

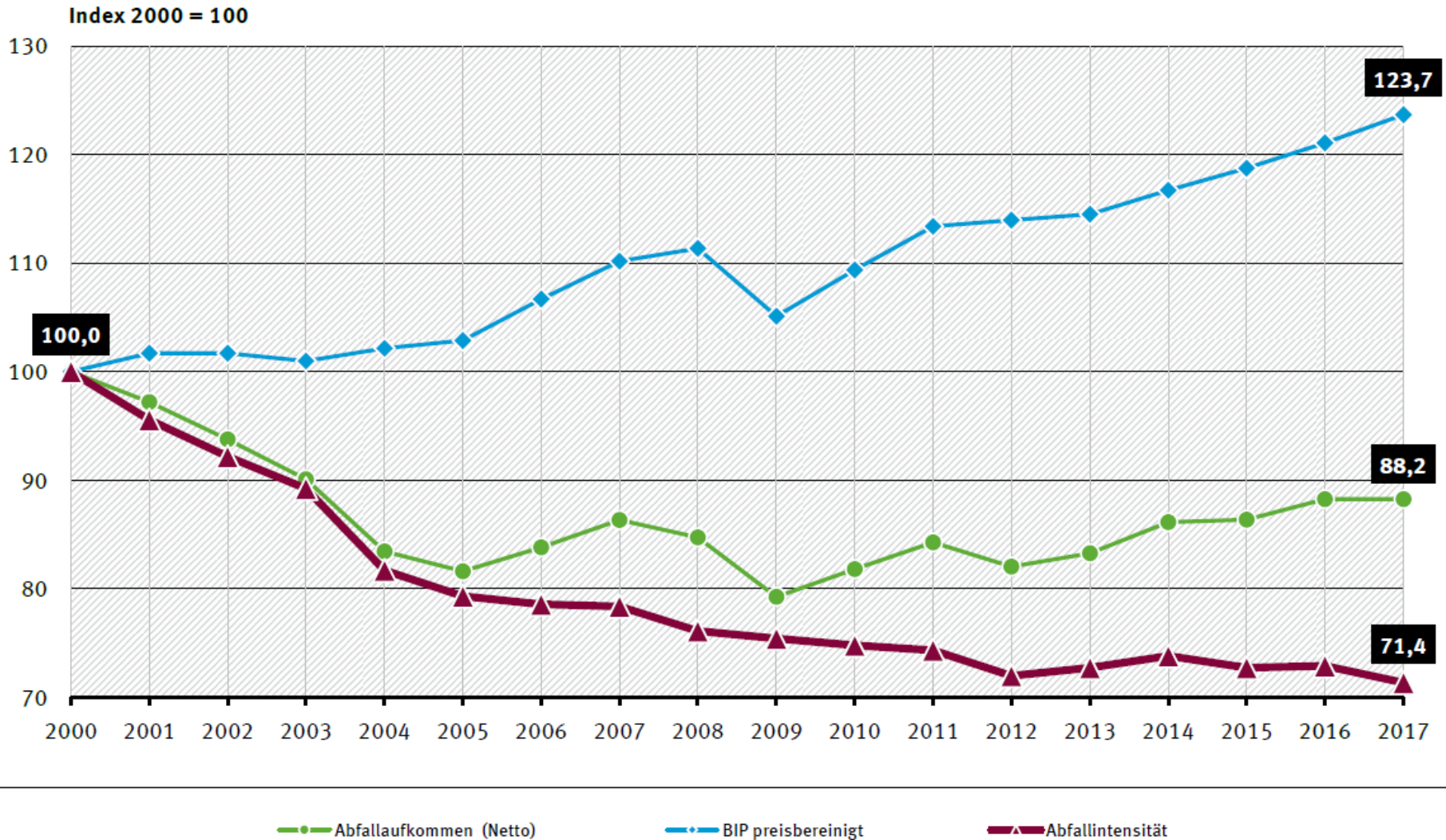
Circular economy in Germany



GERMANY: wealth vs resource scarcity

- ❖ 81.5 million inhabitants
- ❖ 3,500 million. € GDP €
- ❖ 41,300 GDP / per capita
- ❖ 417 mio. T waste
- ❖ 56 mio. T industrial waste
- ❖ 46 mio T household waste
- ❖ 455 kg household waste / capita
- ❖ 68 kg packaging / capita
- ❖ Second hand 43%
- ❖ Reuse 90%,
- ❖ 70% material reuse

Disconnection of GDP from waste generation



Recycling opportunities

Minimum Recovery for Packaging Waste in Germany

	as of 2019	as of 2022
Plastic packaging	58%	63%
Aluminum	80%	90%
Tinplate and ferrous metals	80%	90%
Paper and cardboard	85%	90%
Glass	80%	90%
Beverage carton	75%	80%

Source: Deutscher Bundestag, BMU 2019

New Recycling Potential: Chances for Innovative Companies



1 million e-bikes sold in Germany in 2018



1 million tons of used textile waste generated each year in Germany



12,000 onshore wind turbines in Germany reach end of funding period in 2025



400 GWh electric vehicle battery demand in Europe by 2028

Sources: BVSE, ZIV, BMWi, European Battery Alliance 2019

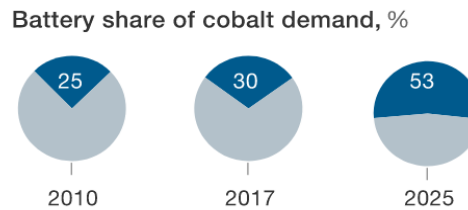
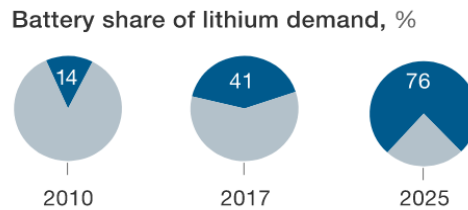
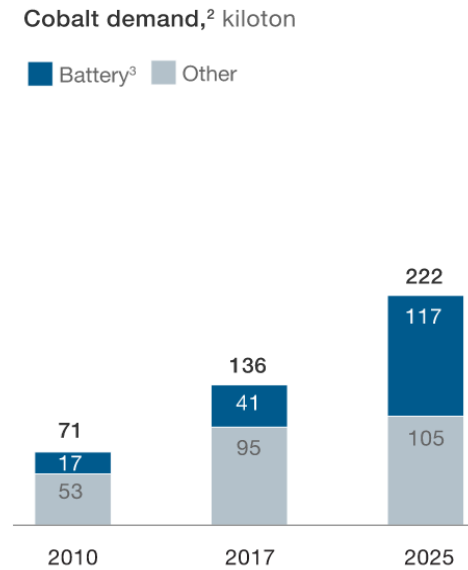
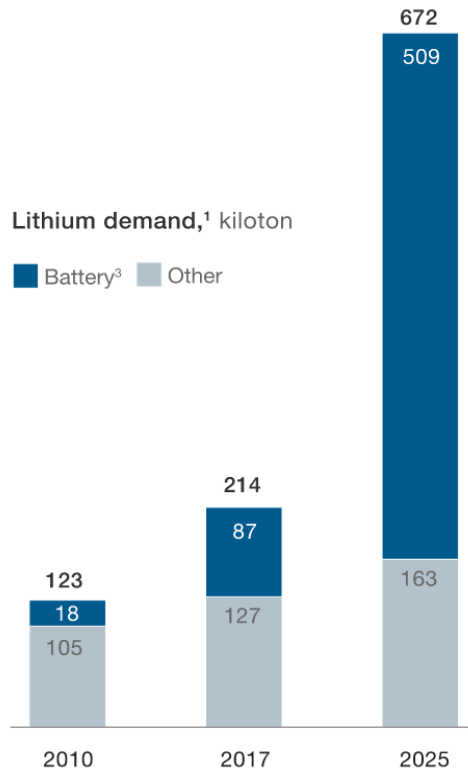
Der Grüne Punkt



Real Vision Systems



Battery recycling



¹Lithium carbonate equivalent.

²Refined metal equivalent.

³Includes automotive (hybrid-, plug-in hybrid-, and battery-electric vehicles), trucks and buses (light, medium, and heavy), two and three wheelers, machinery (forklifts and others), grid storage, and consumer electronics.

Note: Figures may not sum to listed totals, because of rounding.

CO₂ as a raw material



„digital” nanoscale materials



BOSCH

Invented for life



„never change a running system“
zero microplastic, 100% renewable



Recycling Exchange

recyclingboerse.org





Schokobruch.de



Business Model for plastic recycling



Second life

THE EASY WAY TO SELL AND BUY USED MACHINERY

SELL TO US

BUY FROM US

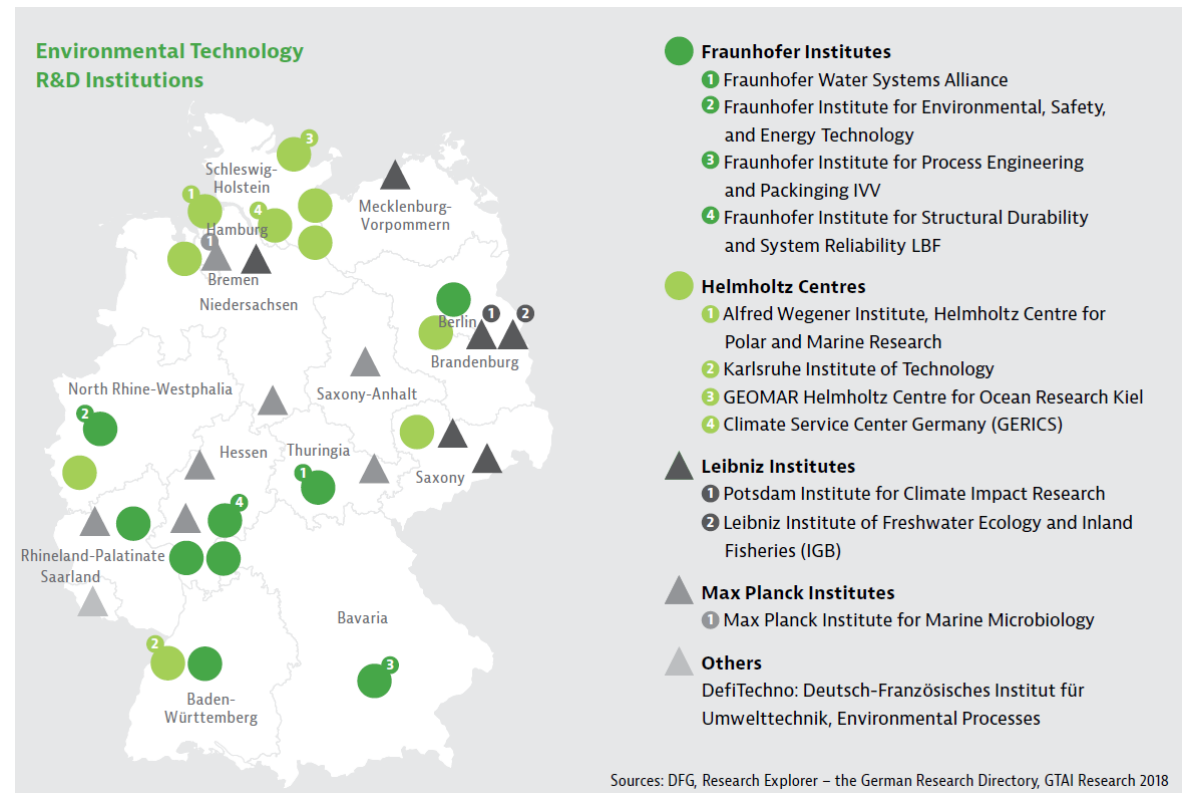


Circular economy & Innovation „made in Germany“

Institutos de I+D

Programas

- FONA
- KURT
- ProgRes III
- ZIM



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