

INSPIRATIONAL TALKS



BEL-EVENT
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INSPIRATIONAL TALKS

Janez Potocnik

*Co-Chair, UNEP IRP – United Nations
Environment Programme International
Resource Panel*





Circular Economy
*Towards a Sustainable Social
and Economic Model*

JANEZ POTOČNIK
Co-chair UNEP International Resource Panel (IRP)
Partner SYSTEMIQ

25th September 2019

Let's start the story in my home country Slovenia

Slavoj Žižek



“It is clear that we are approaching the ecological and digital apocalypse ... but we should not loose nerves.”

*“Everything under heaven is in **utter chaos**; the situation is excellent.”*

THE TASTE OF “UTTER CHAOS”

- *Population* growth (2050 – 9.7 billion)
- Few people own the same as the poorest half of the world and the richest 1% is more *wealthy* than the rest of the world
- We *throw away* one third of the *food* we produce
- *More than 50% of urban fabric* expected to exist by 2050 still needs to be constructed. 2011-13 *China* has used more *cement* than *USA* in 20th century
- *Climate change* experts warned us that emissions need to be about halved by 2030 to limit warming to 1.5°C
- *Biodiversity*: Living Planet Index – 60% fall in just 40 years. Biomass of the mammals living in the nature has been reduced in recent decades for 82%
- A million of *plastic* bottles are bought every minute (9% of plastic recycled, 12% incinerated, 79% landfills or environment). If drinking only *bottled water one* consumes 130,000 *plastic particles* per year from that source alone, compared to 4,000 from tap water
- We are the first generation more likely to die as a result of *lifestyle choices* than infectious disease



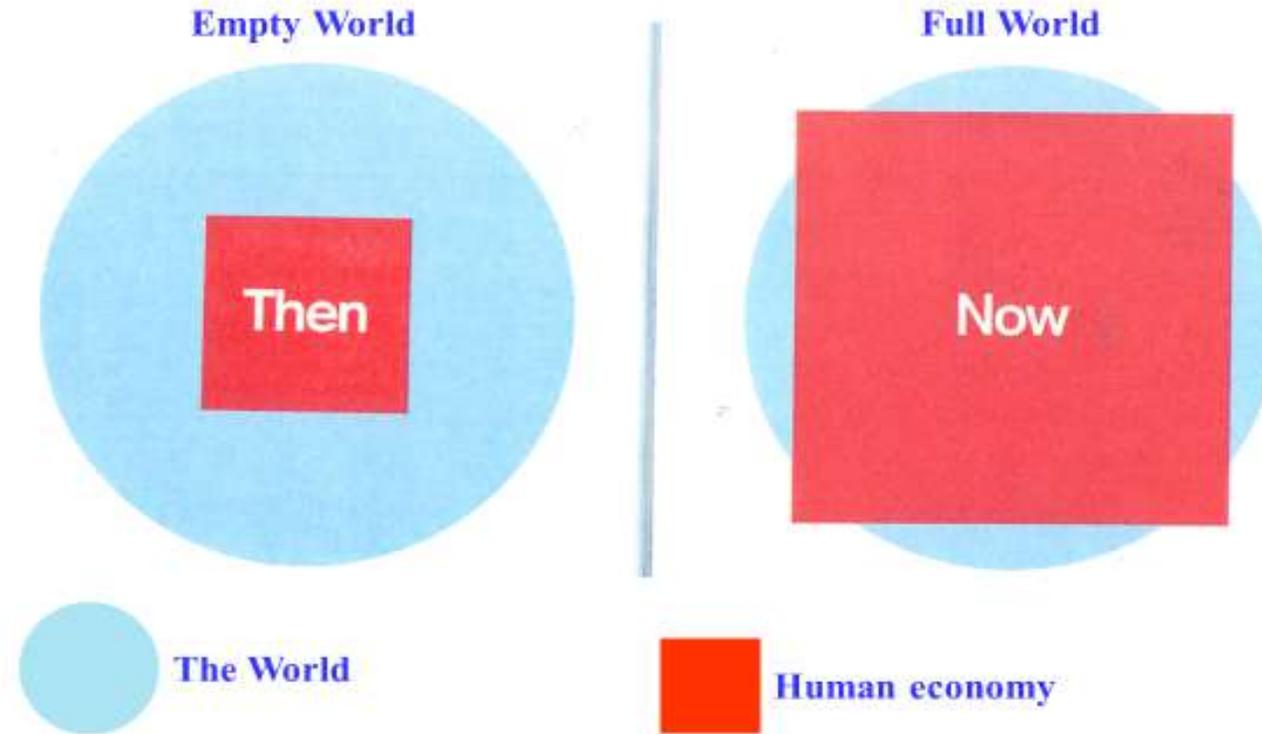


*For the first time in a human history we face the emergence of a single, tightly coupled human **social-ecological system of planetary scope.***

*We are more **interconnected** and **interdependent** than ever.*

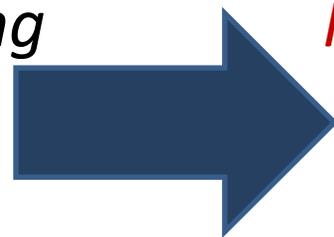
*Our individual and collective **responsibility** has enormously increased.*

Empty World and Full World

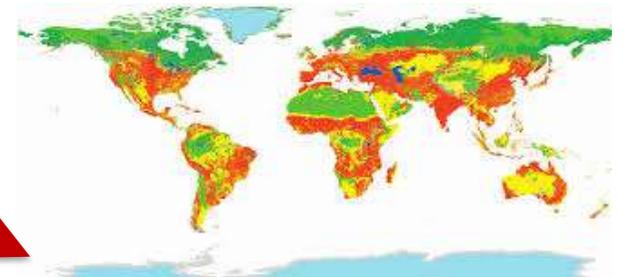
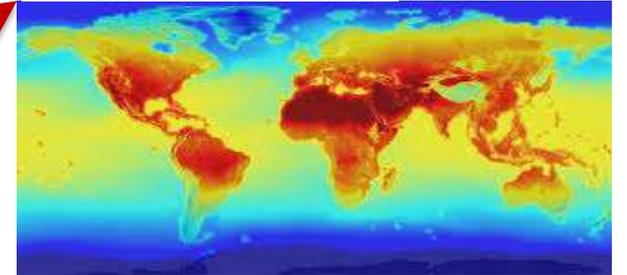
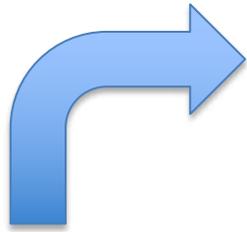


Source: Club of Rome: Simplified after Herman Daly

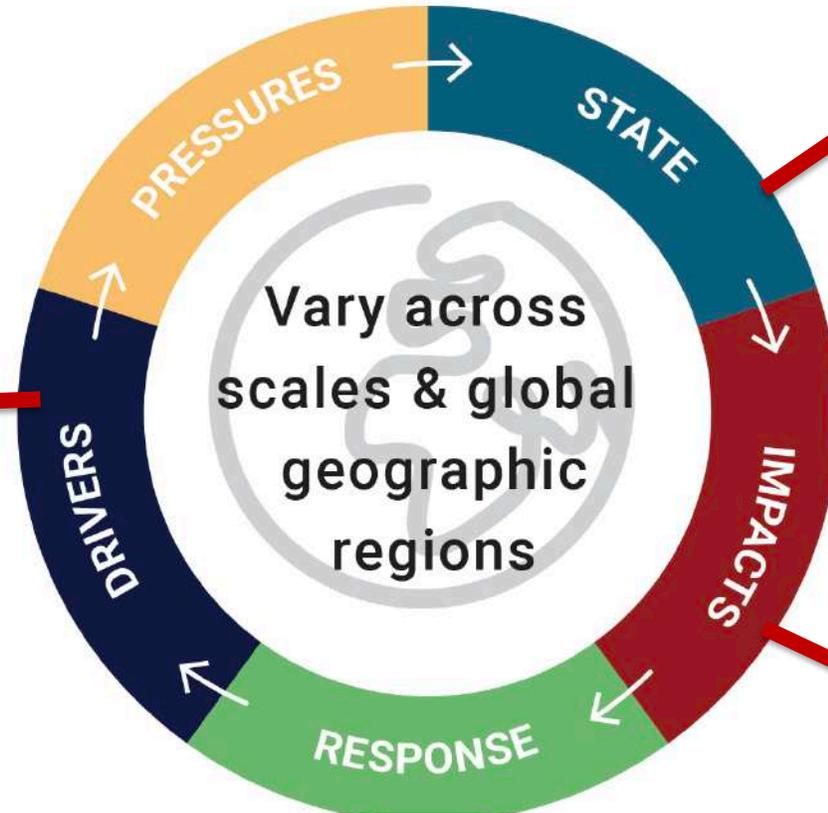
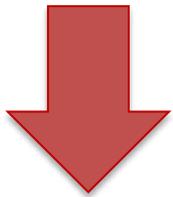
Labour and Infrastructure limiting factors of human wellbeing



Natural resources and Environmental sinks limiting factors of human wellbeing

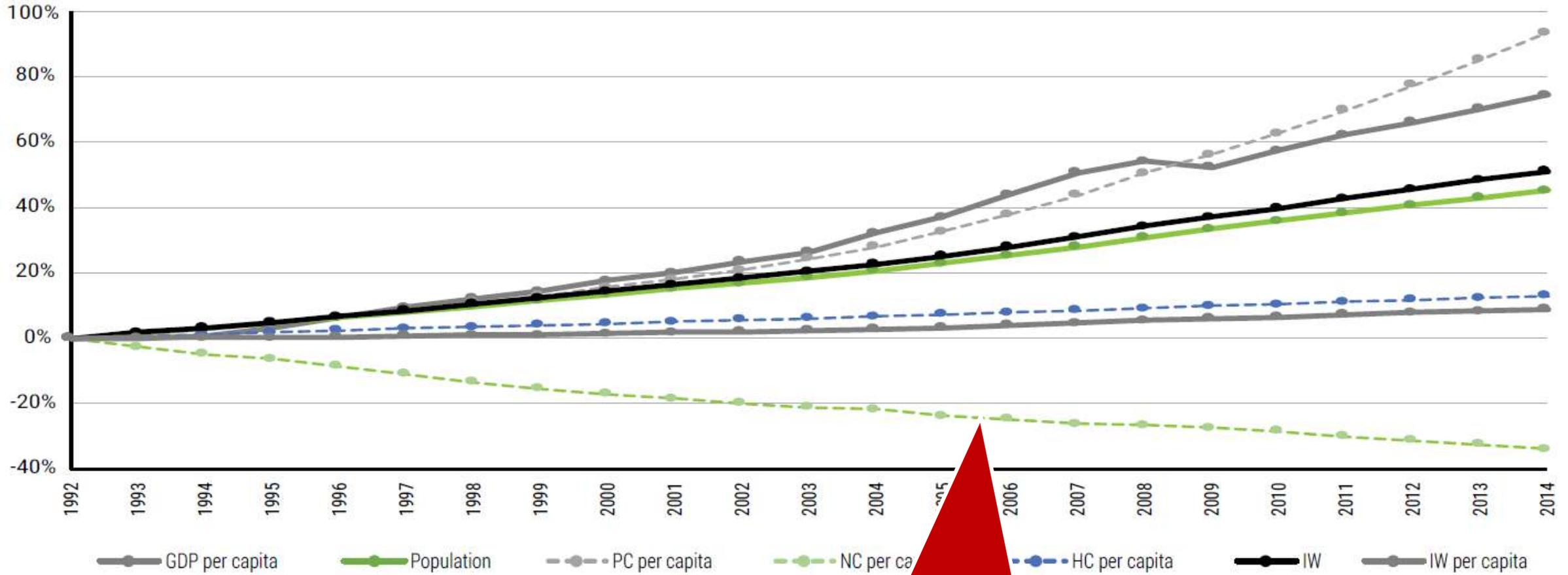


Our Economy



Inclusive Wealth (IW) Index (and its components) evolution - 1992 to 2014

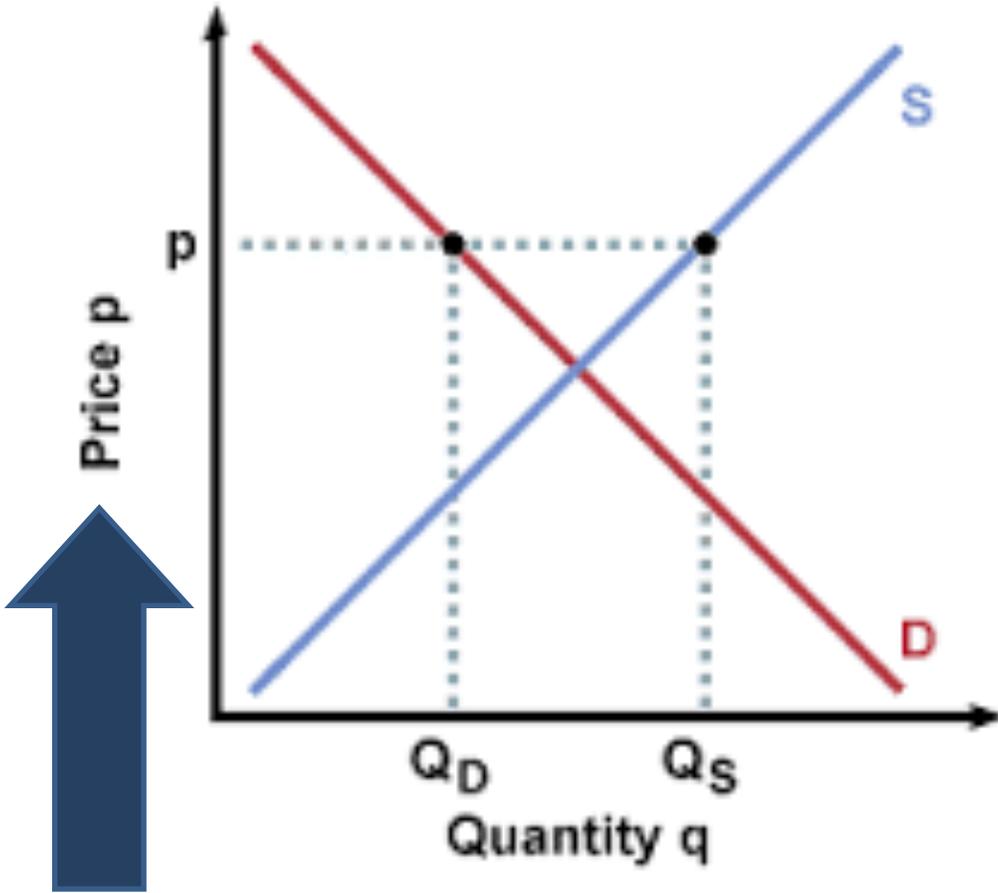
Source: UN, 2018 Inclusive Wealth Report 2018



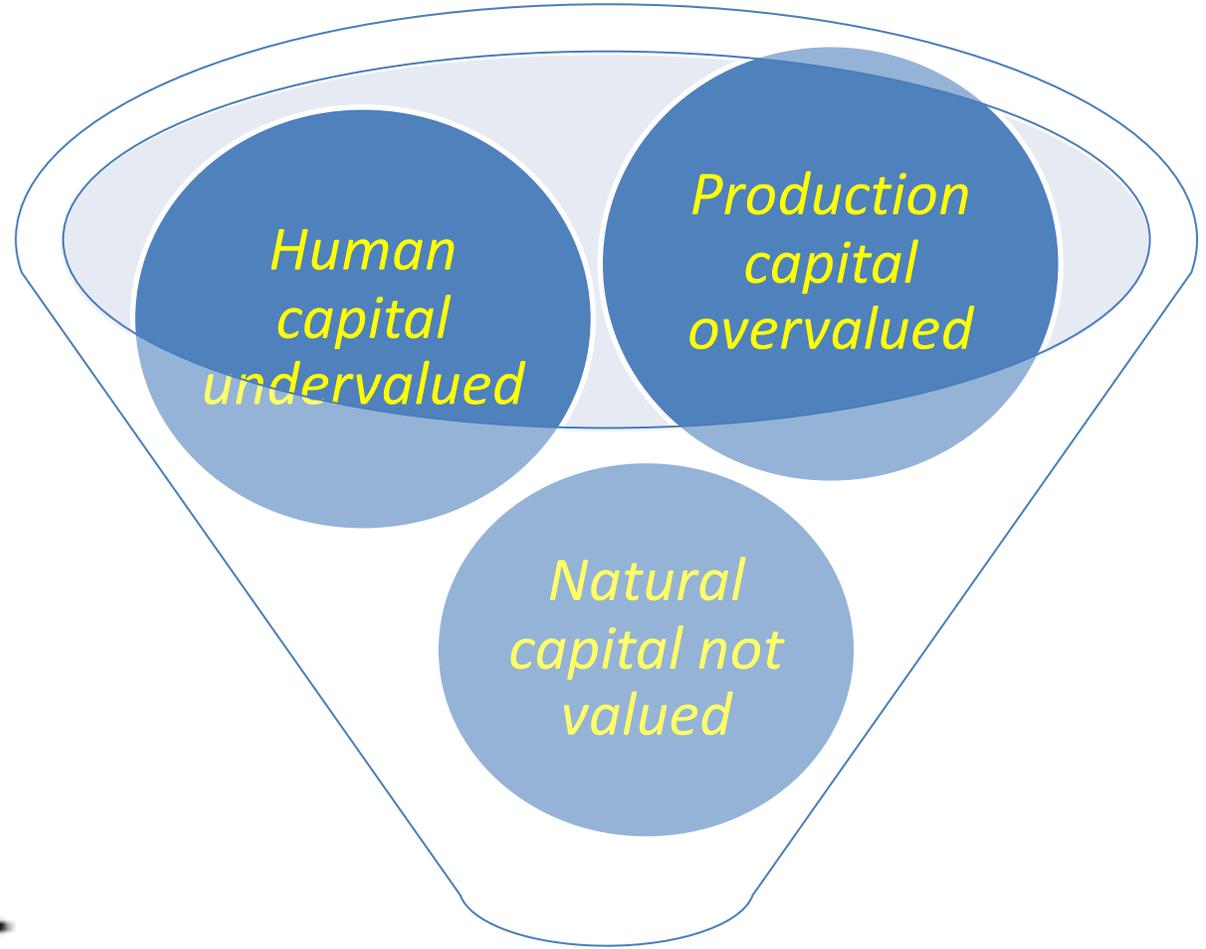
IW – Inclusive Wealth
PC – Production capital
HC – Human capital
NC – Natural capital

Growth of GDP in the past decades has been achieved at the cost of depleting natural capital

*Producers/Consumers
Rational Behaviour*



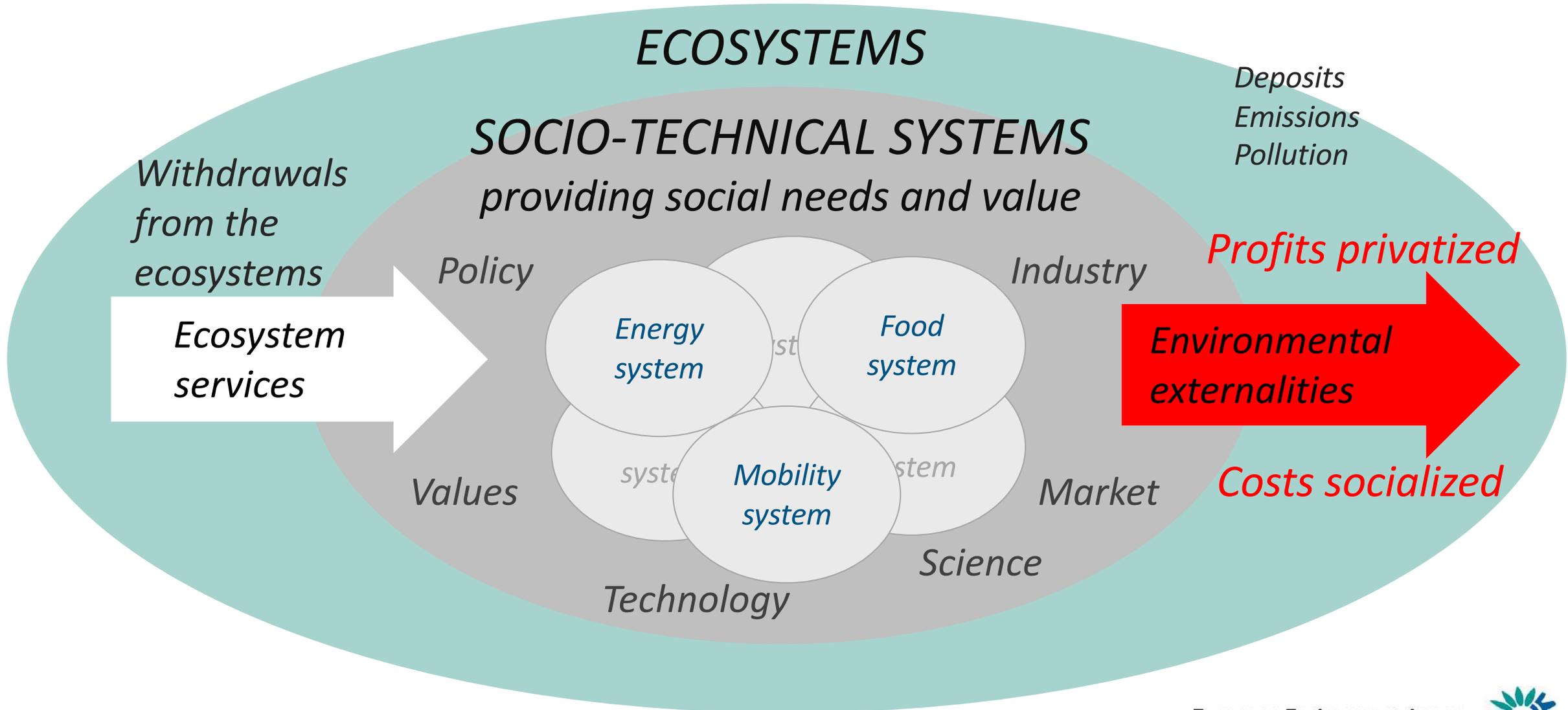
Market Economy



*Economic, social and
environmental (in)balance*

LIVING WELL WITHIN ECOLOGICAL LIMITS

ECONOMIC SYSTEM FUNCTION OF ECOSYSTEM



RESOURCES

THE MISSING LINK



International
Resource
Panel

SDGs DIRECTLY DEPENDENT ON NATURAL RESOURCES





International
Resource
Panel



*Trade-offs among various SDGs are unavoidable.
Sustainable Consumption and Production is the most
efficient strategy to mitigate trade-offs and create
synergies to resolve the development and environmental
challenges articulated in the SDGs.*



International
Resource
Panel

FOCUS ON SUSTAINABLE PRODUCTION AND CONSUMPTION



GLOBAL RESOURCES

OUTLOOK 2019

NATURAL RESOURCES FOR THE FUTURE WE WANT



UN
environment



International
Resource
Panel

UN
environment

*NATURAL RESOURCES FOR
THE FUTURE WE WANT*

Resources:

Provide the foundation for the goods, services and infrastructure that make up our current socio-economic systems



Biomass

Biomass (wood, crops, including food, fuel, feedstock and plant-based materials)



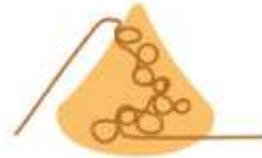
Fossil fuels

Fossil fuels (coal, gas and oil)



Metals

Metals (such as iron, aluminum and copper...)



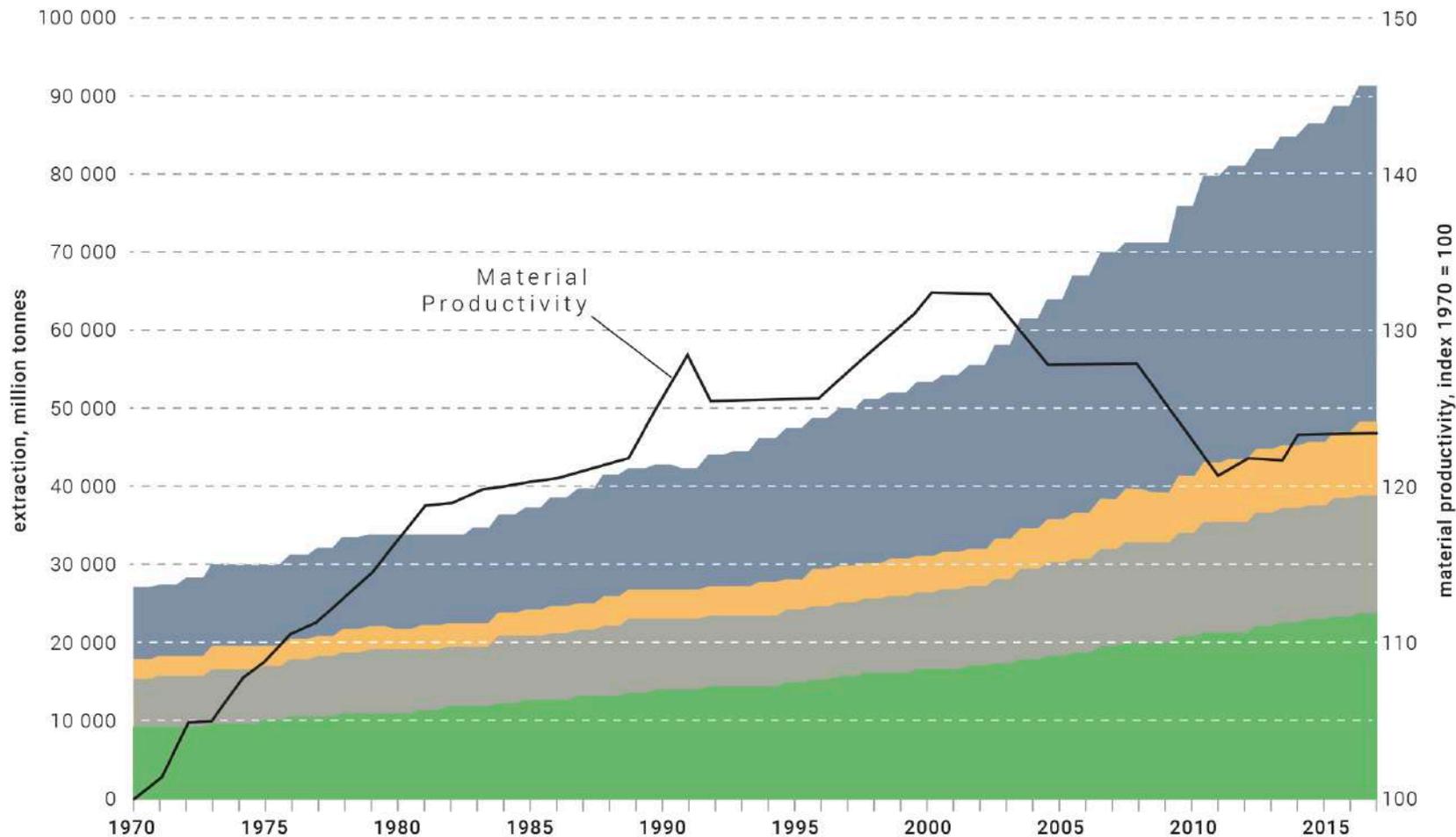
Non-metallic minerals

Non-metallic minerals (including sand, gravel and limestone)

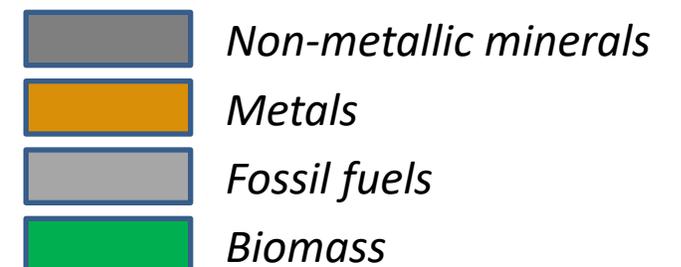
Per capita material footprint from High-Income Countries is 13x the level of the Low-Income Countries !!!

Relentless demand: Global resource use, Material demand per capita and Material productivity

Global material extraction and material productivity, 1970 - 2017



- *Global resource use has more than tripled since 1970*
- *Global material demand per capita grew from 7.4 tons in 1970 to 12.2 tons per capita in 2017*
- *Material productivity started to decline around 2000 and has stagnated in the recent years*



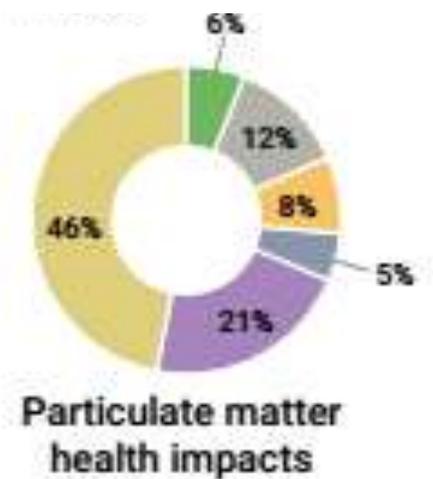
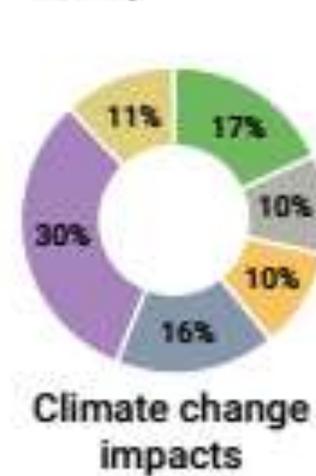
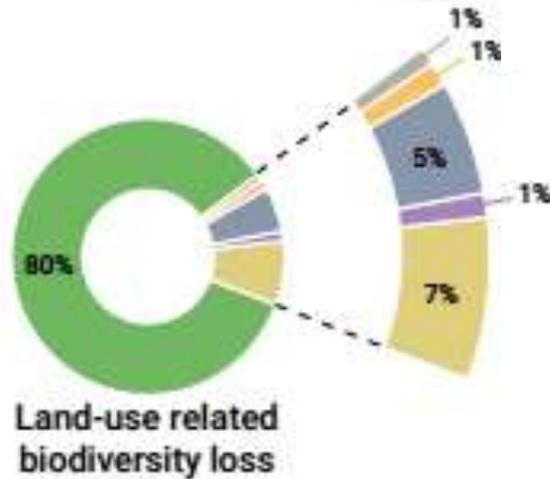
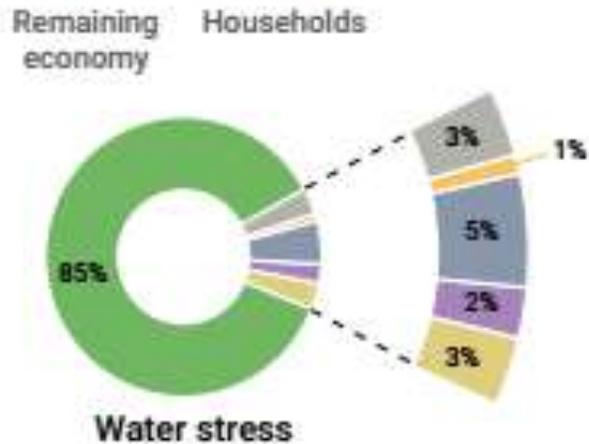
Environmental impacts in the value chain

resource extraction and processing phase

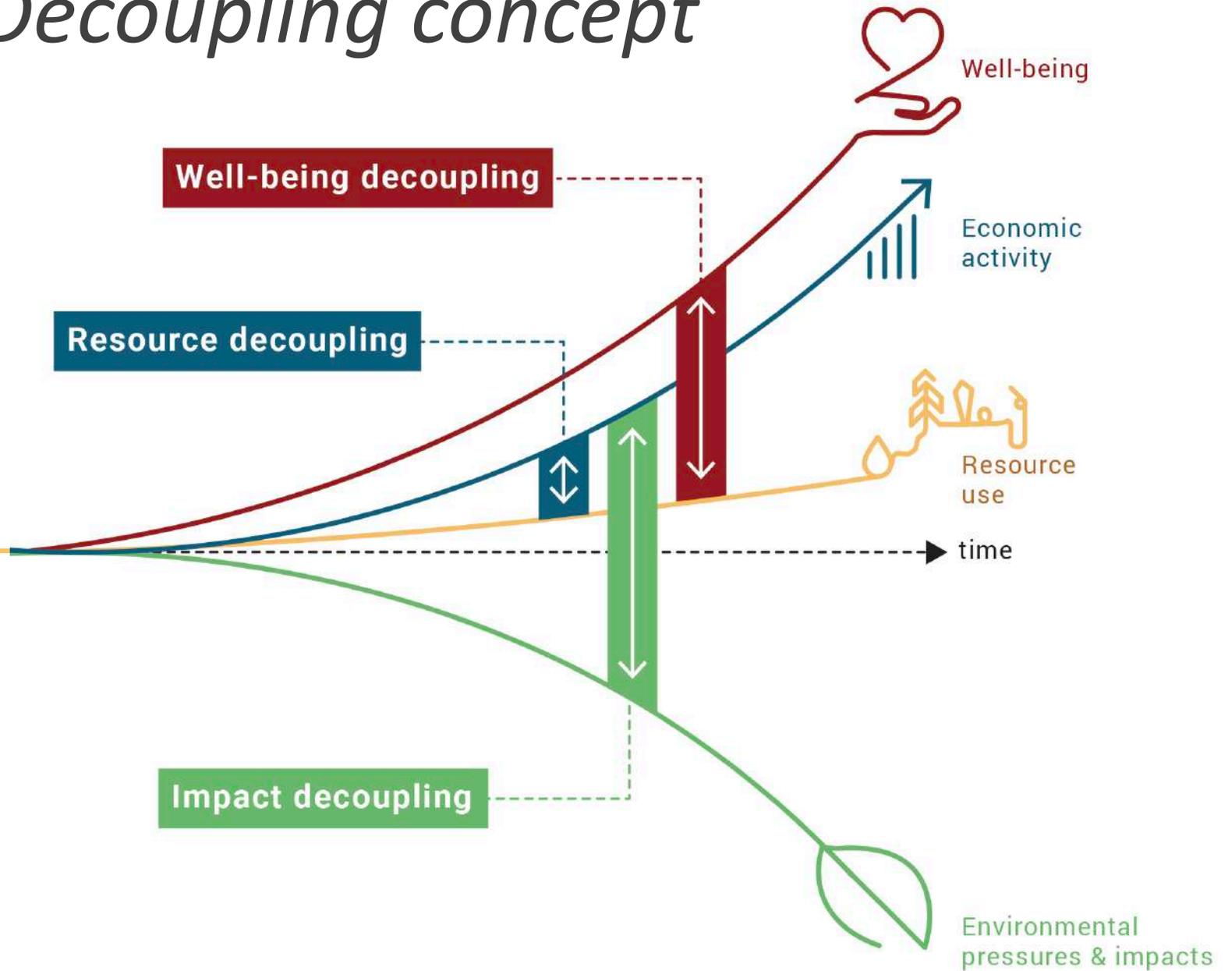
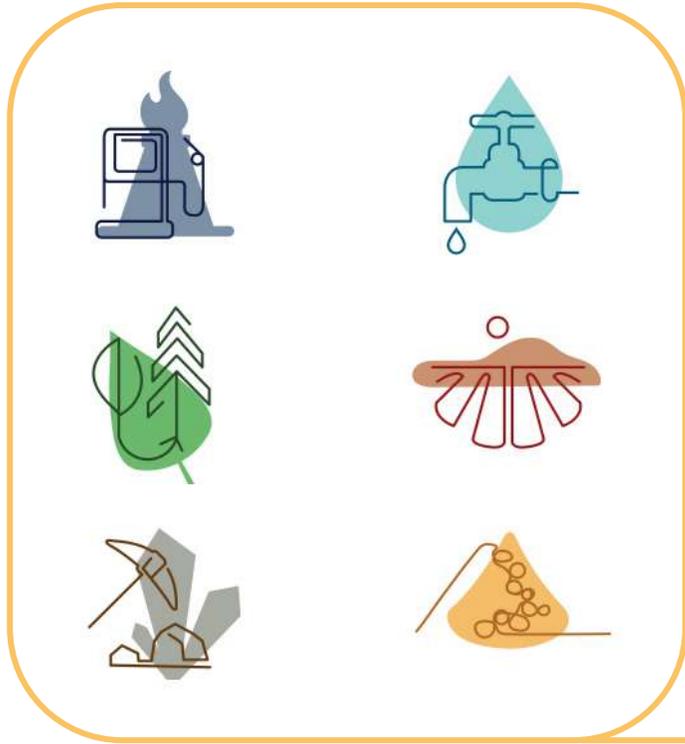
90% of global biodiversity loss and water stress

50% of global climate change impacts

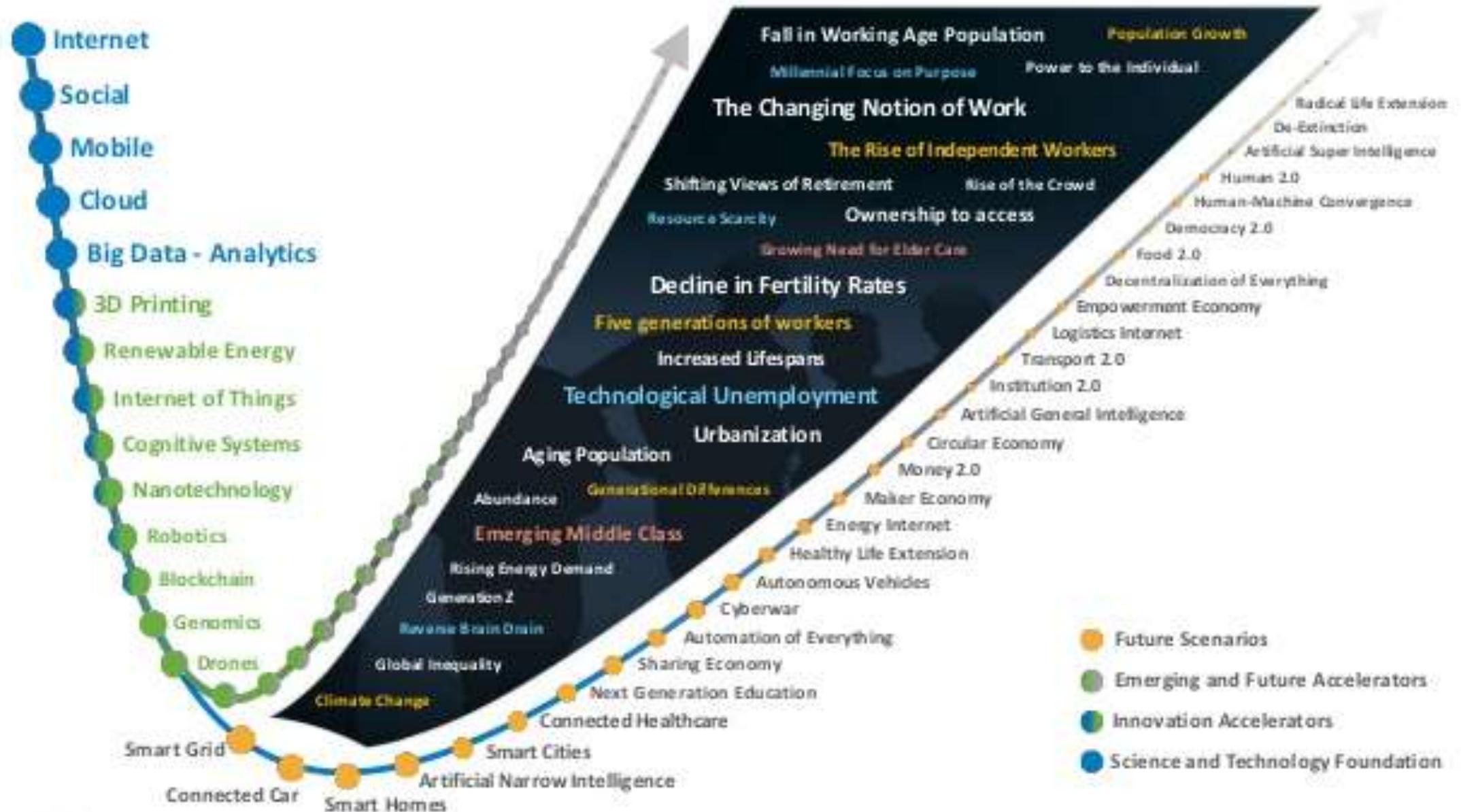
1/3 of air pollution health impacts



Decoupling concept



CIRCULAR AND DIGITAL ARE ON THE SAME DEVELOPMENT CURVE



CLIMATE

CARBON MANAGEMENT

LAND

WATER

ENERGY

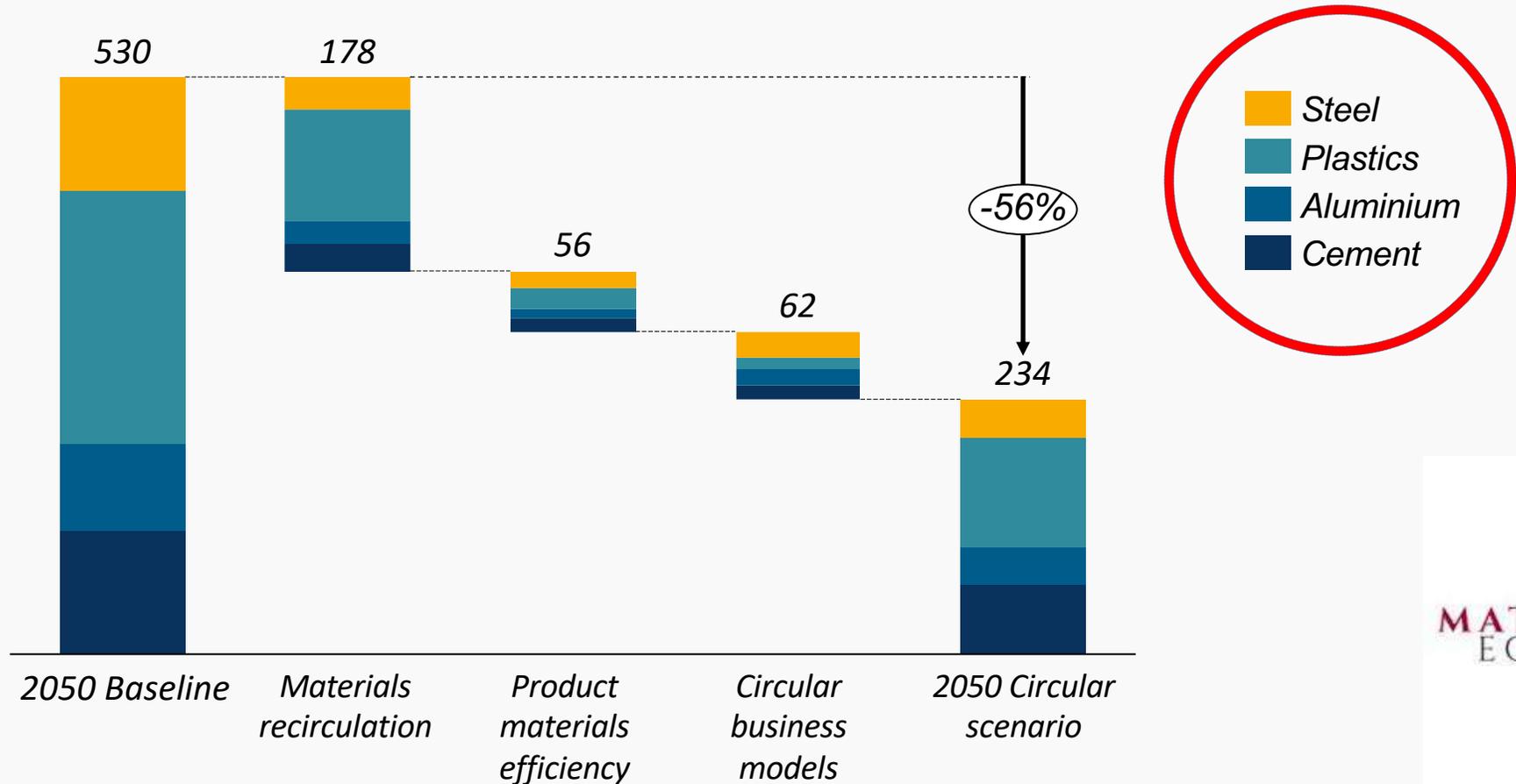
MATERIALS

DECOUPLING

RESOURCES

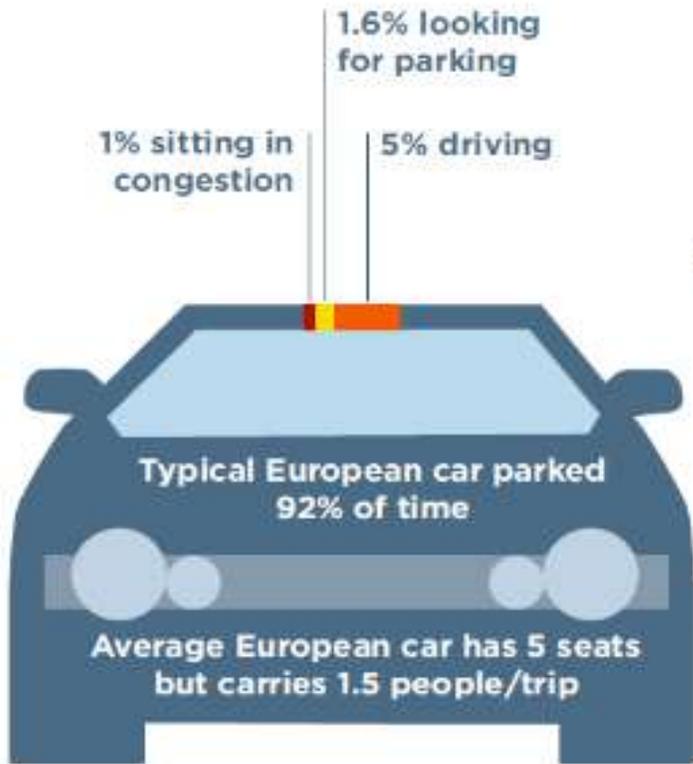
A MORE CIRCULAR ECONOMY CAN REDUCE EU EMISSIONS FROM MATERIALS BY 56%

EU emissions reductions potential from a more circular economy, 2050
Mt CO₂ per year

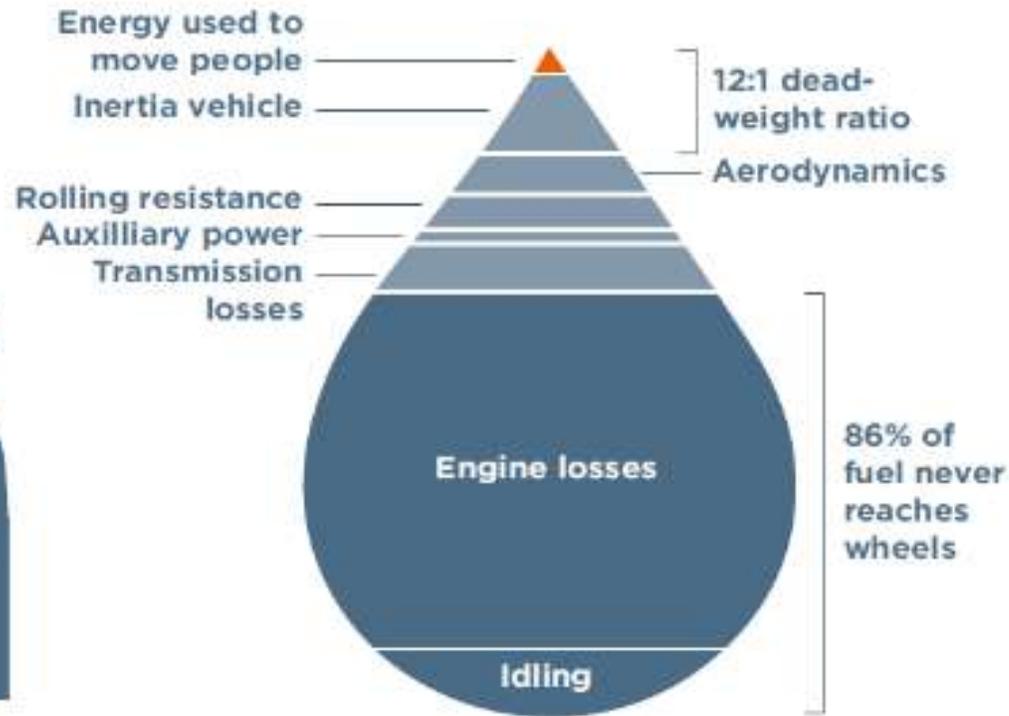


STRUCTURAL WASTE IN A **MOBILITY SYSTEM**

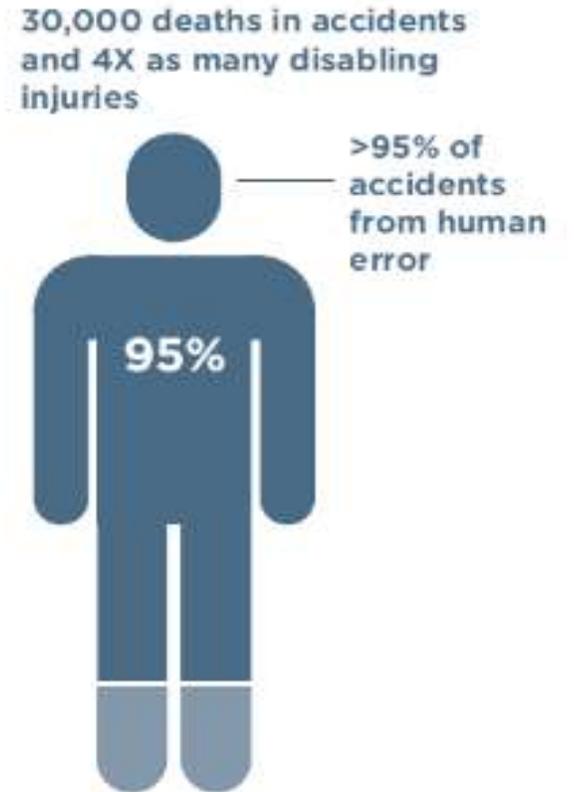
CAR UTILISATION



TANK-TO-WHEEL ENERGY FLOW - PETROL



DEATHS AND INJURIES/ YEAR ON ROAD



LAND UTILISATION:

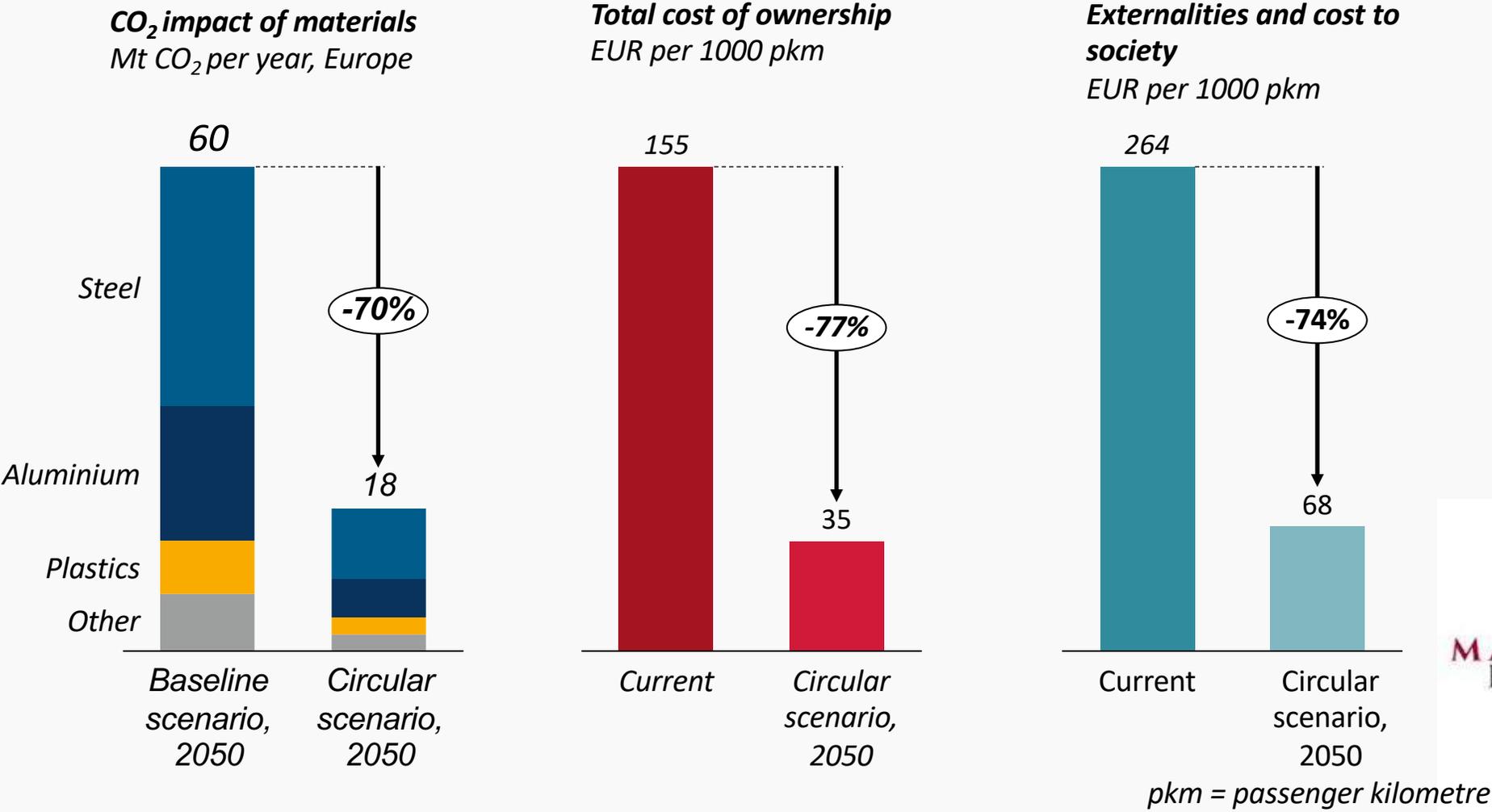
5%

Road reaches peak throughput only 5% of time and only 10% covered with cars then

50%

50% of most city land dedicated to streets and roads, parking, service stations, driveways, signals, and traffic signs

A **SHARED MOBILITY** SCENARIO IS A HIGHLY ATTRACTIVE VISION FOR **PASSENGER CARS**



Cities and Regions



*A lot could be done on that level due to **relative autonomy** of the governance and many **concentrated CE related problems and opportunities***

Sharing Models, Mobility systems, Waste Recycling, Sustainable Buildings, Energy Efficiency ...

ALL LEVELS DO MATTER

National Level



*Encourage **governments** to strategically approach Circular Economy as an agenda for change to the the **SDG compliant economy transformation**. Many EU Member States have already prepared **Circular Economy Roadmaps or/and Action Plans**. EC should propose that they are prepared by **all EU Members states** (make it a request included in the European Semester Country Reports)*

ALL LEVELS DO MATTER

European Union

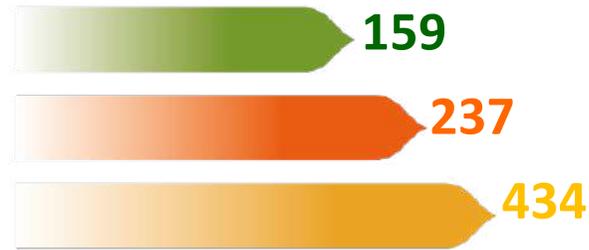


- *Circular Economy should be a **clear priority of the next European Commission***
- *Establish a credible, mutually reinforcing **link between circular economy/SDGs and competitiveness.***
- ***Build new coalitions for CE change** by broadening ownership of the CE idea - partnering with those dealing with climate change, bio-economy, health, digital transformation, regional policy, research and innovation, international relations, enlargement & neighbourhood, development aid, trade ...*
- *Continue working on **plastics** but add also the **product groups** beyond the plastics (textile, food ...) into future CE programmes, improve the **extended producer responsibility and eco-design** to deliver the whole potential and focus on **economic signals and drivers** – taxes, subsidies, public procurement.*
- *Continue working on **data, reporting**, and on **greening the financing**. Focus on **retaining value** in the CE process and on **social aspects of CE transition.***

*RESOURCE MANAGEMENT
AND COMPETITIVENESS
EU CASE*

EU - RAW MATERIAL IMPORTS AND EXPORTS

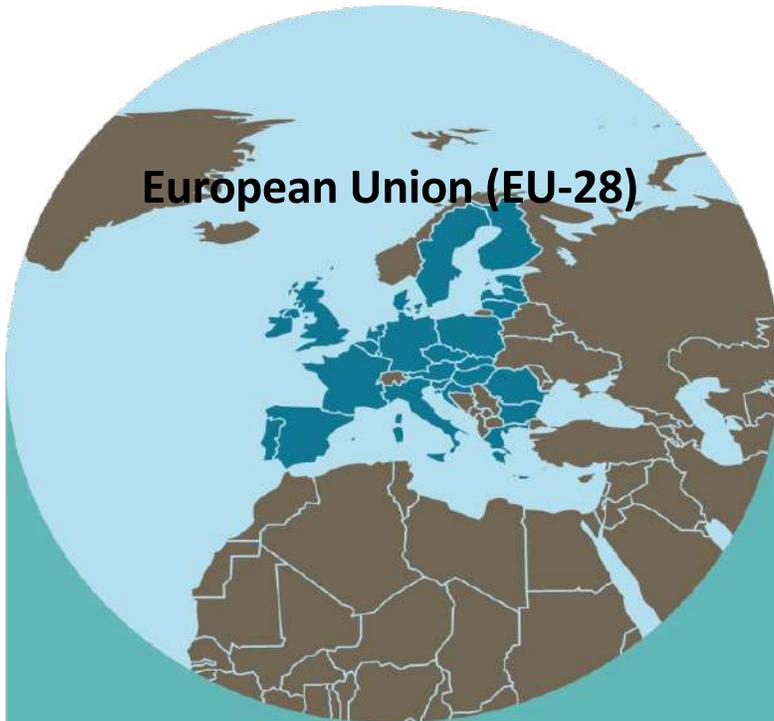
EU-28 exports (2014)



EU-28 imports (2014)



- Biomass
- Manufactures (finished man. products)
- Fuels and mining products (fossil energy, metal ores and non-metallic minerals)



Total trade

EU-28 to ROW

In 2004: 455 million tones

In 2014: 640 million tones



Total trade

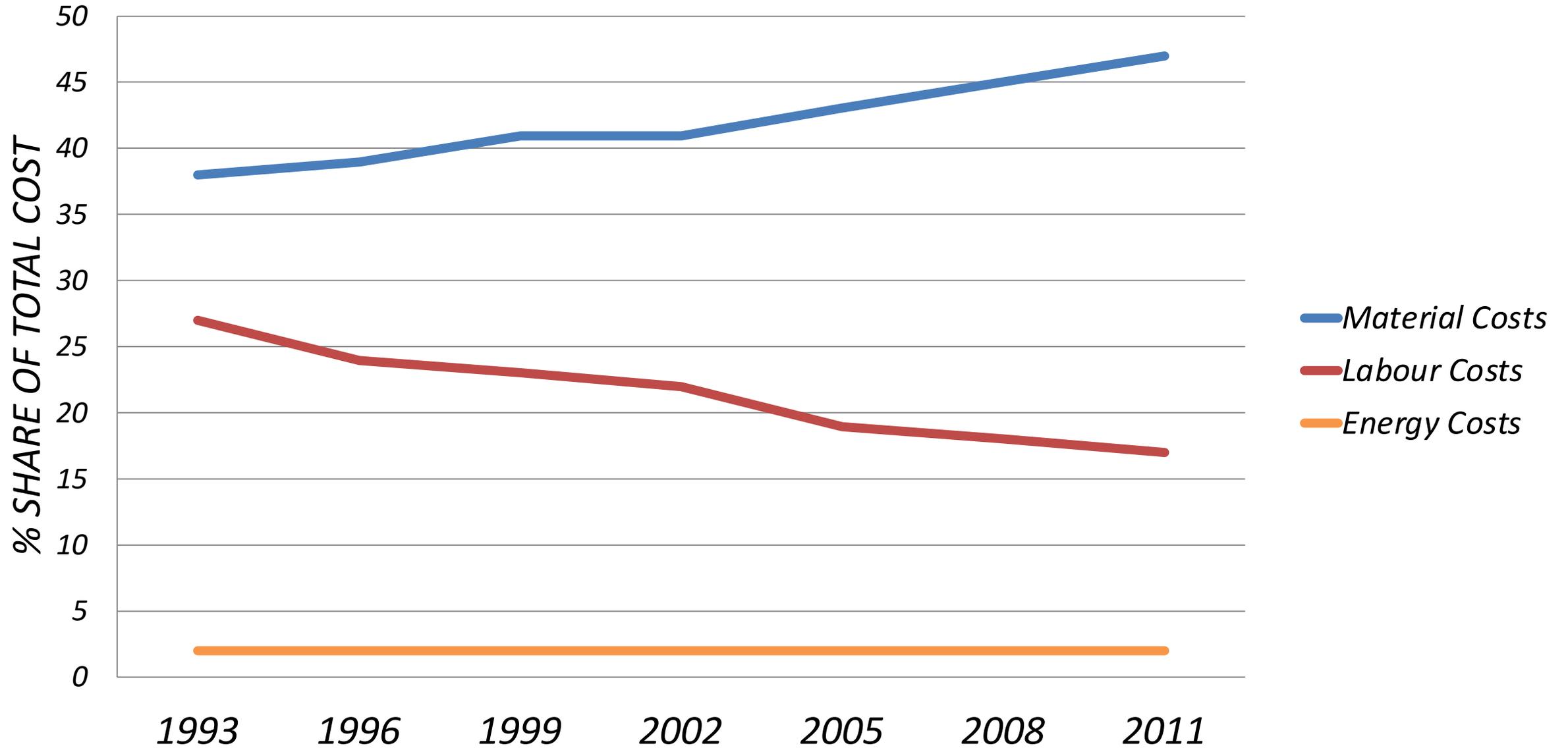
ROW to EU-28

In 2004: 1664 million tones

In 2014: 1534 million tones

COSTS SHARE GERMAN MANUFACTURING SECTOR 1993-2011

VDI GERMAN AGENCY FOR MATERIAL EFFICIENCY





MORE OR LESS REGULATION?

*We should continue working actively to bringing together the leading business actors. Many businesses express that they are **not afraid of more regulation but of unfairness, free riders and uncertain risk**. If we make policies fair, consistent and reliable – we can work together across policy and business actors for a real transition.*

TO CONCLUDE

WHY AND HOW?



- *The challenge seems to not be one of not inadequate scientific evidence anymore; rather it is one of **cooperation and implementation**.*
- ***Complexity and scale of these challenges requires** a space that allows actors with responsibility for those environmental governance mechanisms to be able to consider and experiment with both **new forms of collaboration and more „systemic“ approaches** ... through promoting multi stakeholder cooperation, more agile governance (including sub-state actors, such as cities, states and provinces), the use of new technologies, and enhanced accountability and transparency.*

We need more “Circularity” even in the
GLOBAL GOVERNANCE



Sharing sovereignty instead of owing sovereignty

*Europe is not only
blue with yellow stars*

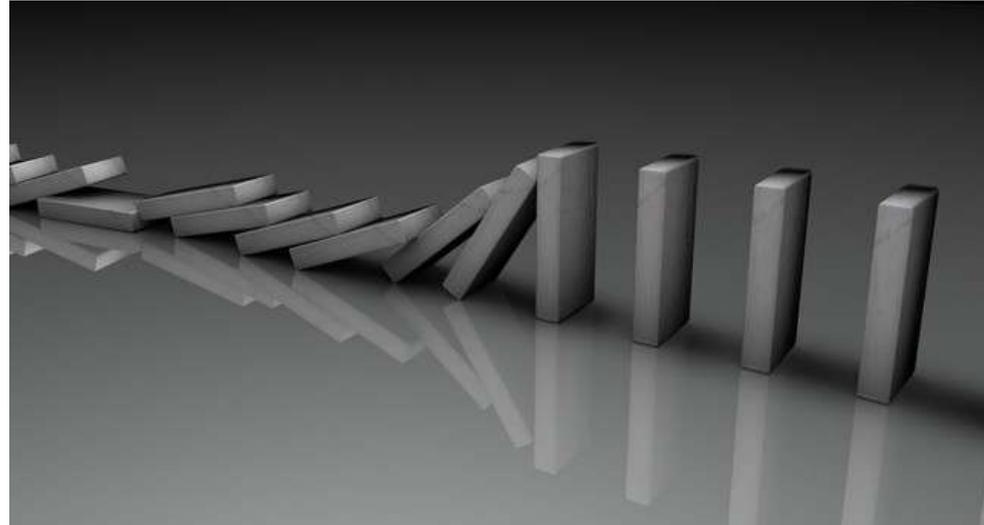


It is a rainbow

- *blue for freedom and democracy*
- *red for social values*
- *green for the protection of environment*
- *yellow for the culture*

*We can hardly picture Europe as the center of the World,
but we should do everything that Europe remains the
center of the dreams of all the people of the World*

Transition to a more sustainable economy and society

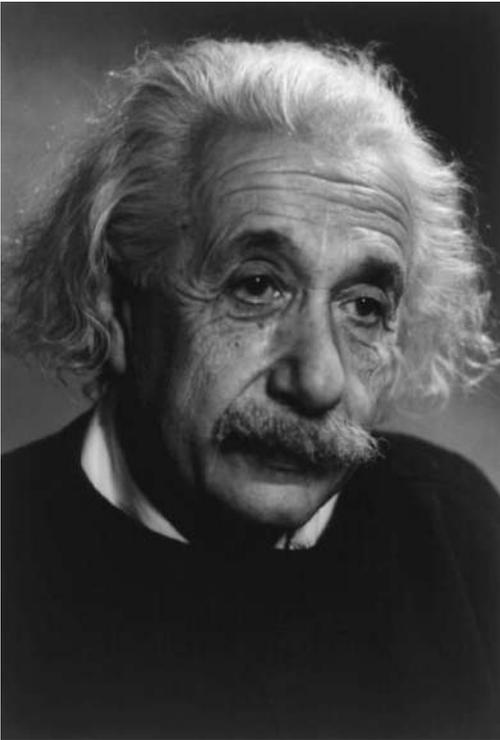


IS UNAVOIDABLE!

*Humans are supposed to be **intelligent**. It is high time to prove it.
We have to fix a broken **compass!***

WILL IT BE EASY?

ALBERT EINSTEIN



When asked why it is that mankind has stretched so far as to discover the structure of the atom, but we have not been able to devise the political means to keep the atom from destroying us he replied:

“That is simple, my friend. It is because politics is more difficult than physics”

Why the changes are so difficult in practice?

- Political cycles, public and financial institutions, have inbuilt **short term focus and logic**. The challenges we face require a real deep system change and rethinking of the the way how we govern our society.*
- Production and consumption systems are based on the logic of **consumerism fuelled by growth based on quantities and measured by GDP**. There is a lack of clear identification of future risks and of an appropriate **effective risk management** and there is a clear lack of understanding what really matters for our safe future.*
- **Transition** to a more sustainable economy and society will be only possible if it is **just, fair and inclusive**. We are currently failing to deliver. We need to make our societies more equitable and do more in the fight against poverty. Social unrest is growing even in the high-income countries and it is high time to hear the echo of the streets and the voice of frustrated young generation.*



“North Star” guiding our policies and behaviour

GREEN DEAL: INTER-GENERATIONAL AGREEMENT

A Program for the Future Generations

“Sustainability First”

Circular Economy is not a new concept



*It is the oldest concept on the earth. All **nature is organized based on the principles of the circular economy.** Nothing is lost and everything has its purpose.*

*That is why it would make common sense to **embrace it** and finally start to **behave accordingly.***

*In essence there is only question we have to answer:
Do we agree that we humans are part of the nature too?*

To answer this question we probably do not need the help of the most famous Belgium detective, but his advise is always useful

HERCULE POIROT



When asked why he is speaking about himself always in a third person he replied something like that:

If one is such a genius like myself, it is very important to establish a healthy distance to himself.



International
Resource
Panel

S Y S T E M I Q

UN 
environment



THANK YOU

For more information

Contact IRP Secretariat at resourcepanel@un.org

Visit our website at <http://resourcepanel.org/>

INSPIRATIONAL TALKS

Bianca Dragomir

*European Cluster Manager of the Year
2016-2018, CEO of AVAENSEN*



A large, stylized graphic of a water splash in shades of blue and purple, with a central column of water rising from a pool of ripples. The splash is positioned on the left side of the frame, with a smaller droplet above it and another smaller splash to the right.

Clusters of Change

For a European Green Deal

Bianca Dragomir

European Cluster Manager of the Year 2016-18

CEO AVAENSEN

A blue-toned image of a turbulent, swirling water vortex, possibly a whirlpool or a large-scale ocean current. The water is dark blue and shows intricate patterns of movement, with a lighter blue area in the center where the vortex is most intense. The overall effect is one of dynamic, powerful motion.

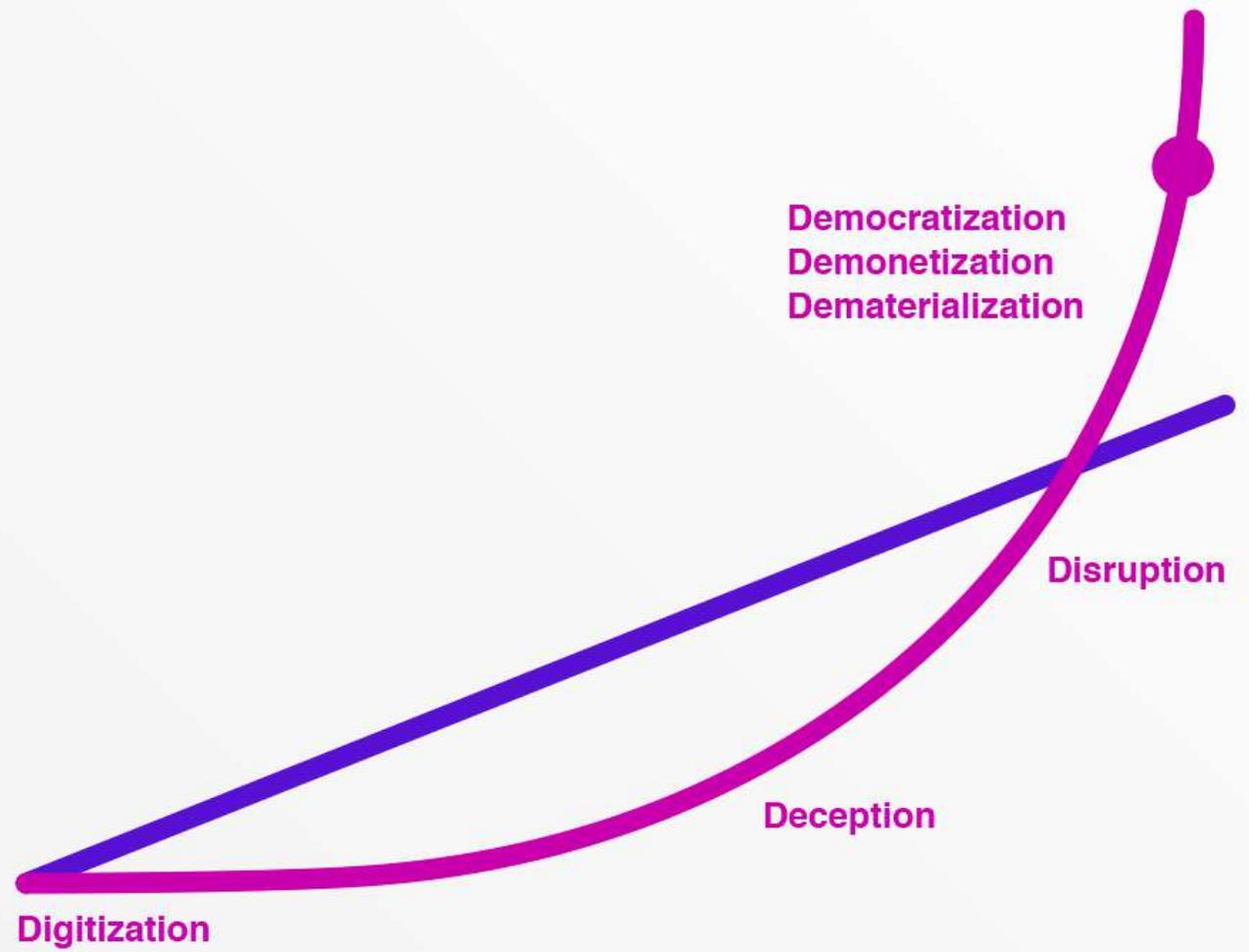
Change is accelerating

**We live in the greatest epic
of **innovation** ever**







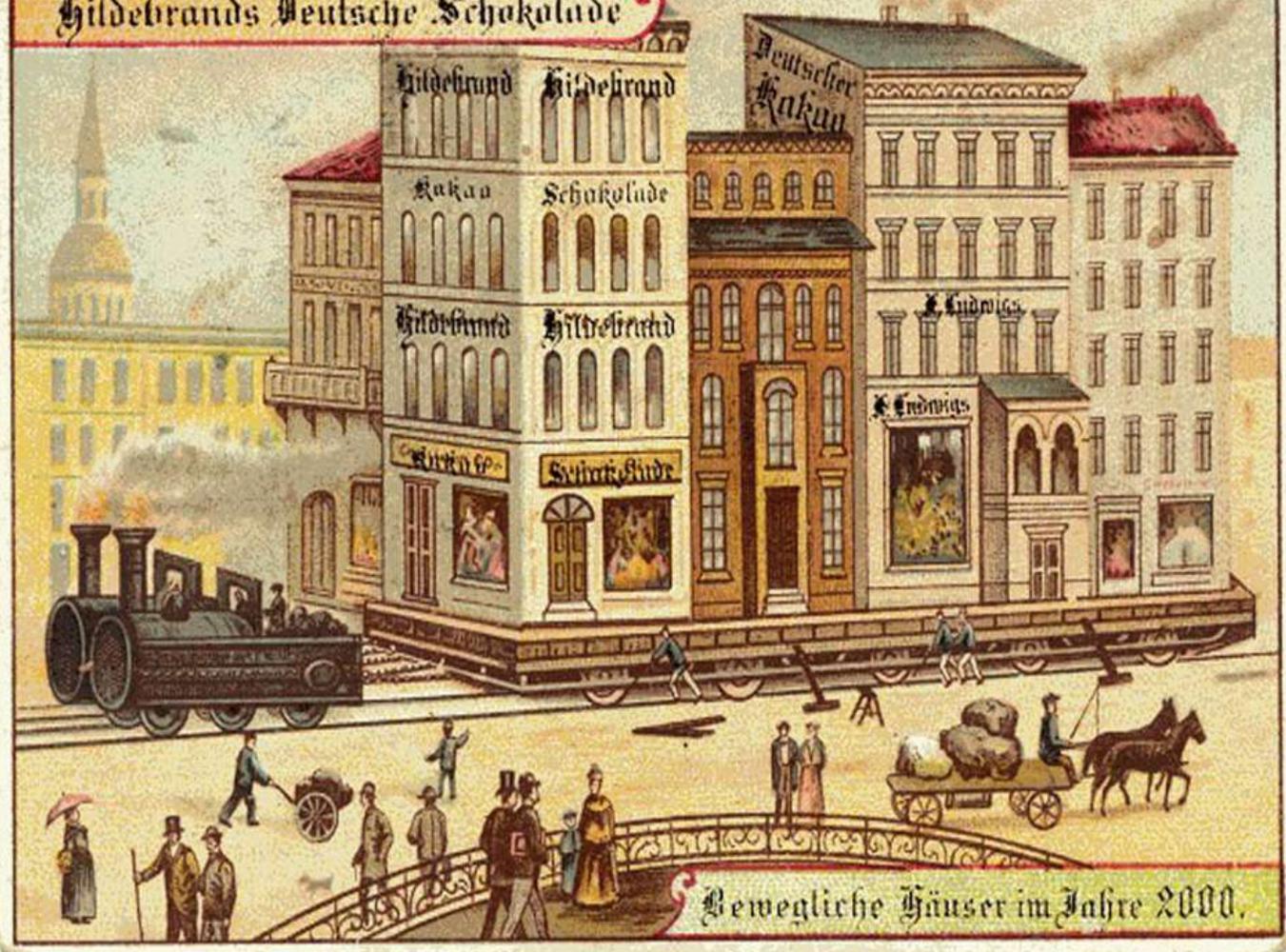


**Today we are blazing the
rails of technology**

What will the **future look like?**

- 1900 -

Hildebrands Deutsche Schokolade



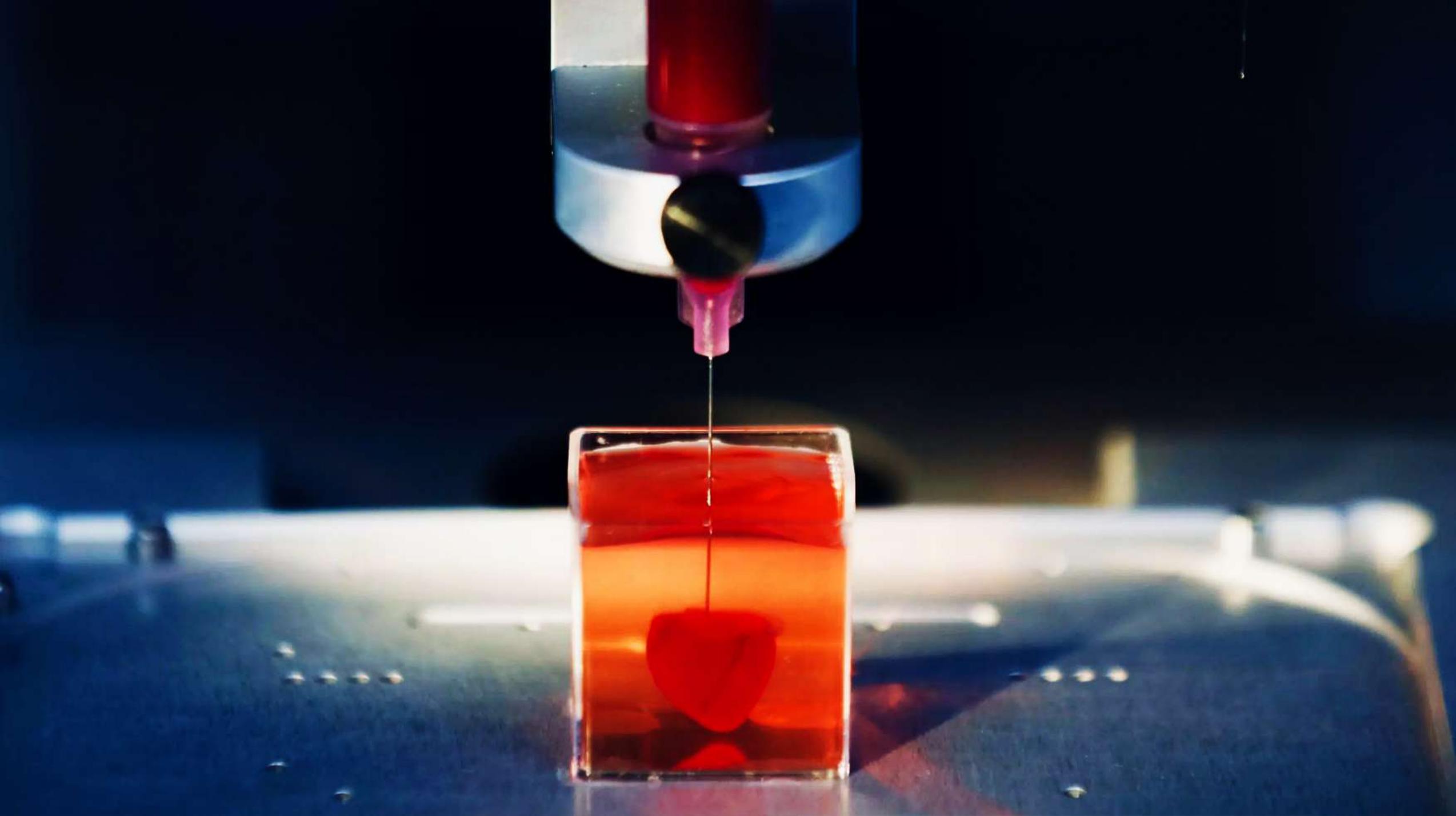
Bewegliche Häuser im Jahre 2000.



NEW STORY

kon

kon
N



What will the **future look like?**

- 1985 -



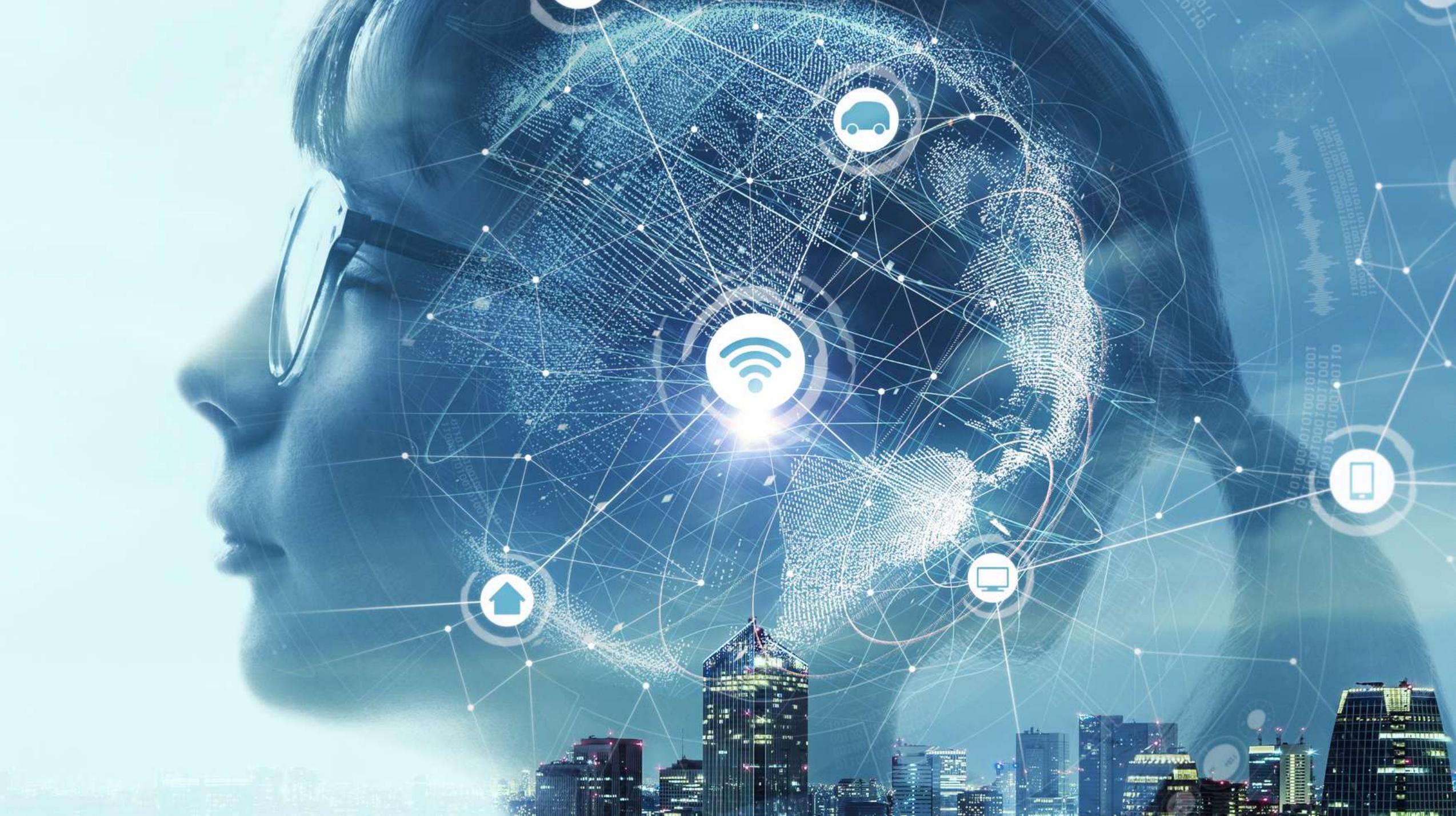


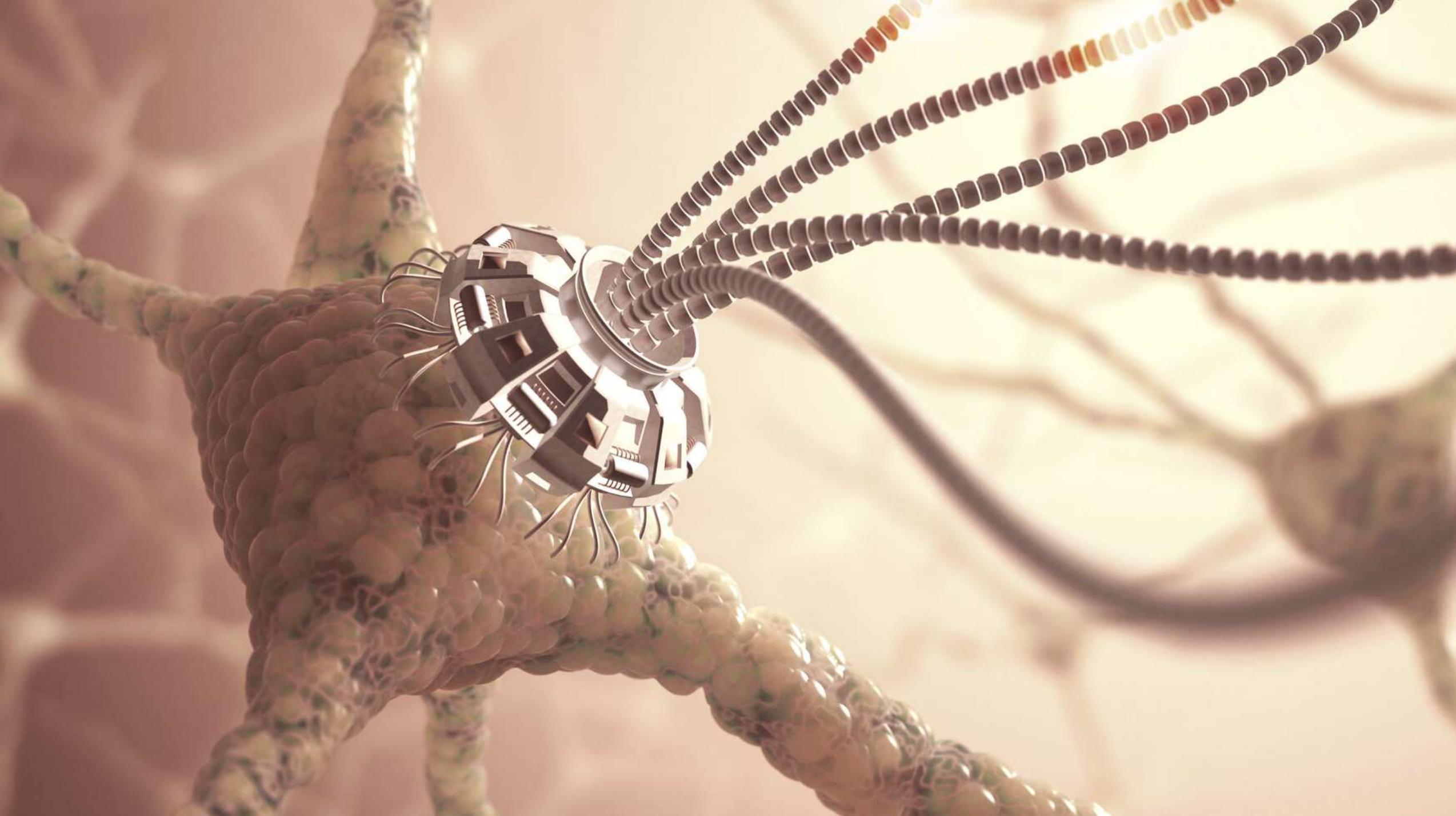
What will the **future look like?**

- 2019 -











Change is accelerating

A landscape photograph showing a large glacier in the background, with a body of water in the foreground containing several icebergs. The sky is a deep blue, and the overall scene is cold and desolate. The text "Climate Change is accelerating" is overlaid in white, bold, sans-serif font across the center of the image.

**Climate
Change is accelerating**





Europe is seeking its **identity**

European Green Deal



We need more **speed.**

We need more **speed.**

We need more **scale.**

We need more **speed.**

We need more **scale.**

We need...

We need more **speed.**

We need more **scale.**

We need...

A paradigm shift



Europe needs
Systemic Change

The background features a repeating pattern of overlapping circles and triangles. Each circle contains a smaller, solid-colored triangle pointing towards the center. The circles are arranged in a grid-like fashion, with some overlapping. The overall color palette is light and monochromatic, with shades of gray and white.

Europe needs
Systemic Innovation

Clusters
can catalyse change at
speed and scale.



2.500 European Clusters

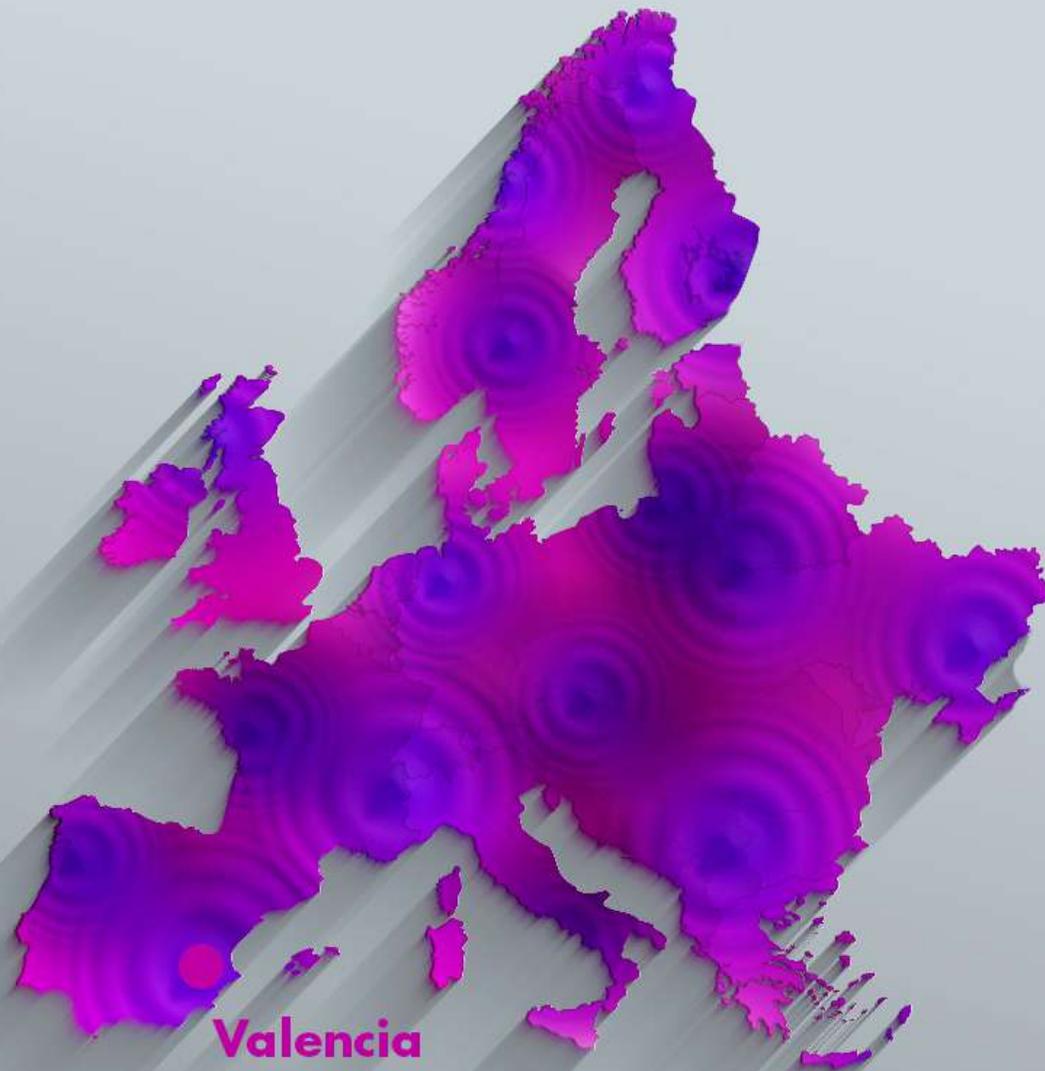




**Daring to
“lift all boats”**



Valencia
avaesen



Valencia
avaesen

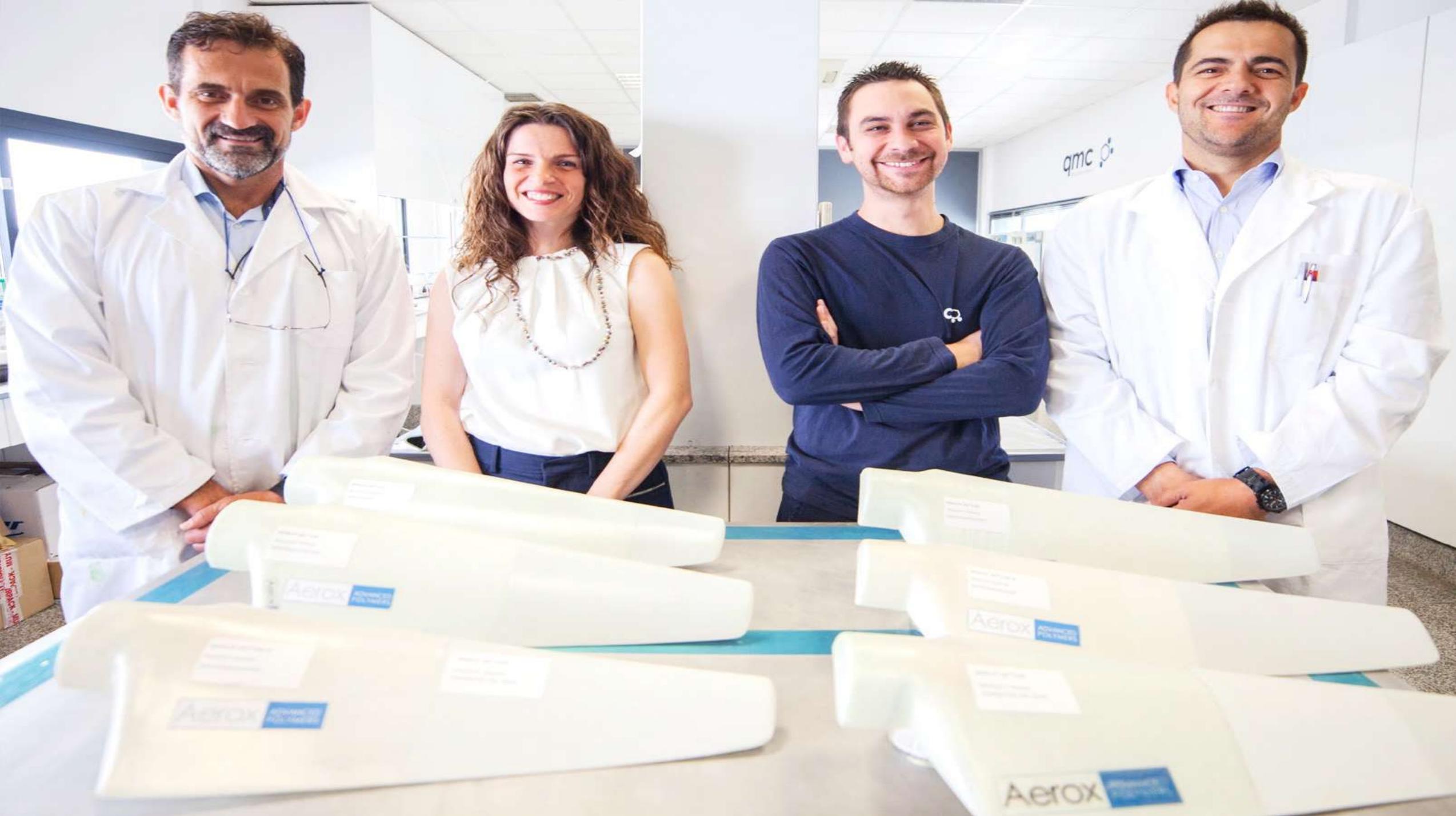
1. Self-sustained business generator

La energía NOS transforma
avdaesen

2. Entrepreneurship

1. Self-sustained business generator

La energia NOS transforma
avdesen









3. Cross-sectorial collaboration

2. Entrepreneurship

1. Self-sustained business generator

La energía NOS transforma
avdaesen



Greenification of cities



4. Fix the domestic market

3. Cross-sectorial collaboration

2. Entrepreneurship

1. Self-sustained business generator

**From clusters-as-usual
to clusters **unusual****



Clusters of Change



7 STEPPING STONES OF
Clusters of Change



7 STEPPING STONES OF Clusters of Change



OPEN



**INNOVATION-DRIVEN
ECOSYSTEMS**



7 STEPPING STONES OF Clusters of Change



OPEN



**INNOVATION-DRIVEN
ECOSYSTEMS**



INTER-CONNECTED



**7 STEPPING STONES OF
Clusters of Change**



OPEN



**INNOVATION-DRIVEN
ECOSYSTEMS**



INTER-CONNECTED



CROSS-SECTORAL



7 STEPPING STONES OF Clusters of Change



OPEN



**INNOVATION-DRIVEN
ECOSYSTEMS**



INTER-CONNECTED



7 STEPPING STONES OF Clusters of Change



CROSS-SECTORAL



MISSION-ORIENTED



OPEN



**INNOVATION-DRIVEN
ECOSYSTEMS**



INTER-CONNECTED



7 STEPPING STONES OF Clusters of Change



CROSS-SECTORAL



RESKILLING & UPSKILLING



MISSION-ORIENTED



OPEN



**INNOVATION-DRIVEN
ECOSYSTEMS**



INTER-CONNECTED



7 STEPPING STONES OF Clusters of Change



SDG-DRIVEN



CROSS-SECTORAL

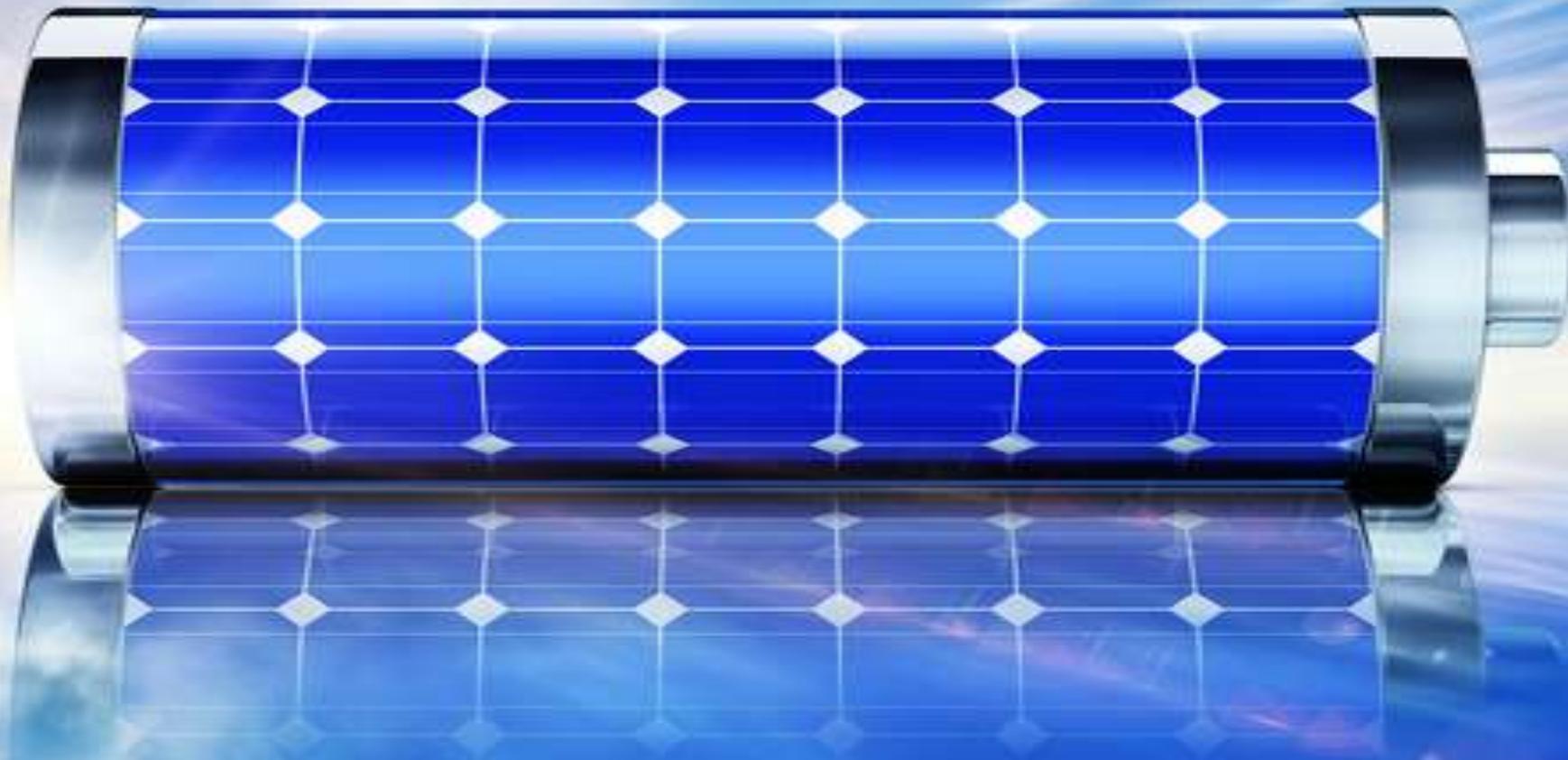


RESKILLING & UPSKILLING



MISSION-ORIENTED

European Battery Alliance





European Circular Plastics
Alliance



SDG-DRIVEN

THE CAP

THE FIRST EUROPEAN
CLUSTER ACCELERATOR
PROGRAMME



ConnectedClusters

Climate-KIC

Climate-KIC is supported by the
EIT, a body of the European Union



provadis
Hochschule



JOIN THE WAVE!



CLUSTERS OF CHANGE

www.clustersofchange.eu







**Let's not miss this speed
of change!**

#CLUSTERSOFCHANGE