

# Exploring pathways towards sustainable lifestyles 2050

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**Abstract:** Despite 20 years of policy making on sustainable consumption, levels of European material consumption continue to increase, driving the global resource use and associated environmental impacts. Numerous initiatives for making everyday life more sustainable have been initiated by governments and businesses, mostly focusing on technological solutions of improving products, production processes and providing infrastructure for collective services. There is, however, a growing understanding that together with technological innovation, sustainable lifestyles can be shaped through social innovation. Social innovation is an emergent field of research and practice that unveils the power of social actors, interactions and processes and may contribute to the goal of collectively finding new ways for sustainable living. However, social innovation is often seen as niche model with little relevance for advancing large-scale societal change. This contribution aims to rectify this situation by envisioning how existing promising sustainable practices could evolve into mainstream sustainable lifestyles of the future. The paper presents available to date results of a European project SPREAD Sustainable Lifestyles 2050. It is a European social platform project that brings together business, research, policy and civil

society to develop a vision for sustainable lifestyles in 2050. The SPREAD project fills a gap in current research on sustainable consumption and social innovation by consolidating existing knowledge, identifying trends and promising practices, and envisioning possible sustainable lifestyle futures.

## 1 Introduction

Despite 20 years of policy making on sustainable consumption (UNCED 1992), levels of European material consumption continue to increase, driving the global resource use and associated environmental impacts. Growth in global trade results in that an increasing share of environmental pressures from European consumption takes place outside Europe (EEA 2010). In addition, the global consumer class continues to grow as people in developing nations use their increasing purchasing power to emulate Western European consumption patterns (WEF 2011). Food and drink, housing, mobility and tourism are responsible for a large part of the pressures and impacts caused by consumption in the EU (JRC, IPTS and ESTO 2006).

On the other hand, we have also witnessed in recent years the emergence of more sustainable products, services and experimental social innovation initiatives. They have signalled new hope that sustainable consumption and lifestyles may be achievable for a greater number of people than ever in post-industrial societies. However, the existing initiatives are clearly insufficient as they remain dwarfed by the unsustainable consumption levels and associated environmental and social impacts of the average European lifestyle (Breukers et al. 2011).

Understanding consumption patterns and their resulting environmental and social impacts has been a major focus of recent research in Europe. Also, a number of research projects have been initiated that aim to better understand strategies and tools that can be employed for changing prevailing frameworks and individual behaviours that lead to the increasing environmental and social impacts (Breukers et al. 2011). So far, research demonstrates that technical, but especially social innovation, is vital to driving significant changes in the ways we currently live and in the ways we frame and define quality of life and well-being (Manzini 2006). Creativity and leadership of many is needed to achieve the widespread changes that will shift current unsustainable lifestyle trends, provide sound policies, innovative business models and resilient support systems to make difficult changes easier. Individual and collective choices will have to be supported by infrastructure that enables, maintains and sustains more sustainable ways of living (Mont and Power 2009). Lifestyles that support future sustainable societies will need to accommodate human diversity and reflect different approaches to work-life balance and personal wellbeing. Future sustainable lifestyles will have to be based on equity, efficiency and sufficiency and fit within the global resource limits.

To address some of the outlined challenges of our unsustainable lifestyles, a European project SPREAD Sustainable Lifestyles 2050<sup>1</sup> (2011-2012) has been launched. It is a European social platform project that brings together business, research, policy and civil society to develop a vision for sustainable lifestyles in 2050. The SPREAD project fills a gap in current research by consolidating knowledge, identifying trends and promising practices, and envisioning possible sustainable lifestyle futures. The main outcome of the project will be a roadmap of action strategies for different societal actors, including 2012-2050 pathways to enabling sustainable living across Europe by 2050. This roadmap will support future research and policy agendas on the EU and national levels, thereby contributing to shaping of sustainable lifestyles in Europe.

<sup>1</sup> <http://www.sustainable-lifestyles.eu/>

This paper presents the results of the on-going SPREAD project as a contribution to the research on sustainable consumption and production. Section 2 presents current European trends. Section 3 then outlines methodology employed in the SPREAD project for envisioning the future sustainable lifestyles and backcasting steps that need to be taken until 2050. Section 4 describes four cross-thematic and emerging visions of new European lifestyle models and section 5 reflects on enablers that need to be further researched by the academic community in the coming decade in order to support advancements towards sustainable lifestyles 2050.

## **2 Current European trends: deplorable numbers and emerging hopes**

Modern European lifestyles are unsustainable. The average environmental footprint per person in many European countries is about double the available biocapacity of those countries (EEA 2010). Especially food and drink, housing and infrastructure, and mobility are the areas with highest environmental impacts, including consumption-related material use, greenhouse gas emissions, acidifying emissions and ozone precursor emissions. Tourism is a fourth area causing high and growing environmental impacts, both within the EU and elsewhere. Research demonstrates that:

- Together, final consumption of food and drink, private transportation and housing are the source of 70-80% of Europe's environmental impacts (JRC et al. 2006).
- Meat and dairy consumption alone accounts for almost one quarter (24%) of all final consumption impacts – by far the largest share in the food and drink sector (Weidema et al. 2008).
- Domestic heating, water consumption, appliance and electronics account for 40% of Europe's total energy consumption (with space heating alone accounting for 67% of household energy consumption in the EU-27) (EEA 2010).
- Car ownership in the EU-27 increased by more than one third (35%) between 1990 and 2007 (EEA 2010). Over one third of the world's 750 million automobiles are owned by drivers in the EU (IEA 2010).
- In the EU-27, approximately 60% of adults and over 20% of school-age children are overweight or obese. Coronary heart diseases (CHD), which is often associated with fatty foods and smoking remain the single most common cause of death in the EU (WHO 2011).

For a long time, the main strategy for addressing unsustainable consumption patterns and levels has been placed on technological innovation. Recent research contributions highlight the need to identify, stimulate and scale-up social innovation initiatives that together with some technical innovations include innovations in social fabric and social norms, in the ways we define well-being and quality of life and in ways we create our individual and collective identities. Theories in sociology of consumption and behavioural psychology confirm that changing current lifestyle patterns and behaviours towards sustainability is a complex task (Jackson 2005). Despite that numerous examples of social innovation and promising living practices are emerging across Europe (Seyfang 2009). SPREAD project identified the following trends in social innovation (Breukers et al. 2011):

- Shifts towards efficient consumption (wasting less), different consumption (shifts to high quality goods and services), and sufficient consumption (reducing material consumption) demonstrate opportunities for sustainable ways of utilising products and services.

- Collaborative consumption (sharing, swapping, trading, etc.) reveals a shift in preferences away from ownership of goods to “access” to goods and services and from being passive consumers to becoming co-producers of goods and services (e.g. urban farming; growing your own food) (Botsman and Rogers 2010).
- Household behaviour change to conserve energy and make investments in energy efficiency signals an increasing awareness and readiness to shift to more sustainable ways of living (Heiskanen 2007).
- Cities and municipalities are supporting modal shifts in transportation toward walking, cycling and public transit as well as new technologies, such as electric vehicles.
- Community and city action demonstrates the success of participatory approaches to sustainable, long-term living and mobility options such as ecotowns, sustainable city initiatives and Transition Towns.
- Promising synergies are emerging for health, equity and well-being through a re-examination of the way we live, eat and move.

The examples of social innovation are often dismissed as an important potential force that could shape a sustainable future due to their niche position. In order to envision how today’s promising sustainable living practices could evolve in the future, the SPREAD consortium, working with a broad group of stakeholders from across Europe, has mapped, combined and projected these practices into the future resulting in four cross-thematic and emerging visions of potential future sustainable lifestyles following the backcasting methodology presented in the next section.

### **3 Methodology for developing scenarios for sustainable lifestyles 2050**

The SPREAD project’s journey to future scenarios for more sustainable lifestyles began by taking stock of existing knowledge on sustainable lifestyles. Through this initial research the existing challenges and barriers to more sustainable living were identified, and promising trends, drivers and opportunities to encourage more sustainable ways of living in the future were identified. The results of this baseline research can be found in our project report, “Sustainable Lifestyles: Today’s Facts and Tomorrow’s Trends” (Breukers et al. 2011).

#### **3.1 Defining sustainable lifestyles 2050**

The next step was to *define sustainable lifestyles*. The SPREAD project used the material footprint measure to define what a sustainable lifestyle could be within the planetary boundaries. The current material footprint of an average European lifestyle is around 50 tons per person, while a sustainable lifestyle should rely on 8 tons of materials per capita. Each of the developed scenarios includes the use of household goods, food and beverages, everyday mobility and tourism, electricity, heating and housing, material footprint of which will have to fit within the sustainable limit. However, the composition of the footprint is different for different people. The share of each consumption domain in the material footprint of 8 tons per person depends on the values, needs and aspirations of the person in question. For example, some people may accumulate more of their footprint through mobility while others move less and would instead prefer living in a larger apartment. Not everyone needs to live in the same way, but – at least on average – everyone must live within this system boundary in order for the sustainable future to materialise.

We have also added two conditions that seem likely to affect the shaping of sustainable lifestyles: 1) limited global crude oil reserves that force production to decline at some point (peak oil) and 2) a limited “carbon budget” of greenhouse gas concentration in the atmosphere.

## 3.2 Scenario methodology - backcasting

The SPREAD Sustainable Lifestyles 2050 project uses a *scenario methodology* to explore the diverse ways for the emergent practices and for potential lifestyle to evolve and how this evolution can overcome current environmental and social lifestyle impacts. Scenarios are not predictions or forecasts but instead seek to explore the most extreme possibilities, in order to help decision-makers plan for the currently “unthinkable”. Our sustainable lifestyle scenarios are stories of possible futures where societies support more sustainable ways of living. The four scenarios present four different pathways towards four alternative societies, in which sustainable ways of living are supported and that suit the diverse needs, desires and cultures of European citizens in 2050. The focus of our scenarios lies primarily in people’s lifestyles. As people live within a society, and within global and local systems, we also identify system boundaries such as, geopolitics, national politics, or technology related to each future scenario.

We have chosen a specific scenario methodology – *backcasting* - to explore different options for new European lifestyle models that encourage sustainable living in 2050. Unlike forecasting, backcasting starts from a desired future vision, by defining what is meant by sustainable lifestyles and setting the definition as a fixed variable, and then identifying events that need to take place at different points in time starting from 2050 and back to the present day (e.g. 2040, 2025, 2015) to ensure that the defined vision will materialise (Robinson 1990). In this way the backcasting methodology addresses one of the main criticism of forecasting, i.e. risk of getting stuck on challenges of the present day instead of concentrating on the future vision (Dreborg 1996). The backcasting method highlights discrepancies between the present day and desirable futures and identifies where the most drastic and even disruptive changes are most needed. Backcasting also opens up alternative pathways to successfully reaching the desired future.

The backcasting methodology employed in the SPREAD project comprised five phases:

1. Defining critical uncertainties for the creation of the scenario quadrants: analysis of findings in SPREAD background research & Delphi survey
2. Defining four scenario landscapes
3. Exploring the pathways to sustainable living in a backcasting workshop
4. Qualifying and quantifying the scenarios and pathways: research & Delphi survey
5. Finalising the scenario stories and visualisations.

### 3.2.1 Phase One: Defining critical uncertainties

In November 2011, a selective Delphi Survey was conducted amongst a crosscutting group of relevant stakeholders. The survey aimed at finding a feasible framework for the backcasting workshop. The Delphi survey questionnaire was formulated based on the findings of the SPREAD baseline report (Breukers et al. 2011), the SPREAD launch conference report and promising practices cards from the SPREAD Visioning workshop.<sup>2</sup> The respondents (40 experts out of 110 invited) were requested to describe a future life they see in 2050. Based on their responses two critical uncertainties in the evolution of lifestyles and societies were identified - the role of technology and the role of governance mechanisms:

- Technology can be either pandemic or endemic.
- Society’s governing principle can be either human-centric or meritocratic.

<sup>2</sup> To be found on <http://www.sustainable-lifestyles.eu/publications/publications.html>

### 3.2.2 Phase two: Defining four scenario landscapes

Four possible future landscapes were identified by combining the two sets of critical uncertainties. The critical uncertainties also defined the main drivers shaping the scenarios and provided the framework for the scenario building and backcasting processes.

### 3.2.3 Phase three: Exploring the pathways to sustainable living in a backcasting workshop

The “Counting backwards workshop” was held on 24-25 November 2011 in Tuusula, Finland. There, four alternative scenario pathways from 2012 to 2050 were created with the help of 54 participants from 16 countries, representing stakeholder groups from start-up businesses to governments, multinational companies, NGOs, researchers, entrepreneurs, designers and independent policy experts. The participants were divided into four groups and each defined an alternative scenario narrative on a development of sustainable lifestyles in Europe between 2012 and 2050. Each group was first confronted with one of the 2050 futures. After that they worked out what would have to have happened in order to enable the 2050 futures to materialise. After this step the groups were asked to fulfil the same task for 2040, 2025 and 2015 until four timelines were created that connect 2050 to the present time.

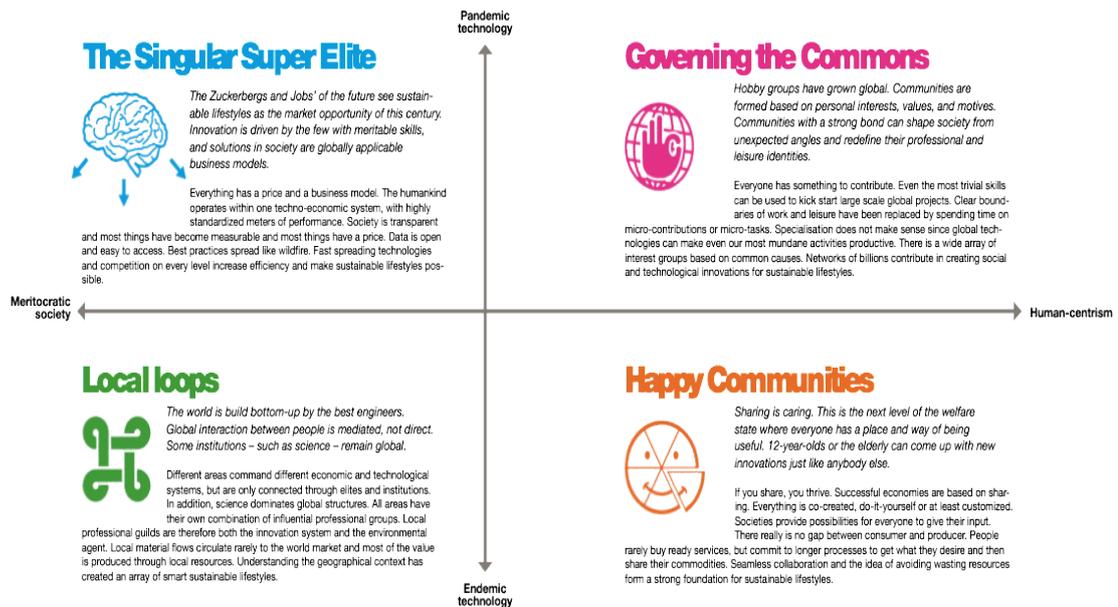


Figure 1: Future Scenarios for New European Lifestyle Models (Leppänen 2012)

### 3.2.4 Phase four: Qualifying and quantifying the scenarios and pathways: research & Delphi survey

The second Delphi survey was formed based on the material collected from the first Delphi round and the results of the backcasting workshop. The aim of the second round was to gather additional assumptions and arguments for each scenario. Like the first round, the second was conducted among a cross-cutting group of 50 experts around Europe. This time, the respondents were asked to comment on a theme of their expertise. Based on the Delphi survey results, new scenario depictions were developed. They were then enriched and tested in the SPREAD People's Forum, which we call “iFuture”. The iFuture reached out to individuals in four European countries in January-March 2012 (Finland, Germany, Hungary and Spain). It connected peoples' aspirations and ideas about “the good life” to sustainable

lifestyles by 2050, where the size of individuals' material footprints does not exceed 8 tons per year. When confronted with today's lifestyles of people across Europe that have material footprint of 50 tons per person and year, one can conclude that drastic changes in lifestyles are needed.

### 3.2.5 Phase five: Finalising the scenario stories and visualisations

In the last phase, the sketched out scenarios were enriched with details, advanced and completed from December 2011 to April 2012. Finally, in March–April 2012, visualisations of sustainable lifestyles from the four scenarios were created and timelines for scenarios were drafted and enriched with 30 examples of lifestyle practices for each scenario.

## 4 Future Scenarios for New European Lifestyle Models

This section presents the main storyline for the four scenarios for sustainable lifestyles 2050.

### 4.1 Singular Super Champions

In the scenario Singular Super Champions Europe has made the leap to a new type of sustainable, competitive and equitable economy: a result of numerous treaties and official goals set in 2035. The leap is supported by the deployment of instruments that radically reformed market conditions that have shaped European lifestyles over the past decades. In 2015, the EU wagered all of its political power and public resources to force companies and consumers into the era of a new sustainable revolution. European nations agreed to remove all subsidies from industries operating with inefficient legacy technologies in the energy and resource intensive fields. All available budgets in the member states are invested in massive R&D centres, demonstration projects and especially in education.

Revolutionising production and cutting subsidies from fuel and many other commodities means that many people lost their jobs. All transportation, and especially private car use became much more expensive and all associated housing costs rose. This created turmoil in declining regions in the 2020s, but the masses were forced to adapt. Simultaneous reforms in welfare provisions due to budget cuts drove many Europeans to migrate and search for income opportunities from thriving metropolitan regions thus speeding up the concentration of the population and sources of wealth.

Big investments paid off: sustainability has become the business opportunity of the century and scientific breakthroughs in material technology made the up-cycling of raw materials profitable. Firms in the cradle to cradle business started to make solid profits in the latter half of 2020s. Consumers are provided with services that continuously upgrade the material products they subscribe for. For some, these upgrade services compensated and replaced their past needs for spacious single family houses and modestly priced cars. Sustainability breathes new life into entrepreneurship and new business models, and people experiment with various aspects of sustainable living at home, saving money and building resilient future.

Europe of Singular Super Champions is a society that celebrates an ethos of learning, entrepreneurship, achievement and self-mastery. In job markets expertise is everything because technology develops fast and the only source of success in the era of resource scarcity is expert knowledge. Everyone has access to basic education, learning and knowledge. But beyond that there is a moral obligation for continuous development of personal and professional skills that drive sustainable societies. Leisure time is spent on

learning and education that is self-centred yet pragmatic. The most affluent people, the Singular Super Champions, have transcended material consumption. Instead of consuming, they make investments in themselves through acquiring new skills, that may help them excel professionally and in their individual lifestyles.

## 4.2 Governing the Commons

Governing the Commons is a scenario where digital reality helps people to break free from many cultural constraints and, eventually, to reach sustainability. Omnipresent computing enables the smart use of resources and redirects people's behaviour and focus of attention from material consumption and their physical surroundings to interaction in the digital realm. People abandon many institutions of the 20th century and liberate themselves in order to lead more meaningful lives and engage in new forms of collaboration. Social networks continue to gain power almost replacing traditional institutions.

The rise of 3D printers made it possible for people to manufacture products based on their own designs at the nearest corner shop, giving them the power to control their own production and consumption. In 2015, 3D technology was seen as something of a niche, but from the early 2030s it has altered lifestyles and businesses permanently. The culture of "self-creation" prevails. It offers endless possibilities to mould and re-create one's identity. People become more careful with their possessions, either purchasing cautiously selected items they like or constantly moulding the same material into new versions of goods. New forms of do-it-yourself manufacturing would not be possible without the rich presence of the digital space. Billions of microchips embedded in machines, walls and pavement bring a new type of data to users and create new opportunities to live smart, sustainable lifestyles through powerful feedback mechanisms.

In the world of Governing the Commons people have found new relationships with their peers from around the world both in virtual and material reality. Learning new skills is easy with all of the information, digitally assisted training tools and peer support. Multi-professional self-employment has replaced a steady income and permanent employment; just like the peer-to-peer service economy has replaced big corporations and their offers. New models of work and wellbeing are formed.

Once people started seeing the collective potential of the new networks of highly skilled self-starters enabled by digital communication, new political movements started to gain power. Networks of interests combined their skills and resources and directly experiment with new solutions. They turned out to be a persuasive power in politics, using more effective instruments than campaigning political establishment for change. Gradually, by combining policy with effective change "in real life" they replaced traditional parties as powerhouses of representative democracy. As a result, the political agenda is largely reformed and political participation is brought back into peoples' daily lives. This type of "wikidemocracy" has revived trust in politics and its capability of changing society towards positive social change.

## 4.3 Local Loops

Local Loops is a scenario in which a radical energy crisis forces societies to re-evaluate the foundations of their well-being. The radical rise of resource prices and oil scarcity leads to increased costs of transport. Citizen unrest in the 2020s as a reaction to these crises forced several European states and the EU to launch new political structures to support the resource constrained reality. The new policies advocate local and regional resource loops and self-sufficiency and found inspiration in transition town and eco-village experiments that had been growing steadily in early 2000s. Not all production of food or energy necessarily happens within the city limits, but cities are encouraged to have management systems that map resource flows and maintain close ties with production facilities creating Local Loops.

In the world of Local Loops scientific knowledge, business expertise and technological innovation is global, but evenly distributed, focussed on user-centred design to produce smart

local adaptations. Local goods appeal to people as their maintenance is easier and as convenient recycling and up-cycling services are in place. This all marks a new phase of glocal culture and glocalisation. Local professional guilds form the core of local innovation systems and competitiveness. They play vital role in politics advocating pro-local legislation and help defining boundaries within which global sustainability is possible.

In their hearts and minds people still recognise their dependence on global networks, but they value local products and culture more than before. Consumer choices become more uniform and traditional, as foreign designs and flavours do not appeal to the average consumer. Also, only few could afford goods produced outside their Local Loop and value is placed on supporting local economies through consumption choices. In the local context, everybody's work becomes more valuable and meaningful. The boundaries of work and free time become blurred as most of free time is contributed to local communities through membership in guilds. Service sector flourishes in the loops and people outsource everyday shores to the local but centralised execution by professionals. This in turn releases time for collaboration and at the same time reduces the material footprint of everyday life at the community level through more efficient use and sharing of household goods and spaces through collaborative consumption. As people spend most of their time in working hubs, collaborating with their guild peers, less space is needed for living than in 2012.

As people live nearby their work, family and peers, most mobility needs are covered by walking and cycling. Cycling routes and walking lanes are in good condition and the easy access to convenient and healthy mobility leads to durable behaviour change. New social norms of staycation and pro-local policies incentivise people to spend their holidays and leisure time close to home. Local tourist destinations blossom and provide competitive and attractive recreational value.

#### 4.4 Empathetic Communities

Empathetic Communities is a scenario about how Western societies faced a crisis they had long dreaded, and how the change turned out to be easier and more profound than anyone had expected. It is a story in which the global economy as we knew it in 2012 fails, followed by paralysis of nation states and their political decision-making structures. When both the economy and national politics were in a state of paralysis, people started organising "Plan B" solutions on local and regional levels. This development pushed forward reforms that helped companies, individuals and local authorities to refocus on nurturing the local city economy. Gradually cities and towns increased their political power over dysfunctional nation states and become the most powerful level of public decision-making in 2050. In Empathetic Communities the many fruits of global culture and advancements in latest technological innovation are enjoyed, although people in general focus on communicating and developing solutions on the city level.

In the early 2020s a new view on human nature started to gain popularity. New scientific evidence emerged about the genuinely altruistic features in primate and human behaviour. The way people perceived their own place at work, in their community, in their families and in city started to change. This led to new principles for collaboration that reformed political decision-making and workplace practices resulting in efficiency gains in organisations and society. The simultaneous decline of nation states and the global economy, together with the new rise of collaborative norms in all aspects of human life, gave impetus to new local governance models.

During the era of high unemployment people started exploring alternative ways to improve living conditions. Hundreds of experiments with local energy and food production, energy retrofitting and peer-to-peer services provision emerged at city level all over Europe.

Gradually these projects grew into larger local initiatives in which entrepreneurs, community leaders, civil servants and local politicians joined forces to build the new foundations for an empathetic city. The infrastructure in Empathetic Communities is mainly the same in 2050 as it was in 2012. However, what has changed is the way it is used. People are encouraged to see the surroundings and physical infrastructure as a shared possession and in active use. This creates new types of (economic) activity and new economic actors emerge: frequent encounters in public spaces create opportunities for ideas and initiatives on new collaborative projects, services and businesses. For example, cooperatives evolve into platforms for local infrastructure, construction and retrofitting projects. Streets and roads built in early 21st century are either transformed to farming land or adjusted to support healthy mobility, such as cycling and walking. There is smart housing design and diverse retrofitting of existing buildings. As global production chains lose significance, local production rises in importance. Food and other necessities are produced and consumed locally, e.g. through urban farming.

## 5 Reflections on enablers of sustainable lifestyles 2050

The four scenarios of sustainable lifestyles 2050 demonstrate the converging ideas and aspirations of representatives of different stakeholders. All visions highlight the importance of education and personal and collective excellence. Three out of four scenarios envision futures where value is placed on collaboration, local economies and self-sufficiency. In all four scenarios values transcend materialism and leisure time is spent on communication with others, self-development or contribution to community or professional networks. Two of the scenarios place leadership into hands of politicians, while the other two believe that the power of people will transform the world.

Several themes emerge as important for shaping and enabling more sustainable lifestyles 2050 that needs to be further researched:

- *Enabling policy environments and the role of political leadership* in initiating, supporting and enabling sustainable lifestyles, e.g. changing the GDP-based pro-growth economic paradigm without consideration for the environmental limits, creating market conditions that encourage sustainable business practices and pro-sustainable innovation, removal of subsidies from unsustainable industries and investments into sustainable R&D and internalisation of externalities.
- *Providing infrastructure* that stimulates and supports changes towards sustainable lifestyles, e.g. the built environment is retrofitted to enable compact living with all needed infrastructure in vicinity; the ICT technology is used to support teleworking and virtual meetings; human-centred collaborative infrastructure that supports local production and access to goods and services; or/and innovative urban and community planning based on participatory stakeholder processes aiming to create better connected communities and sustainable neighbourhoods.
- *Supporting alternative business models* that shape, enable and promote sustainable consumption and lifestyles. Some models could be based on ideas of distributed economies, where businesses and people are driven to produce and consume locally and seasonally and shorten the production-consumption chains. Another option is that traditional businesses could be connected with social entrepreneurs and their value models may bring about more sustainable business innovation, creating a blend of profit and not-for-profit portfolios, transcending public-private sphere and individual-collective dichotomy.
- *The focus on community empowerment* is vital as communities have to take responsibility for local development and context and to lead by example, e.g. by producing products and services designed for collective or shared use and collaboration, thereby helping to reduce the impacts of individual consumption.

Communal spaces may be revitalised and become centres of local culture, personal and collective development, as well as artistic expression. Communities are also seen as becoming self-sufficient, aware and resilient in terms of resources and competence and may become the pillar of the sustainable society.

- *Enabling behaviour shifts and engagement*: a deeper understanding of people behaviour, both consumptive and non-consumptive, and the thoughtful design of living contexts is required to make sustainable options as usual and normal and in order to “nudge” consumers into a sustainable direction. Individual behaviour changes need to be supported and sustainable choices made easy and desirable by a range of options. Feedback loops, monitoring systems and incentives also support people in living more sustainably.

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