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 socio-ecological boundaries
Solid Institutional Capabilities
Macro-Fiscal Sustainability
Productive Labor Force
Strong External Sector
Innovation Ecosystem
Economic Resilience

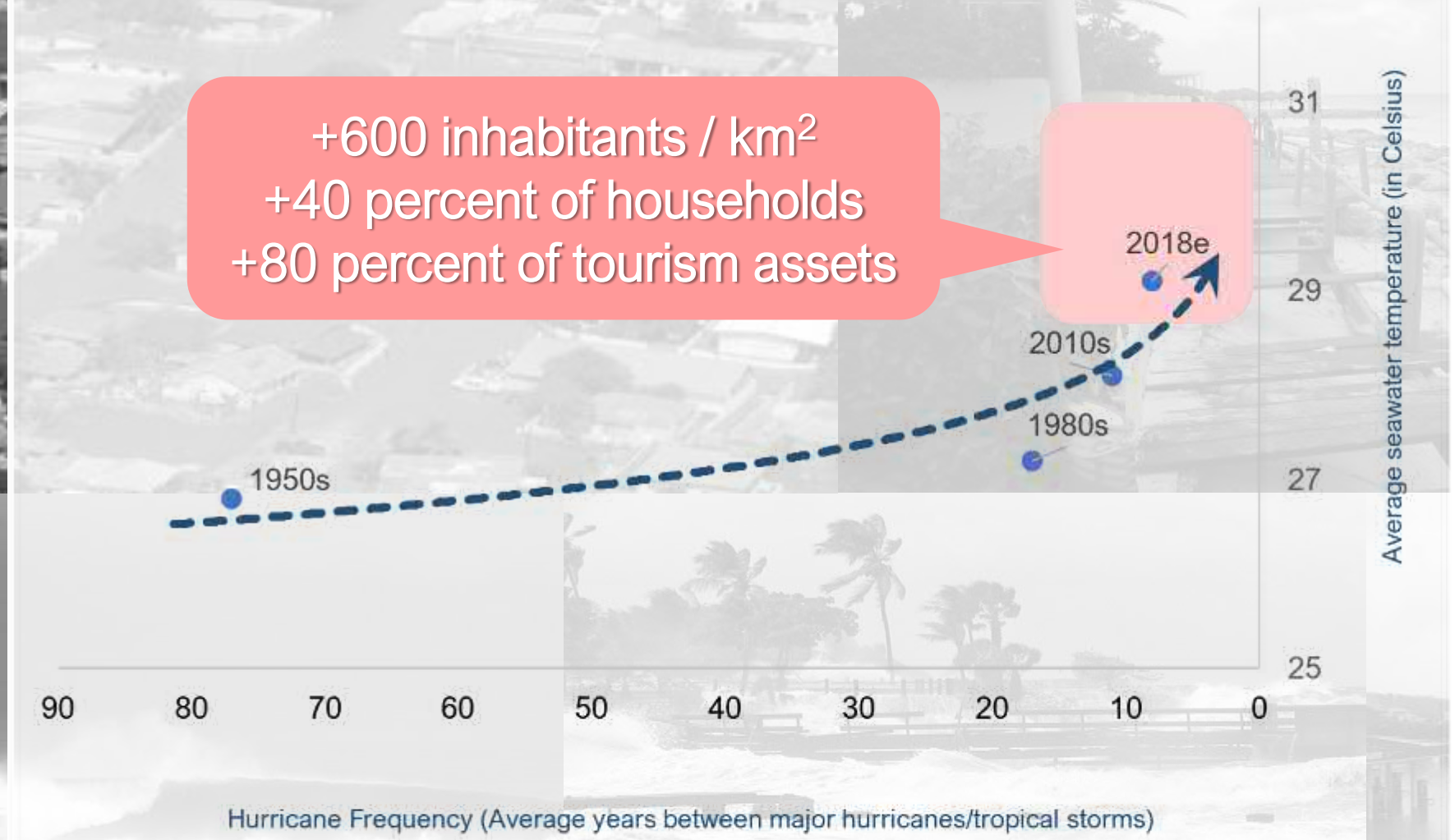
- Responsible Consumption and Sustainable Production
- Doughnuts of Development
- Exploring New Frontiers
- Leading from a Circular Future

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 / km^2
+40 percent of households
+80 percent of tourism assets



Slow burn

Shocks

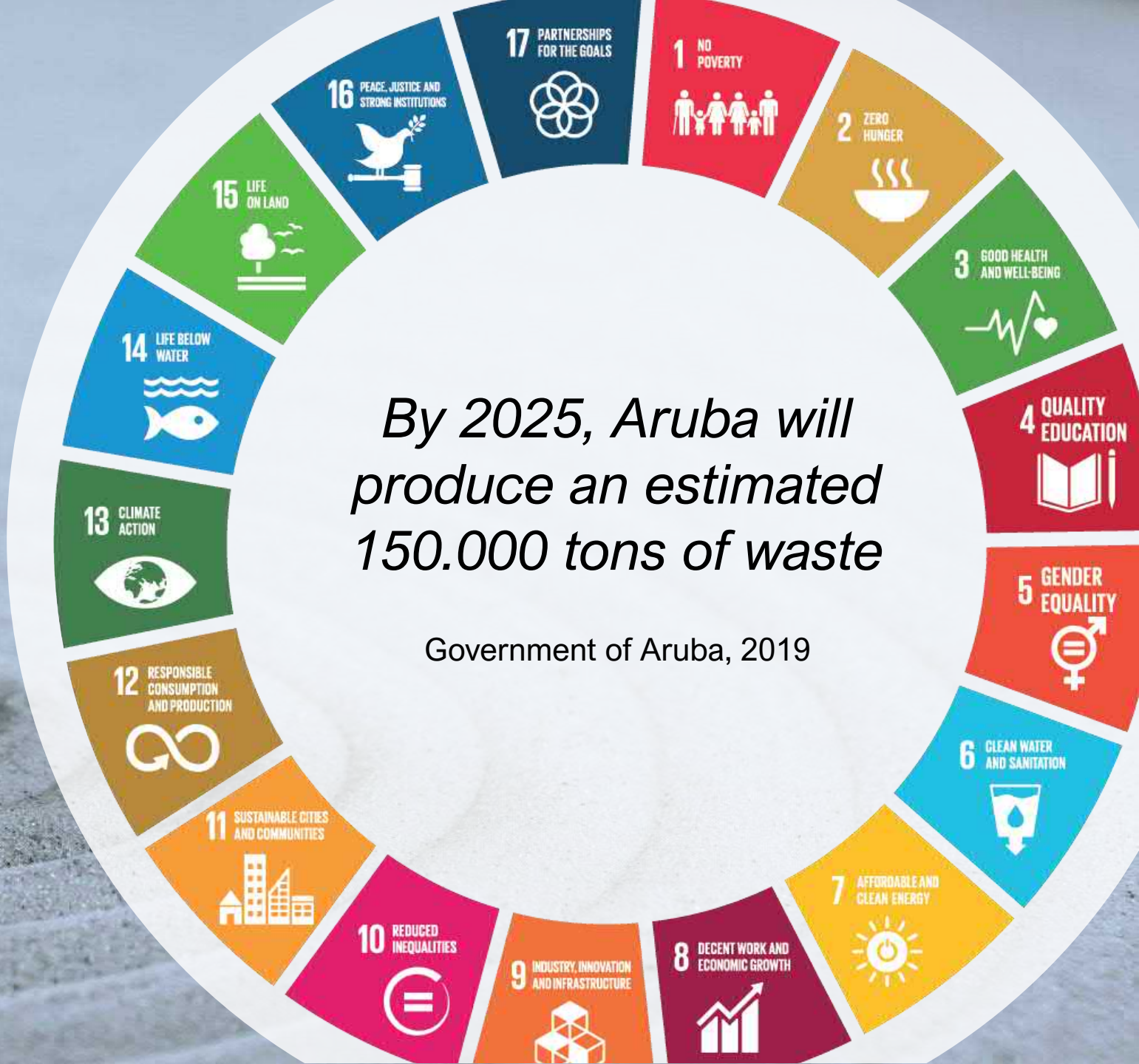

LOSS OF BIODIVERSITY
LIFE & WELL-BEING

Sustainable management of and efficient use of natural resources

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

Strengthen the technological capacity for responsible consumption and sustainable production

(UNSDG, 2017)



By 2025, Aruba will produce an estimated 150.000 tons of waste

Government of Aruba, 2019

Resource impact (footprint*)
Afl. 685 million

Responsible socio-ecological boundaries

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

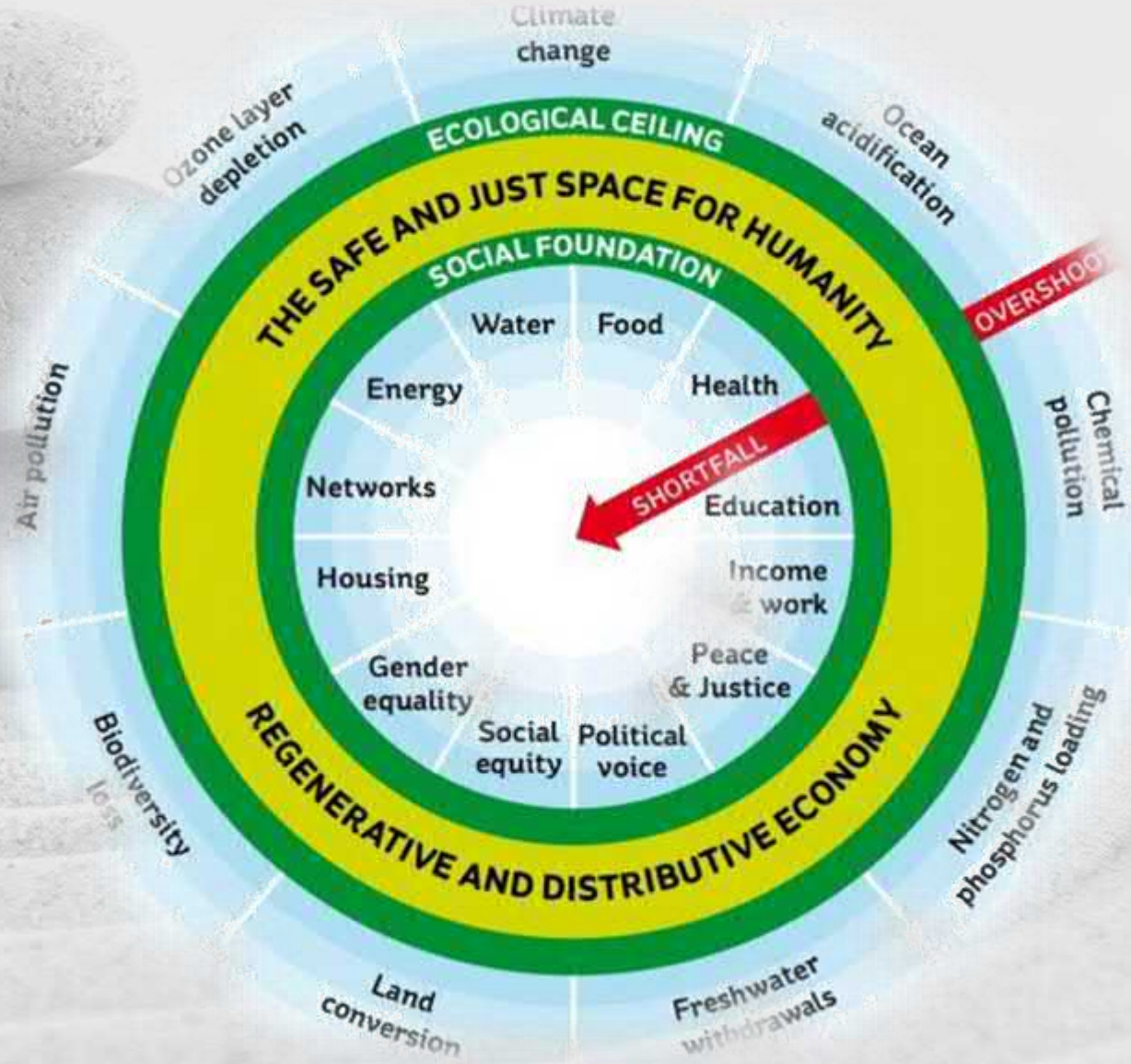
Ecological impact (services**)
Afl. 517 million

(CBS, 2019; Wolfs Company, 2018) *Footprint of Utilities, Construction, Tourism, and Real-Estate sectors based on National Accounts 2017 ** Services based on Natural Capital Accounting

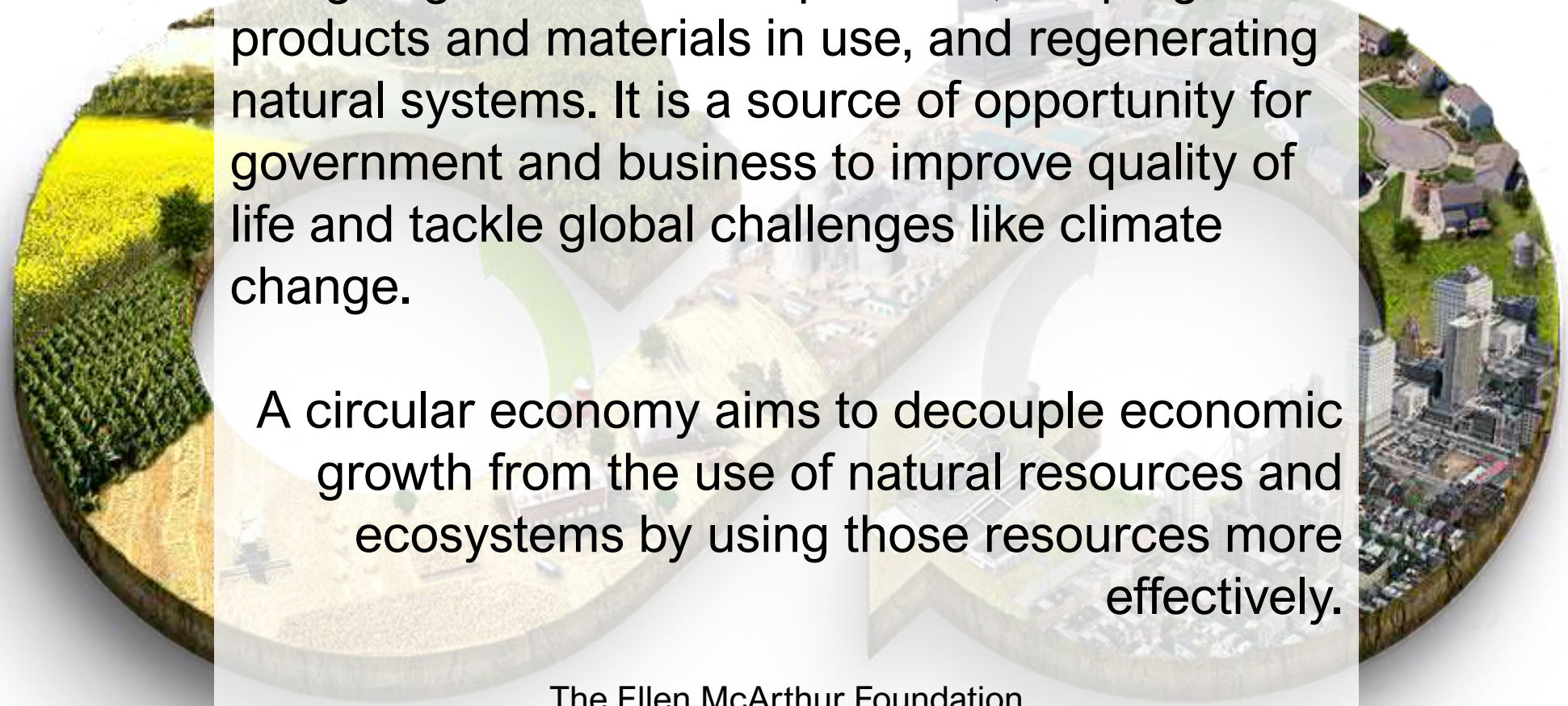
DOUGHNUTS OF DEVELOPMENT

(Kate Raworth, 2017)

BROKEN ECOLOGICAL CEILING?



(Kate Raworth, 2017)

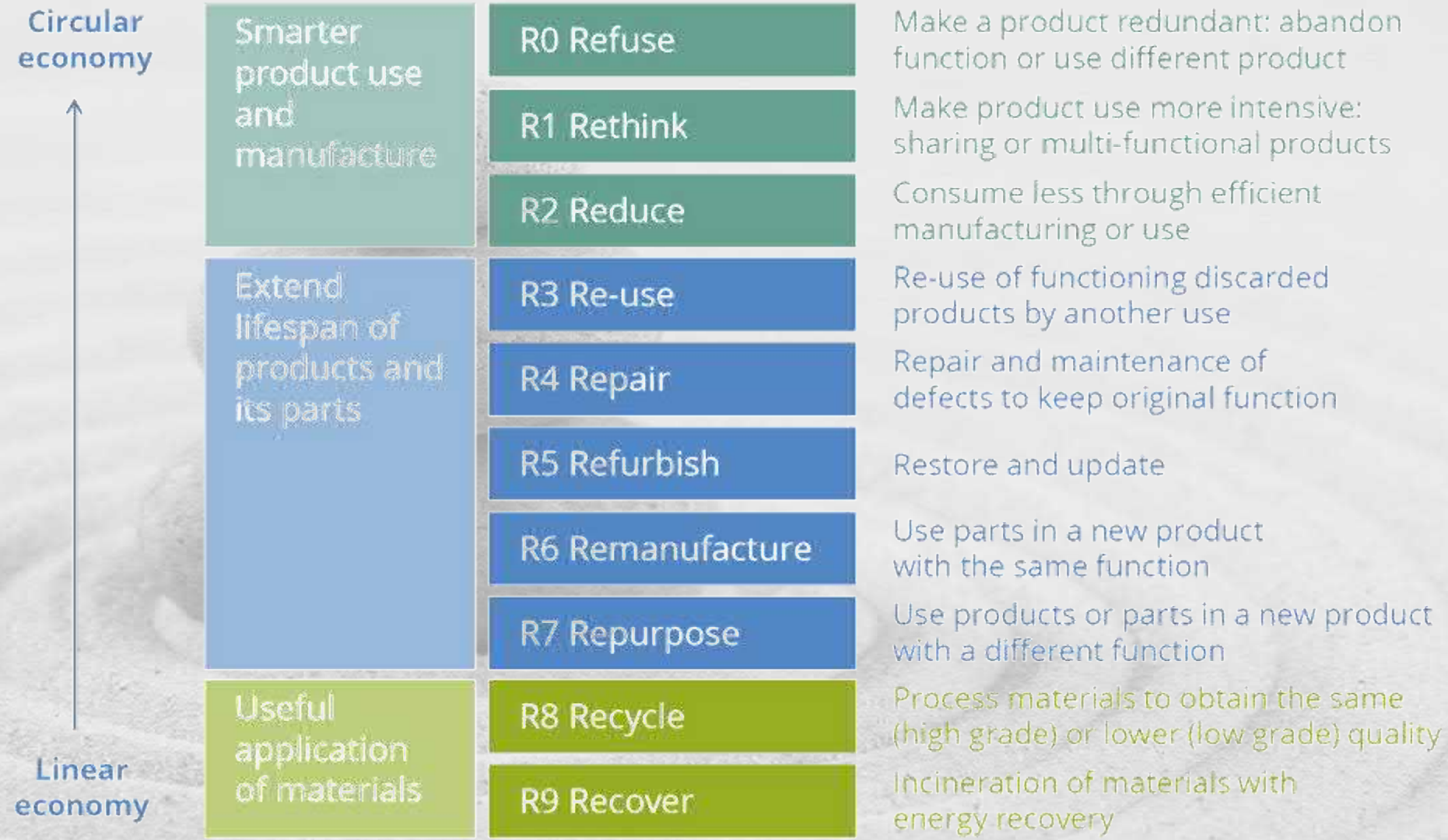


A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems. It is a source of opportunity for government and business to improve quality of life and tackle global challenges like climate change.

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



Most sustainable
Significant benefits

Least sustainable
Limited benefits

(Kircherr et al., 2017)

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

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

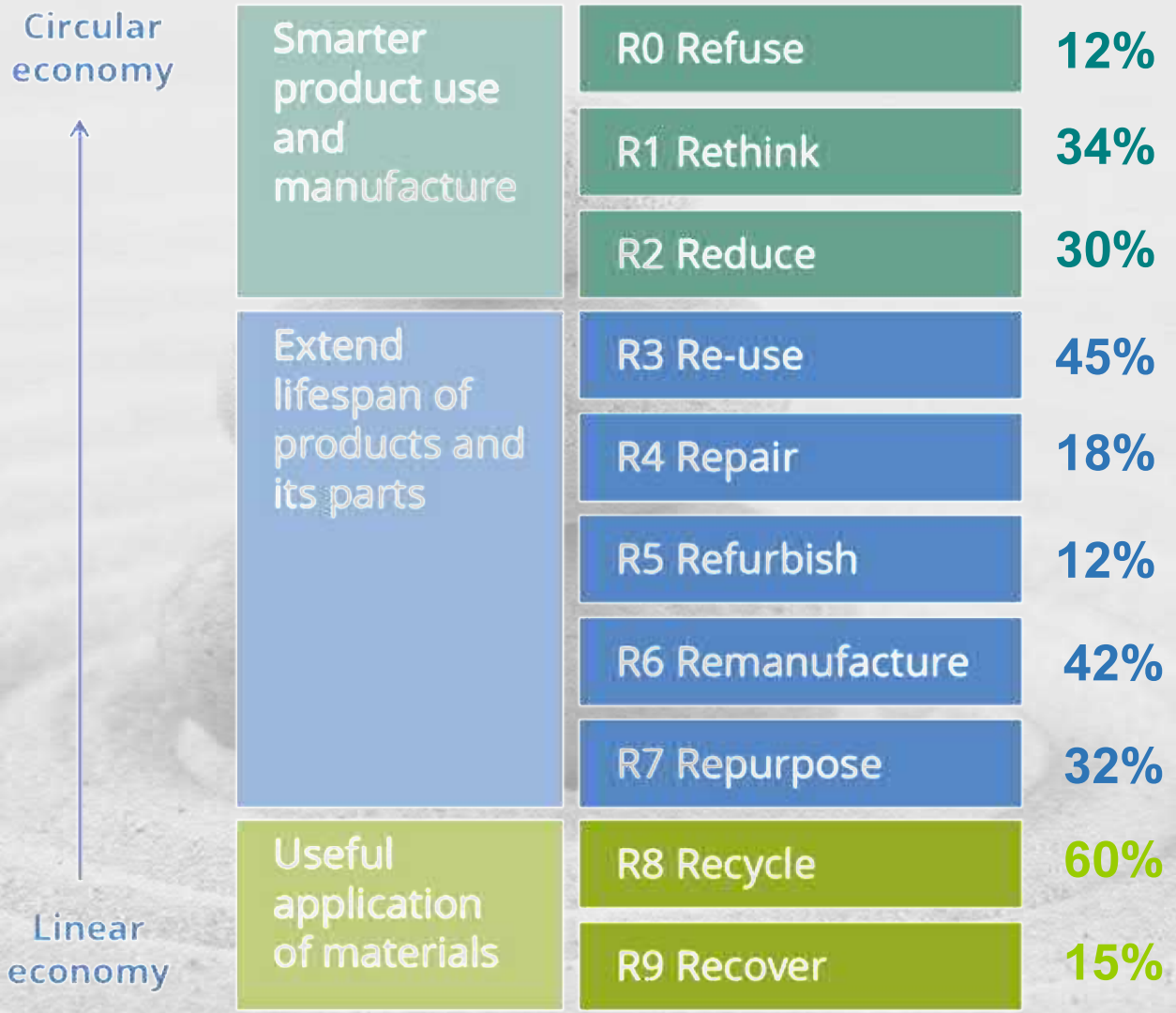
7a-b Contribution of recycled materials to raw materials demand
Secondary raw materials' share of overall materials demand - for specific materials and for the whole economy

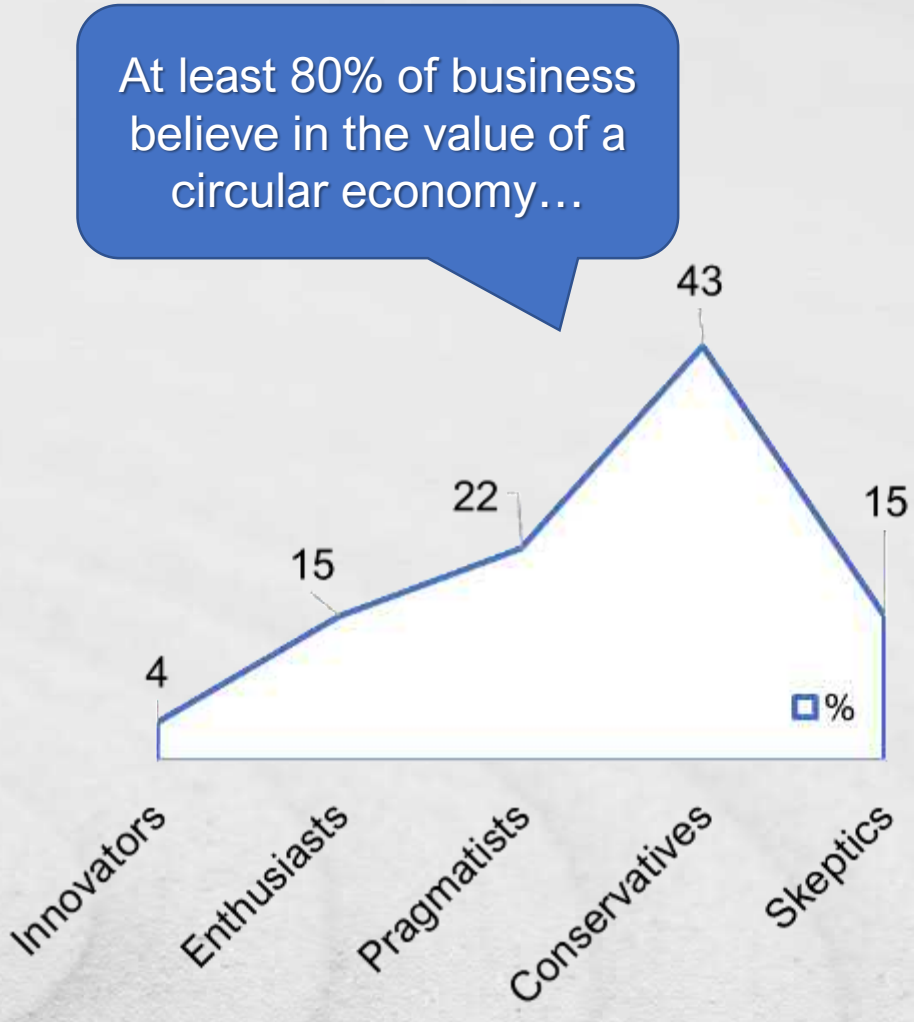
8 Trade in recyclable raw materials
Imports and exports of selected recyclable raw materials

9a-c Private investments, jobs and gross value added
Private investments, number of persons employed and gross value added in the circular economy sectors

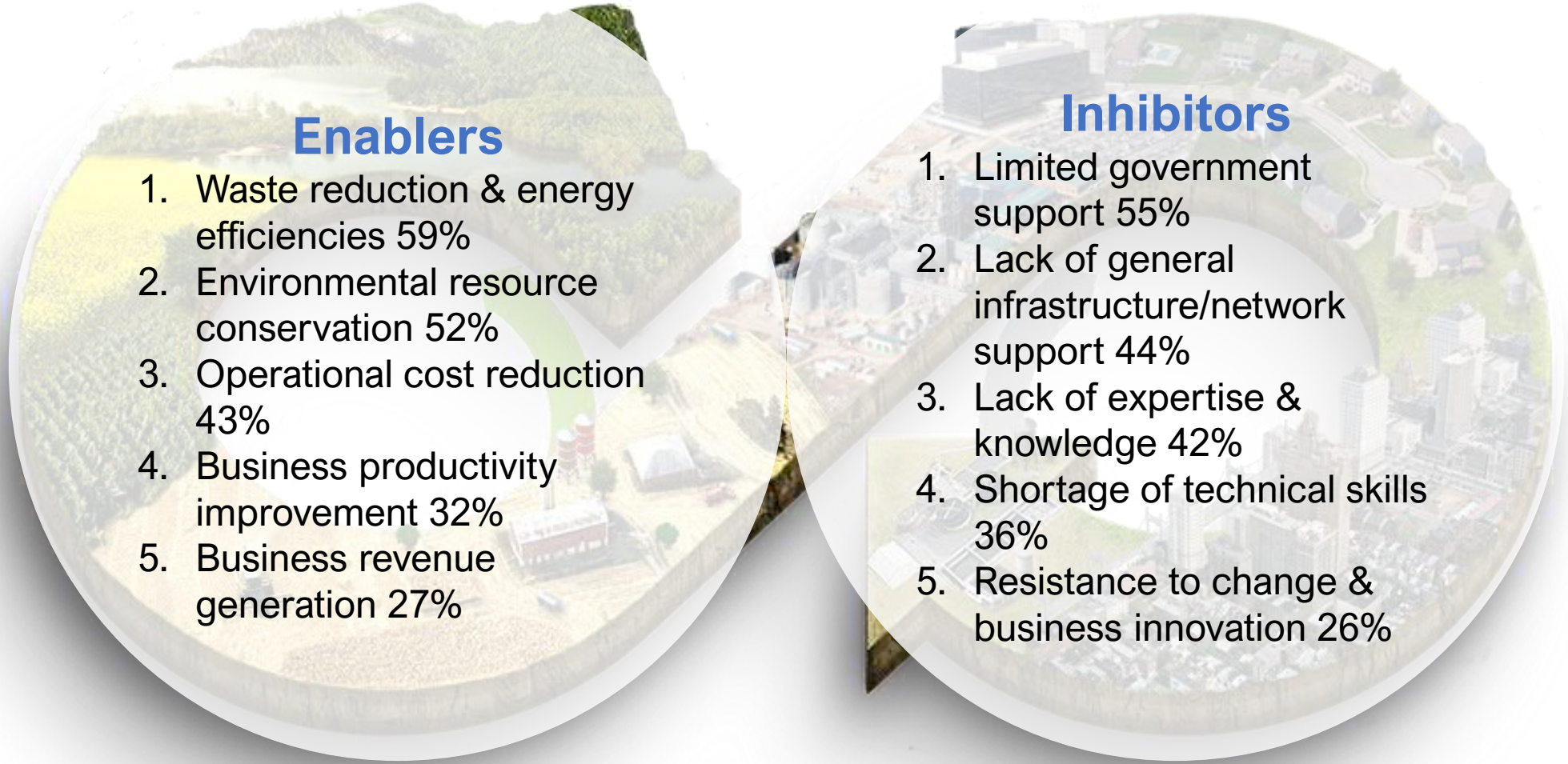
10 Patents
Number of patents related to waste management and recycling

(https://ec.europa.eu/eurostat/web/circular-economy/indicators)





Stages of circular business model innovation



Enablers

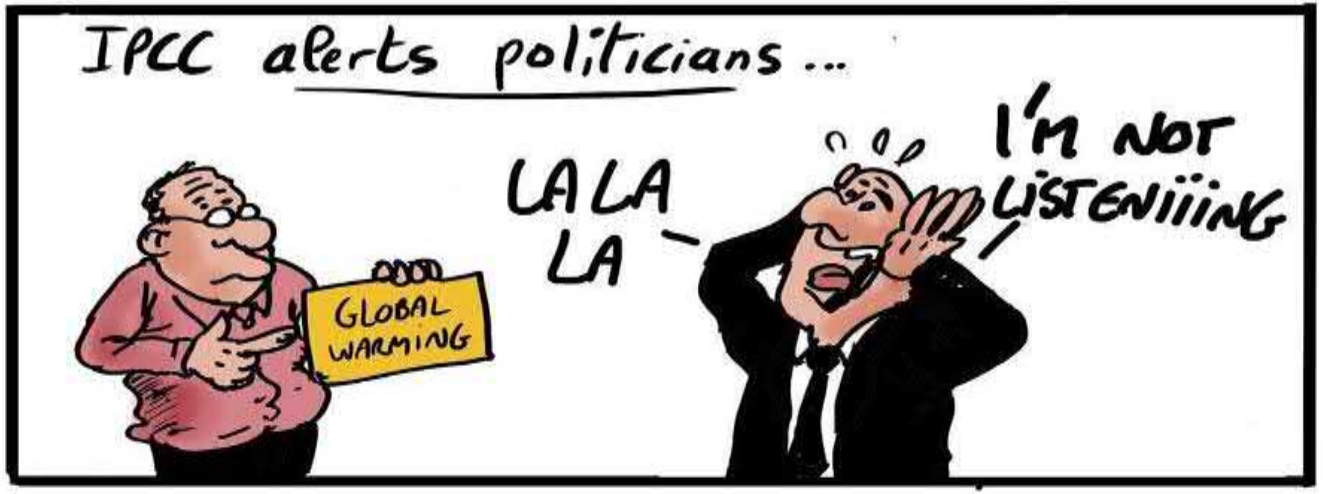
1. Waste reduction & energy efficiencies 59%
2. Environmental resource conservation 52%
3. Operational cost reduction 43%
4. Business productivity improvement 32%
5. Business revenue generation 27%

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)



Thank you

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