



Reinforcing Resilience in an Inter-connected World: Lifestyle Changes in Relation with Science and Innovation

Policy Brief by the Research, Innovation, and Science
Policy Experts (RISE)

Anne Stenros and Riikka Heikinheimo
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Contact: Katarzyna Bitka, Emanuele Barbarossa

E-mail: katarzyna.bitka@ec.europa.eu

emanuele.barbarossa@ec.europa.eu

RTD-RISE@ec.europa.eu

RTD-PUBLICATIONS@ec.europa.eu

European Commission
B-1049 Brussels

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Anne Stenros and Riikka Heikinheimo

Members of RISE

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INTRODUCTION – EMERGING LIFESTYLES

Looking at changes in future generations (Gen Y, Gen Z) lifestyles some significant trends can be identified which will have a major impact on all societal spheres from education to work, from public to private life. Four key lifestyle trends are shaping values, attitudes and behaviour across Europe and the United States by 2020¹:

*First, we are going to live in an increasingly digitalised and **interconnected world** with powerful digital systems providing an invisible infrastructure for future societies. Despite or even because of this invisible character people expect that these systems are not operated top-down and optimized only for efficiency and profit. Instead, they should be inclusive and participatory, promote innovation and well-being, and respond to the needs and wants of all citizens.*

*Second, a shift from a consumer society to a **producer society** is taking place, following open source ideals and practices in every level of the society. This socio-economic system promotes the shared creation, production, distribution, trade and consumption of goods, services, governance and education.*

*Third, in an increasingly complex and unpredictable world characterized by rapid change, people are turning to **the principles of resilience**. Adaptability, modularity, diversity, redundancy, and social capital are becoming key principles to help vulnerable individuals, organisations, communities, cities, and societies persist and thrive amid unforeseeable disruptions.*

*Forth, while the meaning of traditional religious and societal institutions declines, the **quest for purpose** remains central in people's lives. Science and technology provide a vehicle for hope and societal as well as political activism is moving to new forms outside the traditional democratic channels.*

As is obvious from the major lifestyle trends described above, it is not only research and innovation but many other governance areas that ought to be considered when searching for solutions to meet the challenges connected to these trends. Hence, this policy brief addresses not only DG RTD but also an audience that is beyond a single directorate general.

DRIVERS OF DEMOGRAPHIC AND LIFESTYLE TRENDS AND THEIR CONSEQUENCES

The drivers that will have an impact on European lifestyles in the future are dependent on current megatrends and their challenges, namely urbanization, demographic change, climate change, security, digitalization, and the new generations of the Gen Y and the Gen Z, among others.

These trends are not independent from each other, but inter-connected, and cities are the locations where the interferences between them are strongest. Most of the future societal changes and physical, social and economic challenges will happen in the context of the urban environment. By 2025 there will be over 30 mega cities in the world and most of the population growth will happen in the urban context. While in Europe nowadays 78% of the people are already living in urban areas, mega cities will rule the lifestyles and human challenges of the future.

Due to demographic change and other factors, the number of people living in single households is also growing. Today, a large number of Europeans is single and the trend is rising. The accompanying change in lifestyles, i.e. solo living and household atomization, has already started to affect the economy as well as requirements for urban and rural planning and infrastructure, welfare society and policies.

When empowered communities and peer-to-peer networks as described in the lifestyle trends are becoming the basic structure of societies, this has implications for education and work as major spheres of life that societies are based upon. In the changing education systems, inequities based on knowledge and skills might decrease thanks to new modes of (digital) learning. At the same time, there is a considerable risk that the benefits of expanded access to education are not shared equitably. This would lead to a widening gap between educational "haves" and "have-nots".

Further, the extended life expectancy requires an environment integrating the older work force into the labour market in flexible ways, securing knowledge transfer between generations. It is said that

¹ Ville Tikka: Future Trends of Lifestyles in Europe and US. Wevolve, 2013.

in the Post-generation Society, there could be four to five generations working shoulder to shoulder. In Europe, the 50-80 years old will be the biggest age group in the future, demanding the consideration of second careers and the impact of the silver economy. With women having a higher life expectancy than men, educational and economic disparities among the sexes at an early stage of life will be carried on to older age groups. There is a shift in economic participation with a growing female labour force and female buying power giving voice and authority to women. Nevertheless, equal participation of women in economy as well as in science, innovation and technology is still far away and still needs to be a priority for governments. All this calls for increasing people's awareness of the relevance of education and lifelong learning, fostering curious, innovative and adaptable mind-sets throughout all generations and both sexes.

REINFORCING A RESILIENT ECONOMY AND R&I SYSTEM

After looking at some underlying drivers of the lifestyles changes, we now look at their implications for R&I and develop recommendations of how to best deal with two main implications.

As is described in the third lifestyle trend, the core principle that people will orient towards is resilience. Resilience is the capacity to adapt to constant change and to be tolerant against disruptions, and the ability to change and cope with crises and use them for further development. In the future, this is needed as a basic skill and strategy at individual, organisational or institutional, community, city, and societal level. In order to reinforce resilience in Europe's economy and R&I systems, we suggest taking into account the following recommendations regarding a) the growing freelancing economy and b) the new forms of conducting research and creating innovation.

a) Emergence of the Freelancing Economy

Work in the western world is undergoing a radical revolution and re-shaping our understanding of the human labour force. Short-term assignments, project-based work, freelancing and doing many jobs at the same time is not a contemporary situation but a new standard. Vanishing borders and the borderless world is increasing the global workforce mobility and talent flow. In the coming 10 years companies will face a war of talents in the western world, which will even increase in the following decades due to demographic developments. This will put additional pressure on governments to enable international mobility of work forces. As can already be observed, research and innovation communities will be especially affected.

- Recommendation: Reduce hurdles for work force mobility in Europe, especially in the research and innovation sectors.

Creating resilience at personal level requires constantly acquiring and adjusting a personalized set of skills throughout life. For people working in the freelancing economy, these skills will be of paramount importance.

- Recommendation: Emphasize the growing importance of self-management skills, entrepreneurial skills, and highly personalized education (i.e. a personal set of skills).

People are engaging in proactive and preventative lifestyles in order to develop personal resilience and maintain their livelihoods and wellbeing. Among others, this will increase the number of sharing communities and new support systems. The sharing economy, which goes along with the freelancing economy, has already proved its potency across a variety of sectors, including hospitality, transportation, food and education, as digital platforms make it possible to share personal resources. In addition, a new wave of entrepreneurs and businesses is changing the way we think of the business of tomorrow. The new 'value creative' companies are creating scalable solutions that add value for people, business, society and the planet.

- Recommendation: Create conditions that foster the sharing economy and reinforce the development of innovative value creating and purposeful businesses.

b) New Forms of Conducting Research and Creating Innovation

Research and innovation are means that can further develop resilient societies and support socially acceptable transformations of societal spheres (e.g. regarding new societal and political activism). If research and innovation ought to be a mechanism for reducing insecurity in an increasingly fast changing world, the European research and innovation systems need to be highly flexible and provide diverse forms of R&I activities to be able to respond quickly to changing societal demands. Apart from technological aspects affecting R&I, like the digitalization trend (e.g. the Internet of things, 'big data'), research systems are highly dependent on the people conducting research. Hence, research communities need to change accordingly in order to meet these requirements. The

lifestyle trends will also affect researchers working in public research systems, while the systems they are working in tend to be rather slowly in adapting to change.

- Recommendation: Enable researchers to integrate the benefits from trends in digitalization, interconnection, mobility and freelancing as well as sharing economy in the public research systems.

One important factor for creating innovation is the involvement of citizens. When traditional institutions seem partly incapable of solving the ubiquitous and complex problems, individual citizens and innovators will become active contributors. The 21st century meaningful citizen action is powered by digital tools and global communities.

- Recommendation: Increase the role of citizen participation and bottom-up approach in the innovation ecosystem, especially in the case of social innovations.

In order to attain the level of excellence in understanding these complex and inter-connected issues related to the future lifestyle trends and their implications, more opportunities need to be created where the technologies meet art and humanities, e.g. in so called culture laboratories. People from different disciplines but also from different professions should be collaborating and co-creating studies, programmes, and research for the better integration of future technologies and human challenges.

- Recommendation: Foster a network of existing and newly emerging thematic 'Culture Laboratories' throughout Europe.

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The Policy Brief looks at implications of the changes in future generations' lifestyles on all societal spheres from education to work, from public to private life. Four key lifestyle trends are shaping values, attitudes and behaviour across Europe and the United States by 2020: increasing digitalisation and interconnectedness, a shift from a consumer society to a producer society, increase in complexity and pace of change, bringing about the principles of resilience, and the quest for purpose, which is to remain central in people's lives. To reinforce the resilient economy and R&I system, the authors propose the development of measures which can stimulate the emergence of the freelancing economy and of the new forms of conducting research and creating innovation.

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