



CIRCULAR
ECONOMY



Packaging Reuse at Events

PORTFOLIO OF CASE STUDIES



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INTRODUCTION

Cities worldwide are increasingly prioritising sustainability, with waste management and packaging reuse gaining prominence as critical issues. Events such as festivals, concerts, and conferences generate significant amounts of single-use packaging, contributing to the generation of great quantities of waste. In response, several cities have implemented or supported initiatives aimed at reducing event-related waste by promoting the reuse of packaging materials. These efforts not only minimize waste but also pave the way for more circular and resource-efficient urban systems.

This publication presents a collection of eight inspiring case studies showcasing how cities around the world have successfully integrated packaging reuse practices into events. By highlighting diverse models, strategies, and

outcomes, this resource aims to support municipalities in identifying scalable and replicable approaches to reducing event-related waste.

The identified case studies highlight innovative approaches to integrating sustainability into large-scale public events, focusing on reducing environmental impact through the implementation of reuse solutions. They showcase how strategic planning, stakeholder mobilisation, development of guidance and awareness raising can transform events into zero-waste models that can be replicated and upscaled. They emphasise the importance of tailored solutions, consistent efforts, and leveraging data to drive measurable outcomes. By learning from these global examples, cities can accelerate their transition toward sustainable event management and a more circular economy.



Image: Unsplash / Globelet Reusable

BOLZANO, ITALY

ABSTRACT

In the Province of Bolzano, the mobile dishwasher rental service provides an eco-friendly alternative to disposable tableware at public events. Managed by the Provincial Agency for Environment and Climate Protection, this initiative offers local event organisers access to industrial dishwashers, reusable dishes, and cutlery, drastically reducing waste and resource consumption. Collaborating with Novum2, a social cooperative, the service supports both public and private events, promoting sustainable practices throughout the region.

Contextual Background

Bolzano faces challenges related to waste management due to limited land availability and prioritising waste reduction is a key environmental goal. Events such as the Altstadtfest and Christmas markets highlight the need for reusable alternatives to single-use items.

Description

The mobile dishwasher rental service, managed by the Agency for the Environment of the Province, allows organisers to rent industrial dishwashers, reusable dishes, and cutlery. The service provides logistics support, including delivery, setup, and collection after events, with Novum2 overseeing the transportation and cleaning of returned items. The initiative has made reusable tableware accessible to various event organisers, helping replace disposable plastic at festivals.

LEVERS EMPLOYED

- 💰 **Incentivization:** Public-private partnerships
- 💰 **Incentivization:** Fiscal benefits

AT A GLANCE

- ★ **Timeframe:** Active since 2006 during the summer, with occasional events in winter
- ★ **Location:** Province-wide, available for events across the Bolzano province
- ★ **Cost and financing:** Standard rental fees with subsidies for GreenEvents; costs shared with event organisers
- ★ **Stakeholders:** Provincial Agency for Environment, Novum2, local event organisers, and associations

Vision, objectives and first steps:

The program's objective is to establish sustainable practices by reducing disposable tableware usage at large gatherings. Initial trials revealed strong interest from organisers, leading to the program's expansion. By promoting this service, the province aims to minimise event-related waste and set an example for sustainable event management.

Financing, implementation, deployment and upscaling:

Funding for the initial mobile dishwasher units was provided by the Province of Bolzano. Subsidised rental fees, especially for events meeting the „GreenEvent“ criteria, incentivize sustainable practices. Novum2 manages equipment logistics, supported by maintenance and expansion investments from the Provincial Agency.

Results, impact and the way forward:

The dishwasher rental service has significantly reduced waste at local events, with several tons of waste avoided annually. Organisers appreciate the convenience and environmental benefits of reusable tableware. Plans to expand the service to more events and increase the fleet of mobile dishwashers aim to meet growing demand and further reduce environmental impact.

Lessons learned

- ★ Subsidies and recognition, such as the Green Event Certification, can effectively promote sustainable practices.
- ★ Collaboration with local entities enhances service delivery and impact.

Key barriers

- ★ Logistical challenges in transporting and maintaining industrial dishwashers for remote or small-scale events.
- ★ Initial reluctance from organisers unfamiliar with reusable systems, which was mitigated through awareness and financial incentives.

RELATED PROJECTS AND INITIATIVES

- [GreenEvent certification](#)
- [Cooperativa Sociale Novum2](#)

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Dishwasher transport by partner



Image: Bolzano Provincial Agency for Environment and Climate Protection

BOULDER, COLORADO – UNITED STATES

ABSTRACT

The City of Boulder is advancing reuse practices at events and local businesses through partnerships and financial incentives. Collaborating with Partners for a Clean Environment (PACE), Boulder funds initiatives to replace single-use items with reusable alternatives. This approach includes subsidies for businesses adopting reusable containers, partnerships with services like DeliverZero and r.Cup for sustainable packaging, and like Hiccup for reusable systems at public events, such as Boulderthon. These efforts align with Boulder's broader commitment to circular economy practices.

LEVERS EMPLOYED

- 💰 **Incentivization:** Public-private partnerships
- 💰 **Incentivization:** Fiscal benefits

AT A GLANCE

- ★ **Timeframe:** Active with ongoing expansion, particularly relevant for 2024 events
- ★ **Location:** City of Boulder, Colorado, United States
- ★ **Cost and financing:** Funded by county grants and city incentives - the city covers up to \$5,000 per event (most events reusable transition)
- ★ **Stakeholders:** City of Boulder, PACE, r.World, Hiccup, Boulderthon organisers, local restaurants, and businesses

Contextual Background

In response to new composting regulations prohibiting paper and compostable products, Boulder has prioritised reuse as a sustainable alternative to disposables. Recognizing the environmental impact of single-use items, especially at large events, the city aims to transition the community to reusable options, aligning with the county zero-waste goals and circular economy principles.

Description

The City of Boulder's reuse initiative provides financial incentives and logistical support to local businesses and event organisers. Through partnerships with companies like r.World and Hiccup, the city offers returnable reusable containers for food and beverages, enhancing waste reduction at events and large gatherings like the city marathon 'Boulderthon'. Hiccup is a reusable cup service

serving the race industry throughout the United States by providing silicone cups that are used at aid stations provided for runners at races. The service of Hiccup provides dropping off cups to each aid station, picking up the cups as soon as the aid station is closed and washing the used cups to be available again at the next race. Moreover, Boulder collaborates with the organisation Partners for a Clean Environment (PACE) which assists businesses in navigating the transition to reusable by offering rebates for durable dishware, reusable cups, and other in-house reuse systems.

Vision, objectives and first steps:

Boulder's initiative aims to reduce single-use waste at public events and among local businesses, with a long-term vision of fostering a zero-waste, circular economy. Initial steps include establishing incentives for small businesses and large events to adopt reusables, with Boulderthon serving as an example of successful implementation.

Financing, implementation, deployment and upscaling:

To promote behaviour change among businesses, Boulder's approach is to distribute direct financial incentives, which in the past has yielded positive results for the transition to zero waste and composting. For events, the city provides up to \$5,000 of incentives per event, which resulted in most of the events receiving the incentives as their costs associated with the implementation of reusable systems sit between \$800-1,200.

Results, impact and the way forward:

Overall, the city has avoided 111,188 single-use containers, around 632 kg of landfill mass reduction and 5386 kg of avoided GHG emissions. The return rate of r.Cups at events has averaged return rates of 90-92% for r.Cups and of 99.7% for Hiccup at Boulderthon. The initiative has led to a reduction in single-use waste at high-profile events and within local businesses, encouraging a wider shift towards reusable options in the community. The city acknowledges a strong initial wave of early adopters, but interest in financial incentives for restaurants has since plateaued, thus partnerships and incentive programs will be essential in maintaining momentum and broadening impact across more venues and businesses.

Lessons learned

- ★ Financial support and accessibility are crucial to motivate businesses to transition to reusable solutions but are not the only reason for not adopting change, studies into wider scale adoption can offer additional insights.
- ★ Partnerships with specialised services streamline deployment and improve outcomes, offering practical solutions to organisers and business owners.

Key barriers

- ★ Financial and operational constraints for small businesses, though mitigated by subsidies and advisory services

RELATED PROJECTS AND INITIATIVES

- [PACE](#)
- [Circular Boulder](#)
- [rWorld](#)
- [Hiccup](#)

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Image: rWorld Reusable

BREMEN, GERMANY

ABSTRACT

The City of Bremen has implemented a series of measures to promote the use of reusable systems at public events, addressing the environmental challenges posed by disposable packaging. These efforts include the adoption of a regulation mandating deposit-required reusable packaging at events, the creation of a comprehensive reusable roadmap, and the launch of a mobile dishwasher rental service. The Breminale festival has played a central role in showcasing the feasibility and benefits of reusable systems. These initiatives underline Bremen's commitment to reducing waste and fostering resource conservation through practical, scalable solutions.

Contextual Background

Bremen, a city with a strong commitment to sustainability, faced significant waste management challenges at its cultural and public events. The Breminale festival, a five-day cultural event hosting over 220,000 visitors on the banks of the Weser River, has been a pioneer in adopting reusable systems. For years, reusable cups have been used at the festival to serve drinks, but organizers saw a need to expand these practices to food containers as well. A decentralized Breminale in 2021 served as a testing ground for reusable plates and bowls, paving the way for a comprehensive shift to reusable systems. Recognizing the need for regulatory support, Breminale organizers advocated for citywide regulations to ensure that sustainable practices did not result in competitive disadvantages for vendors adopting them.

LEVERS EMPLOYED

-  **Asset management:** Circular use of public-owned assets
-  **Regulation and legislation:** Enacting legislative measures
-  **Incentivization:** Grants
-  **Strategy and Governance:** Elaborating visions, strategies, and roadmaps

AT A GLANCE

- ★ **Timeframe:** Implementation at events started in 2021; City regulation passed in 2022 with implementation phased for March 2023 and March 2024
- ★ **Location:** Bremen, Germany
- ★ **Cost and financing:** €149,902.20 for reusable roadmap development; €35,000 for the dishwashing unit funded by the Bremen Cultural Department
- ★ **Stakeholders:** Bremen City Parliament, event organizers (i.e. Breminale), Institute for Energy, Recycling and Environmental Protection at Bremen University of Applied Sciences

Description

In May 2022, the Bremen City Parliament passed a motion mandating the use of reusable containers at public events. The regulation requires that drinks be served in deposit-based reusable containers starting in March 2023, with food containers following in March 2024. This measure ensures that all events held on city property, organized by the city, or financially supported by it adhere to these sustainability standards. To support this transition, Bremen developed a reusable roadmap in collaboration with Institute for Energy, Recycling and Environmental Protection at Bremen University of Applied Sciences. This

roadmap provides a strategic framework for implementing reusable systems across various contexts, including large and small events, restaurants and bistros, system catering, company cafeterias, and weekly markets. The roadmap addresses logistical, financial, and hygiene concerns while proposing solutions to encourage widespread adoption. The roadmap provides ecologically reasonable solutions to encourage widespread adoption while considering logistical, financial and hygiene concerns. Complementing these measures, the city introduced a mobile dishwasher rental service to lower logistical barriers for organizers, especially smaller-scale events. The dishwasher, capable of cleaning tableware for up to 15,000 people daily, can be rented by event organizers the unit along with reusable tableware, providing an accessible and scalable solution for transitioning to sustainable practices.

Vision, objectives and first steps:

Bremen's vision is to significantly cut down on single-use waste. The switch and consistent use of reusable alternatives is therefore the best solution, and Bremen aims to establish reusable systems across the board for major events in the city and to eliminate competitive disadvantages for event organizers and restaurateurs who act in a resource-saving manner. Objectives include creating an ecologically reasonable, efficient,

user-friendly deposit system, educating the public on sustainability, and fostering collaboration among local businesses and organizers.

Financing, implementation, deployment and upscaling:

The reusable roadmap project was funded with €149,902.20 from the Bremen Environmental Department (AUF program), while the dishwashing unit received €35,000 in support from the Bremen Cultural Department. Event organizers can rent. Implementation involved aligning event requirements with Bremen's regulatory framework and piloting the new systems at flagship events like the Breminale.

Implementation at Breminale:

The Breminale festival has become a flagship example of Bremen's reusable initiative. For cold beverages, reusable polypropylene and polycarbonate cups have been the norm for years, and in 2021, the festival expanded its reusable system to include food and hot drinks. The festival employs a well-organized system in which reusable plates and bowls are distributed to participating food vendors. Each vendor estimates their tableware needs in advance, with the flexibility to order more during the event. Customers pay a 1€ deposit for the reusable items, which can be returned at any participating vendor stand or via conveniently placed return



BREMEN, GERMANY

boxes. To ensure efficiency and hygiene, used tableware is collected in designated boxes and transported to Hanover for cleaning overnight. Broken tableware is recycled, ensuring that waste is minimized even when items are damaged. Visitors are educated about the reusable system through informational displays, posters, and social media campaigns. As more food vendors have shifted toward offering handheld food that requires no plates or bowls, reducing the need for reusable packaging, the 2025 edition of Breminale will see organizers using the mobile dishwasher unit and borrowing only a small number of additional dishes—further improving their environmental footprint by enabling local washing and avoiding transport to Hanover. Parallely to implementation, the festival has collaborated with the Bremen University of Applied Sciences to research the environmental footprint of their approach.

Results, impact and the way forward:

The Breminale festival serves as a clear demonstration of the success of Bremen's reusable initiative. By replacing disposable packaging with reusable alternatives, the festival avoided over 2.6 tons of waste and reduced its environmental footprint. The positive response from vendors and visitors highlights the viability of such systems at large-scale events. The development of a citywide reusable roadmap provides strategies to replicate these successes across diverse contexts, from small local markets to major cultural festivals.

Lessons learned

- ★ Importance of clear signage and straightforward instructions on the deposit system to ensure high return rates.
- ★ Reusable systems are effective when central collection points are strategically located.
- ★ Strong regulatory frameworks can ensure uniform adoption of sustainable practices without disadvantaging individual vendors.
- ★ Providing logistical support can lower barriers to entry for smaller events.

RELATED PROJECTS AND INITIATIVES

- [Breminale](#)
- [Reusable roadmap Bremen](#)

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Key barriers

- ★ Challenges included logistics for large-scale deployment and occasional confusion among attendees about the deposit system.



GHENT, BELGIUM

ABSTRACT

The Ghent Festival ("Gentse Feesten"), a 10-day annual event in Ghent, Belgium, has pioneered a reuse system for cups and food containers, significantly reducing waste. Since 2018, reusable beverage cups have been mandatory, and in 2022, reusable food containers were added. Supported by Ghent's government and local businesses, the festival achieved a 95% cup return rate, a 40% reduction in waste per visitor, and substantial cost savings. The initiative highlights the effectiveness of reuse systems in large-scale public events.




Contextual Background

The Ghent Festival ("Gentse Feesten") is a major public event in Ghent, Belgium, held annually in July. Established in 1843, it has grown to become one of Europe's largest cultural events, drawing over 1.5 million visitors to the different festival areas in the city. Traditionally, large events generate significant waste, especially from single-use plastic items. In response, the city of Ghent and the broader Flanders region have introduced strict policies against single-use plastics, aligning with Europe's goals for reducing plastic waste. Since 2018, Ghent has mandated the use of reusable cups at the festival, and in 2020, the Flanders region further restricted single-use containers and cutlery at public events. This reuse initiative reflects Ghent's long-standing commitment to environmental sustainability and its aim to become a model city for waste reduction through reuse and recycling systems.

Description

The Ghent Festival's reuse system is one of the most extensive in Europe, aiming to eliminate single-use cups and containers through a network of reusable items

LEVERS EMPLOYED

-  **Asset management:** Circularity in municipal duties and obligations
-  **Regulation and legislation:** Enacting legislative measures
-  **Incentivization:** Fiscal benefits

AT A GLANCE

- ★ **Timeframe:** July 2022 (10-day festival), with ongoing policy since 2018
- ★ **Location:** Ghent, Belgium
- ★ **Cost and financing:** €160,000 subsidy from the City of Ghent only for 2024 to set up a uniform system for the cups; rental and washing fees covered by vendors
- ★ **Stakeholders:** City of Ghent, local businesses, vendors, festival organisers, Ivago (waste collection), Groep Intro and Wash-it (social enterprise organisation responsible for the cup washing)

supported by deposit-return systems. In 2022, the system was expanded to include reusable food containers alongside beverage cups. Attendees pay a deposit fee of €1 per cup or container, which they can retrieve by returning the item at designated collection points across the festival zones. The festival features a coordinated infrastructure where cups and containers can be returned and reused across different zones, significantly reducing waste. The initiative also includes specific collection points that remain open after bars close, ensuring visitors can easily return items.

To support vendors, Ghent provided financial subsidies and established a harmonized network of washing services. Vendors rent reusable containers and pay

GHENT, BELGIUM

washing fees, incentivizing them to adopt sustainable practices without bearing the entire cost burden. Clear communication and signage around reusable options are prominently displayed to educate visitors on the system.

Vision, objectives and first steps:

The festival aimed to reduce waste and improve sustainability through reusable systems. Objectives included achieving high return rates, reducing costs, and ensuring positive visitor experiences. Initial steps involved enforcing deposit fees and establishing collection points.

Financing, implementation, deployment and upscaling:

The City of Ghent allocated €160,000 in subsidies in 2024 to assist the festival areas in implementing the reusable systems. This funding covered essential logistics such as hiring a “cup coordinator” to oversee cup distribution, collection, and washing logistics.

Deployment involved setting up a comprehensive return system with standardized deposit fees and convenient return points across festival zones. To address visitor confusion, Ghent ensured most festival zones used a uniform cup and container model, which could be returned at any participating venue. Challenges from earlier editions, like inconsistent cup types and limited return points, were addressed by expanding return locations and increasing standardization. Plans for upscaling include year-round integration of reusable systems in Ghent’s local restaurants and businesses, preparing them to participate fully in the reuse program during festival season.

Results, impact and the way forward:

The reusable system has delivered significant environmental and economic benefits. In 2022, the Ghent Festival achieved a 40% reduction in waste per visitor compared to 2019, despite a 62% increase in attendance. Overall, 20 fewer tonnes of waste were collected, and costs related to waste management decreased by 12%, including a 9% reduction in staffing, 20% less use of vehicles, and a 14% decrease in waste processing expenses. Additionally, 440

hours of cleaning labour were avoided, underscoring the operational efficiencies of the reusable system.

The initiative saw a return rate of 95% for reusable cups and 83% for food containers, demonstrating high user compliance and satisfaction. Moving forward, Ghent aims to involve year-round restaurants in the festival zone in adopting the reusable systems, aligning local businesses with the reuse practices already mandated for the festival. The festival organizers also plans to rent out the 400,000 reusable cups to other events throughout the year, extending the usage and sustainability of these materials.

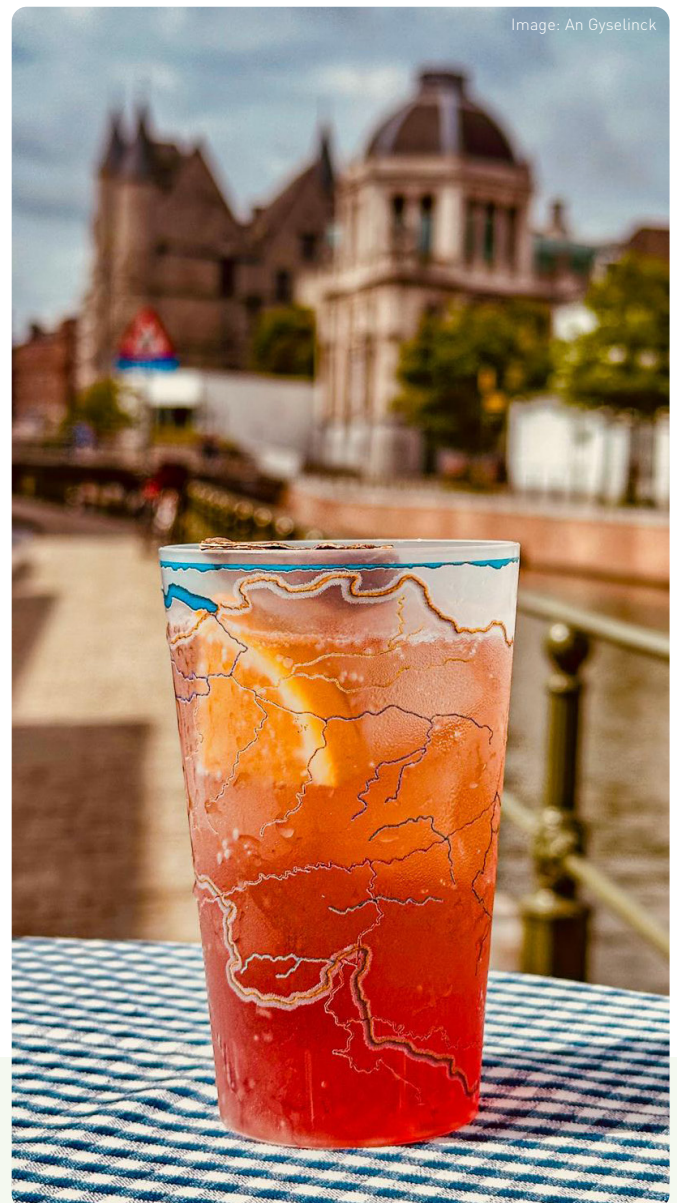


Image: An Gyselinck

Universal Gentse Feesten cup

Policy framework:

Ghent's commitment to waste reduction is reflected in its progressive policies, many of which set a benchmark for local and regional regulations:

- 2008: start of the project 'Waste reduction Gentse Feesten' a collaboration between the city, IVAGO (waste management) and the festival organisers with financial support of the city to reduce the waste of the festival.
- 2014: Financial support only for the areas that did not yet use disposable cups and announcement of the ban to come in 2018.
- 2017: Ghent began prohibiting plastic and aluminum packaging for food vendors, allowing only paper and cardboard.
- 2018: Ghent implemented a city-wide ban of disposable cups.
- 2020: The Flanders region restricted disposable cups, bottles, and cans unless 95% were collected for recycling. Ghent extended this to prohibit disposables in festival areas.
- 2021: A city ordinance banned all disposables, applying to temporary and permanent vendors in the Gentse Feesten area.
- 2022: Ghent expanded the ordinance to cover reusable food containers and cutlery, with a minimum deposit of €1 on cups to promote returns. Subsidies were also introduced to foster a collaborative system across vendors and create a network of return points city-wide.

These policies have inspired similar approaches in Flanders and the EU, positioning Ghent as a leader in sustainable event management.

Lessons learned

- ★ **City Leadership**: Strong coordination and guidance from the city ensure cooperation among stakeholders.
- ★ **Uniformity and effective communication**: Uniform systems and clear return instructions reduce visitor confusion and encourage high return rates.
- ★ **Enforcement and Incentives**: Enforcement mechanisms and subsidies promoted early adoption and compliance among vendors.

RELATED PROJECTS AND INITIATIVES

- [Flanders region-wide ban on single-use items in public events](#)
- [Ghent sustainable events](#)

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Key barriers

- ★ Inconsistent cup types led to confusion, and it should be preferred to avoid thin or cheap reusable plastic cups as they may be mistaken for single-use items, leading festival attendees to improperly dispose of them. Some food stalls initially lacked full compliance and long-term involvement of local businesses remains a challenge.



Image: Stad Gent / Visit.gent.be

MANCHESTER, UNITED KINGDOM

ABSTRACT

Manchester City Council aims to reduce Single-Use Plastic waste by promoting reusable cups at large-scale events. The city's comprehensive approach, part of its commitment to becoming carbon-neutral by 2038, includes the development of guidelines for reusable cups and implementation of reusable cup schemes at popular events like the Manchester Food and Drink Festival and Manchester Day. Manchester City Council's recent sustainable events guide shows how they have saved 1.7 million bar cups from being used once and discarded in the first two years, reduced waste management costs by up to 40%, and provided a replicable model for urban and greenfield events aiming to reduce their environmental impact.

LEVERS EMPLOYED

- 💡 **Knowledge and Awareness:** Developing guidance and targeted tools and resources
- 🎯 **Strategy and Governance:** Setting targets

AT A GLANCE

- ★ **Timeframe:** Initiated in 2018, ongoing with updates in 2022
- ★ **Location:** Manchester, UK
- ★ **Cost and financing:** £7,000 funding from the URBACT-funded C-Change project for guides and impact analysis
- ★ **Stakeholders:** Manchester City Council, local bar operators, event organizers, reusable cup suppliers

Contextual Background

In response to the climate emergency, Manchester set a goal to be carbon-neutral by 2038, 12 years ahead of the national target. Reducing single-use plastic use at events became a core strategy, aligned with Greater Manchester's plan to eliminate avoidable single-use plastics by 2024. Manchester's festivals and events, which draw large crowds, were identified as key opportunities for intervention.

Description

Manchester City Council developed guidelines for reusable cup use at events, which address outdoor, indoor, and multi-day formats. The city's reusable cup system has

been implemented at various large-scale events, including Manchester's annual Christmas Markets, Food and Drink Festival, the citywide Manchester Day, and community events such as Góbéfest with significant success in reducing single-use plastics.

Vision, objectives and first steps:

The objective was to reduce single-use cup waste and its associated environmental impact at events across Manchester. Initial steps involved implementing reusable cup schemes with deposit systems and enabling wider uptake through the development of comprehensive guides.

Financing, implementation, deployment and upscaling:

Manchester's specialist markets team purchased a supply of events cups to be used at the annual Christmas markets. To encourage use of reusables at other events,



Council-owned cups are also available for free loan, with an optional paid-for washing service to assist traders. Funding through the C-Change project provided resources to create a guide for reusable cups.

Results, impact and the way forward:

Early analysis showed that Manchester saved an estimated 1.7 million single-use cups in the first two years, reducing plastic waste by 96% and CO₂ emissions by 82%. Waste management costs dropped by 40% at events like the Manchester Food and Drink Festival. The city continues to work with event organisers to further expand reusable cup schemes citywide, aligning with the 2024 SUP-free pledge.

Lessons learned

- ★ Increasing the cup deposit from £1 to £2 significantly improved cup return rates.
- ★ Support from suppliers was critical for first-time operators like Amber & Malt, who found the system easy to implement with guidance.
- ★ Offering a cup washing service, alongside hire of the cups, helps events to take up offer of the free loan of the cups.
- ★ Clear communication on reusable versus biodegradable options helped manage public expectations and preferences.



RELATED PROJECTS AND INITIATIVES

- [Zero Carbon Manchester – Avoidable Single Use Plastic Free Action Plan](#)
- [European URBACT C-Change project](#)

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Key barriers

- ★ Initial resistance to reusable schemes due to unfamiliarity and operational adjustments.
- ★ The cost and logistics of washing facilities, which required support from council and suppliers.
- ★ Ensuring compliance among diverse stakeholders, from traders to event organizers

MUNICH, GERMANY

ABSTRACT

The City of Munich has transformed Oktoberfest, the world's largest folk festival, into a global example of sustainable waste management. Whether it's a beer or a wine mug - over six million visitors drink and eat entirely from reusable containers on the 38 hectares of the Oktoberfest. The key to success is the reusable requirement laid down in the Munich waste regulations, which applies to all events in public spaces. Since the early 1990s, measures to reduce waste have focused on banning disposable tableware and cutlery, encouraging reusable systems for beverage bottles as well as for transport containers, and optimizing recycling efforts. These initiatives have reduced of ten times waste per visitor, demonstrating how an event of such a large scale can implement effective waste reduction strategies while maintaining tradition.

LEVERS EMPLOYED

-  **Asset management:** Circular use of public-owned assets
-  **Regulation and legislation:** Enacting legislative measures

AT A GLANCE

- ★ **Timeframe:** Ongoing since 1991, with notable updates in subsequent years
- ★ **Location:** Munich, Germany, primarily on the Theresienwiese fairground
- ★ **Cost and financing:** Reusable system financed by the festival tents and implemented through a deposit fee of minimum 1 Euro
- ★ **Stakeholders:** City of Munich, Munich Waste Management Company (AWM), Munich Building Department (Baureferat München), Oktoberfest organizers and festival tents, food and beverage vendors

Contextual Background

Oktoberfest, the world's largest folk festival, attracts millions of visitors annually to Munich's Theresienwiese fairground, offering traditional Bavarian food, beer, and entertainment. However, the festival's scale poses significant sustainability challenges, including high volumes of waste, energy consumption, and CO₂ emissions. As the owner of the event site, the City of Munich has taken a leading role in addressing these issues. Since 1991, the city has implemented a series of measures to transform Oktoberfest into a model for sustainable event management while preserving its cultural heritage.

Description

Since 1991, the city of Munich has implemented a targeted Commercial Waste Ordinance, resulting in all disposable dishware and cutlery being banned at Oktoberfest and mandating the exclusive use of reusable alternatives. Vendors use returnable bottles for beverages, and reusable transport containers are used for the delivery of food and beer mugs. Soft drinks are only sold in returnable bottles for a minimum deposit of one euro and the sale of drinks in cans is also prohibited — festivalgoers pay a deposit on their glass beer steins, which are washed on return for reuse. Since 1998, water has been saved at the Oktoberfest location with the help of a recycling project: in some festival halls, thanks to water cascade utilization, the rinse water from the beer mug washing machines is

not fed into the sewer but is used for the tent toilets. This was only possible for the city because it owns the land and is the organizer. Since 2023 Munich's fresh drinking water has been available free of charge, also avoiding the creation of plastic waste. Freshwater fountains are installed on the outside walls of the WC facilities in some locations on the festival grounds. Also, stallholders are also encouraged to sell reusable or recyclable goods, and many have adopted solar power installations or electric vehicles to minimize their carbon footprint further. These sustainable initiatives play into the festival's "eco points" system, which helps rate businesses seeking admission to the Wiesn, or fairground. The strict enforcement of these rules has reduced waste production per visitor from 2 kg to just 0.2 kg.

Vision, objectives and first steps:

The City of Munich envisioned Oktoberfest to become a model for waste management in large-scale events. The city owns the land where the festival is held, enabling it to enforce strict sustainability measures to evolve it into a platform for implementing and testing innovative ecological strategies that align with Munich's broader

vision of becoming a zero-waste city. With the successful introduction of the reusable requirement in the early 1990s, the state capital Munich took on a pioneering role. At the time, the focus was primarily on city events such as the Oktoberfest, the Dulten and the Christmas market as part of the city's cultural life and flagships of Munich. The primary objectives included reducing overall waste, eliminating single-use plastics, and encouraging recycling and reuse. Initial steps focused on banning disposable dishware and cutlery and establishing clear waste sorting guidelines, paving the way for a sustainable operational framework. Over the years, many cities and municipalities have taken the Munich reusable requirement as a model and in turn incorporated corresponding statutory provisions into their local law.

Financing, implementation, deployment and upscaling:

The waste management system at Oktoberfest was financed and implemented through collaboration between the municipal service provider for waste management (AWM) and festival stakeholders. Municipal authorities provided clear regulatory guidance and infrastructure, such as collection points and sorting facilities, while



Image: LHM / J. Saurer

MUNICH, GERMANY

vendors adapted their operations to comply with the reuse and recycling mandates. A company from Lower Bavaria now offers cutlery rental - 18 million pieces in six quality categories including washing, polishing and wrapping in napkins - for almost all festival tents. Over the years, these measures have been scaled to encompass additional aspects of waste reduction, such as avoiding packaging waste and improving separate collection processes.

Results, impact and the way forward:

The waste reduction measures at Oktoberfest have yielded remarkable results. The Munich municipal street cleaning service reported a two-thirds reduction in cleaning and waste disposal in under 15 years — from 247 tons in 2008 to 88 tons in 2022, 66 tons in 2023, and 36 tons in 2024. This achievement has positioned Oktoberfest as a role model for other major events worldwide. Moving forward, the City of Munich aims to sustain and enhance these practices, ensuring that the festival remains an exemplar of waste management in large-scale event planning.

Lessons learned

- ★ Ownership of event infrastructure enables cities to enforce ambitious sustainability regulations.
- ★ Incentivizing eco-friendly practices through reward systems, such as eco-points, drives vendor participation.
- ★ Strong regulations, such as banning disposable dishware, drive significant waste reduction.

Key barriers

- ★ Balancing sustainability efforts with the festival's traditional appeal.
- ★ Managing the high volume of waste generated by millions of visitors required substantial investment in infrastructure.

**RELATED PROJECTS AND INITIATIVES**

- [Oktoberfest München](#)
- [München Zero Waste City](#)
- [Commercial Waste Ordinance](#)

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Image: LHM / E. Geibel

SEATTLE, WASHINGTON – UNITED STATES

ABSTRACT

The City of Seattle’s “Reuse Seattle” initiative, led by Seattle Public Utilities and the Office of Economic Development, is pioneering a reusable container system to replace single-use cups at large events. In collaboration with partners like r.Cup and local institutions, the program launched its first major event at the Woodland Park Zoo’s ZooTunes concert series. Through a network of collection, cleaning, and digital systems, Seattle aims to create a scalable model that reduces waste and promotes reuse as a sustainable alternative across the city.

Contextual Background

Since 2010, Seattle has implemented bans on single-use food service ware, but with a shift in focus towards reusable solutions. Recognizing the unsustainability of single-use items in venues, the city has expanded its approach to support reusables through public-private partnerships. Reuse Seattle was established as a pilot to develop a standardized, scalable reuse infrastructure, starting with high-impact events like the ZooTunes concert series.

Description

Reuse Seattle’s reusable cup system includes a partnership with r.Cup to manage logistics, collection, and cleaning of reusable cups at large events. At ZooTunes, reusable cups were provided to attendees, who returned them at collection bins on-site. This initiative represents the first step in a broader vision to create an integrated reuse system for food and beverage containers across Seattle’s public venues and businesses.

LEVERS EMPLOYED

- 📋 **Regulation and legislation:** Enacting legislative measures
- 💰 **Incentivization:** Public-private partnerships
- 💰 **Incentivization:** Grants

AT A GLANCE

- ★ **Timeframe:** Program launched in 2022 with first major event at ZooTunes concert series
- ★ **Location:** Seattle, Washington, USA
- ★ **Cost and financing:** Supported by municipal funding, with \$250,000 earmarked for business incentives
- ★ **Stakeholders:** City of Seattle, Seattle Public Utilities, Office of Economic Development, Cascadia Consulting, Blue Daisy, PR3, r.Cup, and local venues like Woodland Park Zoo

Vision, objectives and first steps:

The initiative envisions a city-wide network of reusable containers accessible across institutions, businesses, and community events, aiming to shift from single-use to a convenient, closed-loop reuse system. The first step was launching at ZooTunes, with future expansion planned for arenas, stadiums, and city-wide locations.

Financing, implementation, deployment and upscaling:

The program is funded through city grants, with \$500 rebates for businesses that adopt reusables and \$250,000 allocated to support further adoption. Implementation began with the ZooTunes concert series in 2022, leveraging r.Cup’s infrastructure. Expansion is anticipated in larger venues, with potential to incorporate tech-enabled bins city-wide.

SEATTLE, WASHINGTON – UNITED STATES

Results, impact and the way forward:

The ZooTunes series saw 27,380 single-use cups replaced by reusables, achieving a 95% recovery rate and substantial resource savings, including 2,148 pounds of CO₂ and 9,944 gallons of water. The strong public response suggests high engagement, with future plans to scale the system across more venues and integrate with broader city initiatives to reduce single-use waste.

Lessons learned

- ★ Public Engagement: Attendees valued the initiative and inquired about expanding it to other venues.
- ★ Education and Signage: Clear instructions and visible return stations were key to achieving high recovery rates.
- ★ Economic Considerations: Reusable systems were found financially viable compared to single-use, considering long-term savings on waste management.

RELATED PROJECTS AND INITIATIVES

→ [Reuse Seattle](#)

REFERENCES

- <https://reuseseseattle.org/wp-content/uploads/2023/05/ZooTunes-Launch-Report-June-Aug-2022-1.pdf>
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Key barriers

- ★ Consumer Education: Some attendees kept reusable cups as souvenirs, suggesting a need for clearer messaging or avoided branding.
- ★ Venue-Specific Needs: Some venues require transparent or non-metal cups for safety and regulatory compliance.



Image: Seattle Refined / Sunita Martini

TALLINN, ESTONIA

ABSTRACT

In 2023, Tallinn, the European Green Capital, played a pivotal role in transforming the XIII Youth Song and Dance Festival into a zero-waste event, marking a milestone in sustainable event management. With over 125,000 attendees, the city introduced reusable dishware systems and comprehensive waste management practices, significantly reducing waste from 40 tons in 2019 to 22.1 tons. By fostering collaboration among stakeholders, enforcing progressive policies, and championing environmental responsibility, Tallinn set a benchmark for future sustainable events globally.





Contextual Background

The Youth Song and Dance Festival is part of Estonia's rich cultural heritage, bringing together thousands for performances in Tallinn. With the city's designation as European Green Capital 2023, there was a heightened focus on aligning the festival with sustainability values. Previous editions faced criticism for excessive waste, prompting a shift towards environmentally responsible practices.

Description

The city of Tallinn spearheaded efforts to make the 2023 festival the first zero-waste event in its history. This was achieved through a phased policy banning single-use dishes, adoption of reusable alternatives, and extensive stakeholder collaboration. Strategic measures included a deposit-return system, waste sorting stations, and the installation of public water taps.

LEVERS EMPLOYED

-  **Incentivization:** Grants
-  **Knowledge and Awareness:** Developing guidance and targeted tools and resources
-  **Knowledge and Awareness:** Information campaigns and awareness raising events
-  **Regulation and legislation:** Enacting legislative measures

AT A GLANCE

- ★ **Timeframe:** November 2021 – July 2023
- ★ **Location:** Tallinn, Estonia
- ★ **Cost and financing:** Partially funded by the Tallinn city government to cover the costs associated with the reusable dish systems
- ★ **Stakeholders:** City of Tallinn; Estonian Song and Dance Celebration Foundation; Let's Do It Foundation; Acento (consultancy); Eesti Pandipakend (reusable dish logistics); Festival caterers and vendors; 100 volunteer green ambassadors

Vision, objectives and first steps:

Tallinn's vision aligned with its 2035 development program, emphasising green innovation and sustainability. Key objectives included: 1) Reducing waste and reliance on single-use plastics, and 2) Introducing scalable, reusable systems for public events, and 3) Educating stakeholders and attendees about sustainable practices. To achieve this, the city worked on policy amendments, forming a sustainability team, and consulting stakeholders on reusable systems. Firstly, the city adopted a new regulation (Rule for organising and holding public events in the city of Tallinn). According to this regulation, only

TALLINN, ESTONIA

compostable (according to EN 13432 standard) dishes were allowed for serving food and drinks in a public event (entertainment event, competition, performance, trade event or other similar gathering of people that takes place in a public place and is open to the public with or without a ticket). Although this was a big step forward decreasing the amount of single-used fossil-based plastic dishes and cutlery, it did not reduce the amount of waste generated. Therefore, as a second step, Tallinn amended this regulation by banning all single-use dishes made of any material and allowing only reusable ones. In this way, from June 2023, only reusable dishes (plates, cups, forks, knives, spoons) are allowed in public events in Tallinn. Based on a successful implementation of this regulation a similar regulation was adopted on a national level. From 1st of January 2024, only reusable dishes are allowed at all public events in the whole of Estonia. The city's has also proved ongoing commitment to integrate circular practices into future events through the development and dissemination of a guide to environmentally friendly Events, detailing the requirements and the

recommendations for organising events in Tallinn. This guide is compulsory to follow for all city authorities.

Financing, implementation, deployment and upscaling:

The transition to a zero-waste model for the festival was supported by partial funding from the City of Tallinn, which covered costs associated with reusable dishware. Implementation began 1.5 years before the event, with strategic planning and collaboration between stakeholders, including the Estonian Song and Dance Festival Foundation, sustainable event consultancy Acento, and reusable dishware providers. On-site, 11 reusable dish collection points were set up, supported by a deposit system to incentivize returns. Approximately 100 green ambassadors were trained to manage waste sorting at 70 waste collection points, ensuring smooth operations.

Results, impact and the way forward:

The festival achieved remarkable results, reducing waste generation by nearly half compared to the 2019 event.



Image: XIII Youth Song & Dance Celebration

From 40 tons of unsorted waste in 2019, the 2023 event produced only 22.1 tons, with most sorted into recyclable categories. The reuse system prevented the use of nearly 500,000 single-use plastic items and public reception was overwhelmingly positive, with visitors praising the clean festival grounds and smooth deposit return process. This success has positioned Tallinn as a leader in sustainable event management, providing a model for other large-scale cultural events. The festival's successful execution inspired a national regulation requiring reusable dishware at public events from January 2024, thereby embedding the zero-waste model into Estonia's broader sustainability goals. The city's has also proved ongoing commitment to integrate circular practices into future events through the development and dissemination of a [guide to environmentally friendly events](#), detailing the requirements and the recommendations for organising public events in Tallinn.

Lessons learned

- ★ The recruitment and training of 100 green ambassadors helped guide attendees in proper waste sorting and ensured adherence to the reuse system.
- ★ It is important to support event organizers with guidance and resources to address challenges while dispelling misconceptions about zero-waste practices.
- ★ Clear goals require a baseline and robust monitoring to track progress and ensure achievable outcomes.

Key barriers

- ★ Procuring caterers and service providers willing to adapt to the zero-waste model as many were unfamiliar with reusable systems and concerned about potential added costs and logistical complexities.
- ★ Estonia's compliance with separate waste collection is not consistent across regions. Waste management included separate collection and bin emptying but also cleaning festival grounds, which created a sizable task for the supplier.

RELATED PROJECTS AND INITIATIVES

- [Tallinn 2035 Development Strategy](#)
- [Tallinn European Green Capital 2023](#)
- [Guide to environmentally friendly events](#)

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Image: Panditops Poster at the XIII Youth Song & Dance Celebration

PACKAGING REUSE AT EVENTS

PORTFOLIO OF CASE STUDIES

ABOUT CIRCULAR CITY LABS

This publication has been produced by ICLEI Europe within the context of the activity ‘*Support for the implementation of packaging reuse at City Festivals*’ offered as part of the Circular City Labs project.

The project **Circular City Labs (CCL)** – Testing reusable packaging systems in cities aims to reduce greenhouse gas emissions through waste prevention by promoting reusable packaging systems and strengthening women participation in local circular economies.

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