RE-USE: ON-THE-GO

LESSONS FROM DENMARK FOR IRELAND AND THE EU

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LESSONS FROM COPENHAGEN & AARHUS

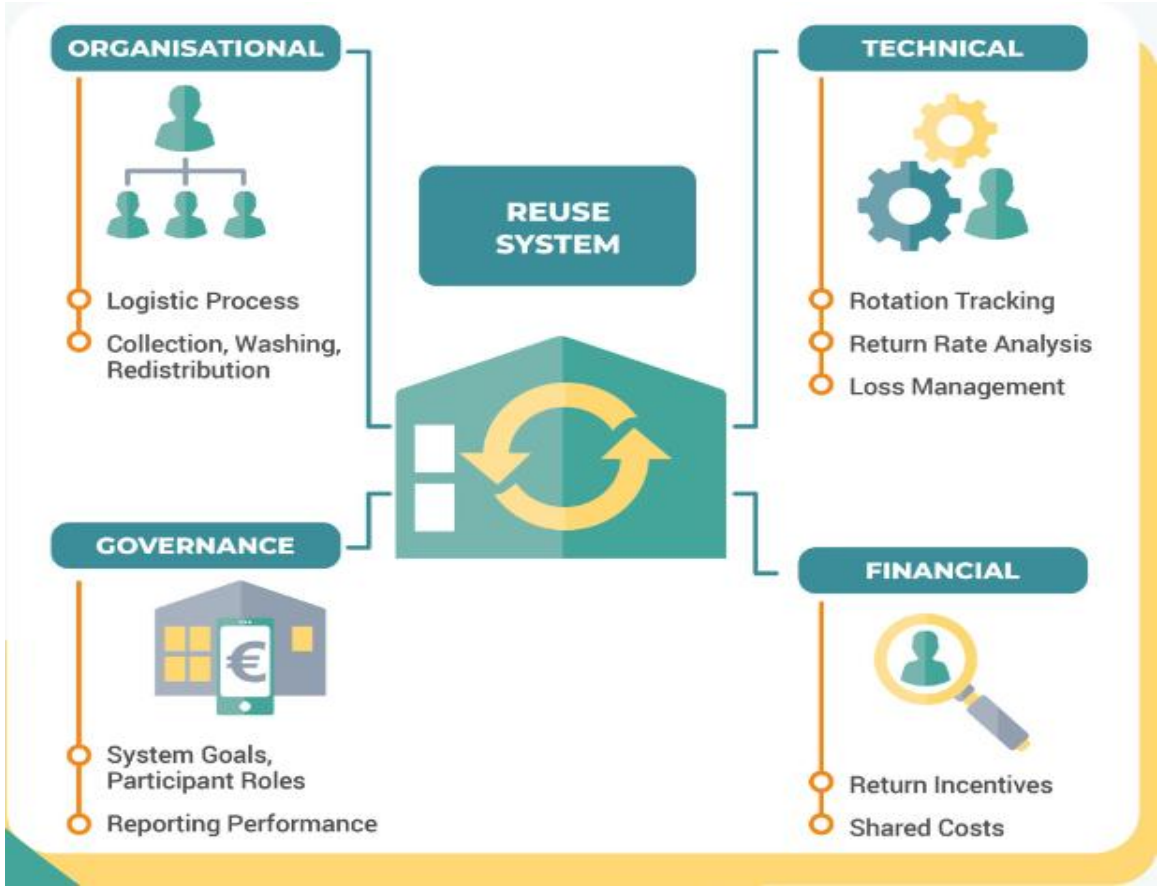
OVERVIEW

In March 2026, *Zero Waste Europe* hosted a two-day study tour in Denmark.

They invited city officials, policymakers, civil society organisations, PROs, reuse entrepreneurs and VOICE to examine the re-use initiative staking place in Copenhagen and Aarhus.

Executive Summary

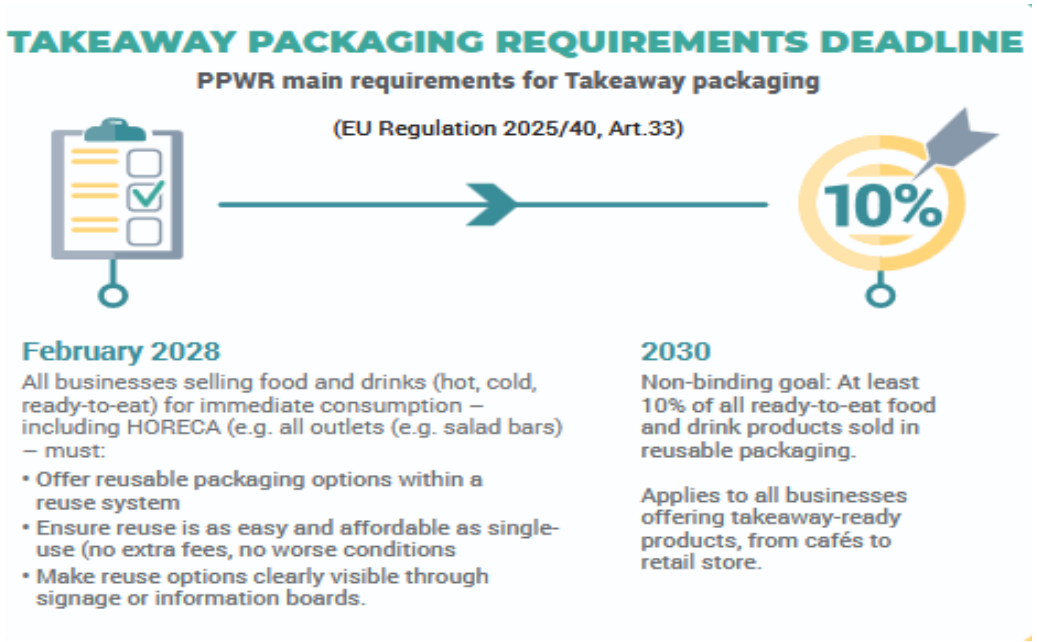
- Re-use systems are already working at city scale in Aarhus and in Copenhagen
- Denmark shows practical, scalable solutions exist
- Policy - not technology - is the main barrier
- Urgent need to embrace the challenges - and the opportunities - presented by PPWR



Packaging and Packaging Waste Regulations

ENTERS FORCE AUG 2026

- Outlets must allow customers **bring their own** cups & containers in 2027
- Outlets must actively **provide a re-usable packaging option** 2028
- Systems which include return points, washing, & logistics operational **at scale by 2030**



What happens if we ban before creating a system?

A LESSON FROM LISBON

Lisbon banned SUP cups in bars & cafes in 2024, many outlets switched to re-usable cups.

There was no re-use system to accommodate, which resulted in confusion and just as much litter.

Subsequently, a city-wide re-usable cup scheme was introduced which has proven to be effective.

Re-use requires a functioning system in place before a ban.

Ireland's Circular Economy Strategy '26-'28

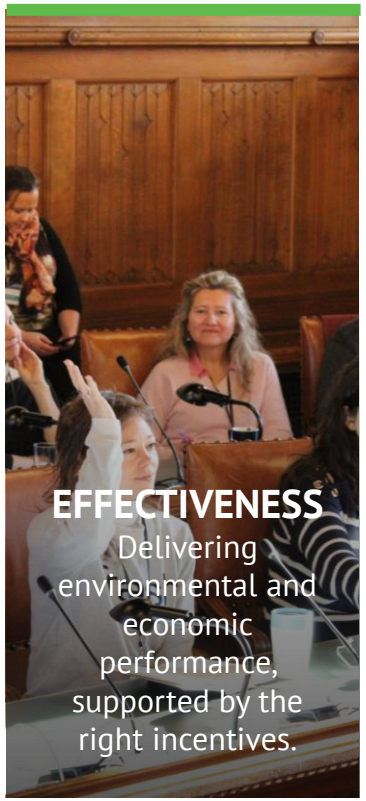
LOOKING AT IRELAND

- Re-use as a core pillar, with a focus on re-use systems
- C.E Fund provides funding pipeline for infrastructure
- Strategy aligns with PPWR and timelines therein
- City-level re-use pilots based on deposit/return
- Pooled re-use systems for businesses

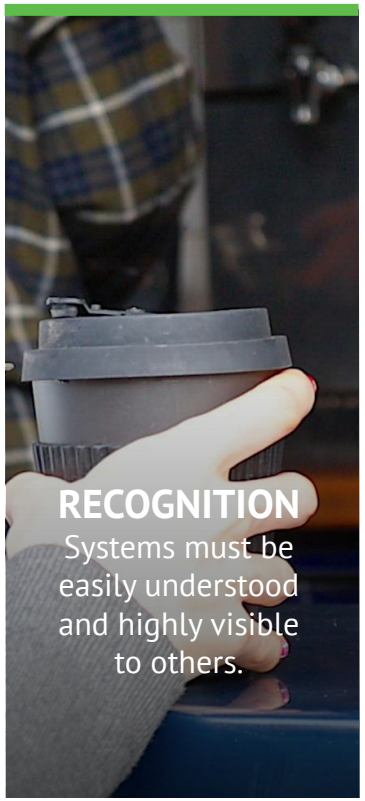
Will ambition meet reality?

Requirements for Reuse

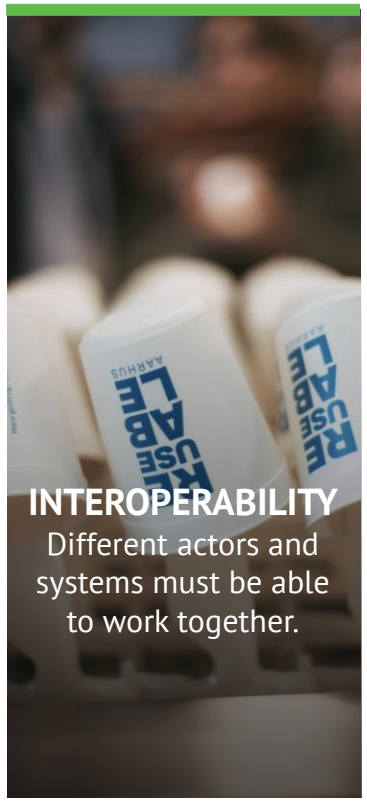
5 ESSENTIAL CRITERIA FOR REUSE SYSTEMS



EFFECTIVENESS
Delivering environmental and economic performance, supported by the right incentives.

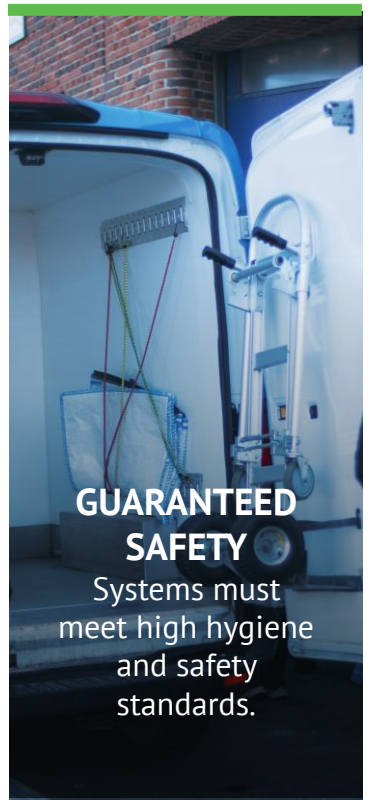


RECOGNITION
Systems must be easily understood and highly visible to others.



INTEROPERABILITY
Different actors and systems must be able to work together.

INCLUSIVENESS
Systems must be accessible, fair and easy for everyone to use.



GUARANTEED SAFETY
Systems must meet high hygiene and safety standards.

What's Happening In Denmark?

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Copenhagen

REUSE IN ACTION

- Presented by City of Copenhagen.
- Re-usable cups mandatory at events since 2019 (MCD run events in Denmark and comply with this law).
- Change (K)now is an EU Interreg Baltic Sea Region project with 8 partner countries.
- 38 return points in city centre.
- **New Loop** selected as service providers.

HOW IT WORKS IN COPENHAGEN

1 SYSTEM DESIGN

- Open, agnostic system (anyone can join)
- No app required
- Return points powered by solar energy
- Return points 'light', easy to move
- Washing within 30km radius
- Council supports of 13-40k funding for businesses

2 CUSTOMER EXPERIENCE

Receive re-usable cup

↓

Pay deposit

↓

Return to machine

↓

Scan QR code

↓

Get refund (card/apple pay/ donation)

↓

No app means a lower barrier to entry

3 OPERATIONS

- 34 machines in Copenhagen
- Cost per machine 2,000 Euro
- Features:
  - Solar powered
  - Moveable
  - Sensor based (no overflow)
- Logistics:
  - Reverse logistics via existing carriers (e.g. airport routes)

4 BUSINESS MODEL

- City funds initial infrastructure
- Transition to self-sustaining model
- Businesses pay to participate
- Key driver for businesses? Brand image and sustainability positioning

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Performance and Insights

FROM COPENHAGEN

System Launch

October 2025 Pilot phase

Challenge: still more expensive than single-use

7.9
Avg reuse cycles

300 million
Single-use cups per year in Denmark

Behaviour & Adoption Challenges

FROM COPENHAGEN

HoReCa onboarding is slow but practical.

Needs to solve real business problems:

- Cost
- Waste
- Branding

Key Insight: Talk to marketing teams, not procurement

Example of versioning of a web-app and encouragement to download app for a client

Aarhaus

REUSE IN ACTION

- Public/private partnership with Municipality & TOMRA
- Funding: €470,000 over 3 years
- System requirements:
    1. Centralised washing,
    2. Public return points,
    3. Cashless deposit

HOW IT WORKS IN AARHAUS

SYSTEM DESIGN

1

- 11 bidders
- Concession contract
- Criteria based on market analysis:
  - Central sanitation
  - Public return points in urban spaces
  - Non-cash payment solution
  - Ownerless deposit

CUSTOMER EXPERIENCE

2

Customer pays deposit when receiving a reusable cup

Cup returned at strategically placed RVM

Deposit refunded automatically via contactless bank card.

OPERATIONS

3

- 28 machines in City Center
- Cost per machine ? Euro
- Cups collected using cargo/electric vehicles
- Centralised washing, inspection and redistribution.
- As an open managed system(OMS), it can handle cups and packaging from different suppliers.

BUSINESS MODEL

4

- Public / private partnership
- 470,000 over 3 years
- Key driver for businesses:
  - Sustainability branding
  - Cost pressure from single-use
  - Regulation Readiness

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Performance and Insights

FROM AARHAUS

TOMRA System Operator

? When launched

Challenge:

- ***Storage space,***
- ***no clear increase in revenue,***
- ***need cost neutrality.***

94%
Consumer awareness

1.6 million
Containers used

41
Eco cup reuse cycles

18
Coffee cup reuse cycles

88%
Return rate

89%
Satisfaction

VOICE

Behaviour & Adoption Challenges

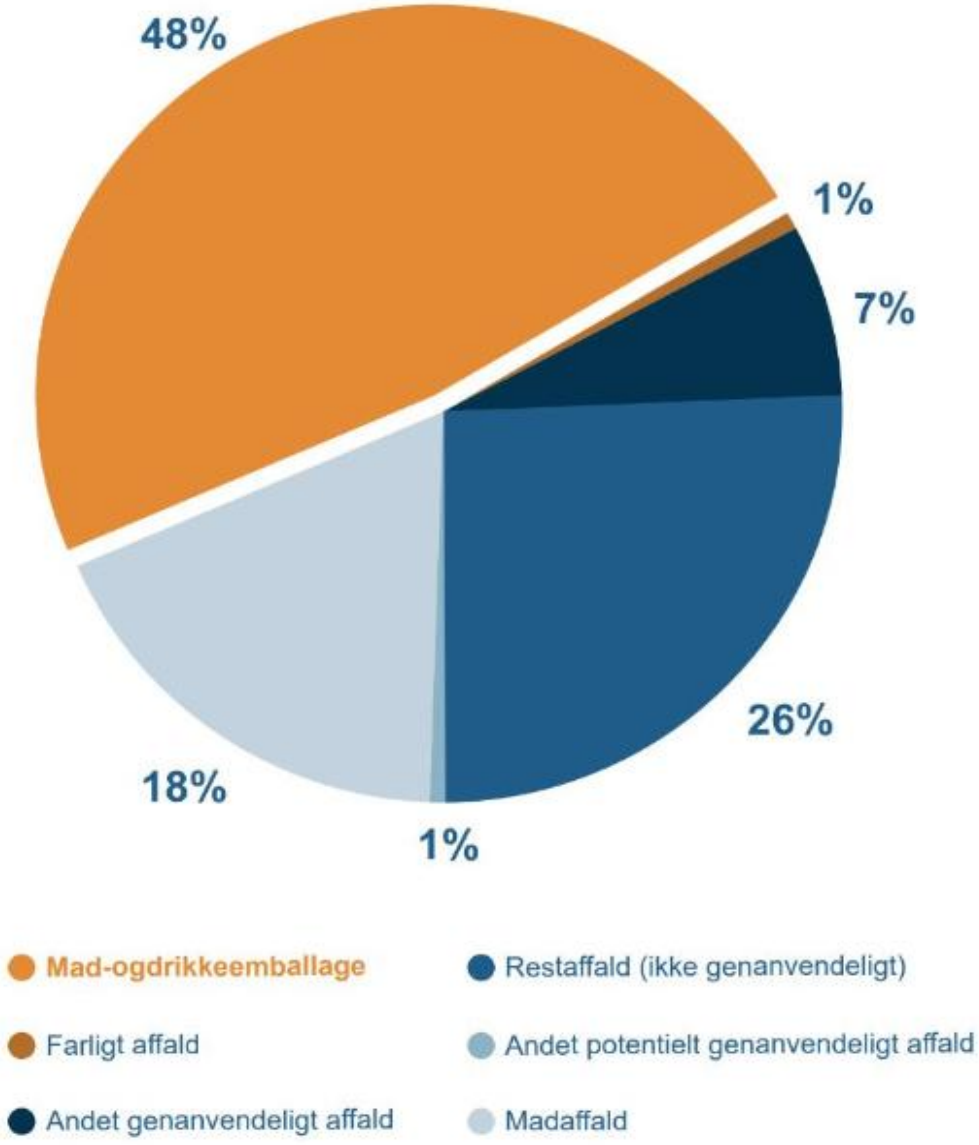
FROM AARHAUS

Key Insights:

- If reuse is offered, people adopt it,
- Default matters,
- Staff influence is critical.

Aarhus explicitly recognises that voluntary systems alone are insufficient without regulation

48% of the waste collected in public spaces in Aarhus is food and beverage packaging.



Business Buy In

CAFÉ EUROPA :: AN EXAMPLE

Café Europa 1989 has
made re-use the default.

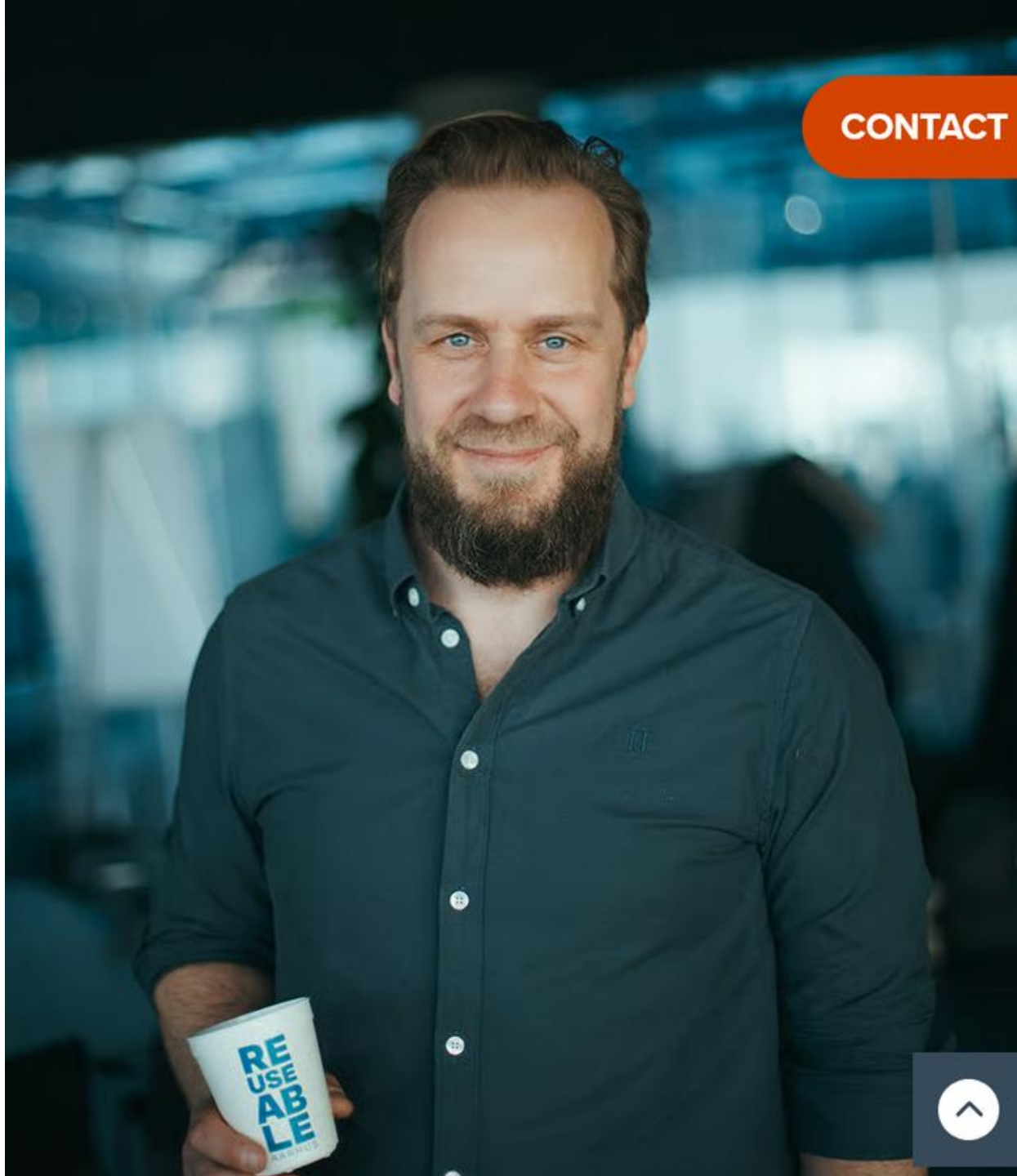
Initially customers were confused, but
practice is now fully adopted.

100% Staff buy-in.

Visit from city officials helped
encourage participation.

Considering own levy on single-use
cups.

Discount if customer brings own
container.



What have we learned?

	System Operator (Copenhagen) New Loop	System Operator (Aarhus) TOMRA
1	Order your coffee in a reusable cup	Order your coffee in a re-usable cup
2	5DKK (67 cent) deposit at point of purchase. The deposit follows the cup, not the card.	5DKK (67 cent) deposit at point of purchase. The deposit follows the cup, not the card
3	Enjoy your drink!	Enjoy your drink!
4	Scan the QR code on the cup to locate nearest return point.	Scan the QR code on the cup to locate nearest return point.
5	The customer is asked to register their credit card via Apple Pay, Google Pay or manually (only when using the system for the first time)	Tap your debit/credit card or smartphone on the machine's scanner, then return your cup in the machine.
6	At the return point, the costumer scans the QR code on the Return Box.	The deposit fee on the cup will then be transferred to your bank card.
7	The web app opens and the costumer is asked to scan the used packaging in the opening.	
8	The scanned packages are delivered to the hatch. The costumer closes the hatch to complete the transaction.	
9	When the Return Box is closed, press exit in the web app, which turns off the deposit value on the returned packaging, and the deposit is paid to the costumer's chosen credit card.	

Copenhagen

Strengths:
- Highly scalable, open model
- Low-cost infrastructure
- Strong interoperability potential
- Flexible and replicable

Weakness:
- Limited performance data
- More friction in user journey
- Slower business uptake

Aarhaus

Strengths:
- High return rates (88–94%)
- Strong behavioural change outcomes
- Proven at events and city scale
- High public awareness and satisfaction

Weakness:
- Still reliant on public subsidies
- Less open system model
- Drop-off in business participation not fully tracked

Opportunities

- **Events** are an ideal testing ground
- Strong consumer acceptance for re-use
- Integration with existing logistics
- Branding opportunity for businesses
- Legislative compliance
- Pilots have proven that re-use systems are possible on an urban, city, scale.

What a citywide reuse system requires from authorities?

- Political commitment to mandate or strongly incentivise participation
- Access to public infrastructure for collection point placement
- A co-funding or cost-sharing model for system set-up and operations
- Willingness to engage businesses as partners, not just compliance targets

What the systems operator must provide

- Complete end-to-end system: collection hardware, logistics and sanitization
- Full tracking and transparency on cup performance across the full lifecycle
- Operational management and field support
- Scalable infrastructure built for city-wide deployment

Conclusion

- Convenience is everything
- Infrastructure must come before regulation
- Default re-use drives behaviour change
- Public-private collaboration is essential
- Systems must be interoperable and open

Re-use systems work at city scale, but require:

-Strong governance
-Initial financial support
-Behavioural design

Key takeaway:
Re-use must be easy, visible, and default.

Examples of cup reuse projects in Ireland (and why they failed)

Killarney

Pilot:: Killarney Cup Project

Start : July 2023 (project has collapsed)

Driven by locals and business owners in Killarney town.

1 Million
Single-use cups avoided in the first year

70
Businesses / Groups Were Signed Up

SYSTEM PROVIDER : 2GoCup

Deposit of 2Euro refunded, once cup was returned to participating business.

Cups were **not traceable** (up to 11 cups in people's cupboards at home).

Full stop on disposables (no single-use cups were allowed in participating cafés).

Tourists got on board. Branding not an issue.

It was a lot of volunteer work that went into this. They were hoping to get ahead of the levy.

Their Top Reasons for collapse?

1. ***No legislative support – need a levy.***
2. ***Independent cafés got on board, but large chains would not change their business models – affected morale.***

Fingal

Pilot:: Fingal Reusable Cup Project

Start : May 2025
End : Nov 2025

Driven by Fingal County Council; in operation in Malahide and Rush.

17
Businesses were Signed up

SYSTEM PROVIDER : VYTAL

Free to use (once cup was brought back within 14 days – 5Euro penalty after 14 days).

QR code on all cups, all cups were **fully traceable.**

No App – just tap to borrow (tap a bank card).

Disposables were still available.

One solution did not fit all (various arrangements).

Required better buy-in from businesses.

Their Top Reasons for low participation?

1. ***No customer buy-in– need a levy.***
2. ***Little buy-in from staff – reusables were not offered to customers.***
3. ***Independent cafés got on board, but large chains would not change their business models – affected morale and ability to make real change.***

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