Transition management in Flanders. Policy context, first results and surfacing tensions.

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0. Introduction

The transition process Sustainable Housing and Building, which was developed in Flanders – Belgium's northern Dutch-speaking region – between 2004 and 2006, is labelled by Loorbach (2007) as the first transition management process outside the Netherlands. A second Flemish transition process started in 2006 in the area of sustainable material management, while a smaller project in the area of sustainable agriculture has temporarily been halted in a preparatory phase due to lack of agreement among participants. This paper discusses the two bigger processes, with some references to the experiences in the agricultural project.

The first part of the paper gives a concise description of the backgrounds of transition management, after which the second part deals with the institutional context and the knowledge base upon which the Flemish processes have been developed. The third part describes the process structure, the institutions which have been set up to guide the processes and the most important results until now. The fourth part discusses several tensions which surface in the application of transition management in Flanders. These tensions can serve as input for orienting research in the coming years.

1. Transition management, a generic governance approach for sustainable development?

1.1. Flanders as a testing ground outside the Netherlands

Transition management made its way into policy and science around the turn of the century. The origins of the approach lie in the Netherlands and have been well documented by the scientists who were involved in its conception (see e.g. Loorbach 2007, Rotmans et al. 2007). The breakthrough was the recognition of the necessity of transitions and the inclusion of transition management as a policy tool in the Dutch Fourth National Environment Plan (NMP4, VROM 2001). NMP4 identifies four policy fields where the model of transition management will be used: the transition to sustainable energy, sustainable mobility, sustainable agriculture, and the transition in biodiversity and natural resource use.

More than five years later, transition policy and transition research have gained solid ground in the Netherlands. While it does not replace regular policy, different policy fields such as the ones mentioned above are experimenting with transition approaches and trying to learn from it. This is supported by important financial resources, also in research. Loorbach (2007) mentions that currently 120 researchers are studying transitions and transition management, while over 100 officials (in full time equivalents) work on it on government level, alongside numerous people in ngo's, business etcetera.

Outside the Netherlands, scientists from fields such as system innovation, governance and sustainable development are studying the experiences in Dutch transition policy and reflecting on the theory (see e.g. Voss et al. 2006, Smith and Kern 2007, Meadowcroft 2005 and 2007, Shove 2004, Shove and Walker

2007a and 2007b, Lovio et al. 2007, Hendriks 2007). However, by far the main body of research is still situated in the Netherlands and their have hardly been any attempts at translating the transition management approach into actual policy outside the Netherlands. Lovio et al. (2007) report on two initiatives in Finland to transfer transition management to Finland. In the first case it has been used in R&D projects in the health sector as a way of framing ongoing research projects as niche projects[1]. In the second case they describe how Dutch scientists (amongst others Jan Rotmans) were invited to Finland to highlight transition management in several environmental policy committees, but the concept never reached the top level of (environmental) policy making, is almost invisible in policy documents and has not been translated into actual policy (ibid., 19-20).

In fact, until now transition management such as it is usually described and discussed by Dutch and non-Dutch scientists has outside the Netherlands only been applied in Flanders. Developers of transition management such as Rotmans, Loorbach and Kemp, claim that transition management is a generic approach to governance for sustainable development and that its principles are internationally applicable in industrialised countries (e.g. Rotmans et al. 2007). In that sense, the current Flemish experiences are unique in that they can teach something about how transition management is received outside the Netherlands and what happens when it is applied in a non-Dutch context. The analysis in this paper is a first attempt at understanding what is happening in the Flemish transition processes and will be followed up and further refined in future publications. The current analysis is based on study of literature and project documents, interviews, group discussions, formal and informal discussion with practitioners and scientists, participation and observation in transition arenas and working groups. Before going into the presentation and discussion of the Flemish cases, it is useful to give a description of what the characteristic features of transition management are and where the line can be drawn between what is generic, and thus internationally applicable, and what is not[2]. This will help later on in the analysis to better interpret and frame the Flemish experiences.

1.2. Searching for the international applicability of transition management

For a start, it is useful to make a distinction between (a) transitions and the transition perspective, (b) transition policy or transition management and (c) the implementation or operationalisation of transition policy/management. In the transition perspective, current industrialised societies are analysed as societies wrestling with complex, persistent problems in the systems that are central for their welfare creation, such as the food system, the energy system, the mobility system and the health system. These so-called socio-technical systems are made up of "a range of technologies, infrastructures, patterns of behaviour, cultural values and policies. A transition implies a process of change that affects all or a large proportion of these

[1] In fact, it is the multi-level model of system innovation such as developed by amongst others Geels that has been used (Geels 2005), rather than the policy approach of transition management; see Lovio et al 2007, 18-19.

[2] I want to thank Derk Loorbach for the time he took during a long interview to discuss some of these points. It should be clear however that the next paragraph and the rest of the paper is not meant as a general discussion of the theoretical background of transition management and a critical appraisal of its methodologies, but that it concentrates mainly on an evaluation of current Flemish experiences. A more general discussion will be the topic of a paper later on in this research project.

dimensions; that is, they are characterized by a combination of technical and societal/behavioural change, in a process of 'coevolution'. Change takes place in the spheres of production, distribution and, crucially consumption and ways of life" (Elzen et al. 2004, 283). Loorbach (2007, 17) defines a transition as a transformation process "in which existing structures, institutions, culture and practices are broken down and new ones are established". What the characteristics of transitions are and how system innovation happens in these socio-technical systems[3], is being studied in the field of innovation and technology studies, amongst other things through historical analyses. Without going into details, it is safe to say that some characteristics always return (albeit not without discussion) (Elzen et al. 2004b, 283):

- Transitions take a long time to develop, at least 25-50 years, and seem to go through different stages, usually labelled predevelopment phase, take-off, breakthrough, stabilization (often visualised in an S-shaped curve).
- Transitions take place through changes at various levels in socio-technical systems. The so-called 'multi-level perspective' distinguishes between changes at the micro-level of niches (incubation rooms for radical novelties), at the meso-level of regimes (the dominant rules, practices, roles, infrastructures and technologies of the actors in the system) and at the macro-level of the landscape (a metaphor to describe the structural trends and slow-changing factors such as worldviews, political culture, macro economy, natural environment, but also material and spatial arrangements of e.g. cities, factories, electricity infrastructures).
- Transitions involve a lot of actors and result out of interaction between networks of actors, such as governments, firms, unions, consumers, ngo's, research institutes.
- Transitions are not caused by a change in a single factor, but are the result of the interplay of many factors that influence each other (technical, regulatory, societal and behavioural change).

Elzen et al. (ibid.) state that in order to be able to speak of system innovations for transitions, these innovations should al least have the characteristics above, i.e. be multi-actor, multi-factor, multi-level and stretching over a long period of time. Loorbach (2007) sees the multi-level and multi-phase concepts as essential for transition theory, but also mentions others such as multi-domain, multi-actor and multi-causal. The main point is that these kind of characteristics are considered generic for transitions in all modern societies and that they imply that system innovations are a specific kind of innovations, leading to radical and structural changes in all components of the system.

The research into system innovation and transitions led researchers to ask the question whether insights into their dynamics could help in influencing and stimulating system innovations in a particular direction, namely in the direction of sustainable development. This introduced research into transition policy, as it is called by some, or transition management as it is called by others. Some of the developers of transition management (such as Rotmans and Loorbach) are quite confident that they have a recipe for a governance approach that can help in guiding transitions to sustainable development, although they admit

[3] Rotmans et al. (2007) draw a sharp distinction between their approach to transitions and transition management, which according to them focuses on *societal* systems, while other approaches focus on *socio-technical* systems. The distinction is not relevant for the discussion here.

that transition policy is still in its early years. "We have yet to complete a full transition management cycle, and in this sense big challenges are still ahead" (Loorbach 2007, 298). Others are more cautious about the possibilities of influencing transitions (Elzen et al. 2004b, Meadowcroft 2007, Smith and Kern 2007, Lovio et al. 2007) or even sceptical (Shove and Walker 2007).

In particular, the argument is gaining ground that different transition contexts may demand different approaches to transition policy. Smith et al. (2005) as well as Geels and Schot (2007) have come up with different typologies of transitions. "The art of governing transitions becomes one of recognising which context for transformation prevails, and which drivers offer the best leverage for guiding change in a desirable direction" (Smith et al. 2005, 1498). Although the field is still very young, Tukker and Butter (2007) already make a distinction between a "mainstream approach to transition management" and other possible approaches. They use Cultural Theory (Thompson et al., 1990) to draw a distinction between an individualist approach to transition management relying on market forces, a hierarchist approach relying on strong government steering, and an egalitarian approach relying on deliberative multi-actor processes and learning-by-doing. It is this last approach that is currently mainstream and "propagated by most of the research community interested in sustainable innovation in the Netherlands" (Tukker and Butter 2007, 99).

What is important for the argument in this part of the paper, is that it is exactly this mainstream approach to transition management that has been applied in Flanders. The proponents of this approach, and even those that are doubtful as to its working, are more or less in agreement that *if* a kind if steering philosophy is possible, it will probably have some typical, generic characteristics. These include:

- Transition policy/management will have to be governance-based. Complex, persistent problems, influenced by many actors and playing out on multiple levels, cannot be solved either by a central institution such as a government or in a pure market context. Therefore, to tackle these problems it is necessary to seek for a form of governance where policies and actions are formulated in interaction between on the one hand public policy actors and on the other hand private actors from civil society and the market. In this sense, the term 'management' may be misunderstood because transitions cannot be managed in the strict sense of controlling the direction they are taking. However, dynamics of change may be influenced and modulated.
- Researchers of transition policy/management admit the need to incorporate a wide range of insights from governance theories, such as the importance of networks and network steering, the growth of multilevel governance, the incorporation of a pluriformity of agendas and interests, the importance of social and policy learning, and the use of incrementalism. Government keeps an active and important role, but takes into account this new, complex societal context.
- An important difference with most governance theories is the fact that transition policy/management has a normative long-term goal, namely influencing transitions in a sustainable direction. And this requires radical innovations in central systems and in institutions of modern societies (which was the basic rationale behind transition thinking from the start). This is however at odds with most

governance theories – such as Lindblom's incrementalism – and may thus require developing a new approach to governance (Grin 2004).

At present, the most theoretically thought-out development of (the mainstream approach to) transition management is probably to be found in Derk Loorbach's PhD thesis, *Transition Management. New Mode of Governance for Sustainable Development* (Loorbach 2007). Transition management is grounded here as a complexity-based governance approach for sustainable development, building on insights from complex system science, sociology and governance studies. Loorbach (2007) as well as Rotmans et al. (2007) explicitly state that transition management is not just a mix of existing approaches – combining e.g. elements of network steering with elements of long-term planning and short-term incremental steps – but that it is also a distinctive, new approach because of its explicit normative focus on sustainable development and its specific use of selective participation (see further down). They label it "perspective incrementalism for sustainable development" (ibid., 25).

To actually "do" transition management, Loorbach (2007) develops a framework that distinguishes between three different levels at which socio-technical systems can be influenced and, consequently, at which transition management can try to intervene. Strategic transition management tries to influence the level of ideas, goals, values, visions and concerns of the individuals and organisations in the system. Since this deals with the underlying culture, structure and practice of the system, it can take a long time before the change actually takes place. Tactical transition management tries to influence the structural regime barriers to the desired development such as rules, routines, institutions, but also infrastructures. This is the level at which policy-making often works and time frames for realising change are shorter, but can still take 5 to 15 years. Finally, operational transition management focuses on practices by trying to influence and alter institutionalized practices and developing new types of solutions and creating innovations (technologies, rules, organisations, services). Since this is often a question of individual firms, organisations or consumers, action can be taken in short time. "The levels of the transition management framework are based on differences in the scale on which the problem is observed, the differences in time-frame taken into account and also the level of the system that is dealt with" (ibid., 111) (see also Table 1). One of the main ideas behind transition management as a steering philosophy is that if the actors with an interest in transition processes towards sustainable development want to have any influence on the system, they need to support and reinforce each other and each other's activities over these different levels. An essential question then is: "How should this be done in practice?".

	Problem level	**Time scale**	**System level**
Strategic	Abstract/societal system	Long-term (30 y)	System
Tactical	Institutions/regime	Mid-term (5-15 y)	Sub-system
Operational	Concrete/project	Short-term (0-5)	Niche/'mini'-system

Table 1. Transition management activity types (Source: Loorbach 2007)

With this question we come to the edge of what transition researchers currently consider as generic in the transition management approach. "The framework can certainly be used to develop a context-specific operational approach, but it can never be implemented without adaptations, additions and improvements" (ibid., 128). The approach has to be translated into practical guidelines, instruments and practices, and what these are will be influenced by factors such as the region where transition management is applied, the societal problem and socio-technical system that is addressed, the phase in the transition cycle etcetera. However, while this context-specific adaptation of the model is conceivable in theory, in practice only one full-fledged model has been developed until now, which is what Loorbach calls the transition management model or the transition arena model. "The transition arena model is an operationalization of the transition management approach within the Netherlands" (ibid., 295). Kemp and Loorbach (2006, 109) call it "our model of transition management, accepting that there are other models. When we speak of transition management we mean the ICIS-MERIT[4] model of transition management in whose development we were involved ourselves". "This model has been specifically applied in the Dutch policy context and therefore does not present a blueprint model for managing transitions in any political culture (although recent experiences in Belgium suggest that the basic model provides a valid basis to start from)" (Loorbach 2007, 131) [5]. The model was conceptualised in the run-up to NMP4 by an ICIS-MERIT team around Jan Rotmans and René Kemp, brought first into practice in the ICIS project "Parkstad Limburg", and later on further refined in DRIFT. It is also the model for which the Flemish process in Sustainable Housing and Building was a testing ground, and it is the model that is used in the second Flemish process in Sustainable Material Management.

1.3. Some basics of the transition management model

The transition management model has been described in several publications, extensively (e.g. Rotmans 2004) as well as more concise (e.g. Kemp and Loorbach 2006). As said above, one of the most thorough discussions is Loorbach (2007). We mainly follow Loorbach's discussion to present some of the basics of the transition management model.

The model is constructed in such a way that it tries to be consistent with the insights in transition analysis and in governance analysis as formulated above. It also aims explicitly for transitions towards sustainable development. The transition management model uses specific "systemic instruments" within a cyclical process, called the "transition management cycle", in order "to structure, organize and coordinate problem structuring and envisioning processes in such a way that it leads to social learning amongst a

[4] ICIS (International Centre for Integrated Assessment and Sustainable Development) is the research institute at Maastricht University where Jan Rotmans was director until 2004, before moving to the University of Rotterdam and founding DRIFT (Dutch Research Institute for Transitions). MERIT (Maastricht Economic and social Research and training centre on Innovation and Technology) is the research institute where René Kemp is working as senior researcher since 1998, specialising in eco-innovation and transition management.

[5] It is interesting to note that transition management researchers distance themselves from the so-called Dutch polder model, which in their view is based on a form of consensus democracy that is corporatist and primarily represents vested interests, hindering the much needed innovations for sustainable development. Transition management contrasts in several aspects with the polder model: through inclusion of a selective group of frontrunners, focus on long-term and broad sustainable innovations, proliferation of visionary ideas in multi-scale networks, self-steering in small innovation networks (see e.g. Rotmans et al. 2007, 24).

network of innovators and the development of shared visions and agendas" (ibid., 280). The transition management cycle consists of four steps, that however do not have to follow a strict sequence (see also figure 1). The different steps in the cycle are (ibid. 115): (1) the strategic level of problem structuring, establishment of a transition arena and envisioning; (2) the tactical level of developing coalitions and transition agenda's (transition images and related transition paths); (3) the operational level of establishing and carrying out transition experiments and mobilising the resulting transition networks; (4) monitoring, evaluating and learning lessons from the transition experiments and, based on these, adjust the vision, agenda and coalitions.

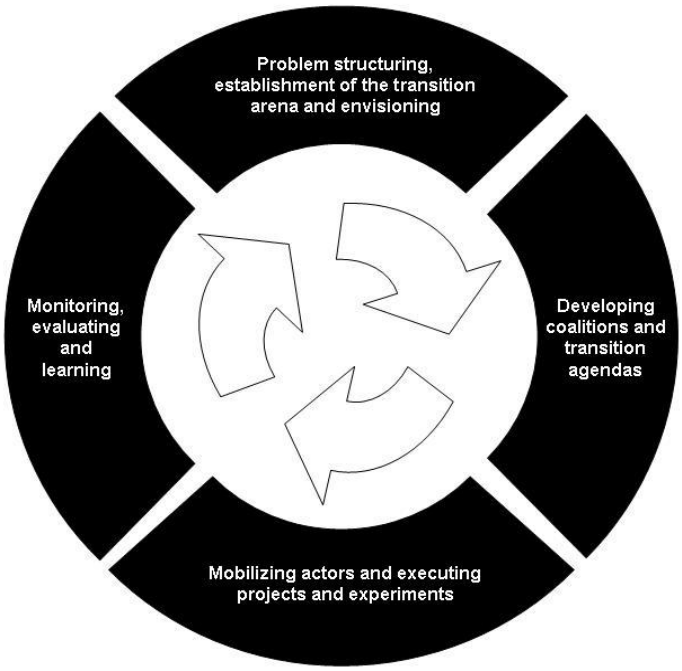

Figure 1. The transition management cycle. Source: Loorbach 2007.

For all of the activities in the transition management cycle, specific systemic instruments have been developed to guide the processes. These include: the transition arena, sustainability visions and transition images, transition pathways, transition experiments, the transition agenda. The central instrument in the cycle is the transition arena. The transition arena is the space where a group of maximum 15 individuals meets with essentially two goals: developing a shared understanding of the problem at hand, and developing a shared sustainability vision for that problem. The individuals are carefully selected and should be "frontrunners", which can be innovative regime actors or innovative niche actors. The arena functions at the strategic level of transition management and is meant to create room for innovative actors to reframe a societal problem and challenge the regime with an inspiring vision.

In a second phase on the tactical level and based on the shared vision, different themes or sub-systems are identified. For each sub-system, transition images are developed that describe the desired future state of the sub-system, such as innovations at the level of infrastructure, technology, institutions, lifestyle, ecological and social impacts etcetera. At that moment, the original arena is usually opened up

and different working groups are created for each of the sub-systems (sometimes called "arenas of arenas"). The working groups further develop the images and start discussing transition paths, i.e. trajectories between the present situation and the desired image. Different transition paths are possible that need not be completely in agreement with each other. The working groups also start first exchanges on possible projects and experiments to work towards the images. The transition agenda brings all of the work together in one text: the problem definition, guiding principles and visions, the images, pathways and first ideas for projects and experiments. According to Loorbach, the transition agenda is the main outcome of the transition arena since it can be considered as a joint action and innovation plan of all actors involved in the arena for the sustainable development of a specific societal system (ibid., 147). The transition agenda is operationalised through execution of transition experiments. The selected experiments will usually consist of a combination of ongoing projects which fit into the agenda and new transition experiments. The main aim of the experiments is to test and learn whether the formulated strategy and transition paths contribute to the desired change.

An important role during the whole process is reserved for the so-called "transition team". Ideally, according to Loorbach it consists of the initiating organisation, experts in the field under study, transition management experts and process facilitators. "In practice different backgrounds can be combined (…) It is very important to make clear in advance how the different members of the team will function, what their roles and responsibilities are" (ibid. 154). The tasks of the transition team are quite demanding: not only surveying, managing and facilitating the whole process, but also feeding participants with background information and detailed knowledge, acting as intermediary in discordant situations and taking care of internal and external communication.

2. Initialising transition management: formal embedding, the knowledge base and the institutional setting in Flanders

After this brief introduction to transition thinking and transition policy, I will try in the following parts of this paper to bring further insights to the debate on transition management in general and to the debate on the international applicability of the approach, drawing on the experiences with transition management in Flanders. This second paragraph looks at the conditions under which the processes in sustainable housing and building and in sustainable material use were started: the formal embedding of the projects, the knowledge base in Flanders and the institutional structures and competences on which could be built.

2.1. Formal embedding of the processes

The transition process DuWoBo (Sustainable Housing and Building) and the transition process Plan C (Sustainable Material Management)[6], are formally legitimized by Flemish environmental policy. In its project 1, the *Milieubeleidsplan 2003-2007* (MINA-plan 2003-2007, Flemish Environmental Policy Plan) identified system innovation and transition management as important tracks for realizing sustainable development. In 2004, this was made operational in the Environmental Year Programme 2004, where sustainable housing and building as well as sustainable material management were specified as the two areas where pilot projects would be developed. These choices were reinforced when the Flemish Minister of the Environment in his Policy Note 2004-2009 formulated the need for an "innovative environmental policy" with as strategic long-term objective "preparing Flanders for transitions" (Peeters 2004, 81)[7]. The note states that in the long term radical transitions may be necessary that go beyond system optimisation and that require system innovations. The Flemish Region should therefore identify long-term and legislature-crossing objectives, which can then serve as orientation points for short and medium term policy. In its operational objectives the policy note then formulates the need to study the feasibility of the concept of transition management in a Flemish context "with sustainable housing and building as testing ground." (ibid., 79).

Both processes, DuWoBo and Plan C, are however embedded in a broader formal context than just the developments in environmental policy immediately prior to the start of the processes. In the case of DuWoBo, interest for "sustainable building" can be traced back to 1994 when it was first mentioned in the preparation of the *Uitvoeringsplan bouw- en sloopafval* (Implementation plan building and demolition waste) of the *Openbare Vlaamse Afvalstoffenmaatschappij*, OVAM (the Public Waste Agency of Flanders). OVAM saw a pro-active strategy of sustainable building as a possibility to promote waste prevention and to tackle the growing waste material from the building sector. Several years later on, in 2000 and 2001, the Flemish Parliament adopted resolutions in which the Flemish government was asked to support actions for sustainable building, although this was still largely restricted to awareness raising in the context of dangerous environmental and health implications of certain building materials. On 9 March 2001, the Flemish government approved the financing of a research project on sustainable building. This decision would later on form the basis for financing project 1 of the MINA-plan 2003-2007. It took some more years before in 2004 the then Minister of the Environment Sannen wanted to have the research project developed in the context of a second implementation plan Building and Demolition Waste within OVAM. However, OVAM objected to enlarging a waste implementation plan so far as to be able to include sustainable building because it doubted whether a sectoral, operational plan was the right vehicle to

[6] From here on we will use the acronyms by which the two processes are known in Flanders: "DuWoBo" for the transition process sustainable housing and building (DuWoBo stands for "Duurzaam Wonen en Bouwen") and "Plan C" for the transition process in sustainable material use. Plan C derives it name from the idea that a Plan B is no longer enough to reach sustainable development and sustainable material management, but that a Plan C is needed. The DuWoBo website is www.duwobo.be . The Plan C website is ww.duurzaam-materialenbeheer.be .

[7] In the run up to the Belgian federal elections of June 2007, the Flemish government was reshuffled. The Flemish minister of the Environment, Kris Peeters, who initiated the transition processes, became Minister-President of the Flemish government. In that function, one of his responsibilities is sustainable development. The current Flemish Minister of the Environment is Hilde Crevits.

promote sustainable building, amongst other things because of the complexity of the theme and the multiple actors involved. During the follow-up discussions, and in combination with the question on how to fill in project 1 of the Environmental Policy Plan, the idea surfaced to use the theme of sustainable housing and building as a first case study for experimenting with transition policy. The responsible department in that case would be the Flemish environment administration LNE. This idea was also influenced by several developments in the knowledge and institutional context that will be discussed further under 2.2. and 2.3. (for a more detailed account of developments mentioned in this paragraph, see Tempst, s.d.).

A similar broader formal embedding of the process can be found for Plan C. Apart from its link to environmental policy, Plan C has from its onset also explicitly been linked to a huge reorganisation of the Flemish administration, called *Beter Bestuurlijk Beleid*[8] (BBB). The Flemish Government initiated BBB in 2000 with the aim of modernising the administration and making it more efficient and customer-friendly. By 2004-2005, the Flemish administration was divided in new functional units. In the field of environmental policy, one of the objectives was the avoidance of overlap of competence between different institutions active in the field. In this process, the Public Waste Agency of Flanders (OVAM) was made responsible for the theme of "sustainable management of material flows", which seemed like a new theme for OVAM, but which fitted in fact into an evolution within OVAM of opening up waste policy to activities such as prevention, eco-efficiency and eco-design. OVAM has an impressive track record in building up a policy of waste management over the last 25 years, but this policy seems to be reaching its limits: although the separate waste flows are efficiently managed, the overall amount of waste is not under control. During 2004, OVAM ordered an internal study from ICIS Maastricht (Loorbach 2004, Loorbach et al. 2004) to make clear how the new task could be filled in. The concepts of transitions and of transition management were defined as promising approaches for OVAM to tackle sustainable material management. It should be mentioned however that, although Plan C is for OVAM a way of fulfilling part of its tasks under BBB, even without BBB OVAM might have evolved into the direction of sustainable material management, partly through the logic of the internal evolutions, partly under the influence of similar processes and lines of thought within e.g. the OECD and the EU. BBB was important as an extra impetus to start the process in a conscious and organised manner. Thus, the development of a transition process in sustainable material management became an experiment, and as such also an accepted risk for OVAM, in exploring new policies and innovation in waste and material management.

One could ask why transition policy was not linked to sustainable development policy at the start of the DuWoBo and Plan C processes. The answer is rather straightforward: linking transitions to sustainable development policy was not possible, since the Flemish government did not have a plan for sustainable development until 2006, nor did it have a specific policy domain sustainable development. It was only in July 2006 that the government approved for the first time a Flemish Strategy for Sustainable Development, phase 1 (VSDO, *Vlaamse Strategie Duurzame Ontwikkeling, fase 1*). With respect to content, the plan mainly

[8] An untranslatable phrase which even sounds strange in Dutch. It means something like "better policy in public management".

uses the EU Sustainable Development Strategy, along with some specific Flemish plans, to formulate general objectives. It further defines some governance elements of the strategy (such as the need for a framework Decree, impact assessments, monitoring and evaluation, a budget etcetera), while operational projects and actions are promised for a second phase. In May 2006, the former Minister-President, responsible for sustainable development in the government, made an explicit link between the VSDO and the DuWoBo-project by declaring that the transition arena DuWoBo would serve as a preparatory platform for a long-term vision on sustainable building for the VSDO, which would later be translated into short-term actions by the government (Leterme 2005). In the ongoing discussion about the further development of the VSDO, OVAM has also brought in ideas for linking policies on sustainable consumption and production patterns with ideas developed in the transition process sustainable material management.

2.2. Preparatory studies

It might be expected that the decisions to start transition processes were taken in a context of knowledge of and familiarity with concepts such as system innovation, socio-technical regime shifts and transitions, as described above in 1.2. and defined by e.g. Kemp, Rip and Geels (Rip and Kemp 1998, Geels and Kemp 2000, Geels 2005). However, it is remarkable that the decisions for experimenting with transition processes have been taken on a rather small knowledge base and with limited institutional backing. System innovation and transitions were (and still are) almost no topic in Belgian or Flemish universities, research institutes and administrations.

Still, in the years immediately prior to 2004 a few studies had been produced that all hinted at the potential of system innovation and transition management, without however going into any detail as to how these should be applied to Flanders. Although these studies were written in different fields and for different purposes, the researchers and civil servants involved were closely connected to the field of environment and/or sustainable development and usually knew each other personally. At one time or another, all of them also went to visit Jan Rotmans and his team at ICIS Maastricht to discuss the new concept of transition management. De Jonge (2003), in a preparatory study for the MINA-plan 2003-2007, discusses how environmental resource policy can be embedded in a wider framework that focuses on system innovation. Based on Dutch examples, he proposes an "ad hoc framework" to initiate system innovation and transition management in Flanders. He advises among other things to work with a strategic and a practice level, to initiate competence networks in the fields of innovation policy, knowledge infrastructure and multi-actor policy, to define systems and subsystems which can be targeted, to launch experimental projects and to organise learning processes. The discourse developed in this research report directly influenced the phrasing of project 1 in the Environmental Policy Plan.

Van Humbeeck (2003), in a paper for the Flemish socio-economic advisory council SERV on the relation between industrial policy, innovation policy and the environment, also points out the necessity of system innovation to tackle environmental problems and to simultaneously renew the economic system.

He states that incremental innovations will not suffice to solve environmental problems and discusses the importance of radical technological innovations and transitions on a systems level. However, neither current environmental policy, nor current innovation policy reserve an important role for environmentally oriented technological development. He therefore advises amongst other things to study more in-depth the experiences in transition policy in the Netherlands, but also states that in principle a thorough study is not absolutely necessary, because transition policy is "a matter of just doing it" (ibid., 76, 78).

In the same years, several papers and reports of the Flemish innovation institute IWT[9] refer to a broadened conception of innovation policy, in which innovation policy not only focuses on improving competitiveness but also becomes "a prime mover in the achievement of a wide range of societal goals, in particular summed up by the agenda of 'sustainable development'", including "issues such as traffic congestion, social exclusion, security and pollution" (Boekholt and Larosse 2002, 14). In 2002, the IWT organised a conference titled *Innovation Policy and Sustainable Development. Can public incentives make a difference?* where amongst others René Kemp from MERIT Maastricht elaborated on the potential of transition policy. In 2003 and 2004, two IWT papers written in the context of an OECD project on horizontal innovation policies, both refer to innovation, transition management and sustainable development. Van Humbeeck et al. (2003) link system innovation and transition management to the idea of "Third Generation" Innovation Policy. This term features in EU notes on innovation policy and is an innovation policy meant to expand its scope beyond economic goals to broad societal goals, such as sustainable growth and sustainable development. "It employs a holistic view and a system-wide approach, stressing the need for an 'Integrated Innovation Policy' where innovation is integrated with other sectoral policies" (Van Humbeeck et al. 2003, 35). They argue that transition management "may be the missing link to put into practice the structural renewal of the Flemish economy and society towards a coherent and sustainable model of production, consumption and innovation. Environmental technological innovation will be at the heart of this transformation" (ibid., 36). They advise to coordinate innovation and environmental policies through definition of common goals and strategies, amongst other things through promotion of system innovation and new management styles such as transition management. Larosse (2004), who co-authored the previous paper, uses essentially the same arguments.

While, as shown above (2.1.), there are several developments that explain why sustainable housing and building was chosen as the first case for project 1 of the MINA-plan 2003-2007, the decision to launch this case under the form of a transition project was taken with essentially the just discussed studies as knowledge base in Flanders. It therefore comes as no surprise that Dutch expertise was hired in to help develop the DuWoBo process (see 3.). Only OVAM ordered a more profound internal study on transitions and transition management before starting Plan C. This study (Loorbach 2004, see also Loorbach 2007 p. 190-192 for a short description) started from a rough integrated systems analysis, based on work done by amongst others Loorbach on the Dutch waste transition, and was made context-specific through discussions and a workshop with some 20 employees of OVAM. The resulting discussion note

[9] Institute for the Promotion of Innovation by Science and Technology in Flanders / Instituut voor de Aanmoediging van Innovatie door Wetenschap en Technologie in Vlaanderen

showed how the Flemish waste management had evolved in 30 years and argued the need for a transition towards an integrated materials approach. In an advisory note for the Board of Directors of OVAM, these conclusions were extensively linked to the new OVAM tasks under the already mentioned BBB reorganisation of the Flemish administration (Loorbach et al. 2004). Initiating and supporting the transition were defined as possible tasks for OVAM. The support of the Board for the conclusions of the report, opened up a space (and a budget) to start working on a transition arena, which would evolve into Plan C.

2.3. Institutional context and capacities

From a perspective of institutional capacities, dealing with the intricacies of transition management may become easier when the involved administration and actors have some experience with certain features of transition management, such as long-term strategic thinking or participatory, multi-actor processes. However, in general terms, it can be said that the Flemish administration did not have a tradition of long-term strategic planning, future studies or multi-actor processes of the transition management kind prior to 2004.

Long-term strategic planning and policy are spread very unevenly over the different policy domains, with total absence in some domains (SERV/MINA 2005). For some years, the Flemish government has installed a planning and statistics administration, which since the BBB reforms includes an official study department, where several initiatives are developed in the field of strategic planning and future studies (see e.g. De Smedt 2005). Since 2004, several scenario exercises have been initiated with the involvement of the Flemish administration and its study department. The initiatives and guidelines developed are, however, too young to have influence or – in the case of the scenario exercises – date from after the start of the DuWoBo process.

The domain of spatial planning is one of the few exceptions to the rule where long-term planning is institutionalised. Since 1997, spatial planning in Flanders builds on the *Ruimtelijk Structuurplan Vlaanderen* (Spatial Structure Plan Flanders) to orientate spatial planning policy. Another exception is the policy domain of environment and nature. Here, a Decree stipulates that every five years a new environmental policy plan has to be formulated. This forms part of a planning cycle that also includes a status report on environmental themes and a scenario report. The current MINA-plan is the third in a series and covers the period 2003-2007[10]. It works with objectives on two levels: long-term objectives for the period 2015-2030 and short-term objectives for the planning period until 2007. The government as a whole is legally obliged to implement the plan. As mentioned above, this is the plan which includes in its "project 1" the ambition to experiment with transition management. The kind of planning which is developed within the environmental policy plans is usually rather strict, linked to clearly defined budgets and objectives and with predefined deliverables. Schouwers (2006) therefore remarks that it is "highly exceptional" that the

[10] It should be noted that in 2006 the current government changed the Decree in order to let the planning period henceforth better coincide with the period of office of the Flemish government. The planning period of the current environmental plan has been extended to 2008-2010. The rationale seems to be to strengthen the grip of policy-makers on the planning cycle and to let each government determine its own environmental policy plan.

Flemish government is willing to support transition processes without a preliminary description of the problem, a specific working procedure and a proposed solution.

In a recent study, De Wel analyses how most previous Flemish governments have launched their own strategic future plans (De Wel 2007). Most plans seem to have had a mobilising and communicating character, aimed at finding broad support for the government's policy. They usually did not have a real planning character with translation of long-term objectives to short-term objectives and projects, implementation measures at administrative level, monitoring of results, etcetera. Consequently, most plans do not survive a next government, which then in turn launches a new plan for the future. This has e.g. been the case with *Vlaanderen-Europa 2002*, launched in 1993 (Flanders-Europe 2002) and *Kleurrijk Vlaanderen*, launched in 2000 (Colourful Flanders), although in this last case an important result remains under the form of the *Pact van Vilvoorde* (Treaty of Vilvoorde), a commitment between the government and Flemish social actors to realise 21 socio-economic goals by 2010. In 2006, the current government launched the initiative *Vlaanderen in Actie* (Flanders in Action), a broad socio-economic program which tries to involve more than 300 "captains of society" to generate impulses for the development of talent, creativity, entrepeneurship and an efficient public service in Flanders

In the field of participation, there is of course a long-standing tradition of involvement and consultation of socio-economic actors in socio-economic policy questions, sometimes called neo-corporatism: the government recognises interest groups of employers and unions as representative and involves them in strategic and operational policy planning, in exchange for professional management of interests and self-discipline (Verbeeck and Loots, 2006). Specific interest groups such as the environmental movement have over the years also become involved in different kinds of advisory councils and more or less formalised committees. Yet, more deliberative and experimental forms of participation and multi-actor governance largely remain uncharted terrain in Flanders. There have been some experiments in the field of poverty by including self-organisations of poor people in policy development. In the field of environmental policy, Verbeeck and Loots find that while some initiatives try to open up the traditional policy cycle, they experience serious difficulties in breaking out of a frame of strong government steering and hierarchal approaches (ibid., 48). In their study of citizen participation cases between 2000 and 2003, Vandenabeele en Goorden (2006) find that citizen participation can lead to an innovative turn in policy preparation and planning content. These local practices remain, however, at odds with the generic approach, distinctive of the way the Flemish administration perceives its own role, i.e. as keeper of general interest, at some distance of and far above the clash of interests of local parties (ibid., 70). From the perspective of transition management these kind of insights are important because they show that some of the central characteristics of the approach – involvement of a select group of frontrunners in strategic, long-term envisioning and policy planning for sustainable development – are very unfamiliar in current policy practices.

Finally, it is not unimportant to mention that two advisory councils to the Flemish government (the socio-economic council SERV and the environment and nature council MINA-Raad) pronounced themselves in favour of experimenting with transition processes, apart from each other as well as in

common advices. Already in 2002 during the public consultation for the environmental policy plan 2003-2007, both councils pleaded for radical innovations under the form of long-term system innovations and asked the government to study the possibilities of framing these as transitions and transition management. In a common advice in 2005 on the sustainable development strategy, both councils argued in favour of the advancement of "strategic intelligence" in Flanders with development of instruments such as explorations of the future, scenario analysis, impact and technology assessment, and development of competences in the fields of process management, participative methods, system innovation and transition management, etcetera (SERV/MINA 2005). These viewpoints, in particular from the influential socio-economic council SERV, serve as additional legitimacy not only for the politicians who support the transition processes, but also for the administrations and civil servants who proposed them and are executing and guiding them.

2.4. A rather pristine context

In summary, at least two preliminary conclusions can be drawn from this reconstruction of the start of the transition processes in Flanders.

First, although it can be said that prior to 2003 and in the following years, some elements were present on which a transitions discourse and transitions processes could build, it is also evident that the overall context was rather "pristine" or unprepared, with relatively few competences that might intuitively be necessary for initiating transitions processes or guiding transition management projects. Important elements of the context within which transition management was introduced in Flanders, include:

- There was (and still is) only superficial knowledge of ideas and theories on system innovation, transitions and transition management. Historical or contemporary studies in which socio-economic and cultural changes in Flanders are framed as transitions are not available (with the exception of Loorbach et al 2004, which gives a preliminary analysis of the transition in the Flemish waste sector). Some Flemish studies argue for system innovation and describe transition management as a promising way forward, without however going into any detail.
- Long-term strategic thinking, explorations of the future, scenario analysis and related methodologies were and still are underdeveloped in Flanders. One of the exceptions is the realm of environmental policy, in which there is some tradition in strategic planning, although this is usually on a rather strict basis and linked to clearly defined budgets, objectives and with predefined deliverables.
- Flanders did not have an integrated, multi-domain covering strategy for sustainable development until 2006. The two transition processes are therefore linked to environmental policy, i.e. the MINA-plan 2003-2007, and initiated and guided by the environmental administration itself (LNE in the case of DuWoBo) or by an agency within the cluster of environmental institutions (OVAM in the case of Plan C). Plan C is internally within OVAM also explicitly linked to the BBB reorganisation of the Flemish administration.

- The choice of the themes "housing and building" and "material management" can be traced further back then just the MINA-plan 2003-2007. In the case of sustainable housing and building, there had been a demand for investing in the theme from political as well as from administrative sources. In the case of sustainable material management, there was a growing realisation within OVAM that after 25 years of waste management, some limits were being reached.
- Flanders has limited experience with participatory processes at strategic level, other than through advisory councils or traditional consultation procedures. Although there have been some experiments with new multi-actor governance processes in fields such as poverty policy and environmental policy, these are generally marginal and furthermore do not have the characteristics of transition management, i.e. policy preparatory, visionary, strategic thinking on sustainable development with a group of frontrunners.
- Both transition processes, and the idea in general of experimenting with and gaining experience in transition thinking and long-term planning, received support from two influential advisory councils to the Flemish government. They also stated the need for radical innovations at system level.
- An element that has not been discussed, but that is perhaps interesting to mention is the fact that in Flanders the Netherlands are often regarded as an example of carefully considered policy planning, as well as an example of a frontrunner state where new ideas are thought out and tested. From the other side, the Dutch sometimes look towards Flanders for its no-nonsense and pragmatic approach to policy-making. Both regions are of course also culturally close and there is no language problem, so that Dutch expertise is easily accessible[11].

This brings us to a second conclusion. Considering the rather unprepared context, it may come somewhat as a surprise that the different elements that were actually present at legal, knowledge and institutional level have been enough to trigger two experiments with transition management in Flemish environmental policy. An additional element is needed to explain this development. The glue that united the different parts has to be sought in the bottom-up process that characterises the start of transition management in Flanders. This is not the story of a master plan of visionary politicians who initiate a grand new policy. It rather is the story of a bottom-up process, slowly growing and finding its way in small, partly informal and parallel networks between civil servants, researchers, policy advisors in advisory councils and others. On the one hand, these people saw the need for the development of long-term environmental policies and for radical technological system innovations in a broad societal perspective. In the discourse of transitions and transition management which had recently gained ground in the Netherlands, they found a conceptual and operational approach that could voice these concerns in a coherent storyline. On the other hand, this storyline also had to be made concrete in practical decisions to start experimental processes in transition

[11] The relationship and feelings between both regions are however more complicated than described here and in Flanders sometimes take the form of a love-hate relationship, with admiration on the one hand, but also aversion to what is considered Dutch patronizing and bold attitudes on the other hand. Cultural differences in approach and even in use of language have at some moments played a role in the DuWoBo-project.

management. In searching for political and administrative windows of opportunity and translating them in operational policy decisions, the role of different civil servants (such as Ilse Dries at LNE and Walter Tempst at OVAM) has undoubtedly been important, backed-up by the approving judgement of the advisory councils SERV and MINA-Raad. This whole context made it possible for the responsible minister to frame the processes as experiments in innovative environmental policy.

This bottom-up development has some similarities with the conception of transition management in the preparation of NMP4 in the Netherlands. Ideas about socio-technical system innovation and transitions had been brewing for years in a loose network of "twenty or so" (Smith and Kern 2007, 10) officials and researchers involved in environment-technology research programmes in the 1990s, before they were picked up and became a central theme in NMP4. Of course, on that last point there is still a huge difference with Flanders, where the transition processes currently function as experiments in the margin of regular policy.

3. A bird's-eye view on both processes

This paragraph delves deeper into the contents and some characteristics of the transition processes DuWoBo and Plan C. Both have two overarching objectives. The first one is on a substantive level: developing a future vision of sustainable housing and building in Flanders (DuWoBo) and of sustainable material management (Plan C), and translating this into an agenda for change with long-term objectives but also short-term actions. Second, both projects hope to gain insights into whether transition management is applicable in Flanders and under which conditions.

As a consequence of the lack of experience with transitions and transition management, and following the contacts that had been made with ICIS Maastricht by several officials and researchers (see 2.2 above), it was almost logical that DuWoBo, the first transition process in Flanders, would use the expertise of Jan Rotmans and his team to give transition management a start in Flanders. This implies that the approach to transition management which is tried out in Flanders, is the one developed by ICIS-MERIT and later on further refined in DRIFT. No Dutch researchers or consultants are directly involved in Plan C, but the process follows essentially the same approach, although as will be explained further on, there has clearly been a learning effect. The basics of transition thinking, transition policy and the transition management model have been described above. Here, some specific aspects are presented more in detail. After that, in part 4 a set of questions from the first Flemish experiences are discussed.

3.1. Evolution of the processes, some results and their current state

Since transition management was initiated in Flanders using the expertise developed in the Netherlands by Jan Rotmans and his team, and since the DuWoBo and Plan C processes also have the explicit objective of testing whether this approach to transition management is suited for Flanders, it is logical that both

processes closely follow the so-called transition management model and cycle as described above in 1.3. This is of course an idealistic scheme of how transition management could work in principle, and Rotmans, Loorbach and others have often stressed that in reality things are much more complicated. One such complicating factor is the fact that DuWoBo and Plan C are meant to be *processes* without a clear end date, but in order to get them financed they had to be structured as *projects*[12]. This implies that typical project characteristics enter the process, such as time and budget constraints, and that in order to keep the processes going follow-up projects have to be defined to fund them. However, this need not necessarily be negative because it obliges to keep some dynamics in the process and to come up with intermediary results at regular moments, which in turn serve to draw interest from decision-makers. Furthermore, in the case of DuWoBo and Plan C, it was the only way to get the processes started. Without this form of project funding, they would simply not have existed.

Figure 1 illustrates how the different phases of the transition management cycle are translated into different phases for DuWoBo. Figure 2, further down, does the same for Plan C.

3.1.1. The DuWoBo process

The DuWoBo process started in October 2004 under the form of a TWOL-project, which was limited in time till December 2006. The first project phase concentrated mainly on discussions on the meaning of transition management and sustainable development, as well as on an Integrated System Analysis of the system "Housing and Building" in Flanders within the transition team[13]. This ISA taught that the system is characterised by an individual and rigid housing culture; a lack of affordable, high-quality, healthy and safe houses; a limited flexibility in the building culture; limited available space for housing; locations for housing that are determined by price and level of services; deteriorating social networks in neighbourhoods; housing which is more and more confronted with aspects of social care for certain groups; a housing and building culture with high environmental impact; trust, participation and cooperation are diminishing; and there is no consistent government policy in this sector (Deraedt et al. 2005).

The ISA served as input for the first meeting of the transition arena, where it was discussed and slightly amended. The arena agreed that without intervention the problems in housing and building in Flanders will only grow worse; far-reaching change is necessary to make housing and building more sustainable. As has been discussed above, knowledge on transitions and transition policy was very limited in Flanders, so the first meeting of the arena was also meant to introduce arena members to the basics of transition thinking. This was done by the Dutch experts.

The next two meetings of the transition arena concentrated on formulating a vision for the sustainable development of housing and building in Flanders. As time horizon, 2030 was chosen. The vision has a substantive and a process side. On the substantive side, it envisions a healthy, safe and social living

[12] Both projects are financed under the TWOL program (Toegepast Wetenschappelijk Onderzoek Leefmilieu, Applied Scientific Research for the Enviroment), a program meant for financing environmental research projects. Plan C receives additional funding from within OVAM.

[13] For the composition of transition team, transition arena and working groups, see 3.2.

environment, tapered to the needs of occupants. On the process side, it states that this kind of vision cannot be realised without transparent cooperation between all parties in the sector, guided by common goals, interests and responsibilities. To give direction to this process in the long term, seven guiding principles for sustainable housing and building in Flanders were formulated. The seven guiding principles are: an integrated approach in the development and management of the sector, shared responsibilities and transparent decision-making, high-quality buildings and adjacent environment, accessible and socially just housing, balance between private and collective use, closed material cycles, an economically viable and socially responsible building sector. Furthermore, besides the guiding principles, four key themes were chosen that were considered as levers for stimulating innovation and making housing and building more sustainable. These four key themes are: learning and innovation in the building sector, closing of material and energy cycles, quality of houses and housing, and spatial planning.

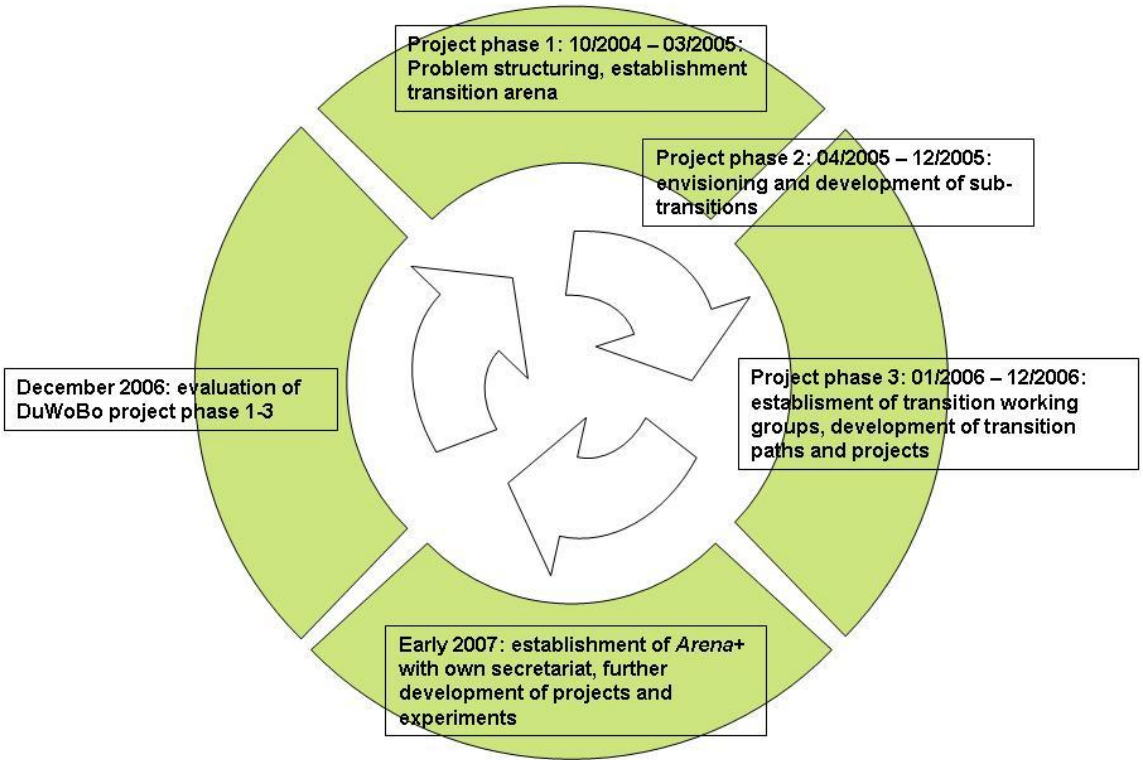

Figure 2. Different phases and timing in the DuWoBo-project

In the next phase, the arena was opened up and working groups were created which were given the task to further develop the key themes. This meant that they were asked to formulate transition or target images, transition paths and finally transition experiments. Most working groups met around three times. Four transition images have been developed within the working groups, based on the four key themes:

- *Co-learning and innovation in the building sector*: in 2030, corporate social responsibility has become common practice and houses are no longer approached as products but as concepts and services. Competent companies work together in networks in the building industry, where all actors have easy access to information on sustainability requirements. A knowledge infrastructure with interdisciplinary

cooperation between government, industry and universities produces and provides relevant information, which is also incorporated into and adapted to education.

- *Close the Circle*: all buildings maximally save energy and water; building materials are sustainable over the whole life cycle; new houses are passive houses and even energy producing; houses are flexible, adaptable and multifunctional; cities and towns are CO_2-neutral.
- *Housing for Life*: in each stage of life, people look for the most suited house, instead of staying in their once bought or built house. Modular design of houses has become normal practice, so that houses can be adapted to changing needs. Houses and neighbourhoods are of high quality, accessible, safe. Residents feel responsible for their neighbourhood.
- *Living Centres*: a new approach to spatial planning leaves room for open dialogue with respect for sustainability criteria. A new layout of spaces goes along with new forms of living together and a consistent mix of functions. Residents have become co-owner of and co-responsible for public space. There is a new balance between different functions of space.

The working groups further developed transition paths and discussed possible transition experiments. The final document of the DuWoBo project, *Vlaanderen in de steigers (Flanders in scaffolds)*, which can be considered as the transition agenda, is rather confusing in presenting the results of this phase. The main results are 6 transition paths, to which are linked: a number of "strategy lines" (an option within a transition path), "germs" (an idea that can grow into a project or experiment), "transition projects" (an initiative that will be carried out by several partners) and "transition experiments" (projects where the stress in on learning) [14]. Apart from the introduction of this new and not very well defined terminology, the final document uncouples transition paths and transition projects/experiments from transition images and presents them all on the same level, because most of them are considered to be relevant for different images.

In December 2006, the project with the original transition team (with Derk Loorbach and Martin van de Lindt as project leaders – see 3.2) was finished with an evaluation of the project. In general, participants seemed fairly satisfied with the transition agenda they had compiled at that moment. There were more doubts as to what the effect would be on government and on the housing and building sector. The process itself was evaluated rather negatively, with doubts relating to the question in how far the tested transition management model was suited for the Flemish context. Several of the points mentioned in the evaluation will return in the discussion under part 4.

On 17 November 2007, the transition agenda was officially handed over to the Minister-President of the Flemish Government, Kris Peeters. In the mean time, it had been decided to continue the DuWoBo process and network under a somewhat different form, called *Arena+*, which is in fact a further enlargement of the transition arena. The process is now steered by a coordination group of 14 people that represent the main actor groups present in the transition arena. The Arena+ is meant to be a knowledge

[14] The main text mentions 8 transition paths of which 6 have been further developed; in annex 5, 7 paths are mentioned. Other figures mentioned are 20 strategy lines of which 17 have been further developed, 35 ideas for projects and more than 80 germs (LNE 2007, 19)

platform on sustainable housing and building aimed at supporting the transition process in Flanders. The enlarged transition arena will meet twice a year, while the working groups further develop projects. As a knowledge platform, the Arena+ has several objectives: be an assembly and distribution point of knowledge on sustainable housing and building in Flanders, be a contact point for the government on sustainable housing and building, be a think tank to further develop and communicate the vision, be a meeting and networking point for different actors in the sector, be a platform to formulate and start new projects, to closely follow-up innovating projects and to look for funding opportunities. During 2007 and 2008, the process is further financed under the TWOL program, which makes it possible to have a small secretariat located in Cedubo, the organisation of To Simons, the president of the transition arena, to support the process.

One of the first products of the Arena+ was a concise list of 35 points of interest, structured along the seven principles of the DuWoBo vision, that was distributed to all Flemish cities and towns with the objective of influencing their housing and building policy. Other projects that are currently being developed include an advisory network for municipalities on integrating sustainable building principles in spatial planning, the development of an impulse programme for passive houses, a research project on the integration of sustainable housing and building principles in formal and non-formal education, a project on sustainable use of plastics in the building sector, and the start of "eco-building pools" in which professionals with experience in bio-ecological building give training to professionals interested in learning these bio-ecological principles and techniques. Furthermore, several of the working groups are involved in the organisation of seminars to present and discuss their ideas and apply them in specific contexts. Meanwhile, the secretariat and officials from the environmental administration have started looking for new funding opportunities to continue the support of the DuWoBo process from 2009 onwards.

3.1.2. The Plan C process

Plan C started early 2006 when the transition team began the first discussions on how to delineate the system. A series of interviews followed to inform the analysis and to select possible transition arena members. The system analysis could partly benefit from the work that had been done almost two years earlier by Loorbach et al. (2004) and which then led to the decision to start a transition process (see also above under 2.1. and 2.2). In contrast with DuWoBo, the system analysis was only preliminary and was thoroughly discussed during the first two meetings of the transition arena. Problems identified included the environmental consequences of current production and consumption patterns, growing scarcity of resources and materials, social effects of these patterns, unequal North-South distribution, and the current culture of spending. These trends undermine welfare worldwide and necessitate the search for radical changes in the system of material use and management.

The transition arena met 5 times between June 2006 and January 2007, trying to formulate a future vision of sustainable material use (the term *leitbild* is used), selecting key themes on which to focus in Flanders, defining solutions and identifying levers for change. The *leitbild* which was formulated sketches

an image of a Flemish society that deals responsibly and carefully with resources, materials and energy, and where resources and materials are regarded as common property. Materials are managed and controlled over the whole of the life cycle in cooperating networks or clusters of producers, processing companies and consumers. A cyclical economy has been installed, services have taken the place of property, emissions have been minimised. Flanders is a trend setter in material management, with a high level of knowledge about wise material use and the development of new materials and services. These developments also offer new opportunities for the Flemish economy as the cradle of sustainable material management. This *leitbild* is made more concrete in the definition of five key themes for change. The transition arena defined these rather roughly. It is the task of the working groups that were formed in April/May 2007, to develop them further, to translate them into transition paths and then start formulating projects/experiments. The five themes around which working groups are formed, are:

- *Smart Closing of Cycles*: materials are managed as common property. Closing of circles becomes possible thanks to intelligent infrastructures which facilitate material flows.
- *Tailor-made Materials*: access to materials is guaranteed, but this is only possible when materials and products are drastically renewed (made from renewables, multifunctional and flexible in usage, easy to disassemble and to reuse or recycle, intelligent materials).
- *At Your Service*: people do not measure quality of life on the basis of property, but on the basis of access to services. A service economy develops with completely new type of companies. New functions and services are integrated in products.
- *Alert Public*: consumers take on responsibility for their consumption choices and take conscious and informed decisions. They evolve from unconcerned choosing towards conscious caring.
- *Green Synthetics*: an important Flemish industrial sector which makes use of new opportunities to become market leader in sustainable synthetics.

This second phase of the process is still ongoing. During two meetings in autumn 2007, the working groups presented their first work on transition images and transition paths to each other. Another collective meeting of all working groups was held in May 2008. This last meeting concentrated on the views of arena members on the status of Plan C as a network, as well as on the substantive results in the working groups. In terms of substantive results, all working groups succeeded in defining transition paths and transition experiments, both counting 33 in total. The working groups will from now on concentrate on starting up experiments. In terms of the network, most members share high ambitions for Plan C. Within 5 years, by 2013, the network should have become *the* reference in Flanders for sustainable material management, with a portfolio of 20 talked-about transition experiments, of which at least half have been initiated by private actors. By then, Plan C should succeed in creating societal awareness for a materials transition, realise some institutional changes and have become an esteemed partner in European and international networks (Van Lieshout 2008).

Currently, the timing is to publicly present a full transition agenda for Plan C – vision, transition images, paths and proposals for projects/experiments – in Autumn 2008. This will be the first moment since the start of the process in early 2006 that a larger public will be introduced to the results. From that moment on, it is hoped that activities will focus strongly on execution of projects and experiments, and learning from them. The Task Force of the process (see 3.2) has already had a series of discussion on possible criteria for projects and experiments.

Meanwhile, the Minister of the Environment, Hilde Crevits, promised in October 2007 that the Flemish government would keep on investing in the process, amongst other things in a role as stimulator of change processes. She also pointed out that a larger budget would be necessary to keep the process going. Simultaneously, she called on other parties involved in the process to make explicit how they would translate the necessary changes in their own organisation. During the meeting in May 2008, the administrator-general of OVAM declared that Plan C is very important for her organisation in terms of broadening the scope of work and networking with innovative actors, but she also wished for deliverance of concrete results and successes after the phase of envisioning. Plan C will get further support until half 2009, but she called on other parties to contribute in order to transform plan C into an independent network of excellence.

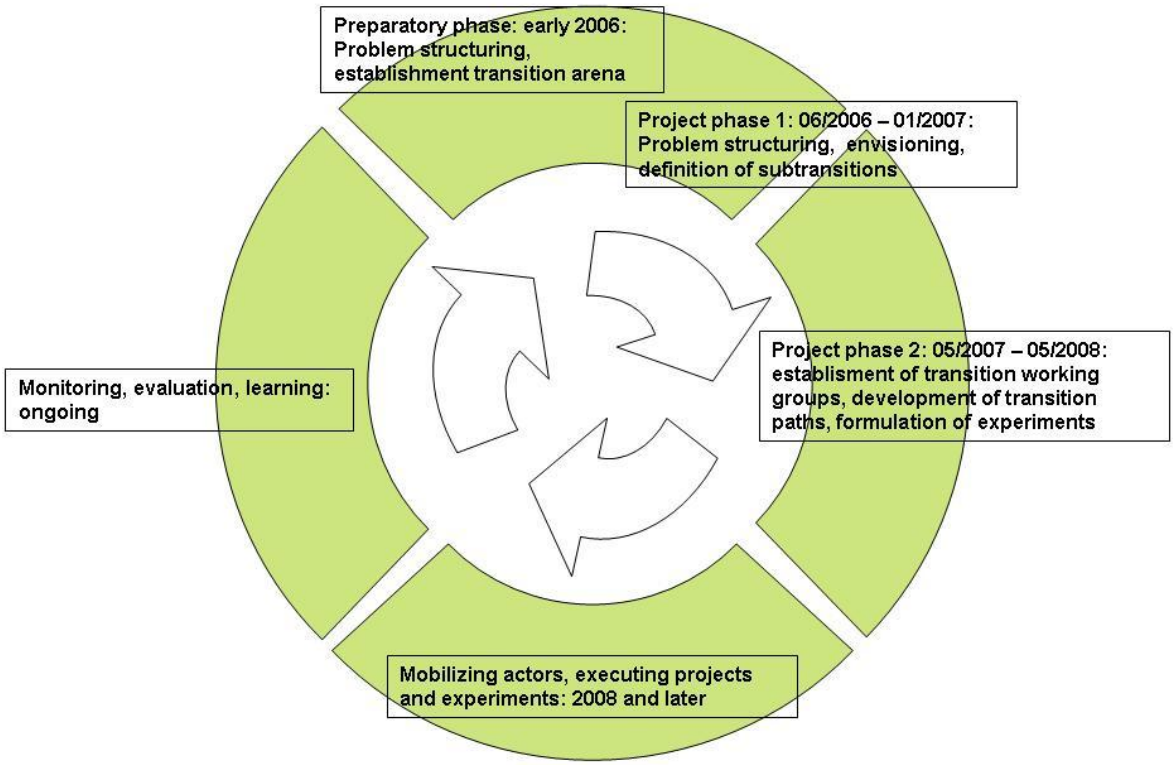

Figure 3. Different phases and timing in the Plan C project

3.2. Composition of the transition team, transition arena and transition working groups

As said above, the transition management approach as developed by Rotmans and others works with a series of typical "systemic instruments" . Some of these instruments have been described in 3.1.: the vision, transition images, paths and experiments. Other instruments are in fact settings in which people are brought together to discuss the problem at hand and develop future visions. First, there is the transition arena, the central institution in the process, usually made up of "frontrunners" and responsible for the development of a future vision. Second, there are the transition working groups (or arenas of arenas) that further detail the vision and develop transition paths and experiments. These are made up of participants in the arena and a wider group of relevant actors. And third, there is the transition team that manages the process and usually consists of the competent government officials and of (scientific) experts and facilitators. Both DuWoBO and Plan C make use of these instruments.

In the case of DuWoBo, the transition team was made up of, on the one hand, officials from several departments and, on the other hand, researchers and consultants. The team was managed by an official from the Flemish environmental department LNE, Ilse Dries. The leading researchers in the project were two Dutch researchers, Martin van de Lindt (TNO Delft) and Derk Loorbach (DRIFT Rotterdam), who had both worked at ICIS before and had been closely involved with the development of the transition management approach. The Flemish experts involved were researchers from the Centre for Sustainable Development (Ghent University)[15], specialised in sustainable development and sustainable building, and the consultant agency Pantopicon, specialised in facilitation in visionary and scenario methodologies (with consultants who had also worked at ICIS Maastricht).

The transition arena which was set up by the transition team attempted to bring together important actors in the field of housing and building, which at the same time had to be innovators or frontrunners in their organisations. The selection of participants was done during the first phase of the process when the team prepared an analysis of the current situation in housing and building (see also 3.1.1). People that were interviewed for this analysis, were simultaneously asked whom they thought would be suited candidates for the arena. In this way, the team composed an arena of 22 persons. The four transition working groups which were created later on in the process numbered 63 persons (of which 13 were arena members). Most of them were invited either through telephone contact or by email. Table 1 gives an overview of the composition of the team, arena and working groups in the DuWoBo project. For easy comparison, it uses the same categories of participants as in Smith and Kern (2007). It should be noted that several of these people were present at the meetings on an irregular basis, sometimes even only once or not at all.

In the current phase of the process (see 3.1.1), since the beginning of 2007 organised in the so called Arena+, the process has been opened up again to other interested actors, while previous members have dropped out. Partly due to thematic overlap, partly due to lack of participants, the working groups Housing for Life and Living Centres have been merged. On the other hand, due to the enormous amount

[15] The Centre for Sustainable Development (Centrum voor Duurzame Ontwikkeling, CDO-UGent) is also the institute of the present author.

of potential projects and experiments, the working groups Close the Circle, has been split up in Close the Circle/Materials and Close the Circle/Energy. These last developments are not included in the table.

TM systemic instrument	Government	Business	Civil organisations	Intermediaries	Science	Total
Trans. Team	4	0	0	2	3	9
Trans. Arena	4	2	8	6	2	22
WG Co-learning and innovation	1	5	1	2	7	16
WG Close the Circle	7	2	5	2	2	18
WG Housing for Life	2	0	1	3	2	8
WG Living Centres	3	5	4	5	4	21

Table 1. Composition of the transition instruments in the DuWoBo-process. "Civil organisations" include ngo's, unions, representatives from residents, architects etcetera. "Intermediaries" include representatives from provinces, municipalities, social housing corporations, advisory councils, consultants. "Science" includes universities and knowledge centres such as VITO and WTCB. Table based on LNE (2007) It should be noted that several of these people were present at the meetings on an irregular basis, sometimes even only once or not at all.

Table 2 gives the composition of the arena, working groups and team in the Plan C process. Since Plan C started more than a year after DuWoBo, it could build on some of the first experiences of DuWoBo (Walter Tempst, the managing official of OVAM for Plan C, was also member of the DuWoBo transition team). The transition team[16] for Plan C consists of several persons who were also involved with the DuWoBo project: this is the case for 2 of the 3 officials in the team and one of the consultant agencies, Pantopicon. Two Flemish consultant agencies are involved as process managers, Pantopicon and Resource Analysis, as well as two scientists from K.U.Leuven specialised in multi-actor processes. The president of the transition arena, Karel Van Acker, is also member of the team and is a scientist from K.U.Leuven specialised in material research.

For the selection of members of the transition arena, a more elaborated procedure was followed than in the DuWoBo process, using a series of interviews which served as a screening for potential candidates. In June 2006, a transition arena with 15 members started working. When in May 2007 the arena was opened up and enlarged with working groups, it was also decided to install a task force to help guide the whole process, in order to make it easier for the transition team to keep an overview of the process, and to watch over the coherence between the vision developed in the original transition arena and the work in

[16] In the Plan C process, the term 'transition secretariat' is used. In order not to create confusion, we stick here to terminology as proposed in Loorbach (2007) and discussed above under 1.3.

the working groups. This task force is essentially a merger of most members of the original arena with the presidents of the working groups.

TM systemic instrument	Government	Business	Civil organisations	Intermediaries	Science	Total
Phase 1						
Trans. Team	3	0	0	4	3	10
Trans. Arena	3	4	2	2	4	15
Phase 2 (since May 2007)						
Trans. Team	1	0	0	4	3	8
Task Force	3	4	0	2	5	14
WG Smart Closing	2	5	0	2	3	12
WG Tailor-made Materials	1	3	0	1	4	9
WG At Your Service	3	4	2	0	2	11
WG Alert Public	4	1	3	1	4	13
WG Green Synthetics	2	6	1	0	6	15

Table 2. Composition of the transition instruments in the Plan C project. "Civil organisations" are mainly ngo's. "Intermediaries" are mainly consultants. Table based on an overviews of the project organisation, available on Projectweb of Resource Analysis, 10 April 2008. It should be noted that several of these people, in particular in the working groups, are present at the meetings on an irregular basis, sometimes even only once or not at all.

4. Discussion: surfacing tensions in transition management in Flanders

It is of course too early for a full evaluation of both processes and their impacts. What is clear for now is that, in spite of the rather unprepared context within which both processes had to start, they have succeeded in reaching a series of results. The DuWoBo process succeeded in developing a full transition agenda, with a future vision for the housing and building sector, transition images, transition paths and projects and experiments. It remains to be seen whether some of these projects and experiments can be realised in the field and whether these will start influencing and slowly changing the housing and building regime in Flanders, but the members of the transition arena are investing in concretising and spreading their ideas. The Plan C process has reached the stage of defining transition images, paths and experiments. In autumn 2008 it will go public and present its full transition agenda. Besides concrete products, both processes are having other effects: stimulating long-term thinking about sustainable development, founding a broader knowledge base about system innovation and transitions, networking between organisations and individuals that previously hardly knew each other, introducing new kinds of

participatory processes in policy formulation. As will be discussed further down, there also seems to be a learning effect: Plan C could profit from some of the experiences in DuWoBo. These process related results may in the end prove to be as important as the concrete products, in particular when the interest in transition management continues to grow and new processes would be launched in Flanders.

However, the first experiences also show that transition thinking and transition policy, as well as the way it has been operationalised by Jan Rotmans and his team, create considerable tensions which may need answering before the approach can win more ground in Flanders, or for that matter, in other contexts outside the Netherlands. This part of the paper discusses some characteristic tensions that surfaced during the processes. The discussion builds on several sources, such as the official evaluation of the DuWoBo process (Van Raak 2006); an evaluation of DuWoBo from the perspective of CDO, one of the research groups in the DuWoBo transition team (Deraedt and Van Assche 2006); a chapter on DuWoBo in Derk Loorbach's PhD thesis (Loorbach 2007, 237-241); several presentations about DuWoBo and Plan C – and one about the halted transition process in agriculture – during the MOPAN conference in June 2007 in Louvain (Loorbach and van de Lindt 2007, Mathijs and Sturtewagen 2007, Craps et al 2007, Taillieu et al 2007, Paredis 2007). This material is combined with material gathered for the research projects "system innovation" and "transition management" of the Flemish Policy Research Centre for Sustainable Development. This consists amongst other things of document analysis, interviews, group discussions, formal and informal discussions with practitioners and scientists, and the experience of participating in the transition arena and some working groups of DuWoBo and Plan C.

This part does not attempt to list all questions that surface in discussions on both processes, but focuses on several characteristic tensions which were and/or still are present in DuWoBo and Plan C. Some of these tensions relate to the place and role of transition policy and its relation with regular policy (4.1.). Other tensions relate to the political and normative choices in finding common ground in the perception of sustainable development and the required system innovation (4.2.). Still others are connected to the capacities needed for developing transition processes and the management of a change process (4.3.) and to the selection of participants in the processes (4.4). This part ends with some more general remarks on these tensions in relation to the international applicability of transition management and developments in the Dutch energy transition (4.5.).

4.1. The status and potentials of a policy in the shadow

An often recurring theme in the literature on transition management is its status as a policy approach. Is it meant as a replacement of classic, "regular" policy, or is it an addition to regular policy? And in either of these options, how should it be institutionalised? The theory on transition management, such as formulated e.g. in Loorbach (2007), states that it is impossible to create the necessary dynamics for radical change within the existing structures or institutions. Transition management, and in particular an instrument such as the transition arena, must open up a space for formulating and initiating innovations outside the regime. The transition arena can be defined "as a policy-niche to the existing policy-regime"

(ibid., 134), that "offers a way to develop a parallel 'shadow track' besides the regular policy arena" (322). The activities developed in the transition arena are meant to influence regular policy. "This is called *transitionizing*: influencing regular policies with transition thinking through the use of the transition arena. The transition arena is in this view used as an (systemic) instrument to develop and empower coalitions and networks to diffuse a new vision and agenda" (322).

In Flanders, both processes fit within this line of thinking. Both are set up as experiments in innovative environmental policy, with as one of the objectives testing whether transition management works for Flanders. They define themselves explicitly as "processes in the shadow of regular policy". In a video message for the Plan C transition arena and working groups, May 2007, the Minister of the Environment tells the participants that they "are part of a unique process. You are offered a refuge to search, experiment and learn (…) We urgently need a radical alternative (…) We are convinced that we have to think further, dare to do more and that's why we go for a Plan C"[17].

While this nicely fits the theory, the crucial question in theory as well as in practice is: how exactly does this "transitionizing" happen? What is needed for the transition arena to have influence on regular policy? Loorbach states that it all depends on a balance between the two, in which "transition management inspires, influences and stimulates regular policy without becoming part of it" (Loorbach 2007, 282). One way to answer the question is to investigate which institutional links are necessary to make the translation from ideas developed in the shadow to regular policy.

From this perspective it is interesting to see the world of difference between the way transition management is institutionalised in the Netherlands and in Flanders. Alongside its regular policy, the Dutch government added the approach of transition management to its Fourth National Environmental Plan (NMP4). "That means that transition policy is authorized by the Dutch Parliament and that the transition process is accountable to the Dutch Parliament" (Rotmans et al. 2007, 11). Transition management has become an autonomous policy line in institutions dealing with energy policy, agricultural policy, mobility policy and policy on biodiversity and natural resources; it is supported by important financial resources, also in research. A crucial development is the fact that transition thinking and policy have not remained within the realm of environmental policy. The most famous and best described case of adoption of transition management is the involvement of the Ministry of Economic Affairs in the energy transition, a move which has proved crucial for the dynamics in this realm.

This double way of institutional linking – between shadow and regular policy, and between different policy fields – is still largely absent in Flanders. In the case of DuWoBo, the involved officials and some arena members are searching for opportunities to insert parts of the DuWoBo transition agenda in other

[17] The original text in Dutch reads: "Beste teamgenoten, hoef ik nog te zeggen dat Plan C een belangrijk proces is, welke fantastische opportuniteiten dit biedt voor Vlaanderen. Jullie nemen deel aan een uniek proces. Jullie krijgen een vrijplaats om te zoeken, te experimenteren en te leren. Alternatieve, innovatieve oplossingen die bijdragen aan het duurzaam beheren van materialen in Vlaanderen staat hierbij centraal. Vanzelfsprekend gebeurt al het een en het ander rond duurzaam materiaalbeheer en doen velen onder ons al inspanningen. Maar het lijkt er ook op dat al die inspanningen afzonderlijk er voorlopig niet in slagen de noodzakelijke grote sprong voorwaarts te maken. We hebben dringend nood aan een ingrijpend alternatief. Een Plan B lijkt de voor de hand liggende benaming van deze nieuwe stap in het proces. Maar we zijn ambitieuzer. We zijn ervan overtuigd dat we verder moeten denken, meer moeten durven doen en daarom gaan we voor een Plan C."

domains, programmes or projects. As a result of these efforts, there has been an agreement to link the process to the emerging Flemish Strategy on Sustainable Development, and there is some coordination with initiatives in Flemish city policy. However, for the moment the initiative for and follow-up of DuWoBo lies almost entirely with the environmental administration. Other administrations with more influence on the topic are hardly involved (such as spatial planning, housing and building)

In the set-up of Plan C more attention seems to have been paid to this link between transition experiment and regular policy, at least within the initiating agency OVAM. OVAM has its own strategic organisational goals on "materials policy" of which Plan C is part. This program is followed up closely by the Board of Directors, to which the OVAM official who manages Plan C reports. In 2006, OVAM also installed an internal forum materials policy, whose objectives are social learning and translation of results of the transition process and the link with regular policy activities. There is an institutional logic behind this careful embedding, i.e. the fact that within the BBB reform of the Flemish administration (see 2.1.), OVAM was made responsible for "sustainable management of material flows". If OVAM succeeds in making Plan C a success and translating its results into regular policy, it not only fulfils an important part of the task it was charged with in BBB, but also strategically positions itself as "market leader" in this domain. This sole responsibility for the material management, contrasts with the position of the environmental administration, which is only one of the players in the field of (sustainable) housing and building. However, as in the case of DuWoBo, there are hardly any links with other policy fields that might be of relevance for the materials transition envisioned. This may endanger the further development of Plan C, once it gets in the stage of realising experiments.

4.2. Internalisation of system innovation and the fight over perspectives

It is impossible to get a transition process started without a minimum of common ground between the participants in the process. For one thing, they have to be able to think in terms of "systems" and "system innovation" and they need a shared understanding of what transitions are and how these can be influenced. They need a minimum of consensus on what the meaning of sustainable development is and which long-term objectives should be reached. Loorbach defines as one of the main goals of a transition arena "the development of an inspiring and attractive sustainability vision, which comprises the desired sustainable future state of the system" (Loorbach 2007, 142). Shove and Walker (2007) warn however that underneath a commonly constructed vision on sustainable development, fundamental conflicts, opposing interests and ideologies can be hidden. "Advocates of sustainable transition management do not always appreciate the deep ambivalence of sustainability as a category and its power as a legitimising discourse" (ibid., 766). The danger is that the transition vision presents an ordered and consensual world, obscuring the conflicts, political choices and power games underneath it.

In DuWoBo this proved to be an area of considerable tensions. As has been said above, Flanders is not familiar with the discourse of system innovation and transition management, so that everything had to be introduced by the Dutch project leaders, which meant a heavy information load for Flemish

participants. They often complained about an overload of concepts and terminology (Van Raak 2006), which sometimes led to arena and working group members who did not know what was expected from them. More importantly, several arena members testify that they did not really see the implications of working with these concepts, but that they were willing to go along in order not to obstruct the process. Moreover, there was a clear tendency with the Flemish participants not to stick too long to general discussions of visions, shared or not, but to quickly move on to concrete proposals for projects and experiments. This was sometimes formulated as a cultural difference between the talking Dutch and the acting Flemish (ibid.).

Within the transition team of DuWoBo, clear differences in opinion existed about the meaning of sustainable development and underlying concepts. There was e.g. a conflict over sustainable development between the scientists in the team, with on one side the Dutch project leaders and on the other side researchers form CDO, who could not find themselves in the SCENE model[18] used by Drift and TNO, and who also thought that discussions underestimated the value-loading of certain choices. As a consequence, after phase 1, the CDO researchers consciously withdrew from any further substantive discussions and followed the process more passively. However, according to CDO, this may also "be an advantage, because now the methodology has been applied to Flanders, without any interference from other partners" (Deraedt and Van Assche 2006). Of course, this serves the process, but does not solve the differences in opinion.

In Plan C, these kind of conflicts due to differences in opinion have not appeared until now. There have however been remarks from participants who entered in phase 2 of the process (after the opening up of the original transition arena) that it is difficult just to go along with the vision developed in the first phase, because they do not really feel themselves "owner" of this vision. There has never been a thorough discussion of the vision with the new entrants in the process. Based on a series of in-depth interviews and a group evaluation, Craps et al (2007) come with another important observation. They observe that after phase 1, the original arena participants were satisfied with the quality of the process and results and that, despite their diversity, they were able to formulate a long term vision on sustainable material management. The researchers then continue: "Transition management methodology however cannot 'resolve' the dilemmas which are an inherent part of multiparty collaboration. The participants in the transition arena were carefully screened and selected to guarantee enough diversity of perspectives, yet at the same time enough sharing of certain values (sustainable material usage) and collaborative qualities. Fundamentally different views on sustainable material usage appeared among the participants in the transition arena. While some participants believed in the current economic growth model to create technological and economical opportunities, adding more eco-efficiency to it, other participants only believed in radical ideological, cultural changes, limiting economic growth and changing consumption patterns to generate sustainable solutions. Despite these profound differences the arena managed to have a constructive dialogue, to listen carefully and learn from each other, and to integrate both views into one vision to

[18] This is the three-capital model with stocks and flows, represented in the form of a triangle, developed by ICIS (see e.g. Rotmans et al. 1998)

which nobody really opposed. However it was also a view with which nobody really identified strongly" (Craps et al 2007).

The question is whether this is a problem or not. How deep should the consensus be in order to launch a transition process with a chance of success? In a failed attempt at transition management in Flemish agriculture (see Frame 1 for more details), opposing views seem to have been responsible for a stalemate, causing the process to halt before it even really started. There was an agreement on a general future vision for the sector, but "differences in culture or mental models (…) pointing to deep rooted beliefs on change in the agricultural sector (and in general)" blocked all further fruitful interaction (Mathijs and Sturtewagen 2007, 11). The authors suggest that a transition management process may be too shallow for bridging these kind of differences in opinion and that other approaches may be needed.

Frame 1. An attempt at transition management in Flemish agriculture.

After two scenario projects in the Flemish agricultural sector that generated a lot of interest and discussion but no concrete action or policy change, several scientists and NGO members tried to initiate a transition management process for Flemish agriculture. The results of the earlier scenario projects were used as background.

Between September 2006 and April 2007, five workshops were organised with around 20 stakeholders from the agricultural and food sector. The aim was to open up a space for the start of a transition process. After the fifth workshop, the process was stopped because no agreement could be found on the contents and the procedures for a transition process. There seem to be several reasons for this stalemate. Although there was agreement on a future vision for the sector, there was disagreement on the necessity of taking action: some actors saw no immediate need for action because in their view important parts of the vision were already being realised. Participants did not succeed in defining the themes on which a transition exercise should focus. Furthermore, no agreement could be reached as to whether the transition demanded radical change or rather gradual innovation. Finally, the transition methodology itself was rejected by several participants as "too communist" and too top-down.

The initiators deem the big differences between participants in world views and beliefs (on agriculture as well as on change) one of the main causes for the failure of the process. They suggest that a transition management process may be too shallow for bridging these kind of differences in opinion and that other approaches may be needed.

This process was so far the only transition management process in Flanders that was not initiated or financed by government. It received financial support from the bank CERA.

Based on Matthijs, E., Sturtewagen, G. (2007) "Convening, composing and guiding a transition arena: a constructive-developmental approach", paper presented at the 14th International Conference in Multi-Organisational Partnerships, Alliances and Networks, 28-29 June, Leuven.

Rotmans and Loorbach (2006) believe that it is perfectly possible to select contradicting images, and that such a basket of images then reflects the fact that sustainability is a contested notion. In practice, however, neither in DuWoBo nor in Plan C are contradicting images visible. The process dynamics are such that participants are inclined towards searching for a common, shared vision. In their assessment of the Dutch energy transition, Kemp et al. (2007) frame the problem differently by drawing a distinction between collectively shared long-term ambitions and a shared agenda on the one hand. This can be a fairly general picture of a desired end-state, such as has been formulated in the Dutch energy transition. On the other

hand, they state that a shared long-tem vision can go hand-in-hand with short term diversity, experiments and also dissent over short-term choices (ibid., 328). According to them, this is a way to overcome the fight over the different perspective on sustainability.

4.3. The difficulty of managing change processes

Participants in transition management not only need a to find common ground in substantive issues, they also have to believe in the effectiveness of transition management to reach the desired goals. More in particular in the case of DuWoBo and Plan C, there has to be some trusts in the methodological operationalisation of transition management such as developed by Rotmans and his team, with its typical systemic instruments (team, arena, working groups, system analysis, visions and images, development of paths, projects and experiments). In the above mentioned agriculture process, this proved to be a serious problem for participants, as the methodology was "fiercely rejected by many as 'too communist' or too top-down" (Mathijs and Sturtewagen 2007, 11).

This questioning of the methodological operationalisation has also at several times played a role in the DuWoBo process, certainly in the transition team, but also in the arena. Flemish members wanted to discuss the process which was proposed by the Dutch project leaders, and were often not willing to just go along, so that consequently "the organization and facilitation of the transition arena process therewith became a very time and energy consuming task" (Loorbach 2007). It seems that in this area of managing the process of change through the transition arena and working groups, the most outspoken differences were felt between Dutch project leaders and Flemish participants. For one thing, there has been an underrating of the complete newness of the approach, with its specific instruments and terminology, and the lack of familiarity of Flemish participants with these instruments and terminology. A lot of explanation and justification of each process step was necessary in order to convince participants of the sense of the next steps. This necessitated a stricter structuring if the process than is the case in the Netherlands. "Because the participants (unlike the Dutch) were not very used to long-term envisioning exercises and unstructured creative sessions, the process needed to be structured much more than in the Netherlands because the people involved required more certainties and control over the process" (ibid., 296). This can be referred back to the discussion above (2.3. and 2.4.) of some more general characteristics of policy-making in Flanders mentioned above, such as lack of familiarity with long term strategic thinking and with participatory strategic processes with frontrunners.

The problem of justifying the process has played a lesser role in Plan C. Several factors have played a role here: certainly the fact that Flemish consultants are involved who are familiar with sensitivities, but nevertheless knowledgeable on the process; a less theoretical approach to introducing transition concepts; a process with more time and space to get acquainted with the approach; and also a more careful selection of arena members who knew better what was expected of them (see also under 4.4.)

What also surprised the Dutch project leaders during the DuWoBo process was the greater importance of political cabinets in giving backing to the different steps taken. Belgium has a strong cabinet

culture, with less institutional space for the administration, which necessitates early and regular feedback with political cabinets. This is one of the explanations why participants voiced some doubts on the appropriateness for Flanders of a rather voluntarist change process such as transition management, in which societal actors and business are expected to take on a leading role alongside the government. There is an unspoken expectation that these kind of initiatives have to be steered by government.

Besides, there is the more down-to-earth realisation that the Flemish government does not have a tradition of spending a lot of money in these kind of processes. As already said above, DuWoBo and Plan C are meant as processes, but are both developed under the form of projects, which means among other things that they have a predefined duration and a limited budget. An important question here is which conditions a process needs to give it a fair chance of success. A whole lot of rather operational questions then surface. What should the budget be and how much time can be spend? Who should be financed? Except for the transition team, no participants have been paid. Both processes rely on the voluntary commitments and sympathy of the participants. Even within the organisation they represent, they are often not given some free space and time to participate and prepare the meetings, so that participation is in fact an add-on to their normal tasks.

Based on their experience in the agricultural process, Mathijs and Sturtewagen (2007) offer an inspiring suggestion: "Projects like this need not to be confined by deadlines. We would like to introduce the idea of a lifeline: the project is not confined in time but by a result (e.g., realise a transition in a certain domain). Financing the project means giving energy to the lifeline towards a new equilibrium" (Mathijs en Sturtewagen 2007). This is undoubtedly rather idealistic, but the case of the DuWoBo process shows that limited budgets and deadlines can hamper the discussion. Loorbach (2007), Deraedt and Van Assche (2006) and van Raak (2006) all mention lack of time and/or budget as factors in the process: these forced a too early shift from the strategic to the tactical phase, hampered the discussion about and elaboration of transition paths and experiments, and in general hampered identification with process and products. Loorbach (2007) and Deraedt and Van Assche (2006) agree as to an important consequence: the results of DuWoBo should and could have been more inspiring and innovative, too much well-known agenda items of participating organisations have been incorporated again, and the process "did not produce significant spin-off in terms of institutional innovation, communication of the transition arena process or institutionalization if the transition arena itself" (Loorbach 2007). In Plan C, which again could profit from the experiences of DuWoBo, more care has been taken to give time and space to the transition arena. The process could also use some internal OVAM funding. However, DuWoBo as well as Plan C are currently looking for fresh funding possibilities to continue the work. It is thus obvious that both processes are still far from being considered as a normal new task of government.

In this kind of situation, care should be taken on how to involve and motivate participants. Currently, the promise of radical innovation, the promise of being among the frontrunners, is the language with which people are motivated to participate in the processes. For example, the mission statement of Plan C is: "Together we will make Flanders the frontrunner and reference point in sustainable material management". However, these processes will not be able to cause a transition in themselves, although they

may be able to start or accelerate certain developments, but even then only when they can take the process to the stage of experiments and projects, and to a stage where long-term visions start influencing the regular policy agenda. When the processes are supported and financed at a sub-critical scale, it will become difficult to yield results.

4.4. Composition of the transition arenas and team, or who should be taken on board

As has been said earlier, the transition arena is central in the whole transition management model. The arena is the place where the new vision on the problem has to be developed, where new coalitions are forged and where experiments to break the status quo are initiated. Consequently, the selection of arena members is crucially important for the whole process. The transition team is expected to make the selection, based on a range of selection criteria. In the theoretical development of the transition management model, these selection criteria are quite demanding. In a first phase, a select group of 10-15 people should be selected, who "need to reflect the complexity of the transition at hand" (Loorbach 2007, 140). This means (ibid. 140-141): (1) that the most important societal perspectives should be present, such as those of government, business, knowledge institutes, NGOs and intermediaries; (2) niche-actors should be represented as well as innovative regime-actors; (3) it should be a mix of creative actors, communicative actors and networkers; (4) their personal competences should include the ability to think at a high level of abstraction and beyond the limits of their own background, they need to function quite autonomously within their organisation, have the ability to convey the developed vision, and be willing to invest a substantial amount of time and energy. Of course, underneath the process of selection run broader questions of legitimacy, participation and representation. Hendriks (2007, 2-3) e.g. asks questions such as "who decides which societal transitions are desirable, how are these decisions accountable to those affected, and what ensures that the procedures and policies to pursue transitions are legitimate?"

In the Flemish processes, the composition of the DuWoBo arena seems to have been more problematic than in Plan C. Dutch project leaders expected frontrunners to be selected by the Flemish team members, but due to a lack of knowledge of the social networks in Flanders, they had difficulties in judging whether this was the case. The Flemish team members from their side did not only want frontrunners, but opted for a more diverse group that spanned the whole sector. This resulted in a rather large group (22 persons) with quite a lot of people representing part of a sector, and thus not always in a position to think freely and creatively. Plan C could profit from some of these experiences and consequently the transition team was much more selective in inviting arena members (also compare table 1 and 2). The arena members' profile better fitted the theoretical profile. Besides, they were also better informed as to what was expected from them and had a lot more time to discuss and develop their ideas. A conscious choice for face-to-face communication instead of communication via mail or phone may have been of influence here.

A second crucial moment from the perspective of actor selection, is the broadening of the original arena with the working groups, who are expected to develop transition images, paths and experiments.

Again, there is the difficult task of finding suited people, but this task is further complicated by the fact that these people have to be introduced to and that they have to identify with the work done. A comparison of table 1 and 2 shows some differences between DuWoBo and Plan C, with in DuWoBo a stronger representation of participants from government, civil organisations and intermediaries, and in Plan C a stronger representation of business and science, and clearly less NGO people and intermediaries. Furthermore, there seems to be a striking difference between the composition in Flanders and in the Netherlands. A comparison of table 1 and 2 above with table 2 in Smith and Kern (2007) on the participation in the Dutch energy transition platforms, shows that the Dutch platforms are dominated by scientists and, overwhelmingly, by business people. In DuWoBo and Plan C, the composition is more mixed. This difference in composition without doubt influences the outcome of the processes.

The broadening of the arena with working groups seems to be a rather volatile experience. In DuWoBo, working groups were characterised by people joining in and dropping out again. In Plan C, there is also a drop out and sometimes irregular presence. In both cases, a small core of a few people advances the process, with others following it from some distance. In the official DuWoBo evaluation (Van Raak 2006) it is remarked that drop out of participants is interpreted differently by the Dutch project leaders and several Flemish participants. Drift/TNO interpreted this as normal and a form of selection, while Flemish participants were worried about the legitimacy of the process and their relationship with people who had dropped out.

Loorbach (2007) also discusses the problem of composition of the transition team in the DuWoBo-process. There have been considerable tensions and conflicts within the team, in particular between the Dutch project leaders and some Flemish members. There is (of course) divergence of opinion on the causes of these conflicts. Loorbach (ibid.) stresses the profile of several Flemish team members who, according to him, were no innovators "but instead adhered to a regular policy approach". Still according to Loorbach, in particular Flemish officials were not able to deal with the uncertainties and loss of control that are inherent to transition processes, so that they became nervous and tried to increase their grip on the process. Flemish team members put more stress on the mix of roles with the Dutch project leaders: they managed the process, but were also the ones knowledgeable in the substantive aspects of system innovation and transitions, and were also strong advocates of transition management as developed by themselves. This combination did not always work well and the Dutch project leaders sometimes had a hard time in finding their way amongst the Flemish questioning of their approach. The least that can be said is that cooperation between team members was not optimal for steering the process and that eventually some team members hardly showed up. This experience in DuWoBo could be used as a learning experience in the second process, Plan C, in which there has been a clearer definition of the roles of the different team members and consequently a stricter separation in tasks. Team members are in particular concerned with guiding and managing the process, and interfere less in substantive debates on the direction the transition should take.

4.5. Some reflections on the surfacing tensions and the international applicability of transition management

This paper started with the observation that transition theory and policy originated in the Netherlands, that it gets increasing attention from researchers and policy community in other, mainly European countries, but that is has until now hardly been applied elsewhere. The two Flemish projects, DuWoBo and Plan C, are amongst the first to be developed outside the Netherlands. In fact, they are the first that have applied the transition management model such as it has been developed theoretically and empirically within ICIS-MERIT-DRIFT (see 1.2. and 1.3.). Both experiences can thus bring further insights to the debate on transition management in general and to the debate on the international applicability of the approach. The tensions observed above are used here to offer some reflections on these issues.

More in particular, the question arises how these tensions can be characterised. Are they a consequence of the application of the transition management model outside the Netherlands, and thus caused by the fact that the model is not suited for the Flemish context or in other words, that some features of the model are typical Dutch? And if this is the case, can these tensions be remedied? Or are they a consequence of inherent characteristics of the transition management model itself, and should an answer be sought in the further theoretical and practical elaboration of the model? To inform these questions, it is instructive to look at some reflections and evaluations of how transition management is being applied in the Netherlands itself. The best studied transition process in the Netherlands is without doubt the energy transition, commented upon by scholars inside as well outside the Netherlands (e.g. Loorbach 2007, Kemp et al. 2007, Smith and Kern 2007, Hendriks 2007). The energy transition is marked by considerable tensions, and puts into question some of the theoretical work on system innovation and transition policy.

According to Kemp et al. (2007), the main difference with the theoretical model is the fact that the energy transition process is dominated by business people and energy specialists, "regime players" in the phrasing of transition discourse, and that innovative niche players are to a large extent left out. The Task Force which is currently steering the process, involves the biggest energy producers and users in the Netherlands, headed by Rein Willems, CEO of Shell Netherlands. This has enabled the Task Force to set the energy transition high on the political agenda, but on the other hand all these regime players are "trying to defend their own interests, while the very idea behind transition process is to create enough space for frontrunners, pioneer (first movers)" (ibid., 326). Hendriks (2007) notes two kind of ironies in this situation. One is that in this way the transition approach marginalises the small-to-medium businesses who are often the innovators, and transition management thus gets "disconnected from the very entrepeneurs it seeks to empower" (p. 14). The second irony is that the current procedures and structures in the energy transition are "reminiscent of neo-corporatist (or Dutch polder model) policy making. Ironically, it seems that in practice transition management replicates the very kind of structures that transition scholars seek to avoid" (ibid.) (see also footnote 5).

Although the Flemish processes have not (yet?) gained such a high profile that they are invaded by CEO's, the tensions that are discussed under 4.4. above refer to the same kind of problem, i.e. how to select the participants in these processes, and who has the power to make this selection. Transition management theory is vulnerable on this issue, and it has been remarked by several scholars that it underestimates questions of power in dealing with far-reaching re-structuring of economies and societal systems. Smtih and Kern (2007) remark e.g. that the transition discourse lacks "an account of how such initiatives become a power base for change", since they do no identify "the social agents that can ensure the radical components of a discourse are carried through to institutionalisation" (p. 18). Loorbach (2007) recognises that transition management theory has until now paid little attention to issues of power, institutions and leadership, and that these questions should become topics of further research. Returning to the questions with which this paragraph started, i.e. the international applicability of transition management, this tension is clearly inherent to the approach itself and its appearance in the Flemish processes need not be explained by the "Dutchness" of the approach. But within the Flemish context, it may be possible to look for solutions fitted to that context. In any case, the Flemish transition arenas at this moment have a rather mixed composition, as has been shown above, and have so far succeeded in avoiding dominance by one particular group of actors.

A second kind of tension emerges on the substantive side of the Dutch energy transition, i.e. what is the definition of a sustainable energy system and which paths should be followed to realise it. Kern and Smith make a direct link between the composition of the guiding institutions in the Dutch energy transition and the proposals it makes: "Any connotations of broad-based civic dialogue around re-ordered socio-economic priorities are being lost to more narrow pursuits of technology-fixes" (p. 16). They find that structural components diminish in the storyline in favour of technocratic, 'how to' exercises. Kemp et al. (2007) draw the same kind of conclusion when they state that "demand-side issues and wider issues of societal embedding have been neglected. The transition experiments are very technological by nature; they are hardly aimed at institutional or cultural change" (p. 326). Furthermore, neither participatory scenario or vision development, nor sustainability assessment of the proposals played an important role.

These remarks somewhat echo the problems mentioned in 4.2. on the fight over perspectives of what constitutes sustainable development in a transition vision or path. So far, the Flemish processes seem to have been able to keep a perspective broader than technological fixes, in particular in Plan C with the "Alert Public" and "At Your Service" transition images and working groups. In DuWoBo, doubts have been raised over the involvement of residents, but possibilities still exist here in the transition images and working group of Housing for Life and Living Centres. Like the actors problem, the problem of the sustainability perspective seems to be inherent to the approach and cannot be regarded as a problem of transfer to another country.

The mentioned tensions of actor participation and sustainability choices can hardly be considered minor problems for transition management. In fact, they are central to the whole debate: can transition management deliver results that directs a system into a more sustainable direction, or will it be taken over by regime actors once it gets a high policy profile and will it subsequently be diverted to technocratic, non-

structural solutions? A comprehensive study of experiences in all Dutch transition processes – and not just the energy transition – could shed more light on these questions. The experiences that have been studied so far, explain why some authors are sceptical about the radical transformation potential of transition management. Shove and Walker (2007) e.g. suggest to broaden the scope of analysis and to start studying other social scientific, systemic theories of change. Lovio et al. (2007) remark that the issued raised in the Dutch energy transition may indicate "that the model is at least partly too optimistic and that thus the same problems will emerge when the model is tried to transfer to other countries" (p. 5). The analysis so far partly confirms this statement, although for the moment, perhaps due to the experimental and low-profile nature of the Flemish exercises, both tensions seem to be better under control in Flanders. This also implies that as far as both tensions are concerned, there is, as of yet, no a priori reason to doubt the international transferability of the transition management model. This would only be the case if the tensions mentioned were absent in the Netherlands and present in Flanders. Since they are present in the "heartland" of transition management as well, they can be considered inherent to the model. Solving them, or at least mitigating them, will demand further theoretical reflection and practical experience.

What about the other two tensions mentioned above, i.e. the link between regular policy and transition policy, and the management of these kind of change processes? The answer is rather mixed here. Again, the tensions are at least partly due to inherent characteristics of transition management. Loorbach (2007) mentions both under his "key issues" for further research. Although the general theoretical idea in transition management is that the interaction of the transition arena with its environment can "transitionize" regular policies and institutions, Loorbach admits that this is "a hitherto barely explored topic of research" (ibid., 292). While further theoretical development and practical experience are necessary, it is clear that a better suited context for transition management may have to be created at the Flemish level as well in order to give transition management more chances. Creation of a knowledge base in system innovation and transition policy, development of strategic intelligence at different policy levels, horizontal coordination and integration of policies at different levels are all topics which should be further worked out at Flemish level. Lovio et al. (2007) mention similar problems for transferring transition management to Finland: the need for a larger domestic expert community with experience in the debate, and the huge distance between the capacities required for managing transitions and the prevailing reality of capacities at government level. They also mention the support of actors with strong influence over technology and innovation policies to bridge the gap between transition thinking and regular policy.

The same mixed analysis holds true for the tensions in management of change processes. While there has to be further research into this topic in general, some of the problems will have to be addressed at Flemish level. One of the most concrete problems to be solved, is the way these processes will be financed. This will be one of the determining factors in their further development. It is interesting to note that Plan C, in particular through discussions in the Task Force, explicitly addresses the question of its role as a network, the role and competences of different partners in the network, problems of financing etcetera.

In conclusion, it seems that also for these last two tensions there are no major indications from the Flemish experiences that the transition management model is not international applicable. Of course, it may well be that the Flemish policy context and the roles played by different societal actors, is all in all rather close to the Dutch, so that making transition management context-specific does not require an immense set of adjustments. There are undoubtedly industrialised countries with policy contexts and actor roles that diverge much more than the divergence between the Netherlands and Flanders/Belgium. Meadowcroft's characterisation of the Dutch political culture resembles the Flemish/Belgian: encouraging consultation and collaboration, acknowledging a strong role for government in achieving social objectives, a relatively open political system and culture in a small state (Meadowcroft 2007) [19].

Still, it may be safe to stay with Lovio et al. (2007) in their conclusion that it is still too early "to draw conclusions on the effectiveness of transition management as an approach to multilevel governance" (p. 24). Indeed, while both Flemish processes succeeded in formulating a full transition agenda – the transition agenda of Plan C will be presented in autumn 2008 – they are only taking the first steps in actually realising project and experiments. Furthermore, their influence on regular policy still has to be proven. So, conclusions about the effectiveness of transition management in the Flemish situation still have to wait for a few more months and years.

5. Conclusions

Building on insights from studies in socio-technical system innovation and transitions, Dutch researchers developed transition management around the turn of the century as a governance approach for sustainable development, in particular in the realm of socio-technical and/or societal systems that support functions central to our welfare (such as the energy, mobility and food system). Transition management tries to take into account the complex policy context of current industrialised societies, while simultaneously keeping an eye on sustainability requirements: it adds a long-term horizon to policy, it opts for radical transitions in societal functions, it takes a broad approach to sustainable development, it pleads for an active government role but in a network context with large responsibilities for innovative actors. While sustainable development policies sometimes seem lost in the intricacies of indicators, impact assessments or labelling systems, transition theory and policy bring some fresh air to the debate with their reliance on inspiring long-term visions, their stress on innovation (technological, socio-cultural and institutional), and their believe in the potential of experiments, learning-by-doing and doing-by-learning.

A lot has been learned over the last few years, theoretically as well as through experiments and in policy development, but the approach is still very young and needs further exploration, not in the least because all major experiences so far are taken from just one small country, the Netherlands. The Dutch experiences show that a transition management approach can release a lot of energy and ideas for

[19] Only the qualifications "unitary state" and "front runner in the environmental field" are not really applicable.

sustainable development of industrialised societies. However, when transition management leaves the rooms of academics and enters the real world, it is also confronted with a stubborn reality that puts into question some of the premises on which transition management builds. The reality of the Dutch energy transition shows that essential characteristics of transition management – such as the involvement of innovative non-regime actors and the importance of structural and socio-cultural change processes – get under heavy pressure in high-profile transition exercises. Dealing with these kind of tensions will be one of the challenges for the next years.

Transition management reached Flanders through a bottom-up process, slowly growing and finding its way in small networks between civil servants, researchers, policy advisors in advisory councils and others. This prepared the way for the political decision to frame the processes DuWoBo and Plan C as experiments in innovative environmental policy. Although Flanders has a political context and culture somewhat resembling the Dutch, it was at the time rather unprepared in what seem necessary conditions for initiating transition management, such as a knowledge base in system innovation and transition policy, a broad experience in long-term strategic thinking, or well-developed skills in dealing with innovative participatory processes. DuWoBo has nevertheless been able to produce a full transition agenda and is currently in the phase of developing experiments and trying to link up with other policy agendas. Plan C is well underway to produce a full transition agenda and will go public with its results in autumn 2008. Besides concrete products, both processes are having other effects: stimulating long-term thinking about sustainable development, founding a broader knowledge base about system innovation and transitions, networking between organisations and individuals that previously hardly knew each other, introducing new kinds of participatory processes in policy formulation. There also seems to be a learning effect: Plan C could profit from some of the experiences in DuWoBo, a development that is promising for next steps in the processes. These process-related results may in the end prove to be as important as the concrete products, in particular when the interest in transition management continues to grow and new processes would be launched in Flanders.

Both processes are confronted with several tensions. The tensions discussed in this paper include the link between transition management and regular policy; the need for finding common ground in the perception of sustainable development, system innovation and transition management; the challenges of managing these kind of change processes; and the composition of the transition arena and transition team. When comparing these kind of tensions with experiences in the Netherlands, it seems they are often inherent or at least partially inherent to transition management and the specific form of transition management that was tried out in Flanders (what we called the ICIS-MERIT-DRIFT model of transition management). All in all, the tensions are for the moment not blocking the processes, although this may partly be due to the experimental and low-profile nature of the Flemish exercises.

In conclusion, it can be said that the evidence indicates that transition management is transferable – at least to a region such as Flanders – and that it is usable for starting up processes for definition of long-term visions, transition paths and experiments towards sustainable development. What will happen next, in particular when these kind of processes would become more influential, cannot be predicted for the

moment. Nor is it clear yet whether they will be effective in initialising real changes towards a transition in housing and building (DuWoBo) or in sustainable material management (Plan C). It may take another few years before their real influence becomes visible.

What *is* clear, however, is that Flemish policy and societal actors can invest in and examine different kind of measures to make the Flemish policy environment more receptive to system innovation, transitions and transition management. Several actions have been mentioned in the discussion under paragraph 4 or can be deduced from the analysis earlier on. They include:

- building a Flemish knowledge base about the theory and practice of system innovation, transition policy and the management of these kind of change processes. Loorbach (2007) mentions the need for "a community of transition professionals", which in the Netherlands is amongst other things supported by the *Competentiecentrum Transities* (Competence Centre for Transitions) that brings together practitioners and researchers;
- investigating how transition processes can be linked institutionally to regular policy, so that they do not lapse into noncommittal exercises but rather enrich regular policy with a long-term perspective on sustainability. This will also require an introspection at the level of public authorities as to the role they can and want to play in change processes, and how they will strengthen their capacities for reflexive governance;
- investigating how the current (and future?) transition processes can break out of the environmental department. Transition processes inevitably involve several domains, so that some form of horizontal coordination is necessary between departments. Perhaps the Flemish Strategy for Sustainable Development can play an integrating role in this respect. However, from the analysis it seems that the reorganisation of the Flemish administration (*Beter Bestuurlijk Beleid*, see 2.1.) has had some adverse effects on horizontal policy integration. A particular field of interest for horizontal coordination is the link with innovation policy, which is still overwhelmingly dominated by a purely economic logic, but where some entry points exist for a broadened conception of innovation, such as the MIP platform (*Vlaams Milieu- en Energietechnologie Innovatie Platform* – Flemish Environmental and Energy Technology Innovation Platform);
- trying to link system innovation and transition with initiatives in Flanders that have the ambition to set an socio-economic agenda for a medium long period. The two most important processes are the *Pact van Vilvoorde* – an agreement between the Flemish government and civil society actors – and *Vlaanderen in Actie* – a government initiative to involve some 300 captains of society. Both initiatives use amongst other things a discourse of innovation and sustainable development and could perhaps take some inspiration from the DuWoBo and Plan C approach to innovation, sustainable development and participatory processes ;
- keeping open enough space for the current transition processes to experiment and learn. Learning-by-doing and doing-by-learning is central to the whole transition approach, so that when processes are kept on a too short leash, they may not deliver the results that could be hoped from

them. One of the most concrete problems to be solved here is avoiding the trap of sub-critical support and financing.

Taking steps forward in these spheres will create a more accommodating environment for system innovation and transition management. They will also inform research over the next few years under the projects "system innovation" and "transition management" of the Flemish Policy Research Centre Sustainable Development.

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