

Transition Management: *Governance for Sustainability*

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Abstract

Our modern society is facing a growing number of complex and so called 'wicked' problems that are symptoms of the increasing unsustainability of today's society and are connected to the intertwining of economic, ecologic, socio-cultural, technological and institutional developments. In addition, the world around us is globalizing and becoming more diverse and more complex. To illustrate this, there is an increasing number of structural and persistent problems in sectors such as agriculture, mobility, housing and energy, that cannot be solved with the traditional short-term approaches. In order to properly address complex problems of this nature and to be able to make the transition to a sustainable society, a new policy- or governance-approach has to be adopted that is better fit to deal with the increasing complexity and diversity.

In this paper we will explore the possibilities of the concept of transition management as a form of governance aimed at generating a sustainable development. Based on a systems-approach, a transition can be defined as a gradual and continuous process of change whereby society, or a sub-system of society undergoes structural change¹. Transition management aims at influencing speed and direction of the transition-process. Because of the nature of transitions, it's long-term horizon, the inherent complexity and uncertainty, it's integrated character and the involvement of various actors, transition management is an evolutionary and adaptive governance strategy, which can be useful towards sustainable development.

The dilemma of modern government

Governments in western democracies have come under increasing pressure during the last decades. On the one hand, various policy-issues have become more and more difficult to handle while on the other hand the capacity of the government to act on these issues has decreased and become more complex as well. These developments have led to a situation whereby government is held responsible for failed policies on major issues, although due to the nature of complex problems, the government will never be able to handle such issues alone.

Since the 1960's, we are confronted with increasingly complex problems related to the environment. Examples hereof are the unsustainable use of energy, housing, transport and mobility and agriculture. Such practices seem structural and almost

¹ Rotmans e.a, 2001

impossible to change. Since the impact of human activities on the environment gained attention during the sixties and seventies, governments throughout western Europe have tried to address such issues with command and control policies. This approach was motivated by the idea that the society could be 'shaped' top-down. In the eighties however, the command and control approach seemed to be conflicting with the idea of individual freedom and the market approach was adopted under the influence of the increasing commercialisation of society. With the process of market-liberalization during the eighties and nineties, government hoped that the market would generate societal solutions at low prices. After various excesses however, government realized that especially market forces should be regulated and that a free market requires a strong government. Thus, both approaches (of control and of liberalization) did not seem to suffice in addressing complex environmental and societal problems, not even in an age of enormous economic growth. It seems that government has lost authority and effectivity, while on the other hand the problems have only become more urgent and complex.

Since the 1960's, parallel to the decreasing capacity of the government to act on the mentioned problems, more and more public functions have been carried out by actors other than the classical state-based government institutions. On various levels, governance structures have emerged that include businesses, NGO's and scientific experts, creating diffuse power structures and decision-making processes. Government has thus in the organizational sense as well, evolved from a hierarchical top-down model into more diffuse and bottom-up models². But as well as in the case of market liberalization did the government in the Netherlands recently come back on the decentralization policy. They did so by redefining the core tasks and responsibilities of the central government and by defining more clearly the competences and the responsibilities of regional and local government³.

The Dutch environmental policies have followed somewhat a similar pattern. When the first signs of environmental change or damage became clear, government tried to deal with it by creating regulations and laws. When this approach didn't yield the desired results, the government tried to persuade industries and other organizations to take environmental measures out of their own will. Through the use of so called 'covenants' mutual intention was expressed to make an effort. This volatile approach seemed to give results, but still the most urgent problems were not addressed. Now it seems that Dutch policies, and especially the environmental policies, have come into a new phase.

In 2001, a new approach towards environmental policy was introduced with the fourth National Environmental Policy Plan (NEP4) and adopted by almost all departments. The document introduced the concepts of transitions and transition management as the new approach towards environmental and, related to that, societal problems. The NEP4 focused on four main issues, namely energy, biodiversity, agriculture and mobility, to be addressed with transition management. In general, the new approach of transition management can be characterized as a mix of top-down and bottom-up, as a combination of market and regulation.

² Peters (1996), Scharpf (1998)
³ Wolfsson (1993)

The concept of transition

The concept of transitions has been used in a variety of ways. The term is generally used to describe a process of change from one dynamic equilibrium to another. A well known example from sociology is the demographic transition that describes the shift from a balanced population growth with high birth and death rates to one with low birth and death rates⁴. In economic studies, the phrase ‘countries in transition’ refers to the Eastern European countries that are experiencing the transformation from a centrally planned state and economy into the western capitalist and democratic model.

From a complex systems theory point of view, transitions could be considered as system transformations from slow equilibrium dynamics to quick development and instability, reverting to relative stability. The new equilibrium is a dynamic equilibrium, i.e. there is no status quo, because a lot is changing under the surface. A societal transition can accordingly be defined as a long-term process of change during which a society or a subsystem of society fundamentally changes⁵ as a set of interconnected changes, which reinforce each other but take place in different areas, such as technology, the economy, institutions, ecology, culture, behaviour and belief systems. A successful transition is a spiral that reinforces itself, driven by multiple causalities and co-evolution. A pre-requisite for transitions to happen, is that several developments in different domains at different scale-levels come together to reinforce each other. To use a mechanical metaphor, all social phenomena have an impulse value for transitions, but only some provide a flywheel force. To stay with this mechanical metaphor, the complex set of cogwheels that engage one another (see Figure 1), could easily lead to an interlock, but once in a while they reinforce each other.

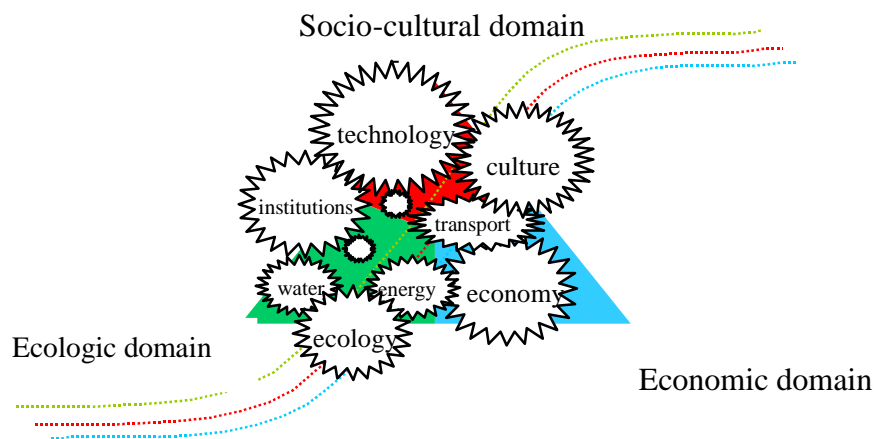


Figure 1 Reinforcing cogwheels

A transition has the following characteristics:

- it concerns large scale technological, economical, ecological, socio-cultural and institutional developments that influence and reinforce each other
- it is a long term, evolutionary process that covers at least one generation (25 years)

⁴ See: Davis, K. (1945), *The world demographic transition*, Annals of the American Academy of Political and Social Science 237(4), 1-11.

⁵ Rotmans et al. 2000

- there are interactions between different scale levels (niches, regimes and landscape)

From analysis of historic transitions, it became clear that transitions generally go through four different stages, following a typical pattern, which can be visualized with an *S*-curve (see Figure 2): a *predevelopment-phase* whereby nothing *seems* to change, a *take-off phase* where the process of societal change ignites, an *acceleration-phase* where structural changes start to take place because of the reinforcing interaction and iteration between different developments in the different domains and on different scale-levels and a *stabilization-phase* where the speed of change slows down and a new balance is achieved.

In addition to the multi-phase concept, the transition-theory is based on the multi-level concept that describes the interplay between the macro- (or landscape) level, the micro- (or niche) level and the meso- (or regime) level (see Figure 3). This multi-level concept is derived from the studies into changes (or transitions) in socio-technical systems by Geels and Kemp⁶, but is applied in this case onto broad societal systems. The model gives insight in the process of regime-change:

- at the *macro-level*, economy, demography, worldviews and culture are inert, but important variables
- at the *micro-level*, initiatives and innovations from individuals or individual organisations challenge the existing regime
- at the *meso-level*, organisations and infrastructure, but as well values, belief systems, norms and unwritten rules and practices form a regime that is most likely to be aimed at protecting its own existence and status quo, rather by optimisation than by innovation.

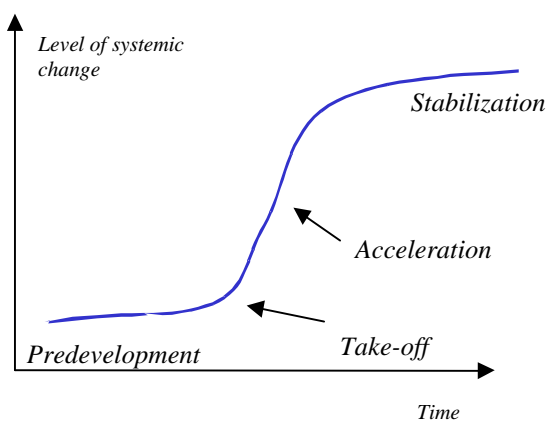


Figure 2: Four phases of transition

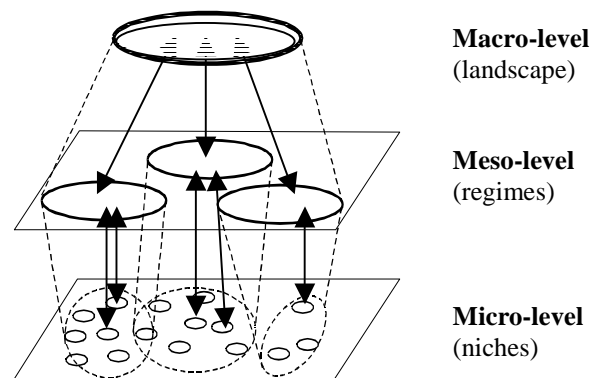


Figure 3: Multi-level interplay in transition

When we combine the two concepts of multi-phase and multi-stage, the following pattern emerges. In the predevelopment-phase, the regime at the meso-level often acts as an inhibiting factor, trying to maintain social norms and belief systems and improve existing technologies. However, because of the boundaries of the regime, and the conservative and rigid nature of any path-dependent system, the only possible adaptation the regime can make is through optimisation. At the same time, because of the increasing problems within the regime, at the macro-level worldviews and

⁶ Geels, F. & Kemp, R. (2000)

perceptions slowly start to change while at the micro-level different innovators (both companies and individuals) start experimenting with alternatives to the existing regime. A transition only occurs when the three levels start to coincide and interact, and a modulation between the different change-processes is achieved.

We can illustrate the concept with the example of the agricultural transition. For decades, we have relied on intensive and quasi-industrial food production. The intensification of the agriculture has led in the last decade or so to increased problems with food-security (think of the BSE and Foot-and-Mouth diseases, the dioxin-crisis in Belgium), to questions about the impact of this kind of agriculture on the environment (animal-rights, pollution of groundwater and land, land-use) and accordingly to questions about the subsidies and institutional arrangements for the agricultural sector. At the macro-level the view and perception of people changed, for example the growing attention for environmental issues and food safety, which has affected consumer-behaviour. At the micro-level experiments were carried out with for example alternative forms of agriculture (such as biological, bio-dynamic farming) and with other consumption-practices (vegetarianism, eco-labels). While the regime found itself under increasing pressure (mainly because of the crises), the alternatives were available and the transition could reach the take-off phase. Nevertheless, the reluctance to change is still existent in large parts of the agricultural sector, mainly because of the 'sunk cost' or made investments in for example machinery or production-methods.

In history, numerous transitions-processes have taken place, bringing society progress and growth. However, these past transitions have, more often than not, led to unsustainable outcomes. By making cars available to everyone, the freedom to move (as well as various other individual choices) has increased but at the same time we are confronted with traffic-jams and pollution (as an autonomous result of individual choice)⁷. While we have achieved optimisation of the regime by making cars cleaner, safer and faster, the increase in numbers has annulled the positive environmental effects.

Traditionally, such issues are addressed with *ad hoc*-policies that try to improve the existing system. For example by building more roads to deal with the traffic jams, thereby only attracting more cars and shifting the problem to inner cities. What is really needed is structural change in that part of the system. a transition of our society in order to reach a sustainable mobility and in general a more sustainable society. direction. Rather than to let short term interests prevail and to develop policies that deal with the mere symptoms instead of the real underlying causes reactively when problems occur, we would like to develop pro-active governance-strategies in such complex issues related to sustainable development. The question then of course arises how we can manage such a transition in a desired direction given the complexity of such issues.

Transition management

Transition management is a new policy tool based on the characteristics of complex systems in order to influence transitions where possible. The question arises to what extent and in what manner these broad societal innovation processes or transitions

⁷ Dirven e.a, p. 16

could be managed or steered. Transitions are no blueprints that determine systematically what will happen. On the contrary, transitions are evolutionary processes that mark possible development pathways, of which the direction and pace could be influenced by specific policies. In other words, transitions cannot be managed in the classical manner of full control and supervision, due to the fundamental uncertainties and many surprises on a transitional pathway. However, transitions can be managed in terms of influencing and adjusting: a more subtle, evolutionary way of steering. In other words, the direction and pace of transitions can indeed be influenced. In concrete terms this means steering through creating a climate in which societal innovation can flourish and through the initiation of the right initiatives at the right moment. A sound and transparent communication among all parties involved is of crucial importance in this process. An example of this ‘transition management’ is the energy transition in the Netherlands from a coal-based energy supply system to a gas-based energy supply, which went relatively fast and smooth in the Netherlands compared to other countries, also because the government played a pro-active and stimulating role, amongst other things creating a private-public partnership that played an important role in guiding the transition⁸.

But if so, in which way could transitions than be managed or steered? First of all there is no generic recipe for the management of transitions and system innovations. The management of this kind of complex societal processes is comparable with a common search journey, for which however, there is not yet a common compass available and even the destination is unclear. However, what we can do is to develop certain ‘minimum requirements’ that are based on the nature of transitions. Because of the multi-actor and multi-perspective elements and the structural uncertainties about the future and ‘best options’, transition management follows four coherent developing lines:

1. organisation of the multi-actor process through the establishment and development of a well-functioning innovation network (a transition-arena) for a specific transition theme;
2. generating integrated visions, transition pathways and evolving agendas;
3. carrying out experiments and concerted action based on the transition-agenda
4. evaluating and monitoring the process and incorporating learning effects

The transition-arena

The first step in transition management is the establishment of a transition-arena. With a transition-arena we do not mean a physical arena, but an innovation network (environment) for a well-defined and marked transition problem. Who now are the players in such a transition-arena? Although we cannot give an unequivocal answer to this question, we can give some hints. The first hint is that the initial group should not be too large, somewhere in between 10-20 people, and that the selection of relevant actors is done on the basis of competences, interests and backgrounds. A small core group of initiators can take care of this selection process, thereby aiming for a representative participation from the four actor-groups (Governmental bodies, business, NGO’s and knowledge institutes/experts). The arena participants need to be innovative in their thinking, open-minded towards ideas of others, not thinking in terms of ready-made solutions and need the ability to look beyond their own

⁸ Verbong (2000)

discipline and background. The selected forerunners need to commit themselves to the innovation process and need to convey this process. The arena is an open network, so new candidates may enter the arena after a while, whereas others may leave the transition-arena.

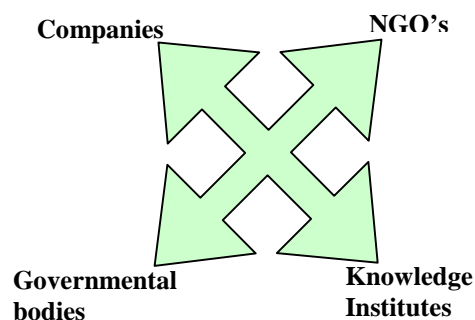


Figure 4 The four key societal actors

The following step involves the organization of the multi-actor process around and evolving from the transition-arena. This practically means continuously creating the adequate conditions for the transition-arena to further the intended transition. In practice this means: (i) providing enough (political and financial) space for innovative experiments, the development of steering mechanisms, learning processes and manners; (ii) removing institutional barriers and the reduction of steering problems; (iii) establishing an independent organization that supports the transition-arena and helps pushing the innovation processes; and (iv) setting up supportive transition teams at the home-bases of the forerunners in order to safeguard an adequate communication between the transition-arena and the home-bases.

Within the transition-arena, the participants first have to come to a mutual understanding of the transition-problem at hand and accordingly come to a shared problem-perception. In practice, this step is very difficult because of the conflicting perspectives of the actors involved and the different interests they have. Through an integral assessment of the problem however a certain level of agreement can be reached at least on the question whether or not there is an urgent problem. From transition-theory, a transition can only take-off when the macro-climate (landscape) is beneficial, which means that in reality the actors involved already feel the urgency to change in the predevelopment-phase. In the agriculture-transition again, a small number of farmers and policy-makers realized already in the early 1980's that the existing system of intensive farming combined with structural subsidies would not be sustainable in the long-run. They therefore started exploring and experimenting with new options, long before the crises convinced the larger public that food-security was at stake. Related to the transition-arena, this means that in the predevelopment-phase, a numbers of actors is already confronted with the 'boundaries of the system' and therefore susceptible to innovation and change, be it from different perspectives. In practice, the development of mutual understanding and 'language' is a prerequisite for effective transition management.

Visions and agenda's

Of crucial importance for transition management is the development of transition final images for the coming decades (ca. 25-50 years) as cornerstones in the envisioning process. These final images are by no means abstract panoramas, but innovative,

inspiring and imaginative transition images that are described in qualitative terms. A ‘sustainable energy-supply system’ for example could in this way be described as ‘safe, sure, available and affordable (etc.)’. The idea is not to develop a blueprint of the future as a kind of optimal transition final image, but to develop a set of transition images. These transition images evolve over time, dependent on the required insights and learning effects. As the transition process goes along the most promising, feasible and innovative final image will be adjusted and selected.

The transition images and goals are the starting points for exploring transition pathways and formulating intermediate goals. This involves the development of different transition pathways in the form of scenarios that will lead to the desired transition images. The intermediate goals are thereby derived from the long-term transition goals and form a testing framework for current policy. The idea is not to choose too early for specific transition pathways and scenarios, but to keep as much as possible a number of options open. Only after a certain period of time, as a result of the learning effects from the innovative experiments set out, it becomes clear which options are dropped and which options keep upright. Obviously, this is a process of variation and selection, marked by many intermediate steps, evaluations and well-pointed innovation experiments. Innovation experiments are experiments with a high-risk level (in terms of failing), but also with a potentially great contribution to the intended transition. In setting up these experiments, it is important to build upon ‘autonomous’ initiatives of societal actors. In many cases interesting initiatives are already running, generating lots of energy among the actors involved. The thing is to mobilize this energy as much as possible and to give direction to the ongoing initiatives and experiments. Through these so called ‘back casting’ exercises, whereby the transition-image is translated to short-term actions and experiments, a joint transition-agenda is drawn up.

Experimenting for sustainability

Based on the long-term sustainability visions and the transition-agenda, experiments have to be developed to start the search process. With experiments, we are referring to all sorts of actions that are innovative and explore new options. Such experiments might include new regulations or new financial arrangements but also new technologies, new forms of co-operation et cetera. To realize the various experiments, in addition new instruments or tools have to be developed that can support the experiments. The development and application of the right instruments forms the next step in the transition process. The notion of instruments is conceived here in a broad sense: from fiscal instruments to subsidies, from arrangements to education, and from measures to incentives. Some of these instruments still need to be developed, others are already around and can be applied directly in the transition process.

An important task with regard to experimenting is to safeguard the available ‘room for experiment’. In order to develop the innovations, but also to naturally come to the selection of desired options, the transition-arena has to be sustained for a longer period of time. Innovations in general (not only technological) tend to have a long development-path and are especially in this phase not profitable, both in financial as in societal terms. Government of course is the prime actor capable of doing so because of their (financial and managerial) capacity, but could also be a hampering factor because of the ever existent drive for short-term results and full control.

By carrying out experiments and actions in general, the search-process towards sustainability (e.g. the transition) is under way. Of course in this process, which can be characterized as *doing-by-learning, learning-by-doing and learning-to-learn*, evaluation is of crucial importance. Evaluation therefore has to take place every few years (depending on the process) with regard to the intermediate goals, both in terms of substance and process. The parties involved consider to what extent the execution of the transition process runs satisfactory, and what has been learned from the innovative experiments that have been carried out. It is explored in what way the instruments have contributed to the achievement of the overall transition goal. It is of crucial importance to document these learning effects systematically. Just as the system changes that also need to be monitored. A rough sketch of the process of transition management is given in Figure 5.

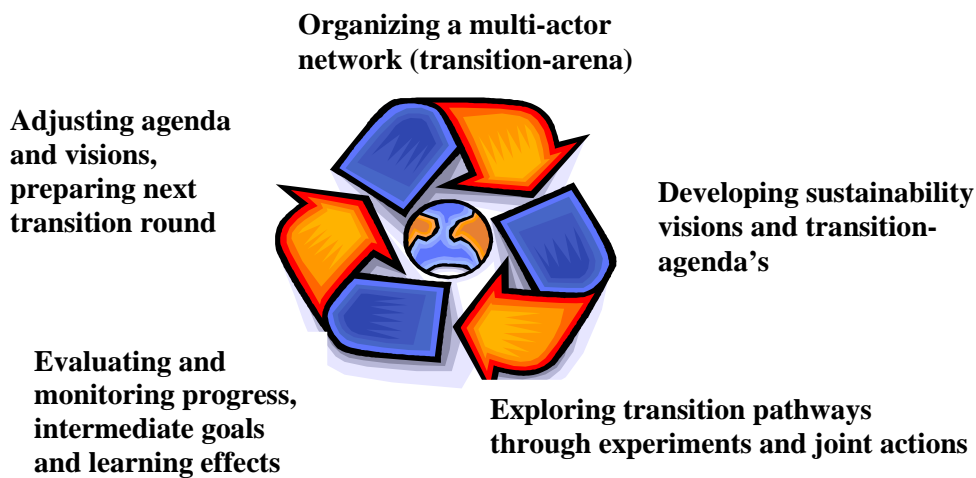
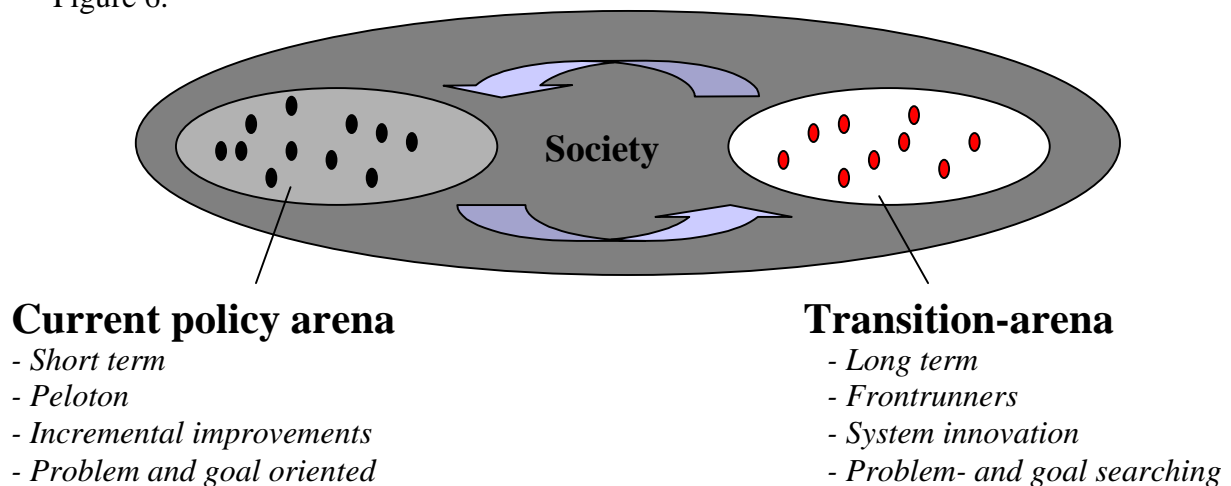


Figure 5 The process of transition management

Transition management is thus a combined search- and learning process, which requires an adaptive and evolutionary steering. The search process is a process of envisioning that is organized by an independent organization in combination with transition teams in the home-bases, which continuously create suitable conditions for innovation. The joint search- and learning process takes place in the transition-arena, which operates on a distance from the political arena (arena of current policy), see Figure 6.



- Current policy arena**
- Short term
 - Peloton
 - Incremental improvements
 - Problem and goal oriented

- Transition-arena**
- Long term
 - Frontrunners
 - System innovation
 - Problem- and goal searching

Figure 6 Communicating arenas

The current policy arena aims at the short-term (at most 5-10 years), at incremental improvement with regular players and regular steering mechanisms. The transition-arena, however, aims at system innovations and transitions in the long run (25-50 years), with forerunners, making use of innovative steering mechanisms. This is illustrated in the box below.

Current Policy	Transition ‘Policy’
Short time horizon (5-10 years)	Long time horizon (25-50 years)
Facet approach	Integrated approach
- limited number of actors	- multi-actor
- one scale-level	- multi-level
- one domain	- multi-domain
Aimed at incremental change	Aimed at innovation and transitions for sustainable development
Linear knowledge development and dissemination	Learning-by-doing and doing-by-learning; cyclic learning process
Monitoring ‘flows’	Monitoring ‘stocks’
Regulation and liberalisation	Network- and selfsteering
Government	Governance
Political arena	Transition-arena

Box 1: Current versus transition-policy

At a certain point in time, a number of innovation experiments executed turn out to be successful and break through to the current policy arena. In this break-through stage, the take-off phase, the successful innovations at micro-level will work through at the meso-level and grow into system innovations. At the same time, more and more actors outside the transition-arena will in this take-off phase get the feeling that they miss the boat. If these outsiders will hook on to the transition activities and experiments, the arena will spread steadily like an oil-stain. In this stage there will be increasing interaction between the transition-arena and the current policy arena, as indicated in Figure 7. The increasing interference will put the short-term policy into a longer-term perspective, with more and more overlap between the current and longer-term agendas. In this process of divergence and convergence between both arenas the government plays a facilitating rather than a leading role.

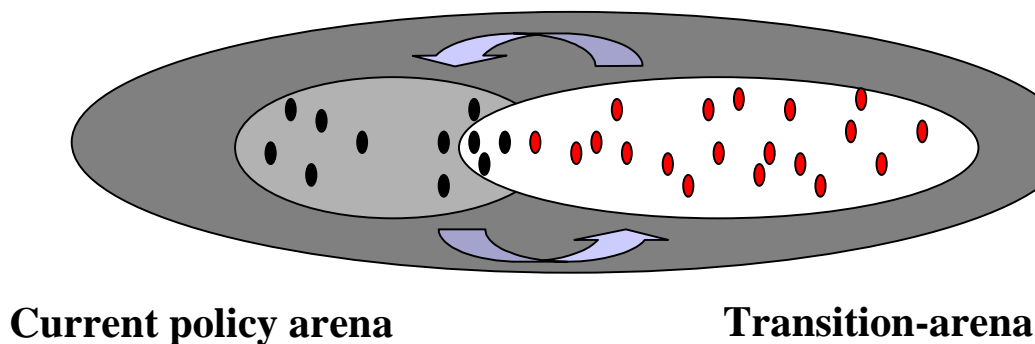


Figure 7 Diverging and converging arena's

New roles in transition management

The interaction between the various actors within the transition-arena has to lead to broad societal innovation. Transitions are not processes that can be directed top-down, but they also cannot be initiated by a single actor bottom-up. Transition management therefore aims to combine the individual interests of the different actors with the collective interest of sustainable development. While recognizing all different perceptions of problem and solutions, all can at least agree on the over-all need for action on a specified transition theme (sense of urgency). If not, then there probably is no momentum for transition management at all. This new approach however, combining network-steering and self-steering with individual and collective interests, requires for all actors to develop new roles and practices. We will shortly point out some of these new roles.

Government of course plays a central role in transition management. Important is first to make a distinction between the different governmental bodies and the different roles and capacities they have. Central government for example is better equipped to draw the strategic lines and to facilitate and coordinate the transition-arena's on a national level. Local governmental bodies for example, could be more involved in the practical work of implementing the strategy and developing local solutions. In general, government has to play a more facilitating and directing role than they presently do, although this role will change with the progress of the transition. For example in the early stages of transition, government has to allow some rules and laws to be temporarily neutralized under controlled circumstances while in later stages of the transition, new rules and regulations have to be developed to support the new regime.

For businesses, they will also have to participate in the multi-actor network and serve both their own as well as the collective interests. This means that they will have to behave socially responsible and also invest in (all sorts of) innovation. They will also have to develop, together with other actors, long term visions on which they base their policies. Thereby they will have to focus on profit, planet and people. By recognising their possible influence on policy-making in a governance-context, businesses will be seduced to participate and will be willing to also serve some collective goals (which will also benefit their image).

Non governmental organisations (NGO's) will also have to develop new roles and practices. Above all, they will have to be able to constructively co-develop long-term visions and solutions. Instead of focussing on one issue, the NGO's have to monitor but also feed the transition process with positive and luring images, examples and alternatives. Together with the other actors, they will have to safeguard the interests of society, but in an integrated way. By this, we mean that they have to be open to various options (instead of presenting already chosen solutions) and to various partners. In a sense already coalitions between business and NGO's have been developed, but so far this has been on only one issue and without much effect.

Knowledge institutes and experts will also have to reflect on their role in transition management. Science in particular has always been fundamental and true. Now, with 'new' or 'mode 2' science, already the first developments point in the direction of more integrated and applied knowledge production. Although fundamental research will remain necessary, in transition management the required knowledge has to be

developed trans-disciplinary. This means that there has to be interaction between scientist and practical experts (who hold 'tacit knowledge'). Within the context of transition management, scientists will be co-developers and innovators of knowledge, together with practitioners of all sorts.

Finally, the citizens or consumers (which are different groups altogether) are not directly represented as a group in the transition-arena. Through participation of the other groups, especially the NGO's, they are indirectly represented. Through own initiative and action, citizens can take part in transition management via another actor-group but it will depend on the transition at hand to what extent also specifically citizen-organisations are involved in the early stages. Of course in the take-off/acceleration phase of the transition, citizens will be of crucial importance to support the vision or direction and to adopt the new regime.

In general, all actors involved will have to let go of part of their authority and control. In a sense, part of the authority was already undermined because it was based on assumptions and structural uncertainties that were ignored. Science for example has already partly recognised the importance of other sources of knowledge besides the 'scientific' and governments have almost no control over complex issues and the behaviour of their citizens. NGO's will have to change their defensive attitude and engage in uncertain envisioning processes. Businesses will have to defend themselves against the short term interests of their stakeholders and focus not only on profit. All in all, the actors will have to develop their new roles and practices in the transition-arena, while still participating in the political-arena.

Conclusion: transition management for sustainability?

Our society is always dynamic and changing. Sometimes, change occurs simultaneously in different domains, and society as a whole can make a jump forward. So far, such transitions have just occurred and were not consciously influenced. To achieve sustainable development, change is necessary. Change in the way we think about government and society and the way in which we organize it. The present structures and institutions are too much focused on the short-term and on the existing societal systems (regimes, physical and immaterial infrastructures, rules and regulations) and are not capable of bringing about the long-term sustainable innovations and transitions that are necessary. The transition-concept implies that a new approach towards dealing with complex societal issues is needed in order to be able to cope with the multiplicity of problems and solutions.

The approach of transition management can be seen as the attempt to bring about the institutional infrastructure that is able to facilitate a sustainable development. Transition management has to be regarded as a governance-strategy that tries to combine long-term envisioning, multi-actor interaction and short-term actions based on innovation. By developing and supporting transition-arena's (innovation-networks), room for experiment can be organised outside the existing political arena with its own interests, goals and time-horizon. Within the transition-arena new ways of cooperation, new rules and new practices have to be developed by all actors. The thus multi-layered and horizontally organised governance-networks will expand and in time affect and change the existing institutions. It will however require long term commitment of a lot of actors as well as the acceptance of uncertainties and risks (which are present anyway). Government especially will have to let go of the idea of

full control and let societal actors take initiative now and then. This will require a transition itself; from government to governance.

The theory on transitions and transition management is still in development. In the coming years we will have to further research on this subject and try to experiment with the approach as well. In the Netherlands, various governmental departments are developing transition management plans and different societal initiatives are undertaken to implement the ideas. In general, a lot is expected from the approach and the first signals of success are there, but it will take at least some years before a really coherent and effective framework for transition management will be developed. In the meantime, we can only try to contribute to both the theoretical development and the practical implementation of transition management and thus take the first steps of the transition to a sustainable society.

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