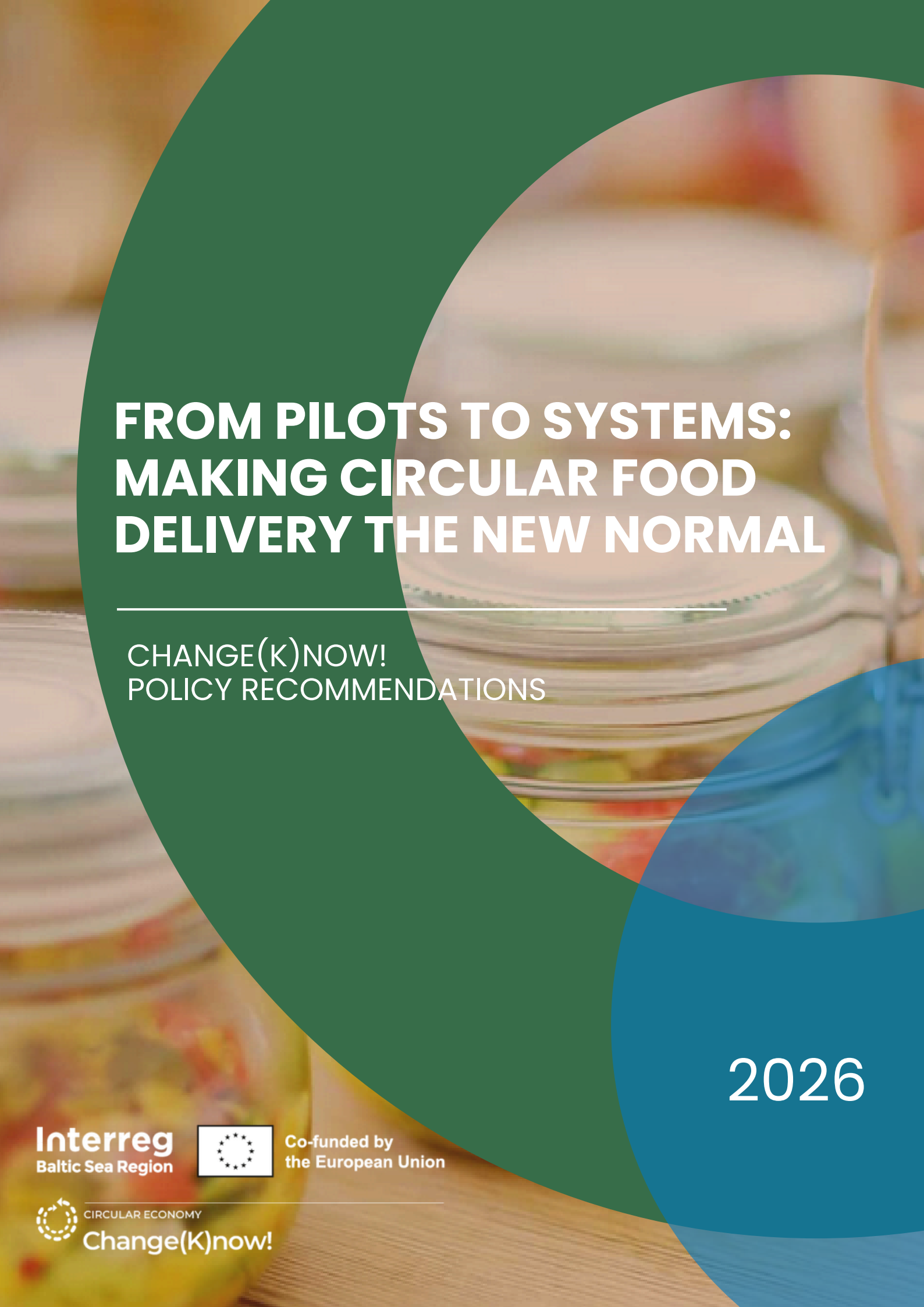

FROM PILOTS TO SYSTEMS: MAKING CIRCULAR FOOD DELIVERY THE NEW NORMAL

CHANGE(K)NOW!
POLICY RECOMMENDATIONS

2026

Interreg
Baltic Sea Region

Co-funded by
the European Union

CIRCULAR ECONOMY
Change(K)now!

Table of Contents

Executive Summary

The transition from single-use packaging to circular food delivery systems is widely recognised as a priority within European environmental and circular economy policies. Yet, despite increasing regulatory pressure and a growing number of pilot initiatives, reusable packaging systems remain fragmented, limited in scale, and far from becoming the default in everyday consumption.

The Change(K)now! project demonstrates that the core challenge is not the absence of solutions, but the absence of **functioning systems**. Across institutional catering, public events and take-away services, the project has shown that reusable solutions can work in practice. However, their success depends on the alignment of multiple factors: governance frameworks, infrastructure, business models, and user behaviour. Where these elements are not coordinated, reuse remains a niche practice.

This policy paper argues that achieving circular food delivery systems requires a shift from a focus on individual measures - such as awareness campaigns or isolated pilots - towards a **systemic approach**. Reuse must be understood as part of a broader socio-technical transition, involving public authorities, private actors and consumers. Behavioural change, in particular, cannot be expected from information alone, but must be enabled through well-designed systems that are convenient, consistent and widely accessible.

Based on extensive pilot testing and evaluation across the Baltic Sea Region, Change(K)now! identifies key success factors: strong public governance, clear and enforceable regulatory frameworks, interoperable infrastructure, and the active role of municipalities as system orchestrators. At the same time, the findings highlight critical gaps, including economic barriers, fragmented markets, insufficient return infrastructure and inconsistent user experiences.

The policy recommendations developed in this paper aim to address these gaps. They provide guidance on how to create enabling conditions for reusable systems, how to mobilise public-private cooperation, and how to design policies that translate regulatory ambitions into real environmental impact.

Ultimately, the transition to circular food delivery systems is not only a technical or economic challenge, but a societal one. Making reuse the new normal requires coordinated action across all levels of governance and society - moving from pilots to systems.

Priority Actions for Decision-Makers: From Strategy to Implementation

Building on the analysis and practical experience presented in this paper, the following priority actions summarise the most effective and immediate entry points for decision-makers at municipal, national and European level. They are intended to translate the systemic perspective into concrete steps that can be initiated in the short to medium term, while contributing to long-term system transformation.

1. **Mandate the use of reusable packaging at public events above a defined size**, ensuring clear requirements, enforcement mechanisms and visibility.

2. **Integrate reuse criteria systematically into public procurement,** particularly in catering services for schools, hospitals and other public institutions.

3. **Plan and establish dense, visible return infrastructure** as part of urban development and public space management.

4. **Ensure interoperability between reusable systems**, avoiding fragmentation and enabling users to participate across providers and locations.

5. **Introduce economic instruments that support reuse**, including fees or disincentives for single-use packaging where legally feasible.

6. **Provide legal clarity on hygiene, responsibilities and system operation**, reducing uncertainty for municipalities and businesses.

7. **Enable and structure public–private partnerships**, facilitating cooperation between municipalities, service providers and businesses.

8. **Use public procurement and regulation as market-shaping tools**, creating stable demand and predictable conditions for investment.

9. **Design systems for convenience and default use**, ensuring that reusable options are the easiest and most accessible choice for consumers.

10. **Establish monitoring and performance criteria**, ensuring that reusable systems deliver measurable environmental benefits and can be continuously improved.

Introduction

The transition towards circular food delivery systems has become an important element of European environmental policy, driven by the need to reduce packaging waste, mitigate climate impacts and shift towards more sustainable consumption patterns. With the introduction of new regulatory frameworks, particularly the Packaging and Packaging Waste Regulation (PPWR), expectations are increasing that reusable packaging systems will play a central role in achieving these objectives.

At the same time, the discourse around this transition has been strongly shaped by the concept of "mindset change". Consumers are expected to adopt more sustainable behaviours, businesses are encouraged to rethink their service models, and public authorities are tasked with promoting awareness and enabling innovation. While this perspective is valuable, it often underestimates the structural conditions that shape behaviour and decision-making in real-life contexts.

The experience of the Change(K)now! project demonstrates that mindset change alone is insufficient to drive the transition towards circular food delivery systems. Across multiple pilot cases in the Baltic Sea Region, it became evident that behaviour - whether of consumers, businesses or public institutions - is largely determined by the systems in which actors operate. Convenience, availability, cost structures, regulatory clarity and infrastructure all play a decisive role in shaping outcomes.

In this sense, the transition towards reuse can be understood as a **socio-technical system transformation**. It affects not only products and services, but also infrastructures, institutional frameworks, market conditions, cultural norms and everyday practices. Such transformations are inherently complex and cannot be achieved through isolated interventions. They require coordinated changes across multiple dimensions and actors.

The project's approach reflects this understanding. It combines the development of strategic frameworks for municipalities with the testing of practical solutions in three key areas: institutional catering, public events and take-away systems. This dual approach allows for a comprehensive analysis of both the enabling conditions at policy level and the operational realities on the ground.

A central finding emerging from this work is the existence of a persistent gap between **strategic ambition and practical implementation**. On the one hand, policies and strategies increasingly promote circularity and reuse. On the other hand, pilot implementations reveal a fragmented landscape, characterised by incompatible systems, limited infrastructure, and uncertainties regarding costs and responsibilities. As a result, even well-designed solutions struggle to scale beyond local or temporary contexts.

This gap highlights the need to move from a focus on individual measures towards a systemic perspective. Rather than asking how to encourage individual actors to change their behaviour, the key question becomes **how to design systems that make sustainable behaviour the easiest and most natural choice**.

In this context, municipalities play a particularly important role. As regulators, procurers, infrastructure providers and conveners of local stakeholders, they are uniquely positioned to shape the conditions under which circular systems can emerge.

However, municipalities often lack the practical guidance and experience needed to translate high-level policy objectives into effective local action.

This policy paper addresses these challenges by bringing together insights from strategic development, pilot implementation and evaluation. It reflects on the relationship between anticipated mindset change and observed behaviour in practice and examines how regulatory frameworks and policy instruments can be designed to achieve real environmental impact.

The objective is not to provide a technical manual, but to offer a **policy-oriented perspective** on how circular food delivery systems can be enabled and scaled. By linking empirical evidence with systemic analysis, the paper aims to support decision-makers at local, national and European level in moving from fragmented initiatives towards coherent and functioning reuse systems.

Ultimately, the transition towards circular food delivery systems requires a rethinking of how responsibility is distributed across society. It is not the task of consumers alone, nor of businesses or public authorities in isolation. It is a shared endeavour that depends on the alignment of all actors within a well-designed system. Only under these conditions can circularity move from ambition to reality.

The System Gap: Why Reuse Does Not Scale Yet

"With every order of hot coffee, she asked each person, every time: do you want to produce waste or protect the environment?"

CANTEEN MANAGER AT A VOCATIONAL SCHOOL IN HAMBURG

Despite growing political commitment and an increasing number of pilot initiatives, reusable food packaging systems have not yet reached the scale required to significantly reduce single-use packaging. The experience from Change(K)now! clearly shows that this is not due to a lack of technical solutions or innovative ideas. Rather, it reflects a structural gap between **strategic ambition and system implementation**.

Across the Baltic Sea Region, municipalities have developed policies, action plans and guidelines aimed at reducing single-use packaging and promoting reuse. At the same time, numerous pilots have demonstrated that reusable solutions can function in practice - whether in school canteens, hospitals, public events or take-away systems. However, these two developments often remain disconnected. Policies provide general direction, while pilots operate as isolated interventions, rarely embedded in a coherent, city-wide system.

This disconnect can be described as the **"pilot-to-system gap"**. While pilots generate valuable insights and demonstrate feasibility, they typically remain limited in scope, duration and geographical coverage. They often rely on temporary funding, motivated stakeholders and favourable local conditions. As a result, they do not automatically translate into long-term structural change.

The analysis of pilot cases across the three clusters of Change(K)now! highlights several recurring patterns.

In institutional catering, public procurement has proven to be a powerful lever for introducing circular solutions. However, implementation is often constrained by operational realities, including existing contracts, kitchen workflows, hygiene requirements and equipment compatibility.

Even where procurement criteria are well designed, their impact depends on the readiness of suppliers and the ability of institutions to adapt their practices.

In the context of public events, pilots have demonstrated that large-scale implementation of reusable systems is feasible and can achieve high visibility and impact. However, these systems typically depend on **clear regulatory requirements and strong organisational capacity**. Without mandatory rules or effective enforcement, uptake remains uneven. At the same time, large events require significant logistical coordination, including return infrastructure, washing capacity and stakeholder alignment.

In take-away and food delivery systems, the challenges are even more pronounced. Here, the dominance of single-use packaging is deeply embedded in existing business models and consumer expectations. Pilots show that reusable systems can work under certain conditions, but their success is highly dependent on convenience, infrastructure and user experience. Where return systems are fragmented, inconvenient or poorly communicated, participation remains low.

Above all clusters, at strategic framework level, **a set of structural barriers emerges**. Economic factors play a central role: reusable systems often require upfront investments and may appear more costly in the short term, particularly at low volumes. Legal and regulatory complexity creates uncertainty, especially regarding hygiene requirements and responsibilities across actors. Infrastructure gaps - especially in return systems and washing facilities - limit scalability. Behavioural factors, including consumer habits and perceptions, further influence uptake. Finally, environmental performance itself depends on system efficiency, including high return rates and optimised logistics.

These barriers are closely interconnected. For example, insufficient infrastructure reduces convenience, which in turn affects user behaviour and economic viability. Fragmented regulations can discourage investment, while lack of standardisation limits interoperability between providers. In this sense, the challenge is not any single barrier, but the absence of a coherent system in which these elements reinforce each other.

A key insight from the project is that reusable systems do not fail because of individual weaknesses, but because of misalignment between system components. Technical solutions exist, but they are not integrated. Policies exist, but they are not sufficiently operationalised. Users may be willing to participate, but the system does not make it easy for them to do so.

Addressing this system gap requires a shift in perspective. Instead of focusing on improving individual elements - such as better communication, new technologies or isolated regulations - the focus must be on **aligning the entire system**. This includes ensuring that regulatory frameworks, market conditions, infrastructure and user experience are mutually supportive.

Only by bridging the gap between pilots and systems can reusable packaging move from experimental applications to a widely adopted, everyday practice. The following chapters build on this understanding, highlighting what works in practice and how these insights can inform the design of effective governance and policy frameworks.

What Works: Lessons from Pilots and Strategic Frameworks

While the previous chapter outlined the structural challenges that prevent reusable systems from scaling, the pilot activities within Change(K)now! also provide rich evidence base of what actually works in practice. These lessons are crucial for moving beyond problem analysis towards actionable policy guidance.

A first key insight is that **governance matters - and it works when it is structured**. The strategic framework developed within the project demonstrates the importance of aligning different levels of decision-making. Municipal strategies and action plans provide direction and define objectives, while local regulations translate these objectives into binding requirements. Operational guidance, in turn, supports implementation by stakeholders on the ground. Where these elements are coherent and mutually reinforcing, they create a stable environment for change. Where they are missing or disconnected, initiatives tend to remain ad hoc and fragmented.

Public procurement emerges as one of the most effective instruments for implementing circular solutions. In institutional catering, procurement criteria can directly influence packaging choices across the entire value chain - from suppliers to end-users. The pilots in Lahti and other cities show that integrating circularity criteria into procurement processes not only raises awareness among stakeholders but also creates concrete incentives for suppliers to adapt their practices. At the same time, these experiences underline that procurement must be carefully designed to ensure feasibility, cost neutrality and compatibility with operational conditions.

Another central lesson concerns the role of infrastructure as the backbone of reusable systems. Across all pilot contexts, the availability and accessibility of return infrastructure proved to be a decisive success factor. In systems where users could return containers easily - ideally at multiple locations and without additional effort - participation rates were significantly higher. Conversely, where return processes were inconvenient or unclear, even well-designed systems struggled to gain traction. The experience from large-scale pilots, particularly in urban contexts, highlights the importance of dense and visible return networks, often supported by centralised washing facilities and coordinated logistics.

Closely linked to infrastructure is the importance of **convenience as a driver of behaviour**. The pilots consistently show that users are willing to adopt reusable systems when they are easy to use, intuitive and seamlessly integrated into everyday routines. In institutional settings such as schools or workplaces, where systems can be standardised and alternatives limited, acceptance is particularly high. In contrast, in more open systems such as take-away markets, where users have multiple options, convenience becomes even more critical. This reinforces the finding that behaviour is not primarily driven by environmental awareness, but by the conditions under which choices are made.

The **role of regulation** is also highlighted by the pilots, particularly in the context of public events. Mandatory requirements for reusable packaging, combined with clear rules and enforcement, have proven to be highly effective in achieving widespread adoption.

In such contexts, reusable systems quickly become the norm, and resistance from users or businesses tends to be limited when the system is well organised. This suggests that regulatory measures can play a key role in accelerating change, provided they are supported by adequate infrastructure and clear communication.

At the same time, the pilots demonstrate that **communication remains an important but supporting element**. Awareness-raising activities, information campaigns and direct engagement with users and stakeholders contribute to acceptance and understanding. However, their impact is limited if the underlying system is not functional. Communication can explain and promote a system, but it cannot compensate for structural weaknesses such as inconvenient return processes or unclear rules.

An important contribution of the project is the identification of **different system archetypes** for reusable packaging. On the one hand, low-tech, locally organised systems - such as the trust-based model in smaller municipalities - can be highly effective in specific contexts. They rely on simple processes, strong local relationships and limited scale. On the other hand, large urban systems require more complex solutions, including digital tracking, centralised logistics and extensive infrastructure networks. These high-tech systems offer greater scalability but also involve higher costs and coordination efforts.

Both approaches have their place, and neither represents a universal solution. Instead, the key lesson is that reusable systems must be **adapted to their specific context**, while still adhering to common principles such as standardisation, interoperability and user convenience. This has important implications for policy design, which must allow for flexibility while ensuring overall coherence.

Finally, the evaluation of the pilots highlights the importance of **collaboration across stakeholders**. Successful implementation requires the involvement of municipalities, service providers, businesses, and users. In many cases, the process of co-creating solutions - through workshops, pilot testing and continuous feedback - proved to be as important as the technical solution itself. This collaborative approach helps to ensure that systems are both feasible and accepted, and that they can be sustained beyond the pilot phase.

Taken together, these lessons provide a clear direction for policy development. Reusable systems can work, and they can deliver environmental benefits. However, their success depends on the alignment of governance, infrastructure, market conditions and user behaviour. The next chapter builds on these insights by outlining how such alignment can be achieved through a systemic governance model.

© Anykščiai Municipality

From Fragmentation to Systems: The Governance Model for Reuse

The transition from isolated pilot initiatives to functioning, large-scale reusable food packaging systems requires a fundamental shift in governance. As demonstrated in the previous chapters, the main barrier to scaling reuse is not the lack of solutions, but the lack of alignment between the different components that constitute a system. Addressing this challenge requires a governance model that is capable of integrating regulatory frameworks, market actors, infrastructure and user behaviour into a coherent whole.

At the centre of this model lies the **concept of the reuse system**. Unlike single-use packaging, which operates through linear, one-way flows, reusable systems are inherently circular. They depend on repeated cycles of use, return, cleaning and redistribution. This requires not only appropriate containers, but also a network of return points, logistics, washing facilities, digital or analogue tracking mechanisms, and clear rules governing the system. Crucially, these elements must function together in a coordinated manner. If one component fails - such as insufficient return infrastructure or unclear user instructions - the performance of the entire system is affected.

A defining feature of successful reuse systems is **interoperability** respectively **compatibility**. Users must be able to return containers easily, ideally regardless of where they were obtained. Businesses must be able to integrate reusable solutions into their operations without being locked into a single provider. Service providers must be able to operate within a shared framework that allows for compatibility and scalability. Without interoperability, systems remain fragmented, leading to confusion among users, inefficiencies in logistics, and reduced environmental benefits.

The experience from the *Change(K)now!* pilots illustrate both the potential and the challenges of achieving interoperability. In smaller-scale systems, interoperability can be achieved through simple agreements and standardised containers within a limited network. In larger urban systems, it requires more complex coordination, including standardisation of container types, alignment of deposit systems, and often the use of digital tools to manage flows. In both cases, however, the principle remains the same: the system must be designed from the perspective of the user and the overall flow, not from the perspective of individual providers.

Within this governance model, municipalities play a central role as **system orchestrators**. This does not mean that they operate reusable systems directly. Rather, they create the conditions under which such systems can emerge and function effectively. This includes setting strategic objectives, establishing regulatory frameworks, facilitating cooperation between stakeholders, and supporting the development of infrastructure.

The **strategic framework** developed within the project provides a useful structure for this role. By aligning strategies, regulations and guidance documents, municipalities can ensure that political ambition is translated into operational reality. Strategies define long-term goals and priorities, regulations establish binding requirements, and guidance documents support implementation by providing practical instructions and recommendations.

When combined with instruments such as public procurement, communication and stakeholder collaboration, this framework creates a comprehensive governance approach.

Public procurement deserves particular attention in this context. As a major purchaser of food services, municipalities have significant influence over market conditions. By integrating circularity criteria into procurement processes, they can create stable demand for reusable solutions and encourage suppliers to adapt their offerings. Procurement thus acts as a bridge between policy objectives and market implementation, translating abstract goals into concrete contractual obligations.

At the same time, governance of reusable systems cannot be achieved by public authorities alone. The transition requires **public-private cooperation** at multiple levels. Service providers bring technical expertise and operational capacity, businesses such as restaurants and caterers integrate reusable solutions into daily operations, and logistics providers ensure the circulation of containers. Effective governance therefore involves creating platforms and mechanisms through which these actors can collaborate, align their interests, and co-develop solutions.

An important aspect of this cooperation is the need to avoid **market lock-in**. While individual service providers may offer effective solutions, systems that are dominated by a single provider risk limiting competition, innovation and scalability. From a policy perspective, it is therefore essential to promote open standards and interoperability, allowing multiple providers to operate within the same system. This approach supports a more resilient and adaptable market, while also improving user experience by reducing fragmentation.

Another key element of the governance model is the integration of different **use contexts**. Reusable systems often develop separately in institutional catering, public events and take-away services. However, from a system perspective, these contexts are interconnected. Users move between them, and containers could, in principle, circulate across them. A truly effective system therefore requires a cross-sector approach, where solutions are designed to function across different use cases and collection points.

This principle of "**thinking across channels and collection points**" is central to achieving scale. It implies that reuse should not be limited to specific niches or pilot contexts but should be embedded in the broader urban environment. This includes integrating return infrastructure into public space, aligning rules across different types of services, and ensuring that reusable options are consistently available.

The governance model must also address the **dynamic nature of system development**. Reusable systems evolve over time, as technologies improve, user behaviour changes, and regulatory frameworks are updated. Governance therefore needs to be **adaptive**, allowing for experimentation, learning and continuous improvement. Pilot projects play an important role in this process, not as isolated interventions, but as components of a broader learning system that informs policy development.

Finally, the governance model must ensure that reusable systems deliver their intended **environmental benefits**. This requires monitoring and evaluation, including data on usage, return rates, losses and environmental impacts. Without such information, it is difficult to assess whether systems are performing effectively and where improvements are needed.

In summary, **the transition from fragmented initiatives to functioning reuse systems requires a governance approach that is systemic, coordinated and adaptive**. It must align regulatory frameworks, market conditions, infrastructure and user behaviour, while fostering cooperation among a diverse set of actors. The following chapter translates this governance model into concrete policy recommendations, providing guidance on how municipalities and other stakeholders can create the conditions for scaling reusable food packaging systems.

Policy Recommendations: From System Analysis to Targeted Action

The analysis presented in the previous chapters has demonstrated that the transition towards reusable food delivery systems cannot be achieved through isolated measures or incremental improvements. It requires a systemic shift in how food packaging is produced, distributed, used and managed. This shift is not primarily technological, but institutional and organisational. It depends on the alignment of infrastructure, regulatory frameworks, market conditions and user behaviour across governance levels.

At the same time, it is evident that decision-makers are not only seeking analytical clarity, but also concrete guidance. A recurring challenge is translating systemic understanding into operational action: what exactly needs to be done, by whom, and in what sequence, in order to move from pilots to functioning systems.

This section therefore builds directly on the analytical backbone of the document and translates it into more explicit, actor-specific and time-sensitive action pathways. It does so without separating analysis and recommendation, but by embedding action requirements into the narrative itself.

Establishing the Conditions for System Emergence

A first priority across all governance levels is to create the basic conditions under which reusable systems can emerge and stabilise. Reuse systems do not develop spontaneously under current market conditions. They require deliberate intervention that simultaneously creates demand, reduces uncertainty for businesses, and signals long-term political commitment.

At the municipal level, this implies that cities should not wait for complete regulatory clarity at national or European level before taking action. Instead, they can use the policy instruments already at their disposal to create initial system demand. This includes, in particular, the introduction of mandatory reusable packaging at public events above a defined size, and the systematic integration of reuse criteria into public catering contracts.

Such measures have proven effective in reducing single-use packaging and creating stable demand for reusable solutions.

At national level, governments are required to provide the legal clarity and political backing that allows such municipal measures to be implemented with confidence. This includes clarifying hygiene rules, responsibilities for handling reusable packaging, and the legal status of deposit systems. Without such clarity, both municipalities and businesses remain hesitant to scale up solutions.

At European level, the role of the Commission is to ensure that the regulatory framework, particularly under the Packaging and Packaging Waste Regulation, sends a clear and consistent signal that reuse is not optional, but a central element of future packaging systems. This requires reducing reliance on voluntary commitments and providing more precise guidance on implementation.

Moving from Fragmentation to Coordinated System Building

Once initial demand conditions are established, the next challenge is to move from fragmented initiatives towards coordinated systems. Fragmentation remains one of the most significant barriers to scaling. Multiple system providers operate in parallel, infrastructure is unevenly distributed, and users are confronted with inconsistent rules and processes.

For municipalities, this means that their role must evolve from pilot initiators to system integrators. They are not expected to operate reuse systems themselves, but they are uniquely positioned to coordinate actors, facilitate dialogue and create a common framework within which different solutions can operate. In practice, this in-

-cludes convening system providers, gastronomy actors and infrastructure operators to address interoperability issues, and using procurement and permitting processes to ensure that new systems do not further increase fragmentation.

National governments need to support this process by developing common standards for interoperability, including harmonisation of deposit logic, container identification systems and data structures. Without such standardisation, the coexistence of multiple providers leads to inefficiencies and undermines user acceptance.

At European level, there is a clear need to move towards common frameworks that enable cross-border compatibility of reuse systems. While full harmonisation may not be immediately feasible, the development of shared standards and reference models can significantly reduce fragmentation and support the emergence of a European reuse market.

Building Infrastructure as the Backbone of Reuse Systems

Reusable systems are fundamentally dependent on infrastructure. Without accessible, visible and reliable return infrastructure, even well-designed systems fail to achieve sufficient circulation rates.

At the municipal level, this implies a shift in perspective: reuse infrastructure must be treated as part of urban infrastructure planning, similar to waste collection systems or public transport. Cities need to actively identify suitable locations for return points, integrate them into public spaces, and cooperate with private actors such as retail centres or transport hubs. In dense urban environments, this may require flexible solutions, including semi-mobile infrastructure or the use of existing facilities.

National governments have a crucial role in enabling such infrastructure development by simplifying permitting procedures and, where necessary, providing financial support for initial investments. Permitting processes can become a significant bottleneck, particularly when multiple authorities are involved.

At European level, infrastructure development can be supported through funding programmes and by recognising reuse systems as part of circular economy infrastructure, including investments in return systems, washing facilities and logistics networks.

Creating Economic Conditions for Scaling

A key barrier is the economic imbalance between reusable and single-use systems. While reusable systems can become cost-efficient at scale, they often require higher upfront investments and face competition from single-use systems that do not reflect their full environmental costs.

Municipalities can contribute by using procurement power and introducing local economic signals, such as fees for single-use packaging in defined contexts. However, their influence on broader market conditions is limited.

National governments play a decisive role in creating a level playing field. This includes introducing economic instruments that reflect environmental costs and developing funding schemes that support initial scaling. Policy design must also ensure that small and medium-sized enterprises are not disproportionately burdened.

At European level, structural market distortions need to be addressed, including the externalisation of environmental costs and the lack of harmonised economic signals.

Strengthening extended producer responsibility schemes is a key element in this regard.

Integrating Behaviour as an Outcome of System Design

Consumer behaviour is primarily shaped by system conditions. Individuals adopt reusable systems when they are convenient, accessible and embedded in everyday routines.

Municipalities should therefore prioritise system design over isolated awareness campaigns. This includes ensuring that reusable packaging is offered by default, that return processes are simple, and that infrastructure is visible and easy to use.

National and European policy should support this approach by establishing requirements for availability and usability of reusable systems. Communication remains important but must reinforce system design rather than compensate for its shortcomings.

Managing Political Trade-offs and Risks

The transition towards reusable systems involves political trade-offs and risks that must be addressed explicitly.

Decision-makers face questions related to costs, distribution of responsibilities and stakeholder resistance. While reusable systems may involve higher initial costs, they can lead to long-term savings through reduced waste management and resource use.

Trade-offs arise between supporting small businesses and achieving system efficiency, or between convenience and regulatory ambition. These must be managed through careful policy design.

A key risk is the emergence of ineffective systems where containers do not circulate sufficiently to deliver environmental benefits. This highlights the importance of monitoring, performance criteria and enforcement.
The risk of inaction is equally significant, including continued growth of single-use packaging and long-term lock-in of unsustainable systems.

Activating Demand: The Role of Consumers in Reuse Systems

The transition towards circular food delivery systems is often framed as a question of consumer behaviour: will people accept reusable containers, return them, and adapt their habits? While this perspective is valid, it risks oversimplifying the role of consumers and overestimating the impact of awareness-based approaches. The experience from Change(K)now! suggests a more nuanced understanding: consumers are not the starting point of change, but a critical component within a system that must be designed to work for them.

In reusable packaging systems, **consumers play a decisive role in determining system performance**. Their behaviour directly influences return rates, loss rates, and ultimately the environmental impact of the system. However, this behaviour is not shaped primarily by environmental awareness or personal values, but by the conditions under which choices are made. Convenience, clarity, and consistency emerge as the key determinants of participation. At the same time, behavioural responses are strongly influenced by perceived personal benefit and everyday practicality, particularly in contexts where environmental concerns compete with other priorities.

Evidence from the Change(K)now! pilots confirms this pattern across all contexts. In institutional settings such as schools and workplaces, where reusable systems are implemented as the default option and supported by clear rules, acceptance is high. Users quickly adapt to new routines, and reusable containers become a normal part of everyday practice. Initial resistance or confusion tends to diminish once the system is understood and integrated into daily life. This effect is particularly strong where systems are introduced without parallel alternatives, allowing new habits to form more quickly and reducing the need for individual decision-making.

In contrast, in more open systems such as public events or take-away services, where users have multiple options and less structured environments, behaviour is more sensitive to system design. Where return processes are inconvenient, return points are scarce, or rules are unclear, participation drops significantly.

Conversely, where systems are intuitive, well-communicated and supported by accessible infrastructure, users are willing to engage, even in large and complex settings. However, even in such contexts, participation depends on the perception that the system fits seamlessly into existing routines and does not require a fundamental change in lifestyle.

A particularly important finding is the **role of convenience as a primary driver** of behaviour. Users are more likely to participate in reusable systems when these systems require minimal additional effort compared to single-use alternatives. This includes factors such as proximity of return points, simplicity of deposit systems, and the absence of complicated procedures. In large-scale urban pilots, the density and visibility of return infrastructure proved to be a decisive factor in achieving high return rates. More broadly, participation increases when reuse systems are perceived as fast, easy and intuitive, comparable to the convenience traditionally associated with single-use consumption.

The use of **deposit systems** also plays a significant role. Deposits are generally accepted by users when they are clearly communicated, reasonably priced, and easy to recover. Problems arise when deposit systems are perceived as compli-

-cated, reasonably priced, and easy to recover. Problems arise when deposit systems are perceived as complicated, inconsistent, or unfair. This highlights the importance of standardisation and transparency in system design. At the same time, deposits alone do not guarantee high return rates; their effectiveness depends on how they are embedded in the overall system and whether return options are easily accessible.

At the same time, the pilots demonstrate the **limitations of awareness-based approaches**. While communication and education can support understanding and acceptance, they are not sufficient to drive behaviour change on their own. Environmental motivation is often secondary to practical considerations and may fluctuate depending on broader social and economic contexts. In periods of economic pressure or declining public interest in environmental issues, reliance on voluntary behaviour change becomes particularly fragile. Users tend to prioritise convenience, cost and familiarity, and environmental considerations alone rarely outweigh these factors.

This leads to a key conclusion: **behaviour should not be treated as an independent variable that can be changed through persuasion, but as an outcome of system design**. The objective of policy and system development should therefore be to design demand conditions that make sustainable behaviour the default and most convenient option. In this sense, behaviour change is less about convincing individuals and more about structuring environments in which desired behaviour becomes routine.

Several principles emerge from the project in this regard. First, reusable systems should be implemented as the **default** wherever possible. This may involve limiting or phasing out single-use options in certain contexts, particularly where alternatives are readily available. Second, systems

should prioritise **user convenience**, ensuring that return processes are simple, accessible and intuitive. Third, **standardisation across systems** is essential to reduce confusion and enable users to participate without needing to learn new rules in each context. Fourth, systems should minimise the need for conscious decision-making, allowing users to act automatically within established **routines**.

Another important element is the role of **social norms and visibility**. When reusable systems are widely visible and commonly used, they become part of the social fabric, reinforcing participation through peer behaviour. This effect is particularly strong in public spaces and collective settings, where individual behaviour is influenced by the actions of others. At the same time, communication strategies can support this process by presenting reuse as a normal and widely accepted practice, rather than as a niche or environmentally driven choice. Positive framing, role models and peer behaviour can contribute to this normalisation, provided that the underlying systems function reliably.

However, the design of demand conditions must also account for potential behavioural risks. Complex systems, inconsistent rules, or poorly designed infrastructure can lead to frustration and disengagement. High deposits or unclear refund processes may discourage participation. Hygiene concerns, if not adequately addressed, can also undermine trust in reusable systems. These risks highlight the importance of user-centred design and continuous feedback in system development. In addition, communication must address such concerns directly and transparently, rather than assuming that users will accept systems without question.

From a policy perspective, these insights have clear implications. **Rather than focu-**

-sing primarily on awareness campaigns or voluntary measures, policy should prioritise the creation of enabling conditions for behaviour. This includes regulating default options, ensuring infrastructure availability, and promoting consistency across systems. Municipalities, in particular, can shape these conditions through public procurement, event regulation and urban planning, while national and European frameworks can provide the necessary legal clarity and consistency across contexts. Communication remains important, but as a complement to, rather than a substitute for, effective system design.

In this sense, **consumers should be seen not as a barrier to change, but as partners in system transformation**. When systems are designed to meet their needs and expectations, users are willing and able to contribute to circularity. The challenge for policy and governance is therefore not to convince consumers to change, but to create systems in which sustainable behaviour becomes the natural choice.

Unlocking Public-Private Partnerships

The transition towards circular food delivery systems cannot be achieved by public authorities or private actors alone. It requires a **new form of collaboration** that brings together municipalities, service providers, businesses and other stakeholders in a shared effort to design and operate reusable systems. Public-private partnerships (PPPs) therefore emerge as a central mechanism for unlocking the potential of reuse at scale.

One of the key insights from Change(K)now! is that reusable systems operate at the intersection of public responsibility and private service provision. Municipalities have the authority to set rules, define objectives and invest in infrastructure, while private actors possess the technical expertise, operational capacity and market access required to implement solutions. Bridging these roles is essential for creating systems that are both effective and sustainable. In this context, municipalities are not only regulators, but also coordinators and enablers, while private actors act as system operators and innovators within a framework defined by public policy.

In practice, PPPs in the context of reusable systems can take various forms. In some cases, municipalities act as facilitators, bringing together stakeholders and supporting the development of shared solutions. In others, they play a more active role by integrating reusable systems into procurement processes or by co-investing in infrastructure. Private actors, including system providers, logistics companies and food service operators, contribute by developing and operating the technical and operational components of the system. National governments can rein-

-force these arrangements by providing legal clarity and funding schemes, while European frameworks can support cross-border cooperation and knowledge exchange.

A central challenge in this collaboration is the alignment of interests. Public authorities aim to achieve environmental and social objectives, while private actors operate within economic constraints and competitive markets. Effective PPPs therefore require mechanisms for **risk-sharing, cost distribution and value creation**. This may involve financial incentives, contractual arrangements or regulatory frameworks that ensure that all parties benefit from participation. In particular, policy design should aim to reduce uncertainty for private actors, for example by providing long-term signals on regulatory direction and ensuring stable demand conditions through public procurement and regulatory measures.

The Change(K)now! pilots provide several examples of how such cooperation can be structured. In institutional catering, procurement processes create a direct link between public objectives and private service provision. In public events, collaboration between municipalities, organisers and service providers enables the implementation of large-scale reusable systems. In take-away systems, partnerships between municipalities, businesses and providers are essential for establishing shared infrastructure and ensuring system coherence across different locations and actors.

At the same time, the pilots also highlight challenges associated with PPPs.

Coordination across multiple actors can be complex, particularly in large urban systems where responsibilities are distributed across different departments and organisations. Differences in capacity, priorities and resources can create imbalances, while unclear roles and responsibilities may lead to inefficiencies or delays. Addressing these challenges requires clear governance structures, defined responsibilities and continuous communication among partners. Municipalities, in particular, need to ensure internal coordination across departments such as procurement, waste management and economic development in order to act as effective partners in these arrangements.

Another important consideration is the need to maintain **openness and flexibility** within PPPs. As noted earlier, systems that are dominated by a single provider risk limiting competition and innovation. PPPs should therefore be designed to support interoperability and allow multiple providers to operate within a common framework. This not only enhances system resilience but also improves user experience by reducing fragmentation.

Financing is a particularly critical aspect of PPPs. The development of reusable systems often involves significant upfront investments in infrastructure and system development, including return points, washing facilities and logistics networks. While public funding can play a role in initiating these investments, long-term sustainability depends on creating viable business models that allow systems to operate without continuous subsidies. PPPs can support this by combining public investment with private capital and by designing revenue mechanisms that reflect the value created by reusable systems, including savings in waste management and environmental benefits. National governments and European funding programmes can play an impor-
-tant role in reducing initial investment barriers and supporting scaling phases.

Beyond financial considerations, PPPs also play a key role in **knowledge sharing and innovation**. By bringing together diverse actors, they create opportunities for learning, experimentation and continuous improvement. This is particularly important in a rapidly evolving field such as circular food delivery, where new technologies, business models and regulatory frameworks are constantly emerging. Structured cooperation can help translate pilot experiences into scalable solutions and avoid repetition of mistakes across different contexts.

From a policy perspective, supporting PPPs involves creating enabling conditions for collaboration. This includes providing clear regulatory frameworks, facilitating stakeholder engagement, and offering support for pilot projects and innovation. It also involves recognising the role of municipalities not only as regulators, but as platform builders that enable interaction and coordination among actors. National governments can strengthen this role by providing guidance and legal clarity, while European institutions can support coordination across borders and sectors.

Ultimately, PPPs are not an optional component, but a core element of system transformation. Without effective collaboration between public and private actors, reusable systems are unlikely to achieve the scale and coherence required for significant impact. By fostering such partnerships, policy can unlock the full potential of circular food delivery systems and accelerate the transition from pilots to integrated systems.

Early Policy Uptake: Signals from Municipal Practice

As the *Change(K)now!* project approaches its final phase, several participating municipalities and associated partners have begun to translate project insights into initial policy and implementation steps. While the timeframe for observing measurable impacts remains limited, these early experiences provide valuable indications of how policy uptake is unfolding in practice and how municipalities are positioning themselves for longer-term system development.

A key observation is that municipalities are primarily focusing on establishing the **strategic foundations** for circular food delivery systems. This includes integrating reuse objectives into existing strategies, such as waste management plans, circular economy roadmaps or climate action plans. In many cases, municipalities are choosing to embed reuse within broader policy frameworks rather than developing stand-alone strategies, reflecting the cross-cutting nature of the issue. This approach allows reuse to be linked with existing policy priorities and resource allocations, but also requires that responsibilities and objectives are clearly defined within these broader frameworks.

In parallel, several municipalities are advancing the development of **local regulations and guidelines**. Public events have emerged as a particularly dynamic field, with some cities introducing or strengthening requirements for reusable packaging. These measures are often seen as relatively straightforward to implement, as events take place in controlled environments where rules can be enforced more easily. At the same time, they provide high visibility and can serve as a testing ground for broader system development.

Municipalities can use such contexts strategically to gain experience, demonstrate feasibility and build acceptance among stakeholders before extending measures to more complex environments.

Public procurement is another area where early uptake is visible. Municipalities are beginning to explore how circularity criteria can be integrated into procurement processes for institutional catering and other services. While this process is still at an early stage, it reflects a growing recognition of procurement as a strategic lever for shaping markets and driving change. By specifying requirements for reusable packaging or system participation, municipalities can create predictable demand and reduce uncertainty for service providers. National guidance and model criteria can support this process by reducing administrative burden and increasing consistency across municipalities.

Despite these positive developments, municipalities also report a range of chal-

-lenges. One of the most frequently mentioned issues is the need for **coordination across departments and stakeholders**. Circular food delivery systems cut across multiple policy areas, including waste management, procurement, public health and economic development. Ensuring alignment between these areas requires internal coordination, which can be difficult to achieve within existing administrative structures. Establishing dedicated coordination mechanisms or clearly assigned responsibilities can support municipalities in addressing this challenge and in maintaining continuity over time.

Resource constraints also play a significant role. Developing and implementing new policies, building infrastructure and engaging stakeholders require time, expertise and financial resources. Many municipalities operate under tight budgets and competing priorities, which can limit their capacity to act. This highlights the importance of external support, including national funding programmes, technical assistance and European initiatives that can provide both financial resources and knowledge exchange. Without such support, the transition from initial uptake to system scaling may be significantly delayed.

Another challenge relates to **legal clarity and regulatory alignment**. While European and national frameworks provide a general direction, their interpretation and implementation at local level can be complex. Municipalities often seek clearer guidance on issues such as hygiene requirements, responsibilities for system operation and the scope of local regulatory powers. National governments have a key role in providing such clarification, while European frameworks can contribute by ensuring consistency and reducing ambiguity across Member States.

At the same time, the early uptake phase highlights the importance of **learning and adaptation.** Rather than implementing fully developed systems from the outset, municipalities are taking incremental steps, testing approaches and refining them over time. This iterative process reflects the complexity of system transformation and the need to adapt solutions to local contexts. It also underscores the value of exchange between municipalities, where experiences - both positive and negative - can inform further development and reduce duplication of effort.

Importantly, the absence of measurable impact data at this stage should not be interpreted as a lack of progress. System transformation is a long-term process, and the establishment of strategic and institutional foundations is a critical first step. The experiences gathered in this phase provide valuable insights into how policies can be designed and implemented more effectively, and how barriers can be addressed in subsequent phases.

In this sense, early policy uptake can be seen as a **signal of direction rather than outcome**. It indicates that municipalities are beginning to move beyond isolated pilots towards more structured and strategic approaches. The challenge in the coming years will be to build on these foundations, scale up successful initiatives and ensure that policy measures translate into tangible environmental benefits. This will require continued alignment between municipal action, national frameworks and European policy objectives, as well as sustained commitment to system development beyond initial pilot phases.

Outlook:
From Niche to New Normal

"For reuse systems to become a new normal, infrastructure must be available and accessible for all stakeholders. Interoperability of reuse systems and public-private partnership are key to success."

ANDRE LANG-HERFURTH, GERMAN REUSE ASSOCIATION

The transition towards circular food delivery systems is at a critical juncture. On the one hand, regulatory frameworks at European level, particularly the Packaging and Packaging Waste Regulation, are creating new momentum and setting clear expectations for the reduction of single-use packaging and the promotion of reuse. On the other hand, practical implementation remains uneven, and reusable systems are still far from becoming the default in most contexts. This gap between ambition and implementation highlights the need for more coordinated and targeted action across governance levels.

The findings of the *Change(K)now! project* suggest that the coming years will be decisive in determining whether reuse can move from a niche practice to a mainstream solution. Achieving this transition requires a shift in how reusable systems are understood and implemented. Rather than being treated as optional add-ons or experimental initiatives, they must be recognised as **essential components of urban infrastructure and as a core element of circular economy policy**.

This implies a fundamental change in perspective. Just as waste collection, water supply or public transport are considered core services within cities, reusable packaging systems should be seen as part of the infrastructure that supports sustainable urban living. This includes physical elements such as return points and washing facilities, as well as organisational and regulatory frameworks that ensure their operation. For municipalities, this means integrating reuse into urban planning, infrastructure strategies and service provision, rather than addressing it as a stand-alone environmental measure.

At the European level, there is a clear opportunity to support this transition through further **standardisation and harmonisation**. At the same

time, continued alignment between European, national and local policies is essential to ensure consistency and clarity for all actors. Providing more detailed guidance on implementation and ensuring that reuse requirements are both ambitious and enforceable will be critical for translating policy objectives into practice.

National governments also have a key role to play in translating European objectives into practical frameworks. This includes providing legal clarity, supporting infrastructure development and creating financial mechanisms that enable municipalities and businesses to invest in reusable systems. In particular, national policies can help establish level playing fields through economic instruments, reduce administrative barriers and support the development of shared infrastructure. Coordination between national and local levels will be particularly important to address differences in legal contexts and administrative capacities, and to ensure that municipalities are able to act effectively within their competencies.

At the local level, municipalities will continue to act as drivers of implementation. Their role as system orchestrators, infrastructure providers and conveners of stakeholders will be crucial in shaping how reuse systems develop in practice. This includes coordinating actors, integrating reuse into procurement and regulation, and ensuring that systems are designed in a way that meets user needs. The experiences from Change(K)now! demonstrate that municipalities are willing and able to take on this role, provided that they are supported by appropriate frameworks, resources and political backing.

At the same time, the success of reusable systems will depend on the continued engagement of private actors and consumers. Businesses must integrate re-usable solutions into their operations and business models, adapting logistics, processes and customer interfaces accordingly. For many actors, this represents not only a compliance challenge but also an opportunity for innovation and new value creation. Consumers, in turn, will adopt new routines and behaviours when systems are convenient, reliable and aligned with everyday practices. As highlighted throughout this paper, this requires system design that prioritises usability and accessibility, rather than relying solely on behavioural change.

Looking ahead, it is important to recognise that the transition towards circular food delivery systems is not a linear process. It involves experimentation, learning and adaptation, as well as overcoming resistance and addressing unforeseen challenges. Pilot projects will continue to play an important role, but their function will increasingly shift from demonstrating feasibility to refining and optimising systems at scale. This also implies a stronger focus on monitoring, performance evaluation and continuous improvement, supported by data and feedback from system users and operators.

In addition, the coming phase will require more explicit political prioritisation. Decisions on infrastructure investment, regulatory measures and economic instruments will shape the direction and speed of the transition. This includes addressing potential trade-offs, such as balancing short-term costs with long-term benefits, or managing the impacts on different market actors. Transparent communication and stakeholder engagement will be essential in building support for these decisions.

In conclusion, **the path from niche to new normal is both challenging and achievable**. The building blocks for reusable systems are already in place, and

the experiences gathered through projects such as *Change(K)now!* provide a strong foundation for further development. The task now is to connect these elements into coherent systems, supported by effective governance, robust infrastructure and aligned incentives across actors and governance levels.

If this can be achieved, reusable packaging has the potential to become not only an environmental necessity, but a **practical and widely accepted solution for sustainable food delivery in Europe and beyond.** The transition will ultimately depend on the ability of policymakers, businesses and communities to move from isolated initiatives towards coordinated system building, thereby embedding reuse as a normal and integral part of everyday life.

© BEF Germany / SURI

Author: Heidrun Fammler, Baltic Environmental Forum Germany
Activity: Policy Uptake

www.interreg-baltic.eu/project/change-know/

Interreg Baltic Sea Region
Co-funded by the European Union

CIRCULAR ECONOMY
Change(K)now!

Change(K)now! project is co-funded by Interreg Baltic Sea Region. The project´s main objective is a mindset change from single-use to circular or multiple-use of food delivery systems in cities and residents of the Baltic Sea Region.