

# Dare to imagine a better future... starting with plastic



Imagine, if you will, for a second.  
You just woke up in the year 2040.  
You look around and it all looks just... normal.

**But is it really?**



**Y**ou notice the air is fresher and cleaner. It's free from microplastics and other pollutants thanks to the change in the way people move and travel within urban areas, brought about by legislation passed a couple of decades ago which moved most motorized traffic out of cities. Those few cars that still circulate use specific tyres which do not tear and wear down easily. As a result, the emissions and the levels of tire dust in the air have plummeted, the air quality has improved and asthma is on the decline.

The apartment in which you live is built with renewable, healthy, repairable, and reusable construction materials. Besides being extremely comfortable, with the room temperature never dropping below 18 or going over 28 degrees, your home has an incredibly good air quality thanks to the absence of fire retardants in furniture, curtains, carpets and other toxics that were previously used in furniture decades ago.

Thanks to the food policies adopted in 2025, 75% of the food we consume in cities is now grown in urban and peri-urban areas. This move was the catalyst for a silent revolution in the food and packaging sector, due to the fact that local fresh produce needs less manipulation and added ingredients to preserve them, and can therefore be delivered with closed loop reusable packaging systems or not packaging at all. For instance, juices previously made out of concentrate, sugar and preservatives have almost disappeared off our shelves and instead, they are all made out of seasonal and local fruits and vegetables, bottled in reusable glass bottles that are part of a closed circuit. The local production of veggies, grain, fruits, meat, fish, mushrooms and more is perfectly integrated within a system of local reusable packaging.



AQUAPONIC CITY FARM

URBAN GARDEN

COFFEE GROUNDS FUNGI FARM

FRESH MUSHROOMS

THE PLANT PROJECT

THE PLANT PROJECT

COFFEE GROUNDS

COFFEE GROUNDS

COFFEE GROUNDS

**A**s a result of shortened supply chains, together with social and technological innovations, single-use packaging has almost disappeared and with it most of the associated negative health, environmental and economic impacts. Packaging doesn't become waste anymore as it is constantly reused and when after many cycles it breaks it is safely recycled. Nowhere in nature is single-use packaging waste littered, all that remains is the legacy from previous, crazy, decades which is slowly being cleaned up. The costs of the ongoing clean-ups are paid by the industry who put these items in the market two decades prior. A side effect of moving away from single-use to reusable packaging is that today's packaging has such a value that manufacturers and retailers are interested in not letting the packaging go to waste, creating closed-loop collection systems and incentives to ensure that they will get them back after every cycle. As a result, the waste collection costs formerly shouldered by municipalities don't exist anymore and with them went all the garbage trucks that in the past were collecting this waste, resulting in local authorities having freed budget which can now be invested into key public sector areas such as education and healthcare.

The shortening of supply chains has not only had a positive impact on packaging waste, it has also considerably reduced food waste throughout the value chain. Another side effect has been the possibility to fully trace food and packaging which has pushed preservatives, sugars and saturated fats out of food. As a consequence, a number of non-communicable diseases such as diabetes, cancers and diseases linked to endocrine disruption are back to the low levels we saw 100 years ago.

The packaging that we own is made of different materials, glass, metal, cloth and more, depending on the function they have to serve within the economy and the local availability of the materials. With your packaging, one can go to purchase food, drinks, cleaning products or drugs in bulk. The system is simple; we take along our packaging to those shops or markets where we can buy in bulk, we take them home where we store them directly or proceed to transfer them to more suitable packaging for home-storing. Moreover, there is also the possibility to have these goods in bulk delivered at home. This delivery system consists of a refilling structure that provides produce stored directly in our own packaging at home before it is used, as well as a distributing concentrates for soaps and detergents that only need to be mixed with normal tap water to do their job.

The other kind of packaging in existence today is the packaging that we rent or pay to use. This kind of packaging is what we use when we purchase goods in supermarkets or we do our shopping online. It consists of packaging made of different materials but plastic is still the most common. No packaging is disposable and those which are made of plastic are durable, safe, recyclable and will go through more than 100 cycles before undergoing high quality recycling. The system is simple, now that cash has disappeared from our pockets. When we pay with our mobile phone or virtual wallets, the cost of renting the packaging is automatically



added to the bill. The system is 100% traceable and will recharge the money or other sorts of incentives into our accounts when the packaging is returned for cleaning and refilling. Once we have used the packaging there are three ways to return it, all of them preserving the value of the material:

- We can bring the used packaging along the next time we go to the supermarket or shop, where we will receive a compensation for the effort, be it in the form of a deposit refund or getting an extra discount or reward;
- We can drop the used packaging in special kiosks that one can find all over the city. These kiosks collect the used packaging and stores it until, when it is almost full, an operator comes to empty it and takes it to the cleaning and packaging center. Thanks to the deployment of new technology, the moment we drop the packaging in the kiosk our account receives the deposit and/or rewards;
- We can trigger a system of reverse logistics which collects the packaging we have used. This system is connected with our home network which sends a sign when we arrive so that they can come and load us with whatever we need and empty our "reuse bin".

All the plastic in the market is under strict control and the quality is assured by an independent body which, since the number of plastics in use has reduced to a few safe polymers and additives, guarantees its traceability and recyclability. The industry continues to innovate in materials and delivery systems but the entrance to the market of materials is a lot more controlled and we don't need to be worried about the toxics that our children might be ingesting when drinking a glass of warm milk before going to bed. In the end, the solution didn't rely so much in material innovation and finding new polymers, but rather in rationalising the use of those that we already knew and innovating new forms to distribute and consume products.

Despite life not being as frantic as it used to be 20 years ago, many people still want to eat and drink on the go and for parties, events and festivals; this is a sector that moves a high volume of packaging. With systems that resemble those already mentioned for home supplies, cities and local municipalities took the initiative to legislate that all businesses which offer food & drink to takeaway should work with reusable packaging. Some of these reusable systems work with the old but effective system of deposit return schemes, whilst others work with systems of incentives and rewards to return the packaging in exchange order to receive discounts and be included in other loyalty programmes locally.





**DEPOSIT RETURN SYSTEM**  
FOOD & DRINK CONTAINER

REDUCE  
REUSE  
RECYCLE  
**R**

RECYCLE  
HERE  
**R**





**B**eyond packaging, single use plastic for normal applications is almost non-existent. Hygiene items, from wet towels to tampons and nappies, mainly operate with reusable systems. Menstrual cups and period panties with their sterilization infrastructure represent more than 80% of the market today and have allowed many girls in impoverished countries to continue attending school despite menstruations. Thanks to incentives created by the legislation regarding extended producer responsibility, disposable nappies have been replaced with laundry systems that collect clean nappies and distribute them locally which has created jobs, phased out waste and reduced the exposure of babies and the elderly to harmful plastic.

The release of microfibres from synthetic clothes coming out of washing machines has been reduced by more than 95% thanks to changes in the business model of the textile sector towards circularity. For example, today most of our clothes are rented instead of purchased and the fabrics used in clothes are better designed so as not to decompose as easily. Moreover, the extended producer responsibility legislation obliges the producers of washing machines to install filters in the exit valve of the machine. As a result, the clothes are of better quality, more circular and the release of fibers into the environment has almost completely stopped.

The pollution associated with toxics in plastics for durable applications has also been radically reduced thanks to innovation in the field of chemistry and physics. For instance, mattresses and sofas no longer contain fire retardants whilst their fireproof properties are better than before. Technological and social innovation has made it possible for this new generation of mattresses to be built using only one polymer, without fire retardants which therefore allow for high quality recycling at the end of life. This has rapidly increased the value of these products so that producers do not sell them anymore, since they prefer to simply keep the property and instead opt for rent and leasing contracts.

In 2040 the world keeps turning, population growth has stabilised, the income gap has been reduced and people, services and, above all, ideas, travel and are more free flowing than ever before. The trade of goods and commodities has reduced due to the shortening of supply chains and the circular economy, which have provided more local jobs, increased resilience in communities, lowered the levels of pollution, resulting in a more equitable income distribution system. This is largely a consequence of the fact that the profits and taxes, which previously used to escape to the pockets of multinationals registered in fiscal paradises, now remain in the communities where they contribute to the local community's welfare. As a result, despite being 2.5 degrees Celsius above the levels of 1995, the planet starts to recover from what is known in history books as "the wild 50", the 5 decades (from 1980 to 2030) in which humankind reduced biodiversity by 90% and used the carbon budget of the whole 21st and 22nd centuries.

The production of plastic in absolute terms has decreased; the forecasts of growth from 20 years ago have proven to be wrong as new business models and new ways to organise

production were implemented beginning to change the rules of the game. Plastic has finally become a circular material which is almost sustainable, as the new generation of plastics are produced using recycled and sustainable bio-based sources. Thanks to this circularity and to the advancements in modern computing capacity, it is possible to know in real time the stock of every type of polymer that is circulating in the economy which allows for a perfect planning of the material flows. Such traceability has provided confidence to consumers about the safety of plastic and people today act with confidence in the knowledge that this material will not pollute their homes or their food.

The flame of the fossil fuel industry is fading away due to the mountains of debt these organisations accumulated during the years of over-investment in big refineries to produce plastics for which demand vanished. Plastic pollution in the oceans and the climate crisis is the heritage that has been left from the era of fossil fuels. Combustion belongs to the past; mobility, lighting, heating, computing are all today run with electricity produced from sources that are renewable and decentralised, most of it produced very close to where it is consumed. Plastic incineration, like coal burning, and any sort of plastic to fuel is about to disappear and recycling is the lowest level in the waste hierarchy. The cycle of materials is almost closed.

Now wake up, we are back to 2020. How does it feel? Does this sound too utopian? More utopian than continuing with the current model? What other scenario can you imagine that would be better yet realistic than the one I just painted?

The scenario I just described is technically feasible, in fact, most of the solutions of this utopia are already working today at small scale, the only thing that we need to do is make it happen. As Abraham Lincoln put it, "the best way to predict the future is to create it." If there is something that we have learnt from history, it is that what separates utopia from reality is, simply, the political will to make it happen.

**By Joan Marc Simon**





MILK

REUSABLE NAPPIES

SUSTAINABLE CLOTHES

ELECTRONICS REPAIR CENTER

BIKE SHOP

REUSABLE NAPPIES  
HERE FOR  
YOUR BABY!

COME IN AND  
HAVE A  
LOOK



## CONTACT US

Dare to imagine a better future

Zero Waste Europe

[news@zerowasteurope.eu](mailto:news@zerowasteurope.eu)

+32 (0)2 736 20 91