

Die Welt von morgen – was bringt Big Data?

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PUBLIC

Beispiele für Big Data

Facebook

- Computeralgorithmen können auf der Basis von Facebook likes einen Menschen besser einschätzen als andere Menschen¹
 - 10 likes → Arbeitskollegen
 - 70 likes → Mitbewohner und Freunde
 - 150 like → Familienangehörige
 - 300 likes → Ehepartner

Google Translate

- Unterstützt aktuell 103 Sprachen²
- Wird täglich von über 500 Mio Menschen benutzt²
- Übersetzt über 140 Milliarden Worte pro Tag³
- Wurde 2016 von einem statistischen Ansatz mit vielen unterschiedlichen Systemen (je eines pro Sprachpaar) auf ein einziges neurales Netzwerk umgestellt

¹ Quelle: Wu Youyou, M. K. (2015). Computer-based personality judgments are more accurate than those made by humans. Proceedings of the National Academy of Sciences of the United States of America.

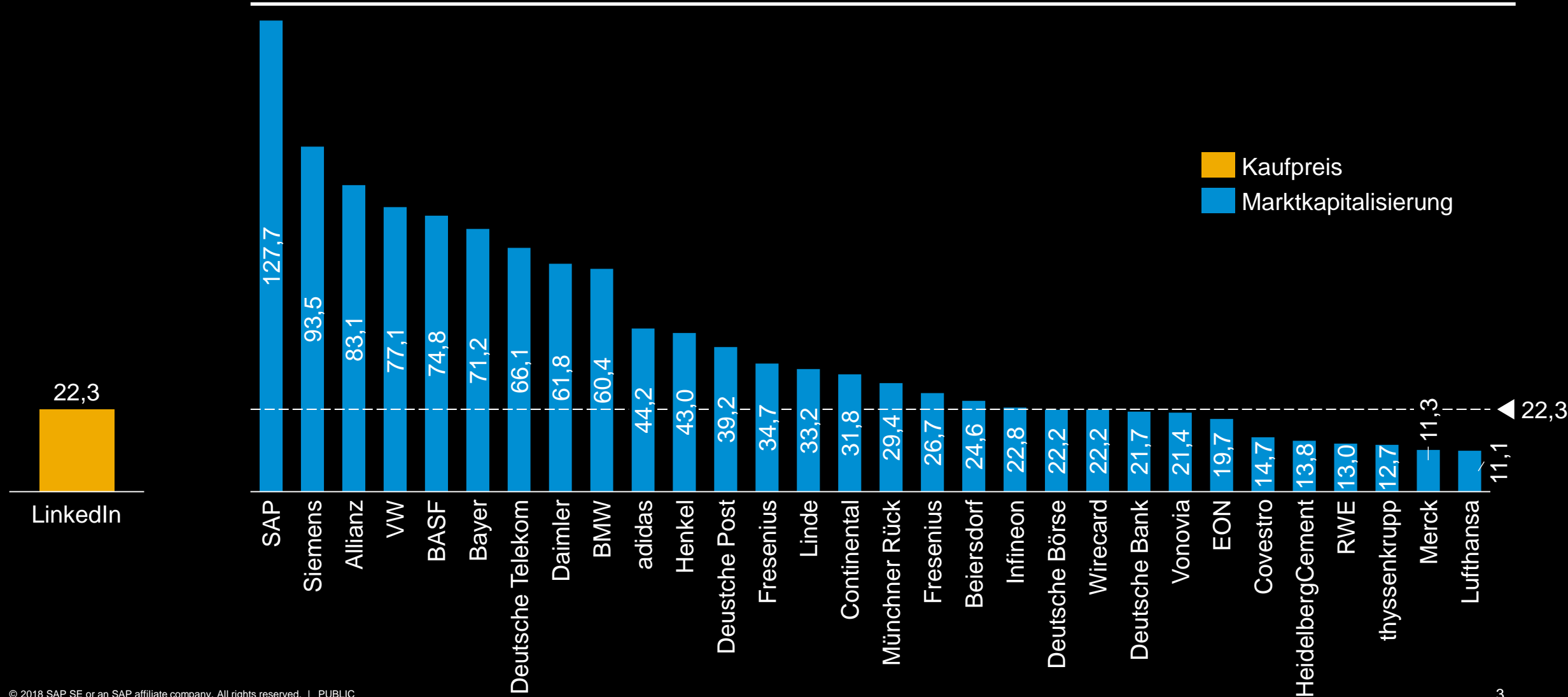
² Quelle: <https://www.independent.co.uk/life-style/gadgets-and-tech/news/google-translate-how-work-foreign-languages-interpreter-app-search-engine-a8406131.html>

³ Quelle: <https://ai.googleblog.com/2016/11/zero-shot-translation-with-googles.html>

Wirtschaftliche Relevanz von Big Data

Millionen Euro

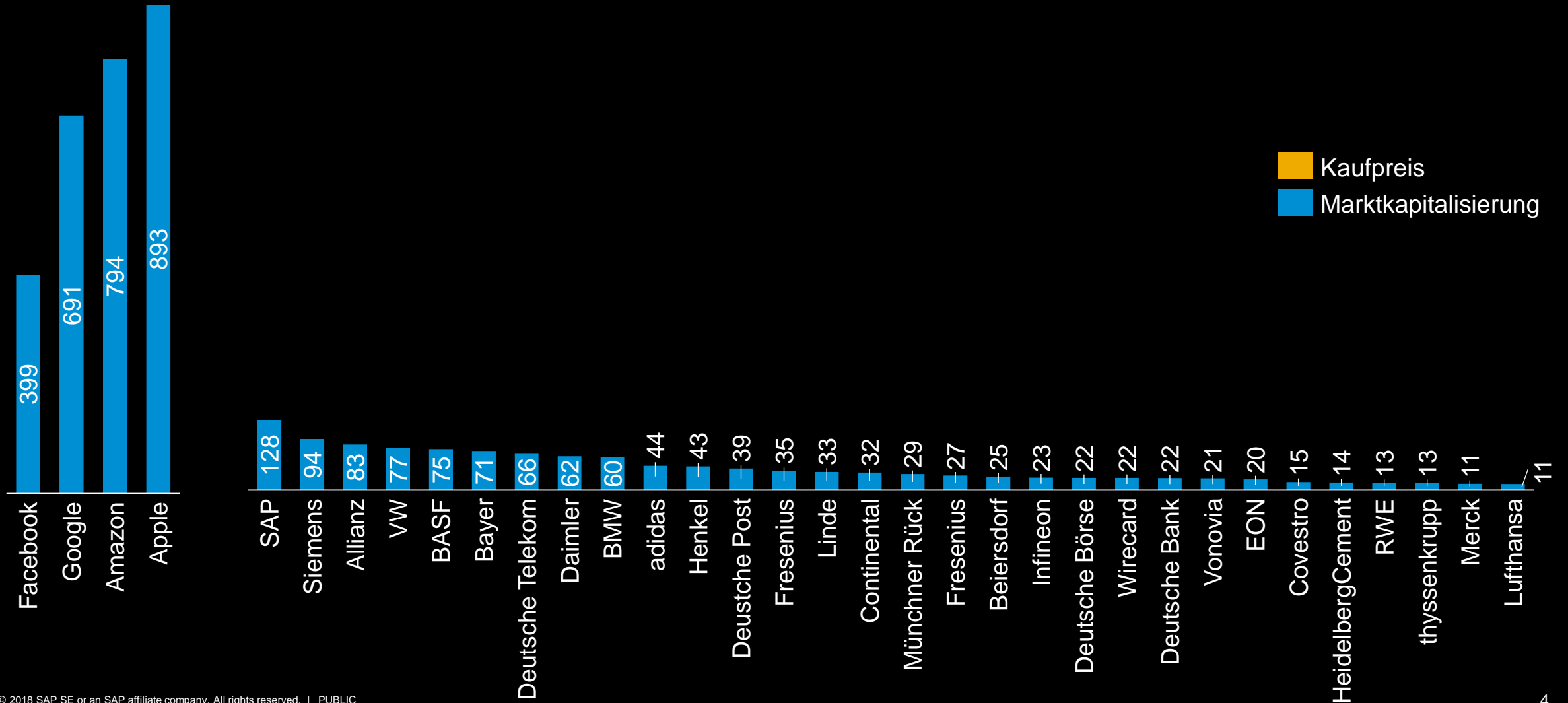
Dax 30 Unternehmen



Wirtschaftliche Relevanz von Big Data

Millionen Euro

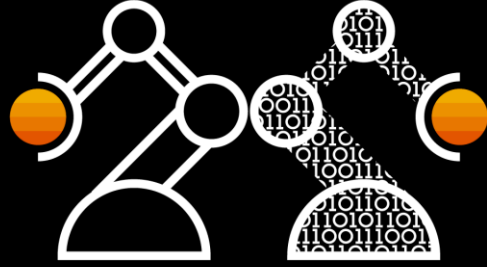
Dax 30 Unternehmen



Big Data



Chancen



**Politische
Notwendigkeiten**

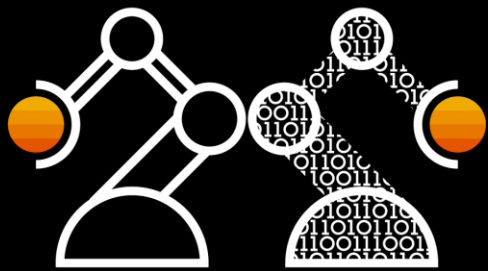


**Einfluss auf
Bildungspolitik**

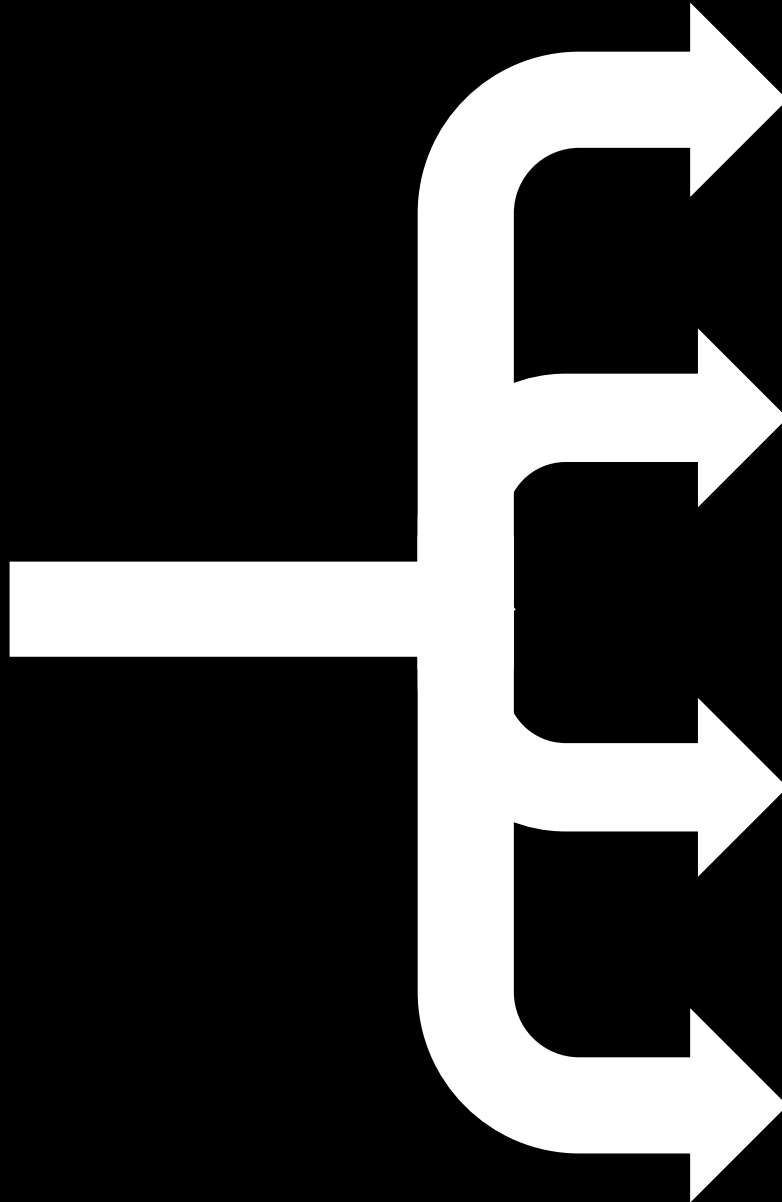


Risiken





Chancen



Innovation



**Neue
Geschäftsmodelle**



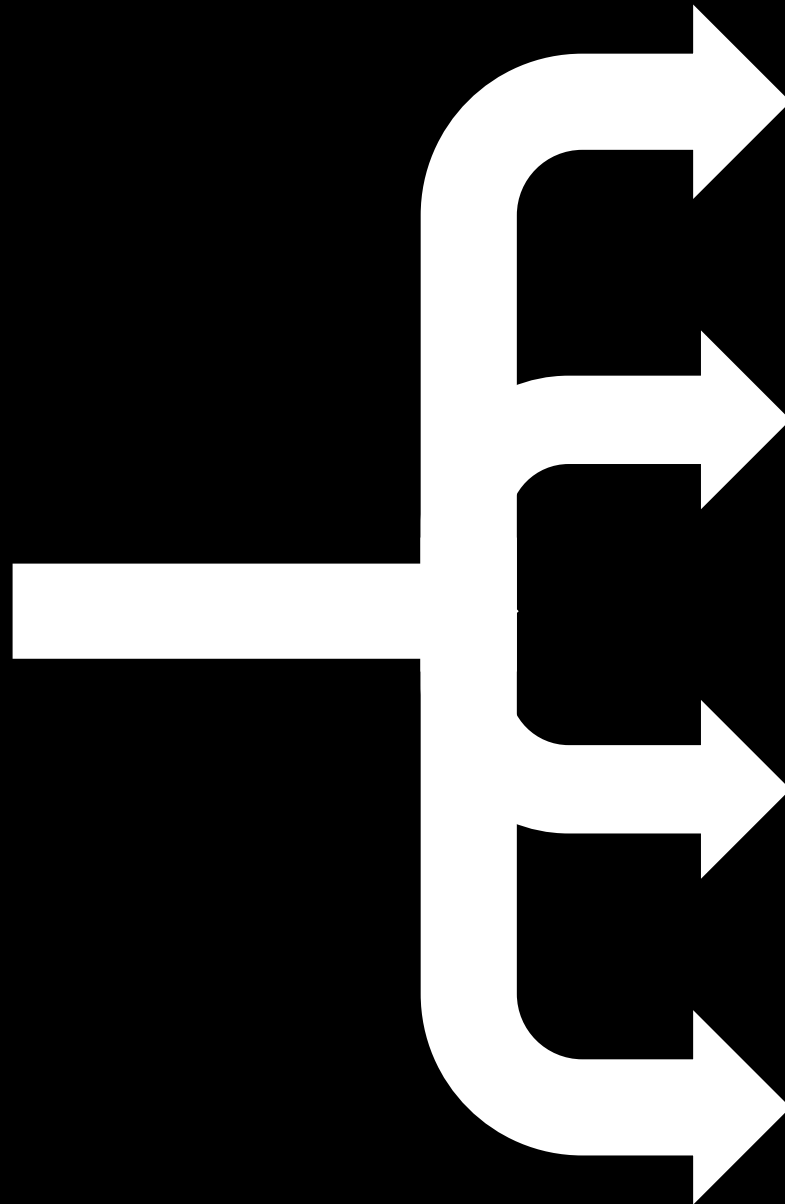
**Optimaler Umgang
mit Ressourcen**



**Wirtschafts-
wachstum**



Risiken



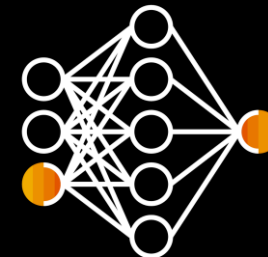
**Staatliche
Überwachung**



Cybercrime



**Missbrauch
personenbezogener
Daten**



**Technische
Komplexität**

Big Data und die UN „Sustainable Development Goals“



How data science and analytics can contribute to sustainable development



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1 NO POVERTY
Spending patterns on mobile phone services can provide proxy indicators of income levels

2 ZERO HUNGER
Crowdsourcing or tracking of food prices listed online can help monitor food security in near real-time

3 GOOD HEALTH AND WELL-BEING
Mapping the movement of mobile phone users can help predict the spread of infectious diseases

4 QUALITY EDUCATION
Citizen reporting can reveal reasons for student drop-out rates

5 GENDER EQUALITY
Analysis of financial transactions can reveal the spending patterns and different impacts of economic shocks on men and women

6 CLEAN WATER AND SANITATION
Sensors connected to water pumps can track access to clean water

7 AFFORDABLE AND CLEAN ENERGY
Smart metering allows utility companies to increase or restrict the flow of electricity, gas or water to reduce waste and ensure a adequate supply at peak periods

8 DECENT WORK AND ECONOMIC GROWTH
Patterns in global postal traffic can provide indicators such as economic growth, remittances, trade and GDP

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
Data from GPS devices can be used for traffic control and to improve public transport

10 REDUCED INEQUALITY
Speech-to-text analytics on local radio content can reveal discrimination concerns and support policy response

11 SUSTAINABLE CITIES AND COMMUNITIES
Satellite remote sensing can track encroachment on public land or spaces such as parks and forests

12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Online search patterns or e-commerce transactions can reveal the pace of transition to energy efficient products

13 CLIMATE ACTION
Combining satellite imagery, crowd-sourced witness accounts and open data can help track deforestation

14 LIFE BELOW WATER
Maritime vessel tracking data can reveal illegal, unregulated and unreported fishing activities

15 LIFE ON LAND
Social media monitoring can support disaster management with real-time information on victim location, effects and strength of forest fires or haze

16 PEACE, JUSTICE AND STRONG INSTITUTIONS
Sentiment analysis of social media can reveal public opinion on effective governance, public service delivery or human rights

17 PARTNERSHIPS FOR THE GOALS
Partnerships to enable the combining of statistics, mobile and internet data can provide a better and real-time understanding of today's hyper-connected world