From Pilots to Systems - Scaling Reuse in Takeaway Packaging

Lessons from the Danish National Partnership for Takeaway Packaging

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PARTNERSHIP
for takeaway-packaging

Mandate: reccomendations for a national reuse system by 2027

In 2025, the Danish Ministry of Environment convened the Partnership for Takeaway Packaging, bringing industry, NGOs, municipalities, and consumer voices to one table.

Norion Consult was selected as independent secretariat.

Mandate:

- **Design:** harmonised requirements, standardisation and labelling across providers
- **Consumers:** what actually moves people from single-use to reusable
- **Organisation:** collection, sorting, washing and logistics at national scale

Goal: To phase out single-use packaging and strengthen the use of reusable packaging – across material types and with the greatest possible environmental impact.

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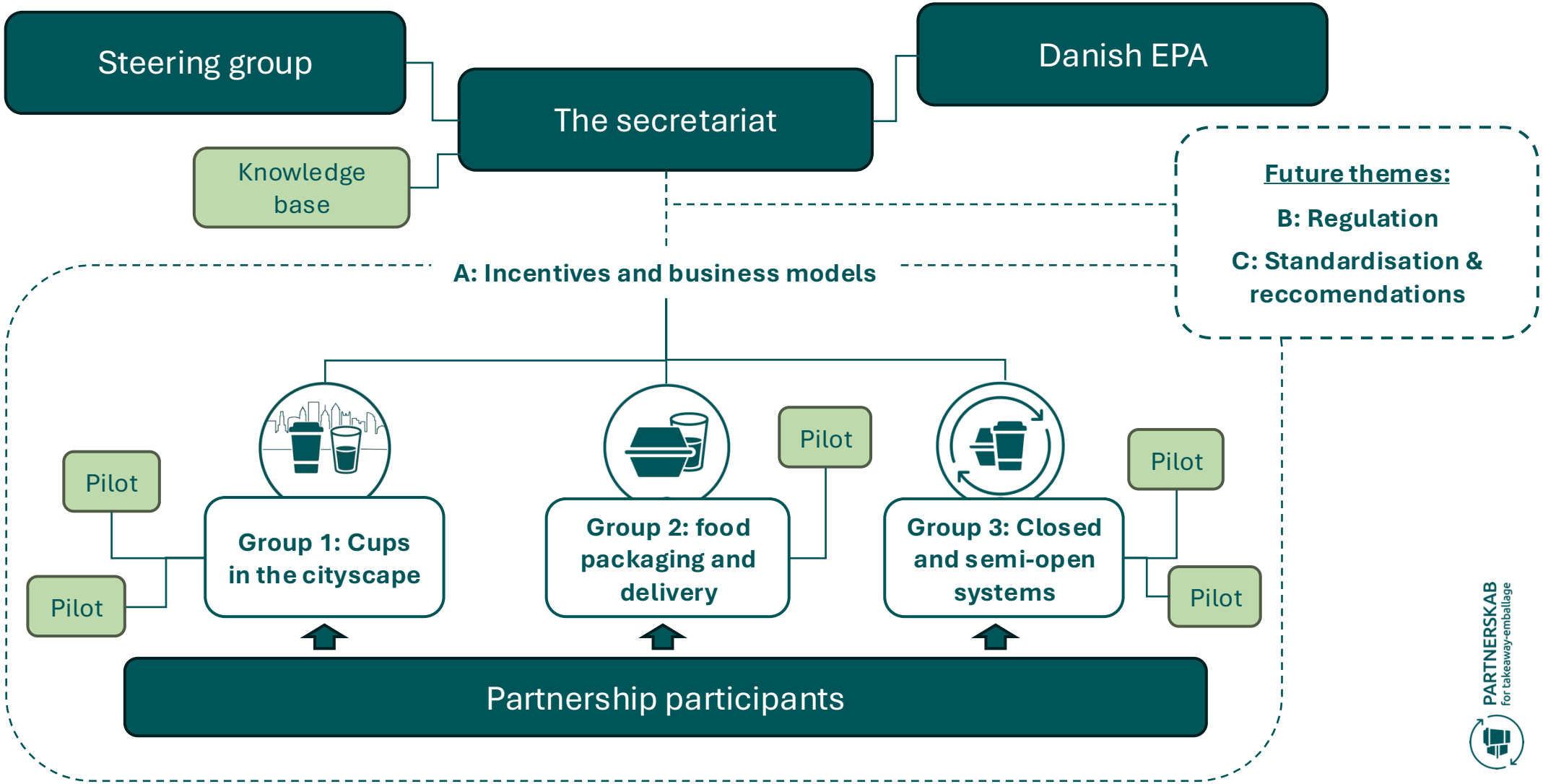
Organisational structure



The Steering group actors

Danish Chamber of Commerce
- Business network organisation
- Representing service industries, retail and trade in Denmark

Confederation of Danish Industry
- Business and employer organisation
- Representing manufacturing and industrial companies

Association of Danish restaurants and Cafés
- Industry association representing restaurants, cafés, bars and nightlife venues

Horesta
- Industry organisation for hotels, restaurants and tourism
- Secretariat for associations, e.g. tourism

Plastic change
- Environmental NGO with focus on plastic pollution
- Advocacy, corporate partnerships and policy engagement

The Danish Consumer Council
- Independent consumer organisation
- Protecting consumer rights and ensuring transparent and safe consumption.

Local Government Denmark
- Association representing all Danish municipal interests
- Key role in public service delivery, waste management and local implementation of policies.

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The scale of the challenge

Takeaway consumption in Denmark is growing rapidly:

+100% since 2016 (takeaway)

+500% (ready meals from supermarkets)

~33 million DKK/year spent on cleaning in Denmark*

~ 787,000 tonnes of takeaway packaging waste in the EU

Impacts go beyond waste

– affecting climate, businesses, municipal budget and regulation

**the calculated amount - the actual costs are much much higher*

https://www2.mst.dk/Udgiv/publikationer/2024/01/978-87-7038-575-6.pdf
https://zerowasteeurope.eu/wp-content/uploads/2022/05/ZWE_Executive-Summary-Making-Europe-transition-to-reusable-packaging.pdf
Horn, U. (2026) Takeawayfærdigretter boomer. Danskerne dropper kokkehuen. Børsen.

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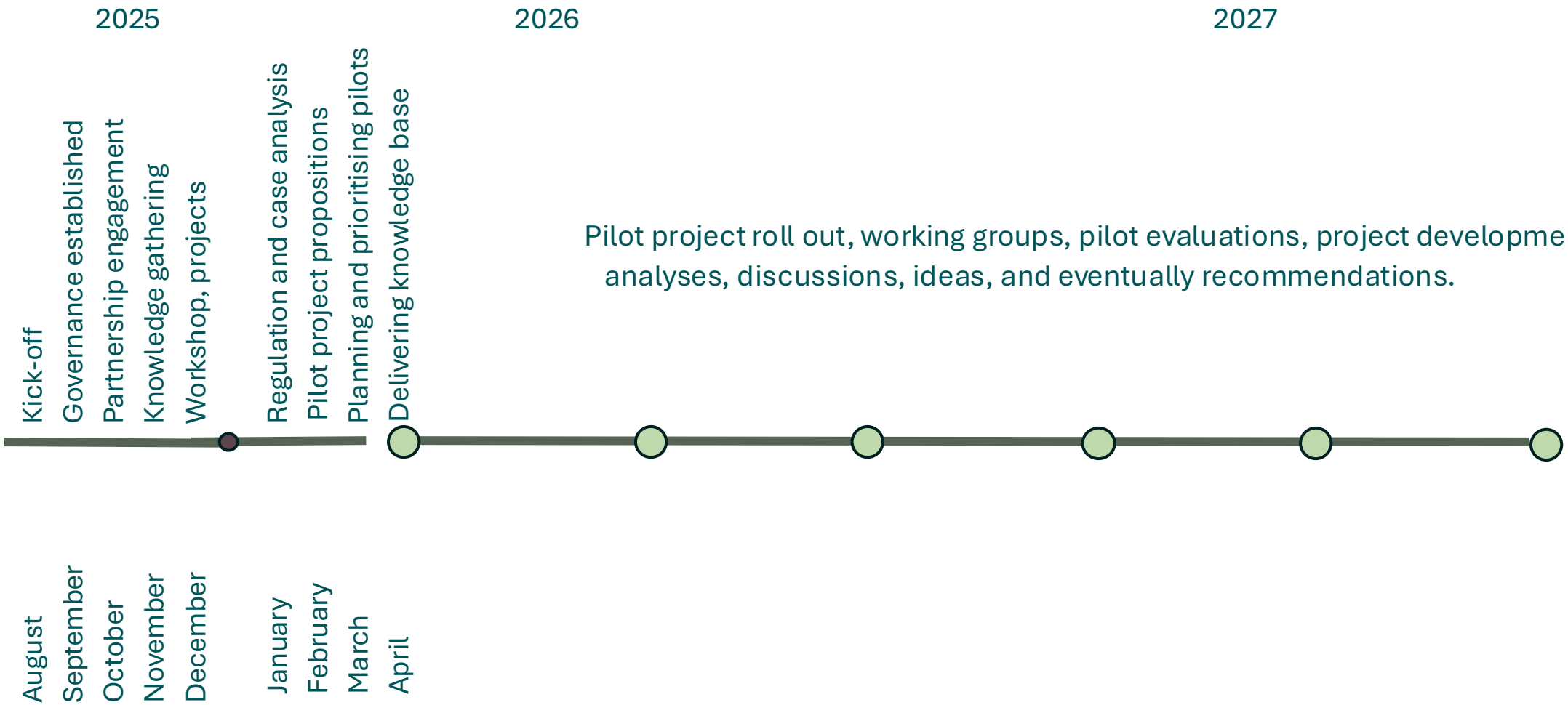
Project timeline 2025-2027



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What we learned from mapping reuse systems

- We have analysed 53 reuse systems across Europe
- 15 cases selected for ind-deapth analysis

Business cases	City- system cases
Reuse systems vary significantly across: • Business models • Degree of standardisation • Role of public actors • Level of system integration	• Konstanz • Tübingen • Freiburg • Aarhus & Lisbon • Copenhagen & Frederiksberg

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What determines how reuse systems work

Economic incentive structure

- **Deposit** → High accessibility, but transactional friction
- **Fine/fees** → Lower friction, but requires digital systems
- **Regulation** (e.g. levies on single-use) → Levels the playing field

Defines user behaviour and business incentives

Technological systems

- **QR codes** → Low cost, flexible, widely used
- **RFID** → High automation, suited for high-volume systems
- **Trade-offs** → Cost, durability, usability, infrastructure needs

Defines system efficiency and user experience

Logistic structure

- **Decentralised networks** → Flexible, multiple actors
- **Shared system infrastructure** → Coordination across providers
- **Single-provider models** → Simpler, but less flexible

Defines scalability and operational complexity

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What determines how reuse systems work

Packaging design choices

- **Lightweight** → fewer rotations needed for climate benefit
- **Durable** → must resist scratches and wear
- **Visual quality** → discoloration affects perceived cleanliness
- Clear **labelling** → guides correct use and return

Defines environmental performance and user trust in packaging

Communication

- Reuse as **default** → greatest impact for uptake
- **Active prompts** → Asking customers in the sales moment
- **Simplicity** → Short user journeys, few new activities, visual communication

→ *Behaviour is shaped at the point of choice*

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Testing system elements in real-world contexts – Cups in the city

Reuse in busy café chains

Expected knowledge outputs:

- Visual communication and Scripts in the moment of sale
- Digital integration with ordering kiosks and apps.
- Implementation model for chains with economic sustainable perspective
- System performance for personnel and costumers

Test of return system in detail stores

Expected knowledge outputs:

- Practical integration in detail stores for personnel, IT integration, and spatial needs
- Effect of return option in detail, like for bottles, on return rates
- User and personnel friction

Coordinated efforts to strengthen communication

Expected knowledge outputs

- Effect of reuse as standard choice
- Tools for municipalities to limit the gap for citizens between knowing of reuse and using reuse
- Communicate measures effect on use of reusable packaging for businesses and costumers

https://www.forum.fi/en/stores/joe-the-juice/

https://samvirke.dk/artikler/kender-du-reglerne-for-flaskepant-her-er-dine-rettigheder

https://www.verdensmaal.org/nyheder/simon-har-genbrugt-sin-kaffekop-314-gange---og-han

Testing the most complex system challenge – Food packaging and delivery

Making reusable food packaging and returns work.

Use context and behaviour

- On-the-go vs. delivery vs. at home
- Longer use time and delayed return
- Low user motivation to return + logistics

→ How do we design systems for real-life use situations?

Business and operational barriers

- Kitchen workflows and speed
- Storage, cleaning and space constraints
- Packaging functionality (heat, leakage, visibility)

→ Can reuse fit into real business operations?

https://www.zetland.dk/historie/sOMV0QdL-aeEtVVjj-50fd0

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Where reuse already works – and what we learn from it

Closed and semi-open systems offer controlled environments for testing

Scalable models for reusable cups in closed systems, through Copenhagen ZOO

Expected knowledge outputs

- Operational integration in facility routines and personel in sales booths
- Test of communicative measures and scripts.
- Test of financial incentive models e.g levy on single use and donation option.
- Effect of a Inside/ outside system return option (integration with city system)

ZOO COPENHAGEN

Test of RFID and digital integration in closed systems, through Sommerland Sjælland

Expected knowledge outputs

- Effect of return model without costumer needing to scan cup
- Operational insights into centralised deposit return
- Design insights into high volume- and pace systems

https://www.dn.dk/nyheder/2025/pant-pa-take-away-fa-penge-tilbage-for-din-kaffekop-udvalgte-steder/

https://www.visitdenmark.dk/danmark/explore/sommerland-sjaelland-gdk618812

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Reuse community reflections - pathways forward

Zero Waste Europe study trip

- Field visit to Danish systems
- Workshops on national scaling

1. Regulation is essential

- Reuse will not scale through voluntary uptake alone

2. Interoperability and standards are critical

- Avoid fragmentation and enable shared infrastructure

3. Economic incentives must shift

- Make single-use less attractive and fund reuse systems

- **4. Convenience drives adoption**
- Systems must work for both users and businesses

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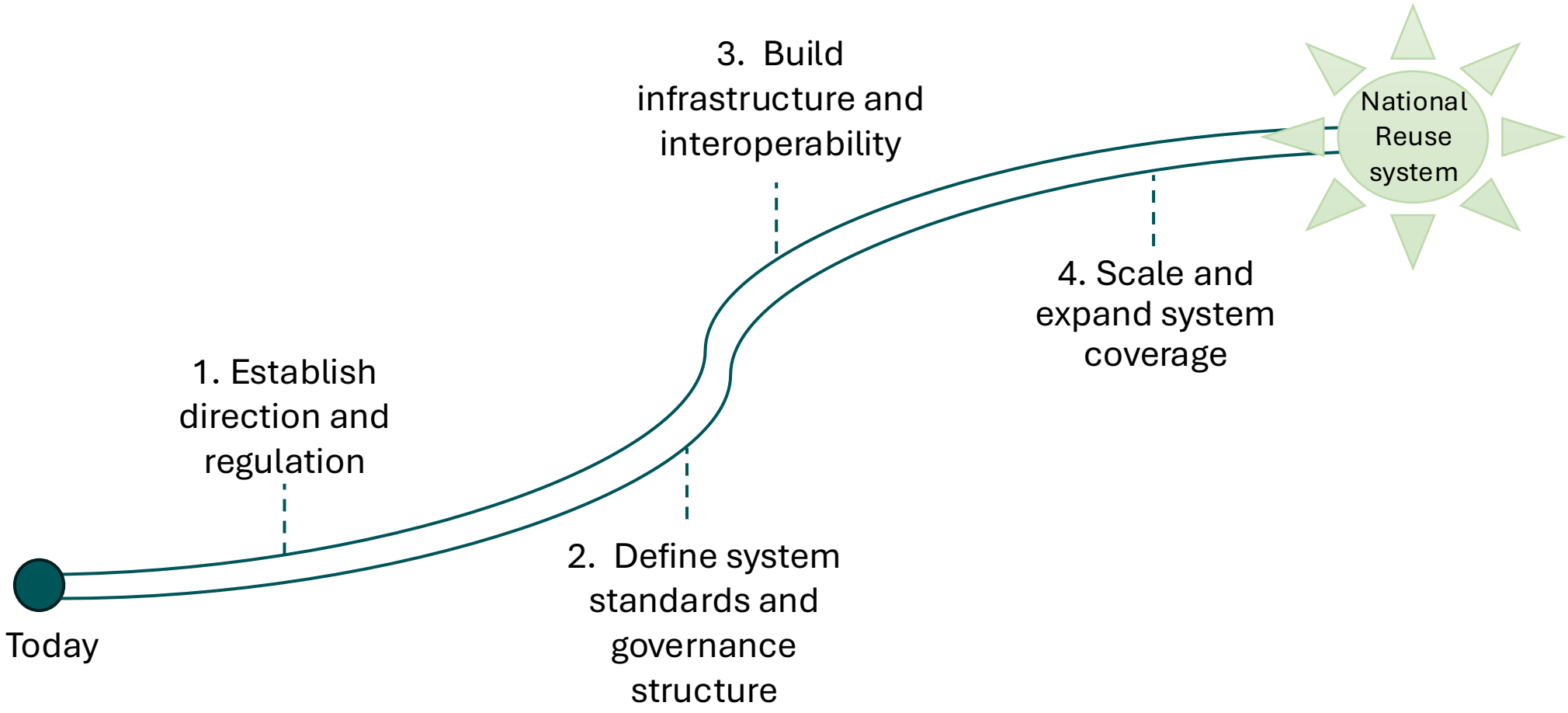
From pilots to a national reuse system



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Thank you

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