

# Sustainably Connected

PROGRESS REPORT & SUPPLY CHAIN ASSESSMENT



## **Executive Summary**

SUSTAINABLY  
CONNECTED

Comsol's 2024 Sustainability Report highlights our ongoing commitment to reducing environmental impact, driving innovation, and creating positive change across our operations, products, packaging and educational initiatives.

By focusing on transparency and collaboration, this report outlines our progress, challenges, and future pathways toward a more sustainable future.

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# Executive Summary

RESOURCE  
USE &  
IMPACT

## Scope 1 & 2 Emissions

Energy efficiency improvements have stabilised electricity consumption, even as operational site capacity doubled from 2021, reinforcing our commitment to reducing emissions from operations.

## Scope 3 Emissions

Focused on addressing product and packaging materials, logistics, and end-of-life impacts.

Highlighted opportunities for circular material use, modular design, and advanced logistics strategies to minimise emissions across the value chain.



## **Executive Summary**

### **PACKAGING & EDUCATION**

#### **Packaging Innovations**

Transitioned to 100% plastic-free retail packaging, eliminating over 244,000 kg of plastic since 2019.

Adopted FSC-certified materials and GRS-certified recycled content, earning recognition from APCO for leadership in sustainable packaging innovation.

#### **Educational Impact**

Through our Closing The E-Loop initiative, over 21,000 students across Australia have been educated about e-waste and circular economy principles, since 2023.

Recognised globally with awards including the World Business Forum Green Impact Award 2023 and shortlisted for the World Sustainability Awards 2024.

# Executive Summary

LOOKING  
AHEAD

## **Comsol's Sustainability Roadmap**

We are committed to refining emissions methodologies and integrating verified data to enhance transparency and accountability.

Expanding circularity across product designs, material choices, and logistics remains a key focus.

We continue to strengthen partnerships with supply chain stakeholders to drive collaborative sustainability solutions.

By aligning our actions with a global vision for sustainability, Comsol is driving change that benefits the planet, our customers, and future generations.

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WHO WE ARE

# CONNECTING SOLUTIONS

Established in 1991, Comsol specialises in delivering connectivity solutions for retail and reseller clients across diverse industries.

Our dedicated team collaborates with trusted long-term partners to ensure excellence in manufacturing, importing, and distribution.

Renowned for high-quality products, a broad range of offerings, and leadership in sustainability across products, packaging, and education.



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## Scope 1 & 2 OPERATIONAL INSIGHTS

Scope 1 and 2 emissions are minimal compared to Scope 3, reflecting our wholesale operations between China and Australia.

Energy efficiency improvements have stabilised electricity consumption, even with a doubling of operational site capacity in 2021, demonstrating our commitment to reducing energy use while supporting growth.



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*Making a positive impact across our supply chain starts with collaboration, data, and innovation*

*It extends beyond carbon assessments to embrace responsible resource use, and our commitment to overall brand accountability*



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## SUPPLY CHAIN

# ASSESSMENT & ACTIONS

Our understanding of Scope 3 emissions focuses on resource use and reduction of environmental impacts within our supply chain.

We are committed to continually refining our strategies and aligning them with sustainable practices to achieve measurable improvements over time.

Partnerships with supply chain stakeholders are critical for reducing greenhouse gas (GHG) emissions.



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SUPPLY CHAIN EMISSIONS

# SCOPE 3

Category 1

**Materials &  
Product  
Footprint**

Category 11 & 12

**Waste  
Streams &  
Circularity**

Category 4 & 9

**Supply Chain  
Movement  
Impact**

Category 2, 5, 6 & 7

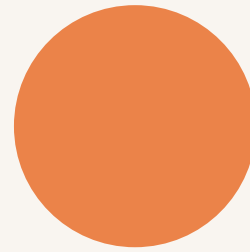
**Facility &  
Travel  
Emissions**



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*Identifying where the greatest positive and negative impacts occur allows for more informed decision-making—addressing Scope 3 emissions is essential for our brand*





*The insights and data shared in this section reflect our ongoing efforts to understand and address Scope 3 emissions. These findings are based on initial internal research and assessments and will be further refined and validated with enhanced methodologies and verified data in future reports.*

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# Category 1

## MATERIALS & PRODUCT FOOTPRINT

The majority of emissions for product and packaging lines are made in the manufacturing stage.

Passive products (e.g., cables) typically contribute higher emissions early in the life cycle due to their volume and reliance on resource-intensive materials.

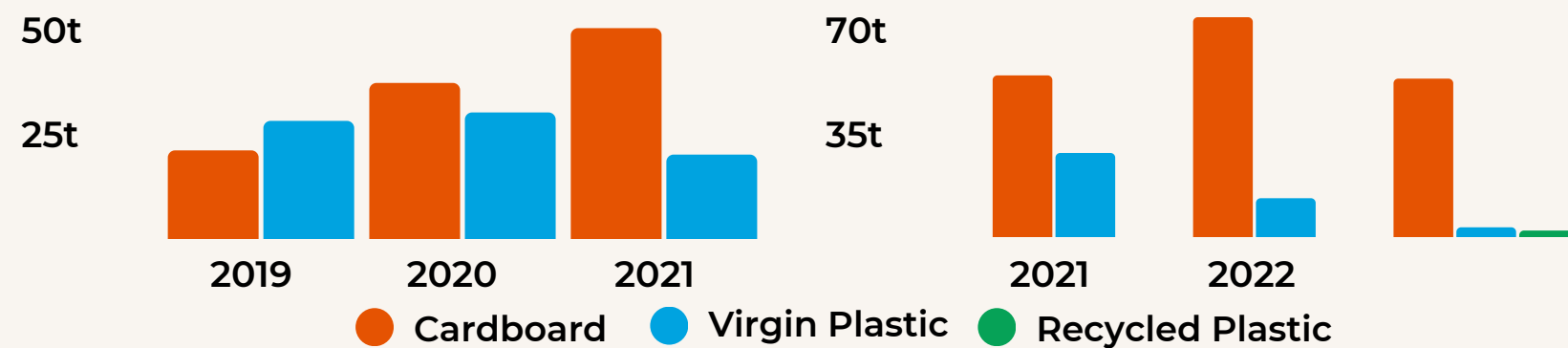
Active products (e.g., chargers) have a more distributed footprint across manufacturing, use, and end-of-life stages, requiring targeted strategies for each phase.

## SOLUTIONS CREATING IMPACT

# PACKAGING

Comsol's transition to cardboard and recycled packaging has been a key focus in the past 5 years. The shift away from unsustainable packaging has resulted in significant emissions reductions.

Comsol recognised the negative impacts of various packaging types, such as single-use plastic, leading to a staged transition toward materials with greater environmental and social benefits.



### Providing Robust Standards

The move toward sustainable packaging aligned with:

- Australian industry needs (Australian Packaging Covenant Organisation) and, international certifications,
- Global Recycled Standard,
- Forest Stewardship Council



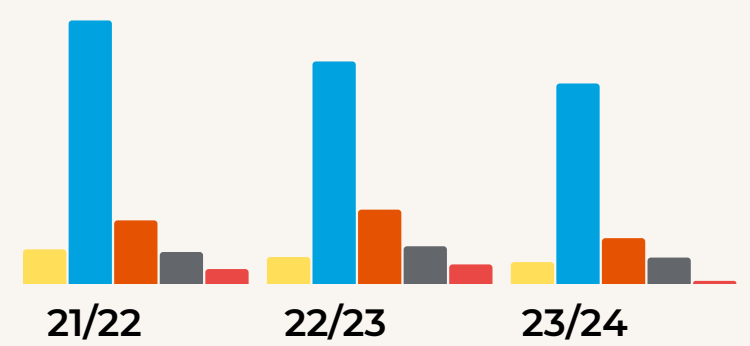
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# ASSESSING IMPACT BY PRODUCT TYPE

Major product types, like cables and chargers, are significant contributors to environmental impact. By focusing on these high-impact categories, we can drive meaningful improvements across the supply chain.

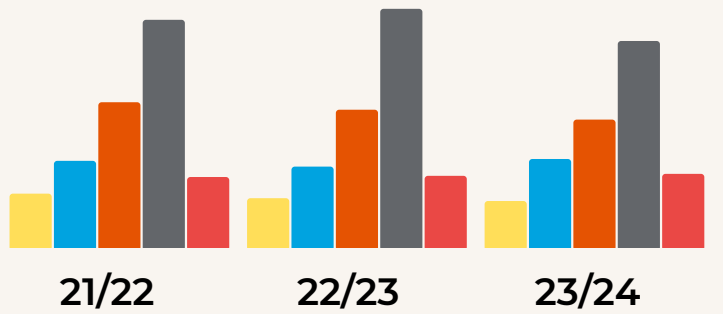
## Passive Products

Cables, as the highest-selling category, represent a significant opportunity for sustainability improvements through material innovations and recycling strategies.



## Active Products

Active products, such as docking stations and chargers, generally have a higher per-unit impact due to their energy use and material complexity.



*\*Representations of potential emissions over time based on internal assessment*

- Cables
- Adapters
- Chargers
- Hubs and Docks
- Power Banks



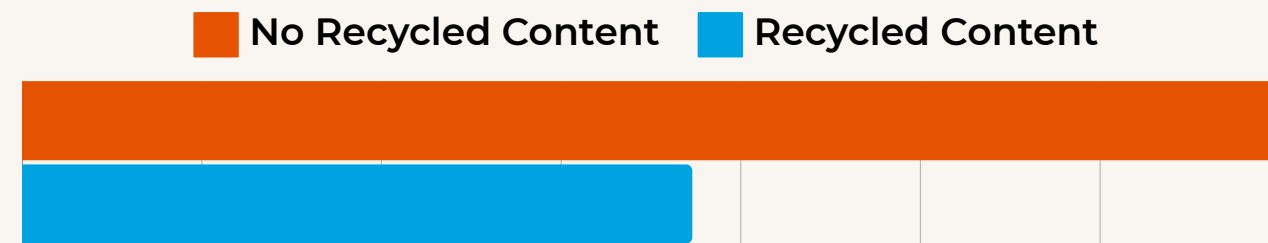
## DRIVING SUSTAINABILITY

# PRODUCTS

### Innovative Solutions for Impact Reduction

**Recycled Content:** Leveraging certified recycled polymers, such as replacing PVC with RTPE, reduces environmental footprints and supports circular material flows.

**Modular Design:** Products like docking stations feature detachable cables and multi-use functionality, extending lifespans and reducing waste.



*\*Representations of GRS Certified recycled content cable potential emissions over time based on internal assessment*

### Key Focus Areas

Prioritising sustainable materials in high-impact products like cables, chargers and docking stations.

Increasing product durability through modular and flexible designs.

Enhancing supply chain efficiency by focusing on extending product life through rigorous testing and quality checks.



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# COMING AND CURRENT CHANGES CREATING IMPACT

## Material decisions

Within an expanded range of GRS-certified products specific cables will feature silicone casings instead of PVC, offering greater heat resistance, flexibility and robustness to the products.

## Universal functions

In response to EU regulations, our lightning cable range has been reduced. Moving away from proprietary Apple chargers, our new range includes universal chargers, making it easier for households to power multiple devices with a single unit.

All new chargers and cables now use universal ends, making them compatible with a wider range of devices.

## Detachable cables for docks and hubs

Our updated docks and hubs feature detachable cables, allowing for easier replacement and reducing the need for complete product replacement due to cable wear and tear.



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## Categories

### 11 & 12

#### WASTE STREAMS & CIRCULARITY

While the use phase and end-of-life contribute less to overall emissions than manufacturing in our internal methodologies, they remain critical for reducing environmental impacts.

End-of-life strategies, such as recycling and circular material flows, offer significant opportunities to minimise waste and recover resources, presenting emissions reduction opportunities.

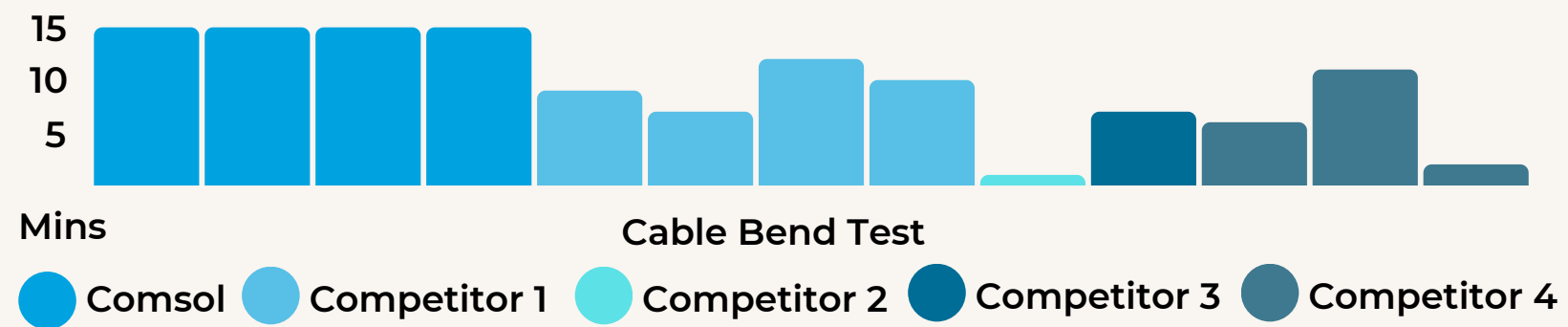
## IMPACT IN DESIGN

# PRODUCT LIFECYCLES

### Extending Lifecycles

**Durability Through Testing:** Rigorous technical tests ensure reliability, including electromagnetic compatibility, voltage testing, and compliance with RoHS standards.

**Consumer Feedback:** Ongoing input helps enhance product longevity, reduce waste, and ensure consistent performance in varied conditions.



*\*This bend test represents an additional internal durability assessment conducted alongside technical compliance tests.*

### Multi-Functional Designs

**Efficient Use of Resources:** Combining multiple functions into a single product reduces emissions and resource use compared to individual devices.

**Example Impact:** Products like 3-in-1 chargers can improve energy efficiency and reduce packaging and operational resource needs.



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# A MINDSET FOR CIRCULARITY

## Circular Materials

**Recycled Materials:** Transitioning to recycled materials including polymers and metals reduces CO2 emissions per kilogram, emphasising the potential of circular design.

**Enhanced Energy Efficiency:** Innovations like GaN (Gallium Nitride) chargers can improve energy efficiency during the use phase, reducing environmental impacts and supporting long-term sustainability.

**Key Focus:** Material and design selection enhances durability, supports resource recovery, and integrates energy-efficient technologies for greater lifecycle impact.

## Recycling for Impact

**Lifecycle Benefits:** We have worked with recyclers to determine that materials like polypropylene (PP) and recycled polymers reduce environmental impact and support circular economy goals.

**Sustainable Priorities:** Prioritising low-emission, high-recyclability materials can minimise waste and aligns with long-term sustainability objectives.



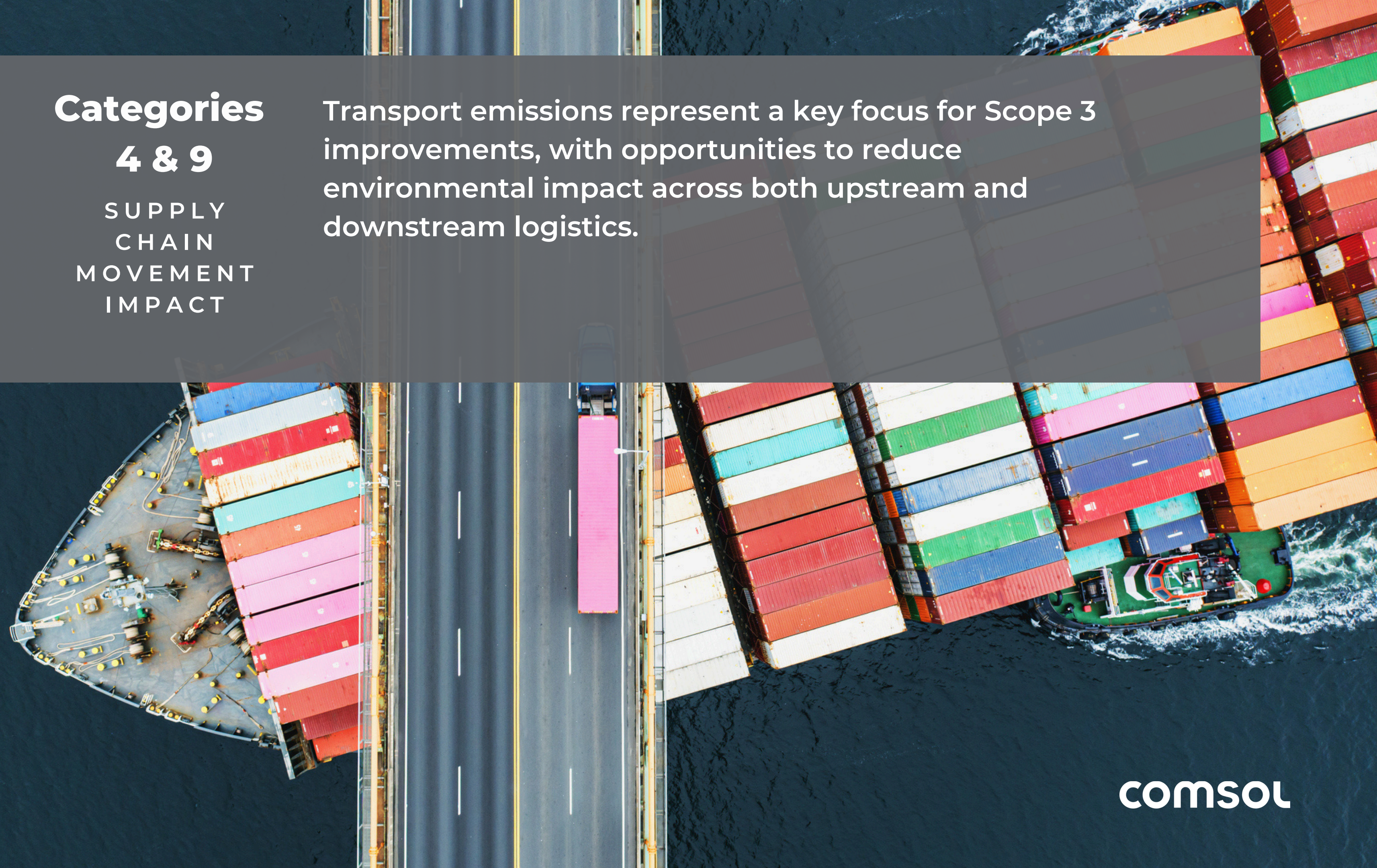
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# Categories

## 4 & 9

SUPPLY  
CHAIN  
MOVEMENT  
IMPACT

Transport emissions represent a key focus for Scope 3 improvements, with opportunities to reduce environmental impact across both upstream and downstream logistics.



# UPSTREAM & DOWNSTREAM TRANSPORT

## Upstream

Efforts focus on refining data for container-level shipments, including bulk transport and low-carbon shipping options between China and Australia.

## Downstream

Analysing distribution patterns and distances has revealed a shift toward broader coverage and opportunities for optimising multi-distance logistics across Australia.

## Modes & Methods

Future initiatives will focus on integrating detailed shipment data and collaborating with logistics partners to explore sustainable solutions across the supply chain.



## Categories

**2, 5, 6 & 7**

FACILITY &  
TRAVEL  
EMISSIONS

Facility and travel emissions account for a smaller share of overall emissions compared to products and transportation but remain key focus areas for sustainability improvements.

Emphasis on reuse and waste segregation.

Strong collaboration with recyclers to minimise landfill contributions.

# STRATEGIC IMPROVEMENTS AND IMPACT

## WASTE IN OPERATIONS

In 2021, Comsol implemented several waste management solutions across its expanded operations at two sites, achieving immediate improvements. The focus on waste reduction in operations led to tangible results that is still providing benefits today.

### Improved Waste Segregation

Reusing boxes and pallets, introducing a cardboard crusher, and soft plastic recycling.

### Plastic Optimisation

Trialling thinner pallet wrap, adding plastic bales, and segregated collection.

### Key Results

Size 6 mixed bins have been eliminated, with significant reductions in waste-related areas across sites due to specific resource recovery efforts including cardboard and soft plastic collections.

### Addressing Other Operational Emissions

While Categories 2, 6, and 7 contribute a smaller portion of emissions, they remain important focus areas for us to address in the future via targeted strategies and ongoing assessments.



# Packaging

DESIGNED  
FOR IMPACT

Impactful packaging is more than a necessity—it's an opportunity to drive positive environmental change.

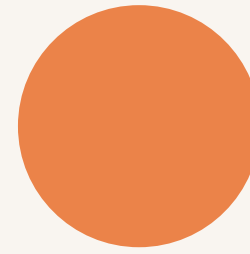
Through innovative designs, material choices, and a commitment to circularity, we've redefined packaging to meet the demands of a sustainable future.

We're delivering sustainable solutions that reduce impact and inspire change.

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*Transitioning packaging from single-use plastic has been a great opportunity to design for sustainability and share purpose driven ideas*



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## SUSTAINABLE INNOVATIONS

# PACKAGING

Building on our commitment to impactful design, these outcomes highlight how our packaging innovations deliver measurable results for sustainability and consumer engagement.

### Plastic-Free Retail Range

Transitioned entirely to zero-plastic packaging, reducing plastic use by 244,111kg (equivalent to 44 elephants) since our sustainable packaging transition commenced in 2019.

### FSC-Certified Materials

100% of retail packaging supports responsible resource management, launching this new quality material into the range during our packaging rebrand in 2024.

### B2B Innovations

Integrated Global Recycled Standard (GRS)-certified materials into B2B packaging, emphasising secondary raw material use.

### Award-Winning Design

Recognised by APCO for leadership in sustainable packaging innovation and leadership in 2022, 2023, and 2024.

### Customer-Focused Design

Our new look packaging, launched in 2024, delivers a sleek, purposeful layout that prioritises product visibility and clarity while embodying environmental responsibility.

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## Education

SUSTAINABLE  
ELECTRONICS  
SOLUTIONS

Beyond packaging innovations, our commitment to sustainability extends to education, where we are driving impact through Closing The E-Loop.

Closing The E-Loop is a global education initiative addressing the e-waste crisis through innovative, actionable learning programs and video content.

By inspiring students and adults alike, it drives awareness and practical solutions for a circular economy.

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*Uncover essential insights and strategies to combat the escalating challenge of e-waste, empowering change at work, home and school*



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# EDUCATION'S ROLE IN SUSTAINABLE TRANSFORMATION

## Creating Impact

Through education and collaboration, Closing The E-Loop is building the foundation for a circular economy, inspiring hope and action for a sustainable future.

## Inspiring Action

Educating the next generation about sustainability and circular design principles with 10 curriculum aligned lesson plans.

Highlighting the environmental and social impacts of e-waste through real-world insights from organisations including Fairphone, Close The Loop, UNITAR and Schneider Electric.

## Global Reach & Universal Relevance

The Sustainable Electronics Solutions video showcase, an interview series featuring 38 industry experts from across the supply chain, offers insights across the electronics value chain, engaging audiences globally, including high schoolers, university students, and adults, with tailored perspectives for diverse viewers.

## Award Winning Content

Recognised globally by platforms such as the World Business Forum, the Sustainable Industrial Manufacturing Asia Pacific Forum and World Sustainability Awards, showcasing its innovative and impactful approach to sustainability education.



## IMPACT & INSIGHTS

# CLOSING THE E-LOOP

**>21,000**

Students  
Educated

**>40**

Open-source  
Resources

**38**

Expert  
Insights

**10**

Student  
Lesson Plans

**5**

Continents  
Involved

**1**

Global  
Goal

## World Business Forum

World Business Forum: Green Impact Award Winner 2023

## World Sustainability Awards

World Sustainability Awards: Shortlisted for External  
Collaboration Award 2024

## SIM-PAC Forum

Judges Commendation Award Winner for Lifecycle Design in 2024  
at Asia Pacific's Primary Forum for Sustainable Industrial  
Manufacturing

*\*Data accessed from first 12 month report published by partner  
Cool.Org, representing outcomes since launch in October 2023.*

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# Looking Ahead

## FUTURE GOALS & PATHWAYS

As we advance our sustainability journey, our future goals focus on:

**Improving Data Accuracy** - Refining methodologies for Scope 3 categories, including transport, material impact, and embodied carbon in products.

**Expanding Circularity** - Continue adopting circular materials and modular designs to enhance product lifecycles and reduce emissions.

**Driving Collaboration** - Strengthen partnerships with recyclers, supply chain stakeholders, and global organisations to achieve shared sustainability objectives.



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Technology | Environment | Community