INTERMEZZO

HORIZON SCANNING

Horizon scanning helps to timely identify contextual developments and assess their threats and opportunities for the environment in Flanders. Within MIRA, this foresight process is receiving increasing attention. We will outline the horizon scanning process and discuss the results of a recently completed project.

Horizon scanning aims to strategically explore weak signals and new or unexpected issues that may have an important social impact. However, persistent problems, emerging trends or changing (mega)trends are identified as well. The aim is to zoom in on developments that occur at the boundaries of current thinking and current policy planning, to better understand their threats and opportunities for the environment (and environmental policy), and to identify gaps in our knowledge of them. The ultimate goal is to make (environmental) policy more robust, also in the longer term.

The work carried out by MIRA in the period 2017-2018 builds on the insights gained from a previous study conducted within MIRA. The report *Megatrends: far-reaching, but also out of reach? How do megatrends influence the environment in Flanders?* (2014) thus identified six megatrends and analysed their implications for the environment in Flanders. The conclusion was that megatrends impact society through our societal systems in a complex and far-reaching way, now and in the future. Those who seek to develop an adequate vision and policy are therefore well-advised to give due consideration to them. In the wake of the report, the VMM, together with Argus and The Shift, organised the conference *Megatrends: How to go about them for a sustainable and resilient Flanders?* at the end of 2015. In the presence of a broad range of societal stakeholders, views were exchanged about the way in which Flanders can deal with megatrends in order to facilitate the breakthrough of sustainable and resilient societal systems.

Via a new horizon scanning study, MIRA validated and updated the megatrends identified in 2014 (see also 1.2 "Megatrends are becoming increasingly present"). The study also looked at interconnections, weak signals and possible counter trends. In addition, a number of broad societal developments were identified and described, which, together with the megatrends, set the context for the implementation of ecologically sustainable systemic solutions. These developments will be described below, at the same time illustrating how knowledge about them can help with the implementation of systemic solutions.

Clustered societal developments

The recent horizon scanning process revealed seven quite diverse societal developments, which we have clustered into three groups. These are developments that are on the one hand still fairly dominant, but at the same time already exhibit counter trends and weak signals of change. The interaction between prevailing contextual developments and counter developments can result in (far-reaching) societal shifts or even a tilt depending on the societal development in question.

The developments also affect the way in which systemic solutions, with a view to transitions to ecological sustainability, can be implemented. Some are very directly relevant to what systemic solutions can look like. For example, the centralised or decentralised organisation of production or supply in societal systems. Others are probably situated on a more fundamental level. For example, is the premise that society is based or not on the current forms of (physical) economic growth. Still others are more indirectly relevant to the implementation of specific systemic solutions, for example the role of technology in tackling major societal challenges.

Shifts in value creation

This development is about possible shifts in the dominant, global economic growth paradigm, whereby economic development is predominantly based on economic and financial principles. Shifts in this growth paradigm can then be labelled as a 'meta'-driving force for societal change and environmental challenges.

Shift from financial/economic to (more) social/ecological added value creation
There are clear signals that pursuing economic growth in its current form is no longer tenable. More attention must be given to the creation of social and ecological added value and the way in which social progress and prosperity are measured. Economic growth as a central paradigm is hardly being challenged. Among policy makers, but also producers and consumers, this leads to the almost exclusive pursuit of continuous growth, whether exponential or not, in economic policy and in our industrialised society. Decoupling economic growth and the associated use of natural resources, waste production and pollution is still often considered adequate to enable further growth in the future. Therefore, what we have here is a paradigm shift that can probably only occur in the longer term.

Shifts in mental models, norms and values

The horizon scanning also detected three societal developments that largely occur at the level of mental models, norms and values. A common characteristic of these developments is that they are in a very early stage and uncertain.

From individual interest to (more) societal interest in consumption
Some developments suggest a shift in consumer considerations when choosing to buy or use products and services. However, the question is whether we are already seeing a developing 'ecological citizenship': a growing awareness that individual choices can have undesirable effects for others and for the environment. Due to the relatively limited scale at which initiatives of greater societal value develop, their impact remains limited for the time being. It is also not certain that this awareness will, in the short term, take hold in Flanders. Individually oriented and cheap consumption continues to prevail. Yet a gradual change in mentality can be observed, especially among certain groups of consumers and citizens. There is also growing policy attention to responsible consumption.

From objective, uniform to subjective, variable information flows
Information and knowledge are becoming ever more important, but at the same time there is a growing lack of clarity about their quality and about the reliability of the sources. A powerful shift is already underway towards more subjective information flows such as social media and fake news, i.e. the dissemination of opinions purporting to represent substantiated scientific evidence. A counter reaction seems to be slowly taking place in the form of user groups (peer-to-peer) and bodies that adopt a more critical approach to information sources.

Towards a more critical vision on the role of technology in society
Technology plays a dominant role in our society. It provides concrete solutions and represents an important driving force for added value creation and economic growth. At the same time, it is becoming clear that technological development plays an important part in pressing societal problems. Examples are the environment and mobility, but also the organisation of the social fabric. A more critical approach to technology and technological innovation seems to be emerging. This could lead to a shift from the question what technology 'is capable of doing' to what technology 'should be doing' from a social perspective.

Shifts in organisation and steering

The horizon scanning also flagged a number of societal developments suggesting a shift towards a more local approach and local solutions to societal problems.

From centralised to (more) decentralised production systems
There is a trend from mainly centralised, large-scale production and supply (the dominant organisation form) to the emergence of more decentralised forms. For example, shifts to local production and marketing of food products or to decentralised renewable energy production are already noticeable. This evolution will not take place in all societal systems to the same extent and at the same rate.

From a globally to a (more) locally oriented policy approach to problems
The growing division over global issues such as the approach to climate change, implies that the centre of gravity of decision making is again shifting to the (lower) international,

national and regional policy levels. A similar process is taking place at European level. Cities all over the world are also developing their own dynamic to address global and supra-local issues themselves.

From a top-down oriented society to more bottom-up initiatives
This societal development manifests itself in the emergence of bottom-up initiatives by (organised) citizens, consumers, local entrepreneurs, interest groups and local governments. In this regard, government should preferably act as facilitator rather than an initiator or guide. A complete shift to bottom-up approaches is not expected, although the trend is growing in importance. Policy can determine for which aspects a top-down approach remains necessary, and where support and upscaling of bottom-up initiatives constitutes a more appropriate approach.

Four possible scenarios for the evolution towards ecologically sustainable systems

To illustrate how horizon scanning can be useful in the choice and implementation of systemic solutions, the seven previously outlined societal developments were combined into four environmental scenarios. In each of these scenarios, the outlines of possible evolutions until 2050 were explored for the societal systems energy, mobility and food. In the following description of the four scenarios, we will also briefly illustrate what these evolutions could mean for the ecological sustainability of the three societal systems.

Business as usual serves as the reference framework with which the other scenarios are compared. Within this scenario, none of the societal developments will lead to a major tilt. For each of the societal systems it will probably not be possible to achieve a transition to ecological sustainability. Energy efficiency is further optimised, but overall energy demand continues to grow and the share of renewable energy does not grow (fast) enough. The focus remains on automobility. Also the number of vehicle kilometres travelled continues to rise, so that congestion becomes critical, resulting in a mobility crisis. Only a minority of consumers adopt a more sustainable dietary pattern. The consumer focus remains on price and comfort. In the area of food production, the focus remains on economies of scale, intensification, further automation and integration into the chain.

In the **Tecology** scenario, there is a firm belief in technological solutions for (environmental) challenges. Large industrial players and small emerging technology firms offer products and services that place greater emphasis on socio-ecological values. The consumer follows suit because these companies offer useful solutions, with the support from governments. In this scenario, renewable energy and smart energy use both break through. However, due to the strong focus on new technology, it remains difficult to meet the increasing demand for energy and resources. There is a clear shift to new technologies that enable sustainable mobility, including more sustainable modes of propulsion, alternative fuels, self-driving cars and ICT supported mobility solutions. Major changes in mobility behaviour are rather slow to take hold. Food production is information- and technology-intensive, but not diverse enough. The food consumer is passive and consumes preconceived ecological products.

The **Ecolocal** scenario is based on local interests and a local approach to (environmental) issues, including supra-local and even global ones. An important role is reserved for bottom-up initiatives. Local companies, together with civil society, citizens and possibly local governments, play an active role. There is a shift away from an energy-intensive economy and a drive for self-sufficiency in the field of energy, causing overall energy demand to decline. Citizens increasingly install their own energy production and storage. Production and consumption are increasingly localised. The distance between living and working, study and recreation, decreases. Local communities initiate the transition to sustainable mobility via sharing initiatives, for example. In the field of food production/distribution, there is a regional system with farmers and food producers that produce local and seasonal products for the local market (possibly on a cooperative basis and supported via sharing platforms) and also provide ecosystem services and social services. Local governments develop food strategies.

In the **Ecosense** scenario, the consumption behaviour is shifting to more sustainable products and services. Consumer demand for more environmentally and socially responsible alternatives induces the economy to create and provide suitable solutions. Large industrial players fulfil a more important role in the sustainability of the various systems. By firmly committing to green development, companies find solutions to meet the energy needs. Energy production is also becoming significantly more renewable. User demand provides a strong impulse to sustainable mobility solutions. Companies offer sharing schemes, reducing the number of bottom-up initiatives. Companies and industrial agriculture play an important active role in making food production ecologically sustainable, including through integrated chain management. Food production is partly high-tech, and food chains are becoming slightly shorter. Governments respond to these trends.