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Arbeit im Wandel:
Das Zeitalter der künstlichen Intelligenz

Dateninnovationen in der Praxis – Von der Datenaufbereitung bis zur KI

Dr. Joschka Hüllmann, Assistant Professor, Universität Twente

Über mich

Dr. Joschka Hüllmann

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Forschungsschwerpunkte:

– Die Zukunft der Arbeit mit neuen Technologien

– People Analytics und Algorithmisches Management

– Analyse Digitaler Fußspuren

– Social Process Mining

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Produktivitätssteigerung in Wissensarbeit

(DellAcqua et al. 2023, p.28; Acemoglu 2024)

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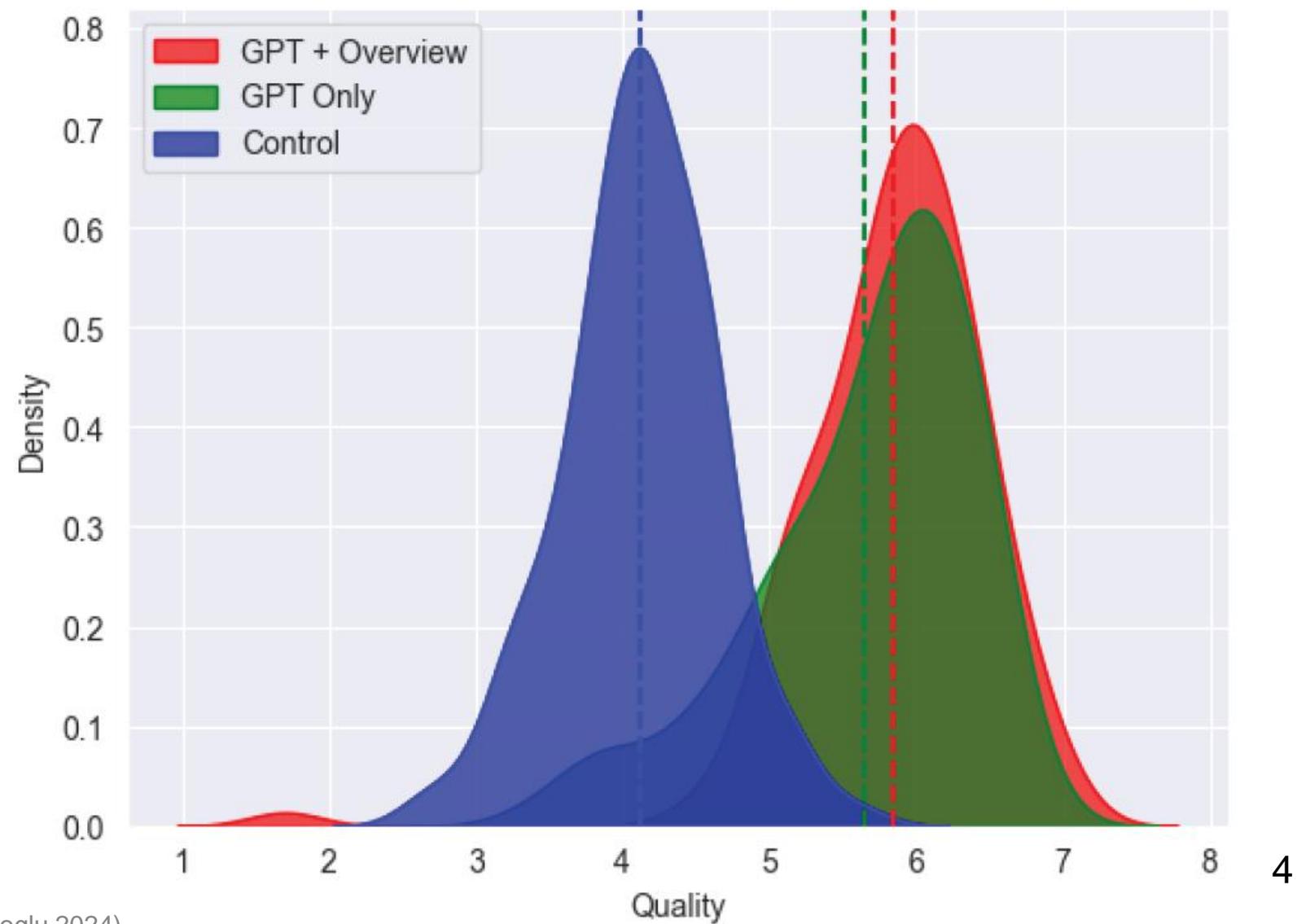
Steigender Bedarf

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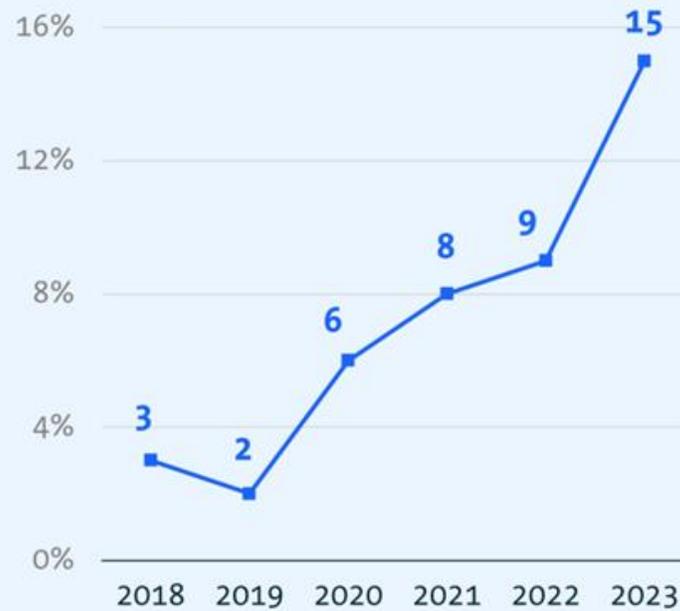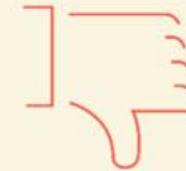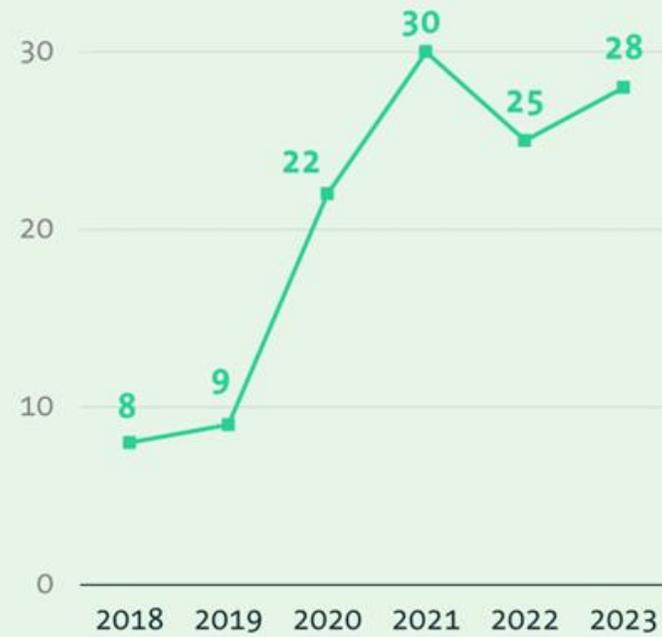
Viele Branchen sind von KI betroffen

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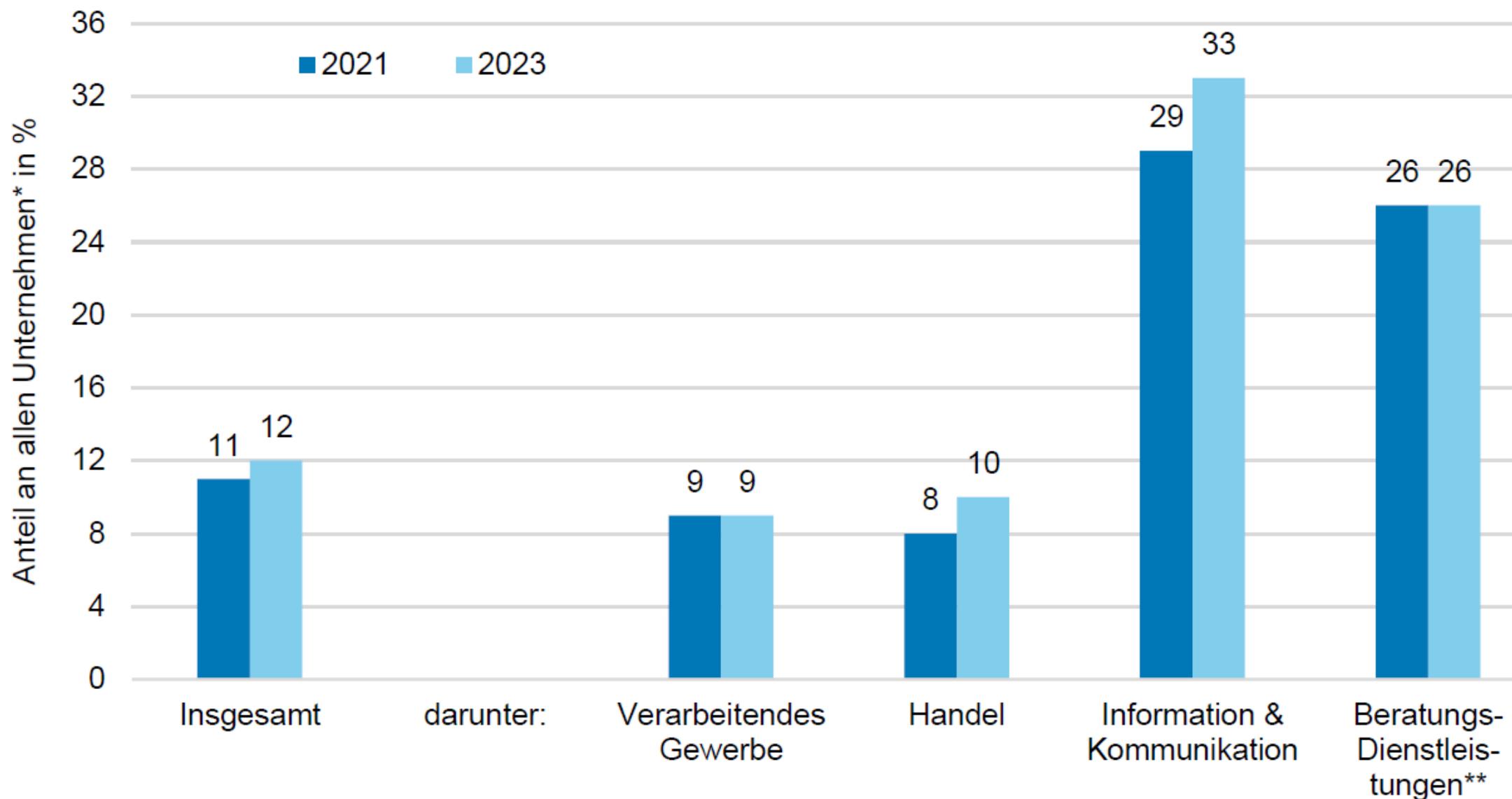
Mehr KI Jobs
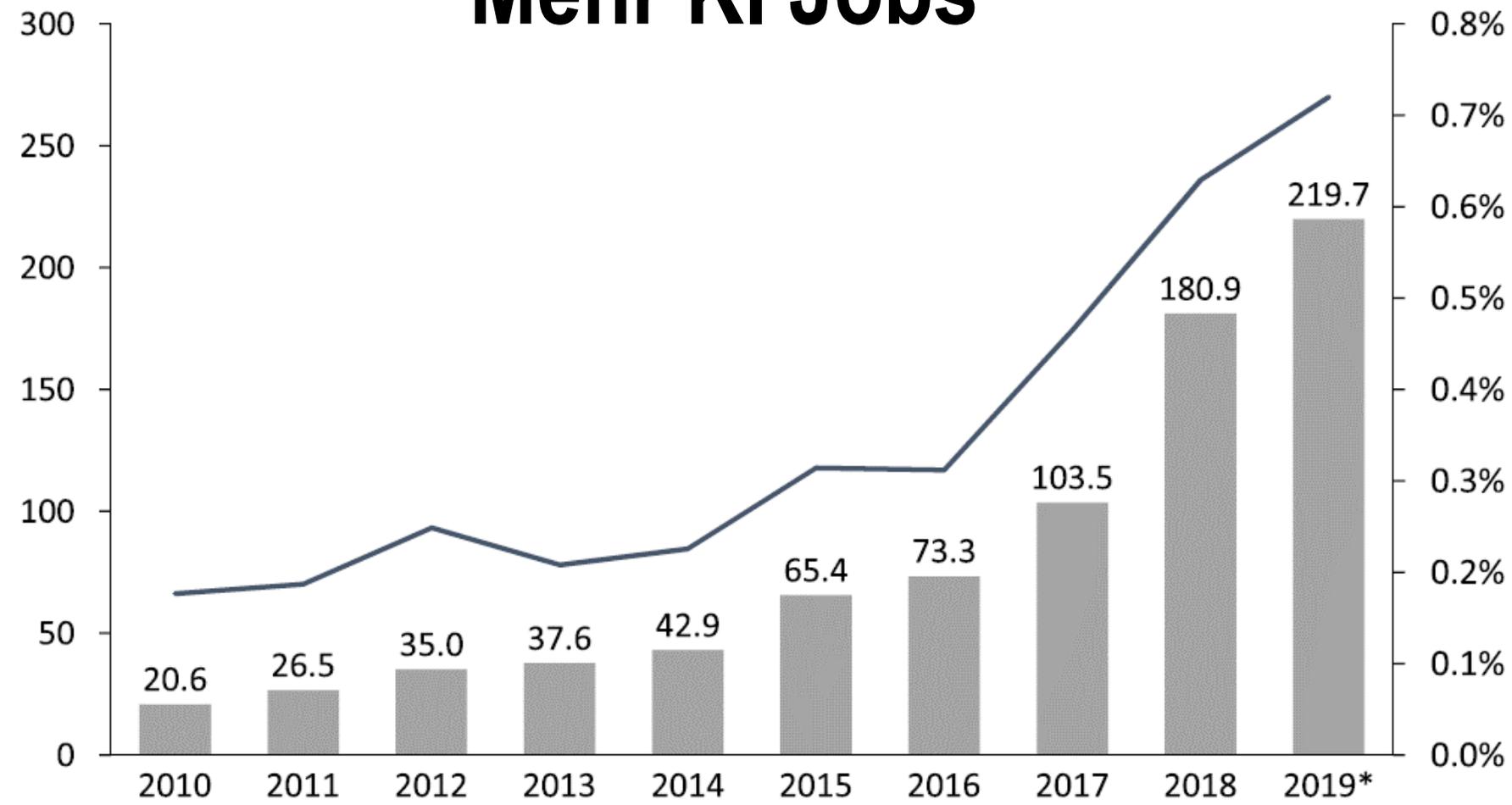
AI share of the Total number of vacancies

Number of vacancies requiring AI skills (in thousands)
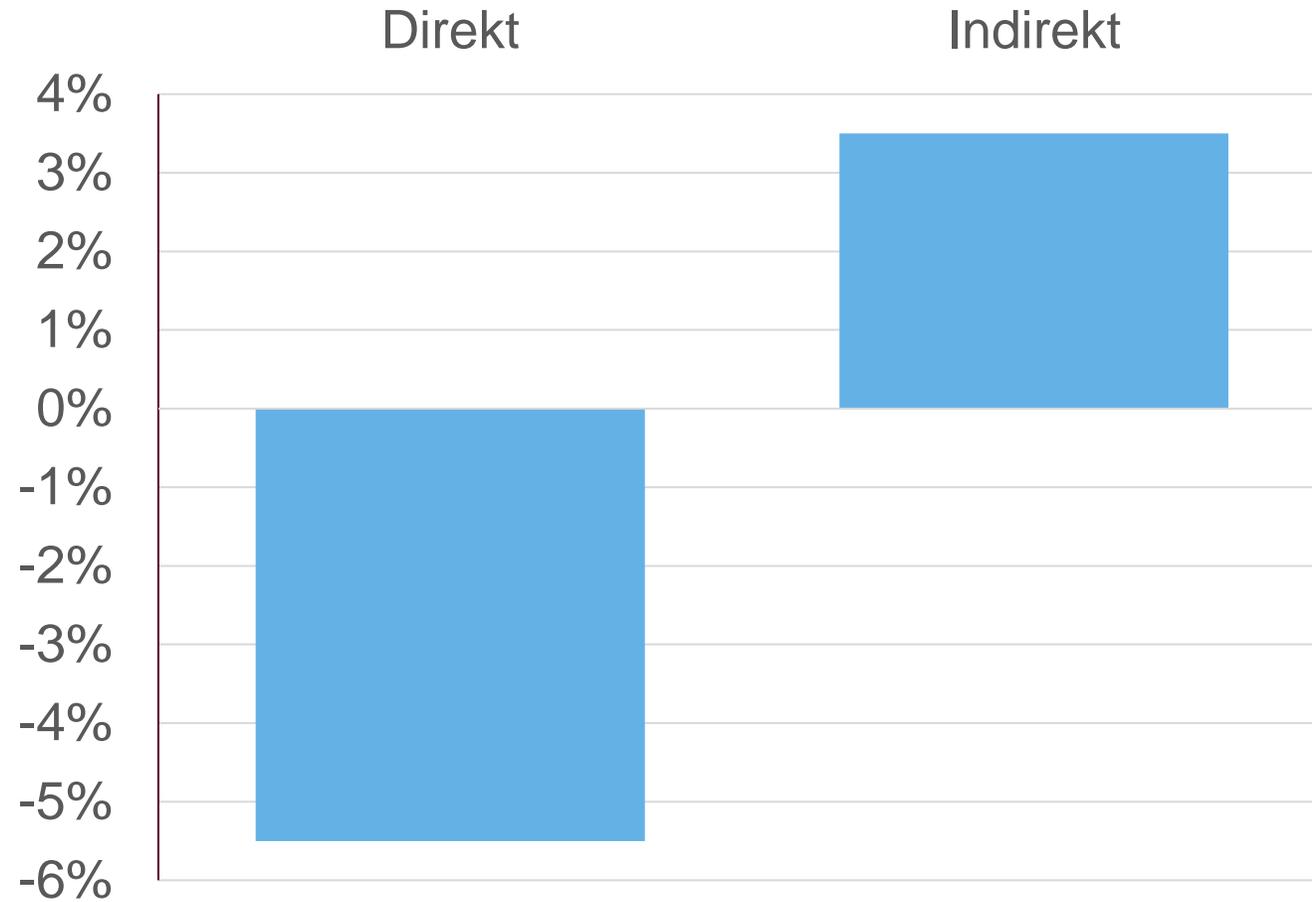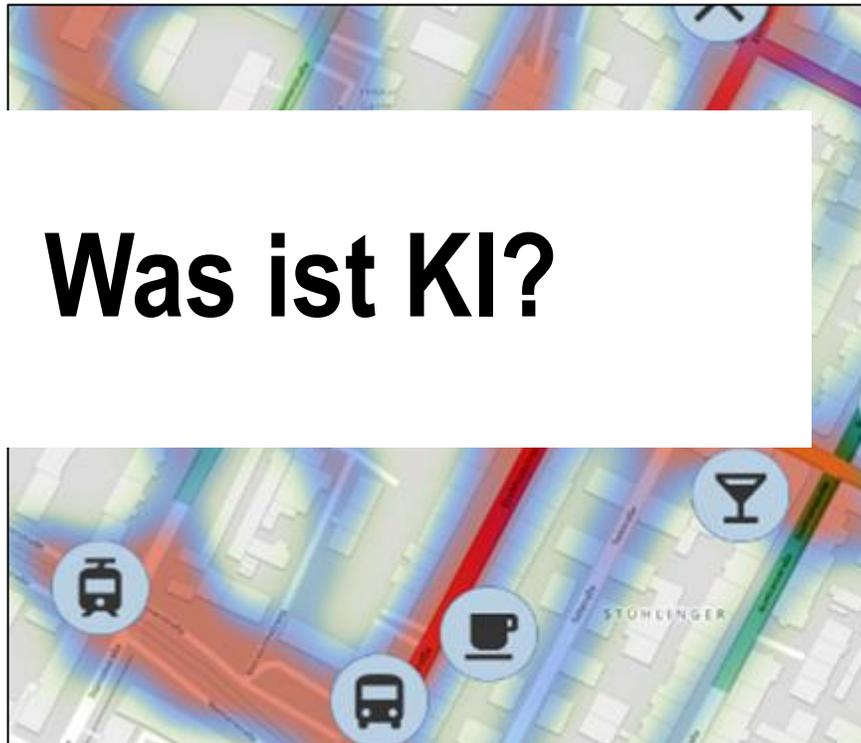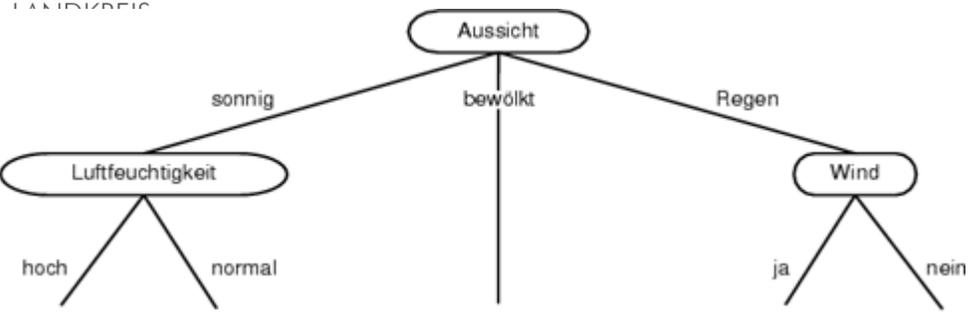
(Alekseeva et al. 2021, p. 5)

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Lohn Effekte

(Acemoglu et al. 2023, p. 23)

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Was ist KI?

(Radford et al. 2018)

Smart Farming

(van Klompenburg et al. 2020; Hüllmann et al. 2023)

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Smart Manufacturing

(https://blogs.nvidia.com/blog/bmw-group-nvidia-omniverse/; Wang et al. 2018; Sharp et al. 2018)

Smart Krankenhaus

(Zhao et al. 2019; Esteva et al. 2021; Rivas-Blanco et al. 2021)

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Öffentlicher Verkehr

(Abdelwahed et al. 2020, 2021)
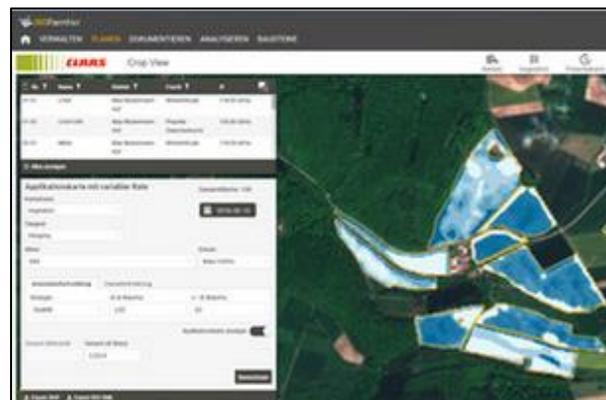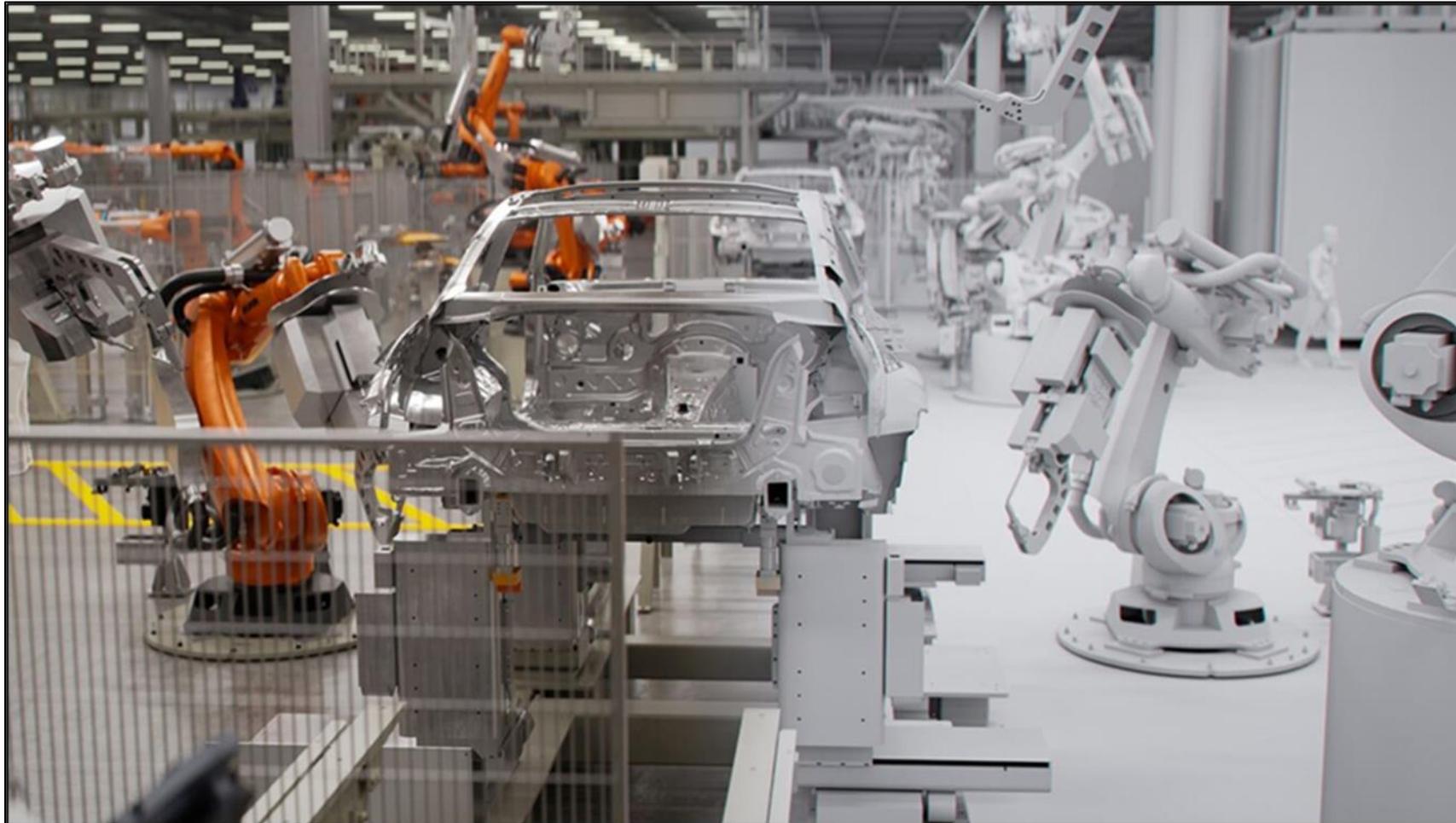
Sport-, Kunden-, People Analytics

(Rothmeier et al. 2020; Hüllmann et al. 2021; Xenopolous et al. 2022; Marcelino et al 2020)

Arbeit im Wandel.

(Hüllmann et al. 2023; Benbya et al. 2021)
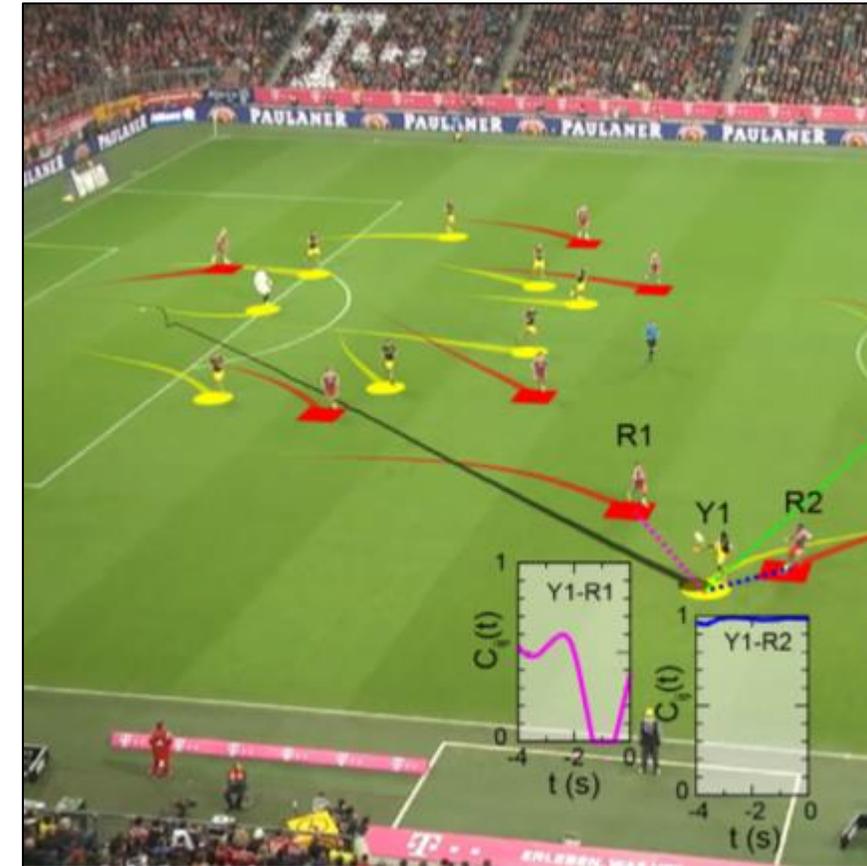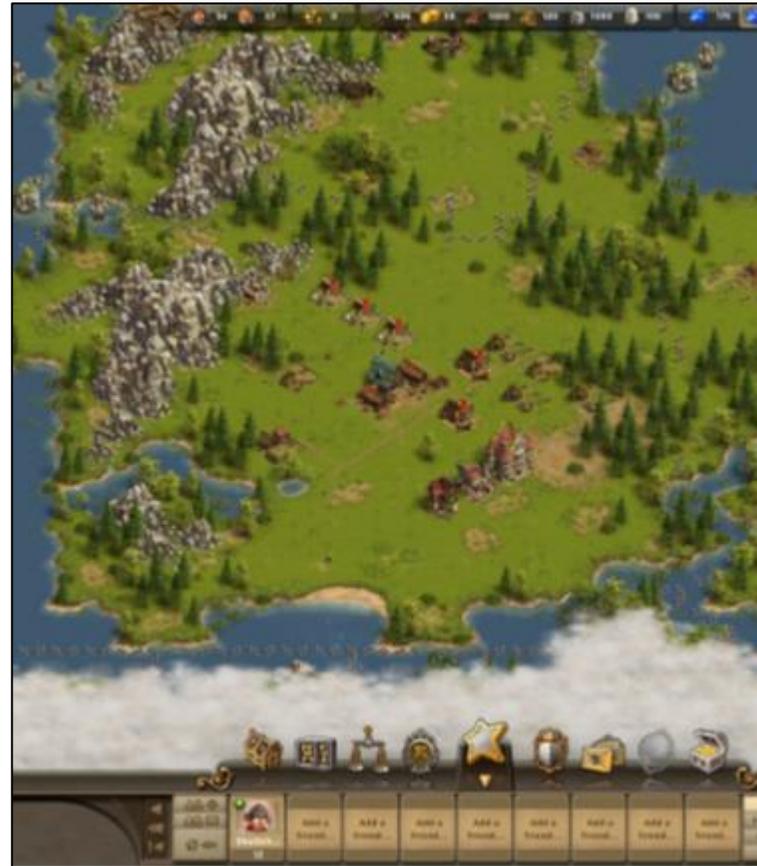
Ist KI anders?
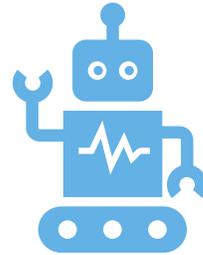
KI Eigenschaften

1. KI-Modelle sind eine "Blackbox".
2. KI-Modelle haben Fehler und Unsicherheiten.
3. KI-Modelle bauen dauert lange.
4. KI-Modelle haben systematische Verzerrungen.

Menschliche Eigenschaften

1. Vertrauen in Mensch vs. Künstliche Intelligenz.
2. Aversion gegen Künstliche Intelligenz.

(Venkatesh 2022)

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Adoption von KI (Unternehmenssicht)

Umgebung

- Rechtliche Bedingungen
- Externe Expertise
- Öffentliche Gelder
- Wettbewerb

Technologie

- Verfügbarkeit von KI Lösungen
- Verfügbarkeit von Daten
- Nützlichkeit
- Skalierbarkeit
- Produktivität des Produktionsprozess
- Qualität der Daten
- Nutzbarkeit
- Zuverlässigkeit

Organisation

- Interne Expertise
- Management Support
- Verfügbare Ressourcen
- Innovationskraft

Schatten-IT

Fachkräftemangel

KI Adoption

(Demlehner and Laumer 2020; Tornatzky et al. 1990; Brynjolfsson and Mitchell 2017; Cowston and Bolici 2019)

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Welches KI Tool ist das richtige?
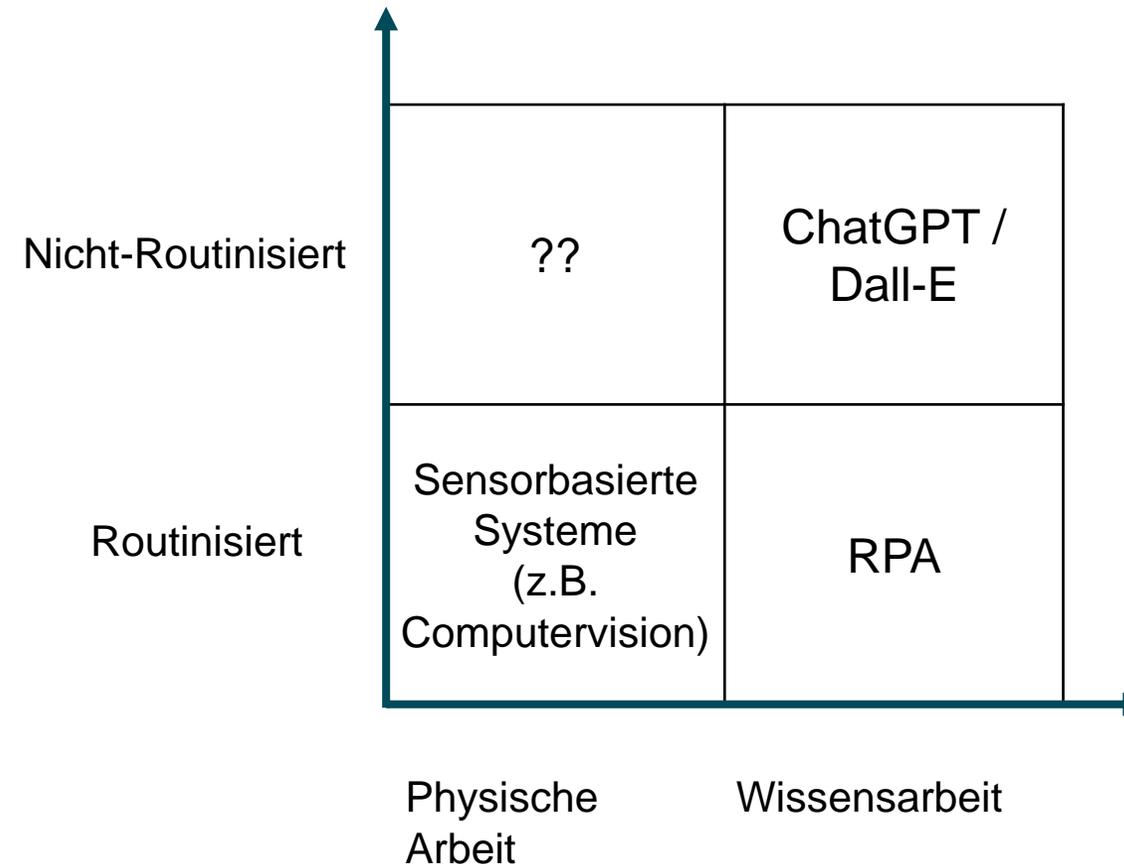
Adoption von KI (Unternehmenssicht)

„Unsere Daten stecken in Silos und haben uneinheitliche Formate."

„Wir haben nicht das Know-How."

„Die Mitarbeiter bevorzugen bewährte Prozesse."

„Sorge vor Kontrollverlust und Relevanzverlust."

(Ångström et al. 2023)

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Mitarbeiterentwicklung für KI

Neue Aufgaben
durch KI

	Upskilling	Reskilling
Keine neue Aufgaben durch KI	(kein KI Einsatz)	Deskilling oder Substitutieren

Geringe
Substituierbarkeit
bestehender
Aufgaben

Hohe
Substituierbarkeit
bestehender
Aufgaben

(Assis Dornelles et al. 2023)
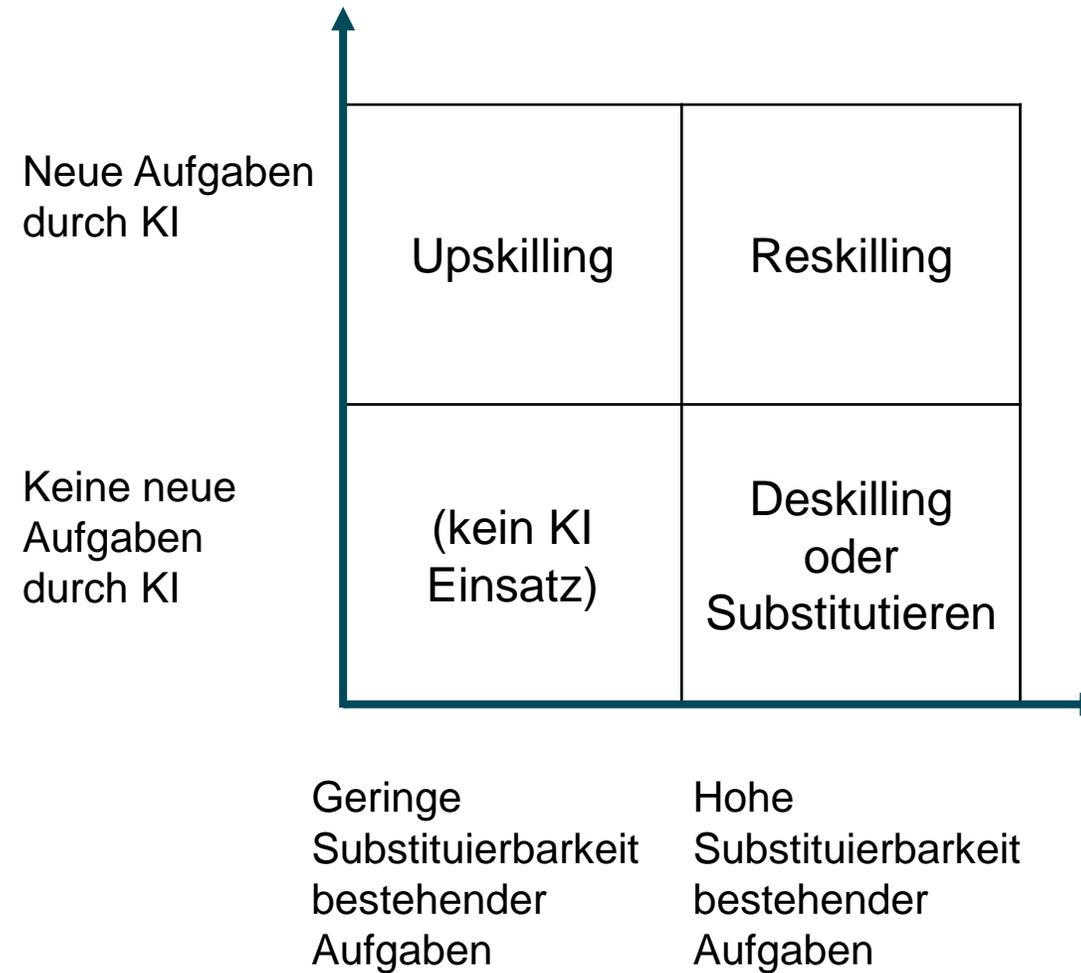
Danke.

Jetzt sind Sie dran!

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