CIRCULAR ECONOMY E IMBALLAGGI (PLASTICI)

Il packaging, cosa cambia, come evolve e quali sono le conseguenze.

ENRICO BASSI

Ricercatore, Designer e Consulente per l'innovazione

IL TUO DOCENTE

- Ricercatore nell'ambito della sostenibilità
- Consulente aziendale sull'innovazione
- Docente di fabbricazione digitale
- Coordinatore del primo Fab Lab italiano (Fab Lab Italia), di Fab Lab Torino e Fab Lab OpenDot

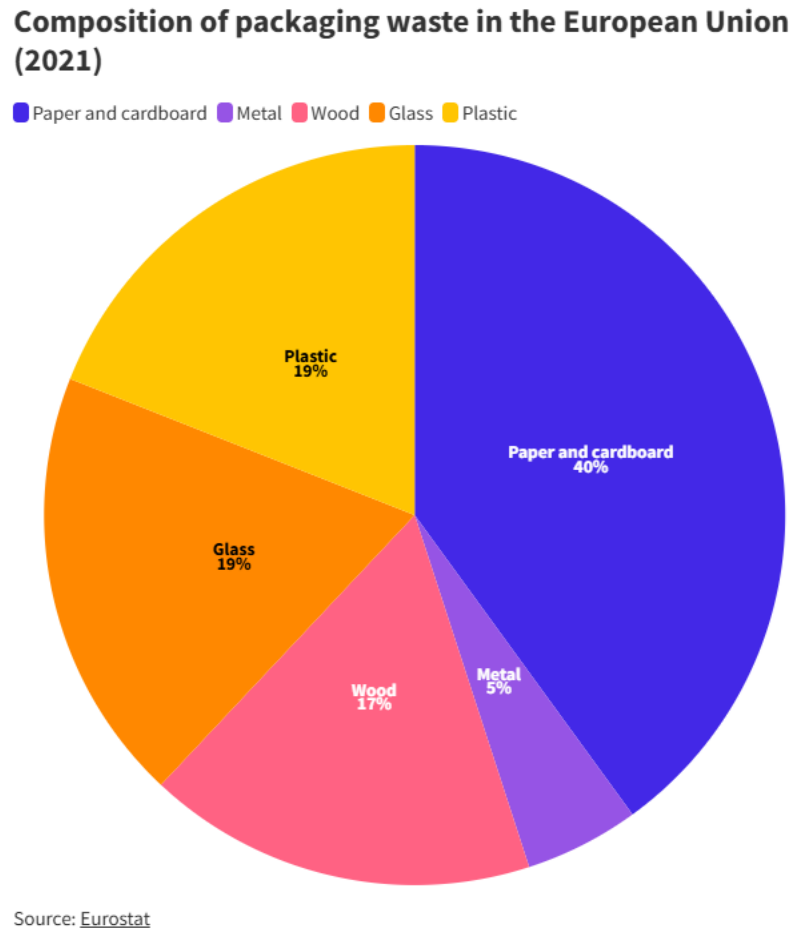
PACKAGING PLASTICO E NON SOLO

NON SEMPRE NEGATIVO

[...]In actual fact, a cucumber has a 'best before' life of 3 days – which film can increase almost 5 times over, to 14 days. This is because a cucumber is 96% water, which it begins to lose as soon as it is picked. After 3 days, it has lost so much water that it becomes dull, limp and unsellable. Wrapping it in just 1.5 grammes of plastic film extends its quality dramatically.[...]

https://interplasinsights.com/plastics-environment-news/morrisons-to-remove-plastic-wrapping-on-cucumbers-despite-fo

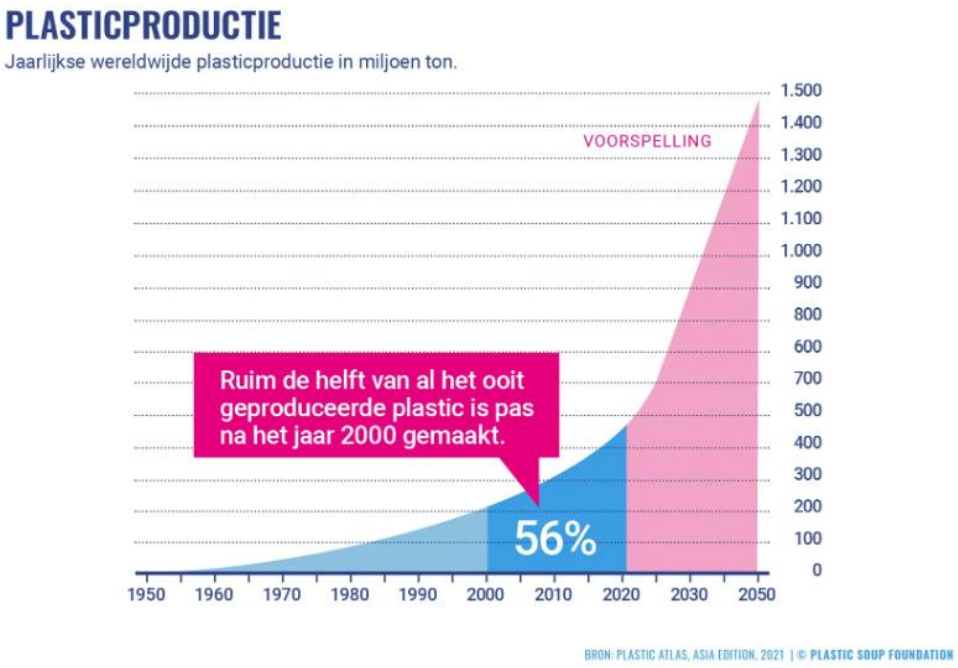
QUALE PACKAGING



Graph: Earth.Org

https://earth.org/eu-strikes-deal-to-reduce-packaging-waste-and-ban-single-use-plastics/

I DATI SULLA PLASTICA



More and more plastic

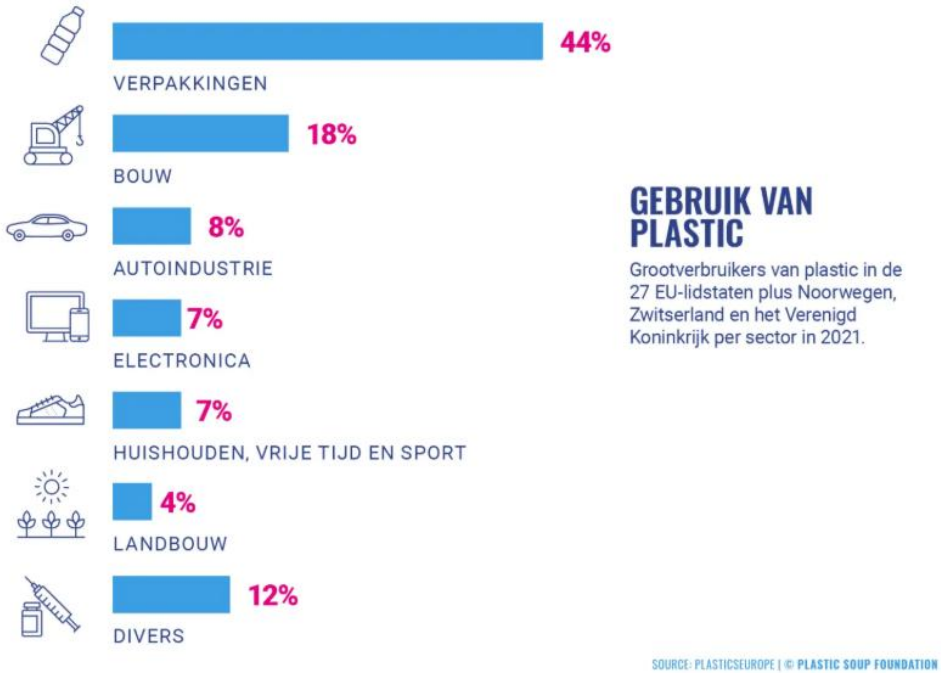
The amount of plastic produced worldwide each year has exploded within the span of one human lifetime: from 2 million tonnes in 1950 to over 390 million tonnes in 2021.[1]

These are the figures from the plastics industry itself, but this does not include all synthetic fibres, so actual production is much higher still.

More than half of all the total plastic produced was not marketed until after the year 2000. And production is expected to quadruple by the year 2050 (compared to 2019), reaching 1480 million tonnes.[2] So that would be almost three times the total weight of the current world population!

https://www.plasticsoupfoundation.org/en/plastic-facts-and-figures

I DATI SULLA PLASTICA

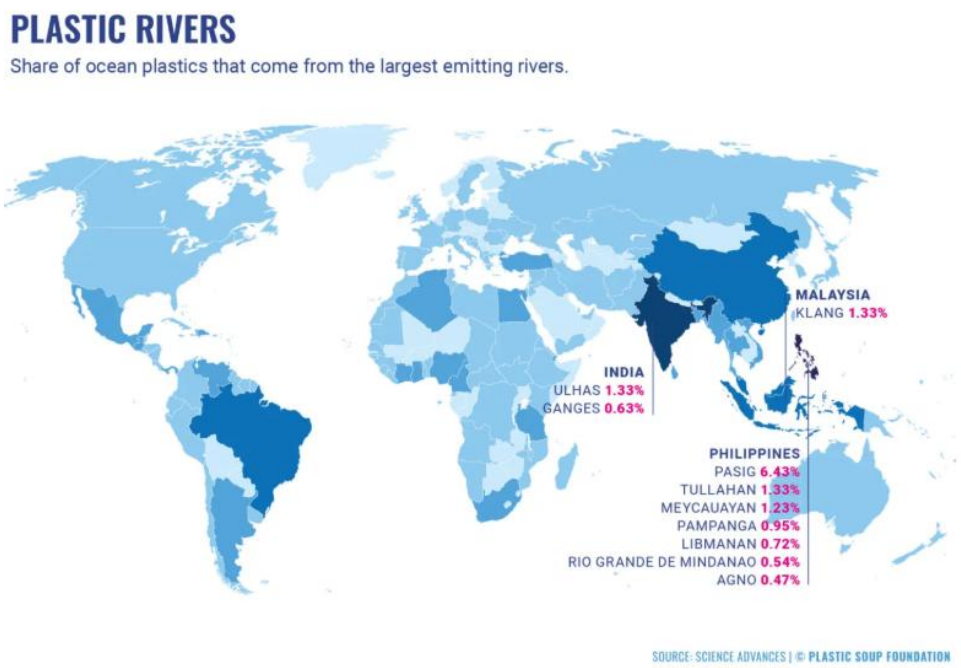


What do we use all that plastic for?

By far the most plastic, 44%, is used for packaging material. This is therefore where the most environmental gains can be made if we want to reduce our plastic use. In second and third place are the construction and automotive industries, respectively[1].

https://www.plasticsoupfoundation.org/en/plastic-facts-and-figures

IL VERO PROBLEMA



How much plastic ends up in the plastic soup?

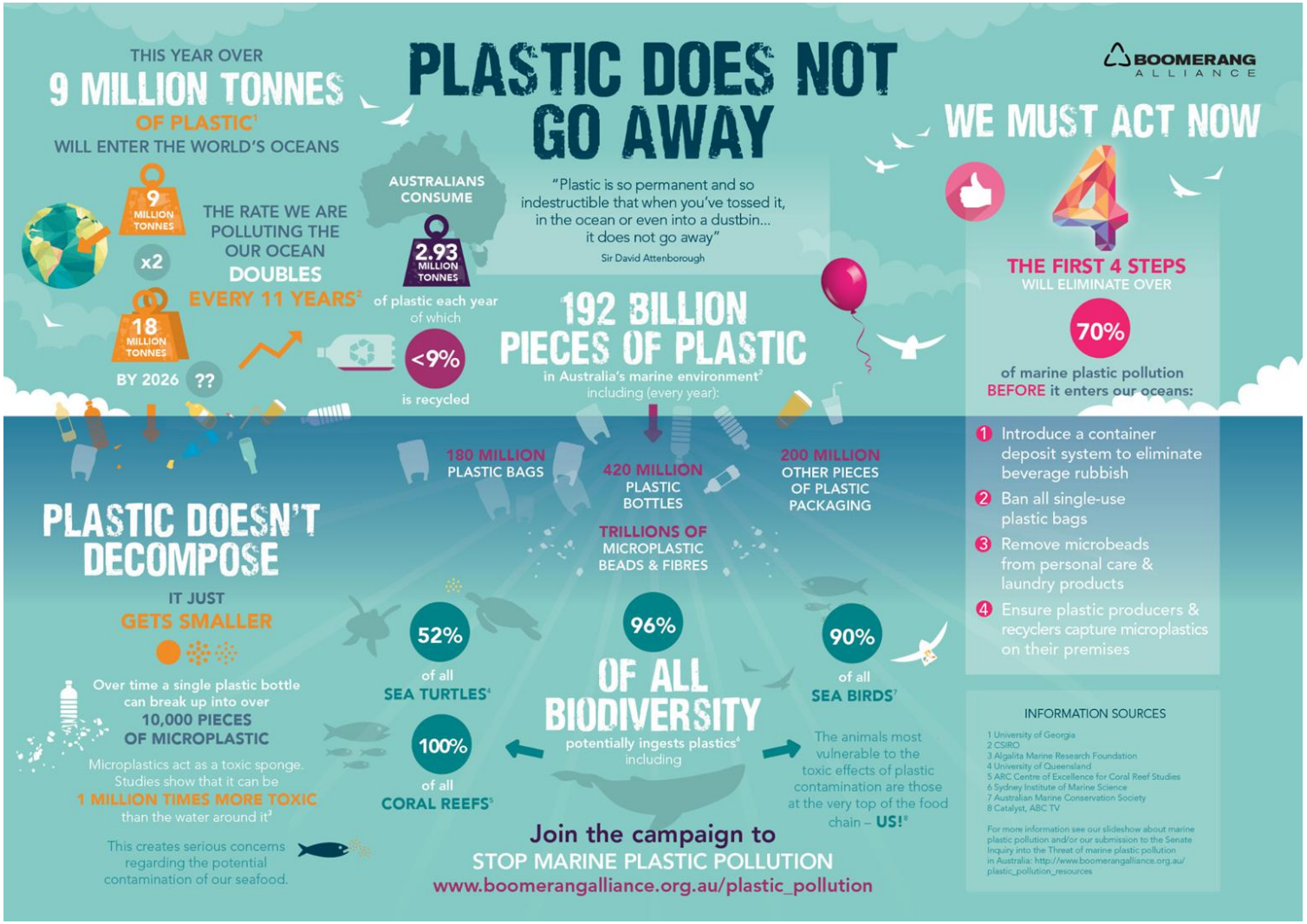
More than half the 9.2 billion tons of plastic that has been produced up to now – about 5 billion tons – has ended up as waste in landfill or has simply ended up in the environment.[1] Of this, between 5 and 13 million tons of plastic enter the oceans.[2] In 2017, two groups of scientists, independently of each other, discovered that 90% of all the plastic in the ocean was brought there by 10 major rivers which included the Nile, the Yangtze and the Amazon.[3] In 2021, that statistic was overturned by new research.4 This research showed that 80% of the plastic in the ocean was not emitted by just a small group of rivers, but by more than 1,000 rivers. And that most of the waste was not carried by the biggest rivers, but by the small rivers that flow through heavily populated areas. It appeared that it was not the Yangtze but the Pasig, that flows through Manila, the capital city of the Philippines, that brings the most plastic to sea.
Apart from all the plastic waste that comes from land, the fisheries are also a huge source of plastic pollution.

https://www.plasticsoupfoundation.org/en/plastic-facts-and-figures

IL VERO PROBLEMA

https://i.pinimg.com/originals/89/73/b6/8973b6535e8849d9b3a095e9c728b116.jpg

IL VERO PROBLEMA



https://www.boomerangalliance.org.au/microplasticsinfographic

GLI ATTORI

AZIENDE

CHIUNQUE FORNISCA UN PRODOTTO O UN SERVIZIO LUNGO LA CATENA

l'attore che può implementare i cambiamenti e accelerarli

PUBBLICA AMMINISTRAZIONE

CHIUNQUE NORMI CIÒ CHE ACCADE LUNGO LA CATENA

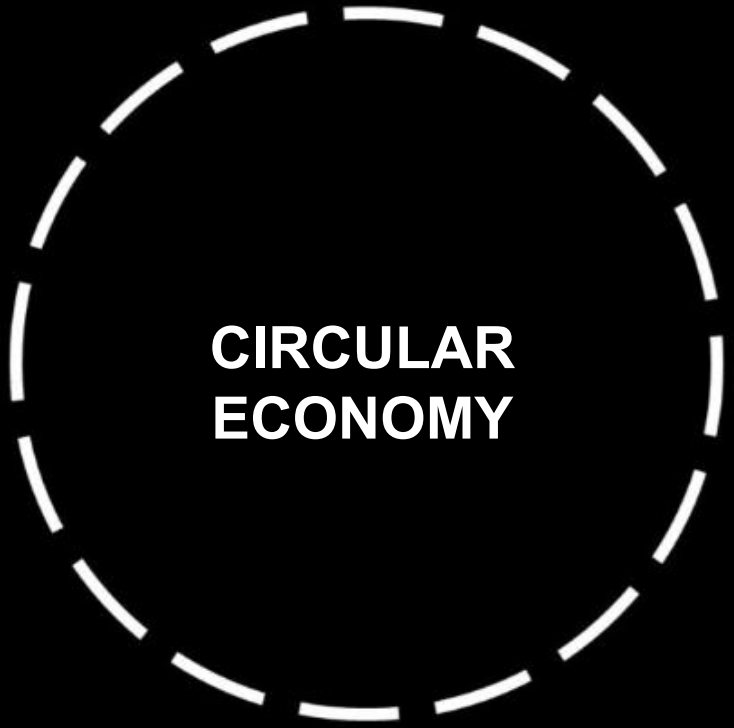
chi formalizza le regole e setta gli obiettivi

UTENTI

CHIUNQUE INTERAGISCA CON I PRODOTTI, I SERVIZI O LE NORME LUNGO LA CATENA

chi interviene attivamente e supporta (o si oppone) al cambiamento

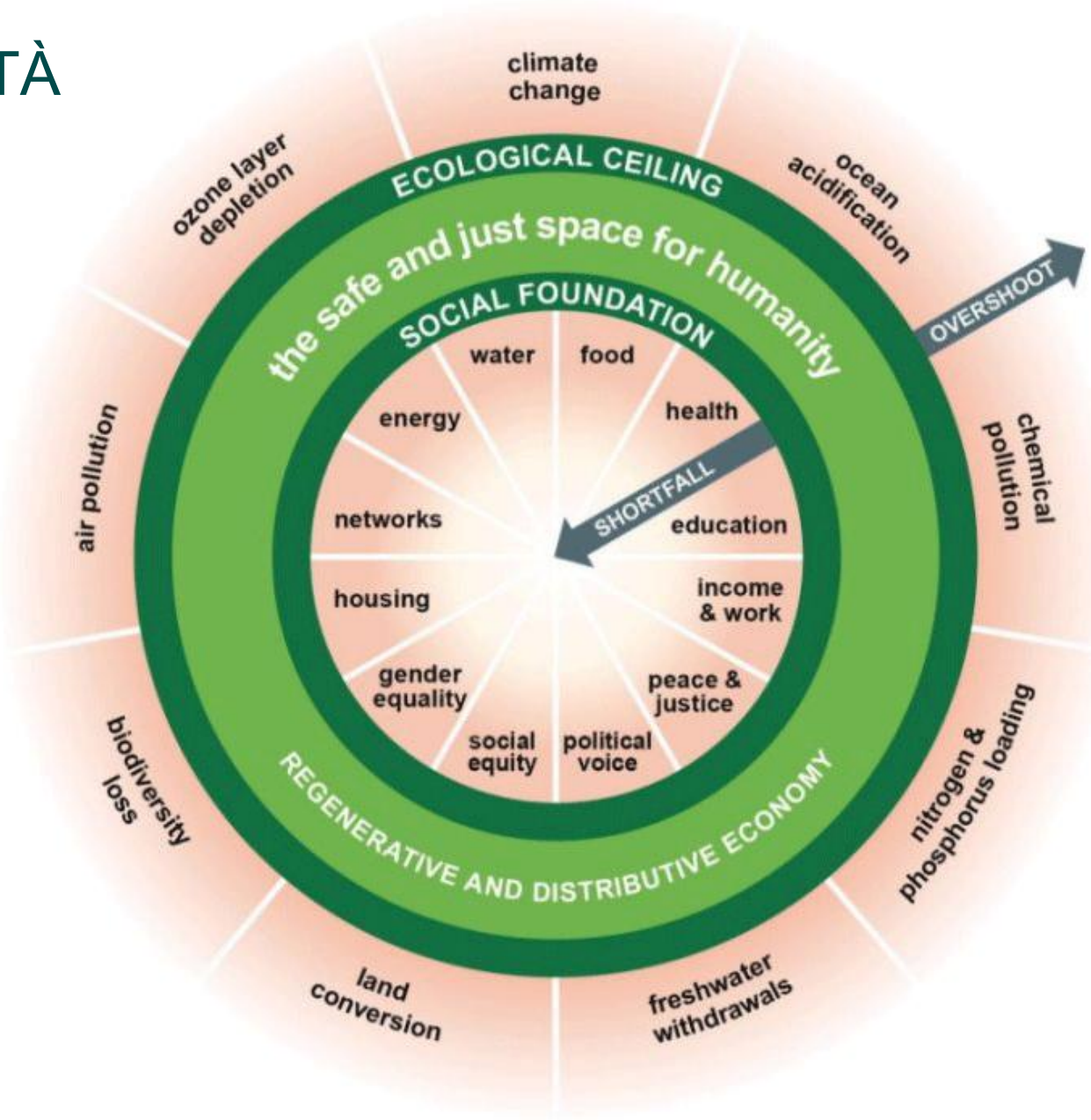
SOSTENIBILITÀ ED ECONOMIA CIRCOLARE



Objective

Strategy

SOSTENIBILITÀ AMBIENTALE

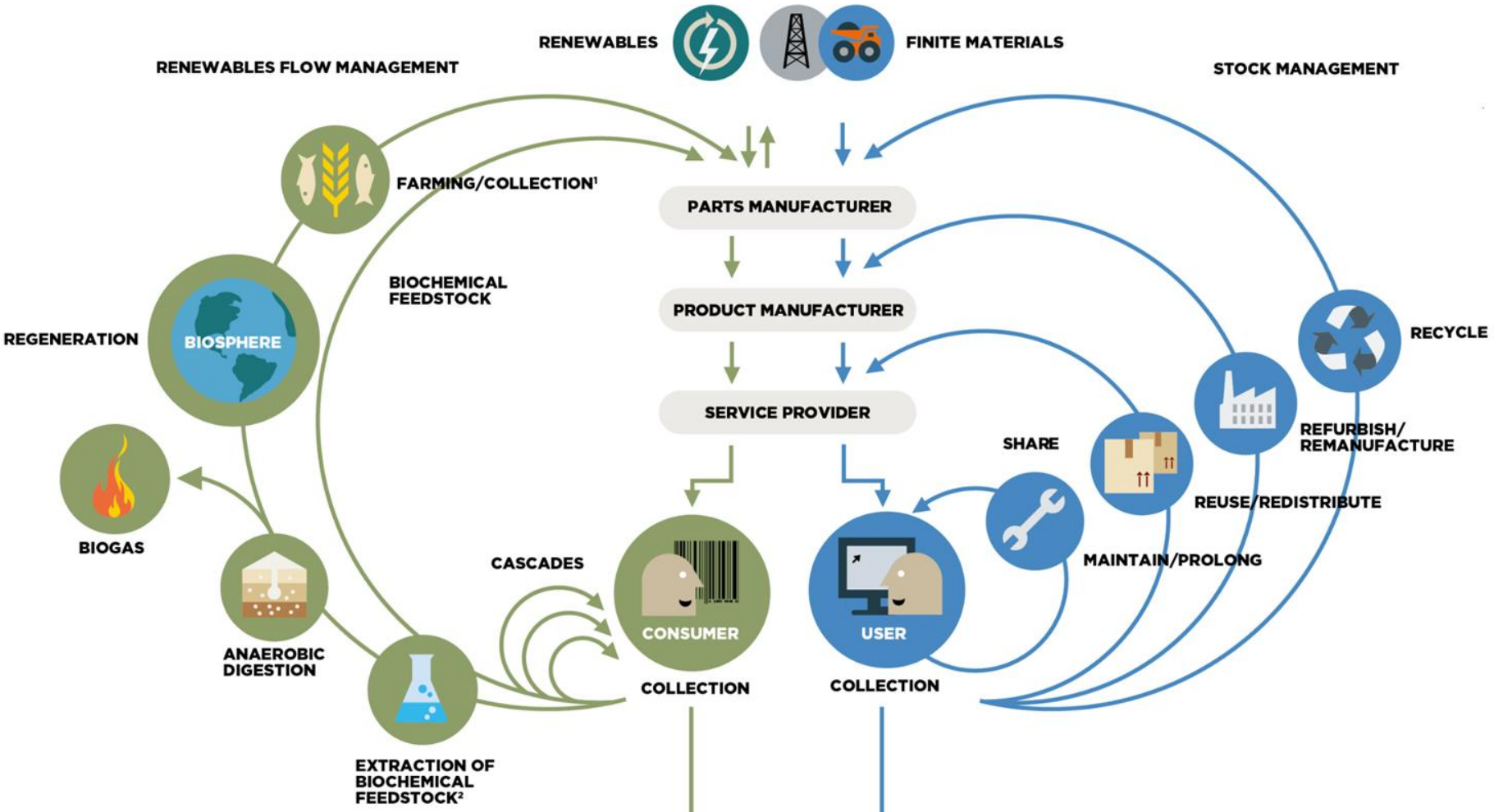


SOSTENIBILITÀ AMBIENTALE

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Brundtland Report

CIRCULAR ECONOMY



1 Hunting and fishing
2 Can take both post-harvest and post-consumer waste as an input

SOURCE
Ellen MacArthur Foundation
Circular economy systems diagram (February 2019)
www.ellenmacarthurfoundation.org
Drawing based on Braungart & McDonough, Cradle to Cradle (C2C)

ELLEN MACARTHUR FOUNDATION

COS'È LA CIRCULAR ECONOMY

L'economia circolare è un modello di produzione e consumo che implica condivisione, prestito, riutilizzo, riparazione, ricondizionamento e riciclo dei materiali e prodotti esistenti il più a lungo possibile.

Fonte: europarl.europa.eu

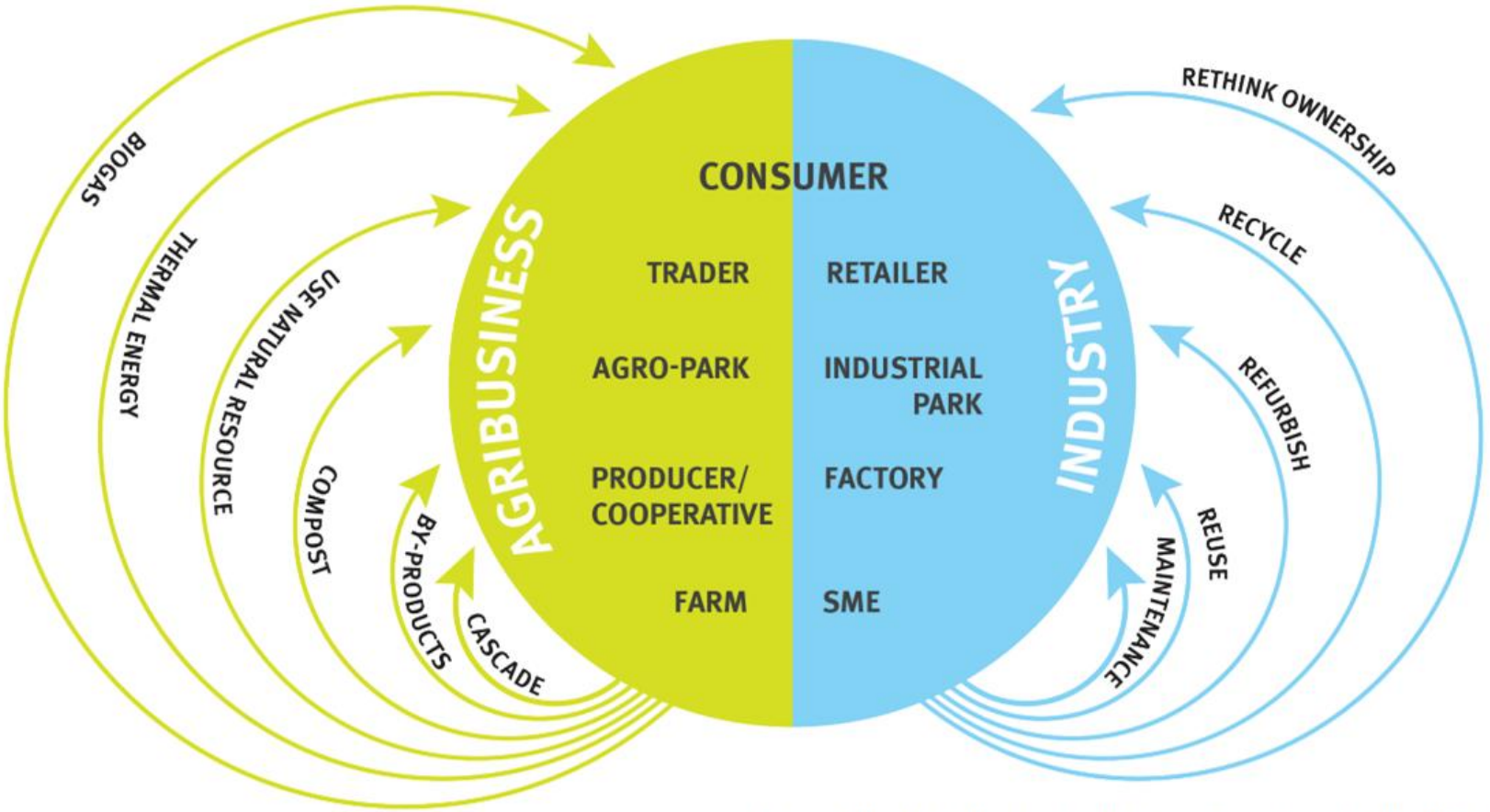
I CONCETTI CHIAVE

CHIUDERE I CERCHI - ogni flusso di materiale deve essere chiuso (confluire in un altro)

STRATEGIE - Ogni modello propone delle strategie che rendono il sistema circolare

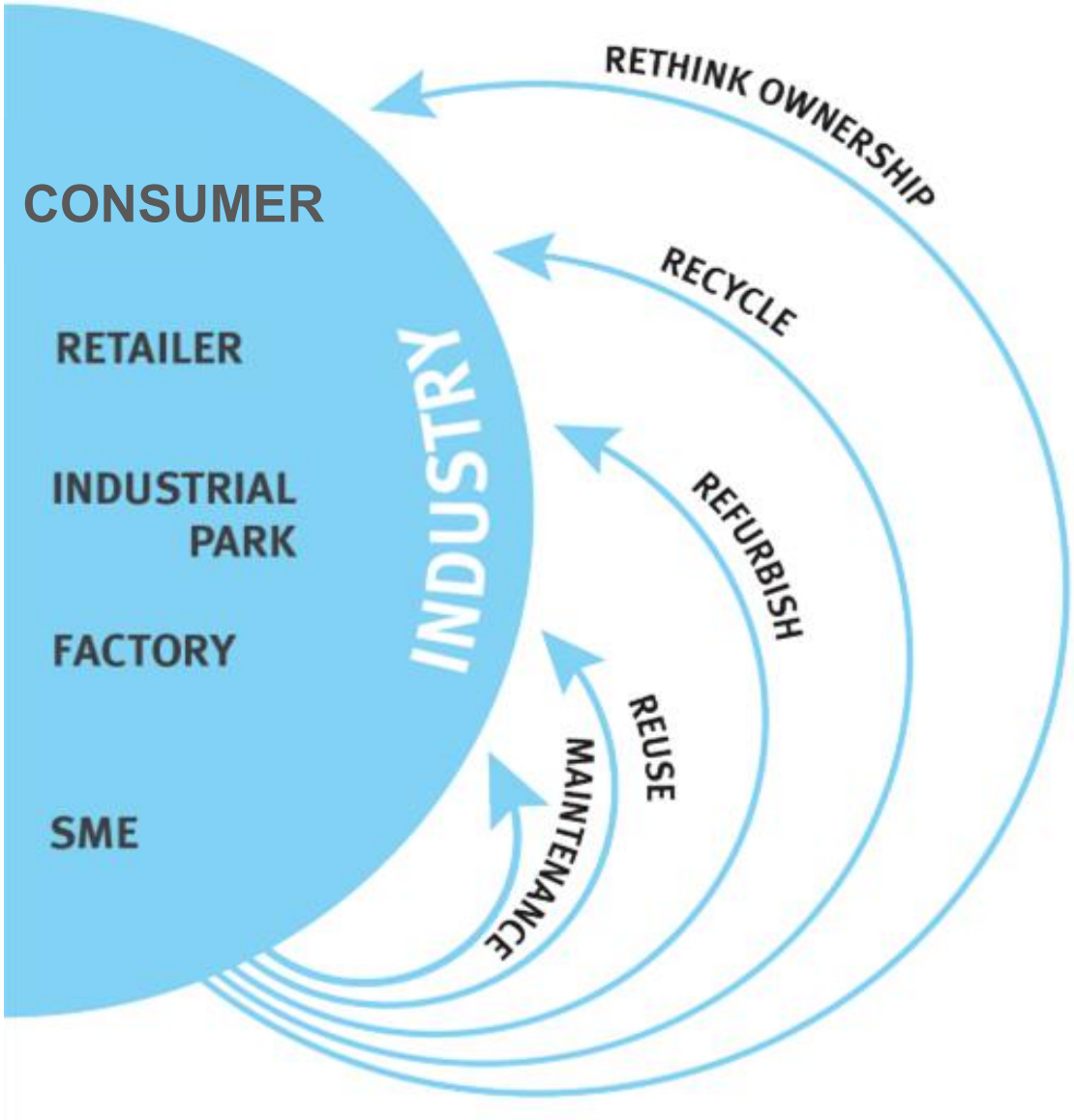
GERARCHIA - le strategie hanno un ordine di priorità, in base a quanto impattanti sono.

CIRCULAR ECONOMY



Source: Ellen MacArthur Foundation concept, redesigned by UNIDO

CIRCULAR ECONOMY

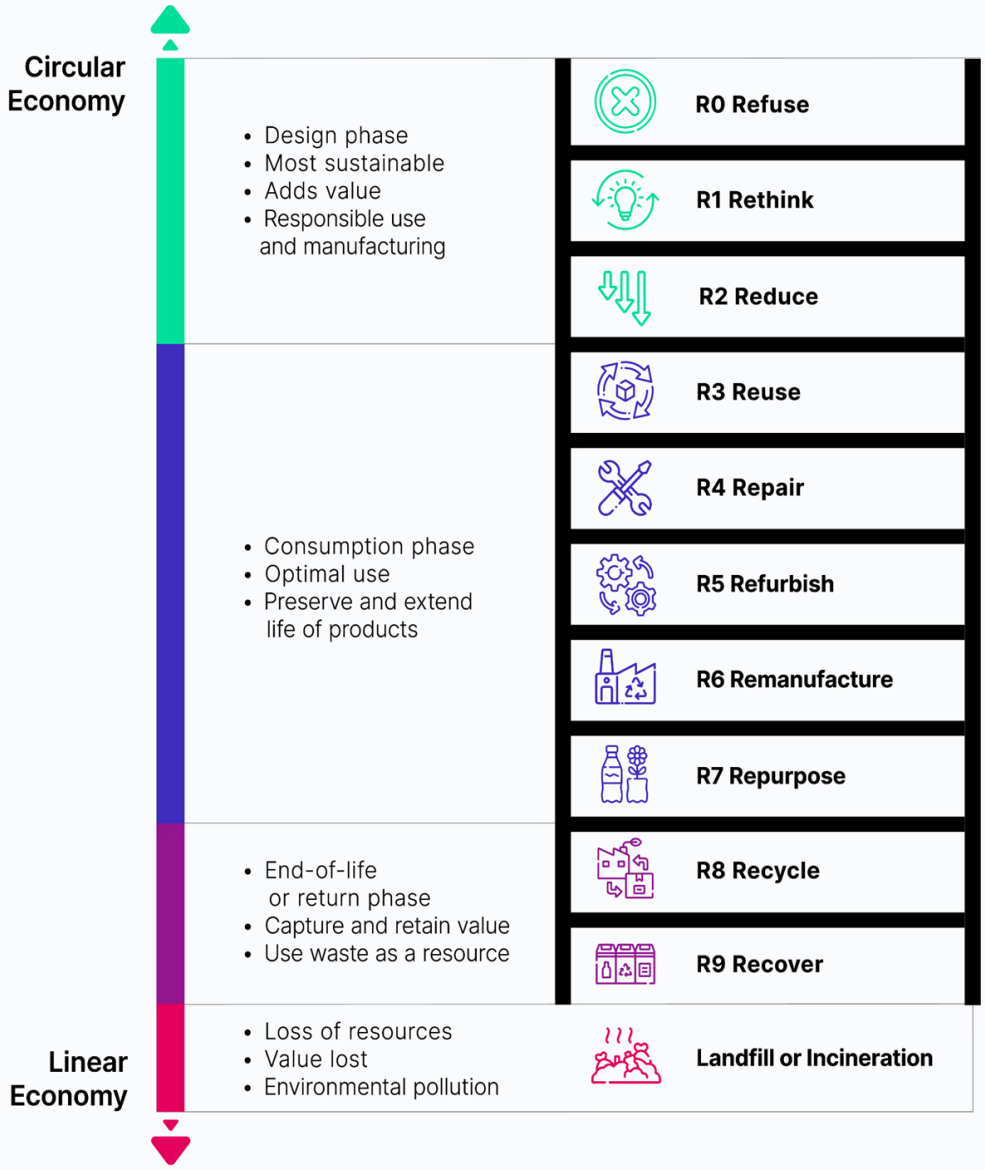


UN ESEMPIO

Problema di sostenibilità
gran parte del packaging prodotto non viene riciclato

Strategia	**Esempi di applicazioni**
REDUCE	- Ridurre il packaging usato - Usare meno materiali che persistono nell'ambiente - Ridurre l'acquisto di prodotti con (over)packaging - …

CIRCULAR ECONOMY NEL PACKAGING



CIRCULARISE

https://www.circularise.com/blogs/r-strategies-for-a-circular-economy

LE GERARCHIE

Imparare un framework di strategie e capire come applicarle.

Scegliere qual’è la migliore e con che ordine cercare di integrarle.

R0
REFUSE

Evitare del tutto il prodotto o il componente superfluo, a monte della filiera. Significa sostituire la funzionalità con soluzioni digitali o condivise, rinunciare a gadget non necessari, eliminare gli imballaggi inutili.

IL VALORE DEL “NON FARE”

«Quello che non c'è non si rompe»

Henry Ford

(e nemmeno inquina)

I PRODOTTI NUDI

NAKED

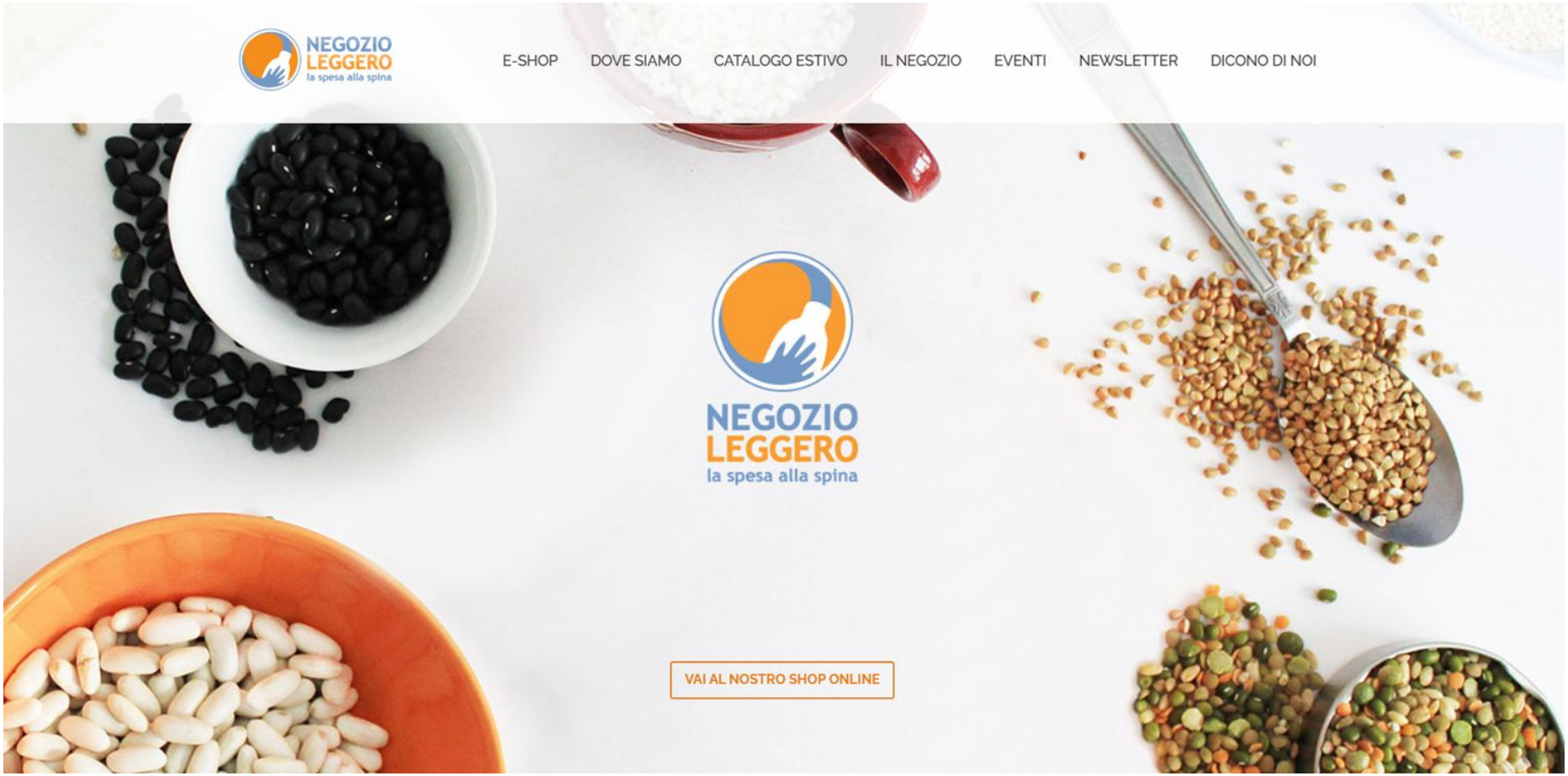
At Lush we believe you should get what you pay for

66%

of our products sold each year are Naked

https://weare.lush.com/lush-life/our-values/naked/

I NEGOZI LEGGERI



https://www.negozioleggero.it/

ALTERNATIVE ALLA PLASTICA

PULPEX.

Mission Design ESG Team News FAQ Contact

Our products are designed for brands, consumers and circularity - with their entire lifecycle in mind.

https://www.pulpex.com/design

ALTERNATIVE ALLA PLASTICA

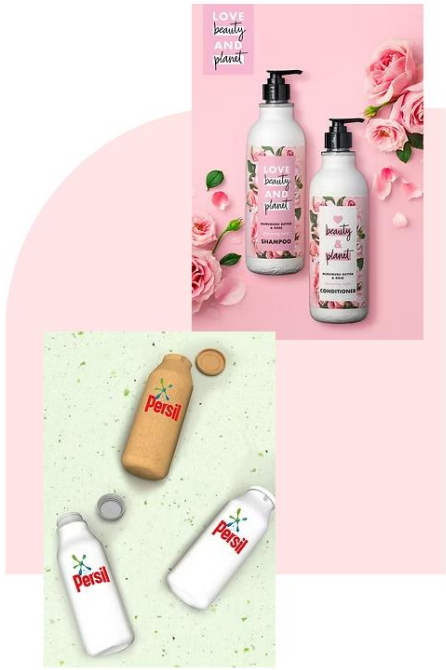
EVOLVE
ORGANIC BEAUTY

Hand & Body Wash / Shampoo

Evolve Organic Beauty is a purpose-driven, independent British beauty brand creating innovative, eco-conscious, natural beauty products that nurture healthy, radiant skin and total body wellbeing. Marking the first-ever commercial use of Pulpex bottles in personal care, we introduced two of our shower products in 550ml refill sizes: African Orange Aromatic Hand & Body Wash and Superfood Shine Shampoo allowing customers to easily refill at home, reducing packaging waste and enabling the bottles to be recycled alongside paper and cardboard.

Evolve's mission has always been to be a force for good, redefining beauty by combining organic, natural formulas with eco-friendly packaging, so this launch is a major milestone in our journey to drive positive change in the beauty industry.

Learn more



Unilever

Love Beauty and Planet / Dirt is Good

Unilever is exploring the Pulpex technology to create paper-based bottles within its laundry and hair care product categories, paving the way for using alternative packaging materials of the future.

This is one of the ways we're completely rethinking our approach to packaging using our framework of 'less plastic, better plastic, no plastic'. In collaboration with innovation partners like Pulpex, we're making progress towards our commitment to halve our use of virgin plastic materials by 2025.

Learn more

Castrol

Castrol Engine Lubricant

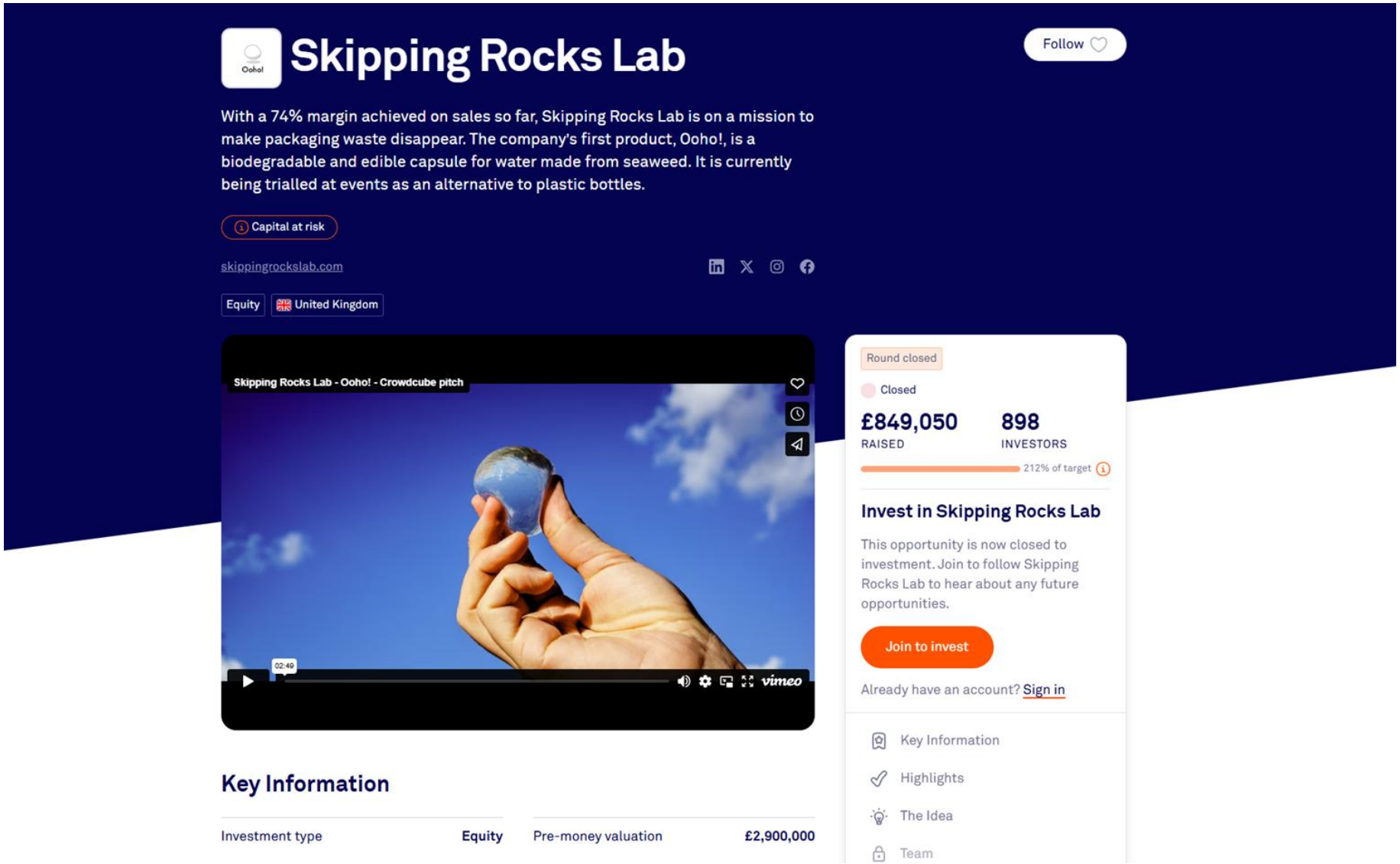
Castrol has a proud heritage of innovation and fuelling the dreams of pioneers. Our passion for performance, combined with a philosophy of working in partnership, has enabled Castrol to develop lubricants and greases that have been at the heart of numerous technological feats on land, air, sea and space for over 100 years.

Today, Castrol is helping drive sustainability with our new strategy that sets out aims for 2030 to save waste, reduce carbon and improve lives. Working with innovation partners such as Pulpex is critical to developing novel packaging solutions to help achieve our sustainability aims.

Learn more

https://www.pulpex.com/design

PACKAGING CHE NON SI BUTTA



PACKAGING CHE NON SI BUTTA

ALTERNATIVE ALLA PLASTICA

Notpla
Disappearing
Packaging

Convenience doesn't have to cost the world

This simple food container is carefully engineered to eliminate waste and make the planet a healthier place. Where conventional containers have petrol-based coatings that stick around forever, this one has a 100% natural seaweed coating. Once finished, the whole package can be composted and disappears without a trace—just like a fruit peel.

more about Notpla Food Containers

Seaweed forever

There are forests below the sea that are very dear to us. Seaweed grows quickly, and needs no freshwater, land or fertiliser. It captures carbon and makes the surrounding waters less acidic.

Beyond this, seaweed is abundantly available and has near-magical material properties. In the quest to heal our ecosystems and food chains from the toxic waste of plastic packaging, it is the perfect companion species and an integral partner to our solutions.

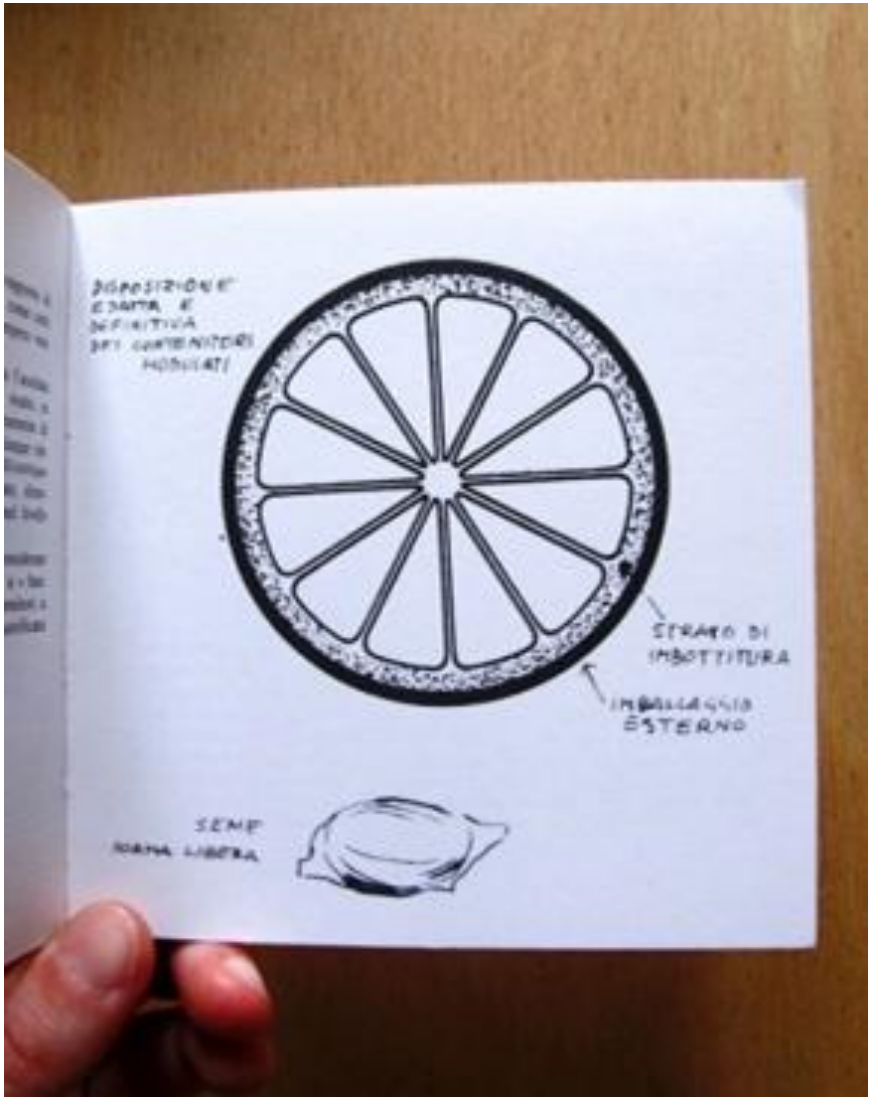
more about Notpla's Impact Theory

https://www.notpla.com/

R1
RETHINK

Cambiare il modello di business o il design in modo da usare comunque il bene ma con molta meno materia o energia: es. “product-as-a-service”, condivisione, modularità, multi-funzione.

EVITARE OVERPACKING



https://www.ebaumsworld.com/pictures/29-times-packaging-was-a-little-excessive/85876139/?image=85876152

MACHINE LEARNING E OTTIMIZZAZIONE

First, we're working to use as little packaging as possible while ensuring a damage-free delivery. Machine learning helps us determine which products are suitable for flexible packaging, such as padded mailers and bags, which are up to 75% lighter than similar-sized boxes. Over the past five years, these algorithms have reduced the use of corrugate boxes by over 35% in North America and Europe. We also introduced algorithms designed to reduce packaging specifically for shipments with multiple items, which decreased the size of packaging for 7% of shipments in North America since launching in 2018. We've also been investing in optimizing our packaging suite to minimize the amount of paper we use for each package, saving approximately 60,000 tons of cardboard annually.

amazon

https://www.aboutamazon.co.uk/news/sustainability/how-amazon-is-reducing-packaging

UN NUOVO CONCETTO DI PACKAGING

ELSEVIER

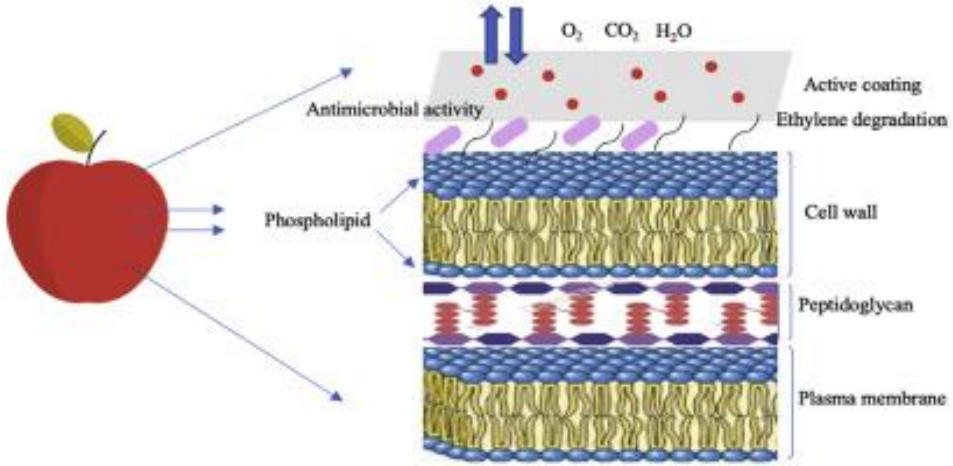
Advances in Colloid and Interface Science

Volume 291, May 2021, 102405

Historical Perspective

Application of bio-nanocomposite films and edible coatings for extending the shelf life of fresh fruits and vegetables

Shima Jafarzadeh [a], Abdorreza Mohammadi Nafchi [a], Ali Salehabadi [a], Nazila Oladzad-abbasabadi [a], Seid Mahdi Jafari [b]



https://www.sciencedirect.com/science/article/abs/pii/S0001868621000464

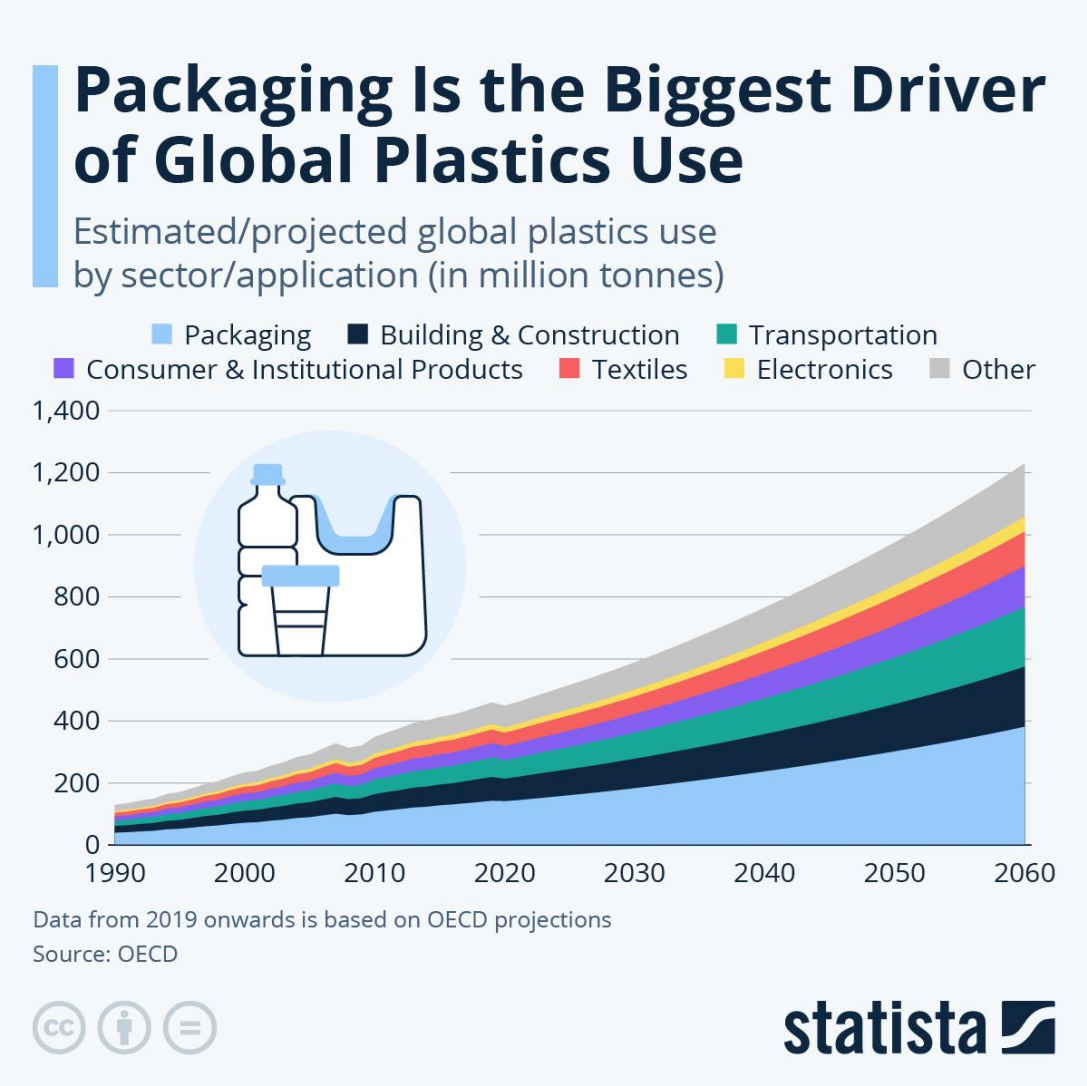
RIPENSARE I PRODOTTI

https://www.friendlyshop.it/

R2
REDUCE

Minimizzare le risorse impiegate per unità di funzione: prodotti più leggeri, uso di materiali riciclati, minor consumo energetico e minor complessità di componenti.

COSA AUMENTA IL CONSUMO DI PLASTICA



https://www.statista.com/chart/32140/global-plastics-use-by-application/

RIDURRE IL MATERIALE USATO

https://youtu.be/h-ANxOPBYrI?si=3U62N2CTYoWoCwSd

R3
REUSE

Ri-immettere in circolazione il prodotto intero così com'è, con lo stesso scopo originario e il minimo intervento (pulizia, test).

VUOTO A RENDERE

Loop | Shop | Purpose | Partners | Join Us | Press | Download Loop App | English

Designed for Reuse

Loop activates a circular ecosystem by collaborating with brands, retailers, and manufacturers to enable the sale and collection of reusable and returnable versions of conventional single-use products to make reuse convenient and accessible.

Experience Loop

DANONE | Nestlé | Unilever | FERRERO | BRASSERIES KRONENBOURG | THE Coca-Cola COMPANY | L'ORÉAL PARIS

https://exploreloop.com/en/

VUOTO A RENDERE

Produits disponibles

Rechercher

Catégories disponibles

Magasins participants

Nouveau

Sodebo - Pastabox 280G Tortellini Ricotta Epinard
Sodebo
Consigne :: 0,30 €

Nouveau

Soda Botanique Ecorce "Essences d'Oé" - 75cl
Oé
Consigne :: 0,20 €

Nouveau

Soda Botanique Fleur "Essences d'Oé" - 75cl
Oé
Consigne :: 0,20 €

Nouveau

Soda Botanique Feuille "Essences d'Oé" - 75cl
Oé
Consigne :: 0,20 €

Nouveau

Soda Botanique Feuille "Essences d'Oé" - 33cl
Oé
Consigne :: 0,10 €

Nouveau

Soda Botanique Ecorce "Essences d'Oé" - 33cl
Oé
Consigne :: 0,10 €

Nouveau

Soda Botanique Fleur "Essences d'Oé" - 33cl
Oé
Consigne :: 0,10 €

Nouveau

Le Merlot - Vin de France Rouge - 75cl
Oé
Consigne :: 0,20 €
L'abus d'alcool est dangereux pour la santé

https://exploreloop.com/en/

IMBALLAGGI RIUSABILI

RePack

Services Packaging Impact About us Articles EN Contact

Packaging for the Circular Era

RePack delivers reusable packages that are designed to be durable, circular, and easy to use.

Our mission is the end of trash and we created the world's first reusable packaging for e-commerce in 2013 to prove it is possible.

The end of trash is near →

ROYAL CANIN ginatricot A S K E T PICTURE MADS NØRGAARD Scandinavian Outdoor GANNI

NELLY.COM stadium DECATHLON

https://www.repack.com

IMBALLAGGI RIUSABILI

E-commerce Bags with Fast and Secure Sealing System

e-com | B2C | fashion | pet food | fast to pack | secure

A Reusable Packaging Design Built for E-Commerce at Scale.

https://www.repack.com/packaging/reusable-ecommerce-bags

PACKAGING PER DELIVERY RIUSABILI

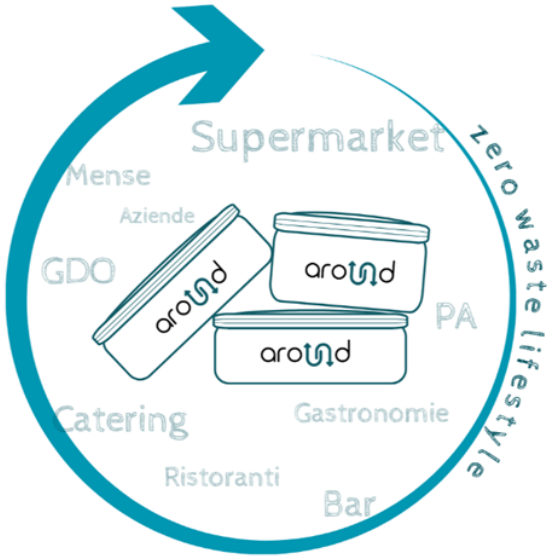
around

HOME CHI SIAMO SERVIZI COME FUNZIONA BLOG CONTATTACI

LA TUA SCELTA SOSTENIBILE

CONTENITORI RIUTILIZZABILI AROUND

La soluzione ideale per supermercati, mense e aziende per eliminare il packaging monouso in modo smart e sostenibile



https://www.aroundrs.it/

R4
REPAIR

Ripristinare la funzionalità sostituendo o aggiustando la parte guasta; il resto del prodotto rimane invariato.

BULLPAK ORBIS RIPARABILE

RIPARAZIONE E MOVIMENTAZIONE

GRANDI CONTENITORI I PALLET

INNOVATIVO ROBUSTO SOSTENIBILE

IN EVIDENZA

Facili da movimentare e riparare
Componenti sono facilmente sostituibili
Video con le istruzioni per riparare

Riparazione e Movimentazione degli Imballaggi Riutilizzabili

Gli imballaggi riutilizzabili di ORBIS Europe sono facili da movimentare e riparare. I contenitori industriali e i pallet sono realizzati in plastica e risultano particolarmente robusti e resistenti agli urti grazie a speciali processi di produzione. Gli imballaggi di plastica migliorano la sicurezza nella vostra azienda poiché si movimentano con facilità e si integrano senza problemi nei processi manuali e automatizzati. Inoltre, rispetto agli imballaggi tradizionali, prevengono eventuali danni ai prodotti proteggendoli da ruggine, umidità, muffa e abrasione. Per la loro corretta movimentazione, consultate i seguenti video o rivolgetevi ai nostri esperti.

Tutti i componenti degli imballaggi riutilizzabili sono facilmente sostituibili, senza speciali attrezzi. Le pareti laterali, le chiusure, le cerniere e le traverse danneggiate dei contenitori FLC si possono sostituire con facilità con ricambi originali. Anche i pallet si riparano facilmente.

Di seguito è riportata una raccolta di video con le istruzioni per riparare e movimentare i contenitori FLC e i pallet.

DOWNLOAD

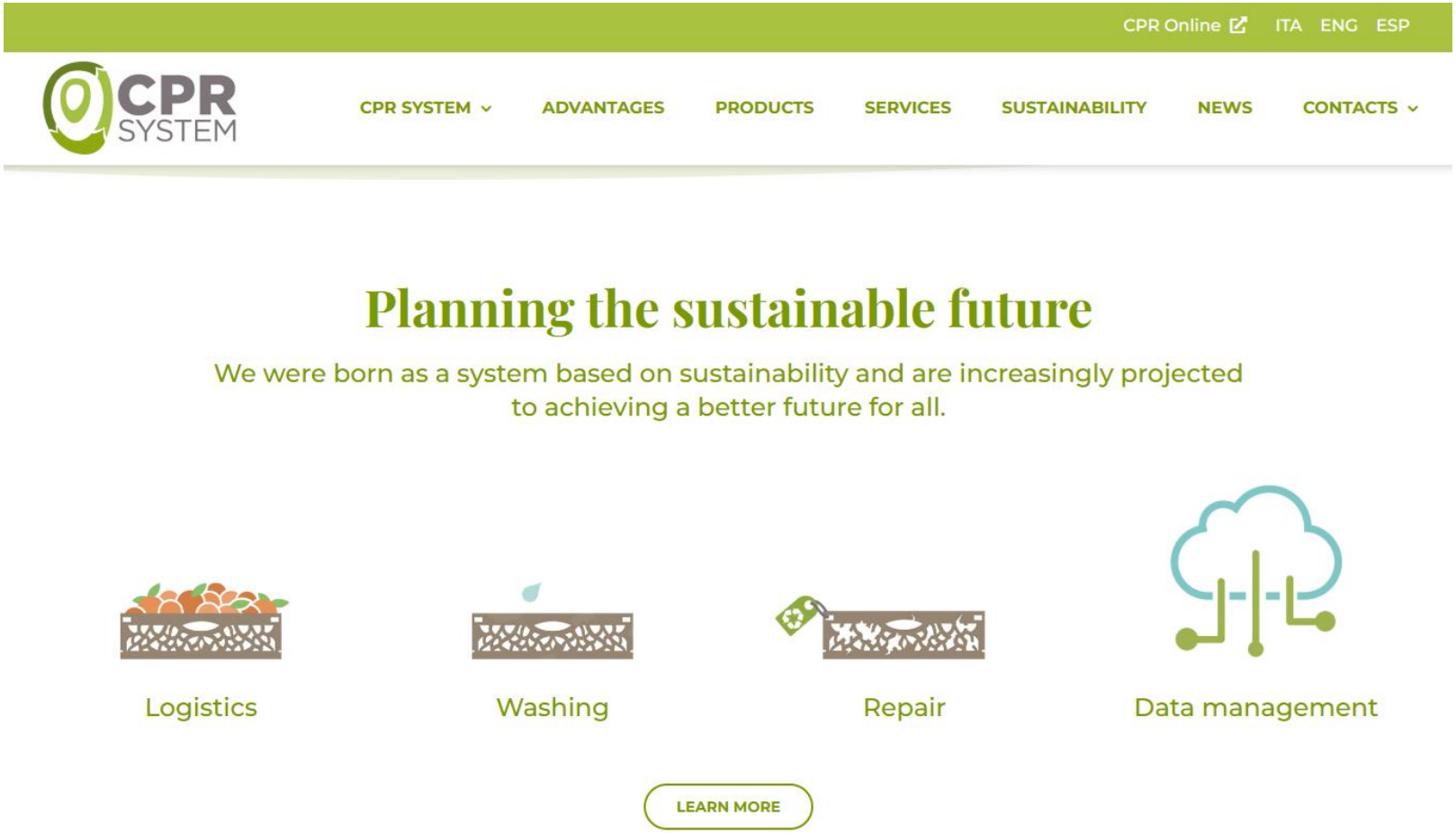
BulkPak Guida all'uso
3 MB, PDF

BulkPak Guida – Piegare
1 MB, PDF

ORBIS YouTube
Tutti i video in un unico luogo

https://orbiseurope.eu/it/riparazione-e-movimentazione/

CASSETTE RIUSABILI E RIPARABILI



https://www.cprsystem.it/en/

R5
REFURBISH

Rigenerare il bene con controlli, upgrade minori, sostituzione di parti di consumo e ripristino estetico, per venderlo “quasi come nuovo” con garanzia.

ANCHE IL PACKAGING PUÒ ESSERE RICONDIZIONATO

SCHÜTZ

As a pioneer of the circular economy, from the very beginning SCHÜTZ understood the IBC as a packaging system that had in its DNA the option of collecting and recycling the containers. This idea is clearly communicated in the embossing on the labelling plates of our IBCs: ECOBULK/RECOBULK.

An ECOBULK is a completely new SCHÜTZ IBC, while a RECOBULK is an emptied SCHÜTZ IBC that has been collected from the customer by our free, worldwide collection service and then reconditioned by us. A globally standardised process ensures the highest quality and eco-friendliness. For example, the inner bottle is always removed and replaced by a new original bottle complete with outlet valve and screw cap. The steel grid and the pallet are cleaned and reused in a resource-saving manner. Thus, each RECOBULK saves approx. 100 kg CO_2 compared to a new container.

https://www.schuetz.net/en/climate-action/blog/packaging-systems/2021/schuetz-recobulk-reconditioned-ibcs-for-the-highest-safety-and-environmental-protection/

R6
REMANUFACTURE

Smontare a livello di moduli, revisionare o sostituire componenti chiave, riassemblare e collaudare con specifiche pari al nuovo; il prodotto riparte da “zero ore” di vita utile.

PACKAGING TRACCIABILE AVANZATO

LIVINGPACKETS Products Services Markets Resources Customer Stories Contact EN Login

Eliminate all packaging waste

THE BOX is a reusable, robust and foldable packaging that eliminates all packaging waste.

Protect every delivery

All our products are equipped with preventive technology. They interact with their environment and alert you before problems occur.

Simplify the management of your deliveries

With a single interface you can track and be alerted for all your deliveries

Our solutions for you

Our products ranges for all your needs

THE BOX

Read more →

THE BOX Pro

Read more →

THE TABLET

Read more →

https://livingpackets.com/

PACKAGING TRACCIABILE AVANZATO

https://youtu.be/vxvixe6pJg0?si=aPI7kdCkzFINZpb7

R7
REPURPOSE

Utilizzare il prodotto o i suoi moduli per una funzione diversa da quella originale (upcycling funzionale), senza tornare a materiale grezzo.

DAL PACKAGING AI MATTONI

TYPES OF BYBLOCKS

STANDARD

Stabilizing top pegs and bottom dimples are essential for first course and mid-wall spans.

FLAT

Used for top and sill courses below wall openings. Provides flat surface for roof or cap installation.

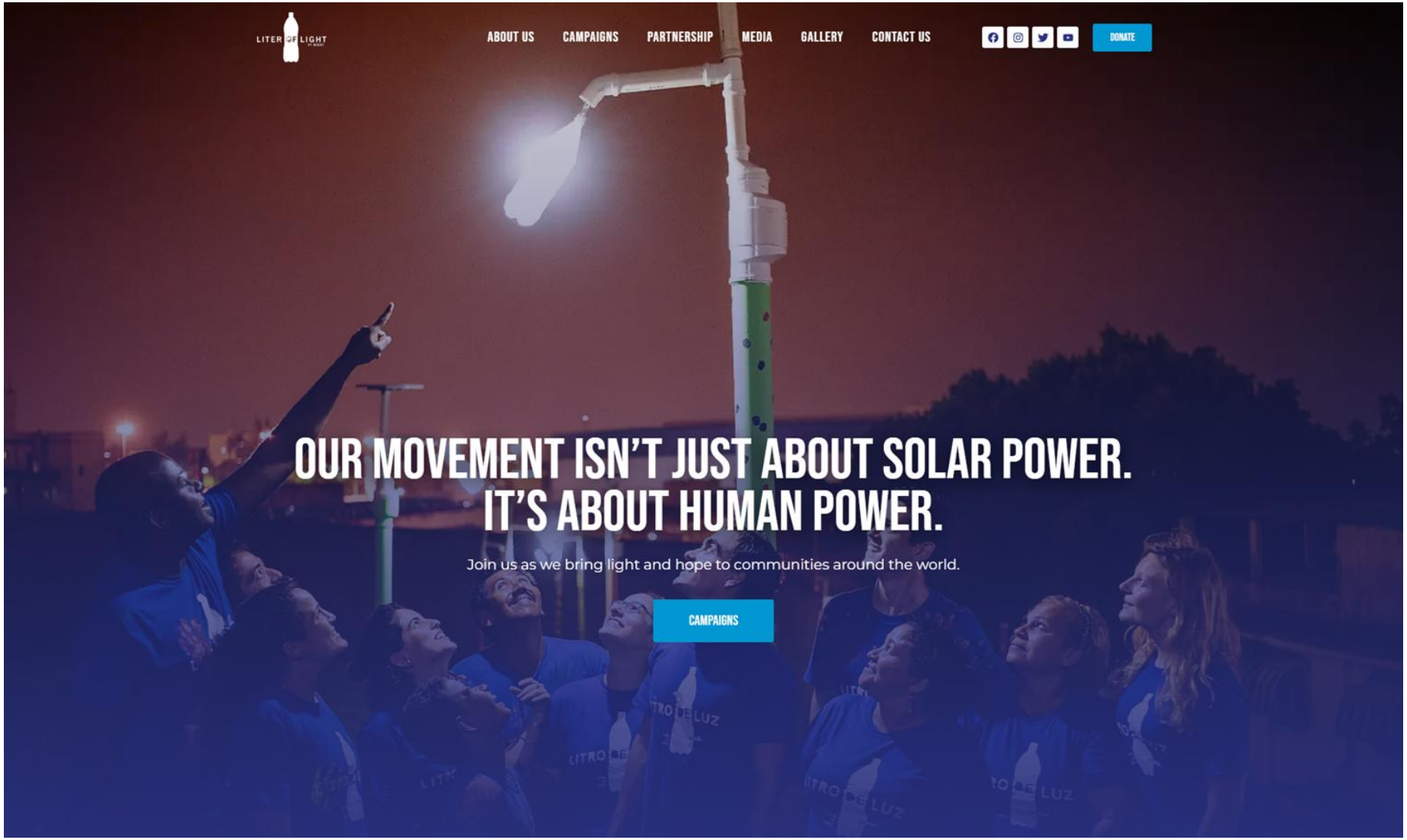
COMBINATION

Used for window penetrations or step down transitions that intersect a full block.

SEE HOW IT WORKS

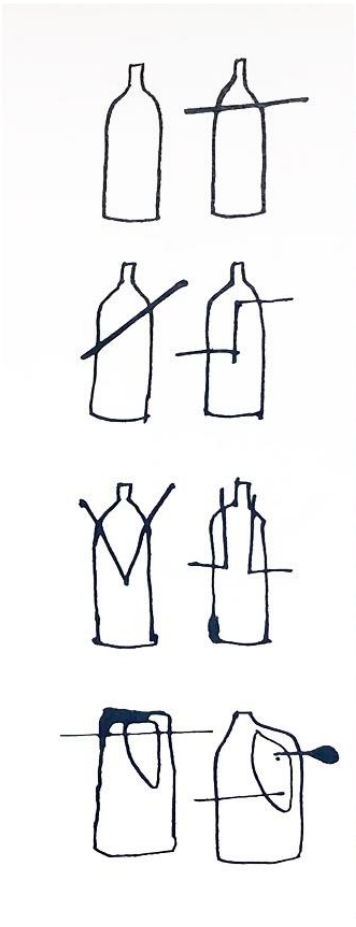
https://byfusion.com/pages/byblock

DAL PACKAGING AI MATTONI



https://literoflight.org/

VASI DI DESIGN - 1995



https://www.designboom.com/design/enzo-mari-ecolo-vase-tag-discarded-common-plastic-containers-10-07-2020/

SECONDA VITA (?)

https://www.designboom.com/design/coca-cola-2nd-lives-caps-campaign-ogilvy-mather-06-03-2014/

12500 BOTTIGLIE IN MARE PER 8000 MIGLIA

https://theplastiki.com/

R8
RECYCLE

Recuperare le materie prime attraverso processi meccanici, termici o chimici, per trasformarle in feedstock e realizzare nuovi prodotti.

Riciclo chimico in partenza a Grandpuits

Iniziata la procedura di commissioning dell'impianto realizzato in joint venture tra Plastic Energy e TotalEnergies.

9 dicembre 2024 08:44

Plastic Energy e **TotalEnergies** hanno iniziato le procedure di **commissioning** del nuovo impianto per il riciclo chimico di rifiuti plastici presso il complesso di **Grandpuits**, in Francia, nell'ambito della riconversione della raffineria esistente (leggi articolo).

Una volta a regime, l'impianto di **pirolisi** sarà in grado di trattare fino a **15.000 tonnellate annue** di rifiuti plastici non recuperabili per via meccanica, trasformandoli in un olio riutilizzabile come feedstock per produrre nuove plastiche, riducendo l'uso di risorse fossili.

Nello stesso sito sorgerà anche un impianto di **riciclo meccanico** e **rigranulazione** di rifiuti plastici capace di produrre fino a **30.000 tonnellate** annue di compound.

https://www.polimerica.it/articolo.asp?id=33001

R9
RECOVER

Valorizzare la frazione residua non riciclabile tramite combustione controllata, pirolisi, gassificazione o altra tecnologia che generi energia o materia prima secondaria, riducendo il ricorso a discarica.

DALLA PLASTICA ALL'IDROGENO

UK firm turns plastic waste into hydrogen, targets 35 tons daily for clean energy

The Feedstock Testing Unit (FTU) employs pyrolysis within a rotary kiln to decompose plastic waste into its fundamental chemical constituents.

Updated: Mar 16, 2025 08:47 AM EST

Aman Tripathi

7 months ago

2

The FTU is designed to process waste plastic at a rate of 2.5 tonnes daily. Powerhouse Energy Group

A UK-based firm, Powerhouse Energy Group, has initiated operation of its Feedstock Testing Unit (FTU), which can convert waste plastics into hydrogen.

https://interestingengineering.com/energy/hydrogen-made-from-plastic-waste

DIREZIONI E CASE STUDIES

PPWR

European Parliament MENU

New EU rules to reduce, reuse and recycle packaging

Press Releases PLENARY SESSION ENVI 24-04-2024 - 12:38

- Measures cover full life cycle of packaging
- Less packaging, less waste, restrictions on certain packaging formats
- Certain single use plastic packaging types will be banned from 1 January 2030
- Each European generates almost 190kg of packaging waste every year

MEPs adopted new EU rules to tackle constantly growing packaging waste © Adobe Stock/ photka

Further information

> Adopted text will be available here (25.04.2024)

> Procedure file

> Legislative train

> EP Research: Revision of the Packaging and Packaging Waste Directive (April 2024)

> Free photos, videos and audio material

https://www.europarl.europa.eu/news/en/press-room/20240419IPR20589/new-eu-rules-to-reduce-reuse-and-recycle-packaging

PPWR

B. Recyclability

The PPWR requires that *all* packaging be recyclable. By 1 January 2028, the EC is charged with adopting delegated acts [2] setting, *amongst others*, design for recycling (DfR) [3] criteria and recyclability performance grades [4]. By 1 January 2030 or 24 months after entry into force (EIF) of the aforementioned delegated acts (whichever is later), *all* packaging placed on the market will be required to comply with the DfR criteria. Packaging with a recyclability grade below 70% will not be considered recyclable (must be Grade A, B, or C as described in Table 3 of Annex II of the PPWR). Importantly, extended producer responsibility (EPR) fees will be modulated based on performance grade.

By 1 January 2030, the EC is charged with adopting implementing acts [5] establishing, *among other things*, the methodology for the recycled at scale assessment *per packaging category*. By 1 January 2035 or 5 years after EIF of the aforementioned implementing acts (whichever is later), all packaging must be recycled 'at scale.' [6]

https://www.packaginglaw.com/special-focus/new-eu-packaging-and-packaging-waste-regulation-highlights-and-challenges-ahead

PPWR

C. Recycled Content in Plastic Packaging

The PPWR also mandates an increase in the recycled content of plastic packaging. By way of example, in the plastic part of certain "contact sensitive" [7] packaging (which includes food packaging), mandatory targets for recycled content from post-consumer waste [8] are set forth as follows:

Material	1 January 2030	1 January 2040
PET food packaging (except SUP beverage bottles)	30%	50% (except SUP beverage bottles)
Food packaging made from plastics other than PET (except SUP beverage bottles)	10%	50% (except SUP beverage bottles)
SUP beverage bottles	30%	65%

https://www.packaginglaw.com/special-focus/new-eu-packaging-and-packaging-waste-regulation-highlights-and-challenges-ahead

PPWR

D. Packaging Minimization

The PPWR requires that packaging be reduced to the minimum necessary for ensuring its functionality by 1 January 2030. Packaging not necessary to satisfy certain performance criteria and packaging only intended to increase the perceived volume of the packaging will be banned unless subject to geographical indications of origins protected under EU law. Further, economic operators who supply products to a final distributor or end user in grouped packaging, transport or e-commerce packaging must ensure that the ratio of empty space between the aforementioned packaging and the sales packaging does not exceed 50%.

https://www.packaginglaw.com/special-focus/new-eu-packaging-and-packaging-waste-regulation-highlights-and-challenges-ahead

RICAPITOLANDO...

- Serve intervenire ad ogni aspetto della catena del valore
- Diversi attori hanno diversi ruoli, ma ognuno può contribuire
- Esistono già svariate soluzioni sviluppate da start-up innovative e centri di ricerca
- Le possibilità per gestire il packaging sono molte
- l'ideale è sempre evitarne l'uso e la produzione
- in alcuni casi il mancato uso di packaging a conseguenze più inquinanti della sua produzione
- esistono molte alternative alla plastica che possono essere esplorare
- il packaging non deve essere necessariamente monouso
- ci sono normative che stanno indirizzando le aziende a ridurre la plastica, soprattutto se non necessaria o monouso
- I cambiamenti sono rapidi e continui e serve continuare a formarsi

GRAZIE!

Enrico Bassi
enrico@enricobassi.com
https://www.linkedin.com/in/enricobassi/