The Digital Transformation
in the light of Sustainability (-ies)

Hans Akkermans

Keynote FEBS 2024
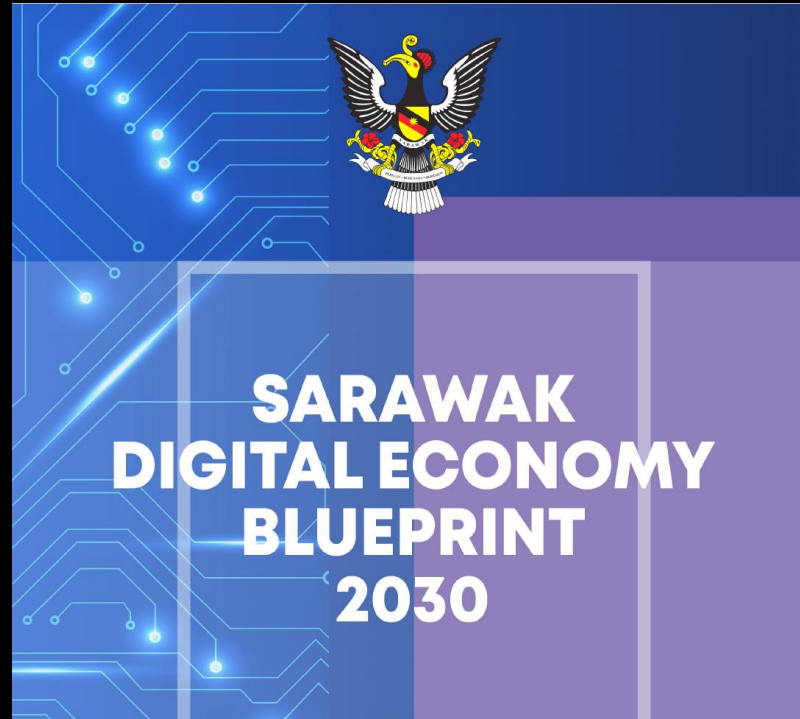Finance, Economics & Business Sustainability
Inclusive Development for Sustainable Future
Kuching, Sarawak, Malaysia, 18 September 2024

The Digital Transformation and the Digital Divide

Digital Transformation Strategy(-ies) and Benefits

SARAWAK
DIGITAL ECONOMY
BLUEPRINT
2030

Sustainability (1 of many): SDG-9 relates to the Digital

- SDC-9.c: Internet to be accessible and affordable for everyone on the planet

- There is a Digital Divide to overcome

- UN 2022: digital technologies can be key to resolving SDG societal challenges

There is more to the Digital Divide than Internet Access alone

- Global South priorities differ from Global North
- Power: Electricity and computing infrastructure
- Literacy and Modality: text writing vs speech
- Education, also for digital literacy
- Language (small Language Models, not LLM)
- Relevant content
- Indigenous Knowledge and rural development

Sustainabilities
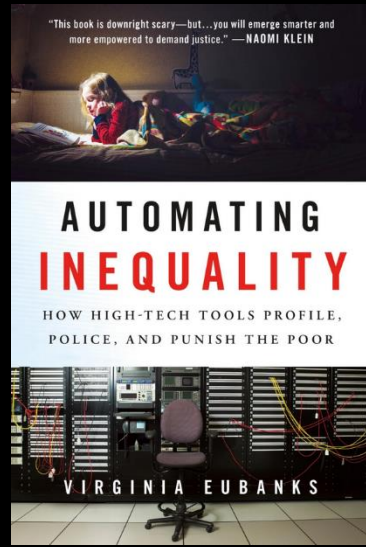
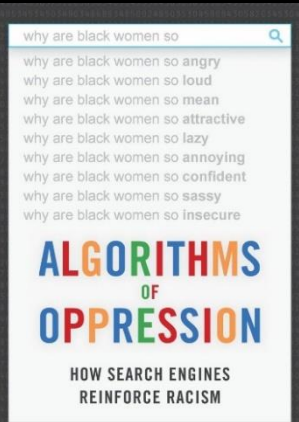# United Nations SDGs and Digital Technologies

… the world … a better place …

Inequalities & Bias (SDG-5 & SDG-10)

5 GENDER EQUALITY

10 REDUCED INEQUALITIES

- Noble, 2018

- Eubanks, 2017

- Broussard, 2023

"The VU proctoring software didn't recognize me as a human being", Robin Pocornie, bio-INF student VUA, 15 July 2022
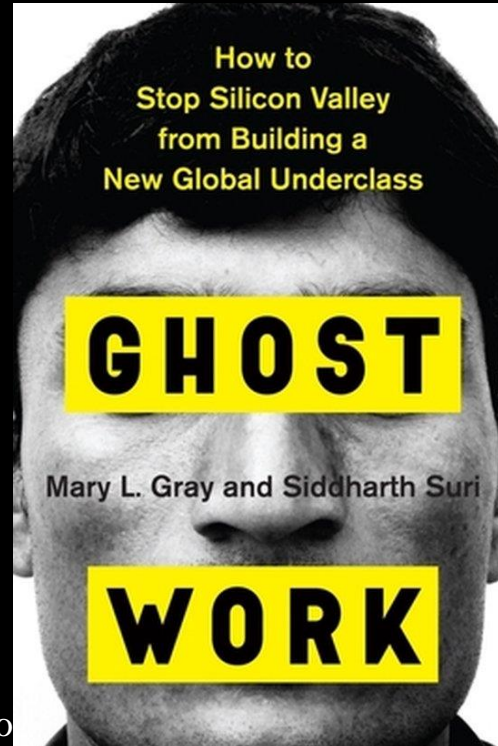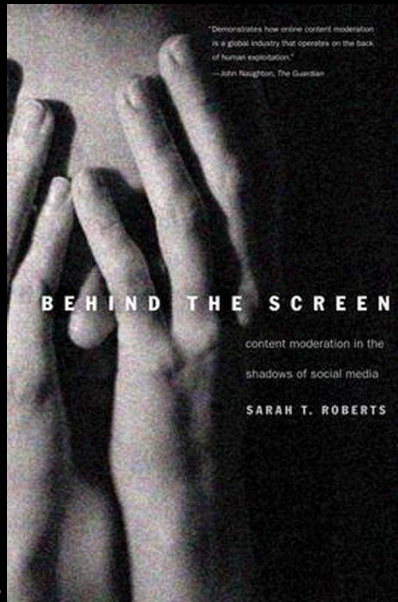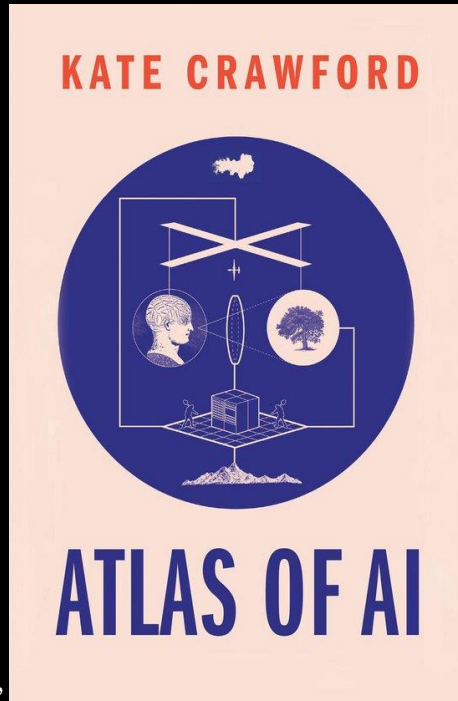
Decent Work & Economic Growth (SDG-8)

- Gray & Suri, 2019
- Roberts, 2019

"Demonstrates how online content moderation is a global industry that operates on the back of human exploitation."
—John Naughton, *The Guardian*

BEHIND THE SCREEN

content moderation in the shadows of social media

SARAH T. ROBERTS

How to Stop Silicon Valley from Building a New Global Underclass

GHOST

Mary L. Gray and Siddharth Suri

WORK

Natural Resources, Energy and Climate Action (SDG-12, SDG-13)

- Crawford, 2021

KATE CRAWFORD

ATLAS OF AI

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

Peace, Justice & Strong Institutions (SDG-16)

- Protect the public interest against harmful consequences of technology
  - ***E.g. EU AI Act, 2024***
  - ***Democratic sustainability***
- Siddarth et al, 2021
- Wellerstein, 2021
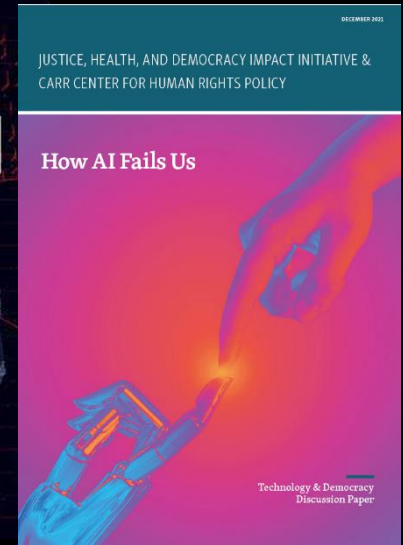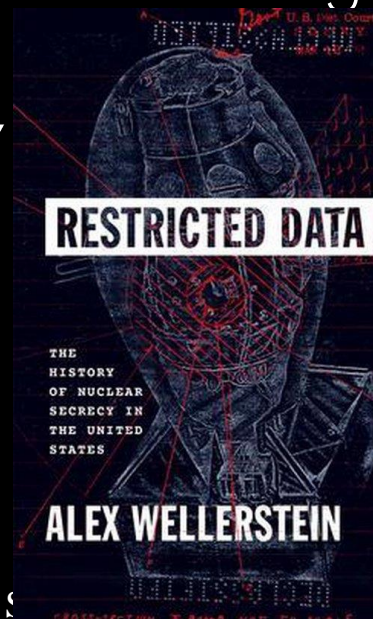
In Sum:

- The Digital Transformation will bring many benefits

- But it is also bringing its own sustainability issues and challenges

- These need to be urgently addressed: technology should not be in the position to dictate course of society

What About AI?

Artificial Intelligence (AI) - A Mixed Bag

- Big potential
- Real achievements not as advanced as suggested
- AI has danger to be overhyped
  - → Has already happened in its history (expert systems)
- Automated biased decision making

- → Humans cannot delegate responsibilities to machine
- AI has become hollow marketing term
  - → **"Product X, now with AI"**
  - → Every piece of software is **now called "AI"**
- Inherent but poorly understood limitations
  - → **"ChatGPT is bullshit" (Hicks** et al., 2024)

Education for the Digital Age

EURIDICE

European Inclusive Education
For Digital Society, Social Innovation and
Global Citizenship – 17 September 2024

Visit to the Ministry of Education, Innovation and Talent Development, Sarawak, Malaysia.

By Anna Bon & Hans Akkermans

**Co-funded by
The European Union**

EURIDICE Key data

- EURIDICE is an EU **Digital Europe Programme – Advanced Digital Skills** project No. 101123121

- With a budget of nearly 10 MEUR, nearly 5 MEUR EU funding

- Duration 4 years: 2024-2027

- With 25 partners

- From 15 countries across the globe

Coordinator: Dr. Anna Bon, a.bon@vu.nl

Consortium partnership

Countries involved in EURIDICE
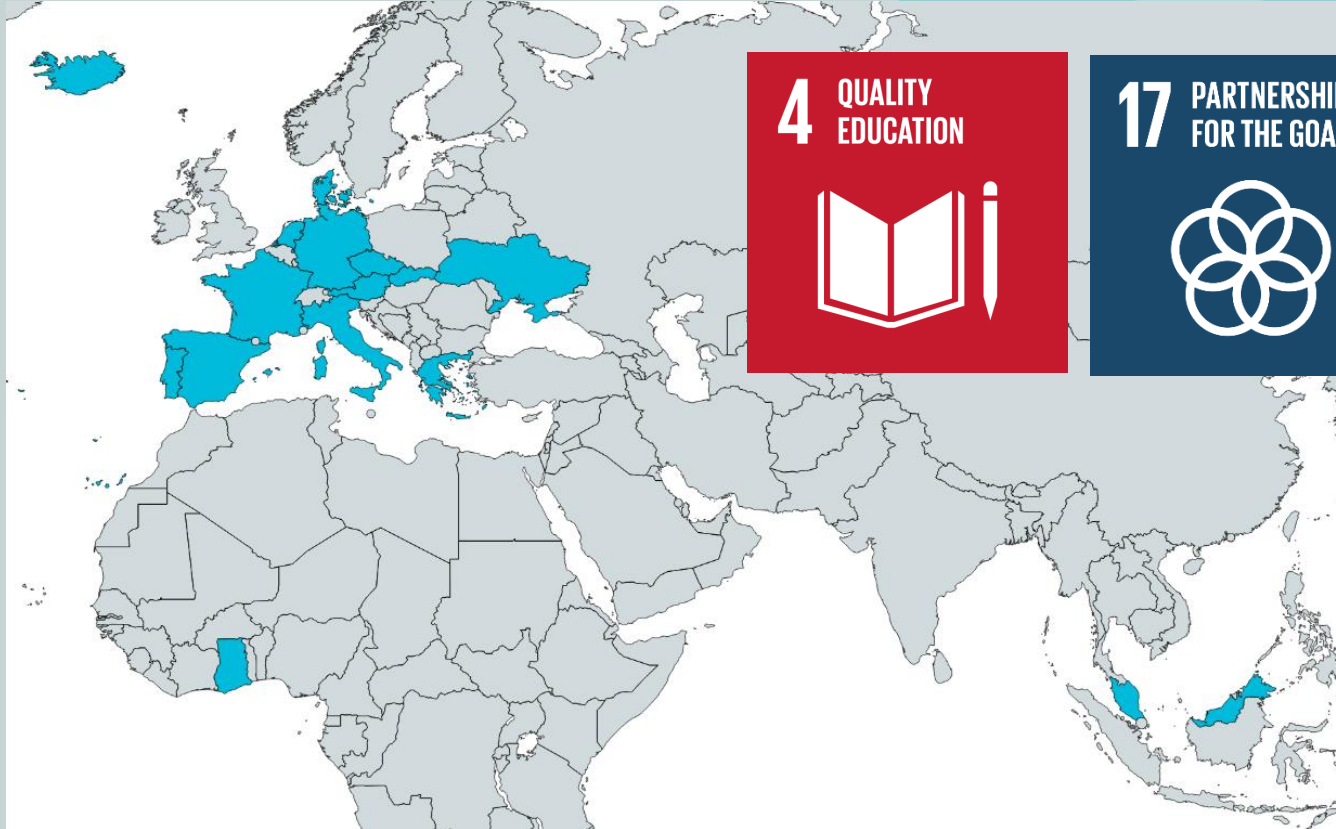
EURIDICE aims

- Several programs are under development:

  - *International joint master Digital Society, Social Innovation & Global Citizenship (highly interdisciplinary: digital technology, communication/social science, legal, humanities (ethics, philosophy))*

  - *Teacher education (self-standing modules; microcredentials)*

  - *Life-Long-Learning (professionals at work; microcredentials)*

  - *PhD school (Digital Humanism)*

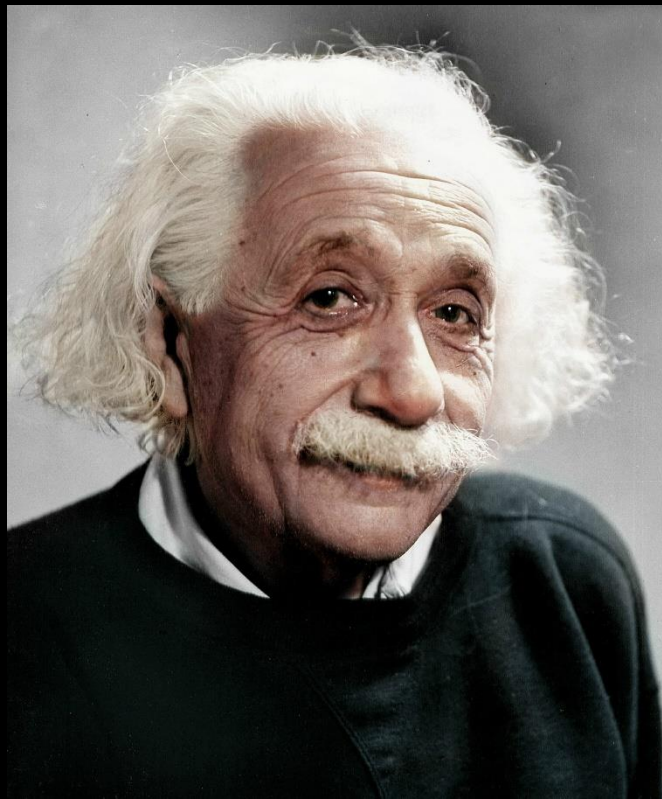# Science, Technology & Society: STEM++

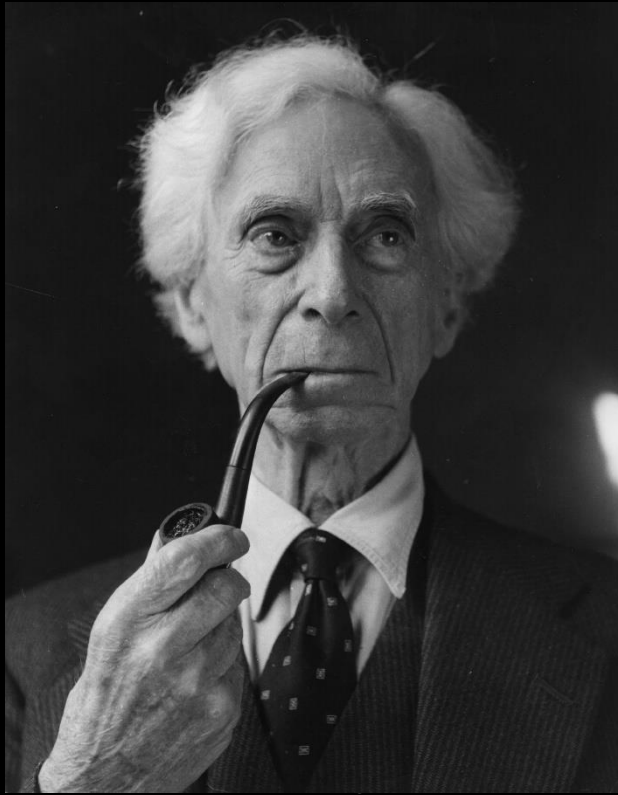# History Informs the Present & the Future - The Atomic Age
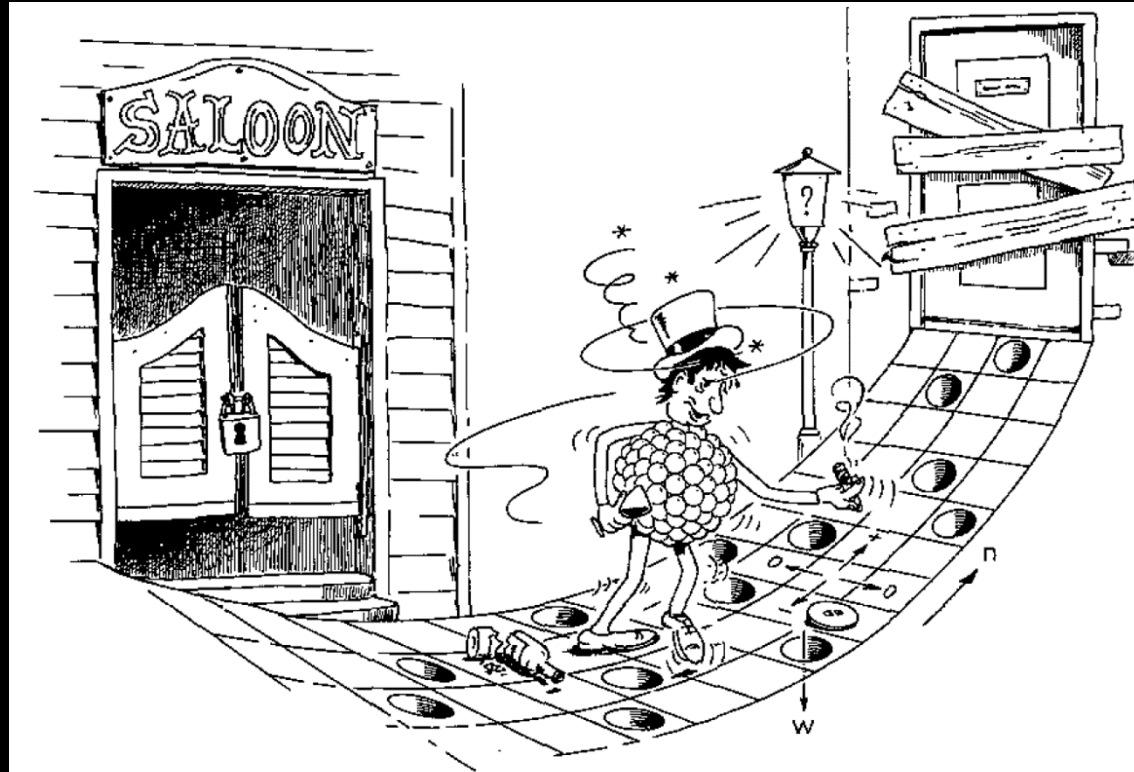
Wim Tukker,
31 August 1982

Guess Who … ?

Guess Who … ?

Russell-Einstein
Manifesto, 1955

on and Sustainability

Social Responsibilities of Scientists (Bertrand Russell, Science, 1960)

- 1. "The scientist is also a citizen; and citizens who have any special skill have a public duty (…) that their skill is used in accordance with the public interest."

- 2. Scientists and technologists possess special knowledge in their field. This position of knowledge brings with it a different position of responsibility in the public societal debate, also as seen in the public eye.

Neurath's Boat (1913/1921)
Otto Neurath (co-founder Vienna Circle)

- "We are like sailors who on the open sea must reconstruct their ship but are never able to start afresh from the bottom. Where a beam is taken away a new one must at once be put there, and for this the rest of the ship is used as support. In this way, by using the old beams and driftwood the ship can be shaped entirely anew, but only by gradual reconstruction."

Thank you