



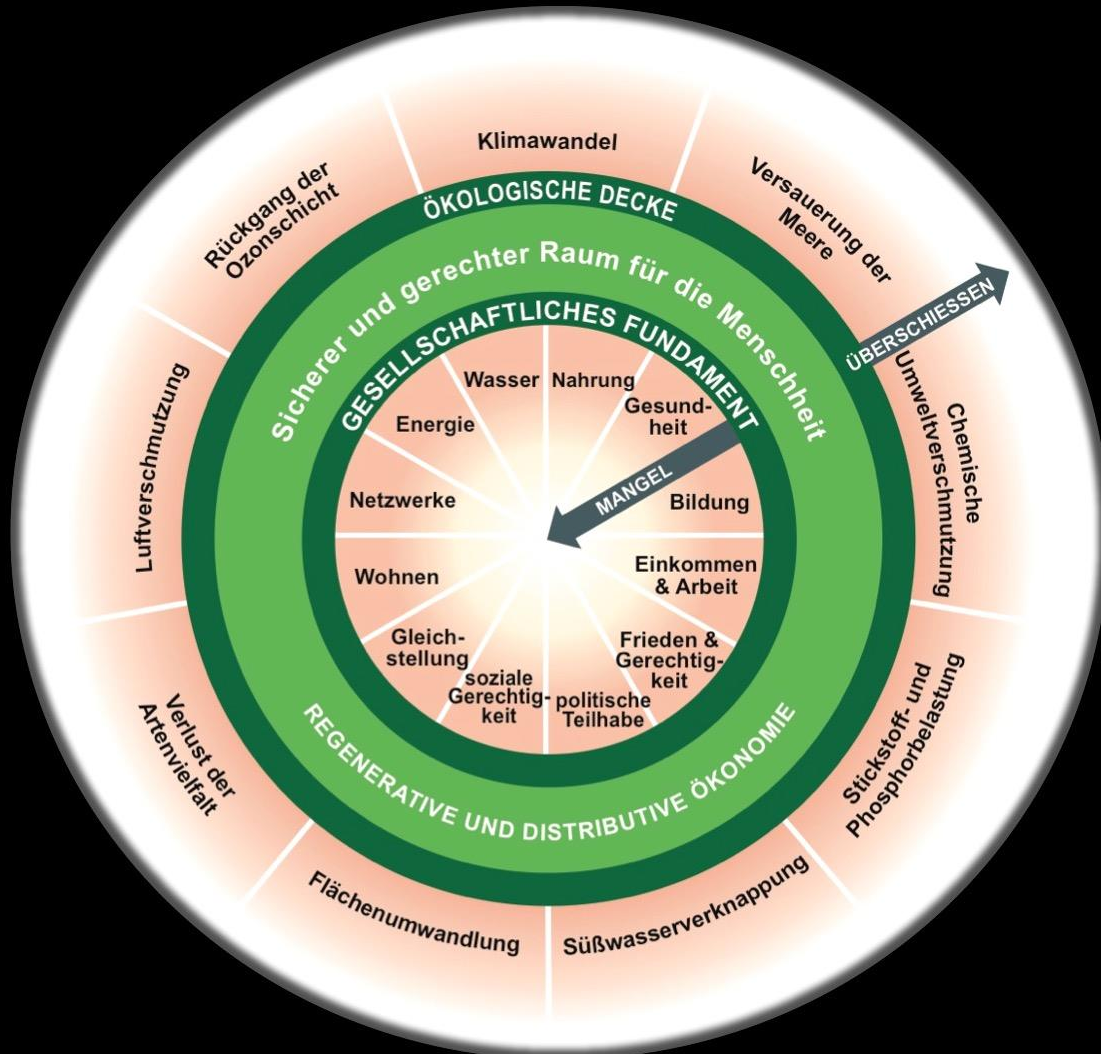
DOUGHNUT ECONOMICS

Seven Ways to Think Like a
21st-Century Economist

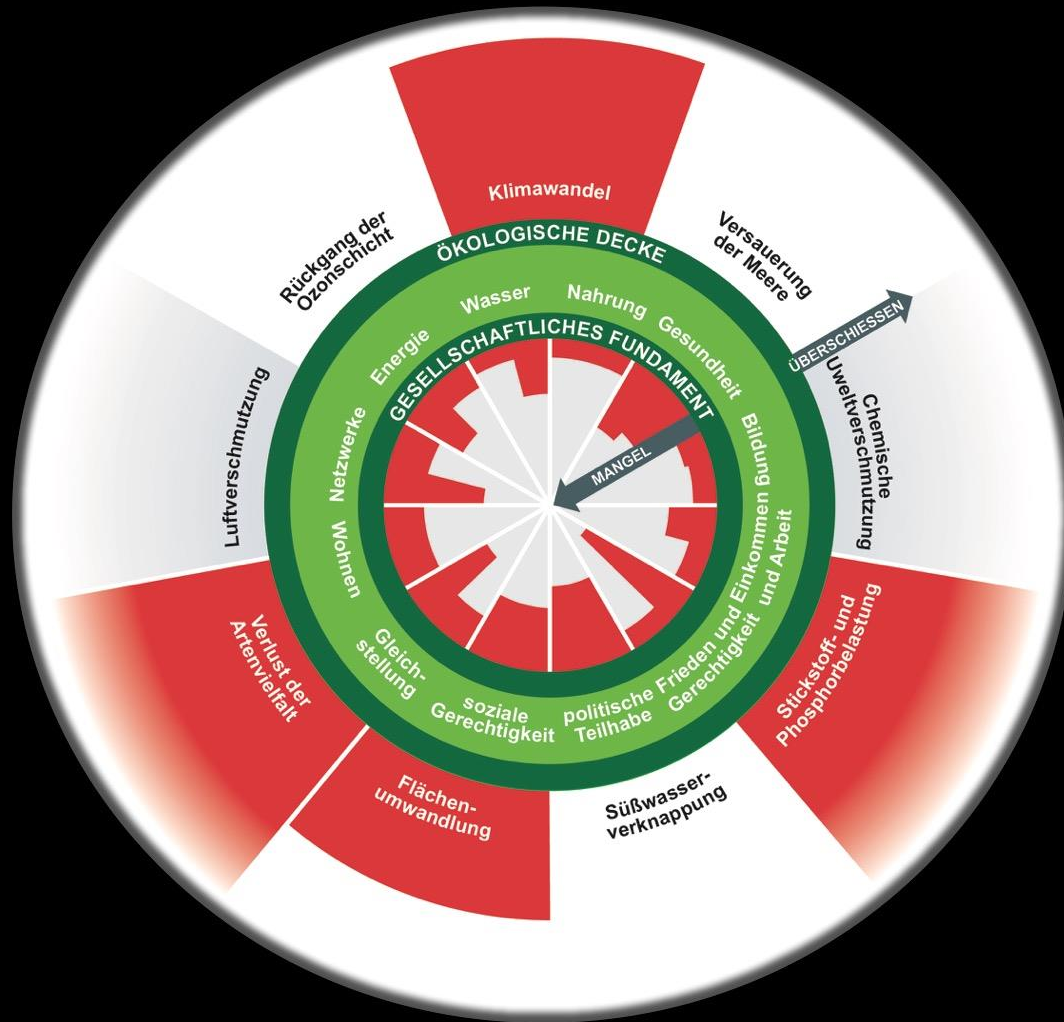
KATE RAWORTH

@KateRaworth





Raworth (2017)
Steffen et al (2015)



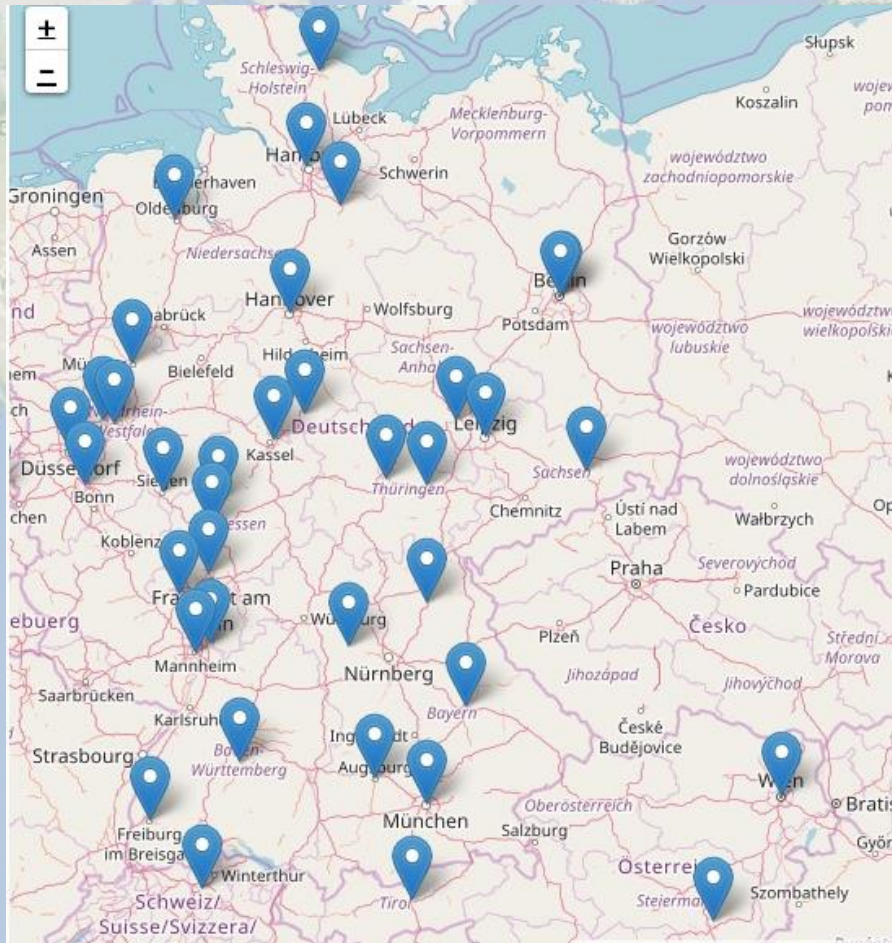
Raworth (2017)
Steffen et al (2015)

DEPARTMENT OF ECONOMICS

SCHOOL OF HUMANITIES, ARTS
AND SOCIAL SCIENCES

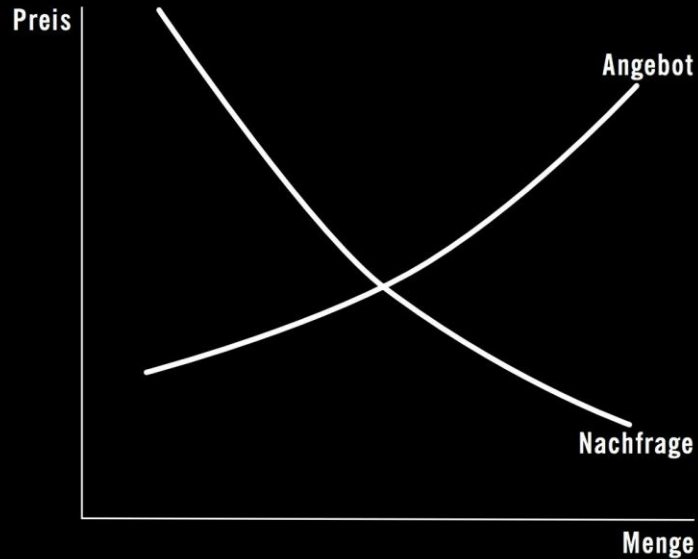


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ZOE. Institut
für zukunftsfähige Ökonomien

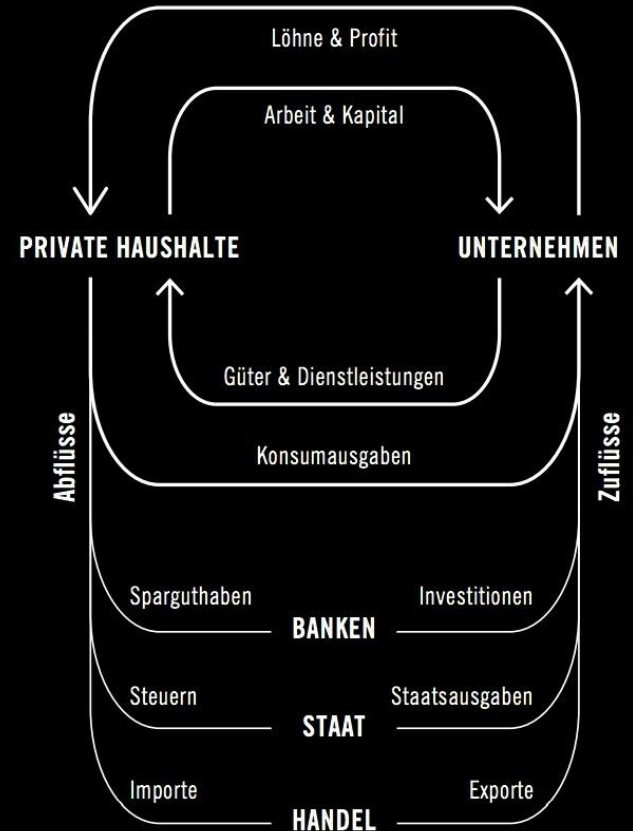
The first picture



The selfie



The biggest picture



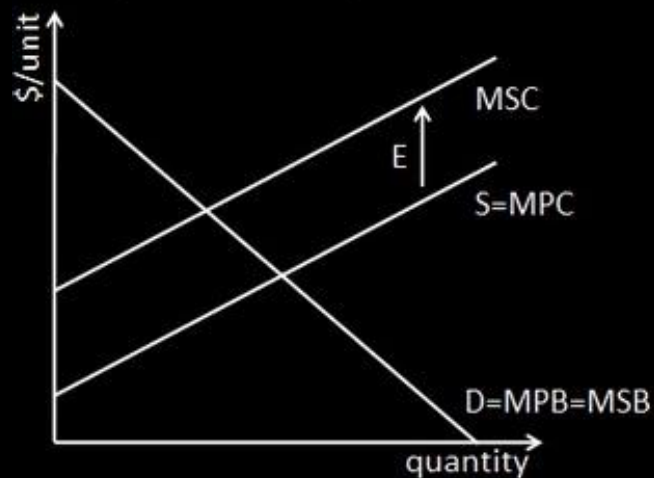
The living world

in words:

‘environmental externalities’

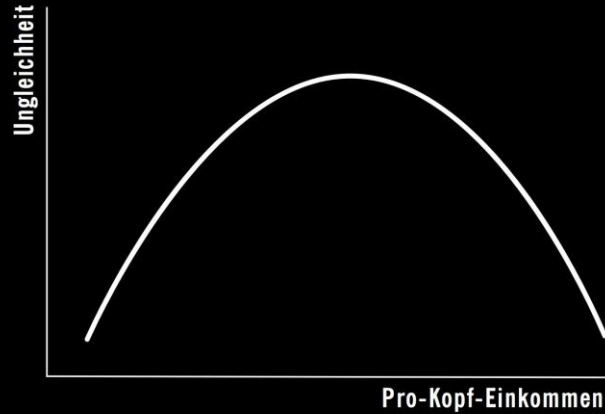
‘Umweltexternalitäten’

in pictures:



20th century 'economic laws of motion'

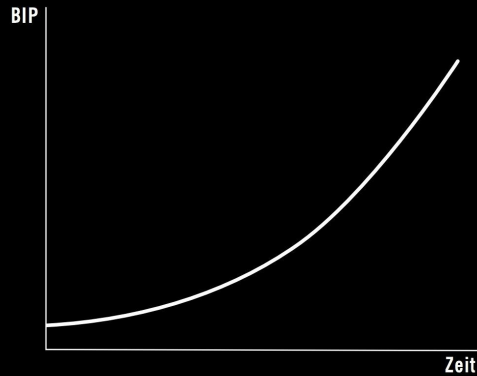
Inequality



**Growth will
even it up again**

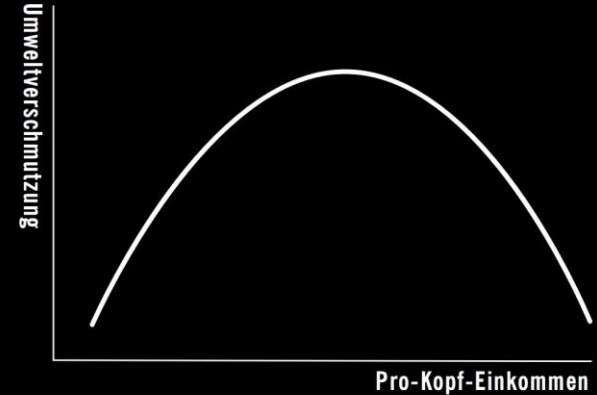
Kuznets (1955)

Growth



**Growth
is endless**

Pollution



**Growth will
clean it up again**

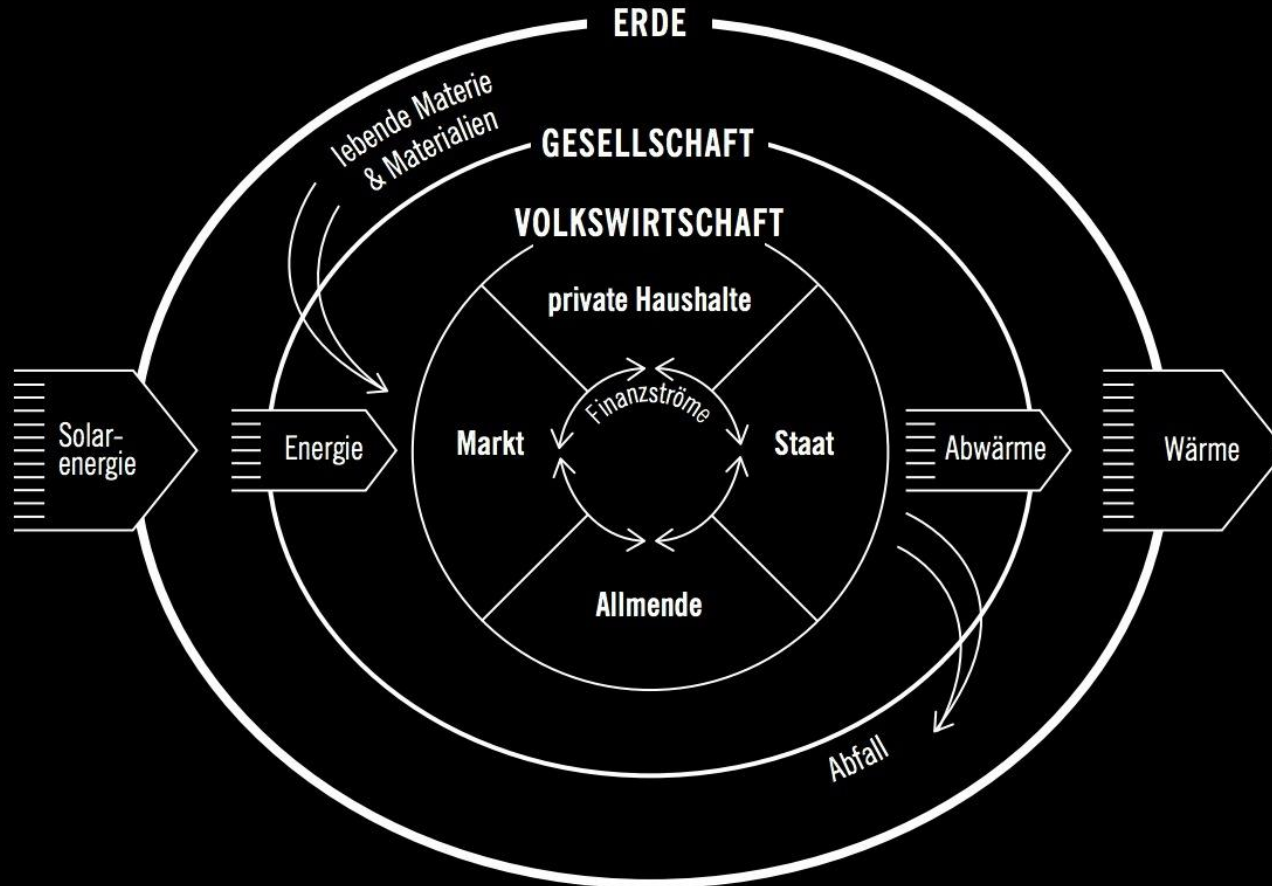
Grossman & Krueger (1995)

Economics is the science of
thinking in terms of models
joined to the art of
choosing models which
are relevant to the
contemporary world

John Maynard Keynes



The first image (and the biggest)



20

So long, Rational economic man



From:
self-interested
fixed preferences
isolated
work hating
dominant

21

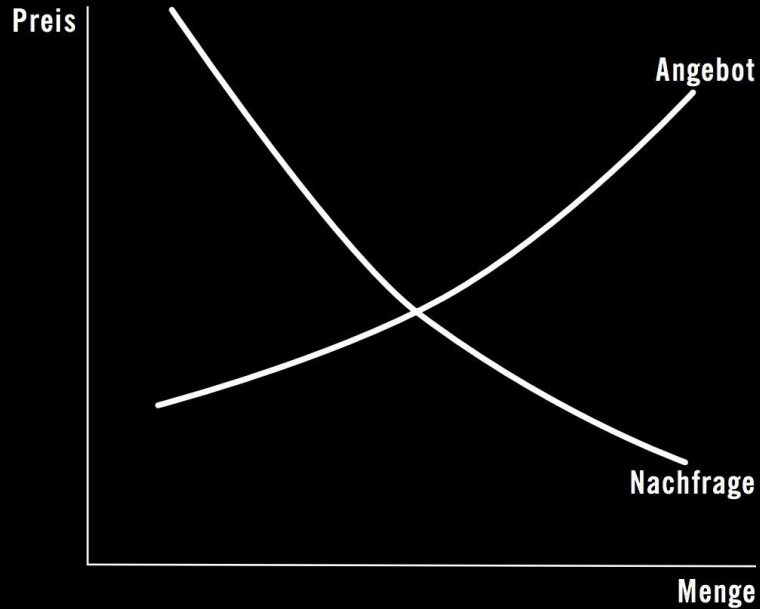
Hello Social adaptable humans

Towards:
socially reciprocating
fluid values
interdependent
purpose seeking
dependent



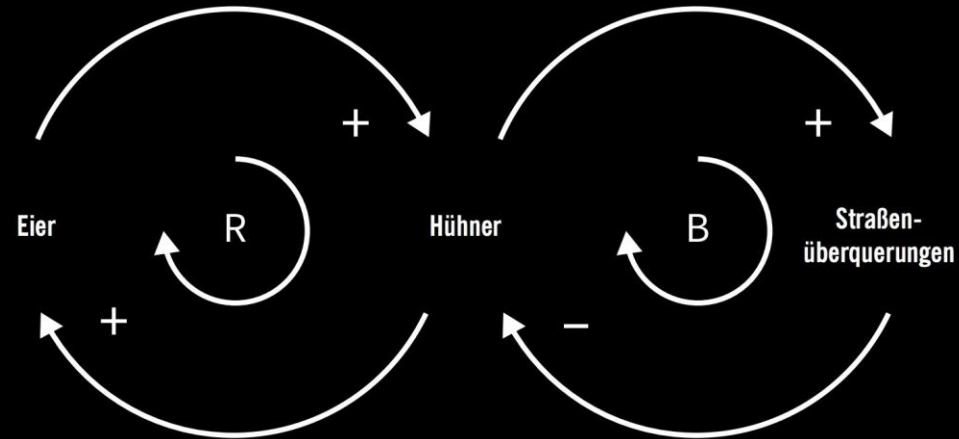
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Don't start with equilibrium



21

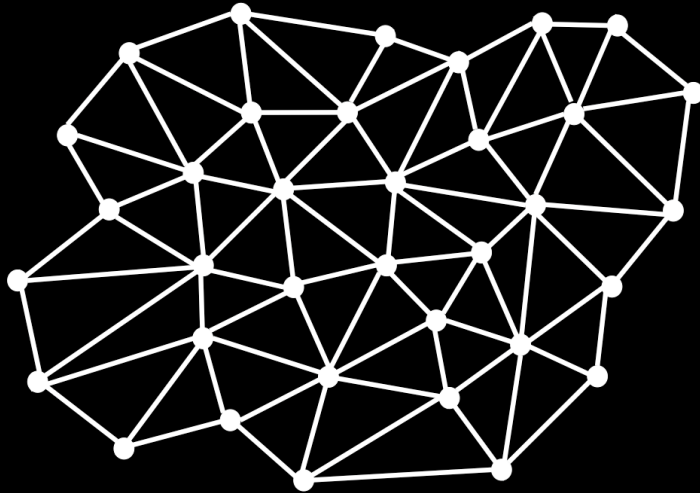
Start with complexity



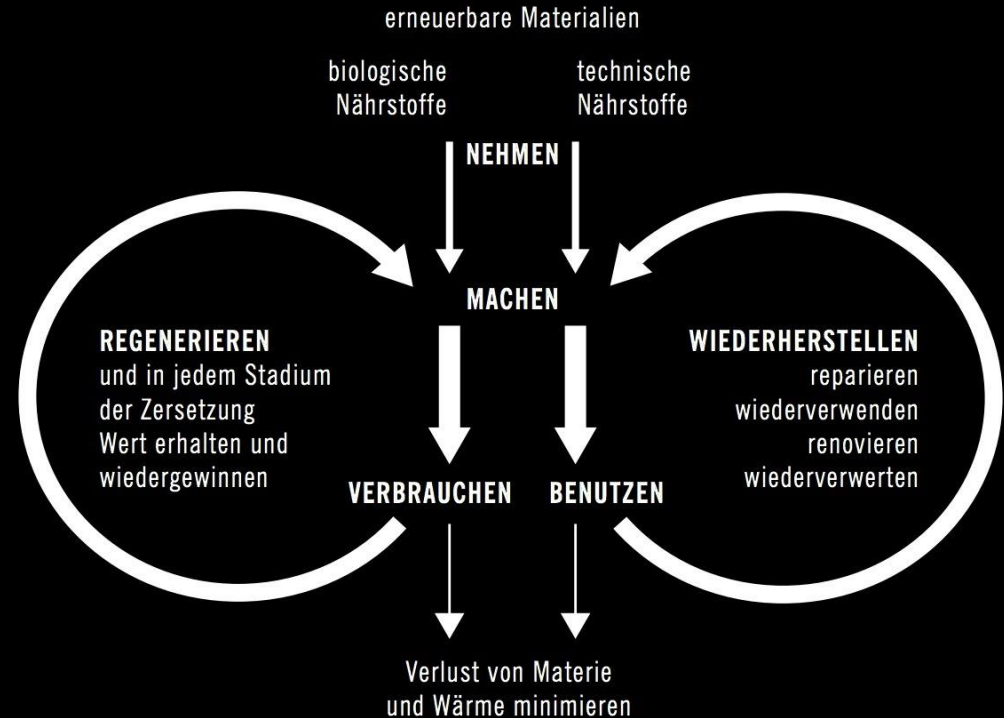
21st century economic principles of design

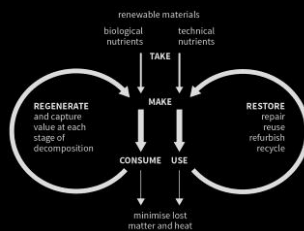
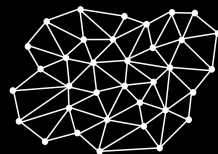


Distributive by design



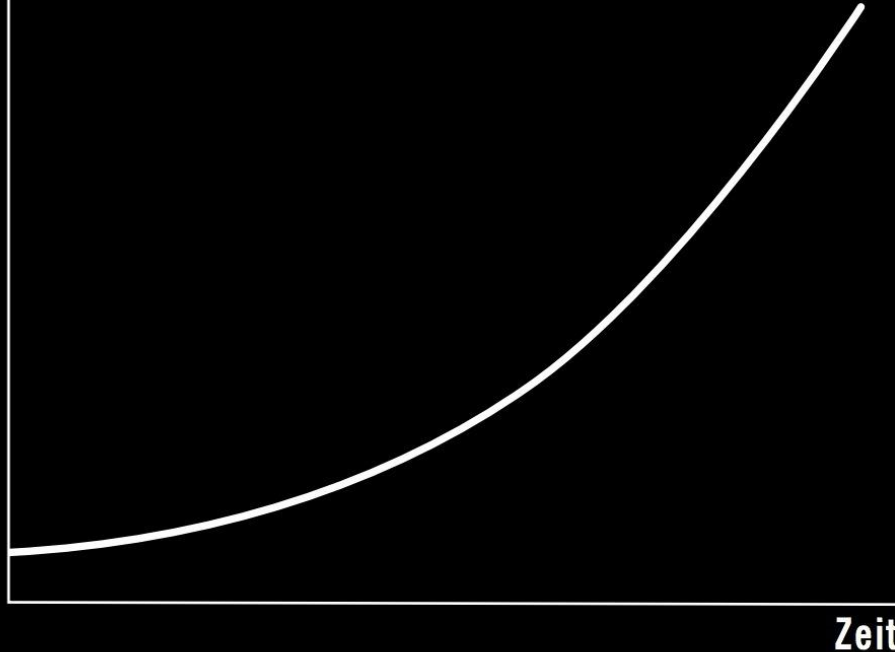
Regenerative by design



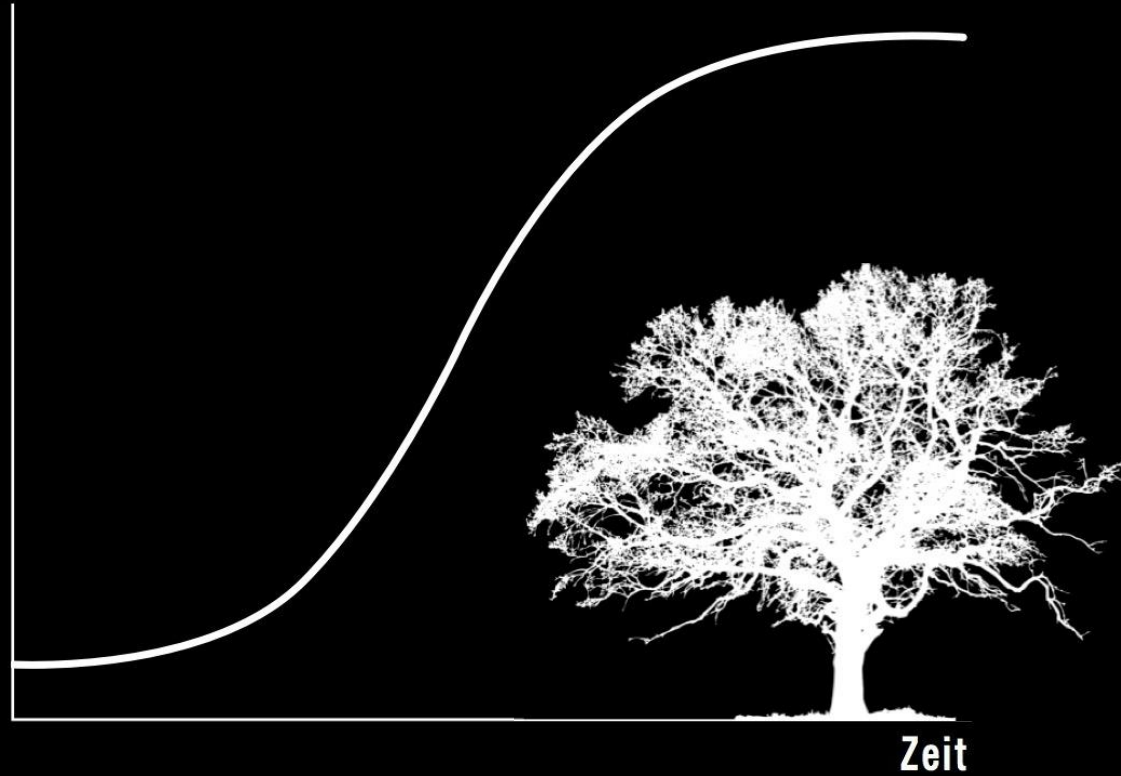


We have economies that need to grow
whether or not they make us thrive

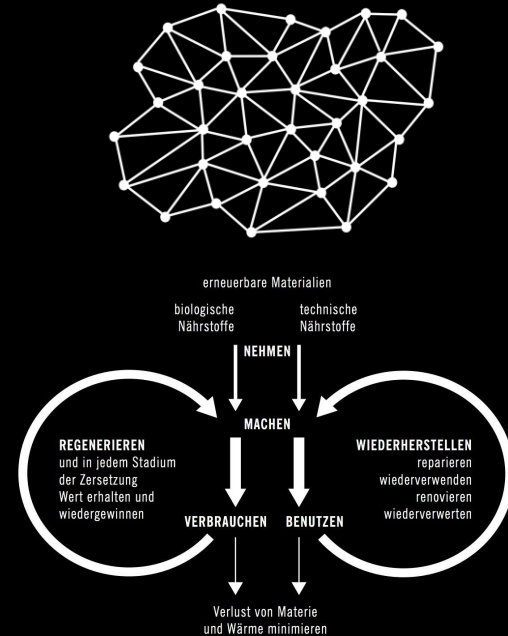
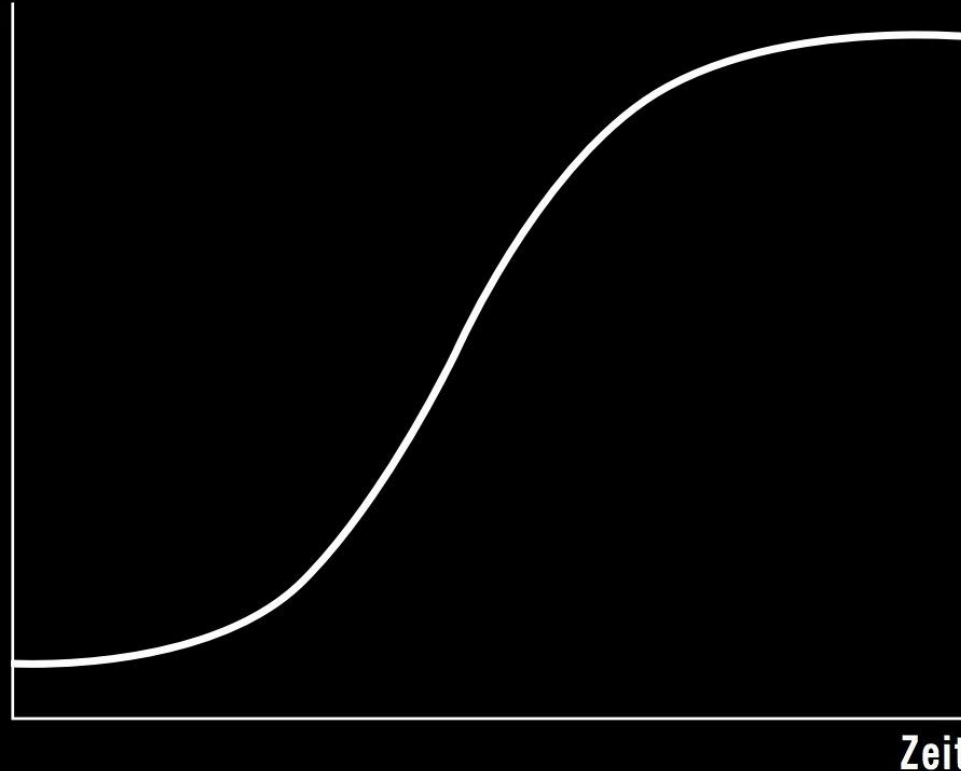
BIP



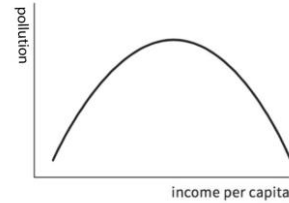
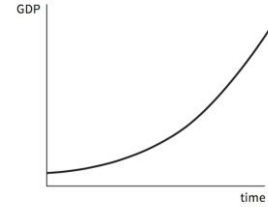
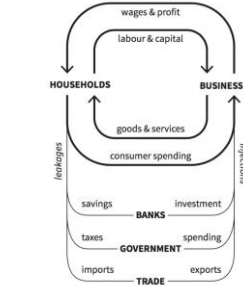
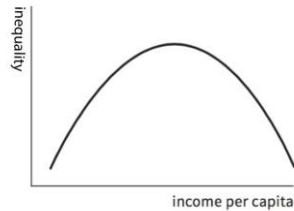
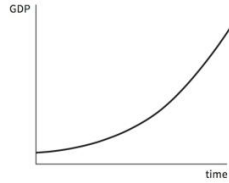
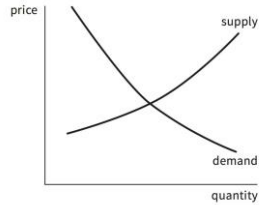
Nature's growth curve



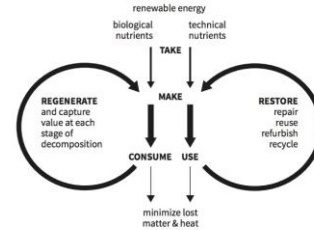
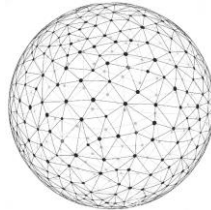
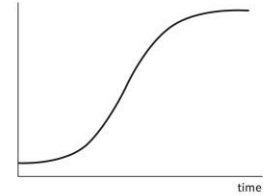
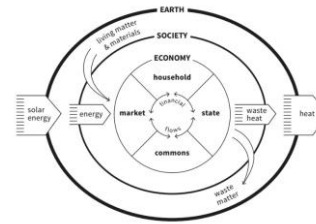
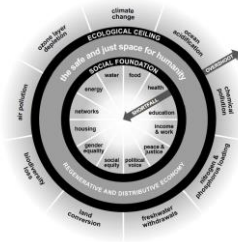
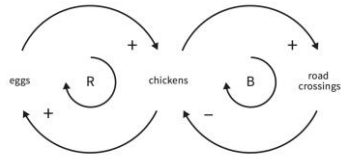
We need economies that make us thrive whether or not they grow



20TH CENTURY ECONOMICS



21ST CENTURY ECONOMICS



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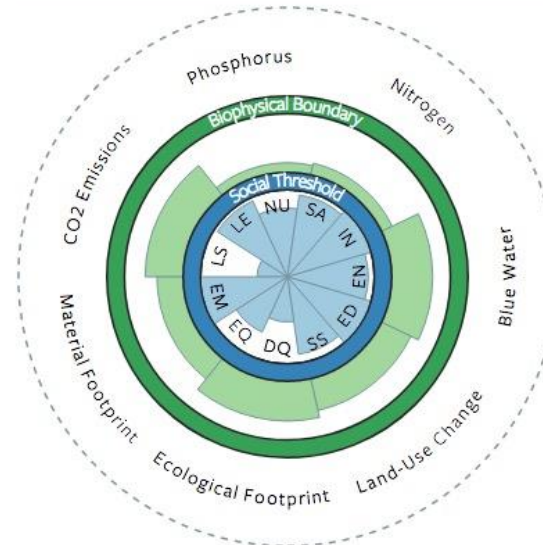
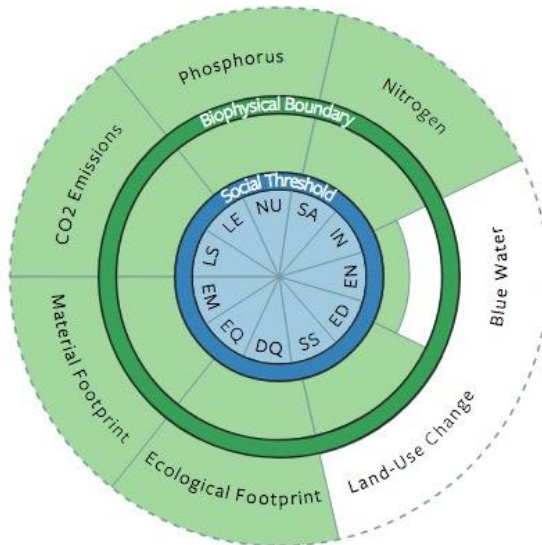
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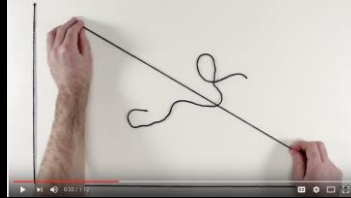
A Good Life For All Within Planetary Boundaries

Austria ▾

Sri Lanka ▾




Watch



kateraworth.com/animations

Discuss

 discuss doughnut economics

Regenerative Design
From 'growth will clean it up again' to regenerative by design

Distributive Design
From 'growth will even it up again' to distributive by design

Be Agnostic About Growth
(video coming soon)

Doughnut For Business

Doughnut for Government

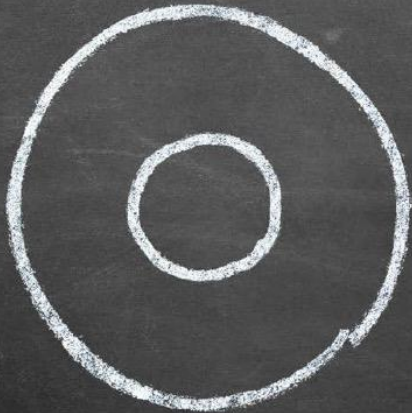
Doughnut for Cities

Teaching Doughnut Economics

discuss.doughnuteconomics.org

Kate Raworth

DIE **DONUT-
ÖKONOMIE**



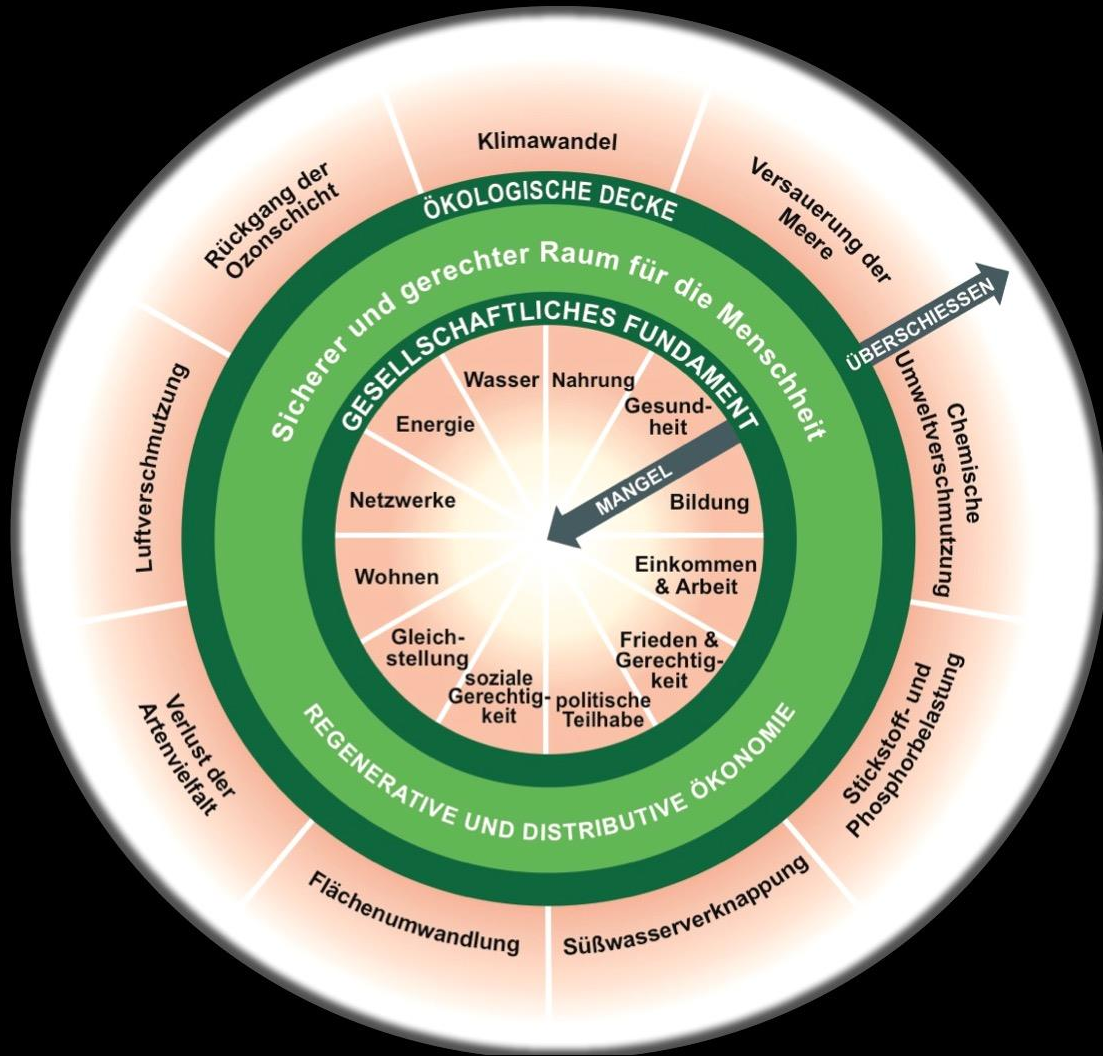
Endlich ein Wirtschaftsmodell,
das den Planeten nicht zerstört

HANSER

@KateRaworth

kateraworth.com

#donutEcon



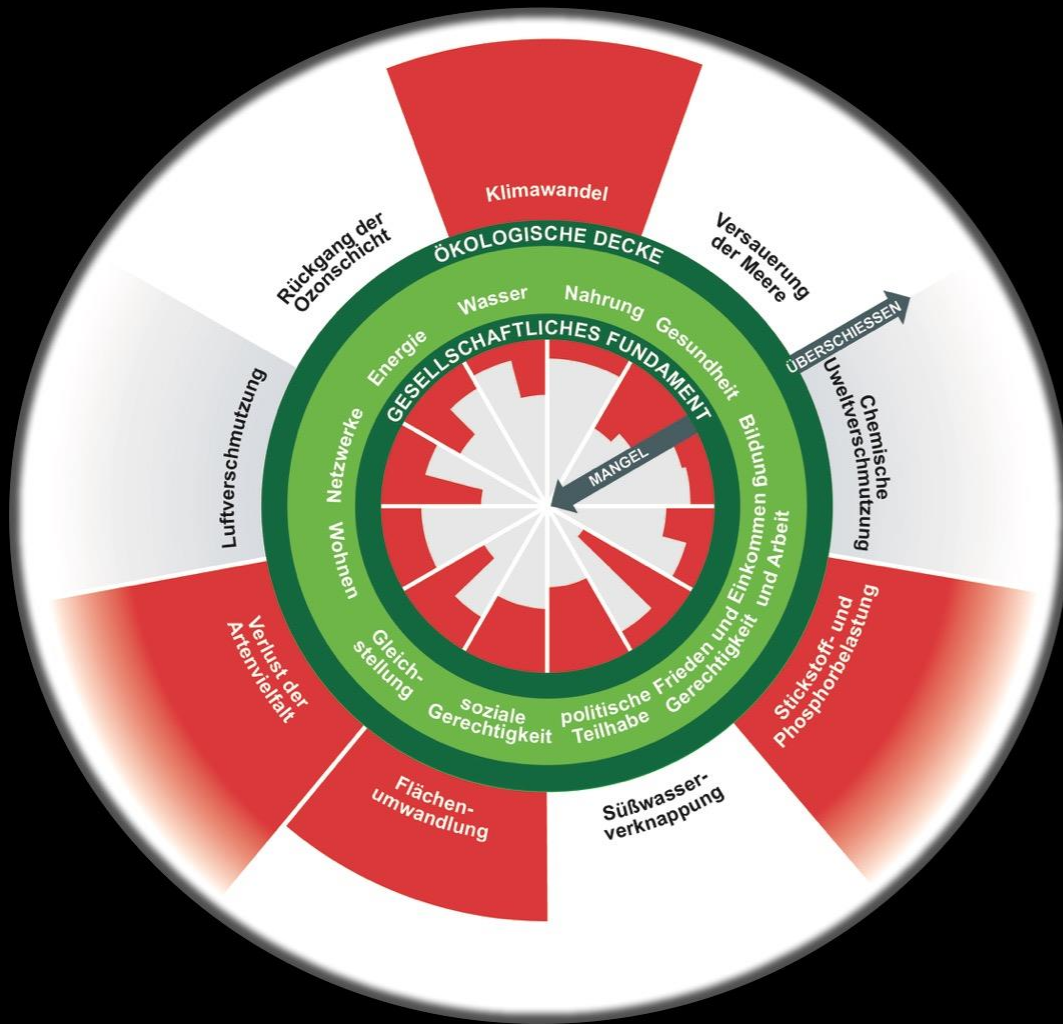


Table 2. The ecological ceiling and its indicators of overshoot

Earth-System Pressure	Control Variable	Planetary Boundary	Current Value and Trend
Climate change	Atmospheric carbon dioxide concentration, parts per million (ppm)	At most 350ppm	400ppm and rising (worsening)
Ocean Acidification	Average saturation of aragonite (calcium carbonate) at the ocean surface, as a percentage of pre-industrial levels	At least 80% of pre-industrial saturation levels	Around 84% and falling (intensifying)
Chemical Pollution	No global control variable yet defined	—	—
Nitrogen and Phosphorus Loading	Phosphorus applied to land as fertiliser, millions of tons per year	At most 6.2 million tons per year	Around 14 million tons per year and rising (worsening)
	Reactive nitrogen applied to land as fertiliser, millions of tons per year	At most 62 million tons per year	Around 150 million tons per year and rising (worsening)
Freshwater Withdrawals	Blue water consumption, cubic kilometres per year	At most 4,000 km ³ per year	Around 2,600 km ³ per year and rising (intensifying)
Land Conversion	Area of forested land as a proportion of forest-covered land prior to human alteration	At least 75%	62% and falling (worsening)
Biodiversity Loss	Rate of species extinction per million species per year	At most 10	Around 100–1,000 and rising (worsening)
Air Pollution	No global control variable yet defined	—	—
Ozone Layer Depletion	Concentration of ozone in the stratosphere, in Dobson Units	At least 275 DU	283 DU and rising (improving)

Source: Steffen et al. (2015).

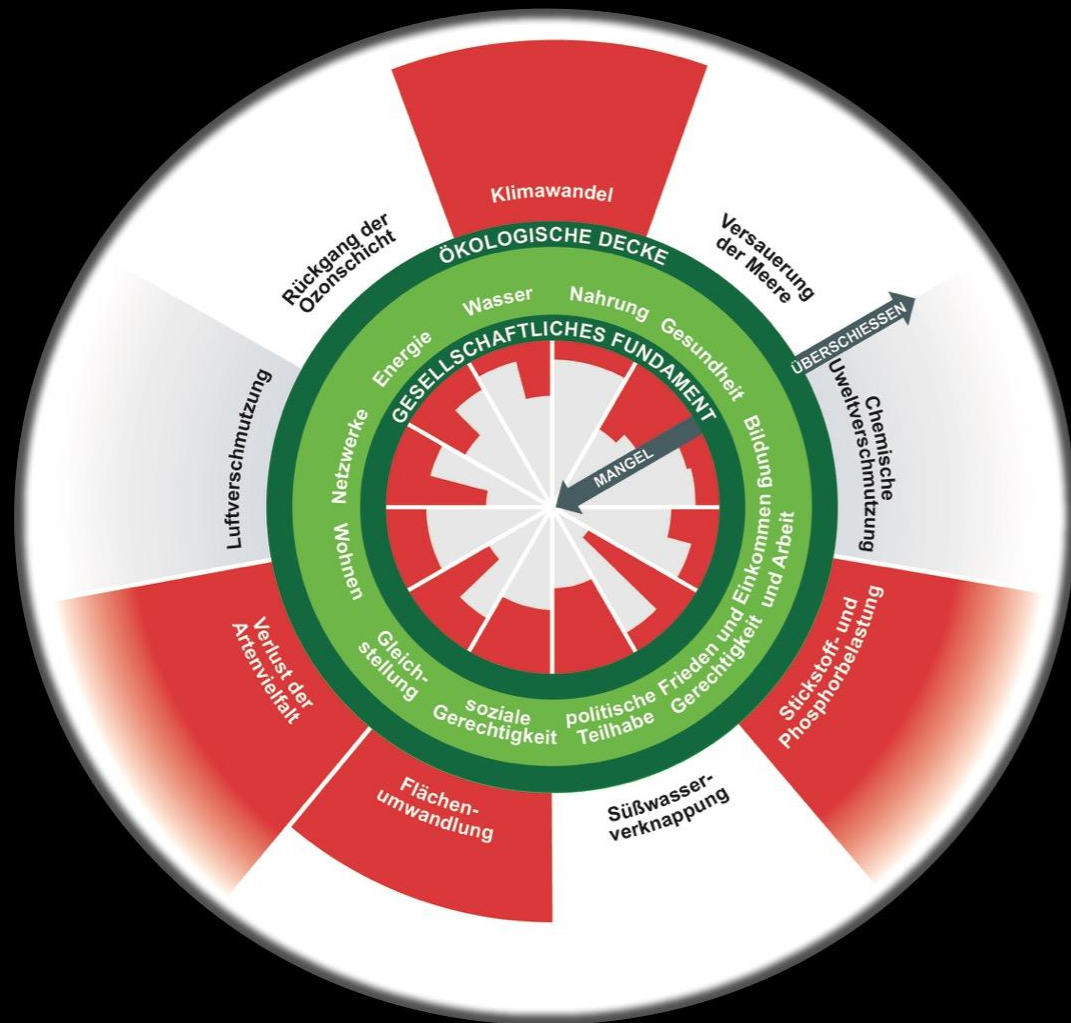
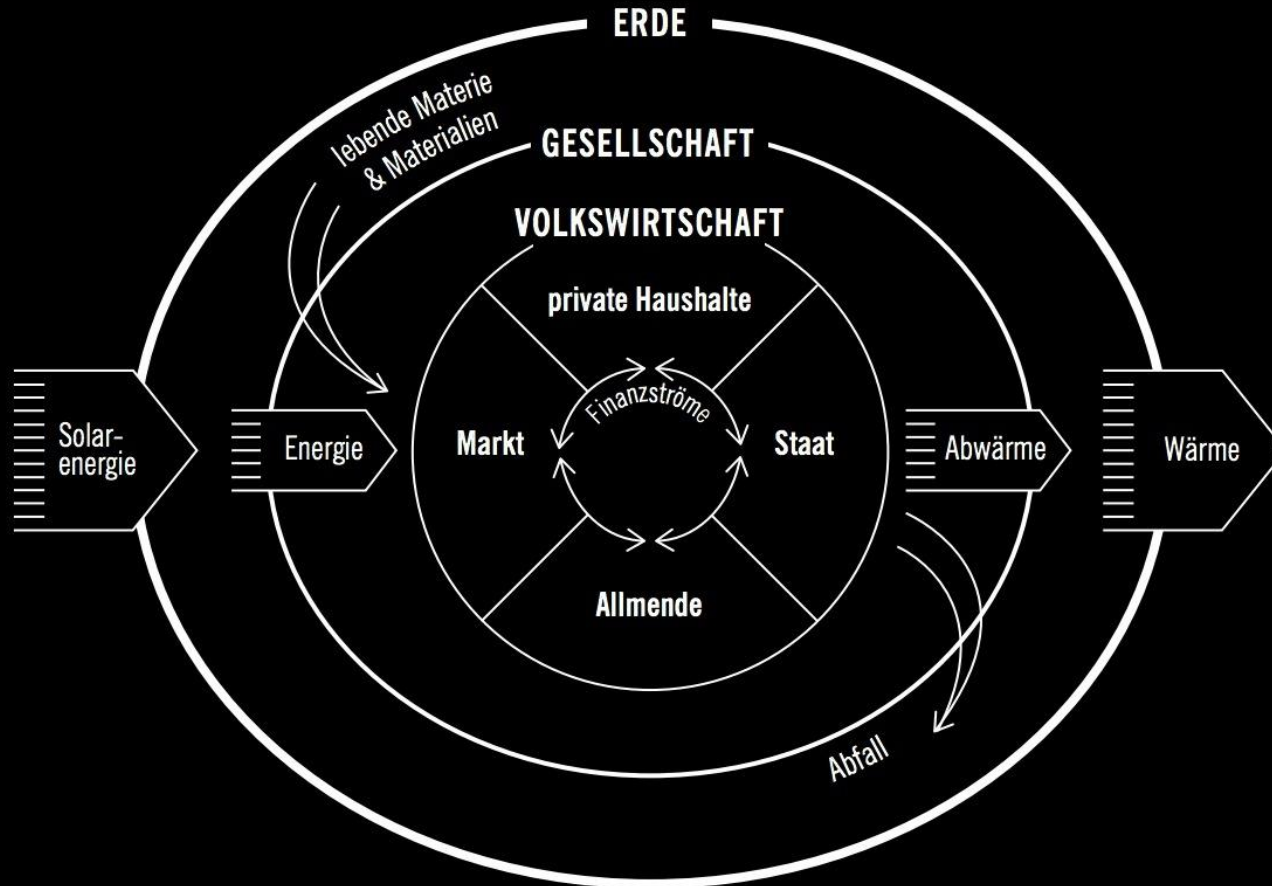


Table 1. The social foundation and its indicators of shortfall

Dimension	Illustrative Indicators (percent of global population unless otherwise stated)	%	Year
Food	Population undernourished	11	2014–16
Health	Population living in countries with under-five mortality rate exceeding 25 per 1,000 live births	46	2015
	Population living in countries with life expectancy at birth of less than 70 years	39	2013
	Adult population (aged 15+) who are illiterate	15	2013
Education	Children aged 12–15 out of school	17	2013
	Population living on less than the international poverty limit of \$3.10 a day	29	2012
Income and Work	Proportion of young people (aged 15–24) seeking but not able to find work	13	2014
Water and Sanitation	Population without access to improved drinking water	9	2015
	Population without access to improved sanitation	32	2015
Energy	Population lacking access to electricity	17	2013
	Population lacking access to clean cooking facilities	38	2013
	Population stating that they are without someone to count on for help in times of trouble	24	2015
Networks	Population without access to the Internet	57	2015
	Global urban population living in slum housing in developing countries	24	2012
Gender Equality	Representation gap between women and men in national parliaments	56	2014
	Worldwide earnings gap between women and men	23	2009
Social Equity	Population living in countries with a Palma ratio of 2 or more (the ratio of the income share of the top 10% of people to that of the bottom 40%)	39	1995–2012
Political Voice	Population living in countries scoring 0.5 or less out of 1.0 in the Voice and Accountability Index	52	2013
Peace and Justice	Population living in countries scoring 50 or less out of 100 in the Corruption Perceptions Index	85	2014
	Population living in countries with a homicide rate of 10 or more per 10,000	13	2008–13

Sources: FAO, World Bank, WHO, UNDP, UNESCO, UNICEF, OECD, IEA, Gallup, ITU, UN, Cobham and Sumner, ILO, UNODC, and Transparency International. All percentages are rounded to the nearest integer.

The first image (and the biggest)



Is green enough growth possible?

