New Work Pioneer Lab, 10.04.2024
Dr. Joschka Hüllmann

Arbeit im Wandel:
Das Zeitalter der Künstlichen Intelligenz

UNIVERSITY OF 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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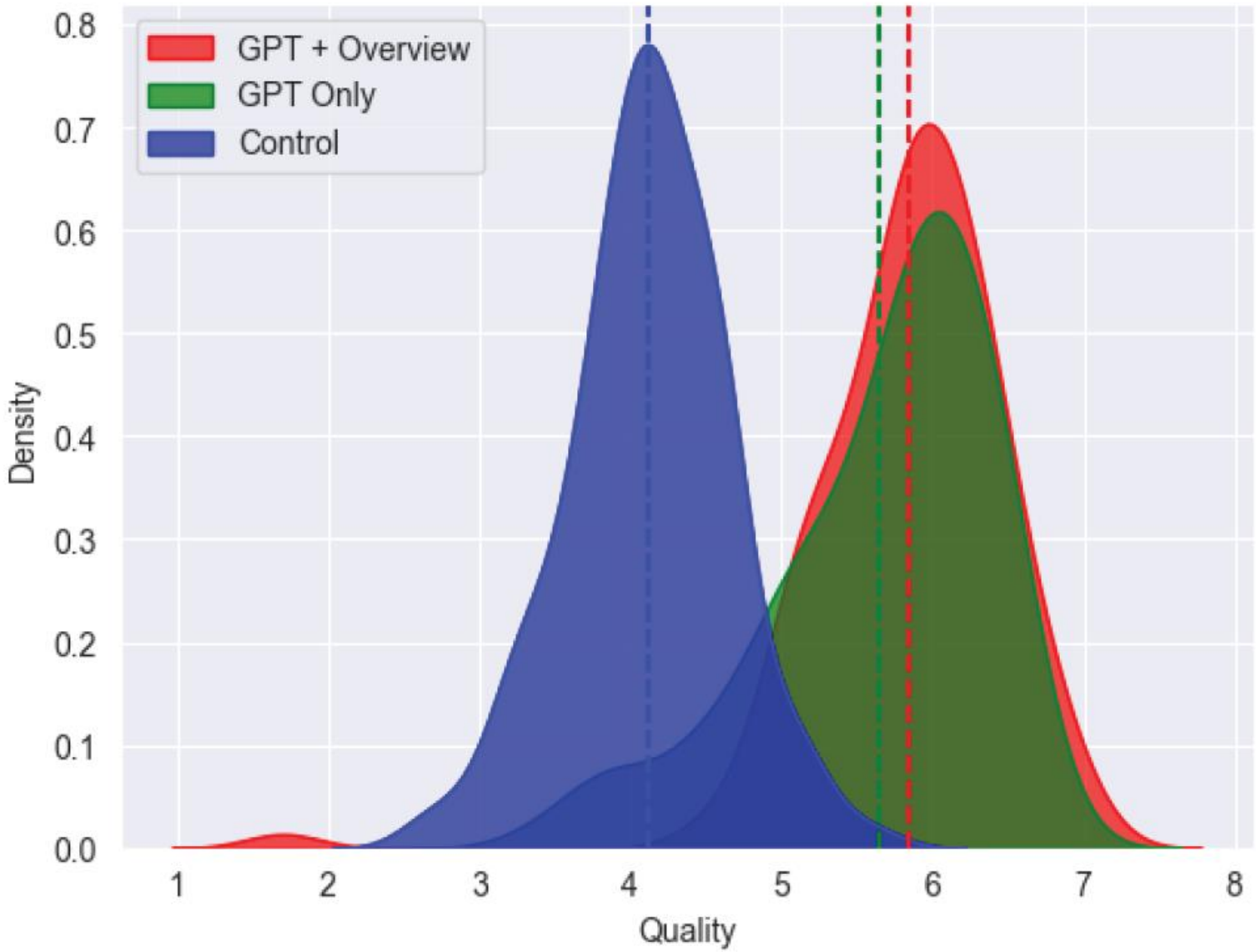
Produktivitätssteigerung in Wissensarbeit



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(DellAcqua et al. 2023, p.28)

Industrie will Techkompetenz

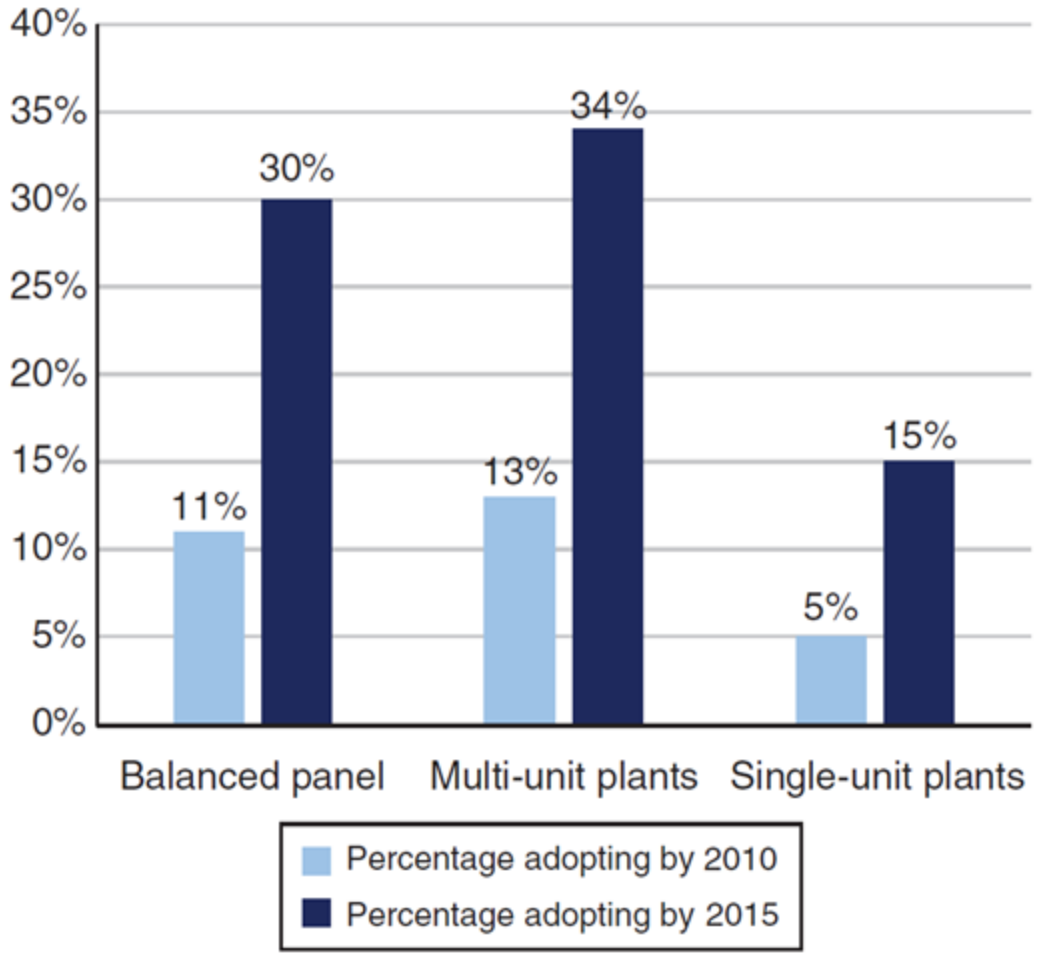
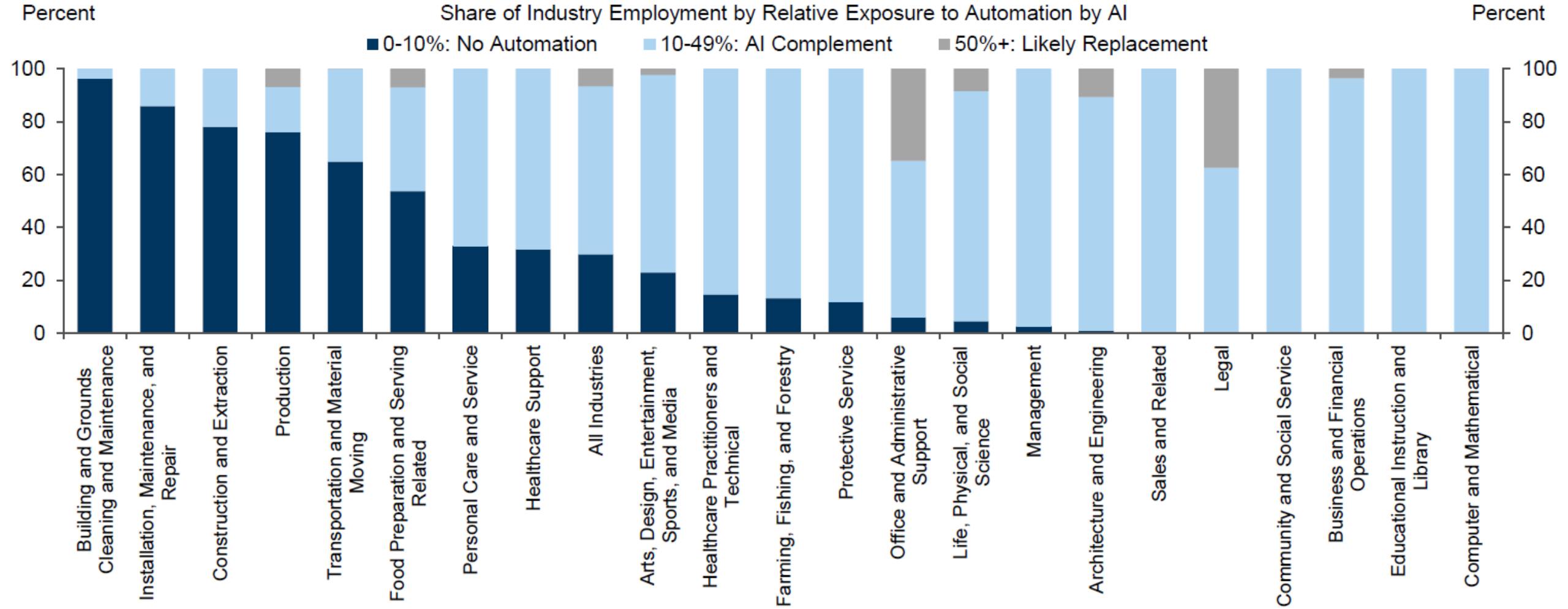


FIGURE 1. ADOPTION OF DATA-DRIVEN DECISION-MAKING IN US MANUFACTURING

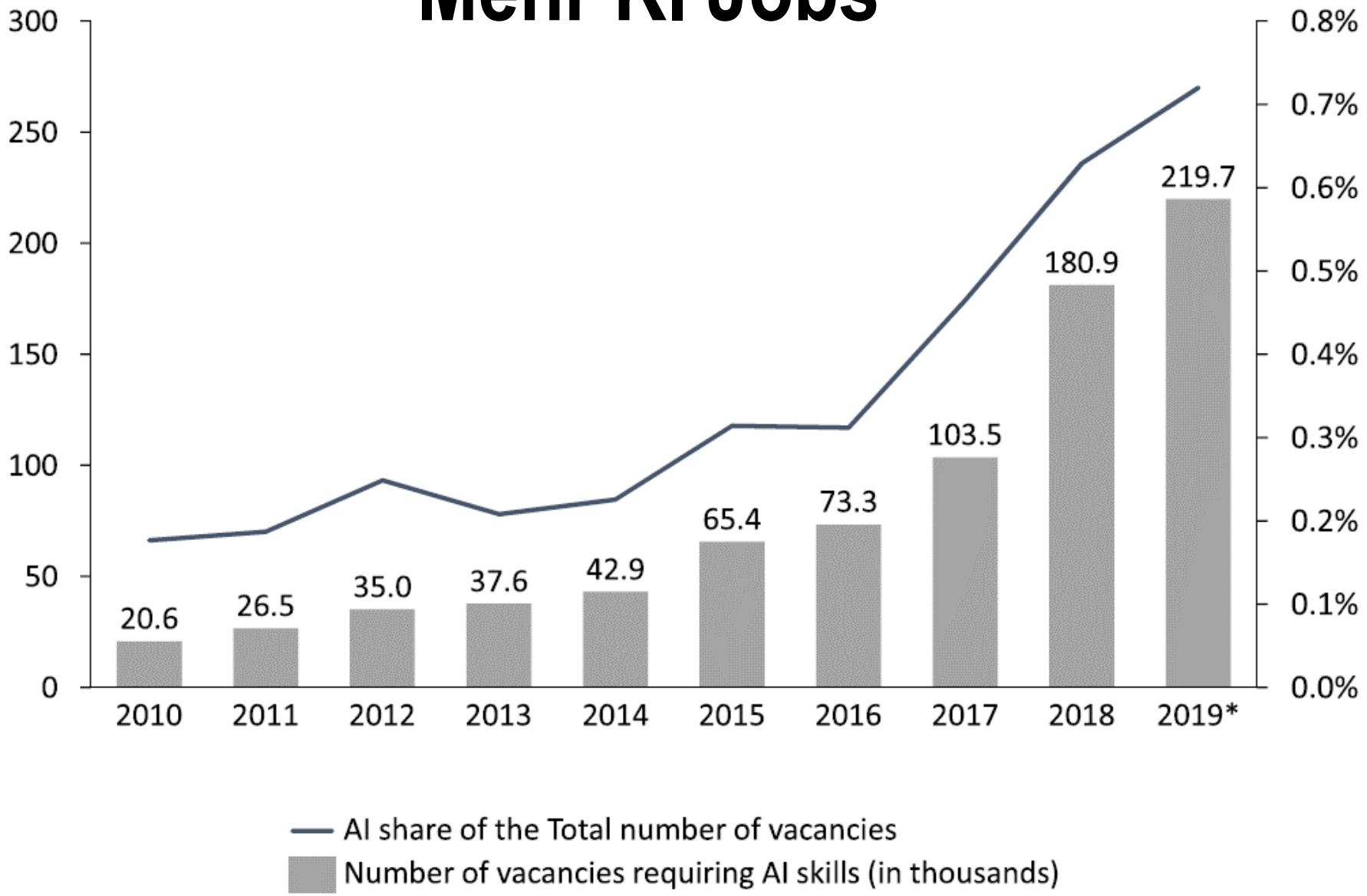
(Brynjolfsson and McElheran 2016, p. 135)

Viele Branchen sind von KI betroffen



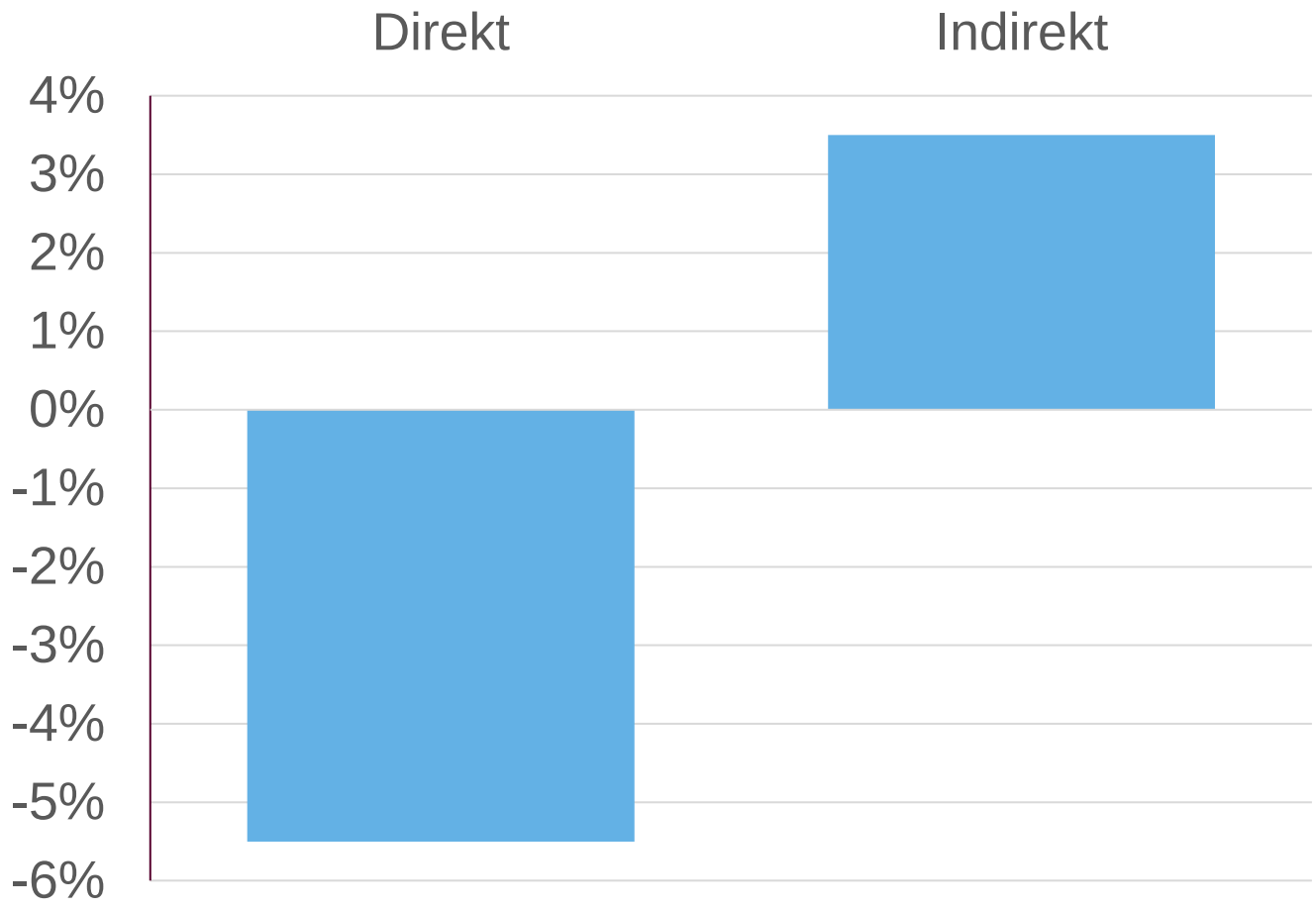
(Hatzius et al. 2023, p. 10)

Mehr KI Jobs

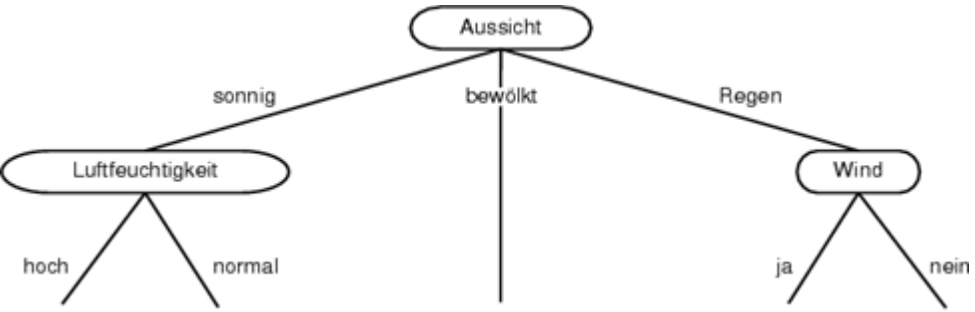


(Alekseeva et al. 2021, p. 5)

Lohn Effekte



(Acemoglu et al. 2023, p. 23)


Aussicht
sonnig
bewölkt
Regen
Luftfeuchtigkeit
Wind
hoch
normal
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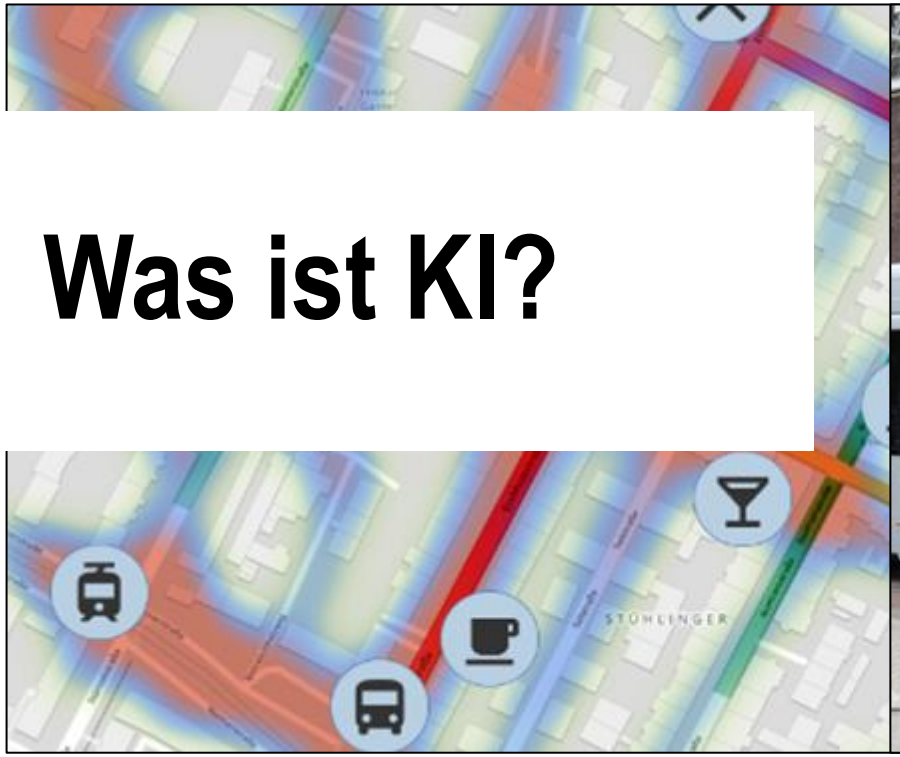
nein

Was ist KI?

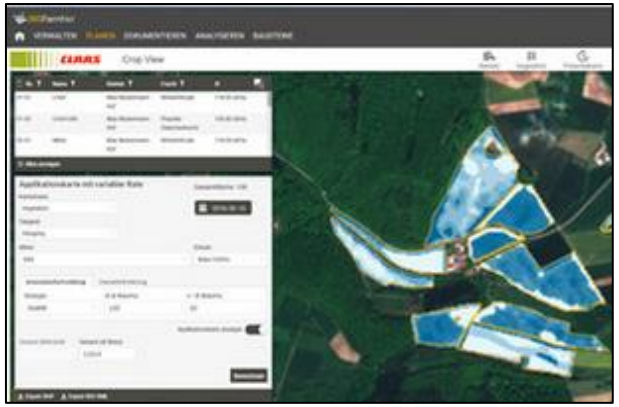



RET Rotterdam
1402

ChatGPT

(Radford et al. 2018)

Smart Farming

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

Smart Manufacturing

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

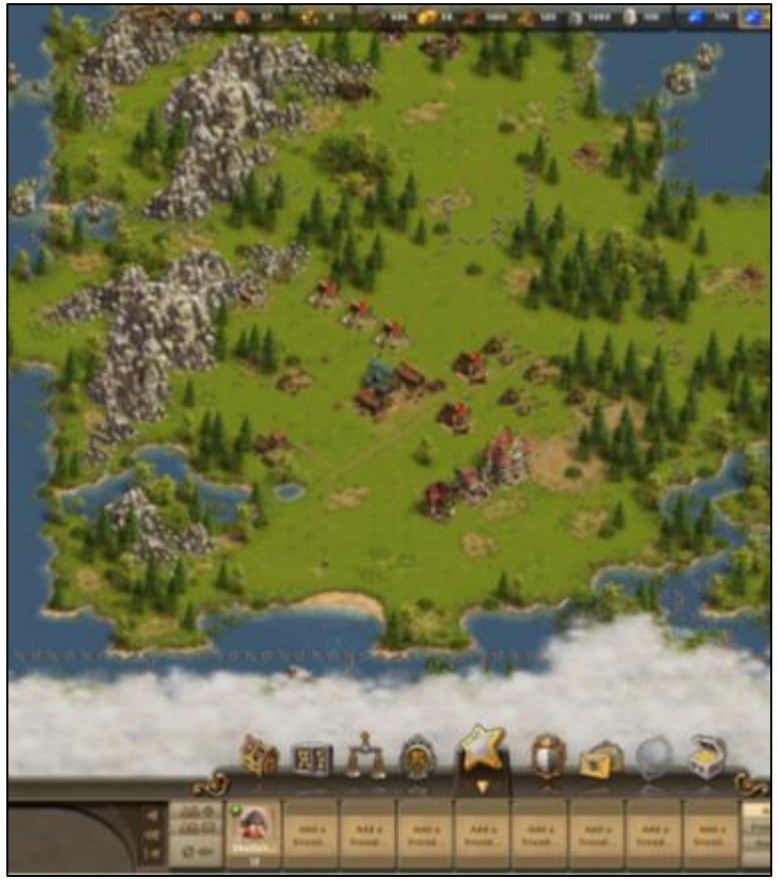
Smart Krankenhaus

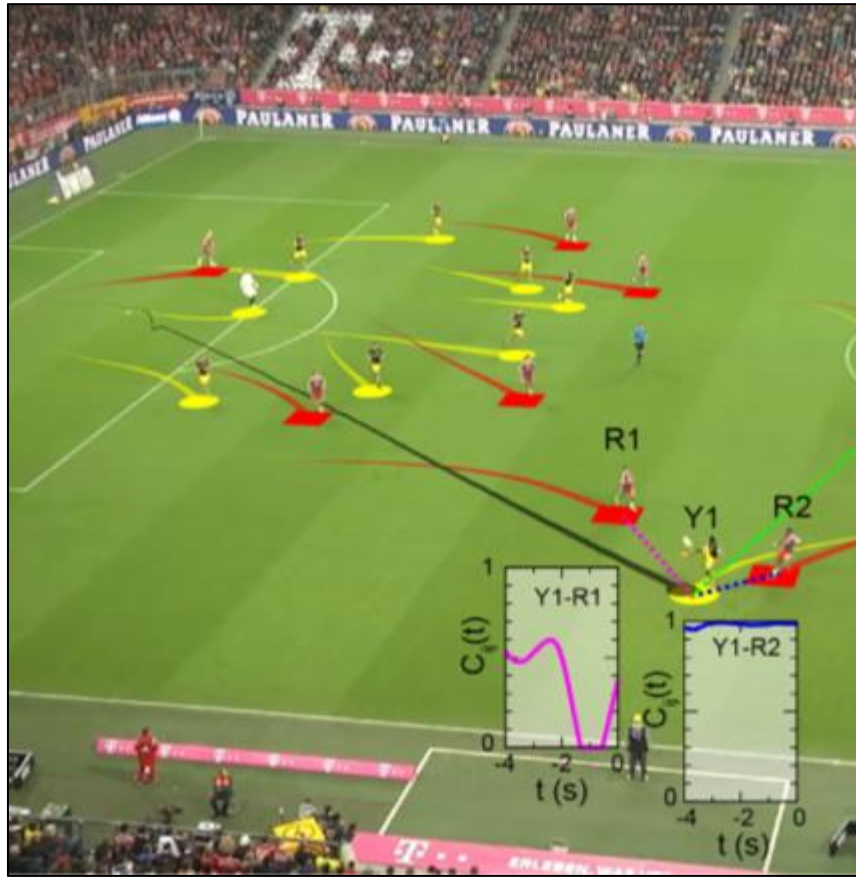
(Zhao et al. 2019; Esteva et al. 2021; Rivas-Blanco et al. 2021)

Öffentlicher Verkehr

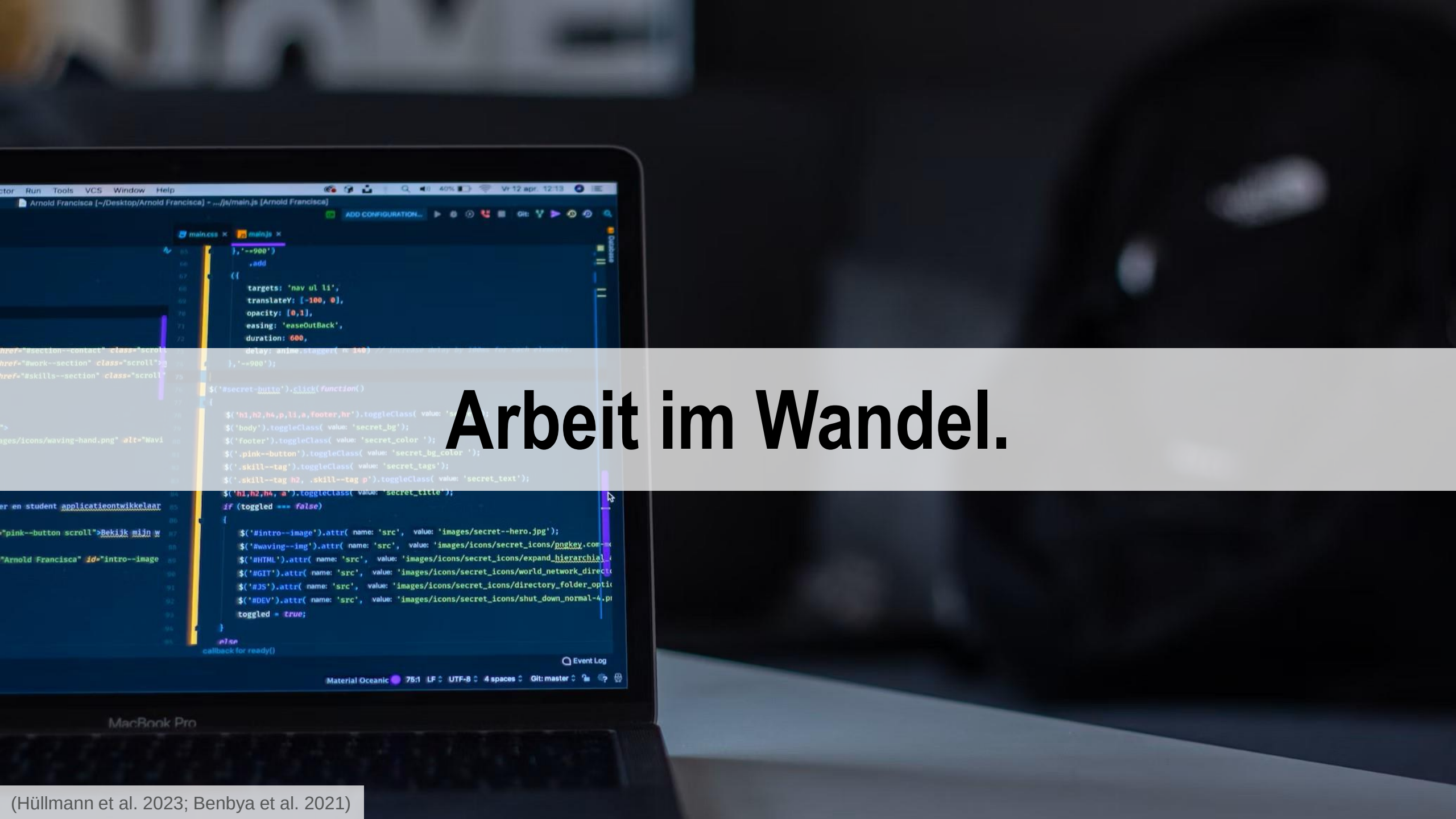
(Abdelwahed et al. 2020, 2021)

Sport-, Kunden-, People Analytics



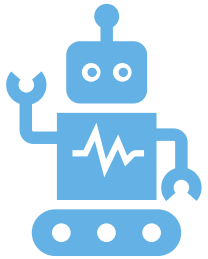


(Rothmeier et al. 2020; Hüllmann et al. 2021; Xenopolous et al. 2022; Marcelino et al 2020)



(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

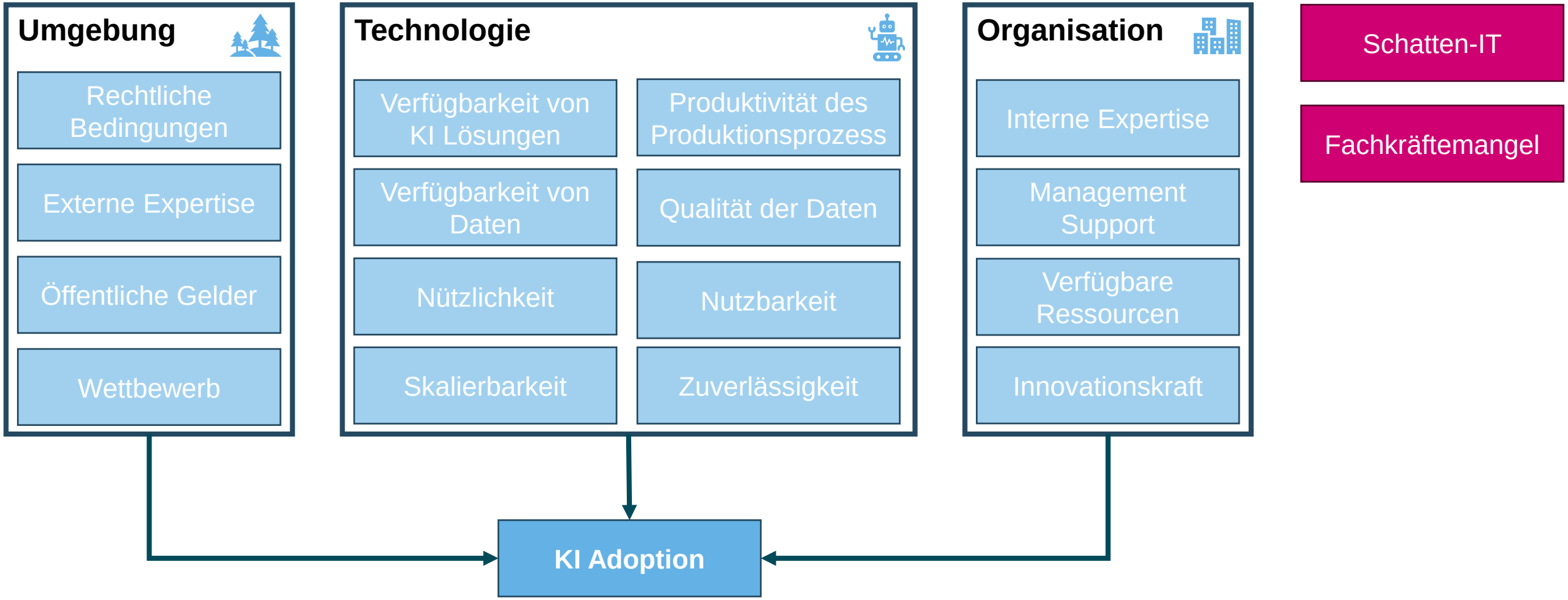
1. Vertrauen in Mensch vs. Künstliche Intelligenz.
2. Aversion gegen Künstliche Intelligenz.

Technische Eigenschaften

1. Es braucht viele Daten.
2. Viele Annahmen über die Domäne.
3. Dynamiken in der Domäne.
4. Multidisziplinäres Wissen.

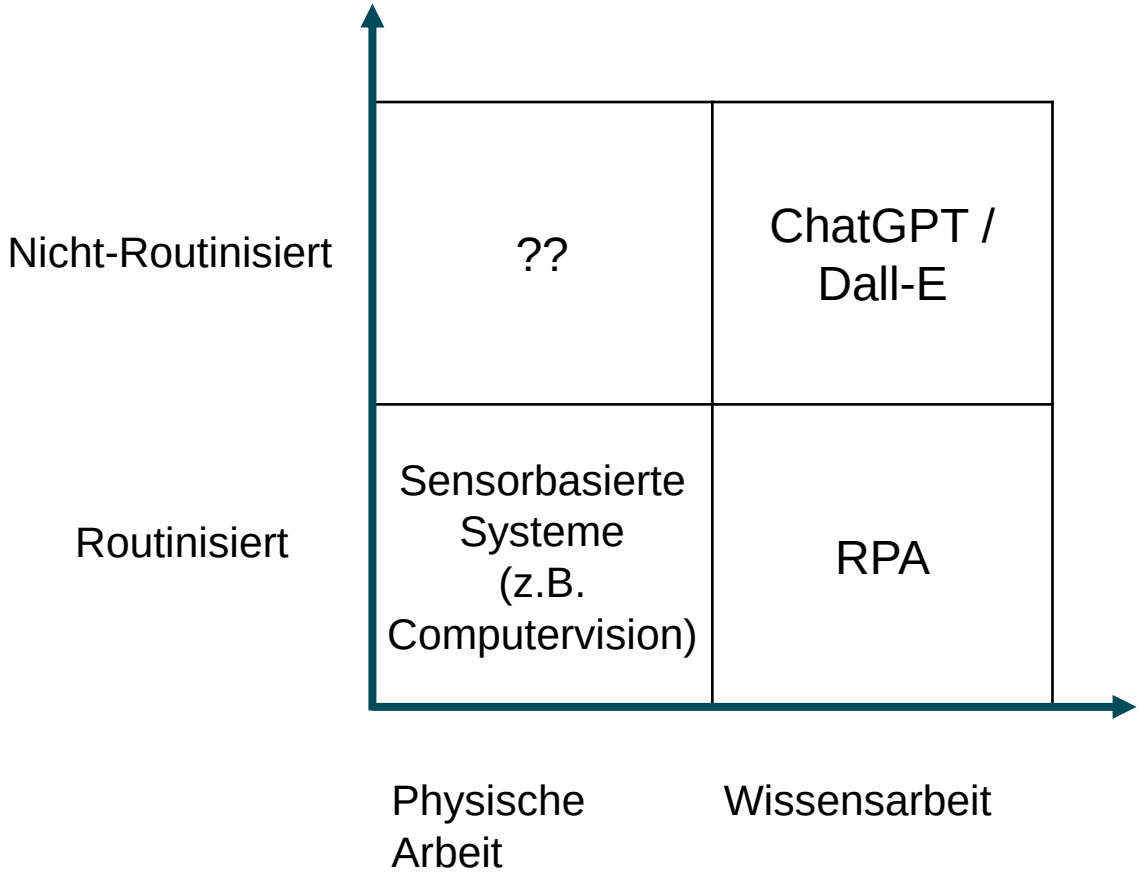
(Venkatesh 2022)

Adoption von KI (Unternehmenssicht)



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

Welches KI Tool ist das richtige?



Adoption von KI (Unternehmenssicht)

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

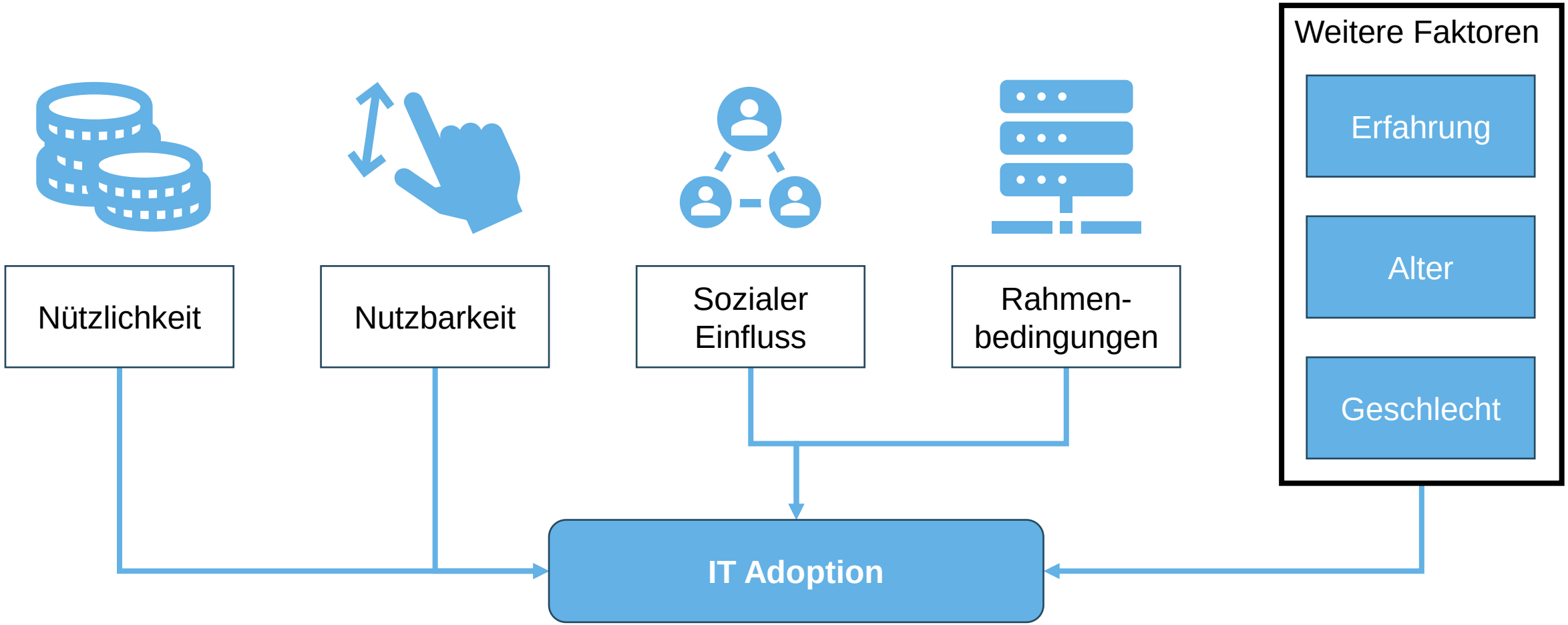
„Wir haben nicht das Know-How.“

„Die Mitarbeiter bevorzugen bewährte Prozesse.“

„Sorge vor Kontrollverlust und Relevanzverlust.“

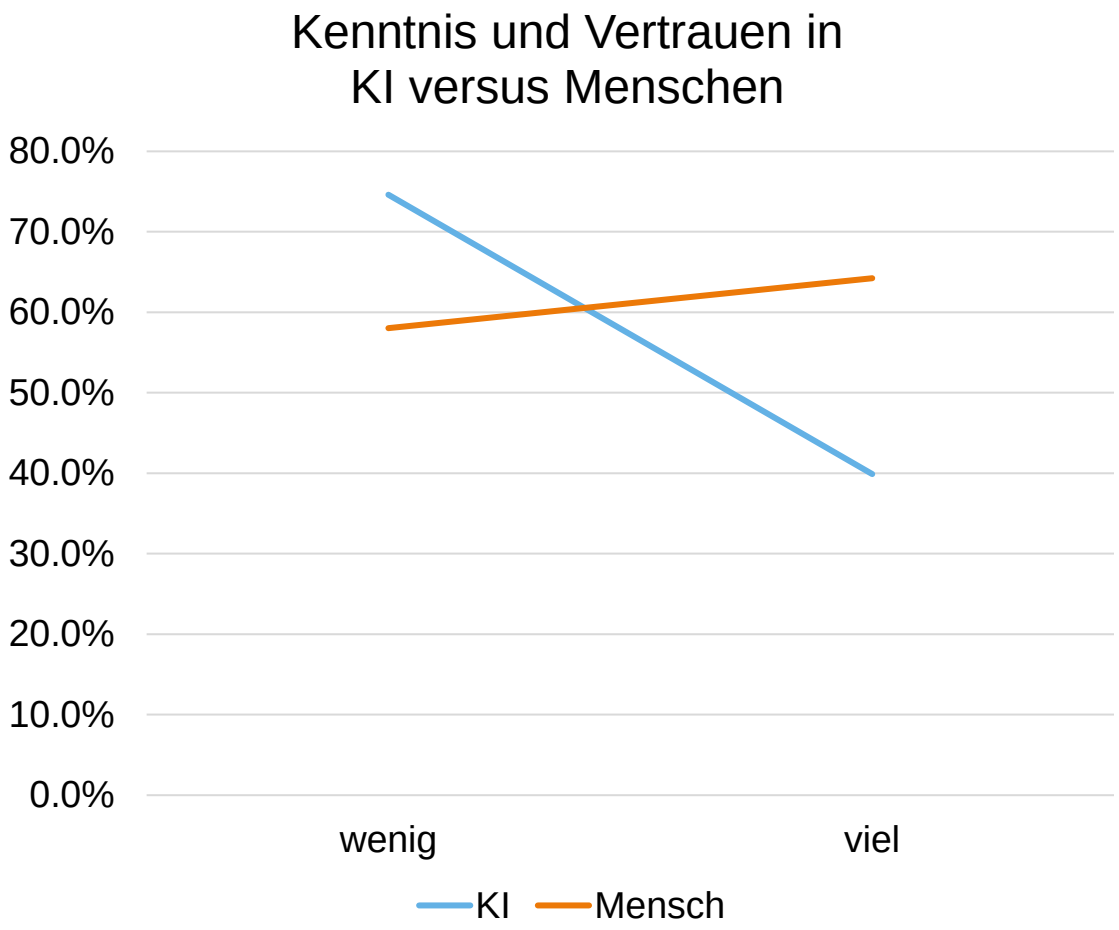
(Ångström et al. 2023)

Adoption von IT (Nutzersicht)



(Venkatesh et al. 2003)

Adoption von KI (Nutzersicht)



Mehr Toleranz gegenüber Menschen
Fehler durch KI bleiben hängen.
Fehler durch Menschen werden verziehen.

Je mehr man es kennenlernt,
→ desto kritischer werden Nutzer.

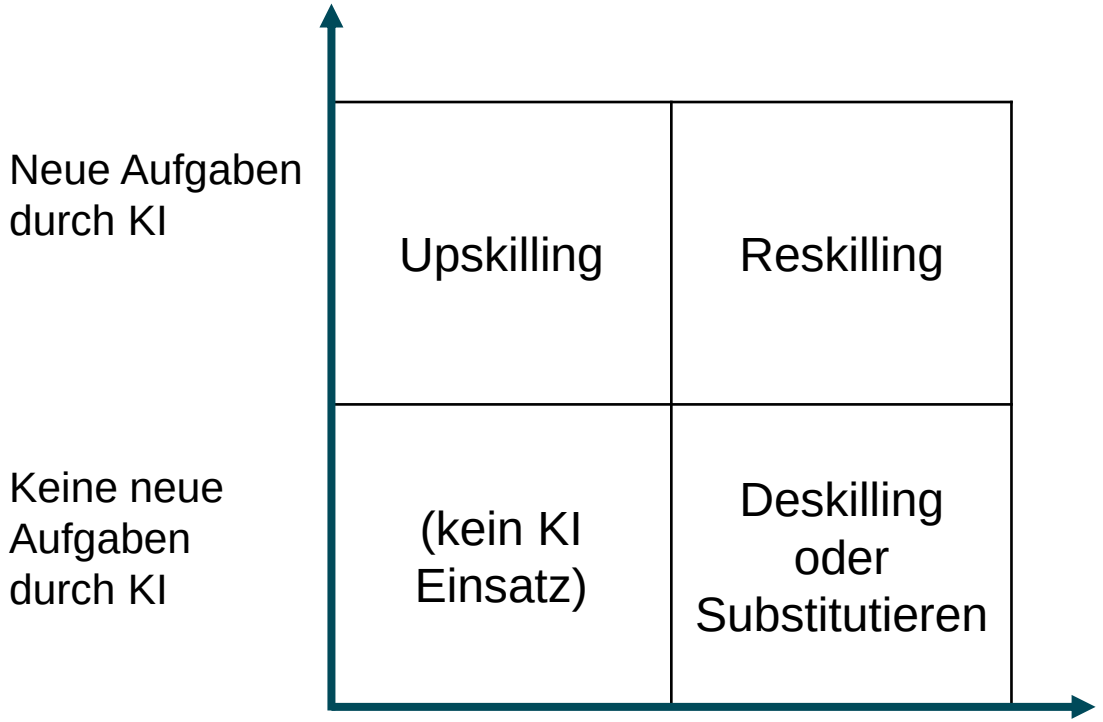
Je besser man es versteht,
→ desto einsichtiger werden Nutzer.

.

Vertrauen & Wissen schaffen, Erwartungen managen!

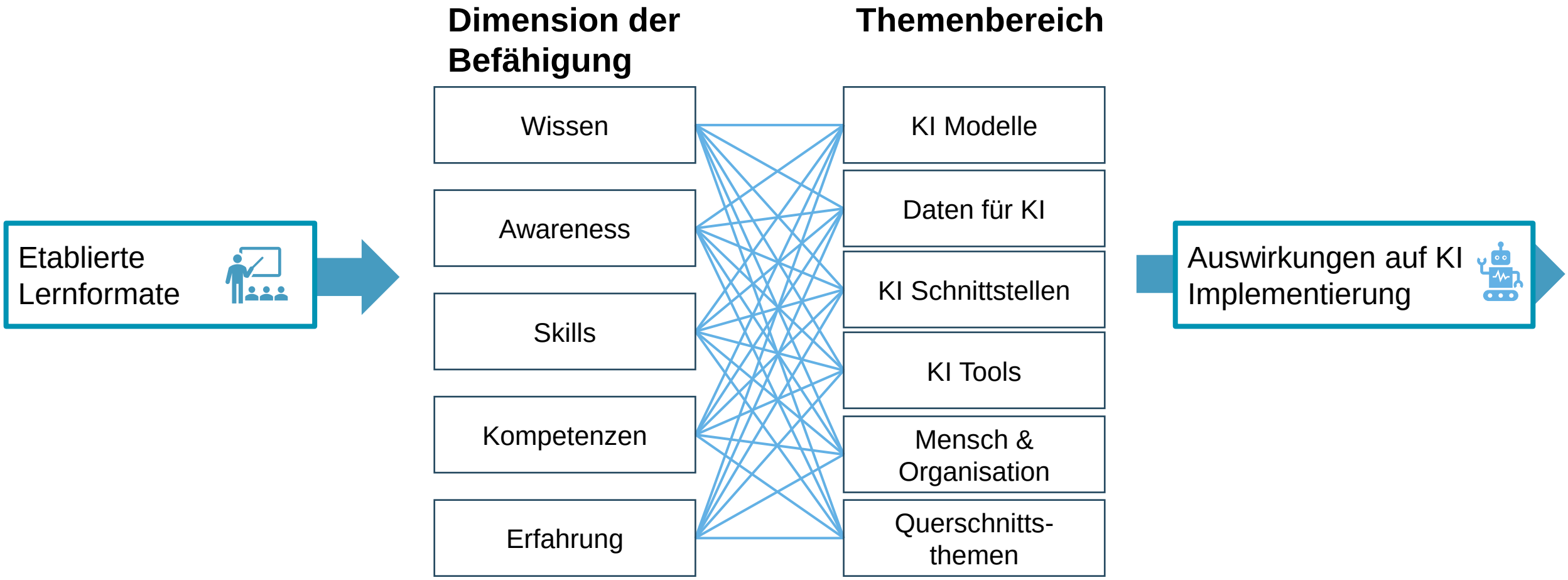
(Berger et al. 2021; Dietvorst et al. 2015; Kocielnik et al. 2019; Logg et al. 2019; Bitzer et al. 2021; Thiebes et al. 2021; Araujo et al. 2020; Hüllmann et al. 2023)

Mitarbeiterentwicklung für KI



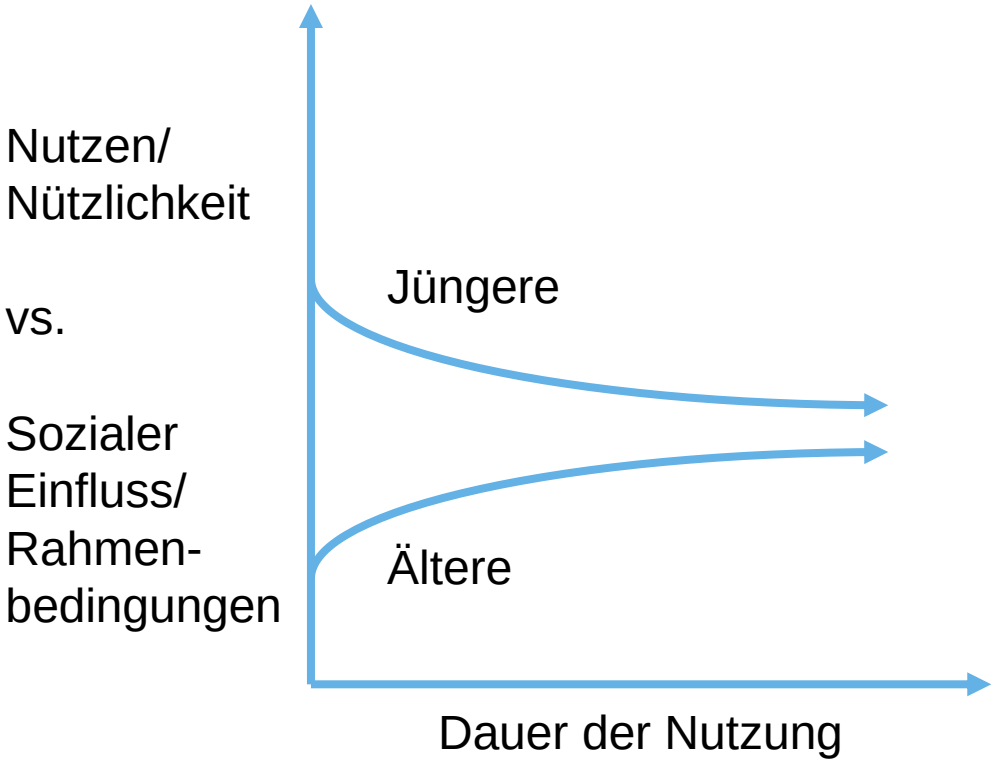
(Assis Dornelles et al. 2023)

KI „Literacy“ schaffen



(Pinski and Benlian 2024)

Rolle von Alter



<u>Anfängliche Nutzungsentscheidungen:</u>

Jüngere Arbeitnehmer:
Benutzerfreundlichkeit / Nützlichkeit der Technologie stärker im Fokus

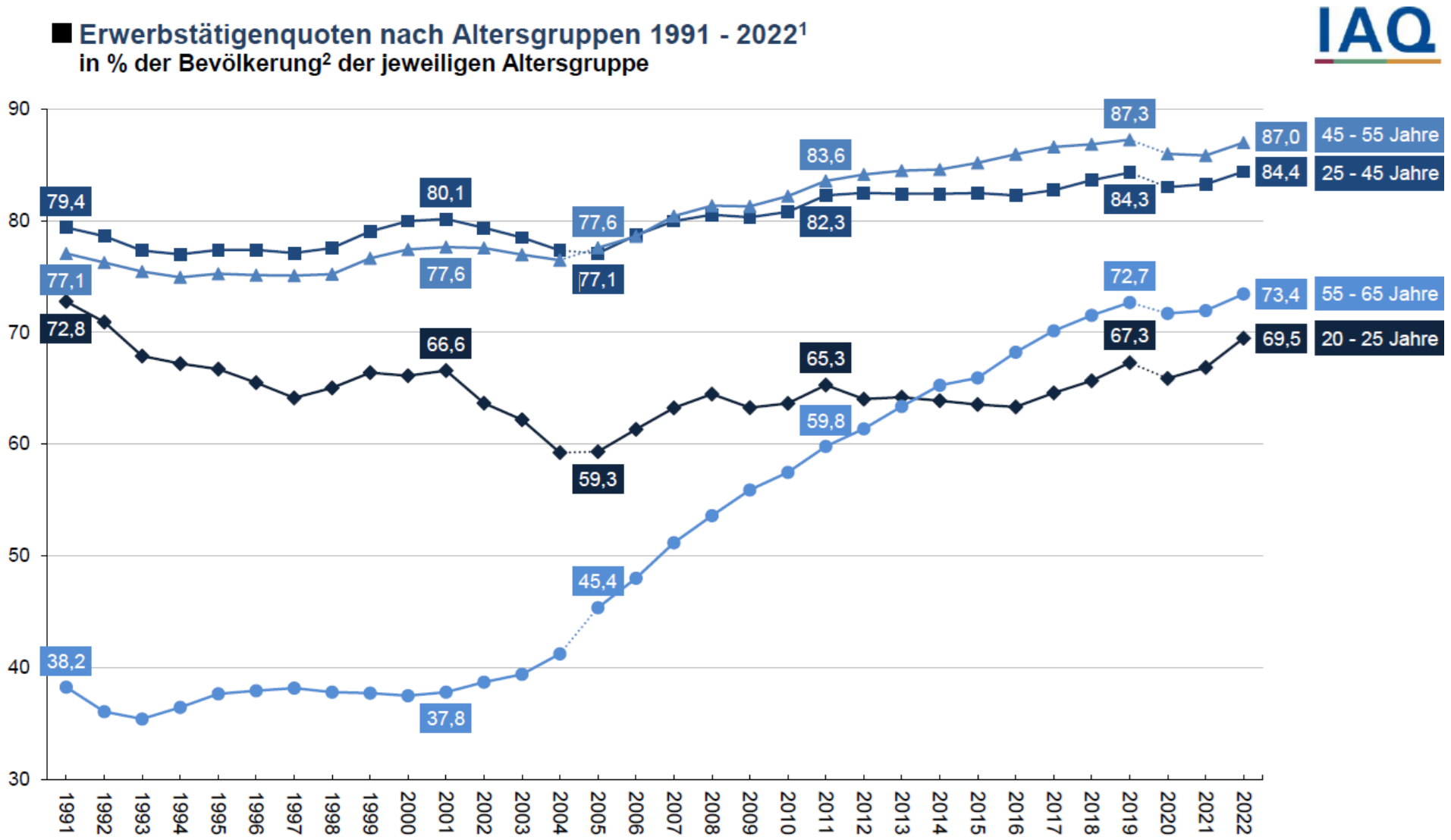
Älteren Arbeitnehmer:
Sozialer Einfluss und Rahmenbedinungen stärker im Fokus

Langfristig:
Angleichung und Internalisierungsprozess erfolgt schnell

Geschlecht:
Männer konzentrieren sich mehr auf Nützlichkeit

(Morris and Venkatesh 2000; Morris et al. 2005)

Arbeitnehmer mit höherem Alter



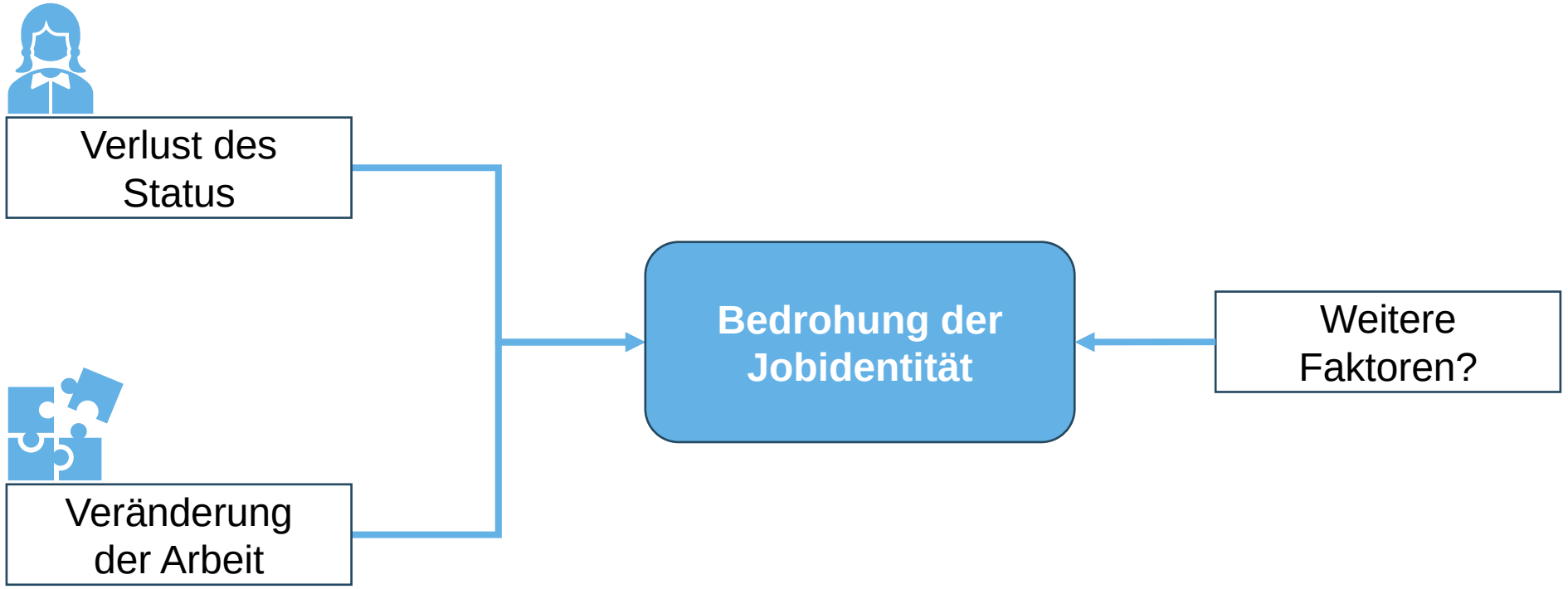
[1] Aufgrund methodischer Änderungen in mehreren Jahren ist der Vergleich im Detail eingeschränkt, jedoch ist die Trendausage belastbar. Werte für 2022 vorläufig. [2] Ab 2017 ohne Personen in Gemeinschaftsunterkünften.

Quelle: Statistisches Bundesamt (2023), GENESIS-Online (Eigene Berechnungen)

Sozialpolitik-aktuell.de

(Heß 2024)

Jobidentität bei KI



(Mirbabaie et al. 2021)

Sinn der Arbeit bei KI

KI Implementierung

1. Substitution
2. Neue Aufgaben (spannend)
3. Neue Aufgaben (langweilig)
4. Verbessern existierender Aufgaben

Bedeutungsvolle Arbeit

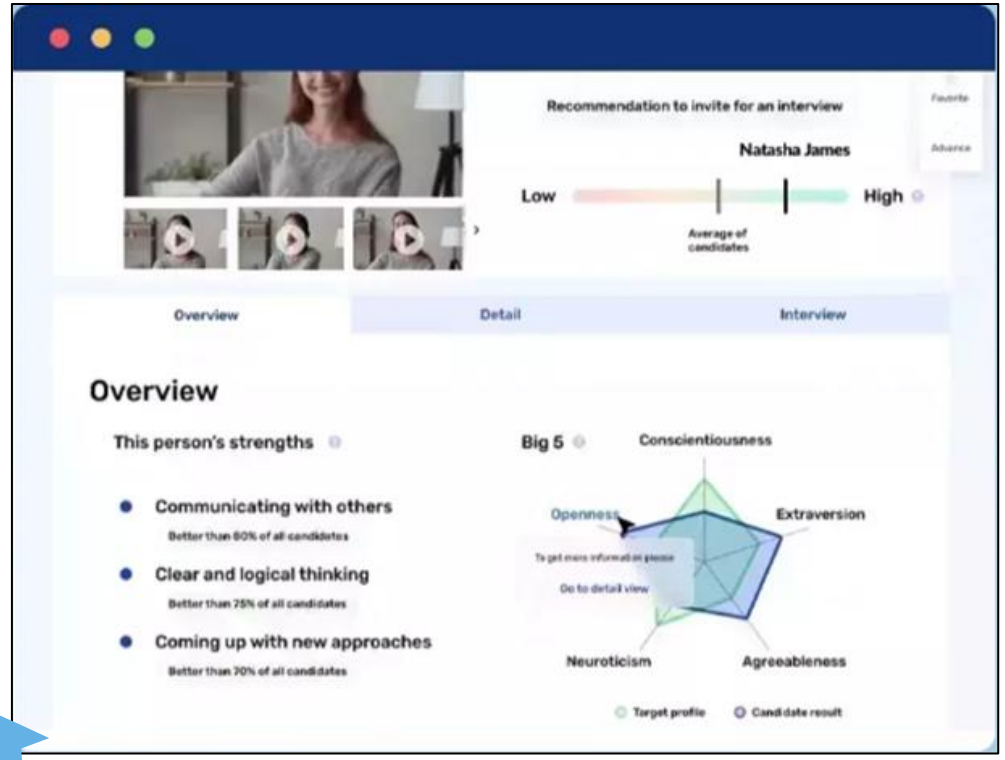
1. Integrität der Aufgaben
2. Kompetenzentwicklung und –nutzung
3. Wichtigkeit der Aufgaben
4. Autonomie
5. Zugehörigkeit

(Bankins and Formosa 2023; Bailey et al. 2019; Lipschitz et al. 2023)

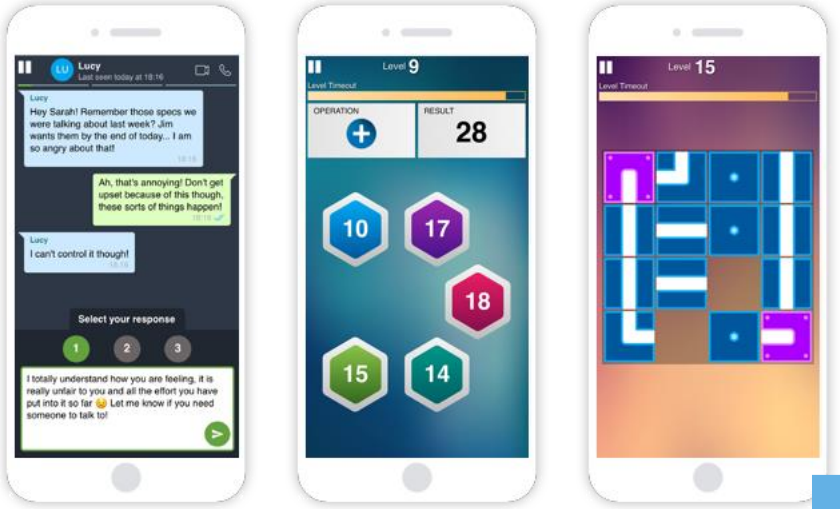
KI in Personal und Organisationsentwicklung

(Kanitz and Gonzalez 2021; Brechtelsbauer and Laumer 2024)

KI im Recruiting



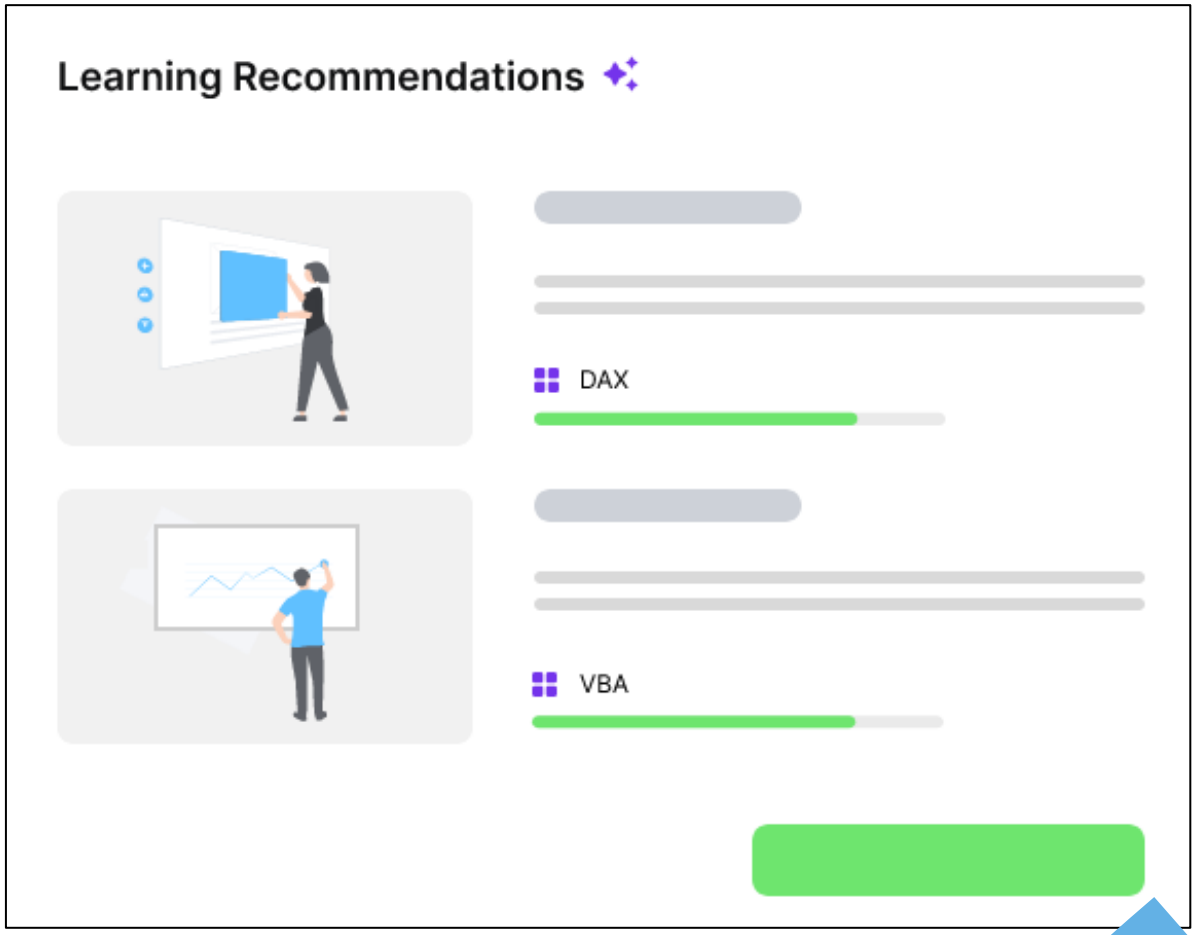
KI-basierte Bewerbungsgespräche



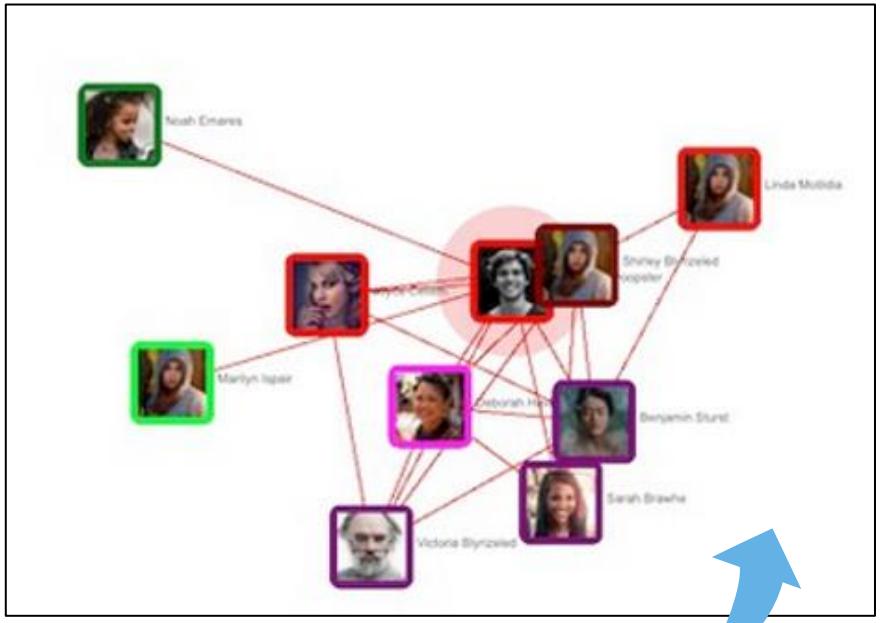
KI-basierte Assessment Spiele

(https://interaktiv.br.de/ki-bewerbung/)

KI in Personalentwicklung

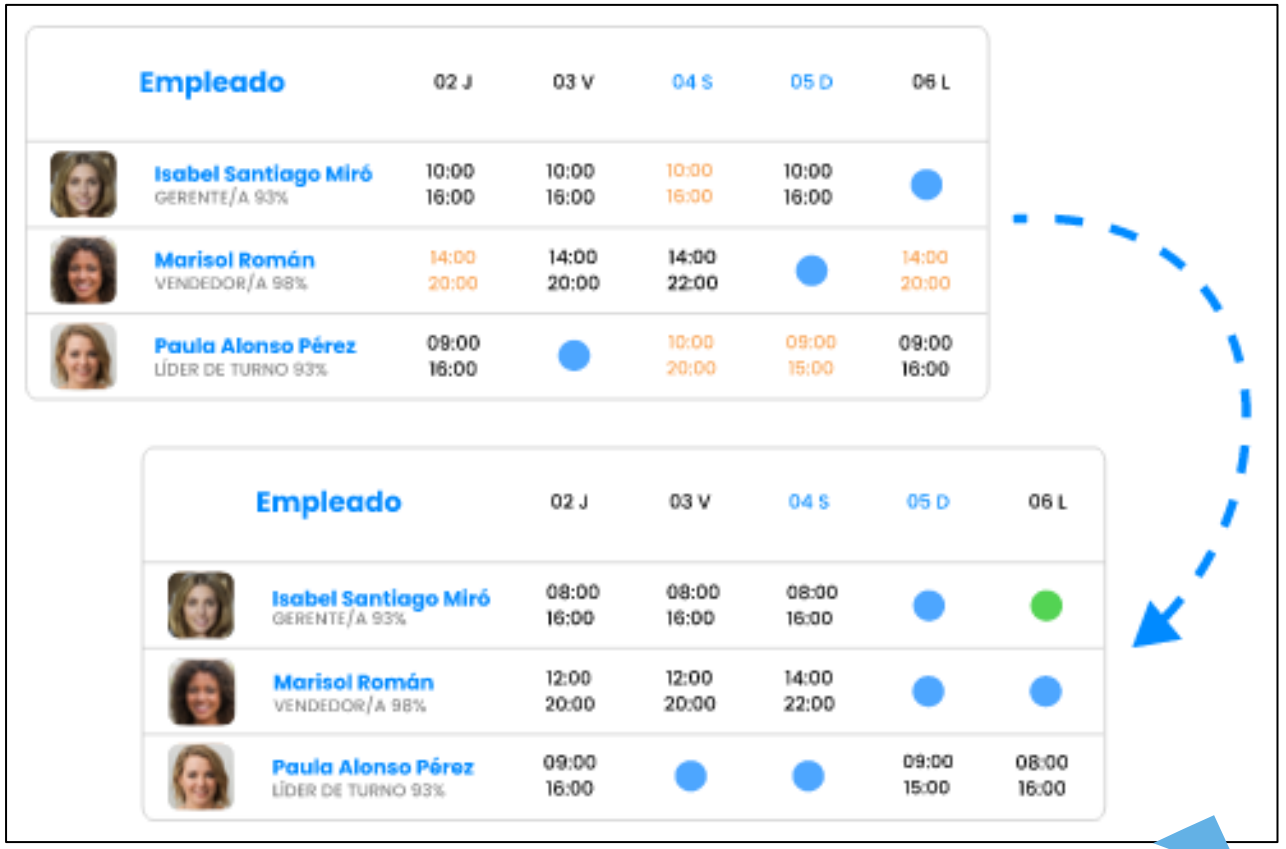


Empfehlungssysteme für Weiterbildung



Netzwerkanalysen

KI in Routinearbeit



KI- und Simulationsbasierte operative und strategische Personalplanung

Datengetriebene Prozessoptimierung (z.B. „Process Mining“)

Danke.

Jetzt sind Sie dran!

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