



Examples	Barriers / risks	Opportunities

EFFICIENCY

EFFICIENCY

Since 1970, the human population has doubled. We use the planet's resources to live. However, we often use them inefficiently.

The solution

Efficiency is a common sustainability action. It means making the same with fewer resources. Examples are energy-efficient (less energy) or fuel-efficient (less fuel). Efficiency can often save money.

Start with an Efficiency question.

NET ZERO

NET ZERO

Greenhouse gases cause climate change. If we don't act, Earth could be 5°C warmer by 2100. This would be very bad because 5°C colder caused an ice age.

The solution

We can slow climate change by releasing fewer greenhouse gases. If we take out as much as we put into the atmosphere, we reach net zero emissions. Earth is already +1.2°C warmer. We need to stop new emissions and take old ones from the atmosphere.

Sources: IPCC (2021). Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change; University of Oxford (n.d.) What is net zero?.

CIRCULARITY

CIRCULARITY

A third of food is thrown away. 60% of fast fashion goes to the bin after one year. We waste a lot of resources.

The solution

When a leaf falls to the ground, it breaks down and feeds other plants. In a circular economy, we also circle resources and keep their value. Businesses can promote circularity through R-strategies, such as Reduce, Reuse, or Recycle.

Sources: Ellen MacArthur Foundation, SUN, McKinsey & Co. (2015). Growth Within: a circular economy vision for a competitive Europe.; McKinsey & Company (2016). Style that's sustainable: A new fast fashion formula.

SUFFICIENCY

SUFFICIENCY

If everyone lived like a U.S. citizen, we would need 5 planets. But the average Indian lifestyle only uses 0.8. While many live in poverty, others consume too much.

The solution

Sufficiency means a good life for all with the resources we have. We use more than Earth can renew, so we need to consume less and distribute more fairly. Business can offer sustainable options and focus on what people really need.

REGENERATION

REGENERATION

Since 1970, we lost 70% of our wildlife populations. In Europe, air pollution kills over 1,200 children every year. We damage nature and suffer ourselves.

The solution

Companies and humans are part of nature and need a healthy planet. Regenerative business has products and services that do not only make things less bad but make them better for people and nature.

Sources: European Environment Agency (24.04.2023). Air pollution and children's health.; Konietzko, J., Das, A., & Bocken, N. (2023). Towards regenerative business models: A necessary shift?. Sustainable Production and Consumption.; WWF, 2022. In: Almond, R.E.A., Grooten, M., Juffe Bignoli, D., Petersen, T. (Eds.), Living Planet Report 2022 – Building a Nature-Positive Society. WWF, Gland, Switzerland.

FLOURISHING

FLOURISHING

You followed the path to flourishing. Academic John Ehrenfeld said companies need to work for “the possibility that humans and other life will flourish on Earth forever”.

All levels you crossed are important for business action. While some might be easier, the more difficult changes often have the most important impact.

How will you work towards flourishing?

Efficiency

**I buy a fuel-efficient car
but then I drive more and
use more fuel. This is a...?**

- a) Bounce back**
- b) Rebound**
- c) Retrace**

b) Rebound

**With a rebound, more efficiency
leads to more resource use. A fuel-
efficient car needs less fuel, so it is
cheaper and often used more.**

**Source: Greening, L. A., Greene, D. L., & Difiglio, C.
(2000). Energy efficiency and consumption—the
rebound effect—a survey. Energy Policy, 28(6-7),
389-401.**

Efficiency

Where does German company “Ecoworks” add insulation to houses?

- a) Inside the walls**
- b) Outside the walls**
- c) Above the house**

b) Outside the walls

They fit insulation panels onto the outside of old houses. This makes retrofitting easier and saves energy.

Source: ecoworks (n.d.).

Efficiency

**The energy-efficient
Eastgate building in
Zimbabwe is inspired by...?**

- a) Termite hills**
- b) Fish eggs**
- c) Eagle nests**

a) Termite hills

**The building is cooled through
natural ventilation tunnels instead of
air-conditioning.**

**Source: Arup (n.d.). How nature can inspire us to
create more resilient buildings.**

Efficiency

US business “General Electric” saves energy and water with staff...

- a) Picnics**
- b) Role plays**
- c) Treasure hunts**

c) Treasure hunts

GE has hosted well over 200. At the hunt, staff with different backgrounds look at processes and find areas for savings.

Source: United States Environmental Protection Agency (n.d.). GE & Universal Studios Hollywood – The Treasure Hunt Model.

Efficiency

Is this statement true or false?

In 2019, more people globally were employed in the gas sector than in making buildings efficient (retrofits & heat pumps).

False.

Energy efficiency in buildings is more labour-intensive than gas, with over 4 million people worldwide working on it.

Source: IEA (2022). World Energy Employment. IEA, Paris.

Efficiency

In 2017, how many fridges sold in the EU were labelled A+ or higher for energy-efficiency?

- a) 60%**
- b) 90%**
- c) 100%**

b) 90%

European customers prefer energy-efficient products, so businesses are updating their product offer.

Source: European Commission (n.d.). About the energy label and ecodesign.

Efficiency

Which animal inspired a “Lufthansa” plane coating for more efficient flying?

- a) Falcon**
- b) Cheetah**
- c) Shark**

c) Shark

Lufthansa and BASF developed a coating called Aeroshark that imitates shark skin and decreases drag. This saves fuel.

Source: Lufthansa Technik (n.d.). Aeroshark.

Efficiency

In 2022, most energy conservation projects at “IBM” focused on...?

- a) IT servers**
- b) Heating**
- c) Lights**

a) IT servers

IBM realised over 500 conservation projects, saving \$9.5 million. 64% of these savings came from server efficiency.

Source: IBM (2023). IBM 2022 ESG Report.

Efficiency

If we talk about efficient cars, what do we mean?

- a) Time efficient**
- b) Water efficient**
- c) Fuel efficient**

c) Fuel efficient

Efficient cars need less fuel for the same distance. Engines now are more efficient but cars are built bigger and need more fuel.

Source: Hu, K., & Chen, Y. (2016). Technological growth of fuel efficiency in European automobile market 1975–2015. Energy Policy, 98, 142–148.

Efficiency

Is this statement true or false?

New “Samsung” washing machines save energy by turning laundry soap into bubbles.

True.

Some Samsung washing machines turn soap into bubbles, so it is absorbed quicker and the machine uses less energy.

Source: Samsung (26.07.2022). Samsung announces global launch of bespoke AI washer and dryer delivering smart and sustainable solutions for laundry day.

Efficiency

Is this statement true or false?

UK company

“Measurable.energy” turns off electronics in people’s homes.

True.

The company sells smart sockets that monitor devices and turn them off if they are not needed.

Source: measurable.energy (n.d.).

Efficiency

Toyota's manufacturing system is known as...?

- a) Clean**
- b) Mean**
- c) Lean**

c) Lean

Toyota relies on only making what is needed, when it is needed. Their production is known for its high efficiency.

Source: Toyota (n.d.). Toyota Production System.

Net zero

**Insurance firm “Swiss Re”
works towards net zero
by...?**

- a) Refusing insurance for
new oil fields**
- b) Reducing flights**
- c) Insuring trees**

**a) Refusing insurance for new oil
fields**

**The business stopped insurance
cover and investment in new oil and
gas projects in 2023.**

**Source: Swiss Re (12.10.2023). New underwriting
targets supporting Swiss Re's journey to net zero.**

Net zero

How does U.S. store “7-Eleven” support sustainable mobility?

- a) Electric car charging network**
- b) No petrol sold at its gas stations**
- c) Deliveries by bike**

a) Electric car charging network

In 2023, 7-Eleven said that it would add charging points to many stores, powered with 100% green electricity.

Source: Gorzelany, J. (20.03.23). Why Charging An Electric Car Will Soon Come With A Slurpee. Forbes.

Net zero

All planned (but not yet built) carbon capture and storage projects can store 0.2% of...?

- a) All emissions ever**
 - b) Emissions from 10 years**
 - c) Emissions from 1 year**
-
- c) Emissions from 1 year**

Many want to capture and store carbon to stop climate change, but technologies are still inadequate.

Source: Honegger, M. (2023). Toward the effective and fair funding of CO₂ removal technologies. Nat Commun 14, 534.

Net zero

Is this statement true or false?

Car manufacturer “Audi” wants to only produce electric cars by 2035.

True.

Audi plans to stop making non-electric cars in 2033, moving to only electric cars.

Source: Audi (25.08.21). “Vorsprung 2030”: Audi accelerating transformation.

Net zero

**How does business “4401”
from Oman store carbon
emissions?**

- a) Plant trees in the
desert**
- b) Turn CO₂ into a mineral**
- c) Pump CO₂ into the
ocean**

b) Turn CO₂ into a mineral

**The company pumps CO₂
underground into the mineral
perodite that reacts with it and turns
it into a new mineral.**

Source: 4401 (n.d.).

Net zero

Is this statement true or false?

The Dutch government wants 50% of new renewable energy plants to be owned by local communities and businesses.

True.

To make the energy transition equal, locals should be able to co-own renewable infrastructure like wind turbines.

Source: Government of the Netherlands (2019). Climate Agreement.

Net zero

Around two-thirds of the climate footprint of “Unilever” products comes from...?

- a) Production**
- b) Transport**
- c) Consumer use**

c) Consumer use

Most emissions come from use, such as doing laundry with Unilever soap. The firm wants to halve those scope 3 emissions by 2030.

Source: Unilever (n.d.). Reducing emissions from the use of our products

Net zero

**British band Coldplay
partnered with “DHL” to
reduce their world tour...?**

- a) Waste**
- b) Emissions**
- c) Travel times**

b) Emissions

Their 2022 World Tour produced 47% fewer CO₂ emissions than previous ones. DHL helped with low-carbon logistics.

Source: Coldplay (02.06.2023). Emissions Update.

Net zero

Some farmers protect their crops and create extra income with...?

- a) Solar panels**
- b) Small nuclear plants**
- c) Windmills**

a) Solar panels

These panels create extra income and shield crops from the sun and extreme weather, like hail.

Source: Petroni, A. (24.04.23). The Italian farmers saving an ancient fruit with solar power. BBC.

Net zero

Is this statement true or false?

There is only one greenhouse gas that needs to be reduced to stop climate change.

False.

Greenhouse gases trap heat that would go into space and send it back to Earth. One gas is CO₂, but there are others, such as methane.

Source: IPCC (2013). Climate Change 2013: The Physical Science Basis. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Net zero

What is usually not considered renewable energy?

- a) Solar energy**
- b) Nuclear energy**
- c) Geothermal energy**

b) Nuclear energy

It produces few emissions but the material for nuclear energy (usually uranium) is not renewable.

Source: IEA (2019). Nuclear Power in a Clean Energy System. IEA, Paris.

Net zero

67% of Americans think business action on climate change is...?

- a) Too much**
- b) Enough**
- c) Not enough**

c) Not enough

67% thought business was doing too little. 21% thought it was enough and 10% it was too much.

Source: Pew Research Centre (18.04.2023). What the data says about Americans' views of climate change.

Net zero

Who threatened to leave the European car manufacturing lobby over climate issues?

- a) Volvo**
- b) Mercedes-Benz**
- c) Renault**

a) Volvo

In 2022, Volvo wanted to leave the lobby group because its own net-zero ambitions were stronger than the group's.

Source: Carey, N. (08.07.2022). Volvo Cars to leave ACEA car lobby group over climate goals. Reuters.

Net zero

Is this statement true or false?

Heat pumps cannot replace any fossil fuel burners in industry.

False.

Heat pumps can heat up to 160°C and could be used in industries such as paper or chemicals.

Source: IEA (2022). The Future of Heat Pumps. IEA, Paris.

Net zero

Is this statement true or false?

Artificial intelligence is entirely positive for sustainability.

False.

AI programmes can improve efficiency but training a standard AI model has the same carbon footprint as 300 cross-US flights.

Source: AlAnsari, M. (01.04.2021). 4 steps to using AI in an environmentally responsible way. World Economic Forum.

Net zero

**Energy provider “SSE”
helps a just transition to a
green economy by...?**

- a) Donating 50% of profits**
- b) Reskilling employees**
- c) Building soup kitchens**

b) Reskilling employees

**Moving away from fossil fuels means
job losses. At SSE, one in five green
job employees used to work in oil or
gas.**

**Source: SSE (04.20.2021). One in five have swapped
high carbon jobs for low carbon careers says SSE.**

Net zero

**Furniture chain “IKEA”
wants to reach...?**

- a) Less than net zero**
- b) Net zero**
- c) More than net zero**

c) More than net zero

IKEA wants to go further than net zero, reducing more emissions than it causes. It plans to do that without carbon offsets.

Source: IKEA (n.d.). Becoming climate positive.

Net zero

Is this statement true or false?

A carbon offset that avoids cutting down trees is helpful to reduce CO₂ in the atmosphere.

False.

Paying foresters to not cut down trees is good for nature. But existing trees only absorb little CO₂.

Source: Boyd, P.W., Bach, L., Holden, R. & Turney, C. (29.08.2023). Carbon offsets aren't helping the planet – four ways to fix them. Nature.

Net zero

Is this statement true or false?

Biofuels can be bad for the environment.

True.

While they can be a sustainable alternative to fossil fuels, biofuels can be bad for biodiversity and compete with food production.

Source: Fairley, P. (2022). How to rescue biofuels from a sustainable dead end. *Nature*, 611(7936), 15-17.

Circularity

“BOSCH” makes its washing machines affordable to low-income households by...?

- a) Renting them out**
- b) Reducing the quality**
- c) Using recycled water**

a) Renting them out

In a project in Belgium, Bosch works with a social enterprise to rent out its machines at low prices.

Source: Bosch (n.d.). Circular Economy Meets Social Commitment – The Papillon Project.

Circularity

**How much of a “BMW”
vehicle is made from
recycled materials?**

- a) 10%**
- b) 30%**
- c) 50%**

b) 30%

BMW used around 30% recycled and reused materials in 2023 and aims for 50%.

Source: BMW (n.d.). Circular economy: sustainable into year 2040.

Circularity

**German business “RECUP”
reduces packaging waste
with...?**

- a) Recyclable cups**
- b) Biodegradable cups**
- c) Reusable cups**

c) Reusable cups

RECUP offers reusable packaging in a deposit system. Businesses add a charge on the packaging, so it is returned, cleaned and reused.

Source: RECUP (n.d.).

Circularity

What does Dutch business
“Philips” not refurbish and
resell...?

- a) X-ray machines
- b) Light bulbs
- c) Coffee machines

b) Light bulbs

To keep things in use, Philips
refurbishes many of its products.
These are cheaper but still covered
by guarantees.

Source: Philips (n.d.). Refurbished Editions.; Philips
(n.d.). Refurbished Medical Equipment.

Circularity

UK business “Sojo” helps repair clothing through their...?

- a) Video tutorials**
- b) Repair ‘delivery’ service**
- c) Free needles**

b) Repair ‘delivery’ service

Customers can book a repair through the Sojo app. The item is collected, repaired and brought back.

Source: Sojo (n.d.).

Circularity

Is this statement true or false?

The Netherlands is on track to having a fully circular economy by 2050.

False.

The country wants to be fully circular but a 2023 review showed it is not progressing enough.

**Source: Planbureau voor de Leefomgeving (2023).
Integrale Circulaire Economie Rapportage 2023.**

Circularity

What is the priority order of R-strategies?

- a) Reuse, Recycle, Reduce
- b) Recycle, Reduce, Reuse
- c) Reduce, Reuse, Recycle

c) Reduce, Reuse, Recycle

It is best to reduce inputs (e.g., energy, raw materials), then reuse, and only then recycle.

Source: Kirchherr, J., Reike, D., & Hekkert, M. P. (2017). Conceptualizing the Circular Economy: An Analysis of 114 Definitions. *SSRN Electronic Journal*, 127.

Circularity

In 2023, “Pringles” went circular by making...?

- a) Its packaging more recyclable**
- b) Its chips reusable**
- c) Its chips from waste**

a) Its packaging more recyclable

Pringles has started to replace the metal in its tube with paper for better recycling.

Source: Roesken, T. (03.05.2023). Pringle-bus verliest metalen bodem en kan straks bij oud papier.

Circularity

What does Dutch non-profit “The Ocean Cleanup” take out of the ocean?

- a) Plastic**
- b) Salt**
- c) CO₂**

a) Plastic

The Ocean Cleanup fights plastic pollution in oceans. It collects waste in the ocean and in rivers.

Source: The Ocean Cleanup (n.d.).

Circularity

What percentage of the world's material flows was circular in 2023?

- a) 7%**
- b) 22%**
- c) 58%**

a) 7%

Of all material used, only 7.2% circled back into the economy. This is less than in 2020 because we extracted more virgin resources.

Source: Circle Economy (2024). Circularity Gap Report 2024.

Circularity

Which is not yet a circular offer?

- a) Kitchen-as-a-service**
- b) Hair brush-as-a-service**
- c) Light-as-a-service**

b) Hair brush-as-a-service

Circular services mean that the product is rented out but the producer owns, repairs and replaces it.

Source: Circular X (n.d.). Cases.

Circularity

If one business uses another firm's by-products as raw material, that is...?

- a) Parasite cooperation**
- b) Work collaboration**
- c) Industrial symbiosis**

c) Industrial symbiosis

Firms use by-products and waste as new raw materials. For example, chemical companies can use water from paper mills.

Source: Neves, A., Godina, R., Azevedo, S. G., & Matias, J. C. (2020). A comprehensive review of industrial symbiosis. Journal of Cleaner Production, 247, 119113.

Circularity

Is this statement true or false?

All materials can be composted at the end of their use time.

False.

Biological materials can be composted, but non-biological ones (e.g., metals) cannot and should be used as long as possible.

Source: Ellen MacArthur Foundation (n.d.). The Butterfly Diagram.

Circularity

Is this statement true or false?

UK business “Team Repair” sends broken toys to children.

True.

Team Repair sends toy boxes to teach repair. Children fix the toys, play with them and send them back for the next child to repair.

Source: Team Repair (n.d.).

Circularity

**Who upcycles waste in
Argentinian social
enterprise “Daravi”?**

- a) Children**
- b) Businessmen**
- c) Local women**

c) Local women

Daravi uses waste material, like fabric, to make new items. They prioritize women to give them work.

Source: Daravi (n.d.).

Circularity

South African business “WeFix” repairs and refurbishes...?

- a) iPhones
- b) Tesla cars
- c) Barbie dolls

a) iPhones

WeFix repairs and resells electronics, including iPhones. Since 2006, they resold over 1 million devices.

Source: WeFix (n.d.).

Circularity

Company “Algramo” from Chile has vending machines that sell...?

- a) Oranges**
- b) Packaging-free items**
- c) Recycled water**

b) Packaging-free items

Algramo sells ‘by the gram’. People bring their reusable boxes and the machine fills them with the exact amount needed.

Source: Algramo (n.d.).

Circularity

Houses in Dutch business area “Park 20|20” were built to be...?

- a) Taken apart easily**
- b) Composted**
- c) Flooded by the sea**

a) Taken apart easily

Park 20|20 buildings can easily be taken apart, so that parts can be reused.

Source: Park 20|20 (n.d.).

Circularity

Is this statement true or false?

U.S. firm “Caterpillar” has offered refurbished construction equipment for over 50 years.

True.

Caterpillar’s remanufacturing (Cat Reman) was set up in 1973, refurbishing and reselling equipment.

Source: CAT (n.d.). CAT Reman.

Circularity

2.0

**What does Danish company
“NORNORM” offer?**

- a) Office workspace-as-a-service**
- b) Shoes-as-a-service**
- c) Pets-as-a-service**

a) Office workspace-as-a-service

NORNORM offers a subscription for office furniture and lighting. The items are made for long life and easy repair.

Source: NORNORM (n.d.).

Sufficiency

What did Swedish business “ASKET” write on a house wall in Stockholm in 2019?

- a) F*ck fast fashion**
- b) Burn capitalism**
- c) Stop buying sh*t**

a) F*ck fast fashion

Their campaign pointed to the bad labour conditions and negative environmental impacts of fast fashion.

Source: NORORM (n.d.).

Sufficiency

How does Australian brand Citizen Wolf celebrate “Black Friday”?

- a) Offer discounts**
- b) Sell black t-shirts**
- c) Dye clothing black**

c) Dye clothing black

Citizen Wolf runs the Black Fridye campaign: people send in clothing for over dyeing. Refreshed, it can be worn for longer.

Source: Black Fridye (n.d.).

Sufficiency

What is a vision of meeting social needs within planetary boundaries?

- a) Doughnut Economics**
- b) Croissant Economics**
- c) Baguette Economics**

a) Doughnut Economics

Such an economy creates wellbeing within ecological limits. As an image, it looks like a doughnut.

Source: Raworth, K. (2017). Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist. Random House Business Books.

Sufficiency

**How does French
“Commown” encourage
people to keep their
phone?**

- a) Lower price if it is kept long**
- b) Discounted repairs**
- c) Reminder emails**

a) Lower price if it is kept long

The cooperative rents out electronics. The longer the user keeps the phone, the lower the rental fee.

Source: Commown (n.d.).

Sufficiency

As part of its “Future Foods” strategy, “Unilever” wants plant-based food to be...

- a) The tough choice**
- b) The easy choice**
- c) Mandatory**

b) The easy choice

It wants meat and dairy alternatives to be accessible, affordable and appetizing, so it is developing alternative products.

Source: Unilever (n.d.). The world's food system needs to change.

Sufficiency

Is this statement true or false?

**Australian business
“Solidteknics” covers its
cookware with a multi-
century warranty.**

True.

It sells high quality products that are durable and meant to last for generations.

Source: Solidteknics (n.d.).

Sufficiency

Is this statement true or false?

In the Netherlands, several city councils voted to ban advertisement for flights.

True.

They banned fossil-fuel advertisements because they are seen as bad for society, like cigarettes.

Source: RTVUtrecht (21.12.2022). Reclame voor vliegvakanties en benzine verboden in Amersfoort.

Sufficiency

Is this statement true or false?

Dutch airline “KLM” tells customers to take the train instead of flying.

True.

KLM runs its Fly Responsibly campaign since 2019 to tell customers about sustainable travel options.

Source: KLM (n.d.). Fly Responsibly.

Sufficiency

Which US outdoor clothing company boycotts Black Friday sales?

- a) Patagonia**
- b) REI**
- c) Both**

c) Both

To raise awareness of overconsumption, Patagonia and REI both boycott Black Friday sales.

Source: Reich, B. J. & Armstrong Soule, C. A. 2016. Green Demarketing in Advertisements: Comparing “Buy Green” and “Buy Less” Appeals in Product and Institutional Advertising Contexts. *Journal of Advertising*, 45, 441-458.

Sufficiency

Every 5.5 days, the average US customer buys a new item of...?

- a) Electronics**
- b) Clothing**
- c) Furniture**

b) Clothing

An average US customer buys over 60 new clothes a year. That would mean a new item every 5.5 days.

Source: Niinimaeki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T. & Gwilt, A. 2020. The 979 environmental price of fast fashion. Nature Reviews Earth & Environment, 1, 189-200.

Sufficiency

Is this statement true or false?

British furniture company “Vitsø” trains its staff to sell as much as possible.

False.

Vitsø wants customers to only buy what they need. Staff are trained to sell as little as possible.

Source: Bocken, N., & Short, S. W. (2016). Towards a sufficiency-driven business model: Experiences and opportunities. Environmental Innovation and Societal Transitions, 18, 41-61.

Sufficiency

Is this statement true or false?

Most people in the Netherlands are happy to give up dairy products for sustainability.

False.

In a survey, most do not want to consume less dairy but over 50% are happy to live smaller and to buy less.

**Source: Planbureau voor de Leefomgeving (2023).
Hoe 'circulair' zijn Nederlandse consumenten?**

Sufficiency

Is this statement true or false?

French clothing company “Early Majority” increases its income without selling more products.

True.

It wants to only sell clothing that people need. To ensure income, it offers a subscription with additional services.

Source: Early Majority (n.d.).

Sufficiency

What did US brand “Levi’s” say in its advertising?

- a) Buy More, Wear Little**
- b) Buy Less, Wear Little**
- c) Buy Better, Wear Longer**

c) Buy Better, Wear Longer

Levi’s ran the campaign in 2021 and 2022. It promoted buying high-quality clothing to keep for a long time.

Source: Levi Strauss & Co. (21.09.2022). Levi’s launches Buy better, wear longer 2.0.

Sufficiency

In 2019, German supermarket “BIO COMPANY” told customers to buy...?

- a) Only German products**
- b) Less**
- c) Out-of-date food**

b) Less

BIO COMPANY sells sustainable products. Their ‘Buy Less’ campaign promoted only buying what you need to avoid food waste.

Source: BIO COMPANY (n.d.). Über uns – Geschichte.

Sufficiency

Is this statement true or false?

Dutch business “Fairphone” makes modular phones so users can change the style a lot.

False.

Fairphone electronics have modular parts to make repair easy. This keeps the items in use for longer.

Source: Fairphone (n.d.).

Sufficiency

Swedish business “Nudie Jeans” promotes repair at home through...?

- a) Home visits**
- b) An AI repair coach**
- c) Free repair kits**

c) Free repair kits

They send them to their customers. Customers can also bring their Nudie jeans to a repair point in store.

Sufficiency

Is this statement true or false?

German architect firm “werk.um” wants to build as much new as possible.

False.

Werk.um designs sustainable buildings but it focuses on reusing existing buildings.

Source: Werk.um (n.d.).

Sufficiency

**In 2014, “T-Mobile Austria”
ran a campaign
promoting...?**

- a) Durable phones**
- b) Repairable phones**
- c) Getting a new phone
every year**

c) Getting a new phone every year

**The firm offered yearly upgrades.
Those ads promoted unsustainably
fast upgrades and made users think
that was normal.**

**Source: Wieser, H. (2016). Beyond planned
obsolescence product lifespans and the challenges
to a circular economy. Gaia-Ecol. Perspect. Sci. Soc.
25, 156–160.**

Sufficiency

Which of these is a clear business sufficiency action?

- a) Stopping discounts**
- b) Installing solar panels**
- c) Recyclable packaging**

a) Stopping discounts

Sufficiency means consuming fewer resources. This means reducing production and consumption, also of packaging material.

Source: Niessen, L., & Bocken, N. M. P. (2021). How can businesses drive sufficiency? The business for sufficiency framework. Sustainable Production and Consumption, 28, 1090-1103.

Sufficiency

Is this statement true or false?

Chinese brand “Erdos 1980” offers a service to shrink sweaters.

True.

Parents can send in their favourite sweater to be changed to fit their children.

Source: Erdos 1980 (n.d.). Erdos way.

Sufficiency

Indonesian business

“Green Rebel” offers...?

- a) Palm oil cookies**
- b) Organic coffee**
- c) Vegan steak**

c) Vegan steak

It offers vegan meat and dairy alternatives in Indonesia and other Southeast-Asian countries.

Source: Green Rebel (n.d.). Our Story.

Sufficiency

40% of timeless fashion firm “Eileen Fisher” is owned by...?

- a) The founder**
- b) The employees**
- c) Investors**

b) The employees

Eileen Fisher produces durable clothing. In 2006, Fisher decided to give 40% of the shares to employees.

Source: Eileen Fisher (n.d.). Brand Overview.

Regeneration

**US company “Guayakí”
sells its drinks to promote
“market-driven...”?**

- a) Charity**
- b) Capitalism**
- c) Regeneration**

c) Regeneration

**Guayakí supports wildlife and local
indigenous communities with its
profits.**

**Source: Guayakí Yerba Mate (n.d.). 2022 Impact
Report.**

Regeneration

In 2022, the founder of “Patagonia” said their only stakeholder is...?

- a) The Market**
- b) Society**
- c) Earth**

c) Earth

He gave all ownership to a non-profit Collective and a Trust. Profits are now used for environmental and social causes.

Source: Chouinard, Y. (2022). Earth is now our only shareholder. Patagonia.

Regeneration

**German business “ClayTec”
cares about the
environment and human...**

- a) Health**
- b) Technology**
- c) Security**

a) Health

**Its construction products are made
from clay. Clay is low in emissions,
pollutant-free and prevents mold.**

Source: ClayTec (n.d.). Why clay.

Regeneration

**Organic clothing brand
“Harvest & Mill” ensures
good labour conditions
by...?**

- a) Producing only in the
US**
- b) Allowing long breaks**
- c) Using robots**

a) Producing only in the US

**In the US, it can legally ensure that
its workers’ contracts are met. This
is not possible in other countries.**

Source: Harvest & Mill (n.d.) Sustainability.

Regeneration

**How does Dutch business
“ReefSystems” restore
coral reef systems?**

- a) Feeding fish**
- b) Building artificial reefs**
- c) Planting corals**

b) Building artificial reefs

**It builds artificial reefs that animals
and plants can live in when their
coral reefs are damaged.**

Source: ReefSystems (n.d.). About us.

Regeneration

Every year, the world spends around US\$4 trillion on subsidies that...?

- a) Damage nature**
- b) Protect nature**
- c) Ignore nature**

a) Damage nature

Governments subsidize activities that harm nature, like deforestation or overfishing.

Source: Dasgupta, P. (2021). The economics of biodiversity: the Dasgupta review. HM Treasury.

Regeneration

**New Zealand sheep farm
“Lake Hawea Station”
offers its customers...?**

- a) Carbon negative wool**
- b) Vegan cheese**
- c) Recycled wool**

a) Carbon negative wool

It uses regenerative farming to store more carbon in the soil than it produces. This makes their wool carbon negative.

Source: Lake Hawea Station (n.d.). Carbon and biodiversity.

Regeneration

How much of global GDP is directly dependent on the services of nature?

- a) 25%**
- b) 40%**
- c) 55%**

c) 55%

A lot of GDP is dependent on healthy ecosystems. Examples are agriculture or water provision.

Source: Swiss Re Institute (2020). Biodiversity and Ecosystems Services Index: measuring the value of nature.

Regeneration

Which industry creates over 50% of the pressures on biodiversity?

- a) Mobility**
- b) Food**
- c) Fashion**

b) Food

It can threaten ecosystems through farming and fishing, changing land use and overexploiting.

Source: Kurth, T., Wübbels, G., Portafaix, A., Zielcke, S., Meyer Zum Felde, A., (2021). The Biodiversity Crisis Is a Business Crisis. Boston Consulting Group.

Regeneration

US company “Dean’s Beans” sells coffee grown in the shade because...?

- a) It tastes better**
- b) It gives habitat to wildlife**
- c) It is cheaper**

b) It gives habitat to wildlife

Shade-grown coffee is surrounded by other plants. These shelter animals and often grow fruits that farmers can eat.

Source: Dean’s Beans (n.d.). Our commitment to shade-grown coffee.

Regeneration

US company “True Pigments” helps its locals by...?

- a) Cleaning polluted rivers**
- b) Building houses**
- c) Training artists**

a) Cleaning polluted rivers

The social enterprise makes paints from coal mine pollution in rivers. The profits are used to clean the water.

Source: True Pigments (n.d.). About.

Regeneration

Where did nature not have legal rights in 2022?

- a) New Zealand**
- b) Sweden**
- c) Panama**

b) Sweden

Many countries give legal rights to nature areas like rivers. Firms which pollute there can then be legally prosecuted.

Source: Center for Democratic and Environmental Rights (2022). Rights of Nature Timeline.

Regeneration

If Google users switch to “Ecosia”, the search engine that plants trees, they can plant 300 billion trees....?

- a) Every year**
- b) Every 10 years**
- c) In 100 years**

a) Every year

Ecosia plants trees with its profits. It planted 40 million trees in 2021 and grows more with every search.

Source: Ecosia (2022). Regeneration Report.

Regeneration

A co-founder of “Burt’s Bees” sold 80% of her stakes to invest in...

- a) A new business**
- b) Bee hives**
- c) Woodland protection**

c) Woodland protection

She bought undeveloped land worth \$60 million and donated it to the US National Park Service for protection.

Source: Burt’s Bees (n.d.). Roxanne’s bees: our co-founder’s story.

Regeneration

Is this statement true or false?

“Ingka Group”, the largest IKEA retailer, has bought forests across the globe to protect them.

False.

Ingka says it will manage the forest sustainably but it actively cuts down trees to sell on the market.

Source: Ingka Group (03.05.2022) Sustainable Forestry: An Investment in the Future.

Regeneration

Mexican eco-hotel “Playa Viva” supports locals with...?

- a) Holiday vouchers**
- b) Permaculture training**
- c) Plant seeds**

b) Permaculture training

Playa Viva restores local forests and trains farmers in permaculture and organic agriculture.

Source: Playa Viva (n.d.). Reforestation.

Regeneration

**UK based company
“Notpla” offers packaging
that is...?**

- a) Not plants**
- b) Not plastic**
- c) Not plain**

b) Not plastic

**Notpla creates plastic-free
packaging from brown seaweed. It
can biodegrade in any environment.**

Source: Notpla (n.d.). Notpla Glossary.

Regeneration

What sustainable product does Ghana-based “Serendipalm” produce?

- a) Hand cream**
- b) Sugar**
- c) Palm oil**

c) Palm oil

Its production is often unsustainable but Serendipalm helps small farmers use agroforestry and organic farming.

Source: Serendipalm (n.d.). Sustainable & Regenerative Agriculture

Regeneration

Brazilian business

“Natura” says that without a living Amazon, there is no...?

- a) Profit**
- b) Future**
- c) Climate change**

b) Future

The cosmetics brand says its business depends on a healthy Amazon forest, so it contributes to conservation and research.

Source: Natura (12.02.2019). AMAZÔNIA VIVA.

Regeneration

South African business “I-Drop” offers customers safe access to...?

- a) Drinking water**
- b) New phones**
- c) Eye medication**

a) Drinking water

Their refill machines clean the water. Customers can bring their own bottle and refill at a local store in eight African countries.

Source: I-Drop (n.d.).



Journalists found out that you use misleading numbers. You say you resell 97% of products returned to you. But that only applies to half your product range. That's bad. Don't move and try again next round.

Inspiration: This was done by German clothing retailer Zalando in 2023.

Source: Materla, V., Maiwald, C. & Roedder, T. (28.02.2023). Greenwashing bei Zalando-Retouren. Tagesschau.



You want your products to last a long time, so you design them for easy repair. You also make repair guides and provide cheap spare parts. Well done! Move two fields forward.

Inspiration: Repair is supported by many businesses, such as outdoor company Vaude and audio equipment business AIAIAI.

Source: Niessen, L. (n.d.). Business for sufficiency database.



You want to network about sustainability, so you organize a conference. But to avoid travel emissions, you host it online. Nice one! Move one field forward.

Inspiration: Conference travel causes a lot of emissions. One participant can cause up to 1,5 tonnes of CO₂-equivalent per round-trip.

Source: Jäckle, S. (2022). The carbon footprint of travelling to international academic conferences and options to minimise it. Academic Flying and the Means of Communication, 19-52.



You could not sell all your products. To protect the brand and avoid discounting, you burn the stock, worth over €30 million. That's bad. Don't move and try again next round.

Inspiration: This was done by Burberry in 2018. They faced public backlash and promised to stop burning stock.

Source: BBC (19.07.2018). Burberry burns bags, clothes and perfume worth millions.



You get a subsidy to hire an adviser on decreasing your company's footprint. How lucky! Move one field forward and keep this card. At your next multiple choice question, you can ask another player for help.

Inspiration: The Dutch government gives money to small and medium-sized businesses to consult a sustainability expert.

Source: [Business.gov.nl](https://business.gov.nl) (n.d.). Subsidy scheme Improving Sustainability of SMEs (SVM).



You think your product is sustainable. You call it “natural” but do not give any evidence. This is misleading and can break consumer law. Oh no. Don’t move and try again next round.

Inspiration: In a global review, 40% of firms use misleading claims, such as vague words or leaving out information to look green.

Source: UK Government Competition and Markets Authority (28.01.2021). Global sweep finds 40% of firms’ green claims could be misleading.



You offset emissions in a reforestation scheme. But there is a wildfire and 'your' trees burn down, releasing further CO₂. Oh no. Don't move and try again next round.

Inspiration: In California, businesses can offset emissions through forest conservation. But wildfires have destroyed nearly 20% of this carbon storage in less than ten years.

Source: Badgley, G., Chay, F., Chegwiddden, O. S., Hamman, J. J., Freeman, J., & Cullenward, D. (2022). California's forest carbon offsets buffer pool is severely undercapitalized. *Frontiers in Forests and Global Change*, 5, 154.



Because of a water shortage, your city raises the price for water. But now the poorer locals cannot pay for it, so you share your water. Well done! Move one field forward.

Inspiration: In Cape Town, the richest 14% use more than half the water. In droughts, the city increases water prices but that affects the poor, not the rich.

Source: Savelli, E., Mazzoleni, M., Di Baldassarre, G., Cloke, H. & Rusca, M.. (2023). Urban water crises driven by elites' unsustainable consumption. Nature Sustainability.



You open a sustainable hotel at the Mexican coast. But the beaches are covered in seaweed that scares away tourists. Oh no. Don't move and try again next round.

Inspiration: Seaweed is normal in the Caribbean. But climate change and chemicals have made it grow faster. Now it scares off tourists.

Source: Garrison, C. (04.07.2022). Stinky seaweed threatens Mexico's post-pandemic tourism boom. Reuters.



Your airline buys fuel-efficient planes to reduce emissions. But more and more people want to fly, so you offer more flights and your emissions still go up. Oh no. Don't move and try again next round.

Inspiration: New planes are 20% more fuel-efficient than older ones. But more passengers in 2000-2019 outpaced these improvements.

Source: International Energy Agency (n.d.). Aviation.



The consumption of the world's rich causes most emissions. You decide to no longer sell luxury fashion and instead focus on essentials. Wow! Move two fields forward.

Inspiration: Since 1990, the consumption of the richest 10% caused 52% of emissions, while the poorest 50% only caused 7%.

Source: Kartha, S., Kemp-Benedict, E., Ghosh, E., Nazareth, A. and Gore, T. (2020). The Carbon Inequality Era: An assessment of the global distribution of consumption emissions among individuals from 1990 to 2015 and beyond. Joint Research Report. Stockholm Environment Institute and Oxfam International.



You want your business to help biodiversity but do not know where to start. So you team up with a local environmental NGO. Good idea! You and another player you choose can move one field forward.

Inspiration: Carpet manufacturer Interface worked with the Zoological Society of London to collect fishing nets from the ocean and turn them into carpet.

Source: Khoo, J. (2018). Interface: Net-works-lessons learnt turning nets into carpet. In Designing for the circular economy (pp. 326-335). Routledge.



You build wind turbines on your factory. To include your community, you give locals the option to co-own a turbine together with you. Nice! Move one field forward.

Inspiration: In the Netherlands, 50% of new renewable energy installations should be owned by local people and businesses.

Source: Government of the Netherlands (2019). Climate Agreement.



Together with employees, you plant trees at your factory. An area is set aside for biodiversity and volunteers manage it, so everyone can use it safely. Good! Move one field forward.

Inspiration: Urban green areas are great for wildlife and air quality but can be perceived as unsafe if not managed well.

Source: Hofmann, M., Westermann, J. R., Kowarik, I., & Van der Meer, E. (2012). Perceptions of parks and urban derelict land by landscape planners and residents. *Urban forestry & urban greening*, 11(3), 303-312.



You join the International Accord for Health and Safety in the Textile and Garment Industry. It binds you to contribute to safety and workers' health. Well done! Move two fields forward.

Inspiration: In 2013, the Rana Plaza factory collapse in Bangladesh killed 1,134 people. The International Accord was set up to increase factory safety.

Source: International Accord for Health and Safety in the Textile and Garment Industry (n.d.).



One of your main ingredients is olive oil. But the drought in Spain raises olive oil prices, so you struggle to pay for it, Oh no. Don't move and try again next round.

Inspiration: The drought increased prices globally by almost 60% from June 2022 to 2023. It affects the size and quality of the harvest.

Source: Financial Times (23.04.2023). No rain in Spain pushes olive oil prices to record levels.



Water in your area is scarce. Your company drills a borehole but so do others. You meet and decide on maximum extraction volumes together. Amazing! You and another player you choose can move one field forward.

Inspiration: Collaboration around water can be traced back as far as 5000 BC. Today, there are about 700 cross-border water agreements.

Source: Global Commission on the Economics of Water (2023). The What, Why and How of the World Water Crisis.



The world needs durable products! Together with other companies, you start a club that promotes sufficiency and longevity. Great! You and another player you choose can move one field forward.

Inspiration: In France, enterprises started a Durability Club to promote long-life products, repair and sufficiency.

Source: Club de la durabilité (n.d.).



While your team discusses sustainable products, your competitors already developed them. They have the first mover advantage. You do not move but the player left of you can move one field forward.

Inspiration: Beyond Meat is a first mover in the American meat substitute market and has left competitors behind.

Source: Choudhary, A. (2020). Sustaining a first mover advantage in a fast-growing meat substitute market. Rutgers Business Review, 5(3), 405-415.



The product you sell has a huge negative impact. You work with your competitors to make it sustainable. Amazing! All players in the game move one field forward.

Inspiration: The Roundtable on Sustainable Palm Oil wants to make palm oil production sustainable. Members include palm growers, processors and retailers.

Source: Roundtable on Sustainable Palm Oil. (n.d.).



You cover your product with coating to make it last longer. But new research shows that the coating contains chemicals that can cause cancer. Oh no. Don't move and try again next round.

Inspiration: PFAS chemicals are common in outdoor clothing. But they can damage health and some governments want to ban them.

Source: US EPA (n.d.). Our Current Understanding of the Human Health and Environmental Risks of PFAS.



Your business made you rich. But you worry about the social and environmental costs of inequality, so you join other millionaires and lobby to tax the rich. Wow! Move one field forward.

Inspiration: In 2023, 120 millionaires called on G20 leaders to raise taxes on the ultra-rich to reduce inequality.

Source: Tax Extreme Wealth (n.d.). Signatures.



You decide to give 30% of your business ownership to your employees. This can make your company more resilient and reduce inequality. Well done! Move one field forward.

Inspiration: In the US, the richest 10% own 90% of business wealth. Employee ownership tackles that and can benefit business.

Source: Dudley, T. & Rouen, E. (13.05.21). The Big Benefits of Employee Ownership. Harvard Business Review.



As an insurance provider, you decide to offer an extreme weather insurance for street vendors, so they can still receive income if they cannot work. Well done! Move one field forward.

Inspiration: This insurance protects workers in India where hot weather can make outdoor work impossible.

Source: Mahajan, S. & Millan, L. (19.06.23). An Indian City's Battle Against Extreme Heat. Bloomberg.



You run a small enterprise with a sustainable mission. You always pay your taxes. Now, you hear that your tax money goes to big polluters. Oh no. Don't move and try again next round.

Inspiration: Research from 2023 found the Dutch government pays over €37 billion to polluting industries in the form of tax cuts and reductions.

Source: SOMO (04.09.23). Nog meer belastinggeld naar grote vervuilers dan gedacht.



To combat heat, you finance a mini-forest in your city. This forest provides space for biodiversity and shade to people. Well done! Move one field forward.

Inspiration: Mini-forests are densely grown with native plants. Cities like Jordan's Amman plant them to fight heat.

Source: Taysser, M. & Millan, L. (30.08.2023). Fast-Growing Mini Forests Help Cool Down a Desert City. Bloomberg.



You want to show your support for climate action. Inspired by Fridays for Future strikes, you join a Business Queue for Climate & Nature to protest. Great! Move one field forward.

Inspiration: UK coalition Business Declares unites over 100 businesses to protest with the global climate strikes.

Source: Business Declares (n.d.).