

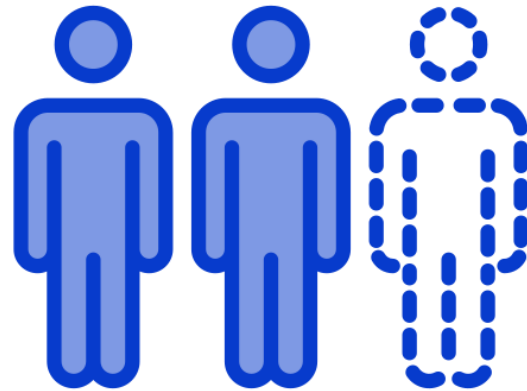
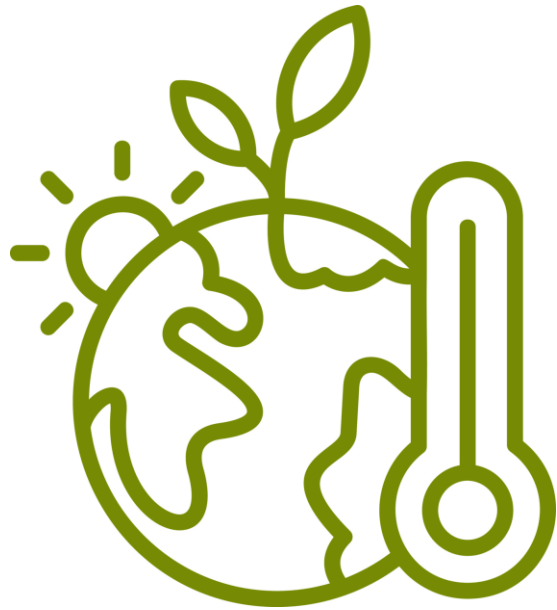
Lifelong learning: A symbiotic relationship

Dr. Linda Koopmans

TNO innovation
for life

Keynote at the NICE Academy, 19-09-2024

The importance of lifelong learning



Third of businesses struggle with staff shortages: Randstad

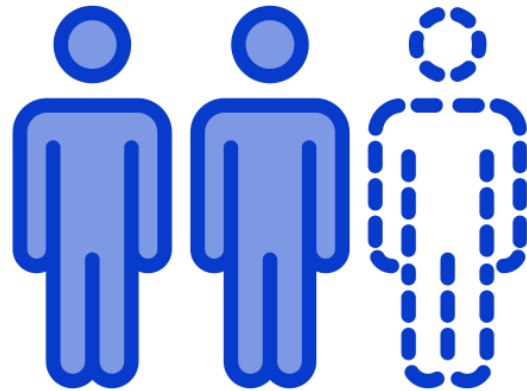
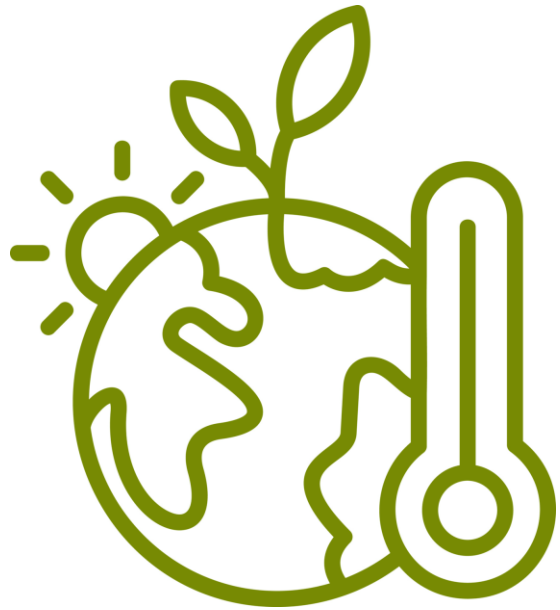
June 17, 2024



EU jobs crisis as employers say applicants don't have the right skills



The importance of lifelong learning



Anticipating and managing the impact of change

Human–robot interaction: What changes in the workplace?



How will AI change the future of work?

The level of impact AI will have on the nature of work and what organisations need to do to prepare their workforce on the impact of a digital future.



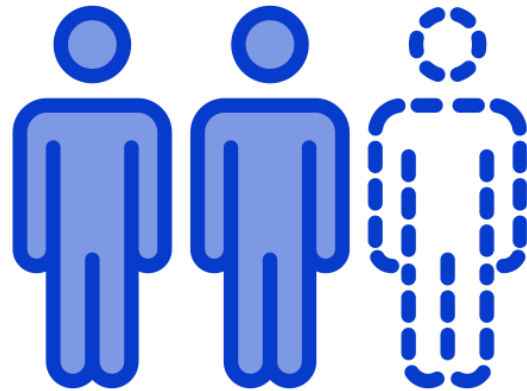
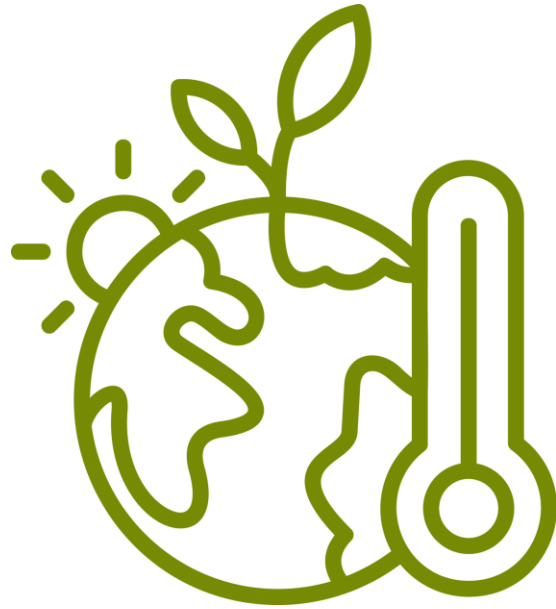
AI is moving fast. For success, you need to skate to where the puck is going—the AI trends that could benefit business in the very near future.

Will robots steal my job?

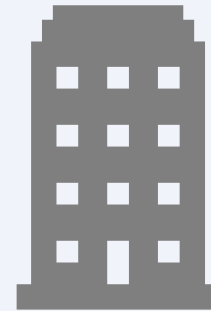
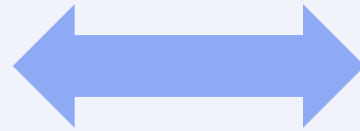
The short answer is: they might, but if you have the right skills, you'll get a better one. AI is the biggest business opportunity of the next decade. It's already automating manual and repetitive tasks. Soon it will augment human decisions. Along the way, it will add more to global GDP by 2030 than the current output of China and India—combined. That growth will be more than enough to create many good jobs, while it will also change how current jobs are being done.

Leaders will have to understand how AI will impact their workforces, then get them prepared: upskill some workers to do existing jobs, but with AI, and retrain and hire others for the new roles that AI will demand. Schools and parents will have to teach children both STEM skills and a culture of creativity and lifelong learning.

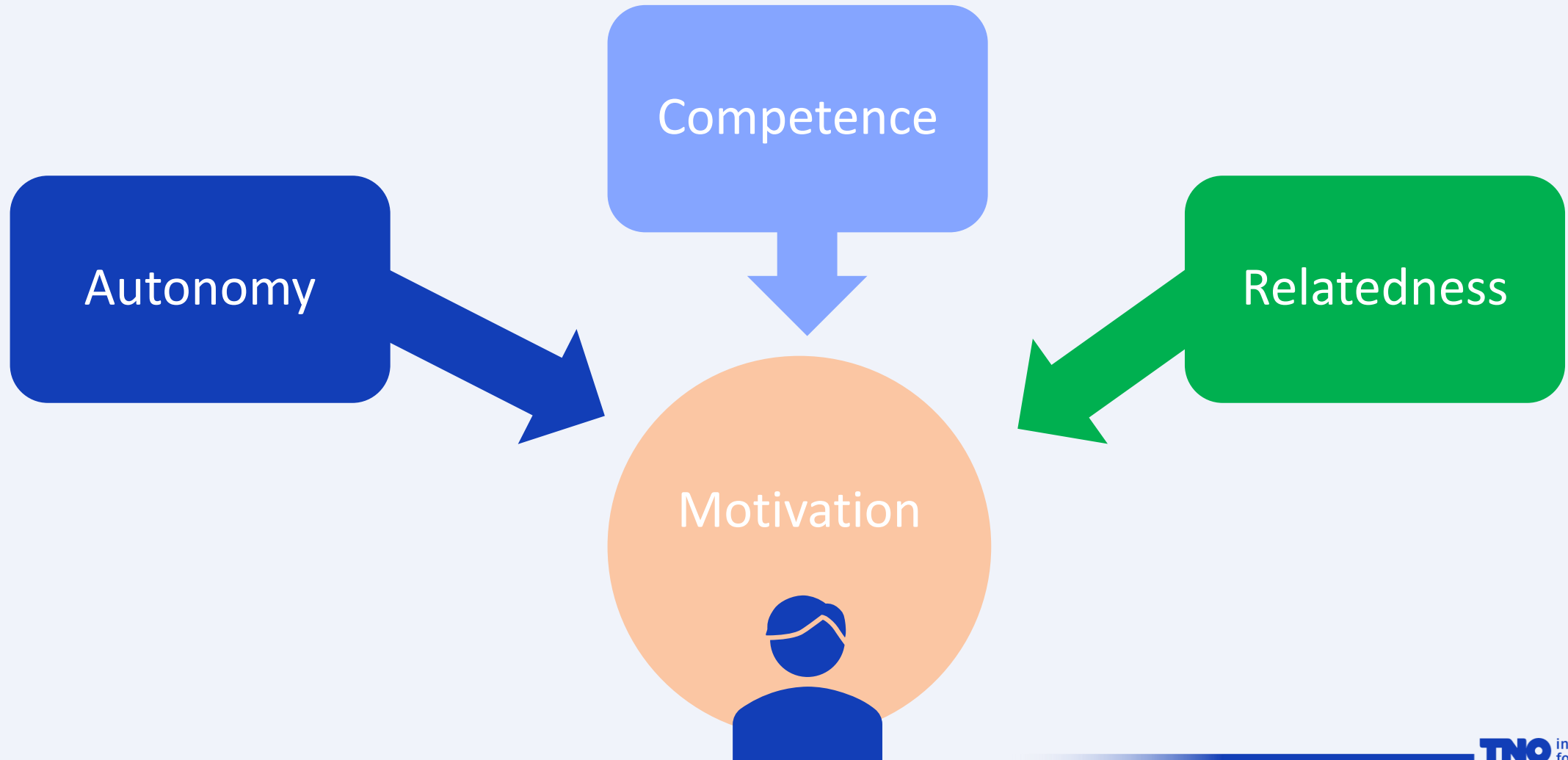
The importance of lifelong learning



Symbiotic relationship



Self-determination theory for individual motivation



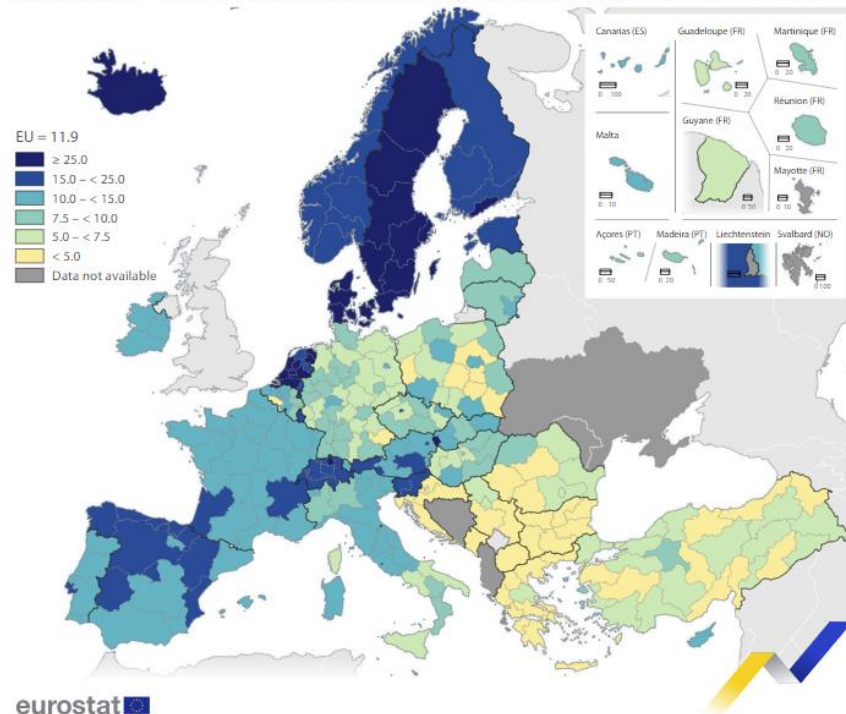
Three types of learning

- Formal learning
- Non-formal learning
- Informal learning

Formal learning in the EU

Participation rate in education and training, 2022

(% of people aged 25–64 who participated in education and training during the four weeks prior to the survey, by NUTS 2 regions)



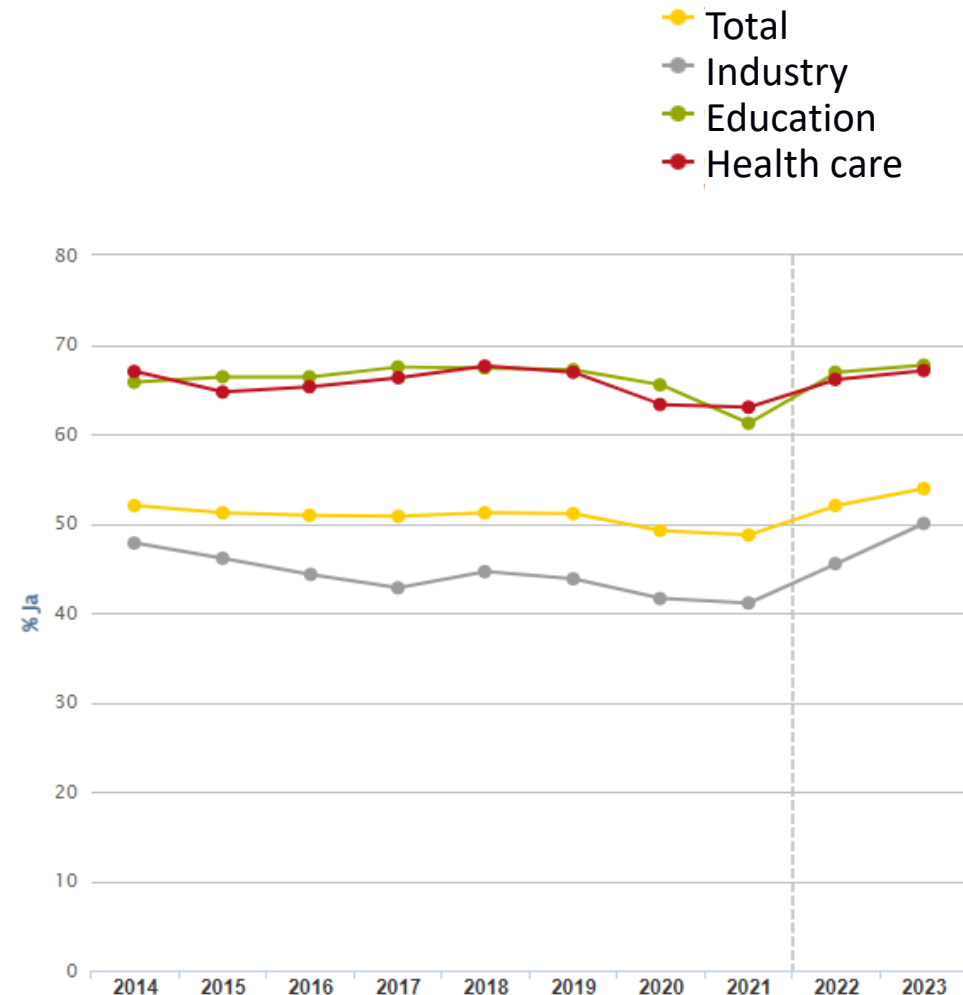
Note: Montenegro, North Macedonia and Türkiye, 2020.
Source: Eurostat (online data code: trng_ifse_04)

Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat – IMAGE, 10/2023

- In 2022, the adult participation rate in **formal and non-formal learning** was 11.9% in the EU.
- This is an increase compared with 2021 (10.8%) and 2020 (9%).
- Source: [Eurostat and Adult learning statistics - Statistics Explained \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1)

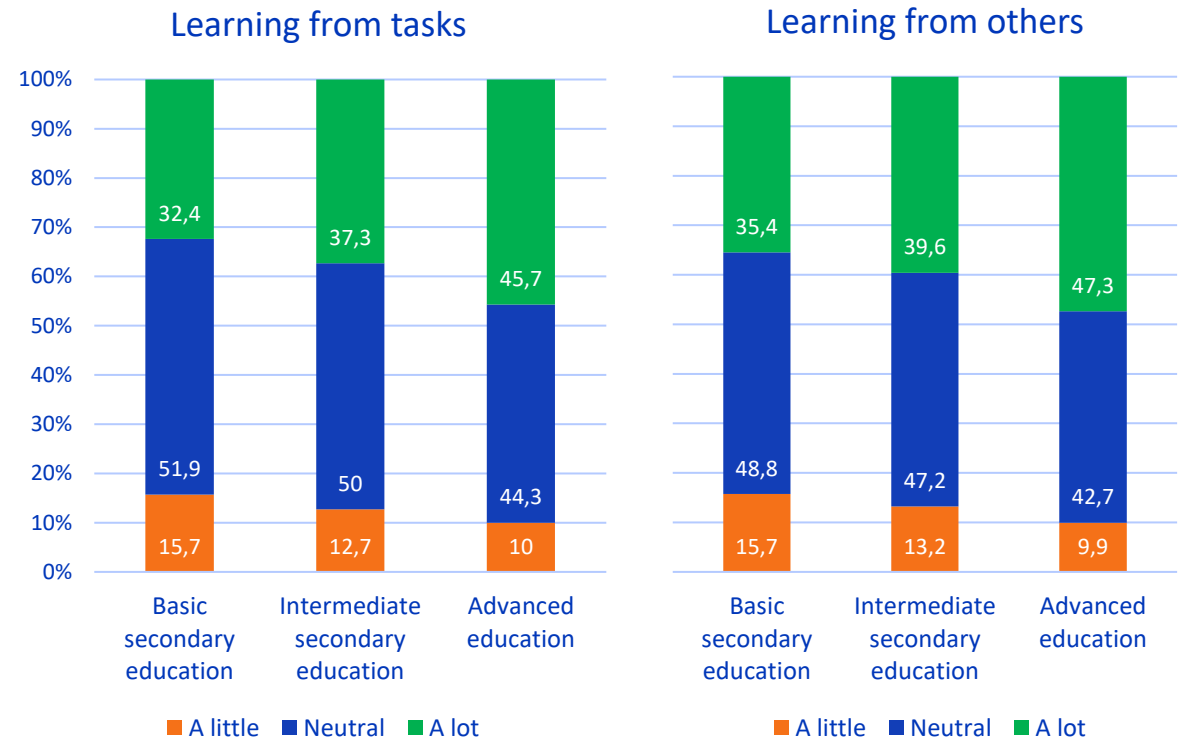
Trends in the Netherlands in attendance of training

- On average, 50% of employees followed a training or schooling during the last two years
- Learning behavior varies per group, for example sector
- Source: [Netherlands Working Conditions Survey \(TNO/CBS, 2023\)](#)



Informal learning in the Netherlands

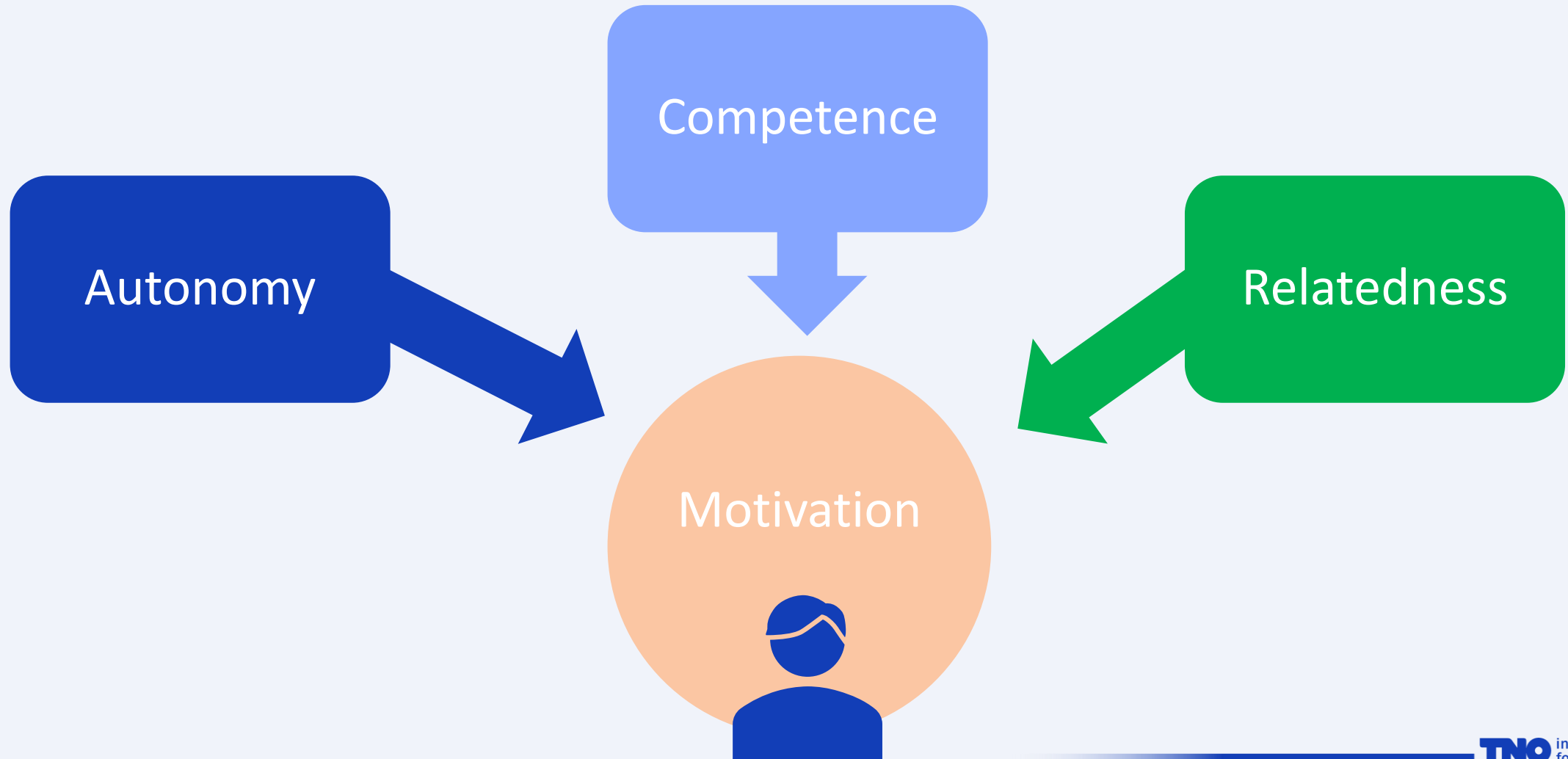
- On average, 42% of workers learn a lot informally
- There are differences between groups, for example education levels
- Source: [Netherlands Working Conditions Survey \(TNO/CBS, 2023\)](#)



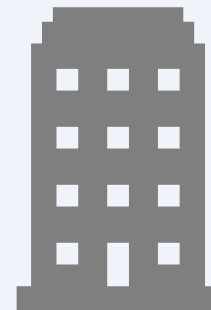
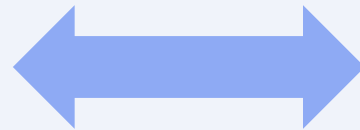
Benefits of lifelong learning for individuals



Self-determination theory for individual motivation



Symbiotic relationship



Organizations can foster lifelong learning

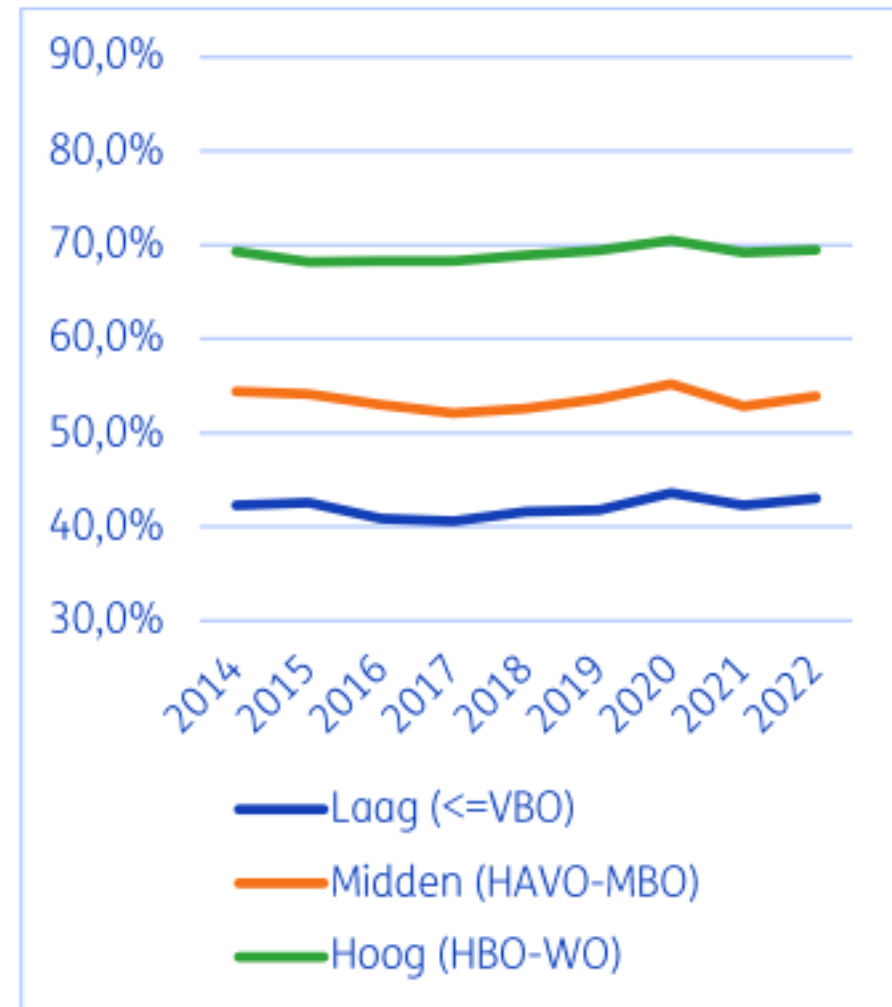


TNO model for learning and innovative organizations



Trends in autonomy for employees in The Netherlands

- Autonomy at work is stable over time
- Large differences between groups
- Source: [Netherlands Working Conditions Survey \(TNO/CBS, 2023\)](#)

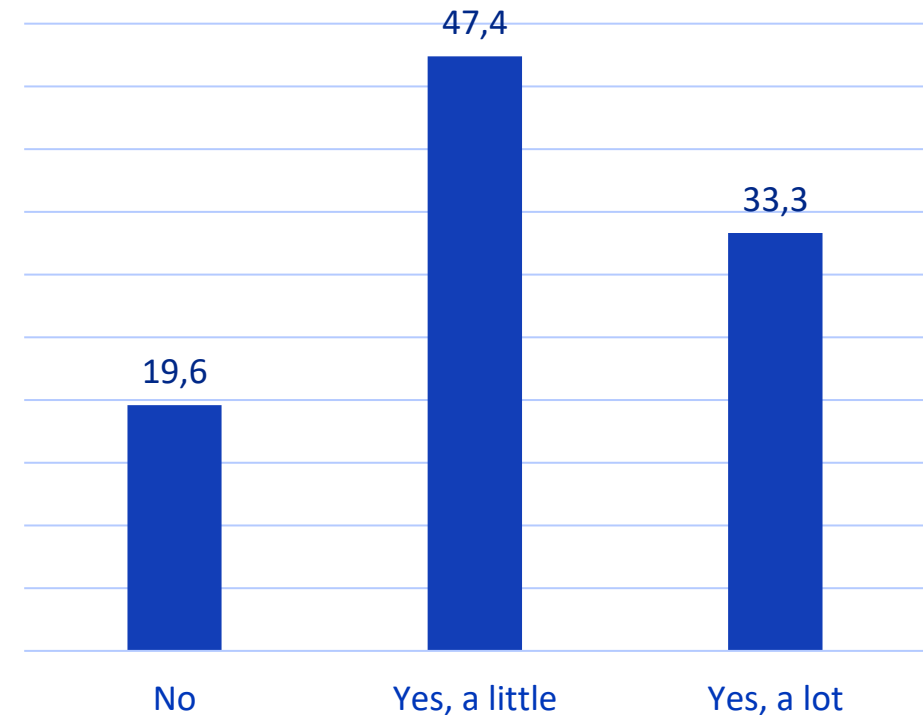


Supervisor support for employee development in The Netherlands

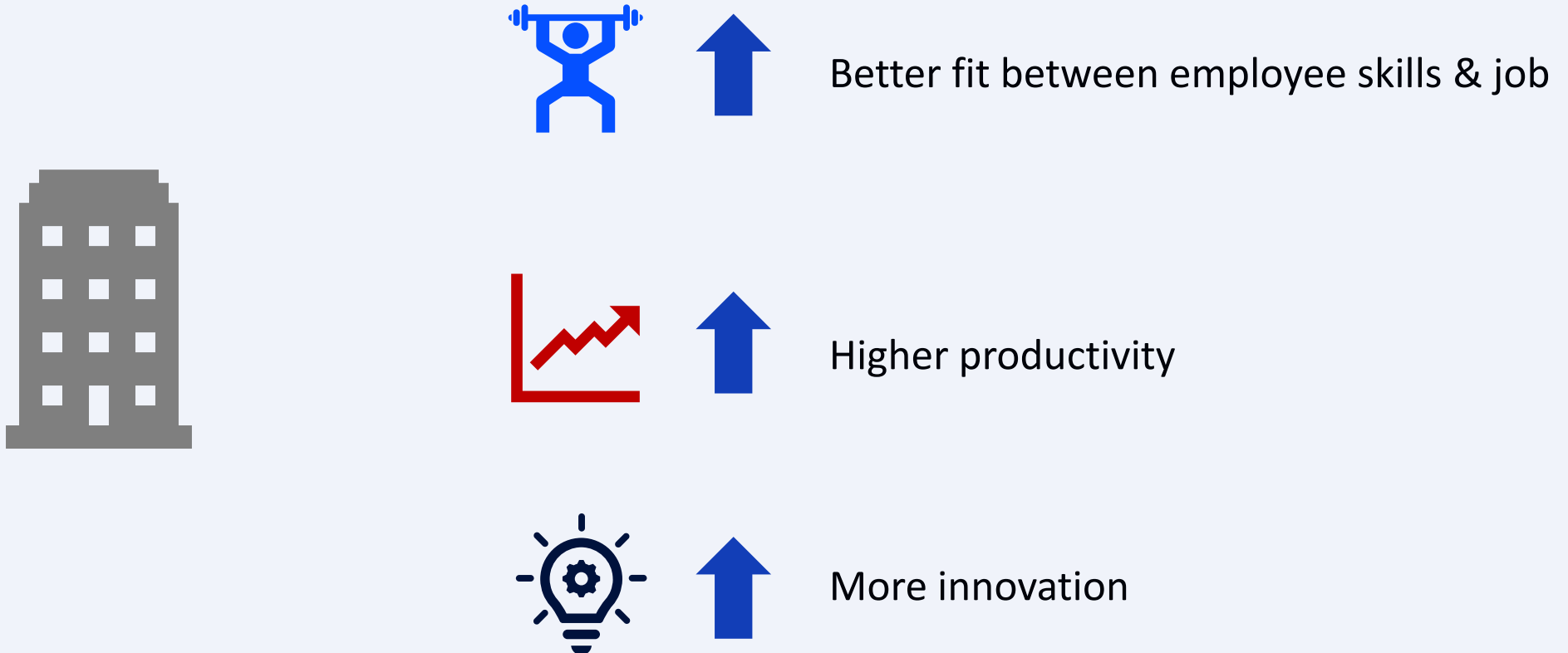
- One in three employees experiences a lot of supervisor support for their development
- Huge differences between groups
- Source: [Netherlands Working Conditions Survey \(TNO/CBS, 2023\)](#)



My supervisor actively supports the development of my knowledge and skills



Benefits of lifelong learning for organizations



How to foster a learning culture

[Wat is Leercultuur](#) [Inspiratie](#) [Aan de slag](#) [Contact](#)

[→ Quickscan leercultuur](#)

vandaag gedaan
vandaag geleerd

Leren op de werkvloer levert aardig wat op

Het maakt het werk leuker en het is goed voor het bedrijf. Hoe gaat dat bij jou? Doe de Quickscan en ontdek in vijf minuten hoe het gesteld is met de leercultuur in jouw bedrijf.

[→ Doe de Quickscan](#)

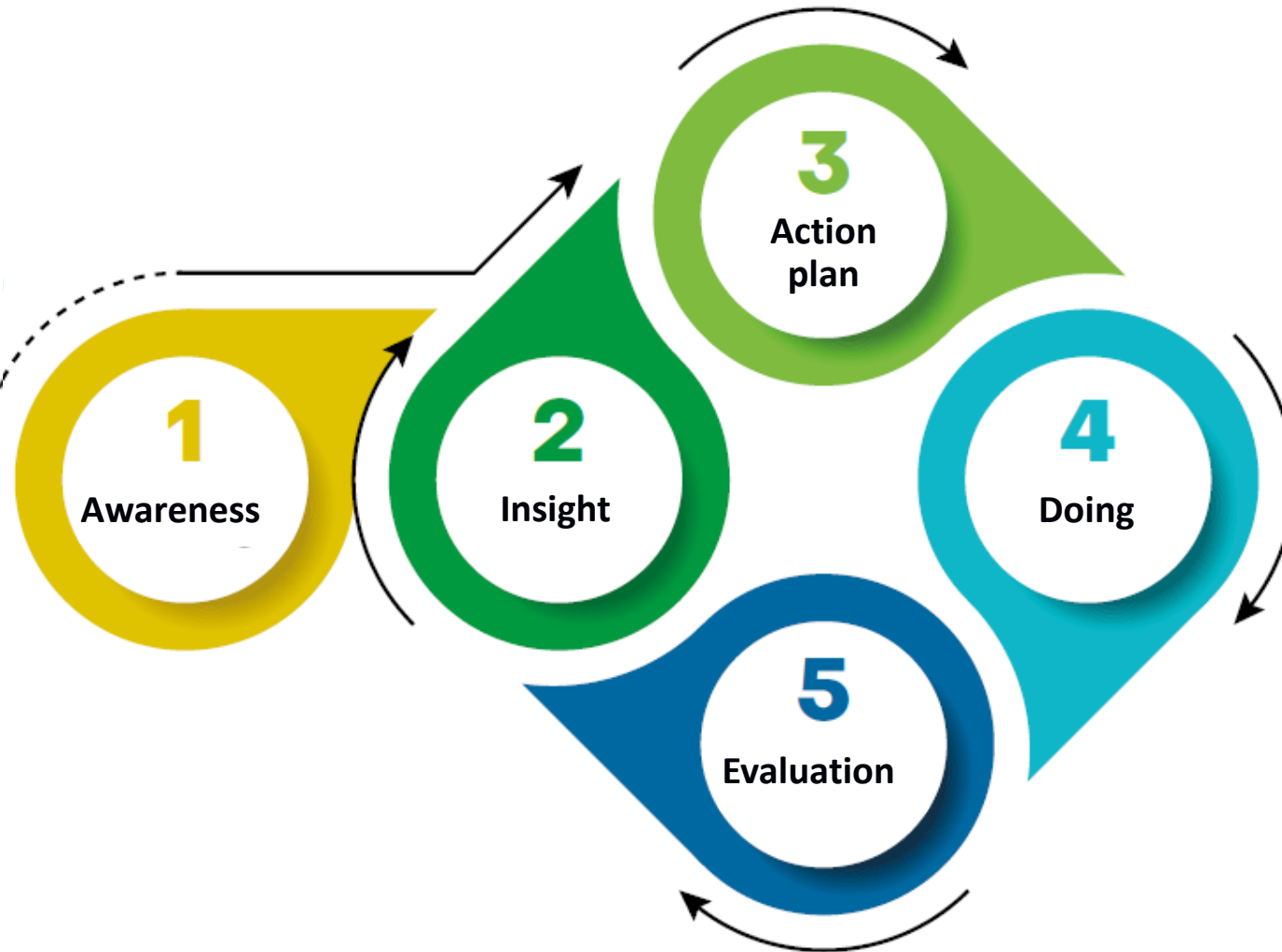
How to foster learning culture



TNO model for learning and innovative organizations



How to foster learning culture



Wegwijzer

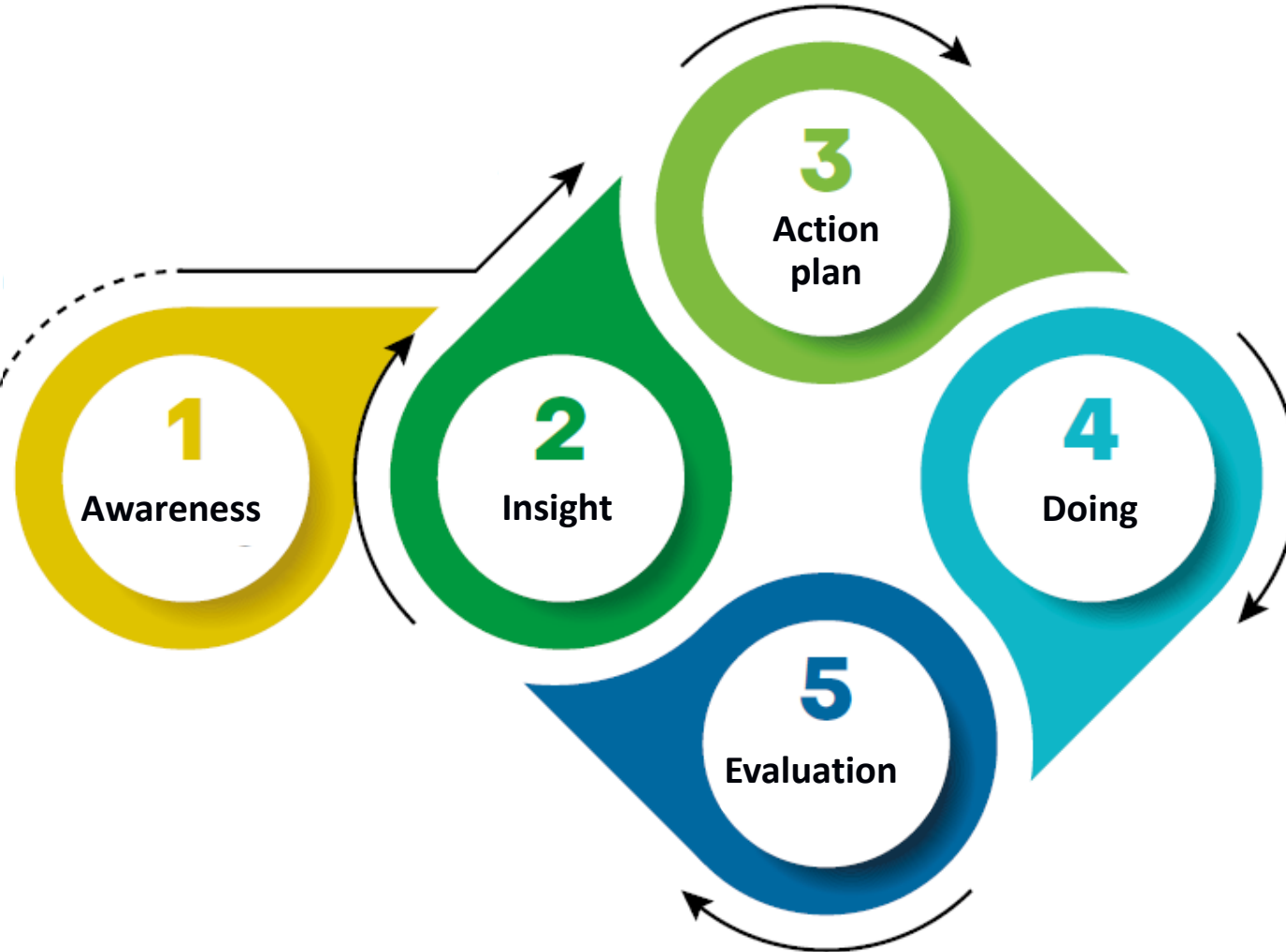
Een lerende
en innovatieve
organisatie
creëren

Stimuleren van leren en innoveren bij
alle medewerkers in vijf stappen

How to foster learning culture

1. Awareness:

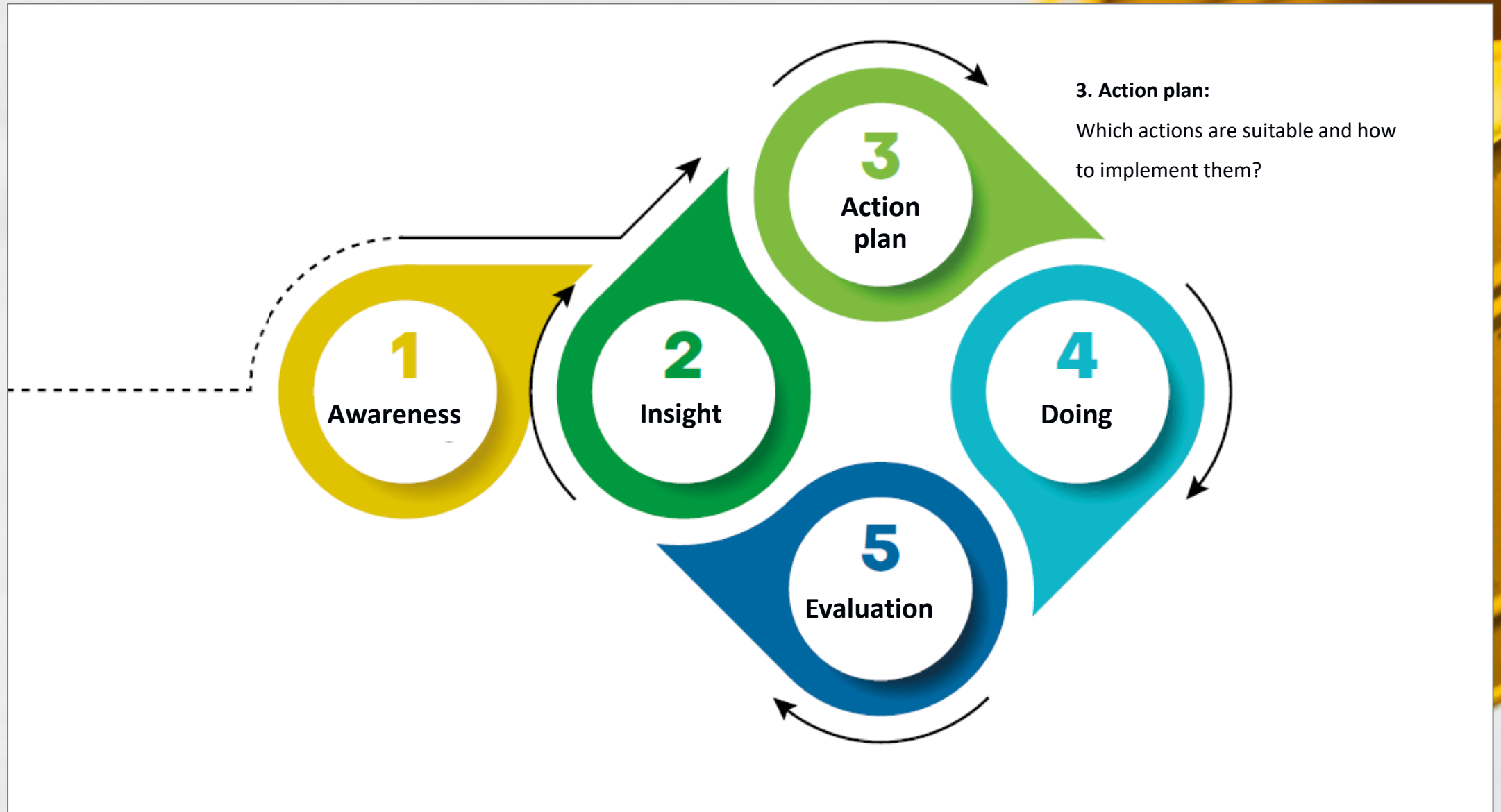
Is there awareness and support at all levels in the organisation?



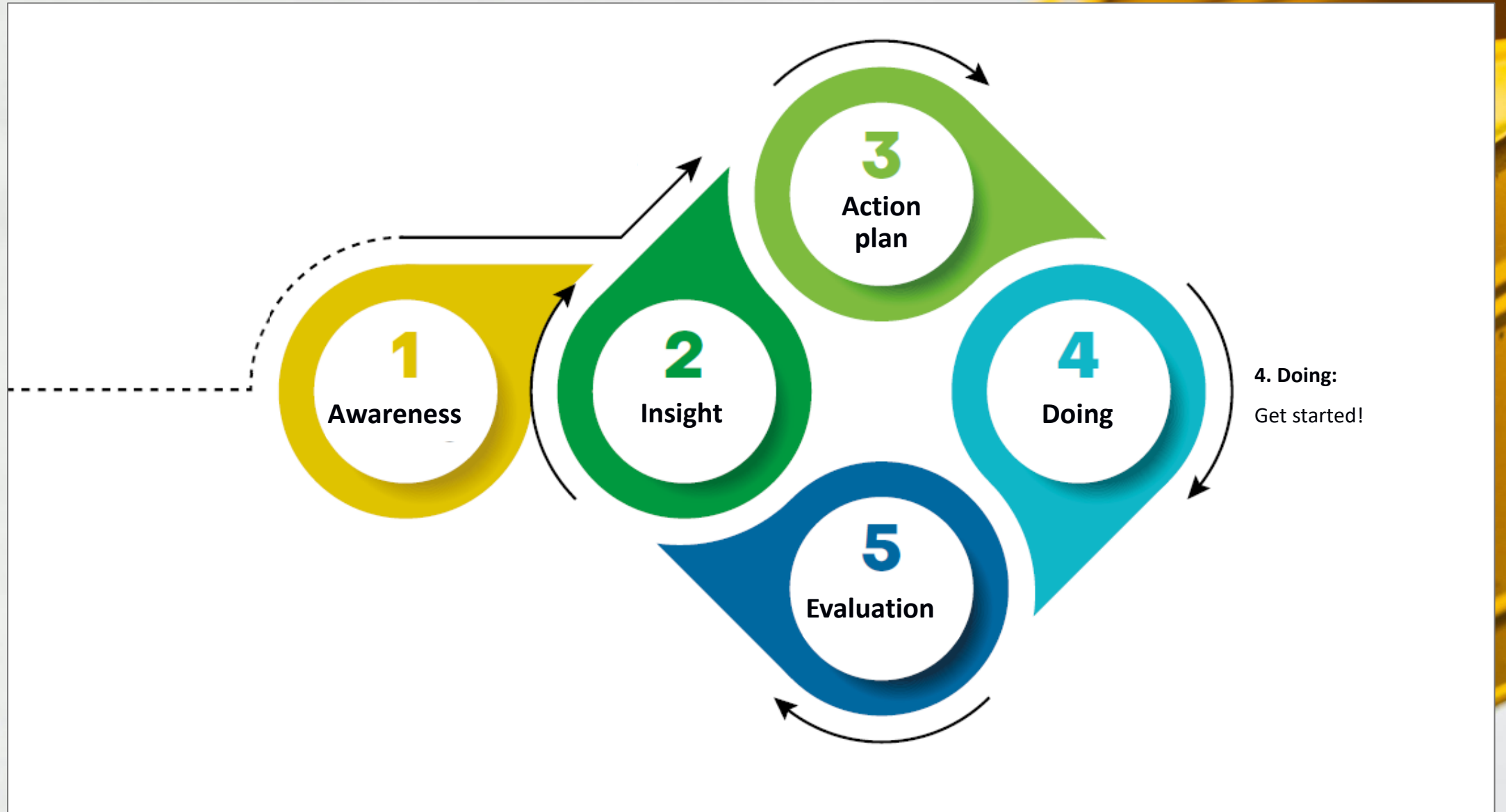
How to foster learning culture



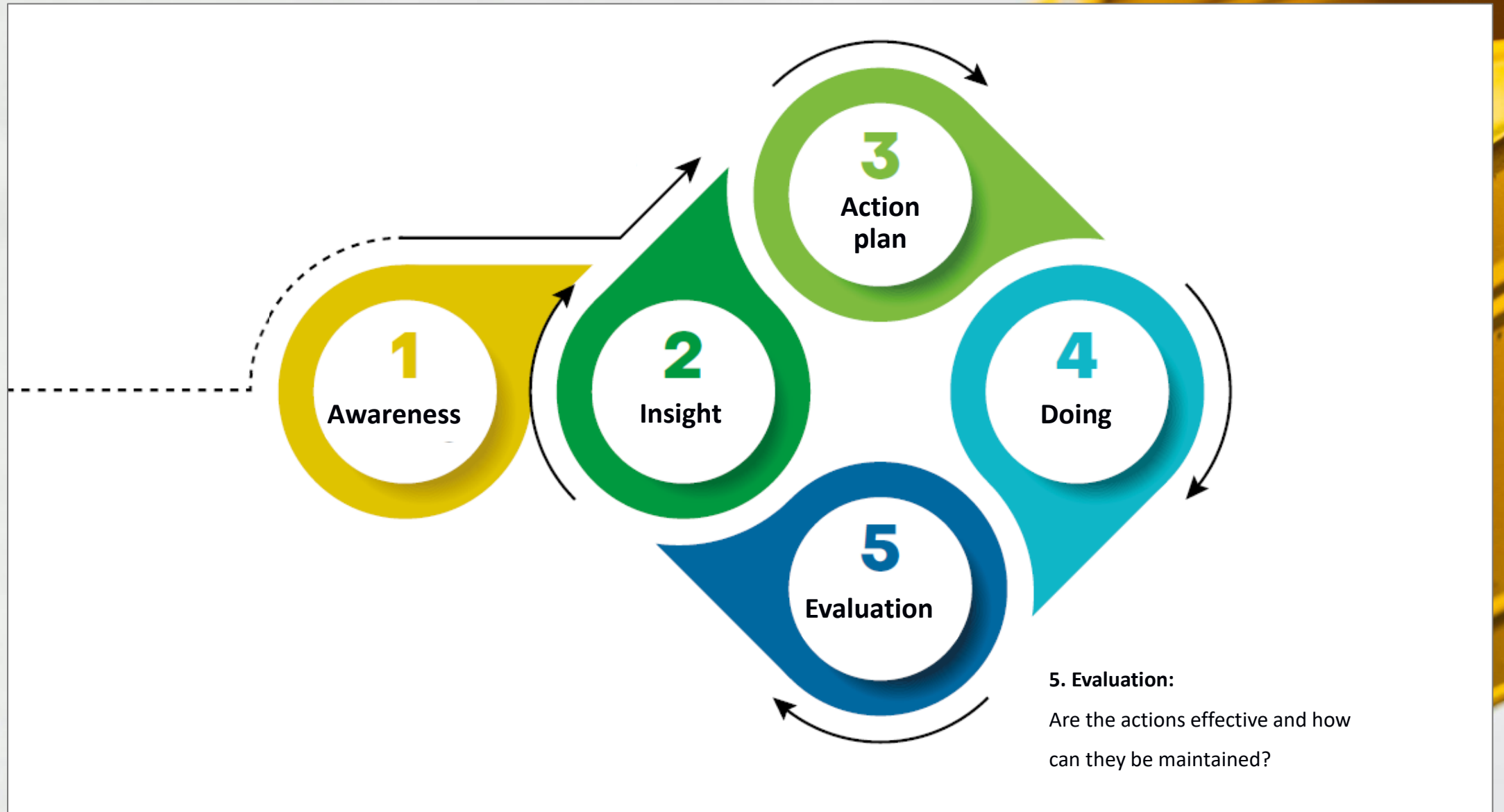
How to foster learning culture



How to foster learning culture



How to foster learning culture



Practical example



Training new employees:

- Knowledge and skills sessions
- Learning on the job
- Individual coaching
- Intervention sessions



Practical example



Supervisor development:

- Theory & knowledge
- Coaching skills
- Organisational support
- Learning from each other



Wendbaar Vakmanschap
in lerende organisaties

**Together we can make learning fun
again, for everyone!**



Thank you!



Want to know more?

[TNO Wegwijzer Lerende en Innovatieve Organisaties](#)

[Cijfers: Leercultuur Monitor \(TNO/SER\)](#)

[TNO model voor Lerende en Innovatieve Organisaties](#)

Quickscan Leercultuur: www.mijnleercultuur.nl

