



Circular economy

WHY IS IT IMPORTANT?

Santa Krastiņa
santa.krastina@gmail.com
21.07.2023.



Zaļā brīvība

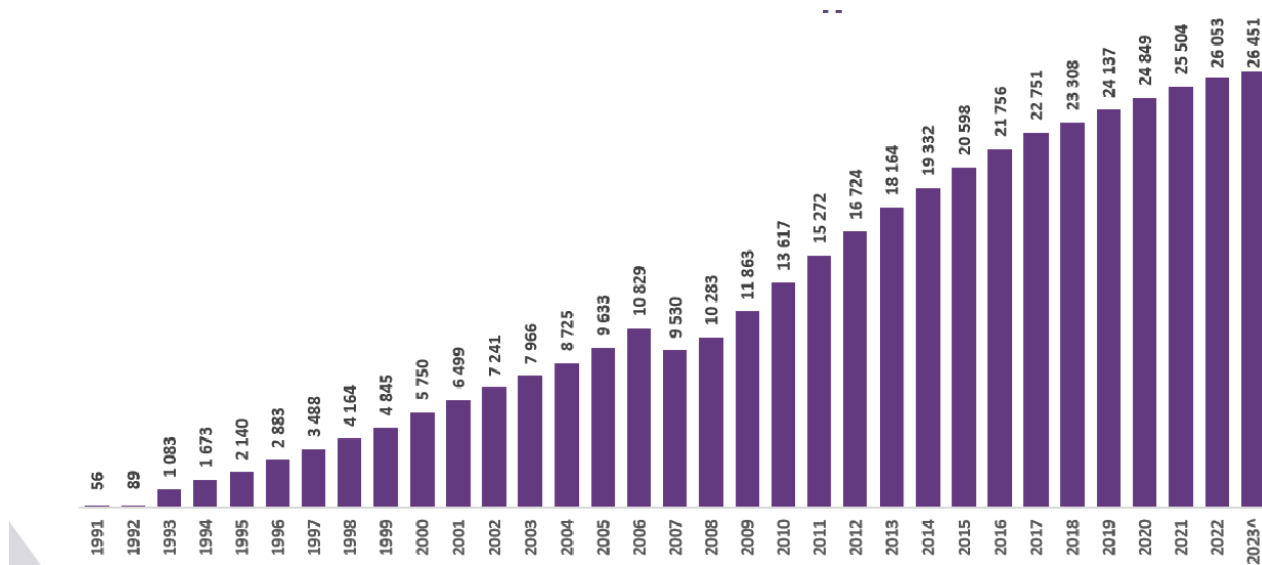


ZERO
WASTE
LATVIJA

NGO in Latvia?

Population of Latvia 1.9milj (2021)

26 451 NGOs in Latvia ($\frac{1}{3}$ are not active)
10 700 registered in Riga



NGO in Latvia?

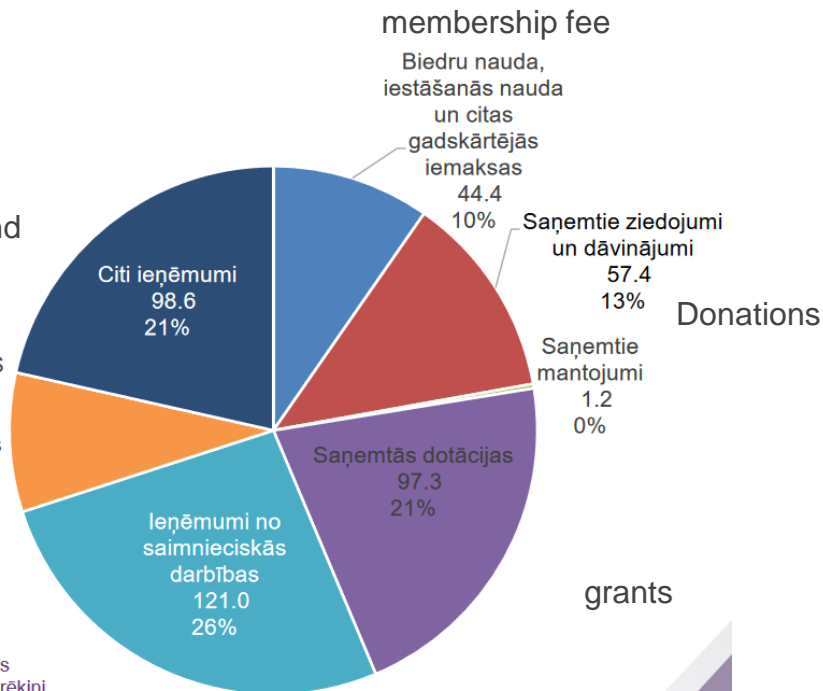
Population of Latvia 1.9milj (2021)

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Aprēķini no kopējiem ieņēmumiem

EU funds (and other foreign funds)

No ES fondiem, ES EEZ fondiem un citiem ārvalstu fondiem saņemtais finansējums
39.0
9%



Datu avots: Valsts ieņēmumu dienests (nēc. I PA datu nienprasīuma) | PA aprēķini

Income

Income structure, 2021

What is this?



CURRENT SOCIETY

Fast development; huge amount of information; consumptionism; mass media and influence of media



- Get all now and here - do not think about system and chain!
- Handy - use once and do not care
- Do not think where waste disappear
- Trends - newest technologies, fast fashion, development etc
- My, my, my - individualistic
- Look good, feel good, more consume - better life quality (beauty, hobbies, lifestyle)?
- Social media as a trendsetter, influence feelings

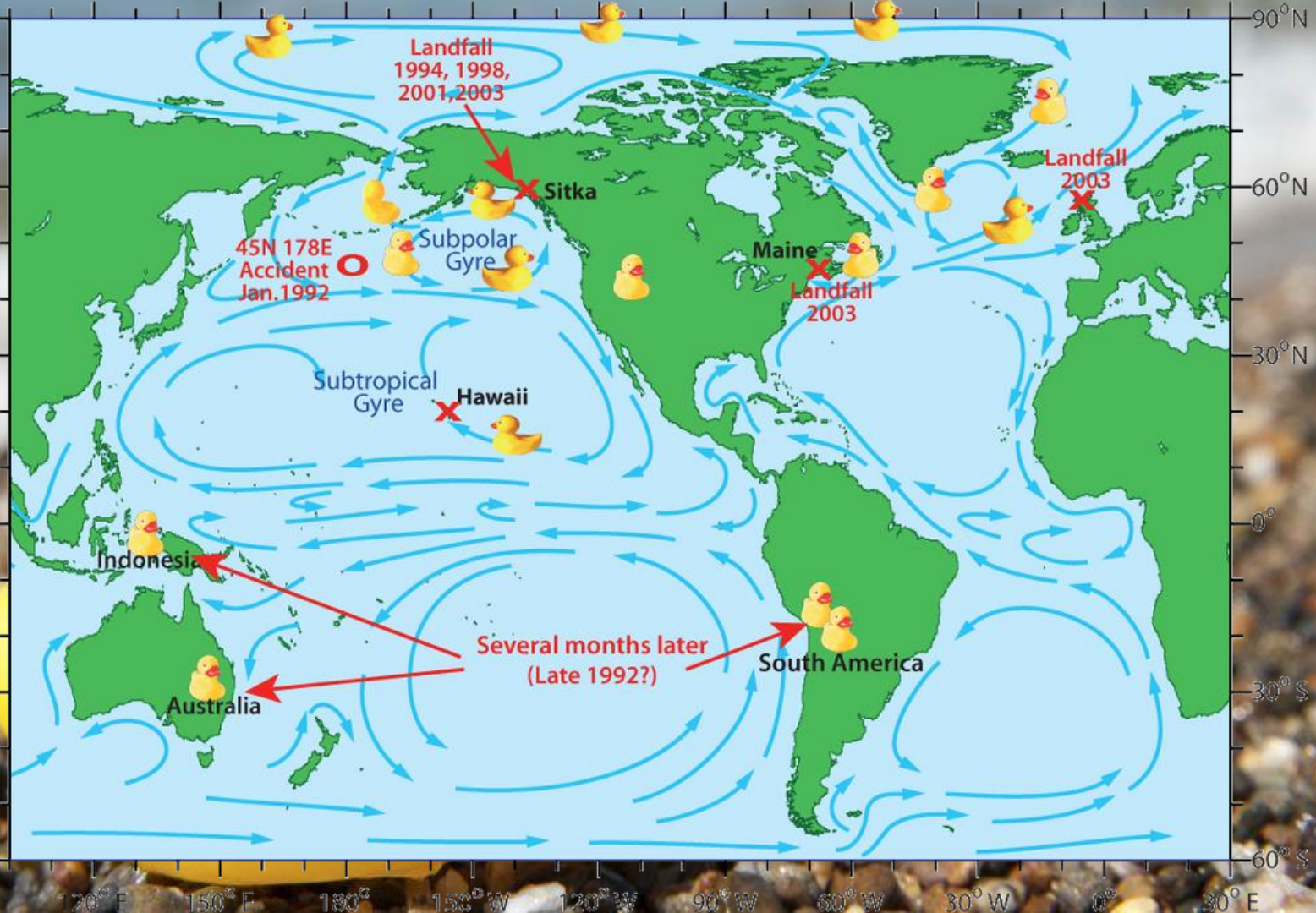


THERE ARE NO “AWAY” or “OUT”

Waste is related to every environmental problem – climate change, biodiversity, water pollution, chemicals in the ecosystems.

Waste returns in the different form.





WHAT HAPPENED?

How we ended up there?

Steam engine

(year 1684 - Thomas Savery)



Industrial revolution

(18th century)

Nature resources and energy - without limits

For the first time mass production.

Evolution of the industry



18th-19th Century
Steam engine



1870-1914
Oil, Electricity,
Steel,
combustion engine



1980-2010
Computers, Internet



2010-2020
Mobility,
Artificial Intelligence,
Cloud, Big data,
Digitalization,
IoT, blockchain

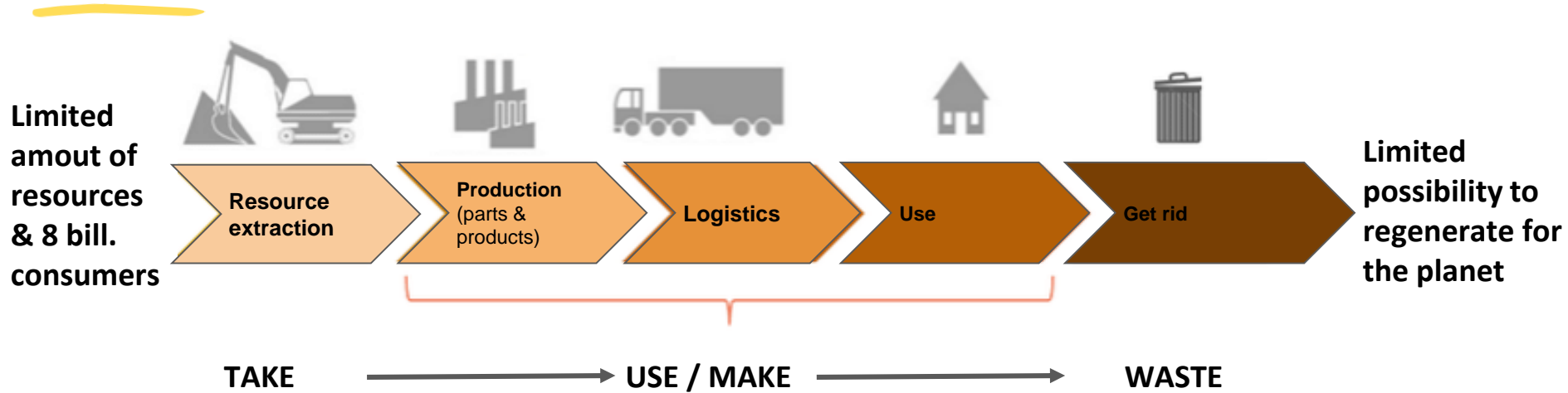


2020-2030
Energy efficiency,
Carbon neutrality,
Frugality,
Bio-diversity,
Resilience

INDUSTRIAL REVOLUTION – TODAY

Our reality: take - make- waste

LINEAR ECONOMY



- Raw materials; extraction
- Energy for machines;
- Transportation

- Energy (coal, oil)
- Heat, water
- Waste, emissions

- Energy for transport (oil; gas)
- Transportation

- Energy for charging

- Waste: valuable metals, toxic elements



”

How many **KG of materials** one person in
EU use per year?

*(main groups of resources: biomass, energy (fossil,
coal etc), metals, minerals)*



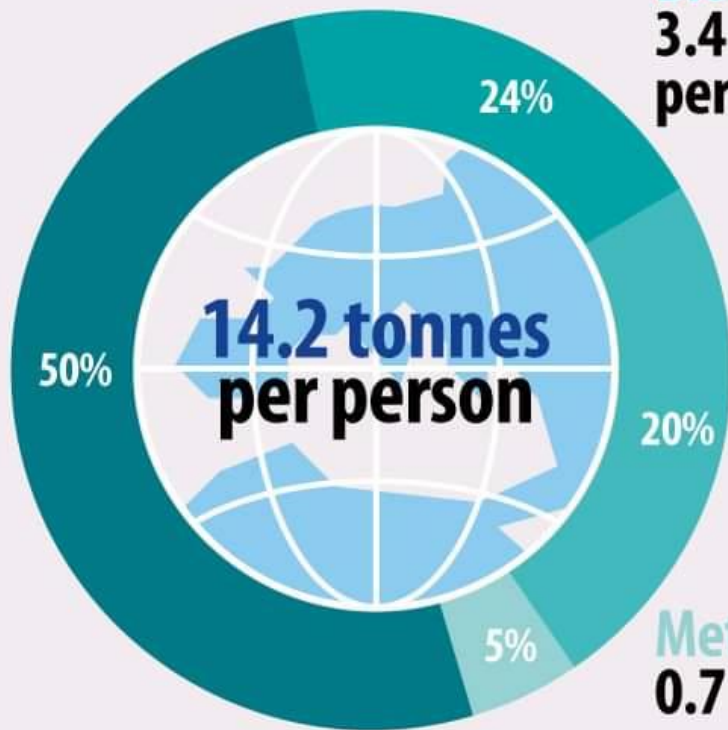
14 200 kg

Domestic material consumption in the EU, 2019

(by main material category)



Non-metallic minerals:
7.2 tonnes
per person



Biomass:
3.4 tonnes
per person



Fossil energy materials:
2.9 tonnes
per person



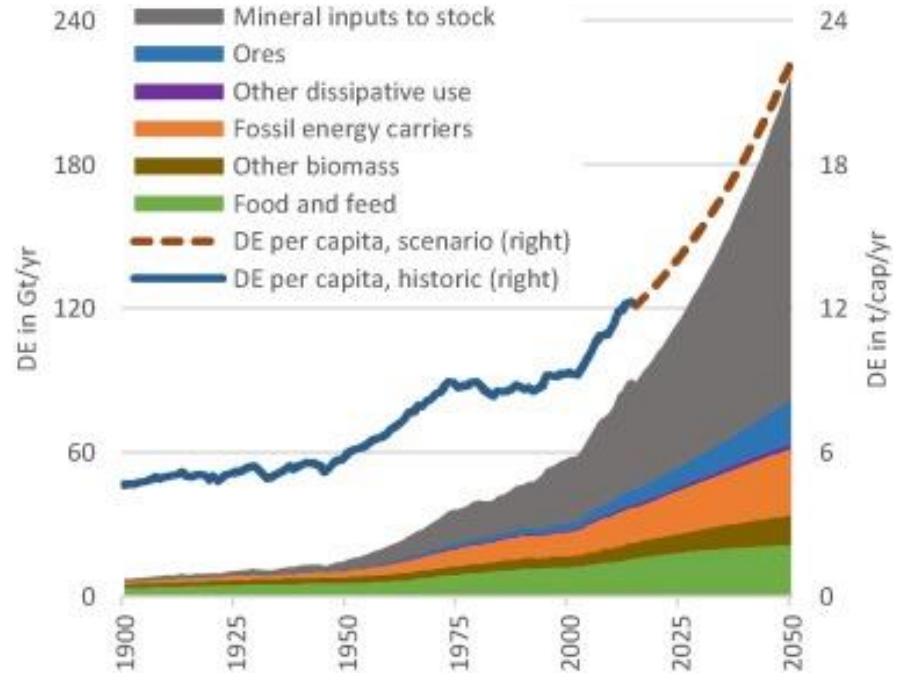
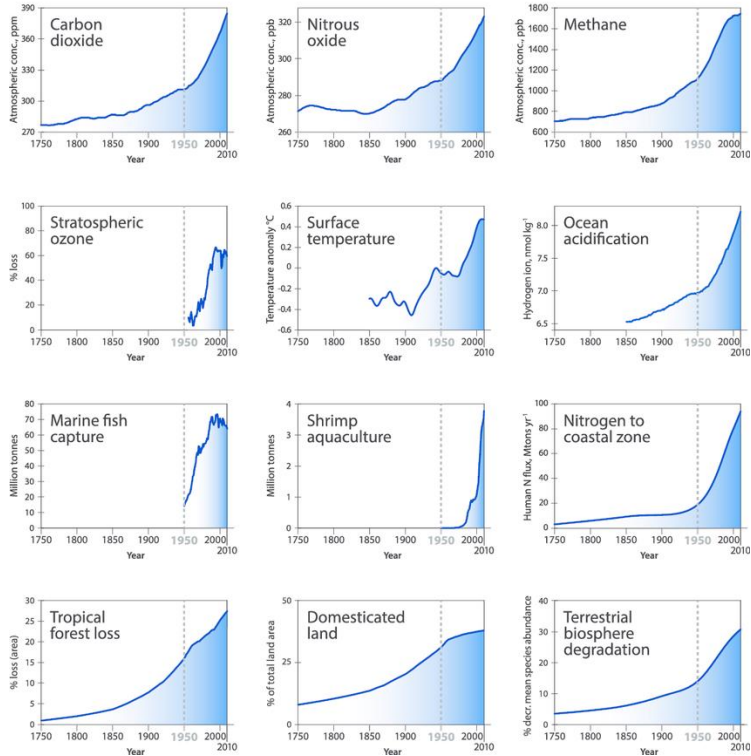
Metal ores:
0.7 tonnes
per person



Data do not add up to 100% as 'other products' and 'waste traded for final treatment and disposal' were excluded (close to 0%).

Why do we need different system?

Earth system trends



What are the differences?

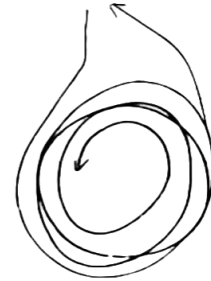
**LINEAR
ECONOMY**



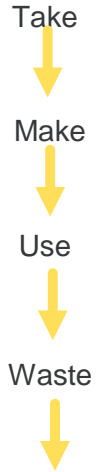
**RECYCLING
ECONOMY**



**CIRCULAR
ECONOMY**

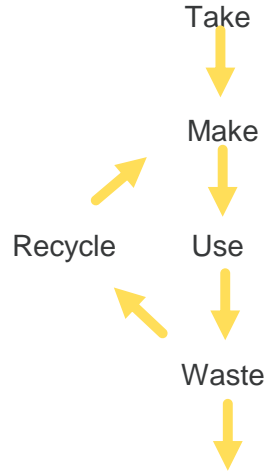


LINEAR ECONOMY



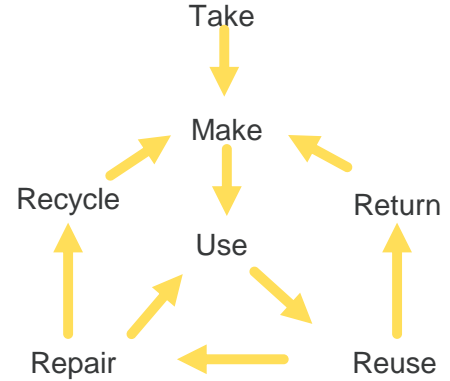
www.zam.wash

RECYCLING ECONOMY



WASTE AS A RESOURCE

CIRCULAR ECONOMY



Concept of Circular Economy

Macro level



CE seeks for solutions of climate change and environmental challenges

Meso level



CE encourages to minimise the waste and the consumption

Micro level



CE engages customers to use products longer



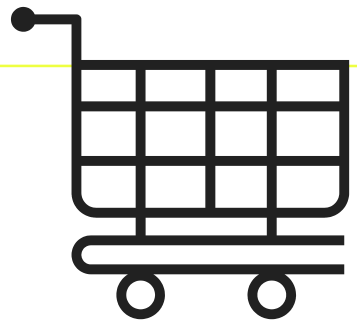
CE enables the efficiency of resources & environmental values in business

Environmental quality, economic and general wellbeing of existing and future generations

Circular economy vs Linear Economy



VS



Use longer and share products

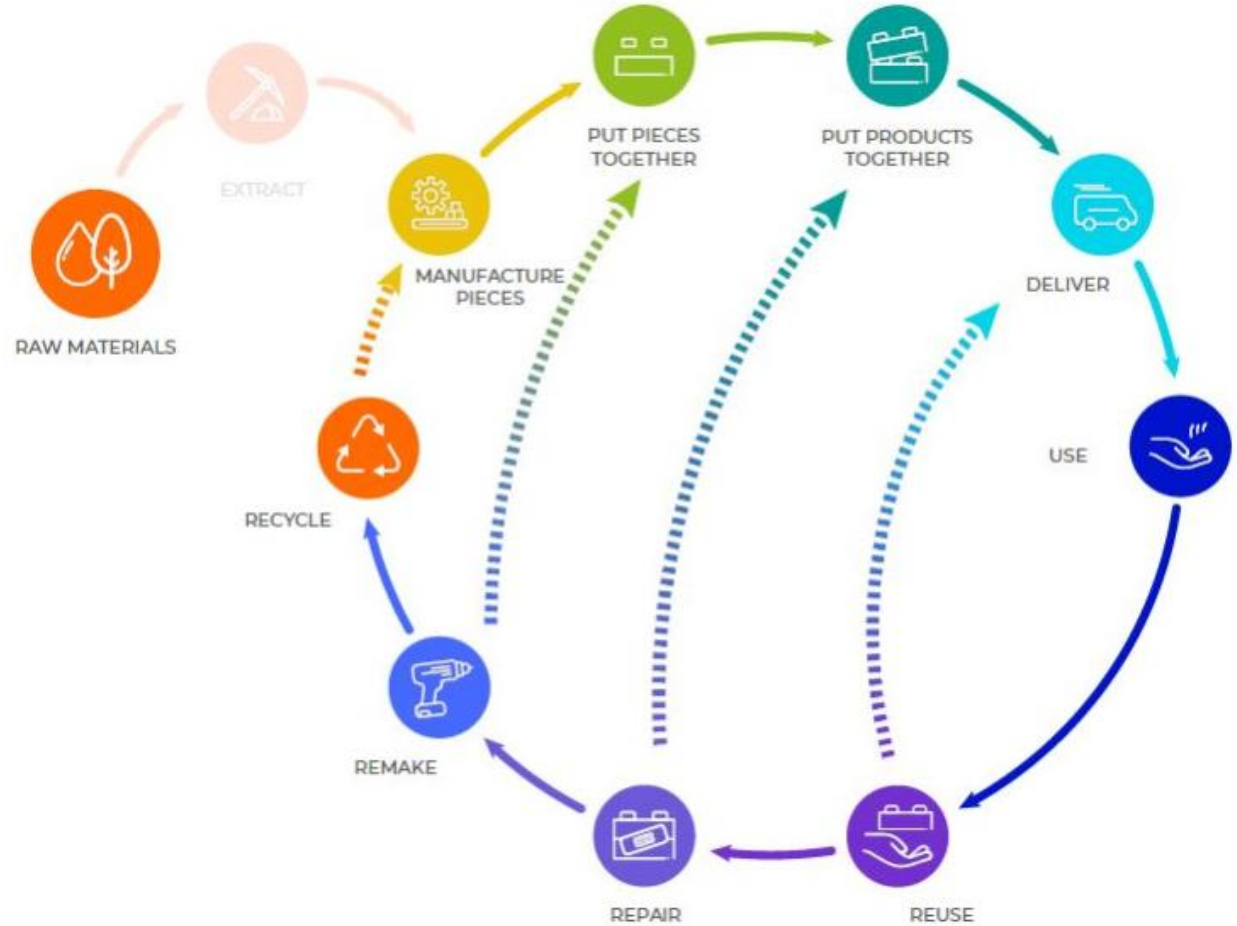
Use of services instead of purchasing products

Waste = productive resource

- Take → make → consume → dispose → “through away”
- Generate huge amount of waste
- Rising industrial demand for resources

CIRCULAR ECONOMY?

- *in all life cycle*





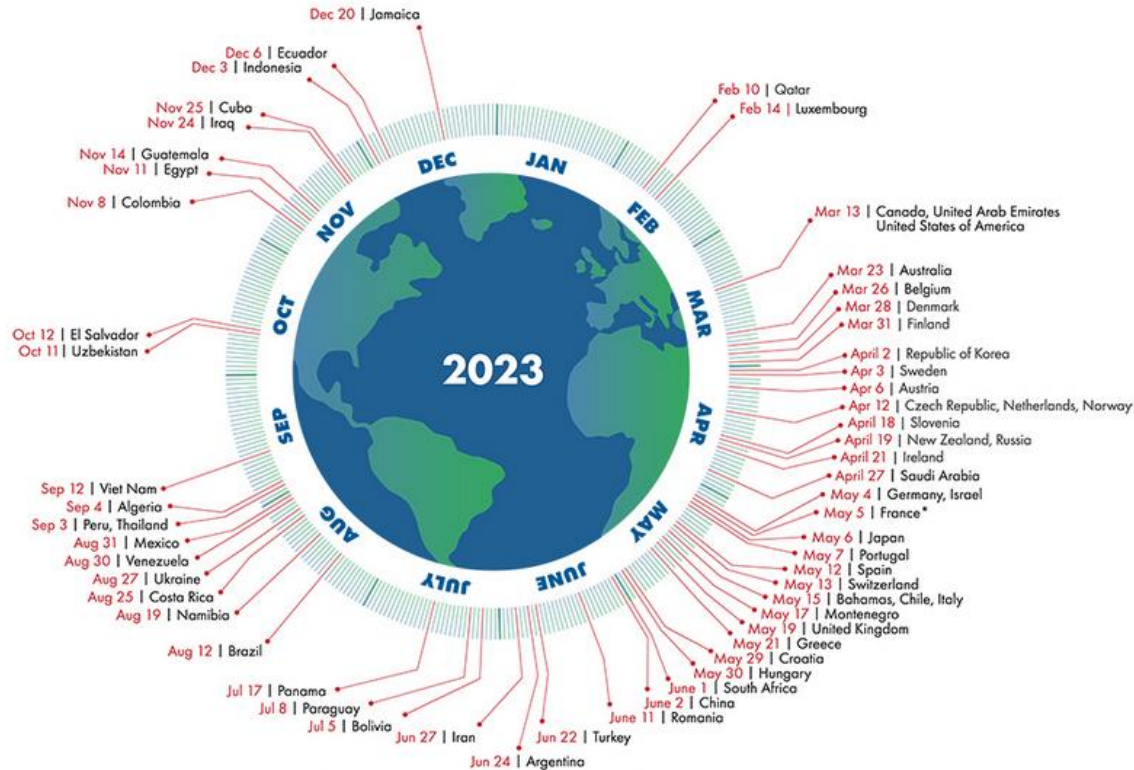
MUM! DAD!
THE FRIDGE IS EMPTY!

SORRY KIDS, WE'VE
SPENT THE BUDGET
FOR THIS YEAR...



Country Overshoot Days 2023

When would Earth Overshoot Day land if the world's population lived like...



For a full list of countries, visit overshootday.org/country-overshoot-days.
*French Overshoot Day based on nowcasted data. See overshootday.org/france.

Source: National Footprint and Biocapacity Accounts, 2022 Edition
data.footprintnetwork.org



In average, we need

1.7 planets to sustain us

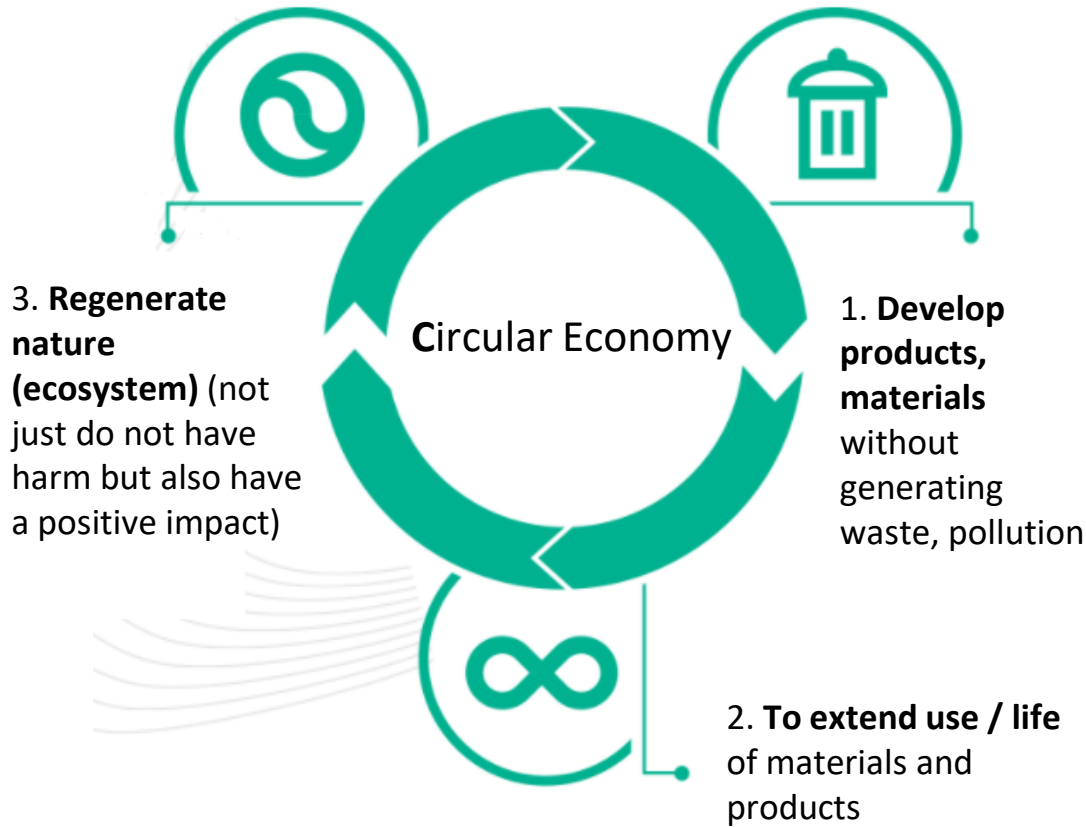
Latvia 01.04. (2023.)

← Italy 15.05.

Poland 2.05.

Date when humanity's demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year.

Principle to move to the new system:



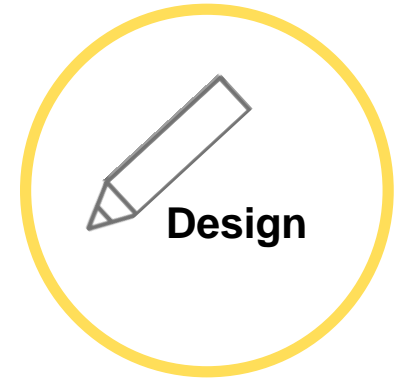
Important role

INNOVATION

and

ECODESIGN

CIRCULAR ECONOMY

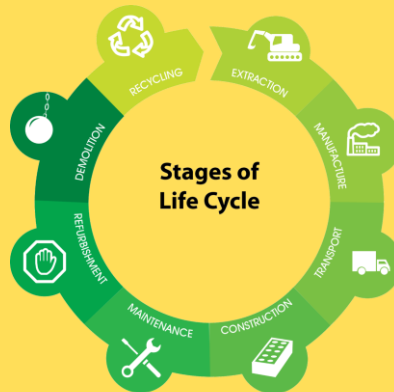


Eco-design

the way how we design products, services

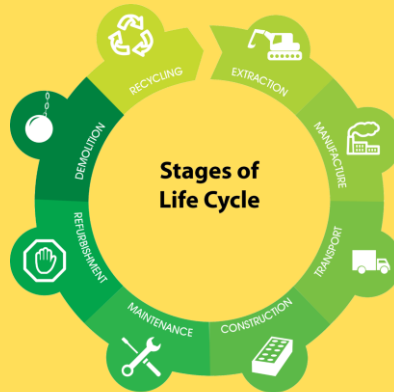


What is the % we can reduce the negative impact on the environment if we plan and design product properly?





In the design stage, it is possible to reduce **80%** of the products negative impact (in the life cycle)



...if only we plan better and look at the full system

from the very beginning

Product as part of the system



How?

Some approaches!

SYSTEMS THINKING

Take into account full system
and links between



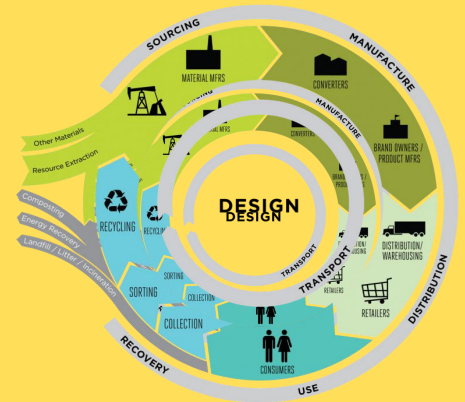
BIOMIMICRY

Look at the nature



LIFE CYCLE PERSPECTIVE

Look at the full Life cycle



To challenge existing “status quo”

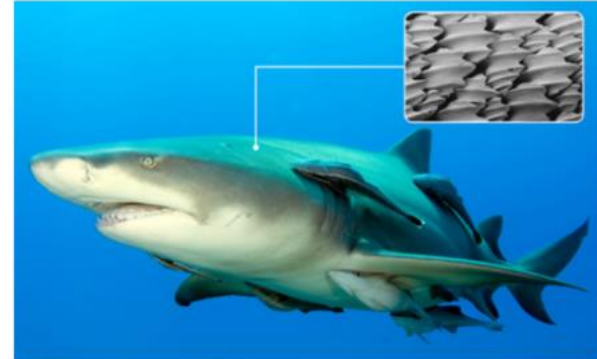
BIOMIMICRY EXAMPLES



Stealth B2 Bomber - Falcon
USA



SHINKANSEN High speed train - Kingfisher
Japan



Shark skin Antibacterial (Sharklet tech)
High speed swimming (Speedo) USA



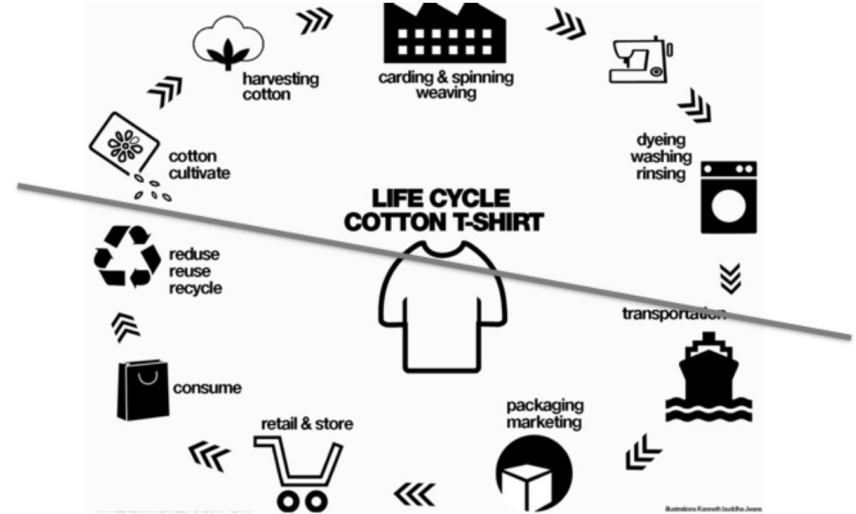
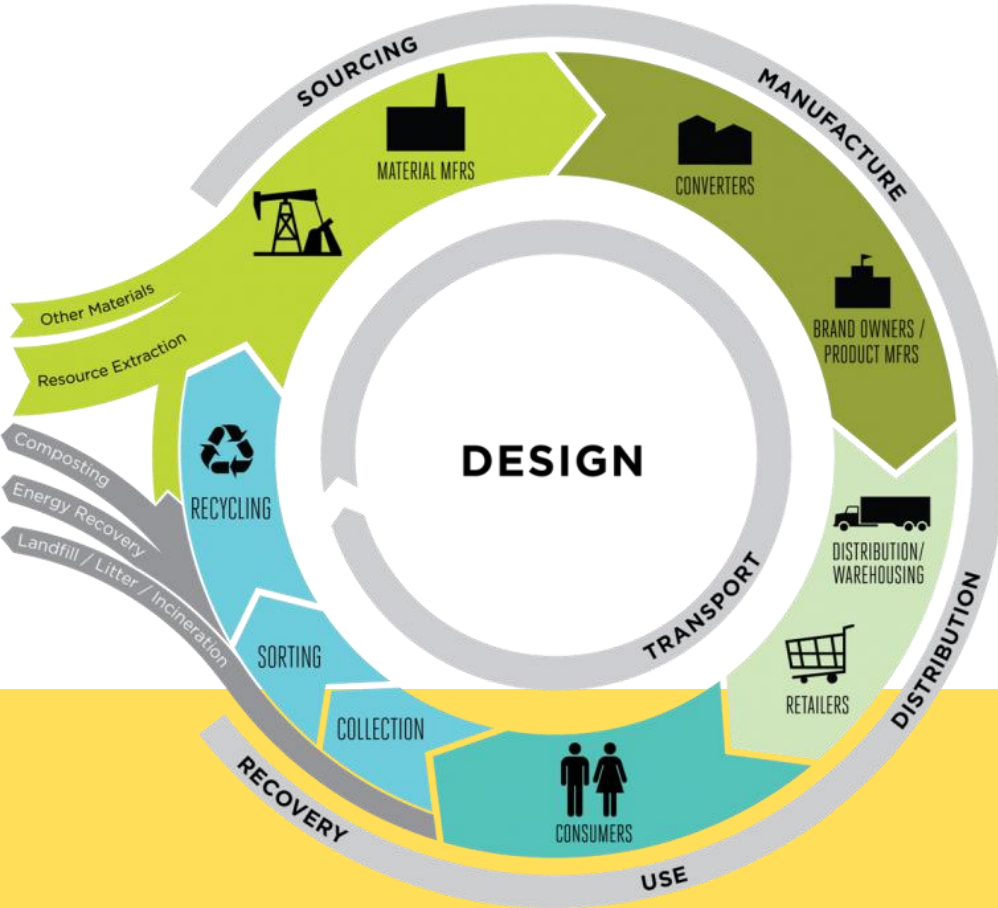
Bardane and
The Velcro



Curved wings of some new planes, inspired by birds' end wing
feathers !



Life cycle



CIRCULAR ECONOMY principles in the design stage



DESIGN TO REUSE

In IKEA stores, you can shop, repair or resell your furnitures.



DESIGN TO REPAIR

SEB group keeps the spare parts of their products for 10 years to facilitate repairs.



DESIGN FOR DISASSEMBLY / MODULARITY

The Fairphone was designed to be disassembled/repared by any user.



DESIGN FOR RENT

Bundles gives access to high quality washing machines by renting them.



DESIGN FOR MULTIFUNCTIONALITY

In IKEA stores, you can shop, repair or resell your furnitures.



DESIGN FOR ACCESS

Instead of selling photocopiers, Xerox sells printed copies to professionnals.



DESIGN WITH UNWANTED RESSOURCE

In Zimbabwe, Chido Govera has collected coffee grounds to grow mushrooms.



DESIGN TO OPTIMIZE

The TooGoodToGo app enables bakeries to sell off their last meals.

Examples of circular economy in design stage

Thoughtful resources / materials



Reusabe materials, waste, natural materials, renewable materials

Use and sustainability - life cycle



FAIRPHONE

- Reuse materials
- Can change parts
- Less e-waste (can repair; change parts etc)

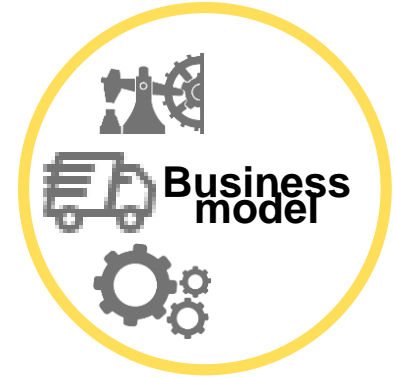
Repair, long lifetime, multifunctionality

Thinking out of the box: waste as a resource or design elements



Added value to the product

CIRCULAR ECONOMY

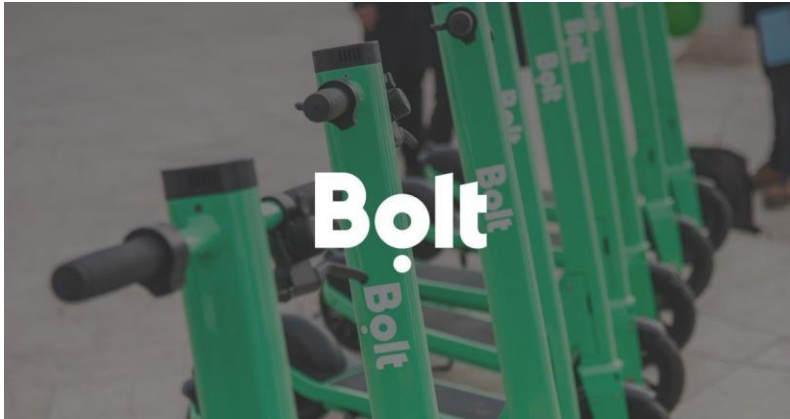


Business model

how do we propose our services, products

SHARING ECONOMY – product as a service

propose the solution for the problem (get from A to B)



Product is a way how to meet the needs

SHARING ECONOMY - product as a service

propose the solution for the problem (plants in the office)



AUGU NOMA

Customers:

- Largest shopping moles
- Leading banks
- Largest companies
- Hotels& restaurants
- Etc.

SHARING ECONOMY - product as a service and longer life time

Biznesa modelis ar cieņu pret lietotu telefonu

lmt 



Atvērtie
telefonu «nomas»
līgumi

Novērtē
nolietojumu un
pārdod lietotus
telefonus

Pienācīga
pārstrāde pilnībā
nolietotiem
telefoniem

- Use as long as you want and give back
- Company is responsible for the product; repair or use parts and give back in the market

How to use the existing product in the most efficient way?

SHARING ECONOMY - product as a service

propose the solution for the problem (clean cloth)

Linear Economy



- Renting a washing machine (month or year)
- Company responsible for the machine (repair etc)





More examples of circular economy

Zero waste shops

Packaging is $\frac{1}{3}$ of all waste

When buying product, we pay for the packaging



Nosver

Piepildi

Nosver vēlreiz

Maksā



Community gardens



Public fridges

Food waste reduction

33% of all food is lost in the logistical chain “producer - consumer”



REUSE

Have longer lifetime of the product

andelemandele

IENĀKT

PĒRĻU MEDĪBAS DĀMĀM KIDS KUNGIEM HOME

Meklēt pēri...

KIDS Visi Šodien Vakar Nedēļas Aktuālie Jaunākie Populārākie Nerādīt rezervētos

STĀVOKĻIS

- Jauns
- Lietots, lielākā stāvoklī
- Lietots, iespējami trūku...
- Vintage

KRĀSA



KAM:

- Mētenēm
- Zēniem
- Unisex

IZMĒRS (CM)

- 50/56
- 56/62

SUPERPĒRĒLES



€ 25,00 € 65,00 2 € 15,00 € 40,00 1 € 15,00 1 € 7,00 2 € 15,00 5
Izpārdošufilī Jauna silta jaka uz 150 Tumsi zilas kurpītes Skaisti auduma apaviņi Silts un ļoti mīksts princēdu kombinzons Koša vīrsjaka, izmērs 98/104.

KIDS



DELFI > Tavs Dārzs > Remonts

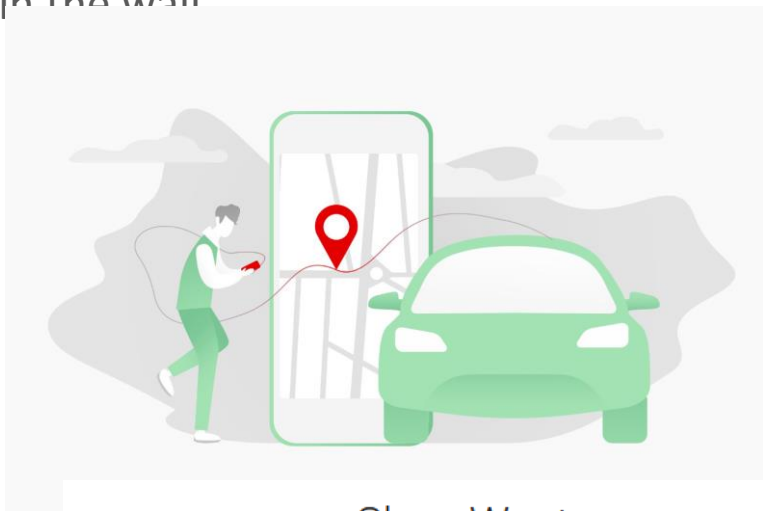
06.05.2021 12:02

Rīgā izveidots remontmateriālu maiņas punkts, kurā bez maksas var nodot un paņemt lietas

DELFI Tava Māja | "Lietiskās informācijas dienests"

SHARE

People do not need drill, they need a hole in the wall



ShareWaste

ShareWaste

Tomas Brambora Dzīvesveids

E Visiem

letver reklāmas

▲ Jums nav nevienas ierīces.

Pievienot vēlmju sarakstam

Līga Kupča asked a question · 27. marts · 🌐

Vai kādam nav USB-C lādētājs, ko varētu aizdot uz īsu brīdi?

2 Answers Redzēja 30

👍 Patīk 💬 Komentēt

Visi komentāri ▾

iBook.lv
Grāmatu draugs

Lietotājvārds:

Parole:

Atcerēties mani [Aizmirsu paroli](#)
[Reģistrēties](#)

[Pieslēgties](#)

Sākums Meklēšana Draugi izdevēji Forums BIJ Kontakti

Jaunākās grāmatas pārdošanai
Jaunākās grāmatas maigai
Jaunākās grāmatu vēlnes

Grāmatas pēc valodas >
Grāmatas pēc cenas >
Jaunas grāmatas pēc izdevēja >
Grāmatas pēc izdošanas gada >

Amatniecība un hobiji (20976) >

Mīļie grāmatu draugi, esiet piesardzīgi un uzmanieties! Ik pa laikam iBook.lv iekļūst, kāds krāpnieks, kurš vēlas saņemt no Jums priekšpaskatu, par grāmatām, kuras **NEKAD** neizsūtīs.

Līdzšinējā pieredze liecina, ka:

- ▶ Krāpnieks visbiežāk pats Jūs uzmeklē un/vai piedāvā populāras un dārgas grāmatas.
- ▶ Krāpnieks vienmēr dzīvos kaut kur tālu-tālu un viņam (kā pa brīnumu) nav ne viena rada/drauga/kolēģa/pazīņas, kas dodas uz citām Latvijas apdzīvotajām vietām un tāpēc grāmatas obligāti ir jāsuāta.

Meklēšana

pēc Nosaukuma

Nosaukums, autors, ISBN

[Meklēt](#)

Atbalsti iBook.lv
Pateikties iBook.lv veidotājiem un

Upcycled products



Community discussions



Zero Waste Latvija diskusijas

Grupa · You and 12 838 others are members



Dita Bukovska shared a link.

February 21 at 4:36 PM

Sveicieni!

Ja sakrājušās kādas tekstilietas (dvieļi, segas, pārvalki u.tml.), kas savu laiku jau nokalpojušas un kuru otrreizējai izmantošanai trūkst ideju, tās kā iekļājamie materiāli lieti noderēs ķepaiņiem dzīvnieku patversmēs. Vēl līdz 28. februārim ir iespējams bez maksas nosūtīt ziedojumus no jebkuras vietas Latvijā uz dzīvnieku patversmēm ar kurjeru. Varbūt kādam pavasara tīrīšanas sezonas ieskaņā būs aktuāla šāda labo darbu iespēja. Te vairāk informācijas:

DELFI.LV

Sasildi ķepas! Piecām dzīvnieku patversmēm palīdzību var nosūtīt ar kurjeru bez maksas

Ikviena interesents aicināts iesaistīties labdarības akcijā "Sasildi ķepas!", kuras laikā ar kurjera starpniecību bez maksas būs iespēja sūtīt ziedojumus uz dzīvnieku patversmēm Alūksnē, Jēkabpilī, Ķekavā, Liepājā un Ogrē....

👍❤️ 39

1 Comment 56 Shares



Katrīna Blate

9 hrs

Gribu noreklamēt brīnišķīgo Ogres optiku! Ne tikai bezgala laipna apkalpošana, bet arī iespēja uzpildīt briļļu tīrīšanas šķidrums par 30ml/1eur! Var nopirkt pilnu uzpildāmo flakoniņu pa 2.30, vai arī uzpildīt jau esošu.

👍 Kristīne Štikāne, Zane Gailite and 16 others

2 Comments



Like



Comment



Share



Ieva Lapina

23 hrs

Labvakar, varbūt kāds var padalīties, vai Latvijā kāds no kosmētikas ražotājiem piedāvā pārstrādāt vai atkārtoti uzpildīt iepakojumus? Domāju šeit vairāk bb krēmi, skropstu tuša, pūdera iepakojums utt.

👍 4

11 Comments



Like



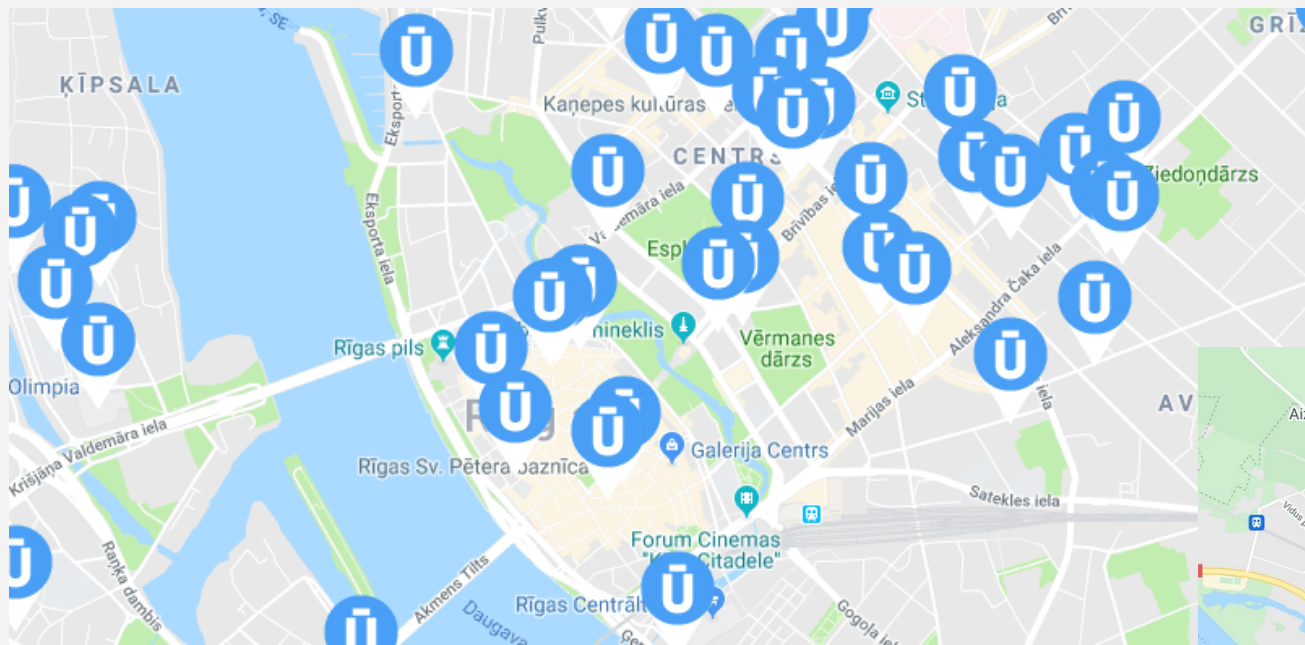
Comment



Share



FILL THE WATER FOR FREE



www.udensparbrivu.lv

Cooperation between stakeholders in Circular economy



Since 2022 the Ministry of **Environmental Protection and Regional Development** of the Republic of Latvia **together with its 21 partners** are implementing the European Union LIFE programme integrated project “Waste To Resources Latvia – boosting regional sustainability and circularity” (LIFE Waste To Resources IP).

Project was developed to help reduce waste generation, ensure more efficient waste management, and lower the amount of waste to be landfilled, while implementing the National Waste Management Plan 2021–2028.

<https://wastetoresources.varam.gov.lv>

3E values of Circular economy



Environmental



Economic



Emotional *sufficiency*



SYSTEMIC CHANGE

INDIVIDUAL LEVEL



COLLECTIVE LEVEL

Circular economy in the community, municipality, globally.



If water is flowing, first of all you need to fix the tap not to wipe the floor.

Co-funded by the
Erasmus+ Programme
of the European Union



SIMPLICITY
awareness about the life

Thank you

Santa Krastina santa.krastina@gmail.com

