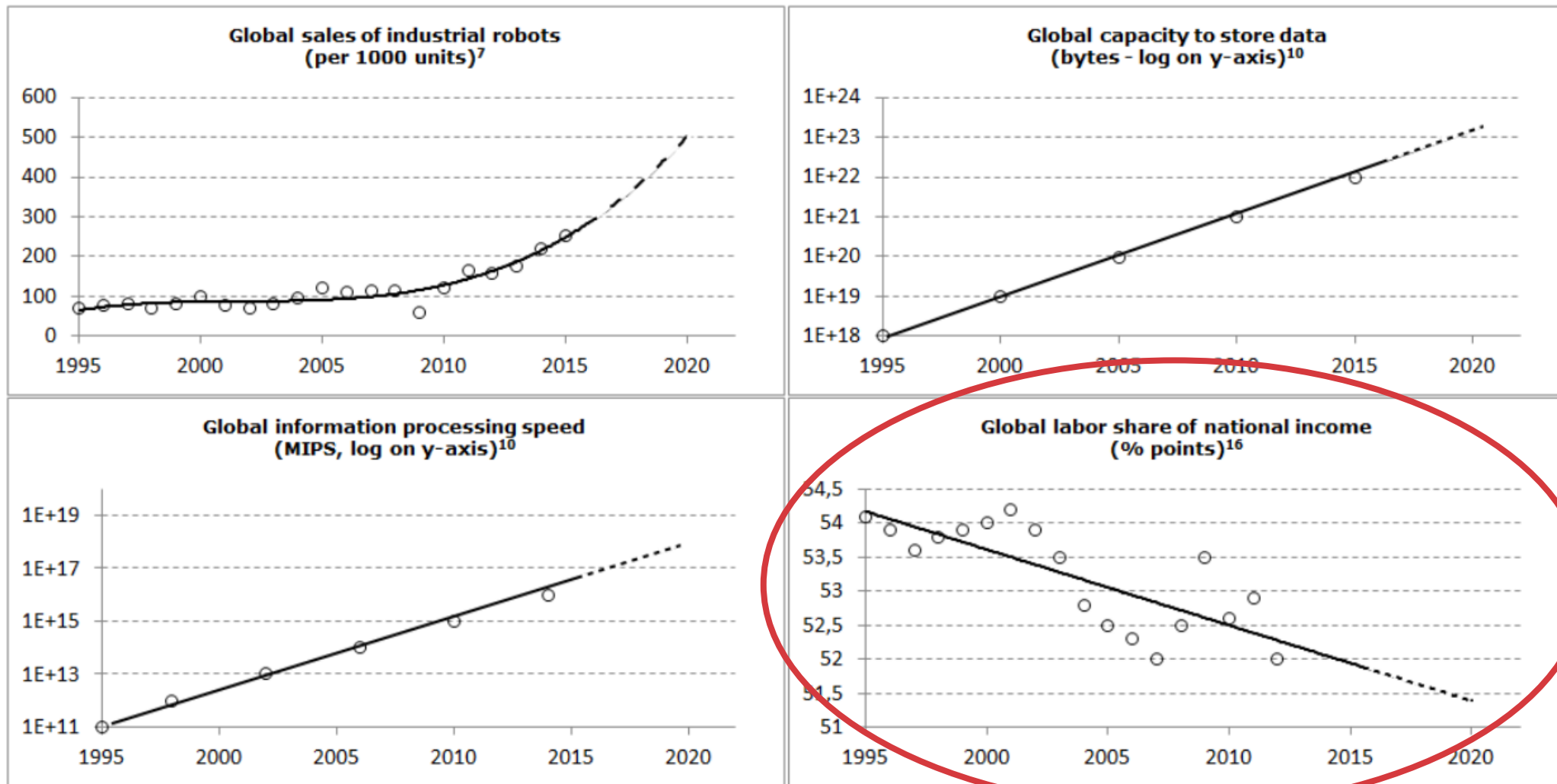


Investigating innovative technologies and the future of work

Dr. Marie-Christine Fregin
Maastricht University / INPUT Consulting / WZB Berlin

Congress 4IRE | Madrid, 2019

Technological innovations, productivity, and labour share



(7) International Federation of Robotics. 2017. World Robotics 2017. Frankfurt am Main: IFR; (10) International Monetary Fund. (2017). World Economic Outlook. Washington DC: IMF; (16) Karabarbounis, L. and Neiman, B., 2013. The global decline of the labour share. *The Quarterly Journal of Economics*, 129(1), pp.61-103

Technequality

Understanding the relation between technological innovations and social inequality



Funded by the Horizon 2020
Framework Programme of the
European Union

Consortium partners



WZB

Berlin Social Science Center



UNIVERSITY OF
OXFORD



Technequality work packages

Understanding the relation
between technological
innovations and
social inequalities



Funded by the Horizon 2020
Framework Programme of the
European Union

1. The **future of work** in Europe
2. Technology, **skills and inequality**
3. **Educating today** for tomorrow's labour markets
4. Reinventing **social welfare**
5. Automation, taxation, and **public finances**
6. Is this time **really different?**

The future is now: Digital problem-solving skills and wage inequalities



(c) iStock

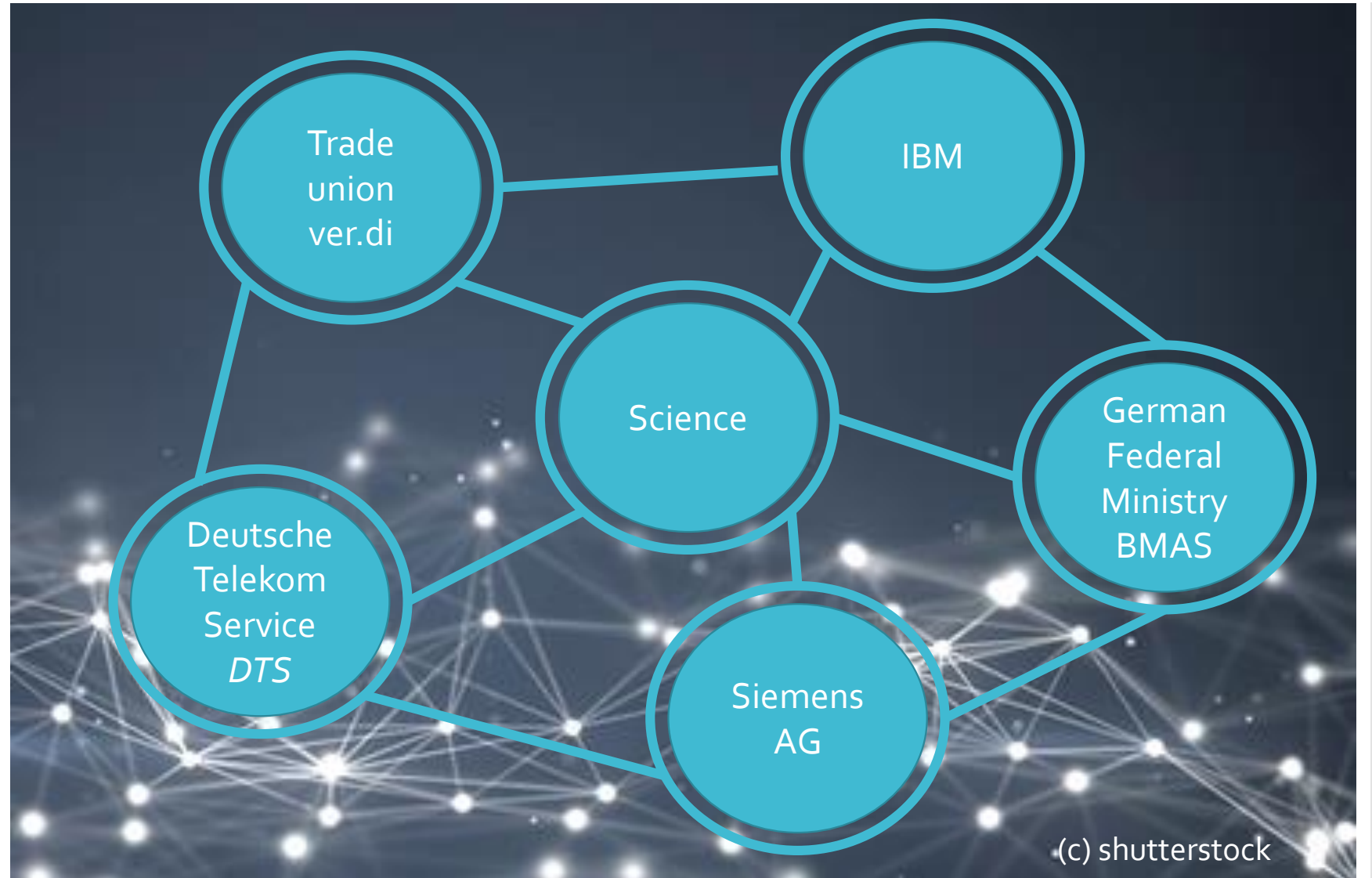
- **Digital problem-solving skills can re-shape wage inequalities.** High levels of these skills pay off more for women than they do for men.
- Digital problem-solving skills may serve as **emancipatory lever**, narrowing the gender wage gap

Zooming in on the company level

Empirical research with AI at workplaces



An idea
is as strong
as the
network
that makes
it fly.

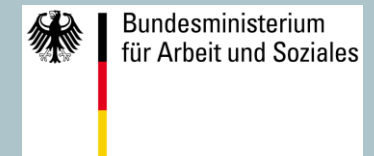


IBM & Ver.di AI Research Project

Artificial Intelligence at the workplace

Empirical research on the effects of AI
on workers and jobs

Marie-Christine Fregin, Mark Levels, Andries de Grip, Sven Semet



IBM & Ver.di AI Research Project

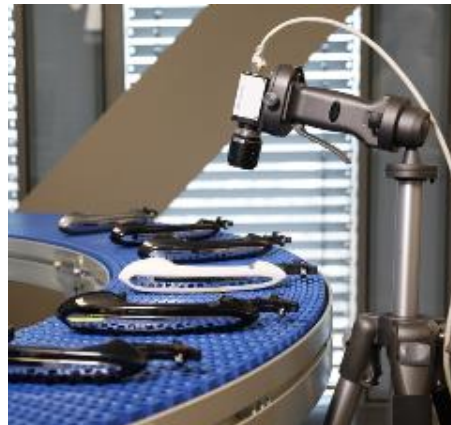
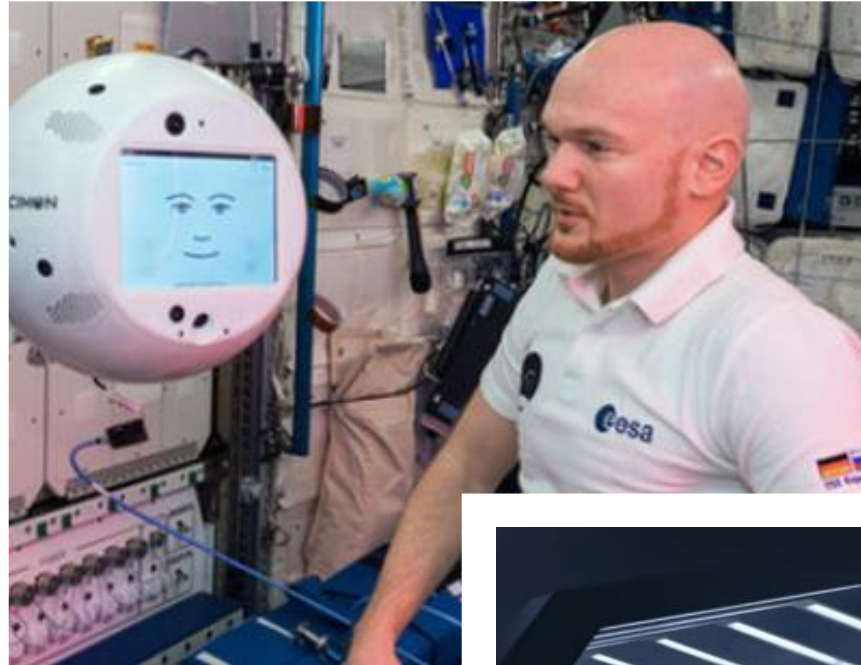
Research Questions

- RQ 1** How does the implementation of AI at the workplace **change tasks** to be done by human workers?
- RQ 2** To what extent and how does the implementation of AI...
- a. ... affect **performance and productivity** of workers in various jobs?
 - b. ... affect worker's perception of **quality of working life and job satisfaction**?
 - c. ... change **skill requirements** for workers in various jobs?
- RQ 3** Which **chances, necessities and perspectives** arise from the implementation of AI on the workplace for workers, industrial relations and politics?

What do we mean by „AI“?

Big steps for AI,
small steps for
humankind.

Still!



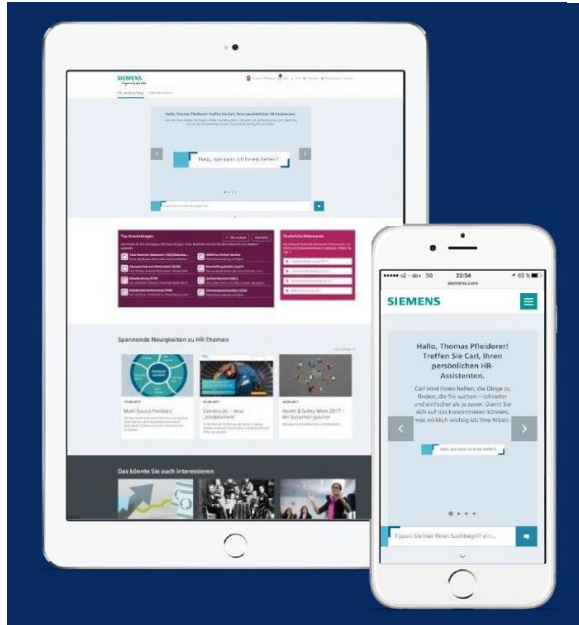
IBM & Ver.di AI Research Project

Chatbots, Voicebots, Discovery AI & Humans!

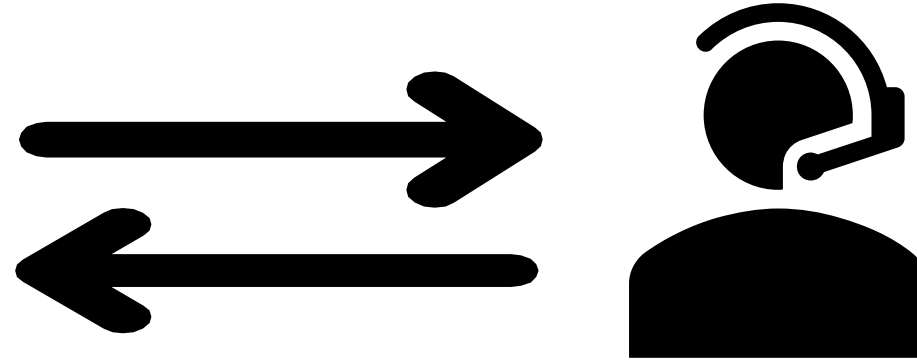


IBM & Ver.di AI Research Project

Case study I: Cognitive HR advisor CARL @ Siemens AG



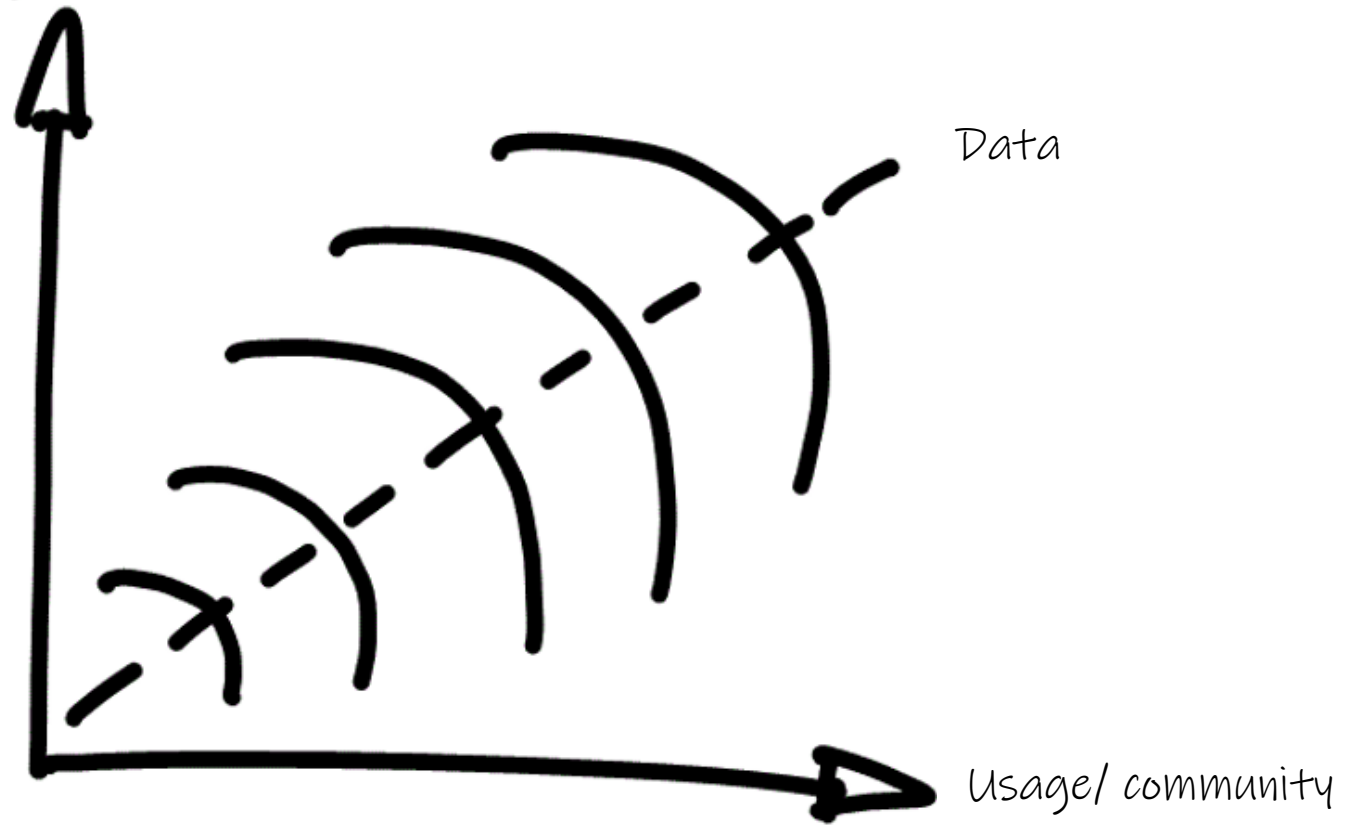
(c) Siemens AG



Automation and substitution potential

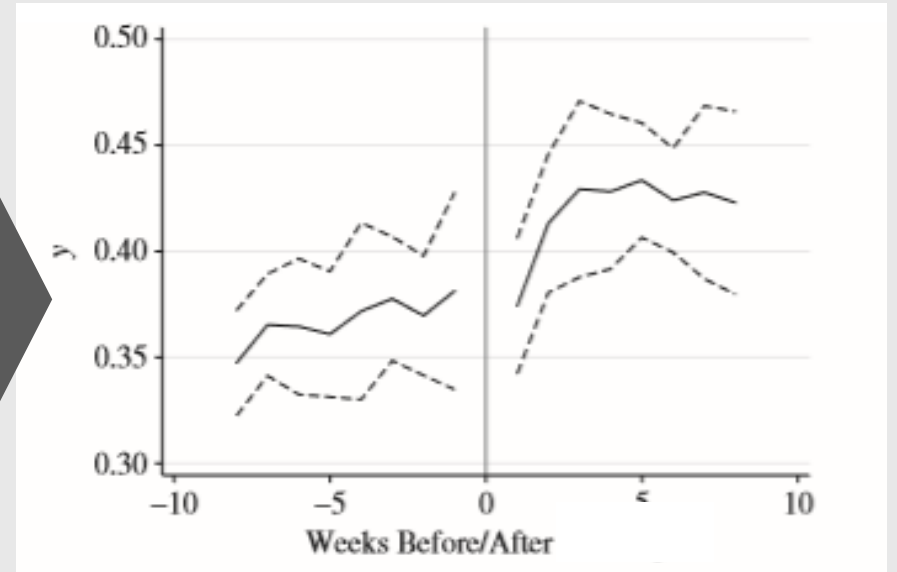
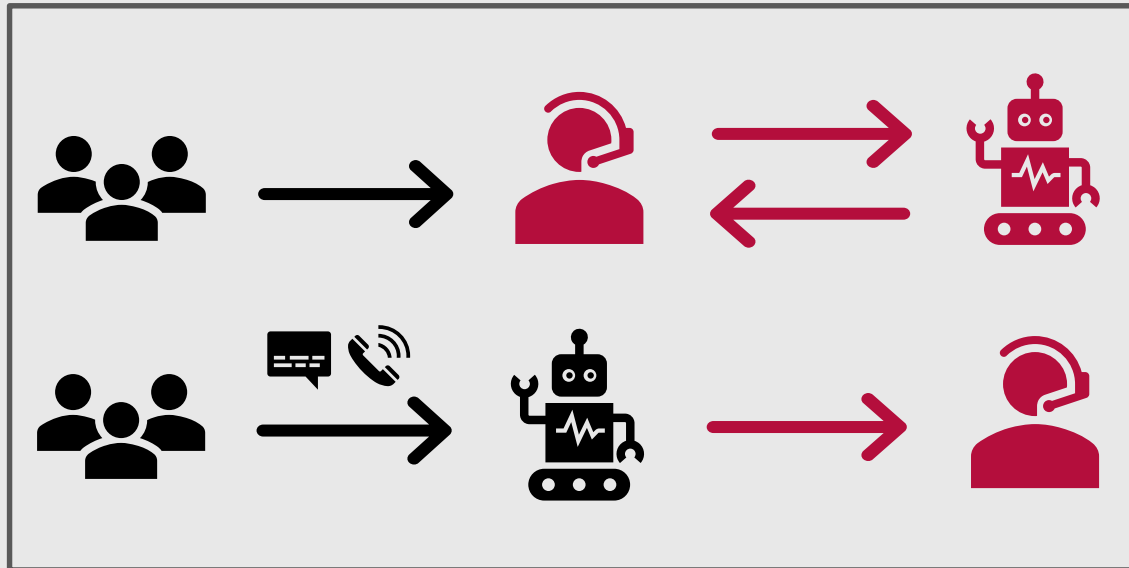
Technological, organisational, and cultural bottlenecks

Functionality



IBM & Ver.di AI Research Project

Case study II: Randomised field experiment with AI in a call centre @ Deutsche Telekom



Thank you for your attention.

Contact

Dr. Marie-Christine Fregin

m.fregin@maastrichtuniversity.nl

<https://roa.maastrichtuniversity.nl>

<https://www.input-consulting.de>

Appendix.

More
information
about
Technequality



Technequality

Understanding the relation between technological innovations and social inequality

technequality-project.eu

Contact:

Prof. Dr. Mark Levels

m.levels@maastrichtuniversity.nl



Funded by the Horizon 2020
Framework Programme of the
European Union

More
information
about the
IBM & Ver.di
AI Research
Project



<http://ibm.biz/watson-ki-studie>

Technequality

Macro relations between technological innovations, inequalities, & government

