

Local Loops

Alternative Sustainable Society 3: Supporting 8 000 kg Sustainable Lifestyles

Local Loops is a scenario in which a radical energy crisis forces societies to re-evaluate fundamentally the foundations of their well-being. Energy and resource systems are increasingly seen through “Local Loops”, which is a technical concept that can be applied in the context of local and regional production cycles. People build their lifestyle and ways of belonging around their work, while technology is better adapted through local design solutions, which create room for new kinds of professionalism. A new ethos of craftsmanship and professional communities shape the way people live, organize their work and spend their leisure time.

The dramatic rise of resource prices and the scarcity of oil finally arrives in late 2010s, though it comes as a great surprise to many. Several companies, politicians and citizens were ill-prepared for an era of radical rise of resource prices and oil scarcity. The rise of logistics costs meant a shift towards local production. This makes people view local resources, like soil, in a new light.

As a reaction to the new era of growing resource prices in the 2020s, there was a citizen uprising, which forced several European states and the EU to launch new programmes to re-define policy structures to support the resource constrained reality. The new programmes were based on an idea of “local resource loops”, referring to local regions that are self-sufficient in key resources. These programmes found inspiration in transition town and eco-village experiments that had been growing steadily in the previous decades. This does not mean that all production of food or energy necessarily happens within the city limits, but rather that cities have management systems helping to map resource flows and maintain close ties with production facilities creating a Local Loop with them.

In the world of Local Loops scientific expertise still dominates global structures. The technological and scientific knowledge base is global and evenly distributed. But the emphasis of many businesses and professions is on user-centred design that produces smart and creative local adaptations. In their hearts and minds people still recognize their dependence on global networks, but they value local products and culture more

than perhaps preceding generations did. Consumer choices become more uniform – only a few would buy furniture, clothes, cheese or cereals produced outside their Local Loop. Foreign designs and flavours just are not appealing to the average consumer anymore. This all marks a new phase of global culture and globalization.

All loops have their own combination of influential professional groups. Local professional guilds form the core of local innovation systems and competitiveness. They are also an extremely important force in politics helping to prepare legislation that is based on local resources, medical practices and the boundaries within which global sustainability is possible.

In societies of Local Loops work has a special value, partly because local value chains are very clear. People understand that they are dependent on each others’ skills. This underlines that everyone’s work is meaningful. Others know that they need your work; your work solves common issues. The boundaries of work and free time are unclear.

How are sustainable lifestyles achieved?

People spend most of their time adding value to their communities, which is something they can best do through engaging in guilds as members. A flourishing service sector within the loops helps people to outsource everyday routines such as

cooking or doing laundry, which in turn releases time for collaboration. The centralized execution of the forementioned household tasks reduces the material footprint at the community level, by ensuring there is less food waste and more efficient use of appliances and indoor spaces.

A breakthrough in solar panel technology and efficient neighbourhood combined heat and power (CHP) systems helps to bring carbon emissions of living spaces down. As people spend most of their time in working hubs, collaborating with their guild peers, less space is needed for homes than in 2012. Collaborative consumption is personified as most home appliances are shared amongst neighbours, and are located in the shared spaces of buildings. Realizing that the locally designed goods meet their needs better (technological innovations have focused on local solutions), people prefer them over their international substitutes. Local adaptations are very appealing to people, their maintenance is easier and convenient recycling and up-cycling services are in place.

There is no need to leave one's neighborhood often as people live nearby their work, family and peers. Cycling routes and walking lanes are in good condition and are built around the best possible scenery to meet multiple user needs. This easy access to convenient and healthy mobility led to resilient behaviour changes, nudging people to walk and cycle to get around instead of using cars or other impactful transport.

For holidays and leisure time, new social norms incentivise people to stay close to home. Local

tourist destinations have increased in number and provide desirable recreational value such as local biodiversity reserves or farms producing their favourite food products. In 2050, members of some families might still live in different cities. To see each other, family members may take longer holidays together in one of the local tourism destinations.

Local Loops scenario narrative – how did it all happen?

- » Peak-oil game-changer
- » Rediscovery of local resources
- » Local turn
- » Craftsman attitude

These drivers are depicted as events on the timeline.

What is life like in the Local Loops?

What changes between 2012 and 2050?	
Education	Education is about transmitting and sharing skills. Craftsmanship and specialization are promoted through mutual teaching and problem-based learning.
Work	Work is characterized by engagement with issues and collaboration within and among guilds. Needs met by applying design thinking and formulating local solutions.
City	Cities are multicentred and formed into their own loops. Guilds working and living in the loops lay their own strong characteristics on their loops.
Health	Work places provide health-care and skilled doctors. There are basic rights that all regions agree to prioritize with regard to health-care.
Living	Living in the loops is characterized by shared spaces, existing infrastructure and co-working spaces. Guild members often live in the same neighbourhood
Food	Food production and distribution are marked by locality, minimized transportation and neighbourhood canteens. Energy used for food production is optimized.
Mobility	Transportation is about walkability and cycling. Existing infrastructure is optimized. Intercity mobility is needed less and services are home-delivered. Local tourism and long vacations are favoured by people.
Consumption	Consumption drivers include a mass quest to reduce the overall volume of appliances needed through sharing schemes and replacement services. Products are made with high-quality local materials and design. Availability of foreign goods is limited. All products are repairable.
Economy	The economy is based around local user-centric adaptations and efficient local clustering.
Sense of security	Sense of security is generated through guilds and understanding of how the system, i.e. the closed cycles, work. People identify themselves primarily as part of their work communities.
Leisure time	People have outsourced their housework in order to be able to maximize their inputs in work communities. Leisure time is mostly spent with guild members.

Peak-oil game-changer

2014: Rise in global energy prices and other commodity prices start a new cycle of indebtedness for many European countries. This impacts upon people's lives in the form of soaring interest rates as well as more expensive food, transportation and electricity prices.

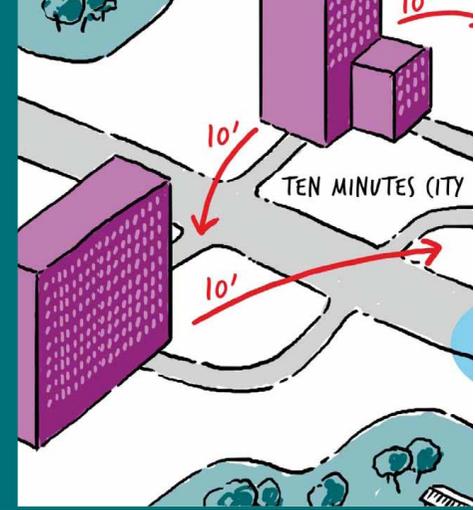
2016: Many seminars debating the European debt crisis concern themselves increasingly with the revealed link between a country's high energy dependency and public debt.

Some of the large districts here in Amsterdam are completely car free. This means I can enjoy it either by walking or cycling better than ever before.



2018: Several European countries reform their economic policies and governmental structures. After the reform, energy and natural resource policies form the core of economic policy.

I thoroughly enjoy living in the "ten minute city" that we have here in Stockholm! I don't have to worry about spending time in transit as all the services I need are just ten minutes away.



Rediscovery of local resources

2015: The first reports are published citing untapped local resources and emerging technologies that present new opportunities for community self-sufficiency.

2017: Twelve European cities publish a joint initiative on the "Local Loops Economy" based on the earlier 2000W society initiative that aimed at energy independence. Each of these cities starts implementing the initiative with their own programmes and defining measures and standards for the fields of building, energy and food.

2019: Groups of companies and universities join the Local Loops Economy initiative and announce the creation of partnerships where the cities develop and test new technologies and service models that support Local Loops.

Local turn

2014: European Parliamentary elections catalyze a series of new expressions on long term goals for the region of what the EU is all about. Several parties campaign with slogans and topics that highlight the EU as a safeguard that secures progress that is embedded in local resources and traditions.

2019: In Germany, some progressive cities with well-travelled international populations start a movement of cyber-localism that celebrates global culture and technology together with traditional ways of building and agriculture.

Craftsman attitude

2015: A group of workers in Ireland launches the New Craftsmanship-Index to measure employee engagement, motivation and a sense of usefulness and purpose in their work.



I've heard about this new type of craftsmanship culture. Apparently it has emerged recently and has started to define an era of user-led design. It looks like a good thing, as the majority of appliances, clothes and furniture are locally produced yet they come in diverse designs fitting different user groups.

"For my husband and me, leisure means visiting one the Local Gastronomy Guilds around, who are reinventing new recipes from local seasonal food."

2015



2023: Oil prices continue to rise beyond belief, pushing great numbers of logistics companies out of the market or forcing them to sell their operations to the few remaining large ones. As a result, a small number of firms dominate transport markets in many countries, which ultimately leads to significant price increases.

2023: Oil prices become very volatile, new peak prices are reached in four consecutive years and there are occasional supply shortages. These drastic price shifts persuade people to start exploring more local and secure production alternatives.

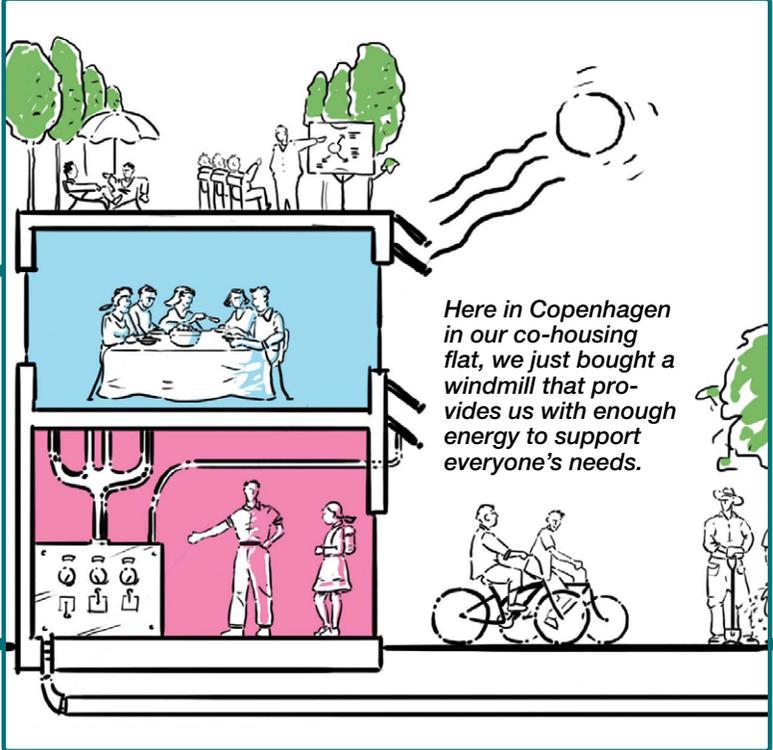
2025: The financial market system is in turmoil, resulting in a new wave of bankruptcies and bailouts of big companies in strategic sectors (logistics, banks, construction industry and retail).

It's hard for me to find coffee in stores nowadays. Instead, I drink good varieties of coffee substitutes that have been developed using modern technology.

2021: A number of regions and even some nations have managed to make their building, energy and agricultural sectors self-sufficient through local resources.

2024: A new field of research that models local ecosystems and the spread of technological applications between regions emerges in Latvia.

"Local food only" towns attract plenty of attention with their vibrant markets and rich food culture.



Here in Copenhagen in our co-housing flat, we just bought a windmill that provides us with enough energy to support everyone's needs.

2023: A group of top European universities opens satellite campuses in Lusaka, Bamako and Bogota supported by their home cities and by some of the world's biggest companies in mining and farming. The intent is to secure the universities' role as places of social and technological innovation since previously existing global systems and technological regimes are eroding. These new universities are seen as a way of adapting some of the most long-lasting global structures, like science, to the new era of localism.

It amuses me that just a while back, there were so many inefficient appliances on the market. Nowadays, it's such a pleasure to go and buy a new refrigerator, since I know all of them are high-quality and consume very little energy.

2025: Leading economists in Slovenia launch the concept of the "Guild Economy" that builds on findings concerning productivity gains provided by strong guild-like structures present in many neighbourhoods in European cities.

In order to get a master degree of social sciences from the university, I have to complete a two-year professional internship. I have to admit that this puts some pressure on me.

2020

2025

Peak-oil game-changer

2026: People start to look for towns and cities that are capable of implementing smart adaptation plans that help their inhabitants cope with peak-oil better than people in other parts of the country.

2028: There are no safe havens for investments now that countries agree on limiting and regulating trade in commodities derivatives. The volume of trading on the global financial markets decreases.

2029: It is a widely accepted fact that the era of oil and modest energy prices is over.

I love living in my Danish town. We haven't had to worry about buying energy in ages. I know lots of other towns that enjoy the same situation.



Rediscovery of local resources

I enjoy living in these brand new blocks made out of the finest wood in Europe. Construction companies in our region here in Western Austria have a well-known tradition in wood architecture to draw upon.



Guild Canteen where Guild members enjoy their lunches and dinners

"This is our Guild Canteen. It's where we usually get our meals. It is also here that we have our shared refrigeration space and equipment."

2029: In Northern Europe the number of villages that are self-sufficient exceeds the number of those that are based on centralized energy solutions.

2030: The European Union re-defines its structure based on an idea of "local resource loops", referring to regions that are self-sufficient in key resources and that operate within the same local technological paradigm.

Local turn

2026: Some universities are restructured around an idea familiar to design. This design-thinking is about applying the best available knowledge to local conditions.

We take pride in supporting local design and goods.

Repair and upscale services are something I use almost every month. I've had my video projector for 10 years now, since I know I can get the best possible maintenance for it.

2030: In many European countries, national governments have delegated a substantial part of their budgeting power to cities and regions that have great freedom to decide on how to build new infrastructure, provide public services and define levels of taxation. However, there are certain EU-wide goals and minimum requirements that regions have to meet.

Craftsman attitude

My guild takes care of all my health care related practicalities. They ensure that both diagnostics and treatment are preventive in manner.

2027: The Guild Economy speeds up the rise of a new movement in urban planning that focuses on creating dense working-living "ecosystems" that inspire the formation of guilds.

Our employer hired a professional who takes care of our children while we work. This allows us and our kids to be in the same place all the time.




Equipments for local production

Local design and production workshop

"My eldest daughter was always hanging around the clothes design guilds' workshops and now she's doing her apprenticeship there. She wants to enter the guild that's produced most of the clothes I wear."

2030: European education policy recognizes guilds as part of the education system and guarantees them the right to give degrees that can be considered equivalent to MA and PhD -degrees.

2030

2032: People increasingly put their money into land and property that they themselves or their families intend to use. Specifically in Italy, people are very excited about this return to local values.

2034: Adaptation to new conditions after peak-oil happens quite unevenly – not only because some countries and regions have more resources, but because some benefit from better starting points than others in terms of natural resources, previous experiments, or more agile innovation systems.

2035: Some nations and regions benefit from the decline of global markets. Many resource-rich but previously underdeveloped African, Asian and South American nations have been able to collect investments and taxes from international companies harnessing their resources.

2035: A number of forerunner regions in Europe, China and the USA have been able to develop well-functioning local energy and food systems. Many of them are practically energy independent and have replaced many energy-intensive import products with local, less energy-intensive ones (e.g. concrete and steel with timber and stone as construction material). Northern Europe is a prime example.

An old friend of mine now works as a local adaptor. He knows a lot about global mobility solutions and brings them into the local context very well.

I work as an expert in solar panels that are best suited to conditions here in Spain. I just got an invite to join the best guild of my profession.

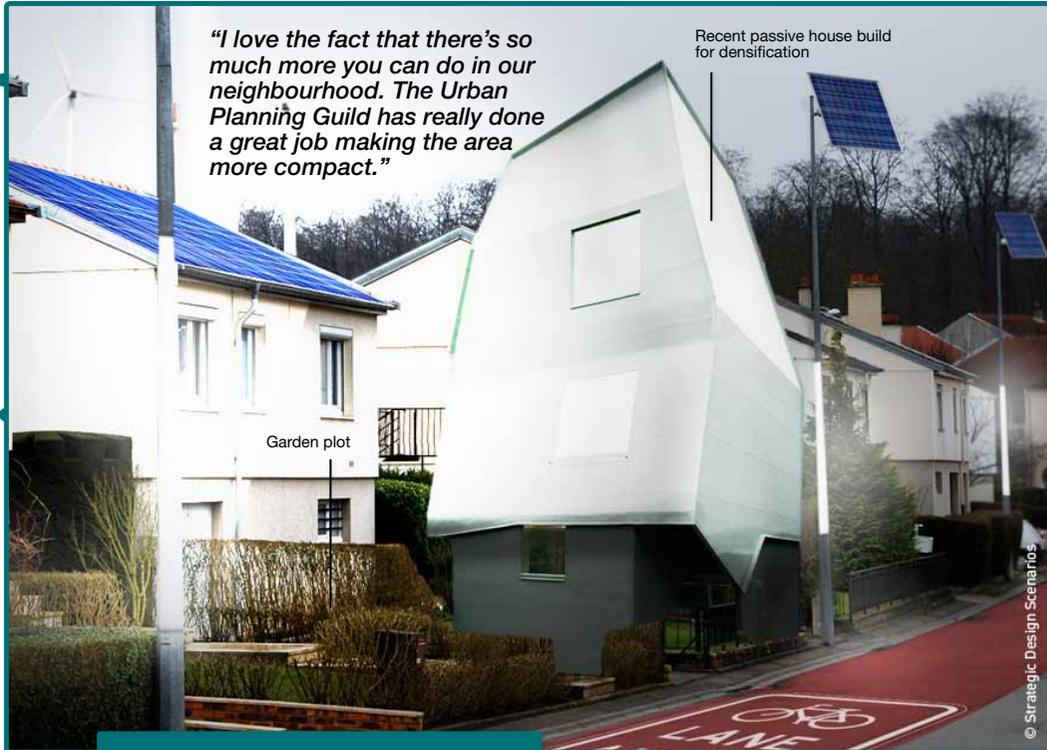


2034: While the transition to local distributed energy systems and the use of local construction materials is well on its way, creating reliable local food/nutrition systems seems to be much more difficult.

2035: In France, the number of people working in farming has increased due to the slow development of new agricultural methods based on local resources. This is one of the reasons why food prices remain high.

"I love the fact that there's so much more you can do in our neighbourhood. The Urban Planning Guild has really done a great job making the area more compact."

Recent passive house build for densification



Garden plot

My husband and I wanted to get a blender. We managed to buy a very good Spanish one from a local company that had customised it to fit well with our Slovakian ingredients.

At 78, I still work 4 hours a day at our office. Most of my work there is evaluating projects and talking with my colleagues. Training programmes, diets and different types of medicine have helped me retain my mental vitality.



There's a new bicycle route that just opened outside the city. It allows me to get to the local winery and appreciate the scenery here in Bavaria. We typically try to leave the city for long weekends.



2035

2031: More and more people live in the same neighbourhood with other members of their guilds. Less space for living is required as many appliances are shared and provided by the guild for large group of people.

Peak-oil game-changer

2037: The EU is putting more power and resources into transferring knowledge in the field of "Local Loops management". However, the global economy has been stagnant for over a decade, unemployment is high in many European regions and the power of national governments is eroding even as there is less public resource to invest.



I have allocated a set amount of money each month for expensive foreign products, such as coffee and tea. Prices are high, as the transport market is dominated by a few global companies.

2040: Many countries that used to have a low standard of living have managed to raise the general level of their infrastructure, education and health care. This encourages many professionals from the developed world to migrate to these countries as international markets start to decline. The skills gap between "developed" and "developing" countries and regions starts to narrow.

2040: After years of negotiations, cities agree on a new global financial regime based on local currencies and tangible assets such as energy, strategic minerals or skills.

Just last year, we managed to turn some old city railway tracks into state-of-the-art bicycle lanes. Cycling is a pleasure in Bratislava now!

Rediscovery of local resources



I can quickly move within cities and between different areas of the cities inhabited by guilds with the new Superbus system.

2042: A new global treaty on the openness of research is negotiated. It defines the new thinking on science and technology, highlighting the benefits of the traditional virtues of science (openness, freedom, tentativeness...) and of the open-source approach to technology while at the same time bolstering a technological regime in which most technological applications are very local.

Local turn

2036: Cities agree on global evidence-based frameworks for regionally implemented policies on such key issues as health, environment and safety.



All workplaces in Sweden introduce a happiness index to measure employee satisfaction. This leads to a more fulfilling work environment and starts to reshape Swedish work culture.



My guild bought me a service robot that takes care of cleaning and cooking so that I don't have to.

Craftsman attitude

In the area I live in, lots of workshops and workplaces have disappeared as there are many people here who don't belong in guilds.



Green doorkeepers are a specialized guild that controls, monitors and ensures the energy efficiency of buildings and blocks. They serve as links between the neighbourhoods.

2040: 2/3 of the population live in neighbourhoods that are defined according to a profession and a guild. These neighbourhoods also form the basic political units that have the right to elect their own representatives to regional council.

2040

Inter-generational furniture is a new design trend that promotes local design that lasts for generations. It's easy and cheap to re-assemble and adaptable to a user's needs.



2043: There is still a significant amount of global trade in energy, food and other basic commodities, but compared with levels in 2012, many of the most flourishing regions do not import many tangible goods. In these regions a discourse on the “crisis of 2020s” is already part of collective memory as people consider themselves to be part of a new era of development.

2044: A global guild of scientists is formed, with the right and duty to secure that technological knowledge is spread evenly across the world.

2046: Many Europeans feel that currently the EU is an interim solution on the way towards global government.



2044: Technically, people are still citizens of a nation. However, national politics is understood to be a ceremonial tradition that reminds citizens of such values as democracy, equality, freedom and solidarity.



My daughter just set off on her journeyman year to Bucharest to work in a local construction company. She's taking the international train.

2045: People spend much of their leisure time within their own neighbourhood. They work long hours and often see their fellow guild members as their closest friends.



Tomorrow, our guild will set up guidelines for zero net energy in construction. Our guild has the most expertise in this issue and our guidelines are expected to become the basis of legislation to be passed later this year.

“I met my husband when I was doing my internship at Energy Saving Doctors, one of the town guilds for energy preservation and production. It was easy to find an apartment for our family. Now we have access to convenient lodging connected to our workspace.

2045

2050

Gatekeepers for lifestyle changes



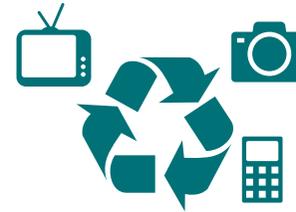
Food, energy and construction companies

...focus on local alternatives and local markets to offer secure choices.



Profession specific networks and associations

...acknowledge their capacity and influence as experts and networks who have a shared responsibility to society.



Appliance industry

...turns towards business models that take local context into account and include repair in their products.

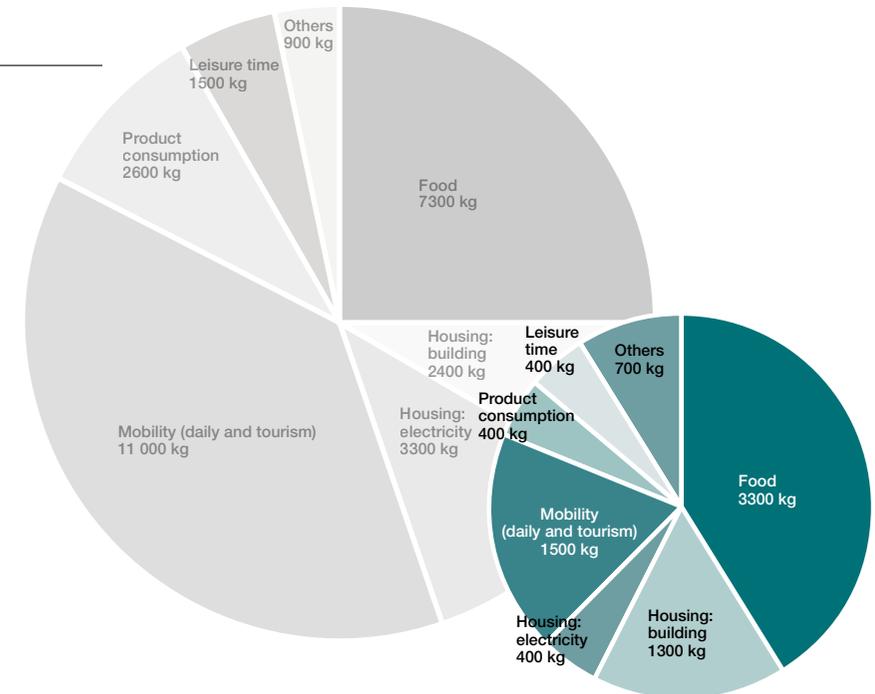


Service industry

...leases products that were previously available only as purchases and creates a leasing economy.

Six-pack of most influential lifestyle triggers

1. Extremely high energy and food prices persuade people to focus their choices on local and secure alternatives.
2. Tight workplace and neighbourhood-based communities enable and encourage people to share spaces and equipment. The need for living space is reduced.
3. People live close to their guild peers. Ample service options mean minimal need to commute outside the neighbourhood.
4. People prefer appliances, furniture and clothes to be sold as services. Maintenance and adaptation services are improved and they significantly prolong the lifecycle of products.
5. Consumers can no longer make mistakes: policies built on scientifically backed environmental and health objectives eliminate bad choices.
6. People eat out more. Better food services ensure a healthy diet, adjust portions to optimal size, eliminate food waste and help people focus on their work and social life.



The average material footprint of a European in 2050 in the Local Loops scenario (8000 kg per person in a year) compared to the average material footprint in 2007 (29 000 kg).