GEF LAC CITIES:
TOWARDS A PLASTIC CIRCULAR ECONOMY AT THE CITY LEVEL IN LAC COUNTRIES

Regional Session on Upstream Solutions

Good practices on upstream innovations and solutions to eliminate, reduce and reuse

19 June 2025

CONTENT – UPSTREAM SOLUTIONS

1. Introduction to key concepts

   Feedback from the participants: Please post a key word (Mentimeter)

   1.1 Upstream
   1.2 Circular Design
   1.3 Reuse and Refill
   1.4 Circular Innovation and Financing

2. Good practices on upstream innovations and solutions

   2.1 Reduction and Circular Design
   2.2 Reuse and Refill
   2.3 Circular Innovation

   Feedback from the participants: Which good practice is particularly interesting for your context? Which inspires you most for your upstream pilot?

3. Recommendations and first pilot project ideas
4. Next steps

1. INTRODUCTION TO MAIN CONCEPTS

1

1. Introduction to main concepts

What comes to your mind when thinking of upstream solutions?

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1. Introduction to main concepts

UPSTREAM

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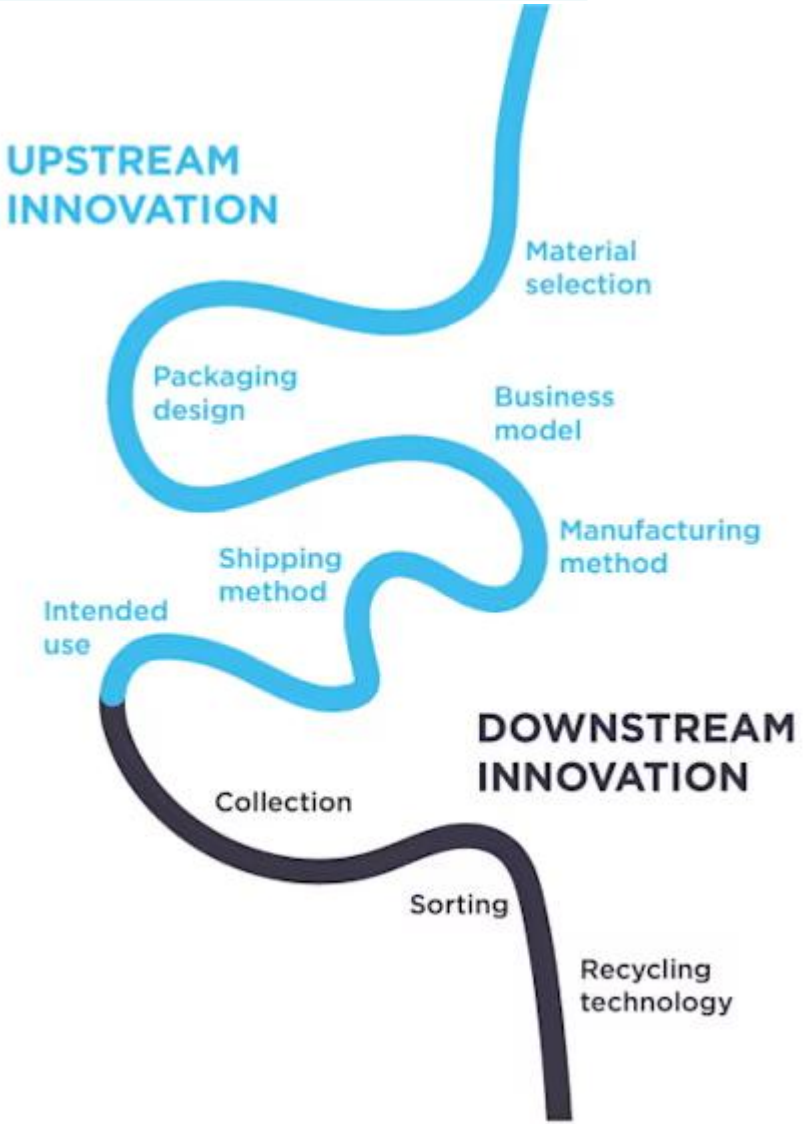
1.1 What is the difference between upstream and downstream innovation?

▶ Upstream Innovation:

Rethinks products and services at the design stage. For example, this can include developing new materials, product designs, or business models.

▶ Downstream Innovation:

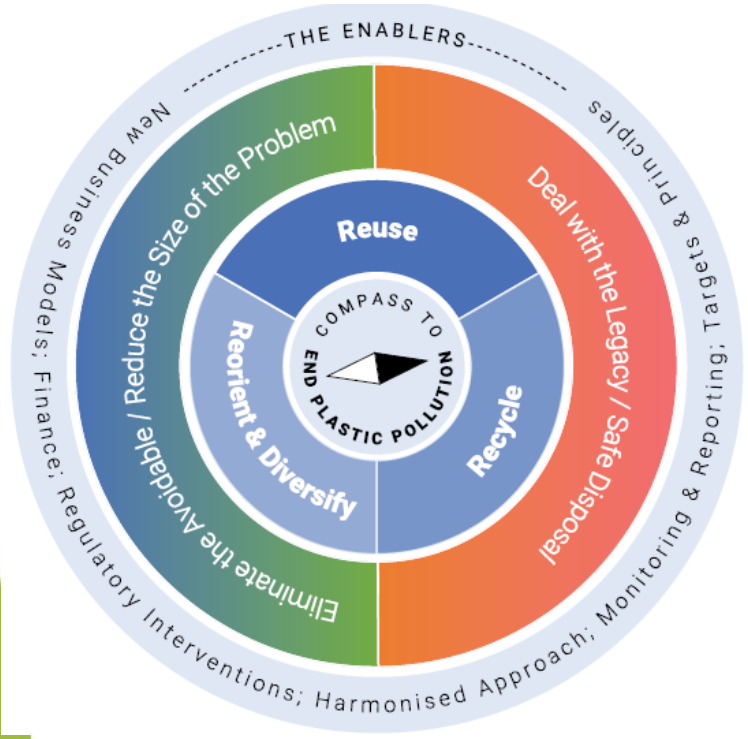
Affects a product or material after its first use. For example, this can include developing a new collection, sorting, and recycling technologies.



Source: https://www.ellenmacarthurfoundation.org/upstream-innovation/overview

1.1 Why is advancing in upstream solutions so important?

UNEP highlights the importance of **integrated actions** that are required across the life cycle (UNEP/PP/INC.1/7) under three main categories to move to a circular plastics economy:



1. Reduce the size of the problem

2. Transform the market from linear to circular through three market shifts:

- **Accelerate the market for reusable products**
- Accelerate the market for plastics recycling
- **Reorient and diversify the market for sustainable and safe plastic alternatives**

3. Deal with the plastic pollution legacy

Source: https://www.unep.org/resources/turning-off-tap-end-plastic-pollution-create-circular-economy

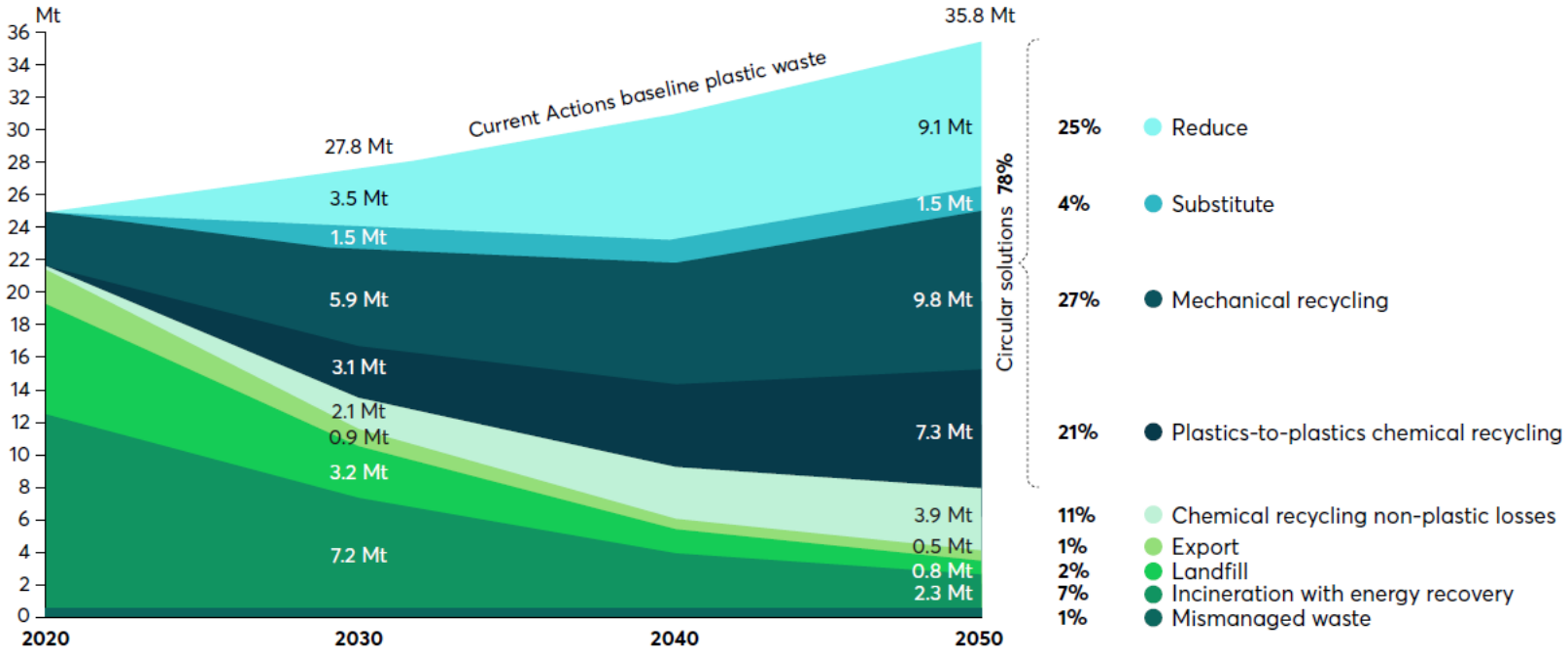
1.1 Why is advancing in upstream solutions so important?

Source: https://www.systemiq.earth/wp-content/uploads/2020/07/BreakingThePlasticWave_SummaryReport.pdf

1.1 Why is advancing in upstream solutions so important?

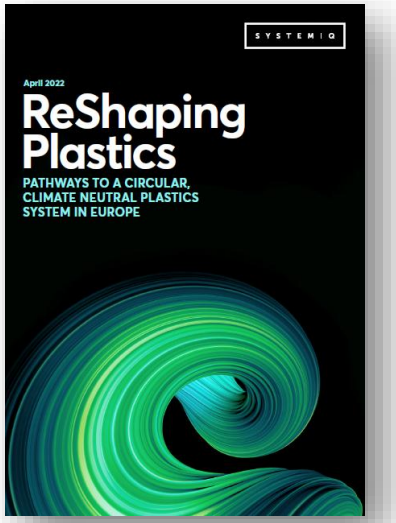
By 2050, the Plastics system could achieve 78% circularity with 30% of waste avoided through reduction and substitution and 48% being recycled, leaving 9% in landfills and incinerators

Physical fate of plastic waste from packaging, household goods, automotive and construction 2020-2050 (Mt)



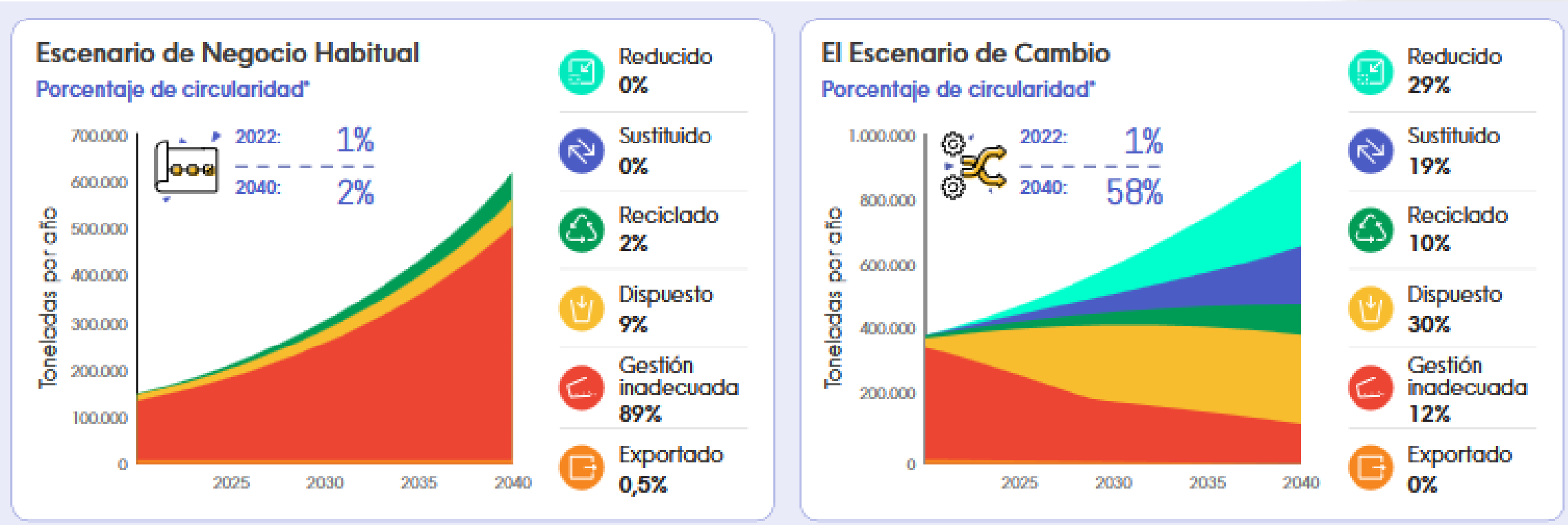
Source: "ReShaping Plastics" model

Source: https://www.pewtrusts.org/-/media/assets/2020/10/breakingtheplasticwave_mainreport.pdf



1.1 Why is advancing in upstream solutions so important?

Change Scenario for Panama



Source: https://www.globalplasticaction.org/panama

1.1 Why is advancing in upstream solutions so important?

Upstream interventions (pre-consumption) could avoid the generation of more than **441,000 tons (48%)** of plastic waste in Panama.

Measures with most impact are:

- Elimination of non-necessary plastics
- Reuse and Refill systems
- Substitution of plastics through alternative materials

Source: https://www.globalplasticaction.org/panama

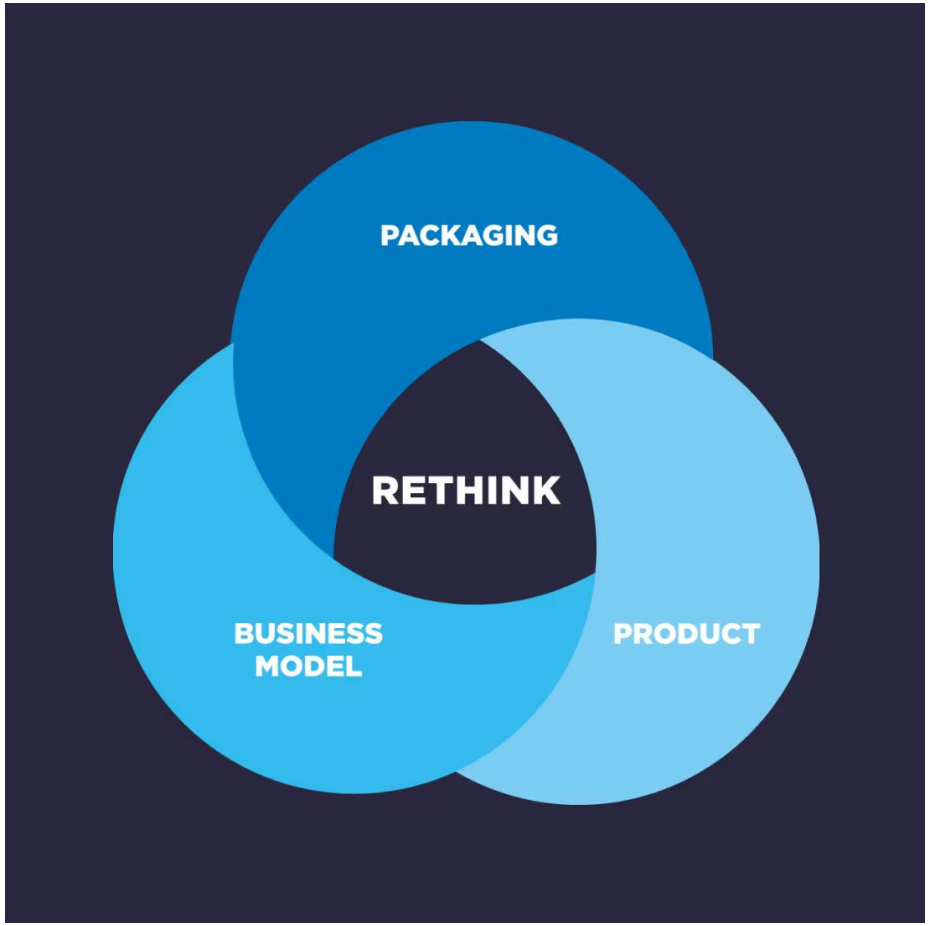
1.1 Why is advancing in upstream solutions so important?

- 71,000 tons (8%) of plastic can be avoided by **eliminating** unnecessary plastics.
- The adaptation of **reuse and refill** systems could allow a reduction of 198,000 tons (21%) of plastic waste.
- **Substituting** plastics through alternative materials (paper, compostable materials) could avoid the generation of 171.000 tons (19%) of plastic waste.

Source: https://www.globalplasticaction.org/panama

1.1 What are upstream innovation strategies?

Upstream innovation is focusing on **rethinking** packaging, product and business model.



Rethinking the packaging means innovating at the packaging design level (packaging concept, format, components, material choice) to provide the same essential packaging function, while designing out waste. For example, moving from non-recyclable to recyclable packaging formats or using a completely different type of material.

Rethinking the product means innovating at the product design level (product formulation, concept, shape, size) to change the packaging needs, while maintaining or improving the user experience. For example, changing from a physical product to a digital product, or from a liquid product to a solid product.

Rethinking the system means innovating at the system design level (business model, supply chain, location of production, product delivery) to change the packaging needs. For example, selling products in refillable or returnable packaging, rather than single-use packaging. Localising production, so freshness can be assured without relying on the complex, often less recyclable packaging, that is frequently required in global supply chains.

Source: https://www.ellenmacarthurfoundation.org/upstream-innovation/overview

1.1 What are upstream innovation strategies?

The Ellen MacArthur Foundation proposes **3 key innovation strategies**:

ELIMIMINATION

Direct approach
Packaging that does not serve an essential function is directly removed. For example, film packaging on multi-buy tins.
Innovative approach
Packaging that does serve an essential function is indirectly eliminated through innovation. For example, edible coatings for fresh produce that extend shelf life, eliminating the need for packaging.

REUSE

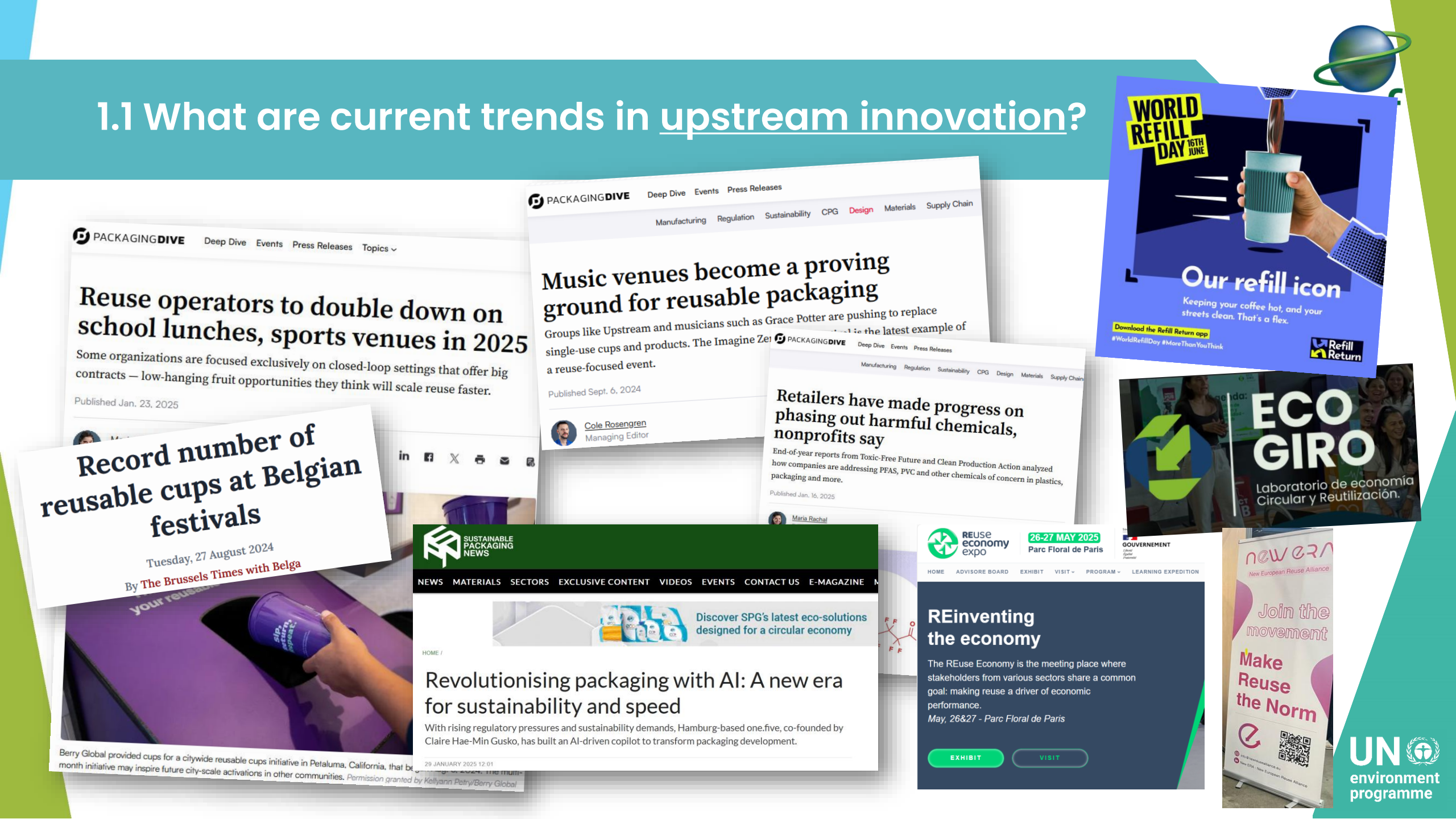
Refill at home
Users refill their reusable container at home (e.g. with refills delivered through a subscription service).
Refill on the go
Users refill their reusable container away from home (e.g. at an in-store dispensing system).
Return from home
Packaging is picked up from home by a collection service (e.g. by a logistics company).
Return on the go
Users return the packaging at a store or drop-off point (e.g. in a deposit return machine or a mailbox).
B2B packaging and reuse
There exist a wide range of business-to-business (B2B) reuse models. From individual companies reusing their own transport packaging, to industry-wide reuse systems based on interconnected operators managing a shared set of standardised, reusable packaging.

MATERIAL CIRCULATION

Plastics recycling
Plastic packaging is broken down (mechanically or chemically) and the resulting materials are used to make new products (this excludes energy recovery and the use of the material as a fuel).
Plastics composting
Plastic packaging is decomposed in a home or industrial composting facility, producing biomass, water and CO2.
Substitution
Plastic packaging is replaced with non-plastic packaging (for example paper or aluminium), and designed for recycling or composting.

Source: https://www.ellenmacarthurfoundation.org/upstream-innovation/overview

1.1 What are current trends in upstream innovation?



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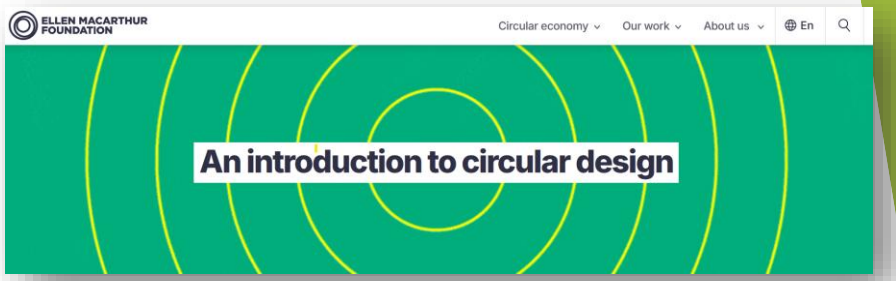
Circular Design

1.2 Why Circular Design?

Up to **80%** of a product's **environmental impact** is influenced by decisions made at the **design stage**.

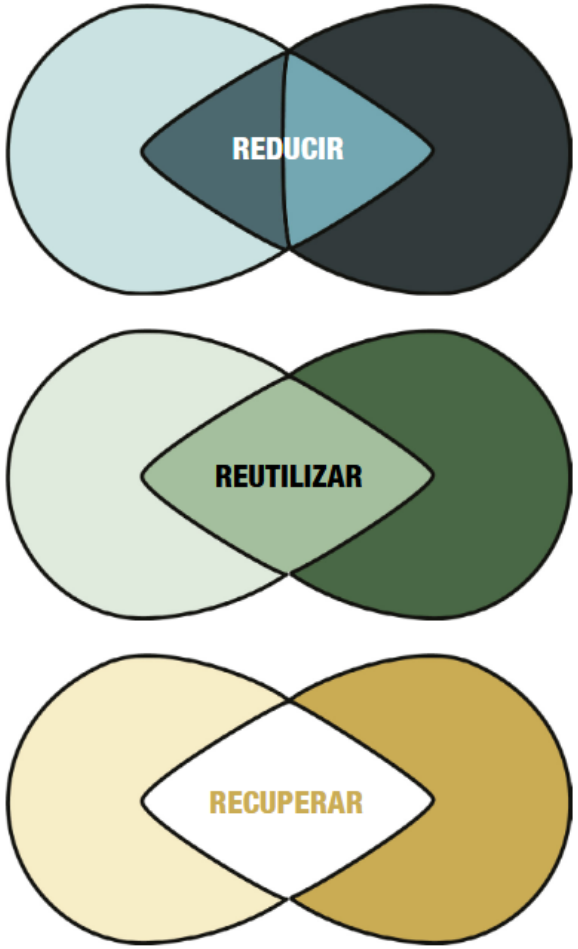


Design is at the **heart** of the circular economy.

Decisions made at the design phase influence how long something lasts, what it is made of, if it can be repaired, and what happens to it at the end of life.

Source: https://www.ellenmacarthurfoundation.org/news/an-introduction-to-circular-design

1.2 What is Circular Design? Categories and strategies



Ecodiseño para reducir, a través de:
- Eliminación de material
- Uso de material renovable
- Inclusión de material reciclado
- Eficiencia en procesos

Ecodiseño para reutilizar, a través de:
- Retornabilidad
- Recarga
- Reutilización B2B

Ecodiseño para recuperar, a través de:
- Diseño para la reciclabilidad
- Diseño para la compostabilidad y biodegradabilidad

Circular design to reduce, through:
- Elimination of material
- Use of renewable material
- Use of recycled material

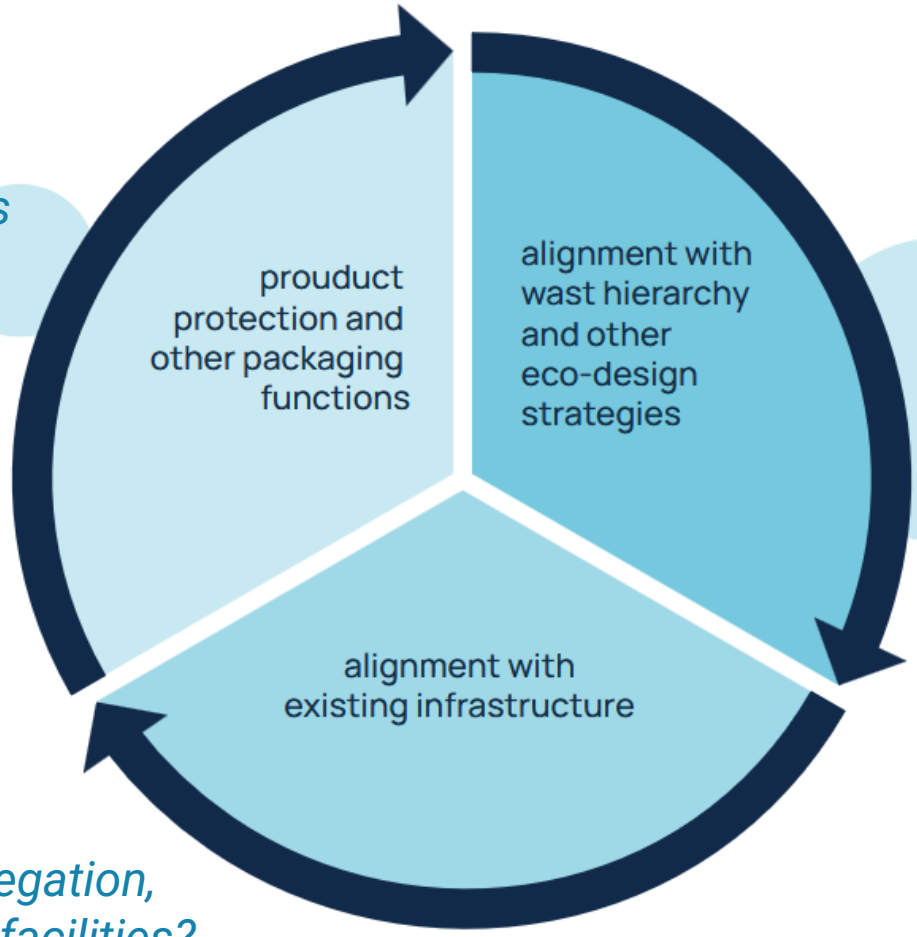
Circular Design for reuse, through:
- Returnability
- Refil
- Reuse B2B

Circular Design for recycling, through
- Design for recycability
- Design for compostability and biodegradability

Source: https://www.giz.de/de/downloads/giz2023-es-CajaLab-Gu%C3%ADa-Innovaci%C3%B3nEyE-ProUSAR.pdf

1.2 What is Circular Design? What should guide Circular Design?

Specific ambient conditions (humidity, oxidation, etc.)

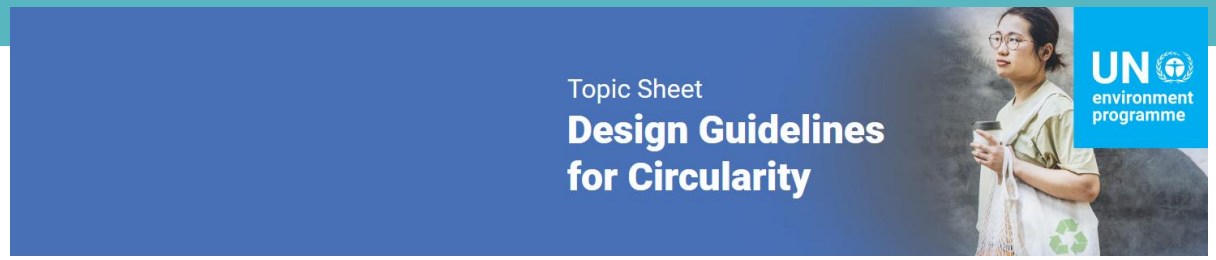


Can the packaging be avoided?
Can reusable packaging be used?
Can the packaging be recycled?

Existence of waste segregation, collection and recycling facilities?

Source: https://prevent-waste.net/wp-content/uploads/2023/05/230207_Prevent_CircularDesignStudie.pdf

1.2 What is Circular Design? Existing Design Guidelines



Reduction / Elimination

Avoid the use of unnecessary or problematic plastic

Reuse

Establish standard reuse models and infrastructure

Recycling

Simplify the number of polymers and other materials used in products

Existing Design Guidelines (selection)

- **Golden Design Rules** (he Consumer Goods Forum Plastic Waste Coalition)

- **Design Guidelines for Reuse** (The World Economic Forum's Consumers Beyond Waste)
- **Guidance-for-Reusable-Packaging** (Sustainable Packaging Coalition)
- **'Reuse - Rethinking Packaging' guide** (Ellen MacArthur Foundation)
- PR3: https://www.resolve.ngo/projects/pr3

- **Golden Design Rules**
- **ISO Standards for Design for Recyclability**
- **„How2Recycle Scheme"**
- **„Can I Recycle This?"** (UNEP)

Source: https://wedocs.unep.org/bitstream/handle/20.500.11822/42233/guidelines_circularity_sheet.pdf?sequence=3&isAllowed=y

1.2 What is Circular Design? The Golden Design Rules

The Consumer Goods Forum launched a set of voluntary **Golden Design Rules** consisting of practical recommendations to reduce plastic waste and enhance its recyclability in the design of plastic packaging.

Several of these rules are about **reducing and eliminating unnecessary or problematic plastic** elements:

- remove problematic elements from all plastic packaging;
- eliminate excess headspace;
- reduce plastic overwraps; or
- reduce virgin plastic in business-to-business packaging.

Source: www.theconsumergoodsforum.com/environmental-sustainability/plastic-waste/key-projects/packaging-design/

3.2 What is Circular Design? Easy-to-follow Design Principles

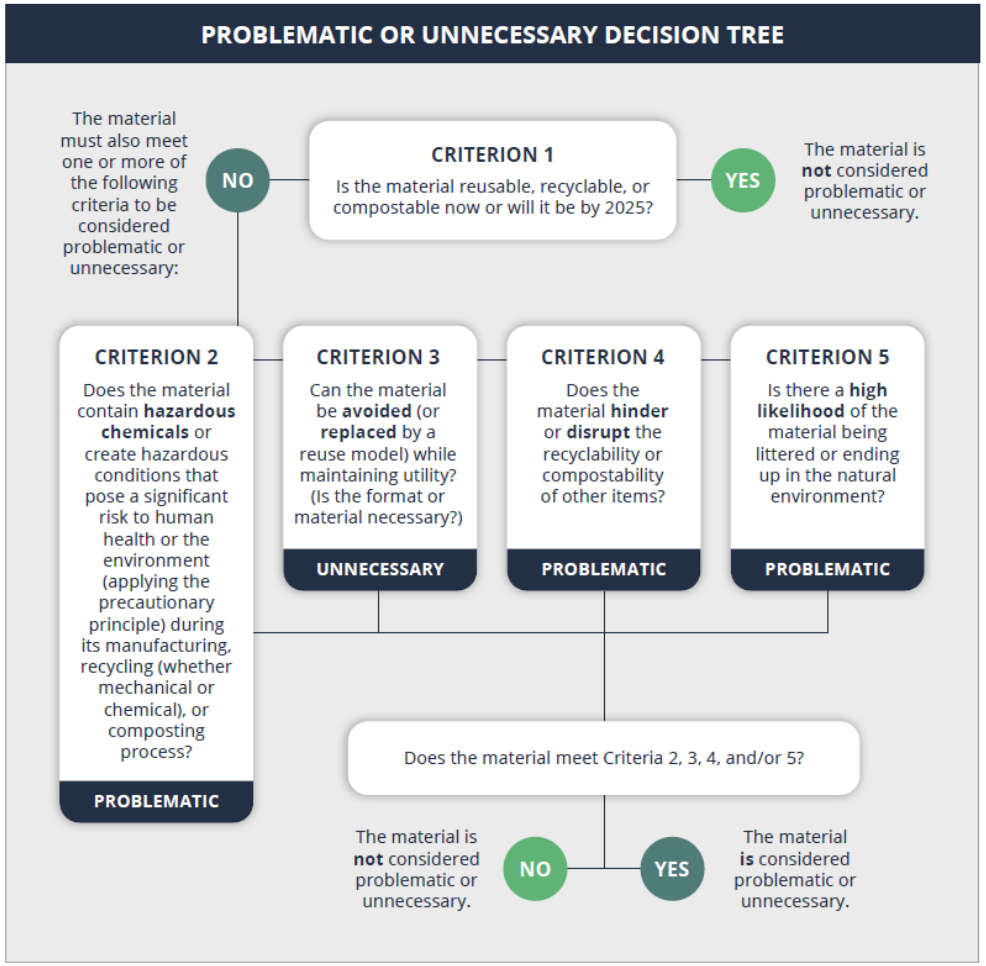
Figure 5-1: Easy-to-follow design principles

- Mono-materials should be chosen instead of a polymer mixture or composite materials.
- Labels made of the same material as the packaging or, alternatively, water-soluble adhesive for paper labels schould be preferred over labels based on PVC.
- Pigmented polymers, coloured printings and opacifier may hinder automated sorting and not be recyclable to the same degree and quality as transparent polymers.
- Caps and lids of bottles and boxes from plastic should be easily and completely removeable to fully separate the material streams.
- The variety of D4R guidelines for materials, specific products and packaging is high. Some of the above-mentioned examples could be used as a basis for own reflections.

Source: (Sharma 2019)

Source: https://www.giz.de/de/downloads/2021-06%20Design%20for%20recycling_barrierefrei.pdf

1.2 What is Circular Design?
Reduction of problematic and unnecessary materials - USA



Source: https://usplasticspact.org/wp-content/uploads/dlm_uploads/2022/01/U.S.-Plastics-Pact-Problematic-Unnecessary-Materials-Report-1.25.2022.pdf

1.2 What is Circular Design?
Reduction of problematic and unnecessary materials - Chile

En relación con el listado de ítems, existen dos categorías definidas en el documento técnico de plásticos problemáticos que se detallan a continuación:

Plásticos Problemáticos para Eliminación

Comprende los plásticos clasificados del número 1 al 5, los cuales se consideran materiales problemáticos destinados a su reducción y/o eliminación directa, debido a su impacto negativo en el medio ambiente y a las dificultades para su gestión y reciclaje.

Plásticos Problemáticos para Evaluación

Incluye el poliestireno (PS) y los envases flexibles de pequeño formato (tamaño < A4), identificados como números 6 y 7. Estos plásticos se encuentran bajo evaluación, con el objetivo de identificar alternativas sostenibles que mitiguen su impacto y permitan reducir los efectos adversos asociados a su uso.

Considerando los criterios anteriores, el listado final de ítems plásticos problemáticos e innecesarios de PCP es:

1 **PVC**

2 **Poliestireno expandido (ePS)**

3 **Empaques multicompra y film plástico** (sobre empaquetamiento)

4 **Etiquetas problemáticas en envases y embalajes**

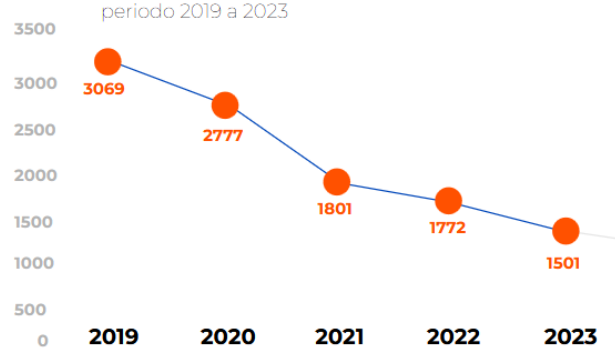
5 **Envases de plásticos multilaminados**

6 **Poliestireno (PS)**

7 **Envases flexibles de formato pequeño** (tamaño <A4)

¿Cómo se han comportado los ítems plásticos problemáticos destinados a reducción/ eliminación?

Gráfico 5. Toneladas de plásticos problemáticos de PCP definidos para eliminación - periodo 2019 a 2023



Fuente: Elaboración propia a partir de los envases y embalajes puestos en el mercado por miembros de PCP entre años 2019 y 2023.

Incluye a aquellos definidos para eliminación:

1. **PVC**
2. **Poliestireno expandido (ePS)**
3. **Empaques multicompra y film plástico (sobre empaquetamiento)**
4. **Etiquetas problemáticas en envases y embalajes**
5. **Envases de plásticos multilaminados**

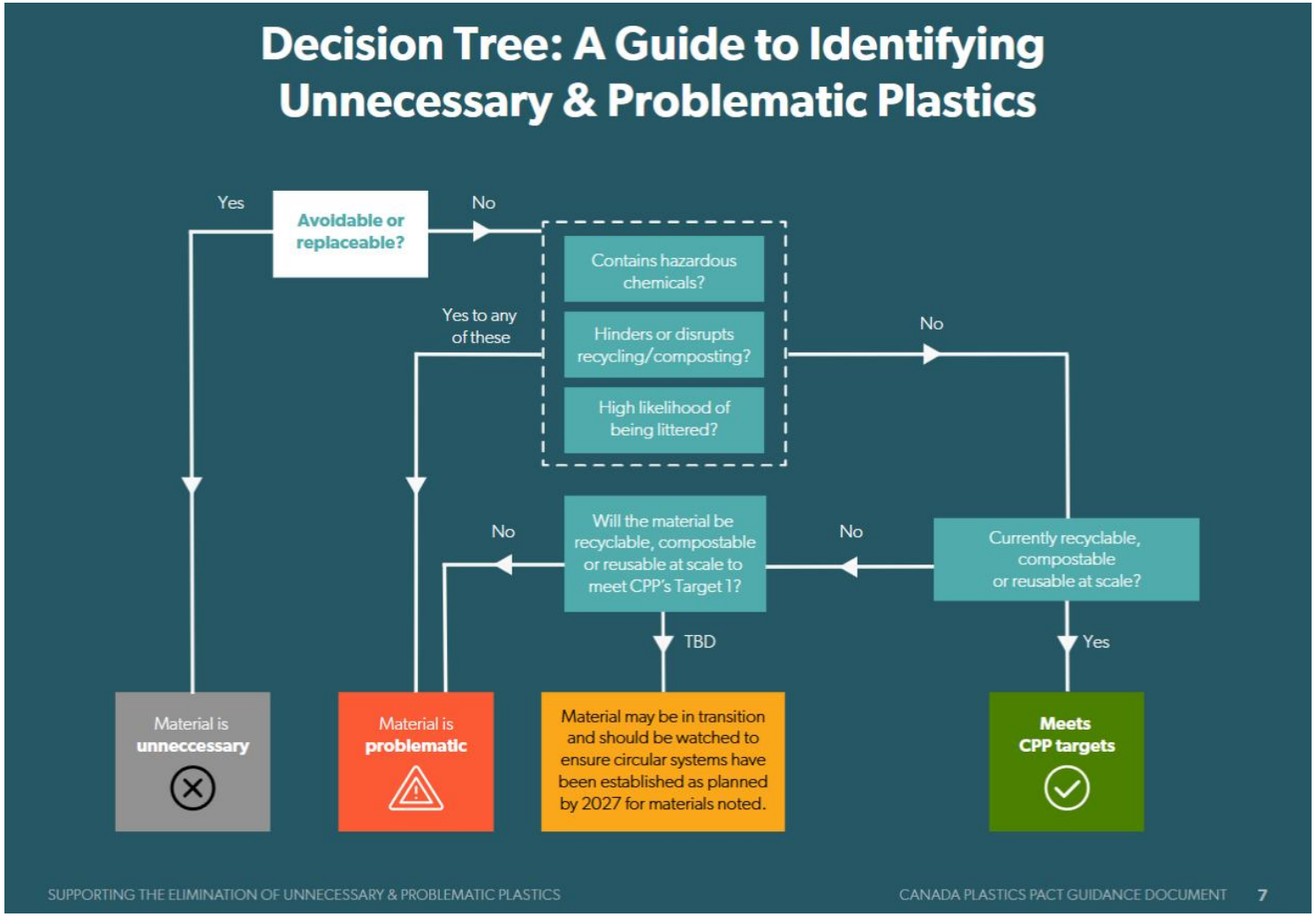
PACTO CHILENO DE LOS PLÁSTICOS

Entre 2019 y 2023 se redujo **+50%** los ítems plásticos problemáticos de los socios del PCP, lo que se traduce en una reducción de **1.568 toneladas**

- Entre las reducciones más significativas, destaca el **PVC**, cuya **disminución alcanzó un porcentaje cercano al 50%,** en comparación con el año 2022.
- Se observa una leve reducción en los envases multimateriales, principalmente debido a la eliminación o **reducción de los envases PET/PE.**
- Hubo una ligera disminución en el uso de ePS, mientras que el sobre empaquetamiento se mantuvo constante, en relación con el último periodo de comparación.

Source: https://circulaelplastico.cl/wp-content/uploads/2024/12/REPORTABILIDAD_PCP_2024_OK_INTERACTIVO.pdf

1.2 What is Circular Design?
Reduction of problematic and unnecessary materials - Canada



Source: https://plasticspact.ca/wp-content/uploads/2024/04/CPP_UnnecessaryProblematic_GuidanceDoc.pdf

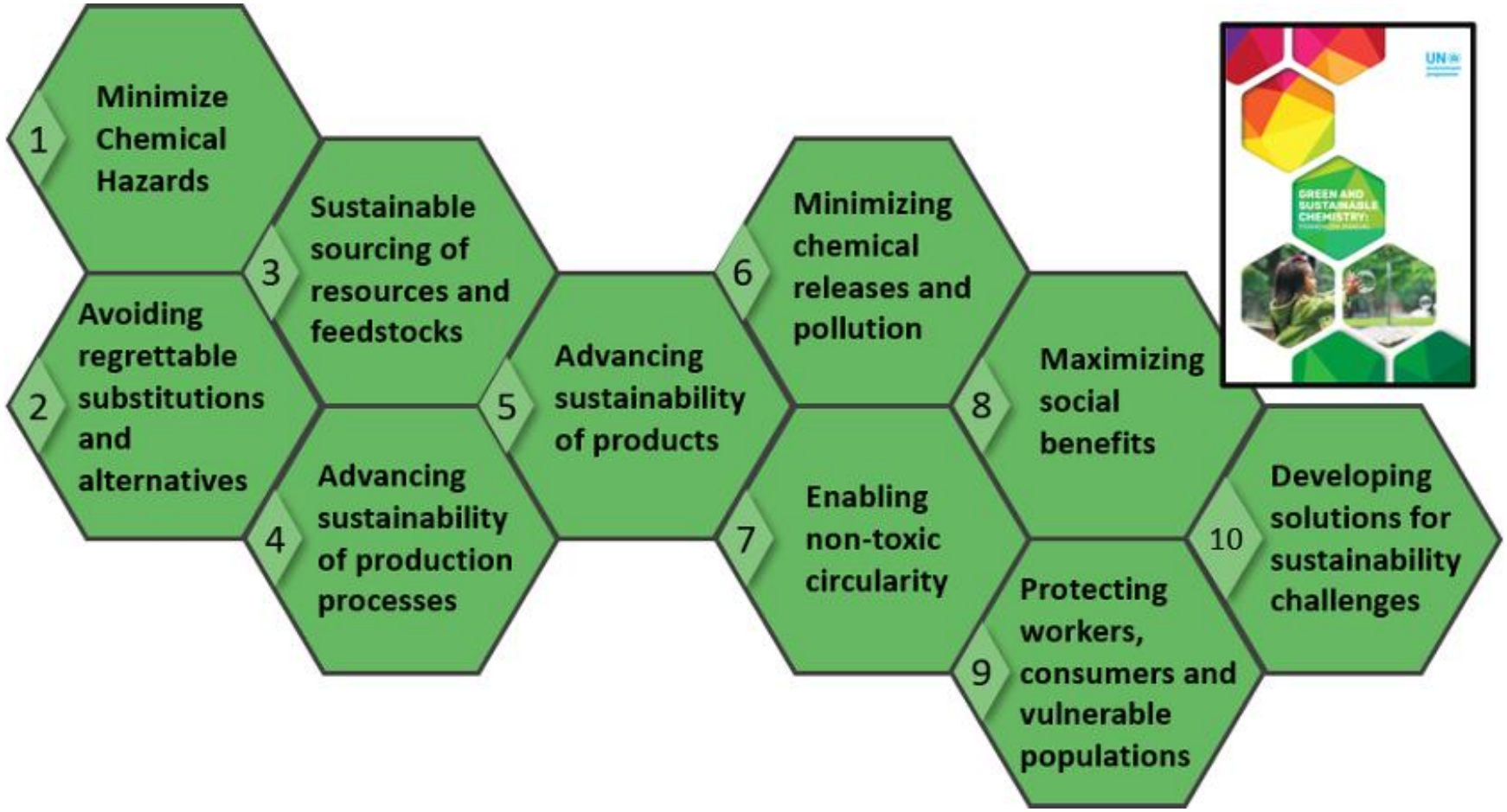
1.2 What is Circular Design?
What is REDUCTION?

- **Reduction** refers to lowering the amount of resources used for products or packaging.
- This can involve (i) right-sizing packaging if filling has not been optimised and (ii) reducing packaging material (e.g. small wall thickness).
- Necessary to evaluate items individually and prevent trade-off with recycablity.

Source: https://prevent-waste.net/wp-content/uploads/2023/05/230207_Prevent_CircularDesignStudie.pdf

1.2 What is Circular Design? Categories and strategies – Design for REDUCTION - Green and Sustainable Chemistry

The concepts of **green and sustainable chemistry** have gained attention around the world given their potential to innovate and advance chemistry to help achieve global sustainable development goals.



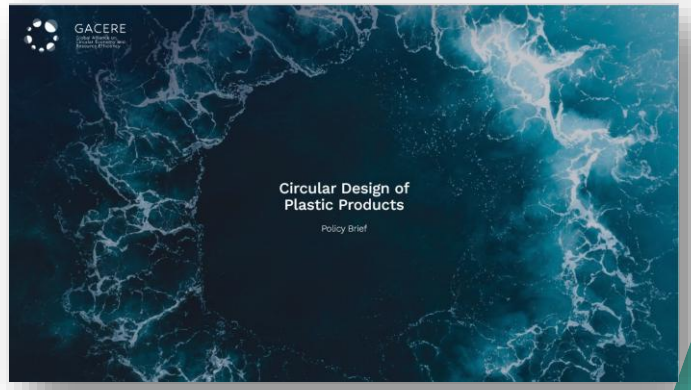
Source: https://www.unep.org/topics/chemicals-and-pollution-action/circularity-sectors/green-and-sustainable-chemistry

1.2 What is Circular Design? Categories and strategies – Design for REUSE

Design criteria for prolonged product use and reuse:

- Fit for multiple use
- Specificity
- Safety
- Ease of cleaning
- Ease of storability
- Reassembly
- (Recycability)

GACERE
Global Alliance on Circular Economy and Resource Efficiency



Sources: https://www.unido.org/sites/default/files/unido-publications/2024-04/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf
https://www.unep.org/gacere

1.2 What is Circular Design?
Design for SUBSTITUTION

- **Substitution** is the replacement of one object or material with another.
- The objective of substitution in product or packaging design is to create a more ecologically compatible alternative, for example, by replacing plastic with paper.
- In order to avoid negative rebound effects, substitution measures have to be carefully evaluated.
- The suitability of a substitution is dependent on local contexts. Local factors, such as climate, have a strong impact on packaging design.

Source: https://prevent-waste.net/wp-content/uploads/2023/05/230207_Prevent_CircularDesignStudie.pdf

1.2 What is Circular Design?
Design for RECYCLING

- **Recyclability** is the actual ability of an item of packaging or product in the post-use phase to substitute for virgin material in new items; 'actual' is used here to indicate that the necessary industrial-scale collection and processing infrastructure is available.
- When determining recyclability, it is necessary to take into account product or packaging design (e.g. ensuring that there are no recycling incompatibilities) and the waste management infrastructure in place, checking whether:
  - the packaging or product can be captured through an existing efficient countrywide collection system;
  - the packaging or product can be segregated and forwarded to recycling through existing sorting and treatment infrastructure;
  - the processing of components is technically and economically feasible.
- Recyclability therefore depends on the country or region where the packaging/product is used and becomes waste.

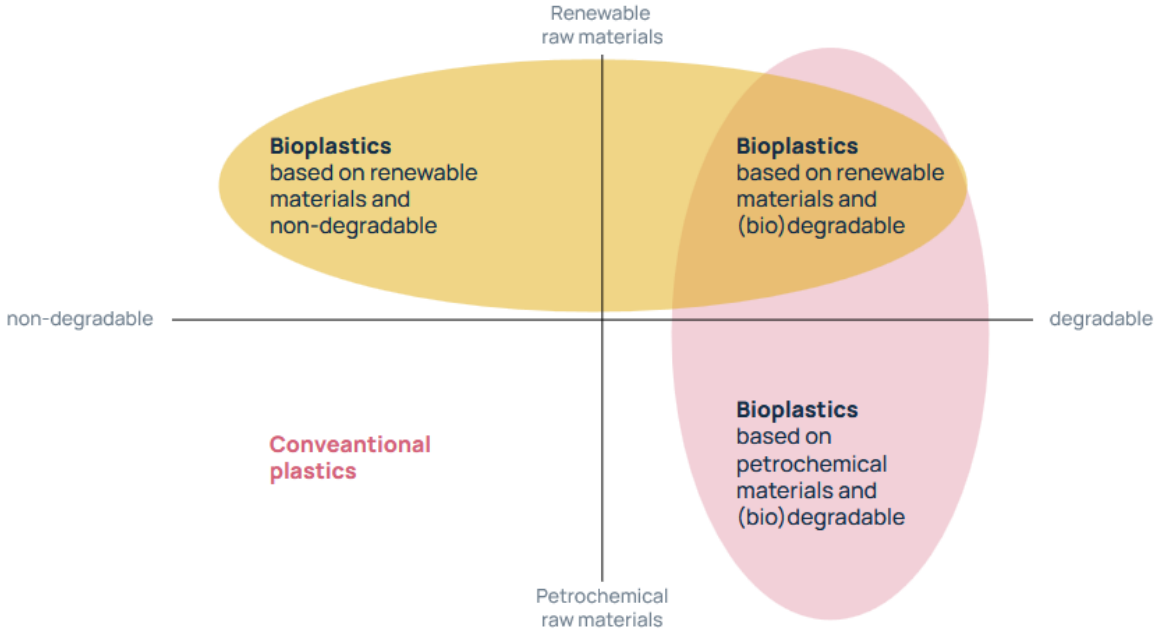
Source: https://prevent-waste.net/wp-content/uploads/2023/05/230207_Prevent_CircularDesignStudie.pdf

3.2 What is Circular Design? What is RECYCLATE?

- **Recyclate or recycled content** refers to the portion of materials used in packaging or a product that has been diverted from the solid waste stream through a recycling process.
- If these materials are diverted during the manufacturing process, they are referred to as pre-consumer or post-industrial content.
- If they are diverted after consumer use, they are referred to as post-consumer content.

Source: https://prevent-waste.net/wp-content/uploads/2023/05/230207_Prevent_CircularDesignStudie.pdf

1.2 What is Circular Design? Categories and strategies – Design for COMPOSTABILITY and BIODEGRADABILITY



Factors that impact compostability

- Available infrastructure: Industrial municipal composting infrastructure is still quite limited globally.
- Organic waste separation: Cities and countries that have wet/dry separation of waste for their collection systems already have a helpful foundation both in infrastructure and behavioural norms for use of home compostable and soil biodegradable plastic materials.

For more information see:

Sources: https://www.unep.org/resources/report/exploring-potential-adopting-alternative-materials-reduce-marine-plastic-litter / https://www.unep.org/resources/report/biodegradable-plastics-and-marine-litter-misconceptions-concerns-and-impacts

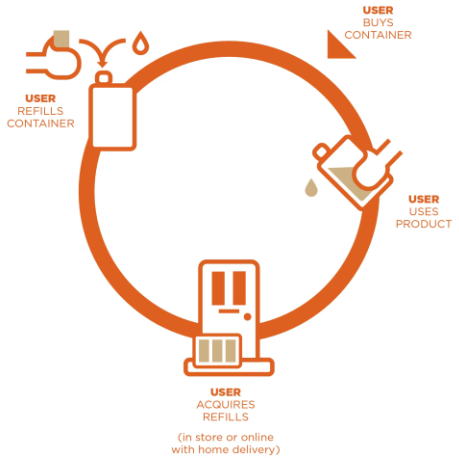
1. Introduction to main concepts

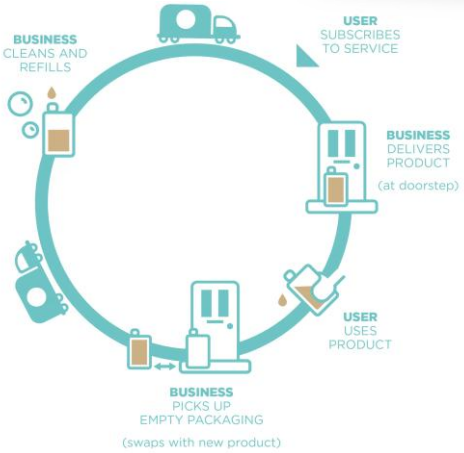
REUSE and REFILL

UN environment programme

1.3 How can you categorize REUSE and REFILL models?

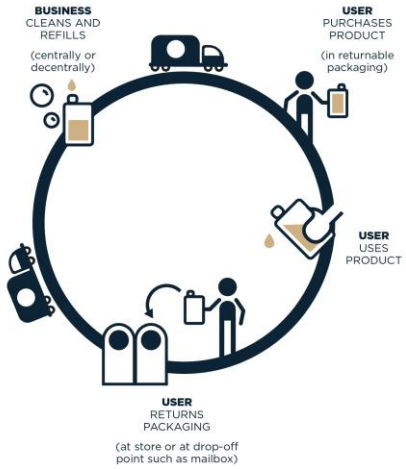
Users refill their reusable container at home (e.g. with refills delivered through a subscription service)





Packaging is picked up from home by a pick-up service (e.g. by a logistics company)

Users refill their reusable container away from home (e.g. at an in-store dispensing system)



Users return the packaging at a store or drop-off point (e.g. in a deposit return machine or imailbox)

Source: https://www.ellenmacarthurfoundation.org/upstream-innovation/reuse

1.3 Reusable packaging systems – How REUSE services work?

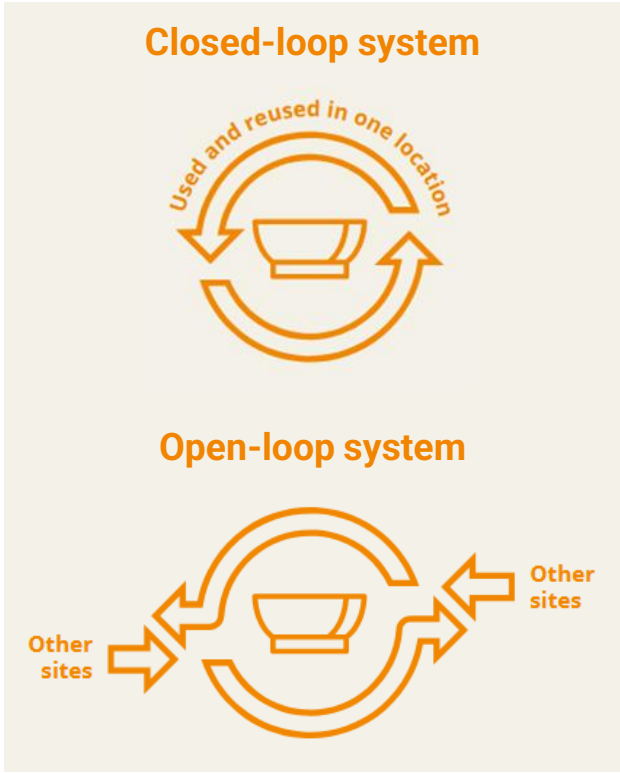
Source: The New Reuse Economy (www.upstreamsolutions.org)

1.3 Reusable packaging systems – What is a closed-loop system?

There are **two main forms** of reusable serviceware systems:

- In a **closed-loop system**, items are used and reuses in the **same location**, such as *food courts, cafeterias, schools, event locations, sport stadiums, music festivals*.

- In an **open-loop system**, serviceware can be reused across **multiple sites**, for example *food delivery* across a city, requiring more sophisticated collection and distribution infrastructure.



Source: https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Plastik/WWF-Report-Reuse-in-the-Global-South.pdf

1.3 Reusable packaging systems – Some success factors

Environmental performance depends on key parameters:

- **Production** of reusable packaging:
  Health / safety considerations and packaging standarisation
- **Number of cycles**:
  Critical number of reuse cycles (Break-even point) and high return rates
- **Logistics**:
  Short return distances and energy/water efficient washing, scale and sharing infrastructure
- **End-of-Life**:
  Considerations of existing waste management practices/infrastructure in place

Sources: https://www.circularityconcepts.org/module-4-reuse-refill-circular-economy / https://wedocs.unep.org/bitstream/handle/20.500.11822/35109/ASUP.pdf?sequence=3&isAllowed=y / https://www.lifecycleinitiative.org/activities/life-cycle-assessment-in-high-impact-sectors/single-use-plastic-products-studies/

1.3 Reusable packaging systems – Key role of Cities

How cities can promote and accelerate local reuse solutions:

Upstream
We heart reuse.

- Collaborating across city departments and agencies
- Offering incentives and securing funding for the necessary infrastructure
- Promoting reuse culture by engaging communities in education and participation
- Establishing enabling policies that promote reuse
- Contracting for reuse services
- Building broad partnerships with private sector, NGOs and start learning process

"For cities looking to dive into reuse, the advice is:
Don't wait. Just pick a starting point and begin,
even if it's a small step."

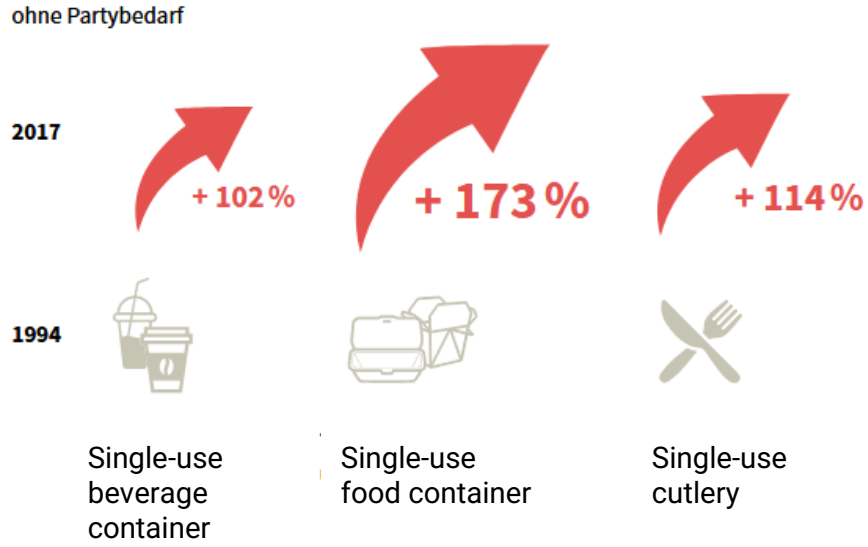
Source: https://upstreamsolutions.org/blog/key-takeaways-from-the-resource-recycling-conference

1.3 Reusable packaging systems – Key role of Cities

The story of Tübingen

- Starting point: Littering problem linked with **high waste management** costs which have to be covered by municipality
- The German city of Tübingen took the pioneering steps of introducing a city wide **tax on single-use plastic** items, which formed just one part of a wider strategy to foster reuse within the city.
- The tax applied to both single-use cutlery (20 cents) and single-use packaging for food and beverage containers (50 cents).
- The city supplemented this action to support businesses transition to reusable alternatives by **providing subsidies** for dishwashers and directly connecting them with companies who have the equipment and infrastructure already for reusable packaging.
- Whilst the legality of the tax is now under review within the German legal system, the story of Tübingen highlights how cities can take important action to tackle the problem of single-use items in cities.

Development of waste generation from single-used plastic (1994-2017) in Germany



Source: https://zerowasteeurope.eu/library/the-story-of-tubingen/

1.3 REUSE– Additional Resources

Websites:

- **EMF –** Upstream Innovation: https://www.ellenmacarthurfoundation.org/upstream-innovation/reuse
- **Yunus Environment Hub:** https://yunusenvironmenthub.com/solutions/ongoing-solutions/#Scaling%20Reuse%20Models:%20A%20Partnership%20Between%20Yunus%20Environment%20Hub%20&%20Algramo
- **The Reuse Portal**: https://www.reuseportal.org/home
- **New European Reuse Alliance** (New ERA): https://newreusealliance.eu/

Publications:

- **Reuse in the global South** – Case Studies (WWF, 2025): https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Plastik/WWF-Report-Reuse-in-the-Global-South.pdf
- **Good Practices for Reusable Packaging Systems** (GIZ, 2024): https://www.giz.de/de/downloads/giz2024-en-good-practices-reusable-packaging-systems.pdf
- City Playbook: **Building a Reuse City** (WEF, 2021): https://weforum.ent.box.com/s/fx48az4ij1c8gr31g8jm5bppns79fpom
- **Reuse Wins Report** (2021): https://upstreamsolutions.org/reuse-wins-report
- **Reuse Wins at Events** (2022): https://upstreamsolutions.org/reuse-wins-at-events

Accelerator Sessions WCEF 2025 (Videos)**:**

- **Upstream Circular Innovation for Latin America:** https://www.youtube.com/watch?v=tbfHB2SUf7E
- **Why aren't return and refill models everywhere?:** https://www.youtube.com/watch?v=hY0-atJVBU8

1. Introduction to main concepts

CIRCULAR INNOVATION

and FINANCING

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1.4 What is an Circular Business Model?

The Value Hill categorizes circular business models into 4 groups:

- Circular Design
- Optimal Use
- Value Recovery
- Circular Support

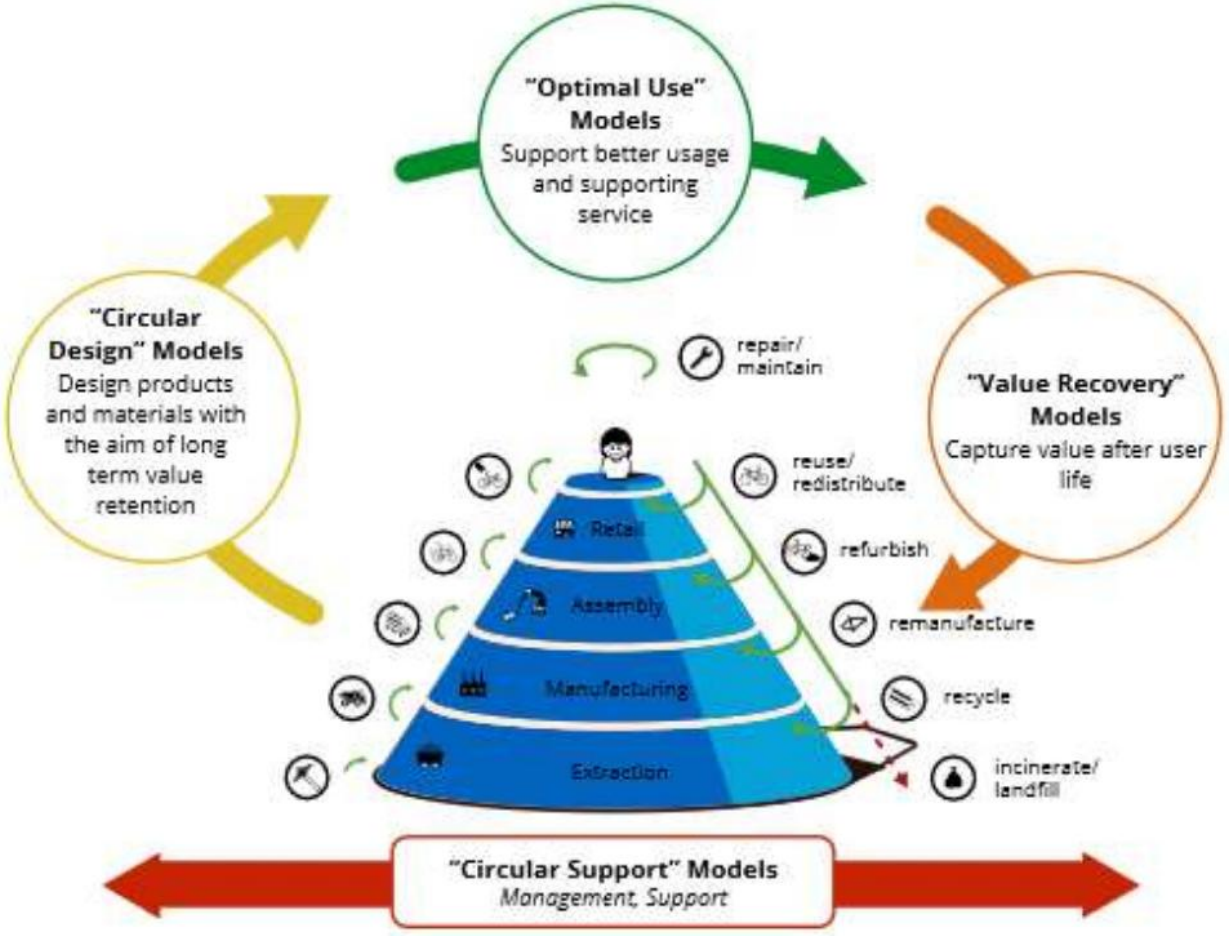


Figure 1: Business Model Categories mapped on the Value Hill

Source: https://circulareconomy.europa.eu/platform/sites/default/files/categorisation_system_for_the_ce.pdf
https://www.circle-economy.com/news/master-circular-business-with-the-value-hill

1.4 How to make circular business models successful?

Social & emotional rewards
Make it desirable, cool

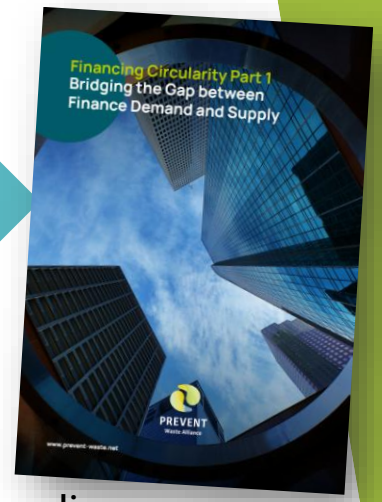
Information, how to communicate, rules
Make it understood

Costs & financial incentives
Make it affordable and rewarding

Convenience
Make it obvious, make it easy

Source: Searious Business
https://static1.squarespace.com/static/63933dd8487359657dfa1563/t/63ee67dfc61ca84485d1761d/1676568544046/Onepager+Shifting+Behavior+by+Searious+Business.pdf

1.4 Business Model Innovation – Financing



Key Insights

- **Finance for the circular economy is stuck in silos:** Few investors prioritise circular economy, with most CE finance coming from general impact or climate funds — not CE-specific ones.
- **Supply and demand are mismatched:** Many CE enterprises in LMICs are small, early-stage ventures needing flexible seed or growth capital. However, finance is geared toward later-stage, scalable projects with predictable returns.
- **The "missing middle" persists:** Entrepreneurs fall between microfinance and commercial capital. Few instruments cater to untested circular economy models that might be associated with more financial risk.
- **Investors underestimate CE potential:** Many investors are unfamiliar with circular models or perceive them as associated with financial risk despite their climate and social co-benefits.

Financing Challenges for CE Organisations

- **Missing middle:** Circular economy enterprises, particularly in LMICs, are struggling to secure funding between USD 50,000 and 1 million, which is too large for microfinance but considered too small or risky for traditional commercial investors.
- **Financing needs to evolve with growth:** From self-financing and grants to equity or loans at later stages. Many CE actors struggle with finding or identifying aligned funders.
- **Impact mismatch**: Despite clear climate and biodiversity benefits, very few sustainable investors actively focus on the circular economy. CE impact is often undervalued or overlooked in investment criteria.
- **Impatient capital:** Many investors expect quick returns and favour asset-light, fast-scaling models — a poor fit for CE ventures, which typically require longer horizons and upfront capital.

Sources: https://prevent-waste.net/wp-content/uploads/2025/05/Financing-Circularity-Bridging-the-Gap-Part-1.pdf
https://prevent-waste.net/wp-content/uploads/2025/05/Financing-Circularity-Guidance-to-Unlock-CE-Finance-Part-2.pdf

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1.4 Business Model Innovation – Financing

Opportunities for Action

- **Frame CE as a climate and development solution:** Position CE as a contributor to resilience, job creation, and emissions reduction to tap into established sustainable finance flows.
- **Strengthen blended finance:** Donors and development banks can de-risk investments and signal long-term commitment.
- **Build investor capacity**: More awareness and tools are needed to help investors understand CE models, risks, and returns.
- **Support local intermediaries:** Ecosystem actors like accelerators, incubators, and blended finance vehicles play a crucial role in bridging the finance gap.

Recommendations

For Investors:

- Develop tailored CE funding instruments, including concessional, catalytic, and blended finance products
- Use local intermediaries to build pipelines and realistically assess risks
- Include circularity metrics in ESG assessments

For Policymakers and Donors:

- Mainstream CE in climate and development funding
- Create enabling conditions for private CE investment (e.g. public procurement, tax incentives)
- Support knowledge-sharing platforms and capacity building

Sources: https://prevent-waste.net/wp-content/uploads/2025/05/Financing-Circularity-Bridging-the-Gap-Part-1.pdf
https://prevent-waste.net/wp-content/uploads/2025/05/Financing-Circularity-Guidance-to-Unlock-CE-Finance-Part-2.pdf

2. GOOD PRACTICES ON UPSTREAM INNOVATIONS AND SOLUTIONS

Disclaimer: UNEP does not endorse any private sector companies mentioned in meetings/events organized or presentations/reports/documents produced under the GEF LAC cities project.

2

2. Good practices on Upstream Innovations and solutions

REDUCTION

and

CIRCULAR DESIGN

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2.1 Overview of **CIRCULAR DESIGN** tools and practices

No	Name of the practice	Country	Link	Focus
1	**KLEANTAB**	Costa Rica	https://kleantab.com/	Redesign Cleaning Products
2	**EcoLab de Innovación**	Colombia	https://conversapolis.org/recurso/cajalab-de-innovacion/ https://www.youtube.com/watch?v=lLi1xtKcNsI	Tool for Packaging Redesign
3	**Less Plastic Guide**	Central America	https://www.sica.int/caribecircular/guia-menos-plastico	Tourism
4	**Circular Room**	Colombia	https://www.fenalco.com.co/blog/gremial-4/manual-de-implementacion-habitacion-circular-8026	Tourism
5	**Plastic Waste Free Islands Toolkit Hotels**	Caribbean	https://www.seariousbusiness.com/islands	Tourism

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Circular Design Practice 1 – kleantab

Profile	
Name of the Practice	**kleantab**
Location (City/Country)	San José, Costa Rica
Sector involved	Cleaning products
Partners involved	Quiticol ST
More information (website)	https://kleantab.com/

WHAT

Kleantab are tabs that become everyday cleaning products.

HOW

Example for product redesign: Changing the design of the product itself, changing liquid cleaning detergent redesigned as a dry powder o tabs.

- Elimination of single use plastic packaging and avoiding the use of irritating or toxic chemicals as well as high transportation and storage costs through a new product design: Tabs
- These tablets are dissolved in water to obtain all kinds of cleaning products such as bathroom disinfectant, laundry detergent, hand soap, degreaser, glass cleaner and all-purpose cleaner.
- Combining redesigned product to eliminate plastic with a refill format that reduces long-term costs for consumers.

Circular Design Practice 1 – KleanTab

Results / Impacts

- Locally produced laundry detergent in tablet form, hand soap, floor disinfectant, surface cleaners,fabric softeners, dishwashing soap
- More 25 products in more than 150 selling points in four countries
- New Production Center “Circular Project” 2025

Success Factors / Lessons Learnt

- Support received by incubationa and acceleration program GreenTech and Pomona Impact
- Price competitiveness
- Communicating clearly environmental, social and economic benefits

Ilustration

Circular Design Tool 2 – EcoLab de Innovación

Profile	
Name of the Practice	**EcoLab de Innovación**
Location (City/Country)	Colombia
Sector involved	Packaging
Partners involved	GIZ Colombia (ProUsar) Waste to Worth
More information (website)	• https://conversapolis.org/recurso/cajalab-de-innovacion/ • https://www.youtube.com/watch?v=ILi1xtKcNsI

WHAT

Practical Tool for Packaging Innovation

HOW

- Practical tool to guide upstream innovation for packaging.
- Based on inputs and references from EMF, Sustainability Packaging Coalition, Cradle to Cradle, Golden Design Rules and Prevent Waste Alliance
- Based also on consultations with more thant 55 key players (5 workshops in major cities in COL and interviews)
- Acts as an mirror and catalyst for change in a strategic, structured way
- Helps to prepare, define, implement and monitor the innovation process step by step

Circular Design Tool 2 – EcoLab de Innovación

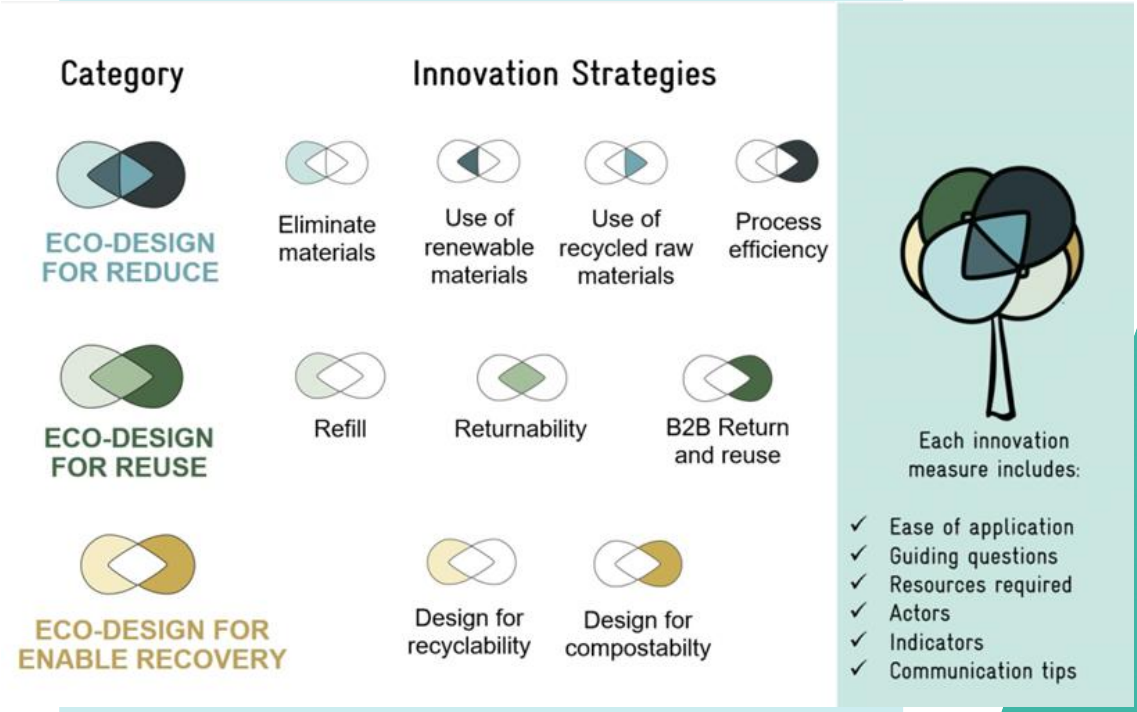
Results / Impact

- Combine design with business strategy
- Enables innovation in packaging in a systemic and practical way
- Enables (re)assessment of exisiting initiatives from new angles
- Triggers strategic questions around eco-design and systems thinking
- Supports documentation and traceability of innovation
- Reaises awareness among non-technical profiles
- Not only diagnose – it connects, guides and builds a circular vision
- Current application in supermarkets (post-consumer, flexible, mono-layer packaging and labels) *(Results in June)*

Recommendations for application

- Promote colaboration space at city level (Industry roundtables) to understand needs to achieve more circularity in the value chain.
- Identify sector (packaging, beverages, food, cleaning, personal care)
- Identify, evaluate and prioritize innovation area and circularity strategy
- Engage internal departments and key stakeholders
- (Can be applied also in SMEs)

Ilustration



Plastic Reduction Tool 3 – Less Plastic Guide

Profile	
Name of the Practice	**Less Plastic Guide** (Guía Menos Plástico)
Location (City/Country)	Mexico, Central America and Dominican Republic
Sector involved	Tourism (Hotels, restaurants)
Partners involved	GIZ (Caribe Circular) CCAD Sustentur (Mexico)
More information (website)	https://www.sica.int/caribecircular/guia-menos-plastico

WHAT

Practical tool
to prevent and reduce
SUP in the
tourism sector

HOW

The manual guides, accompanies, and supports decision-making to assist organizations in the tourism sector in transitioning towards the prevention of plastic consumption and improved management of plastic products. The six steps included in the Less Plastic Guide strategy are:

1. **IDENTIFY**: This involves taking actions to identify the type of plastic and its use in each of the operational activities and areas of the organization.
2. **MEASURE**: It establishes the count of the quantity of plastic items used by each area, in addition to the associated cost in money for each one.
3. **PRIORITIZE**: It involves making informed decisions about which changes to prioritize in order to maximize economic savings and minimize environmental impact.
4. **TAKE ACTION**: It refers to reducing the consumption of unnecessary plastics, as well as raising awareness among the staff and guests or customers of the organization about the substitution and/or elimination of plastics that do not add value to their experience.
5. **ASSESS**: This step involves monitoring and quantifying the impact of the changes made by comparing monthly, quarterly, semi-annual, or annual data with specific indicators of the achieved goals.
6. **COMMUNICAT**E: This step includes the dissemination of the implementation actions and the achievements obtained in terms of the amount of plastic that has been eliminated, substituted, or reduced

Plastic Reduction Tool 3 – Less Plastic Guide

Results / Impacts

- Accessible, practical tool to promote leadership among companies in the tourism sector in preventing plastic consumption.
- Highlight also economic benefits of plastic reduction
- Manual is useful for consultants and employees (sustainability managers) of hotels
- Not only analysis and monitoring tool but also provides a concrete action plan

Recommendations for application

- Raise awareness between main stakeholders from the tourism sector
- Create alliance with tourism associations
- Evaluate opportunity to create a certificate / label for successful participating companies.
- Communicate results and promote exchange of learning experiences between participants (Sustainable Tourism Summits)

Ilustration

https://www.youtube.com/watch?v=JvbYGWQpjMk

More inspiration for REDUCTION Practices in the Tourism Sector – Circular Room Manual

Short description

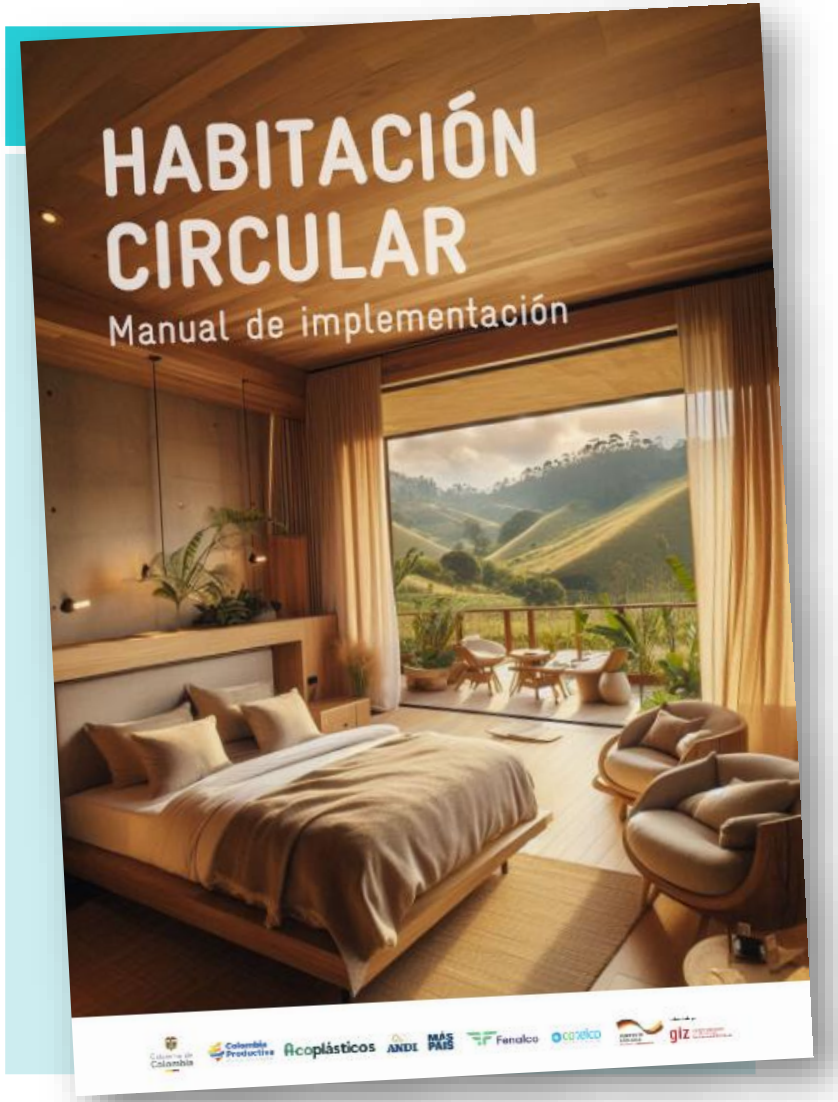
The **Circular Economy Room Manual** guides hotels in redisigning hotel rooms with circular principles. Scalabale model which allows also AI integration, supply chain transformation and local adoption in a hoistic strategy.

It is structured in **5 phases**:

- Diagnosis (Mapping material flows and identifying opportunities for waste reduction)
- Circular Design (Selecting locally sourced circular products and services)
- Operational transition (Aligning with hotel visions, target groups and budget)
- Monitoring and KPIs (Implementing circular alternatives)
- Guest engagement (signage, QR, etc.)

Example hotel (Zuana Hotel, Santa Marta / Colombia):
- Built alliances with local recyclers
- Susbtitution of sinle-use items with water refill stations and reusable products
- Refillable dispensers for personal care products
- Procurement of products with recycability (34 tons recycled / +27%)
- Promotion of socioeconomic inclusion

More information:
- https://www.fenalco.com.co/blog/gremial-4/manual-de-implementacion-habitacion-circular-8026
- https://drive.google.com/file/d/1V5vEoetK5Jf95GZZyGfgx7nfF8fdqnV3/view



More inspiration for REDUCTION Practices in the Tourism Sector – Toolkit for plastic waste-free hospitality

Short description

The **Toolkit for plastic waste-free hospitality** offers practical tips & tricks on how to be hygienic and environmentally-friendly in hotel/restaurant/bar and how to effectively combine forces with business partners/suppliers.

Upstream options are proposed in the **following areas**:

- Bathroom and personal care
- Food & Beverages
- Rooms, Pool/spa/gym, entertainment areas
- House keeping
- Furniture and office
- Beach supplies

More information:

- https://www.seariousbusiness.com/islands
- https://www.youtube.com/watch?v=yAQgl4UKjIA

Ilustration

Circular Design – More inspiration!

More **inspiration** for plastic waste reduction in the tourism sector!

Global Tourism Initiative:

- Tools and resources: https://www.oneplanetnetwork.org/programmes/sustainable-tourism/global-tourism-plastics-initiative/tools-and-resources

- Recommendations: https://www.oneplanetnetwork.org/knowledge-centre/resources/recommendations-tourism-sector-continue-taking-action-plastic-0

Circular Design – How to built successful city pilots

- Raising awareness and building interest in specific sectores (Industry Roundtables?)
- Identify and prioritize innovation space based on challenges and opportunities
- Apply one of the tools to a committed number of companies, hotels / restaurants (5-10 at city level)

In the specific case of tools for the **tourism sector**:

- **Shifting mindset**: Circular economy is more than recycling, identify circular solutions with economic, social and environmental benefits
- **Internal communication**: Hotel / restaurant staff also needs to understand the WHY and HOW. E.g. agree on some principles (no plastic bags, no single-use plastic bottles) which every staff member has to follow. Setting-up an internal policy that every employee needs to understand and committ.
- **External communication**: Address the issue of plastic pollution at the beginning of every holiday to your guests and explain what your company does to have a positive impact and how your customers can help to tackle this problem
- **Creating local alliances** with supply chain partners and community partnerships to provide circular solutions

2. Good practices on Upstream Innovations and solutions

REUSE

UN environment programme

2.2 Overview of **REUSE** practices

No	Name of the practice	Country	Link	Focus
1	**XICLO**	Colombia	https://xiclo.app/	One-site and takeaway food - Gastronomy, Food Delivery, Meal Preps, Events (Festival)
2	**Huella Verde**	Ecuador	https://www.huellaverde.com.ec/	Food Courts in Malls
3	**Ficus Box**	Costa Rica	https://www.ficusbox.com/	Events (Music, Culture, Corporate)
4	**Galaxy Pack**	Colombia	https://galaxypack.co/	Commerce / Logistics B2B Packaging

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REUSE Practice 1 – XICLO (Colombia)

Profile	
Name of the Practice	**Xiclo**
Location (City/Country)	Bogotá / Medellín (Colombia)
Reuse Model	Return on-the-go / Return at home
Sector involved	Food serviceware
Partners involved	GIZ, Vision 30/30 ANDI
More information (website)	https://xiclo.app/ (min 1:27:00)

WHAT

Xiclo offers reusable packaging for takeaway food, and has developed a software-as-a service (SaaS) platform to improve the efficiency of reusable packaging for food and beverages.

HOW

Xiclo provides reusable packaging for the takeaway food sector. Food takeaways can be bought from various outlets through Xiclo's app, which is delivered in durable metal containers. Customers can then return the stainless steel containers – within three days – via a collection point or a doorstep collection.

Xiclo works also with catering partners to provide reusable packaging services for events and canteens. In these closed-loop settings, Xiclo provides reusable packaging, drop-off points, and on-site cleaning and sanitizing.

An Integrated SaaS platform gives detailed tracking of each container, including when it was last used and how much water, energy, or cleaning products have been used to keep the packaging in use.

REUSE Practice 1 – XICLO (Colombia)

Results / Impacts

- The company currently has capacity to wash 2,500 dishes per day and employs four full-time employees and 15 part-time employees.
- Since its founding in 2021, the company's reusable packaging has eliminated the need for 30,000 units of single-use food packaging.
- 9 restaurants in Bogotá with high return rate (98%)
- Own washing machine as a service (min. 1.600 containers washed per day)
- In partnership with the Industry Association (ANDI), Juan Valdez launched a pilot for reusable cups in a coffee bar with 100% returnable cups with 8,200 uses in 8 weeks and high user satisfaction.
- Xiclo is currently working with the City of Bogota to replace single-use lunch items in public school meals with reusable lunch packaging and pilots with university in Medellin.

Success Factors / Lessons Learnt

- Integrated solutions: Traceability, smart packaging, reverse logistics, industrial washing, transition advice
- Closed-loop systems with recurring habits offer the highest collection rates.
- Initially, it can be easier to achieve the necessary scale in (semi-)closed- loop systems due to the controlled settings and concentrated customer base with recurring habits (big state/corporate canteens, meal plans, etc.).
- Importance of strong staff engagement and adopt bases on user feedback
- Communication of hygiene standards
- Public partnerships could help to scale this service (e.g. school meal services)

Reuse Practice 1 – Xiclo - Corona Sunset Festival

What and How?

- During the **Corona Sunset Festival 2023** in Santa Marta, with 6.000 attendees, Xiclo, in partnership with with Corona (ABInBev), Páramo and GIZ (ProUSAR), was piloting the first Reuse Systems for a massive event in Colombia.
- A return scheme was piloted with 5.400 reusable cups (not intented as souvenirs) in rotation and an on-site return logistic system was installed.
- The operation included collection bins, mobile return points and a temporary washing station.
- The experience was supported by educational actions, social media campaigns and staff training.
- Offine solution because of internet conection

Success Factors / Lessons Learnt

- Adequate material for specific context
- On-site logistics, cleaning infrastructure and effective communication before, during and after the event
- Consumer experience and satisfaction
- Clear communication and diferentiation
- Deposit
- Reuse option when SUP are used (problem: when already recyclables in use and collected)

Ilustration

Reusable cups in large-scale events:

Source: https://www.giz.de/en/downloads/giz2024-es-eye-uso-de-vasos-reutilizables-y-retornables-en-corona-sunset-2023.pdf

Reuse Practice 1 – Xiclo - GreenTur

Short description

The project addresses the environmental challenges of the tourist destination of San Andres by reducing waste generation and marine pollution through the implementation of a **returnable cup system**.

GREENTUR is developed through cooperation between: Clean, Denmark's national water and environment cluster, which drives the green transition of Danish companies internationally; Kleen Hub, the innovator of the **TAP&REUSE**™ system; XICLO; and INVEMAR, the Colombian Institute of Marine and Coastal Research.

Solution works with tapping credit card and containers with **RFID chip** for tracking, deposit not requires and no app needed. No costs when returned after a specific number of days.

Tap&Reuse models remove tech frictions (e.g. app download) and improve user experience in quick service environments and high-turnover/fast-paced settings.

If strong local partner network in place, then relatively easy, quick and visible to pilot and communicate.

More information:

- https://www.kleenhub.com/
- https://www.cleancluster.dk/en/project/greentur-greening-san-andres-sustainable-tourism-to-reduce-single-use-packaging

Ilustration

REUSE Practice 2 – Huella Verde (Ecuador)

Profile	
Name of the Practice	**Huella Verde**
Location (City/Country)	Quito, Guayaquil, Ambato, Manta (Ecuador)
Reuse Model	Return on-the-go
Sector involved	Food courts
More information (website)	https://www.huellaverde.com.ec/ HUELLA VERDE EN 8 PATIOS DE COMIDA / JUNIO 2024 https://www.youtube.com/watch?v=rhXKeuRglvY

WHAT

Huella Verde offers reusable packaging for malls, food courts

HOW

- Huella Verde replaces disposable plates, cutlery and glasses with reusable ones in food courts.
- They provide this service with an efficient industrial washing system.
- Huella Verde sorts and recovers organic and recyclable waste. These are handed over to waste managers.

REUSE Practice 2 – Huella Verde (Ecuador)

Results / Impacts

- 50 MILLION disposables avoided at 10 shopping malls ttps://huellaverde.com.ec/50millones/
- New jobs created: 79 employees
- Zero Waste Food Courts: Every day 2 tons of organic waste and 200 kg of recyclables sent to waste managers
- Benefit for municpalities: Less waste to manage

Success Factors / Lessons Learnt

- Effective and high quality industrial washing system
- Competitive pricing (cost per reusable = cost of SUP)
- Make SUP costs transparent!
- Communication campaigns
- Committment of the shopping mall (center must provide separation station for organics, recycables and reusables, storage, hot water and electricity)
- Providing shopping center with comprehensive impact reporting (mobile app) on avoided waste and emissions related to transport, water usage and employment generation).
- Enabling framework: SUP ban in food courts and / or waste management fees based on quantity (pay-as-you.throw)

Ilustration

REUSE Practice 3 – Ficus Box (Costa Rica)

Profile	
Name of the Practice	**Ficus Box**
Location (City/Country)	Costa Rica
Reuse Model	Return on-the-go
Sector involved	Food serviceware
More information (website)	• www.ficusbox.com • https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Plastik/WWF-Report-Reuse-in-the-Global-South.pdf

WHAT

Ficus Box offers reusable packaging for food and beverages for events.

HOW

- Ficus Box is a reusable food serviceware and packaging solution for meal prep companies, small restaurants, school cafeterias, and events.
- Closed-loop events of up to 800 people, such as fairs and food markets, are currently the primary focus as collection rates can be kept high.
- The company provides plates and cups for food service then arranges on-site collection before washing and reusing the serviceware. Packaging units are made from durable polypropylene (PP), designed to be durable and recycled at their end of life.
- To encourage uptake, clients are provided with data on cost and materials savings to support sustainability targets.

REUSE Practice 3 – Ficus Box (Costa Rica)

Results / Impacts

- Around 5,000 to 6,000 food containers are reused each month.
- Since 2020, more than 1 ton of single-use food and beverage packaging units have been avoided, mainly plates, cups, and utensils.
- The company has been awarded a grant by End Plastic Pollution International Collaborative (EPPIC) to expand its solution in the events segment

Success Factors / Lessons Learnt

- Closed-loop systems offer the highest collection rates. Having experimented with a number of formats, the company is now focused on semi-closed or closed ecosystems to keep reuse rates above 90%
- Smart technologies could optimise the circulation of reusable packaging. The company is in the early stages of exploring smart packaging and software such as QR codes and RFID tags to provide data-driven insights into return rates and life cycles.
- Dishwashing technology could also reduce the economic and environmental costs of cleaning.

Ilustration

REUSE Practice 4 – Galaxy Pack (Colombia)

Profile	
Name of the Practice	**Galaxy Pack**
Location (City/Country)	Bogotá (Colombia)
Reuse model	B2B packaging
Sector involved	Airports, logistics, retail, e-commerce, food industry
More information (website)	https://galaxypack.us/ https://www.youtube.com/@galaxypack8296

WHAT

Galaxy Pack develops customized, reusable pallet covers to protect goods in transit.

HOW

- Galaxy Pack developed a reusable plastic pallet cover for big clients such as LATAM Airlines, DHL, Mercado Libre, and Cencosud (Latin America's third largest retailer).
- The covers substitute single-used stretch films and can be used 2,500 times and are designed to be easily refurbished at low cost.
- These pallet covers are safer and quicker for employees to handle and designed for breathability, which reduces mould and other microbials.
- Anti-microbial protection can be added to the pallet covers as required, which lasts for many uses.

REUSE Practice 4 – Galaxy Pack (Colombia)

Results / Impacts

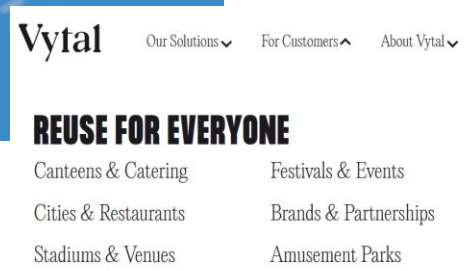
- The company has over 2,800 reusable pallet covers in use – 80% in Colombia and 20% in other South American markets.
- After four years in operation, more than 90% of Galaxy Pack's reusable pallet covers still in use.
- Galaxy Pack's reusable covers have collectively been estimated to have eliminated the need for 167 tons of single-use pallet wrap.

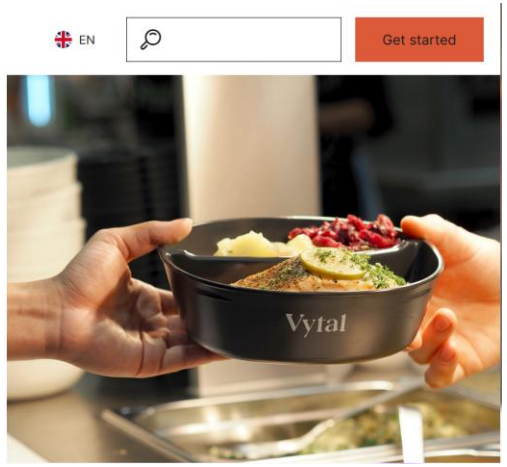
Success Factors / Lessons Learnt

- A strong **economic case** is vital to overcoming resistance to the initial investment (on pallet cover can save more than 500 USD during life cycle).
- GP offers a **simulator** to obtain Return **on Investment (ROI) Simulator**
- Reusable pallet covers are most suited to **closed-loop intra-company supply chains**. Businesses moving large amounts of cargo between two locations will quickly recover investments in reusable pallet covers.
- Enabling environment: Tax on single-use plastic in Colombia.

Ilustration

Reuse Practices – More inspiration





Sources:
https://www.returnity.co/the-last-box
https://www.vytal.org/
https://circulars.iclei.org/circular-city-labs/
https://yunusenvironmenthub.com/scaling-reuse-models-a-partnership-between-yunus-environment-hub-algramo/

2. Good practices on Upstream Innovations and solutions

REFILL

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2.3 Overview of **REFILL** practices

No	Name of the practice	Country	Link	Focus
1	**Mercado Circular**	Mexico, Chile	https://www.mercadocircular.com/	Home and personal care
3	**ALFE ASEO**	Colombia	https://alfeaseo.com/	Detergents

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REFILL Practice 1 – Mercado Circular (Chile)

Profile	
Name of the Practice	**Mercado Circular / EcoCarga**
Location (City/Country)	Chile and Mexico
Reuse Model	Refill on-the-go
Sector involved	Home and personal care
Partners involved	Municipalities, etc.
More information (website)	https://www.mercadocircular.com/ https://ecocarga.com/ https://www.youtube.com/watch?v=sgxcBJ1_9xE

WHAT

Mercado Circular develops refill solutions for consumer products. The company is part of the Demaria group, a big Chilean national brand focused on cleaning products.

MERCADO CIRCULAR

EcoCarga
AHORRA Y REUTILIZA

HOW

- Mercado Circular offers a range of reuse services, including customised refill machines/dispensers, tracking software, and operational support.
- Bottles with QR code permit tracking but also recognizing if it is a new or returned bottle without packaging cost.
- Dispenser machines are sited in strategic locations including supermarkets, neighbourhood stores, malls, metros, parks, and city halls.
- Customers refill their own containers (refill-on-the-go) at prices 10-30% lower than equivalent supermarket products (packaging typically accounts for 30-40% of a product's cost).

REFILL Practice 1 – Mercado Circular (Chile)

Results / Impacts

- To date, 150,000 families use Mercado Circular's refill dispensers.
- Mercado Circular since his foundation in 2017, has eliminated the need for over 1.2 million single-use packaging units, equivalent to more than 220 tons of plastic.
- EcoCarga estimates that the average Chilean family using its products will save USD 150 per year.

Success Factors / Lessons Learnt

- Public partners providing points of sale for reuse solutions.
- Partnerships with (local) brands
- Assuring user-friendly interaction with refill machines
- Tracking of product (lwith information on specific ot in case of recalls, etc.)

Ilustration

REFILL Practice 2 – ALFE Aseo (Colombia)

Profile	
Name of the Practice	**Alfe Aseo**
Location (City/Country)	Bogotá, Colombia
Sector involved	Cleaning products
Reuse model	Refill at home
More information (website)	https://alfeaseo.com/

WHAT

Reuse system for cleaning porducts

HOW

- The purchase cycle with ALFE works by taking the products in their packaging to the site indicated by the customer. Only for the first purchase the costs of the container is included.
- Once the product needs to be refilled, ALFE takes care of collecting the plastic material, which will be reused in the next purchase.
- To safe storage space and ease use of refillable containers, vertical organizers (racks) are offered.
- Alfe Aseo works with B2B / B2C and also Vending Machines.

REFILL Practice 2 – ALFE Aseo (Colombia)

Results / Impacts

- Familiy business with now 4 years offering refill solution
- ALFE is selected by CleanTechHUB as one of the 10 finalists in LATAM as a SUSTAINABLE startup (https://cleantechhub.net/)
- More than 130,000 reused containers
- 2 Vending Machines en residential compounds

Success Factors / Lessons Learnt

- Visualize and transpantize economic benefits (cost savings)
- Marketing
- Efficient distribution system

Ilustration

Refill Practices – More inspiration

- https://algramo.com/en/about-us/
- https://ejfoundation.org/reports/bottle-free-seas-refill-to-reduce-single-use-plastic-bottles-in-thailand
- https://centinelasdelagua.org/wp-content/uploads/2024/06/INFORME-ANUAL-2023.pdf
- https://menosplasticoesfantastico.com/estaciones-de-agua/
- https://ecodrop.co.zw/

REUSE and REFILL – Some recommendations

- Lets initiate pilot upstream interventions! Existing initiatives in the region offer valuable **learning experiences** and succes cases.
- Initiate with **closed-loop systems** as they offer the highest return rates with recurring customers and habits (food service and cafeteria operations for city government run & owned buildings, universities/schools, city events as gastronomic fairs or music festivals, food courts, corporate cafeterias, logistic hubs, tourist spots)
- Identify city needs and sectors which are open for pilot and can decide fast
- Identify existing washing infrastructure & logistic systems for pooling and sharing in your cities
- Provide a **enabling framework**: creating partnerships, public institutions or events as piloting focus, providing space for refill systems, (fiscal) incentives, etc.
- Assure attractive and simple **user experience**
- Review the **economic and environmental perfomance** (Return of Investment **(ROI)** of the preferred solution in the specific context. *(Consider hidden cost for SUP: logistics, inventory, waste management)*
- Embed reuse and waste prevention approaches into your **city's strategic frameworks**, narratives and external/internal **communications** and attractive **campaigns**
- Use collaboration platforms with private sector (**Industry Roundtable**) to promote upstream solutions at city level and share learnings, needs and opportunities regarding pilot projects.
- **Position your municipality** as promoter of innovative vanguardian initiatives

2. Good practices on Upstream Innovations and solutions

CIRCULAR INNOVATION

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2.4 Overview of **CIRCULAR INNOVATION** practices

No	Name of the practice	Country	Link	Focus
1	**Eco Giro**	Medellín, Colombia	https://medellin.impacthub.net/ecogiro	Circular Business Models for reusable packaging
2	**Hackathon de Química Verde**	Peru	https://quimicaverde.pe/hackathon-2025/	Green Chemistry
3	**The Single-Use Plastics (SUP) Challenge**	Asia	https://prevent-waste.net/projekte/the-sup-challenge/	SUPs used in foodservice

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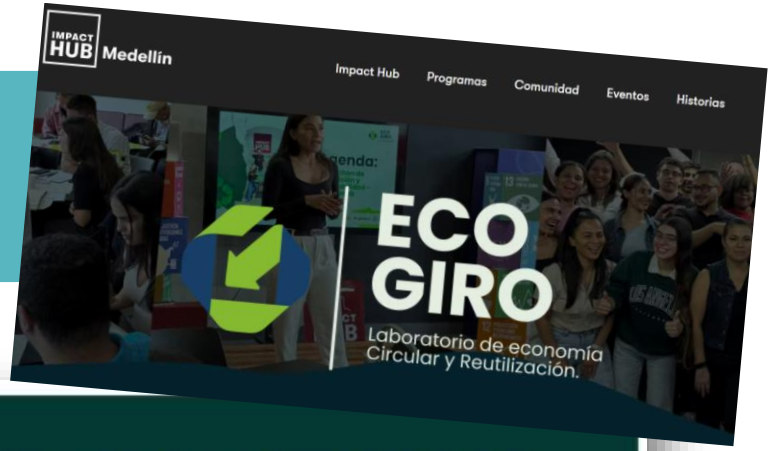
Circular Innovation Practice 1 – EcoGiro



Short description

EgoGiro is a program to support circular models for reusable packaging in the City of Medellin with trainings, workshops, networking and finance.

- 12 companies acelerated
- 9 pilot proposals elaborated
- 1 winning company with support fund

Hackathones EcoGiro:

Spaces for co-creation and innovation, bringing together students, professeionales and repreesntatives from the public and provate sectores around a specific challenge:

HACEB Challenge (24.04.2025): Design innovative solutions to increase the recovery of cardboard and plastic packaging generated by your appliances.
City Challenge (20.06.2025): Design a creative campaign to promote reuse at city level.

More information:
- https://medellin.impacthub.net/ecogiro
- https://medellin.impacthub.net/hackaton
- https://medellin.impacthub.net/hackathon

Circular Innovation Practice 2 – Green Chemistry

Short description

The United Nations Industrial Development Organization (UNIDO) has been promoting the **Global Green Chemistry Innovation and Networking Programme**, which aims to strengthen the sound management of industrial chemicals and their wastes through improved control, reduction and/or elimination, applying the principles of green chemistry, with special emphasis on the reduction/elimination of persistent organic compounds (POPs).

Program Components:

- Technical trainings in the principles and application of green chemistry
- Funding to ventures or startups applying green chemistry.
- Development of pilot cases applying green chemistry in Peruvian companies.

More information:
https://quimicaverde.pe/
https://www.globalgreenchem.com/toolkits

Circular Innovation Practice 3 – Single-Use Plastics Challenge

Short description

The PREVENT Waste Alliance and The Incubation Network have implemented **The SUP Challenge** to collaborate with Entrepreneur Support Organisations (ESOs) in South and Southeast Asia to source, support and scale high-potential startups tackling single-use plastics in the food and beverage sector.
The SUP Challenge supported eight Entrepreneur Support Organizations (ESOs) and 76 startups across India, Indonesia, the Philippines, Thailand, and Vietnam.

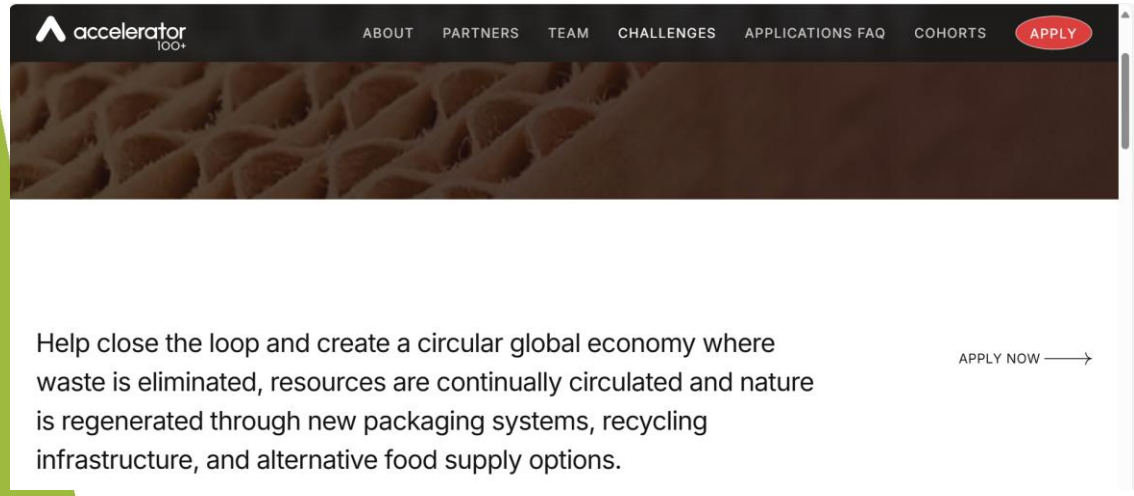
Each project lasted for about 6 months, including selecting startups and piloting solutions with partners from the food and beverage (F&B) sector to the collection of data and project outcomes.

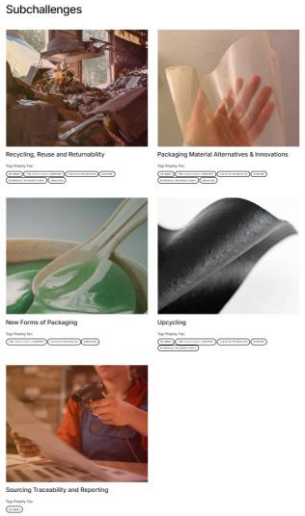
Each project has onboarded a cohort of startups, provided capacity building and piloted ventures' solutions with a F&B partner. The project also measured the volume of plastics reduced through the ventures, behavioral changes, and other related metrics

More information:

- https://www.incubationnetwork.com/programs/the-sup-challenge/
- https://prevent-waste.net/projekte/the-sup-challenge/
- https://prevent-waste.net/wp-content/uploads/2023/06/The-Incubation-Network-The-SUP-Challenge_Technical-Playbook.pdf

Circular Innovation Practices – More inspiration





Circular Innovation – Some recommendations

- Mapping and building / strengthening **circular eco-system** (companies, start-ups, universities, NGO´s)
- **Industry Roundtables** could be act as a starting point for network / eco-system building
- Start with easy to implement activities which bring together key stakeholders of the eco-system (e.g. **Hackathons**) discussing and co-creating solutions on concrete challenges defined by the city or private sector
- Identify possiblity to leverage **innovation funds**
- Position **municipality as a changemaker** that tackles real problems with innovative and attractive solutions for the city

2. Good Practices

Which good practice is particularly interesting for your context?

Which inspires you most for your upstream pilot?

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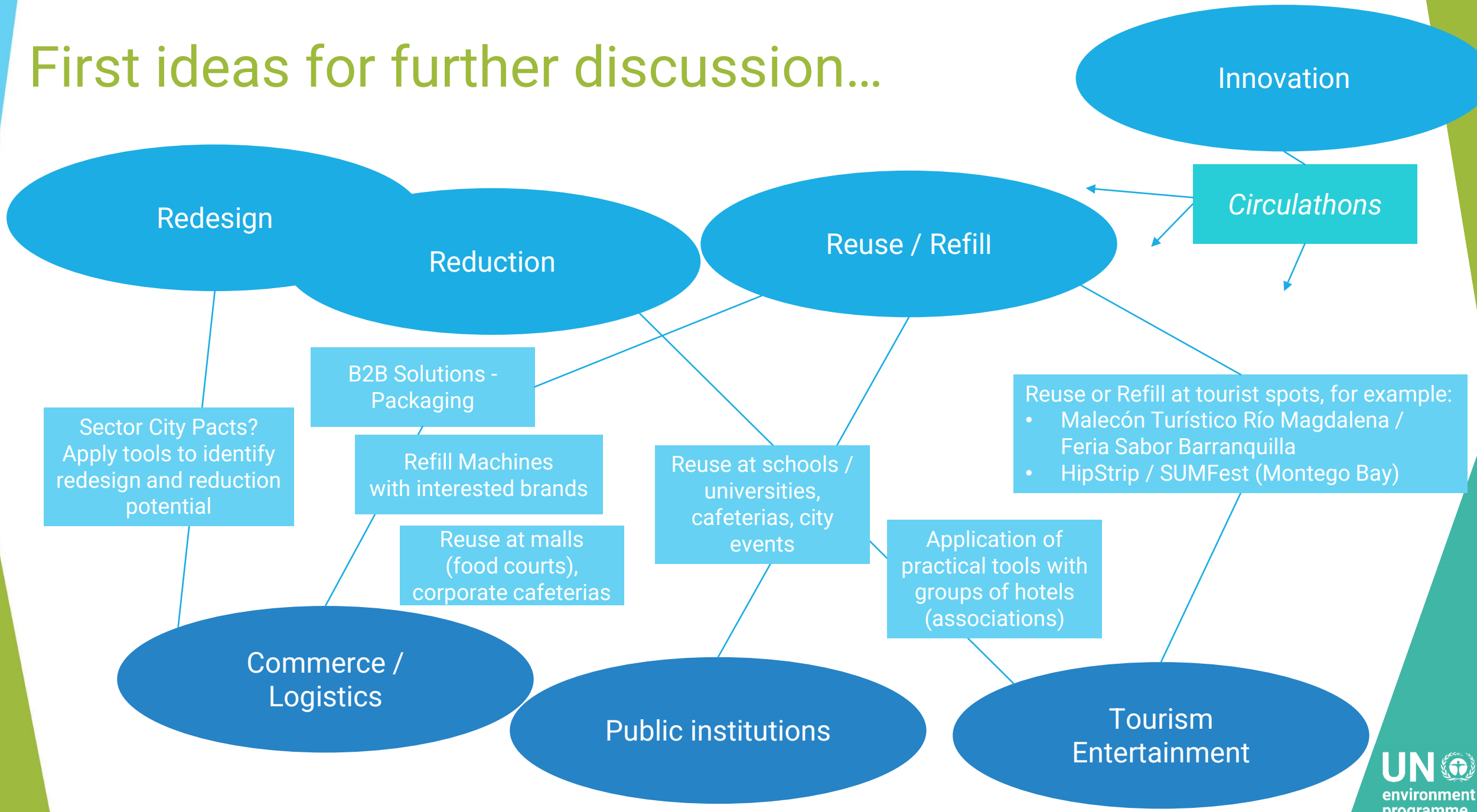
3. FIRST IDEAS AND RECOMMENDATIONS

3

Cities can play a crucial role in piloting upstream solutions!!!

- **Circular Design and Reduction**: Select sectors with high relevance and interest in your city to apply tools for packaging redesign and reduction of plastic waste
- **Reuse and Refill**: Initiate with highly visible, closed-loop systems with recurring habits and opportunities of sharing washing infrastructure. Offering space and create partnerships to establish first refill stations.
- **Innovation**: Build alliances and connect circular innovation eco-system actors around (*upstream*) solutions for concrete city challenges
- *Promote **policy / financial instruments** that leverage and enhance pilot projects*

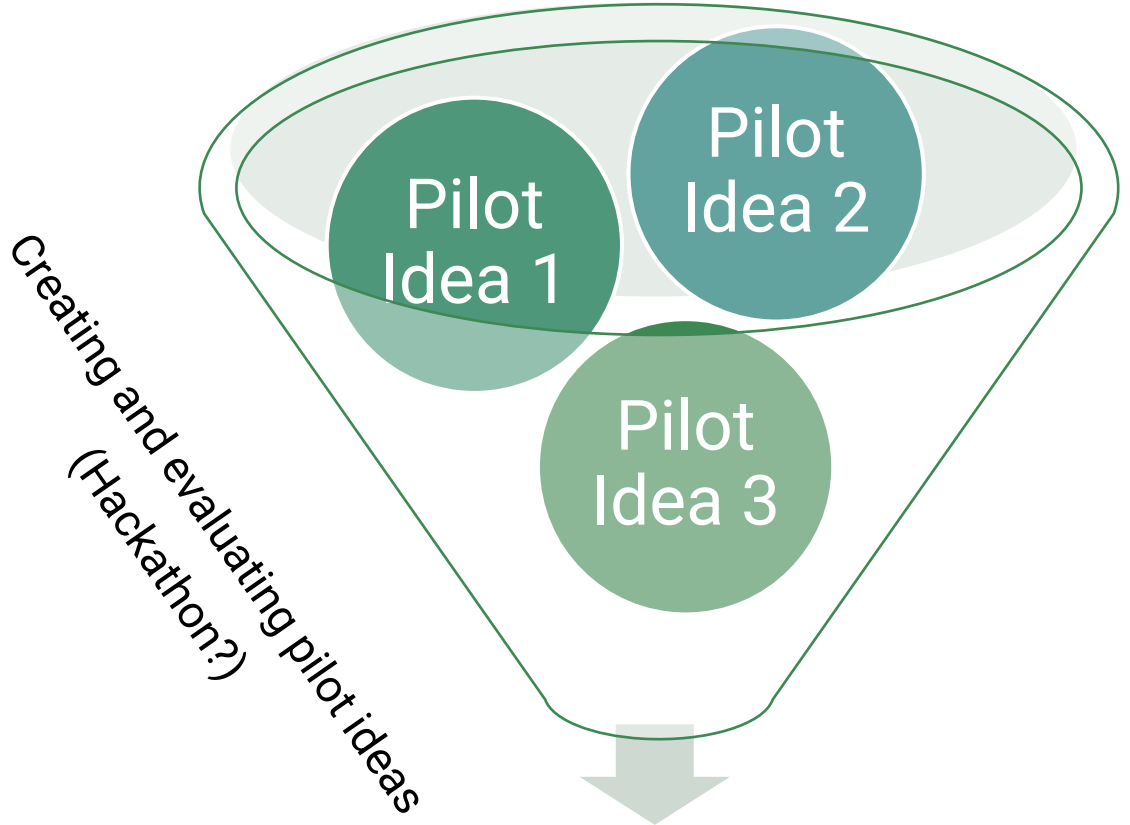
First ideas for further discussion…



Proposal

Supporting the identification and evaluation of potential upstream pilots in the partner cities

- Identify existing initiatives, alliances, road maps, etc.
- Identify possible sectors and partners with demand, opportunities and interest



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4. NEXT STEPS

4

Next steps

1. Share this **presentation** and an extended version with additional useful information *(June 2025)*
2. Peter could give a more detailed presentation on specific concepts or practices and will organize **bilaterial meetings** to define next steps regarding pilot selection / design process *(mid June – July 2025)*
3. Recheck work plans assuring adequate **budget allocation** for activity 2.2.1 and indicator (*identify and pilot one upstream intervention per city*)
4. Save the Date for the "**Regional Session on Downstream Solutions** *(18.07.2025)* - *Save the date will be sent out soon*

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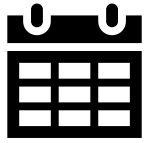
Regional session on downstream solutions – *Save the date!*

Objective: Present and discuss key concepts and practical examples to inspire your pilot project design.
Objetivo: Presentar y discutir conceptos claves y ejemplos prácticos para inspirar el diseño de sus proyectos pilotos

Downstream Session

Good practices on **downstream innovations and solutions** to collect and recycle

Buenas prácticas sobre **innovaciones y soluciones *downstream*** para la colección y reciclaje del plástico



18.07.2025

09:00 a.m.

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