REDUCING PLASTIC WASTE IN CANADA

Funded by the European Union

Reducing Plastic Waste in the EU

A Best Practices Highlights Report

Strategy | Reuse | Recycling Technologies | Collaboration

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Introduction to The Reducing Plastic Waste in Canada Project

Reducing Plastic Waste in Canada is a two-year project part of the Circular Plastics in the Americas Program addressing the issue of plastic waste and is part of the European Union (EU) commitment to the United Nations (UN) Sustainable Development Goals to support the transition toward more sustainable production and consumption and, boost ongoing processes to create opportunities for a sustainable and circular plastics economy. The project aims to deepen knowledge, strengthen approaches, and accelerate the implementation of solutions through a series of targeted activities such as peer-to-peer exchanges, workshops, knowledge development reports, pilot projects and, outreach and dissemination activities.

Canada shares these environmental values and has set ambitious goals to reduce plastic waste by 2030 and to promote a circular value chain for plastics. As a leader, Canada also seeks to improve on its record and has already identified European strategies as sources of best practices. Collaborations are rich (e.g., G7, business councils, standards, Plastic Pacts, etc.) and can be enhanced to address challenges and further encourage innovation. The diverse and deep experience of the EU and its Member States in implementing the various action plans that target plastic strategically places the EU as a unique resource to champion discussions and connect people and experiences around the world.

The Reducing Plastic Waste in Canada project began in January 2021 and was finalized in January 2023. It was implemented by consortium that included a two-member project team in Canada, led by EPRD Policy & Development in Poland.

Introduction to this Report

The overall objective of this selected best practices highlights report is to share a range of practices in various categories that demonstrate the depth and breadth of European leadership in reducing plastic waste with a goal of increasing awareness and knowledge of European practices, innovation and efforts towards more sustainable production and consumption of plastics with Canadian peers.

The practices were identified through a literature review, and criteria for selection of practices for inclusion in this report included the following. The approaches:

- Demonstrate implementation of strategies/policies related to reducing plastic waste at either the regional, national, or local level;
- Show innovation, the practice not happening at a widespread level elsewhere; and
- Address theme areas of the Reducing Plastic Waste in Canada project.

The categories of best practices profiled include the following:

1. Strategy and Policy Directives / Pledges
2. Extended Producer Responsibility and Design for Recycling
3. Green Procurement
4. Reuse Initiatives
5. Outreach and Engagement Campaigns

This Highlights Report showcases a selection of five best practice examples in each of these categories, for a total of twenty-five best practices. The selection is meant to be representative of a variety of approaches in a variety of countries, including different types such as guidelines, roadmaps, technologies, programs, and policies, that showcase the various types of initiatives happening across Europe.

Category A: Strategy and Policy Leadership

Best Practice A1: New Circular Economy Action Plan

The *NEW* EU Circular Economy Action Plan (CEAP)[1] was launched in 2020 building on the successful 2015 plan with a suite of both legislative and non-legislative actions that aim to transition the European economy from a linear to a circular model. Funding of CEAP initiatives will be enhanced through the EU's NextGeneration post-pandemic recovery fund launched in 2021 for seven years. The *New* CEAP includes legislative proposals on waste, including reducing plastic waste, targets for reuse and recycling to be met by 2030 and 2035, along with new obligations for recycling collection. The *New* CEAP covers several policy areas and sectors alongside cross-cutting measures to support this systemic change through innovation and investments. It also includes a sectoral strategy for plastics.

The *New* CEAP is one of the main building blocks of the European Green Deal, Europe's new agenda for sustainable growth. The EU's transition to a circular economy will create sustainable growth and jobs. The CEAP has initiatives along the entire life cycle, including how products are designed and managed. It promotes circular economy, encourages sustainable consumption, aims to ensure that waste is prevented and resources are kept in the EU economy. By rethinking resource efficiency and material flows, the European Commission developed a framework to promote systemic change across member states, regions and local governments. By engaging policymakers across levels of governance, as well as various stakeholders, it uses a collaborative approach and enabled the adoption of integrated policies.

THE OBJECTIVES OF CEAP ARE TO:

- MAKE SUSTAINABLE PRODUCTS THE NORM IN THE EU
- EMPOWER CONSUMERS AND PUBLIC BUYERS
- FOCUS ON THE SECTORS THAT USE MOST RESOURCES AND WHERE THE POTENTIAL FOR CIRCULARITY IS HIGH
- ENSURE LESS WASTE
- MAKE CIRCULARITY WORK FOR PEOPLE, REGIONS AND CITIES
- LEAD GLOBAL EFFORTS ON CIRCULAR ECONOMY

[1] Source: European Commission, New Circular Economy Action Plan https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en#:~:text=The%20new%20action%20plan%20announces,for%20as%20long%20as%20possible.

Best Practice A2: EU Green Deals

The European Green Deal is about improving the well-being of people. Making investments that lead to a climate-neutral Europe and protecting natural habitat to ensure benefits for people, planet and economy. Investments for a more climate-neutral and circular economy were the backbone of the first Green Deal announced in 2019. Since then, the term has evolved to represent strategic investments by the European Commission that are sector specific action to achieve regional goals that priorities both circular economy and climate as well as clean air and water, healthy soil, contribute to biodiversity, energy efficient buildings, sustainable and green transportation, clean energy, as well as product longevity and waste reduction.

EU Green Deals is a package of European proposals to make sustainable products the norm in the EU, boost circular business models and empower consumers for the green transition. Linked to the *New* CEAP, the Commission is proposing new rules to make almost all physical goods on the EU market more circular throughout their whole lifecycle, in various categories.

The Green Deal approach is multi-faceted, it includes specific proposals to enhance circularity for a variety of products, plastics, as well as for the textiles and construction sectors which have also been identified as sectors that contribute to plastic waste. The EU Green Deal presents the tools to move to a truly circular economy in the EU: decoupled from energy- and resource dependencies, more resilient to external shocks and respectful of nature. Investments from the NextGeneration EU Recovery Plan will finance the European Green Deal.

EU Example: Flemish Green Deal

A Flemish initiative called the “Green Deal Anders Verpakt” or “Green Deal Packed Differently”[2] aims to reduce the amount of single use packaging in the distribution sector with the establishment of new reusable packaging initiatives across the region, and a focus on prevention. The Green Deal intends to shift the focus of efforts from collection and recycling to other distribution and consumption models aimed at reducing one-way packaging. To achieve prevention and reuse of packaging the initiative is looking at the entire chain of production and not only the final product. As of March 2022, over 80 companies and organizations signed onto the Flemish Green Deal, representing stakeholders at all points of the supply chain as well as companies specializing in the logistics of collecting, washing, and delivering reusables. Participants will spend the next three years collaborating in identifying solutions to stimulate the prevention and reuse of packaging in the distribution sector. The projects within the Green Deal give consumers in shops more choices to avoid buying single-use packaging. Key players in the Green Deal are brand owners who develop refilling stations for their product lines. The plan is to make refill the standard for everyday shopping behaviour.

[2] Source: https://vito.be/en/news/green-deal-anders-verpakt-15000-tons-less-disposable-packaging-flanders

Best Practice A3: EU Strategy for Plastics in a Circular Economy

The European Strategy for Plastics in a Circular Economy (the EU Plastics Strategy)[3] aims to transform the way plastic products are designed, produced, used and recycled in the EU by setting ambitious targets for recovery, reuse, and recycling for each member country. The Strategy set a target that 10 million tonnes of recycled plastics are used to make products in the EU by 2025 to encourage recycling of plastics that are not being recovered but are being disposed or wasted. This strategy lays the foundations for a new plastics economy, where the design and production of plastics and plastic products fully respect reuse, repair and recycling needs and more sustainable materials are developed and promoted. This will deliver greater added value and prosperity in Europe and boost innovation. The strategy presents key commitments for action at EU level, as well as for the private sector, including all across the plastics value chain from design, manufacturing and production, use, and management at end of life. Commitments were also required by EU member states including national or regional government authorities.

Key goals of the Plastics Strategy are to:

- Improve design and support innovation to make plastics and plastic products easier to recycle;
- Expand and improve the separate collection of plastic, to ensure quality inputs to the recycling industry; expand and modernise the EU's sorting and recycling capacity;
- Create viable markets for recycled and renewable plastics.

Key actions underway in the Plastics Strategy:

- Establishing new rules on packaging to improve the recyclability of plastics and increase the demand for recycled plastic content
- Improving the separate collection of plastic waste
- Launching an EU-wide pledging campaign
- Driving innovation and investment by scaling up support with €100 million to develop smarter and more recyclable plastics materials, to make recycling processes more efficient, and to trace and remove hazardous substances and contaminants from recycled plastics.

[3] Source: European Commission Plastics Strategy https://environment.ec.europa.eu/strategy/plastics-strategy_en#:~:text=The%20EU's%20plastics%20strategy%20aims,the%20environment%20and%20human%20health

Best Practice A4: Circular Plastics Alliance

The European Commission uses industrial alliance to facilitate stronger cooperation and joint action between all interested partners. Industrial alliances can play a role in achieving key EU policy objectives. They can make European economies more resilient, ensure the global competitiveness (including for small and medium sized enterprises), and support a successful transition to a carbon-neutral continent by 2050.

Industrial alliances bring together a wide range of partners in a given industry or value chain, including public and private actors and civil society. Industrial alliances are:

- Built around a common goal to implement EU policy objectives
- Involve all relevant partners (EU countries, regions, industry, financial institutions, private investors, innovation actors, academia, research institutes, civil society, trade unions, and others) along the value chain
- Based on the principles of openness, transparency, diversity and inclusiveness and comply with competition rules
- Are not involved in decision making on policy, regulation or financing
- Do not receive direct funding for alliances and they do not prejudge potential Important Projects of Common European Interest (which are designed by EU counties and need a separate approval by the Commission).

To drive the momentum that began with the launch of the EU Plastics Strategy, the EU Commission launched the Circular Plastics Alliance to help bridge the gap between the supply and demand for recycled plastics. The alliance covers the full plastics value chains and includes over 300 organisations representing industry, academia and public authorities. The Circular Plastics Alliance has committed to boosting the EU market for recycled plastics to 10 million tonnes by 2025. The CPA takes action to reach this target and publishes monitoring and reporting activity.

The alliance has committed to: identify untapped potential for improving quantity recycled; map investment needs in recycling facilities in each member state; identify untapped potential for collection and sorting; map investment needs in collection and sorting facilities and infrastructures in each member state; identify legal, economic and technical obstacles to more uptake of recycled plastics; map investments needs in collection, sorting, recycling and converting of plastics, and list the barriers; set up a monitoring system to track collected and sorted recycling.

Best Practice A5: Ecodesign Regulation

A new regulatory proposal, *Ecodesign for Sustainable Products Regulation*, published on 30 March 2022, is the cornerstone of the EU Commission's approach to more environmentally sustainable and circular products. The proposal builds on the existing Ecodesign Directive, which currently only covers energy-related products. The proposal establishes a framework to set ecodesign requirements for specific product groups to significantly improve their circularity, energy performance and other environmental sustainability aspects. It will enable the setting of performance and information requirements for almost all categories of physical goods placed on the EU market, and for groups of products that share sufficient common characteristics, the framework will also allow to set horizontal rules. The framework will allow for the setting of a wide range of requirements, including with respect to:

- Product durability, reusability, upgradability and reparability
- Presence of substances in products that inhibit circularity
- Energy and resource efficiency
- Recycled content
- Remanufacturing and recycling
- Carbon and environmental footprints, and
- Information requirements, including a new "Digital Product Passport" to provide consumer facing information about products environmental sustainability

The new "Digital Product Passport" will provide information about products' environmental sustainability. It should help consumers and businesses make informed choices when purchasing products, facilitate repairs and recycling and improve transparency about products' life cycle impacts on the environment. The product passport should also help public authorities to better perform product reviews. The Green Deal is multi-faceted, it also includes specific proposals to enhance circularity from the textiles and construction sectors, which have also been identified as sectors that contribute to waste production, and both sectors include plastics in their products.

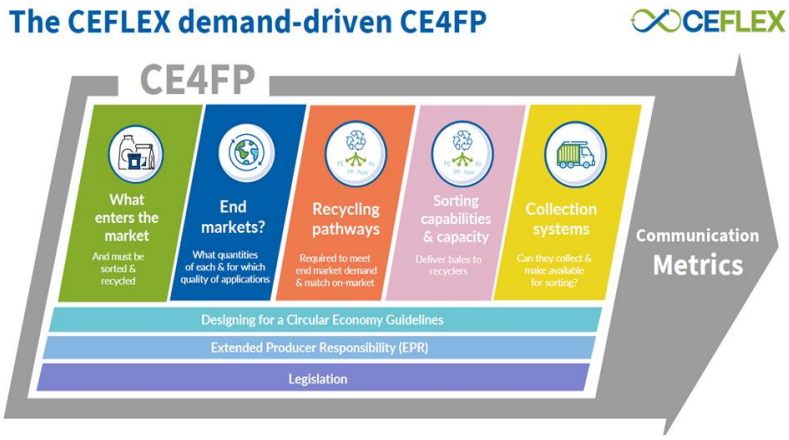
The proposals build on the success of EU's existing Ecodesign rules, with the proposal for the new Ecodesign regulation including new requirements to make products durable, reliable, reusable, upgradable, reparable, easier to maintain, refurbish and recycle, as well as being energy and resource efficient. The Digital Product Passports will make it easier to repair or recycle products and facilitate tracking substances of concern along the supply chain. Labelling can be introduced as well. The proposal also contains measures to end the destruction of unsold consumer goods, as well as expand green public procurement and provide incentives for sustainable products.[4]

[4] Source: European Commission https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/sustainable-products/ecodesign-sustainable-products_en

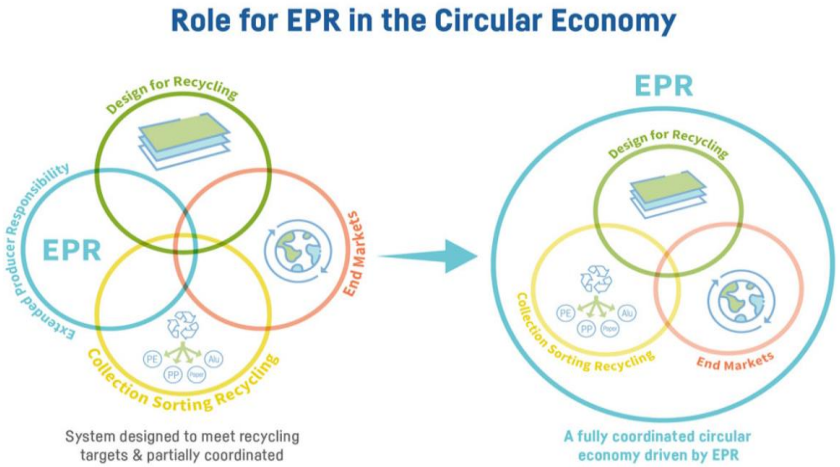
Category B: Extended Producer Responsibility and Recycling Best Practices

Best Practice B1: EPR Criteria for Circularity

Circular Economy for Flexible Packaging (CEFLEX) is a collaborative association of 190 stakeholders from all parts of the flexible plastic packaging value chain. Together, CEFLEX developed a circular economy roadmap for flexible packaging as well as EPR criteria for circularity, endorsed by all members.



The roadmap includes a set of actions needed by each part of the value chain. By 2025, CEFLEX envisions an established collection, sorting and reprocessing infrastructure and economy for post-consumer flexible packaging across Europe. Key pieces of information for the CEFLEX roadmap include: what is being placed onto the market; developing end markets; determining recycling pathways and how sorting should be organised given the requirements for both mechanical recyclers and chemical recyclers. Three key enablers for this roadmap were identified as having in place the Design for a Circular Economy Guideline (D4ACE) guideline, an enhanced role for EPR in the circular economy, and recycling legislation. The following exhibit shows how the role of EPR is evolving to be all encompassing as we move towards a more circular economy. [5] Producers and the role they play, will be the driving force in a circular economy of the future.



[5] Source: ceflex.eu/ceflex-launches-epr-criteria-for-circularity-in-flexible-packaging/

Best Practice B2: EPR in Belgium

Belgium is leading the way to regulate packaging waste from both out-of-home sources, as well as the Industrial, Commercial, and Institutional (ICI) sector. Belgium is one of only a handful of EU countries that have regulated EPR programs that target both out-of-home and ICI sector materials.

To date, Austria, Netherlands, Belgium and Germany have passed laws requiring producers of packaging that is designated for the ICI sector to participate in regulated EPR programs. In Germany and Belgium, producers are responsible for collecting and managing materials from all ICI sector sources of packaging waste including businesses, restaurants, hotels, hospitals, educational facilities, sports stadiums, cinemas, and museums. Most of these materials can be considered institutional sources of packaging.

Belgium was one of the first countries in the EU to regulate packaging recycling from this sector in 1997. There are two compliance organisations (Producer Responsibility Organisations or PROs) accredited in Belgium:

- Fost-Plus for household packaging, including out-of-home; and
- Valipac for ICI packaging

Fost-Plus works through service agreements with municipalities, they contract haulers and report all recycling information to the Belgian government. The specific approach for out-of-home collection is a hybrid model between the residential collection program and the model where businesses are free to select waste haulers and report data to Fost-Plus. Fost-Plus's mandate is focused on household packaging as a material type, regardless of whether the waste generated in the home or away from home. This program is tailor-made to the generating sites including workspaces, schools, public spaces such as stadium, transport areas, parks, and events such as festivals, etc. Fost-Plus offers access to service providers that collect from businesses and allows some small companies to use the collection bags used in the residential sector. Fost-Plus also offers incentives for collection for equipment (bins) and education at schools.[6]

Valipac acts primarily as a centralizer of recycling system performance data, and as a facilitator between waste service providers and waste packaging generators; they do not operate infrastructure but rather they access information on collection and recycling with service providers and incentivize the collection at source. Valipac offers incentives (funded by fees from members), tied to contracting with a waste management company for participating on different levels.[7] In addition, Valipac conducts enhanced traceability of the destination of collected recycling from its ICI sector and can identify 99% of the final destinations of ICI plastic packaging waste collected to ensure it is not exported illegally. Furthermore, Valipac also stimulates the development of recycling businesses within Europe by offering its recycling processors a bonus of €20/ton for recycling plastics within the EU, and €10/ton for recycling plastics within Belgium.

Fost-Plus and Valipac are required to provide evidence to government authorities of the recycling of packaging placed on the market by their members. For this reason, both organizations conduct education and awareness outreach, and incentives for facilities to sort packaging materials.

[6] Fost Plus. 2022. Sorting at School. Available at: https://www.fostplus.be/en/sorting/sorting-school
[7] Source: https://www.valipac.be/en/sorting-waste-in-your-company/#incentives
https://www.valipac.be/en/facilitating-circular-economy/#traceability

Best Practice B3: EPR for Durable Plastics in France

France has always been a leader in regulating EPR for multiple product categories. With the passing of the Law Against Wastage and for a Circular Economy they are pushing forward with new product categories added to the list of mandatory EPR schemes, including a variety of durable plastic products from new sectors not currently subject to EPR.

Starting in 1993 France required EPR programs for household packaging and agro-supply products, batteries, tires, graphic paper, electronics, vehicles, textiles, medicine, furniture, chemical products, perforating medical devices, boats, and tobacco filters. The French EPR system is organized by product type and not material type. As such, the plastics sector is represented by several Producer Responsibility Organizations (PROs). France is one of the countries that makes the most use of the EPR schemes in the structuring of its waste management regulatory framework. There are currently about fifteen EPR schemes in the country with different PROs, and twelve new schemes under development.[8]

On January 1, 2022, five new EPR schemes were introduced as per the *Law against Wastage and for a Circular Economy* (2020) for designated products that are made with durable plastics: toys, sports and leisure products, home improvement and gardening products, and products and materials from the construction sector. Decrees (regulations) defining the scope of each fraction or category of products were adopted in 2021. There will be new EPR requirements for additional sectors in the next three years: packaging from the construction and restoration sector (in 2023), fishing articles (in 2024), and industrial and commercial packaging (in 2025).

TACKLING CONSTRUCTION WASTE WITH EPR:

- FRANCE'S CONSTRUCTION SECTOR GENERATED 42 MILLION TONNES OF WASTE ANNUALLY AND ACCOUNTED FOR 26% OF THE COUNTRY'S CO2 EMISSIONS IN 2016
- TO BETTER MANAGE RESOURCES AND PROMOTE CONSTRUCTION MATERIAL REUSE, AN EPR SCHEME FOR BUILDING MATERIALS WILL BE OPERATIONAL FROM 2022 UNDER THE *LAW AGAINST WASTAGE AND FOR A CIRCULAR ECONOMY* (2020)
- BY IMPROVING THE RESOURCE MANAGEMENT SYSTEM, EPR SCHEMES CAN HELP SUPPORT MULTIPLE CIRCULAR ECONOMY LOOPS.

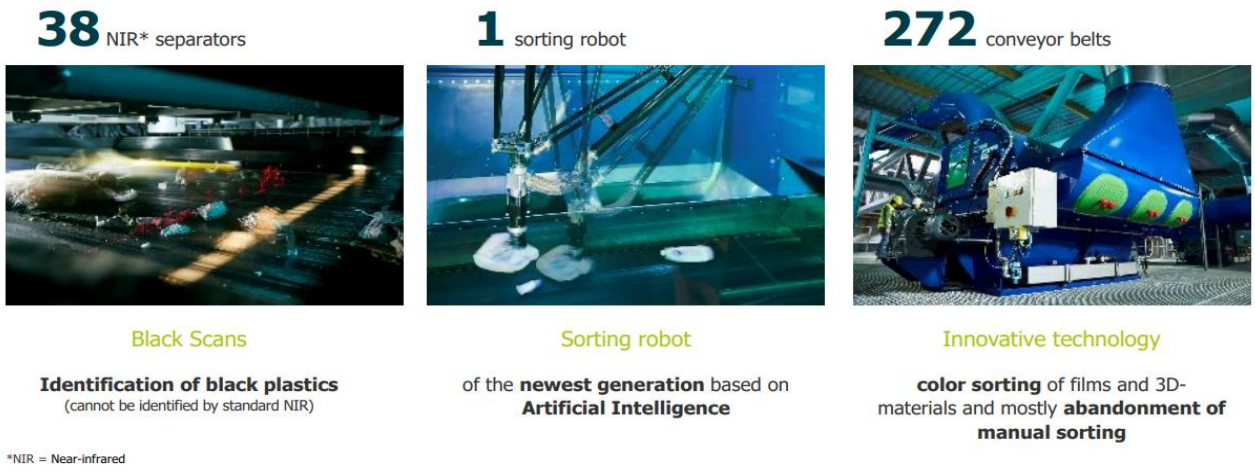
The *Law Against Wastage and for a Circular Economy* (2020) was developed with a goal to better promote waste prevention as the first pillar of the waste hierarchy, directly within the development of new EPR schemes. In addition, the law reforms the methods of financing EPR schemes within each sector and clarifies the purpose of EPR, as not just a method of financing recycling at end of life, but as a way to drive change upstream to prevent waste in the first place by re-designing products and packaging.

[8] Source: Institute National de l'Economie Circulaire
https://institut-economie-circulaire.fr/responsabilite-elargie-producteur-rep-loi-economie-circulaire/
https://institut-economie-circulaire.fr/wp-content/uploads/2021/01/focus_rep_inec_2021.pdf

Best Practice B4: Producer Leadership in Plastics Sorting Innovation

PreZero, a German company that operates packaging sorting facilities in eleven countries in Europe, has developed innovative sorting technologies to virtually eliminate manual sorting and improve automatic sorting capabilities for what has typically been known as "hard to recycle" flexible packaging across European countries where they have operational facilities.

PreZero operates collection, sorting and recycling facilities that has incorporated innovative technology specifically for flexible packaging sorting and recycling. PreZero is in operation in eleven countries in Europe, with seven sorting plants in Germany. In addition, PreZero operates as a Producer Responsibility Organization (PRO) in Germany. PreZero's new state of the art Eitting sorting facility in Germany is designed to process up to 120,000 tonnes/year of lightweight packaging using Near Infrared (NIR) optical sorters, as well as a screen sorter to remove plastic pieces that are 20 mm or less. The new Eitting sorting facility includes the following new technology features:[9]



Implementing this enhanced sorting capability has allowed Eitting to produce four separate flexible plastic commodity streams: transparent low-density polyethylene (LDPE) film, coloured LDPE film, flexible polypropylene (PP) and mixed flexible polyolefins (MPO). Current end markets mostly include European polypropylene (PP) rigid recyclers, as PP film is compatible with rigid formats and can be incorporated into PP recyclates that can be used to produce rigid plastic packaging.

The primary driver to develop technology to increase the capture of smaller pieces of flexible packaging is the higher recycling targets in Germany and the EU Commission's Plastics Strategy, which is driving increased demand for recycled content across Europe. Strategic goal-setting by policy-makers drives technology development in the private sector, including by producers.

[9] Source: https://eprd.pl/wp-content/uploads/2022/05/Web2_-_-Advances_in_the_collection_and_sorting_technologies_for_flexible_packaging.pdf

Best Practice B5: Germany's New Packaging Legislation – An Enhanced EPR Approach

The new German Packaging Act, 2019[10] replaces the Packaging Ordinance of 1991. It is an updated piece of legislation that aims to increase responsibilities of producers, include online marketplace sellers, and set targets for multiple material categories including recycled content as well as recycling rates.

The target for plastics recycling is 90% of all plastics placed on the market will be recycled. Starting in 2022, a deposit will also be mandatory on all single-use plastic beverage bottles. Starting in 2025, PET non-returnable beverage bottles must contain at least 25 percent recycled plastic and starting in 2030 this quota will increase to at least 30 percent and will then apply to all non-returnable plastic bottles.

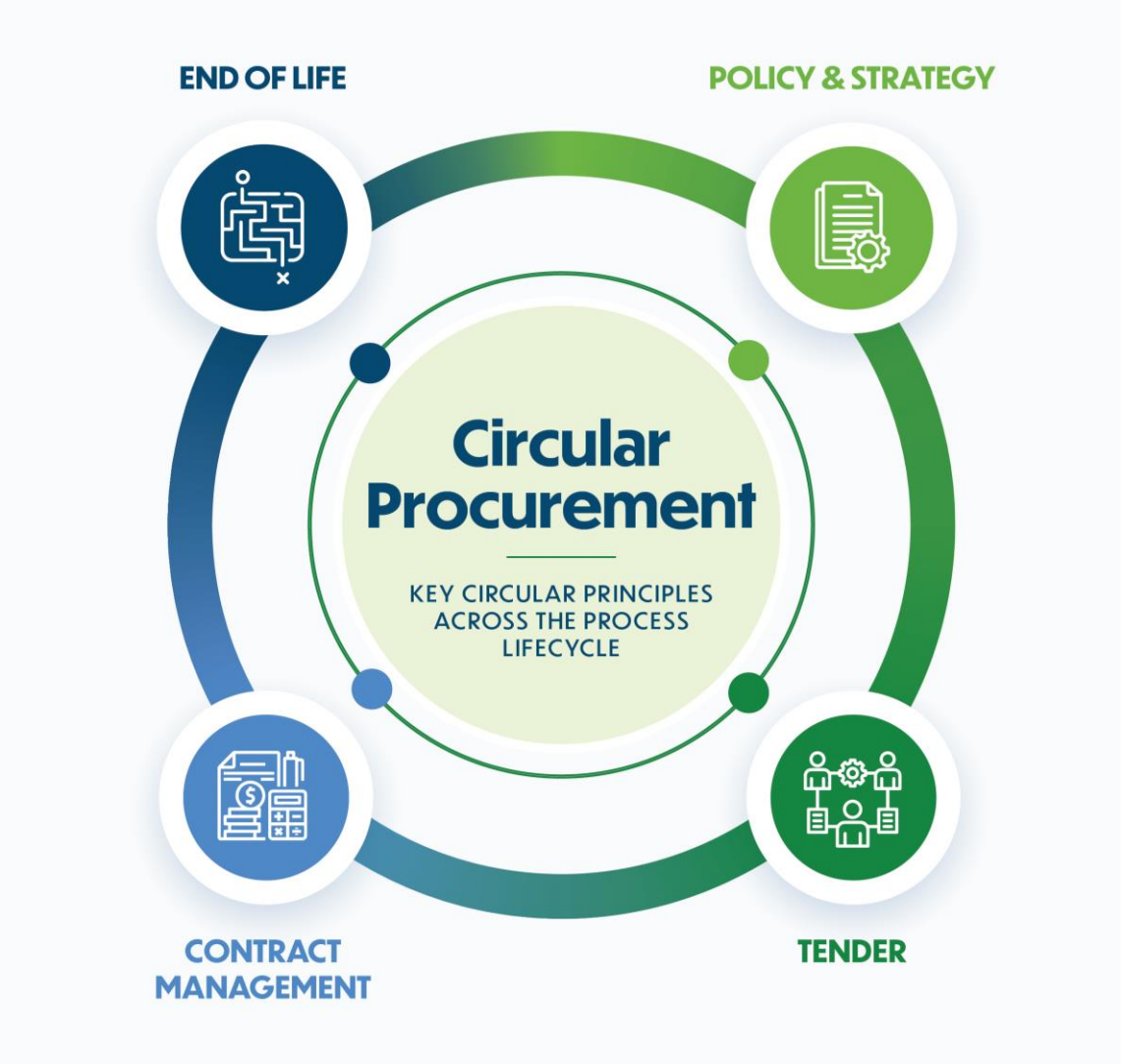
The updated Act aims to make retailers more responsible for promoting the use of eco-friendly and recyclable packaging, including deposits on all single-use beverage packages as well as compulsory labelling of the shelves as "ONE WAY" or "RETURNABLE" beverage packaging by the distributor. Owners of restaurants and retailers will have to offer reusable alternatives instead of single-use plastic packaging from 2023 when selling food and beverages for immediate consumption. The reusable options must not be more expensive than the product in the disposable packaging.

There will be a central packaging registry to ensure data traceability. Every manufacturer, distributor or importer, including online retailers have obligations in the new legislation. In addition, there is no threshold limit to exempt small companies, unlike the former Packaging Ordinance. The registry will track legally compliant distribution of packaging and packaging take-back, as well as tracking recycling volumes within Germany. The centralized packaging register is an EPR approach that requires manufacturers, as well as in-person and online retailers to register prior to placing their product for sale on the Germany market.

This new legislation has multiple elements that will ensure success. The first is that it aims to include online retailers / the e-commerce marketplace which has traditionally been a difficult sector to include in EPR programs, and e-commerce sellers have been documented as being free-riders on existing programs that can only obligate those physically located within a country. The second is that it has specific obligations for the retail sector to offer reusable alternatives, this is not being done elsewhere. [11] [12]

[10] German Government news release https://www.bmuv.de/pressemitteilung/mehrweg-wird-moeglich-im-to-go-bereich/
[11] Der Grüne Punkt https://www.gruener-punkt.de/fileadmin/Dateien/Downloads/PDFs/mediathek/190204_DSD_106_FLYER_VERPACKG_EN_RZ_WEB.pdf
[12] Plasteco Interreg Europe https://projects2014-2020.interregeurope.eu//plasteco/news/news-article/11177/german-cabinet-passed-amendment-of-packaging-law/

Category C: Circular Procurement Best Practices



Best Practice C1: Austria National Green Procurement Requirements

The Federal Government of Austria has a legislated requirement for green procurement criteria in the federal procurement process as of 2020. This change came about after a decade with a voluntary requirement in place which was very successful.

The impact of public procurement on the transition to a circular economy can be significant. Integration of holistic procurement requirements can increase demand for circular products and services, drive innovation, minimise waste and drive the circular economy.

The European Commission's guidance on ***Public Procurement for Circular Economy*** proposes three models for implementing circular procurement: at system level, supplier level and product level. The European Commission has encouraged all Member States to voluntarily develop National Action Plans (NAPs) to guide greening their procurement protocols. The NAPs should contain targets with specified measures to achieve them. The NAPs are not to be legally-binding but provide political incentive to the process of implementing and raising awareness of greener public procurement. The intention is for Member States to choose the options that best suit their political framework and the level they have reached.

Austria developed a National Action Plan for Greening Procurement with 16 product groups[13], based on core criteria of EU-Toolkit for Member States to use. After ten years of success with the voluntary program, in 2020 the federal government legislated the NAP for federal government procurement.[14] Green criteria are required for procurement activity in relation to buildings, civil engineering, textiles products and leasing, transport, IT equipment, cleaning products and services, furniture, food and catering services, lighting (indoor and street lighting), household appliances, electricity, gardening products and services, office supplies, paper, and event management.

Austria's Action Plan has three goals.

1. Anchoring of sustainable procurement in all federal institutions
2. Harmonization of criteria related to sustainable public procurement
3. Securing Austria's pioneering role in sustainable public procurement in the EU

[13] Source: ec.europa.eu/environment/gpp/pdf/Public_procurement_circular_economy_brochure.pdf www.nabe.gv.at/
[14] Source: ec.europa.eu/environment/gpp/pdf/GPP%20NAPs_April%202022.pdf

Best Practice C2: Ghent, Belgium Requires Cradle-to-Cradle Certified Purchasing

The City of Ghent, Belgium has won Sustainable Procurement of the Year Awards from the Global Lead City Network on Sustainable Procurement for its advancements in applying green procurement requirements using the Cradle to Cradle® certification.

Located in the Flemish region of Belgium, Ghent is the capital and largest city of the East Flanders province. With more than 250,000 inhabitants, Ghent is Belgium's second largest municipality.

Since 2008, the City of Ghent has had in place an action plan for sustainability, Ghent 2020, which includes more than 105 actions and initiative to make Ghent a more sustainable city, including sustainable procurement activities. A first Procurement strategy with a focus on sustainability was launched in 2012, and in the decade since, this strategy was officially renewed and the city won the Sustainable Procurement activity of the Year Award in 2019[15] due to its efforts. The city requires Cradle to Cradle® certification for selected procurement contracts as part of its action plan for sustainability.

Ghent purchases products meeting the European Ecolabel criteria, as a minimum, and was the first city to use Cradle-to-Cradle Certified products through their contracted services for maintenance, cleaning and catering for all of its buildings and facilities. There are 340 locations in the city (ranging from office buildings, schools, nurseries, museums, etc.) as well as approximately 350 external contractors that must abide by the procurement rules.

Part of the technical scoring criteria of the city's procurement process under this initiative addresses waste reduction. The city included criteria that waste should be prevented by limiting it as much as possible or through inclusion of re-use initiatives. For unavoidable waste, a sustainable process, with an emphasis on recycling should be used. The supplier is responsible (at its own expense) to take back all packaging. If the supplier has intensified its efforts or innovative methods for reducing and/or minimising waste, extra points were awarded. These efforts must be an added value to the provisions for waste which are already included in the specifications, be feasible and actually carried out during the term of the contract. Each extra or innovative method undertaken to reduce waste was awarded with specified point rated criteria.

[15] Source: https://glcn-on-sp.org/fileadmin/user_upload/Publications/SP_Profiles/City_of_Ghent_GLCN_on_SP_Profile.pdf

Best Practice C3: Province of Zeeland, the Netherlands Sustainable Procurement Plan

The Province of Zeeland, the Netherlands was profiled by the European Commission's procurement June 2022 Newsletter and case study for its innovative approach to greening procurement by linking its most recent 2021-2024 procurement plan with the United Nations (UN) Sustainable Development Goals (SDGs).

The Province of Zeeland is the most western province of the Netherlands with 386,000 inhabitants. The Province has been actively engaged in sustainable procurement for over a decade. The Sustainable Procurement Plan 2021-2024 was adopted by the Zeeland Provincial Executive Board in April 2021. The Zeeland Provincial Executive wants to use its purchasing power (on average €60 - €90 million per year) to contribute to its sustainability policy ambitions. The Province of Zeeland sees a stronger role for itself in the coming years in ensuring sustainable procurement across all its tenders.

The Province of Zeeland has chosen to use Sustainable Development Goals (SDGs) as one of the fundamental principles of the SP Plan 2021-2024.[16] The 17 SDGs are a universal language spoken by governments, policy makers and businesses and cover the three economic, socio-political and environmental dimensions to achieve sustainable development by 2030. The selected procurement categories and products are: building, retail, catering, coffee, events, cleaning, clothing, civil engineering, technical installations, data centres/servers, nature conservation projects, insurances, mobility, bicycle footbridge, bicycle tracks. Each procurement category or product is then linked to the 17 SDGs by mapping risks and opportunities across the entire supply chain for each SDG, based on current procurement practices. For each SDG, three corresponding levels of ambition are formulated:

- → **Level 1** ('fundamental' level) allows socially responsible tender requirements to be set quickly and easily. These requirements mean that products, services and works that do not contribute to sustainability stand less chance of being awarded the contract and can be excluded, if the requirements are integrated in the tender as technical specification.
- → **Level 2** ('significant' level), stricter requirements are formulated and the market can be challenged to deliver higher sustainability performance via award criteria. The process is more extensive, as an assessment of the various bids must take place. The project manager defines and describes how the award criteria will be assessed.
- → **Level 3** ('ambitious' level) includes more involvement of purchasers and budget holders in the tendering process and in the execution of the contract.

[16] Source: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue113_NewsAlert_CaseStudyZeeland.pdf

Best Practice C4: France's Green Procurement Policy

France's National Action Plan on Green Procurement (2022-2025) was profiled in the May 2022 newsletter on Greening Procurement by the European Commission and is linked to the national law against waste and for the circular economy. [17]

France's National Action Plan on Green Procurement aims to include at least one environmental aspect in 100% of public procurement contracts. To achieve such an ambitious target, a set of 22 priority actions were outlined across five main areas: guidance, training, regional networks, best practice award, and monitoring. It includes measures such as:[18]

- Support public buyers with social and environmental facilitators;
- Ensure a broader geographical coverage, with strengthened SPP regional networks;
- Promoting tools to ease the identification of responsible suppliers (e.g. "marché de l'inclusion");
- Monitor progress towards those ambitious targets (qualitative and quantitative indicators will be developed based on existing ones) Learn more about the Action Plan here (in French).

The national government will also develop training to support the implementation of the NAP, promote good practices and host sustainable procurement awards to recognize progress in implementation. At the local and regional level the government will strengthen networks and reinforce management tools to better monitor quantitative and qualitative indicators.

The NAP is linked with France's *National Roadmap on Circular Economy*, as well as the "*Law against waste and for the circular economy*", 2020, which requires that as of January 1, 2021, a part of the goods acquired annually by the central and local authorities must come from reuse or incorporate recycled materials (including office products such as laptops, paper, desk furniture, textiles, etc.). This law also prohibits the central public authorities as of January 1, 2022 from buying single-use plastic for use in the workplace and in workplace events.

One of the key guidance documents prepared by the national government is Guidance on Zero Plastic for Procurement (see link here, in French).

[17] Source: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue112_NewsAlert_May_2022.pdf
https://www.ecologie.gouv.fr/sites/default/files/PNAD-PAGEAPAGE-SCREEN(3).pdf
https://www.economie.gouv.fr/files/files/directions_services/dae/doc/guide_fin_plastique_a_usage_unique.pdf?v=1641455727
[18] Source: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue112_NewsAlert_May_2022.pdf

Best Practice C5: Green Procurement in Denmark

Denmark has a Secretariat for Green Public Procurement (GPP) which is driving the development of new green criteria across multiple product categories.

Denmark has a *Partnership on Green Public Procurement* (POGI) and a *Forum on Sustainable Procurement* (the Forum) within the Ministry of Environment. These are the Ministry's two main initiatives on GPP administered by the Secretariat for Green Procurement within the Danish Environmental Protection Agency (EPA).

The Danish government first released their strategy for circular economy in 2018. It was succeeded by the strategy for green public procurement '*Green Procurement for a Green Future'* in 2020, which included a Partnership on Green Public Procurement – representing approximately thirty local governments.[19] Since 2021 the Partnership has developed criteria for procurement goals in the categories of: transportation, information technology and communication equipment, and lightning. Criteria for procurement relating to sustainable wood, cleaning products and food are expected to be finalised in 2023. Working groups to develop procurement criteria for the categories of textiles, furniture and recycled assistive devices are expected to start in 2023.

Since 2021 the Forum coordinates working groups that provide input and recommendations to be included in tenders, such groups have been established for the following categories:

1. Product standards in green procurement
2. Circular business models and furniture
3. Green and climate friendly procurement of food
4. Green consumption and behavior in procurement
5. Green last mile transportation
6. Innovation clauses.

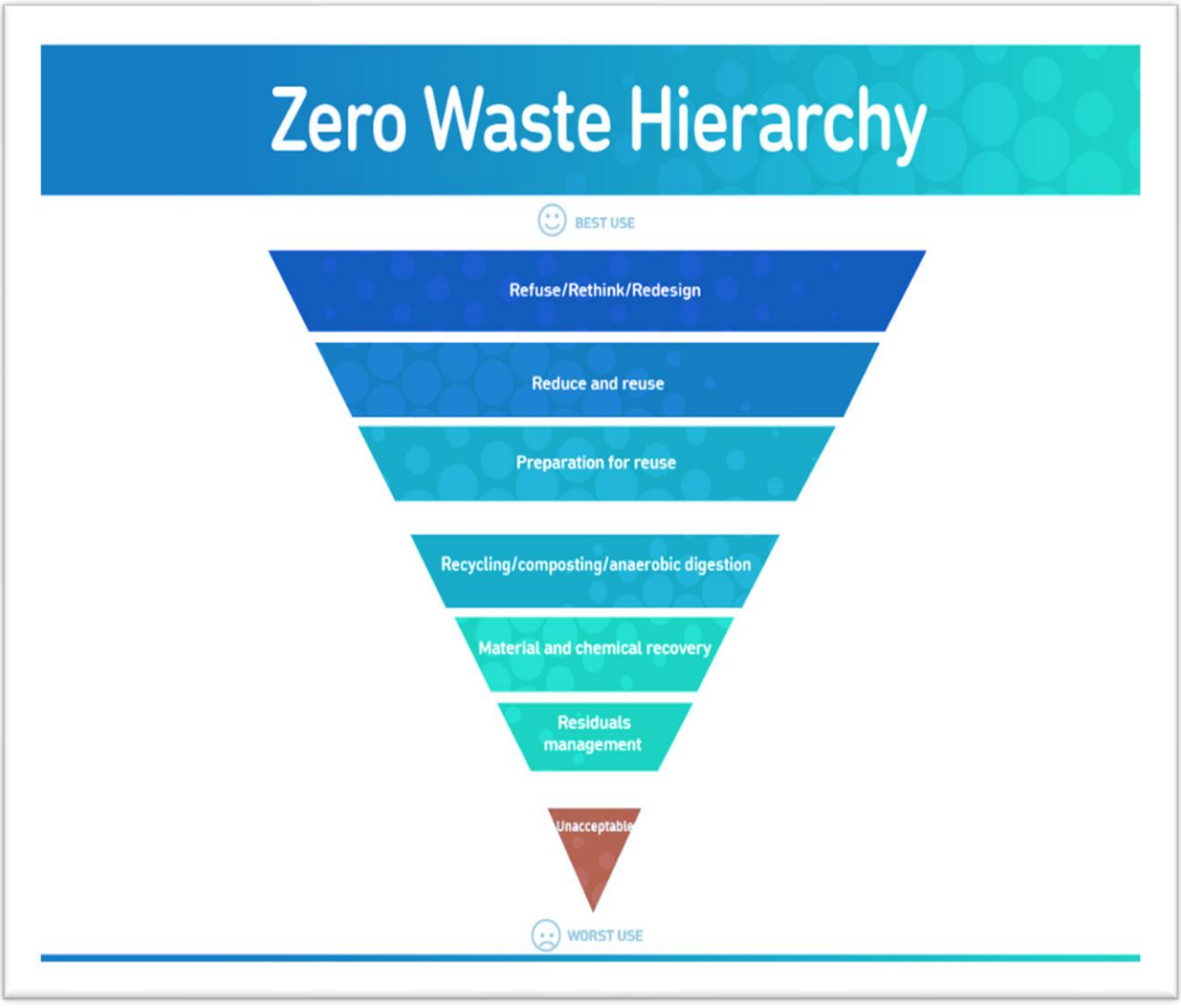
The Secretariat for Green Procurement cooperates with other government authorities to create one common online portal with access to sustainability requirements in public tenders and private procurement agreements. The purpose of the portal is to provide access to the latest knowledge on opportunities, requirements and tools to support sustainable procurement.

The Danish EPA is also very involved with the European Commission on its work related to:

- **The Sustainable Product Initiative (SPI)** – setting minimum life-cycle performance requirements for products to gain access to the EU market (e.g. durability, repairability, recyclability, etc.); and
- **The Green Claims Initiative (GCI)** – developing a framework on how to price a product as green and how to market its products without misleading the consumer.

[19] Source: https://eng.mst.dk/sustainability/sustainable-consumption-and-production/sustainable-procurement/partnership-for-green-public-procurement/

Category D: Reuse Best Practices



Best Practice D1: Reuse Requirements in the EU Packaging and Packaging Waste Directive

The Direction to Prioritize Reuse over Recycling for Packaging is a new requirement for European Union (EU) Member States. Countries must include reuse schemes in their producer responsibility requirements for packaging from all sectors, and track reuse packaging data.

The EU Packaging and Packaging Waste Directive (PPWD), amended in 2018, has a new important section on Reuse which were passed in November 2022.[20] The amended PPWD now outlines strategic direction for Member States to align with the priorities of the waste hierarchy by placing reuse as more important than recycling and more importantly – applies to all sources of packaging, including residential, as well as Industrial, Commercial, and Institutional (ICI) sources.[21]

> *"Member States shall take measures to encourage **the increase in the share of reusable packaging** placed on the market and of systems to reuse packaging in an environmentally sound manner, without compromising food hygiene or the safety of consumers. Such measures may include: use of deposit-return schemes; setting of qualitative or quantitative targets; use of economic incentives; and/or setting up of a minimum percentage of reusable packaging placed on the market every year for each packaging stream. PPWD, Article 5(1)"*

EU rules under the PPWD include all categories of packaging placed on the European market, from all sectors. EU Countries must find a way to track and calculate the percentage share of reusable packaging placed on the market within their country on an annual basis. This data is reported to the EU. By December 2024, the Commission will examine data on reusable packaging provided by Member States and decide if legislative targets are feasible and/or required.

The EU Commission is currently assessing options to review the PPWD with a view to improving reuse and contribute to reaching objectives of the new circular economy action plan (CEAP) to ensure that "all packaging on the EU market is reusable or recyclable in an economically viable way by 2030" and it will also contribute to the objective of the *Plastics Strategy*, in which the Commission committed to ensure that by 2030 all plastics packaging placed on the market can be reused or recycled in a cost-effective manner". The Commission is also evaluating possible measures promote the uptake of recycled content in packaging, and set minimum mandatory green public procurement criteria.

Key European organizations that are contributing to drive reuse at a strategic level across the continent include Reloop and RREUSE. Reloup works at the centre of policy-making with governments, industry stakeholders and NGOs, develop knowledge products and outreach to contribute to the creation of a circular economy. RREUSE is an international network supporting social enterprises active in re-use, repair and recycling.

[20] Source: https://environment.ec.europa.eu/topics/waste-and-recycling/packaging-waste_en
[21] Source: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7155

Best Practice D2: France's Anti-Waste Law

France is shaping a system-wide transition towards a circular economy with an ambitious new law that has introduced several measures that are a world first.

France has designed a regulatory tool to address the large quantities of perfectly good products being unnecessarily destroyed, wasting energy and resources used to produce goods. France sees unnecessary waste as an economic, environmental, and social issue. France adopted its comprehensive Anti-waste Law in 2020. The law aims to eliminate waste and pollution from the design stage and transform the system of production, distribution, and consumption from a linear to a circular economic model. It encourages businesses across various sectors, municipalities, and citizens to eliminate waste and adopt more circular practices and prohibits the destruction of unsold products.

The law aims to[22]:

- → Phase out single-use plastic packaging by 2040
- → Eliminate waste by encouraging reuse and supporting charitable organisations
- → Tackle planned obsolescence
- → Promote a better resource management system from the design stage to the recovery of materials
- → Provide more transparent information to consumers.

The law has introduced measures to shape the transition to a circular economy. France is the first country to ban the destruction of unsold non-food products. Rather than landfill or incinerate unsold goods, companies will now have to reuse, donate or recycle their unsold products. It is also the first country to introduce a mandatory repairability index on electronic and electric products, such as smartphones, laptops, washing machines, and televisions. This measure aims to increase the proportion of products that get repaired, by making manufacturers consider repairability at the design stage and consumers aware of repair options when purchasing a device.

The law also aims to stimulate societal transformation by creating funds to foster the creation of 70,000 jobs in reuse networks and encouraging the donation of unsold goods to charitable organisations, France is also promoting circular solutions.

[22] Source: Ellen MacArthur Foundation https://ellenmacarthurfoundation.org/frances-anti-waste-and-circular-economy-law#:~:text=France%20is%20the%20first%20country,or%20recycle%20their%20unsold%20products. https://www.legifrance.gouv.fr/loda/id/JORFTEXT000043458675

Best Practice D3: Austria Legislated Reuse Targets

Austria is the first European country to implement regulatory reuse targets for plastic containers, by mandating a beverage container reuse quota of 25% by 2035. This initiative is leading businesses to change their product lines to include refillable containers, with new infrastructure under development for return systems.

Up until 25 years ago, Austria had a reusable beverage container rate of 80%, and with the switch to single-use plastic bottles globally throughout the 1990's and beyond, this rate dropped to less than 20%. With new policy drivers of the European Union to reduce plastic waste and improve circularity, Austria is one of the first European countries to implement regulatory reuse beverage container targets for beverage container companies. The Austrian government has committed to a reduction of 20% in the amount of single-use plastic packaging placed on the market. Part of this commitment is the development of new short and long-term legislated targets for beverage producers:[23]

- 25% of beverages to be sold in refillable containers by 2023, and
- 30% of beverages to be sold in refillable containers by 2030.

Non-alcoholic beverages in containers less than 0.5 litre in size are exempted from the refillable quotas. There is an expected implementation date of 1 January 2025 for the new scheme to be in place and operational, while the infrastructure must be in place by October 2022.

This government requirement has led to a number of new businesses to develop infrastructure for reusable beverage containers, including returnable bottle plants for refilling. Complementary measures to the reusable packaging targets include a plastic bag ban imposed nationally, a deposit for single-use plastic beverage containers to ensure they are returned for recycling in the countries extended producer responsibility programs, minimum recycled content requirements for plastic products, and a regulatory requirement that plastic packaging may only be placed on the market if it can be reused or recycled.

This law was also influenced by the desire to reduce the amount of money Austria had to send to the EU as part of the EU's plastic tax. From 2021, the EU will demand a levy on non-recycled plastic packaging from its member states. This plastic tax will cost Austria 160 to 180 million euros per year.

The law also introduced, from the start of 2025, a national deposit return system for disposable (single-use) beverage packaging made of either plastic or metal. The DRS proposal includes:[24]

- A 0.25 EUR deposit for all plastic bottles and all cans ranging from 0,1L to 3L
- Establishing a central organising entity made up of industry and supermarkets
- Ensuring that the return of such items are possible in all supermarkets and shops that sell any of the bottles or cans; as well as in additional "neutral" places like train stations.

[23] Source: OECD https://www.oecd.org/environment/ministerial/outcomes/Environment-Ministers-commitments-on-plastics.pdf
[24] Source: Zero Waste Europe https://zerowasteeurope.eu/wp-content/uploads/2022/11/ZWE-factsheet_Austria-refill-quotas.pdf

Best Practice D4: Greece Introduces Eco-Modulation of Producer Responsibility Fees to Encourage Reuse

In collective Extended Producer Responsibility (EPR) schemes, the fee schedule is most often set based primarily on cost of recycling each material. Eco-modulation of fees introduced in Greece is intended to drive upstream design changes to address reuse and repair.

Most often EPR fees incorporate the end-of-life cost (i.e. cost of collection, sorting and recycling) of a product or package. Eco-fee modulation is an economic tool intended to incentivise Design for Environment (DfE) changes upstream such as applying lower fees for sale of reusable products or packaging compared to recyclable products or packaging, or the use of criteria with lower fees to incentivise the use of secondary materials in product or package design.

In 2021 Greece introduced, a new regulation (Law 4819/2021) outlining rules for fee eco-modulation for plastic packaging. In this new system, producer responsibility organisations (PRO) fees are to be set taking into account various criteria such as durability, reparability, reusability, recyclability, the use of recycled content, and the presence of hazardous substances in a product or package. For example, the fees paid by a PRO on a plastic package increase if it uses coloured polyethylene (PET) bottles, multilayer plastic packaging, composite packaging, polyvinyl chloride (PVC) or expanded polystyrene packaging, and PVC labels on packaging. All of these materials make a package more difficult or costly to recycle.

The use of eco-fee modulation is complemented by other economic instruments to encourage reuse: a charge on use of single use plastic beverage cups and food containers as of 2022 and for packaging products containing PVC as of 2022, paid by the consumer, to promote the use of reusable alternatives and a nationwide Deposit Return System (DRS) for plastic beverage packaging to be implemented from January 2023 by beverage packaging producers

These national commitments were announced by Greece at the 2022 Organisation for Economic Cooperation and Development (OECD) Council at Ministerial Level (MCM) meeting. [25]

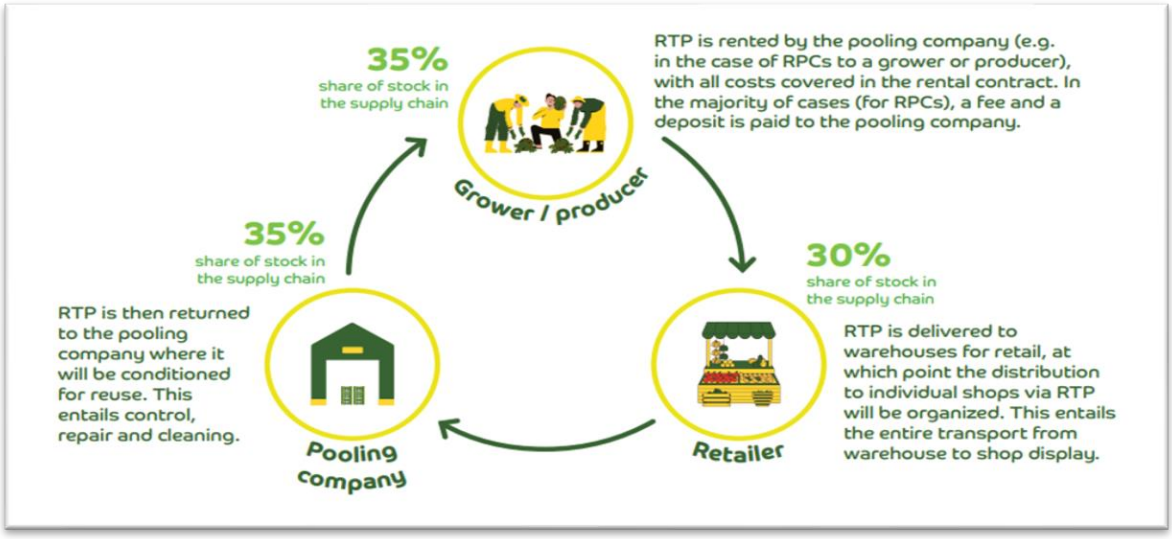
[25] Source: https://www.oecd.org/environment/ministerial/outcomes/Environment-Ministers-commitments-on-plastics.pdf

Best Practice D5: 'Product as a Service' Model for Reusable Transport Packaging Systems in Europe

The use of reusable transport packaging as a circular service is essential for reaching a climate-neutral economy. Reusable transport packaging in a Product-as-a-Service (PaaS) model has been identified as a very efficient and sustainable solution to a circular economy.

Reusable Packaging Europe (RPE) represents the interests of companies active in the area of Reusable Transport Packaging (RTP), primarily reusable packaging containers and reusable wooden pallets across Europe. RPE is fully committed to contribute to the EU's transition towards a circular economy and aims to lead by example. Its mission is to promote reusable packaging as a circular service as the most efficient and sustainable solution for transport packaging by combining innovative pooling models and reusable transport packaging.[26]

The organisation promotes pooling and Product-as-a-Service (PaaS) models that enable the use of RTPs. In a Product-as-a-Service (PaaS) model, producers either keep the ownership of the packaging or have the responsibility for its performance throughout its lifecycle. RTP is rented by a pooling company, with all costs covered in the rental contract. For most reusable containers a fee and deposit is paid to the pooling company. RTP is delivered to warehouses which controls inventory and organises distribution to individual shops. Following use and delivery to a retailer, RTP is then returned to the pooling company where it Is conditioned (e.g. repaired, cleaned) for reuse. The use of a pooling system with RTPs is much more efficient than single-use transport packaging and lowers the final costs for its users. Overall, RTP results in a 40 to 60% CO2 reduction in comparison with single-use packaging and a significant waste reduction.



[26] Source: https://rpeurope.eu/wp-content/uploads/2022/07/Factsheet-Reusable-transport-packaging-as-a-prime-example-of-a-circular-model-v3.pdf

Category E: Outreach and Engagement Campaigns

Best Practice E1: Outreach Campaign to Industry – the European Plastic Pact

Bringing together frontrunner companies and governments to accelerate the transition towards a European circular plastics economy, the European Plastic Pact was established in March 2020.

The European Plastic Pact is a public-private coalition that includes a European network of companies, states and other organisations such as non-governmental organizations (NGOs) that are working collaboratively to reduce single-use plastic products and packaging. The aim of the pact is to set ambitious common objectives and to encourage cooperation, innovation and harmonisation at the European level, in order to bring about a truly circular European plastics economy.

The Pact relies on the "pioneers" in the plastics value chain to create a bold movement that will pave the way for the rest of the market. The Pact works on all levels to reduce the release of plastics into the environment: by improving the recyclability and reusability of products by design, by shifting to a more responsible use of plastics, by increasing collection, sorting and recycling, and by incorporating more recycled materials into new products and packaging.

The European Plastics Pact is based on four "aspirational" objectives to achieve better life cycle management of plastics:

- **Reusability and recyclability**: Design all plastic packaging and single-use plastic products placed on the market to be reusable where possible and in any case recyclable by 2025;
- **Responsible use of plastics**: move towards a more responsible use of plastic packaging and single-use plastic products, aiming to reduce virgin plastic products and packaging by at least 20% (by weight) by 2025, with half of this coming from an absolute reduction in plastics;
- **Collection, sorting and recycling**: increase the collection, sorting and recycling capacity by at least 25 percentage points by 2025 and reach a level that corresponds to market demand for recycled plastics;
- **Use of recycled plastics**: Increase the use of recycled plastics in new products and packaging by 2025, with plastics user companies achieving an average of at least 30% recycled plastics (by weight) in their product and packaging range.

The European Pact brings together governments and frontrunners from across the whole value chain. They work together towards these goals. The Pact supports this work by offering a unique platform to exchange ideas, display good practices and discuss challenges, needed to build a new circular default for all to follow. The pact offers a unique platform for discussion at the European level with peers, other stakeholders in the plastics value chain, governments and other organisations that work collaboratively.

Best Practice E2: Key Elements of an Effective Campaign – a Leading EU Example

A 2021 report from the Stockholm Environmental Institute conducted for the United Nations Environment Programme (UNEP) presented an insightful analysis of campaigns from across the world that address plastic waste, and EU campaigns were found to include many of these elements.

The *Reducing Plastic Pollution: Campaigns that Work* study[27] identifies how plastic campaigns can make use of effective behaviour change strategies to influence individuals' sustainable use of plastic. The study analyzed fifty campaigns across the world and provides valuable recommendations and insights on universal norms and values that can help in the design of campaigns to effectively increase awareness and information but also motivate changes and instill new behaviors. The campaigns reviewed cover different facets of the plastic life cycle. Their effectiveness in motivating individuals towards sustainable plastic consumption patterns and circularity was analysed through the lens of behavioural science. Findings show that campaigns can be successful in changing consumer behaviour by: employing good practices like providing tips and solutions to avoid plastics in everyday life; customizing messages considering age, or gender; creating incentives; and aligning with moral and social norms.

The European Commission's campaign, "Single-use plastics: are you #ReadyToChange?" [28] was found to include four of these six elements. The approach was customized to target various audiences, focussed on good social norms to shape behaviour, direction provided for individuals to take specific action with visual cues, and commitments were catalyzing with a challenge feature.

Six key elements evident in the most successful campaigns include:

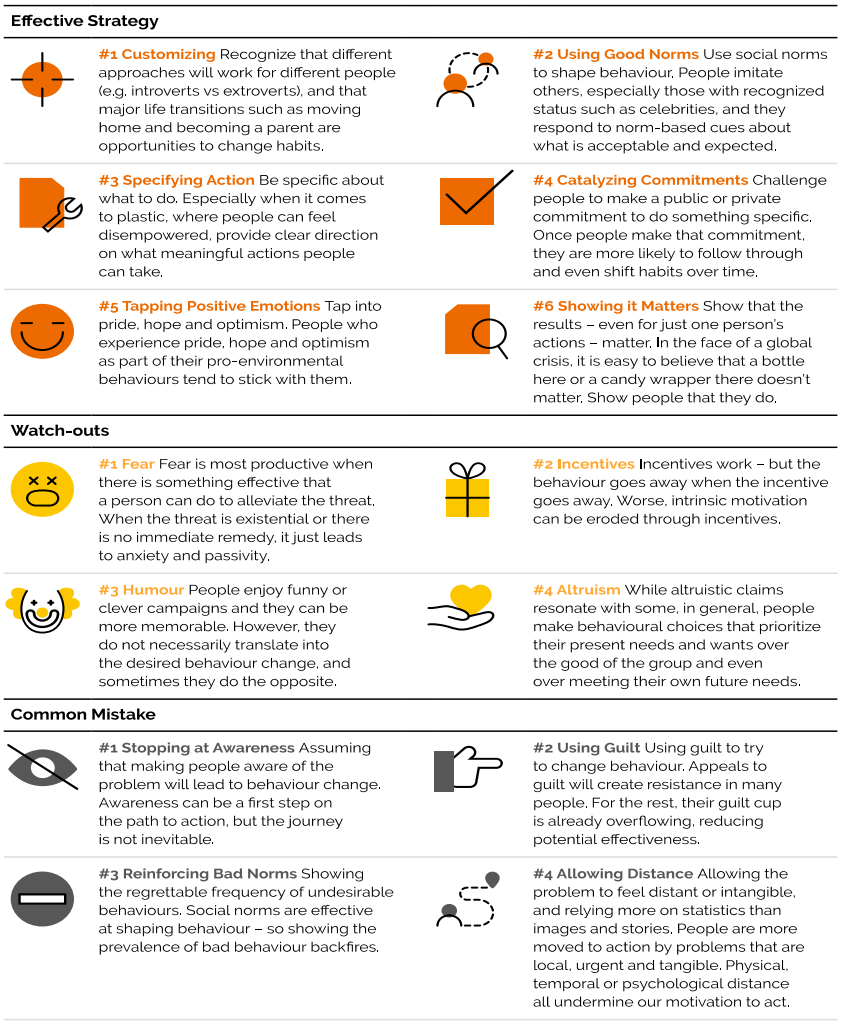
1. Customize the approach to target various audiences
2. Use good social norms to shape behaviour
3. Specifying action with clear direction
4. Catalyzing commitments with a challenge
5. Tapping positive emotions like pride or optimism
6. Showing it matters, even individual action.

[27] Source: Stockholm Environment Institute (SEI) and the United Nations Environment Programme (UNEP), 2021 Reducing plastic pollution: campaigns that work. https://www.sei.org/wp-content/uploads/2021/02/210216-caldwell-sle-plastics-report-with-annex-210211.pdf

[28] Source: European Commission website https://ec.europa.eu/info/news/single-use-plastics-are-you-readytochange-2018-jun-05_en

EU Example: “Single-use plastics: are you #ReadyToChange?”

To mark World Environment Day in 2018 which had the theme ''Beat Plastic Pollution”, the European Commission launched a major single-use-plastics focussed campaign. It was a public awareness-raising campaign to highlight citizens' role in combatting plastic pollution and marine litter. The campaign used the slogan: “Single-use plastics: are you #ReadyToChange?”. The campaign stressed the importance of sustainable consumption, and the impact that personal choices can make in the effort to reduce plastic waste in the EU. The campaign launch also supported the EU’s 2018 Plastic Strategy, and proposed legislation (subsequently enacted in 2021) on banning the ten single use plastic items most commonly found in marine litter: cotton bud sticks, cutlery, plates, straws, stirrers, sticks for balloons, as well as cups, food and beverage containers made of expanded polystyrene and on all products made of oxo-degradable plastic. The campaign included a single picture which gave the public the specific visual of the key single use plastics they should avoid using. Messaging was clear, and alternatives suggested. The campaign also included sharable social media content to drive momentum, and an informative web platform with details on EU actions and initiatives that address plastics.



Best Practice E3: Zero Waste Cities Masterplan

Zero Waste Europe's Zero Waste Cities initiative is a programme dedicated to help cities and communities transition toward zero waste. It brings together a European platform of knowledge for local stakeholders to implement best practices in communications and outreach.

The Zero Waste Masterplan[29] is the pioneering knowledge platform created by Zero Waste Europe and its members to support the further development of the zero-waste model on a local level and turn circular economy a reality in Europe. Whether a community is already in the process of preparing a campaign or building a movement, the Zero Waste Masterplan offers the building blocks that can truly help solidify an outreach programme: providing the tools needed to implement a sustainable waste management, waste prevention activities, repair and reuse strategies and an overview on Zero Waste Business models.[30]

According to the Zero Waste Masterplan, 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. 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 is important 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 environmental organizations or community groups. Given their local knowledge and prominent role, these stakeholders should be invited to provide local solutions to the local challenges faced by their community.

> *Zero Waste Cities brings together a European platform of knowledge for local stakeholders to implement best practices, as well as a mentoring and recognition programme for municipalities. Zero Waste Cities is run jointly by Zero Waste Europe and its member organisations. The Programme's aim is to accelerate the transition towards zero waste at the city level - specifically small and medium-sized municipalities - with the implementation of the latest EU legislation and zero waste strategies based on citizen-centered models, leading to a substantial decrease in waste generation and increase in separate collection and recycling.*

[29] Zero Waste Cities Masterplan https://zerowastecities.eu/wp-content/uploads/2020/07/2020_07_07_zwe_zero_waste_cities_masterplan.pdf
[30] Zero Waste Cities https://zerowastecities.eu/learn/

Best Practice E4: Bitetto, Italy Uses a Successful "Know-As-You-Throw" Campaign

The small community of Bitetto in Southern Italy is considered a best practice example of how to use campaign messaging to source-separate waste, and how to incentivise composting through a "Know-As-You-Throw" (KAYT) campaign that includes innovative technology.

Zero Waste Europe has an initiative called Zero Waste Cities, which includes cities that have publicly committed to moving towards the path of zero waste through implementation of policies and programs with progress monitored by Zero Waste Europe. [31]

The Zero Waste Cities initiative has profiled the success of Bitetto, Italy as a best practice in moving towards Zero Waste. Bitetto has achieved impressive waste reduction results in a very short amount of time because of two key factors - economic incentives to produce less waste; and by ensuring citizens have a wide range of accessible information available to them to better understand the system, their waste generation, and how to reduce it.

Driven by the aim of making the local waste fee system more equitable, Bitetto has developed an innovative 'Know-As-You-Throw' (KAYT) model for their waste separation and collection, which builds upon the existing Pay-As-You-Throw (PAYT) scheme that is implemented locally and rewards citizens who generate less waste with lower fees. The PAYT scheme is specifically designed to promote the uptake of home composting, with a reduction in fees available to those who use their separated bio-waste as materials for compost. Together with key partners within the EU-funded campaign *#Re-Think Waste* project, Bitetto introduced the KAYT model in 2019. KAYT uses a knowledge and persuasion-driven approach. The basis of the concept includes informing citizens in a continuous and convenient way, combining technology, gamification, meetings with experts, and incentives. KAYT highlights awareness-raising, accessible information, and communications with citizens as key actions to help enable better performing PAYT systems.

The KAYT model includes equipment unique to waste collection vehicles in Bitetto which use tracking devices so that any household which is seen not to be separating properly is provided with a notice on the bin that contains key information on how to avoid this mistake. A free mobile app provided by the waste company gives citizens a wide range of important information to assist their separation of recyclable items, and to ultimately reduce their waste. Information includes: guidelines on how to separate waste and recyclables, a waste dictionary to explain key terms and procedures, as well as a report on the volume of waste and recyclables collected from their household in the past month.

[31] Source: Zero Waste Europe 2021. https://zerowastecities.eu/wp-content/uploads/2021/12/SZWMR_2021-Final.pdf

Best Practice E5: Community Collaboration on Zero Waste Campaigns Across Germany

In Germany, numerous local zero-waste initiatives were created in recent years, creating an alliance on a national level to strengthen the exchange between the local zero waste associations as well as with other European countries, will streamline messaging across the country.

On March 29, 2021 Zero Waste Germany was founded with eleven local city members. Led by the state capital of Kiel, a Zero Waste Strategy was passed by a unanimous vote at the city's municipal council. In May 2021, Kiel officially became the first German Zero Waste candidate city, creating a path for other cities in Germany to follow. The approach taken by Kiel is seen as a best practice, other German cities that have adopted a Zero Waste strategy include Munich, Leipzig, Regensburg and Düsseldorf.[32]

The approach of having all eleven local city members join together as one entity to form Zero Waste Germany allows for the individual associations/communities to have a unified voice at the Zero Waste Europe network level, to streamline common messaging of a Zero Waste lifestyle across Germany beyond the borders of their cities. The local movement can be represented internationally, along streamlined campaign messaging from international and national levels to be adopted locally.

The interest and increasing adoption of the Zero Waste framework across German cities is a success for Zero Waste Germany and the Zero Waste movement across Europe. The development of the certification system, and the creation of the Zero Waste Germany alliance all contribute to the support of this growing movement at the local level.

ZERO WASTE EUROPE

ZERO WASTE GERMANY

[32] Source: Zero Waste Germany https://zerowastegermany.de/gruendung-des-vereins-zero-waste-germany/

Resources

CEFLEX Design for a Circular Economy Guidelines
https://guidelines.ceflex.eu/guidelines/

Ellen MacArthur Foundation, Framework for Circular Procurement for Cities
https://emf.gitbook.io/circular-procurement-for-cities/framework-overview

European Commission – Circular Economy Action Plan
https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en

European Commission – Circular Plastic Alliance
https://single-market-economy.ec.europa.eu/industry/strategy/industrial-alliances/circular-plastics-alliance/commitments-and-deliverables-circular-plastics-alliance_en

European Commission – Green Deal
https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

European Commission – NextGenerationEU
https://next-generation-eu.europa.eu/index_en

European Commission – Plastic Strategy
https://environment.ec.europa.eu/strategy/plastics-strategy_en#:~:text=The%20EU's%20plastics%20strategy%20aims,the%20environment%20and%20human%20health

European Commission – Public Procurement for a Circular Economy Guidance
https://ec.europa.eu/environment/gpp/pdf/Public_procurement_circular_economy_brochure.pdf

Plastic Action Centre
https://plasticactioncentre.ca/

Plastic Action Centre – EU Reducing Plastic Waste in Canada Project
https://plasticactioncentre.ca/news/new-partnership-cic-eu/

Zero Waste Cities: https://zerowastecities.eu/

Zero Waste Europe
https://zerowasteeurope.eu/

Zero Waste Germany
https://zerowastegermany.de/

Zero Waste International Alliance
https://zwia.org/