



How smart are we in managing our talent?

Challenges for the regional labour market 2023-2027

Dr. Arjen Edzes

Groningen, June 22nd 2023



AI: What are the main developments that will affect the Dutch labor market in the next 20 years?

- Technological developments
- Ageing
- Need for new skills
- Self-employment
- Change in the nature of work

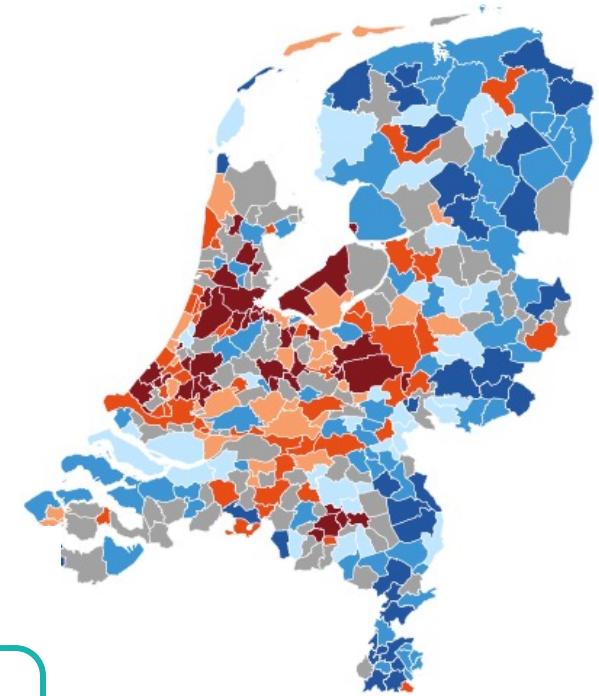
Als AI-taalmodel heb ik geen mening of visie, maar ik kan u zo goed mogelijk de informatie geven die ik heb verzameld over de verwachte ontwikkelingen op de Nederlandse arbeidsmarkt in de komende 20 jaar. Enkele van de belangrijkste ontwikkelingen zijn:

- 1. Technologische vooruitgang:** Kunstmatige intelligentie, robots en automatisering zullen op steeds meer plekken taken en banen overnemen die voorheen door mensen werden uitgevoerd.
- 2. Vergrijzing van de beroepsbevolking:** Er komen steeds meer oudere werknemers en minder jongere werknemers. Dit kan de vraag naar bepaalde soorten banen beïnvloeden.
- 3. Noodzaak om nieuwe vaardigheden te verwerven:** Flexibiliteit en aanpassingsvermogen zal steeds belangrijker worden, zodat werknemers zich kunnen aanpassen aan de veranderende arbeidsmarkt. Scholing en bijscholing worden daarom ook belangrijker.
- 4. Zelfstandige arbeid neemt toe:** Meer mensen kiezen voor freelancen of zelfstandig ondernemerschap, wat leidt tot meer flexibiliteit en innovatie, maar ook tot onzekerheid over inkomsten en arbeidsvoorraarden.
- 5. Verandering in de aard van werk:** Omdat technologie en automatisering bepaalde banen overnemen, wordt er meer nadruk gelegd op werk dat uniek menselijk vermogen vereist, zoals leiderschap, communicatie, samenwerking en creativiteit

Bevolkingsgroei 20 jaar tot AOW-leeftijd tussen 2021 en 2035

Staff shortages are structural

1. Growth of the labour force is leveling off
2. The Northern Netherlands is at the forefront of this



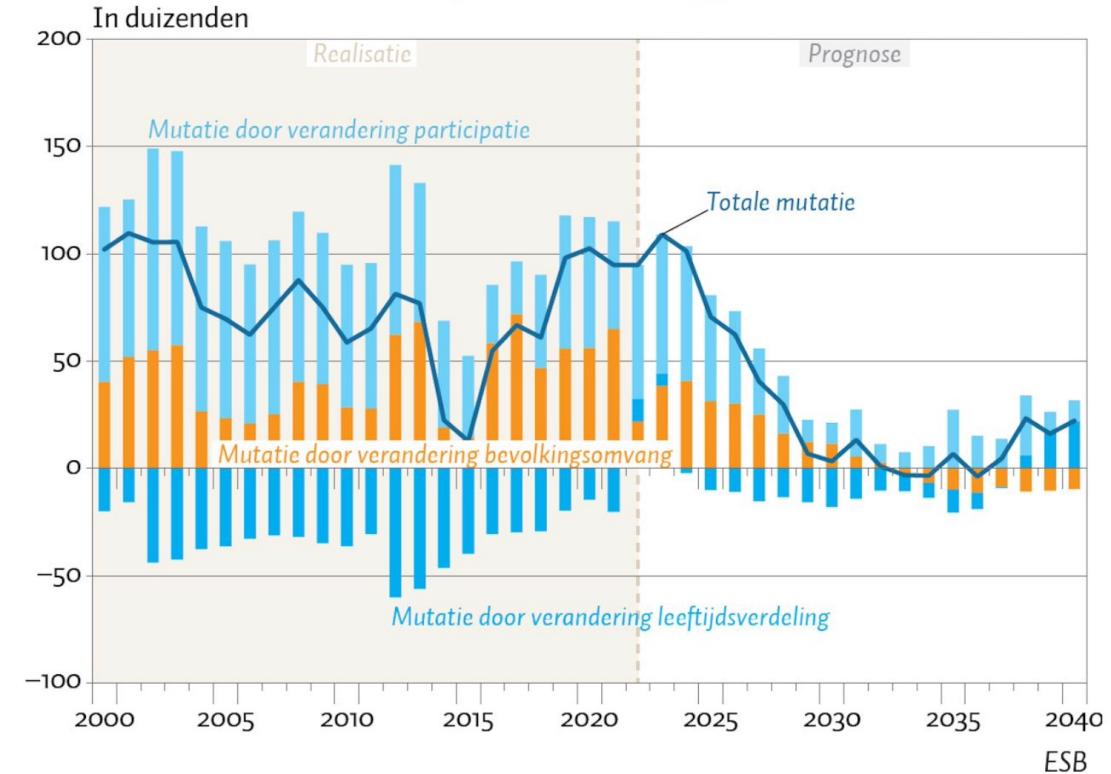
Bevolkingsprognose 20-65 jaar. (CBS/PBL, 2022)	2025	2030	2035	2040	2045	2050	Totaal
Nederland	10 474,3	10 453,1	10 358,9	10 320,1	10 463,4	10 657,3	183
Groningen	353,2	345,4	331,3	319,3	315,3	316,1	-37,1
Fryslân	362,8	351,9	339,2	329,3	328,3	329,0	-33,8
Drenthe	271,3	262,1	253,3	247,6	248,5	251,3	-20
NNL	987,3	959,4	923,8	896,2	892,1	896,4	-90,9



Staff shortages are structural

1. Growth of the labour force is leveling off
 1. Some growth due to change in participation rate
 2. Decrease after 2030 due to changes in population size
 3. Ageing

Groei van de beroepsbevolking



Do more with less people

1. Smarter production
2. Learn smarter
3. Organize smarter
4. Match smarter

Focus Het Raderwerk

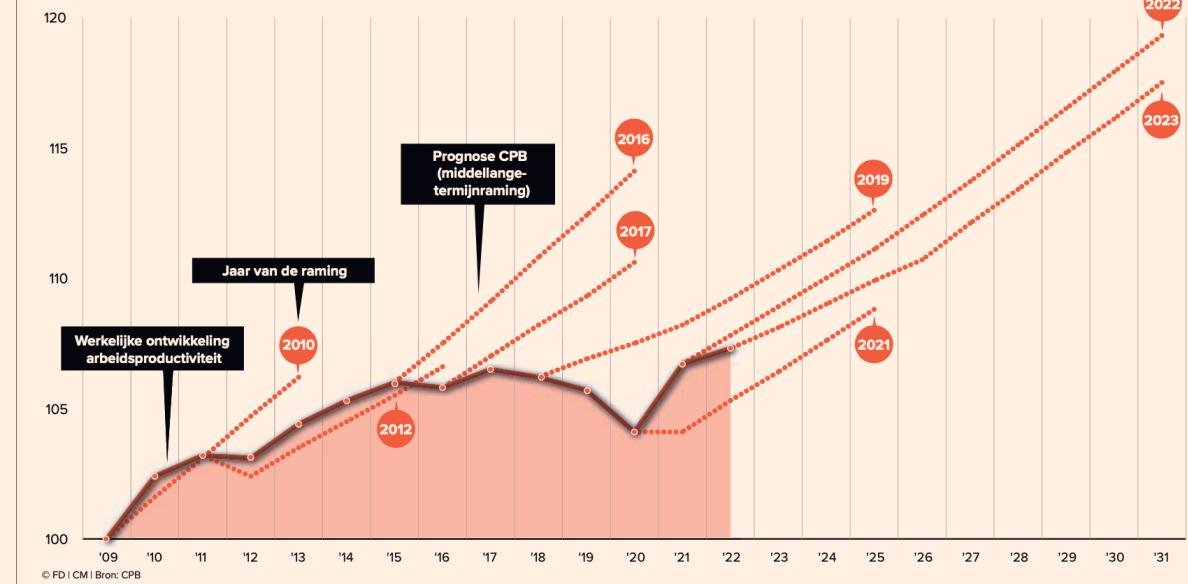
Tijd van steeds meer werken voorbij, het moet productiever



Mathijs Bouman

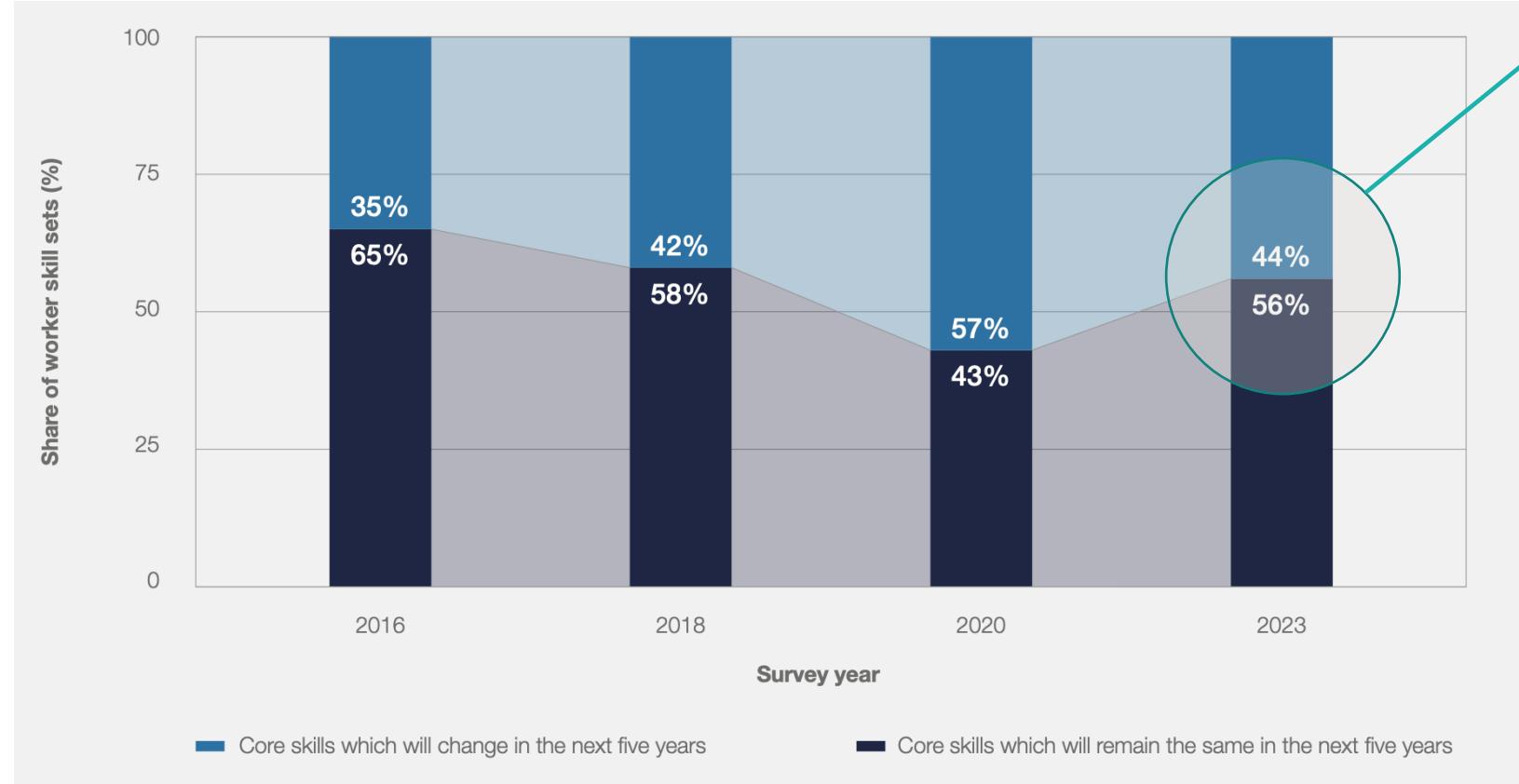
Groei arbeidsproductiviteit valt telkens tegen

Productie bedrijven per gewerkt uur, index: 2009 = 100

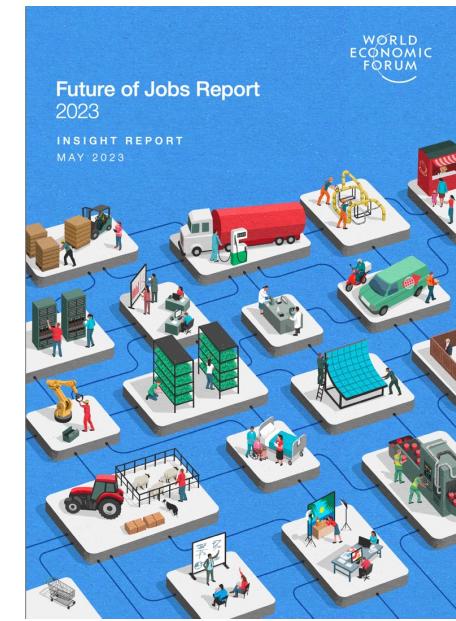




Change of required skills coming years



44% of the skill set will change
in the next five years



Change of required skills coming years

1. 80% of the US workforce will see at least 10% skills change (and 20% at least 50%)

WORKING PAPER

GPTs are GPTs: An Early Look at the Labor Market Impact Potential of Large Language Models

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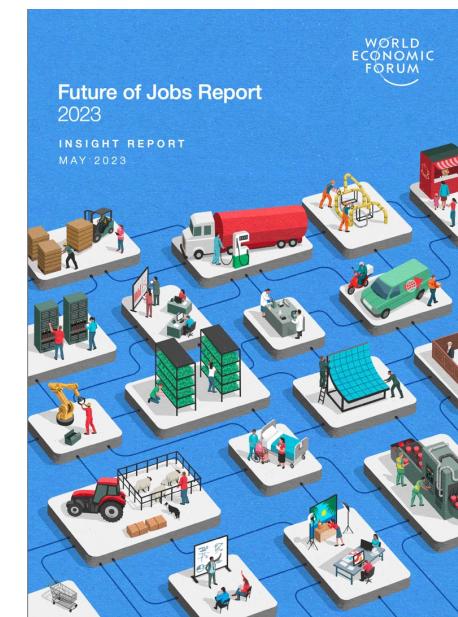
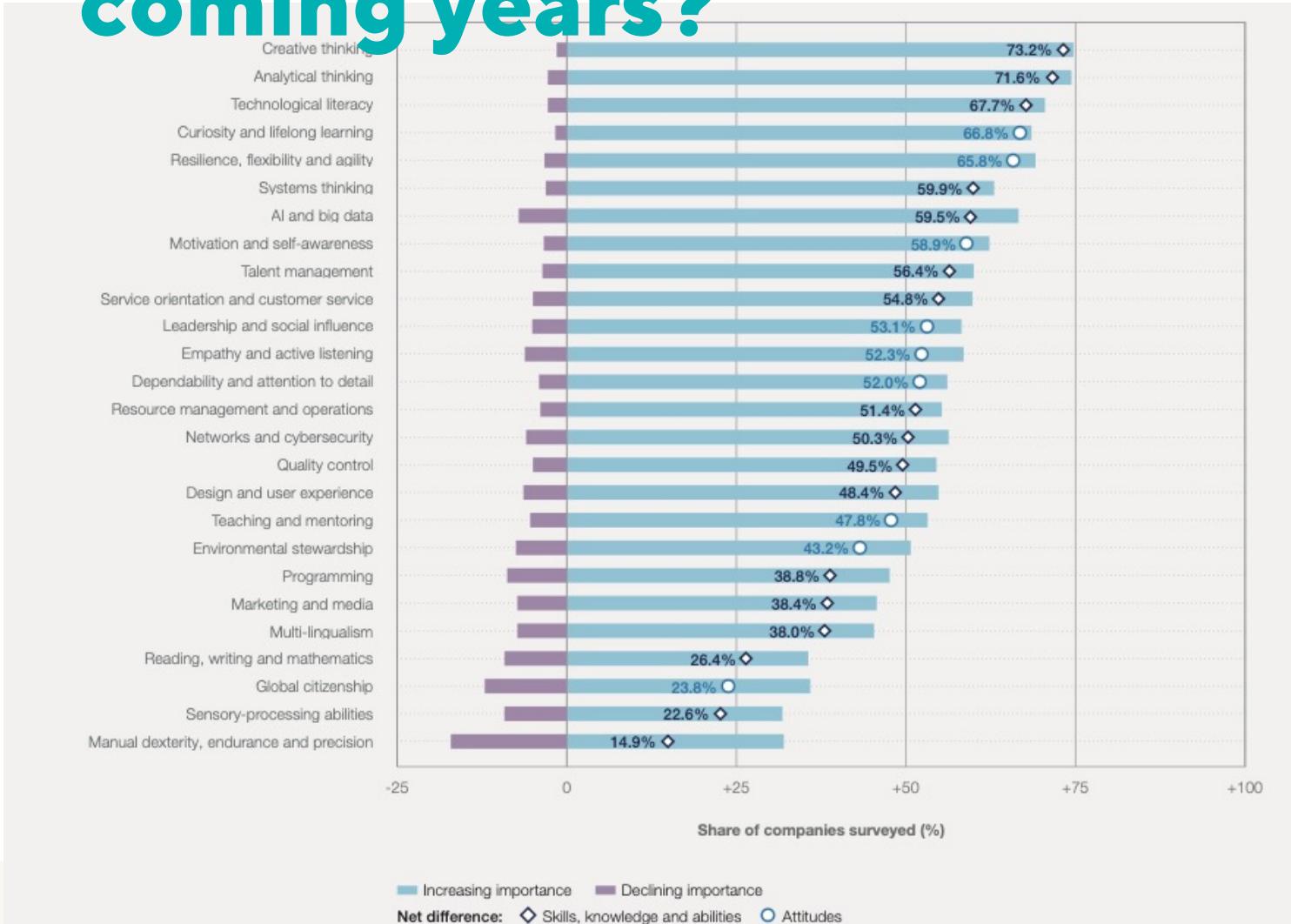
³University of Pennsylvania

March 27, 2023

Abstract

We investigate the potential implications of large language models (LLMs), such as Generative Pre-trained Transformers (GPTs), on the U.S. labor market, focusing on the increased capabilities arising from LLM-powered software compared to LLMs on their own. Using a new rubric, we assess occupations based on their alignment with LLM capabilities, integrating both human expertise and GPT-4 classifications. Our findings reveal that around 80% of the U.S. workforce could have at least 10% of their work tasks affected by the introduction of LLMs, while approximately 19% of workers may see at least 50% of their tasks impacted. We do not make predictions about the development or adoption timeline of such LLMs. The projected effects span all wage levels, with higher-income jobs potentially facing greater exposure to LLM capabilities and LLM-powered software. Significantly, these impacts are not restricted to industries with higher recent productivity growth. Our analysis suggests that, with access to an LLM, about 15% of all worker tasks in the US could be completed significantly faster at the same level of quality. When incorporating software and tooling built on top of LLMs, this share increases to between 47 and 56% of all tasks. This finding implies that LLM-powered software will have a substantial effect on scaling the economic impacts of the underlying models. We conclude that LLMs such as GPTs exhibit traits of general-purpose technologies, indicating that they could have considerable economic, social, and policy implications.

Which skills are gaining importance coming years?



Match smarter: skills matching

Connecting

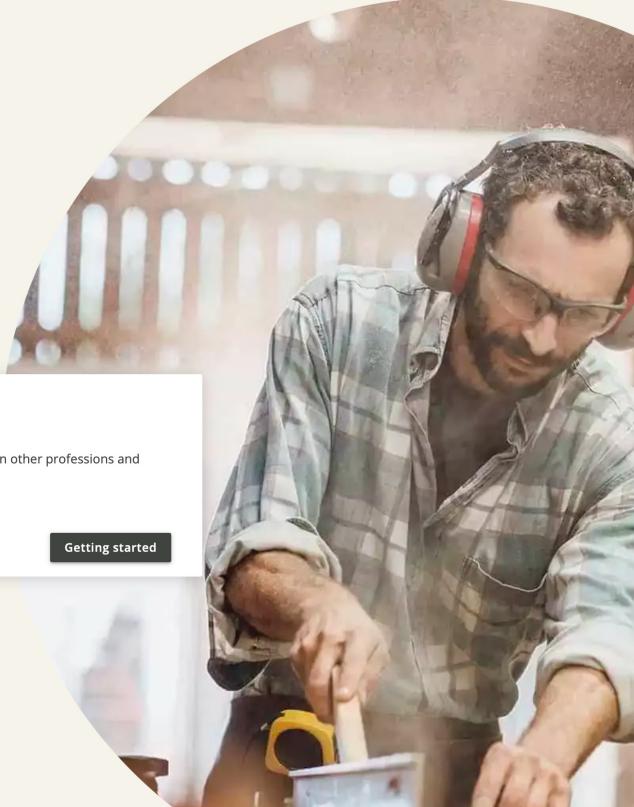
- Talent (labour potential)
- Employers (profile, vacancies)
- Educators (skills certificates)
- Professionals (Job coaches, HR professionals)

Fundament: skillstaal voor de arbeidsmarkt





Matching & Career tool



Welcome

Nederlands Log in

Matching and career tool

Part of Talent in the Region

Welcome! Through this platform you can find vacancies, internships and graduate jobs with employers in the northern region.

I am a student
Choose your study programme and find internship vacancies and graduation projects that suit you.
[Getting started](#)

I am a job seeker
Fill in your work and education history. View information on other professions and courses that suit you.
[Getting started](#)

For organisations
Post offers of education, jobs, internships, or graduate jobs. Find candidates by matching by skills or by search.
[Register](#)



Matching & Career tool

The screenshot shows the homepage of the Talent in de Regio website. On the left, a teal sidebar contains the site's logo and navigation links: Dashboard, Find, Saved vacancies, Profile, and Contact. The main content area has a light beige background. At the top left is a section titled "Professions for you" with a sub-section "Personal Profile". Below these are two sections: "The Job Explorer" and "Vacancies for you!".

Dashboard

Professions for you
Look at occupations that match your skills profile.

Personal Profile
You have already made a start with your *Personal Profile*. Complete your profile and see which jobs match your skills and how many vacancies there are currently for jobs that match your skills.

complete your Personal Profile

Other scans and information

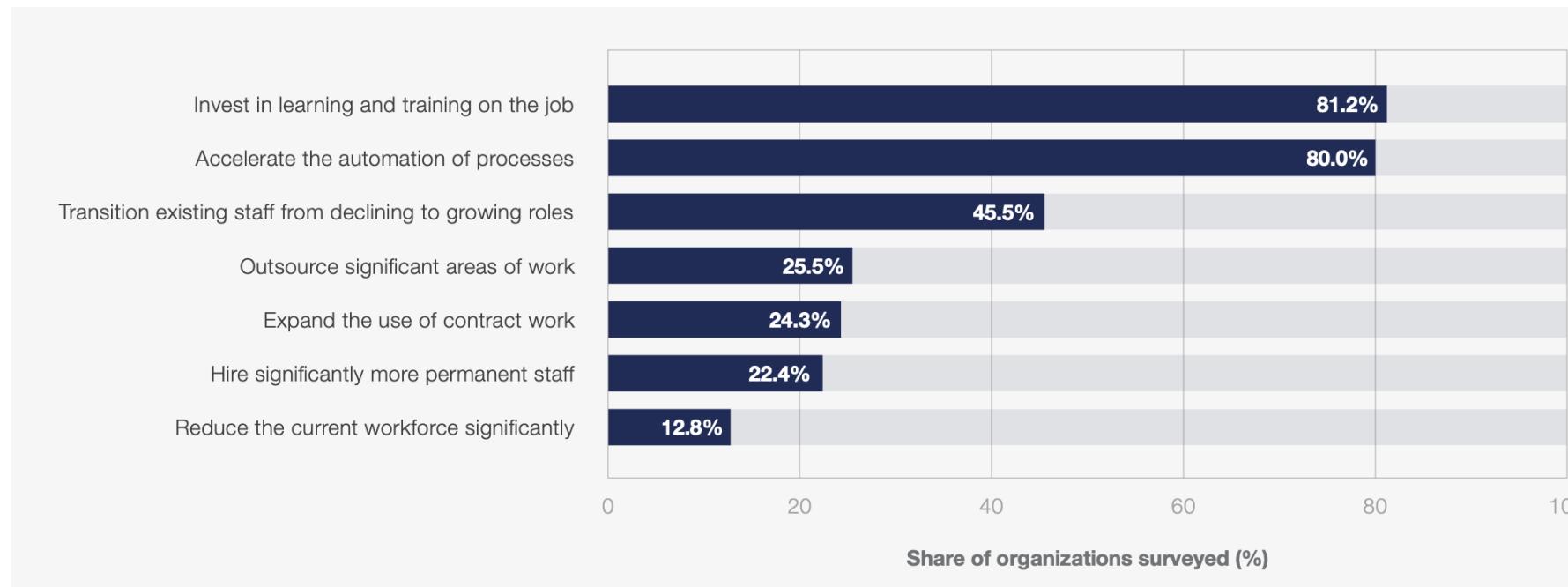
The Job Explorer
No work experience yet? Answer the questions and get an overview of what work suits you and what training(s) can be taken for it.
Duration: ± 20 min.

Vacancies for you!

- Projectleider Stap**
Groningen | 24-10-2022
- Projectleider Stap**
Groningen | 23-10-2022
- Security Specialist / Hacktester**
Groningen | 21-10-2022

HR Strategies 2023-2027

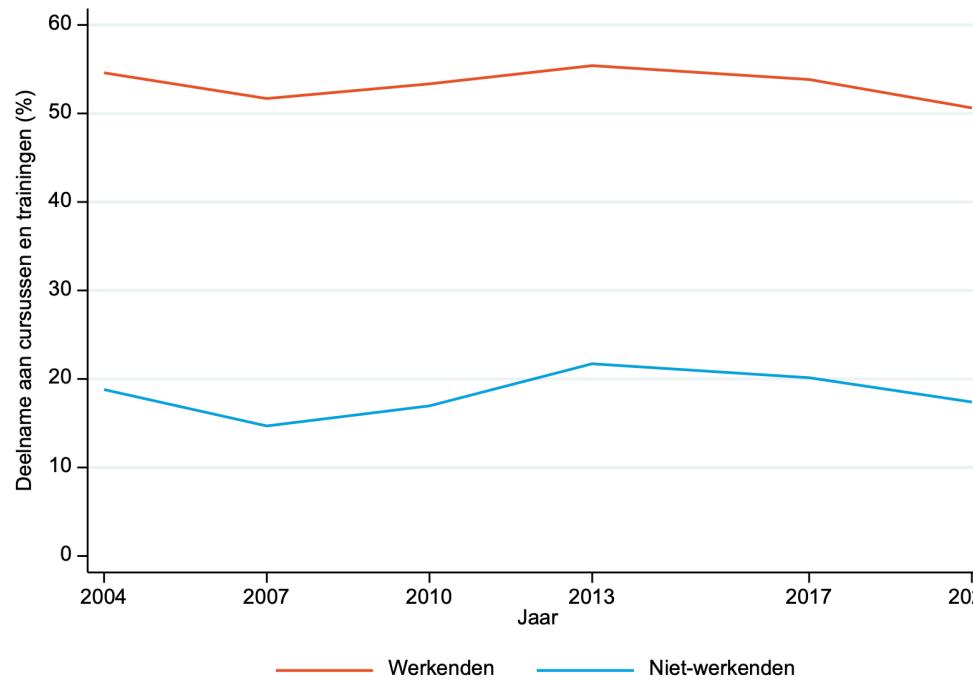
Slimmer produceren | Slimmer leren | Slimmer organiseren | Slimmer matchen



Decline in learning

Formeel leren: ontwikkeling van de deelname aan werk gerelateerde cursussen en trainingen,
2004-2020

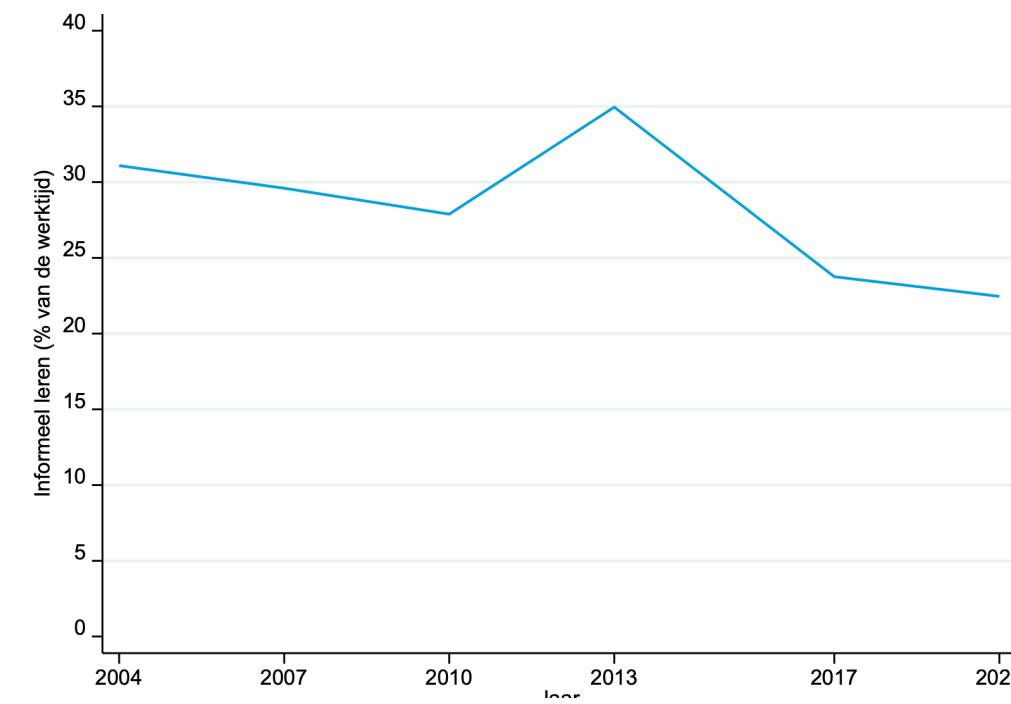
Formal learning is stable



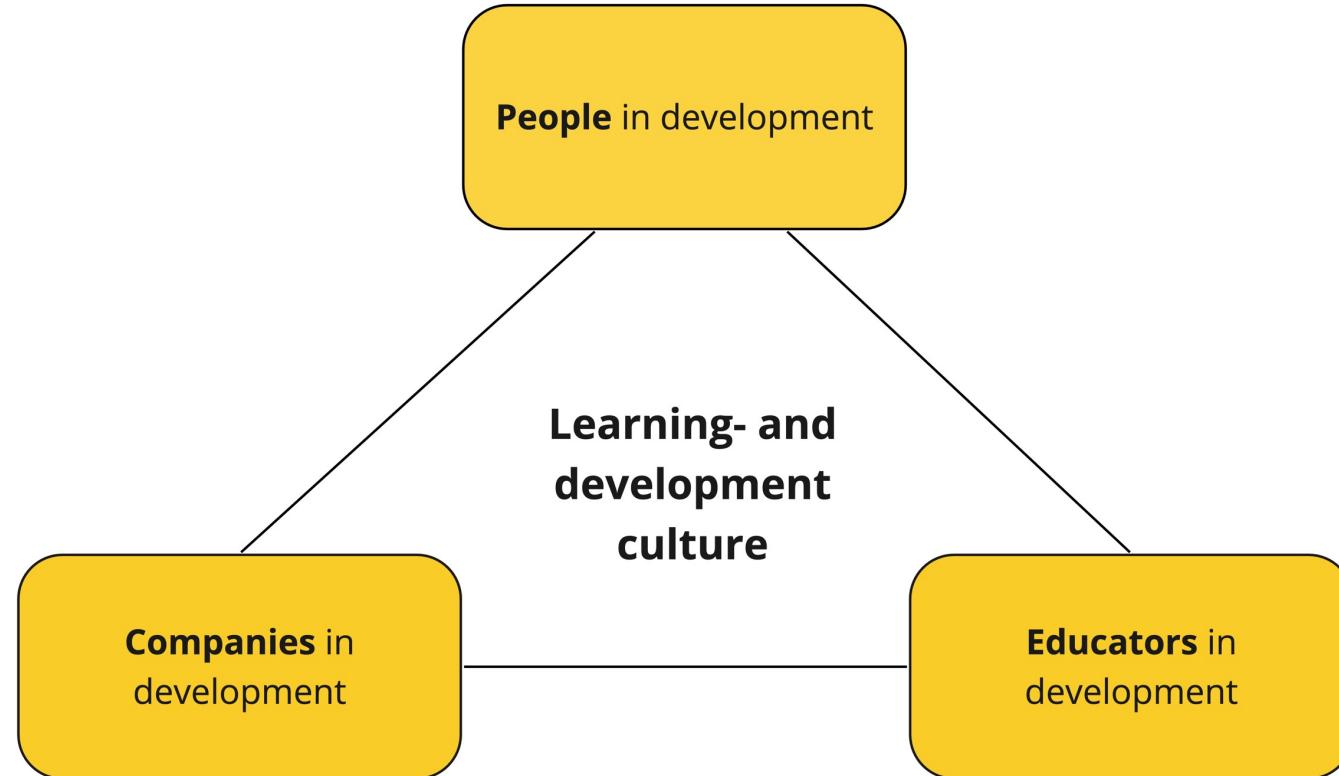
Bron: ROA LLL-enquête 2004-2017, LLO-enquête 2020

Informeel leren op het werk: ontwikkeling van het percentage van de werktijd besteed aan activiteiten waarvan men kan leren, 2004-2020

Informal learning is decreasing

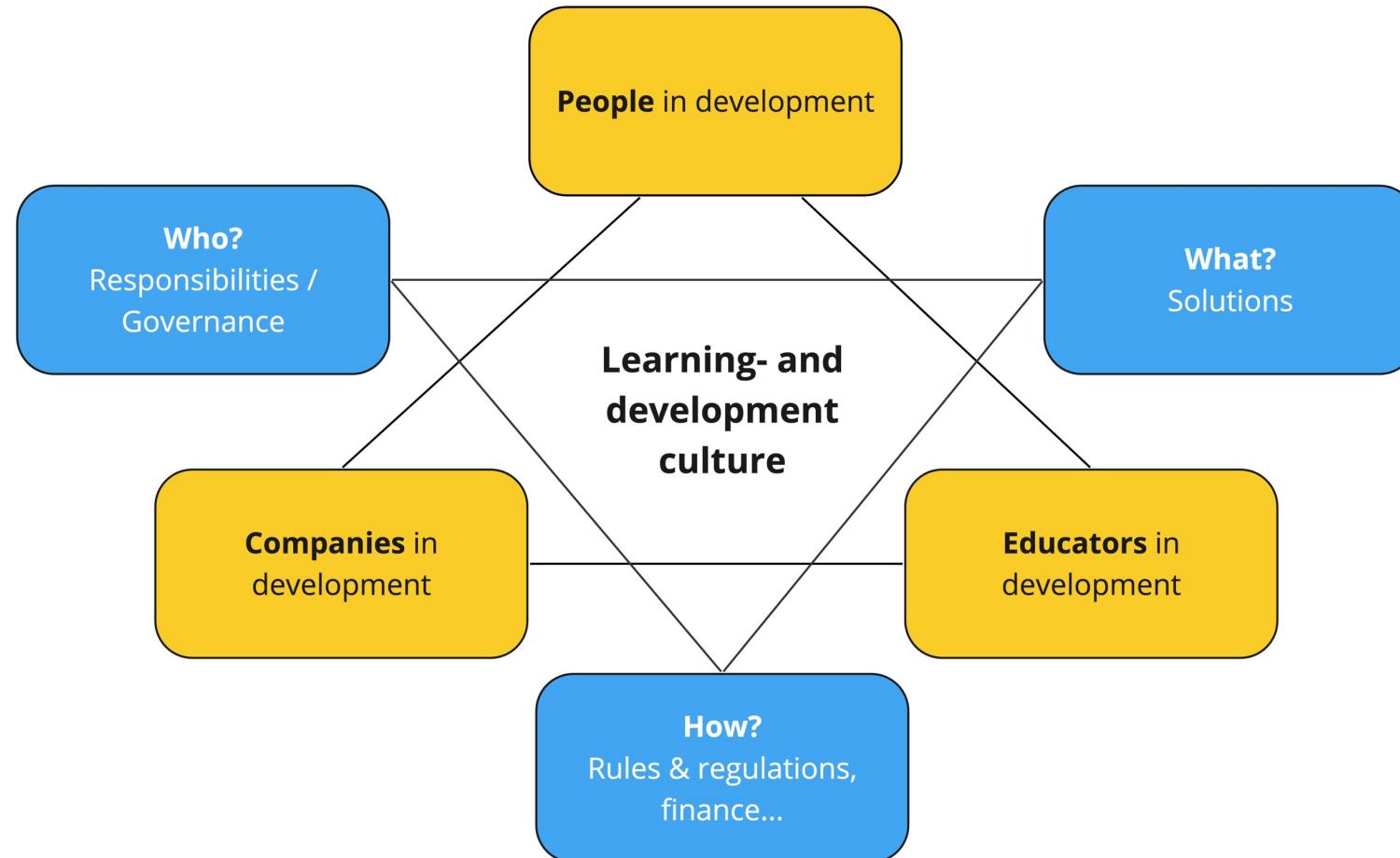


Need for innovation



Figuur: [Beleidslijnen voor een sterke leercultuur](#). Ministerie van Sociale Zaken en Winkelgelegenheid, 2022

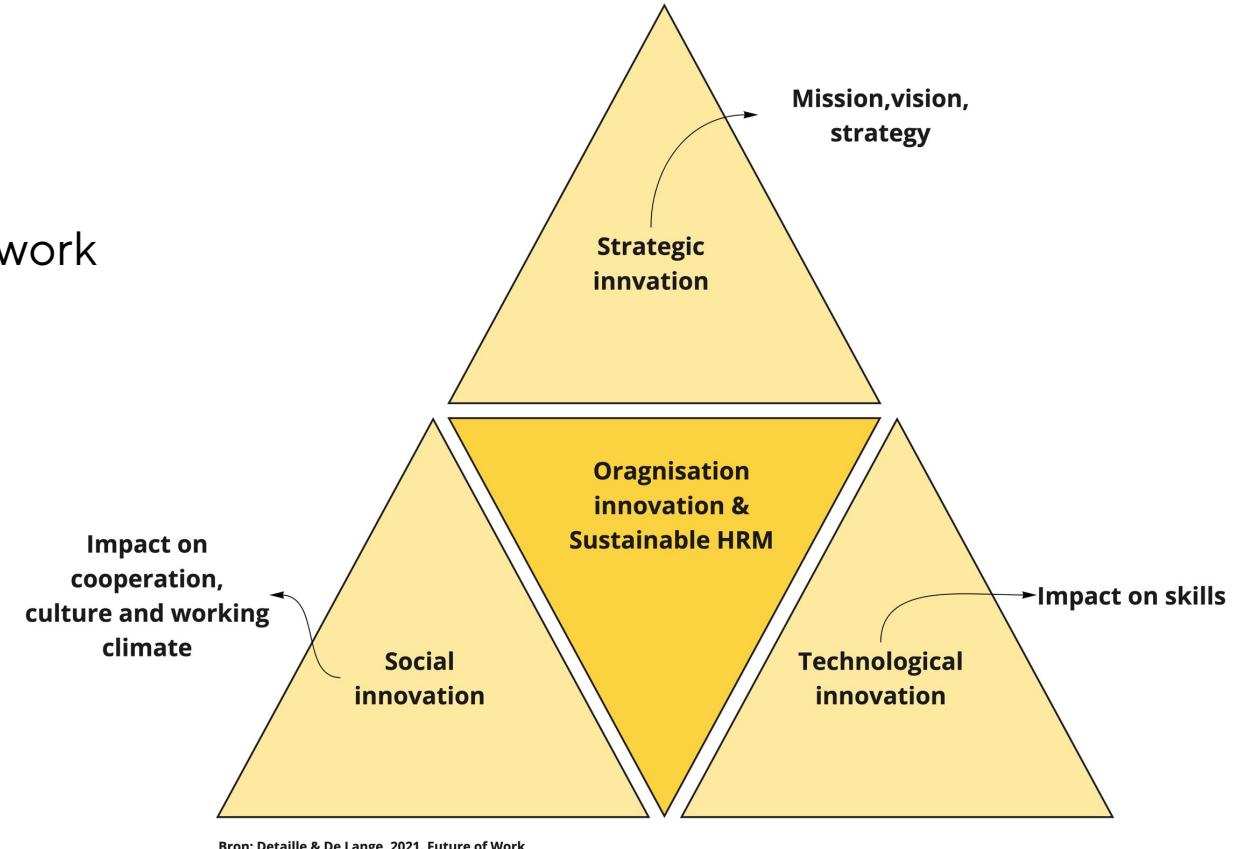
Need for innovation



Message:

Solutions for staff shortages do not lie outside, but within the organization

1. Make working and learning attractive
2. Improve conditions for more hours of work
3. Utilize unused labor capacity



Message:

Invest in social innovation

1. Managementskills
Coachende managementstijl
2. Organisational structure
3. Competences of personal
4. Company culture

SER-advies Naar verdere succesvolle toepassing van sociale innovatie

Innovatie is broodnodig voor onze welvaart. Technologische innovaties kunnen oplossingen bieden voor bij voorbeeld de energietransitie. Sociale innovatie is nodig om andere manieren van werken, organiseren en managen te vinden. Het geheel draagt bij aan meer productiviteit van bedrijven en tevreden werknemers.



SER



Message:

≡ NIEWS & VERHALEN CHANGEMAKERS BEDRIJVEN EVENTS

CHANGE INC.



TEUN SCHRÖDER 24 april 2023, 11:00

INLOGGEN NIEWSBRIEF & MEMBERSHIPS

Paul Polman: ‘Helft werknemers overweegt ontslag omdat eigen waarden niet matchen met die van hun bedrijf’

‘Vergeet zitzakken en sportschoolabonnementen. Werknemers willen sterke waarden en een positieve impact.’ Het somt in twee zinnen de resultaten op van een groot onderzoek dat de voormalig CEO van Unilever Paul Polman uitvoerde onder werknemers in de VS en het VK. “Bedrijven hebben te maken met een tikkende tijdbom.”

Half of employees are considering dismissal because their own values do not match those of the organization





Thank you for your attention