

The Future of an Aruban Circular Economy

4th Annual Conference
Future of Innovation

Centrale Bank van Aruba
November 1, 2019





4th Annual Conference *Future of Innovation* - Centrale Bank van Aruba
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SAFEGUARDING OUR FUTURE

Strategies for an Aruban Circular Economy

Jeanette R. Semeleer
President



- Responsible Consumption and Sustainable Production
- Doughnuts of Development
- Exploring New Frontiers
- Leading from a Circular Future





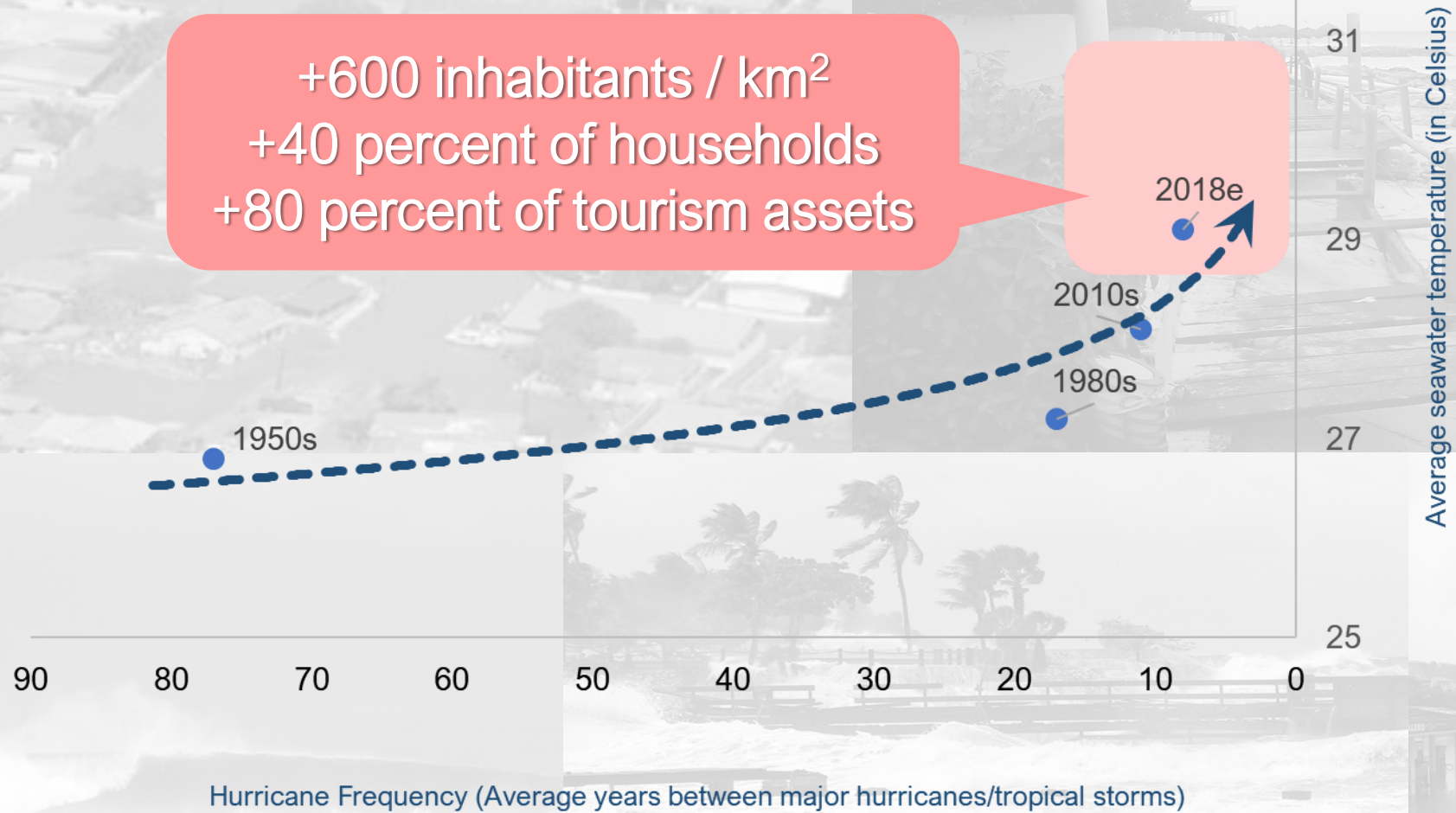
Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters

Integrate climate change measures into national policies and strategies

(UNSDG, 2017)



+600 inhabitants / km²
+40 percent of households
+80 percent of tourism assets



Slow
burn

Shocks



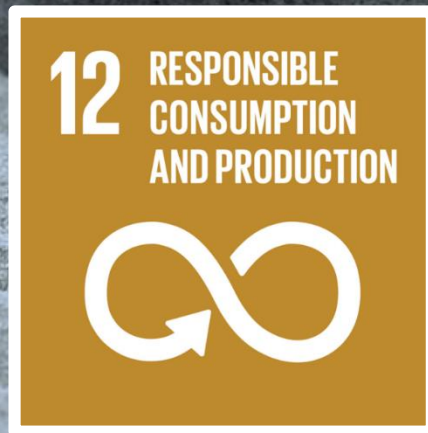
LOSS OF BIODIVERSITY
LIFE & WELL-BEING



Sustainable management of
and efficient use of
natural resources

Reduce waste generation
through **R**efusing, **R**educing,
Recycling, and **R**eusing (4 R's)

Strengthen the technological
capacity for responsible
consumption and sustainable
production



(UNSDG, 2017)





Resource impact (footprint*)
Afl. 685 million

Ecological impact (services**)
Afl. 517 million



Our ecological footprint is larger than the value of our natural resources. Aruba is “overconsuming” its fragile environment

DOUGHNUTS OF DEVELOPMENT

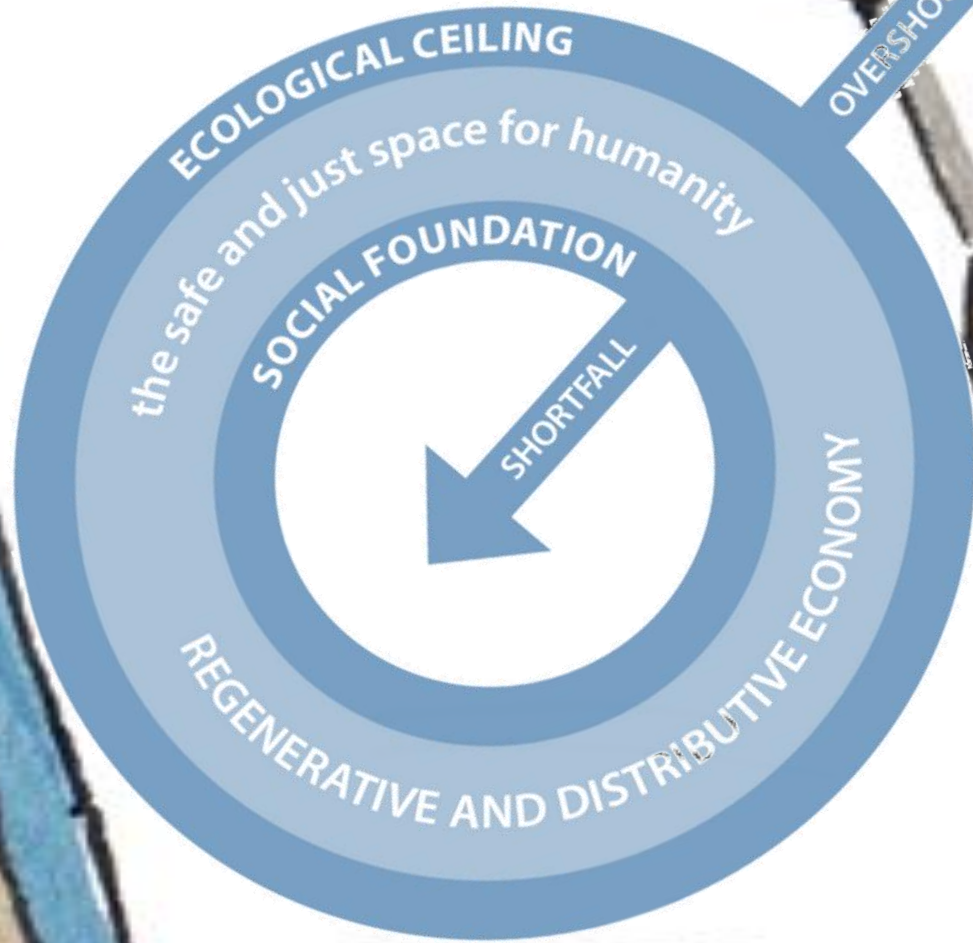




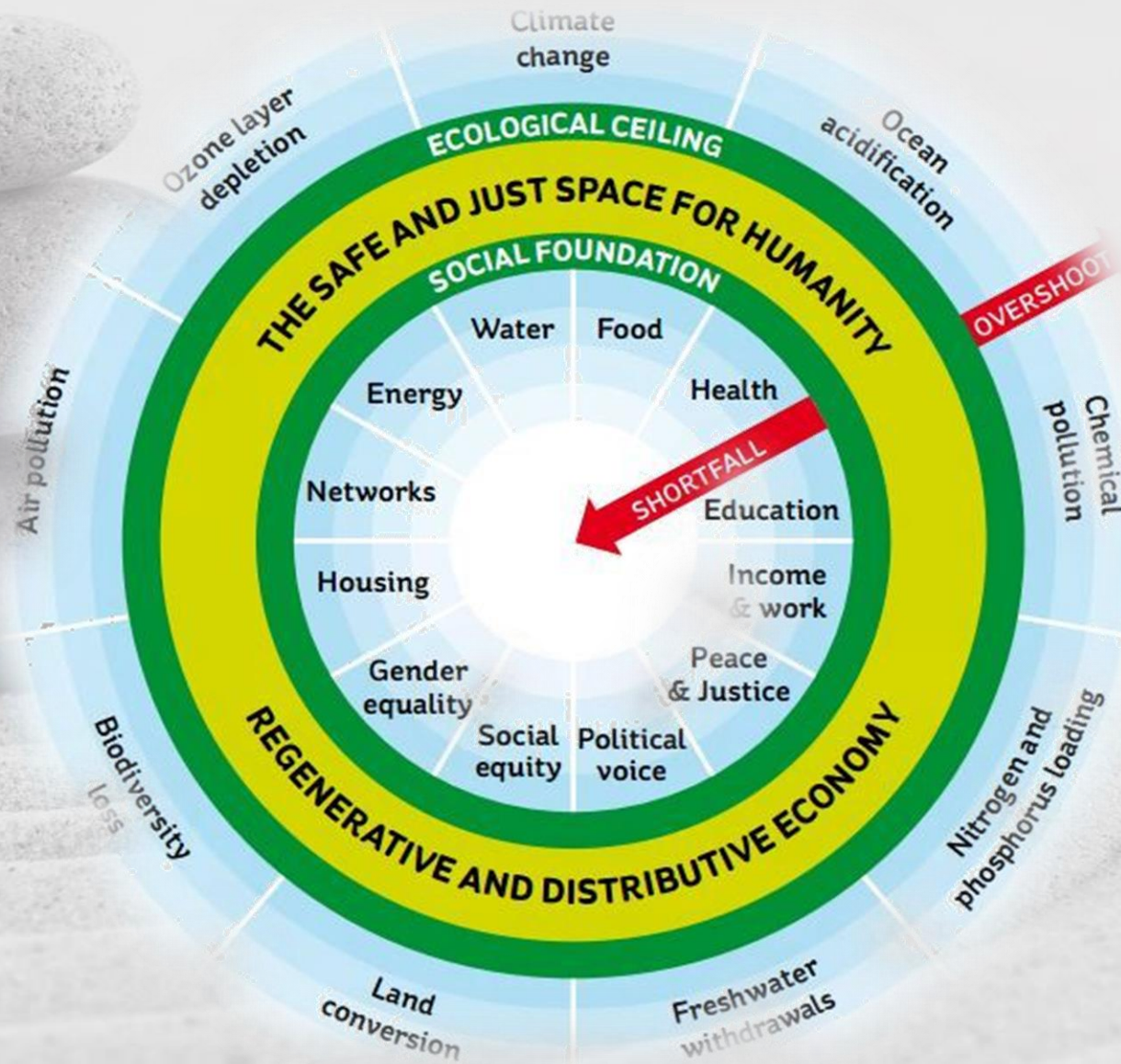
DOUGHNUT ECONOMICS

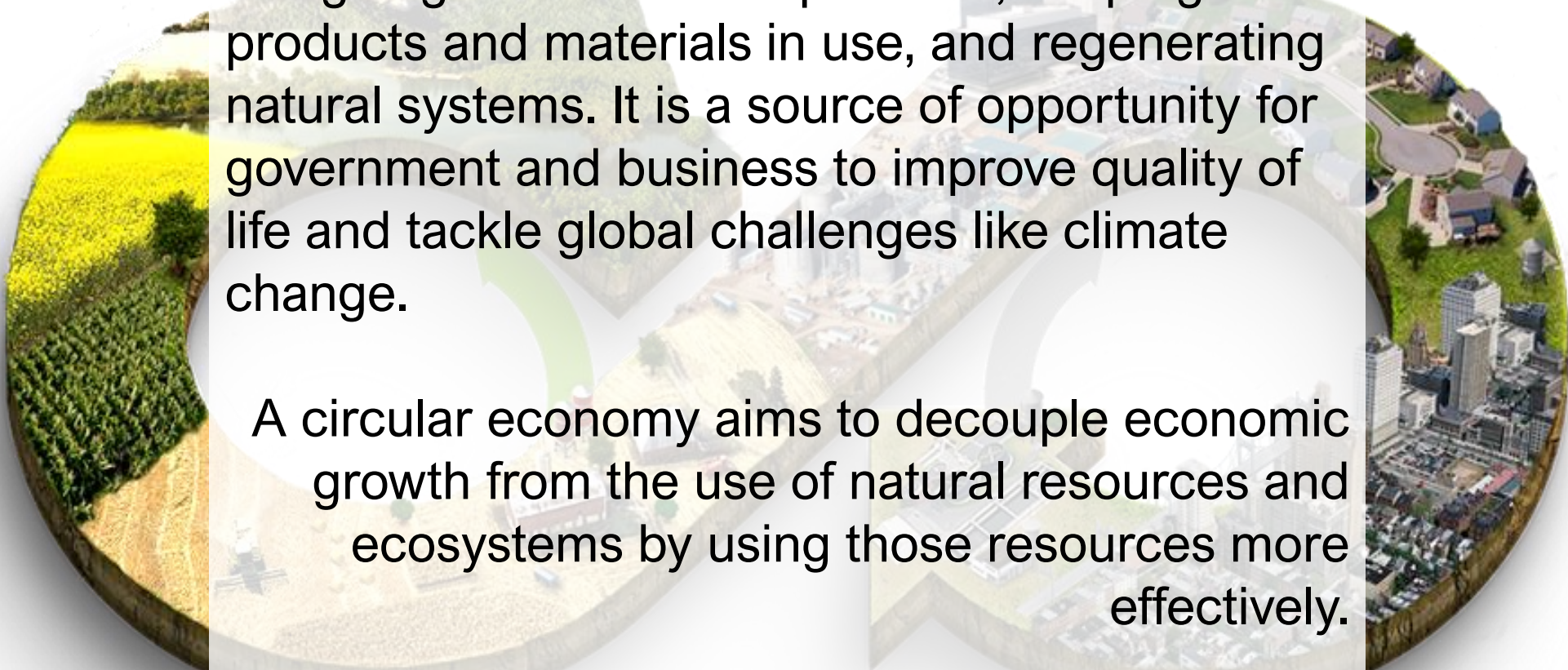


Kate Raworth



BROKEN ECOLOGICAL CEILING?



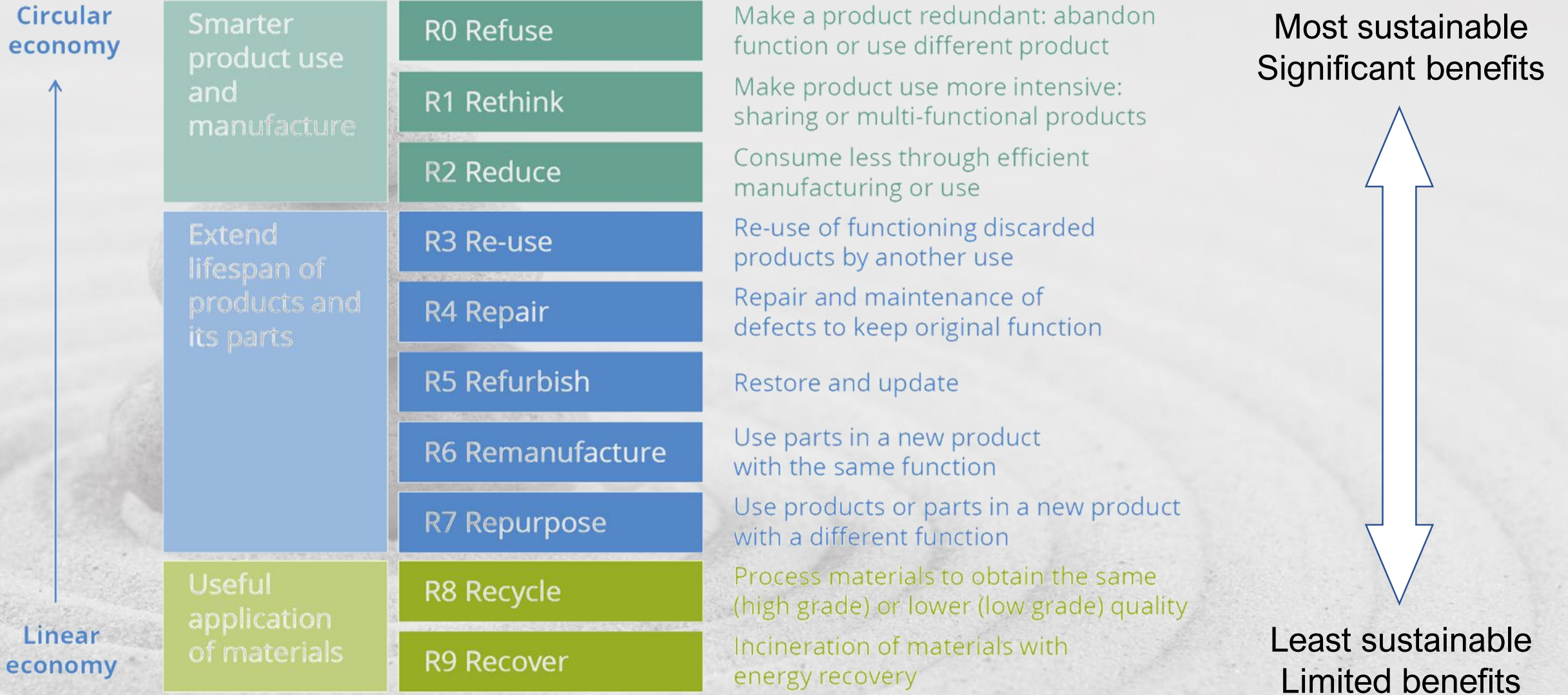


A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems. It is a source of opportunity for government and business to improve quality of life and tackle global challenges like climate change.

A circular economy aims to decouple economic growth from the use of natural resources and ecosystems by using those resources more effectively.

The Ellen McArthur Foundation

A CIRCULAR ECONOMY



Circular economy monitoring framework

1 EU self-sufficiency for raw materials

The share of a selection of key materials (including critical raw materials) used in the EU that are produced within the EU

2 Green public procurement

The share of major public procurements in the EU that include environmental requirements

3a-c Waste generation

Generation of municipal waste per capita; total waste generation (excluding major mineral waste) per GDP unit and in relation to domestic material consumption

4 Food waste

Amount of food waste generated

7a-b Contribution of recycled materials to raw materials demand

Secondary raw materials' share of overall materials demand - for specific materials and for the whole economy

8 Trade in recyclable raw materials

Imports and exports of selected recyclable raw materials



5a-b Overall recycling rates

Recycling rate of municipal waste and of all waste except major mineral waste

6a-f Recycling rates for specific waste streams

Recycling rate of overall packaging waste, plastic packaging, wood packaging, waste electrical and electronic equipment, recycled biowaste per capita and recovery rate of construction and demolition waste

9a-c Private investments, jobs and gross value added

Private investments, number of persons employed and gross value added in the circular economy sectors

10 Patents

Number of patents related to waste management and recycling

Circular economy

Smarter product use and manufacture

R0 Refuse

12%

R1 Rethink

34%

R2 Reduce

30%

Extend lifespan of products and its parts

R3 Re-use

45%

R4 Repair

18%

R5 Refurbish

12%

R6 Remanufacture

42%

R7 Repurpose

32%

Useful application of materials

R8 Recycle

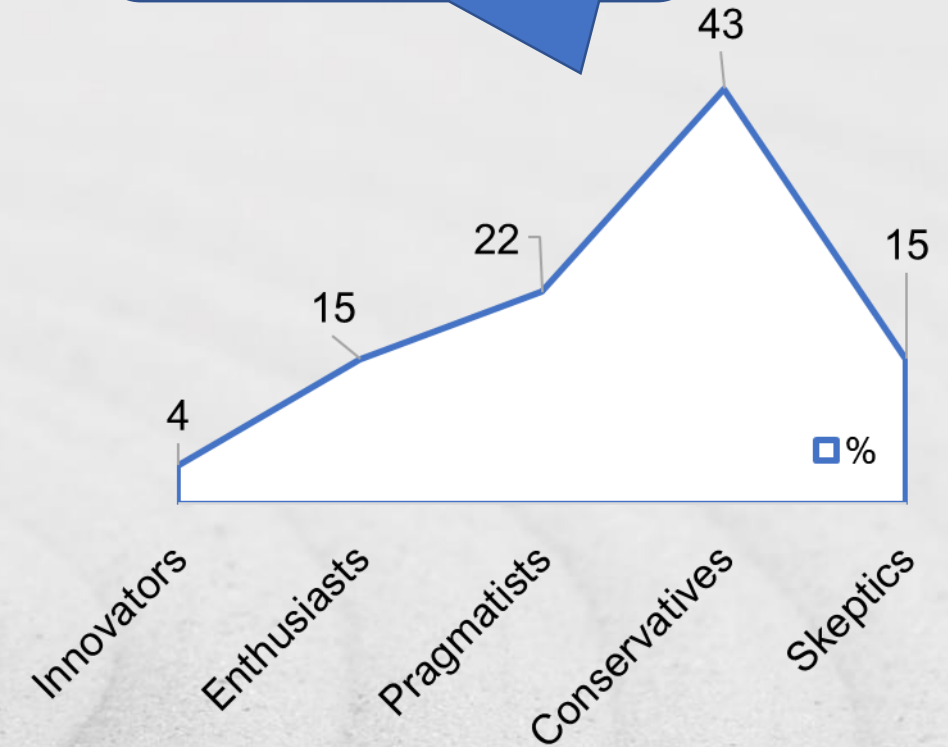
60%

R9 Recover

15%

Linear economy

At least 80% of business believe in the value of a circular economy...



Stages of circular business model innovation



Enablers

1. Waste reduction & energy efficiencies 59%
2. Environmental resource conservation 52%
3. Operational cost reduction 43%
4. Business productivity improvement 32%
5. Business revenue generation 27%



Inhibitors

1. Limited government support 55%
2. Lack of general infrastructure/network support 44%
3. Lack of expertise & knowledge 42%
4. Shortage of technical skills 36%
5. Resistance to change & business innovation 26%

CONCLUSIONS

- Design a regulatory framework for circular economic development (including legislation and monitoring)
- Enforce regulation, conservation, and regeneration of natural resources (especially of marine ecosystems)
- Allocate government investments and actively source foreign investments
- Design 'deep dive' business cases (by lines of industry)
- Establish "Center of Circular Excellence" (for knowledge and human capital)

IPCC alerts politicians...



15000 Scientists alert politicians



Greta Thunberg comes to alert...



Thank you

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President



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