

# Evaluating Progress on Plastic Pollution Mitigation: Circularity & Plastic Footprint

A case study



# Authorship

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# Foreword

The plastic pollution crisis is one of the most pressing environmental challenges of our time. Our oceans, rivers, and lakes are inundated with plastic waste, with only 9% of plastic recycled globally. This underscores the urgent need for innovative solutions to shift away from the inefficient take-make-waste economy.

The case study "Evaluating Progress on Plastic Pollution Mitigation: Circularity & Plastic Footprint," developed by Earth Action with the support of WBCSD, examines how companies can address this issue. It highlights three key strategies: narrowing, slowing, and closing the plastics loop.

**Narrowing the Loop:** This involves reducing the total amount of materials used, especially problematic and unnecessary plastics, through scientific, life-cycle assessment-based approaches.

**Slowing the Loop:** Extending the lifespan of products through reuse, repair, and refurbishing. This reduces the need for new materials and the volume of waste generated, moving away from single-use plastics.

**Closing the Loop:** Enhancing recycling and recovery to keep materials in use. The Circular Transition Indicators (CTI) measure material circularity, assessing the effectiveness of closing the loop between material inflows and outflows.

The case study shows that while increasing recycled content and improving product design are crucial, they alone are insufficient. True impact comes from combining these efforts with robust waste management practices and proactive reduction targets.

As the UN Treaty on Plastic Pollution takes shape, companies must adopt these comprehensive strategies. The treaty's multi-stakeholder action agenda and mandatory corporate disclosure will help ensure accountability and standardize plastic-related data.

Metrics like material circularity and plastic footprint are complementary and must be used together. Circularity strategies capture material flows for recycling, while the plastic footprint approach focuses on avoiding environmental leakage. Using both metrics provides a comprehensive strategy to tackle plastic pollution.

The time to act is now—let this case study serve as a roadmap for achieving a circular economy and ending plastic pollution.

**Delphine Garin (Manager, Plastics & Packaging at WBCSD) & Sarah Perreard (Co-CEO at Earth Action)**  
September 2024



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# How to read the report

Refer yourselves to these icons to help you navigate the presentation



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# 1. Executive summary

Main results and take away of the case study

# Executive summary

This report evaluates the trajectory of plastic pollution from a company's operations under varying scenarios of circularity actions and waste management strategies through to the year 2040.

## **Scenario A – Business as Usual:**

Under the business-as-usual framework, we anticipate a steady rise in plastic pollution due to unchanged production and consumption patterns, leading to a predicted increase in waste leakage to oceans from 7 kt in 2023 to 10 kt in 2040.

## **Scenario B – A First Layer of Circularity:**

With the introduction of circularity actions focusing on recycling and repair, the scenario projects a modest improvement in WBCSD's Circular Transition Indicators (CTI) % material circularity indicator, emphasizing the need for more robust measures.

## **Scenario C – A Stronger Layer of Circularity:**

An advanced circularity strategy that pairs upstream actions with downstream waste management interventions shows promise. The scenario highlights a more significant increase in WBCSD's % material circularity, suggesting an enhanced circularity profile.

## **Scenario D – Circularity and Reduction:**

Incorporating reduction targets alongside circularity actions translates into the most substantial improvement in material circularity and a marked decrease in plastic pollution. This scenario underscores the critical impact of reduction strategies on mitigating plastic pollution.

Across all scenarios, it is evident that while specific circularity interventions can significantly influence circularity scores, they do not always correspond to reducing plastic

pollution. On the other hand, implementing plastic reduction strategies directly impacts plastic pollution but is not reflected in the circularity score.

This dichotomy highlights an essential finding: focusing solely on circularity does not provide companies with the strategies they need to properly address the ongoing challenge of plastic pollution. Therefore, a comprehensive plastic strategy must holistically integrate circularity actions with robust reduction targets to turn off the tap of plastic waste.

Pursuing zero plastic pollution by 2040 remains an ambitious and complex goal. This report's data-driven insights emphasize the need for a balanced approach that embraces the principles of circularity and champions the cause of absolute waste reduction. Such an integrated strategy will be critical to significantly mitigating plastic pollution.

# 2. Covering the Basics

- Plastic Footprint explained
- The Circularity Indicator explained



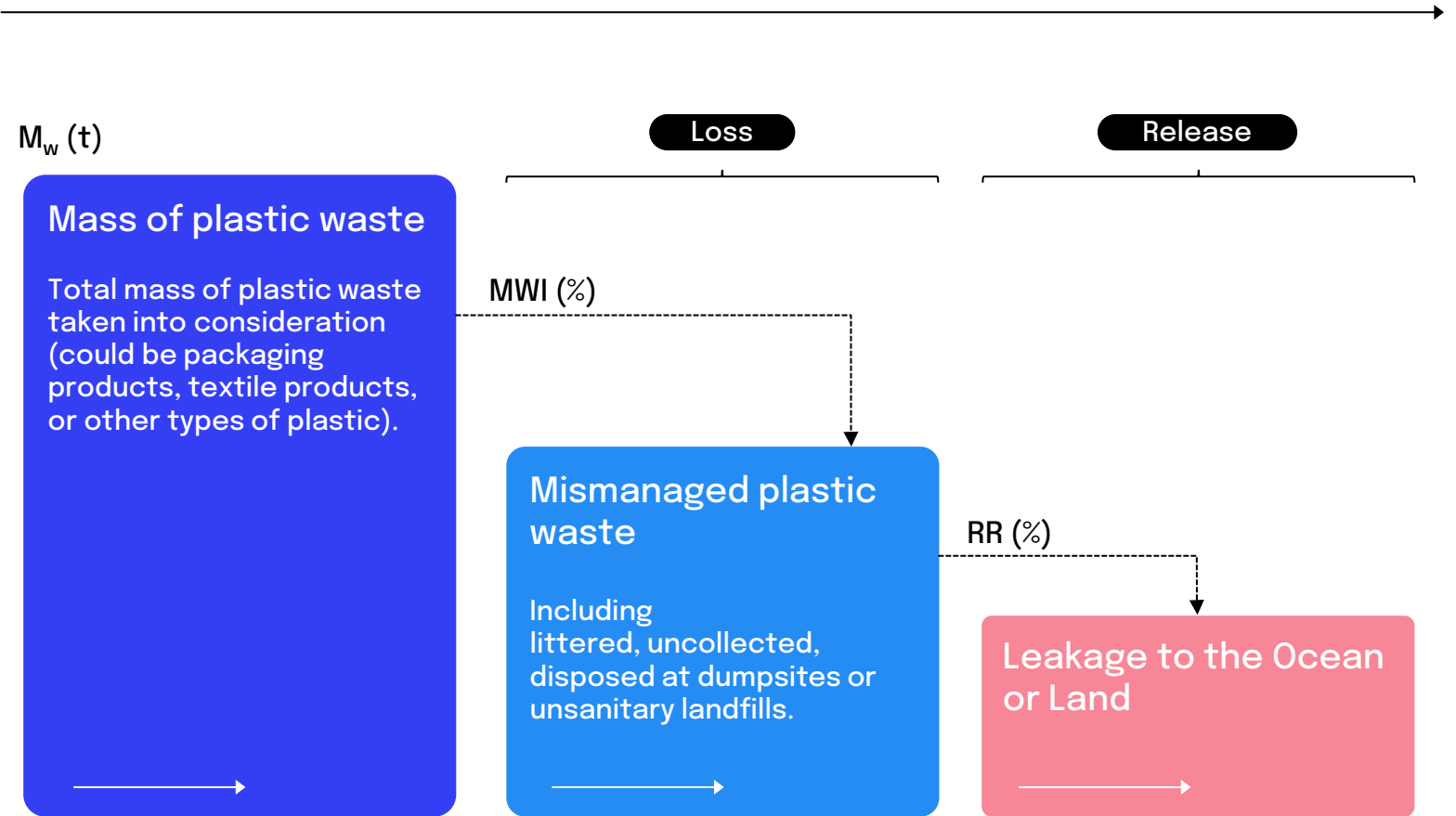
# Plastic Footprint

A plastic footprint measures plastic leakage, defined as the plastic leaving the technosphere and accumulating in the natural environment (soil, air, rivers, and/or ocean).

During a plastic leakage assessment, we focus on the total amount of **plastic waste generated**, the pollution it generates (which corresponds to the **mismanaged plastic waste** in this figure), and the **leakage** to the natural compartments.

Source: Plastic footprint methodology as defined by the Plastic Footprint Network.

$$\text{Leakage} = \text{Mass of waste (kg)} * \text{Mismanaged Waste Index (\%)} * \text{Release Rate (\%)}$$



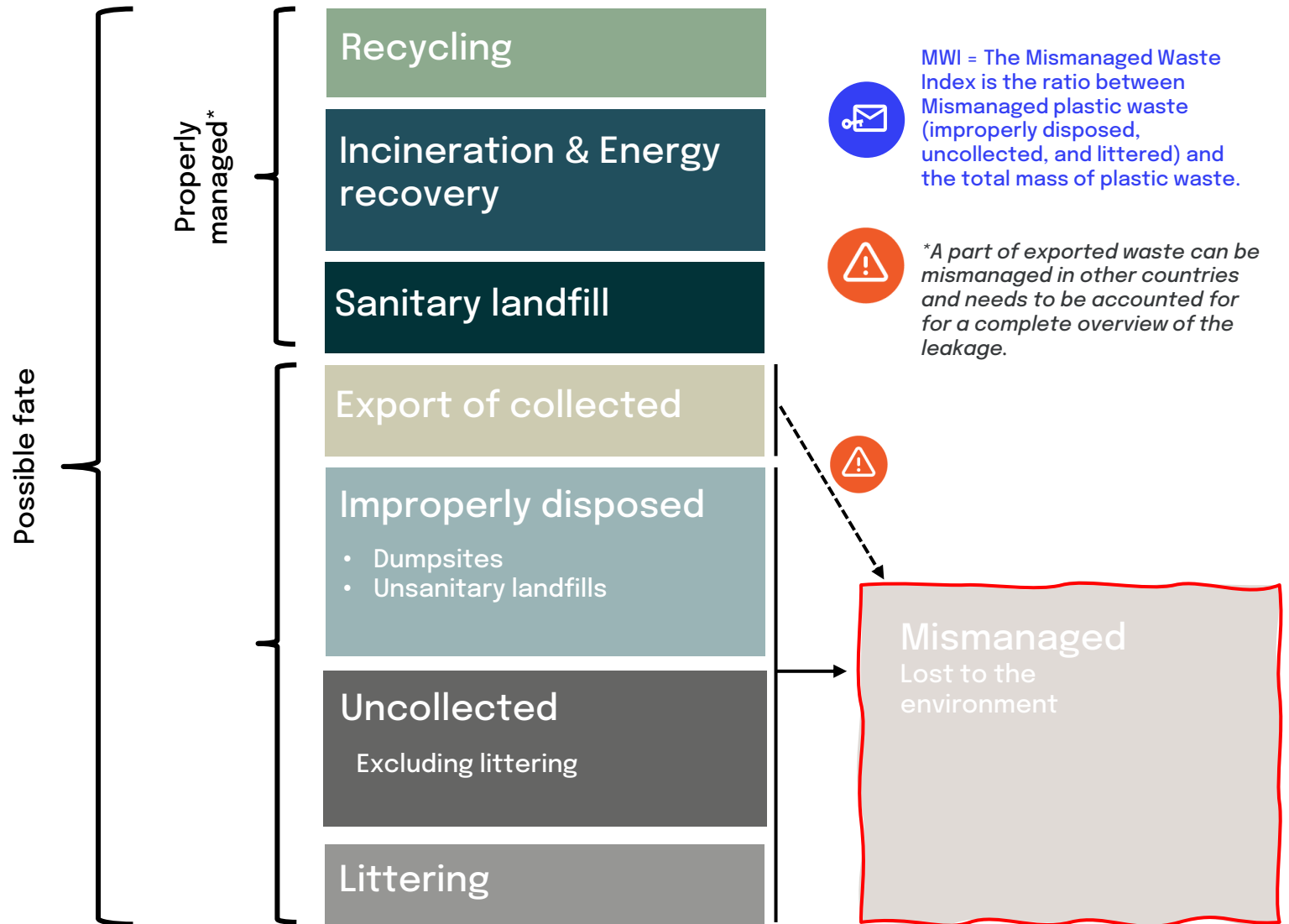
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# Plastic Pollution

The United Nations Environment Programme (UNEP) defines plastic pollution as the **negative effects and emissions resulting from the production and consumption of plastic materials across their entire life cycle**. This includes **mismanaged plastic waste**, such as being open-burned or dumped in uncontrolled sites, and the **leakage** and accumulation of plastic objects and particles that adversely affect humans, wildlife, and the non-living environment.

While recognizing that plastic pollution encompasses the externalities from plastic production and consumption, in this presentation, we will refer to **plastic pollution as the quantities of plastic waste that are mismanaged**. Our focus will be on material pollution, specifically physical pollution, rather than atmospheric or water pollution related to the production process.

Plastic waste is considered mismanaged when it is littered, uncollected, or collected but improperly disposed of, such as in unsanitary landfills or dumpsites. By concentrating on this aspect, we aim to address the tangible impacts of plastic waste in the environment.



# Circularity assessment | Material circularity

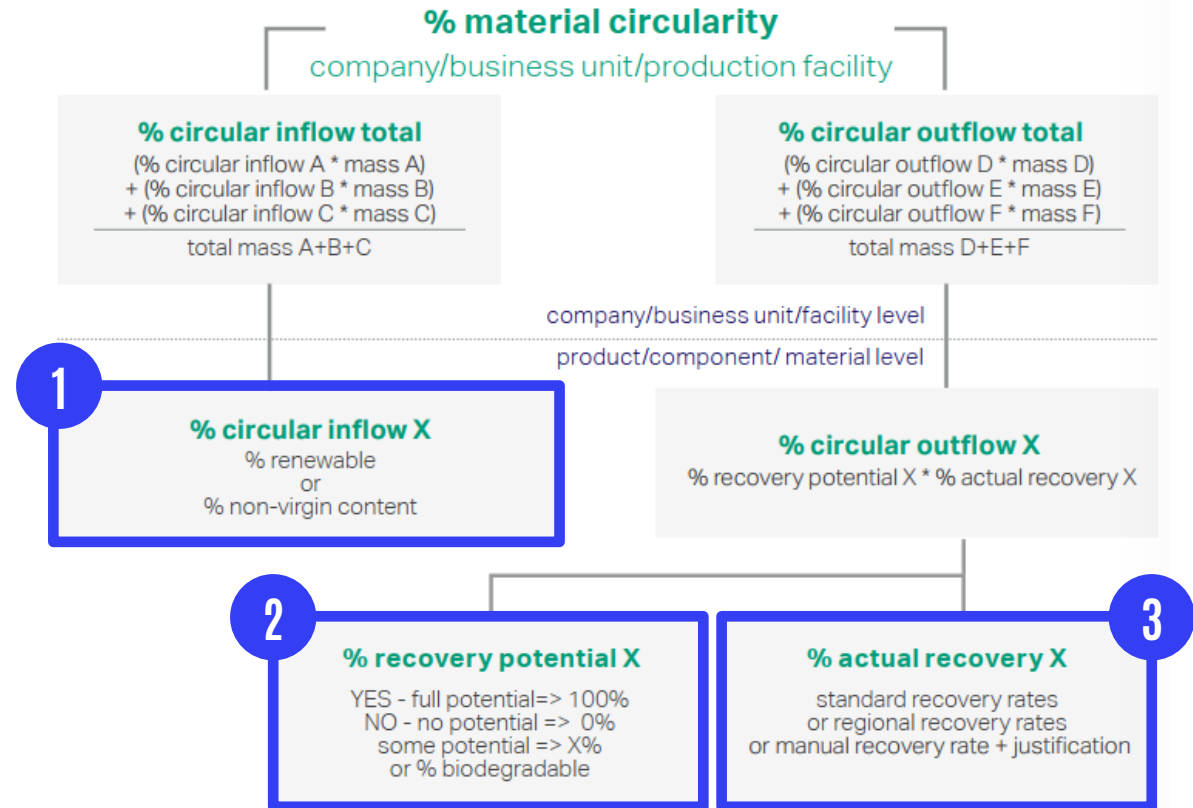
The **Circular Transition Indicators (CTI)** are a set of metrics developed by WBCSD to measure the circularity of a business. The metrics can be used at the company, business unit or facility and/or product level.

The current project uses the **% material circularity** indicator as the indicator depicting the ability of a company to «close the loop» of its material flow. This indicator depends on the degree of circularity of the **company/facility/product's inflows and outflows**.

It is based on three key metrics:

1. The **circular inflow**: how much renewable or non-virgin content is present in the product.
2. The **recovery potential**: how much materials in the product are recoverable at its end-of-life.
3. The **actual recovery** rate: how much of the collected materials are actually recover in the end-of-life treatment process.

Figure 12: % material circularity



# 3. Introduction

A case study on how plastic pollution and circularity are interconnected, and how different interventions affect them differently.

# Introduction

This case study explores the operational practices of a large sports equipment producer, which has a diverse product range, including apparel, accessories, and various sporting goods, along with their packaging.

The primary focus is to evaluate the environmental repercussions of the company's plastic consumption under various operational scenarios.

## Scenarios explored

### Business-as-Usual

We examine the current situation (business-as-usual), where existing production and waste management practices continue without significant changes.

### Mitigation Actions

A set of alternative actions are considered:

- Circular business models
- Use of recycled inputs (replacing virgin plastic where possible)
- Reduction of quantities of plastics used in production

## Metrics of evaluation

### Plastic Pollution

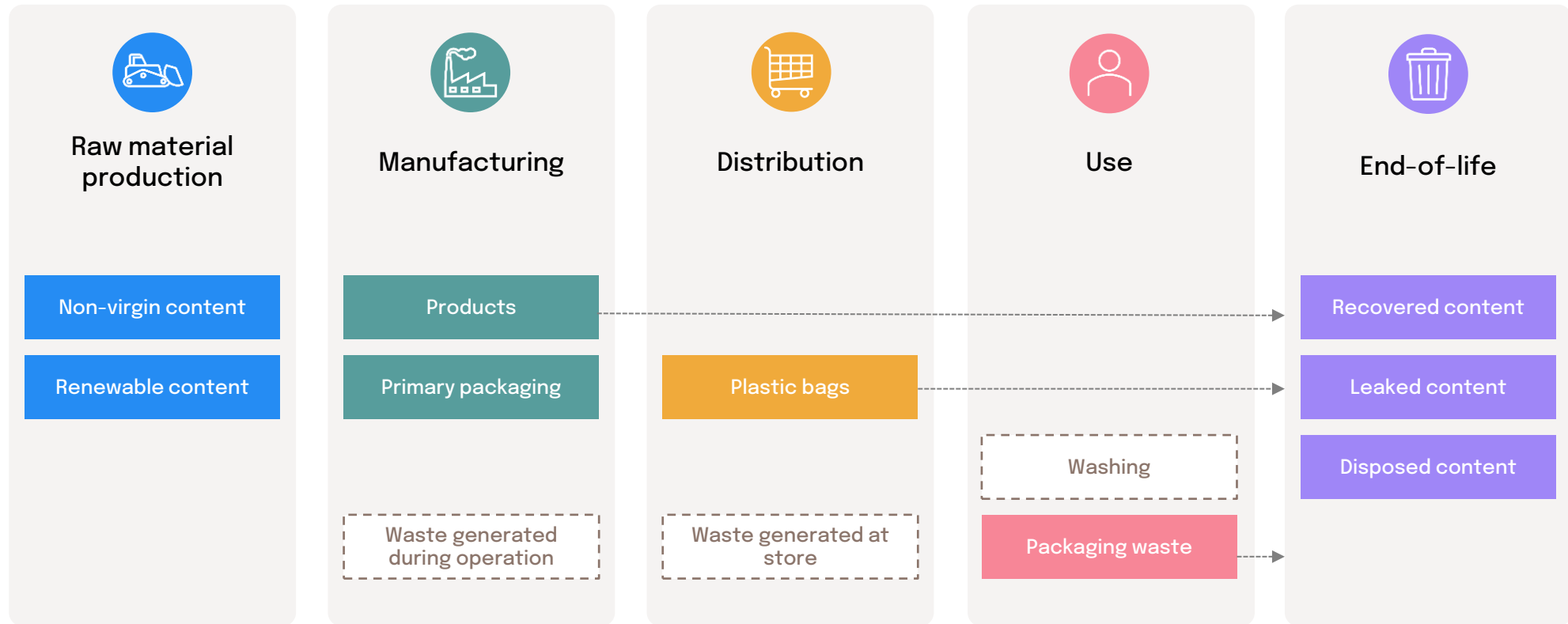
Quantified by the metric tons of plastic leakage, this measures the amount of plastic waste the company generates that is disposed of improperly, thus entering natural environments like oceans and lands.

### Material circularity\*

Assessed through the % material circularity indicator of the CTI methodology, this metric provides a percentage score indicative of the company's circularity, calculated from the inflows and outflows of materials within the company's material streams.

*\*Material circularity will be assessed using the material CIRCULARITY indicator of the CTI*

# System boundaries



Lorem ipsum

Not included in the analysis

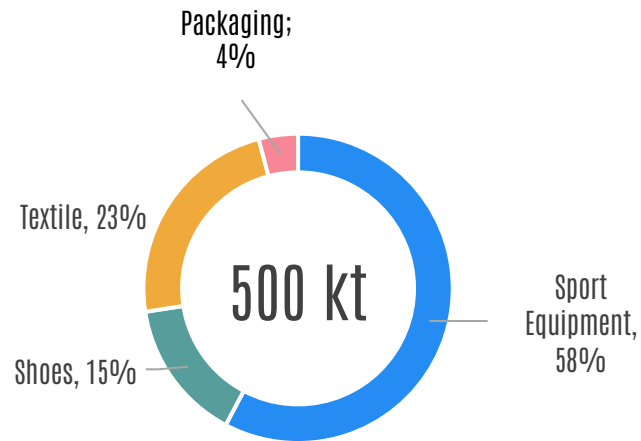
# Case study hypotheses

This case study is based on a real-life modeling of a company's plastic pollution mitigation actions that Earth Action collaborated on in 2023. Various teams collected data and piloted strategies to promote circularity and reduce plastic pollution.

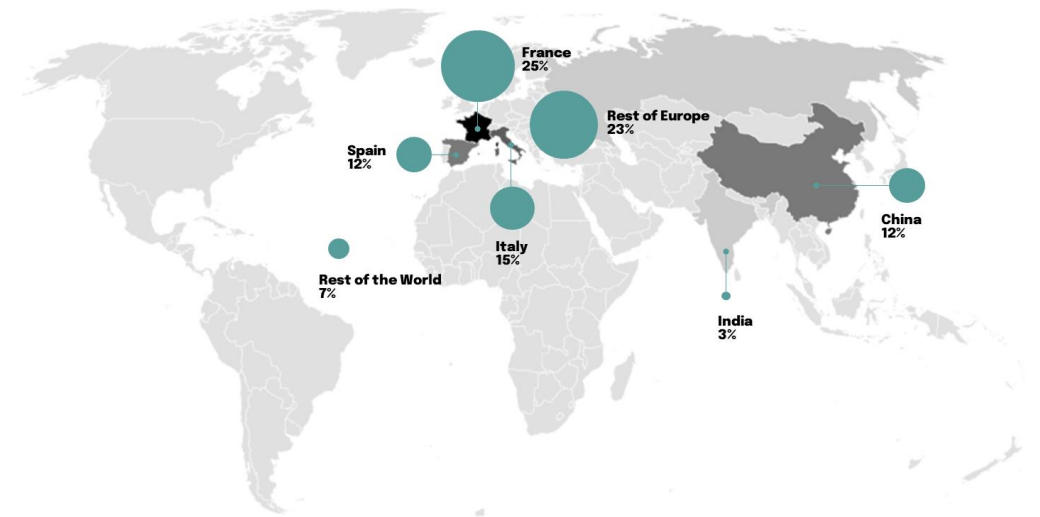
While the mitigation actions and their effectiveness are grounded in reality, certain details such as sales volumes and company growth have been altered to protect the company's anonymity.



In 2023, the company used half a million tons of plastic across a diverse product range, including sporting equipment, textile garments, footwear, and packaging materials. The distribution of plastic usage among these categories is as follows:

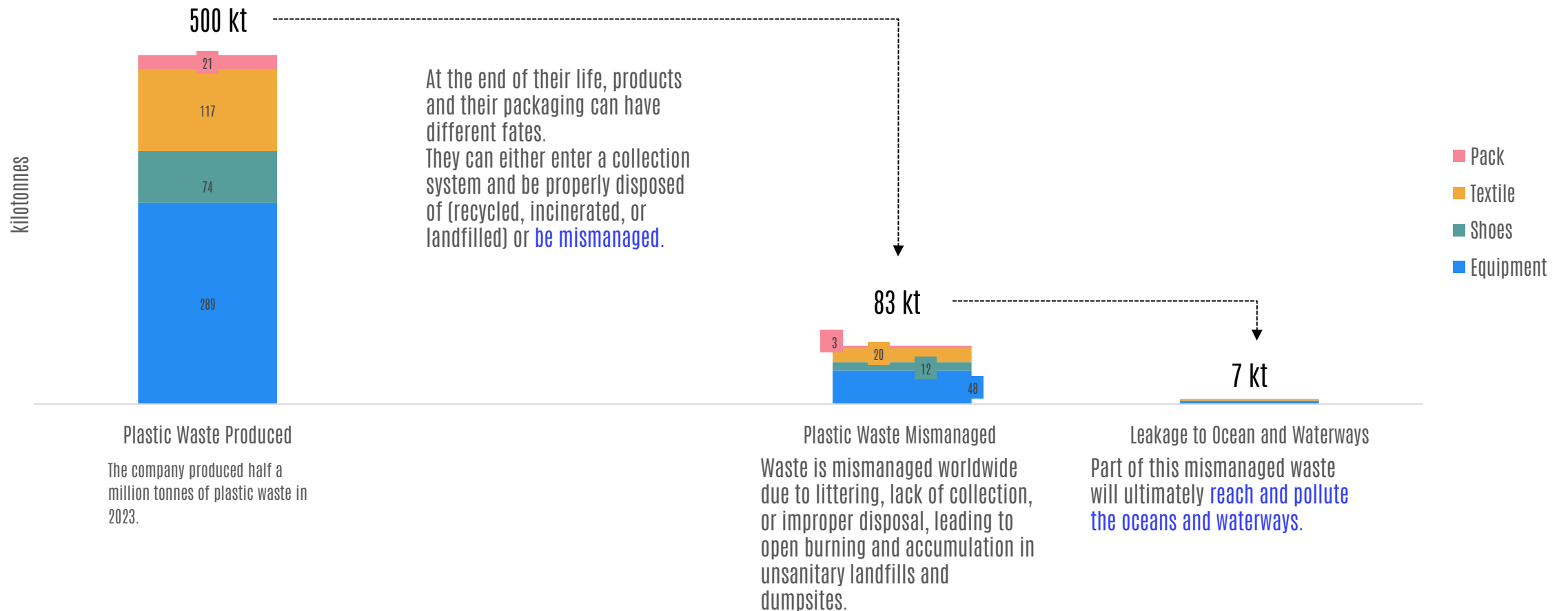


The company's products are distributed globally, with the predominant sales volumes occurring in Europe (mainly France, Italy, and Spain) and China.



# Baseline - Plastic pollution

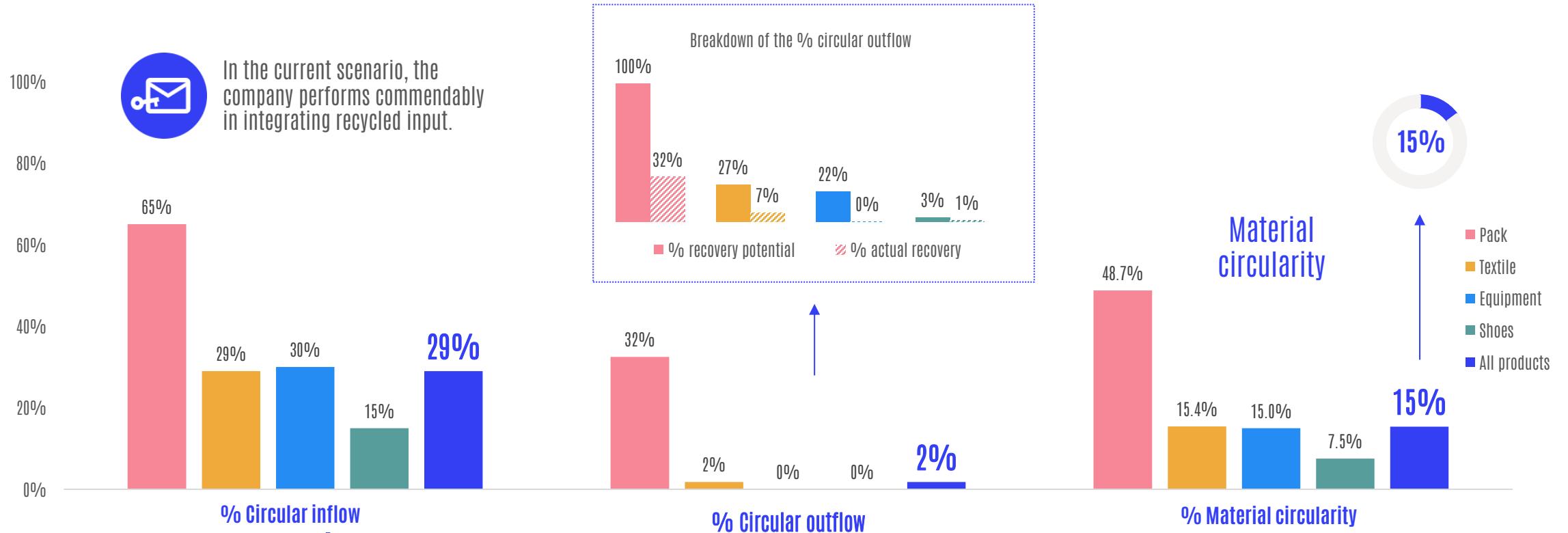
Based on the countries of sales and their local waste management practices, approximately **17% of the waste generated by the company will pollute aquatic and terrestrial environments.**





# Baseline - Material circularity

The circularity profile varies based on the type of product. It is influenced by a range of factors tied to their lifecycle. The products are not distributed equally, packaging being only 4% of the total portfolio and equipment being almost 60%, so this will be taken into account to calculate the overall score. As a result, the company has a circularity inflow metric score of 29% and a circularity outflow metric score of 2%, resulting in an **overall material circularity indicator of 15%**.

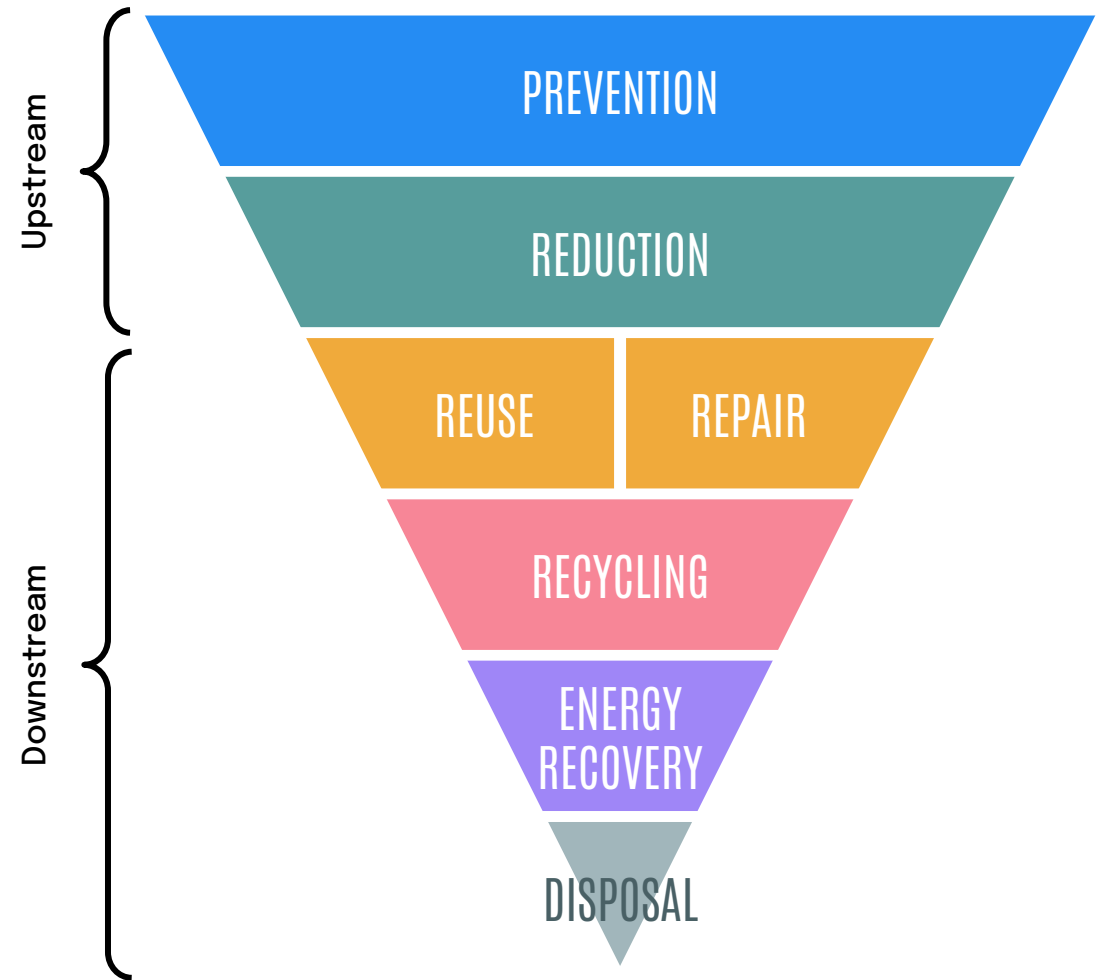


It also performs well in recovery potential, however, there is a marked underperformance in the domain of actual recovery. The gap between potential and actual recovery is most pronounced within the textile, footwear, and equipment categories. A contributory cause to this gap is identified as the lack of robust recovery and recycling infrastructure, which prevents the achievement of higher actual recovery values.

## Taking action: The waste hierarchy

To decrease the environmental footprint associated with plastic usage within the company's value chain, a series of strategic actions are proposed, informed by the principles of the waste hierarchy:

- **Prevention:** Eliminating the use of plastic where feasible and avoiding waste creation in the first place.
- **Reduction:** Decreasing the amount of plastic used in corporate operations.
- **Reuse:** Extending the lifecycle of products through secondary use.
- **Repair:** Increasing product longevity through repair, repurposing, refurbishing, or remanufacturing.
- **Recycling:** Reclaiming plastic materials through recycling (downstream) and incorporating recycled plastics into new products (upstream).
- **Energy Recovery:** Extracting energy from plastic materials via incineration.
- **Disposal:** Ensuring plastic materials are disposed of without environmental leakage.



# 4. Scenario A - Business-as-usual

Analysis of circularity and plastic pollution in a  
business-as-usual (BAU) scenario

# Business as Usual - Plastic pollution

Our projections indicate an incremental rise in plastic pollution in a business-as-usual scenario, where current production and waste management practices remain unchanged. The graph provides a detailed forecast of the company's plastic waste profile, delineating three critical aspects: waste generation, waste mismanagement, and the resulting leakage into marine environments.

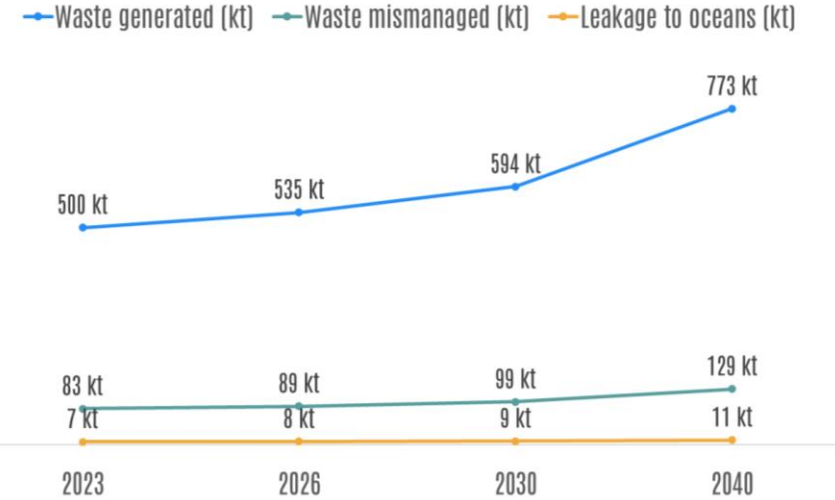
The data suggests that if no mitigative actions are implemented, the total volume of plastic waste the company generates is anticipated to expand significantly, driven by consistent production growth and consumption patterns. Concurrently, the proportion of this waste that is mismanaged—indicative of insufficient recycling, recovery, and disposal mechanisms—also shows an uptrend. This mismanagement leads to an increase in the leakage of plastics.



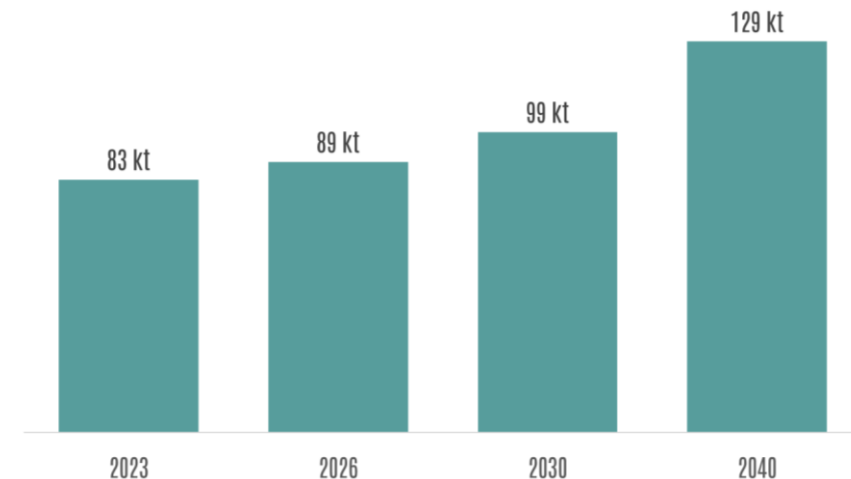
**Without intervention, plastic waste mismanaged is forecasted to rise from 83 kilotons (kt) in 2023 to 129 kt by 2040.**



What happens to the company plastic waste?  
How does the situation evolve until 2040?



Waste mismanaged (kt)



*\*industry growth based on OECD projection for clothing, consumer products, other textiles and packaging. It starts at 102.1% from 2023 to 2024 and grows until 102.6% from 2039 to 2040.*

# 5. Scenario B - A first layer of circularity

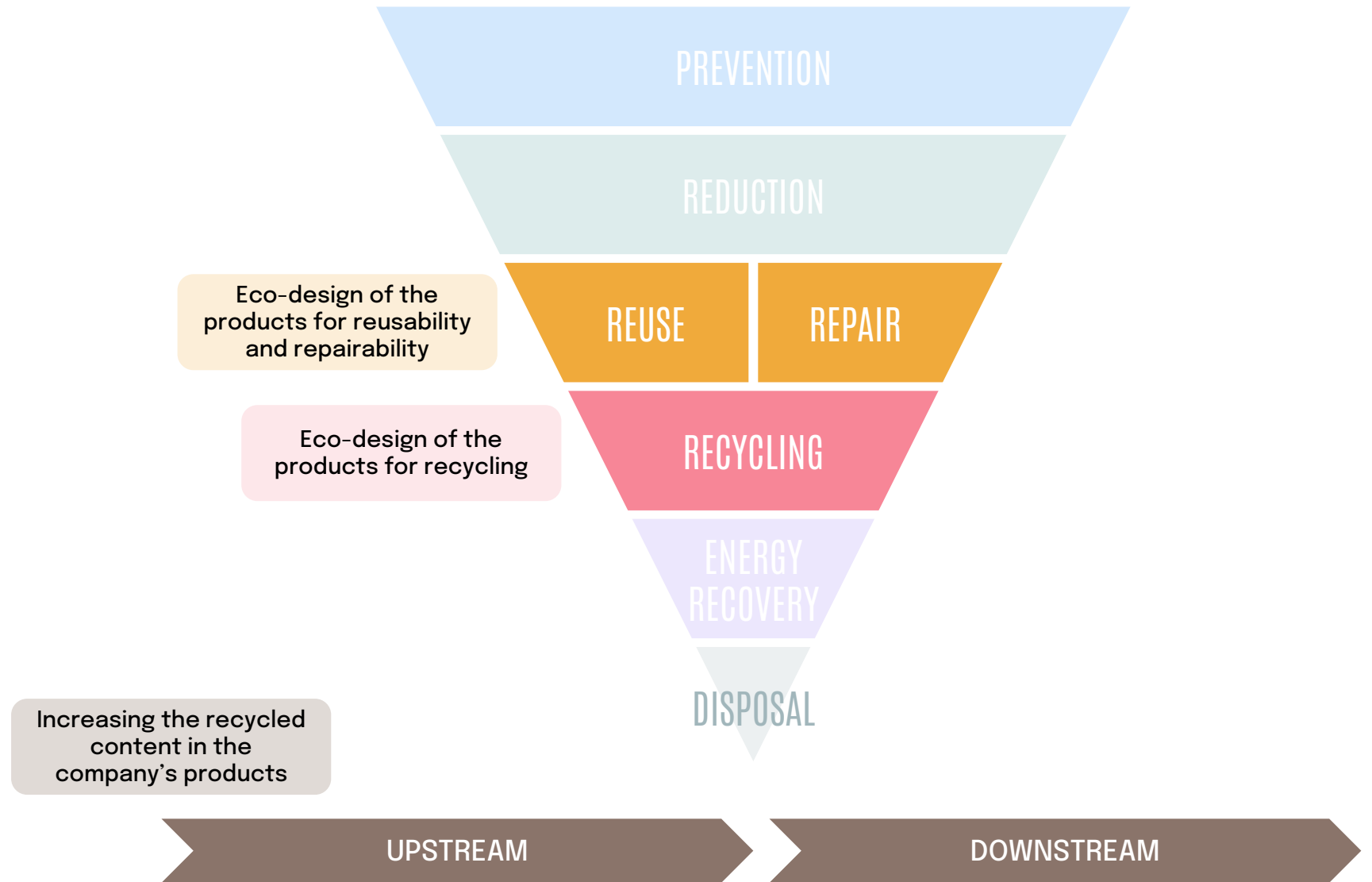
Analysis of circularity and plastic pollution in a scenario with targeted circularity actions in upstream processes, recycling, and repair.

# Starting with circularity low hanging fruits

Under Scenario B, selected circularity actions will be executed, targeting enhancements in recyclability, product repairability, and recycled content use.

The primary **focus** is on **upstream activities**, emphasizing the adoption of **recycled content** and the integration of **eco-design principles** into product and packaging development.

This will affect the % circularity inflow and for the % circularity outflow, it will affect only the % potential recovery, but not the % actual recovery.





# Actions of the first layer of circularity

The actions modeled vary in their impact on the different metrics used in this study, as follows:

**LEGEND:**

 increase/decrease

 no change


 ≈ small changes possible, but not included in our modeling for this case study.

## Increase in recycled input

The company which was already integrating about 30% of recycled input in its products plans to progressively increasing it up to 80% in 2040.

Plastic pollution 

Circular inflow 

Circular outflow 

## Eco-design for recycling

Ensuring that products are recyclable. While this was already the case for about a fourth of the portfolio, the aim is to reach 80% of recyclable products by 2040.

Plastic pollution 

Circular inflow 

Circular Outflow\* 

## Eco-design for repair

Ensuring that products are dismantlable and repairable. The aim is to go from a fourth of the portfolio to 80% of dismantlable and repairable products by 2040.

Plastic pollution 

Circular inflow 

Circular Outflow\* 

\* Under this scenario only the % recovery potential is affected, the % actual recovery stays the same. This will mean that overall, the % circularity outflow will not improve much.

# First layer of circularity



**Rising Circularity Metrics:** The material circularity percentage significantly increased, suggesting that the circularity of the company is improving.



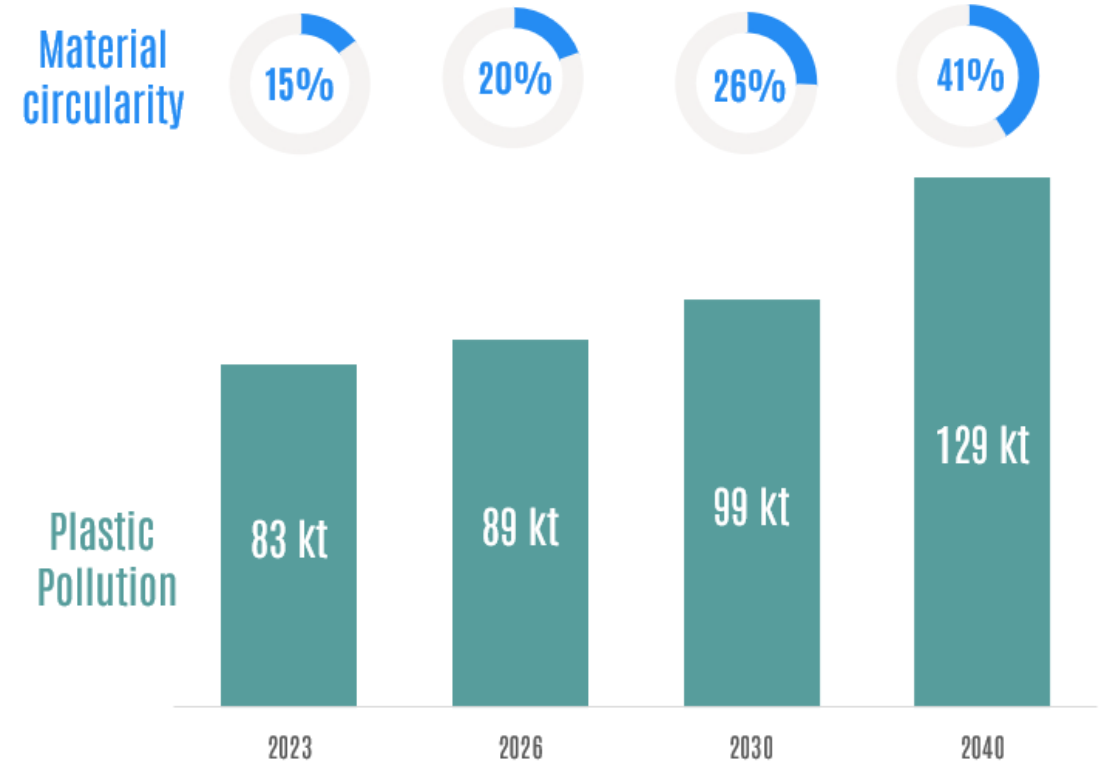
**Escalating Plastic Pollution:** Despite the increase in overall company circularity, the absolute quantity of plastic pollution is projected to rise since the operations are projected to grow with time. This is because the selected circularity actions only affect the inflow, with no effective results on the outflow.



**Need for balanced circularity strategies:** The increase in plastic pollution, despite numerous ambitious circularity actions, highlights the necessity for a comprehensive strategy. This strategy should not only focus on recycled content (inflow) and the potential for recyclability and repairability (recovery potential) but also on actual recovery. Without the development of adequate waste management infrastructures and a robust plastic reduction strategy, plastic pollution will continue to rise. Consequently, a company might produce more plastic pollution even if its circularity score improves.



## How will the plastic pollution generated by the company's operation evolve until 2040 under this scenario?



*In the CTI methodology for the material indicator, only the circularity inflow is significantly affected. The outflow remains largely unchanged because, although the potential recovery percentage increases, the actual recovery percentage does not improve due to the lack of new infrastructure development.*

*This highlights a critical challenge: as the company grows, its environmental footprint expands, even with enhanced circularity practices.*



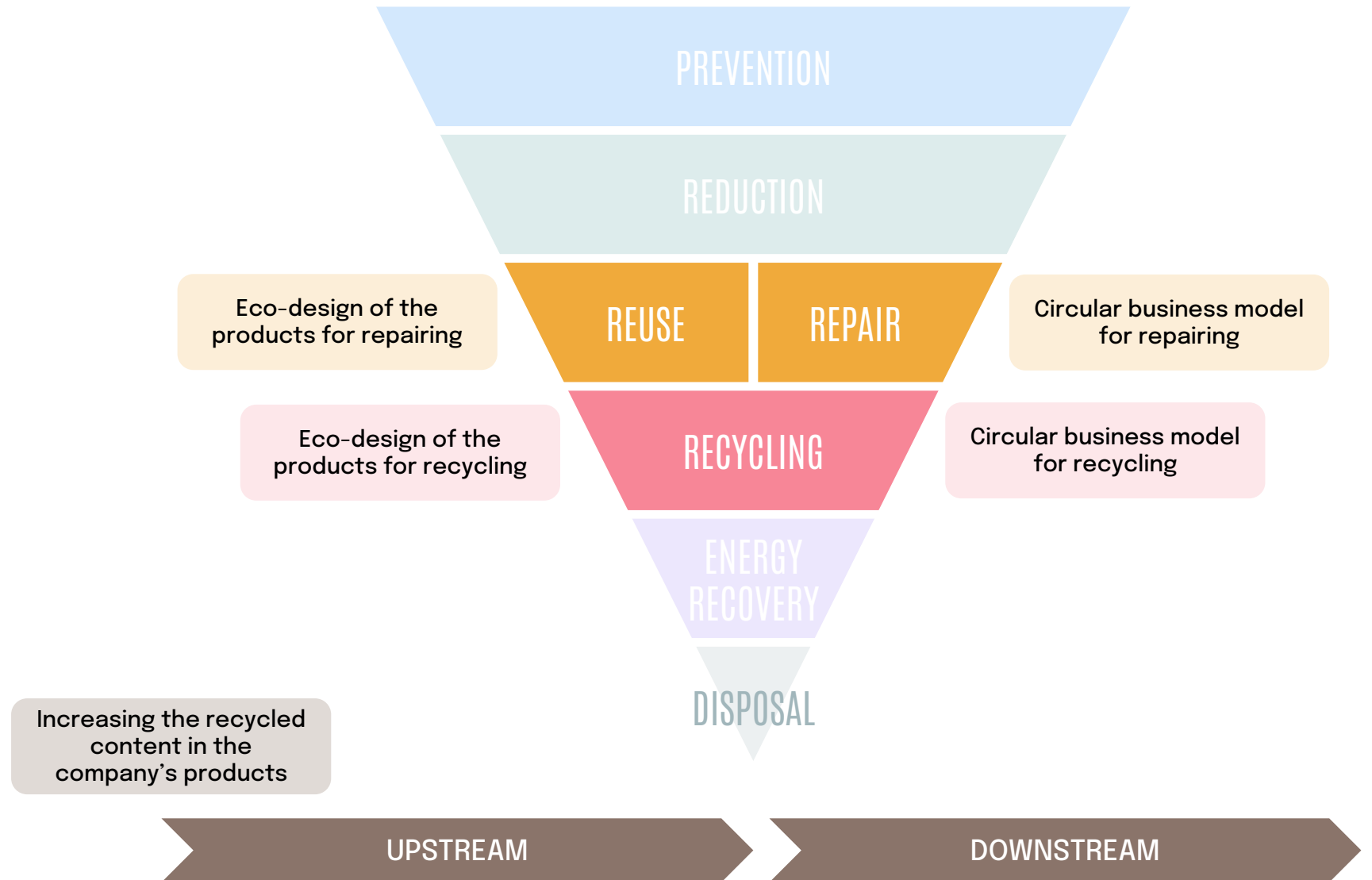
# 6. Scenario C - A stronger layer of circularity

Analysis of circularity and plastic pollution in a scenario where upstream circularity actions are coupled with downstream (waste management) actions.

# Adding a stronger layer of circularity

Scenario C acts on the same categories of the waste hierarchy as Scenario B: improving the recycling (both upstream and downstream) and repairing the products.

The difference with Scenario B is that in Scenario C, the **focus** is both on **upstream activities**, and on **downstream activities**. The company therefore also develops initiatives that directly **influence the post-consumer level**, and will affect the % actual recovery.





# Additional actions in the stronger layer of circularity

The actions modelled vary in their impact on the different metrics used in this study, as follows:

**LEGEND:**

 increase/decrease

 no change

 ≈ small changes possible, but not included in our modeling for this case study.

## Development of a Repair-Focused Business Model

Customers are encouraged to return products in need of repair to the company's stores. These items are then repaired, allowing customers to extend the product's lifespan instead of purchasing new ones.

Plastic pollution



Circular inflow



Circular outflow



## Establishment of a Recycling-Driven Business Model

This initiative invites customers to bring end-of-life products back to the stores, enabling the company to manage the recycling process. The company collaborates with recyclers to ensure the effective processing of returned products.

Plastic pollution



Circular inflow



Circular outflow



## An additional layer of circularity



**Rising Circularity Metrics:** The material circularity indicator shows a significant upward trend, surpassing the improvements seen in Scenario B. This suggests that the circularity practices implemented are more effective.



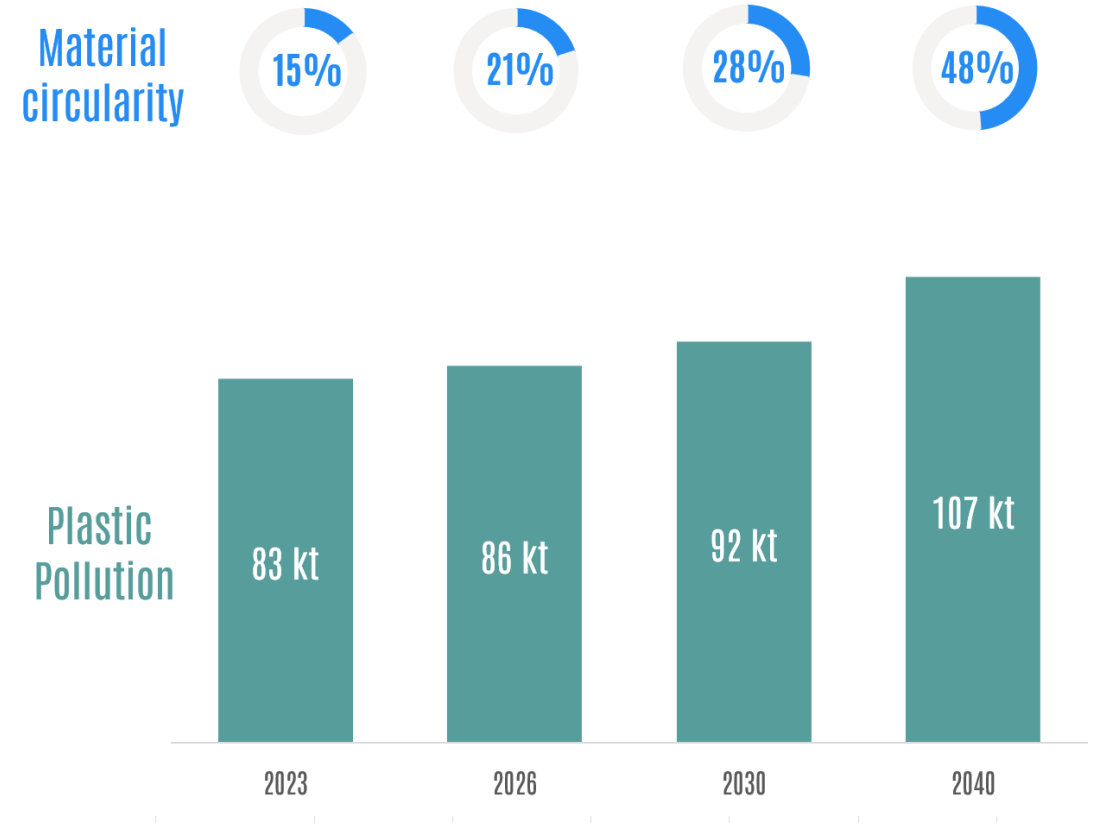
**Escalating Plastic Pollution:** Although the absolute quantity of plastic pollution is projected to increase, it will do so at a slower rate compared to Scenario B. This is due to the additional actions that directly address the end-of-life management of products (outflows), coupled with the development of waste management infrastructures.



**Implications:** The continued rise in plastic pollution, despite enhanced circularity efforts, highlights the need for a more aggressive approach to further reduce the absolute volume of waste. This suggests that improving circularity alone may not be sufficient to mitigate the company's impact on plastic pollution.



How will the plastic pollution generated by the company's operation evolve until 2040 under this scenario?



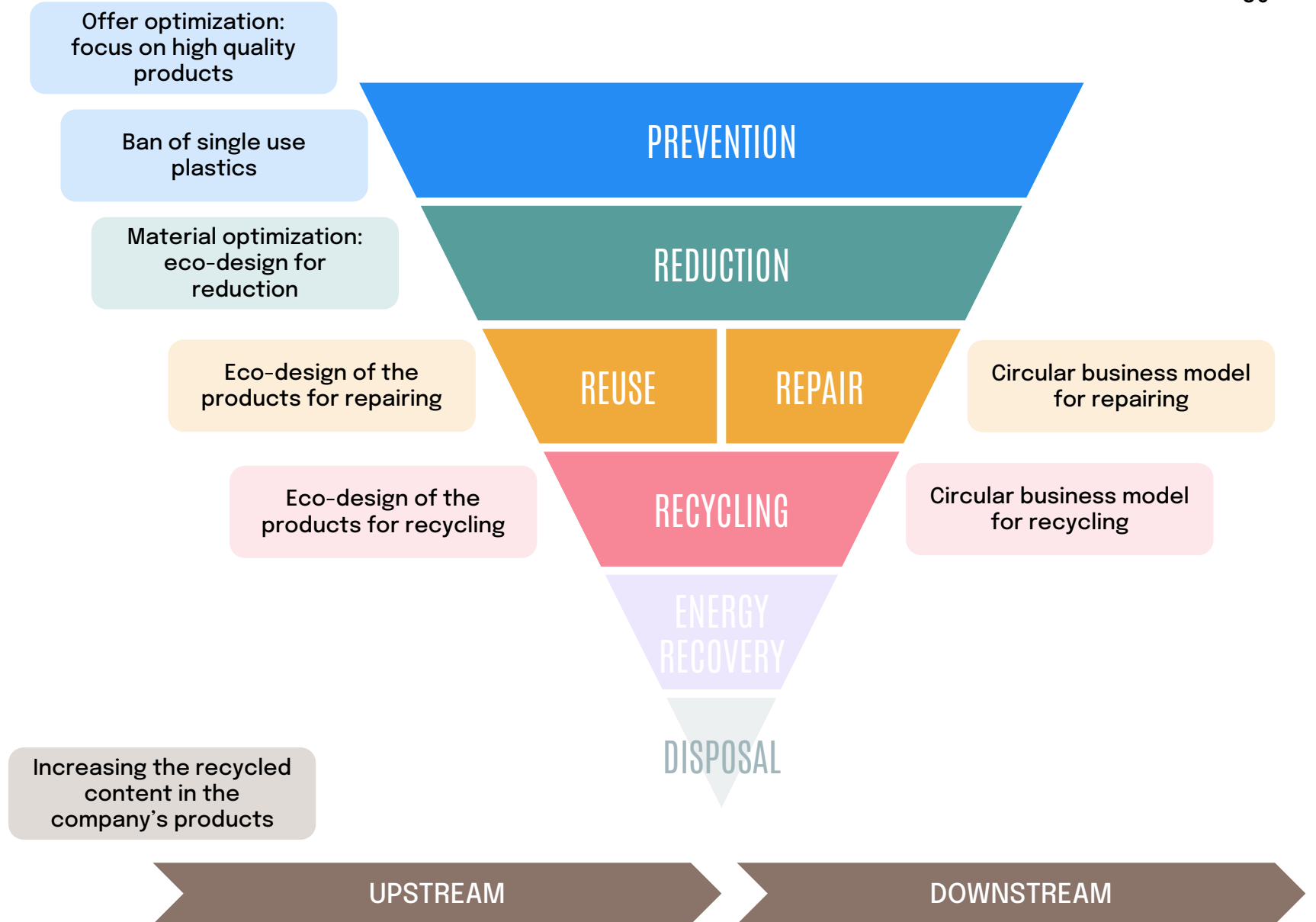
*In the CTI methodology for the material indicator, both the circularity inflow and outflow change.*

# 6. Scenario D- Implementation of both Circularity and Reduction actions

Analysis of circularity and plastic pollution in a scenario where circularity actions and waste management actions are coupled with reduction targets.

# Moving up the waste hierarchy

In this ultimate scenario the company broadens its scope to prioritize the **uppermost tiers of the waste hierarchy**. Building upon previous initiatives in recycling and repair, the strategy now includes proactive measures for plastic reduction and prevention.





# Additional actions on reduction

The actions modelled vary in their impact on the different metrics used in this study, as follows:

**LEGEND:**

 increase/decrease

 no change

 ≈ small changes possible, but not included in our modeling for this case study.

## Material optimization

The company is refining its production processes to reduce the plastic content in products by 4%, ensuring that this reduction does not compromise product quality.

Plastic pollution



Circular inflow



Circular outflow



## Offer premiumization

By shifting towards higher-quality and more durable products, the company aims to maintain its revenue while decreasing the volume of products sold, thereby reducing overall plastic consumption.

Plastic pollution



Circular inflow



Circular outflow



## Single-use-plastic elimination

A phased strategy is being implemented to phase out all single-use plastic items, which currently represent 4% of the company's total plastic output.

Plastic pollution




Circular inflow





Circular outflow




## Introducing Reduction

- 

The material circularity percentage is not changing compared to scenario C, as material circularity percentage is not impacted by actions on reduction.
- 

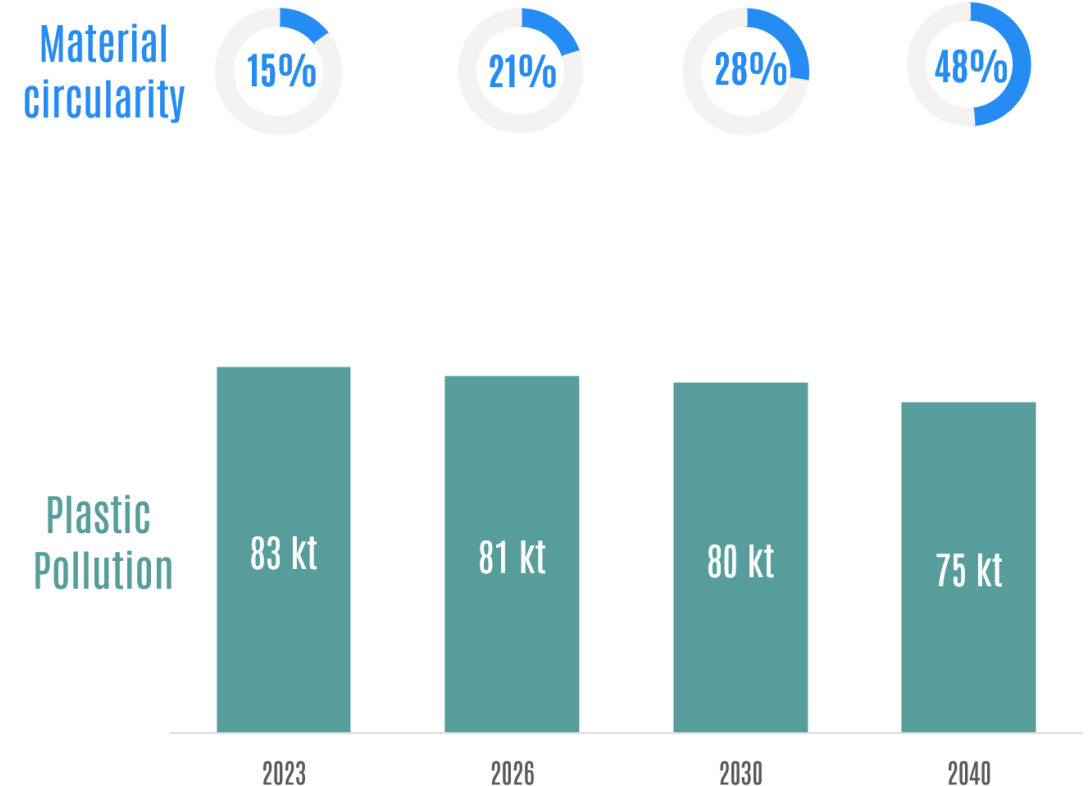
The reduction initiatives implemented significantly reduce the volume of plastics entering the market and are complemented by the advancement of waste management infrastructures. As a result, the absolute volume of plastic pollution decreases.
- 

However, the **material circularity percentage does not change** compared to Scenario C because **actions focused on reduction do not impact the material circularity**. On the other hand, the decrease in plastic pollution created by the company indicates effective control of its pollution levels.
- 

Despite these advancements, achieving zero plastic pollution by 2040 remains an ambitious target that the company has yet to attain.



How will the plastic pollution generated by the company's operation evolve until 2040 under this scenario?



*In the CTI methodology for the material indicator, both the circularity inflow and outflow change.*



# 8. Results & Conclusions

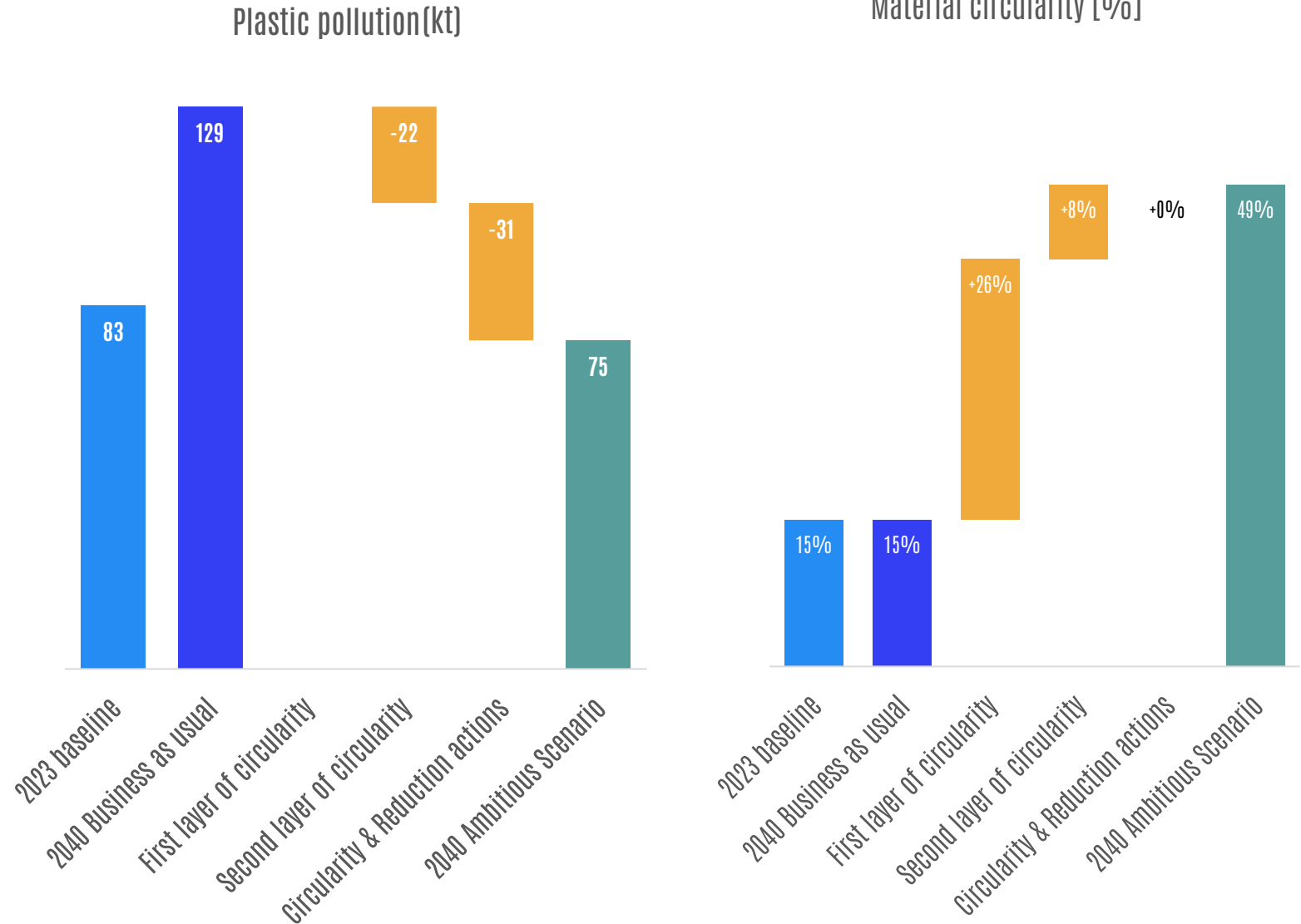
# Results & Conclusions



Our analysis reveals that while specific circularity interventions can markedly improve circularity scores, they might not necessarily lead to a reduction in plastic pollution.

Conversely, decreasing the quantity of plastic utilized impacts pollution rates but does not inherently enhance circularity metrics, as these reductions are not factored into circularity calculations.

For the development of an effective comprehensive plastic strategy, a **dual focus on both circularity and pollution metrics is essential to gain an integrated understanding of environmental impact.**



# Take home messages



## Balanced Circularity Strategy

The study highlights the need for a **comprehensive circularity strategy** addressing:

- inflows (e.g., recycled content),
  - potential recovery (e.g., design for repairability),
  - actual recovery (e.g., investment in waste management infrastructure),
- to achieve significant material circularity.



## Inflow Focus Limitations

**A strategy based on actions targeting inflows alone**, without a plan to participate in the development of waste management infrastructure and a plastic reduction strategy, **fails to directly impact end-of-life** product outcomes, leading to continued plastic pollution growth.



## Need for upstream mitigation actions

Only a strong commitment to prevention and **reduction of plastic waste generation** will ensure a decrease of absolute plastic pollution volumes.



## Ongoing Challenge

Despite progress, **achieving zero plastic pollution by 2040 remains ambitious**. The company's projected growth necessitates further strategic advancements, including investments outside its value chain, to enhance circular business models and develop waste management.

# Appendix

All data and assumptions for the different  
scenarios analysed

# Business as usual

Data and main assumptions.



\*There is no repair business model implemented so the actual recovery is influenced only by the recycling rate in this scenario.

## Waste generated

| 2023   | 2026   | 2030   | 2040   |
|--------|--------|--------|--------|
| 500 kt | 535 kt | 594 kt | 773 kt |

*\*industry growth based on OECD projection.*

## Plastic Pollution

| 2023  | 2026  | 2030  | 2040   |
|-------|-------|-------|--------|
| 83 kt | 89 kt | 98 kt | 129 kt |

## Circularity

Inflow (%)

Outflow (%)

MCI

|             | Single Use Plastic | Textile | Equipment | Shoes | ALL PRODUCTS |
|-------------|--------------------|---------|-----------|-------|--------------|
| Inflow (%)  | 65%                | 29%     | 30%       | 15%   | 29%          |
| Outflow (%) | 32%                | 2%      | 0.02%     | 0.03% | 1%           |
| MCI         | 49%                | 15%     | 15%       | 7.5%  | 15%          |

Sport Equipment

Shoes

Textile

Single Use Plastic

ALL PRODUCTS

|                    | Plastic Mismanaged (%) | Leakage to Ocean (%) | Recycled Input (%) | Recyclability (%) | Actual Recycling Rate* (%) |
|--------------------|------------------------|----------------------|--------------------|-------------------|----------------------------|
| Sport Equipment    | 16.57%                 | 1.41%                | 30%                | 22.09%            | 0.10%                      |
| Shoes              | 16.50%                 | 1.29%                | 15%                | 3.18%             | 100%                       |
| Textile            | 17.02%                 | 1.42%                | 29%                | 27%               | 6.06%                      |
| Single Use Plastic | 16.55%                 | 2.84%                | 65%                | 100%              | 29.54%                     |
| ALL PRODUCTS       | 16.66%                 | 1.45%                | 29%                | 23.6%             | 2.8%                       |

# First layer of circularity

Data and main assumptions.

= data that changes compared to the previous scenario



\*The quantities remain unaffected by the initial layer of circularity, staying consistent with the Business As Usual (BAU) scenario.

\*\*The actual recovery rate remains unchanged, as the actions taken do not impact the waste management practices for the company products.

## Waste Generated\*

| 2023   | 2026   | 2030   | 2040   |
|--------|--------|--------|--------|
| 500 kt | 535 kt | 594 kt | 773 kt |

## Plastic Pollution\*

| 2023  | 2026  | 2030  | 2040   |
|-------|-------|-------|--------|
| 83 kt | 89 kt | 98 kt | 129 kt |

## Circularity

|             | 2023 | 2026 | 2030 | 2040 |
|-------------|------|------|------|------|
| Inflow (%)  | 29%  | 38%  | 50%  | 80%  |
| Outflow (%) | 0.7% | 1.0% | 1.4% | 2.5% |
| MCI         | 15%  | 20%  | 26%  | 41%  |

|                    | Plastic Mismanaged (%) | Leakage to Ocean (%) | Recycled Input (%) | Recyclability (%) | Repairability (%) | Actual Recovery (%)** |
|--------------------|------------------------|----------------------|--------------------|-------------------|-------------------|-----------------------|
| Sport Equipment    | 16.57%                 | 1.41%                |                    |                   |                   |                       |
| Shoes              | 16.50%                 | 1.29%                |                    |                   |                   |                       |
| Textile            | 17.02%                 | 1.42%                |                    |                   |                   |                       |
| Single Use Plastic | 16.55%                 | 2.84%                |                    |                   |                   |                       |
| ALL PRODUCTS       | 16.66%                 | 1.45%                |                    |                   |                   |                       |
|                    |                        |                      |                    |                   |                   |                       |
| 2023               |                        |                      | 29%                | 24%               | 26%               | 2.8%                  |
| 2026               |                        |                      | 38%                | 34%               | 37%               | 2.8%                  |
| 2030               |                        |                      | 50%                | 47%               | 52%               | 2.8%                  |
| 2040               |                        |                      | 80%                | 80%               | 88%               | 2.8%                  |

# A stronger layer of circularity

Data and main assumptions.

= data that changes compared to the previous scenario



\*Thanks to the fact that a part of the products is collected for recycling, the plastic pollution quantities decrease.

\*\*The actual recovery rate increases, as the actions taken on repair and recycling do impact the waste management practices for the company products.

## Waste Generated

| 2023   | 2026   | 2030   | 2040   |
|--------|--------|--------|--------|
| 500 kt | 532 kt | 579 kt | 713 kt |

## Plastic Pollution\*

| 2023  | 2026  | 2030  | 2040   |
|-------|-------|-------|--------|
| 83 kt | 86 kt | 92 kt | 107 kt |

## Circularity

|             | 2023 | 2026 | 2030 | 2040 |
|-------------|------|------|------|------|
| Inflow (%)  | 29%  | 38%  | 50%  | 80%  |
| Outflow (%) | 1%   | 2%   | 5%   | 18%  |
| MCI         | 15%  | 20%  | 28%  | 49%  |

2023  
2026  
2030  
2040

|      | Plastic Mismanaged (%) | Leakage to Oceans (%) | Recycled Input (%) | Recyclability (%) | Repairability (%) | Actual Recovery (%)** |
|------|------------------------|-----------------------|--------------------|-------------------|-------------------|-----------------------|
| 2023 | 16.7%                  | 1.45%                 | 29%                | 24%               | 26%               | 2.8%                  |
| 2026 | 16.2%                  | 1.41%                 | 38%                | 34%               | 37%               | 6%                    |
| 2030 | 15.5%                  | 1.35%                 | 50%                | 47%               | 52%               | 10%                   |
| 2040 | 13.8%                  | 1.21%                 | 80%                | 80%               | 88%               | 20%                   |

# Circularity and Reduction

Data and main assumptions.

= data that changes compared to the previous scenario



All the improvements are consolidated in this scenario:

- **UPSTREAM:** There is a decrease in quantities generated due to a reduction in sales volumes, a ban on Single-Use Plastics (SUP), and optimization in material utilization.
- **UPSTREAM:** There is an increase in the recycled input rate.
- **DOWNSTREAM:** There is an increase in the quantities of recycling and repairs, thanks to eco-design and circular business models.

Waste Generated

| 2023   | 2026   | 2030   | 2040   |
|--------|--------|--------|--------|
| 500 kt | 503 kt | 514 kt | 545 kt |

Plastic Pollution

| 2023  | 2026  | 2030  | 2040  |
|-------|-------|-------|-------|
| 83 kt | 81 kt | 80 kt | 75 kt |

Circularity

Inflow (%)

Outflow (%)

MCI

| 2023 | 2026 | 2030 | 2040 |
|------|------|------|------|
| 29%  | 38%  | 50%  | 80%  |
| 1%   | 2%   | 5%   | 18%  |
| 15%  | 20%  | 28%  | 49%  |

2023  
2026  
2030  
2040

| Plastic Mismanaged (%) | Leakage to Oceans (%) | Recycled Input (%) | Recyclability (%) | Repairability (%) | Actual Recovery (%) |
|------------------------|-----------------------|--------------------|-------------------|-------------------|---------------------|
| 16.7%                  | 1.45%                 | 29%                | 24%               | 26%               | 2.8%                |
| 16.2%                  | 1.41%                 | 38%                | 34%               | 37%               | 6%                  |
| 15.5%                  | 1.35%                 | 50%                | 47%               | 52%               | 10%                 |
| 13.8%                  | 1.21%                 | 80%                | 80%               | 88%               | 20%                 |



**We help organisations & people create sustainable change by developing science, methodologies & actionable plans**

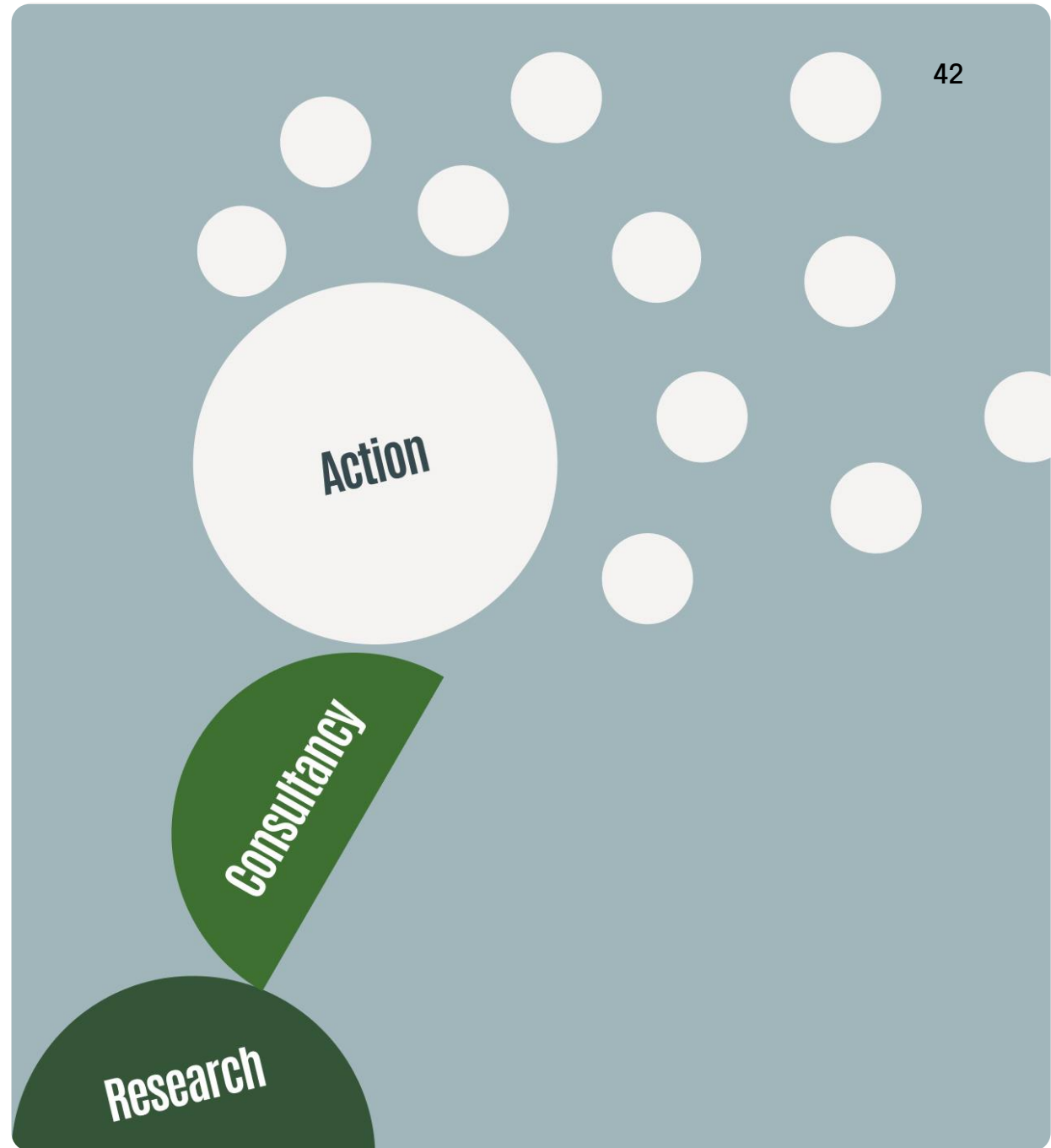
## We are Superspreader (of impact)

From the beginning EA was envisioned as a place where the world's current path towards exceeding planetary boundaries could be addressed at multiple levels.

The first level, like the roots of a dandelion, is robust research, providing the foundation that supports all other efforts. EA services, solutions and expertise can be understood as the stem, with direct support being provided to foster the growth and success of clients and partner organizations. With these anchors in place, EA is positioned to directly and indirectly disseminate research-based and practical initiatives and action to create a ripple effect of positive impact and necessary change.

EA's commitment to broader change is also firmly established in the organization's design where all profits generated in the for-profit side, EA Sàrl, are reinvested in the non-profit arm, the EA Association, to support scientific advancements, global partnerships and the design of research-based solutions to expand environmental responsibility and reign in humanity's impact on the planet.

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### About the World Business Council for Sustainable Development (WBCSD)

The World Business Council for Sustainable Development (WBCSD) is a global community of over 225 of the world's leading businesses driving systems transformation for a better world in which 9+ billion people can live well, within planetary boundaries, by mid-century. Together, we transform the systems we work in to limit the impact of the climate crisis, restore nature and tackle inequality.

We accelerate value chain transformation across key sectors and reshape the financial system to reward sustainable leadership and action through a lower cost of capital. Through the exchange of best practices, improving performance, accessing education, forming partnerships, and shaping the policy agenda, we drive progress in businesses and sharpen the accountability of their performance.

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