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#ZeroWasteCities

The Zero Waste Masterplan

Turning the vision of circular economy into a reality for Europe

Brussels July 2020

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Foreword

Dear reader,

The pressure on cities keeps increasing every year. Local governments have to manage systems under stress and this tension is becoming increasingly clear to many. I see major shifts happening across various industries and sectors around the planet, with city planners facing the challenge of adapting to this fast-changing-world.

Europe is finally moving away from waste management, with industry and policy-makers now increasingly understanding the urgent need for a new approach: resource management.

The shift “from waste to resources” has become a critical issue for cities as it simultaneously impacts economic, social and environmental agendas. In rural areas, the need to preserve agricultural systems, local jobs and community resilience is greater than ever. Our communities’ future is at stake.

> **Cities are where the climate battle will largely be won or lost.**
>
> **António Guterres**
> UN Secretary General

While gloom often dominates the media narrative, I see positive change happening everywhere. Technological, societal and economic drivers are shifting the narrative to force communities to perform in a fast-changing world. The pace of innovation is so quick that it can easily disrupt public services and regulations.

However, I see the sharing economy is re-building the “social fabric” of our neighborhoods, whilst the circular economy is creating the material banks that our social fabric needs to relocalise production for us citizens to regain ownership of our future. Awareness of our environmental impact has now become mainstream and people are ready to seize opportunities to move towards smarter and healthier lifestyles.

More than ever, leaders will be successful if they give their community a sense of purpose, a vision to follow and the right tools to perform in this new economy.

If you think that the changes of the last decades have been big, then start preparing yourself for what will come in the next 10 years. The COVID-19 crisis provides a glimpse of the changes we will experience and will become commonplace in the years to come.

What we need to do in Europe is as necessary as it is unprecedented; changing the way we produce and consume in order to radically reduce our emissions whilst simultaneously increasing our quality of life and the resilience of our communities. The next 10 years will set the foundations for achieving a new economy that is local, decarbonised and resilient. The goal is not only to stop being a burden on our planet, it is to replenish it with life and resources. A laudable goal indeed, but how do we get there?

At the EU level, both the public and private sectors are regrouping around the concept of “a transition towards a circular economy”. A circular economy is one that does not waste or pollute, an economy that keeps products and materials in use and rebuilds the natural capital of our ecosystems. The term is now on everybody's lips and we all seem to agree on the true potential of a “Resource Efficient Europe”. The vision of decoupling growth from resource use is now prevailing in Brussels with various supporting pieces of legislation set in motion by the EU. Yet, the challenge remains on how to translate and implement this vision at the local level.

For this reason we are very proud to release the second version of the Zero Waste Masterplan: a vision for the what and why of zero waste. In this updated and extended Masterplan, we outline what exactly we mean by zero waste, its history and how it defines a vision for the future.

The Masterplan is designed for municipality officials, policy-makers, zero waste activists, community leaders, waste professionals and city planners seeking to drive an ambitious transition in their city on one - or several - of the following themes:

- Solving a waste crisis or transitioning the system from focusing on residual waste management to circular resource management
- Creating opportunities for entrepreneurship, local businesses and jobs to flourish
- Mainstreaming smart, sustainable and healthy lifestyles
- Phasing out toxics and emissions from products, services and infrastructures
- Building resilient neighborhoods and strong communities, helping citizens reconnect with each other

Whether you are “in-office”, already working on waste, drafting a local zero waste campaign or building a community movement, the Masterplan provides you with the necessary building blocks as you prepare a zero waste plan for your community. It was designed as your first step on the road towards zero waste. At the end, we outline the further tools we have created that dig deeper into the detail of how to implement a zero waste plan in your community.

We hope this resource will help you and your community move towards zero waste.

Best regards,
Joan Marc Simon
Executive Director, Zero Waste Europe

From “Waste Management” to “Resource Management”

Our Planet has always followed zero waste principles. For thousands of years, until the industrial era, waste was not a developed concept because most discards from civilisations were used as inputs for other processes, retaining the value of a material in a circular way, just like nature does. But, what nature has done through evolution, humankind today needs to do by design.

We have now come to realise that we need to rethink the way we produce and consume in order to create these ecosystemic relations, which preserve the value and energy embedded in resources whilst enabling civilisation to flourish and prosper. Zero waste is not only about decoupling economic activity from environmental destruction, it is above all about building resilience and natural capital for future generations.

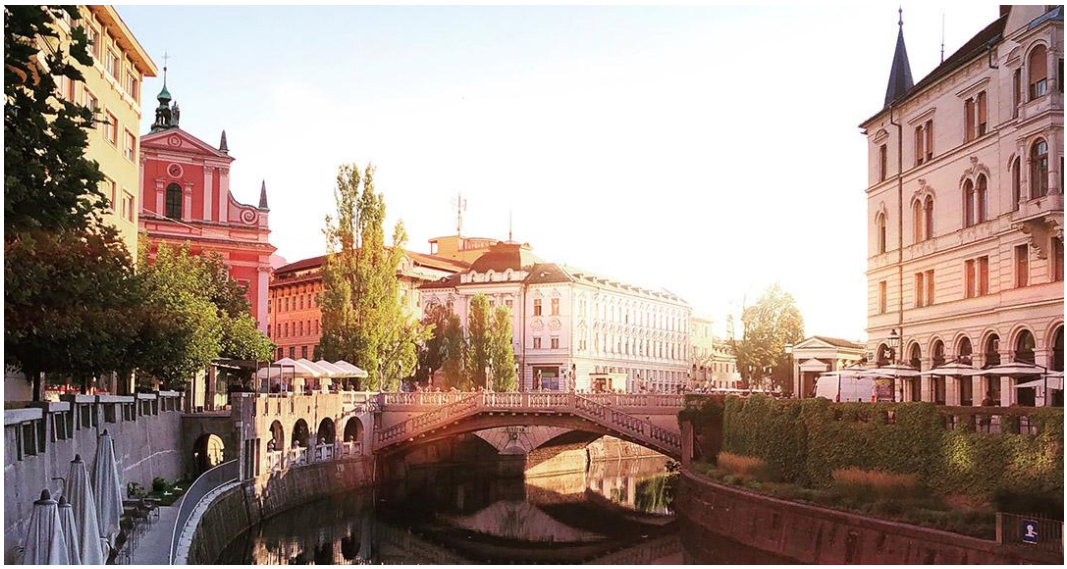
During the late 20th and early 21st century, the modern waste management model in Europe was characterised by cherry-picking the valuable materials in the waste stream and sending the rest to newly built incinerators. Only 30 years ago a separate collection rate of 25% would have been deemed unachievable anywhere on the continent. As a result, big incineration capacities were built in Austria, France, Germany, the Netherlands and across Scandinavia.

Today we know that waste prevention and new business models can reduce waste generation by 30 to 50%, that separate collection rates can reach 90%, and that separate collection of biowaste makes not only environmental but also economic sense. Consequently, one can observe a transition from the 20th century model: expensive, highly

centralised and inflexible infrastructure, to a zero waste one: effective, decentralised and flexible systems which allow for progress to continue as society evolves and technologies improve.

The success or failure in meeting European prevention and recycling targets will depend on how local authorities implement waste policies. Municipalities are hubs of innovation and action, which means they are amongst the best placed to fight waste and drive the transition towards a European circular economy together alongside their citizens. Over the last few decades cities have opted for different models, some of them are future proof, but some of them belong to the past.

If we compare data from the old reference cities for waste management and we benchmark them against the new front-runners following the zero waste model presented in this document, we can see that the difference in residual waste sent for disposal is more than substantial. Looking at just one comparison, we see that the city of Vienna is generating almost 3 times more residual waste than Ljubljana and 6 times more than Treviso.



Picture 1: Ljubljana is Europe’s first zero waste capital. After 10 years the total waste generation decreased by 15%, the average of recycled or composted waste went up to 61% and the amount of waste sent to landfill decreased by 59%. As zero waste goes beyond mere waste management, the city has enhanced its waste prevention activities and set the ambitious target of halving its residual waste by 2025.

In the 20th century the purpose of waste management was to minimise the immediate environmental damage through collecting waste and disposing of it in the least environmentally harmful way. Zero waste brings us into the 21st century by shifting the focus away from waste management to proper management of our Earth’s valuable resources.

ZERO WASTE MEETS CITY PLANNING

Cities and municipalities, working in partnership with stakeholders from the community, hold the key to unlocking the potential of the circular economy in Europe. This is who the Masterplan has been written for, to be used as a tool to build knowledge on the practicalities of zero waste at the local level and turn the vision of the circular economy into a reality.

BEST PRACTICE

The Story of Capannori

Italy

Capannori, Italy

Back in 2007 Capannori (Italy) was the first European town to declare that it would pursue the zero waste goal. The project was initiated by Rossano Ercolini, then leader of a local group and now Director of Zero Waste Italy and President of Zero Waste Europe.

The city has been paving the way for an international movement that has continued to expand ever since. With hundreds of lessons learned, strategies and tactics tried and tested, their experiences were aggregated and structured to give birth to the Zero Waste Masterplan, thanks to the work of several pioneering cities and their local groups.

READ THE STORY OF CAPANNORI

And have a look at the other Zero Waste Cities best practices.

What is zero waste?

PART 1

Waste is one of the meta-problems of today's world and is something that we all generate and manage on an everyday basis.

However, we cannot fix the waste challenge by just cleaning the mess or by better managing waste. We need a new approach that goes to the root of the problem to redesign our relationship with resources and rethink how we produce and consume, focusing on the way we take decisions collectively.

This new approach is zero waste.

Zero waste is a goal that is pragmatic and visionary, local and global. Inspired by nature, the zero waste philosophy works in an ecosystemic way to maximise what is available in the community alongside building local resilience and increasing the natural capital available for future generations.

What our planet and ecosystem do naturally through evolution, we as humans must follow suit and do by design. This is why zero waste aims at rethinking the way we produce and consume in order to preserve the value and energy embedded in our planet's resources whilst enabling civilisation to flourish and prosper.

Whilst waste management aims at turning waste into resources, zero waste is about keeping resources from becoming waste.

Zero waste is about designing waste - and the toxics and inefficiencies associated with it - out of the system. In a zero waste system, the value of materials and products is kept within the community where they are used over and over again. Any technology that doesn't allow for material recovery is deemed as unacceptable and phased out. Meanwhile, recycling is important to close the loop but it should be seen as an end-of-pipe solution because we cannot recycle our way out of a wasteful society.

According to the only peer-reviewed definition, zero waste means:

"The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threaten the environment or human health."

December 2018, Zero Waste International Alliance

Zero waste is a vision of hope for the future
Zero waste is an attitude

More than a destination, zero waste is a journey, and it is open to anyone

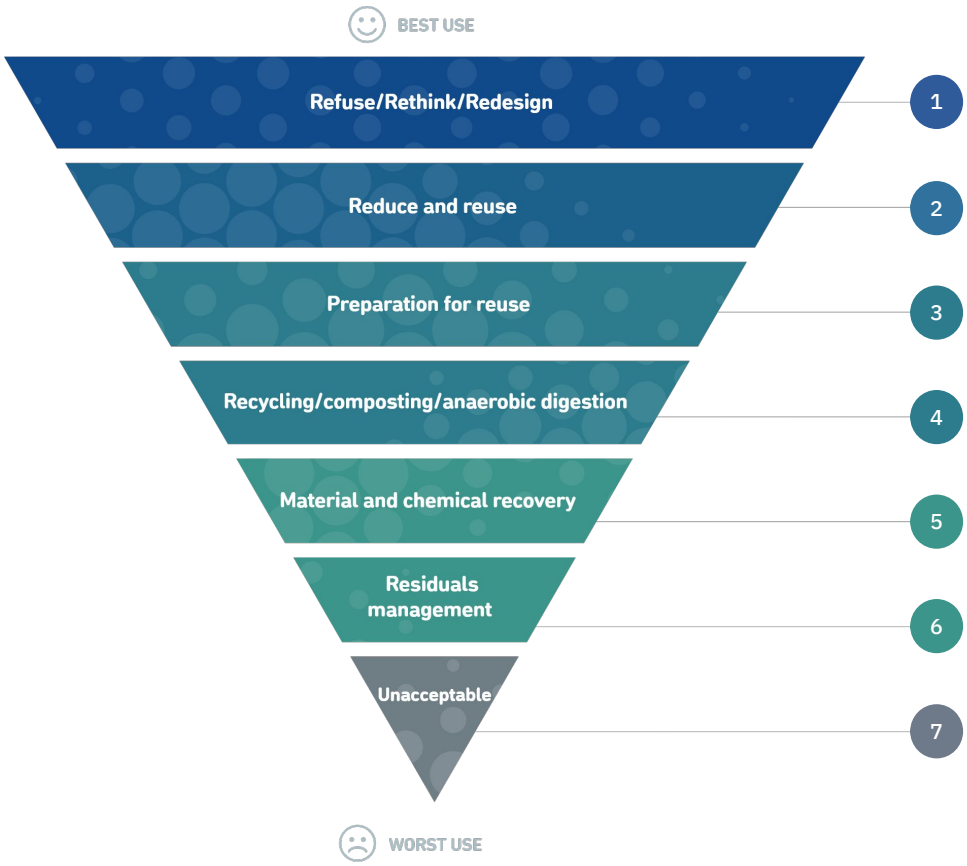
Cities, restaurants, hotels, events, communities, and individuals worldwide are already proving that a better world is possible by adopting the zero waste philosophy.

Zero Waste Hierarchy

Zero Waste Europe created a new waste hierarchy in order to change the mindset of how we view waste in society. Importantly this hierarchy moves away from traditional waste management towards resource management, creating systems that ensure the value of our resources is preserved in the economy for current and future generations.

The Zero Waste Hierarchy differs from the European Waste hierarchy, which has 2 steps less. Our Zero Waste Hierarchy gives more importance to the preservation of high quality materials and organising residual waste treatment, bearing in mind the transition that needs to happen in the coming years.

We take a step by step guide through the hierarchy, from best practices at the top to the worst and most unacceptable practices at the bottom.



1

REFUSE/RETHINK/REDESIGN
Refuse what we don't need and change the way we produce and consume by redesigning business models, goods and packaging in order to reduce resource-use and waste.

2

REDUCE AND REUSE
Minimise the quantity, toxicity and ecological footprint and any operation by which products or components that are not waste are used again for the same purpose for which they were conceived.

3

PREPARATION FOR REUSE
Checking, cleaning or repairing operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing.

4

RECYCLING/COMPOSTING/ ANAEROBIC DIGESTION
High quality material recovery from separately collected waste streams

5

MATERIAL AND CHEMICAL RECOVERY
Technologies to recover materials from mixed waste into new valuable materials in an environmental sound way.

6

RESIDUALS MANAGEMENT
What that cannot be recovered from mixed waste is biologically stabilised prior to landfilling.

7

UNACCEPTABLE
Options that don't allow for material recovery, have high environmental impact and create lock-in effects that threaten the transition to zero waste: waste to energy incineration, co-incineration, plastic to fuel, landfilling of non-stabilised waste, gasification, pyrolysis, illegal dumping, open burning and littering

Image 2: The Zero Waste Hierarchy

Guiding principles of zero waste for cities

The real implementation of zero waste takes place at the local level by municipalities and communities stakeholders. This is why this Masterplan is structured and tailored as a starting point for Zero Waste Cities, through a set of common guiding principles. These principles are the foundation of the zero waste approach and they are available in full on zerowastecities.eu.

Below, we relate the key principles to the local context, and the policies that local governments can both implement and influence in most scenarios:

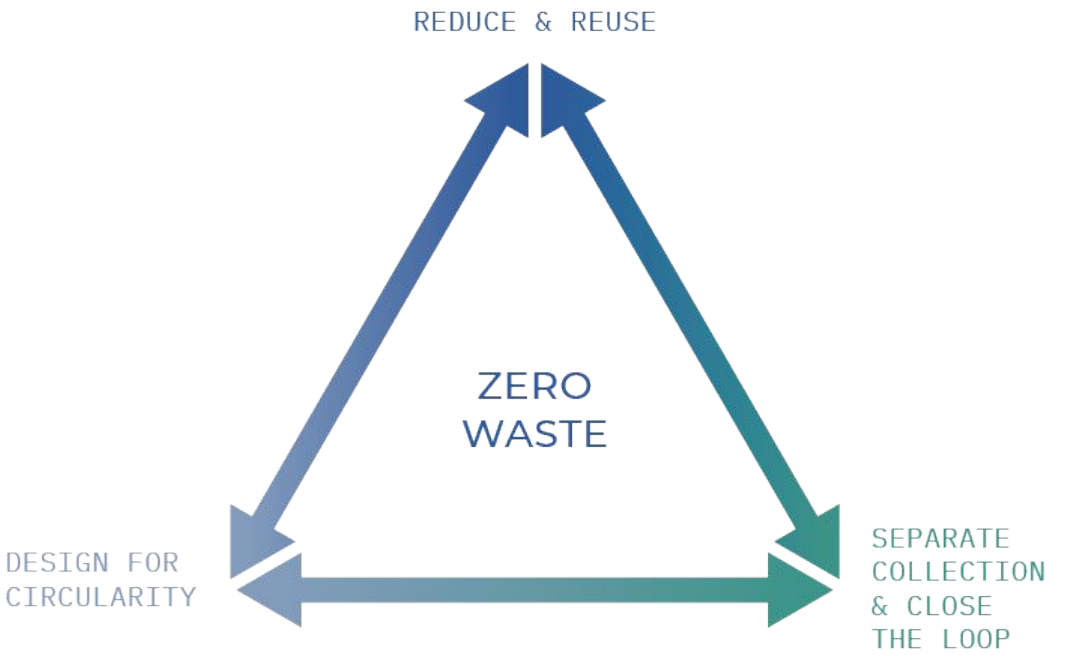


Image 3: The key principles of zero waste

REDUCE AND REUSE

The best waste is the waste that is not produced in the first place. Hence intervention at the design stage is key to prevent having to manage waste that shouldn't exist.

For example, food waste can be reduced with the right training, incentives and procurement policies in canteens, restaurants, hotels, hospitals and homes. Packaging free shops and local markets can prevent packaging and food waste whilst providing fresh food.

Most single-use packaging is superfluous and can be easily replaced with the right intervention at the city level. Coffee cups to go, containers for take-away food, throw-away water bottles or single-use straws are just a few examples of items that can be replaced with solutions that don't generate waste.

City authorities can also play a key role in facilitating the roll-out of refillable systems for beverages and reuse systems for nappies, as well as guaranteeing availability to alternative waste-free sanitary items within local shops.

For durable goods such as electronics, furniture or clothes, it is key to encourage repair and reuse operations in the form of second hand shops or reuse activities and platforms offline and online.

Using the purchasing power of public procurement to change the market, promoting paperless offices, establishing material banks and libraries for tools are other ways to prevent waste from being generated at local level.

DESIGN FOR CIRCULARITY

Products and packaging should be designed to not become waste, but instead to retain as much value as possible at the end of their useful life. ***If a product can't be reused, repaired, refurbished, recycled or composted it should be redesigned or taken out of the system altogether.***

IF WE DON'T KNOW WHAT THE PROBLEM IS THEN WE WILL NOT BE ABLE TO FIND THE SOLUTION.

Current waste systems are designed to make waste "disappear", by sending it away to other countries, burying or burning it. This illusion of throwing something "away" makes the problem invisible. For this reason, a zero waste strategy takes the opposite approach. Waste should be made very visible as a way of providing proof that the current materials and products within our system are all designed inappropriately and unsustainably. Zero waste programmes study what is left in the residual waste bin, after an effective separate collection has been conducted, in order to examine and identify potential solutions that will prevent this waste from continuing to remain a problem in the future.

It should be made clear whether a specific product or packaging should be part of the biological cycle (products for consumption) or part of the technical cycle (products for service). As a general principle, products or packaging that mix technical and biological components are very difficult to digest by current resource management systems. Therefore, they should not be allowed into the market unless it is very clear how they are going to be separated to undergo different recycling operations.

Indeed, some substances in products or packaging can harm human health and any other living creature. If a product or packaging is not designed to be safely reintroduced in the production cycle its recirculation as secondary raw material can endanger the technical

performance of recycling systems and items using this recycled content.

There can be cases in which some materials and products are designed for circularity but the waste collection and treatment systems are incapable of managing them. In these cases, the producer should set up their own reverse logistics system to ensure that they are effectively recycled.

SEPARATE COLLECTION AND CLOSING THE LOOP

If preventable waste is avoided by changing our consumption and production methods, and the waste that is non-preventable has been designed to be circular so that it can be reused within the economy, the only action that is needed to reintroduce a resource back into the production cycle is to ensure it is collected in the best and cleanest way possible, to make sure that its value is preserved for its next use.

In this respect, cities and municipalities should be implementing effective collection systems that allow for the clean separation of various materials. The materials which should be separately collected, at a minimum, include organics (food and garden waste), recyclable streams such as paper, cardboard, glass and plastic containers, products and components which are reusable, and then the residual waste, which is what is left after everything else has been separated.

Current examples in Europe show separate collection achieving recycling rates of 80-90% of municipal waste, which is the term used to describe all the waste that is generated by households, schools and public institutions.

Separate collection of organics can often have the biggest impact, with huge volumes of waste being sent for composting rather than landfill or incineration, whilst it also results in other recyclable materials having a

higher purity rate and therefore remaining of value as a product which can be reused or recycled.

The most powerful and effective tools to ensure the highest capture rates and clean separation of materials at the lowest cost are kerbside collection and Deposit, Refund Schemes (DRS).

DOING THE RIGHT THING: SORTING SHOULD BE CHEAPER AND EASIER THAN DOING THE WRONG THING

Any system which relies solely on the commitment of people to make the extra effort is not going to work. Price incentives should be promoted as a key driver of behavior. Excessive generation of waste should be penalised. Current experience is living proof that citizens collaborate when the system is designed for and with them.

Separate collection schemes should be co-financed by the producers of the product that is to become waste.

Next to the price incentives for citizens to do the right thing, there should be an extended responsibility for producers to cover the cost of collection and treatment of waste that is generated as a result of putting their product or packaging on the market. The fees paid by producers should be eco-modulated, meaning that the costs reflect the ease with which each material or product can be reintroduced into the production cycle as secondary raw material.

If separate collection is done properly then resources previously discarded as waste keep their value and can be recycled into secondary raw materials. When done at scale, this allows for the creation of material banks within cities, replacing current linear resource extraction methods, providing a system for the future where resources can be kept, created and re-used in a circular manner within cities themselves.

CHANGE THE INFRASTRUCTURE IN LINE WITH THE NEW PARADIGM

Disposal infrastructure such as landfills or incinerators should be phased out as waste generation decreases and recycling rates increase. Flexibility and adaptability are vital to zero waste, contracts and waste plans should not therefore inhibit increased recycling or create lock-in situations. With due consideration for the lack of adaptability of incineration (whether conventional or non-conventional) new capacity for thermal treatment must be avoided, and existing sites should be progressively phased out.

While local schemes increase reuse, separate collection, recycling and composting, and decrease waste amounts, a transitional solution for the residual waste fraction is to allow only a small and ever-decreasing amount of stabilised residual waste to be safely landfilled. In order to minimise reliance on landfills right away, the mass, volume (and impact) loss through biological stabilisation should be complemented by further material recovery from residual waste, which is proving practicable and increasingly effective where kerbside programmes have been started.

Engaging your community

Another key principle is community education and participation, which is indispensable for the successful implementation of the Zero Waste Masterplan, which takes a people-centric approach to change. Citizens should be invited to adopt waste-free practices, on top of having the opportunity to actively participate in the design of resource management systems that significantly reduce waste production.

Public education campaigns are critical to encourage and foster citizen participation. Whilst the population naturally ages over time, cities and towns often have to deal with ever-changing demographics as large numbers of newcomers either move into the area to live permanently or just commute in and out for the day. Given the constant changing of demographics in many cities and towns today, greater emphasis must be placed on educating citizens and providing them with informative resources to guide engagement with the zero waste plan. Municipalities should therefore prioritise community engagement and educational activities, as this sets the basis for a successful and effective local zero waste plan.

Education and training are vital to shift the paradigm and progressively phase out waste. Key personnel from municipalities' environmental division, the local waste management company and other community leaders, need to ensure they increase their levels of awareness and knowledge regarding resource management. Education and training initiatives are the best way to address cultural challenges around waste during the roll-out of the Zero Waste Masterplan.

Greater incentives and support should also be provided to local entrepreneurs, social enterprises and groups. Given their local knowledge and prominent role within a Zero Waste City, these stakeholders should be invited to provide local solutions to the local challenges faced by their community.

Zero waste and the circular economy

Europe is transitioning from a linear to a circular model of resource management and the implementation of this change takes place at a local level. New ambitious European legislation is already in place today and will require that local authorities change gears in the coming years so that prevention and reuse policies are developed, separate collection is widespread, quality recycling is the rule and disposal in landfills and incinerators is phased out.

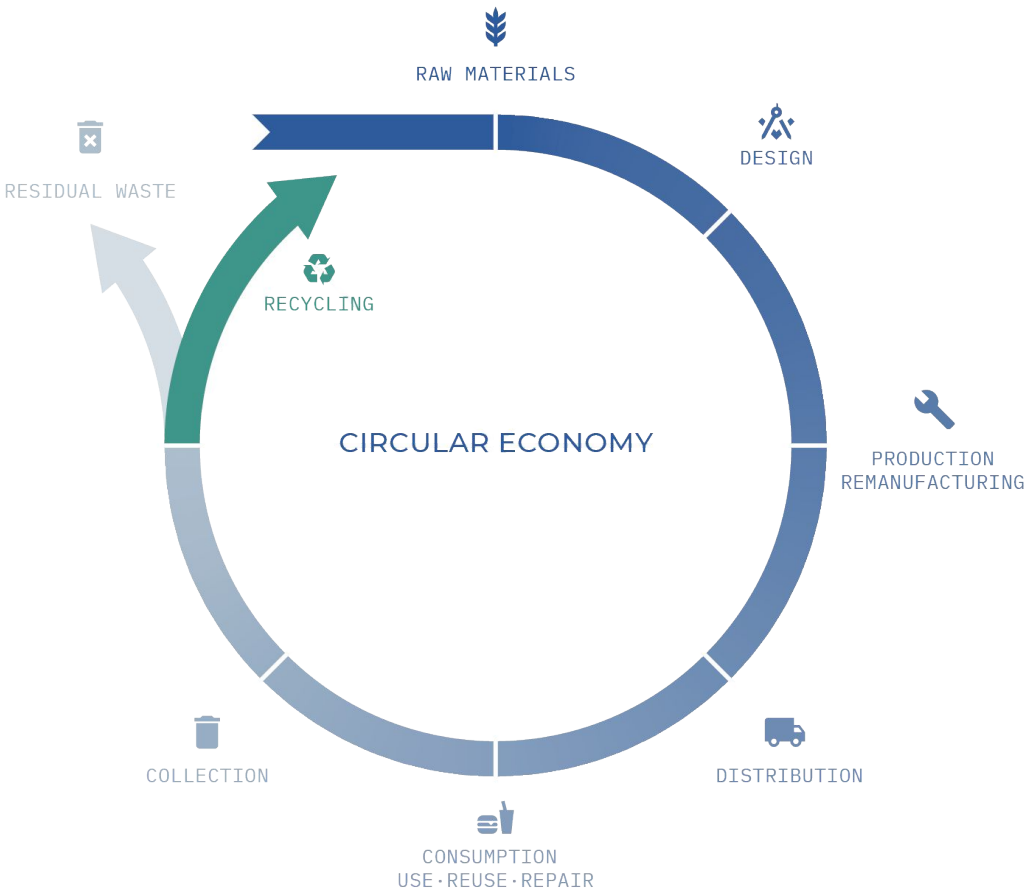


Image 4: The circular economy diagram

A circular economy is a regenerative system in which resource input and waste, emissions, and energy leakage are minimised by slowing, closing, and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling. This is in contrast to a linear economy which is a 'take, make, dispose' model of production.

Zero waste thinking perfectly integrates the circular economy narrative, and the Zero Waste Masterplan can act as a relevant and important tool for cities to start applying circular economy principles. A circular economy has the potential to create many additional local jobs and enterprises to deal with the reuse and recycling of finitely available material resources.

Today, hundreds of cities in Europe have committed to go zero waste and are following the zero waste approach. Local governments from around the world have also expressed an interest in learning from European best practices that have put the interests of communities first.

> **We need to make sure we take care of our own rubbish...but the only real way of taking care of our waste is by not having it in first place.**
>
> **Frans Timmermans**
> Executive Vice-President for the European Green Deal, during his hearing by the Committee on Environment, Public Health and food Safety (ENVI) of the European Parliament.
> October 10th 2019 — Brussels

Zero waste models

THE OLD WAY - CENTRALISED RESOURCE MANAGEMENT

Over the last few centuries, European cities have shifted from being centers of production to centers of consumption. As the world's urban population has increased, production has become increasingly globalised and cities have become resource sinks.

The linear model has enlarged supply chains exponentially, turning cities into graveyards for resources which has caused major harm to local citizens. In turn, this has caused a massive centralisation of power and infrastructure into the hands of the few, and has disconnected communities from direct production cycles.

Indeed, today most workers are employed in services associated with consumption, while production and the waste management processes take place far away.

Over recent decades, infrastructure development has been leaning towards highly-centralised systems for resource extraction and management. These systems consume vast amounts of vital resources, such as energy and water, whilst also producing extensive levels of waste and carbon emissions. For each 'system' (a factory, a city, a hospital, a school), resources are produced, or disposed of, far from the location where they are consumed.

Centralised systems mean centralised power structures and high carbon emissions from transporting the resources, which are produced or managed far from the consumption source.

Image 5: Comparison between the traditional waste management and the zero waste approach.

THE RIGHT WAY - DISTRIBUTED RESOURCE MANAGEMENT

We are observing how cities are slowly becoming centers of production again and there is a growing reconnection between production and consumption at the local level. Thanks to technological enablers, societal and economic drivers, as well as an increased focus on building system efficiencies and resilience, we are witnessing major shifts in the way we produce and deliver energy, food, water and other fundamental resources.

Decentralised systems means that communities have more power and control over the decisions that affect their lives. A zero waste approach does exactly this, by returning control over resource management and giving greater influence over the shape of the local economy to the community.

Whether it's through enhancing community composting, creating closed-loop systems through the establishment of reuse centres, or by redesigning business models to localise production, zero waste helps create a flexible system that can be tailored to the specific needs of the community. Across Europe today, we are seeing the positive benefits of this approach, with communities feeling a sense of ownership, cohesion and pride over how their local area operates.

VISION FOR THE FUTURE

In the future it is not only possible, but realistic, for societies to design a system that is circular. One where urban and periurban agriculture will produce most of the food we consume in cities.

The **bioeconomy** will enhance nutrient and resource cycles, with the help of newly-set up material banks filled with secondary raw materials that previously were discarded as waste. While locally produced **renewable energy** sources will supply the energy to make this system work.

The **digital economy** will blend with the circular economy to optimise systems and create jobs that cannot be delocalised. Producers become consumers and consumers become producers. Disposable products and packaging will be replaced with reusable waste-free solutions, enabled by the **shortening of supply chains**. Local material flows become prioritised, and the community plays an active role in the management of resources to ensure they maintain the majority of the wealth that is generated by the new system.

This shift is already happening today, through the growth of zero waste cities globally. We are beginning to see the benefits of it play out across all aspects of society, both for our environment and the population, taking us one step closer each time to a zero waste world.

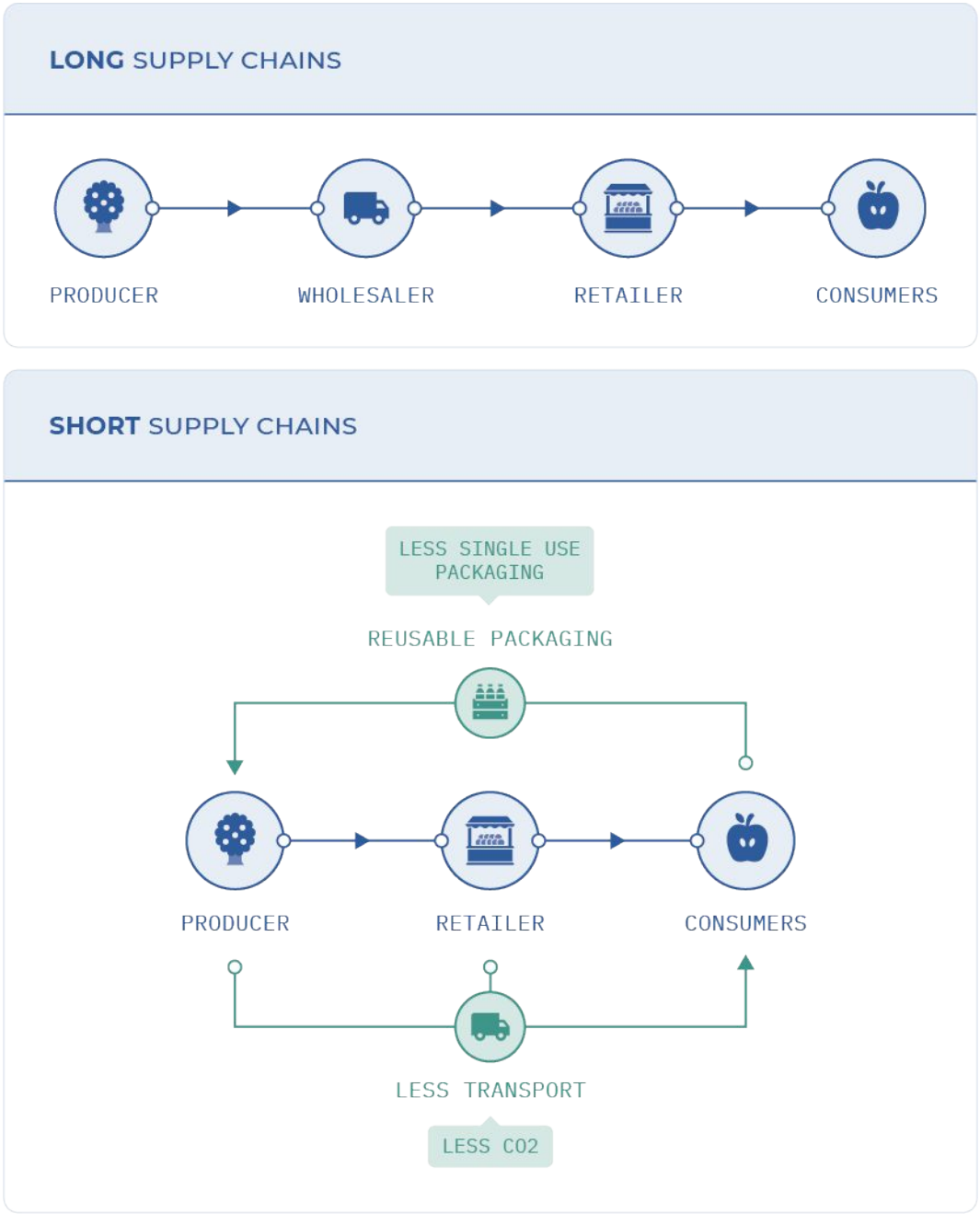


Image 6: Comparison between long and short supply chains

The Zero Waste Masterplan does not focus on waste crises and the problems created by landfills, incinerators and other false solutions. However, if you want to learn about these, multiple resources are available on zerowasteeurope.eu.

Emerging themes surrounding zero waste

Zero waste is one of the biggest trends in today's city planning agenda and a fundamental part of enabling sustainable cities. A number of practices have gained significant exposure in the field of city planning in recent years. In parallel to the Zero Waste Masterplan, other themes are interesting to consider and explore because they integrate core values in line with our roadmaps. This consolidated approach can help the political program stand out and communicate a true vision for your community.

SMART CITIES

Most of the visible narratives currently promoted by certain industries are very tech-centric. They define smart cities as an urban development vision that integrates large-scale information technology and communication systems, as well as technology surrounding the Internet of Things (IoT) to manage cities' assets. Recent developments in this area however, show a much more people-centric approach, emphasising the fact that technology should serve a community purpose and should be used as an "enabler of social progress". Whilst zero waste often facilitates low-tech solutions, we do recognise the benefits that digital platforms and devices can have in creating efficiencies and helping cut carbon emissions from the waste system, for example by optimising waste collection routes for trucks and through radio frequency identification tags used in some Pay-As-You-Throw systems. The beauty of zero waste systems is that they can reach excellent results with or without smart technologies.

GREEN AND SMART MOBILITY

We support ambitious and sustainable mobility agendas for cities. This means promoting transportation systems for people and goods that are optimised and, wherever possible, minimised. Smart mobility does not necessarily mean replacing petrol or diesel powered cars with electric cars and heavy public transportation infrastructure. It is primarily the way the city develops and the way that the movement of people and goods is "engineered" that decides the level of carbon emission reductions that a community can have. For example, do people have to travel far to go to work? Do they shop in their community or they need to go far from the city centre? Ensuring the answers to these questions place the local community first is critical for cities looking to implement effective mobility plans that are sustainable, low-carbon and resource-efficient.

BREAKING FREE FROM SINGLE-USE

Plastic pollution is the clearest representation that we have reached a tipping point, and public opinion is united around the idea that we can't continue trashing the planet. The topic has become highly emotional because of the crises most cities have faced at some point in their history, such as collection strikes leading to waste in the street, harmful chemicals found in the local atmosphere, soil or water supply, and citizen opposition to landfill or incinerator projects. Yet never before have we seen a global waste crisis like what we see today with plastic. The good news is that solutions exist and they are being adopted across the globe. In the coming years prevention and reuse activities will increasingly replace single-use plastic applications and zero waste cities are home to many of these projects.

NEW BUSINESS MODELS THAT DESIGN-OUT WASTE

The challenges posed by a linear economy that uses things only once before discarding them, are today mainstream. The solutions to single-use packaging, disposable nappies or food waste require changing mindsets and implementing new business models that

design waste out of the system. These new business models employ toxic-free materials for durable applications, and make good use of the new technologies that allow logistics and data management in a way that was not possible before. The new business models are labour and know-how intensive and blend into the local ecosystem instead of forcing the social ecosystem to adapt to them.

ZERO WASTE LIFESTYLE

At a family and individual level, the zero waste lifestyle has gained great momentum in recent years, with tens of thousands of households in Europe deciding to consume differently and take the conscious decision to radically reduce their waste generation. Buying products in bulk, producing our own cosmetics or growing our own food are examples that prove people want to be actors and producers, not just consumers. This vision translates into local economic development opportunities that create more jobs, whilst lowering carbon emissions as a result.

THE UNITED NATIONS' SUSTAINABLE DEVELOPMENT GOALS

The zero waste approach aligns itself with the vision and goals of the UN's Sustainable Development Goals (SDGs). Applying a zero waste strategy within your community is a practical method of integrating the SDGs into a local plan, helping to address the major environmental, economic and social issues that many societies face today.

Specifically, the zero waste approach can help communities and municipalities achieve:

- SDG 11 Sustainable Cities & Communities
- SDG 12 Responsible Consumption & Production

Image 7: The Sustainable Development Goals

Zero waste takes the ambition and vision of these global level policies and translates them into tangible policies at the local level to accelerate the achievement of these goals that have been agreed by all 192 UN Member States.

> **When it comes to climate protection, the cities play a vital role in shaping a livable future for our planet. The biggest environmental challenges can only be overcome if we keep our focus on social justice and do not lose sight of the economic perspective.**
>
> **Michael Müller**
> Governing Mayor of Berlin

European Union legislation on waste and the circular economy

Since the publication of the European Union's Circular Economy Roadmap in 2014, the European Union has been developing a legislative framework that has been paving the ground for the transition towards zero waste. In 2018 and 2019, this momentum continued to build with amendments to the major waste-related directives and the introduction of the Strategy on Plastics, including the Single-Use Plastics Directive.

In this section, we will provide an overview of the latest European Union legislation related to waste and the circular economy. In the second section of the Masterplan, we explain how a zero waste approach is helping municipalities across EU Member States achieve these targets, by providing a framework and methodology that can be locally tailored and adapted resulting in high levels of engagement and impact.

AMENDMENTS TO EU WASTE LEGISLATION

In 2018, EU member states agreed on the revision of three main European Union legislation pieces on waste, with the aim of taking Europe towards a circular economy.

The following directives have been amended:

- Directive on Waste (2008/98/EC)
- Directive on Packaging and Packaging Waste (1994/62/EC)
- Directive on the Landfill of Waste (1999/31/EC)

WHAT OBLIGATIONS DOES THIS PUT ON EU MEMBER STATES?

Member States must set up separate collection schemes for at least:

- **Bio-waste** by 31/12/2023
- **Textiles** by 01/01/2025
- **Hazardous waste** by 01/01/2025
- **Waste oils** by 01/01/2025
- Paper (*already mandatory since 2015*)
- Metal (*already mandatory since 2015*)
- Plastic (*already mandatory since 2015*)
- Glass (*already mandatory since 2015*)

The following objectives have also been approved for recycling and waste management, specifically looking at packaging:

	2025	2030	2035
Minimum recycling and preparation for reuse of MW	55%	60%	65%
Maximum landfilling of MW	N/A	N/A	10%
Minimum recycling of packaging waste	65%	70%	N/A
Plastic	50%	55%	N/A
Wood	25%	30%	N/A
Ferrous metals	70%	80%	N/A
Aluminium	50%	60%	N/A
Glass	70%	75%	N/A
Paper and cardboard	75%	85%	N/A

Image 8: Recycling and waste objectives focusing on packaging (MW stands for Municipal Waste)

The new Directive on Waste obliges Member States to 'make use of economic instruments and other measures to provide incentives for the application of the waste hierarchy,' including examples of economic instruments such as:

- **Charges and restrictions for landfilling and incineration of waste** which incentivise waste prevention and recycling, while keeping landfilling as the least preferred waste management option
- **Pay As You Throw (PAYT) schemes that charge waste producers** on the basis of the actual amount of waste generated and provide incentives for separation at source of recyclable waste and for reduction of mixed waste
- **Fiscal incentives for the donation of products**, in particular food
- **Extended producer responsibility schemes** for various types of waste and measures to increase their effectiveness, cost efficiency and governance
- **Deposit Refund Schemes (DRS)** and other measures to encourage efficient collection of used products and materials
- **Phasing out of subsidies** which are not consistent with the waste hierarchy
- **Use of fiscal measures** or other means to promote the uptake of products and materials that are prepared for re-use or recycled

ARE THESE OBJECTIVES MANDATORY FOR EU MEMBER STATES?

Yes they are. The European Commission will monitor compliance of national governments with the targets, and three years before every deadline it will produce early warning reports to assess the progress of every Member State towards achieving the targets. The non-compliance with the Directive and these targets implies the opening of infringement procedures and potential fines for Member States if they do not comply. Therefore, your community and municipality has a crucial role in taking these policies and translating them to the local level, in order to ensure your national government does not fail to meet the required targets.

MY COUNTRY IS OUTSIDE OF THE EU, DOES IT AFFECT ME?

It largely depends on the agreement between your country and the EU. Those willing to join the EU will sooner or later be bound by these directives, but, for as long as negotiations on environmental issues have not started, your country isn't formally compelled to follow the legislation. This is the case for most candidate countries. Countries like Switzerland are bound by these to a certain extent, particularly with regards to single market rules. In the case of the UK, the Brexit deal will determine the extent to which these apply in the UK. At this moment, the UK is legally bound by these and any other piece of EU legislation and, if the UK is to participate in the single market, it will have to follow EU legislation. However, even if you are outside the EU, you can use the latest EU legislation to encourage and push for action.

The successful adoption of these objectives and the implementation of policies on the ground, which are not only meeting these requirements but going way beyond them, is the case for many municipalities in Italy who are currently implementing 80-90% separate collection rates, proving that zero waste is no longer just a pipe dream - it is a set of tangible policies and strategies which can be introduced into your community today to immediately see results from a decrease in waste generation levels as well as an increase in recycling.

CIRCULAR ECONOMY ACTION PLAN

The end of 2019 marked the beginning of a new five-year term for the European Commission in Brussels, bringing with it a period of renewed focus and prioritisation for Commissioners and their teams to steer the European Union towards 2024.

> **The circular economy, including new waste and recycling laws, will represent "half" of the EU's effort to achieve net-zero carbon emissions by 2050, and will be erected as the number one priority of the upcoming European Green Deal.**

From the European Parliament Plenary Session on July 16th 2019

In March 2020, details of the second Circular Economy Action Plan were released by the European Commission, forming one part of the EU's Green Deal. The new plan outlines the steps and measures that the EU and national governments are expected to implement which will fulfill the transition towards zero waste and a circular economy in Europe.

The revised Circular Economy Action Plan aims to go beyond what the previous EU circular economy strategy achieved, establishing a 50% reduction target in municipal waste and a new "right to repair" policy for key products. At the current time of writing (April 2020), the plan contains only measures and initiatives rather than tangible legislation, which will be decided in the months and years since the plan's launch in March 2020. These include:

- An aim to make all packaging placed on the EU market reusable or recyclable in an economically viable way by 2030
- A sustainable product policy ensuring that products are made according to sustainability criteria including reusability, repairability, resource use or CO2 emissions
- A new target to reduce food waste through the EU's farm-to-fork strategy
- Guidance on the separate collection of textile waste to promote circularity in this key waste stream, the separate collection of which will be mandatory for EU member states by 2025

THE SINGLE-USE PLASTICS DIRECTIVE

On the significant negative environmental impacts of single-use plastics products, a new Directive on the reduction of the impact of certain plastic products on the environment, commonly referred to as the Single Use Plastics (SUP) Directive, was approved in May 2019 and entered into force in July 2019.

Image 9: The Rethink Plastic alliance campaign for the SUP Directive implementation

The Directive aims to prevent and tackle plastic pollution, especially in the marine environment, through, among other things, EU wide ban from 2021 on unnecessary single-use plastics such as cotton buds, cutlery, plates and some expanded polystyrene containers.

Furthermore, the Directive includes incentives for reducing consumption and support the transition to reusable systems for food and beverages, as well as establishing higher collection rates for plastic bottles and requires the introduction of producer responsibility schemes.

Read more about the SUP Directive on our policy briefing.

THE 10% LANDFILL TARGET, THE EU POLICY THAT CONTRADICTS THE CIRCULAR ECONOMY

One of the cornerstones of the Circular Economy Package is the amended Landfill Directive. The strategic goals of the new Directive are largely the same as the EU policy on landfills defined in 1999. However, a key new element brought about by the new Directive is the landfill minimisation target, which obliges Member States to limit the amount of municipal waste due to be landfilled to 10% or less of municipal waste generated by 2035.

Although the landfill minimisation target seems to be aligned with the strategic goals of the Waste Framework Directive (maximisation of preparation for recycling and reuse, separate collection obligations of specific waste types), the new obligation also generates operational goals which may contradict the overarching principles of the EU Circular Economy Agenda.

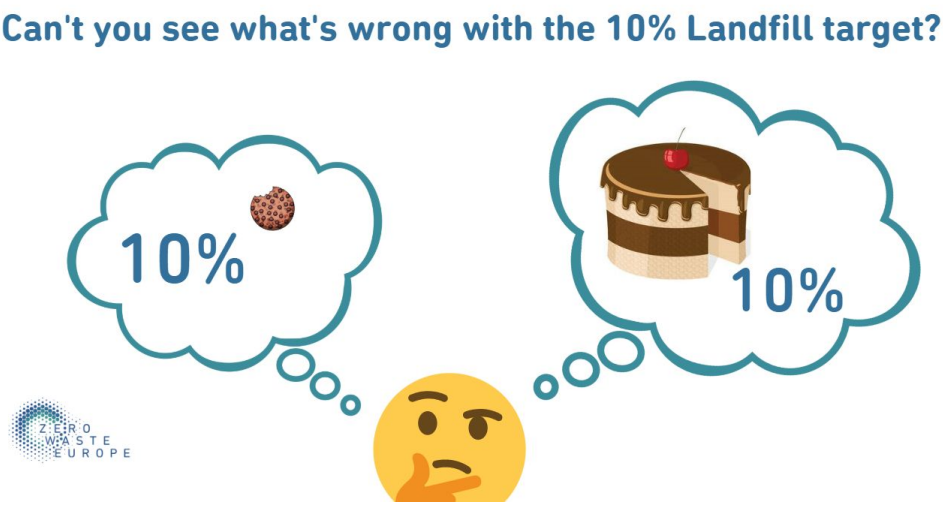


Image 10: Visualisation of one of the problems concerning the 10% landfill target, the measurement in percentage instead of tonnes.

The evidence shows that meeting the 10% threshold is extremely challenging and may push decision makers to invest in waste incineration so as to minimise landfilling. This may create a lock-in situation, with waste compelled to go to incineration, contravening the principles and strategic goals of the Circular Economy Package.

For this reason, Zero Waste Europe recommends to amend the Landfill Directive in two complementary ways, so as to align it with the overarching principles and strategic goals of the EU Circular Economy Agenda:

- Set the landfill target with reference to a baseline year, instead of "any given year". This would reward the efforts on waste reduction, which are placed higher up in the waste hierarchy, and should be regarded as "Plan A" for sustainability,
- Adopt a landfill target in kgs of waste per person per year, instead of a percentage, so as to reward those areas (communities, local authorities) who are implementing progressive waste management strategies to minimise the generation of residual waste. The target in kgs/person/year may replace the one in percentage, or simply supplement it stipulating that either one applies.

To understand better what's wrong with the Landfill target, read our Policy Briefing.

Why adopt a zero waste approach?

PART 2

Today, there are numerous reasons why a municipality would adopt a zero waste approach.

Whether you live in a rural or urban community, with a large or small municipal budget, in a high or low densely populated area, affected by tourists or a dwindling population size, adopting a zero waste approach can bring a huge range of social, economic and of course environmental benefits to your community.

Furthermore, a zero waste approach is increasingly seen as the vehicle for adopting a local framework that can help municipalities achieve and align themselves with European Union legislation on waste, the circular economy and climate change.

Understanding the benefits of zero waste

With the growth and spread of Zero Waste Cities across Europe, we are increasingly being able to capture data and witness the benefits that adopting such policies provides for local communities. Here, we break these down into 3 main categories: economic, social and environmental.

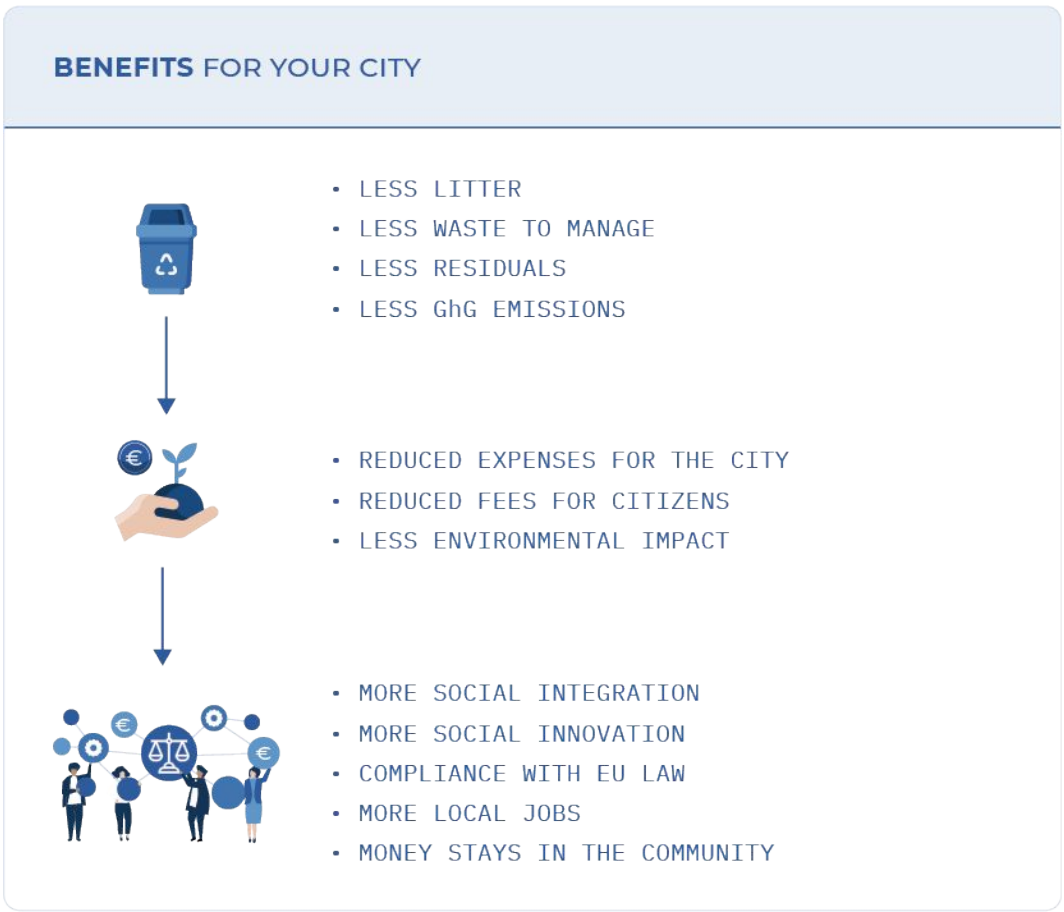


Image 11: Benefits of Zero Waste Cities

ECONOMIC RESILIENCE

Cities typically commit to zero waste because, in addition to solving a number of social and environmental issues, there are real economic arguments behind the vision. These include:

- When a city wants to prioritise local solutions to prevent waste it is in fact providing **business opportunities to local entrepreneurs**, whether that's in developing packaging-free alternatives or new business models for electrical appliances. All together this helps to build a social fabric within the community and diversifies the economy, making it more resilient for the future,
- Simply put, if there is less waste to manage then there are **lower costs for municipalities**. With zero waste, the amount of waste sent for disposal is radically reduced which, as a result, means that the city doesn't need to pay the costs of disposal which are typically in the order of >€100 per tonne. Meaning more funds are available either to put back into public services or to reduce taxes for residents.
- Better implementation of the separate collection of waste means **more quality resources** are made available which can continue to be sold in the market, thereby helping to compensate for the initial costs of collection,
- With a waste reduction plan and the roll-out of financial incentives that are adapted to citizens and businesses, **everyone saves money**. When both businesses and citizens are financially incentivised to produce less waste, they will be able to lower the costs they previously paid for waste management.

SOCIAL BENEFITS

Zero waste primarily builds on local solutions that will benefit the community first:

- Zero waste is all about local solutions to manage resources. This means investing in new business opportunities that design waste out of the system, in awareness raising and education together with optimising separate collection to manage the waste locally. This is in

stark contrast to traditional waste management, which is intensive in capital investment and technology. This means investing money in creating **local jobs that cannot be de-localised** later down the line,

- Not only does zero waste help to create jobs, but it creates **social jobs**. The material collection and product repair markets are highly inclusive because they can integrate low-skilled workers and groups that were previously left out of traditional social and economic development. Zero Waste Cities in Europe have seen the emergence of local businesses to increase recycling, reuse and repair capabilities, which often employ, upskill and integrate workers who now get a chance to play an important role in the community,
- On average, **zero waste creates 10 times more jobs than landfilling or incineration**. Why is that?

    - Landfilling and incineration are technology and capital-intensive waste treatment solutions, which require less labour than any other waste management operations.
    - Increasing the capabilities of communities to re-use and repair materials facilitates work and employment through labour intensive repair systems and the deployment of re-use systems, such as Deposit Return Schemes, which create local jobs in collection and washing.
    - Recycling is also labour intensive because the separate collection of materials creates an expectation for clean waste streams, which require a high degree of human coordination.

- Zero waste brings the community together. For example, community composting, repair cafés, cooking with food discarded by supermarkets, to name just a few, are all zero waste activities which help **bring the community together and build its resilience as a collective unit**.

ENVIRONMENT AND HEALTH

Current distribution chains, that are global and interconnected, facilitate the spread of viruses and other pathogens at a speed we have never seen before. The COVID-19 pandemic is a good example of what can await us in the future if we continue to run a throw-away economy in which most stuff is disposable and shipped around the globe.

From a system in which we have no traceability as to whether the disposable packaging we are served with is safe, the zero waste approach helps society and economies transition to a system in which there is full transparency and suppliers guarantee the quality of the products and packaging.

Zero waste policies radically reduce plastic pollution and its associated environmental and health impacts. By promoting the zero waste lifestyle we support seasonal food produced in the community which needs less preservatives and packaging, consequently encouraging healthier habits.

Thanks to the economic incentives of zero waste systems such as Deposit and Return Schemes (DRS) and other reverse logistics operations, littering has been radically reduced, resulting in cleaner nature and parks. Whilst zero waste systems that are based on refillable or reusable packaging often result in some of the cleanest in the market, with increased capacity and focus given to washing and sterilisation.

Zero waste means less pollution and less greenhouse gas (GhG) emissions from landfills and incinerators. Today, climate change poses one of the most urgent problems to humanity and the Earth as a whole. The acceleration of a warming planet and the devastating impact this will have on communities is occurring due to increasing GhG emissions, predominantly carbon dioxide, methane and nitrous oxide, being emitted into the environment.

By adopting a zero waste approach, cities and communities can take

steps to immediately reduce their GhG emissions. For example, the creation of energy from burning waste has been proven to be both hugely energy-intensive and inefficient, having a serious negative effect on our efforts to reduce GhG emissions and reach net-zero carbon economies by 2050.

Landfilling of waste meanwhile also facilitates vast amounts of methane and carbon dioxide emissions into the environment. Therefore, by adopting a zero waste approach to remove the need for incineration and landfilling **we can address a key component of effective climate change mitigation plans** for cities and communities. Simultaneously, policies that preserve the value of materials and resources within a circular economy also significantly reduce GhG emissions earlier in a product's lifecycle, before it becomes waste, by removing the need for the extraction and refinement of fossil fuels to manufacture and produce a good or material. Finally, through home and community composting programmes less waste needs to be transported outside town and the compost can also be used locally. As less waste needs to be transported, the traffic caused by garbage trucks and its associated emissions are also reduced.

Introducing the Zero Waste Cities Savings Calculator

Do you want to be able to see the benefits that adopting a zero waste strategy could bring to a municipality in terms of saving costs and GhG emissions? By switching to a zero waste strategy, municipalities can immediately begin reducing the costs of their waste management. The Zero Waste Cities savings calculator, created by our member Ecologists without borders during our collaboration for an Erasmus+ project, has been designed to help you visualise and understand the benefits that adopting zero waste policies can bring to your local area.

All is required is that you input some simple information regarding your city or town's population and the ambition of its current plans to go zero waste, as well as key data on current waste generation and management levels, including costs. The calculator will then automatically showcase the potential cost savings for your municipality, providing a real life comparison example with cities in Europe.

Try the Zero Waste Cities Savings Calculator
Visualise and understand the benefits that adopting zero waste policies can bring to your local area.

Zero waste as a methodology for achieving key European Union targets

Whilst sometimes a politically sensitive topic, EU policies are extremely relevant at the local level, often proving to be a motivating factor behind a municipality's decision to move away from outdated waste disposal methods and towards a zero waste approach instead. Translating the objectives and requirements set in Brussels by the EU into on-the-ground policies and strategies within a community is critical to ensure that national governments meet their required targets.

Current Zero Waste Cities in Europe often act as a model for the country, showcasing the path and methodology that can be followed in other regions to help ensure national fulfillment of European legislation. For example, these cities frequently achieve recycling rates of 70% and above, thanks to a highly effective kerbside separate collection system.

Many key components of a zero waste plan are increasingly being recognised in EU legislation as key vehicles for change in the transition towards a circular economy. For example, effective separate collection of plastics can increase the volume of recycled packaging in the market, Deposit Return Schemes can help achieve the Single-Use Plastics Directive and an increase in access to reusable products will align municipalities with the waste prevention targets outlined in the second Circular Economy Action Plan.

With dwindling volumes of residual waste, municipalities can actively play their part in helping national governments achieve the EU's decarbonisation targets, by reducing the volume of Greenhouse Gas

(GhG) emissions that occur from environmentally harmful waste disposal methods.

EU policies can also act as catalysts for municipal action, as the targets that are set are just the minimum requirements, so further ambitions and improvements to existing systems should actively be encouraged within the local area.

For further reading on how zero waste aligns with a carbon-neutral future, check out our library of resources on climate, energy and air pollution related topics.

Where to begin

PART 3

Now you understand what zero waste is and the benefits that a zero waste approach can bring to municipalities, it's time to begin thinking about what a strategy could look like in your community.

This can be a daunting task and often it’s not clear where the best place to start is.

This is why we have written the following section, providing a useful template to help you start thinking about what policies would feature within a local zero waste plan, as well as advice on overcoming certain contextual challenges that municipalities often have.

Questions to get started

Here you can understand some of the questions that zero waste experts typically ask at the beginning of a municipalities' journey. It's good to bear these in mind in order to understand the different parameters of a zero waste programme. By answering these 10 questions with data and information readily available, this will begin the process of developing your local zero waste strategy.

1

WASTE GENERATION

- How much waste is generated in the city?
  (in total and in kg/inhabitants/year)

2

COMPETENCY

- Does the municipality have the competency for waste collection?

3

WASTE COMPOSITION

- What is the composition of a typical residual waste bin?
- Do you know how much of it is recyclable?
- How much of the recyclables end up in the waste bin for residuals?

4 SEPARATE COLLECTION

- What is the separate collection rate in the municipality (in %)?
- What happens to the waste that is not separately collected?
- Do you know what happens to the streams that are collected?
- Is data available for the quantity/volume which is actually recycled?

5 MANAGEMENT OF ORGANIC WASTE

- Does the municipality collect organic waste separately?
- If so, what is the level of contamination?
  (% of impurities in the organic waste stream)
- Does the municipality own a composting plant?
- Does the municipality have systems in place to encourage home and community composting?

6 WASTE PREVENTION

- Does the municipality have a waste prevention plan?
- What powers does the municipality have to introduce waste prevention measures?
- Does the municipality have the competency to ban certain products or materials in the market (e.g. plastic bags)?

7 REPAIR AND REUSE

- How many reuse/repair centers are there in the municipality?
- How many businesses operate repair and reuse initiatives within the municipality?

8

CONTRACTUAL OBLIGATIONS

- Does the municipality have a long-term contract with a waste treatment facility/operator?

9

DISPOSAL COST

- How much is the gate fee for mixed waste?
  (charge to pay for the deposit of a certain quantity of waste at a processing facility)
- Does the municipality have the power to amend this price?

10

CONTRACTUAL OBLIGATIONS

- What is the waste management cost per capita?
  (in EUR/inhabitant/year)
- Does the municipality have incineration and/or landfill taxes?

DO YOU NEED ANY ADDITIONAL INFORMATION ON THOSE QUESTIONS?

Feel free to contact our team at cities@zerowasteeurope.eu

Potential scenarios when starting out

Starting a zero waste plan from scratch might seem intimidating or too complicated. Simultaneously, you may already be on your journey to zero waste through the successful implementation of separate collection and waste prevention measures, but are looking for further inspiration to increase the speed and efficiency of which your community transitions towards a circular economy.

Whatever your starting point, Zero Waste Europe is here to help you on your journey.

These 7 scenarios cover the situations municipalities most often find themselves in when deciding how to implement a zero waste strategy. Under each scenario, you will find a roadmap that outlines some of the steps a municipality can take in their unique situation to increase the effectiveness and ambition of its zero waste plan. We also provide best practice examples of cities which have implemented successful strategies and policies.

The purpose of this tool is to:

- Identify which scenario best describes the situation in your municipality
- Give you an overview of what a typical roadmap looks like for this specific scenario
- Get you started on the path towards zero waste

SCENARIO 1

MY CITY IS STARTING FROM SCRATCH

- We don't have information about the waste we generate and potential of prevention policies
- Citizens and businesses do not have any economic incentive to generate less waste or to separate materials
- We do not have separate collection in place yet
- We do not have any infrastructure in place for materials collection and processing

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Please refer to the profile page named "Scenario 1" hereafter.

SCENARIO 2

WE HAVE ALREADY TAKEN THE FIRST STEPS

- We have taken action to stop some wasteful single-use items
- We have separate collection in place — but the results are still disappointing, with comparatively low separate collection rates and/or high levels of contamination of materials in each stream
- Citizens and businesses do not have any economic incentive to generate less waste or to separate materials
- We have some infrastructure in place but it is inadequate

Please refer to the profile page named "Scenario 2" hereafter.

SCENARIO 3

WE ARE PROBABLY IN THE EUROPEAN AVERAGE BUT OUR CITY HAS BARELY IMPROVED IN RECENT YEARS

- We have passed a ban on plastic bags and we are considering other measures to reduce the use of disposable items
- We do not have a waste prevention plan or it is badly implemented
- We have separate collection in place but it is not optimised, the rate is between 40% and 60%
- Citizens and businesses have few economic incentives to generate less waste or to separate materials
- Our disposal cost is above 50 EUR per tonne

Please refer to the profile page named “Scenario 3” hereafter.

SCENARIO 4

WE ARE MEETING THE EU RECYCLING TARGETS BUT WE WANT TO GO BEYOND THAT

- Our municipal residual waste production is below 100kg/person/year
- Our separate collection rate is above 60% and it includes separate collection of organics
- We have a waste prevention plan in place and citizens are incentivised to generate less waste
- The separate collection scheme is optimised
- Our waste disposal costs are above 70 EUR per tonne

Please refer to the profile page named “Scenario 4” hereafter.

SPECIAL SCENARIOS

Scenarios 5–7 build on the previous four but offer roadmaps for municipalities in more diverse environments and contexts. Recognising that many municipalities are looking to transition away from incineration in order to reduce their GhG emissions, they often face a unique situation given that they are in a remote or island location, or in fact that they receive a seasonal influx of tourism which brings with it its own set of challenges and opportunities.

SCENARIO 5

WE NEED TO TRANSITION FROM INCINERATION TO LOW-CARBON ALTERNATIVES

- As part of our local/national climate agenda we need to decarbonise sources of energy and this requires stopping carbon emissions from burning waste in incinerators or cement kilns
- We own or have a closed contract with thermal treatment plants to dispose of our waste
- We have a source separation system in place that works but we are still far from the 2030 EU recycling targets

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Please refer to the profile page named “Scenario 5” hereafter.

SCENARIO 6

WE ARE A TOURIST DESTINATION

- Our city is in one of the previous scenarios but our biggest challenge is the fluctuation of the population because it is a seasonal destination
- Our city is in one of the previous scenarios but our challenge is the influx of tourists

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Please refer to the profile page named “Scenario 6” hereafter.

SCENARIO 7

SCENARIO 7 - WE ARE LOCATED IN A REMOTE RURAL AREA OR ON AN ISLAND

- Our town is in one of the scenarios 1 to 6 but with the added challenge of being relatively or completely isolated from land or populated areas

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Please refer to the profile page named “Scenario 7” hereafter.

SCENARIO 1

My city is starting from scratch

WHERE WE ARE

So far my city has been taking care of removing waste from the streets but the only recycling in town has been done by either recycling companies that have only recently been established or by the informal sector within our community, conducted for only those items which have market value. We are very far from meeting the EU recycling targets and we are wondering where to start. Littering is a real issue.

THE OPPORTUNITY

However, since we are just getting started, we have the chance, and the will, to do things right from the beginning and learn from the experiences of others in order to leapfrog to a new scenario. We believe the circular economy is the way forward and we want to tap into the unexploited potential within our municipality. With the support and using the tools of Zero Waste Europe, we want to have a good waste prevention and management plan for the next decade and roll out separate collection and prevention measures to achieve good results within the next 3 years.

THE CHALLENGE TO OVERCOME

«We just don't know how to start»

This is what this Masterplan and our further resources are for. To help you identify where you are and what are the key challenges ahead. Building on our years of experience and learning lessons from the most successful European cities we are best placed to help set you off in the right direction.

«The costs of disposal are so low that there is little incentive for my city to spend money on collection or recycling»

Low costs of disposal are a real issue, however they are set to rise in the coming years as European legislation is implemented and landfills fill up. Zero waste is an opportunity to anticipate the future and jump to the most modern waste management system.

«We don't have the money to invest in separate collection»

Prevention measures that will reduce street cleaning costs and the size of your waste bin do not cost money. The savings generated from an effective prevention policy can then be the start-up capital to kick-off a waste collection plan. Going for zero waste requires an initial investment to change the system and plan some infrastructure. However, other cities have demonstrated that this initial investment pays off in little time. After the first 1 or 2 years the operational costs of running waste management in the city go down.

«We are lacking the political will/vision to implement such a plan»

Without political drive the change will not happen. Ideally a zero waste vision needs to be shared by the City Hall and/or civil society. If this is not the case it is important to organise it. Based on the experiences of other cities, the Masterplan includes strategies to help create the right political pressure and make changes possible.

«What to include in a zero waste plan?»

At this stage you want to make sure that the plan includes both short-term and long-term milestones. Those milestones should cover initiatives such as organising a separate waste collection system, introducing prevention policies in the use of disposable items, enabling reuse and repair centres that flourish, infrastructure planning and ensuring a smooth transition towards the progressive decline of residual waste generation (avoiding potential lock-in situations).

«The recycling in my town is done by informal recyclers, what will happen to them?»

Informal recyclers have a very valuable experience which should be an asset for the new zero waste plan which will involve them and turn a potential problem into an asset for the model.

SCENARIO 1 · MY CITY IS STARTING FROM SCRATCH

The Story of Ljubljana

Slovenia

Ljubljana, the capital of Slovenia

From waste novice to the EU 'Green Capital' in just 10 years.

When Slovenia joined the EU in 2004 it was starting from scratch. In its capital Ljubljana (population 440,000) most of its waste was being sent directly to landfill. Thanks to the commitment of the public waste company Snaga, monitoring from civil society and the determination of local authorities, they started to roll out separate collection instead of investing in big expensive infrastructures. Ten years later Ljubljana became the best performing European capital and European Green Capital partially thanks to the good waste management plan.

READ THE STORY OF LJUBLJANA

GOING FURTHER IN YOUR DIAGNOSIS

Do you want to discover first hand how Ljubljana achieved its impressive results, along with other frontrunning cities implementing zero waste in Europe?

Join a future Zero Waste Study Tour to learn about how European municipalities are becoming world leaders on zero waste.

For a taste, this is what happened last time in Slovenia.

Image 12: The Zero Waste Study Tour in Slovenia, various locations, 2019.

SCENARIO 2

We have already taken the first steps

WHERE WE ARE

We have installed roadside containers and we have run a couple of unsuccessful communication campaigns asking people to consume responsibly but people didn't collaborate, it looks like we are not going to meet the EU recycling targets and we don't know how to proceed. Recycling rates are low and most waste is buried or burnt.

THE OPPORTUNITY

With the support and using the tools of Zero Waste Europe, we will unblock the situation and devise a plan to target the most littered items, create infrastructures for reuse and repair, roll-out effective separate collection and substantially reduce dependence on disposal operations. At the end we plan to see an increase in citizen participation and a reduction in the costs of waste management and environmental impact.

THE CHALLENGE TO OVERCOME

«Finding the political support to start a change»

Without political will and/or political pressure nothing will move. It is important to have someone in the administration wanting to lead the transition or build a strong civil society movement to push the administration to commit to adopting a zero waste plan.

«Creating a zero waste plan for the city»

The elaboration of a zero waste plan is the best way to bring civil society and policy makers together to take ownership over the process.This plan includes short term and long term milestones which deal with organising separate collection, prevention strategies, infrastructure planning and ensuring a smooth transition towards the progressive decline of residual waste generation (avoiding potential lock-in situations).

«Giving a sign of commitment – ban iconic single-use items»

It is important to give a sign to the population that there is political will to move towards zero waste by legislating on one or more iconic single-use items around which there is wide consensus about its

redundancy, such as plastic bags or plastic straws. This will also align your municipality with the new Single-Use Plastics Directive's requirements.

«Targeting the biggest waste fraction - biowaste»

Food scraps and garden waste together make up between 25 - 50% of municipal solid waste in Europe. They are also the cornerstone of solid waste management. If biowaste is properly addressed through home and community composting and dedicated separate collection so that most of it is captured, the quality of the other waste streams and the economics of the system will increase exponentially. Getting it right is not rocket science but it requires solid and verifiable commitments to make it happen.

«'Put or Pay' contract or ownership of disposal infrastructure»

Many cities are trapped in contracts that require them to supply a certain amount of waste per year to incinerators, landfills or MBT plants (Mechanical Biological Treatment plants). A plan needs to be devised to circumvent this harmful obligation and allow the city to move towards zero waste.

SCENARIO 2 · WE HAVE ALREADY TAKEN THE FIRST STEPS

The Story of Argentona

Spain

Argentona, Catalonia, Spain

“The way of the pioneer is always rough” is a saying that fits the experience of Argentona. Up until 2004 the town of Argentona (population 12,000) was separately collecting glass, paper, lightweight packaging and mixed waste in roadside containers with little success; recycling was stable at well below 20% and more than 80% of its waste went to the nearby incinerator of Mataró.

Thanks to the vision of a group of committed citizens who got themselves elected on a zero waste platform, the town changed the way they managed their resources and in less than 3 years was recycling more than 70% of its waste and had more than halved the mixed waste they were sending to the incinerator.

Argentona paved the way for many other Catalan towns to follow.

READ THE STORY OF ARGENTONA

SCENARIO 3

We are probably in the European average but our city has barely improved in recent years

WHERE WE ARE

We have a functioning system of separate collection but a good amount of recyclables are still found in mixed waste. We still send most of our waste to disposal operations and the quality of our separately collected fractions is still low. We haven't tried or haven't been successful with waste prevention policies and we have little incentive to change things due to contractual lock-ins with a disposal facility or recycling not being competitive compared to disposal.

THE OPPORTUNITY

We want to make sure we meet the EU targets for 2025 and need to start working towards the more ambitious goals that the EU is setting for 2030. This is the right moment to lay the foundations of a new resource management plan for our city.

THE CHALLENGE TO OVERCOME

With the support and using the tools of Zero Waste Europe, the first thing we will do is focus on optimising our separate collection system to radically increase the amount and quality of recyclates and prepare a good waste prevention strategy.

«Finding the political support to start a change»

Without political will and/or political pressure nothing will move. It is important to have someone in the administration wanting to lead the transition or build a strong civil society movement to push the administration to commit to adopting a zero waste plan.

«Creating a zero waste plan for the city»

The elaboration of a zero waste plan is the best way to bring civil society and policy makers together to take ownership over the process. This plan includes short term and long term milestones which deal with organising separate collection, prevention strategies, infrastructure planning and ensuring a smooth transition towards the progressive decline of residual waste generation (avoiding potential lock-in situations).

«Targeting the biggest waste fraction - biowaste»

Food scraps and garden waste together make up between 25 - 50% of municipal solid waste in Europe. They are also the cornerstone of solid waste management. If biowaste is properly addressed through home and community composting and dedicated separate collection so that most of it is captured, the quality of the other waste streams and the economics of the system will increase exponentially. Getting it right is not rocket science but it requires sufficient commitment to make it happen.

«'Put or Pay' contract or ownership of disposal infrastructure»

Many cities are trapped in contracts that require them to supply a certain amount of waste per year to incinerators, landfills or Mechanical Biological Treatment plants. A plan needs to be devised to circumvent this harmful obligation and allow the city to move towards zero waste.

SCENARIO 3

The Story of Pontevedra

Spain

A focus on biowaste: Pontevedra, Galicia, Spain

The Spanish province of Pontevedra, which consists of 61 municipalities, had for a long time implemented an inefficient waste management system, with only 9% of its waste being separately collected. Consequently, the remaining 91% had to be transported more than 100 km away, to be either burned or landfilled.

To shift away from this unsustainable, centralised and expensive waste management system, whilst also ensuring compliance with EU recycling obligations, the province launched a project named “Revitaliza” which built a decentralised, community-led composting system for biowaste relying on 3 key factors:

- A suitable location for the composting process to be conducted within each municipality, adapted to the local area’s specific needs and context
- The design and implementation of an effective monitoring system through the use of a mobile app. The effectiveness of this live monitoring system helped ensure the success of the project by creating a process of quickly identifying and solving issues that arose throughout the implementation phase
- A strong communication plan that was tailored to each community, in order to increase awareness and understanding on how citizens can compost their food and garden waste locally using the new community centers
- In 2019, after only 3 years, the Province achieved some impressive results after successfully rolling out the project in more than two-thirds of municipalities.

READ THE STORY OF PONTEVEDRA

SCENARIO 4

We are meeting the EU recycling targets but we want to go beyond that

WHERE WE ARE

We believe that all the basic elements of a zero waste programme have been put in place, although there are still a few fundamental steps to take to reach top performance and get the full benefits that a zero waste plan can provide on a large scale.

THE OPPORTUNITY

With the support and using the tools of Zero Waste Europe, we want to focus on reducing waste generation, optimising separate collection and proximity management of waste. Our focus will be on the reduction of residual waste, measured in kg/person per year.

THE CHALLENGE TO OVERCOME

«Designing a plan for the next few years to constantly reduce residual waste»

As our residual waste is below 100kg/person/year, we need to carefully study what is still in our residual waste stream and design targeted actions to either replace the products with a different business model or find ways to collect and recycle what we managed to recycle in the past. This plan will need to set mid-term goals below 50kg/person/year of residual waste and will seek to almost completely phase out disposal to landfills and incinerators in the next decades.

«Building synergies with civil society and local businesses to design waste out of the system»

There is so much that the city can do to manage resources, because producers are currently free to sell unsustainable products and/or packaging, not yet having to care about how to manage them once they become waste. Local solutions and new business models can be utilised to use various resources effectively, as well as to phase out materials and products that cannot be taken care of by the local zero waste system.

SCENARIO 4

The Story of Contarina

Italy

Contarina, the Italian excellence Treviso, Italy

The saying “excellence is doing ordinary things extraordinarily well” fits the story of the public company Contarina, which serves the districts of Priula and Treviso in northern Italy, with a combined population of 550,000. Despite being long-time frontrunners, Contarina didn't just rest on its laurels. Even after achieving recycling rates above 50% by the early 2000s, Contarina renewed its focus on reducing residual waste to a minimum.

By 2015 Contarina was already separately collecting more than 85% of its waste and generating less than 60kg of annual residual waste per person, whilst offering the cheapest waste management system in the whole country and generating more green jobs.

Despite being the best European performer in waste management, Contarina is setting its sights even higher. It has set itself the goal of 96% recycling and 10kg residual waste per capita by 2022, an 80% reduction from its already formidable results.

READ THE STORY OF CONTARINA

SCENARIO 5

We need to transition away from incineration to low-carbon alternatives

WHERE WE ARE

We have a functioning separate collection system but a good amount of recyclables are still found in mixed waste. We still send a significant amount of our waste to disposal operations or we export it abroad. We have little incentive to change things due to contractual lock-ins with a disposal facility. Yet our national government has adopted an ambitious decarbonisation agenda that will mean ending incineration of waste in the next decades. Moreover, as renewable energy replaces coal and gas-powered energy plants, the energy produced by waste incineration only gets comparatively worse from a climate perspective.

THE OPPORTUNITY

Citizens worldwide, but especially in our city, are asking for action on the climate crisis and we want to deliver on this front. The alignment of waste with the climate agenda means a comprehensive and holistic resource policy needs to be planned for our municipality. The zero waste and net-zero carbon plan will be the backbone of our city planning for the next decades.

THE CHALLENGE TO OVERCOME

In order to transition away from incineration and other types of carbon-intensive disposal options, we need to reduce the amount of waste we generate and improve the effectiveness of our collection system. Moreover, we will need to build new infrastructure or adapt old ones to recover materials from residual waste and biologically stabilise the remains, so that methane production can be radically reduced by over 90%.

«Finding the political support to start a change»

Without political will and pressure from citizens for political change, nothing will progress. Despite citizens asking for climate action and even national legislation mandating to move in this direction, we need to have someone in the administration wanting to lead the transition or build a strong civil society movement to push the administration to commit to adopting a zero waste plan that phases out all sorts of waste combustion.

«Creating a zero waste plan for the city»

The elaboration of a zero waste plan is the best way to bring civil society and policy makers together to take ownership of the process. This plan includes short term and long term milestones which deal with prevention and reuse strategies, reorganising separate collection and infrastructure planning. With this plan the amount of waste that needs to be disposed of can be reduced dramatically which will make a significant amount of the current waste disposal capacity prescindible.

«'Put or Pay' contract or ownership of disposal infrastructure»

Many cities are trapped in contracts that require them to supply a certain amount of waste per year to incinerators, cement kilns and other waste combustion technologies. All the contracts have their own details and there is always a way out of them, even in a worst case scenario the plant will be depreciated or the contract will expire. A transition needs to be planned so that when the combustion stops, a low-carbon alternative can be implemented in its place.

«Alternative to combustion technologies that meet the European Union's requirements»

According to EU requirements, municipalities will need to substantially reduce the amount of waste they send to landfilling, 10% by 2035 according to the latest legislation, whilst some national legislations go further and ban the landfilling of any waste that either has a certain calorific value or a biological activity level. A system consisting in advanced Mechanical Biological Treatment - what we call Material Recovery and Biological Treatment or MRBT - is capable of sorting out valuable materials from mixed waste and ensure that biological activity is reduced below the thresholds established in the EU Landfill Directive so that it can be safely landfilled. This system is more flexible, adaptable and cheaper than combustion options and can be built a lot faster even when using existing infrastructure.

SCENARIO 5

The Story of Besançon

France

Transitioning away from incineration Besançon, France

Besançon and its surroundings have a population of 225,000 people, of whom half are living in densely populated areas.

Before 2008, waste was incinerated within an incineration plant comprising 2 different furnaces, one of which was built in 1975. In 2008, Besançon and its surrounding municipalities decided to start moving away from incineration and close the old furnace.

A programme based on an extensive use of decentralised composting and pay-as-you-throw fees has put them on track to zero waste.

READ THE STORY OF BESANÇON

SCENARIO 6

We are a tourist destination

WHERE WE ARE

My city has a high degree of seasonality because it is a holiday destination for locals or because of the strong presence of tourists for some months of the year. During the low season there is more or less a functioning waste management system but when tourists come we lack a plan to address this temporary overpopulation.

THE OPPORTUNITY

Being “green” is not only good for the environment and for our citizens, it is also a way to add value to our tourist sector. With the Zero Waste Masterplan, we aim to develop a plan to involve seasonal visitors in preventing and separating waste even if they don't do it at home.

THE CHALLENGE TO OVERCOME

Regardless of what kind of waste management system the city currently has, we will need to review and optimise our measures to design a system that is compatible with the seasonality or the big influx of tourists.

«Is it worth educating tourists?»

Tourists will not stay for long and the communication to them should not be the same as the one directed to local residents. Developing systems and communications that are easy to understand and even easier to execute is key for tourists. It is important to target waste streams and spaces frequented by tourists, such as popular hotels, bars, and restaurants.

The routes and frequency of collection will need to match the fluctuations in waste generation that occur throughout the year, as well as being adapted to encourage recycling. Flexibility within the zero waste plan is central to its success, which can be achieved through using the Zero Waste Masterplan and by continuing to analyse the contents of municipal waste, identifying recurring problematic items and creating solutions to address them. Awareness and information communications should also be spread around the community in order to encourage tourists and residents to reuse products, highlighting

locations and businesses where they can find reuse centres, such as refillable water stations or Deposit Return Schemes.

DESIGNING A ZERO WASTE PLAN

The plan should include measures to reduce waste generation and maximise separate collection. A dedicated waste prevention plan will be key to reducing waste generation, with measures aimed at preventing disposable products and packaging, offering water in public fountains, reducing food waste and promoting local products.

SCENARIO 6

The Story of Sardinia

Italy

A touristic islands and zero waste Sardinia, Italy

This fantastic tourist destination in the Mediterranean has led the way towards implementing a strong zero waste programme within a challenging context.

Combining political will, civil society involvement and the application of best technical expertise, the island of Sardinia is the Italian region that has shown the fastest growth in separate collection over the last decade.

Today the island achieves a separate collection rate of 60%, reaching 80% to 90% in some municipalities, combined with very low waste generation across the island.

READ THE STORY OF SARDINIA

SCENARIO 7

We are located in a remote rural area or on an island

WHERE WE ARE

We are far away from big populated areas. This means that solutions that work somewhere else might not work or will be a lot more expensive in our situation. Remote locations, including small closed systems as for example small islands, also face different challenges than most cities and specific scenarios can vary quite a bit from one situation to the other. Those communities may have to deploy truly local solutions, with highly optimised collection systems for recyclables.

THE OPPORTUNITY

We want to set up a system that is efficient, cost-effective, decentralised and that fits our reality. Our zero waste plan needs to be flexible to meet the demands of our local context.

THE CHALLENGE TO OVERCOME

«Creating a system that is economically and environmentally sustainable»

The isolation of our community means that the less waste we generate, the less needs to be shipped, and the lower the costs associated. This can be done by a good policy of substitution of single-use items and packaging, local management of organic waste and a good system of collection and storage of those waste streams which cannot be treated locally.

«Management of biowaste»

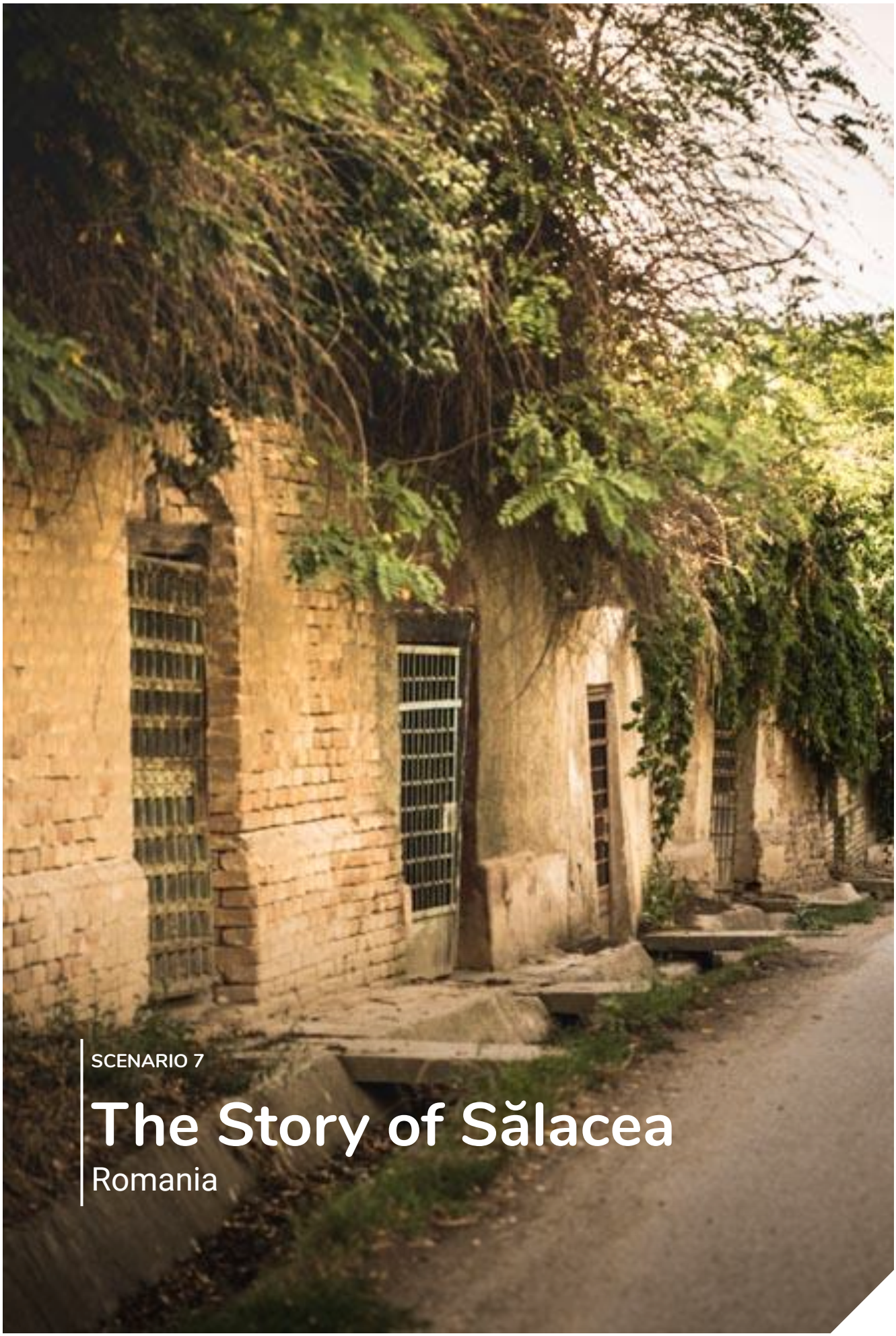
Like everywhere else the most significant waste fraction is biowaste. Given its high density and high biological activity, it cannot be stored for a long time before transfer and it doesn’t make economic sense to ship it almost daily to big bio-waste treatment facilities. Hence local treatment of biowaste is the most economic and environmentally sensible option. Whether this takes place via home composting, community composting or anaerobic digestion, will depend on local conditions.

«Managing dry waste»

If biowaste is separately collected and managed, most of the other fractions can be collected a lot less frequently and stored until the volume accumulated justifies a shipment to a far away sorting facility.

«Addressing problematic waste streams»

Sanitary products are a problematic fraction that will be difficult to store at home or in the village/island due to their biological activity. Practical actions will need to be devised to prevent and manage these waste-streams, like replacement with reusable options or sterilisation/stabilisation prior to storage.



SCENARIO 7

The Story of Sălacea

Romania

A small rural champion Sălacea, Romania

The city of Sălacea, located in the north-west of Romania, managed to not only quickly rise from collecting almost no waste for recycling to 40% in just 3 months, but it also managed to reduce community waste generation by 55% in that same period. In partnership with Zero Waste Europe and Zero Waste Romania, the authorities in Sălacea began their journey towards zero waste by implementing a system consisting of:

- Complete door-to-door separate collection of five waste streams, including biowaste
- Strong levels of engagement and collaboration with local stakeholders, including principally Eco Bihor, the sorting and treatment plant regional operator
- A comprehensive four-week education programme for citizens, accompanied by an effective communication strategy to inform and engage the local community

After only 3 months, the results in Sălacea were outstanding:

- Total waste generated fell from 106.7 tonnes to 47.93, a drop of 55%
- Waste that went to landfill dropped from 105 tonnes (98%) to 26.3 (55%)
- Separately collected waste rose from 1% to 61%
- Rates of local citizen engagement increased from 8.4% to 97%

READ THE STORY OF SĂLACEA

Every city is different, we know that. That's why we can help you analyse your situation further and define the key steps that you will need to take to develop your zero waste plan specifically tailored to your local needs and context.

Please make contact at
cities@zerowasteeurope.eu

Next steps

PART 4

Following the Zero Waste Masterplan from the start to this point, you will now have a good understanding about what exactly zero waste is, including the emerging trends and the relevant pieces of EU legislation for waste and the circular economy.

You will also have an understanding of the economic, social and environmental benefits that the zero waste approach can bring for a community when adopted effectively.

Furthermore, you will have begun to consider the various options and starting points available for your municipality to begin its journey to zero waste, given the specific local context and environment you are working in.

The Masterplan has been designed as your entry point into zero waste.

From here on, we have developed several resources to help guide the design, implementation, monitoring and evaluation of zero waste strategies at the local level.

Building on the knowledge you have already, these resources provide practical advice to follow, templates to use and tools to help define your work.

All of these can be found online in the Zero Waste Europe Academy.

Zero Waste Europe Academy

Given the growth in awareness of zero waste and the circular economy, it's now more important than ever that municipalities and community stakeholders have the right knowledge, materials and experience to begin implementing impactful zero waste policies.

The Zero Waste Europe Academy is where you'll find leading tools, resources and experts who have been behind Europe's transition towards zero waste so far, and can help guide you towards future successful implementation of zero waste strategies. Using the experience that we have gained from being at the forefront of the zero waste movement in Europe for the past decade, the Zero Waste Europe Academy has been designed to support the work of anyone who is serious about reducing and preventing waste in their local community.

The Academy consists of both an online platform and offline workshops and Study Tours. Our online platform is full of guides, videos and audio recordings, providing you with access to our pioneering Zero Waste Live! webinar series where we convene the leading thought-makers and practitioners to discuss the biggest topics surrounding zero waste today.

SEEING IS BELIEVING

The Zero Waste Europe Academy is not just online thoug,; we can bring it directly to you and your community. We have designed the Academy in order to build awareness and the capacity of European change makers to deliver local-level policies and strategies that reduce and prevent waste generation.

Through Zero Waste Europe staff and our network of experts, we deliver Study Tours that convene groups in Europe's front running zero waste cities to learn from the most successful and effective examples out there today. The Academy also comprises in-person Workshops delivered by experts within the Zero Waste Europe network that can be specifically tailored and designed to meet your needs and requests.

So if you want support on implementing a decentralised composting system, guidance on what zero waste business models are being implemented today, or if you are in need of direction regarding what should be included within a municipality's zero waste plan, the Zero Waste Academy should be the first stop in your search.

Whether you are a municipality official, waste management professional, civil society organisation, school, business, event organiser or simply an individual wanting to make a change, you will find something for you in the Zero Waste Europe Academy.

VISIT THE ZERO WASTE EUROPE ACADEMY

Zero Waste Cities certification and benchmarking Europe's best zero waste businesses

The term zero waste is increasingly being used and applied in societies today. From hotels to festivals, cafés to cities, zero waste is becoming an ever more common term due to the growing awareness and recognition that we need to change our economic model towards one that is more circular. The growth in popularity and awareness of zero waste is something to be celebrated, and we're proud of the role we've been able to play in helping secure this.

However, the increasing use of the zero waste term has also resulted in its definition and approach becoming diluted and weakened. Increasingly, some stakeholders ranging from municipalities to big businesses, are claiming that they or their business are zero waste, without understanding the holistic, community-led approach that this requires.

In order to protect the real zero waste approaches from bogus claims but, above all, in order to facilitate the transition towards this resilient future we complement the Zero Waste Europe Academy with the Zero Waste Cities certification and label to benchmark Europe's best zero waste businesses. The certification process is open to any European municipality and is currently present in 8 European countries, whilst the label is open for small and medium sized businesses, events and organisations who are implementing a zero waste approach within their operations and work.

For further information about this initiative, please visit our website.

Conclusions

PART 5

With zero waste increasingly accepted and acknowledged within mainstream society today, coupled with an ambitious legislative framework being built at the EU level, there is a growing urgency now for efforts and attention to focus on the implementation of zero waste at the local level. This is why the Zero Waste Masterplan has been improved, to help explain further the what and why of the zero waste approach.

Given the proximity of the climate and environmental disasters facing the planet, there has never been a more urgent and important time for action. We are in need of brave leaders, both those who are elected and those who volunteer their time. This Masterplan has been designed specifically for individuals and organisations wanting to address these issues, rethinking our consumption and production patterns to connect our lives closer to nature and bring together communities in doing so.

We hope that this is just the first step on your journey to zero waste. Through the Zero Waste Europe Academy, you will find further tools and resources that allow you to dig deeper into the topic of zero waste, supporting you further as we transition Europe towards a zero waste future, one community at a time.

For further information, you can either contact us directly at cities@zerowasteeurope.eu or you can find out who the National Coordinator is in your country.

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DESIGN

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For more information visit zerowastecities.eu
or contact cities@zerowasteeurope.eu

Zero Waste Europe is the European network of communities, local leaders, experts and change agents working towards the elimination of waste in our society. We empower communities to redesign their relationship with resources, and to adopt smarter lifestyles and sustainable consumption patterns in line with a circular economy.

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