2001 and stands at 5% today. The federal government also invested in the NC programme through a cooperation with the Beliris fund: 16% of the entire investment over the last 20 years were funded in this way.16 Finally, 7% of the NC programme are financed by other sources such as public-private partnerships for housing projects or privately run kindergartens. Figure 4.1 presents the evolution of cumulated investments in the NC programme by sources of funding. It shows that the NCs that started in the 1990s were almost entirely co-financed by the Region and the local municipalities. From 2000 onwards federal and other investments have become a substantial source of financing as the share of municipal funding declined.

The existence of both tangible and intangible operations in the NC programme corresponds to the administrative distinction between “bricks categories” (which the DRU further splits into “housing”, “facilities”, and “public space”), on the one hand, and “socioeconomic” and “coordination” operations on the other hand. We used this distinction to divide the population of 1,933 operations into 1,022 “tangible operations” that modify the physical environment of the neighbourhood and 911 “intangible operations” that mostly involve people. The predominance of tangible operations becomes even more pronounced once we account for the fact that the average tangible operation is more than four times more expensive than the average intangible operation (see Table 4.1). As a consequence, 84.5% of the 1.14 billion euros invested in NCs are related to physical modifications of neighbourhoods, while only 12.8% were intangible investments other than local project management.

The NC programme was implemented in 11 municipalities of the Brussels Capital Region. Figure 4.2 shows the distribution of total spending by municipality. The large shares of the Ville de Bruxelles (31%), Molenbeek (16%), Schaerbeek (12%) and Anderlecht (11%) reflect the relatively large areas of these municipalities that lie within the eligible zone for NC programmes: 45 of the 75 neighbourhoods are situated in one of these four municipalities. By contrast, Etterbeek and Jette each signed only one NC.

| Table 4.1: Number of operations and total investment (1994-2014) |
|-----------------|-----------------|-----------------|-----------------|
|                 | Number of operations | Average investment | Total investment  |
| Total tangible operations | 1,022 | 938,424 € | 959,069,000 € |

"Socioeconomic" but whose description refers to project management tasks like coordination, communication, meetings, information etc. It should be noted that the total amount of 30.79 millions euros does not account for regional and federal management costs such as the personnel costs of the DRU or Beliris. Total programme management costs are therefore likely to be considerably higher.

16 Also another urban renovation policy, the Quartier des Initiatives, was absorbed and incorporated into the NC programme with the Ordonnance du 20 juillet 2000 (Thibaut, 2001).
Total intangible operations, of which:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>911</td>
<td>193,418 €</td>
<td>176,204,000 €</td>
</tr>
<tr>
<td>Programme management(^{17})</td>
<td>188</td>
<td>164,000 €</td>
<td>30,785,000 €</td>
</tr>
<tr>
<td>TOTAL OPERATIONS</td>
<td>1,933</td>
<td>587,311 €</td>
<td>1,135,273,000 €</td>
</tr>
</tbody>
</table>

Note: Funding amounts in constant 2013 euros.

**Table 4.1: Cumulated investment by source of funding (1994-2014)**

Note: Funding amounts in constant 2013 euros

**Figure 4.2: Distribution of funds by municipality (1994-2014)**

\(^{17}\) Excludes regional and federal programme management costs (see previous footnote).
4.2 Classification of operations

Cities engage in many different types of urban renovation strategies. However, without grouping this diversity of strategies together in a relatively short list of urban renovation tools it is difficult to analyse the implementation of a programme such as the NCs. Indeed, one of the main obstacles for project evaluation that repeatedly came up during our interviewees was that certain categories used by the administrators of the NC, especially the "socioeconomic" budget line, are extremely blurry and refer to a range of rather distinct activities.

Table 4.1 shows a list of six categories of urban renovation tools that are arguably the most frequently encountered in the literature in urban planning and urban economics. Four of these tools are recommended in a recent report on the adaptation of cities to the polarisation of local labour markets by the Centre for Cities (Clayton et al. 2014): its authors recommend that cities should adapt to changing labour market economics by enabling them to make transport more affordable (infrastructure tool); by engaging in demand and supply policies such as career schemes for local employers and training programmes for local employees (local economy tool); by investing in affordable childcare institutions (public facilities tool); and by building new residential houses (housing).

Variations of these tools have been implemented in different "distressed neighbourhoods around the world. The UK government has created “City Deals” or “Local Growth Deals” that have focused on “housing, transport and skills” (Clayton et al. 2014, p. 31). The US government has created the “Empowerment Zone (EZ) Program” in order to encourage economic, physical, and social investment in the neediest urban areas of the United States. The selected EZs notably received funds to be used for business assistance, infrastructure investment, physical
development, training programs, youth services, promotion of homeownership and emergency housing assistance (Busso et al 2013).

Two more socially oriented tools can be added to those recommended by the Centre for Cities: investments in amenities and social cohesion. The first can be defined as desirable urban features such as parks, lakes or a beautiful panorama and are regarded by some urban economists as an important driver for attracting a new class of “creative workers” to local labour markets (Florida 2002, Glaeser 2005). Social cohesion tools can be defined as public interventions with the specific aim of improving the relations within a community. Table 4.2 provides a brief definition for each tool and an example from the agglomeration of Lille in France. The latter undertook ambitious urban renovation projects after the decline of the industrial activities of the Lille area since the 1980s and to make better use of industrial and military space in the southern part of the city. Many elements of this programme were implemented according to a masterplan that Euralille, a public-private partnership, commissioned in 1989 to the renowned Dutch architect Rem Koolhaas on a site of more than 120 ha (Newman and Thornley 2002). The initial masterplan has been extended through the Euralille 2 programme (22 ha), a third section called Euralille 3 is currently in planning.

**Table 4.2: List of main urban adaptation tools**

<table>
<thead>
<tr>
<th>Adaptation tool</th>
<th>Definition</th>
<th>Example from Euralille programme</th>
<th>Classification applied to NC database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amenities</td>
<td>Creation or improvement of desirable urban features such as parks, lakes, a beautiful panorama or cultural activities</td>
<td>Park &quot;Henri Matisse&quot;, Lille3000 festivals, “Tri Postal” exhibition space, “Aeronef” concert hall</td>
<td>Amenities &amp; infrastructure</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Creation of improvement of interconnected structural elements supporting the city’s development</td>
<td>Lille Europe international high-speed train station, parking space under office towers and hotels</td>
<td></td>
</tr>
<tr>
<td>Local economy</td>
<td>Support for local economic activities</td>
<td>Euralille shopping centre, six hotels, “Grand Palais” conference centre, Tour de Lille, Tour Lilleurope and Eurocity I-V office towers</td>
<td>Local economy</td>
</tr>
<tr>
<td>Social cohesion</td>
<td>Interventions with specific aim of improving relations within a community</td>
<td>“Contrats urbains de cohésion sociale” in the South of Lille</td>
<td>Social cohesion &amp; public facilities</td>
</tr>
<tr>
<td>Public facilities</td>
<td>Provision of public</td>
<td>Construction of new headquarters of the government</td>
<td></td>
</tr>
</tbody>
</table>
It should be noted that these adaptation tools include both tangible and intangible operations: while the creation of the park Henri-Matisse outside of the Lille Europe train station is a physical intervention, the organisation of the Lille3000 festival is directed at the behaviour and attitudes of people. Many urban planners recognise that successful programmes combine tangible and intangible elements in order to adapt both the “software” and the “hardware” - this was the reason why policy makers in Brussels added socioeconomic operations to the NC programme in the early 1990s. This being said, it should be noted that the distinction between tangible and intangible tools is not always clear cut: an office tower can become a recognisable landmark and thus an intangible amenity; a successful festival can spur investments in hotels etc.

We used the list of urban renovation tools in Table 4.2 as starting point to classify the operations in our database. However, the final classification of NC operations differs slightly from this list. First, for many operations the database does not contain sufficiently detailed information to distinguish between “amenities” and “infrastructure” projects. The main reason for this is missing information on investment subtypes in projects financed by Beliris. While grouping amenities and infrastructures together might be problematic at larger scales such as the Euralille programme, it is arguably a lesser concern at a more local scale. Indeed, infrastructure projects in the NC typically consist of relatively modest improvements of mobility infrastructures such as the renovation of a sidewalk, the improvement of street lighting or a short section of a bike path rather than large-scale infrastructure projects such as an international train station. As a consequence, local infrastructure projects in the NCs are relatively similar to amenities as they mainly aim to improve the quality of public space. Second, we also combined the categories “social cohesion” and “public facilities”. In many cases, the NC invested in public facilities directed at social cohesion like neighbourhood centres so that it is difficult to distinguish between the two tools. Third, the database allowed us to refine the category of “housing” by distinguishing between the supply of new housing, on the one hand, and the improvement of existing housing on the other hand. Finally, we identified for each of the five resulting categories whether the operation was a tangible or intangible investment.

**Amenities and infrastructure**

We combined administrative information on types (“volet”) and subtypes (“infrastructure category”) to classify operations as “amenities and infrastructure”. Table 4.3 shows the distribution of 484 tangible operations that belong to this category. For many operations the subtype was not available since this information is missing for Beliris operations; these
operations are classified according to their type ("volet") as "public space". Together they account for 343 operations and 208.2 million euros of investment, followed by mobility infrastructure (36.5 million), green space (12.6 million) and other improvements of public space (10.0 million). The average investment in tangible amenities and infrastructure operations was 558,000 euros.

Only 8%, or 23.1 million, of the 293.0 million euros invested in amenities and infrastructure was used for intangible operations. We classified all intangible operations in the socioeconomic "volet" by using the description of the operation (the database usually provides one or two sentences describing the main content and purpose of the investment) and the organisation that was paid for its implementation. During the period 1994-2014, 153 operations with an average value of 151,000 euros were thus classified as being directly related to amenities and infrastructure. While some of these operations relate to mobility issues (e.g. a subsidy to a local NGO repairing bikes) or the environment (e.g. a subsidy for creating a collective vegetable garden), most of the intangible operations in this category concern cultural amenities (e.g. subsidies for artist collectives or cultural events).

Table 4.3: Investments in amenities and infrastructure (1994-2014)

<table>
<thead>
<tr>
<th>Type of intervention</th>
<th>Number of operations</th>
<th>Average investment</th>
<th>Total investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total tangible, of which:</td>
<td>484</td>
<td>558,000 €</td>
<td>269,889,000 €</td>
</tr>
<tr>
<td>Public space</td>
<td>343</td>
<td>607,000 €</td>
<td>208,224,000 €</td>
</tr>
<tr>
<td>Mobility infrastructure</td>
<td>85</td>
<td>430,000 €</td>
<td>36,510,000 €</td>
</tr>
<tr>
<td>Green space</td>
<td>25</td>
<td>505,000 €</td>
<td>12,616,000 €</td>
</tr>
<tr>
<td>Other improvements of public space</td>
<td>18</td>
<td>555,000 €</td>
<td>9,985,000 €</td>
</tr>
<tr>
<td>Public lighting</td>
<td>8</td>
<td>215,000 €</td>
<td>1,721,000 €</td>
</tr>
<tr>
<td>Embellishment of façades</td>
<td>3</td>
<td>103,000 €</td>
<td>310,000 €</td>
</tr>
<tr>
<td>Garbage collectors</td>
<td>1</td>
<td>435,000 €</td>
<td>435,000 €</td>
</tr>
<tr>
<td>Art object</td>
<td>1</td>
<td>88,000 €</td>
<td>88,000 €</td>
</tr>
<tr>
<td>Total intangible</td>
<td>153</td>
<td>151,000 €</td>
<td>23,134,000 €</td>
</tr>
<tr>
<td>Total</td>
<td>637</td>
<td>460,005 €</td>
<td>293,023,000 €</td>
</tr>
</tbody>
</table>

Note: Funding amounts in constant 2013 euros

Local economy
Investments in local economy projects are by far the smallest category in our database and concern only 184 operations with a total value of 53.8 million euros. Only 20 of them consisted in tangible projects, mainly the provision of commercial space that is included in the category “local or social economy” in Table 4.4. Moreover, we identified 164 intangible operations as being directly related to the local economy, representing a total investment of 40.2 million euros. Most of these intangible local economy projects were carried out by the local administration in the framework of local employment policies such as job training for unemployed residents. The average value of these interventions equals 245,000 euros and is almost 100,000 euros higher compared to intangible amenities and infrastructure projects.

**Table 4.4: Investments in local economy (1994-2014)**

<table>
<thead>
<tr>
<th>Type of intervention</th>
<th>Number of operations</th>
<th>Average investment</th>
<th>Total investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total tangible, of which:</td>
<td>20</td>
<td>676,000 €</td>
<td>13,513,000 €</td>
</tr>
<tr>
<td>Local or social economy</td>
<td>10</td>
<td>591,000 €</td>
<td>5,907,000 €</td>
</tr>
<tr>
<td>Centre for professional training</td>
<td>4</td>
<td>723,000 €</td>
<td>2,893,000 €</td>
</tr>
<tr>
<td>Centre for employment</td>
<td>4</td>
<td>694,000 €</td>
<td>2,775,000 €</td>
</tr>
<tr>
<td>Reactivation of unused spaces</td>
<td>2</td>
<td>969,000 €</td>
<td>1,938,000 €</td>
</tr>
<tr>
<td>Total intangible</td>
<td>164</td>
<td>245,000 €</td>
<td>40,240,000 €</td>
</tr>
<tr>
<td>Total</td>
<td>184</td>
<td>292,136 €</td>
<td>53,753,000 €</td>
</tr>
</tbody>
</table>

Note: Funding amounts in constant 2013 euros

**Social cohesion and public facilities**

The category social cohesion and public facilities is the only one with a large number of both tangible and intangible operations (215 and 298, respectively). The tangible operations include Beliris investments in facilities for which the subtypes is not known (these are classified among the “other facilities” in Table 4.5). Neighbourhood centres, kindergartens and indoor sport facilities are the other most frequent subtypes and account together for more than half of the operations and total investment. The intangible social cohesion and public facilities operations include a wide range of activities and were carried out by a multitude of local NGOs, although local governments such as the Commune de Molenbeek also count among the top receivers of subsidies in this category.

**Table 4.5: Investments in social cohesion and public facilities (1994-2014)**

<table>
<thead>
<tr>
<th>Type of intervention</th>
<th>Number of operations</th>
<th>Average investment</th>
<th>Total investment</th>
</tr>
</thead>
</table>
We created the distinction between supply and quality of housing by using information on housing operations (the volet “housing”) and whether the investment concerns a new construction or the renovation of an existing building. Table 4.6 classifies the operations involving new constructions into subtypes. The subtypes differ from each other according to whether a) the new housing was destined for renting or for sale and b) whether the operation was carried out directly by a public agency or as “contractual housing” by a private or semi-private developing company. The average new housing operations is with 1.49 million euros on average more than twice as expensive compared to amenities/infrastructure and local economy investments, and also 285,000 euros more expensive than the average social cohesion/facilities investment. We identified only a handful of small intangible operations as being concerned with new housing (most of which are linked to alternative housing projects of the Community Land Trust Brussels). While the total value of 310.9 million euros is close to the total investment in social cohesion and public facilities, a much larger share of new housing projects is invested in tangible operations.

**Table 4.6: Investments in supply of housing (1994-2014)**

<table>
<thead>
<tr>
<th>Type of intervention</th>
<th>Number of operations</th>
<th>Average investment</th>
<th>Total investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total tangible, of which:</td>
<td>215</td>
<td>1,198,000 €</td>
<td>257,649,000 €</td>
</tr>
<tr>
<td>Other facilities</td>
<td>61</td>
<td>961,000 €</td>
<td>58,594,000 €</td>
</tr>
<tr>
<td>Neighbourhood centre</td>
<td>52</td>
<td>1,051,000 €</td>
<td>54,669,000 €</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>48</td>
<td>1,358,000 €</td>
<td>65,187,000 €</td>
</tr>
<tr>
<td>Indoor sport facility</td>
<td>21</td>
<td>2,174,000 €</td>
<td>45,659,000 €</td>
</tr>
<tr>
<td>Cultural centre</td>
<td>9</td>
<td>1,676,000 €</td>
<td>15,088,000 €</td>
</tr>
<tr>
<td>Outdoor recreation &amp; sport</td>
<td>9</td>
<td>604,000 €</td>
<td>5,434,000 €</td>
</tr>
<tr>
<td>Schools &amp; extrascolar facilities</td>
<td>7</td>
<td>821,000 €</td>
<td>5,747,000 €</td>
</tr>
<tr>
<td>Centre for youth</td>
<td>7</td>
<td>991,000 €</td>
<td>6,937,000 €</td>
</tr>
<tr>
<td>Library</td>
<td>1</td>
<td>334,000 €</td>
<td>334,000 €</td>
</tr>
<tr>
<td>Total intangible</td>
<td>298</td>
<td>188,000 €</td>
<td>56,172,000 €</td>
</tr>
<tr>
<td>Total</td>
<td>513</td>
<td>611,737 €</td>
<td>313,821,000 €</td>
</tr>
</tbody>
</table>

Note: Funding amounts in constant 2013 euros
A different picture emerges from Table 4.7 that shows investments into the quality of existing housing units (see). More than half of the 197 operations were intangible investments, although the latter tended to be small in financial terms: the average intangible investment in this category was 247,000 euros compared to 1.14 million euros for tangible operations. The majority of intangible operations concerned projects that provided information and/or incentives to private households for increasing the quality of their residence, for instance through better thermic insulation. Many of the projects were carried out by NGOs that specialised in consulting services linked to the renovation of old residential houses of which Brussels is very abundant. The tangible operations concerned mostly publicly owned and rented social housing units (95.7 million out of the total of 107.5 million euros of tangible investments).

**Table 4.7: Investments in quality of housing (1994-2014)**

<table>
<thead>
<tr>
<th>Type of intervention</th>
<th>Number of operations</th>
<th>Average investment</th>
<th>Total investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total tangible, of which:</td>
<td>94</td>
<td>1,144,049 €</td>
<td>107,540,625 €</td>
</tr>
<tr>
<td>Existing social housing (rent)</td>
<td>80</td>
<td>1,196,721 €</td>
<td>95,737,669 €</td>
</tr>
<tr>
<td>Contractual housing (sale)</td>
<td>8</td>
<td>1,038,753 €</td>
<td>8,310,025 €</td>
</tr>
<tr>
<td>Other housing</td>
<td>6</td>
<td>582,155 €</td>
<td>3,492,931 €</td>
</tr>
<tr>
<td>Total intangible</td>
<td>103</td>
<td>247,000 €</td>
<td>25,409,000 €</td>
</tr>
</tbody>
</table>
5. RELATIONSHIPS BETWEEN GOVERNANCE AND IMPLEMENTATION

In this section we use methodological triangulation based on information from the administrative dataset, the interviews we conducted and lessons from our action research in order to examine how the implementation of the urban renovation programme was related to the governance framework in which it evolved over the last 20 years. The analysis is structured around three aspects of the programme: first, the allocation of funds among different tools and over time; second, the content of intangible investments; and third, the link between tangible and intangible investments.

5.1 ALLOCATION OF FUNDS

The distribution of the total investment of 1.14 billion among the different adaptation tools is shown in Figure 5.1. Supply and quality of housing is the biggest spending category (39%), followed by social cohesion and public facilities (28%) and amenities and infrastructure (26%). Only 5% of the total budget was invested in the local economy, only slightly more than the 3% spent on programme management.

The distribution of funds among different types of investment is to some extent fixed by the legal regulation of the NC programme that stipulates its main objectives and the types of investments that are eligible. But the regulatory texts do not determine the exact share of each investment category, so that most important actors - i.e. the regional and municipal administrations - have some discretion as to how they want to divide the budget of a given NC programme. The high share of housing investments arguably reflects a general consensus that Brussels suffers from a shortage of social housing. This consensus is supported by influential regional NGOs (such as Interenvironnement Bruxelles) but also by the regional and most municipal administrations since the beginning of the 1990s. The commitment of the municipalities to address this issue can be seen in the large share of municipal funding for housing, which is the largest municipal investment in absolute terms (see Figure 5.2). In addition to substantial regional funds, housing is also the spending category that attracted the most private funds over the last twenty years.

Social cohesion and public facilities have received relatively less private funding, but this was compensated by federal investments through the Beliris programme. This category has been the highest priority for the region if evaluated in terms of the absolute investment. The large share of investments in amenities and infrastructure is mainly due to federal spending through the Beliris programme, although both the region and the municipalities have also invested large amounts on this category. The concentration of federal spending on amenities and infrastructure is in line with federal interests: it is reasonable to assume that federal policy makers are inclined
to make investments aimed at strengthening the prestige and recognition of Brussels as the national capital of Belgium.

The most striking result in Figure 5.1 is the low share of investments into the local economy. In the interviews we conducted, regional and especially municipal representatives insisted that unemployment is the top priority in the participating neighbourhood. One local programme

**Figure 5.1: Cumulated funding by adaptation tool (1993-2014)**

![Pie chart showing funding distribution](image)

Note: Funding amounts in constant 2013 euros.

**Figure 5.2: Cumulated funding by adaptation tool and source of funding (1993-2014)**
manager answered the question of the priority of the socioeconomic NC interventions as follows:18

“The objective is above all to put the people in employment. As soon as the individual has an employment, he has more income and can have his home, have activities with his family etc and therefore the key is really employment and we try to go that way as much as that is possible. Because if you have a job it’s easier to integrate on a social level as well. On any account I think this is the priority.”

Interestingly, this programme manager suggests that other objectives of the NC, such as providing social housing and increasing social cohesion in the neighbourhood, could be obtained indirectly by improving the labour market situation of the population. If one follows this reasoning, most of the investment should be directed at the local economy instead of trying to overcome housing or social cohesion problems. This stands of course in stark contrast with the actual allocation of funds that directed more than 13 times more money towards housing and social cohesion than to the local economy.

The small share of local economy investments contrasts with similar local development programmes from other countries. In Figure 5.2 we compare the distribution of financial investments in the NCs with the Empowerment Zone Program managed by the US Department of Housing and Urban Development. The US figures are based on Busso et al (2013) and have been classified according to the list of interventions in Table 4.2. While the local economy is only a minor component of the NCs it is by far the largest in the EZ, a programme that leading researchers have evaluated as having “substantially increased employment in zone neighborhoods and generated wage increases for local workers without corresponding increases in population or the local cost of living” (Busso et al 2013).

18 Interview with H. on 5 June 2014.
Figure 5.2: Distribution of funds in Empowerment Zones (Atlanta, Baltimore, Chicago, Detroit, New York City, Philadelphia) and Neighbourhood Contracts (Brussels)

There are several potential explanations for why the NC failed to invest more into the local economy. First, from the outset it was highly unusual that the regional ministry for housing and environment and its DRU agency, which is in charge of the NC, is able to invest at all into economic issues as the latter normally fall either into the resort of the regional ministry of economy and employment, the regional economic agencies (such as Impulse or the Agence Bruxelloise de l’Entreprise) or to the political bodies in charge of educational policy. In fact, the NC is one of the few exceptions in which regional urban renovation policy can directly stimulate the local economy. Contrary to the planning of housing, public space and facilities that are part of routine tasks, economic planning is not a core competence of the DRU. This is arguably why the regional administrators lack economic expertise when evaluating or proposing elements of NC programmes and have focused on housing, public space and facilities. According to one local programme manager, the DRU gives more freedom to the municipalities when it comes to socioeconomic elements of NC programmes.

Second, also the municipalities are not able to mobilise substantial economic expertise for the planning or implementation of NC programmes. The professional background of local programme managers typically lies in architecture or urbanism, and despite their evolution as “social architects” many of them declare to be overwhelmed by economic issues. In the action research we carried in the NC 1, the local programme manager told us that he doesn't have sufficient knowledge on economic matters to be able to intervene or plan for the adaptation of the local economy.

Third, also the other actors that participate in decisions about the allocation of funds among different adaptation tools typically lack economic expertise. This holds especially for the influential role of the planning company that is hired by the municipality at the beginning of a NC to establish the basic programme. The planning companies normally have strong expertise in urbanism and architecture, but few if any have planned or conducted socio-economic projects. Moreover, the participatory process of the NC is not designed to ensure effective representation of local businesses or other voices of the local economy. The regulation stipulates a quota for the
number of “social or economic actors” that have to participate in Neighbourhood Commissions in order for the latter to be valid, but it in practice these seats are always given to local socio-cultural NGOs rather than local entrepreneurs or other actors with potential economic expertise.

Fourth, both regional and local interlocutors argued that there is a general lack of innovative economic actors in the NC neighbourhood that would be able to propose and implement relevant investments into the local economy. A representative of the Minister’s cabinet pointed in particular to the experience of a promising environmental start-up that received subsidies to create commercially viable urban horticulture production in NC neighbourhoods. But the organisation went bankrupt before production began, which put the regional administration under public pressure to invest is less risky and probably less ambitious projects. While the regional representative was still very favourable to investments in local economy projects, he argued that “we simply don’t have appropriate operators for these economic projects on the ground”.19

As a consequence of these four (and probably other) explanations, investments into the local economy are rare and mostly crowded out by other intangible operations directed at amenities, social cohesion or the quality of housing. Tangible investments supporting the local economy are even less frequent (we identified only 20 operations over the last 20 years).

Given that the main decisions on budget allocation are taken by two different actors - the region and the municipalities - it is a relevant question which of two has more influence on the final allocation. According to a local programme manager, there is a clear hierarchy between the region and the municipalities. To our question what this hierarchy implied he responded:20 “Yes, the budget is there to redo buildings, to make public space and only afterwards there is the socioeconomic category that has come and that is there, it is important but they nevertheless insist that things shouldn’t go further. Most of the money to the real estate and only afterwards the socioeconomic things, that’s OK but you couldn’t reverse this order...”

According to this narrative, the regional authority defines the main spending lines and the municipality can only influence the content of the investment, whereas it has more leeway in deciding on socioeconomic spending compared to the housing or facility investments. If this depiction of the decision making process between the region and the municipalities was true, we should not see a lot of variation between the different municipalities regarding the budget allocation to the different adaptation tools. This variation is shown in Figure 5.3 and indeed suggests that the municipalities have limited discretion how to distribute the regional envelope, although some of them have invested for instance less in housing than average (e.g. Koekelberg, Forest, Jette). Another way of testing the municipal discretion over budget allocation decision is to run simple regressions with spending shares on different budget items as dependent variable and municipality dummies as independent variables. If municipalities can influence the spending shares we would expect relatively high coefficients of determination. As can be seen in Table 5.1, the explanatory power of the municipality is very low for amenities and cohesion, the supply of housing (the municipality dummies account for less than 10% of the variation in budget allocations). The coefficients of determination are, however, somewhat higher for local economy and quality of housing (18 and 16%, respectively).

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19 Interview with B. on 18 March 2014.
20 Interview with H. on 5 June 2014.
The concentration of funds into housing, public space and facility investments has of course consequences for who benefits from the NC programme. Since the majority of investments involve the construction or renovation of buildings, streets or parks, the most important direct beneficiaries are construction companies. We have used the administrative database to identify in more detail these beneficiaries and Table 5.2 shows a list of the ten contractors with the highest number of successful bids as well as the cumulated investment of the ensuing contracts.
The list documents the high concentration of contracts among a small number of companies: the ten companies in Table 5.2 together captured around 16% of the entire NC programme over the last 20 years.\textsuperscript{21} Conversely, this means that small contractors were far less successful in participating in local NC programmes.

The bias towards large construction companies and the repeated assignment of contracts to individual companies (In Advance sa was involved in almost two operations per year over a period of 20 years) can be attributed to characteristics of the governance framework of the NC programme. The extreme time pressure under which the tenders are written, published and attributed means that contractors need to have dedicated personnel in order to write proposals relatively quickly. This might not be possible in small companies. Moreover, due to the same time pressure the municipal managers might be inclined to minimise the risk (but not necessarily the costs) of each real estate operation, which could also lead them to work with big and experienced construction companies rather than with local contractors that so far have played a very minor role in the implementation of the NC programme. Finally, contrary to regular recommendation by the European Commission, the NC programme does not include proactive policies in favour of SMEs.

\textit{Table 5.2: Construction companies with most contracts in urban renovation programme (1994-2014)}

<table>
<thead>
<tr>
<th>Name of construction company</th>
<th>Headquarter</th>
<th>Number of operations</th>
<th>Total investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Advance sa</td>
<td>Brussels</td>
<td>37</td>
<td>50,000,000 €</td>
</tr>
<tr>
<td>M&amp;M Sitty sa</td>
<td>Wallonia</td>
<td>22</td>
<td>31,300,000 €</td>
</tr>
<tr>
<td>Technotra sa</td>
<td>Flanders</td>
<td>20</td>
<td>16,000,000 €</td>
</tr>
<tr>
<td>Verhaeren sa</td>
<td>Flanders</td>
<td>20</td>
<td>14,900,000 €</td>
</tr>
<tr>
<td>Balcaen &amp; Fils sprl</td>
<td>Brussels</td>
<td>16</td>
<td>14,700,000 €</td>
</tr>
<tr>
<td>De Dender nv</td>
<td>Flanders</td>
<td>15</td>
<td>7,400,000 €</td>
</tr>
<tr>
<td>EDK sa</td>
<td>Brussels</td>
<td>15</td>
<td>9,800,000 €</td>
</tr>
<tr>
<td>Kembo sa</td>
<td>Flanders</td>
<td>12</td>
<td>13,700,000 €</td>
</tr>
<tr>
<td>Gillion Construct sa</td>
<td>Brussels</td>
<td>11</td>
<td>16,600,000 €</td>
</tr>
<tr>
<td>ACH Sintra sa</td>
<td>Wallonia</td>
<td>9</td>
<td>5,700,000 €</td>
</tr>
</tbody>
</table>

\textit{Note: Funding amounts in constant 2013 euros}

\textsuperscript{21} The actual concentration is even higher than suggested by the list since Verhaeren sa and Kembo as have merged in 2011.
We now turn to the evolution of the NC investments over the last twenty years. Figure 5.4 shows the annual investments for each adaptation tool. The total annual amount fluctuated around 50 million euros during the first ten years and then increased to around 70 million euros over the last ten years. The distribution of funds also changed over time. In the 1990s spending was concentrated on the renovation and construction of housing. The share of this category decreased over time as investments in cohesion/facilities and, albeit to a lesser extent, the local economy increased during the 2000s and 2010s. Annual spending on amenities and infrastructure has fluctuated from year to year but the absolute amounts remained relatively stable compared to the other adaptation tools.

Figure 5.5 provides a more detailed image of the increase of annual investments in social cohesion and public facilities by splitting the total amounts according to funding source. The figure suggests that the increase was mostly due to higher regional investments, but also federal and other funding contributed to growth of this category.

A simple way of measuring the importance of these time trends in the distribution of NC investments across the different adaptation tools is to calculate the coefficient of determination of a pooled regression in which the share of each tool in the total budget is regressed on year dummies (see second column of results in Table 5.1). This indicator suggests that the time trend is indeed strongest for cohesion and facilities as the time dummies account for more than half of the variation in the data. Also the share of amenities and infrastructure is highly correlated with the year dummies (the adjusted R² equals 27%). Comparing the explanatory power of the year dummies to the coefficients of the municipality dummies, results suggest that the time trend is a much better predictor for the allocation of investments than the spatial variation among municipalities.

How is the evolution of investments over time related to the governance of the NC programme? When we asked the regional administrators of the DRU why investments in housing have decreased over time, they pointed out that this tool still remains a priority for the regional and most municipalities but argued that opportunities for new housing projects are scarcer today compared to the beginning of the programme. One interviewee of the DRU explained:
Figure 5.4: Evolution of funding by type of intervention

Note: Funding amounts in constant 2013 euros.

Figure 5.5: Evolution of annual investments in cohesion and facilities by funding source

Note: Funding amounts in constant 2013 euros.
“I think today we don’t make less real estate operators than before, but today we produce less housing because actually what remains are smaller lots that are more complicated to develop or operations that are more expensive. Today we need to buy the land, before there were more lots owned by the municipalities. Plus the price of land has increased in Brussels, that already eats up a share of the budget.”

If spending on housing decreased because housing operations have become more complicated and/or more expensive, this can be interpreted as the opportunity-driven way in which the local programmes are designed by the municipalities and the contracted planning company. Instead of dividing the available budget according to fixed proportions, the prevailing approach at the local level is to look for good opportunities for high-impact operations that do not concentrate the entire budget. Local programme managers might also be reluctant to engage in “complicated” real estate projects due to the short time frame of 4-6 years in which all steps of the investment (purchase of the land, design of building, public tender, construction) have to be concluded.

This being said, the analysis of the quantitative data support this narrative. First, if housing remained a top priority but new constructions got more expensive due to the depletion of publicly owned land, local and regional policy makers could nevertheless invested more in the renovation of the existing stock of social housing. However, as can be seen in Figure 5.6, the number of renovated housing units did not increase over time but rather showed a similar downward trend as the number of new housing units.

Second, one policy makers could also have responded to increasing costs but building smaller housing units. But this has also not be done. As the number of new housing units per year decreased, their composition according to different housing types has not changed towards smaller one- or two-bedroom apartments (Figure 5.7). The evolution of the average size in square meters suggests the opposite has happened: although year-to-year fluctuations are large, the average apartment seems to become larger over time (Figure 5.8).

Third, the argument that cost factors explain the decrease of spending on housing is only partially corroborated by the data. Figure 5.9 plots the evolution of the total cost per new and renovated square meter (total costs include the purchase of land the construction or renovation of buildings). The figure shows wide swings in costs that do not follow any obvious pattern. Moreover, adding the average cost per square meter to a regression with the share of new housing investments as dependent variable does not improve the fit of the model (the associated coefficient is not significant at conventional levels).

Finally, the reduction of housing investments has coincided with a relative increase in investments in public facilities although both types of operations are subject to the same cost pressures from the real estate market.

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22 Interview with regional administrator, M., on 1 April 2014.
Figure 5.6: Evolution of new and renovated housing units

Figure 5.7: Evolution of new housing units by type of housing
Given this circumstantial evidence against an explanation of the decrease of housing investments over the last twenty years, we propose two alternative explanations. The first boils down to a change in priorities of the regional and/or the municipal authorities. One regional interlocutor indeed suggested that certain municipalities are reluctant to invest into the construction of new social housing:
“Our regulation obliges us to make social housing and they don’t want to do social housing in Cureghem, because they [the municipality of Anderlecht] have a different project for Cureghem, they would change really everything. I don’t say to raze everything down but to change everything. They have an idea that doing prestigious housing and stuff like that, lofts etc, to elevate the living standard... how to put it...the income of the population. But we are not in this way of thinking. I think there is from the side of Anderlecht no loyalty regarding the programme. They take what interests them, so public space, socioeconomic things etc; but social housing for example they don’t want.”

One of the specificity of the NC programme’s governance framework is that the different signatories of the neighbourhood, so chiefly the DRU and the municipality in which the local NC is situated, are obliged to cooperate with each other in order for the programme to work. If for political or other reasons one of the signatories has a different vision - for instance local decision makers in the municipality of Anderlecht who apparently do not wish to create new social housing in the Cureghem neighbourhood - the relationship can become conflictual. And although all interviewees insisted that the regional “has always the final word” on budget allocations, the DRU itself cannot impose projects if they are not proposed and supported by the local municipality. In this governance set-up, it is likely that social cohesion and public infrastructure projects have emerged as investments that cater both regional and municipal interests in many neighbourhoods. By investing in public facilities the region can claim to address the apparent shortage of daycare facilities and schools, whereas local policy makers can claim to improve the quality of life of the incumbent population rather than attracting new relatively poor residents to the already fragile neighbourhoods. This explanation is backed up by data on the sources of funding for social cohesion and public facilities (see Figure 5.5) given that the municipalities but especially the region has increased its investment in this category over time.

A second and somewhat related explanation is that the governance framework has allowed municipalities to manage a larger share of the funds more autonomously in the form of “socioeconomic” budget line. Indeed, all interviewees stated that the region interferes to a much lesser extent into the content of socioeconomic projects. The decrease in housing and the increase in social cohesion and public facilities projects could therefore also reflect a) the relative increase in socioeconomic category over time and b) that this category includes much more social cohesion than housing projects. This leads us to the discussion of the content of intangible investments in the NC programme.

5.2 CONTENT OF INTANGIBLE INVESTMENTS

Before analysing the content of the intangible investments it should be noted that the share of intangible projects has increased from 5% to around 20% in the first ten years of the programme and remained relatively stable afterwards (see Figure 5.10). The regional interviewees were aware of this evolution; also a local programme manager mentioned that socioeconomic projects “gained space”. Several reasons for this trend have been proposed by the interviewees. A representative from the DRU linked the hike in intangible investments to a change in the regional government: in July 2004, Evelyne Huytebroeck (Green Party) became

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23 Interview with L. on 1 April 2014.
regional minister in charge of the NCs and kept this office until July 2014. According to L, the new minister wanted to invest more in employment measures, and in particular relatively expensive training programmes, which is why according to this person the share of socioeconomic spending increased. While it is true that during the mandate of Evelyne Huytebroek the annual share of intangible investments was always higher than during the mandate of her predecessor Didier Gosuin (MR, then FDF), Figure 5.10 also shows that this share already started to increase in the mid-1990s, i.e. before Huytebroeck took office.

An alternative explanation was suggested to us by a cabinet member of Evelyne Huytebroeck, namely that it took time for local organisations to familiarize with the rules of the game of the NC programme before they could enter it. Also an administrator of the DRU proposed a similar reasoning:

“I think it is also that there a more operators that have entered the market in Brussels, everything that is social economy is now officially recognised, so there is a whole sector that has created itself around this. They know that we are coming, that we are interesting in this kind of initiative.”

This viewpoint emphasises a specific aspect of the NC governance, namely that its intangible operations hinge crucially on the existence of local organisations that are capable of proposing and implementing socioeconomic projects. It is possible that the increase from 5 to 20% in the share of intangible investments over the first 10 years of the programme reflects a relatively slow learning process during which existing local organisations started to enter the programme or new organisations emerged and proposed projects. The fact that the share of intangible investments did not rise beyond 20% probably reflects the regional understanding that the NC programme “should remain mostly about physical interventions” that was reported to us by a local programme manager.

A serious problem for previous evaluations of the NCs consisted in the fuzziness of the administrative category of "socioeconomic" operations. We have addressed this issue by classifying all intangible operations according to the list of adaptation tools in Table 4.2. This allows us to document the diversity of intangible projects and link their characteristics to the governance framework of the NC programme.

Compared to the distribution of tangible projects, the intangible NC investments are more evenly spread across the different adaptation tools (see Figure 5.11), with the important exception of the supply of new housing which has been the theme of only a handful of intangible operations (they concerned operations related to the Community Land Trust Brussels). There are no strong time trends in the distribution among tools and Figure 5.11 contradicts one interviewee’s statement that the Huytebroeck ministry decided to invest more in employment-related projects. While it is true that the total share of intangible projects was on average higher compared to the preceding Gosuin administration, it is rather the category “amenities and infrastructure” that appears to have received more funding since 2004 than the category “local economy”. The relatively balanced distribution of intangible investments is likely to be driven by the decision-making process of local NCs; compared to the physical interventions, the decisions on intangible investment are strongly influenced local actors. This influence takes several forms:

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24 Interview with L. on 1 April 2014.
First, contrary the tangible operations that are typically carried out by a small number of large contractors from outside of the neighbourhood (see Table 5.2), the intangible operations are more often proposed and implemented by organisations established within the NC perimeter. In practice, the local programme managers “make do” with the supply of local NGOs when defining the content of most intangible operations. One interviewee described the process of defining intangible investments as follows:

"Instead of defining a project with the residents and afterwards looking for an operator at the regional scale, often we do the inverse: we know that in the neighbourhood there is an association that works with a certain group group of people, we take them because that responds to a need."
But they don’t always have a project either. The project is created afterwards or, incidentally, is not created.25

This supply-driven process is likely to lead to a diversification of intangible projects as local organisations cater very different interests and operate in a range of sectors (youth, sports, culture, art, religion, environment etc).

A second characteristic of the NC decision-making process with consequences for the content of intangible operations is the direct participation of local actors in the choice of intangible investments via their representation in the Commission de Quartier and similar meetings (see Section 3). Given the heterogeneous composition of the local participatory NC bodies, this means that a broader set of interests and needs are able to influence the choice of projects. Although the budget for intangible operations are much smaller compared to tangible ones, the local participatory process often focusses on the projects carried out by and for the local population or the organisations that claim to represent them. Interestingly, this often seems to play against local economy projects:

"Surprisingly, the economy [...] and the creation of employment, in the end they do not really interest the people. One the one hand everybody is concerned, there should be more jobs for young people, but as a neighbour one could think ‘Yes, OK, there should be more jobs for young people but I am here to talk about the neighbourhood’. We are at a different scale here.”26

As a consequence, it seems that the content of intangible projects are driven by what is interesting and palpable for the local actors involved in the decision-making. A relatively abstract and general concern such as youth unemployment appears to be crowded out by other projects more concretely linked to civic activities that are already present in the neighbourhood, especially because issues such as unemployment are perceived to be a pandemic or at least regional problem that cannot be addressed at the level of a neighbourhood.

Finally, another explanation for the content of intangible operations is that the latter are often instrumentalised by local municipalities for the goal of legitimizing the NC vis-à-vis their local constituency. Such instrumentalisation is perhaps the most obvious in the form of so-called “participatory envelopes” through which the local programme managers earmark 10,000 or 20,000 euros to finance a series of small local projects. These micro-projects, often representing less than a thousandths of a percent of the total budget of the local programme, take the form of calls for proposals in which individuals or organisations from the neighbourhood are invited to propose small projects. The "participatory envelopes" attract a lot of attention in the neighbourhoods, arguably because they allow local actors be more directly involved in the definition and selection of projects leading to change in their neighbourhood. But they also create a somewhat unrealistic impression of the actual influence of local participation given the negligible size of the amounts and the disproportionate attention invested in these micro-projects, especially when contrasted with the amounts paid to external construction companies that are frequently not only more than 100 times bigger in but on which the local participation has also a considerably smaller impact. On any account, the instrumentalisation of participatory funds for the mere sake of participation (“keeping people happy”) arguably leads to a

25 Interview with local programme manager, S., on 15 May 2014.
26 Interview with local programme manager, S., on 15 May 2014.
fragmentation of the investment into a multitude of many intangible projects with diverse themes and objectives.

5.3 LINK BETWEEN TANGIBLE AND INTANGIBLE INVESTMENTS

Since we have classified all tangible and intangible operations in the administrative database according to the same list of urban renovation tools we can directly examine the potential links between the tangible and intangible aspects of the NC programme. As it turns out, there is both quantitative and qualitative evidence that these links are rather weak in all of the 75 existing local programmes.

One way in which tangible and intangible projects could be linked is through the budget allocation in each local programme: a strong link would mean that programme with high investments in tangible projects in a specific tool, for instance social cohesion and public facilities, would also invest more in intangible projects of that same tool. Figure 5.12 plots for each type of intervention and each local NC programme the share of tangible investments in the total budget against the share of intangible investments. For none of the five types of urban renovation tools the dots show a positive relationship between the share of tangible and intangible operations. A pooled OLS regression with data from all 75 programmes confirms this impression: the associated coefficient is never significant.

As for the qualitative evidence, in all interviews and meetings we observed that the involved actors draw a strict separation between tangible and intangible projects and rarely discuss the links between them. Tangible investments are mostly referred to as “bricks projects”, whereas the intangible operations are “socioeconomic projects” or “NGO projects”. Most of the local participation is by and large confined to the latter, whereas the “bricks projects” are planned and carried out by external professionals (mainly planning and construction companies). Moreover, the list of the planning companies that were the most successful in winning NC bids (see Table A.5 in the appendix) suggest that all of them are specialised in “bricks projects” and have only limited or no expertise in the conception or planning of intangible urban renovation projects. As a consequence, from the outset of the local programmes the interventions are split into tangible and intangible elements that are subsequently developed and implemented by different sets of actors that only rarely cooperate with each other.

This situation contrasts with some of the rhetoric about the programme insisting on the “concentration of means in a limited time and space” and the “quest for synergies” by managing the NC programmes in transversal units that differ from the traditional departmentalised municipal administrations. However, a representative of the regional ministry told us that rather than developing synergies between tangible and intangible operations the regional decision makers aimed at synergies among different types of intangible projects:

“We have done a series of tests on how we could develop projects that have at the same time an objective of transforming the area, of social cohesion but also to generate employment in sectors that are called sustainable, especially in urban agriculture.”

27 Interview with B. on 18 March 2014.
Instead of linking a tangible operation (e.g. reconfiguration of a park) with intangible ones (e.g. a start-up in horticultural production), the regional administration apparently tried to promote intangible projects that would deliver at the same time social, economic and environmental benefits - while investing in simultaneously significant amounts in tangible operations in the same neighbourhood with no apparent link to such comprehensive socio-economic-environmental projects.

There are, however, some examples of exceptional local programmes that managed to create closer ties between tangible and intangible operations. Most of them concern synergies between public facilities and NGO projects with socio-cultural orientation. The creation of local neighbourhood centres (a tangible operation) can go with subsidies for local NGOs to propose social, cultural or artistic activities in these centres (intangible operations), as was done for example in the NC Scheut in Anderlecht. There are also examples of programmes that linked tangible and intangible operations related to housing: a few programmes combined the renovation of social housing (tangible operation) with professional training in the construction sector (intangible operation). Another example of synergies related to housing are projects by the Community Land Trust Brussels that propose innovative forms of collective or public ownership of land in order to make the purchase of housing more affordable; these are intangible investments have been financed as socioeconomic projects but provide an obvious link to tangible investments such as the purchase or renovation of abandoned or underused buildings.

In order to improve our understanding of the link between tangible and intangible dimensions of the NC programme, we engaged in “action research” in the “Petite Senne” programme in the municipality of Molenbeek that started in 2014. Robson (2002) defines action research as involving “action (solving concrete problems in real situations) and research (trying to further the goals of science)” as well as collaboration between researchers and their subject matter through experiments or pilot projects on demonstration sites, facilitating direct engagement with problem solving and record/assessment. In our case we worked with the local programme manager of the Petite Senne programme and his assistant in order to help solving issues related to the economic revitalisation of the neighbourhood.

Several features of the “Petite Senne” programme, which totals an investment 24.1 million euros, make it a likely venue for synergies between tangible and intangible operations. The programme budgeted 4.3 million for a planned building at the Quai de l’Industrie 77-79 that has been conceived to accommodate not only housing but also workshops. There are also other substantial investments in public space, notably the reconversion of an old hangar, that could potentially be related socio-economic projects. Among the intangible projects financed by the “Petite Senne” programme, two are directly linked to physical places in the neighbourhood that have recently or will soon be the object of urban renovation. The project “Bellevue 4 starters” (managed by the local NGO Art2Work for a budget of 40,000 euros) and project “training hotel space Bellevue” (managed by the municipal employment service for a budget of 140,000 euros) both represent a link with the reconversion of the Belle-Vue brewery, an industrial red-brick building that has been renovated in 2014 with the help of funds from the European Union and a preceding NC programme (the “Cinéma Belle-Vue” programme from 2009-2013 invested 568 140,84 euros in the renovation of the building). Moreover, the project “renovation of façades”, run by the local company Greenworks for 200,000 euros), links professional training in the construction sector with some of the public space investments of the programme.
Four additional intangible projects of the "Petite Senne" programme provided potential for synergies: the project “pop-up zone canal” (100,000 euros), the “redynamisation of retail and gastronomy” (150,000 euros) are both managed by the municipality and could have been linked to physical operations targeted at empty or underused buildings. A project with some ties to physical interventions is the project “Klimop recycled furniture” that has been proposed by by the local NGO Atelier Groot Eiland for 160,000 euros. The objective of this project was the relocation of an existing furniture workshop out of the building in which Atelier Groot Eiland also runs other social economy projects. The relocation of the furniture workshop constituted a potential synergies with real estate operations but was not budgeted in the programme. However, the programme planned to furnish the interiors of two real estate operations with furniture produced by the Klimop workshop.

Our action research focused on several privately owned industrial buildings in the "Petite Senne" perimeter that lies along the canal. The planning company that produced the programme proposed to turn these buildings at least partially into a “recycling workshops” that could eventually also accommodate the Klimop furniture workshop. The buildings are currently either empty or occupied by used car and car parts dealers. There is strong political will at the municipality and at regional level to relocate the car-related activities outside of the neighbourhood in order to decrease noise and the congestion of the narrow streets in the area that would make the area a nicer place to live, but also to attract more profitable and innovative economic activities.

From the beginning the local programme manager and the urbanist from the planning company told us that they lack the economic competence to plan and implement the reconversion of the industrial buildings into recycling workshops, which explains their main motivation to cooperate with our research team. We think that this situation is representative of other NC programmes and that few local managers and planning companies are able to formulate a vision for the local economy, for instance by assessing the types of businesses that are likely to be attracted to the neighbourhood and what actions could be taken to increase the neighbourhoods economic attractiveness. Since no NC budget had been allocated to the reconversion of the privately owned buildings into recycling workshops, our main task consisted in bringing together socio-economic actors, including a company specialised in the temporary occupation of buildings, that are jointly able to make a credible and economically viable proposition to the owners of the building. This led to the “Bernard’s procedure”, named after the owner of one of several industrial buildings in the neighbourhood. The purpose of this procedure is to chart the different steps and various competences that are necessary to convert empty or underused buildings in order to make the project economically viable. Together with the municipality and the real estate company, we also worked on the organisational form in which the steps and competences could be take place, we proposed the creation of a "socio-economic real estate agency" similar to the social real estate agency that have carried out many housing projects in NC programmes.

Our action research in the NC Petite Senne confirmed that the actors currently involved in the conception and implementation of NC programmes do not have the means and expertise to engage in systematic improvements of the local economy. While actors with economic competence (such as municipal employment services or semi-private economic support agencies such as Atrium) frequently participate in later stages of NC programmes, they are normally absent when the important budget allocations are made. The local programme
managers and planning companies are experts in architecture and urbanism but have less or no economic expertise. To the extent that the NC programme pursues economic objectives - many official interlocutors stated that employment is the top priority in the neighbourhoods - the absence of economic expertise can be problematic: once the main conceptual and financial lines of the local programmes are defined it is difficult to integrate them at later stages and almost impossible to create synergies between tangible and intangible operations related to the local economy.

**Figure 5.12: Shares of tangible and intangible investments in each programme**

6. **Governance recommendations**

Drawing on the analysis of the links between the governance and implementation of the NC programme, we submit the following recommendations on how the governance of urban renovation could be improved in order to foster local economic resilience.

**Closer integration of tangible and intangible operations in local programmes**

Our analysis suggests that the current governance set-up of the NC programme does not provide for a full connection between tangible and intangible urban renovation projects. As a consequence, the programme potentially misses opportunities for creating synergies between investments directed at economic actors (such as professional training programmes, support for start-ups, consulting for local businesses etc) and investments directed at the reconfiguration of the biophysical environment of the neighbourhood (like the renovation or transformation of underused industrial buildings). Without a closer integration of these two approaches the investments are less likely to adapt the local economy to changing economic conditions and less capable of improving the match between local economic activities and their urban environment. Closer integration could be reached in three ways:
1. **Every NC programme** should clearly lay out how the planned tangible and intangible operations complement each other; complementarity should be a key criterion for including a specific operation in a local programme.

2. **Municipalities** should select planning companies with proven expertise in conceiving both tangible and intangible urban renovation interventions as well as their integration and impact on the local economy.

3. **The regional administration** should review the categorisation of operations it uses in its internal database in order to be able to identify links between tangible and intangible operations. The list of urban renovation tools used in this paper could be a starting point for such a review.

### Injecting more economic expertise into programme conception and implementation

In order to maximise the potential influence of NC investments on local economies, it is vital that more economic expertise is injected into the conception and implementation of the individual programmes. The profile of the local programme managers as “social architects” means that they often lack the tools and vision to formulate successful strategies for the economic aspects of urban renovation. Also the planning companies hired for assisting the municipalities in the conception of local programmes typically do not provide such expertise. This assessment was corroborated in interviews with local programme managers and our action research in the NC “Petite Senne”.

Stronger economic expertise could not only help to improve the impact of physical interventions but also the leverage of intangible operations. According to our regional interviewees, the main obstacle in this area is the deficiency of local operators able to propose and implement more innovative projects. A member of the ministerial cabinet told us:

“But there are no organisations for the socioeconomic aspects, and if they exist they are deficient. There is a lack of capacity, of tools and of actors, this doesn’t emerge naturally. It’s a difficulty of people. There was an interesting project in Canal-Midi but it has become a flop because of a management problem of the operator.”

One way in which the lack of economic expertise manifests itself is that almost all investments into local economy projects financed in the last 20 years were not economically sustainable, i.e. the activities either stopped altogether when the NC funding dried up or only continued because they were subsequently financed through other subsidies. There are of course compelling arguments for subsidizing certain activities directed at the local economy - many economists would frame these arguments in terms of “positive externalities”. To be sure, we do not imply that all operations should be completely independent from public subsidies. However, the NC programme could probably increase the economic resilience of local economies by also supporting projects that can stand on their own after the initial subsidy. Currently this is almost never the case; in practice, local programme managers see other municipal or regional subsidies as the only possibility for economic operations to continue beyond the programme period. An interviewee from the regional administration summed up the financial dependence of local actors as follows:

“There is often the will to carry on with the project, either because they find other funding sources or because they work differently, it depends. But it’s true that for example Habitat et Rénovation,

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28 Interview with B. on 18 March 2014.
and all the NGOs that give advice to private households to improve the quality of housing etc, they function only with subsidies. There are the NC subsidies but also other subsidies, it’s true that they are super-dependent. This holds also for everything related to extrascolar activities. [...] If we stop from one day to the next they will shut down, that’s clear.29

We propose three levels of action through which more economic expertise and economic sustainability could be injected into the NC programme:

- Prior to its political validation, every NC programme should be reviewed by competent external experts for local economic development; a key criterion for this evaluation should be the match of the proposed operations to existing economic development plans and economic policies at the neighbourhood, municipal and regional scales, such as the Plan régional de développement durable, the Alliance emploi-environnement, the Programme régionale d’innovation or the Pacte de croissance urbaine durable, which are so far not connected to the NC programme. Individual projects should provide an economic concept beyond the time frame of the NC programme.
- Municipalities should reach out more to the local business community and include their views and strategies during the conception phase of local programmes. They should also promote projects that are able to generate income other than subsidies.
- The regional administration should support the creation of operators that are able to manage integrated tangible-intangible operations for local economic development.

Avoid conflicts of interest

Decisions on the allocation of urban renovation investments should be based on objective criteria and rational decision-making rules: projects and operators should be selected based on an evaluation regarding their impact on the neighbourhood. It is not certain that the current governance framework of the NC programme can ensure that this is always the case. The framework notably generates conflicts of interests, for instance when organisations that hand in project proposals are also involved in the selections of projects, or when local NGOs report on how they spend subsidies to committees in which they are themselves members. Such conflicts of interest have already been pinpointed by previous evaluations of the NC policy; especially the attribution of intangible investments has sparked criticism of “unclear criteria” and “incompetent evaluations” by private stakeholders that participated in NC meetings (CREAT-CRU 2008). But so far these criticisms have not been addressed through changes of the regulation.

Perhaps the most obvious case of conflicting interests relates to subsidised projects that are carried out by municipal services. Here municipal services compete with external proposals handed in by NGOs or companies when the funding decision is actually taken by representatives of the same municipality (normally the municipal council). In other words, the municipalities can choose between funding their own services or external projects. This governance set-up arguably accounts for the fact that an important share of intangible projects has been carried out by municipal services instead of private operators: according to our calculations the municipalities attributed at least 43% of all intangible investments to their own services (this figure excludes the funding for project management as well as for para-municipal NGOs such as RenovaS and Bravvo). Figure 5.13 illustrates the discretion that municipalities have over

29 Interview with M. on 1 April 2014.
allocating intangible investments: Etterbeek allocated more than 70% of intangible investments to its own services, Ixelles and Koekelberg more than 50%. Schaerbeek has the lowest share of self-subsidizing (less than 20%), but this does not mean that this municipality is less exposed to conflicts of interest but merely reflects the allocation of funds to a semi-public organisation in which the municipality has a stake.30

Figure 5.13: Distribution of funding for intangible projects by type of beneficiary

The effectiveness of the NC programme could arguably be increased by ensuring that conflicts of interest do not hamper the optimal allocation of investments to the best project. We propose three amendments to the governance of the programme that could lower the incidence of conflicts of interests:

1. In every NC programme there should be an external evaluation of alternative projects, based on clearly defined criteria. Funding decisions should not be taken by actors with vested interests. Subsidised organisations should not report to committees of which they are themselves members.
2. Municipalities should be transparent about funding allocations to their own services; private organisations should at least be informed when entering in competition with municipal services and at best have equal opportunities of being funded.
3. The regional administration should provide clear guidelines on municipal self-subsidies. They should also ask municipalities to provide substantial justifications for

30 Schaerbeek has delegated the management of its LC programmes to the semi-public organisation “RenovaS”. The latter has won at least 16 tenders that are not linked to its management tasks and through which it received more than 5.3 million euros. Since the municipality of Schaerbeek decides to a large extent on the allocation of funding and has also a stake in RenovaS this constitutes a conflict of interest.
municipal self-subsidies. All projects proposed by municipal services should undergo an external evaluation.

7. DISCUSSION AND CONCLUSION

We conclude the paper by taking a step back in order to relate our empirical results from the Brussels case study to more general observations on the governance of urban adaptation in a context of structural economic change. A useful starting point is the distinction between the ‘species perspective’ and ‘system perspective’ on urban adaptation that we discussed in Section 2.3: while some elements of the NC programme can be assimilated to species adaptation, others are closer to system adaptation.

Species adaptation refers to the actions and strategies of individual actors that take the social-ecological system in which they operate as given (see Section 2.3). In the NC programme, manifestations of species adaptation are mainly found in projects related to the local economy and social cohesion. Most of these were intangible investments in which municipal services, NGOs from the neighbourhood and local programme managers were the central actors (see Table 7.1).

System adaptation, on the other hand, is directed at adapting the social-ecological system itself. There are attempts at system adaptation in some NC programme investments related to amenities and infrastructure; the supply and quality of housing; and social cohesion and public facilities. Most of the investments in these areas were tangible. Key actors for their implementation include regional and federal administrations, planning and construction companies and the local programme managers.

A central result from our empirical analysis is that the tangible and intangible investments in Brussels’ urban renovation programme could be better connected. This arguably reflects another deeper and more consequential divergence, namely a missing link between the two perspectives of urban adaptation to structural change: with the exception of some social cohesion and public infrastructure projects, all adaptation tools are either predominantly ‘species-oriented’ or ‘system-oriented’. Moreover, the local programme managers are the only actors involved in both types of adaptation strategies. This leads us to further considerations related to the governance of the NC programme and other urban renovation policies in general.

First, species adaptation appears to be more often bottom-up, whereas system adaptation occurs more often in top-down settings. Our evidence from Brussels clearly illustrates this tendency, as can be seen by the distinct decision-making processes and types of actors that are involved respectively in species- and system adaptation.

Second, neither of the two approaches is inherently superior to the other as both have different strengths and weaknesses. In our case study we observed that the initiatives related to species adaptation, for instance the local economy or social cohesion projects run by local civil society organisations, appear to do a better job at identifying local needs and mobilising local knowledge and resources. They are also more likely to give rise to diverse adaptation strategies, a result that could lead to higher local resilience. By contrast, the strengths of system adaptation is the mobilisation of knowledge and resources at higher scales - in the case of the NC programme, for instance, municipal or regional development plans and expert knowledge from outside of the neighbourhood. The actors involved in these initiatives are also more likely to adopt a holistic, systematic vision of the adaptation process. The two approaches face different potential weaknesses: whereas a species perspective is probably more likely to fail to address
obstacles at system level, the system perspective might fail to link to adaptation strategies of individual actors.

Finally, from these observations we can deduce governance challenges for the two perspectives on urban adaptation. The governance challenge for bottom-up policies is to ensure that their integrate a more holistic understanding of socio-ecological systems. In the case of the NC programme, we suggested that this could be achieved by selecting local projects on the basis of strategic plans at larger scales (such as the *Plan régional de développement durable*) or by improving external evaluations of bottom-up project proposals. Conversely, the main governance challenge of top-down, system-oriented adaptations is to integrate the species perspective. Possible ways to address this challenge in Brussels' urban renovation programme could be a closer integration of the local business community in the conception of NC programmes, and especially their participation in decisions on tangible interventions.

The key to successful urban renovation as a way to adapt to structural changes in social-ecological systems appears to be situated halfway between bottom-up and top-down strategies: their respective strengths and weaknesses are largely complementary and their combination a promising venue for synergies and more efficient policies. However, breaching the middle ground between bottom-up and top-down policies is a thorny governance problem with no one-size-fits-all solution. Brussels' neighbourhood programme is an example of an ambitious urban renovation policy that invested considerable resources at the top and the bottom of its governance; the context-specific recommendations in this paper could amplify these investments by making them meet in the middle.
Table 7.1 Species and system adaptation in NC programme (1994-2014)

<table>
<thead>
<tr>
<th>Species adaptation</th>
<th>System adaptation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predominant adaptation tools</td>
<td>- Local economy</td>
</tr>
<tr>
<td></td>
<td>- Social cohesion &amp; public facilities</td>
</tr>
<tr>
<td></td>
<td>- Amenities &amp; infrastructure</td>
</tr>
<tr>
<td></td>
<td>- Supply of new housing</td>
</tr>
<tr>
<td></td>
<td>- Renovation of existing housing</td>
</tr>
<tr>
<td></td>
<td>- Social cohesion &amp; public facilities</td>
</tr>
<tr>
<td>Predominant type of interventions</td>
<td>- Intangible interventions</td>
</tr>
<tr>
<td>Key actors</td>
<td>- Municipal services</td>
</tr>
<tr>
<td></td>
<td>- Local NGOs</td>
</tr>
<tr>
<td></td>
<td>- Local programme managers</td>
</tr>
<tr>
<td></td>
<td>- Planning companies</td>
</tr>
<tr>
<td></td>
<td>- Construction companies</td>
</tr>
<tr>
<td></td>
<td>- Regional public and semi-public administrations</td>
</tr>
<tr>
<td></td>
<td>- Federal agencies (Beliris)</td>
</tr>
<tr>
<td></td>
<td>- Local programme managers</td>
</tr>
<tr>
<td>Orientation of governance</td>
<td>- Bottom-up</td>
</tr>
<tr>
<td>Potential strengths</td>
<td>- Failure to address obstacles at system level</td>
</tr>
<tr>
<td>Potential weaknesses</td>
<td>- Failure to link to adaptation strategies of individual actors</td>
</tr>
<tr>
<td>Main governance challenge</td>
<td>- Integrate system perspective</td>
</tr>
<tr>
<td>Examples of governance recommendations</td>
<td>- Integrate knowledge of local business community</td>
</tr>
<tr>
<td></td>
<td>- Involve economic actors in conception of physical interventions</td>
</tr>
</tbody>
</table>

- Intangible interventions
- Tangible interventions

- Municipal services
- Local NGOs
- Local programme managers
- Planning companies
- Construction companies
- Regional public and semi-public administrations
- Federal agencies (Beliris)
- Local programme managers

- Bottom-up
- Top-down

- Identification of local needs
- Mobilisation of local knowledge and resources
- Diversity of adaptation strategies
- Mobilisation of knowledge and resources at higher scales
- Holistic vision and systematic approach to structural change

- Failure to address obstacles at system level

- Integrate system perspective

- Select local projects on the basis of strategic plans at larger scales
- Provide external evaluations of project proposals
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Snep and Opdam 2010


## APPENDIX

### Table A.1

<table>
<thead>
<tr>
<th>Top beneficiaries of intangible amenities investments</th>
<th>Number of operations</th>
<th>Total investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commune de Forest</td>
<td>7</td>
<td>980,511 €</td>
</tr>
<tr>
<td>Commune de Molenbeek</td>
<td>7</td>
<td>1,465,744 €</td>
</tr>
<tr>
<td>Commune d’Anderlecht</td>
<td>4</td>
<td>1,207,330 €</td>
</tr>
<tr>
<td>Recyclart asbl</td>
<td>4</td>
<td>757,914 €</td>
</tr>
<tr>
<td>Arkadia asbl</td>
<td>4</td>
<td>577,740 €</td>
</tr>
<tr>
<td>Commune d’Etterbeek</td>
<td>3</td>
<td>468,267 €</td>
</tr>
<tr>
<td>Ville de Bruxelles</td>
<td>3</td>
<td>910,973 €</td>
</tr>
<tr>
<td>Les Nouveaux Disparus asbl</td>
<td>3</td>
<td>258,078 €</td>
</tr>
<tr>
<td>Laeken Découverte asbl</td>
<td>3</td>
<td>161,132 €</td>
</tr>
<tr>
<td>Ecole du Cirque de Bruxelles asbl</td>
<td>2</td>
<td>329,409 €</td>
</tr>
</tbody>
</table>

### Table A.2

<table>
<thead>
<tr>
<th>Top beneficiaries of intangible local economy investments</th>
<th>Number of operations</th>
<th>Total investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission Locale de Bruxelles-Ville</td>
<td>11</td>
<td>3,845,281 €</td>
</tr>
<tr>
<td>ATRIUM asbl</td>
<td>11</td>
<td>2,130,059 €</td>
</tr>
<tr>
<td>Ville de Bruxelles</td>
<td>9</td>
<td>2,372,142 €</td>
</tr>
<tr>
<td>Jeunes Schaerbeekois au Travail asbl</td>
<td>9</td>
<td>2,054,660 €</td>
</tr>
<tr>
<td>Mission Locale de Forest</td>
<td>9</td>
<td>1,895,900 €</td>
</tr>
<tr>
<td>Mission Locale de Saint-Josse-ten-Noode</td>
<td>7</td>
<td>1,348,030 €</td>
</tr>
<tr>
<td>Commune de Molenbeek</td>
<td>15</td>
<td>3,564,883 €</td>
</tr>
<tr>
<td>BRAVVO asbl</td>
<td>13</td>
<td>3,416,133 €</td>
</tr>
<tr>
<td>CPAS</td>
<td>12</td>
<td>6,850,795 €</td>
</tr>
<tr>
<td>Commune d'Anderlecht</td>
<td>11</td>
<td>2,253,685 €</td>
</tr>
<tr>
<td>Commune de Saint-Gilles</td>
<td>9</td>
<td>958,529 €</td>
</tr>
<tr>
<td>Commune d'Etterbeek</td>
<td>8</td>
<td>961,443 €</td>
</tr>
<tr>
<td>Ville de Bruxelles</td>
<td>7</td>
<td>1,577,795 €</td>
</tr>
<tr>
<td>Une Maison en Plus asbl</td>
<td>7</td>
<td>998,461 €</td>
</tr>
<tr>
<td>Maison des Jeunes de Forest asbl</td>
<td>5</td>
<td>745,990 €</td>
</tr>
<tr>
<td>Commune de Forest</td>
<td>5</td>
<td>453,896 €</td>
</tr>
</tbody>
</table>

**Table A.3**

<table>
<thead>
<tr>
<th>Top beneficiaries of intangible cohesion and facilities investments</th>
<th>Number of operations</th>
<th>Total investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commune d'Anderlecht</td>
<td>5</td>
<td>1,516,204 €</td>
</tr>
<tr>
<td>Job Yourself asbl</td>
<td>5</td>
<td>948,110 €</td>
</tr>
<tr>
<td>Casablanco asbl</td>
<td>5</td>
<td>1,839,566 €</td>
</tr>
<tr>
<td>CAFA asbl</td>
<td>5</td>
<td>592,850 €</td>
</tr>
</tbody>
</table>

**Table A.4**

<table>
<thead>
<tr>
<th>Top beneficiaries of intangible investment in quality of housing</th>
<th>Number of operations</th>
<th>Total investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>RenovaS asbl</td>
<td>13</td>
<td>3,573,366 €</td>
</tr>
<tr>
<td>Convivence asbl</td>
<td>6</td>
<td>1,982,020 €</td>
</tr>
<tr>
<td>CRU asbl</td>
<td>6</td>
<td>1,812,238 €</td>
</tr>
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</table>
### Table A.5: Main planning companies involved in NC programme

<table>
<thead>
<tr>
<th>Name of planning company</th>
<th>Number of operations</th>
<th>Total investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Espaces Mobilités</td>
<td>21</td>
<td>7,600,000 €</td>
</tr>
<tr>
<td>B612 Associates</td>
<td>18</td>
<td>39,000,000 €</td>
</tr>
<tr>
<td>Cipolat Architecture</td>
<td>16</td>
<td>10,200,000 €</td>
</tr>
<tr>
<td>R²D² Architecture</td>
<td>15</td>
<td>16,600,000 €</td>
</tr>
<tr>
<td>LD2 Architecture sprl</td>
<td>14</td>
<td>18,200,000 €</td>
</tr>
<tr>
<td>Pierre Blondel Architectes</td>
<td>12</td>
<td>20,100,000 €</td>
</tr>
<tr>
<td>Accarain-Bouillot</td>
<td>11</td>
<td>10,400,000 €</td>
</tr>
<tr>
<td>MS-a</td>
<td>11</td>
<td>2,600,000 €</td>
</tr>
<tr>
<td>Atelier d'architecture Georges Pirson</td>
<td>10</td>
<td>8,000,000 €</td>
</tr>
<tr>
<td>Grontmij</td>
<td>10</td>
<td>9,100,000 €</td>
</tr>
<tr>
<td>Suède 36 Architectes</td>
<td>10</td>
<td>3,628,561 €</td>
</tr>
</tbody>
</table>
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