

# GOVERNING AI WHY, WHAT, HOW?

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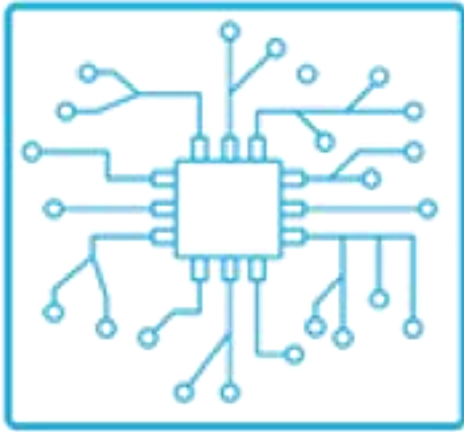
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# AI – MORE IS BETTER?



Computing Power



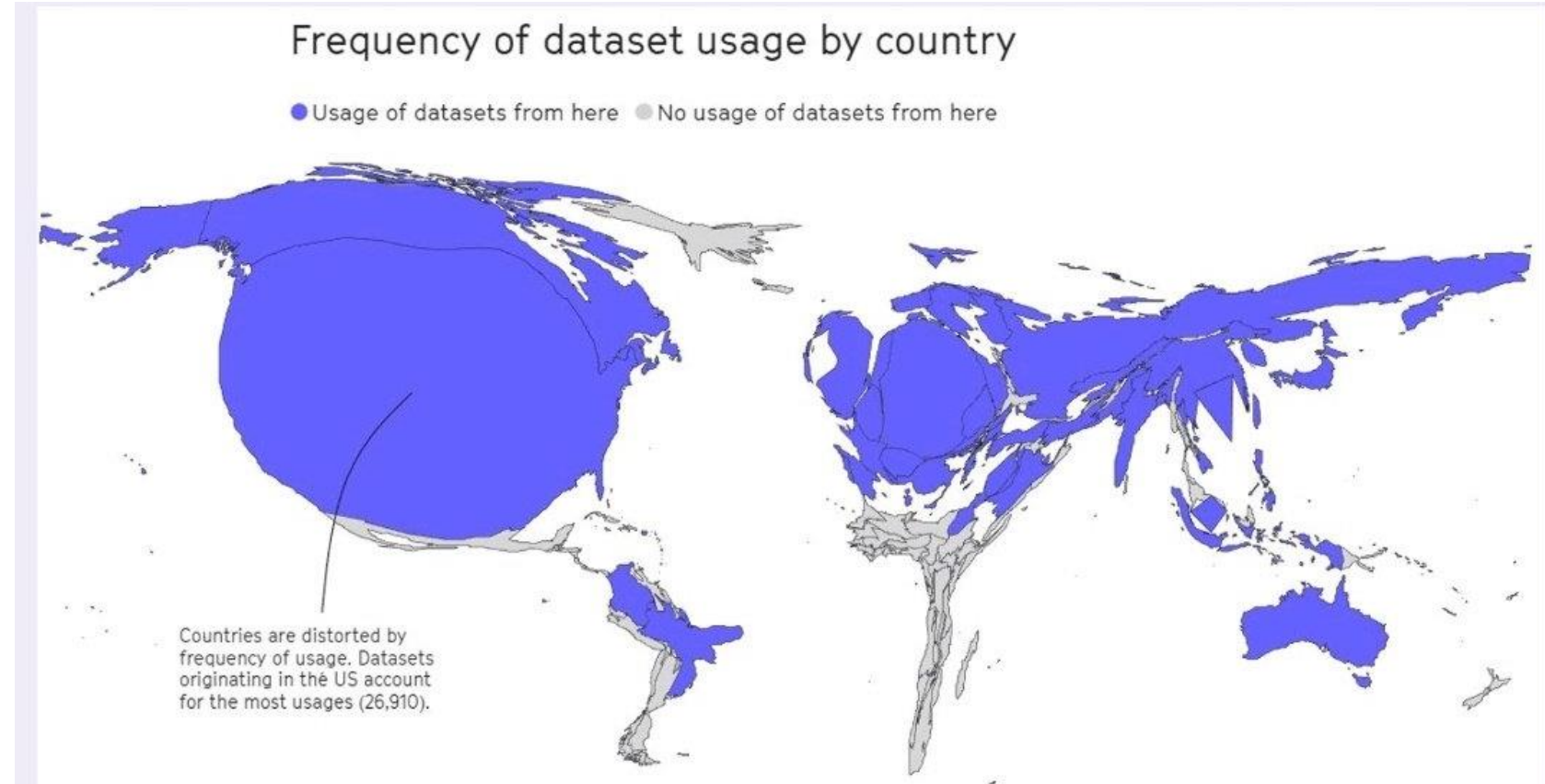
Algorithm Power



Data Availability

# HOW AI 'SEES' THE WORLD

- 50% of datasets are connected to 12 institutions
- WEIRD demographics (Western, educated, industrialised, rich, democratic)



# HOW AI MODELS THE WORLD



- AI is a **rational** system
  - Models of preferences, priorities, on outcomes of actions;
  - Optimize for preferences.

Stuart Russell and Peter Norvig. Artificial intelligence: a modern approach. PrenticeHall, 2010.

- AI principles are Global North stereotypes
  - **Optimisation / Efficiency / Rationality / Agency / Autonomy**

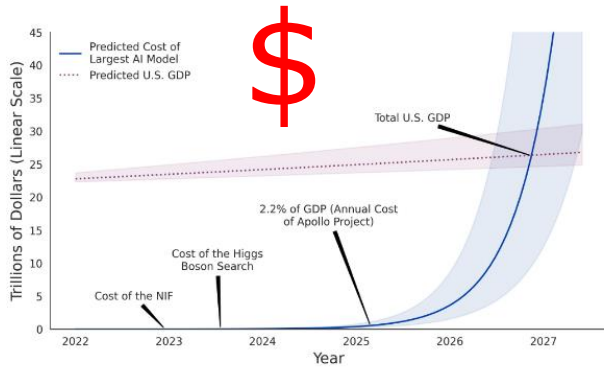


- But... People act in context
  - We pursue seemingly **incompatible** goals and hold **inconsistent** beliefs, **different motives** (altruism, fairness, justice, or to prevent future regret)
  - Our actions are influenced by the **context**, including thinking about others and different situations.
  - We **don't maximize forever**: good is good enough

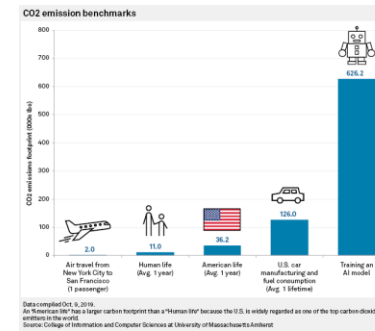
Virginia Dignum. Social Agents: Bridging Simulation and Engineering. Communications of the ACM, November 2017, Vol. 60 No. 11, Pages 32-34

# HOW AI USES THE WORLD

- Computational cost of AI
- Human and social costs

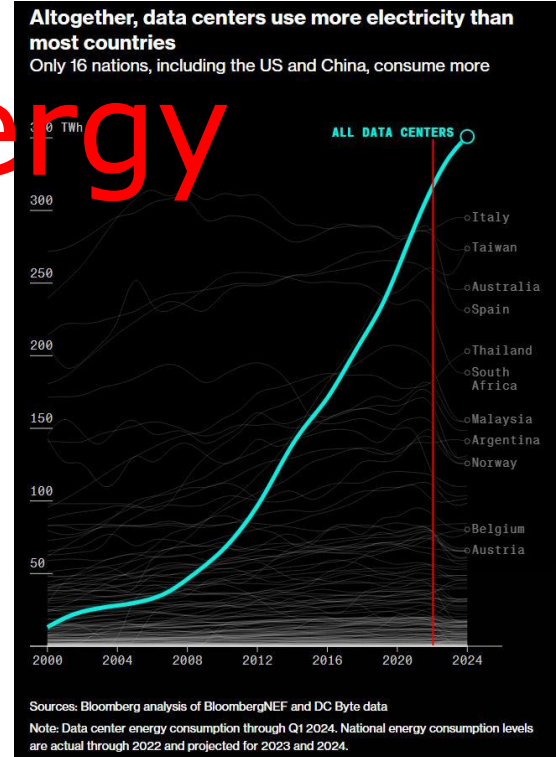


Source: CSET. Note: The blue line represents growing costs assuming compute per dollar doubles every four years, with error shading representing no change in compute costs or a doubling time as fast as every two years. The red line represents expected GDP at a growth of 3 percent per year from 2019 levels with error shading representing growth between 2 and 5 percent.

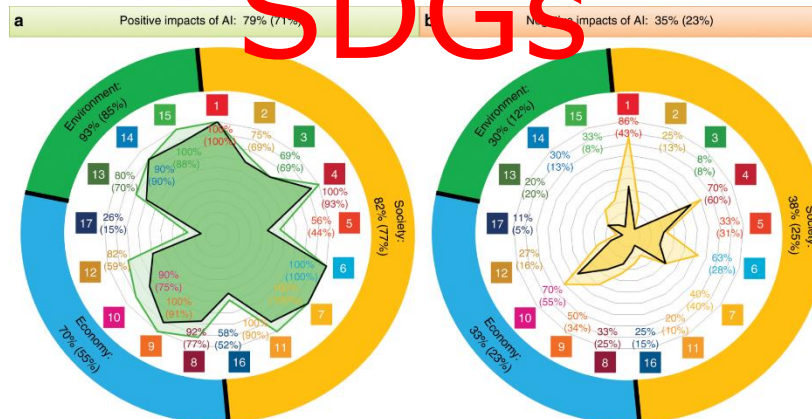


Data compiled Oct. 4, 2019.  
 The Scientist: He has a larger carbon footprint than a "Human life" because the U.S. is widely regarded as one of the top carbon dioxide emitters in the world.  
 Source: College of Information and Computer Sciences at University of Massachusetts Amherst

## Energy



## SDGs



Global AI's Scope 1 & 2 Water Withdrawal in 2027

Est. 4.2~6.6 Billion Cubic Meters



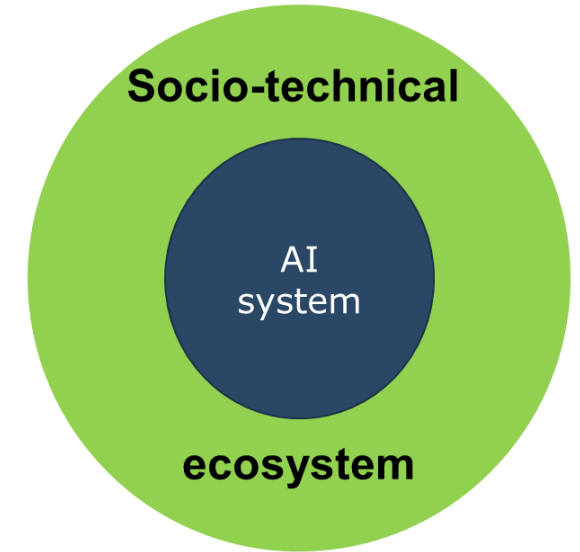
4~6x Annual Water Withdrawal of Denmark

## Water

# RESPONSIBLE AI

## AI does not happen to us!

- AI is designed. We make the choices
  - Who should decide?
  - Which values should be considered?
  - Whose values? How to prioritize?
- AI does not exist in a vacuum
  - There is no technology fix for ill effects!
  - Ethics, regulation, governance concern the ecosystem



**Responsible AI solutions need to be social rather than technical!**



# GOVERNANCE – WHY? WHAT FOR?

- Regulation as **incentive for responsible innovation, sustainability, and fundamental human rights**
  - powerful stepping stone for innovation with societal benefits
  - signaling expected ambitions enhancing innovation, competitive power

*Cars drive faster with brakes*

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*In a game without rules, no one wins*

- Existing laws, directives, standards, and guidelines applicable to AI systems, products, and results
  - Need for better understanding and integration of existing frameworks alongside introducing more regulation
- Avoidance of an "arms race" narrative in AI regulation

# GOVERNANCE: REGULATION AND MORE

- Legislation
  - Compulsory, formal enforcement
  - Many options: ex ante, ex post, risk based, principle based...
- Standards
  - soft governance; non mandatory to follow
  - demonstrate due diligence and limit liability
  - user-friendly integration between products
- Organisational processes and functions
  - Set and monitor ethical guidelines
  - able to veto any projects or deliverables that do not adhere to guidelines
- Monitoring and assessment
  - responsible AI is more than ticking boxes
  - Means to assess maturity are needed
- Education and training
  - Awareness
  - Participation / civic duty



# CONCRETE STEPS...



1. Define what responsible AI means for the organisation



2. Ensure training and education in AI and responsible AI



3. Establish internal governance structures and measures



4. Implement procedures for risk management and internal controls



5. Integrate available tools

# RESPONSIBLE AI IS NOT A CHOICE!

Not *innovation vs governance* but  
*governance as stepping-stone for innovation*

- Innovation is moving technology forward, is not the use of existing tech 'as is'
- Adopting responsible AI
  - Build trust
  - Drive for transformation
  - Business differentiation



**THANK YOU!**