

Packaging como Sistema

Economía Circular

2025UBA



Pablo Groglopo

El Packaging

...y su paradoja



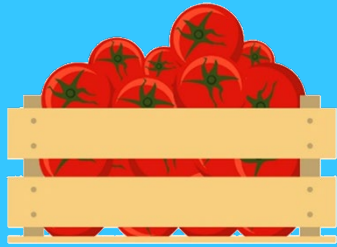
100% Natural
Cucumbers
1.5 lbs (0.7 kg)
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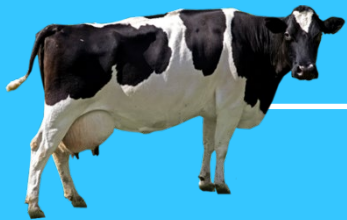
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1.5 lbs (0.7 kg)
100% Natural
Cucumbers
1.5 lbs (0.7 kg)



Comida

Packaging

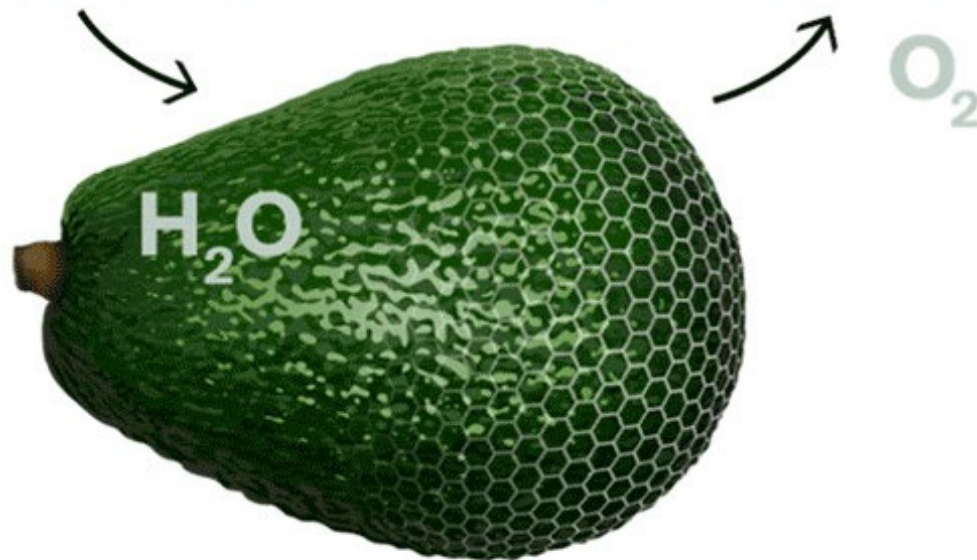


HOW APEEL WORKS

Providing a little extra peel

MOISTURE STAYS INSIDE

AIR STAYS OUTSIDE



From strawberries to peppers, every fruit and vegetable has a protective peel or skin that nature uses to keep it fresh. Made from plants, Apeel adds a little extra “peel” to the surface of fresh produce to slow water loss and oxidation – the factors that cause spoilage.





LIFE

1955

2018

**POLLUTED BY
SINGLE-USE PLASTIC**

A photograph of a polluted beach. In the foreground, the sand is covered with a thick layer of trash, including plastic bottles, bags, and other debris. In the middle ground, two people are holding up a large yellow banner with the text "POLLUTED BY SINGLE-USE PLASTIC" in bold black letters. The background shows a body of water and a cloudy sky.

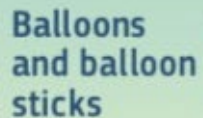
Hay 134 especies marinas amenazadas porque comen residuos plásticos


Según un estudio el 90% de las tortugas marinas analizadas ingirió plástico

10 most common plastic objects found on European beaches



Single-use plastic items represent **50%** of marine litter





INVESTIGACIÓN

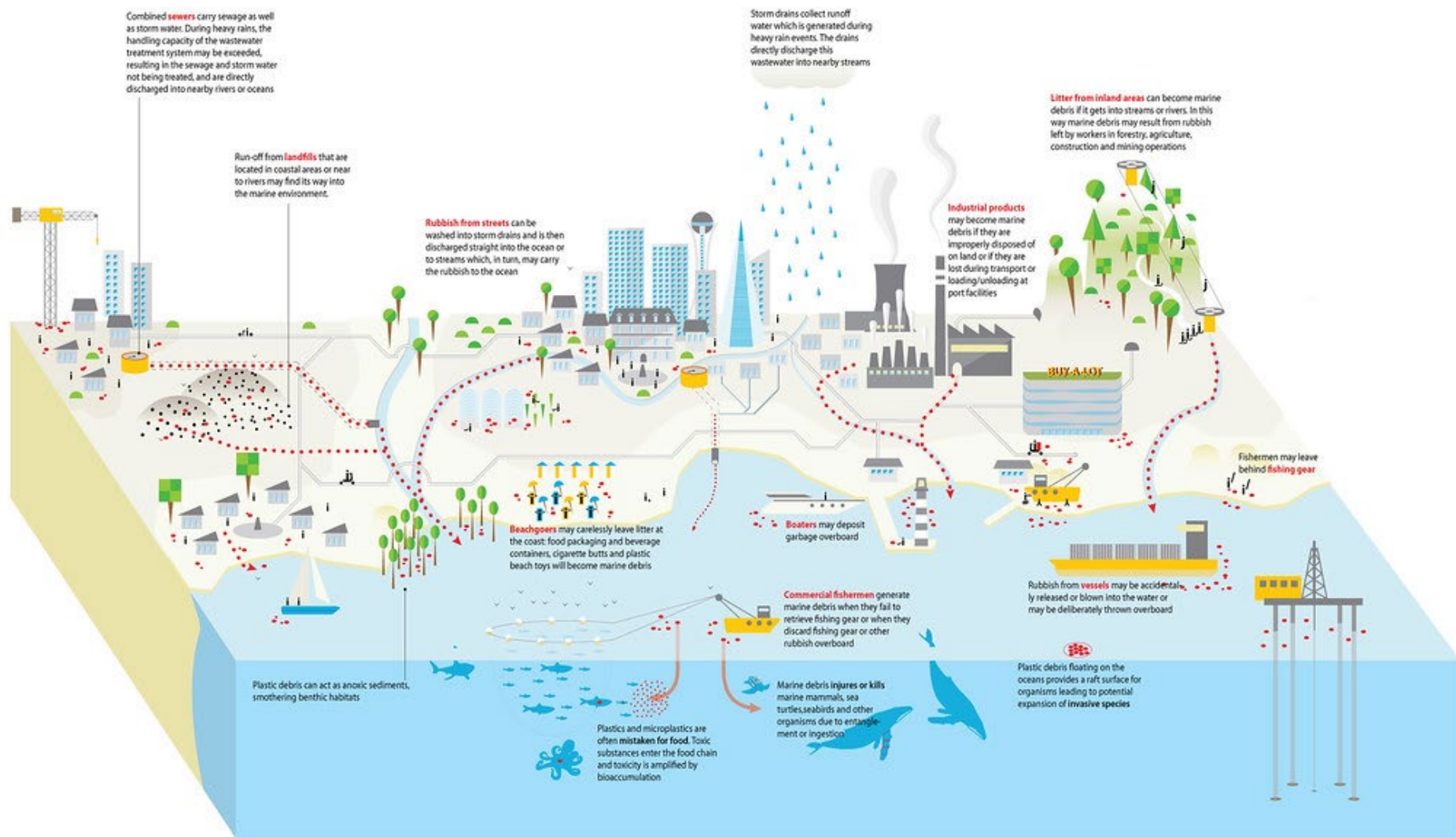
Los microplásticos se detectan por primera vez en la sangre humana

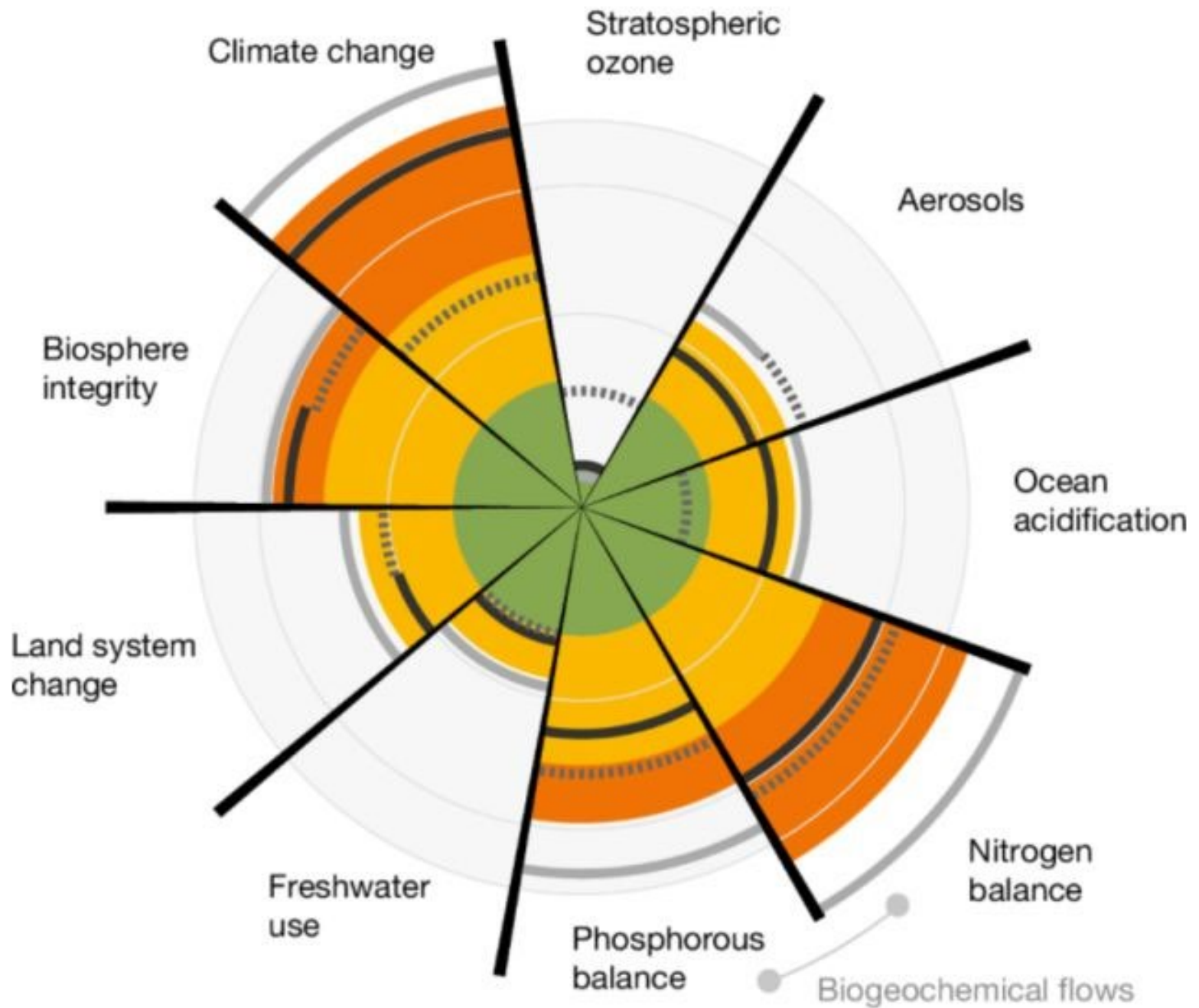
En cifras globales, la concentración de partículas de plástico en la sangre de los 22 donantes ascendió a una media de 1,6 microgramos por mililitro

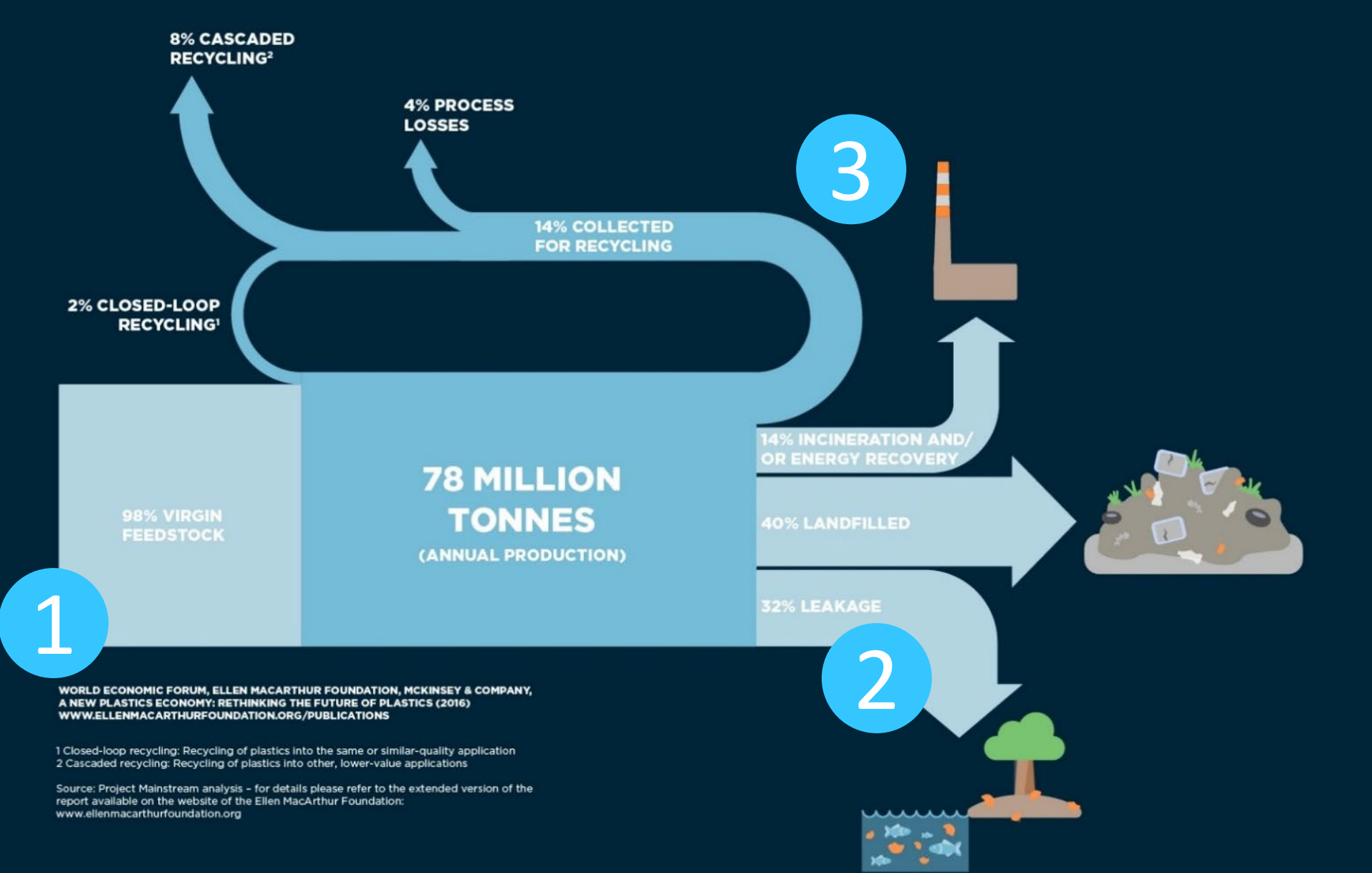


**WHERE DO
MICROPLASTICS
COME FROM?**

Plastic debris in the ocean: a multiplicity of sources and pathways

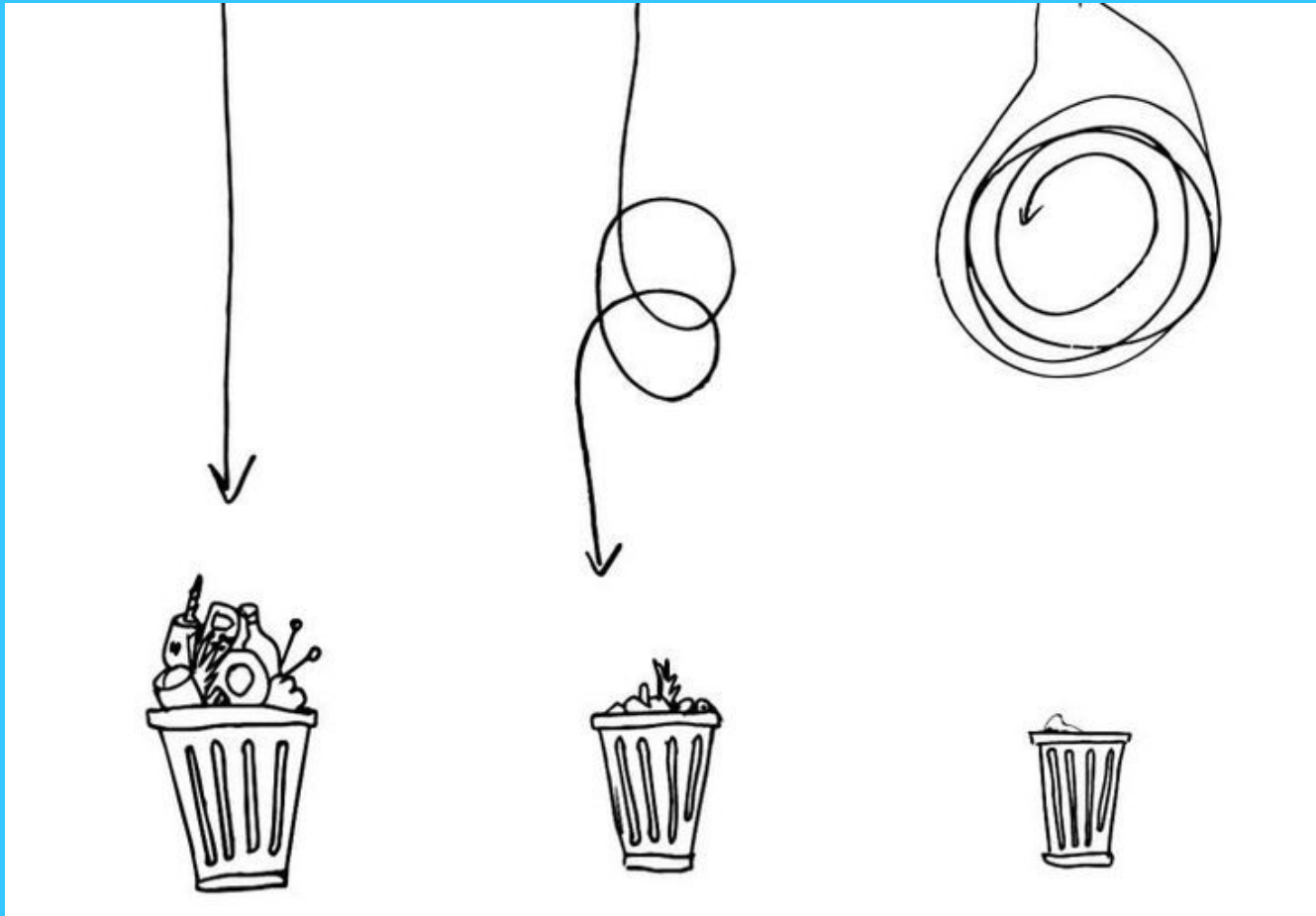






*Ellen McArthur Foundation (Sansky diagram of global plastic material flow)

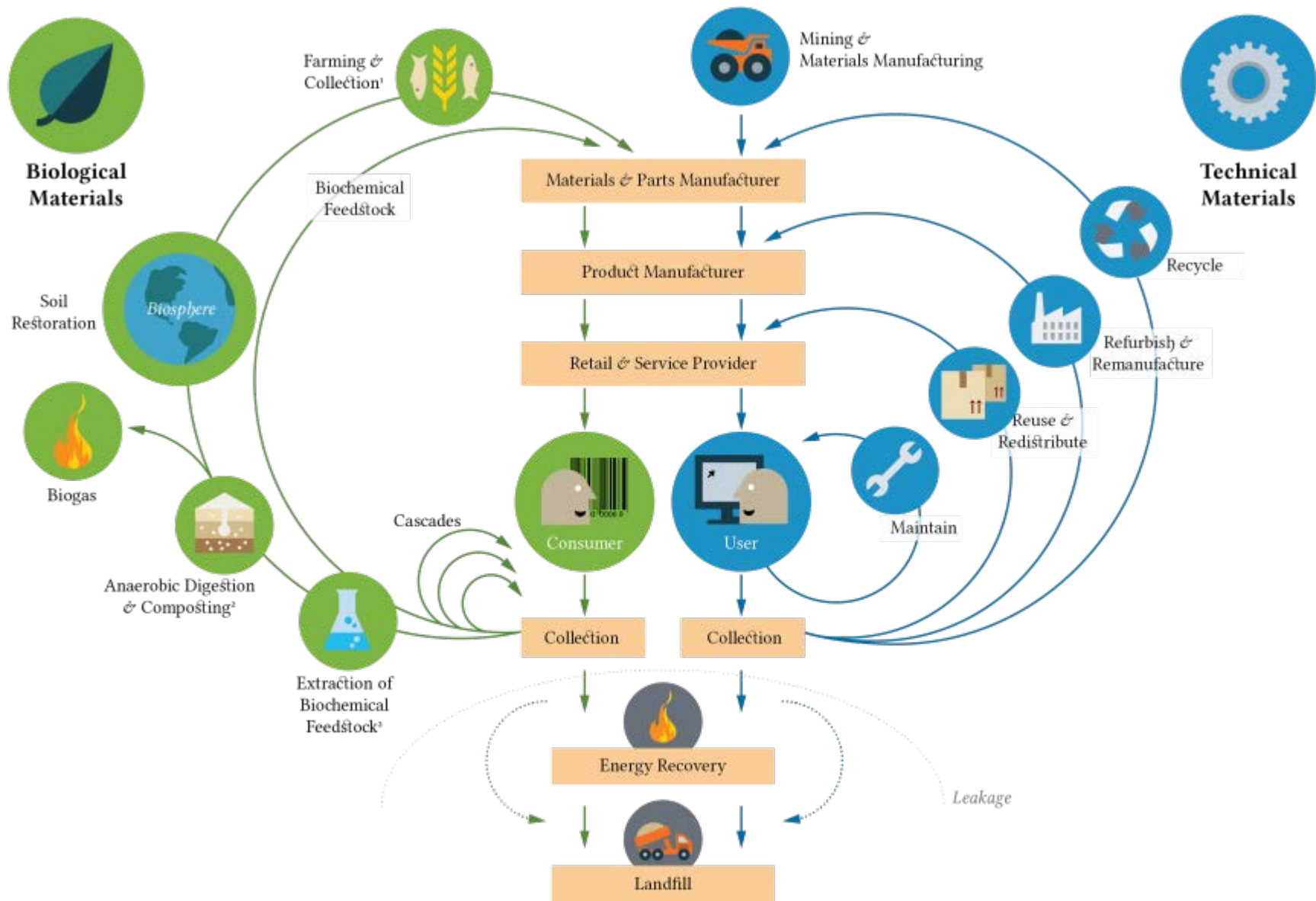
Economía Circular del Valor



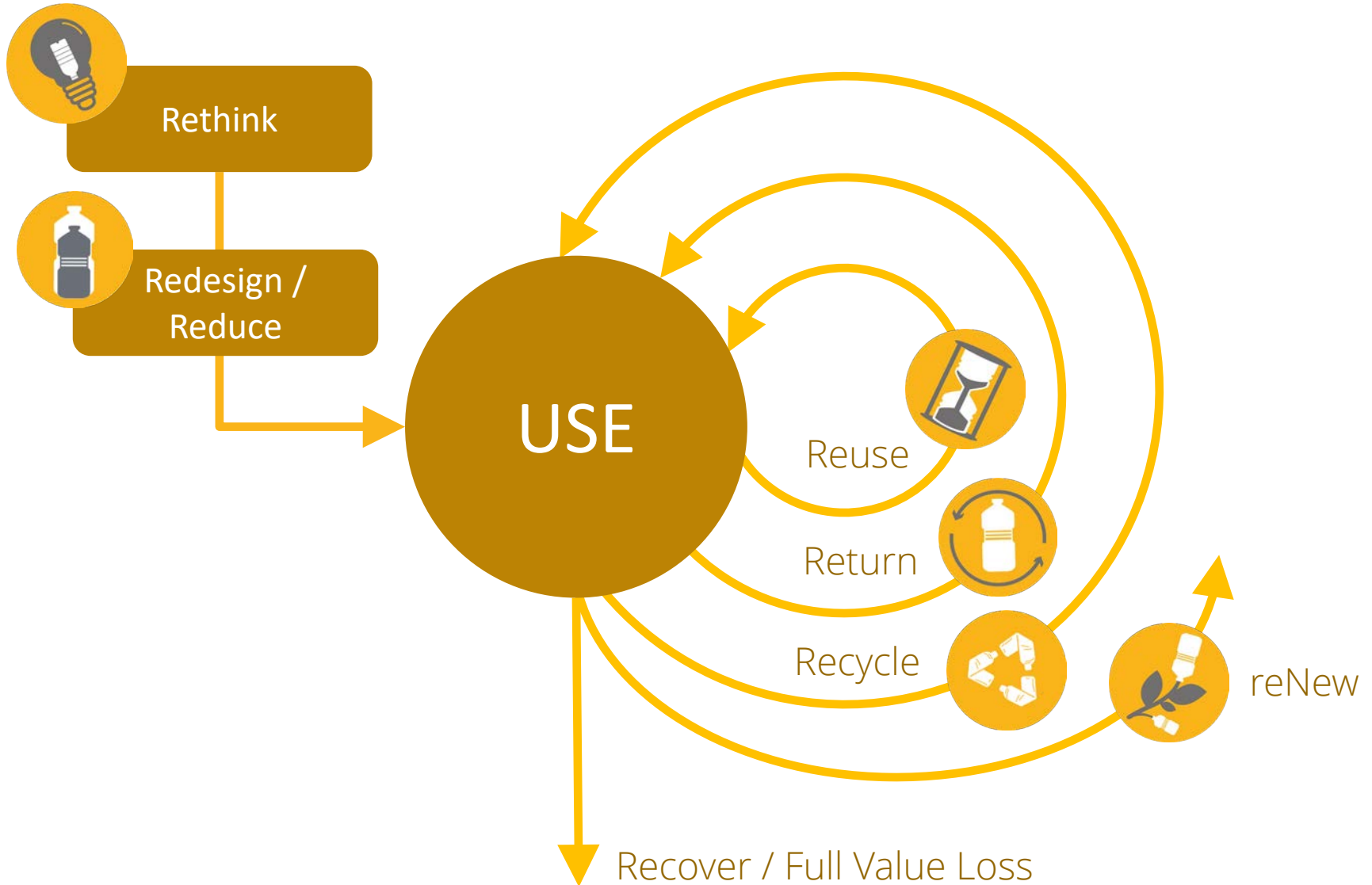


El concepto de Residuo (waste) es económico.
No existe tal cosa como el desperdicio en la naturaleza
Günter Pauli – The Blue Economy

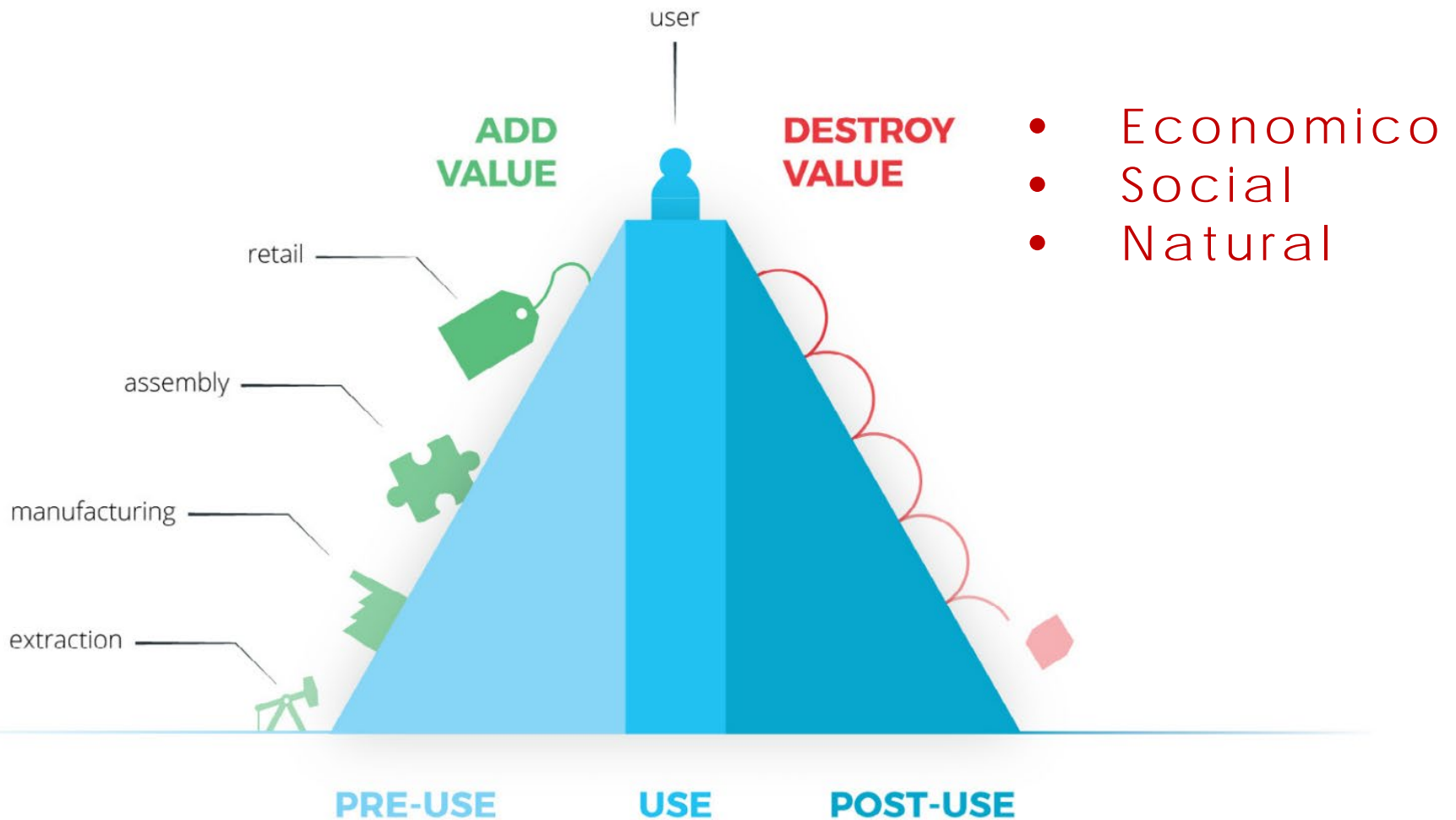




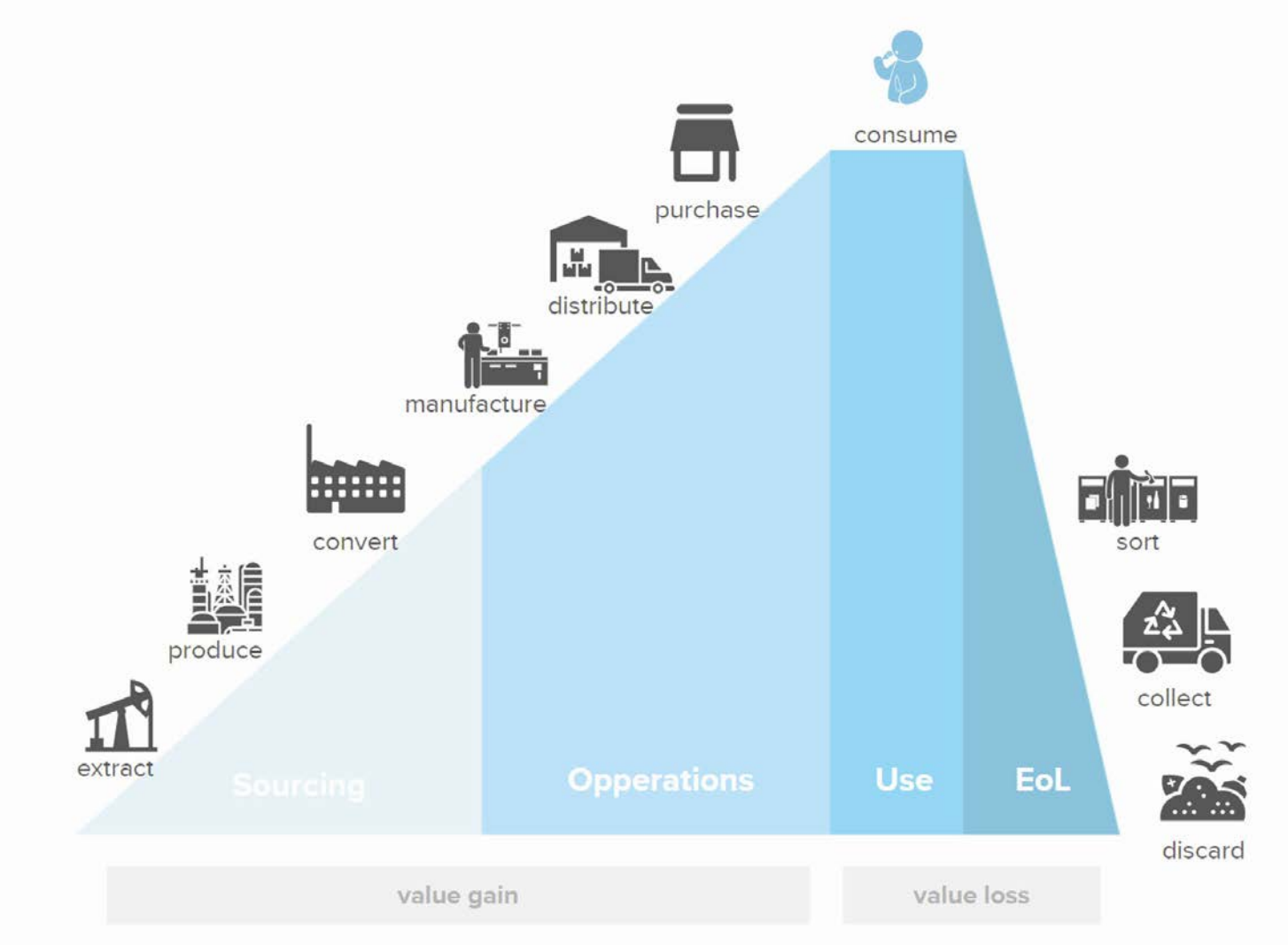
Estrategias de Diseño



Colina de Valor



Colina de Valor

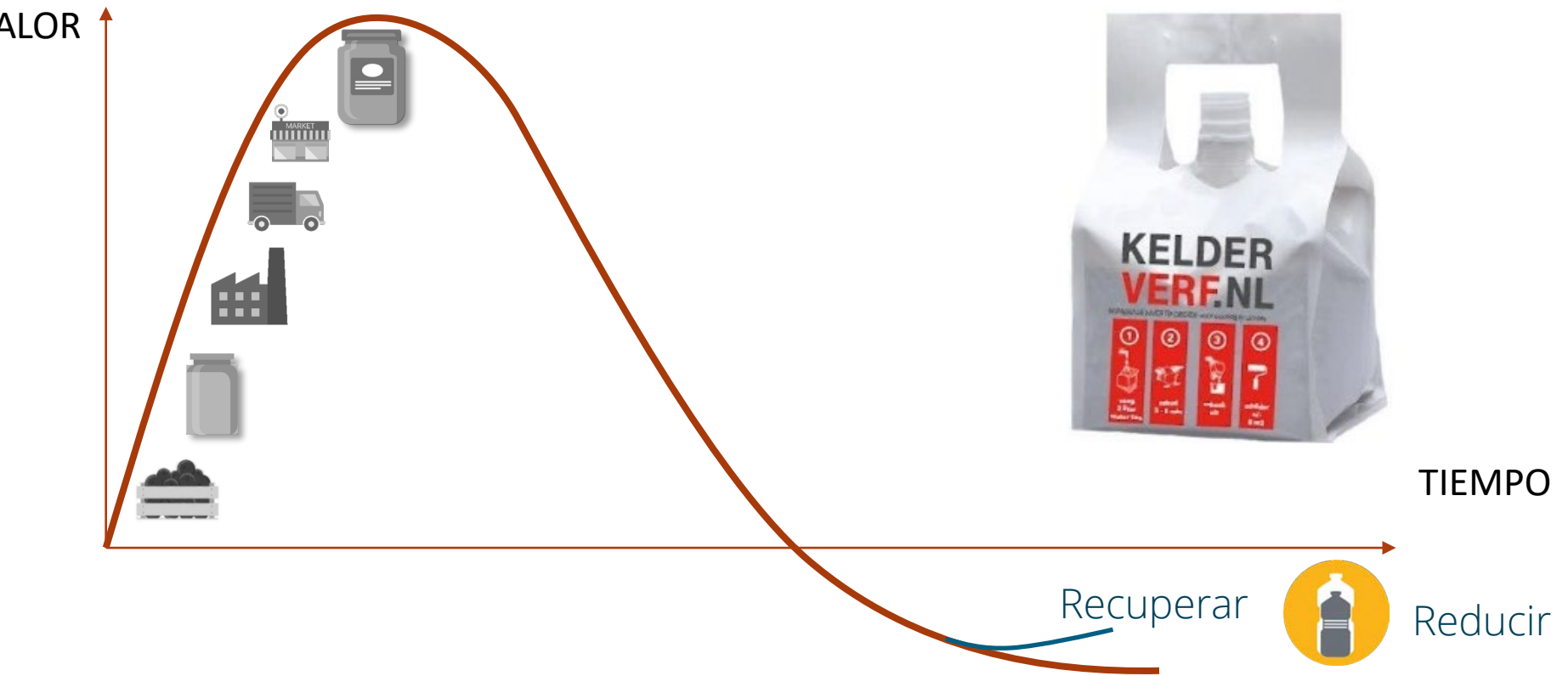


Montaña de Valor





Montaña de Valor





ALTO EN SODIO
Ministerio de Salud

ALTO EN CALORÍAS
Ministerio de Salud

HELLMANN'S
EST. 1913

LA VERDADERA
MAYONESA



CON HUEVOS DE CAMPO

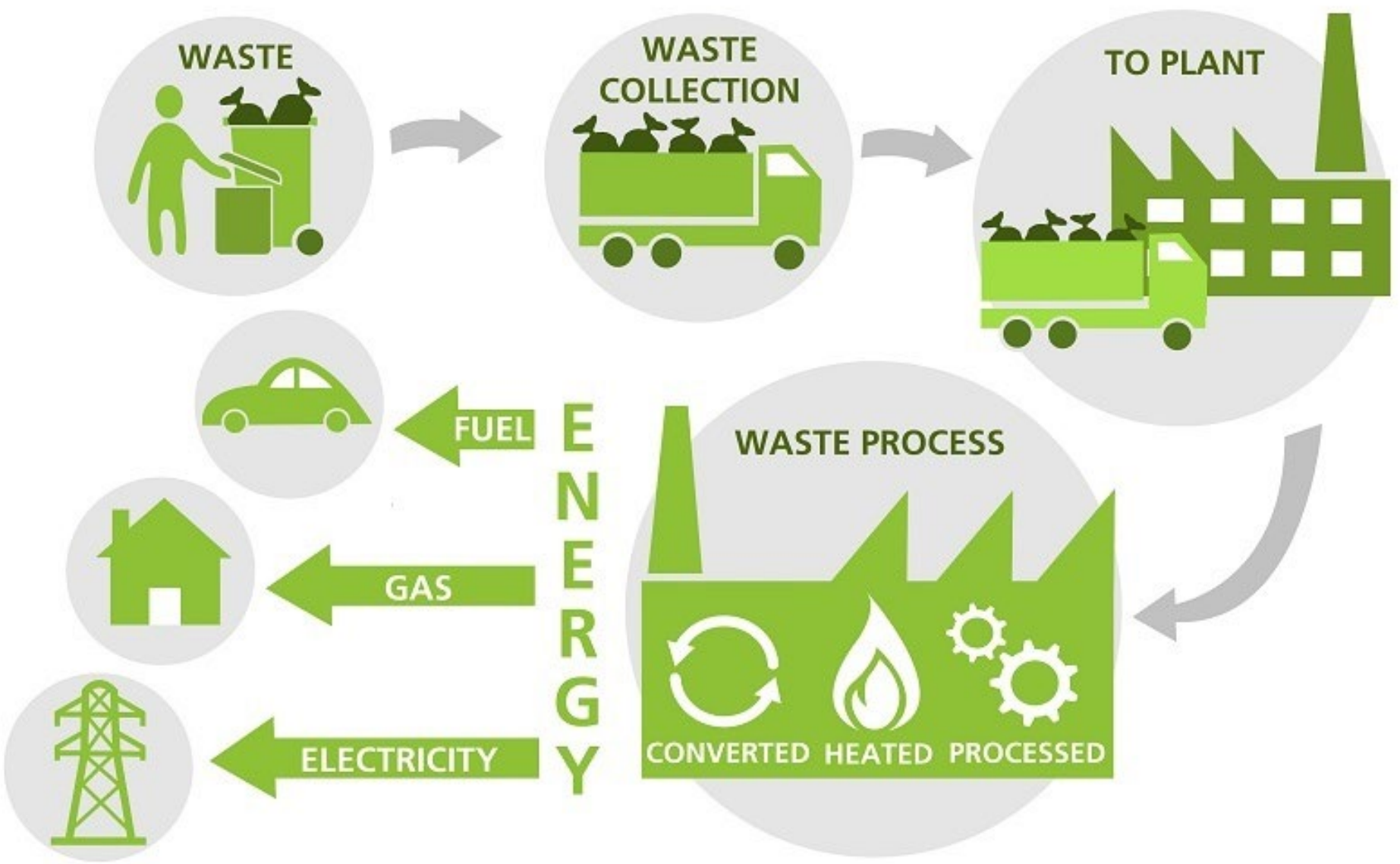
Datos
Energía
Hidratos
Grasas
Sales
Fibra

Richard Hellmann

COMERCIOS CONVIVIR
Sin Gluten

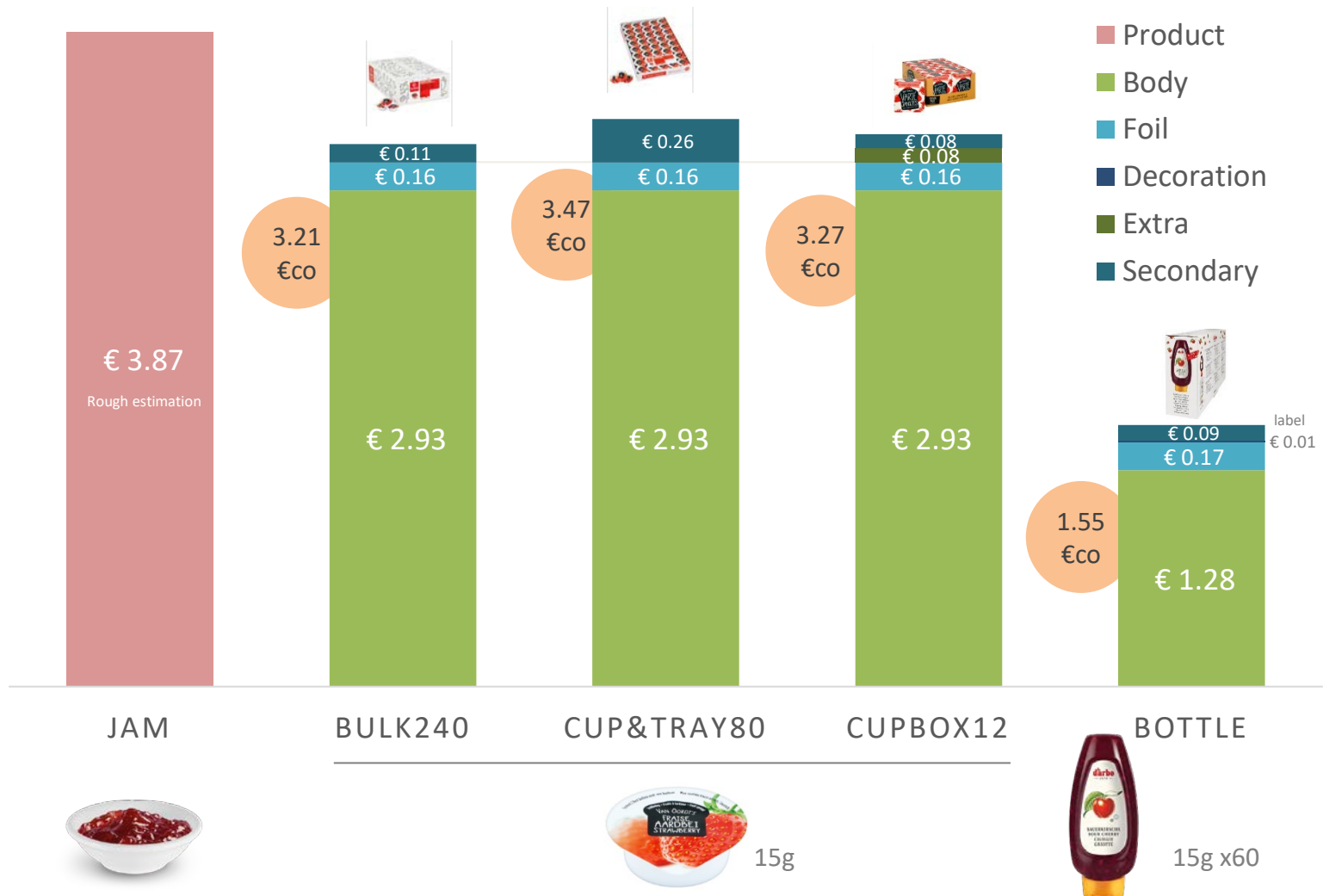
Cont. Neto
744 g





Ecocosto

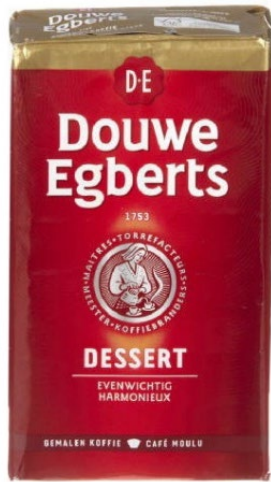
x1000 dosis = 15kg mermelada





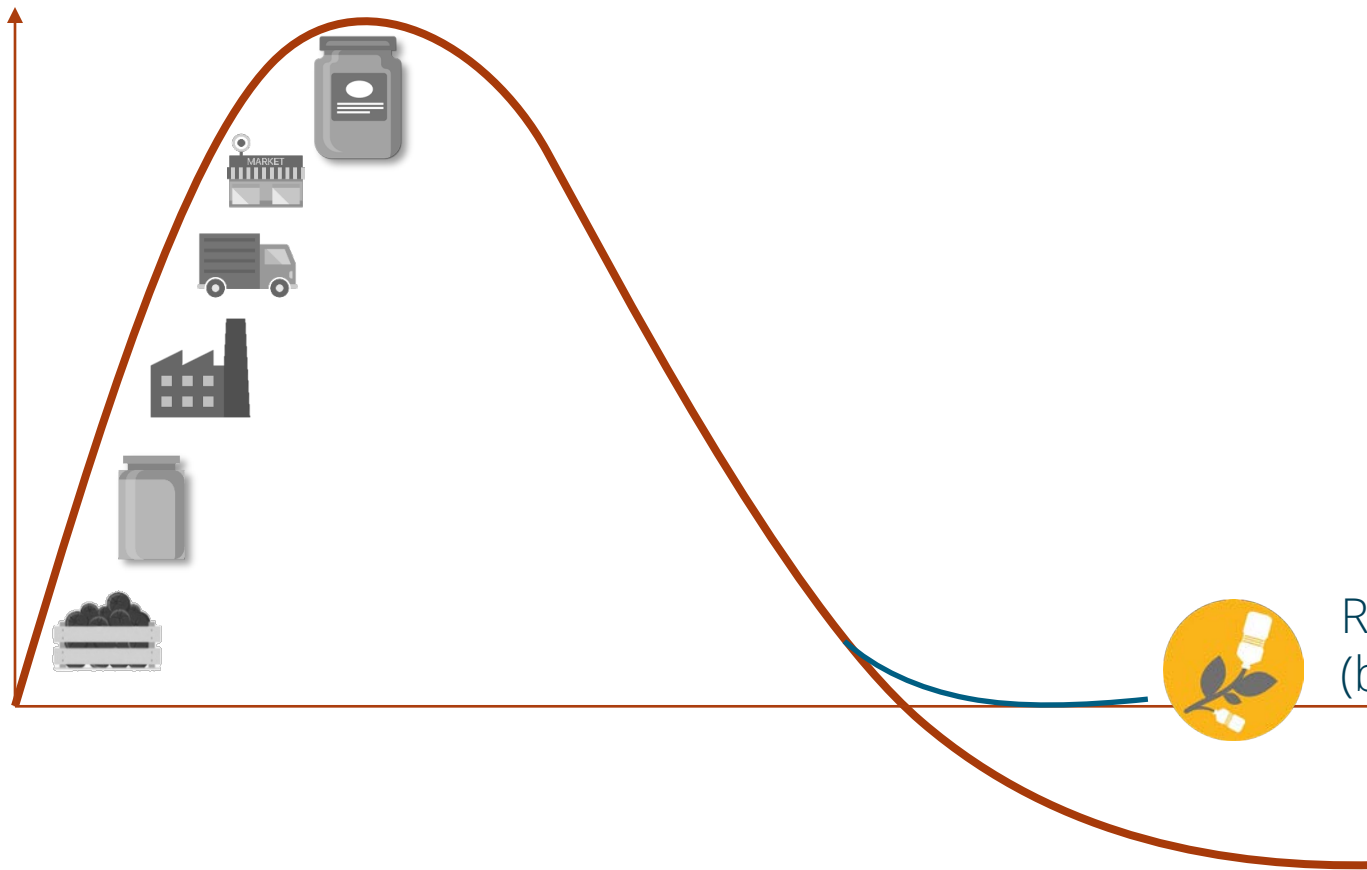
*Nuestro ma
consumidor e
desag
1993 Douwe Eg*





Renovar bio

VALOR



Renovable
(bio/degradable)







Biobasado

Bioplásticos

BioPE

Bioplásticos

PLA, PHA y PBS

No biodegradable

Biodegradable

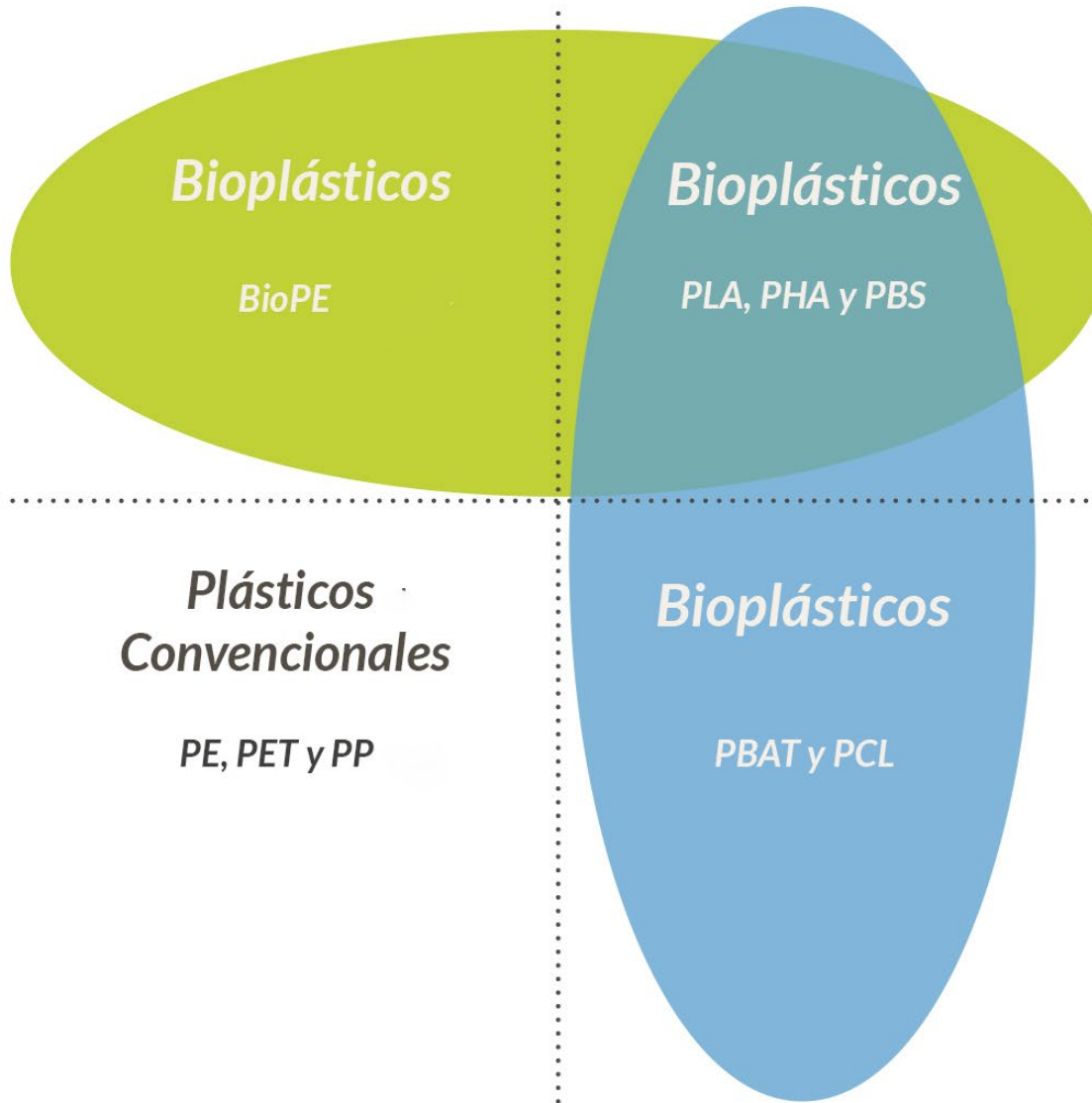
**Plásticos
Convencionales**

PE, PET y PP

Bioplásticos

PBAT y PCL

Fuentes Fósiles



biodegradable?

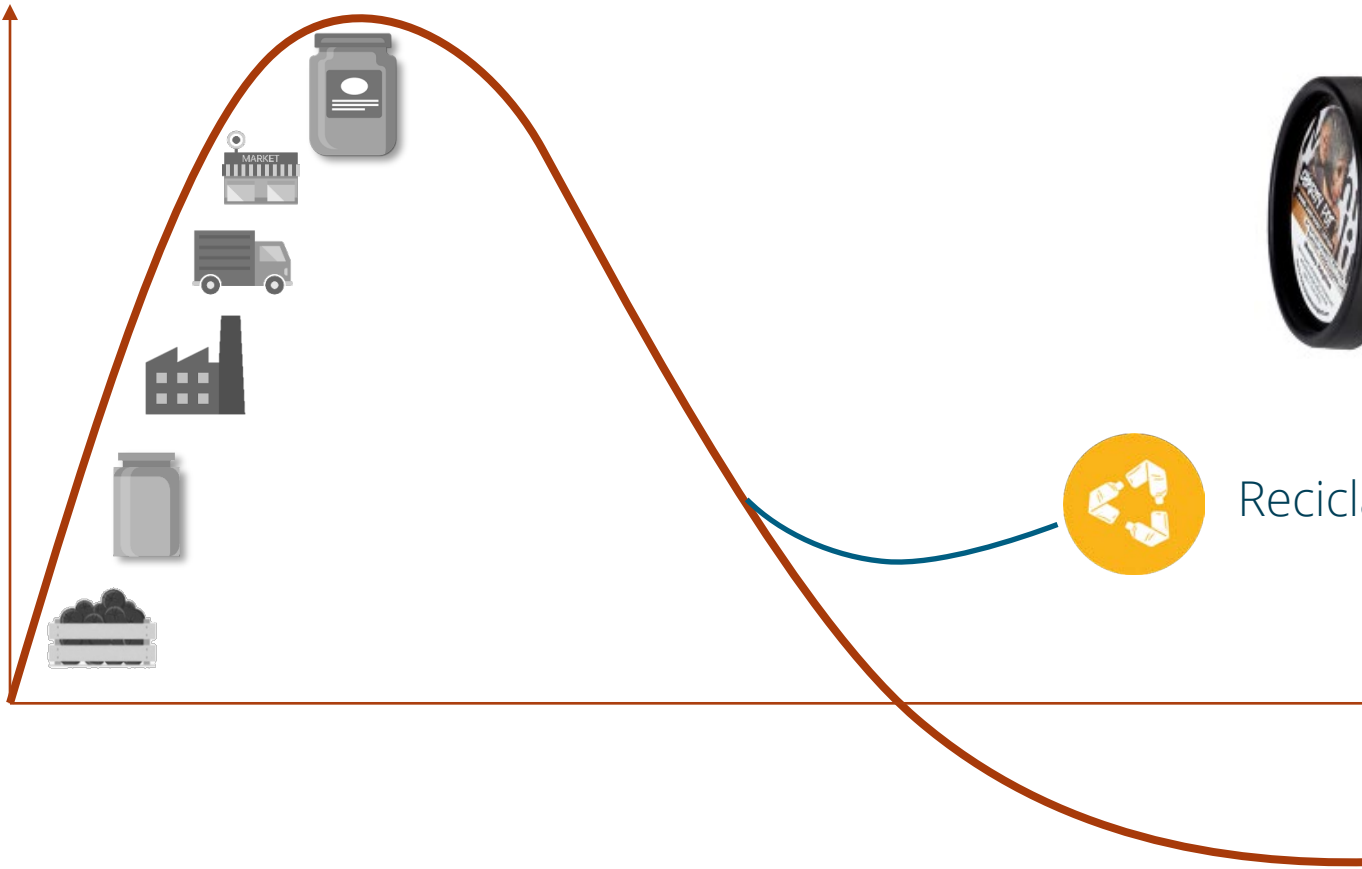
La cuchara compostable

- De dónde viene?
- Qué pasa si la reciclan?
- Bajo qué condiciones degrada?
- Qué pasa si se degrada?
- El valor se puede recuperar?



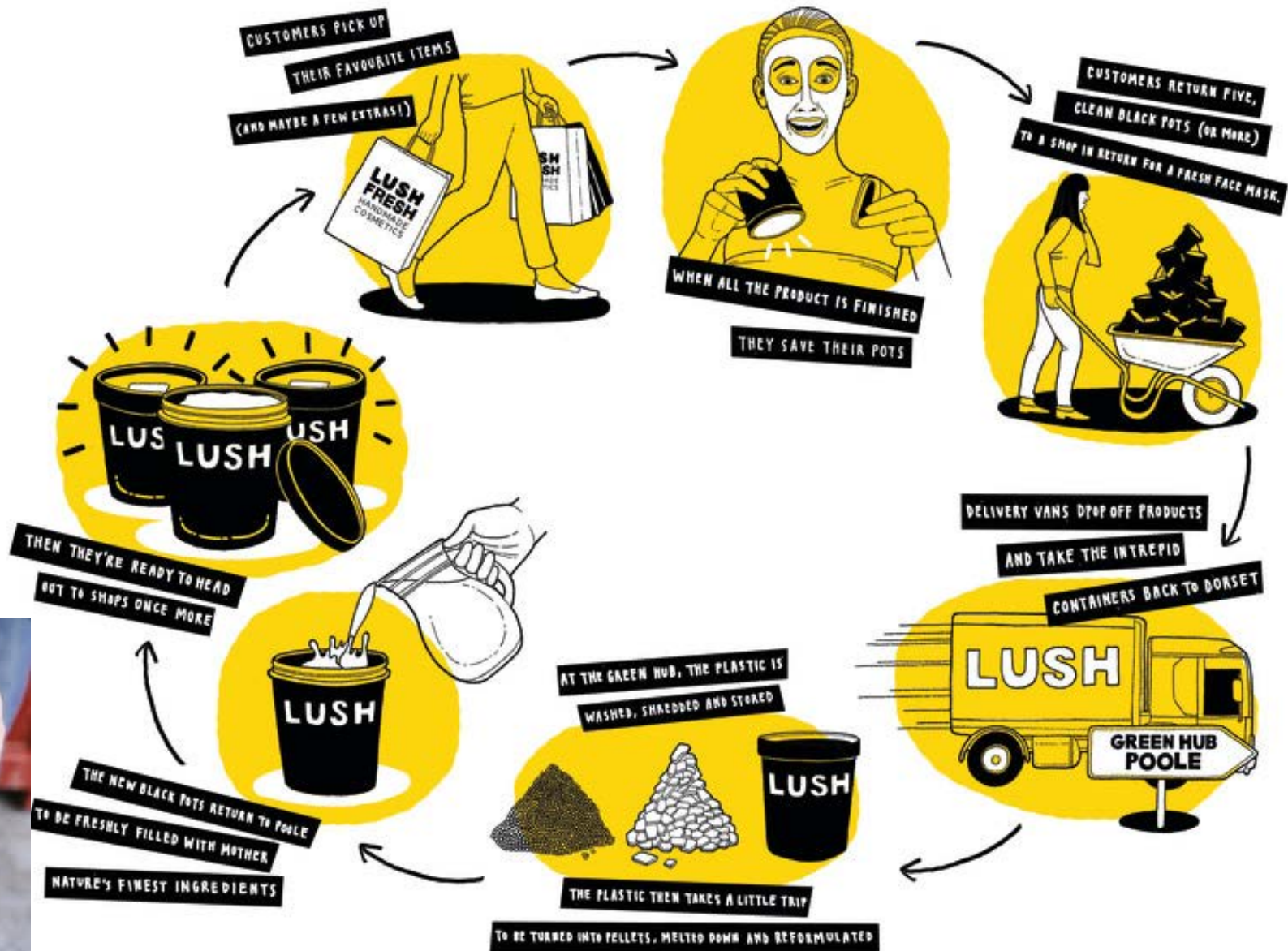
Reciclar

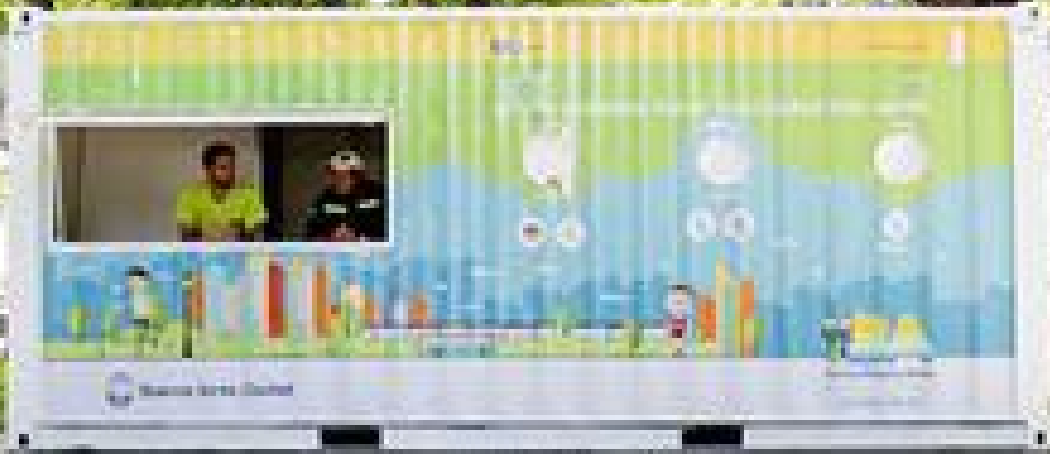
VALOR



Reciclable: Nivel Material

LUSH





Buenos Aires / Unilever
earn discounts for return empty bottles



Mooi
zijn
kost
een
prikkie

Rotterdam EcoEuro

It is often a good reward
for taking care of the environment. For example, you can get a discount on public transport or a free coffee when you return an empty bottle. The Rotterdam EcoEuro is a reward for taking care of the environment.

Rotterdam EcoEuro is a reward for taking care of the environment. For example, you can get a discount on public transport or a free coffee when you return an empty bottle. The Rotterdam EcoEuro is a reward for taking care of the environment.

RET
EL

Rotterdam ECOEuro
earn discounts for return
empty bottles





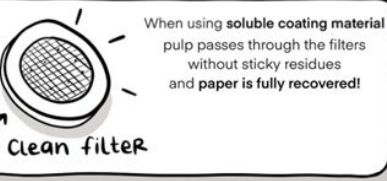
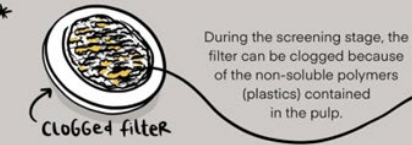
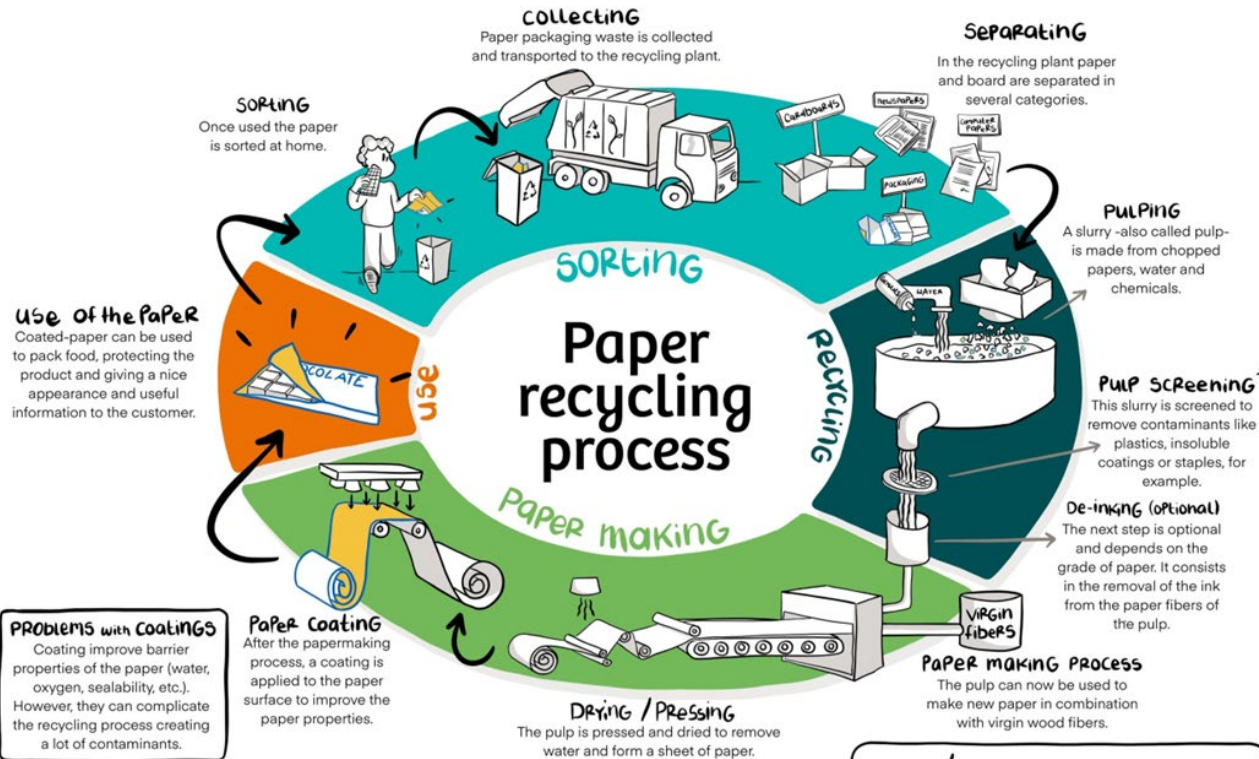
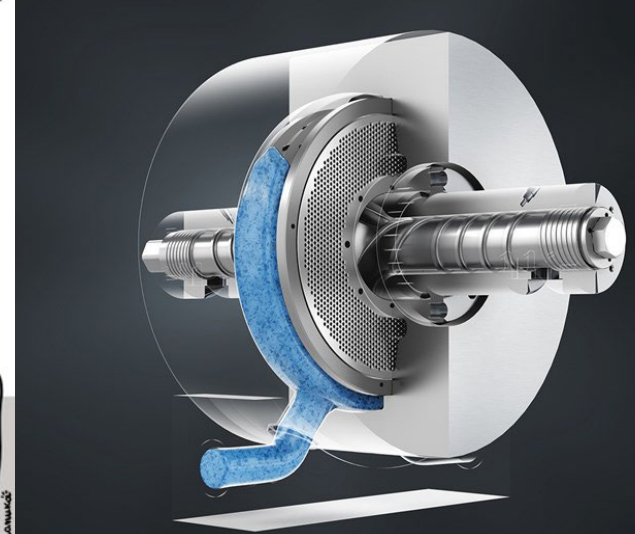
Levante la mano
quien piensa que...



"Yo separo la basura pero el
portero junta todo en la misma
bolsa"

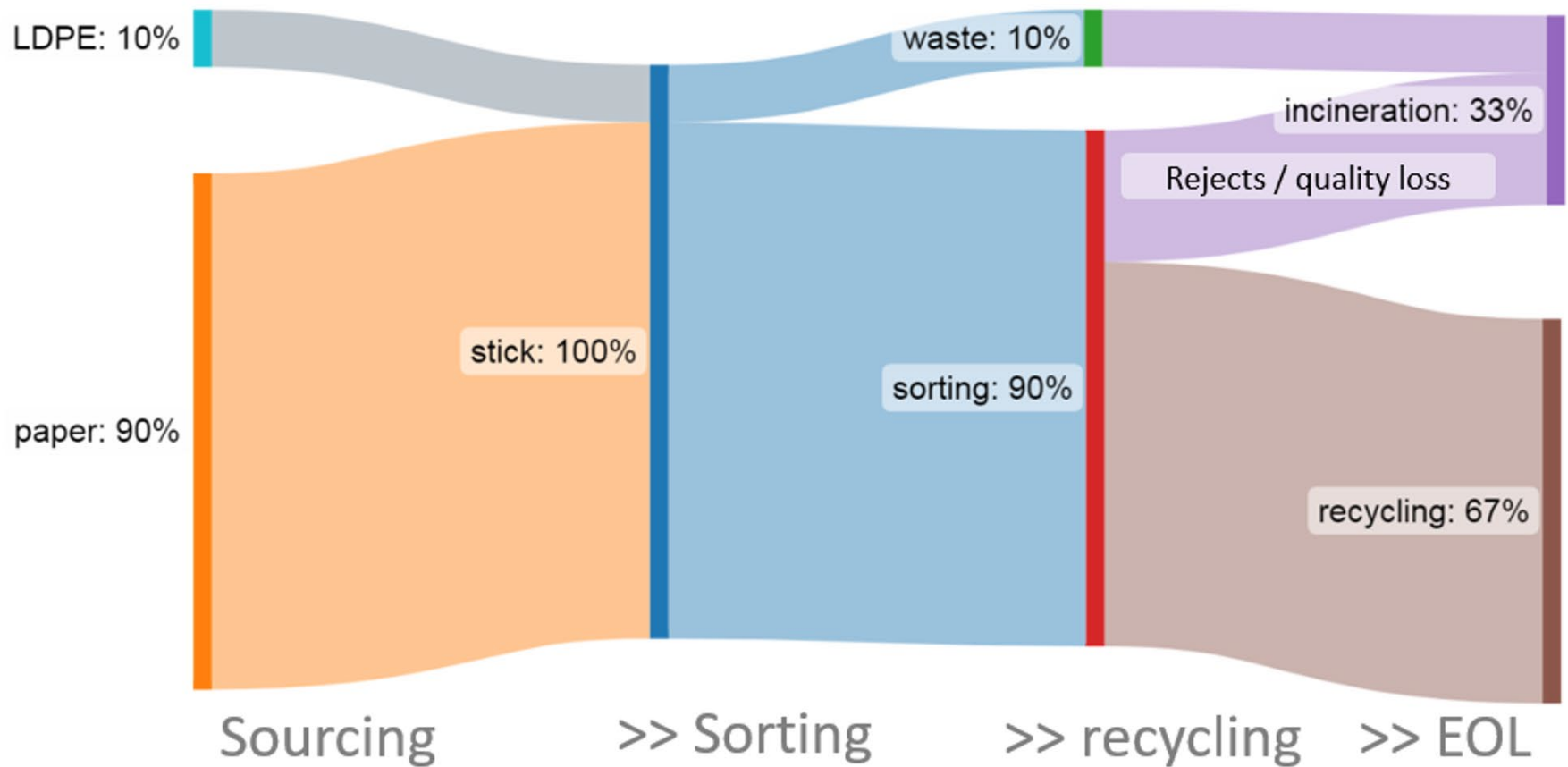
Es el valle,
seguí llevándolo al punto verde

ii EL PAPEL !!



* SOLUBLE COATING MATERIALS (which don't leave sticky residues) are recommended by : 4evergreen association, CPI (Confederation of Paper Industries), FEFCO Corrugated Packaging and CEPI

Diagrama Sankey



Niveles de reciclabilidad

Aticelca® 501



Recyclability assessment system* Aticelca 501:2019	Recyclable with paper				Non-recyclable with paper
	Level A+	Level A	Level B	Level C	Non-recyclable with paper
Coarse reject (%)**	< 1.5	1.5 - 10.0	10.1 - 20.0	20.1 - 40.0	> 40.0
Area of adhesive particles $\phi < 2000$ μm. (mm²/kg)	< 2.500	2.500 - 10.000	10.001 - 20.000	20.001 - 50.000	> 50.000
Flakes (%)***	< 5.0	5.0 - 15.0	15.1 - 40.0	> 40.0	-
Adhesiveness	absent	absent	absent	absent	present
Optical inhomogeneity	level 1	level 2	level 3	level 3	-

The parameter with the worst value characterizes the class to which the sample belongs.

NOTE:

* recyclability means the ability of the product to be processed in an effective and efficient way from a technological and economic point of view, in order to reuse the cellulosic fibers contained in it through the currently most widespread paper production technologies for processing of paper to be recycled [UNI 11743]. In case the sample is classified as "Not

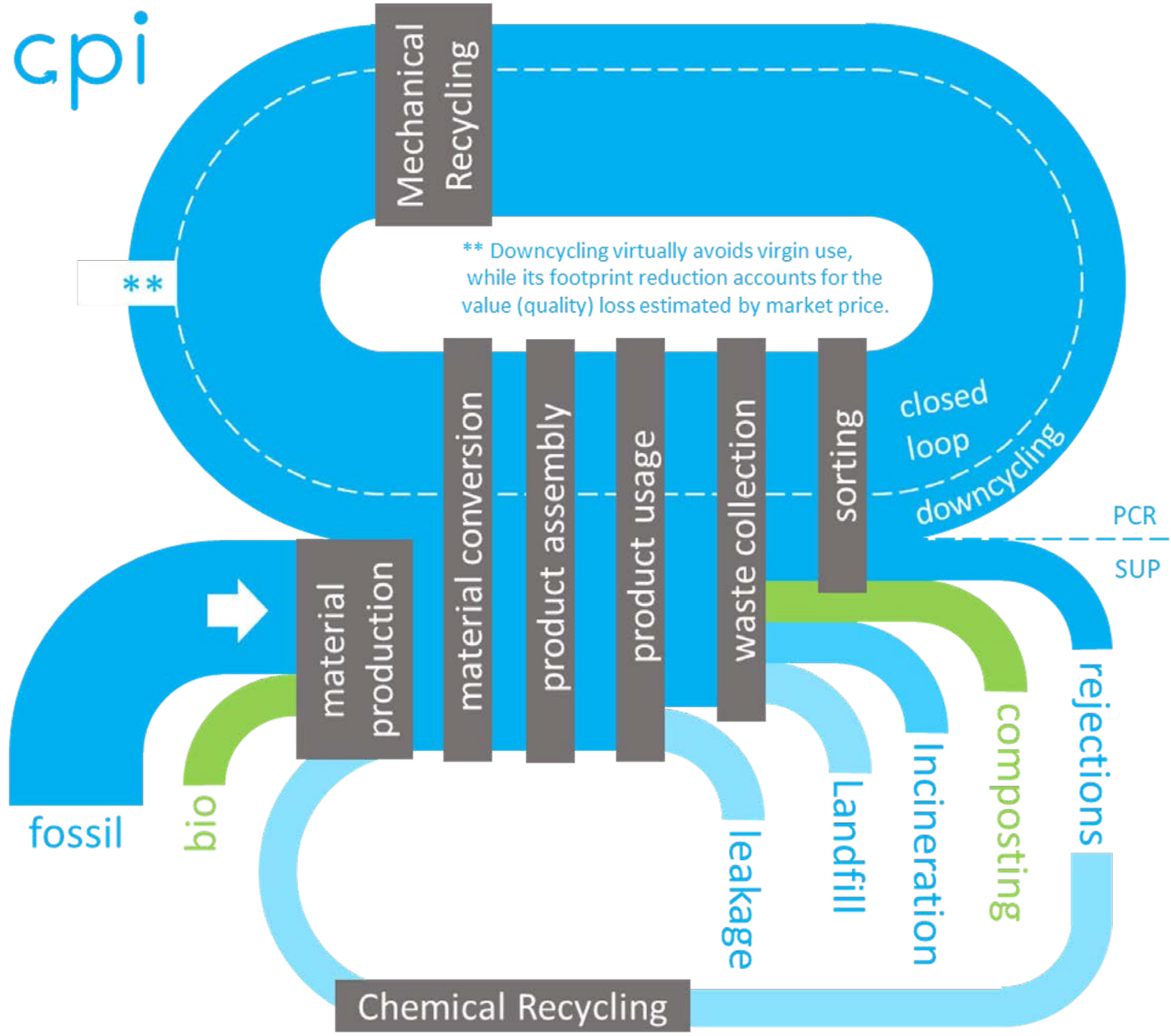
**NUESTRAS BOTELLAS
100% DE PLÁSTICO
RECICLADO***
**INCORPORAN UN NUEVO
TAPÓN ADHERIDO**

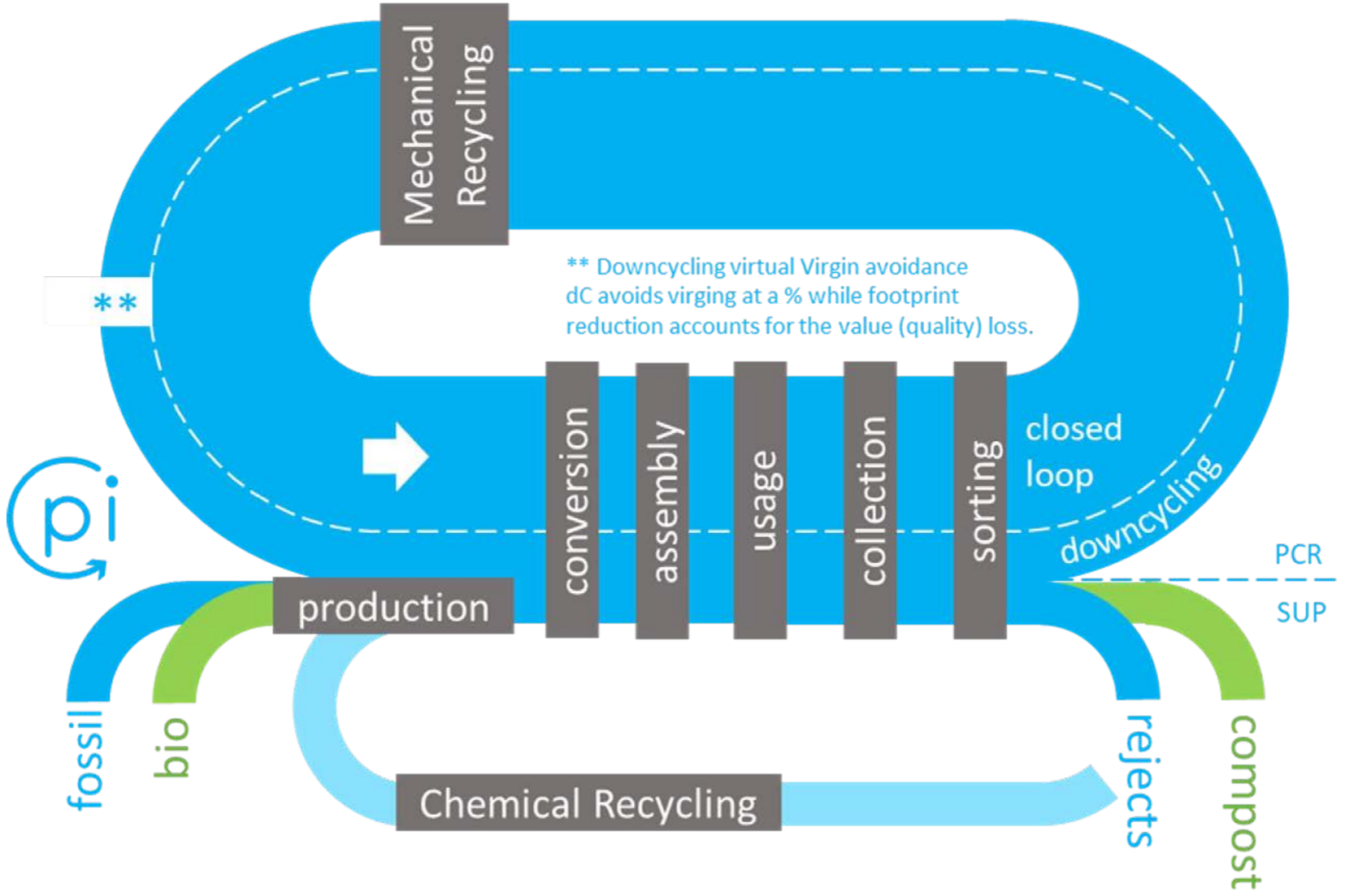
*EXCEPTO TAPÓN Y ETIQUETA





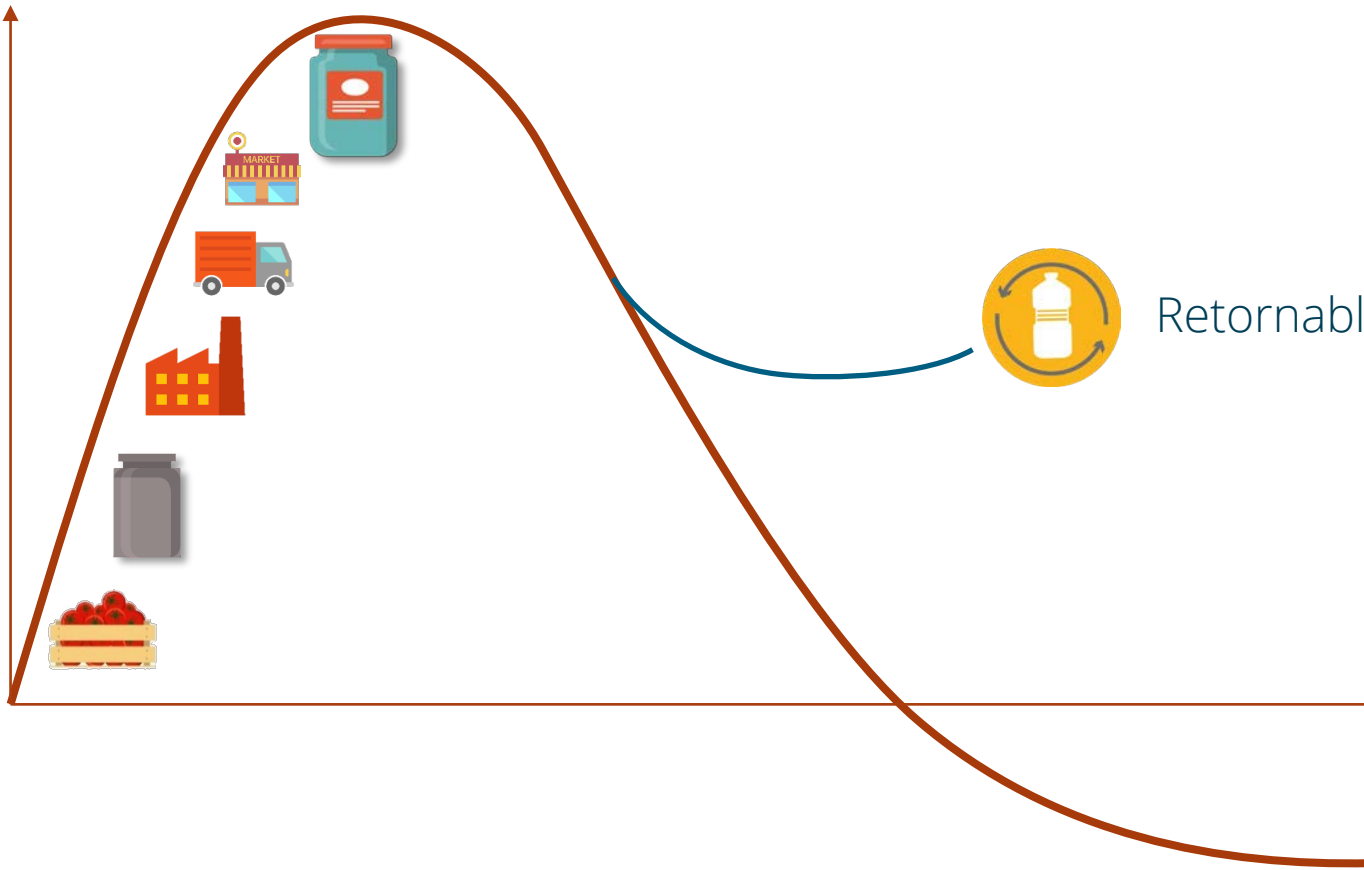
gpi





REtornar

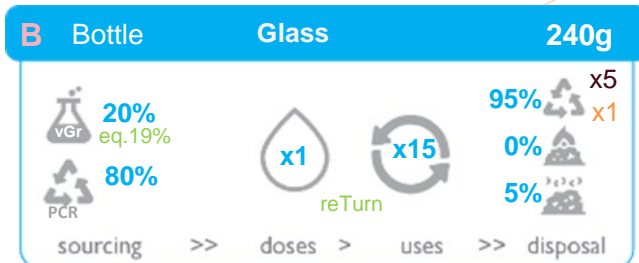
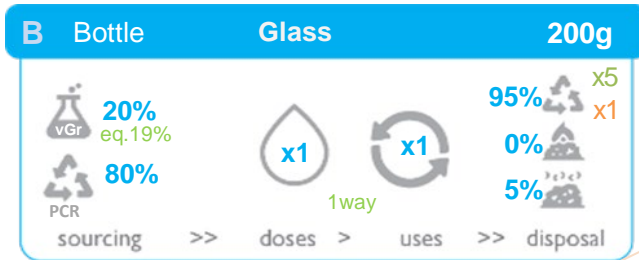
VALOR



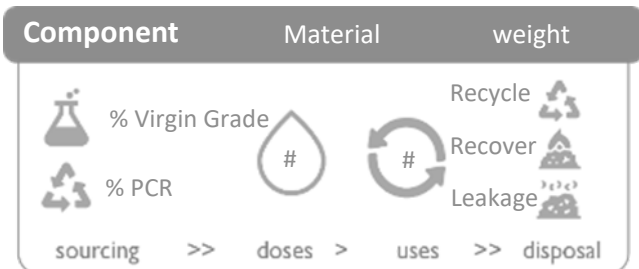
Retornable: Nivel componente



Components Inventory

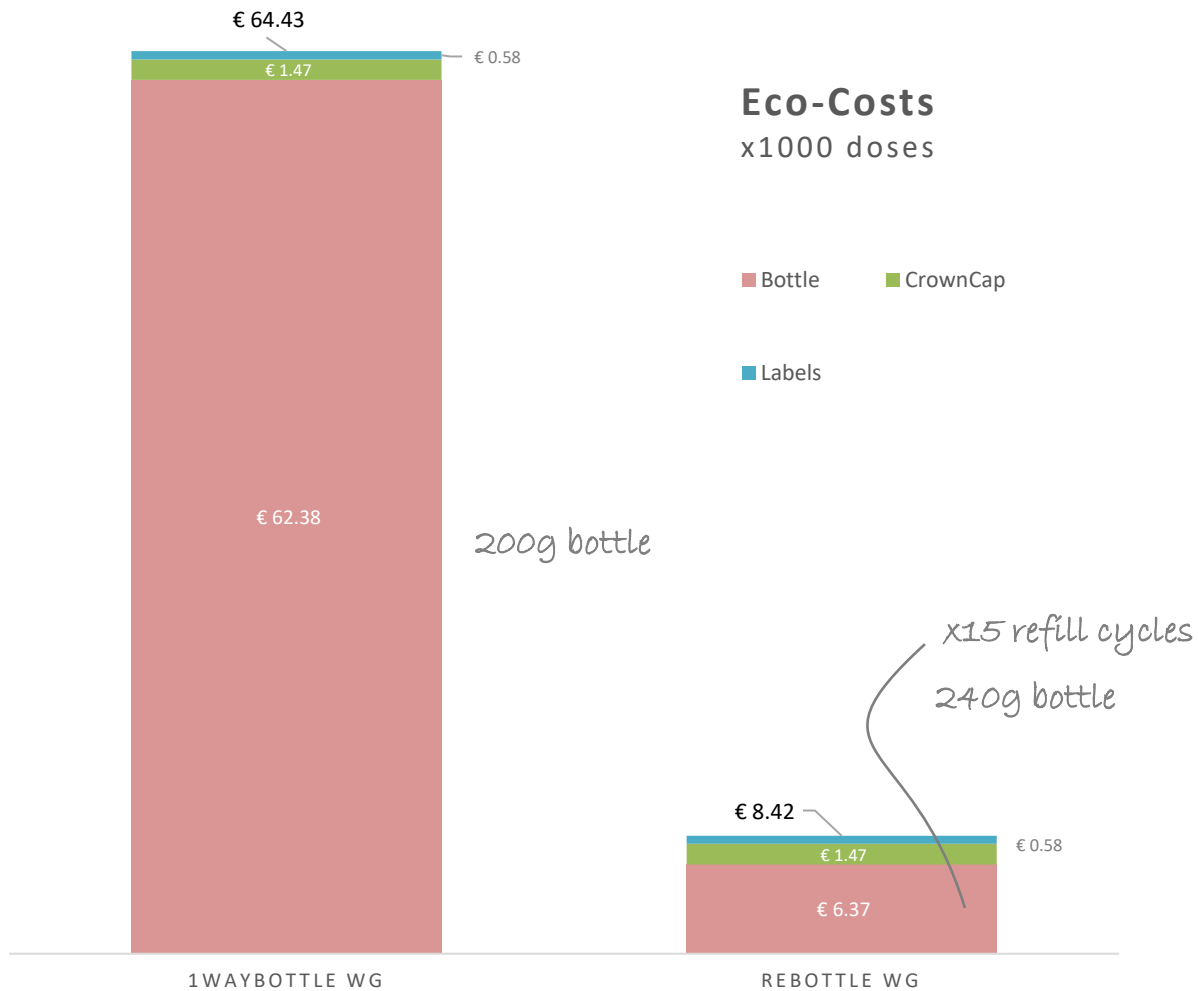


How to read the cartouche?



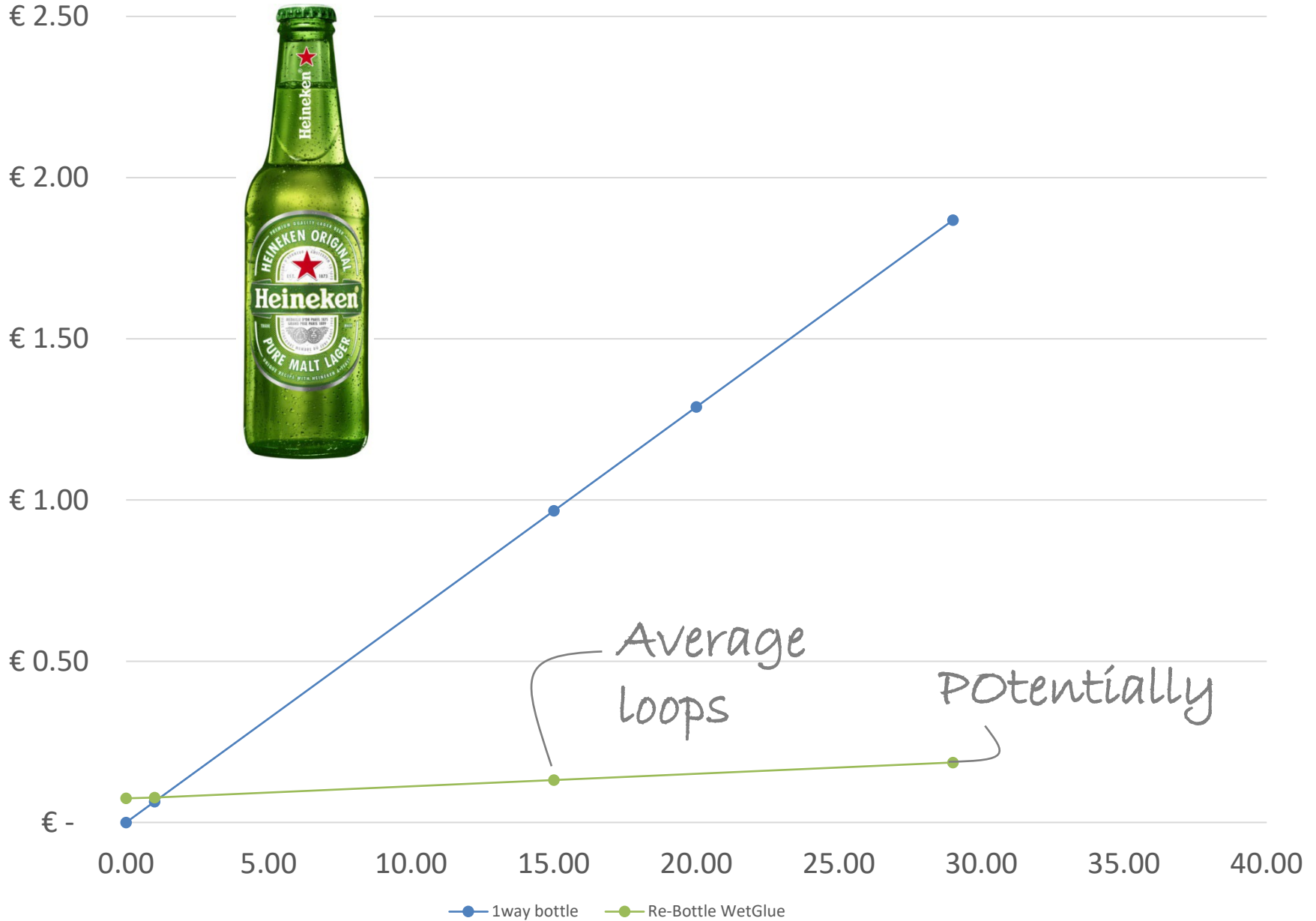
or

Descartable vs Retornable



Environmental break even

Ecocost





SODERO NO SE HACE, SE NACE.

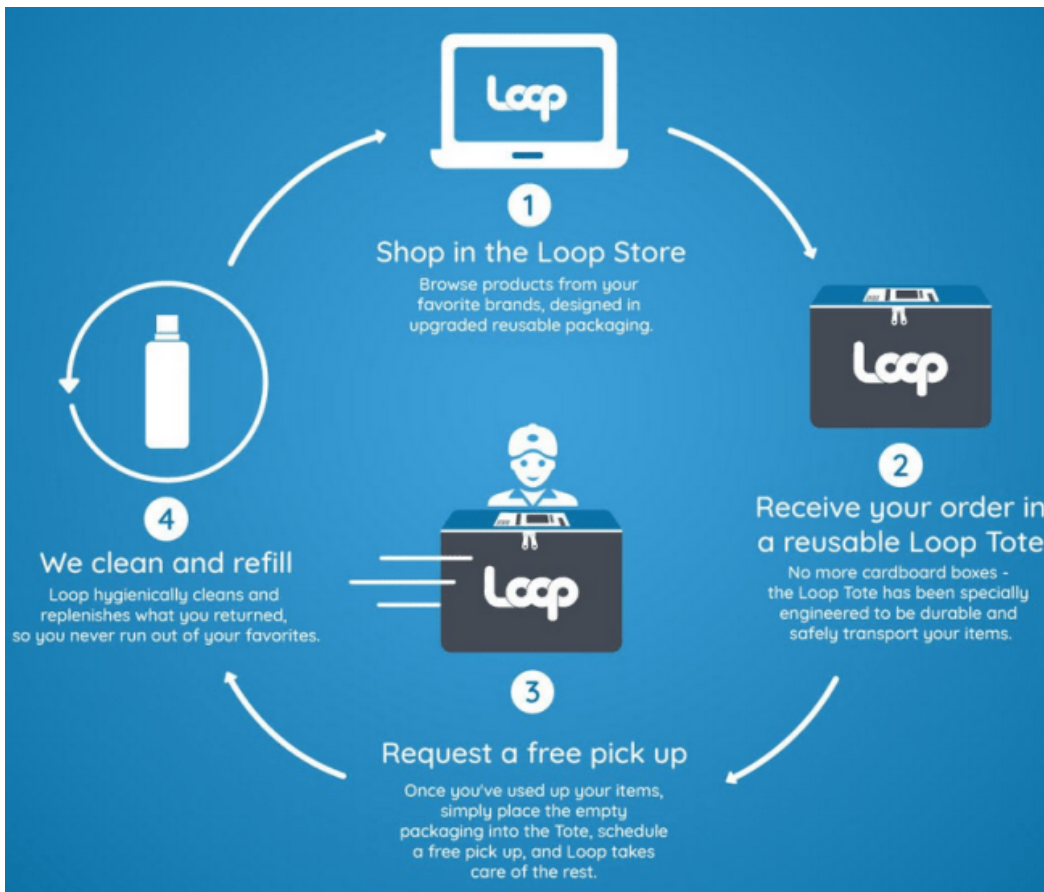
10 DE ABRIL, DÍA DEL SODERO.

Druetta Hnos. S.R.L.
MITRE 1161 TEL. 21194
VERA PAMP. TUCUMÁN

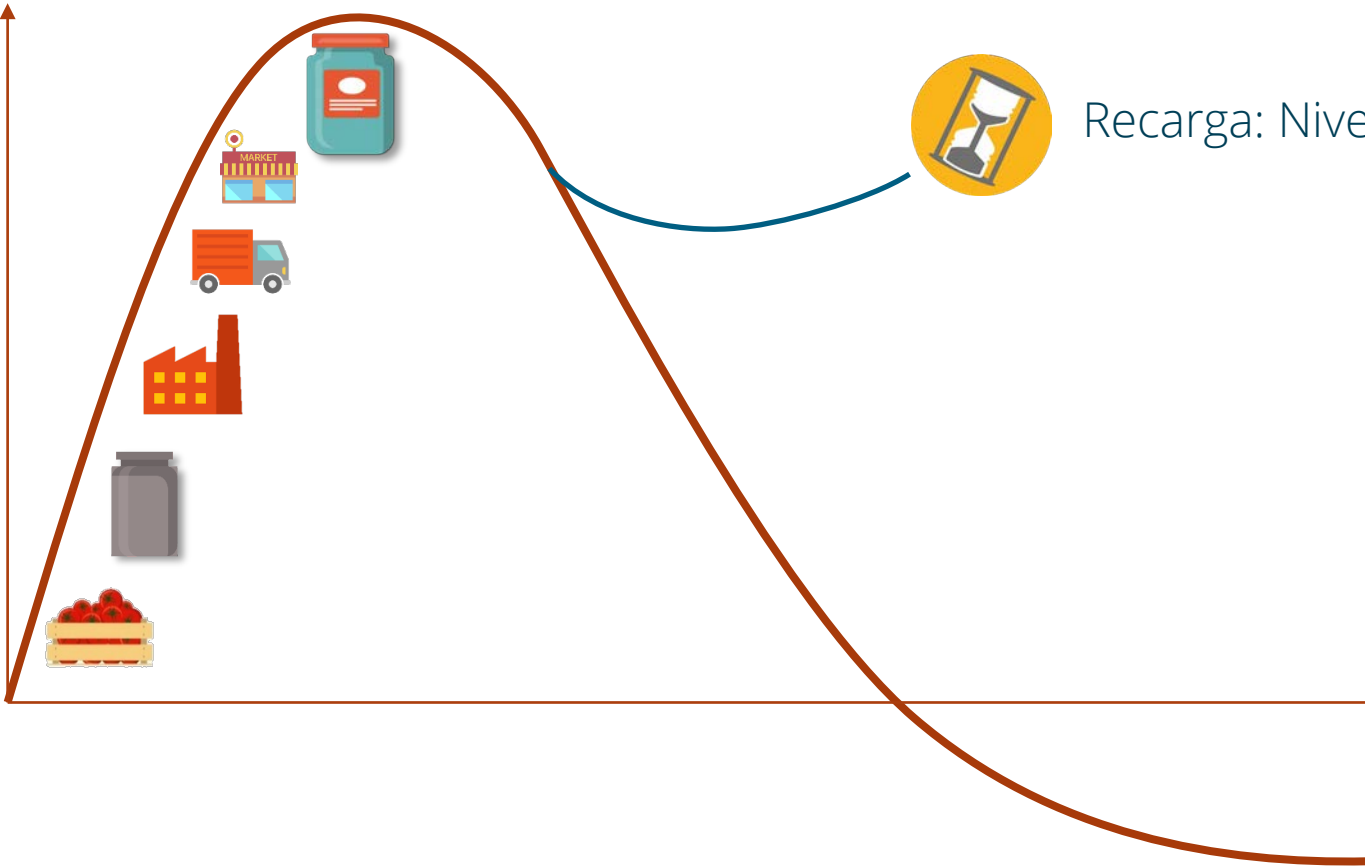
Rocio
SODERO

CINZANO
HOY VERMUT

BEBER CON MODERACIÓN. PROHIBIDA SU VENTA A MENORES DE 18 AÑOS.



UE



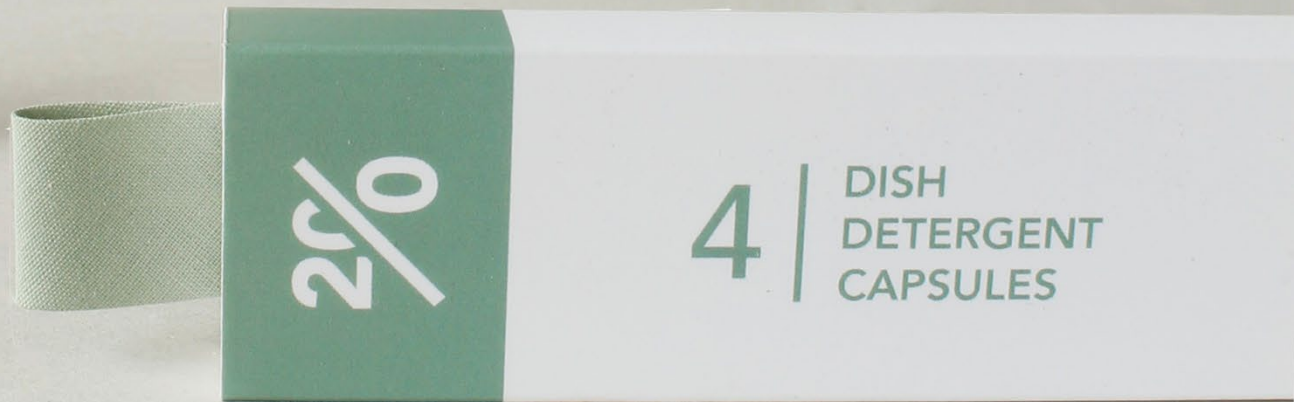
Recarga: Nivel Producto

the best looking serve.











Arpeggio

BEIGIAN BLONDE

ALC. 5% - IBU-25

Forest Park
India Pale Ale

ALC. 6% - IBU-50

I PA

ALC. 7% - IBU-70

SPITZBERG
BLOND

IBU-22

GANTER
FOREIGN STOUT

ALC. 6% - IBU-

HABEMUS
LUPULUS

HABEMUS
LUPULUS

ere
Non-Bio
40p
per 100ml
ver

refill here
All Purpose
Cleaner
30p
per 100ml
ecover

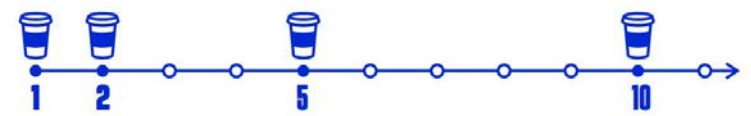
refill here
Washing
Liquid
30p
ecover



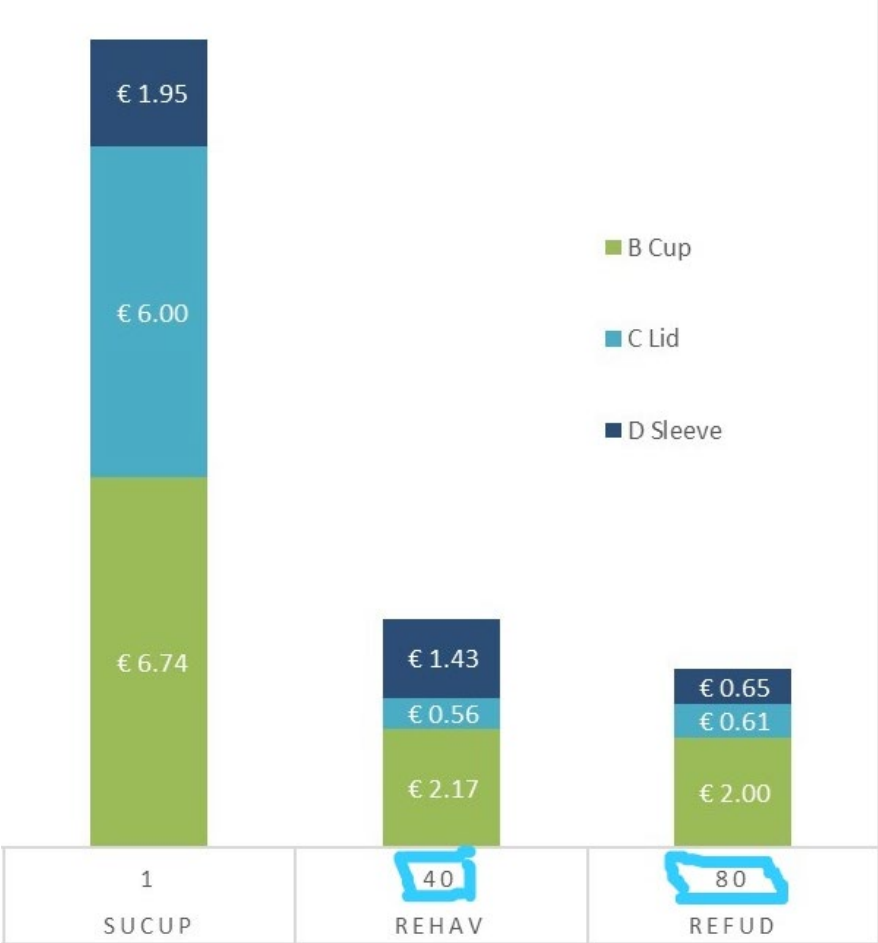


**NUEVO VASO REUTILIZABLE +
2 CAFÉS/RECARGAS POR \$1500**

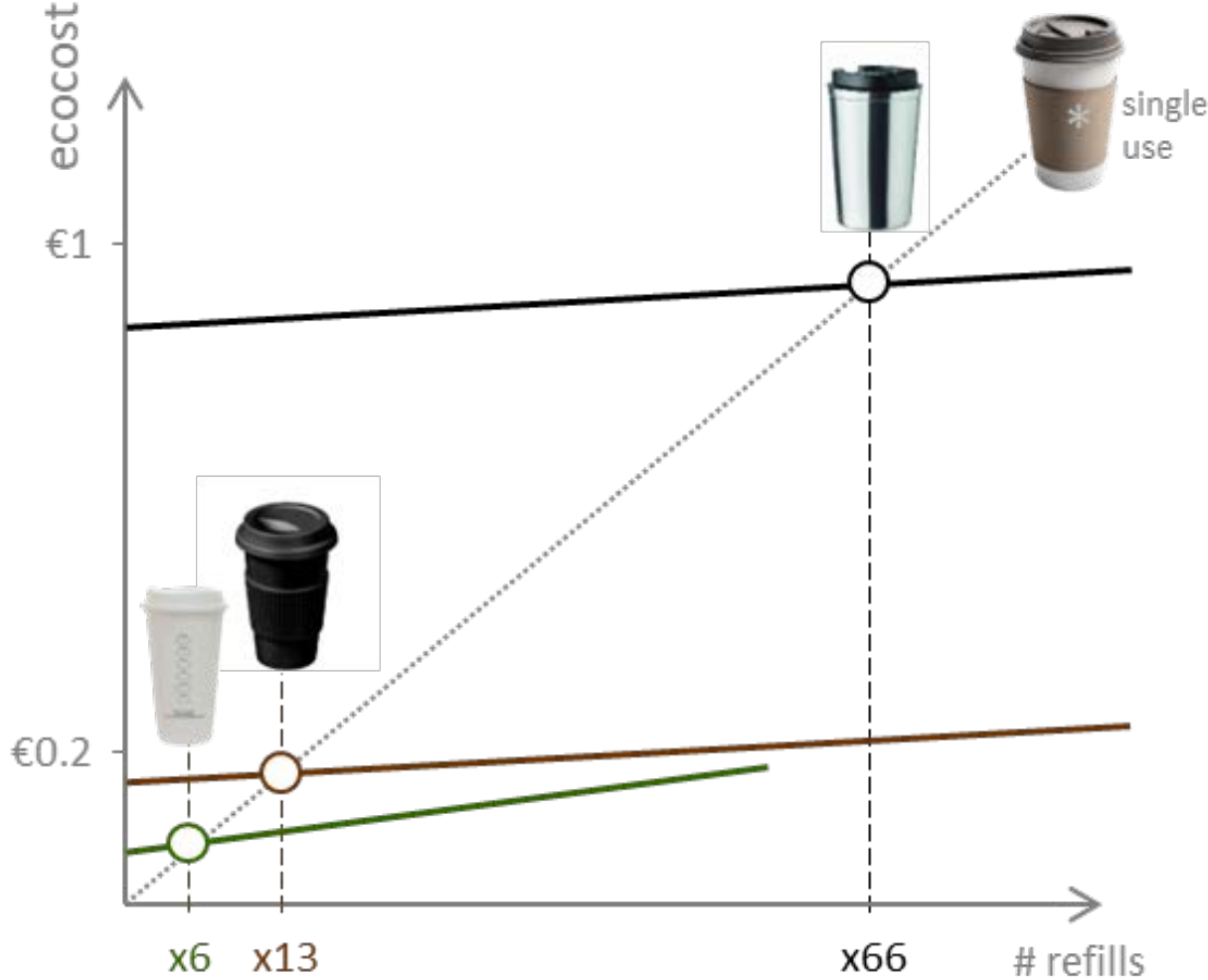
- ESCANEALO CADA VEZ QUE RECARGUES.
- CADA 4 RECARGAS, LA 5TA VA DE REGALO.
- A PARTIR DE LAS 15 RECARGAS PREMIOS EXCLUSIVOS.



Huella-> Ecocosto

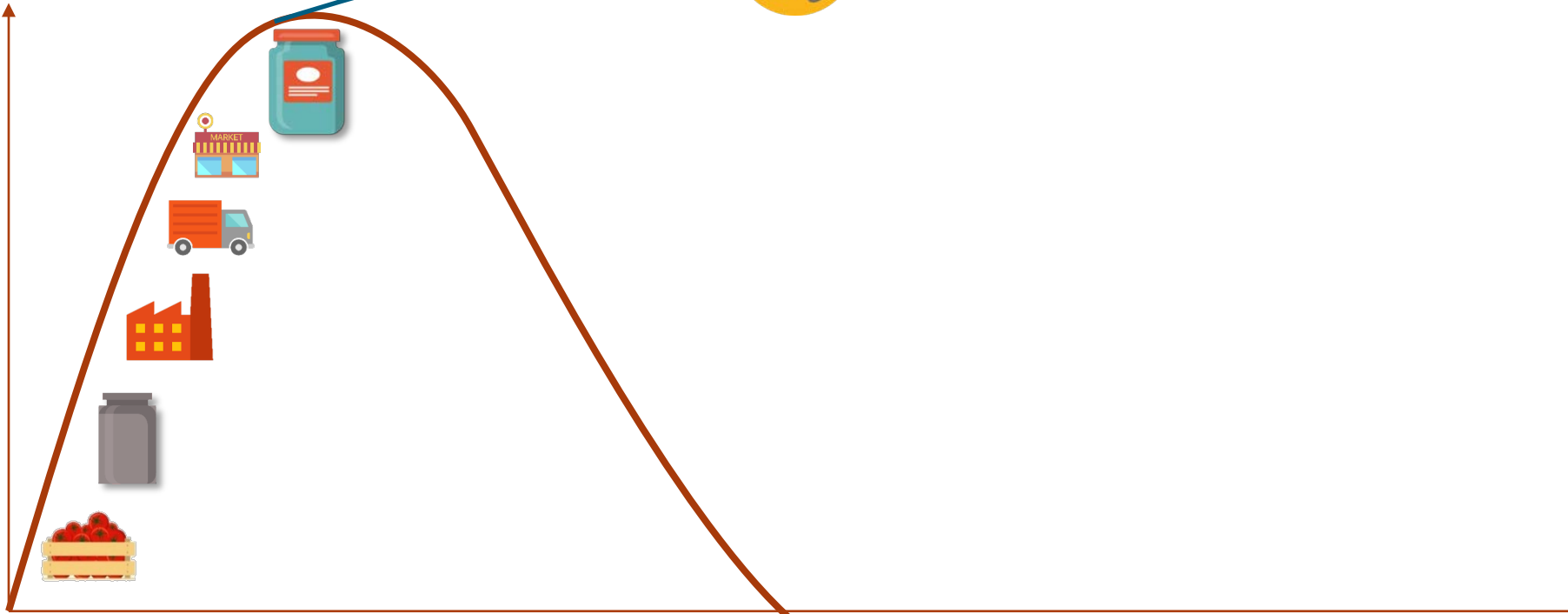


Punto de inflexión ambiental



EcoROI graph | Cumulative impact by number of reuses

VALUE



Repensar: nivel Servicio

fuga

LUSH



Algramo

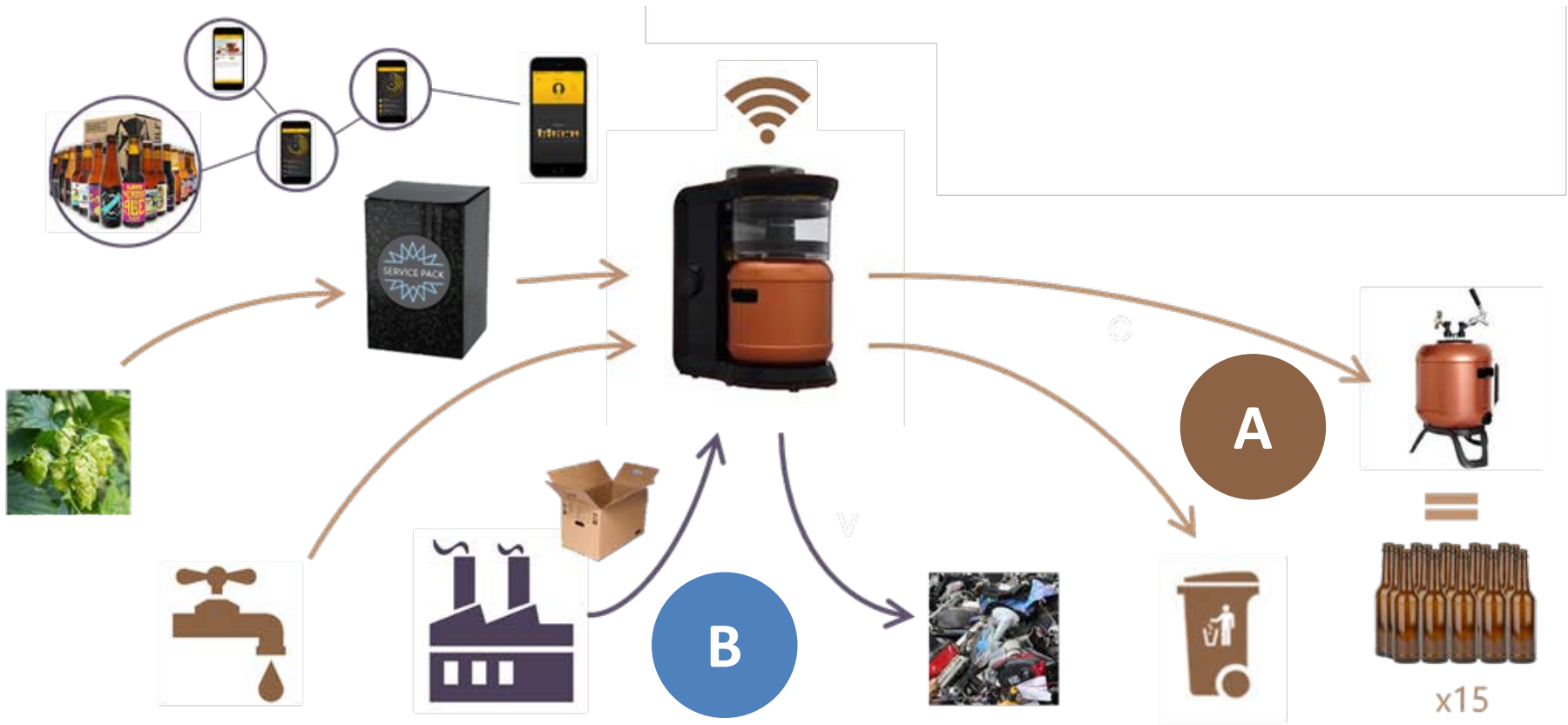
A Connected Platform: RETHINKING REfill & REuse

Algramo

Order | Track | Pay



Sistema: Producto – Servicio – Comunidad---- IMPACTO



#1 reframe

Cómo hacer un Producto
Sustentable?

or

Cómo nuestro producto...
a una sociedad sostenible?

#1 reframe





IKEA®

It's the
little things
that matter

MÄSTERBY step stool
402.332.36
See page 327
\$39.99

THE PRICES IN THIS CATALOG CAN ONLY GET LOWER UNTIL JUNE 2016, NEVER HIGHER.



EXCEPT
INTEGRATED SUSTAINABILITY

The IKEA catalogue story

Taking responsibility for the world's largest print production



#2 reframe tiempo

La única constante es el cambio



#1 Future Thinking

Resilient Business models

Future Ready Experience
Taking a look at the future today

Daan Roosegaarde



ATTRACT **ENGAGE** **SELL** **DELIVER** **DELIGHT** **DISPOSE**



Mark

Business partner for FOH **Sustainable bussiness models**
 100% SuSo | Locally Sourced
 Will define "where to go"
Made for Bas

Convenient next gen pack

Extraordinary Pack Experience
 Good plastic!

Always neat
Always clen
Always full
Doesn't harm the planet

Aim Zero Waste

where to go?

Deciding the meal

Order taking

Order Serve

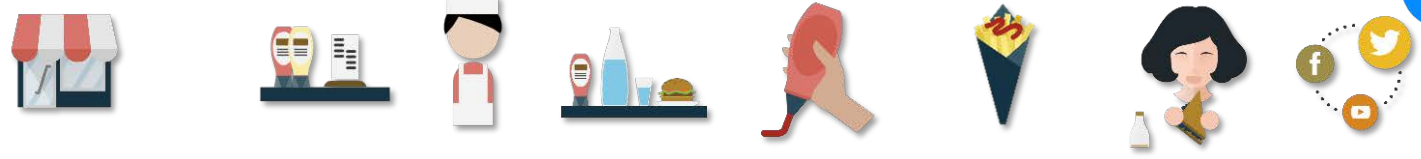
Applying My touch

Look & feel

Enjoying the meal

Social Share

Sara

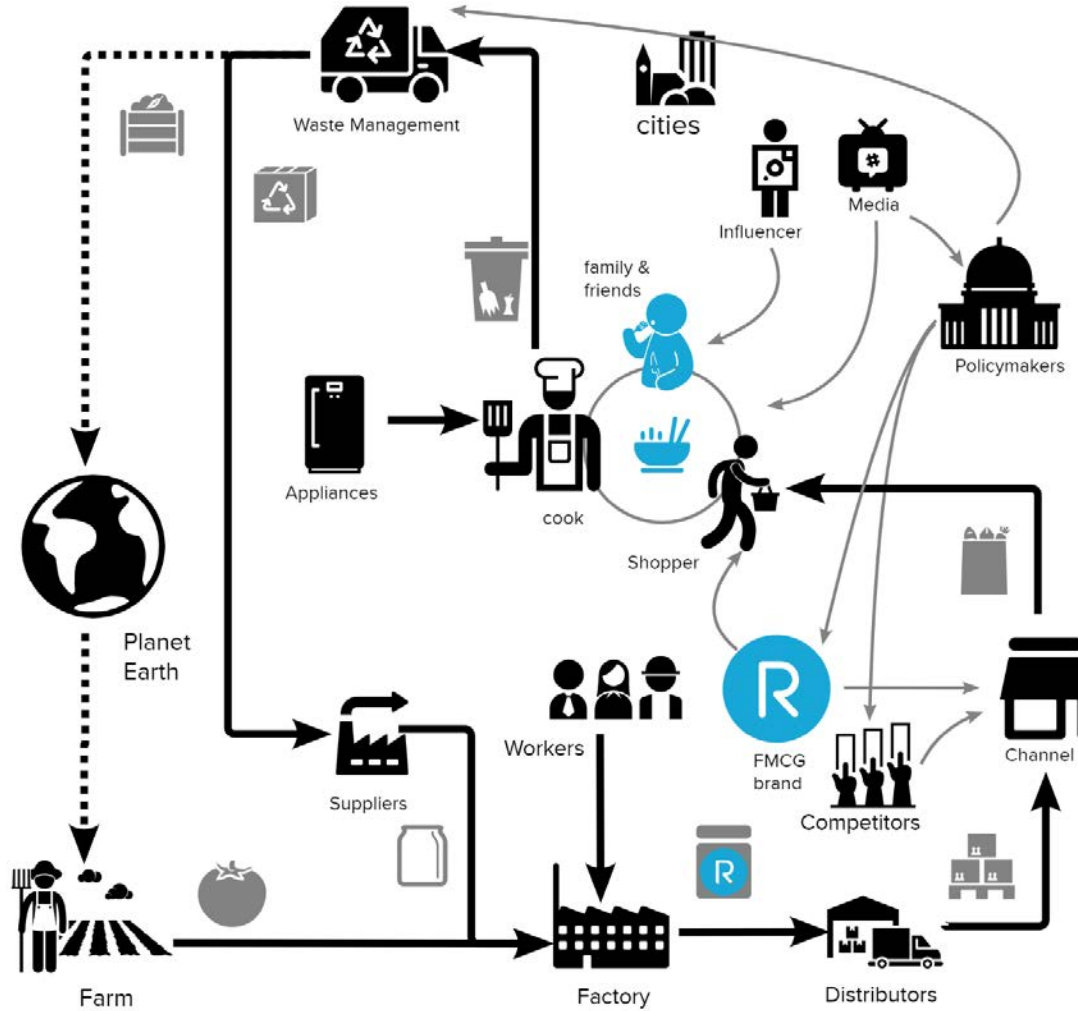


Based on current needs
Based on future forecasting

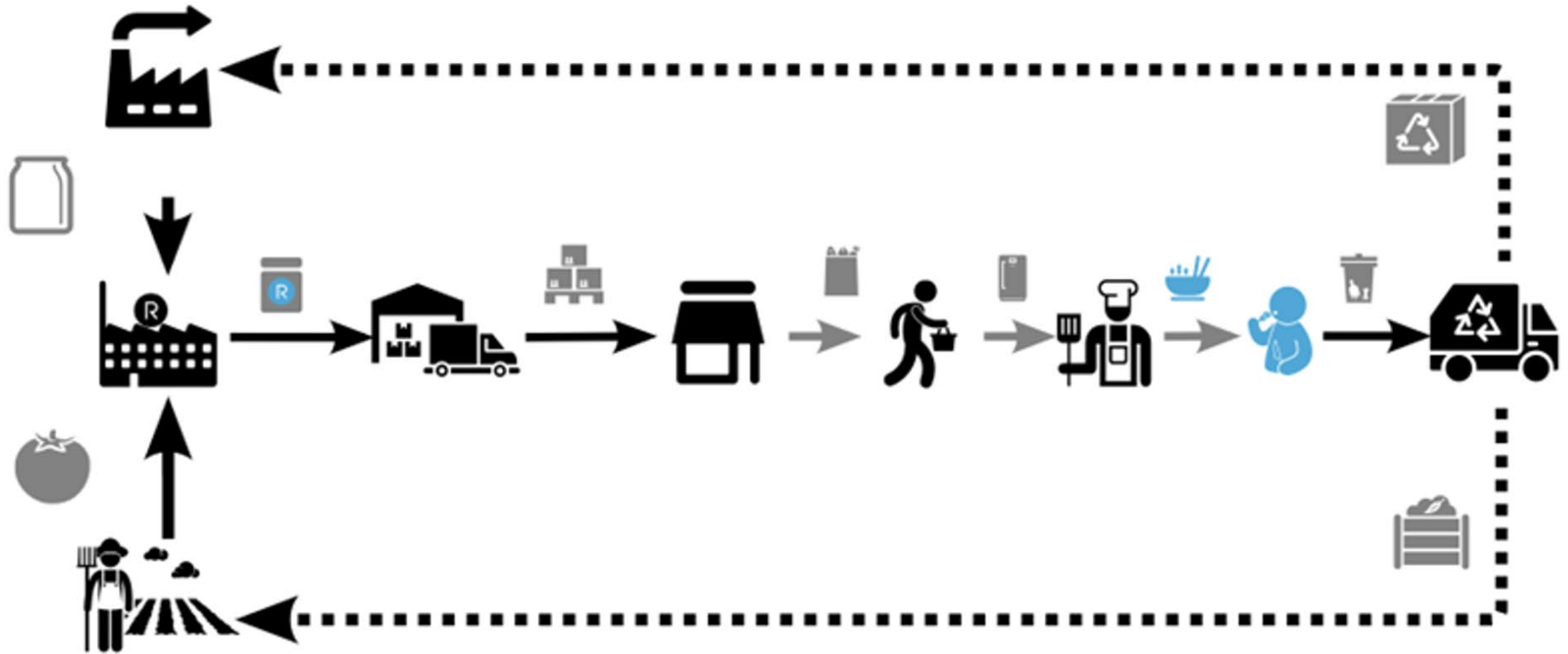
¿Cómo estimamos

■ ■ Huella Ambiental?

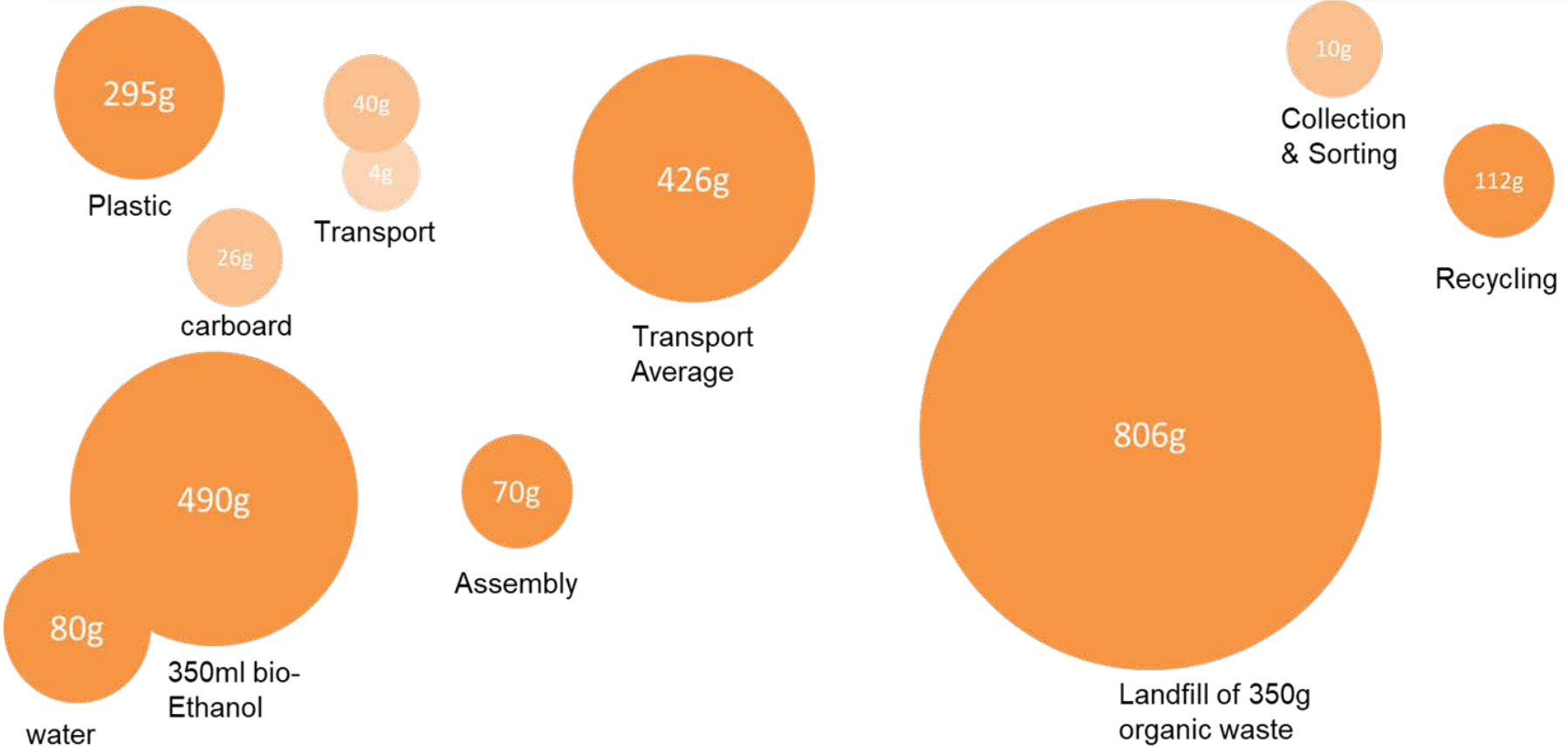
La economía de Actores



La economía de Actores



Emisiones CO2 Cadena de valor



Cálculo de huella

Definir el systema

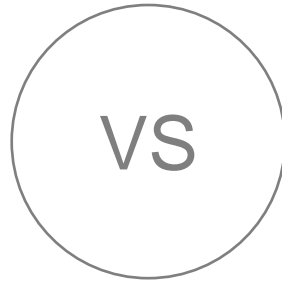
- Unidad Funcional
- Gate-Gate
- Craddle-Grave
- Inventario de flujo



Nuestro inventario



¿Cuál tiene mayor “Potencial Circular”?



500ml

Agua gasificada

¿la lata?

✓ optimizada

✓ monomaterial

✗ 100%
recyclable?

Necesita alrededor
de 10% de Alu
virgen?

✗ Mucha E!

✗ Etiquetas!



✗ plastic free?!



Contiene ~5%
resina epoxy

¿la botella?

✗ la tapita
se pierde

✓ Versátil

✓ se puede
reciclar la tapita



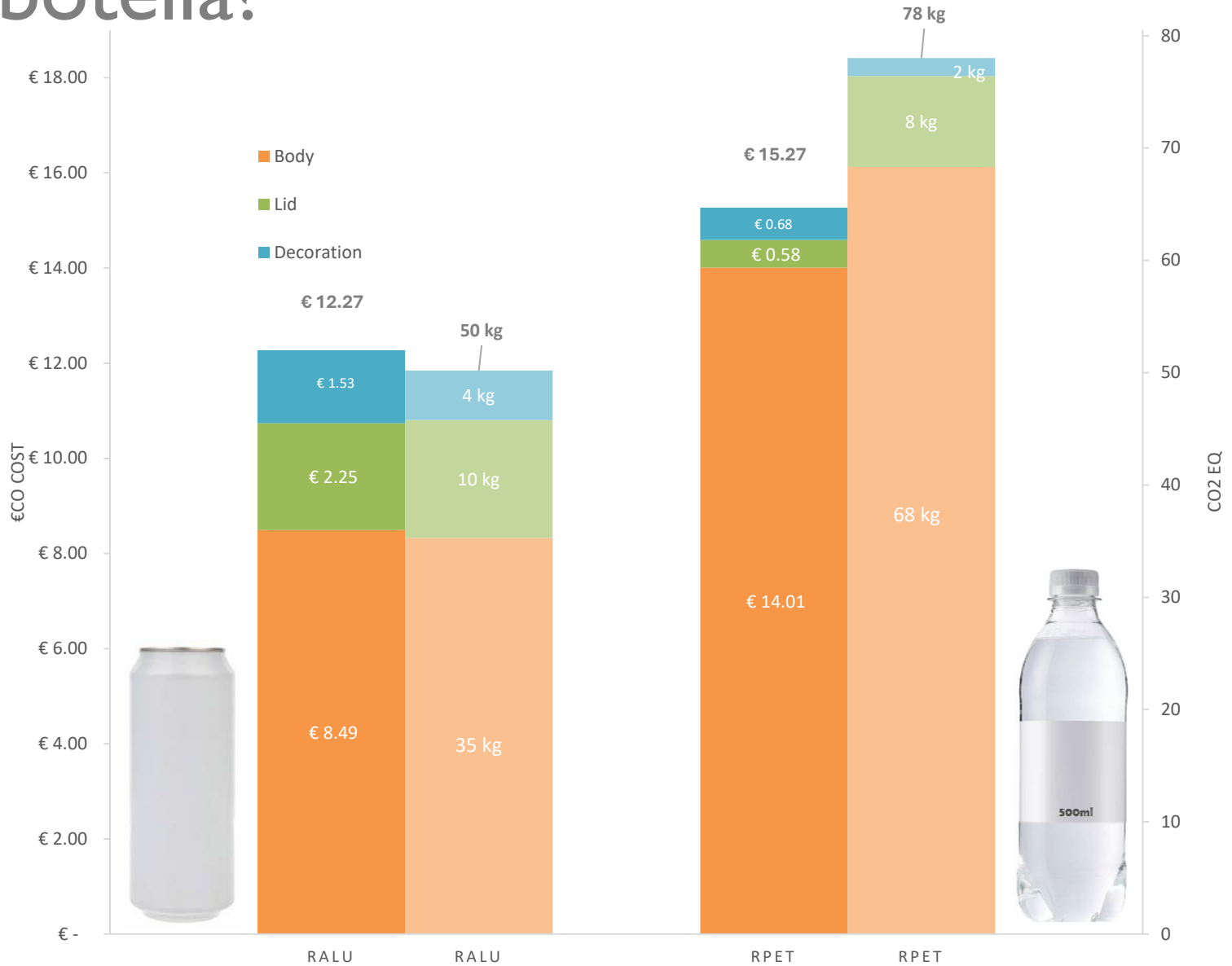
✗ plastic!

✓ PCR x7 (food)

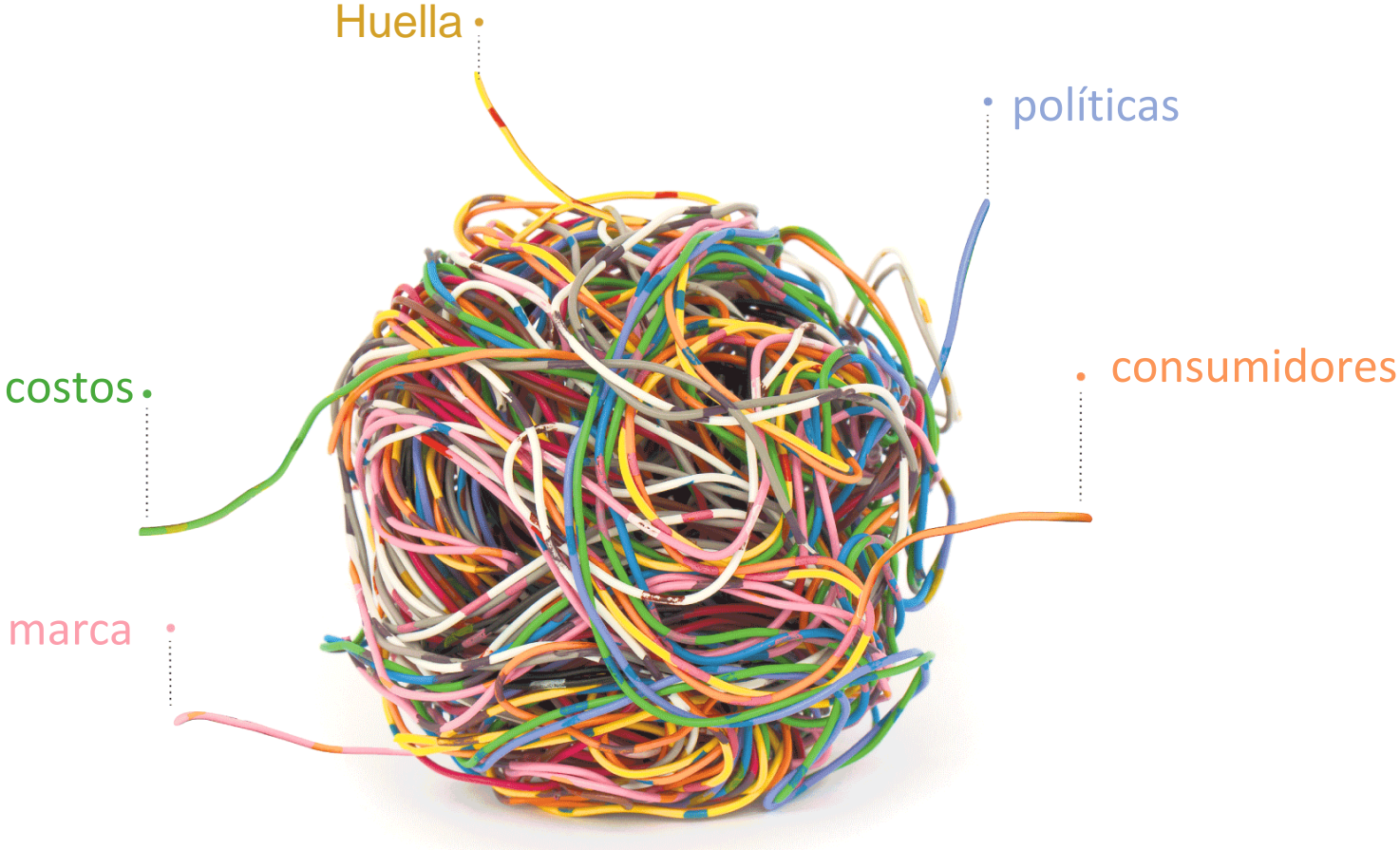
✓ Rec. Químico

✓ menos CO₂ /g

¿la botella?



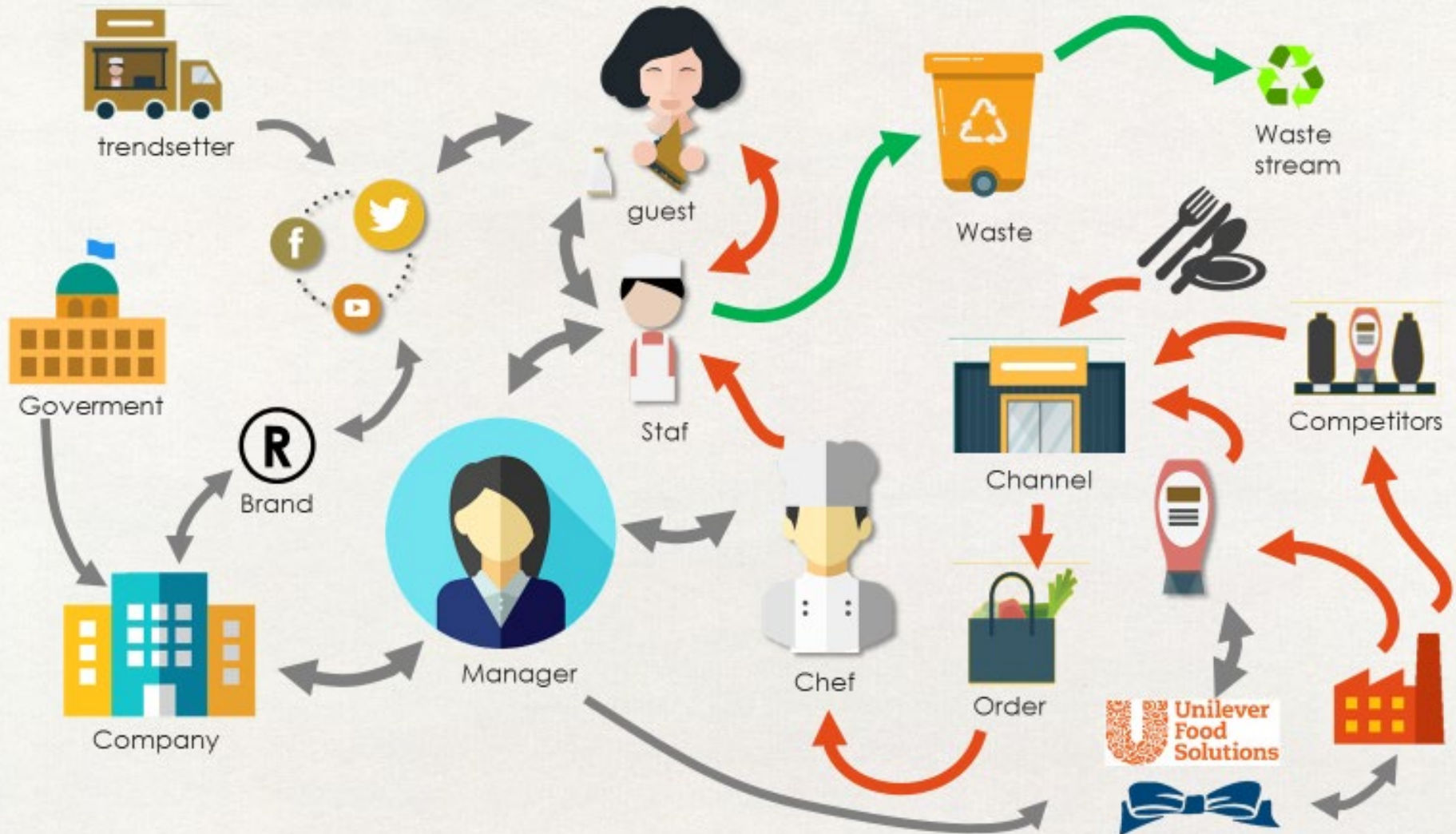
Un problema retorcido



?

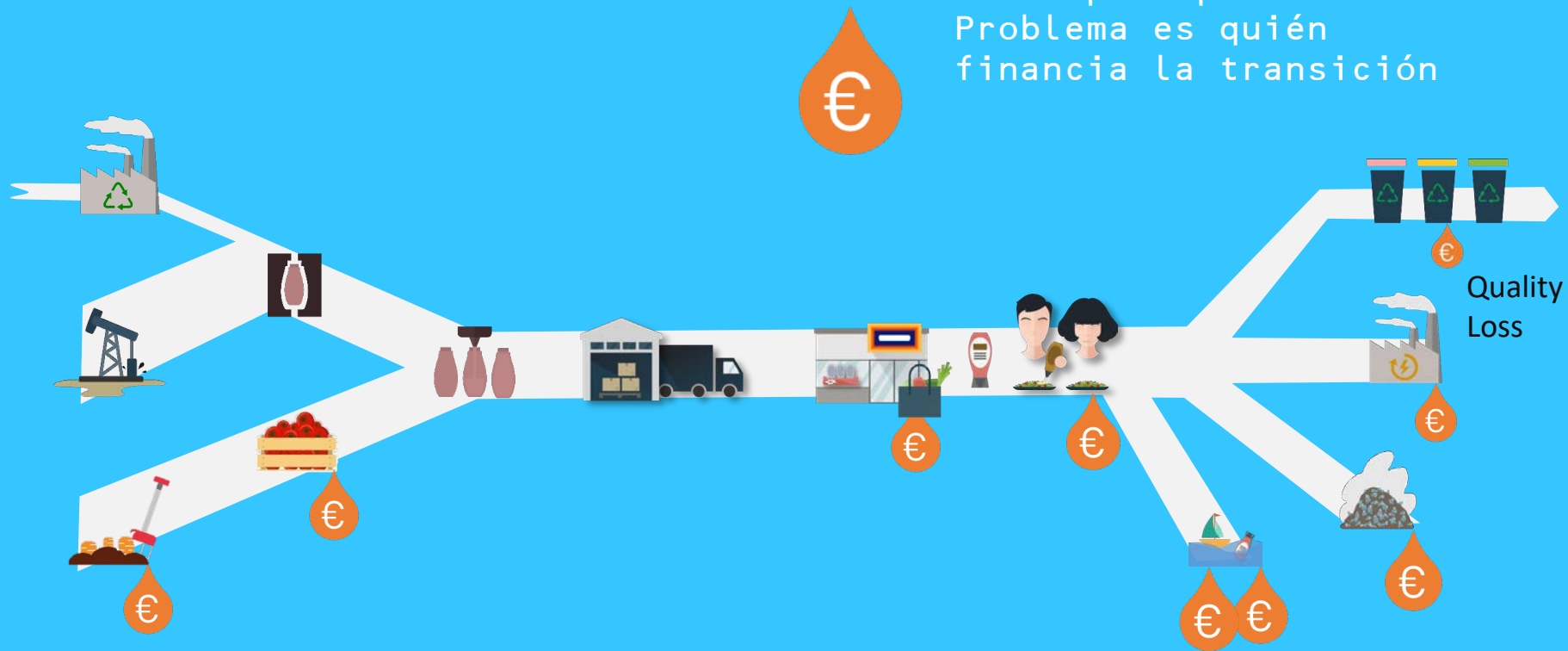


Mapa de actores

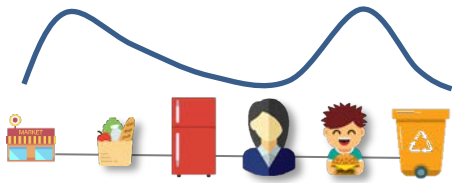


Localizar la fuga

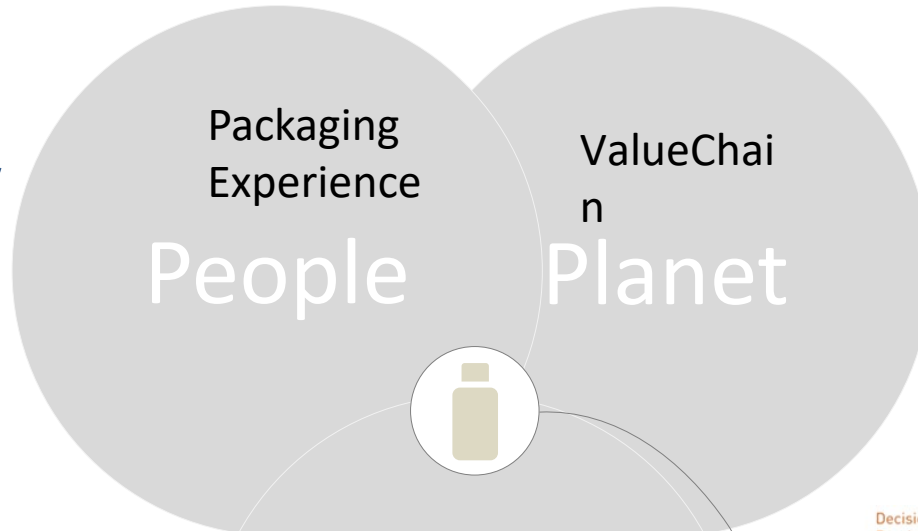
Es el presupuesto.
Problema es quién
financia la transición



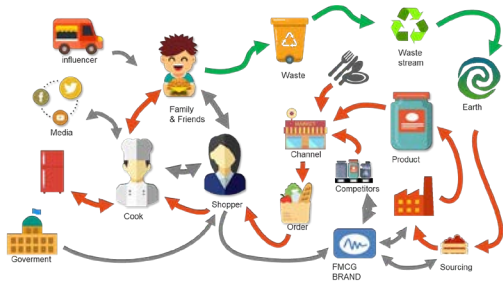
Mapas de Sistema



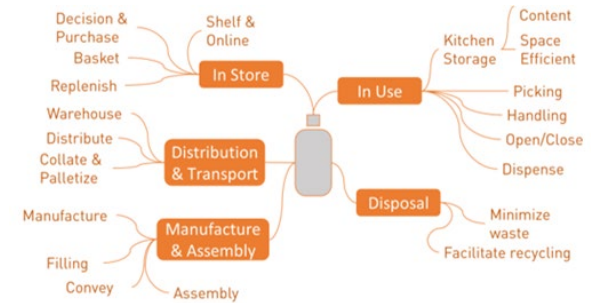
Mapa de experiencia



Ciclo de Vida



Mapa de Actores

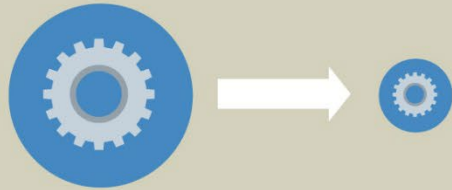


Requisitos

The realm of complexity

**SIMPLE, LINEAR
CAUSALITY**

ONE MAJOR CAUSE



Reductionist

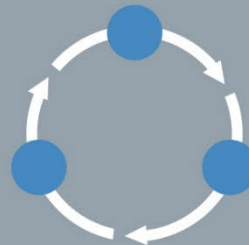
**LACK OF CAUSALITY
DISORDERED COMPLEXITY**

WEAKLY COUPLED BODIES



REALM OF COMPLEXITY
INTRICATE DYNAMIC PATTERNS

ORDERED COMPLEXITY
INTERTWINED CAUSALITY

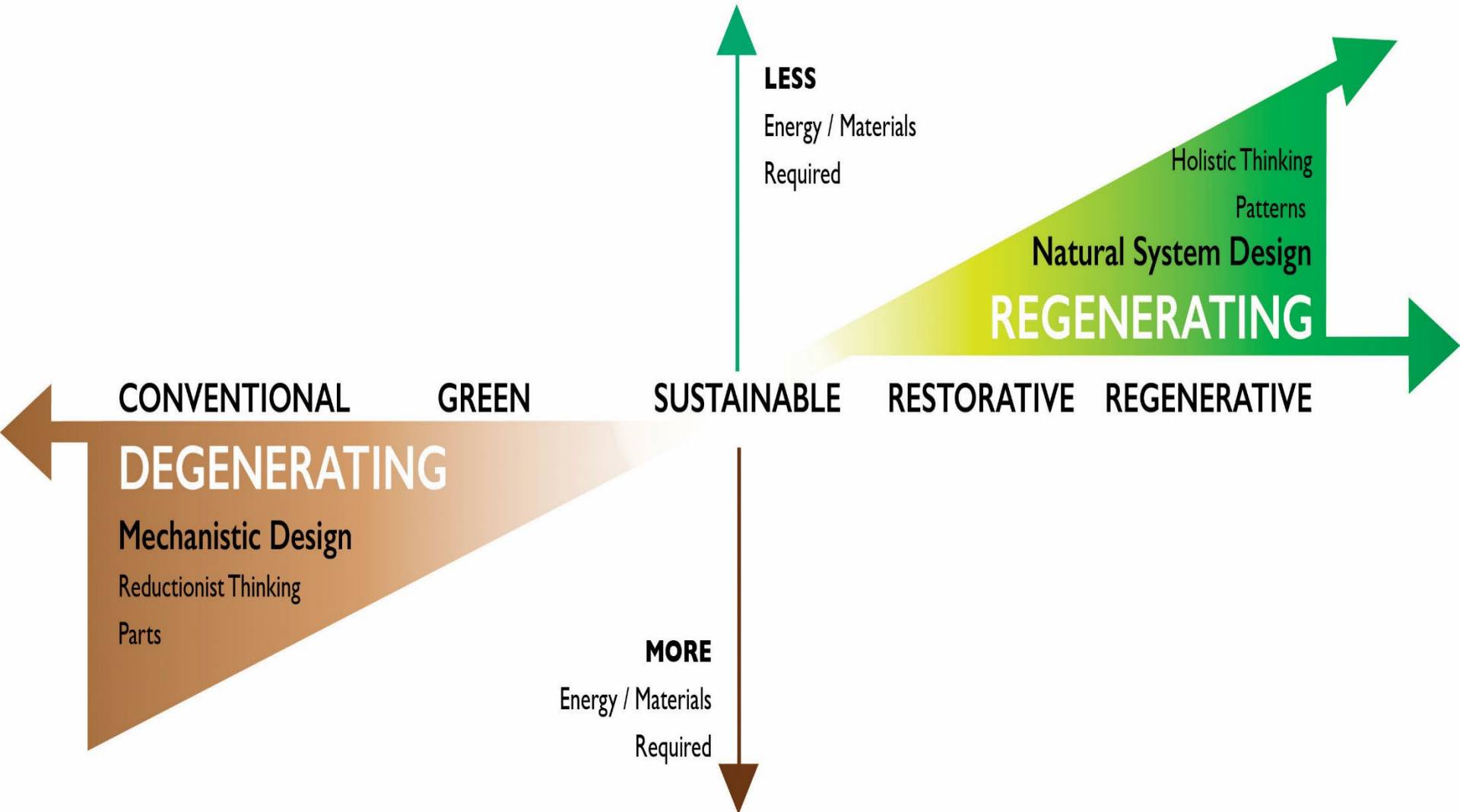


MUTUAL CAUSALITY

Systemic

AN ECONOMY

Place - Culture - Enterprise - Government - Commons

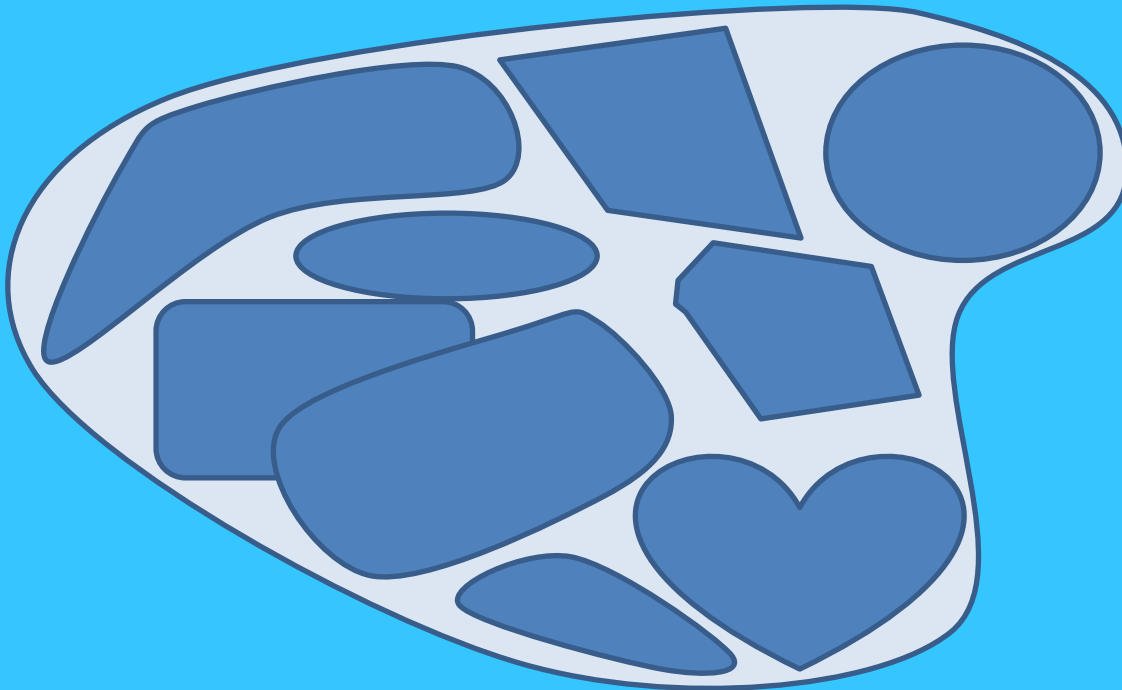


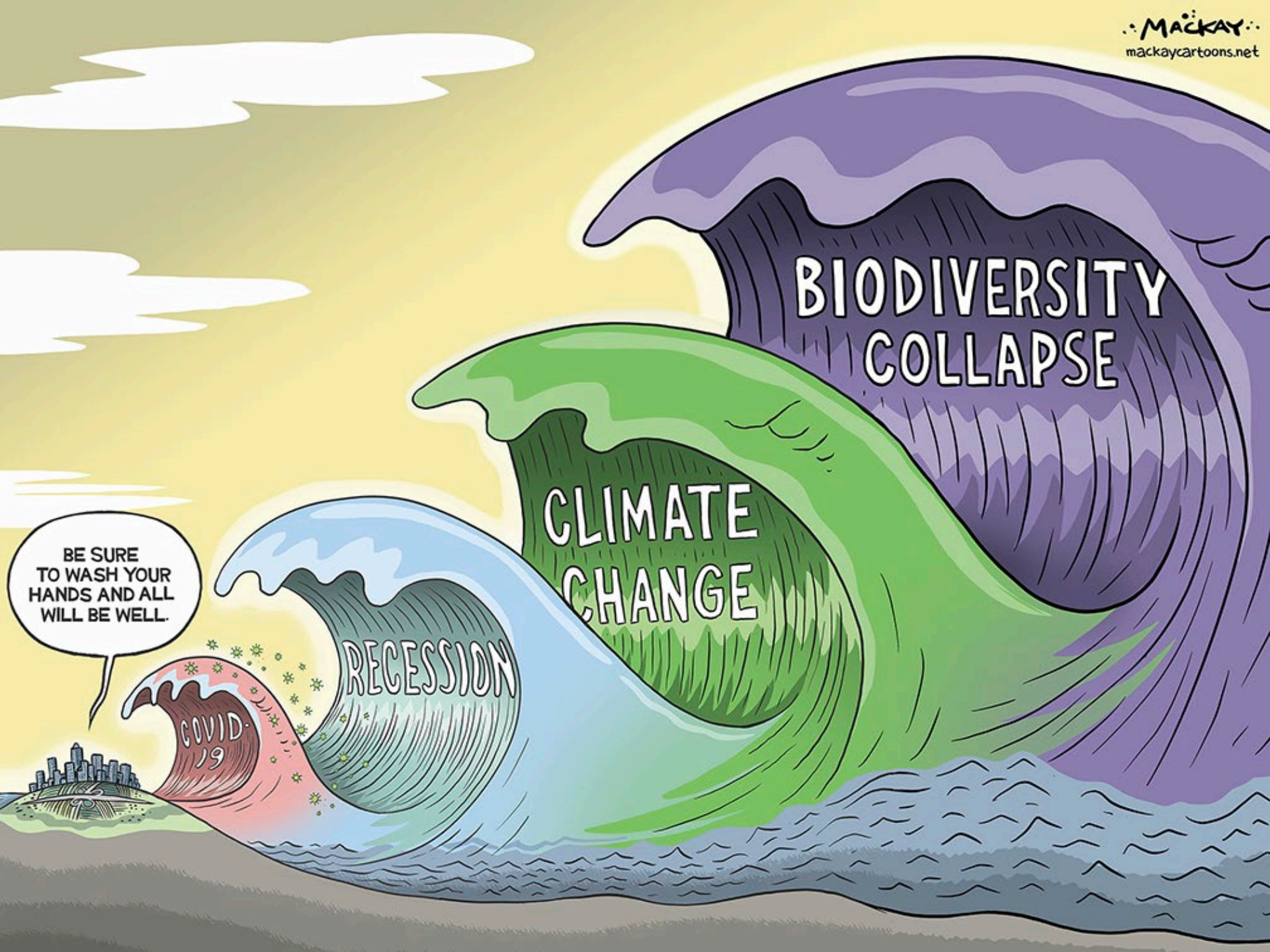
Reductionist:

- Divide and succeed
- Implicit gaps

Systemic:

- **Fill the gaps of the Efficient**
Reductionism Approach
- **Reframes the challenge** (changing
system boundaries)
Physical | Scale | Time





BE SURE
TO WASH YOUR
HANDS AND ALL
WILL BE WELL.

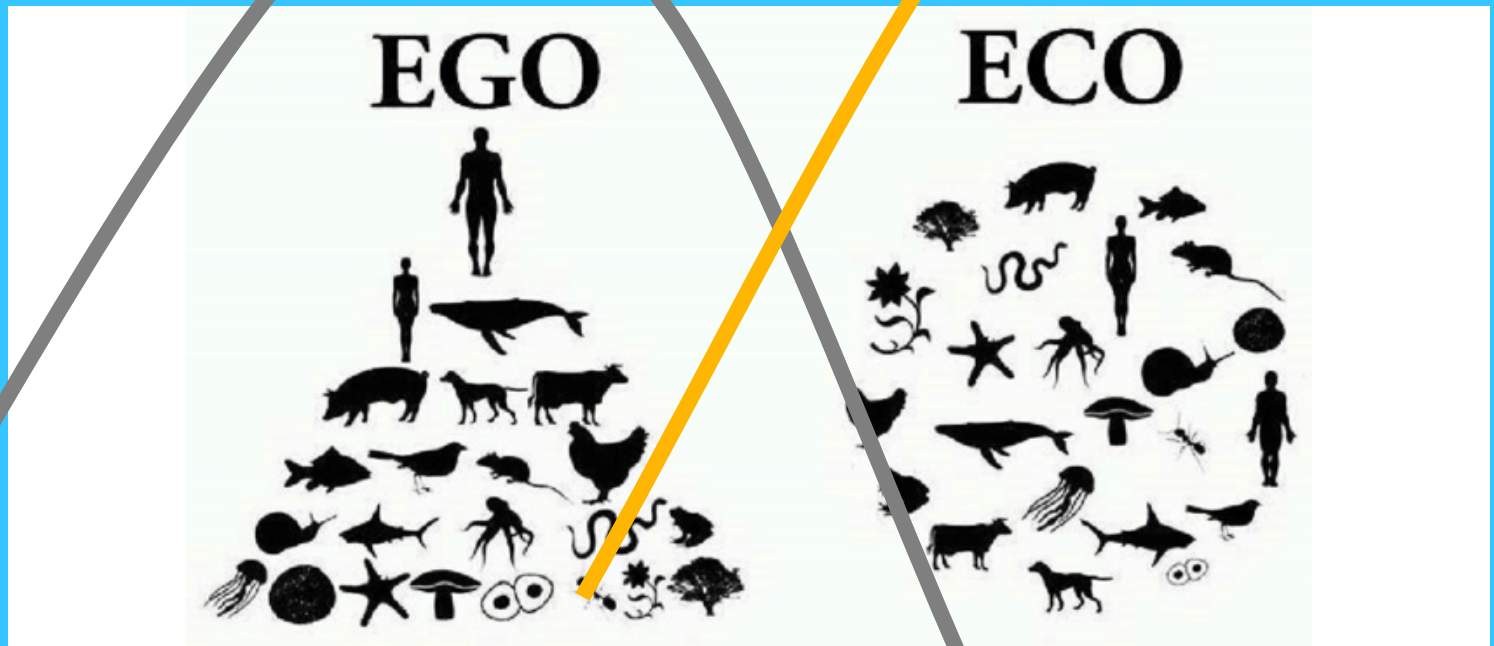
COVID-19

RECESSION

CLIMATE
CHANGE

BIODIVERSITY
COLLAPSE

Panarquía.

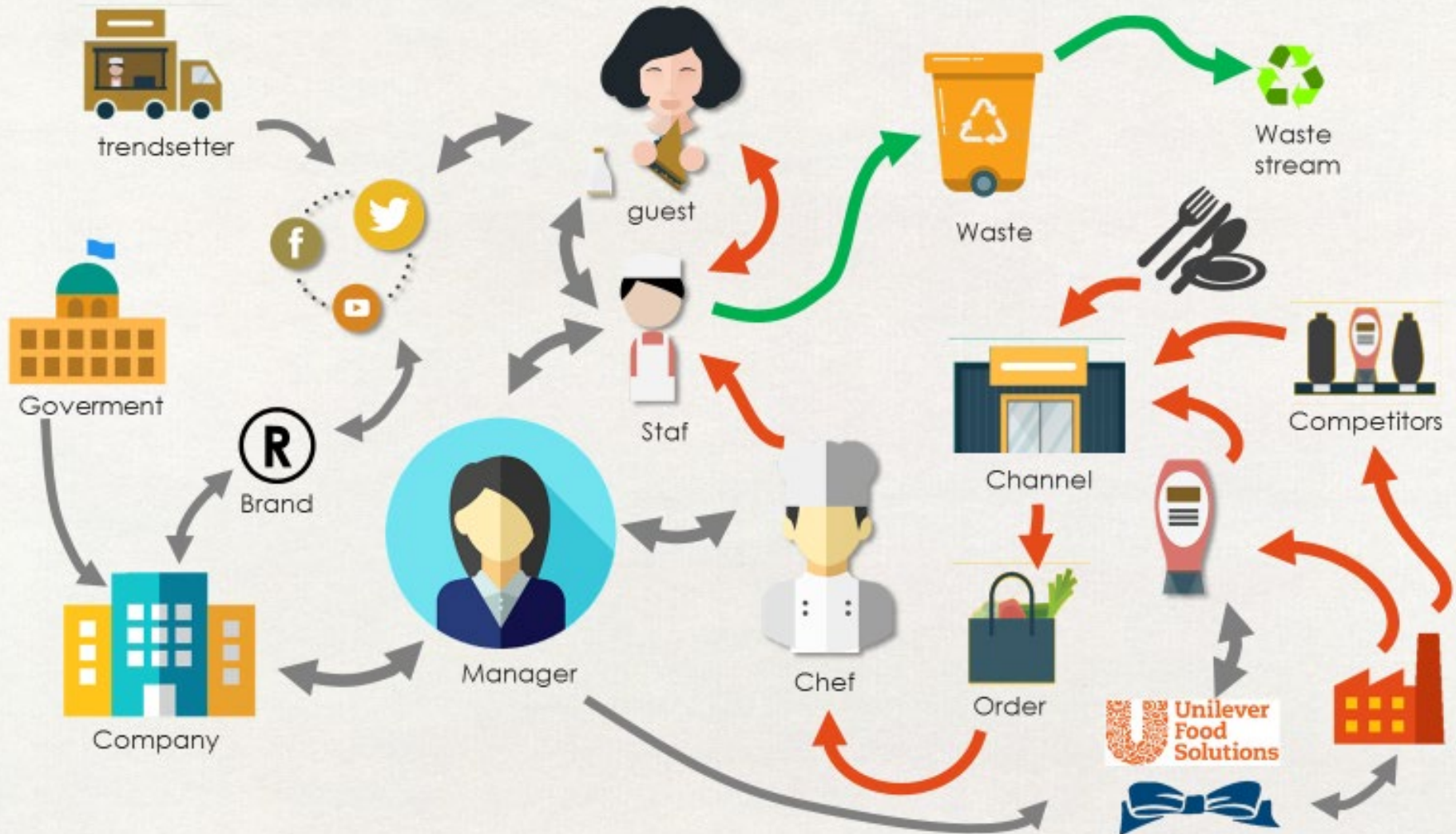


extractivismo



Regenerativo

Stakeholders Economy - Value Network





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