



SYSTEM INNOVATION: CASE STUDIES

BELGIUM - Governance for System
Innovation: Sustainable Housing
and Building in Flanders.



Governance for System Innovation: Sustainable Housing and Building in Flanders.

An OECD case study

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Introduction

During 2013-2014, The OECD Working Party on Innovation and Technology Policy (OECD-TIP) set up a project on *system transformations through innovation*, or briefly *systems innovation*. The basic motive of the OECD TIP-project is to understand how policy can influence system innovations and what have been practical experiences in member states with governance approaches for stimulating systems innovation. This report discusses experiences in Flanders (Belgium) with governance for system innovation, in particular in the field of housing and building. Over the last ten years, policy-makers in Flanders (Belgium) have increasingly adopted a language of “system innovation”, “transition” and “transformation” of societal system and industrial sectors, and have set up policy initiatives to stimulate such forms of innovation. The field of housing and building was in fact the first one where such new policy approaches were tried out. The focus of this report is on two specific policy initiatives, but the analysis is situated in a broad context of historic trends, long-term policy evolutions and evolving practices in housing and building. The first and oldest initiative, called *DuWoBo*¹, was initiated in 2004 and is still running. It originated in the context of environmental and sustainable development policy, and aims at reinforcing the transition to a more sustainable housing and building system. Originally, it employed the approach of “transition management”, but it has meanwhile moved beyond that, although it still works explicitly from a sustainability transitions point of view. The second initiative, the *Round Table Construction*, originated in the industrial and innovation policy of Flanders and aimed at a strategic, industrial transformation agenda for the building sector, coupled to a concrete action plan. It started early 2012 and ended half 2013, but it has indirectly contributed to amongst others things a call for innovative experiments in energy renovation in buildings.

This report makes an analysis of both governance experiences, starting from the questions that lie at the basis of the OECD TIP-project, such as: what are the historic and contemporary mechanisms in the system under study, and which key mechanisms can drive a transition? Which structures and mechanisms characterize policy development in this field? How has the government tried to influence transition in this case and what can be learned from this experience? What does this imply for future policy development?

The report starts with a brief look at what makes this case relevant (part 1) and, next, describes the research approach and analytical framework (part 2). Part 3 then analyses the historical and contemporary context within which both policy initiatives were introduced and discusses some key mechanisms in the evolution of housing and building in Flanders. Next, part 4 makes a reconstruction and analysis of *DuWoBo* (4.1.) and the *Round Table Construction* (4.2.). Part 5 discusses important cross-cutting themes and questions that surface in the governance experiences of these processes. General conclusions are presented in part 6.

1. Why this case?

When in 2013 the OECD Working Party on TIP initiated a two-year project on “system innovation”, intended to analyse the experiences with policies for system innovation, it sought relevant cases in

¹ DuWoBo is a Dutch acronym for *Duurzaam Wonen en Bouwen*, or Sustainable Housing and Building.

member states of governance for system innovation. In this context, a case study of policies for system innovation in housing and building in Flanders is interesting for two reasons: the societal importance of the housing and building system, and the several years of experience in Flanders of trying to stimulate innovation at system level in a complex governance setting.

As in other industrialised countries, the housing and building system has a high impact on several domains of Flemish society: it is a big economic sector, it provides a lot of employment, it has important spatial and environmental impacts, and it is closely connected with mobility and lifestyle patterns. Trying to innovate this system as a whole – and not just focusing on specific products or processes – can consequently have huge societal benefits, but will also be quite challenging. It is thus relevant to study how in such an important and socially deeply embedded system, attempts at system innovation are interpreted by the actors in the system, which problems surface and how (and if) solutions are found.

Furthermore, system innovation policy is not exactly a common policy approach. On the contrary, it can be argued that governance initiatives for system innovation are in an experimental phase, with all actors involved searching how to interact and cooperate. Within the housing and building system, Flanders has built some experience with governance approaches that take such a rather experimental approach to policy. This is most obvious in the DuWoBo process, where in 2004 the government introduced the so-called “transition management” approach (Rotmans et al. 2001, Loorbach 2007) to work towards system innovation and transition for sustainable housing and building. Also in the Round Table Construction, the government experimented with an approach where an industrial sector was invited to develop its own strategic agenda to transform the traditional building sector to a construction-energy-environment cluster. Both experiments with system innovation policy can provide interesting insights in the chances and problems of such an approach in a complex policy environment.

2. Research questions, research approach and methodology

As said above, the research questions in this report derive from the general questions of the OECD TIP-project System Innovation: what are the historic and contemporary mechanisms in the system under study, and which key mechanisms can drive a transition? Which structures and mechanisms characterize policy development in this field? How has the government tried to influence transition in this case and what can be learned from this experience? What does this imply for future policy development?

The analytical framework used in the case study derives from Paredis (2013) and builds on a combination of the multi-level perspective (MLP) of transition studies and the policy arrangements approach (PAA) mainly developed in environmental policy analysis (Arts et al., 2006, Arts and Leroy, 2006). I briefly introduce the framework, but refer for a detailed discussion to Paredis (2013). One of the main features of this framework is that it can provide a historically informed narrative of how an innovative governance approach can be situated in the long-term development of a societal system and its policies, how it influences (or does not) the policy regime and what kind of influence this is.

2.1 The multilevel perspective (MLP)

In this study, the multilevel perspective (MLP) is used because it allows to describe the housing and building system, its main characteristics and its historical development. These provide the context within which policy initiatives for system innovation are taken and against which they can be analysed. The MLP originated in the field of socio-technical system studies and sustainability transitions studies (Geels, 2005, Grin et al., 2010). The MLP is useful to analyse systems and to understand how deep, transformative change happens in them. Geels (2004) defines a system as a cluster of elements and their linkages that ensure that a societal function – such as energy provision, mobility, housing – is fulfilled. The MLP analyses a system in three levels: regime, niches, and landscape. **Regimes** are strongly structured, relatively stable configurations of institutions, technologies, artefacts, practices, infrastructures, rules and actor networks that are the dominant way of fulfilling a specific societal function. At the meso-level of regimes, change is incremental. At the micro-level, however, radical novelties emerge. In these **niches**, technologies and practices are developed that diverge strongly from what is normal in the regime. Niches can be constructed around technologies, new practices or approaches to governance and policy. Because a lot of experimentation is going on and technologies, rules and practices are in the making, niche configurations are less stable than regimes. The macro-level is called the socio-technical **landscape** and refers to “the technical, physical and material backdrop that sustains society” (Geels and Schot 2007, p. 403). The landscape is an exogenous factor that is beyond the direct influence of regime or niche actors, but that makes some actions easier than others. It usually evolves rather slowly and contains deep cultural patterns, macro-political developments, natural circumstances and material infrastructure. Landscape changes are an important source of pressure on regimes, but they also provide new opportunities for niche development (Smith et al., 2010).

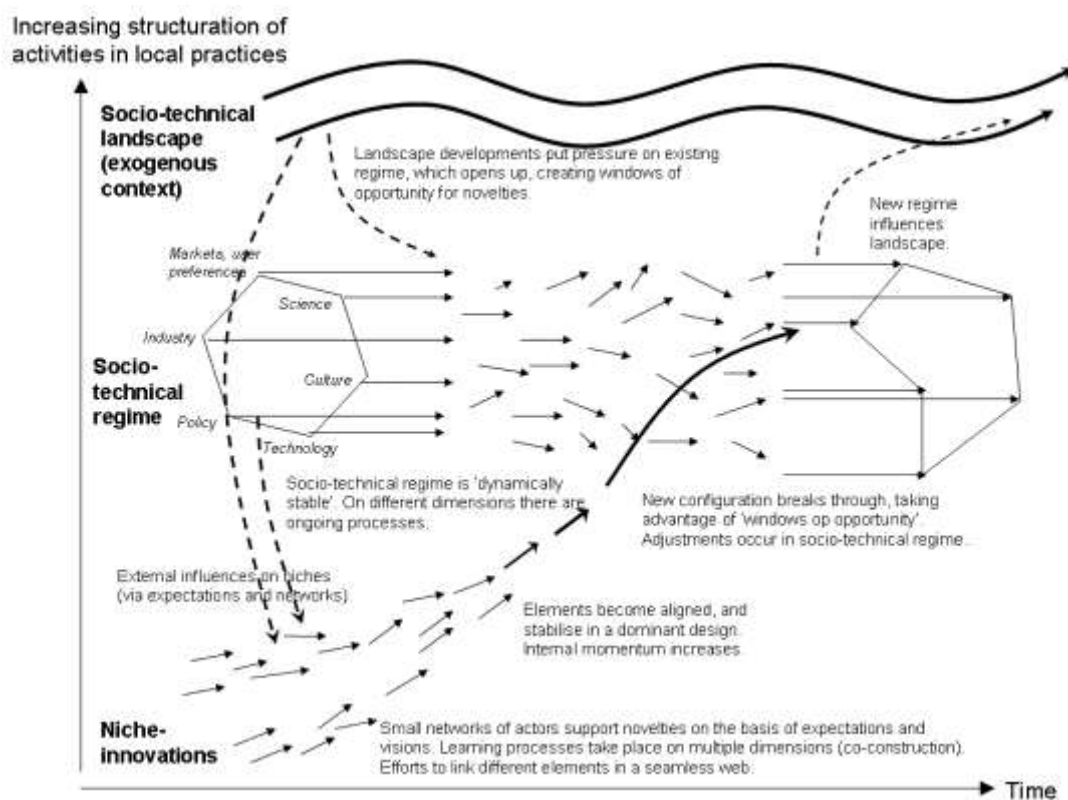


Figure 1. The multilevel perspective. Source: Geels and Schot (2007, p. 401)

The central insight of the MLP is that although radical novelties may start in niches, an innovation as such is not enough for change to break through. It is the interaction between landscape, regime and niches that is determining: “The multi-level perspective argues that transitions come about through interactions between processes at these three levels: (a) niche-innovations build up internal momentum, through learning processes, price/performance improvements, and support from powerful groups, (b) changes at the landscape level create pressure on the regime and (c) destabilisation of the regime creates windows of opportunity for niche innovations. The alignment of these processes enables the breakthrough of novelties in mainstream markets where they compete with the existing regime” (Geels and Schot 2007, p. 400) (see figure 1).

2.2 Explaining policy change and stability: policy arrangements

The MLP allows for a historically grounded analysis of the long-term development of a system through interaction between different levels (landscape, regime, niches). That in itself can provide interesting insights in our case study – the development of housing and building in Flanders – but the MLP is not suited for a detailed analysis of policy and the influence of policy initiatives on e.g. policy discourses, rules and institutions, or actors (Paredis, 2013). For this policy analysis, the policy arrangements approach (PAA) is a useful framework because it captures the different dimensions that are relevant when trying to understand change and stability in policy (Arts and Van Tatenhove 2004, Arts et al. 2006, Arts and Leroy 2006a). A policy arrangement is “the temporary stabilisation of the content and organisation of a policy domain, in a bounded time-space context” (Arts and van Tatenhove 2004). The concept is meant to analyse substance and organisation of a policy domain, as well as change or stability of that domain. Policy arrangements are the result of and can change through the day-to-day policy processes and interactions between players and/or through long-term processes of structural transformation. To analyse policy arrangements, four dimensions are taken into account: actors and actor coalitions, resources and powers, rules of the game, discourses. The first three are organisational elements of policy, the last one refers to substantial aspects.

- **Actors** and actor coalitions: relates to the different players involved in the policy domain, e.g. from different administrations, business, ngo’s, experts, scientists, civilians etc.
- **Resources:** the means actors can use such as money, personnel, knowledge, authority, technology. The division of resources among actors is one of the determinants of their capacity to influence policies and policy results.
- **Rules** of the game: formal procedures of decision making and implementation as well as informal routines of interaction within institutions. Rules determine which actors are in and out of the game, and how actors can get in. They relate to norms, procedures, legislation, divisions of tasks etcetera in a policy domain.
- **Discourse:** interpretative schemes, ranging from formal policy concepts to popular story lines, by which meaning is given to a policy domain. Hajer (1995,2006) has shown how policy domains are often characterised by discourse coalitions, or group of actors that share the usage of a particular set of storylines.

The four dimensions are intricately connected, so that change in one of the dimensions (e.g. entrance of new actors) often causes changes in the other dimensions (e.g. new actors lead to a different distribution of power, new discourses, different rules to engage the players). This is however not an automatism.

The PAA also draws explicit attention to the context in which policies develop, namely the different kinds of social, economic and political processes that are changing the relationships between the state, the market and civil society, and that in their wake also initiate new conceptions and structures of governance. Grin (2010) labels these **ongoing processes of structural transformation**, or structural elements outside the direct grasp of policy actors that can be a source of political change. Examples are globalisation, the ideological shift towards market steering or the (financial) crisis of the welfare state.



Figure 2. Dimensions of policy arrangements and influences leading to policy renewal. Based on Arnouts and Arts 2009.

Figure 2 illustrates the connection between the different concepts: policy renewal – or in other words: an innovation of a policy arrangement – results from structural processes of social and political change on the one hand, and the day-to-day strategic behaviour of actors involved in daily policy interventions on the other. It is remarkable how close the processes identified in the PAA are to the formulations in the MLP (the ‘levels’ can be recognised in the presentation in figure 2). The different building blocks of the policy arrangements approach can in fact be reinterpreted through the different levels of the MLP. In that way, they make explicit the political dimension of the MLP:

- The processes of structural transformation are the political aspects of the landscape level. They put pressure on the regime, in particular on its policy arrangement, but they can also be a source of inspiration for the initiation of new governance practices.
- the existing policy arrangement is the political part of the socio-technical regime, and can further be detailed as a configuration of actors, rules, resources and discourses
- the governance innovations through actors’ agency can be situated at niche level or regime level. Important for the analysis further down is that the two studied policy initiatives for system innovation – DuWoBo and the Round Table Construction – can be situated at this level. This is most obvious with the transition management approach of DuWoBo. TM can be framed as the introduction of a policy niche, set up alongside regular policies, with the ambition to introduce a new style and practice of governance that aims for innovation in the policy field on the level of substance as well as organisation. It aims for example for a sustainability transition in housing and building, and involves so-called frontrunners and forward-thinking regime players. The PAA allows to analyse in how far this policy niche diverges from regular policy (does it have a distinguishing discourse, actors, rules and resources?).

2.3 An interpretive policy analysis

The case study about the DuWoBo TM-process builds on several years of empirical research, based in interpretative policy analysis, as reported in Paredis (2013)². This research used methods such as extensive participative observation, interviews, document and literature study, and feedback sessions with policy-makers. There were for example 18 specific interview for DuWoBo and around 15 more for a mapping of the context with civil servants, business people, NGO's, scientists, policy-makers. The case study on the Round Table Construction was added for this report, and builds on document study, discussions with policy-makers, five additional interviews and a lot of informal conversations.

In order to develop an understanding of how policy initiatives with a focus on system innovation work in practice, which opportunities they offer, which problems they encounter and how they influence (or not) regular policy, the analysis uses three research strategies. The first is a reconstruction of the two cases (DuWoBo and Round Table Construction) to detail how they originated, what their main developments were and the main results. The second is a contextualisation of the cases in historical and contemporary evolutions. This places the cases in a longer time perspective, and by mapping the developments that are simultaneously taking place around them, it allows for a sharper view of the structures, practices and culture in which these system innovation initiatives try to intervene. The third is an uncovering of the main characteristics and patterns that surface in the processes themselves and the patterns that surface in the interaction with their context.

3. Historical and contemporary evolutions in housing and building in Flanders

To analyse the role and potential impact of policy initiatives for system innovation such as DuWoBo or the Round Table Construction, it is necessary to develop a deeper understanding of the context within which they are introduced. All socio-technical systems upon which present-day industrial societies are built (such as the energy, mobility or food system), have roots that go back at least a hundred years. Typically, the technologies, institutions, knowledge, norms or cultures that are present in these systems are difficult to change. Policies for system innovation are thus bound to encounter inertia, lock-ins and vested interests. However, it is important that such initiatives are also aware of current trends and evolutions that may create possibilities for change. This chapter looks at the main features of the housing and building system in Flanders, by which trends and mechanisms these have been shaped historically, and which trends may be drivers for change in the future.

² This PhD dissertation essentially poses the question how transition management processes influence existing policy regimes and policy practices, which characteristics this influence has and how it can be explained. Its empirical basis rests in two Flemish case studies, DuWoBo and Plan C, which is a second transition management process in Flanders (started in 2006), that focuses on sustainable materials management.

3.1 The foundations: anti-urban policies from the 19th century onwards

The roots of the current Flemish housing and building system can be traced back to the second half of the nineteenth century when the needs of the industrialisation of Belgium combined with responses to social unrest to initiate the first housing policies. Different historical accounts of Flemish housing and building that have been published over the last years (De Decker, 2004, De Decker, 2008, De Vos, 2012, Kesteloot, 2003, Loeckx and De Meulder, 2003, Van Herck and Avermaete, 2006a) mention a very comparable set of “political choices and actions, cultural convictions and economic possibilities that reinforced each other in daily practice over and over again in the dominant direction” (De Decker, 2008, p. 155).

The background of these policies was an “**anti-urban policy and attitude**” (Kesteloot, 2003, Loeckx and De Meulder, 2003): catholic and liberal elites regarded the city as a place of political agitation and moral decline, and therefore stimulated suburban living. Simultaneously, they wanted to keep industrial centres accessible to bring workers to the city for working. The development after 1885 of a dense railway net, a light rail net and – already in 1869 – of cheap railway season-tickets through social tariffs were influential measures in that direction. After the bloody workers revolt of 1886, the government approved several social laws, with the first housing law of 9 August 1889 being one of the most important. This law gave workers the opportunity to become home owner with the help of tax exemptions and cheap social loans (Doms e.a., 2001). Owners and families who were saving for a house were even given an extra vote. **Individual home ownership** was promoted as an ideal because it made the workers part of the owners class and because the obligation to pay a loan would diminish the appetite for strikes (Kesteloot, 2003).

After the First World War, the introduction of universal single male suffrage obliged the Catholics to accept coalition governments with socialists or liberals, although they remained by far the dominant party. This new power balance during the interbellum period allowed to introduce new accents in housing policies. In 1919, the *Nationale Maatschappij voor Goedkope Woningen en Woonvertrekken* (NMGWW, National Association for Cheap Houses and Living Rooms) was founded under socialist direction, with the goal of building cheap rental houses for low income families. **Social housing policy** during this period was dominated by the idea of garden neighbourhoods (‘tuinwijken’), neighbourhoods with modest houses, surrounded by a lot of green, where collective services had to prevail, financially and organisationally supported by tenants cooperatives. Although the model countered private home ownership, it is telling that also the socialists preferred to protect the workers from the vices of the city and house them on the outskirts of cities (ibid.).

3.2 After the Second World War: expansion, spatial chaos, economic weight and growing environmental pressures

After the war, housing shortage was a first order political problem in most European countries. In 1945, the shortage for Belgium was estimated at 250.000 dwellings, taking into account the expected demographic growth (Theunis, 2006). A large portion of the houses (67%) dated from before 1918 and were in bad shape (without a toilet in the house or a connection to electricity or a sewage system) (Van Herck and Avermaete, 2006b). Opinions diverged about what could count as efficient solutions for the problem. The *Christelijke Volkspartij* (CVP, Christian Peoples Party), the Christian-democrat successor to the Catholic party, favoured the building or purchase of single-family dwellings in the suburbs or in the countryside. The *Belgische Socialistische Partij* (BSP, Belgian

Socialist Party), that had become the second party after the war, wanted to build collective social housing projects in and around the cities, with high-rise blocks as one of the solutions. Apart from these differences, all three major political families – Christian-democrats, socialists, liberals – saw the building sector as a crucial factor in the post-war reconstruction of the country.

In 1944 already, a social pact had been agreed between employers and a number of socialists and Christian democrats. In return for social peace, the employers agreed with a social security system set up by the state. “The state became an economic coordinator of the planned economy on the condition that it guaranteed social peace and promoted class reconciliation” (Witte et al., 2990, p. 227-233). Ownership of a building lot, a private house and later the purchase of a car and durable consumption goods formed an integral part of policies to boost purchasing power and the standard of living and to create a market for the mass production of industry. And just like in previous decennia, policy-makers did not only pursue socio-economic objectives through housing and building policies, but also political ones, such as the promotion of social stability through home ownership (Reynebeau, 1999).

During the socialist-Catholic government Spaak (1947-1949), two pieces of legislation were approved that founded the post-war housing and building regime, namely the catholic Law De Taeye (29 May 1948) and the socialist Law Brunfaut (15 April 1949). The most influential one is without doubt the **Law De Taeye**, named after the Christian-democrat Minister Alfred De Taeye. The law promoted private initiative in the building of cheap, functional and hygienic houses for single families. The Law helped to solve the main housing shortage problem by the mid 1950’s. In 1954, the 100.000th building subsidy was granted and by 1973 411.000 De Taeye houses had been erected (Theunis, 2006, p. 71). Typical is that the majority of these houses were not built by large building companies, which are scarce in Belgium, but that private control over construction was the norm. In contrast with other European countries, where post-war housing shortage was solved through social rental housing policies, in Belgium the solution was found in building new houses through private initiative of individual families, stimulated by premiums (Winters et al., 2007).

The Law De Taeye is not only the cornerstone of the Belgian model of **acquisition of property through individual building** (Kesteloot, 2003), it is also generally recognised as one of the main foundations for the Flemish “wild dwelling” and the typical urbanisation model (Van Herck and Avermaete, 2006b, De Decker, 2008). Because spatial policy was lacking, there were almost no restrictions on where houses could be built. The combination of this specific housing and building model, with a lack of spatial planning and a mobility policy focused on car mobility caused from the fifties onwards a flight from the city and an enormous **suburbanisation**. The ongoing construction activity demanded new building plots that were found on the countryside or on the fringes of cities, where the plots were cheapest. Because of a lack of spatial planning until the early sixties, houses became spread alongside the access roads to town and on numerous new allotment schemes, resulting in **sprawl and ribbon development**. In particular in Flanders, the spatial sprawl has led to characterisations of Flanders as ‘nebula city’, ‘diffuse city’ and ‘network urbanity’ (Loeckx and De Meulder, 2003). It took until 1997 before the *Ruimtelijk Structuurplan Vlaanderen* (RSV, Spatial Structure Plan Flanders) defined a vision for the spatial development of Flanders. The RSV wanted to counter the fragmentation of the territory, amongst others things by introducing a distinction between urban areas and countryside. In spite of the intentions of the RSV, dynamics that had been taking shape over several decennia could not easily be reversed. Even with new investments in cities, by the early 21st century, suburbanisation continued and policy initiatives had not yet succeeded in reversing the trend.

In contrast with the policy attention for private construction and home ownership, the attention for social housing and the private rental market has always been minimal. The Belgian laws on **private rent** are based in the liberal philosophy of the Civil Code, which means that principles such as a strong protection of the right of ownership, contractual freedom of the parties, the (supposed) equality between parties and the supplementary character of rent acts are central features (Pannecoucke et al., 2003, Winters et al., 2007). The Belgian legislator has always been reluctant in intervening in the private rental market, mainly restricting himself to watching over the conformance of financial and contractual aspects of house rental agreements with the legislation.

What about **social housing**? As mentioned above, in 1949 the Law Brunfaut was voted as the socialist counterpart of the Law De Taeye. The law made the funding possible of social housing projects and infrastructure works in social housing neighbourhoods. In the period 1950-1995, the social housing associations represented 16% of new housing constructions in Belgium, while 83% was carried out by private individuals (Winters and Elsinga, 2008, p. 218). However, two-thirds of these social houses were intended for sale and only one-third for letting, a situation that leads De Decker to the conclusion that social housing institutions mainly reinforced the foundations of the housing regime (De Decker, 2008). The social housing sector never became a real alternative for the dominant model, but rather functions as a supplement to absorb the most pressing social housing problems. An important year is 1997, when the *Vlaamse Wooncode* (Flemish Housing Code) gave the Flemish housing policy a legal base and decreed the main principles of housing policy. The Code is in fact the judicial endpoint of the regionalisation process in the domain of housing (Winters et al., 2010). It bundles all Flemish competences and aims at the realization of the constitutional right to housing. It states that everybody must be able to live in decent circumstances and it aims to promote “the disposal of a well-adapted house, of good quality, in a proper living environment, for a reasonable price and with housing certainty” (VWC, art. 3).

The historical choices in the **housing market** have caused an enormous **dichotomy**. A survey from 2005 shows how the preference of the Flemish for a house in private property, if possible detached and on the countryside, is visible in the figures: 74,4% of houses is privately owned, 5,6% is social rent and 18,5% is private rent. These figures have diverged systematically over the years, as shown by the fact that the private rental sector that still had a segment of 30,7% in 1976 (see figure Table 5.2). With a social housing market of below 6%, it is in particular the private rental market that has become problematic “because it has evolved into a residual sector for households that do not have the means to become home-owner or that get no access to social housing (even when they are part of the target group)” (Afdeling Woonbeleid 2011, p. 5). It is also in the private rental market that the quality of houses is lowest. Meanwhile, the waiting list for social rental houses was around 70.000 families at the turn of the century (VCB, 2005).

<i>In %</i>	1976	1992	2001	2005
<i>Owner-occupier</i>	65,3	67,7	72,6	74,4
<i>Private rent</i>	30,7	26,9	22,1	18,5
<i>Social rent</i>	4,0	5,4	5,3	5,6

Table 5.2. Share of owner-occupier and tenants in the Flemish housing sector (VCB 2005, Winters and Elsinga 2008).

All these construction activities over several decennia have turned the **construction sector** into an important economic sector. In 2012, the construction sector accounted for 5,3% of Belgian GDP, with

around 280.000 persons directly and 220.000 indirectly employed suppliers, counting for more than 13% of private employment. The sector has always been characterised by a diversity in company types and company sizes, where the dominance of SME's is striking.

What about the **ecological consequences** of this housing model with suburban living as the dominant form? Authors refer to it as the institutionalisation of a systematic wastage of scarce resources such as open space, energy and resources, and high costs to provide mobility, infrastructure and provisions (Loeckx and De Meulder, 2003, De Vos, 2012). The environmental performance of the housing and building regime was, nevertheless, hardly a concern until the early 1990s when the energy and waste problems initiated the first policy initiatives. In the field of energy, it took until September 1992 before the Flemish Insulation Decree was approved, that installed a K-65 norm for newly built houses in its first year and a K-55 norm from September 1993 onwards. However, there was hardly a difference in insulation quality noticeable before and after the decree, partly because technical knowledge was lacking and information for builders was insufficient, but also because there was no form of control or enforcement so that rules could easily be ignored (Hens and Janssens, 2005). Waste policy was more successful. Since construction and demolition waste is one of the most voluminous waste streams, one of the first policy plans in waste was the Implementation Plan Construction and Demolition Waste (1995). It had two main objectives: 1. confining the amount of waste; 2. ensuring that as much remaining waste as possible is recycled or used as secondary material instead of being incinerated or landfilled. Because of bans on landfilling and high incineration tariffs, the sector began to reorient its treatment of waste. By 2005, recycling and reuse as secondary material from construction and demolition waste had risen from 40% to 85% and landfilling has been reduced drastically. Although this is generally evaluated as a success of waste policy that puts Flanders at the top of Europe, it remains a weak point that the reduction of total waste amounts and the composition of construction and demolition waste are insufficiently under control (OVAM, 2007).

During the seventies, a **counter-discourse and assorted alternative building practices** developed that form the roots of what is currently labelled 'sustainable housing and building'. Just like in several other European countries, a number of architects and activists started experimenting with different environment-friendly construction techniques and housing styles. The energy crisis from the seventies and concerns about health effects of used materials (asbestos, chemical paints...) were the direct reasons for experimenting with new construction techniques, but these practices were often part of a broader search for what an ecological society was thought to be: small-scale, decentralised organisation, building on cooperation, ecologically adapted, employing so-called 'soft' technologies. From the mid-nineties onwards, small-scale initiatives for sustainable building multiplied rapidly. In contrast, around the turn of the century, the regular building sector in Flanders hardly paid attention to "sustainable building".

3.3 The Flemish housing and building system and its policy arrangement: main features, and historical and contemporary driving forces

3.3.1 Regime, niches and landscape around the turn of the 21st century

The overview of the history of housing and building in Flanders until the early 21st century provides a basis for describing the system more in detail. The central features of the Flemish housing and building **regime** at the beginning of the 21st century can be summarized as follows:

- A high degree of private home ownership, with a majority of single-family dwellings that are privately constructed
- A dichotomy of ownership vs. rental market; a small social housing sector of around 6% of the market
- A huge preference for suburban dwelling, with sprawl as a result
- Spatial polarisation between richer groups outside the cities and lower social status groups in the cities
- High energy- and materials-intensity
- An important and diverse construction sector

Alongside the dominant housing and building model, two **niches** with a counter-discourse and diverging practices can be discerned. The first originated after the first World War, was socialist inspired and promoted social housing policy that emphasised collective types of dwelling, collective provisions and a social rental systems. As said above, this niche has never developed into a real alternative for the regime practices and policies. Over time it has become embedded in the dominant model, where its function is to absorb the most pressing social housing problems. During the seventies, another counter-discourse and assorted alternative building practices developed that was mainly occupied with ecological and health concerns. Here, the emphasis is on a different handling of energy, materials and water that translates in different building techniques and housing guidelines. Although it clearly diverges from the dominant regime in these aspects and can thus be characterised as a real niche, it does not counter other dominant features of the regime such as its spatial and mobility components. Most of these ecologically more sustainable houses are privately owned, newly constructed homes, with a private garden, usually situated in the countryside or on the fringes of cities.

The central features of the housing and building regime can be traced back to the 19th century and the economic, political and ideological logics that at that time began to shape the system. Most of these logics can be labelled as **landscape pressures**, outside the immediate influence of the housing and building regime. In the 19th century these included industrialisation and the resulting economic organisation, the resistance from the working classes against their living conditions, the reactions from the ruling classes to defend their privileges. These kind of trends combined to lay the ground for a housing model based on private home-ownership, preferably away from the city but with easy access to it. After the Second World War, the model developed further, hugely influenced by economic priorities and a demand for better distribution of welfare. The fordist-keynesian post-war economic model (Kesteloot, 2003, Van Herck and Avermaete, 2006b) built on a combination of mass production and mass consumption. The two pivotal goods of this mass consumption were the suburban house and the car, both making the production and consumption of other goods possible and necessary. “The spatial design of post-war economic growth is suburbanisation”, as Kesteloot (2003, p. 23) expresses it. The continuing trend of suburbanisation throughout the sixties and seventies also had social consequences because suburbanisation is socially selective: after the rich, also middle class families moved to suburbia, leaving a relative over-presence of weaker social groups in the city and thus causing a form of spatial polarisation. By the second half of the eighties, flexibility and globalisation initiated an intensified competition between regions for capital, production facilities, jobs and markets. The attention of policy-makers for cities revived, because cities play an increasingly important role in this interregional competition. The other side of the coin is land speculation, starting in Brussels before 1992 in view of the European market, and from there spreading out over Flanders, causing a doubling of house prices in cities. This in turn locked the

poorer city inhabitants into the 19th century worker quarters and strengthened the separation between city and periphery, causing not only socio-economic, but also demographic and ethnic segregation (ibid.).

3.3.2 Policy arrangement

While the previous paragraph analyses the Flemish housing and building system around the turn of the 21st century in MLP-terms, this paragraph zooms in on its main policy features: actors, discourse, rules, resources.

Who are the **actors** that are part of the housing and building regime and its policy arrangement? Due to the integrating character of housing and building, the list of relevant actors is quite impressive: government at several levels, occupants, building professionals, house providers, civil society organisations, research, education, media etcetera. Even though the amount of actors in the housing and building regime is impressive, not all of them have a central role in the policy arrangement. When we take a closer look at the government actors, the Flemish level is undoubtedly central: it sets the conditions and determines the policy principles and priorities. Although Flanders has acquired most relevant powers, the federal level retains some important ones, such as financial and taxation policies that are relevant for housing and building. Also the powers of the local level should not be underestimated, in particular in spatial policy and social housing policy. Of the administrative departments that play a role in the policy arrangement, the central one is the department of spatial planning and housing (in 2004 AROHM, meanwhile RWO) and the different agencies that form part of it. They group competences such as spatial planning, ground and building permits, social housing, housing policy, renovation premiums and so on. In practice the two domains in this department – spatial planning and housing – have only a limited integration and coordination in working structures and practices. Since the two domains often fall under the authority of different Ministers that are usually from different political parties, harmonisation of policies is very difficult.

From the non-governmental actors, most influence on the policy arrangement comes from organised groups, and because of its economic weight, organisations representing the professional building sector and real estate developers are particularly influential. The *Vlaamse Confederatie Bouw*, representing the bigger construction companies, is generally considered to be one of the more influential ones. Other important professional sector organisations include the *Bouwunie* that represents mainly small and medium constructors, the *Beroepsvereniging van de Vastgoedsector (BVS)* that represents real estate developers, the *Algemeen Eigenaars Syndicaat (AES)* that represents landlords and real estate owners, and different organisations that represent architects (such as the *Vlaamse Architectenorganisatie, NAV*). The construction sector also finances its own scientific and technical research centre, the *Wetenschappelijk en Technisch Centrum voor het Bouwbedrijf (WTCB)*, that often carries out studies for the government to prepare regulation and standardization.

The **discourse** about housing and building has been very consistent over the last decennia. The central metaphor is found in the often used expression “*De Vlaming heeft een baksteen in zijn maag*”, literally “A Fleming has a brick in his stomach”. The expression refers to the fact that the ultimate dream of the Flemish population seems to be to build an own house or at the very least be the owner of one, if possible in the countryside or on the outskirts of cities and towns. Private home ownership remains a central goal of Flemish housing policy, not only for Christian-democrats for whom it has been a goal historically, but it has also become a core feature of the ideology of the

Liberal party, the social-democrats and the Flemish nationalist N-VA, who all advocate home ownership as a guarantee for living well and a kind of life insurance. The recent Flemish Governmental Agreement reads: "We want a policy that gives even more Flemings the opportunity to acquire their own house. If necessary, we will provide extra support to acquire a house" (Vlaamse Regering 2014, p. 91). Another long-standing guiding idea behind policy initiatives is that the construction sector is a crucial sector for the economy. "In the field of employment the adagio still is: when the construction sector performs well, the whole economy performs well" (VCB, 2005, p. 4). Several authors refer to another implicit starting point of policy, namely the strong protection of the private right of ownership that permeates Belgian civic law since its inception in 1830 and that is grounded in the even older Code Napoleon (1803). Van den Broeck et al. (2010, 2012) find for example that the ownership logic permeates the system of allotment permits and construction permits, and thus inhibits the realisation of collective policy objectives in spatial planning.

While these elements of the decennia old policy discourse are still standing firmly, there is some movement visible in others parts. In spatial planning, the RSV (1997) established the idea that spatial policy should not just passively follow the ongoing developments, but that it should be offensive and steer towards a long-term vision of spatial development. How far this planning should go and how strict it should be implemented, remains however a highly contested political and societal topic. A second evolution was the start of a serious city policy in the late 1990s, with the explicit aim of making cities more attractive and keeping or attracting middle class families with children. A third evolution, important for the development of social housing policy, followed from the approval of the *Vlaamse Wooncode* (Flemish Housing Code, 15 July 1997). It anchored core concepts in housing policy such as affordability of housing, availability of a diversity of houses adapted to the needs of different groups, quality of houses (technically, level of comfort), housing certainty, integration and equal opportunities for residents (Winters et al., 2010).

Because of the numerous policy fields that are relevant for housing and building, it needs no explanation that the **rules** dimension of the policy arrangement is very complex. When regarded from the perspective of the private owner who wants to build, buy or renovate (75% of families) he/she is usually first confronted with regulation from spatial planning and urban development that regulates where can be built and under which conditions. Rules are quite complicated and relate to topics such as desired spatial development of the municipality, mobility impact, building density, visual elements, cultural-historical aspects, environmental impact, health etc. Building, purchasing, renovation and renting are also hugely influenced by the financial construction that have been built around them, such as different kinds of tax deductions, exemptions and premiums. These are for the most part oriented towards home-ownership. Some of them are still federal powers, but over the years a lot of powers have also been transferred to the regional level. The regional level is also competent for setting quality standards for housing. Since 1997, the *Vlaamse Wooncode* plays a central role here. It brings together all aspects of housing over which Flanders has responsibility and forms a basis for the development of new policy instruments.

As a corollary to the complexity of the housing and building policy arrangement, the **resources** within it are distributed between different policy domains and a lot of actors. At the level of the government, the foregoing analysis has shown that political ideology plays an important role in the development of housing and building, so that consequently the relative weight of political parties and in particular government coalitions have an influence. Over the years with the regionalisation of for example spatial planning and housing, the administrative capacity at the Flemish level to prepare

and implement policies at Flemish level has increased. Looking at the non-governmental actors, the economic weight of the construction sector and its representative organisations – in terms of turnover and employment – gives them a lobbying power that can hardly be underestimated, certainly since some of them can build on an impressive membership, such as VCB (with a membership of 9000 construction companies, including the bigger ones) and Bouwunie (with 8000 members from SME's and self-employed). Over the decades, the actors in the system have built up a high degree of expertise about all kind of aspects, from technical and political, to spatial and social, but not always in an integrated form. Knowledge is distributed over a lot of organisations, companies, ngo's, academia, often with their specific expertise.

3.3.3 What are the current driving forces?

Parts 3.1 and 3.2 described the historical evolution in the Flemish housing and building system since the late 19th century. Parts 3.3.1 and 3.3.2 analysed the main features of the current system and of its policy arrangement around the turn of the century. Of course, evolutions did not stop there. On the contrary, in the last few years, some of the central features of the housing and building regime have increasingly come under pressure from growing concerns over for instance example climate change, materials scarcity or competition over use of space. These pressures are already initiating change in the system and it is likely that they will be a cause of further change in the years to come. Policy initiatives such as DuWoBo and the Round Table Construction, that will both be discussed in part 4, can be regarded as a policy answer to (some) of the growing pressures on the housing and building system. So, what are currently some of the main pressures on the system?

The trend that is perhaps mostly speeding up the evolutions in housing and building is the threat of **climate change and the closely related energy question**. In particular European legislation has been of crucial importance. As part of its strategy to meet the Kyoto objectives, the EU began in the late nineties issuing Directives and setting up programmes to urge member states to boost energy efficiency, decrease CO₂ emissions and stimulate renewable energy. In 2002, the European Parliament and the Council approved the *Energy Performance of Buildings Directive* (EPBD, 2002/90/EC), which goal is to decrease the energy use and CO₂ emissions of buildings. The Directive defines a methodology to calculate the energy performance of buildings, sets minimum standards for the energy performance of newly built houses and of renovation, and regulates energy certification of buildings. The Directive has been made more stringent in the EPBD recast (2010/31/EU) that decrees that as of 2021 all new buildings in the EU have to be “nearly zero energy” and that the energy that is still needed, has to be largely covered by renewable energy. Governments are obliged to reach these goals for their own buildings from 2019 onwards. In Flanders, the EPBD was in 2006 translated in the *Vlaams Decreet Energieprestatie en Binnenklimaat* and adjusted in 2011 in function of the recast. In general terms, it can be argued that one of the typical characteristics of the building system until a decade ago – the energy performance of a house is hardly important, neither for professionals, builders nor renovators – is quickly disappearing. Under pressure of European requirements, the developments are even going so fast that the energy question currently reduces “sustainable building” almost to “low energy building”. This is of course accompanied by several bottlenecks, with tensions between old regime rules and new practices, but the construction sector perceives it as an opportunity as well, with new investments and new job opportunities.

A second pressure can be labelled as trends in **demography**. Several trends converge here: an expected growth in population, an increase of households because of population growth but also because of smaller households (one-parent families, singles young and old), an ageing population but

in the cities a growth of younger families, immigration. According to prognoses, the amount of families will increase with 250.000 by 2021 and a further 180.000 by 2041 (in relation to 2006) (De Decker et al., 2011), so this implies a need for more houses. The changing composition of the population also demands new housing concepts, with diverging needs between cities (with more young families) and suburban or rural environments (with an ageing group).

More houses may be necessary, but is there space enough? Different domains (housing, business, mobility, agriculture, nature, recreation...) have always made **spatial claims** on the small Flemish territory, but new evolutions are increasing the pressure: globalisation and European integration of economy, transport and agriculture; increasing transport flows; climate change and demand for renewable energy; protection of biodiversity; economic restructuring and innovation. In 2011, the Flemish government started a process to discuss a *Beleidsplan Ruimte Vlaanderen* (Spatial Policy Plan Flanders). After a consultation and an expert process, in May 2012 a Green Paper was published, *Vlaanderen in 2050: mensenmaat in een metropool?* (Flanders in 2050: human scale in a metropole?) (Vlaamse Overheid, 2012). According to this paper, Flanders' spatial ambitions should be threefold: 1. strengthening Flanders' metropolitan status, 2. while keeping human scale in spatial development, 3. and increasing the spatial resilience of Flanders. However, the process stalled because no political agreement could be reached on the further development of this vision. Under the current government, in office since July 2014, the process has been picked up again in November 2014.

On the **social side**, the problems of the housing and building regime remain: the dichotomy between ownership and rent, the lack of social housing, the private rental market as a rest market with grinding consequences for poorer families, the increase in real estate prices (building lots and houses). Affordability of qualitative houses, not in the least for low-income groups is an important issue in housing policy. The difference between ownership and the rental market is remarkable here: while only 2% of owners has a payment problem, this is 23% for private tenants and 13% for social tenants (Vlaamse Woonraad, 2014, p. 6). Research has found that in the ownership as well as in the rental market, there is a clear relationship between the socio-economic situation of households and problems related to affordability, quality and security of housing (ibid., p. 7).

Most of these pressures can in transition terminology be labelled as landscape and/or regime pressures: they derive from trends and evolutions that are either outside the immediate influence of actors in the system, or that are a consequence of the day-to-day developments in the system and the growing problems and contradictions that flow from that. Part of the current pressure on the system also derives from what could be labelled as **niches**: new building and housing solutions that present themselves as an alternative and a challenge for the dominant model. Some of these are primarily technological, such as the growing segment of passive houses or the niche of bio-ecological construction materials. Others show important socio-cultural renewal, such as experiments with co-housing. Often different kinds of innovations are combined (including a different use of space) such as in initiatives for sustainable neighbourhoods or re-use of brownfields.

Given the combination of all these different pressures on the housing and building system, there is a good chance that some of its features will undergo changes in the following years. How deep and far-reaching these changes will be, is of course difficult to predict. What is important, however, from the point of view of this study, is that over the last few years several policy initiatives have been taken that try to exercise influence on the evolutions that are taking place. Part 4 makes an analysis of two of these initiatives: DuWoBo and the Round Table Construction.

Table 1. An overview of the main features of the housing and building system around the beginning of the 21st century.

Regime	<ul style="list-style-type: none"> • A high degree of private home ownership, with a majority of single-family dwellings that are privately constructed • dichotomy ownership vs. rental market; a small social housing sector of around 6% market share • A huge preference for suburban dwelling, with sprawl as a result; • Spatial polarisation between richer groups outside the cities and lower social status groups in the cities • High energy- and materials-intensity • An important and diverse construction sector
Discourse	<ul style="list-style-type: none"> • A private home with garden on the countryside or in the suburbs as an ideal • An own house for living well and life insurance • A strong building sector is a strong economy
Actors	<ul style="list-style-type: none"> • Very diverse: government at several levels, occupants, building professionals, house providers, civil society organisations, research, education, media • Government: Flemish level is central, with departments housing and spatial planning as most influential • Non-governmental actors: actors with economic weight such as the professional building sector and real estate developers are particularly influential
Rules	<ul style="list-style-type: none"> • Complex layering of rules, with importance rules relating to spatial planning, urban development, financing, housing. Rules are for the most part oriented towards home-ownership.
Resources	<ul style="list-style-type: none"> • Distributed between different policy domains and a lot of actors • Regionalisation has increased capacity at the Flemish level • Economic weight of building sectors and representative organisations • High degree of expertise, but not (always) integrated
Current pressures	<ul style="list-style-type: none"> • Climate and energy, with influence from EU legislation • Demography: growth, ageing, greening, immigration • Increasing pressure on open space; difficulty of reconciling spatial ambitions of different sectors • Affordability of qualitative housing for low-income groups; dichotomy ownership versus rental market

4. Two experiences with governance for system innovation

The previous pages served to describe the context within which policy initiatives such as DuWoBo and the Round Table Construction were introduced. In this part 4, I present a reconstruction of both processes and make an analysis of some of their important policy characteristics with the help of the policy arrangements approach. Part 5 then picks up several themes that surface throughout the analysis and discusses these in a cross-case fashion. One of the recurring observations is how innovative policy approaches have to wrestle with a long-established context of practices, meanings and institutions.

Before going deeper in the analysis, table 2 presents a brief overview of some of the differences between the two policy initiatives. Although DuWoBo and the Round Table Construction used a language of “system innovation”, “transition” or “transformation” to describe their ambitions, these terms do not always get the same interpretation, as will become clear further on. Also, the initiator, the process approach and the involved actors differ.

DuWoBo was initiated by the environmental department LNE in 2004 and later found a new place under the department of general government affairs DAR, where it was embedded within the Flemish sustainable development policy. It had the broad goal of reorienting the housing and building system towards a more sustainable system and chose to use the approach of transition management for that goal. Since 2004, DuWoBo has come a long way. It is still inspired by sustainability transition thinking, but has turned away from the strict transition management approach to a broader governance approach in which it experiments with different ideas for change. It relies on a differentiated network with a mixture of frontrunners and forward-thinking regime actors from business, government, ngo’s and science.

The Round Table Construction ran in 2012-2013 and relied on a less diverse network, with actors directly related to the construction sector, supported by the government. It aimed for a transformation of the construction sector into an integrated construction-energy-environment cluster. This fits with the ambitions of Flemish economic and innovation policy, and more specifically with the search for a new industrial policy, re-industrialisation and smart specialisation. The construction sector served as a pilot case for a new approach to cooperation between sector and government, in which the sector was invited to define its own ambitions and long-term strategy, within the framework of transformative cluster policy. The initiator of this policy initiative was the economic and innovation department EWI.

	DuWoBo 2004 - present	Round Table Construction 2012-2013
Initiator	From department LNE (environment) to department DAR (general affairs)	Department EWI (economy, science, innovation)
Goal	Transition to a more sustainable housing and building system, ecological, social en economical; Embedded in sustainable development policy	Transformation of an industrial sector to a competitive construction-energy-environment cluster. Embedded in new industrial policy
Process approach	From transition management (LT-vision, paths, experiments) to own approach of transition governance with experiments, learning platforms, strategic group	Experiment in innovative sector policy; self-organisation for long-term strategy development via “entrepreneurial discovery”
Actors	Network of frontrunners and regime actors from government, industry, science, ngo’s	Representatives of sector organisations with government

4.1 DuWoBo: transition management and beyond³

When the transition management process DuWoBo was initiated in October 2004, it was the first policy process at Flemish level that attempted to set up a coordinated policy for sustainable housing and building. The process was initiated by the environmental department (a department that in 2004 was in the margin of the housing and building regime) and was positioned as an experiment in innovative environmental policy. It had in fact a double purpose: on the one hand developing a future vision for sustainable housing and building in Flanders and translating that vision in an agenda with long-term objectives and short-term actions, and on the other hand testing the applicability of transition management in Flanders and investigating under which conditions such a policy approach could function (Peeters, 2004). There was no prior consultation with the departments spatial planning or housing policy about the objectives, format or actors of the process.

³ For a much more detailed analysis, see Paredis (2013).

For its innovation in governance, DuWoBo drew its original inspiration from the field of sustainability transition studies (Grin et al. 2010), relying on the approach of transition management to structure the process (Rotmans et al., 2001, Loorbach, 2007). Transition management claims to offer a toolbox for policymakers that hope to initiate transition processes in socio-technical systems. It usually employs a so-called transition arena with a selected number of frontrunners in the system (from government, business, civil society, science) to develop a transition agenda. This agenda contains a commonly developed system analysis, a future vision for the system, transition paths towards that vision, and a series of experiments to test and initiate the paths in reality. The underlying rationale is one of “goal-oriented incrementalism” (Rotmans et al. 2007): controlling a transition is not possible, but transition management processes are intended to influence, modulate and accelerate changes along sustainable paths, through processes of learning and experimenting.

4.1.1 DuWoBo between 2004 and 2014

The DuWoBo process started in 2004 and is still running. The preparation for DuWoBo began mid 2004 with the search by the department LNE for a group that could manage the process. The task was commissioned to a consortium under the direction of two Dutch research institutes, ICIS (with Jan Rotmans and Derk Loorbach, two of the founders of the TM-approach) and TNO. The Flemish partners in the consortium were the research institute Centre for Sustainable Development (UGent) and the consultant Pantopicon. The task that was assigned to the consortium had all ‘classical’ TM-ingredients: making a systems analysis, developing a transition agenda by the end of 2006 with a future vision for sustainable housing and building, formulating transition paths between that vision and the present, and developing experiments to implement the vision in practices. Apart from the project team of the consortium, the process was guided by a steering group under the direction of a project leader from LNE. During the preparation, a group of 22 people was selected, with a mixed profile: frontrunners as well as more established regime actors from business, government, ngo’s, science.

What can be labelled as the first phase (October 2004 – December 2005) of DuWoBo, started in the Autumn of 2004. It comprises the meetings of the original transition arena with as main anchor points the elaboration of the **problem analysis** and the formulation of a **future vision** along main lines. The analysis was mainly prepared by the consortium and amended and approved by the arena, but the vision was constructed and discussed during a series of meetings in 2005 by the whole arena. The system analysis identified ten bottlenecks that are comparable to the analysis in part 3: an individualist and rigid housing culture focused on home ownership, limited availability of space, no homogenous policy etcetera. The future vision formulated ambitions for 2030, that later in the process would become the central themes and guiding images for DuWoBo after 2006:

- *Learning and innovation in the building sector*: in 2030 social corporate responsibility has become normal practice in the construction sector. Houses are no longer just products, but they are regarded as services. Specialised and competent firms cooperate in networks where all actors have easy access to information about sustainability requirements. Government, business and knowledge institutes cooperate in an interdisciplinary knowledge infrastructure, which translates in education and training.
- *Closing of material and energy loops*: construction materials are sustainable over the whole life cycle and materials that are unhealthy have been phased out. All buildings have been designed to save water, energy production is based on renewables. All newly built houses follow the passive house concept and even produce a net energy surplus, while existing houses have been refitted to a

low-energy standard. The government creates conditions for the closing of loops, ensures a control system and informs all actors.

- *Quality of the house and its environment*: the housing market has become more flexible and the Fleming less fixed to his one house; instead, he/she searches in each stage of life for the most suited dwelling. The consequence has been a shift from ownership to a higher degree of rent. Houses have a modular design, adaptable to the changing demands of their occupants. There is a high diversity of architectural solutions and space for new housing concepts. An integral tackling of neighbourhoods has created agreeable environments where people feel responsible for liveability and cooperate in maintaining it. A housing code guards over the quality of houses.
- *Housing environment and spatial planning*: a new approach to spatial planning leaves more room for dialogue and creation of new public spaces. Housing and building start from respect for open space through more collective building processes and use of sustainability criteria. New forms of housing and a mixing of functions steer the development of city and village. Collective facilities have become much more important, while occupants have become co-owner of public space. The integrated approach of the living environment ensures the liveability and safety of neighbourhoods. There is a better balance between the different spatial functions.

The second phase (January 2006 – December 2006) of the DuWoBo process started when the arena was expanded with new participants that were demanded to assist in developing **transition pathways** towards the future vision and proposing **transition experiments**. This phase ended with the presentation of the transition agenda *Vlaanderen in de steigers (Flanders in Scaffolds)* in late 2006, a document which contains the future vision, the transition pathways and the proposals for experiments. This also finished the task and process coaching of the consortium. During this phase, there is a first anchoring of the process to the newly developed Flemish strategy for sustainable development. Also remarkable: there is a drop out of most participants that were concerned with the social aspects of the system. They are often connected to small organisations, subsidised for specific tasks, and DuWoBo seems to be too much work with respect to expected results.

In phase 3 (January 2007 – Spring 2009) the first actions and **experiments** were set up to execute the agenda. Even though there was no specific budget to fund experiments, smart coupling to existing funds of the departments LNE and DAR created some experimentation room. An important moment was the **formal presentation** of the agenda in November 2007 to the new Minister-President Kris Peeters. Because Peeters accepted the agenda as the long-term orientation for his policy regarding sustainable housing and building, it acquired more legitimacy. Meanwhile the first projects had started and participants tried to introduce the transition agenda in different forums. It influenced for example the framing of a new materials and waste management plan for the construction sector.

Phase 4 (Spring 2009 – early 2012) began with an important **institutional change** in the steering of the DuWoBo-process, namely a transfer from the minister and department of environment LNE to the Minister-President, who has sustainable development as one of his powers, and the department *Diensten Algemeen Regeringsbeleid* (DAR, Department of general government policy). During this phase there was a development of the DuWoBo-process that at first sight seems paradoxical. On the one hand, sustainable housing and building became better **institutionally embedded**, while also several projects begin to bear fruits and eased the further integration into policy of sustainable housing and building. On the other hand, the DuWoBo-process was **losing its earlier dynamics** in particular at the level of the coordination platform – that had to set the strategic lines – and in the working groups: people and organisations stopped participating or took a distant and controlling attitude.

The transfer of the theme sustainable housing and building to the general department DAR, was associated with a growing consciousness that the policy theme sustainable housing and building is essentially integrating and coordinating. Ideally, it should integrate policy domains such as energy, environment, water, health, materials, housing, spatial planning, mobility. Although this integration was never realised, sustainable housing and building did acquire an important place in the ambitious *Vlaanderen in Actie* plan (ViA, Flanders in Action) of the Peeters II government that took office in 2009⁴. A small team was assigned to further develop sustainable housing and building and to support initiatives that had arisen in DuWoBo and that were developing a life of their own, such as the creation of provincial centres for sustainable building, a sustainable building standard, and the formation of a sustainable building council.

At first sight paradoxically and in contrast with the success of the institutional embedding and new projects, the DuWoBo TM-process increasingly experienced difficulties of participation and engagement, in particular at the level of the strategic platform and the working groups. By late 2011, the cohesion and common purpose that existed between the participants in the early years of the process seemed to be lost. Some smaller non-business actors had the impression that they had lost influence in the process, while sector organisations had fallen in a passive attitude that departs from the original idea of a transition arena where participants search commonly for a direction and cooperate in the formulation of vision and strategies. Different analyses (Paredis, 2013, Van Lieshout, 2013) showed that the situation was a result of a combination of DuWoBo-internal problems (e.g. limited funding, lack of time to capture and share knowledge, lack of policy impact) and a fast-changing external context (see earlier 3.3.3, but also competing policy initiatives such as the Round Table Construction that attracted the sector organisations, see 4.2).

The mentioned problems initiated a fifth phase (early 2012 – present) that in the course of the last two years had led to a **repositioning of DuWoBo**. In 2012, a process started, coached by a consultant, to reformulate the future vision and bring it up to date with evolutions in the sector, to revise the management and the structure of DuWoBo and to reposition the process in the ongoing evolutions in Flanders. In this so-called *DuWoBo 2.0 process*, participants reflected upon past results, obstacles and the desired future. In its current reorientation, DuWoBo tries to focus more on creation of networks of practitioners and companies that are putting sustainable housing and building in practice. An interesting example is the network it has built around sustainable neighbourhoods, where actors regularly meet and exchange experiences, problems and solutions. From a policy point of view it is worth mentioning that during 2013 the idea surfaced to develop a two-track governance structure for the housing and building sector: the DuWoBo-process would serve as the long-term visioning and experimentation space, while the Round Table Construction would be further developed into a short- to mid-term programme in consultation between

⁴ ViA was already initiated in 2006 as an ambitious program to rejuvenate the Flemish economy and society and to position Flanders in the top 5 of Europe by 2020. Flanders had to become more competitive, growth-oriented and technologically at the front of Europe, but also greener and more social. The ambition was caught in the catchword *doorbraken* (breakthroughs): not incremental change but productivity and quality gains of 25 to 30% had to be realised. One of these breakthroughs was formulated as “green and dynamic city region”, which paid a lot of attention to sustainable housing and building. With the start of the Peeters II government in July 2009, ViA became the cornerstone of the Governmental Declaration 2009-2014 and thus gained even more strategic importance. However, by mid-2010 it was obvious in government circles that the ViA-process had trouble in keeping its dynamics and funding a suited policy approach that fitted the high ambitions. During the search to reinforce ViA, transitions and transition management surfaced as a potential policy approach and in July 2011 the Flemish government initiated 13 transition management projects. Sustainable housing and building was one of them. Around the time of finishing this report in January 2015, the ViA-process was stopped by the new Flemish government that took office in July 2014.

government and relevant actors. Until now, this idea has however not been picked up at political level (see also 4.2.2).

4.1.2 An interim analysis

As discussed in part 3, an integrated treatment of the sustainability of housing and building was not on the policy agenda in 2004 when DuWoBo started. DuWoBo was a policy niche in several ways. It had some clearly distinctive features from then existing policy: it brought together a group of actors from government and society that covered the whole system, it developed a new integral discourse on sustainable housing and building, and it tried out new working methods and rules based on transition management for interaction between the involved actors.

Although transition management theory advises to focus on frontrunners, the DuWoBo process chose to work with a mixed group, representing the important **actors** in the system, regardless of whether they were regime or niche players. The main rationale was that such a composition was necessary to guarantee support in the sector, and to make sure that in particular the building industry and its representative organisations (such as VCB, WTCB, Bouwunie) would not oppose the process, and preferably think along with it. Although the vision that this group produced is not evaluated similar by everyone, there seems to be unanimity over the value of bringing together established actors with challengers. As shown above, after 2009, niche actors and NGO's had the feeling they had to fight for their position when forms of institutionalisation took place, while representative actors of the sector took on a passive attitude. In the current reorientation, the process chooses to work explicitly with practitioners and less with representative organisations. What has remained impossible throughout the process is to get an active involvement of the central policy domains housing and spatial planning, in spite of different attempts.

In 2004, environmental aspects of housing and building were hardly a theme. The transition agenda *Vlaanderen in de steigers* tried to redress the balance: the transition agenda is an attempt at creating a **discourse** where economic, social, spatial and environmental themes receive equal attention. This is in particular the case for the guiding principles and the target images of the transition agenda. But the more concrete the agenda gets – in its strategy lines and proposals of experimental projects – the more the economic-technical and environmental aspects of the vision come to the front. The social and spatial aspects have always been difficult to make concrete in experiments and projects, probably also because the actors that were engaged in these topics did not participate or left the process. On that level, the agenda hardly offered a solution for some of the deeply engrained practices and characteristics that were analysed in part 3. Still, one of the main results of DuWoBo's vision and transition paths was that it coupled and broadened the agendas of its members. For traditional sector organisations, this meant a breakthrough at certain points (such as the acceptance of passive housing); for niche actors, it enabled them to find new platforms for their story.

DuWoBo was the very first transition management process in Flanders and it was also the first time that such a broad group of people was confronted with the approach and concepts of TM. TM does not have formal **rules** of how interactions should be organised, but Rotmans' and Loorbach's formulation of the theory does contain relatively detailed guidelines. Important guidelines (or 'informal rules') include: "work with frontrunners from niches and regime", "develop and grow in the shadow of policy", "use the network, vision development and experiments to learn about direction and about what works", "develop as a network with government as one player among many", "make the arena an empowering environment so that the process becomes self-organising". These kind of rules obviously differ from the working procedures in the housing and building regime. From the very

beginning, there is however a grappling with the rules of how the TM-game should be played and rules are constantly adjusted. I showed this already with the diverging interpretation of which actors should be involved. Several of the rules were not even brought into practice or did not work: time has never been taken to learn from experiences; self-organisation did not emerge. On the contrary, members expected an active, steering role of the government. Yet, in spite of this grappling with and adjusting of rules, certainly during the first 2 to 3 years of DuWoBo, the new approach and the introduction of new concepts created a dynamism and a certain enthusiasm for thinking about long-term system innovation, that resulted in amongst other things a future vision and proposals for experiments. The time and space that were created “in the shadow of policy” during these years, effectively contributed to cooperation between niche and regime actors in drawing up a transition agenda. But when in later years the processes started losing their coherence and the discourse coalitions began to disentangle, old patterns resurfaced. This became visible, when by 2011 the representative actors from the construction sector and architects had turned into followers, watching over their interests, but not carrying the process forward anymore. This can be interpreted as patterns and rules of policy-making that are typical for the regime level, that slip into the niche. Over the last years, the process has not followed the traditional steps of transition management anymore, but in its day-to-day invention of its own take on governance for transitions it still relies on guidelines such as “network creation with a mixture of practitioners from niches and regime”, or “government as one actor among many”.

In its **resource** dimension, DuWoBo as a process always had to work with limited financial means for daily process support as well as for funding of experiments. At administrative level, there is almost one full-time equivalent, divided over several staff members. Until 2008, the budget for a secretariat and for working costs was at 60.000 Euros, since 2009 it is at 80.000 Euros annually. There were no specific funds for projects or experiments available, but as explained, small projects could be funded through funding calls from LNE and DAR. Almost all of them were limited to a budget of 50.000 to 60.000 Euro for maximum one or two years. People that have been closely involved with the process usually hold the opinion that, taking into account its limited means, DuWoBo has performed relatively well.

So, which main points derive from the history and analysis of DuWoBo, in view of the research questions for this OECD-project? What can be learned from this policy experience of trying to influence a transition to more sustainable housing and building? I return to this question in part 5, but formulate here some first observations:

- The original transition management approach of DuWoBo and its current in practice developed form of transition governance seem able to do at least three things: create a (mixed) network of actors from niches and regime that previously hardly ever cooperated; develop a common discourse about the desired future of the system; develop new experiments or incorporate ongoing projects. These results demand quite some investment from dedicated participants and are not guaranteed for years to come. Actors exhibit strategic behaviour when other opportunities present themselves (such as the Round Table Construction), and after a few years the glue of the common vision begins to come off. Constant investment in network creation and maintenance seems necessary.
- what started in 2004 as the DuWoBo transition arena, has grown into a small policy arrangement in an early stage of institutionalisation that consists of the DuWoBo-process itself, the administrative SD team in DAR and a few flanking initiatives. There is no integration with other areas such as housing or spatial planning. It is in fact an addition to the existing housing

and building arrangement, with only limited on that existing arrangement. It has, however, been important for promoting and strengthening (the niche of) sustainable housing and building practices, and it succeeded in drawing more policy attention to the importance of these practices for the future development of Flanders (such as in the ViA programme).

- Transition management as approach has guidelines for how to work in the arenas, but has no political strategy outside the arena. This is problematic when a TM-process wants to gain influence in policy. At that moment, its proponents cannot remain within their arena and TM-cycle. They have to show active agency that looks for couplings with contemporary trends and processes, that tries to change regime rules, that searches confrontation with dominant discourses, that engages with institutionalisation (and a lot more). All this happens while they try to cope with historically grown institutions, practices and culture of the housing and building system. DuWoBo-members have learned and are learning in day-to-day experiences how to do this (of course without guarantee of success). This is no longer the terrain of transition management such as it is described in the literature, because neither the theory nor the practical guidelines have anything to say about this kind of agency. In other words, it shows the necessity to move away from TM as a stand-alone approach and embed it as part of a broader governance strategy.
- Gaining influence for transition governance processes seems strongly dependent on conditions external to the processes, a context which consists of events and structures that are not under the control of the process or the individuals in it. Developments at EU-level (such as a Directive on the energy performance of buildings) or in the ViA-process were clearly outside the control of DuWoBo proponents. Yet, policy entrepreneurs in the processes can try to be ready to hook their ideas and approaches to policy windows that may open up when such developments come along.

4.2 The Round Table Construction: entrepreneurial discovery and its challenges

While the DuWoBo-initiative has a history of some 10 years, the second policy initiative that is part of this case study – the Round Table Construction – started early 2012 and was broken off in May 2013. It did not rely on a specific approach, such as transition management, although it takes some inspiration from it and combines it with elements of strategic planning.

4.2.1 Driven by a rapidly changing context

In the background of the Round Table Construction two kinds of concerns met: on the one hand, a more general concern in the domain of economic and innovation policy about the future of the Flemish industry in a globalising economy where in the industrialised world ever more economic activity and value derive from the service sector; on the other hand, the aforementioned context of growing pressures on the traditional features of the housing and building system (see 3.3.3), which oblige the sector to start searching for new solutions.

The **future of industry** in general is a concern of the Flemish government (as it is of many governments). In 2011, this prompted the formulation of a White Paper for a New Industrial Policy (NIP) for Flanders (Vlaamse Regering, 2011). The White Paper promotes a transformation of the Flemish industry along 4 pillars: a productivity and competition policy, an industrial innovation policy,

a career and competence development policy, and an infrastructural policy. In the frame of the NIP, the Flemish government invited different industrial sectors to define for themselves their objectives and strategies for transformation. In return, they can count on different forms of support from the government. The NIP is based on a concept of transformation of current economic sector towards more integrated, sector-crossing value chains and clusters. The conviction is that well-developed clusters can use the benefits of geographical proximity, common infrastructure and knowledge spill-overs to develop a strong position in the home-market and anchor industrial activity and employment, while simultaneously becoming more competitive internationally. The transformation is also necessary to react to new societal challenges such as care for the elderly or response to climate change, and to benefit from the creation of new markets in these realms.

This last point is of course an immediate link to some of the pressures that are more specific for the housing and building system. As said above, **the system is increasingly subject to external trends**, in particular in how these trends are translated through the EU level. This is best visible in influences from energy and climate policy. Policy changes can already be observed in the energy segment of the building system, where European legislation such as the Energy Performance of Buildings Directive (EPBD) introduces new standards that not only stimulate new construction practices, but have a cascade of effects, such as a demand for new professions and a reorientation of existing ones, a reorientation of schooling and training profiles, of premium systems, and new criteria for mortgage loans. Furthermore, in the core of the system – the spatial planning domain and the housing domain – some of the typical features such as the unlimited use of space and the ownership model are increasingly discussed.

These different concerns converged in 2011. In the previous years, several industrial sectors (such as the technological and the chemical sector) had already formulated strategic action plans and discussed them with the government, but the construction sector had not yet had this opportunity. After the publication of the White Paper and its ambition of developing a sector-crossing transformation policy through Round Tables, the construction sector seemed a good choice to function as a pilot for the new policy because the sector is strongly integrated with its supplying sectors and it is important for industrial activity and work in the Flemish economy as a whole. Besides, some of the representative organisations in the sector had already spoken out the ambition to evolve towards a construction-energy-environment cluster, in order to set in motion the transformation processes that are necessary to prepare the construction sector for the future (such as the construction of low-energy houses and low-energy renovation, the development of new building formats as a response to demographic and spatial evolutions, and the reduction of resource use) (VCB, 2013).

4.2.2 The process and its main results

The preparation for the Round Table Construction started in September 2011 with an agreement between the Flemish government and the social partners (employers and trade unions) in the so-called VESOC⁵ about the ambitions and procedures of a renewed form of sector consultation under the form of **Round Tables “new style”**. The renewal took two forms. First, its aim was the development of a long term vision and strategy for the transformation of a sector to future-oriented

⁵ VESOC is an acronym for *Vlaams Economisch Sociaal Overlegcomité*, or Flemish Economic-Social Deliberation Committee. The Flemish social partners (employers and labour unions) deliberate with the Flemish Government about socio-economic issues in VESOC. When a compromise is reached in VESOC, the Government engages itself to implement the agreement. The social partners defend the agreement before their members and assist in the implementation.

clusters and value-chains. This implies the formulation of strategic choices, an action agenda, and a mobilisation of relevant actors from sectors that are relevant for the clusters. Second, sectors were challenged to take themselves the lead in these Round Tables and to ensure that relevant actors from within and outside the sector were present. The whole approach is in line with ideas of “entrepreneurial discovery” for innovation as they are currently circulating at EU level. The hope is that it will lead away from the “old style” consultation, that is predominantly focused on the short term and where actors mainly try to pressure the government.

The building sector was proposed as a pilot case for the renewed sector policy, with the general aim of transforming the building sector into a building-energy-environment industrial cluster. Traditionally, sector representatives of the building sector meet with the top of the government once or twice a year in the VBOC (*Vlaams Bouwoverleg Comité*, Flemish Consultation Committee for the Building Sector) and discuss what can be done – mainly from the side of the government – to solve some of the sector’s problems. Now, the government invited the sector to formulate itself a future vision and strategic action program, in a dialogue with the government and stakeholders of other sectors that are important for the whole value chain of housing and building.

Between October and December 2011, a **core group** was composed of 24 representatives, on the one hand the employers and labour unions of the construction sector (*Vlaamse Confederatie Bouw*, *Bouwunie* and the three labour unions ACV, ABVV, ACLVB); on the other hand, two organisations that are closely linked to the sector, namely the *Organisatie van Raadgevend Ingenieurs, Advies- en Ingenieursbureaus* (ORI), that represents the consultant and engineering industry, and the *Vlaamse Architectenorganisatie* (NAV), one of the organisations representing architects. The lead of the round Table was in the hands of the *Vlaamse Confederatie Bouw* (VBC), that delivered the president of the Round Table. Government representatives were added to the Round Table to support the process and it was decided that on the side of the government an interdepartmental group would be installed to ease coordination between departments and avoid overlap with current policy.

During these first months, VCB prepared a **starting note** with substantial proposals and orientations for the process and discussed it with members of the core group. The note briefly sketched the most important challenges for the construction sector. These include: answering the requirements of low energy building and renovation, delivering new building models in response to demographic and spatial evolutions, diminishing resource use and improving reuse of materials. Next, the note proposed to install three transformation platforms (financing of private energy-efficient houses, public-private partnerships in building projects, water-resistant construction) and three thematic working groups (promotion of export, improving skills and education, safety and wellbeing on the job). These transformation platforms should deliver ideas that will initiate innovative clusters of companies. Simultaneously, the platforms as well as the working groups can propose so-called ‘flanking’ policy measures, through which the government can support the transformation.

The Round Table Construction was **officially installed** on 10 February 2012, in the presence of three Ministers. The Flemish government expressed its support for the starting note, but it is remarkable that it also formulated two important remarks, namely that it expects more ambitions in the agenda of work and that it urges the involvement of a broader array of actors that can help define the transformation agenda. This message was repeated during a meeting between the president of the Round Table and the secretary-general of the economy and innovation department EWI later in February.

Between March 2012 and February 2013, the Round Table met under different forms, either at the level of the core group or in the different transformation platforms and working groups. The whole process was supported by consultant agency Levuur. The Round Table delivered its **conclusions** to

the Interministerial Conference Innovation on 21 February 2013. The 20-page report starts with an overview of the potential contributions to the Flemish economy of a transformation to a construction-energy-environment cluster. These include a rise of the GDP thanks to extra investments and renovation, a reduced import of fossil fuels, the creation of new jobs and a reduction of energy and resource use. The **strategic goals** of the construction-energy-environment cluster are defined as:

- Housing 600.000 extra families by 2030 in sustainable and affordable new houses;
- Reducing energy use in buildings with 50% by 2030 and evolving towards 2,5% renovation yearly;
- Keeping a lead position in soil sanitation and evolving towards 100% reuse of construction and demolition waste;
- More efficient use of space, more compact building and multifunctional building concepts, new techniques to protect buildings against flooding, new financing and implementation methods for cleaning up brown and black fields.

The report then lists **instruments** that are deemed necessary for realising these goals:

- New products and techniques, because of more stringent requirements in energy, maintenance, materials, water;
- A more integrated organisation of the building process, where customer, architects, contractors and suppliers cooperate from early on;
- Growing importance of certification and quality control, where the focus should change from specific parts to the building as a whole;
- Innovative spatial policy, with attention for mixing of functions (living, working, shopping, recreation...) and new technical solutions
- Acquirement of new skills for new and current employees and protection of companies against unfair foreign competition
- New financial instruments are regarded as the central piece in the renewal. The report contains a plea for more investments by the authorities and creative and innovative financing instruments, in particular in Public Private Partnerships.

The report ends with the remark that the Round Table did not succeed in creating new clusters of pioneering enterprises, but that it proposes to continue the work in 2013 and later, in close collaboration with the Flemish government. According to the core group, the focus should be on a reform of the economic, financial, regulatory and spatial framework in order to stimulate “FLEECE” (Flemish Lead Enterprises in Energy, Construction and Environment).

The report and this follow-up proposal were discussed during the yearly VBOC meeting of the government and the sector in May 2013. No decisions were taken, but the cabinet of then Minister-President Peeters promised a new discussion. This did not take place, however, and after the Flemish elections of June 2014 a new government took office. At the moment of finishing this report, it is unclear if a new step will be taken or under what form.

It should be added here that while the Round Table process was running, the **government representatives** also regularly met to discuss the progress and see what could be done to support the Round Table. From early on, there was an ambiguous feeling in this group about the process. On the one hand, it saw the importance and potentialities of the ambitions, but on the other hand, its evaluation was that the organisational form and the chosen transformation platforms and working groups were not adequate for attaining these ambitions. The proposals remained too much on the side of sector policy and economic *recovery*, instead of cluster development and economic *transformation*. For a new phase, the government representatives proposed an integration with

other processes that aim for renewal of housing and building (such as DuWoBo) and a more thorough discussion of what the strategic goals and the governance requirements of cluster transformation processes should be. Three important aspects of the follow-up trajectory would include: a renewed DuWoBo which sets out long-term societal goals, transition paths and experiments for housing and building; a strategic agenda and mid-term action plan in the form of a roadmap for a construction-environment-energy cluster where different initiatives can be attuned; and a big project for renovation in housing in which different government departments cooperate; as a start, a smaller innovation call for renovation projects is launched. As said above (4.1.2), this idea has been not turned into a political decision and has not been further discussed with the sector. There has however been action on the renovation front, with a call by the innovation agency IWT for innovative projects in collective energy renovation (in May 2013 – 8 projects have been financed), and potentially more important, an initiative by the new Flemish Minister of Energy Turtelboom to develop a Renovation Pact with 33 organisations (launched in December 2014 and to be signed by mid-2015).

Within innovation policy, the Round Table experience seems to have functioned as a form of policy learning. In following up on the Round Table, the domain of industrial and innovation policy tries to link up with EU developments with a focus on 'smart specialisation' and the formulation of 'roadmaps' that include clear engagements of both government and private partners in the development of new value chains and clusters.

4.2.3 An interim analysis

As said above, the Round Table Construction was framed as a pilot case for a new form of sector consultation. The new style did not yield a big success. In the final report, the core actors are aware that they did not succeed in defining new clusters, while the government finds a lack of ambition and an inadequate organisational form. The process seems, at least temporarily, to have been stalled. Just like in the case of DuWoBo, it should probably not come as a surprise that experimenting with new governance forms that simultaneously have high ambitions, does not always run smoothly. The dimensions of the policy arrangements approach will again serve as anchor points to inform a further analysis. What does a more detailed look at involved actors, discourse, rules and resources tell about the functioning of the Round Table Construction and the problems it encountered?

A good start for the analysis is a look at the **actors** that are present. Two things stand out. One is the fact that, except for two organisations, all members of the Round Table are sector organisations. In the course of the process, other organisations (amongst others from the chemical sector) demanded to be allowed, but they were refused. Neither were environmental or social NGO's or DuWoBo-members invited. Although it was the ambition to develop a strategy for a building-environment-energy cluster, the sector seemingly wanted to keep firm control over the process. The consequence is of course that existing practices and patterns in the sector are not challenged by outsiders, nor does it allow to build new partnerships and networks for a cluster strategy. The role of the government as an actor is interesting in this situation. The government delegated civil servants from different departments to support the process, but acts fairly strictly as a facilitator: it invites the sector to set up a Round Table, it formulates the ambition to fit the process within new industrial and cluster policy, it provides a consultant to support the process. Unlike in the transition management case of DuWoBo, the government is hardly a co-creator in the process. Most remarkable is that it criticises from early on some of the choices that are made (such as the limitation of participants to the sector), but never forces a different decision.

This is strongly related to the **rules** under which the Round Table operates. The Round Table is a pilot for a new form of sector consultation, but the rules for how this should proceed mainly refer to formal arrangements, such as who will be around the table, how often participants will meet, which working groups are organised. Other working procedures are not made explicit, and are to be developed or experienced more or less on the spot. The fact that the sector is invited to formulate for itself a future vision and strategy and present it to the government, is for most an unusual situation, and leads to questions – often left unspoken – such as: how will decisions be taken? Who is in the lead? What is the relation with the government? How will cooperation be organised between participants? This situation is reminiscent of what Maarten Hajer has called *institutional voids* and *new political spaces* (Hajer, 2003). Solutions for certain policy problems – a reorientation of a sector to a cluster – cannot be found in existing institutions, and therefore new environments are created. But in these new spaces there are no generally accepted rules and participants are insecure about their roles. Participants bring in their expectations and may have an idea of what they think the rules should be, but there is no a priori agreement. This can and probably will cause tensions. In the case of the Round Table, there hardly is a change in rules: because only the participants of the ‘old style’ consultation processes are present, it seems that participants easily fall back into these well-known ways of doing things. Consequently, renewal becomes difficult.

This leads to an interesting tension between government representatives versus Round Table members. First, the government partly sets the scene when it expects the sector to come up with a vision and strategic plan for the transformation of the sector towards a cluster. Next, the sector mainly focuses on itself and does not follow the government’s suggestions such as enlarging the membership and being more ambitious. The government remains in the facilitating position, is no co-creator and does not intervene directly, but has the power to evaluate the result positively or negatively. This leads to misunderstanding and frictions about the results, what can be done with them and what the next steps should be.

Some of the tensions can also be explained on another level, namely the story that the Round Table tried to create. At the start, there seemed to be a common **discourse**: all agreed that the ambition was a transformation of the sector to a building-energy-environment cluster. Yet, during the process, it seemed that the sector perceived itself as already being a cluster *in practice*, through its connections with suppliers and practitioners in the value chain. It also felt that innovation had to happen through concrete projects, such as through government orders for big projects. This was perceived differently on the government side, where it was felt that the societal challenges of housing and building demanded a strategic vision about which directions the sector should take and how it would innovate in cooperation with other actors. In this point of view, concrete projects follow as a translation of that vision. The common framing was thus rather superficial, hid deeper differences in opinion and hindered progress in the process.

In the field of **resources**, the means were limited. A consultant was appointed to guide the process and several civil servants were demanded to reserve some time for support. Again, we see some confusion here, when the Round Table members were encouraged to hand in a project to receive subsidies for a supportive staff member (to be located at VCB, the organisation of the Round Table president), but this subsidy was then refused on the basis of project criteria that were not suited for a process such as the Round Table. In general, it remains somewhat surprising that the government invests only limitedly (also in terms of civil servants engagement) in a process that is meant to be of importance for the development of its new industrial policy.

What are some first observations from the point of view of the OECD-project on system innovation:

- Breaking out of established patterns, in this case the ‘old style’ form of sector consultation, is difficult, even with an ambitious common goal such as ‘transformation’ or ‘system innovation’, and even if there are agreements about a new form of consultation. Established actors that have always been around the table easily slid back in well-known procedures and relations.
- A superficial agreement to start a process for system innovation is not enough. Creating a discourse coalition needs active intervention, where participants reserve time to discuss problems and solutions. In particular when ambitions such as system innovation, transformation or transition are on the agenda, this will probably demand a reformulation of existing problem definitions and certainly of accepted solutions. With only the “usual suspects” around the table, this is hard to achieve.
- In processes for system innovation, also the government is in search of its role. The Round Table suggests that it is not enough to set framework conditions, but that active partnership is necessary. Interestingly, this pilot case with a new style of sector consultation has so far been the only one. There seems to be a form of policy learning, though, because sectors are now being invited and subsidised to set up processes using a better defined roadmap methodology.

5. Cross-cutting themes in governance for system innovation

A glance at both initiatives, DuWoBo and the Round Table Construction, seems to reveal a lot of similarities: they use a comparable language (system innovation, transition, transformation), they are formulated as experiments in innovative policy with a partner relationship between government and societal actors, and they aim for a long-term ambitious vision with a short-term action plan. But the analysis above has shown that what may seem similarities, can work out quite differently in both cases. Yet, common themes seem to surface. In this last part, I group observations under five themes that seem important when processes for system innovation are set up. At least, these are themes that surface in the Flemish processes on (sustainable) housing and building. There is no claim here that these are universal themes, but it may be interesting to look for them in other studies (with other sectors, in other places) as well. In any case, a look at the scientific literature shows that comparable themes can also be found in other work about governance of transitions and system innovation, though not necessarily all of them, and not necessarily under the same form (see e.g. Meadowcroft, 2009, 2011, Kern, 2009, Avelino, 2011, Grin, 2012, Bosman et al., 2014).

5.1 Drivers of system change: increasing pressure from different levels and sources

Policy initiatives for system innovation never take place in a vacuum. Historically grown features of a system as well as contemporary trends influence what is possible in at least two ways: history may hamper change, while recent evolutions may reinforce existing patterns or counter them. So, it is important for policy-makers and for actors that are involved in system innovation processes to try to chart the context in which they are operating: **what are historically grown structures, practices and culture and how have they taken shape? What are important current trends and can they be mobilised to support regime change?**

Housing and building policy has a history of a century and a half, with structures, culture and practices that result from years of confrontation between different views of society. The core regime image – the privately owned house with garden on the outskirts of town – is at the heart of who the Flemish are and what Flemish society finds important. The power that derives from this image and associated institutions lies at the core of the stability in housing and building policy. Until recently, analysts adhered to the thesis that the Flemish housing and building market is predominantly locally determined, mainly influenced by internal powers and dynamics such as the distribution of land ownership, the importance given to private property, or opinions about the desirability of state intervention (De Decker et al. 2011). This gave the housing and building system a huge stability and high path dependency. Yet, the perception of different actors is increasingly that the trends that are shaping the system have taken on a more direct, international character, on which they have furthermore only a limited influence. These trends include the climate crisis and the energy transition, different demographic evolutions (growth, ageing and greening, migration), economic integration and restructuring, increasing transport flows. It is for example obvious that European regulation as a result of climate policy has been crucial to set in motion the whole energy segment of the building and housing system. This has resulted in moving a previously marginal topic to the centre of attention in the construction sector. And the effects of new regulation, industrial activities and housing practices around energy are also spilling over into other segments: it influences e.g. thinking about urban development, spatial planning and quality requirements for social housing.

These landscape trends – in the terminology of transition studies – put the existing system under pressure. They combine with two other developments at the level of regime and niches. At regime level, tensions are growing in several domains. In spatial planning, we observe the struggle between different claims over increasingly limited space. In housing, there is the problem of rising prices and affordability of buying or renting a house, while economic policy is challenged by a labour market shock where social dumping undermines competitiveness of local constructors. Furthermore, at niche level, a diversity of new technologies and practices in housing and building have been multiplying over the last years: niches diverge from specific technical parts of construction (e.g. renewable energy technologies, bio-ecological materials), to houses as a whole (e.g. passive houses), to larger projects (e.g. sustainable neighbourhoods), to primarily social innovations (e.g. cohousing).

In this situation of growing pressure on the system, policy initiatives such as DuWoBo or the Round Table that specifically aim for system innovation, may find room for influence. Whether influence is possible and how it turns out, is connected with factors that are discussed next.

5.2 Discourse: the role of reframing problems and solutions

The two cases show that policy development is not just about power and interest games, but also about creating a relevant, appealing political and societal story with which involved actors can identify and that they are willing to promote. In DuWoBo and the Round Table these stories are constructed around terms such as ‘system innovation’, ‘transition’ or ‘transformation’. This kind of terminology implies that the current situation will prove to be untenable in the mid to long term; that some form of deep change is needed to remedy that situation; and that a different governance approach is needed for dealing with such an situation. However, while a sense of necessity for change is shared in both processes and between actors, the exact meaning and nature of the change is interpreted differently and can thus become a point for divergence and contestation. Policy-makers and actors involved in these processes may find it useful to think about questions such as:

how are problems and solutions framed by involved actors? Are different framings present and are they compatible? Is a new discourse created around system innovation, and how do existing discourses find a place? Is a discourse dominant and why?

In the DuWoBo case, 'transition' refers to deep changes that are needed for a more sustainable and equitable system; sustainable development is the starting and end point of all activity. While these themes are also present in the Round Table, the starting point here is the strength and competitiveness of an industrial sector, and sustainability gets a shallower interpretation. These different interpretations of system innovation influence the kind and depth of change that is discussed and that is deemed acceptable in both cases. Different interpretations of what a desirable future is for the housing and building system also hampered cooperation and integration between the two processes. Most actors in DuWoBo were for example not welcome in the Round Table process.

On the level of the individual processes, finding congruency between involved actors and building a common story about what the problems exactly are and where solutions lie, demands a lot of work. In DuWoBo, a visioning exercise proved useful for creating such a discourse coalition. This seems important for gaining influence. It can be observed that when the discourse coalition starts breaking up (in DuWoBo during 2011-2012) or is realised only partially (in the Round Table) that the process is threatened because of a lack of cohesion. This breakdown or partial failure is in both cases related to diverging interpretations of involved actors about the relevance and impact of the process or about which kind of agenda (strategic or concrete) should be aspired to. It seems however possible to rejuvenate the discourse in a system innovation process, such as DuWoBo is currently showing (although the exact results and impact of this can only be judged over time).

5.3 Governance architecture: the challenge of unusual policy approaches and of policy coordination

Policy initiatives that aim for some form of system innovation/transition/transformation are currently often developed outside regular forums. Above, I referred to Hajer's concepts of institutional voids and new political spaces (Hajer, 2003) as an interesting way of looking at these initiatives: solutions for certain policy problems cannot be found in existing institutions, and therefore new environments are created. To be somewhat more specific: Hajer argues that these spaces are marked by two conditions (Hajer and Versteeg, 2005, p. 341). The first is *institutional ambiguity*: there are no agreed upon norms and rules; participants are insecure about their role and the setting they are entering. The second is *multi-signification*: actors bring their own meanings to the new setting; they may conceive of the world in different terms, or when they use the same terms, different interpretations may be attached to them. Hajer stresses that the functioning of such new political spaces is not only a cognitive question, such as for example for the development of a discourse, strategic action plans or experiments. The experience of collaboration in the deliberation and negotiation process that goes on (about problems, solutions, rules) is key to building trust and understanding. The participants find that they are mutually dependent on each other. Often, a central feature is that governmental agencies participate but do not dominate the deliberation (Hajer, 2003, p. 187). Such a situation poses considerable challenges for the role of policy-makers as well as for other involved actors: **how to create conditions that are favourable for cooperation? Are there rules and guidelines that can be built upon to initiate such processes? Specifically for policy-makers, how is coordination organised within and between policy levels? What is the relation**

between the government and other actors? Which capacities are needed to develop such processes?

Also in the case of DuWoBo and the Round Table Construction, both initiatives chose for an approach to policy development outside the regular forums. A search for system innovation – be it under the form of a sustainability transition (DuWoBo) or a transformation from sector to cluster (Round Table) – seems to demand some freedom in working methods, in forms of cooperation and in searching for acceptable solutions. Both cases show an attempt at strategic and practical collaboration between involved actors. In the DuWoBo case, the government is crucial as an actor, but tries not to dominate the process and supports the search for different forms of collaboration. The cooperation builds here on the informal guidelines of transition management theory. In the Round Table case, the government sets the conditions but the initiative lays mainly with the sector actors. Both initiatives show how such experimental spaces cause a lot of uncertainty with actors over how to proceed and which rules to follow. When this is not acknowledged, it can undermine the process and cause increasing misunderstandings between actors (such as in the Round Table and during 2011-2012 in DuWoBo).

It should be kept in mind of course that it is not illogical or surprising that experiments with new approaches such as transition management encounter difficulties in the processes as well as in gaining influence (in fact, the opposite would be surprising). An important question then is whether these experiences can lead to forms of policy learning, for example by making tacit knowledge about 'how things work' explicit and by confronting experiences. With the DuWoBo 2.0 process, DuWoBo has explicitly taken this path and seems to have been able to redefine itself. The experiences of the Round Table have informed the further development of cluster policy in innovation policy. However, one of the main learning results, namely the need in the housing and building system for a more integrated approach, with a long-term orientation and a mid-term strategic and action programme, has so far not been taken up.

This relates of course to that other challenge for system innovation policy, also visible in both initiatives, namely the problem of policy coordination. System innovation implies an approach that integrates over different policy domains (horizontal coordination), between different policy levels (multi-level coordination) and with different societal actors (multi-actor coordination). This proves to be particularly challenging. The long tradition of compartmentalisation of policy in Belgian and Flemish policies hinders such forms of policy coordination, as shown by the fact that both processes did not succeed in involving the central policy departments of housing and spatial planning.

5.4 Power: challenging incumbent structures, actors and culture

System innovation and policy initiatives to initiate it almost inherently imply that existing actor roles, existing structures and existing practices are challenged. Existing power is thus confronted with challenging power that derives from different sources. The political science literature is full of analysis of power and it has often been argued that power is a multi-faceted concept. In line with the policy arrangements approach, Arts and Van Tatenhove (2004) argue that power resides on the one hand in the hands of social actors, who have resources that they can use to achieve certain policy outcomes. This power can rely on organisational resources (such as money, personnel), but can also be discursive when actors gain influence by arguments or persuasion. On the other hand, power has also structural aspects, because the historically grown context in which actors are embedded and structural trends of transformation with which they are confronted, also exerts considerable

influence. Since structural trends and discourse have already been treated, I discuss here the aspect of actors and their interests: **Which actors are in/out? Who decides on this and on what basis? What is the relationship between the actors involved? How do different interests show themselves? Which interests are dominant?**

Literature on governance for system innovation and transition usually assumes that the involvement of only regime actors in such processes inhibits formulating fundamentally new visions and changes. Paredis (2013) argues that when these new political spaces function well, there is a delicate power balance between the participants: the different actors recognise each other as necessary for producing the vision, for formulating ambitious yet realisable ideas and experiments, for cooperating in setting up experiments, and for jointly communicating results to policy-makers and the public. Niche members need regime members because it gives the process an aura of seriousness and because regime members are exactly the ones they want to target with their ideas; regime members need niche members to bring in innovative solutions and possibly tap new markets; both need the government for support, guidance, legitimacy; and the government needs the participants to rethink its policies and help in solving a societal problem.

This seems to have worked relatively well in DuWoBo in the first years, but during 2011-2012 – due to a combination of internal and external factors – regime actors fell back in an observational, mainly representational mode. Quickly, the process became paralysed and lost part of its legitimacy. In the Round Table only regime actors were present, which is probably one of the factors why no challenging perspective was developed. The government actors involved were aware of this problem, but did not force a different decision.

This brings up another important aspect of power relations in policy initiatives for system innovation: the position, quality and strategic capacity of the government actor in the system can make a difference in the influence of governance approaches for system innovation. Government agencies seem to be well suited as initiators, because their power allows them to initiate system innovation processes with a sufficient degree of credibility. After all, starting up such a process presupposes that enough suitable actors are willing to invest time to cooperate during several months or even years in a process of which neither the internal results can be well defined at the start (what will the contents of the transition vision be? which experiments and projects will be defined? etc.), nor what the external influence will be (will it influence regular policy? what will I or my organisation be able to do with the result? etc.). Concretely, in DuWoBo as well as the Round Table, the initiating government actors LNE and EWI seem to have had enough legitimacy and credibility to persuade societal actors to step into the processes. This is not enough, however, for a successful process. The experiences of DuWoBo suggest that participants expect that the government is engaged in the processes and provides guidance on what is expected. Government engagement is needed to keep actors on board. When the government withdraws and gives the sector freedom to formulate its own agenda in the framework of Flanders New Industrial Policy, the holistic agenda does not even appear on the table. In this case, the power of the incumbents in the sector, rooted as it is in historically grown institutions and practices, slows down a breakthrough of a broader agenda. What complicates the picture some more is that in both DuWoBo and the Round Table, the involved government departments LNE/DAR and EWI are not central actors in the housing and building system, and their resources are relatively limited. This restricts their manoeuvring space and the gaining of wider influence of the system innovation processes. It is an extra argument for a more coordinated approach to system innovation for housing and building.

5.5 The role of technology and innovation

One of the ideas behind system innovation is that for solving a lot of current societal problems and developing towards a more sustainable society, innovation of products and production processes is not enough. The whole configuration of current socio-technical systems such as the energy, mobility and food system has to be innovated. The question then is whether governance initiatives that aim for system innovation also succeed in formulating such proposals, and whether innovation policy is suited for promoting such approaches: **which kind of innovations are presented as solutions in these processes? Which are chosen? What can be financed? How does innovation policy support system innovation?**

In the housing and building system, technologies in the domains of renewable energy, energy efficiency and new materials currently draw a lot of attention and their further development is deemed crucial. While this is commonly acknowledged, the cases also show that the interpretation of what relevant technologies and innovations are and which role they have, sometimes differs considerably between actors. Furthermore, some actors find that a lot of relevant technological building solutions are (almost) available, but that institutional rules and political choices prevent implementation. Other actors demand more attention for solutions where socio-cultural and technological innovations are combined (such as in collective solutions beyond the individual house). In general, the feeling is that system innovation for sustainable housing and building is more than just a technological challenge, but relies on a combination of socio-technical and institutional-political solutions.

Traditional innovation policy seems ill-equipped to deal with these last kind of challenges since it seldom moves beyond mere economic-technological agendas and almost automatically translates societal challenges in market-driven solutions. When one looks at the role of innovation policy, this is furthermore historically limited in the housing and building sector. The construction sector has never been at the forefront of innovation (VRWI, 2012). The Flemish innovation policy currently shows a cautious attempt at searching for long-term strategic agendas and new governance structures. The Round Table and DuWoBo show however that actors in the construction sector have different interpretations of what substance and process should be in such initiatives. Besides, even though there are efforts at integration between the domains of innovation, sustainable development, environment, materials and energy, there is a noticeable lack of integration with the core domains of spatial planning and housing. This leads to a partial disconnect of the innovation agenda from societal challenges as defined in these domains (which in turn partly explains the reduction of stakeholder involvement to traditional socio-economic partners of the construction sector in the Round Table).

6. Conclusions

Growing societal challenges in different domains of society (climate and energy, the future of industry, limited space, an ageing population, migration, social inequality...) are increasingly putting pressure on the Flemish housing and building system. A reorientation of the housing and building system seems necessary, and offers a lot of potential benefits. During the last years, the Flemish government has set up several policy initiatives that use a language of 'system innovation', 'transition' and 'transformation' and that are intended to consciously give direction to the

developing changes in the housing and building system and to fasten the transition. The underlying rationale is the conviction that for system innovation new governance forms, with new forms of cooperation between government and a range of societal actors, are needed. Such an approach has several interesting features: it goes beyond process and product innovation and opts for innovation at system level; it looks at the role and contribution of a broad range of regime and niche actors; it provides direction by taking societal challenges and sustainable development as orientation ; it aims for a long-term view that can provide guidance to concrete projects and experiments.

Practical development of policy initiatives in this vein is however not self-evident in a historically deeply embedded system such as housing and building with its highly distributed form of governance. The two initiatives that were studied in this case study show that their interpretations of 'system innovation' are not unequivocal. DuWoBo takes sustainable development as a normative orientation and uses the transition management approach to formulate a long-term vision, set up transition experiments and create a mixed network of frontrunners and regime actors. The Round Table Construction is part of a search for a new industrial policy and focuses on a restructuring of the building sector towards a building-energy-environment cluster, with a group of representative sector organisations. Although both initiatives are developed in the same system and related policy domains, different factors hinder integration and even cooperation: diverging goals and interpretations of system innovation, strategic positioning of involved actors, difficult harmonisation between policy departments.

Furthermore, these policy initiatives wrestle with an unruly reality on at least two levels. First, they present an unusual policy space for involved actors and thus cause uncertainty about who takes on which role, which procedural rules should be followed, how results find legitimation etc. Second, such initiatives are embedded in a broader policy environment that is often unresponsive to their way of functioning or their results. System innovation policy needs long-term thinking, integration of policies, coordination between departments, but in general these are not common practices. Traditional innovation policy seems ill-equipped to deal with these challenges since it seldom moves beyond mere economic-technological agendas and an almost automatic translation of societal challenges in market-driven solutions. The housing and building case demonstrates the need of system innovation through a combination of socio-technical and institutional-political solutions.

Overall, the study shows that there is no fast and easy way of influencing system innovations (for sustainable housing and building, but this probably holds for other systems as well). It should not come as a surprise that initiatives such as DuWoBo and the Round Table are no easy processes; in fact, the opposite would be surprising. The combination of an unusual but necessary ambition (system innovation for more sustainable housing and building) with an unusual policy approach (open, goal-searching processes with a mix of actors) collides with existing policy structures and practices. Policy learning is important in such a situation and seems to be visible in DuWoBo and its repositioning, as well as in and the development of cluster policy after the Round Table. Still, one of the main learning results, namely the need in the housing and building system for a more integrated approach, with a long-term orientation and a mid-term strategic and action programme, has so far not been taken up in policy.

A lot of involved actors remain convinced that the societal challenges that the housing and building system is facing, require deeper changes than what has been realised until now, and therefore demands a system approach, responsive to societal challenges, with a long-term view and involvement of a broad array of actors. In following up on the Round Table, the domain of industrial and innovation policy tries to connect with EU developments with a focus on 'smart specialisation' and the formulation of 'roadmaps' with clear engagements of both government and private partners

in the development of new value chains and clusters. In the field of DuWoBo and sustainable housing and building, the development of experiments continues, together with a search for a more strategic platform. Overlooking these and other developments in housing and building, leaves little doubt that the new Flemish government, that took office in July 2014, will unavoidably be confronted with the question of how to provide direction and steering in this important but highly diversified and fragmented system.

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