



# AI-Driven Training System on Product Safety for Professionals

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How AI is shaping VET



Co-funded by  
the European Union

# How AI is shaping VET

- What is „good“ VET? Oncoo
- AI as a subject
- Goals of VET
- How AI might endanger good VET
- How AI can support good VET
  - Individualisation
  - Motivation
    - Time-boxing - Reminders - Assistants
    - Gamification
    - Rating and assessment (z.B. große Hantel nur wenn kleine gestemmt)
  - Support of teachers and trainers
- Wrap-up

# What is good VET?

Please follow the QR-Code for a Card Query

- scan the code
- type your answer in the white box
- clicking “Auf den Stapel” = “Add to stack”: you gather your own ideas first – like a personal note pile
- once you're ready, click "Alle an die Tafel" = “Send all to board”:you share them with the whole group.



<https://www.oncoo.de/etlg>

# Goals of VET

- This is good vet : )

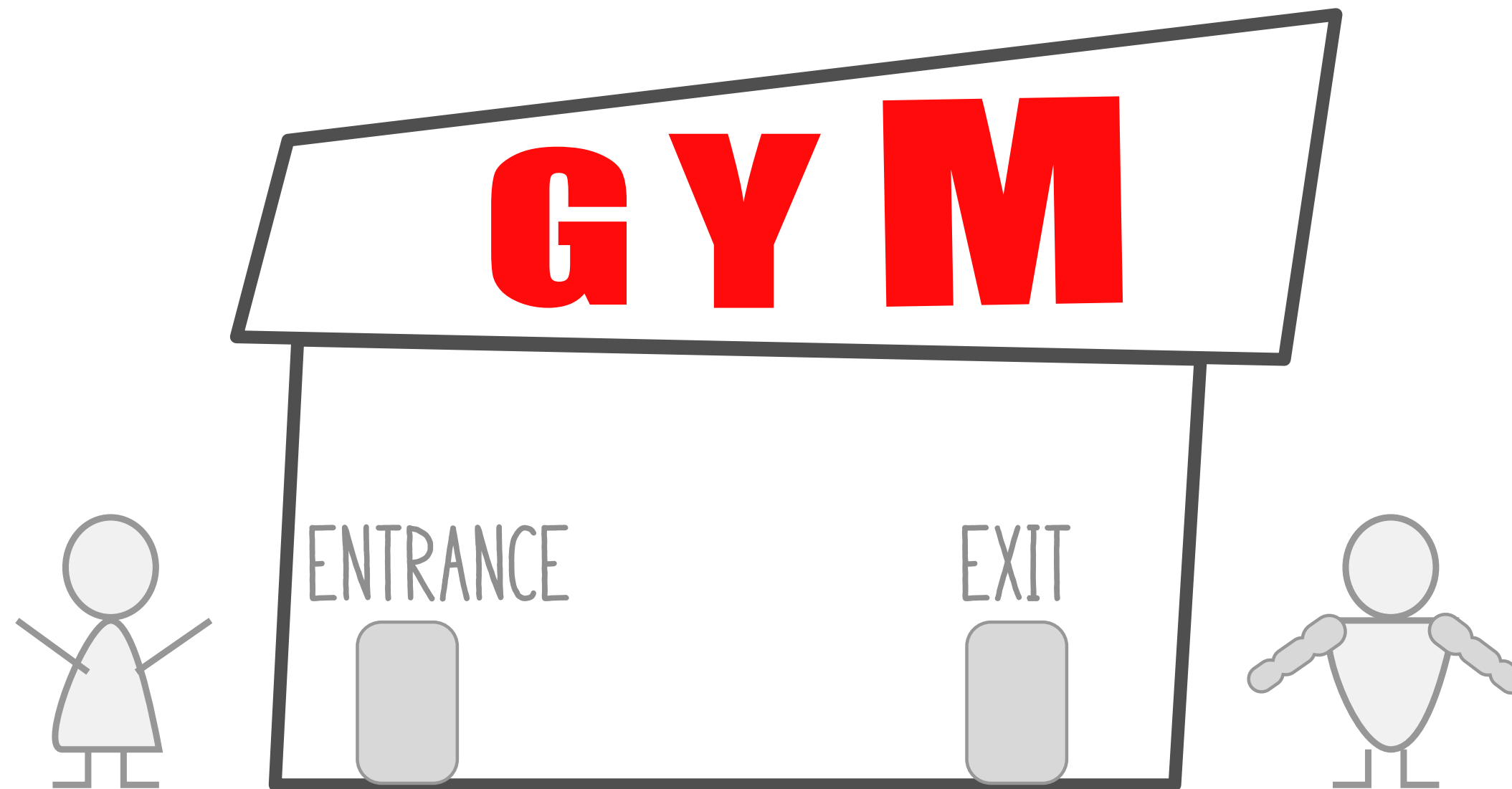


<https://i0.wp.com/presserfitness.de/wp-content/uploads/2018/03/vorher-nachher-Bild.jpg>



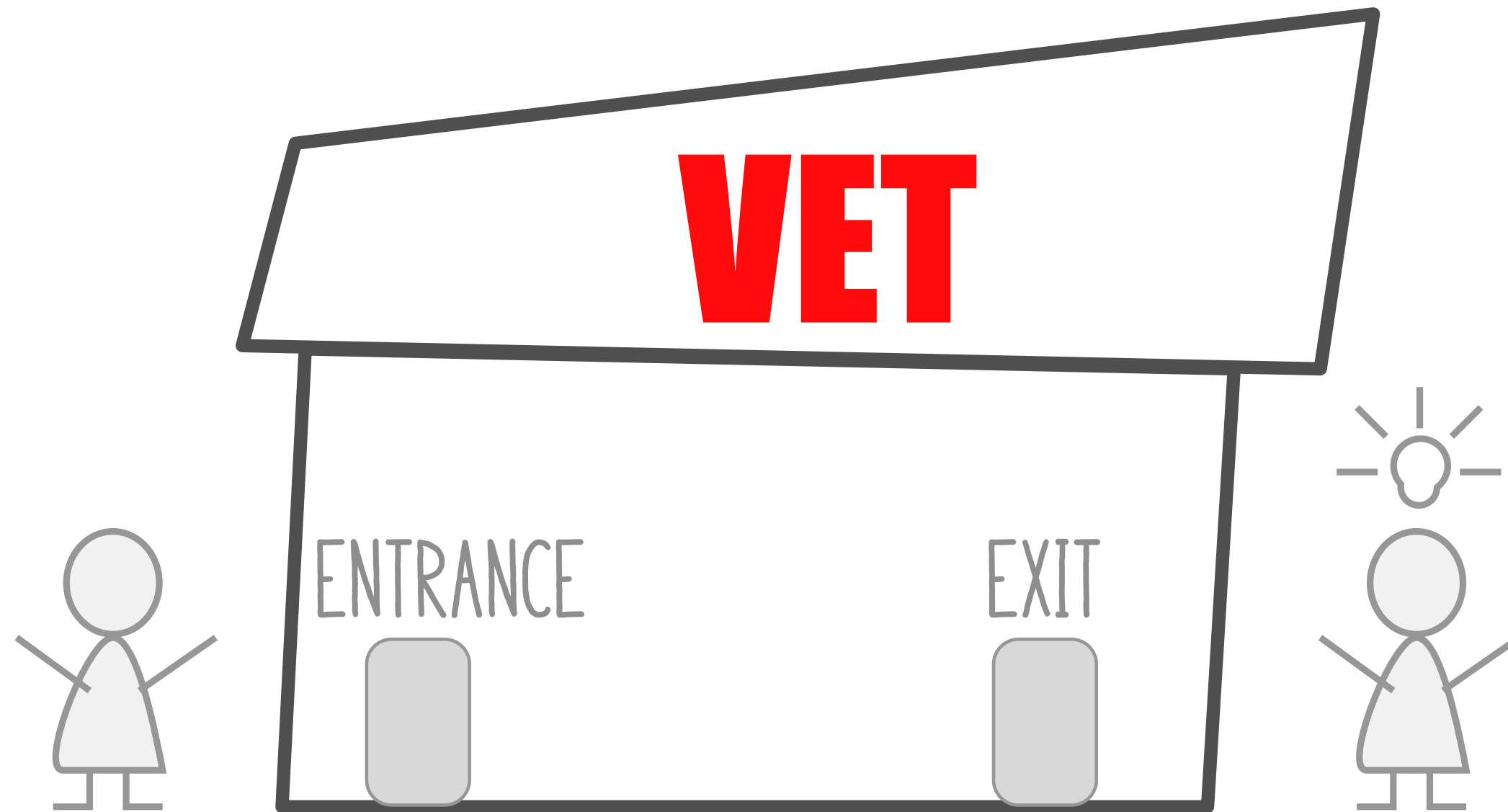
# Goals of VET

- VET is like going to the gym



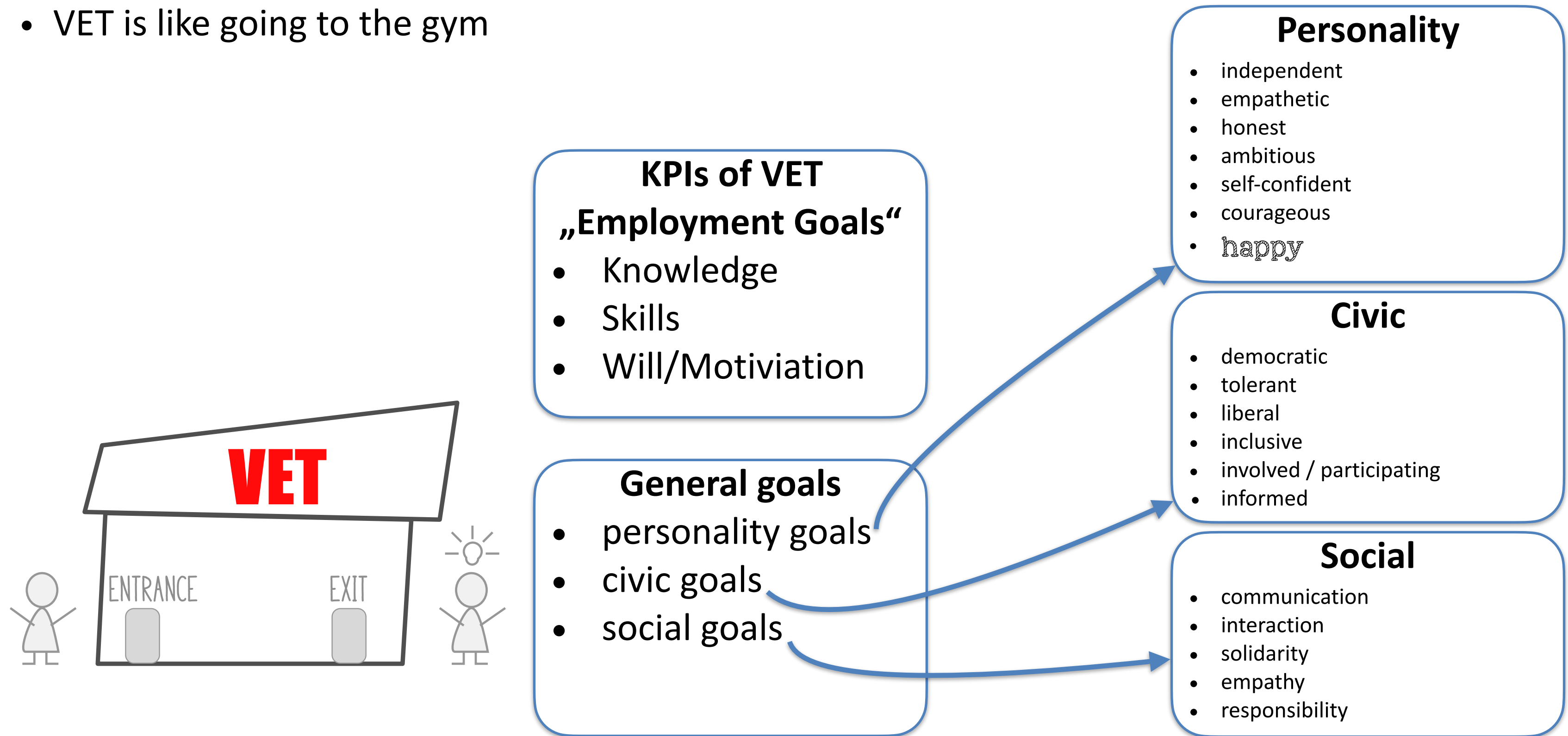
# Goals of VET

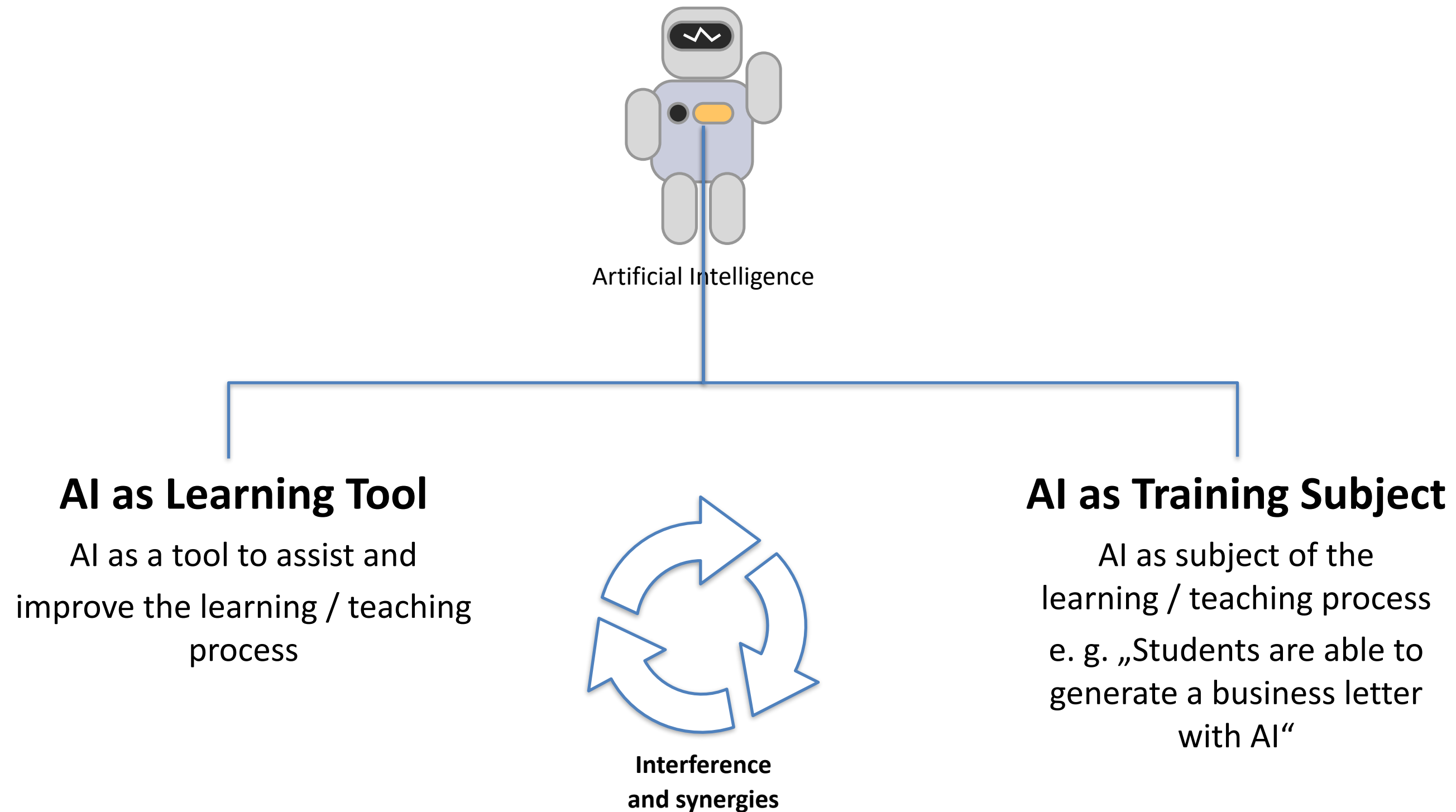
- VET is like going to the gym



# Goals of VET

- VET is like going to the gym

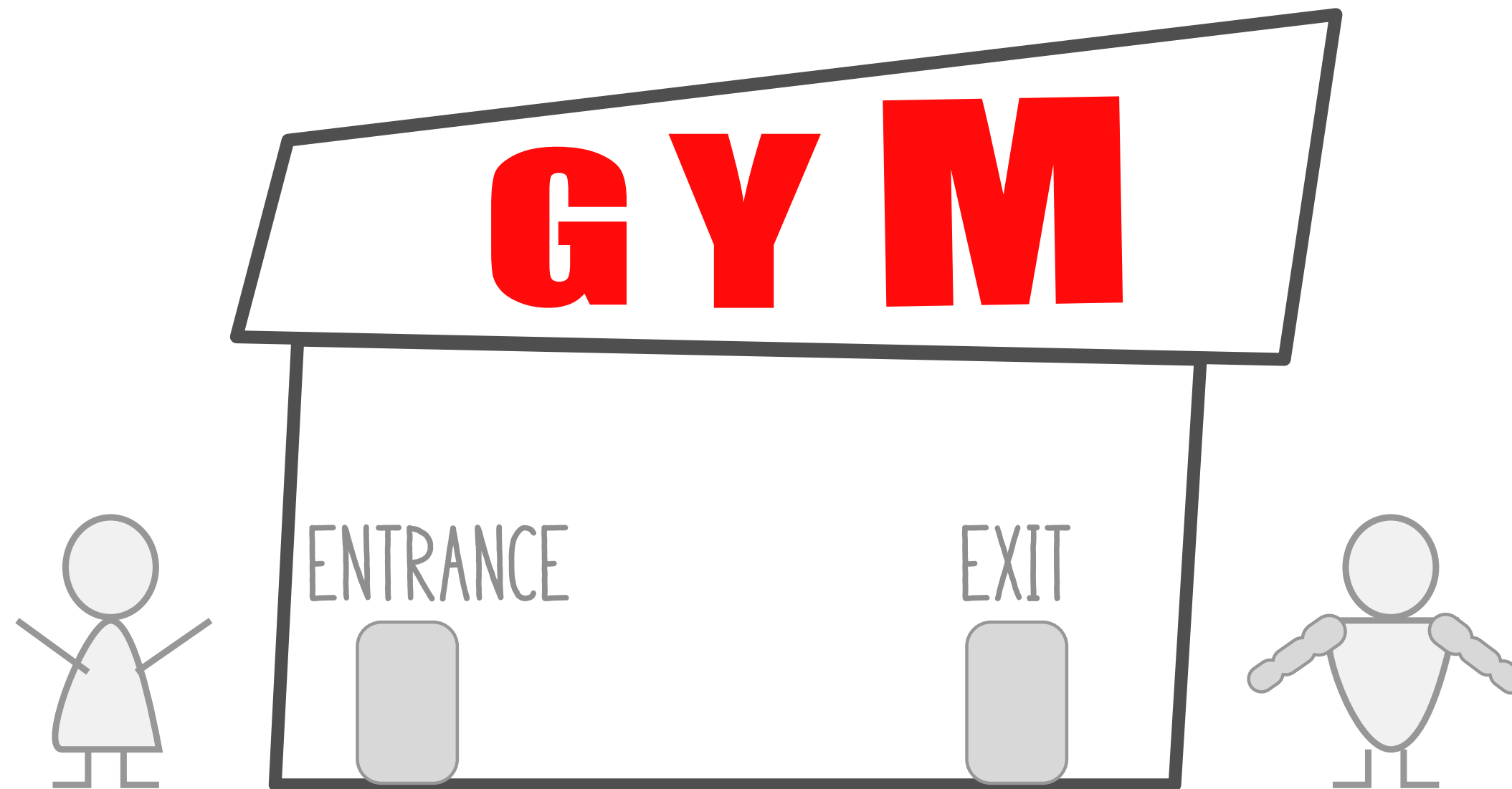






# HOW AI MIGHT ENDANGER GOOD VET

# HOW AI MIGHT ENDANGER GOOD VET



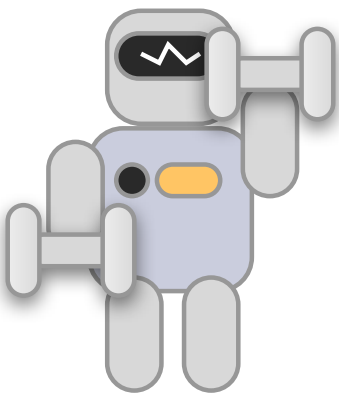
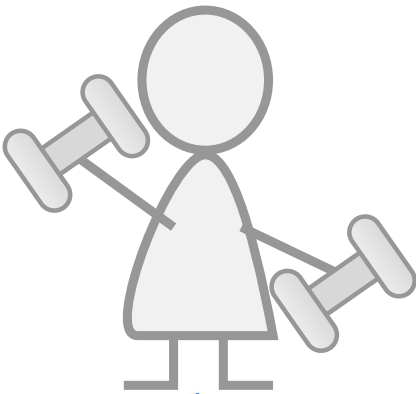
# HOW AI MIGHT ENDANGER GOOD VET

GOOD

BAD

**GYM**

**AIGYM**



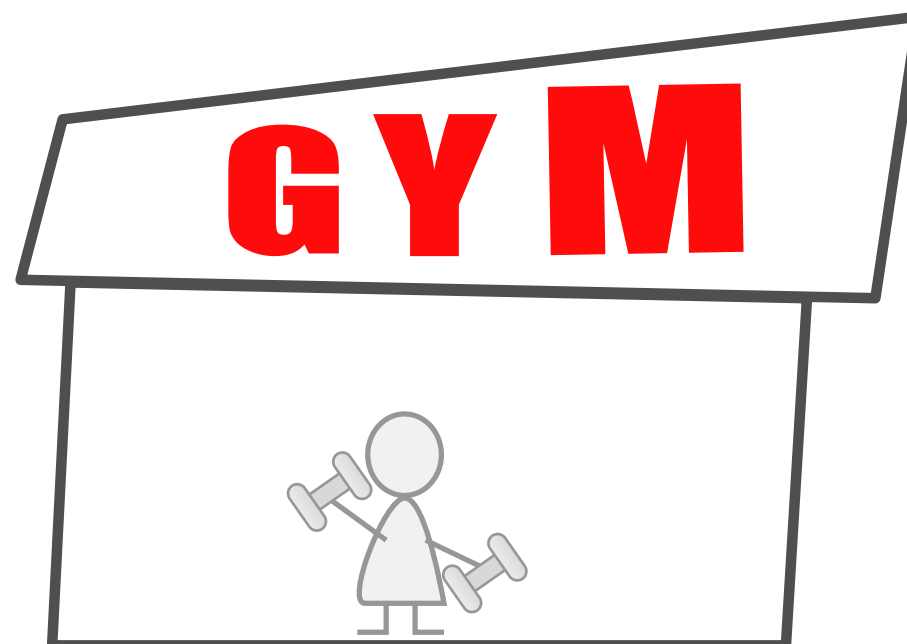
Do the workout

Have the  
workout done

# HOW AI MIGHT ENDANGER GOOD VET

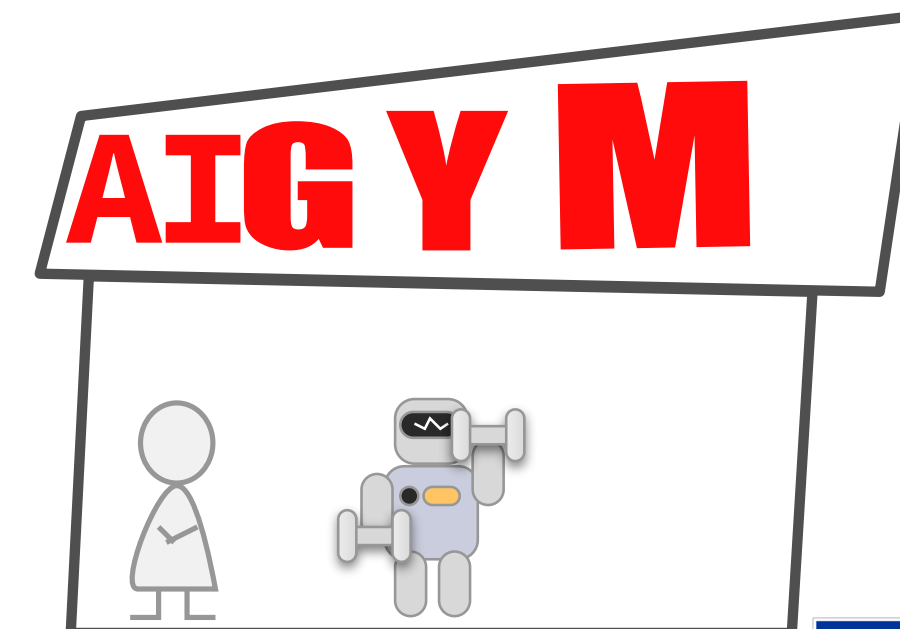
## Good usage of AI in VET

- use AI to **assist individually** in the learning process
- use AI as a **knowledge** provider
- use AI as a **motivator**
- use AI to **summarise** and **make easier** to understand (accessibility)
- User questions, analyses, improves, iterates over AI results

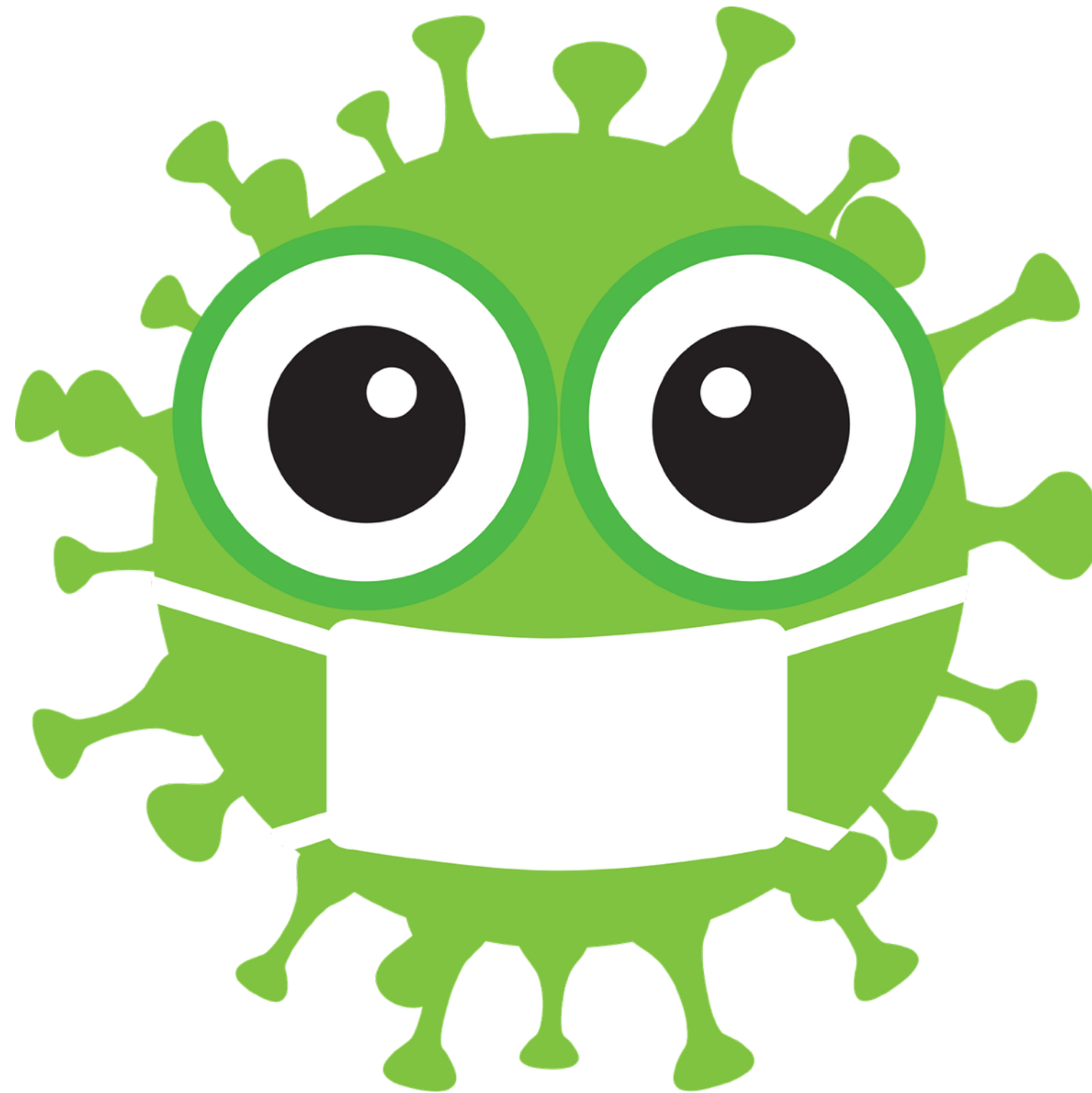


## Wrong usage of AI in VET

- use AI to „lift the weights“  
=> solve tasks and exercises
- User copies and pastes AI results  
blindly w/o iterations  
...without using own brain



# Beyond the Hype: Critical Reflections on AI in VET



pixabay - iXimus

**Corona  
put a lot of  
pressure on  
education to  
digitalize**



# Beyond the Hype: Critical Reflections on AI in VET



Shiny new toys syndrome

[https://i.ytimg.com/vi/9-qjRE697A0/maxresdefault.jpg?sqp=-oaymwEmCIAKENAF8quKqQMa8AEB-AH-CYAC0AWKAgwIABABGHIgUihAMA8=&rs=AOOn4CLB80wjcON8\\_UuKNIWnjwxDoVRDmpg](https://i.ytimg.com/vi/9-qjRE697A0/maxresdefault.jpg?sqp=-oaymwEmCIAKENAF8quKqQMa8AEB-AH-CYAC0AWKAgwIABABGHIgUihAMA8=&rs=AOOn4CLB80wjcON8_UuKNIWnjwxDoVRDmpg)



# Beyond the Hype: Critical Reflections on AI in VET



pixabay - Tumisu



# Beyond the Hype: Critical Reflections on AI in VET

- **Civic / Social problems**

- companies owning the technology (aka gatekeepers)  
may not be compatible with civic goals of VET such as:

- democratic education
- European values
- human and civil rights
- minorities
- ...

- VET serves the **public good**

- equal access, inclusion, critical thinking, democracy
- economic goals of AI companies might endanger that



## Images

[https://es.wikipedia.org/wiki/Elon\\_Musk](https://es.wikipedia.org/wiki/Elon_Musk)

[https://en.wikipedia.org/wiki/File:Donald\\_Trump\\_by\\_Gage\\_Skidmore.jpg](https://en.wikipedia.org/wiki/File:Donald_Trump_by_Gage_Skidmore.jpg)

[https://zea.wikipedia.org/wiki/Xi\\_Jinping](https://zea.wikipedia.org/wiki/Xi_Jinping)

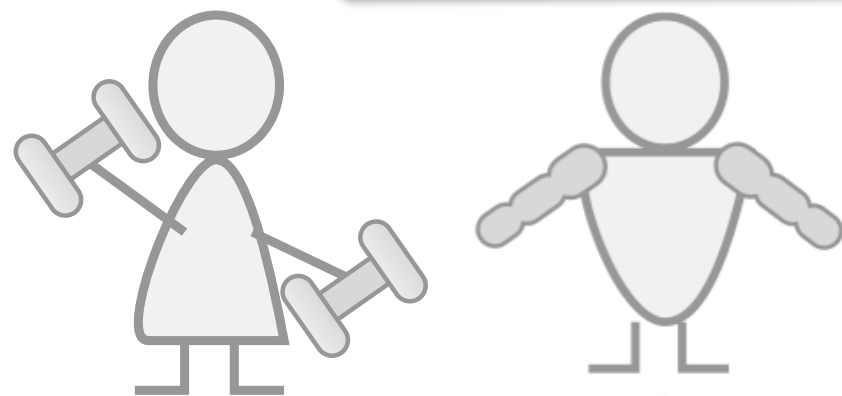
# HOW AI MIGHT SUPPORT GOOD VET

# HOW AI CAN SUPPORT GOOD VET

GOOD

**GYM**

Instructor = AI



In order to get the best results I need to know more about you:  
Why are you here?

Imagine AI as your personal fitness coach:

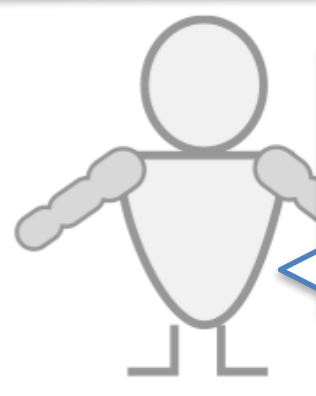
- It doesn't lift the weights for you
- but it helps you get better, faster, and more focused.
- It gives you a **plan**, **tracks** your progress, and helps you stay **motivated**

# HOW AI CAN SUPPORT GOOD VET

GOOD

**GYM**

Instructor = AI



Motivation  
level = 0 ?!?! ...

"I signed up online for a two-year membership at the gym on the 2nd of January when I was standing on the scales (104 kg) with a hangover."

## AI as your personal fitness coach

First: Needs to find out **who** you are and **where** you are:

- motivation or motivation level (1-10)
  - extrinsic motivation
  - intrinsic motivation
- level of knowledge (1-10)
  - Level 1: never heard of and dealt with product safety (issues)
  - Level 10: already worked on product safety issues in my company, in need of permanent updates

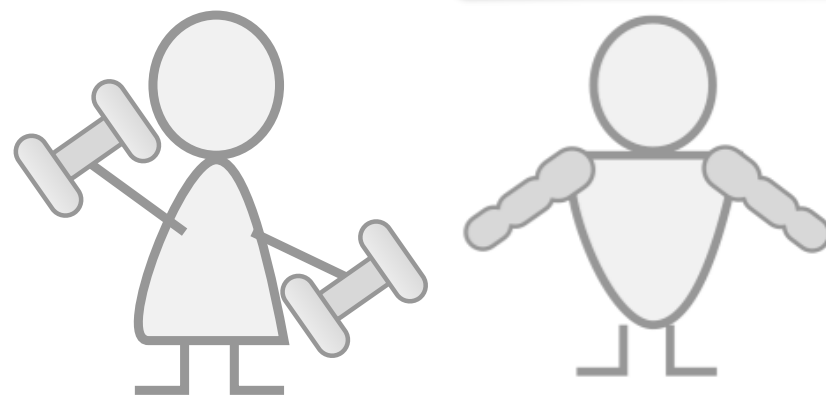


# HOW AI CAN SUPPORT GOOD VET

GOOD

**GYM**

Instructor



I have a plan for you.  
„How are you feeling today?“ - ....  
„The first exercise is ... and we  
are starting with 6 pound  
dumbbells...”

## AI as your personal fitness coach

### Individualisation – "Setting the Gym Machines Right"

- AI can analyse test results, behaviour, even typing speed – to create learner profiles (personas)
- Based on this, it can suggest exercises, reading materials, or tasks at the right difficulty.

=> „adjusting the gym machine“ based on your VO2 max or FTP



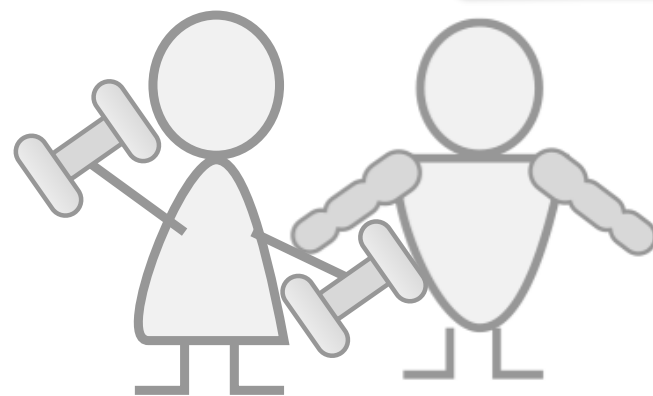
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# HOW AI CAN SUPPORT GOOD VET

GOOD

**GYM**

Instructor



## AI as your personal fitness coach Accessibility

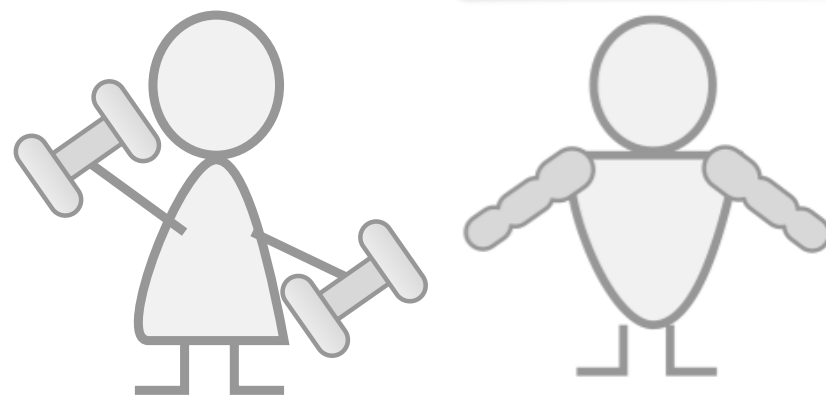
- AI can lower or even remove barriers like:
  - physical disabilities
  - cognitive or emotional impairments
  - language barriers
  - barriers in ICT (information and communication tech)
- AI can make education more inclusive

# HOW AI CAN SUPPORT GOOD VET

GOOD

**GYM**

Instructor



Tomorrow regeneration day: Go for a walk with your best friend and treat yourself to a good meal.

## AI as your personal fitness coach

### Regeneration and Nutrition – Learning Efficiency

Training isn't only about pushing hard. Regeneration matters too.

AI can:

- detect cognitive overload,
- suggest breaks,
- recommend reviewing instead of moving ahead.

And learning input matters – just like food for athletes.

Bad prompts and poor material = junk food.

Good prompts, adapted content = healthy fuel.

**Problem:** questioning the person (also about personal circumstances) could make the person feel uncomfortable, cause a feeling of mistrust (data protection and data security important for product safety as well as AI training courses on this issue)

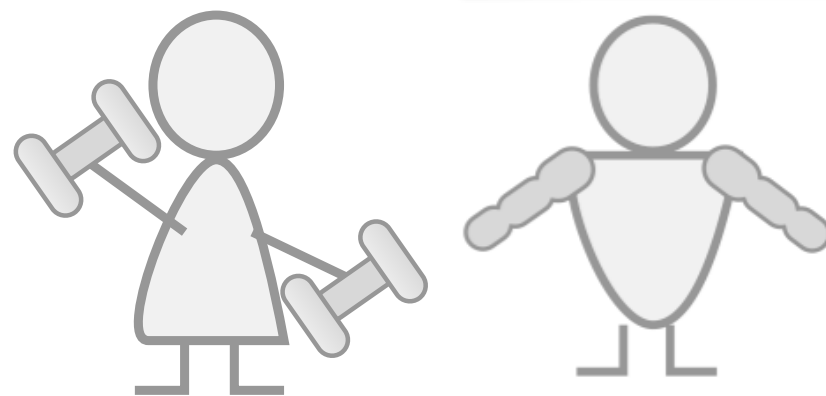
=> proper level of decency in questioning the learner

# HOW AI CAN SUPPORT GOOD VET

GOOD

**GYM**

Instructor



Next workout tomorrow. One hour. No excuses.

## AI as Motivator

One of the hardest parts in both training and learning is motivation.

AI tools can help with:

- **Time-boxing:** planning focused sessions
- **Reminders:** gentle nudges to continue
- **Assistants:** chatbots that answer questions 24/7

This creates structure, encouragement, and a feeling of progress – like a coach saying: ‘You got this, just one more set!’”



# HOW AI CAN SUPPORT GOOD VET



You have mastered the beginner level. In my planning tool as an instructor you are now one of my advanced athletes.

## Gamification

### Making Progress Visible and Fun - Learning as a Challenge

Gamification turns effort into visible progress:

- Points
- Levels
- Badges
- Leaderboards

| Leaderboard |       |      |
|-------------|-------|------|
| 1           | PLAYE | 1:00 |
| 2           | SCORE | 1:00 |
| 3           | TIME  | 1:00 |
| 4           | NAME  | 1:00 |
| 5           | SCORE | 1:07 |
| 5           | TIME  | 1:00 |
| mm:ss       |       |      |

=> But it's important to use this wisely. (cultural differences?)  
You only get the big weights after you've mastered the small ones.  
AI can manage this progression intelligently – giving learners challenges that are achievable, but not too easy.”



## 2. STREAKS – BUILD LEARNING CONSISTENCY

Every good training thrives on regularity – and so does learning.

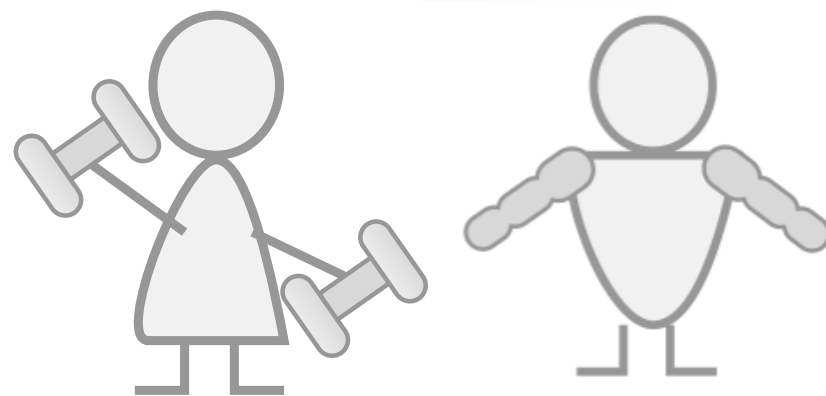
- Daily Streaks: z. B. “You've completed 5 days in a row – great discipline!”
- Content Streaks: “You’ve answered 15 questions on hazard symbols correctly in a row!”
- Comeback Streaks: “You’re back after 3 days – let’s rebuild your rhythm!”
- Probability of reaching the goal (in %)  
→ e.g. “Current success probability: 74% for grade B – keep going!”

# HOW AI CAN SUPPORT GOOD VET

GOOD

**GYM**

Instructor



You've lifted 10 kg successfully  
10 times - now let's try 12 kg

## Rating and Assessment – Smart Feedback Loops Feedback – From Small Steps to Big Lifts

AI can support assessments by:

- Giving instant feedback on answers
- Tracking long-term progress
- Adapting the difficulty of new tasks

This builds learner confidence and keeps progress sustainable

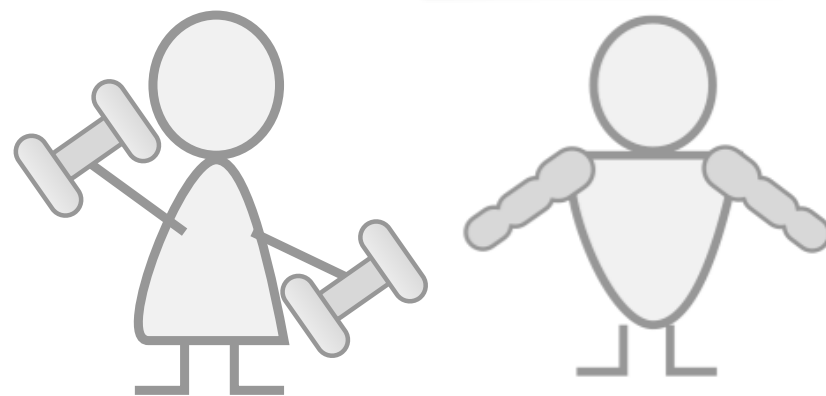


# HOW AI CAN SUPPORT GOOD VET

GOOD

**GYM**

Instructor



Why did you skip training today? ...Yesterday I've lifted 12 kg 10 times - now my shoulder hurts...

## Supporting Teachers and Trainers

AI Helps Supervisor/Teachers/Boss/Instructor to Focus on What Matters

AI can take over training course – so that teachers can focus on mentoring, feedback, real interaction.

Examples:

- Identifying struggling learners early
- AI identifies lack of motivation? Giving notification to the boss and the task to ask the learner how things are going

In our gym metaphor, teachers are like physiotherapists

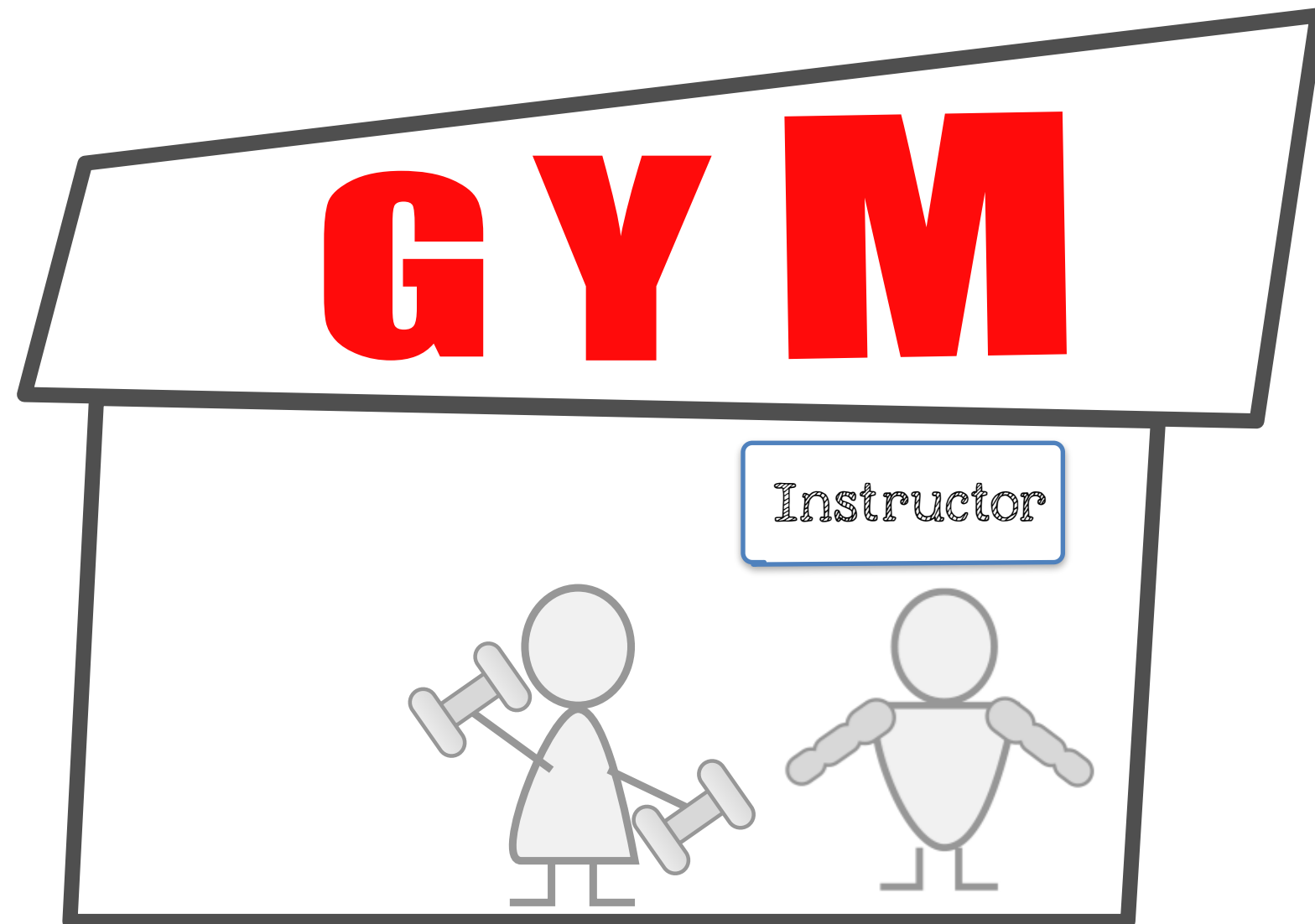


# Adapting AI to Different Learning Styles

| Learner type                                                                                                     | Gym metaphor                     | AI Training Approach                           |
|------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------|
|  <b>Visual Learner</b>          | Needs to see the movement        | Diagrams, infographics, icons, visual cues     |
|  <b>Auditory Learner</b>        | Learns by listening to coaching  | Spoken feedback, explanation via chatbot voice |
|  <b>Reading/Writing Learner</b> | Reads training logs, takes notes | Text-heavy materials, summaries, checklists    |
|  <b>Kinesthetic Learner</b>    | Needs to do the motion           | Interactive tasks, practice cases, simulations |

# HOW AI CAN SUPPORT GOOD VET

GOOD



## Wrap-up –

### “AI: A Coach, Not a Replacement”

- AI can individualise, motivate, and guide learners.
- It can make education more adaptive, engaging, and efficient.
- But like in the gym, the effort still has to come from the learner

What do you think:

Is a personal (= non AI) trainer still essential in education?

To what extent can/will the teacher (as an individual person) be replaced by AI

- overall
- in vocational training
- training professionals on product safety?





**BAD AI:  
NO TRAINER**



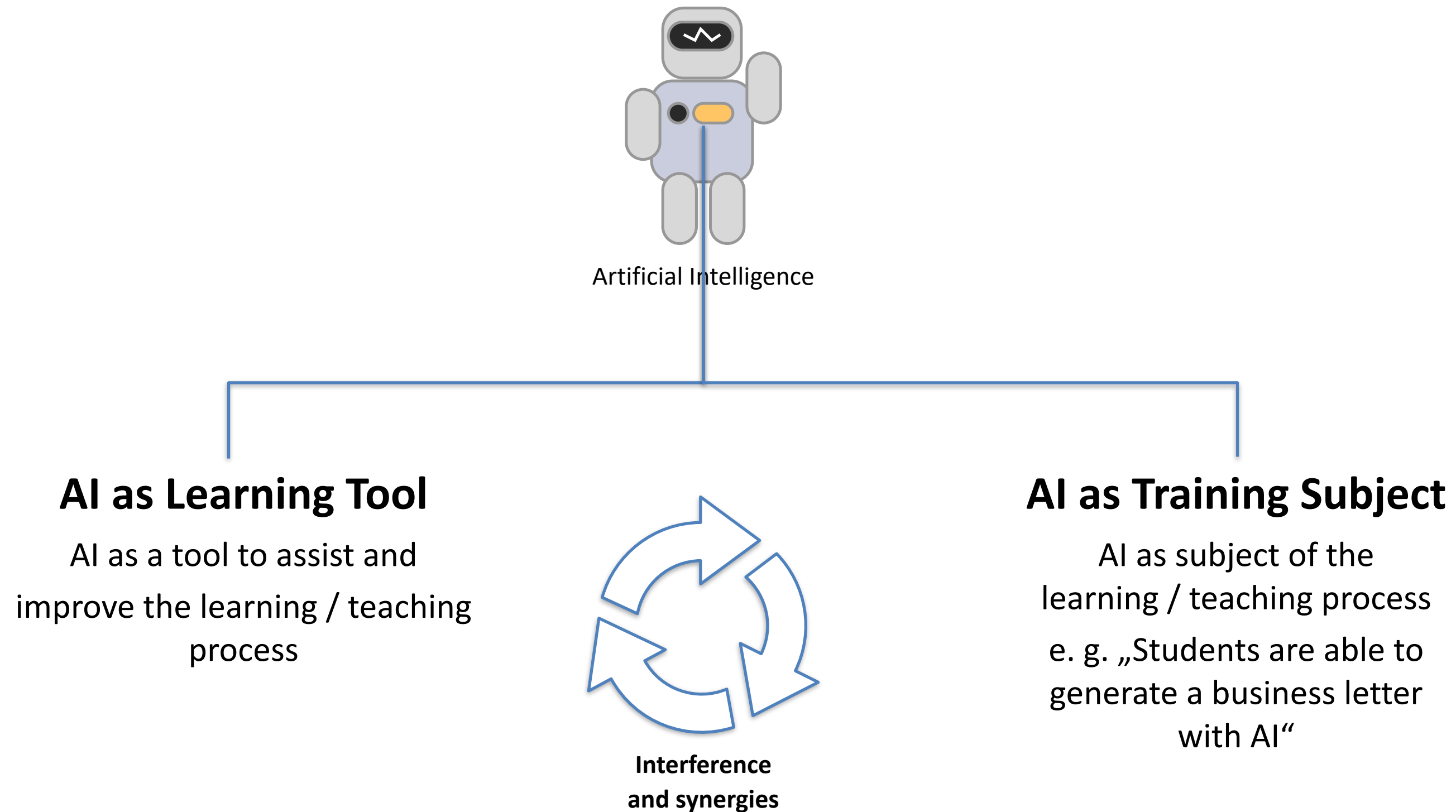
**GOOD AI:  
POWERED BY A TEACHER**

“A gym is only as good as its trainers.  
A classroom is only as strong as its teachers – no matter how smart the machines.”



# AI AS A TRAINING SUBJECT





# AI as Training Subject

**Cu**

Cultural

**Cr**

Creative

**Cn**

Constructive

**Co**

Communicative

## **EIGHT ESSENTIAL** ELEMENTS OF DIGITAL LITERACIES

**Cf**

Confident

**Cg**

Cognitive

**Ct**

Critical

**Ci**

Civic

# Digital literacies in general

How does AI  
shape our culture?  
e.g. a love letter from  
ChatGPT?

**Cultural**

Do new things in new  
ways

**Creative**

Create an advertising  
video using AI

**Constructive**

Using AI in  
communication with  
other people

**Communicative**

## **EIGHT ESSENTIAL** ELEMENTS OF DIGITAL LITERACIES

Using AI w/o fear in a  
self-aware manner

**Confident**

Understand how AI  
works, proper use,  
limitations

**Cognitive**

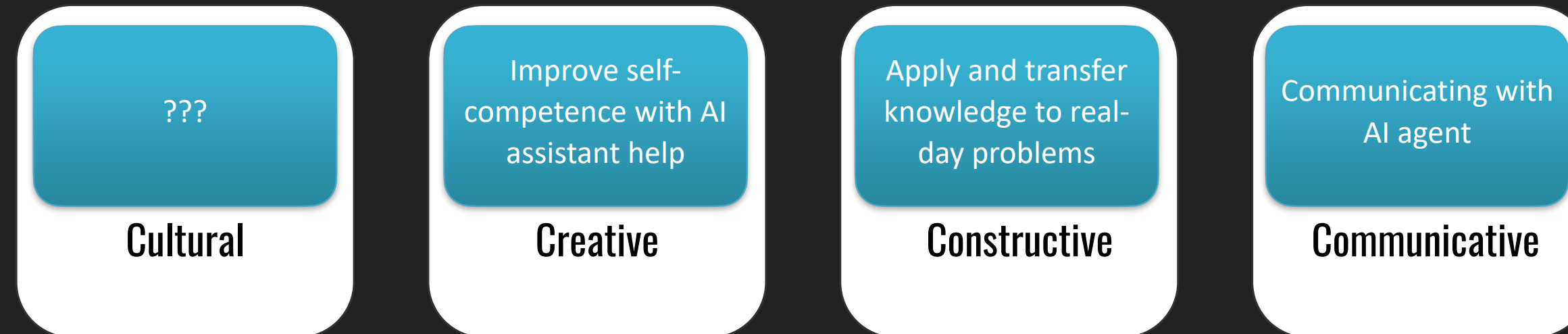
Analyse the  
power structures  
behind AI - reflect  
own usage

**Critical**

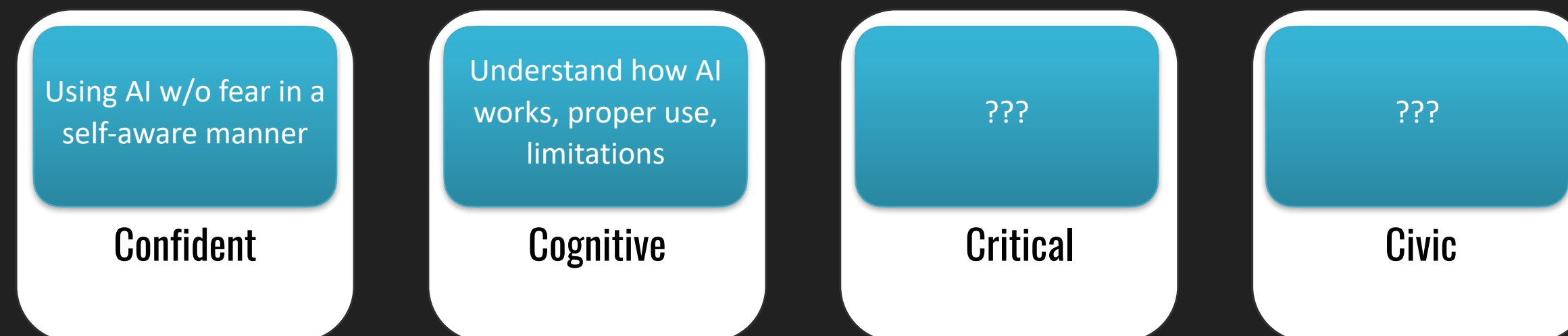
Does AI  
strengthen our  
society? Does it  
empower people?

**Civic**

# Potential Digital literacies in our project



## **EIGHT ESSENTIAL** ELEMENTS OF DIGITAL LITERACIES





# AI as Training Subject



# AI as Training Subject

Digital literacy is the ability to find, evaluate, utilize, share, and create content using information technologies and the Internet.

Digital Literacy is important in education, the workforce and generally for every internet user.

Digital Literacy is one component of Digital Citizenship.

Digital literacy is when students can manipulate and evaluate data to construct their own meaning.

Digital literacy is using technologies to find, use and disseminate information.

Digital literacy is the ability to effectively and critically navigate, evaluate and create information using a range of digital technologies.

Digital literacy is a process, not a tool.

Digital literacy is critical to the development of UK further and higher education as digital technologies provide new opportunities to enhance teaching, learning, research and the management of organisations.

Digital Literacy is essential reading for students, researchers, writers, investors, and anyone who intends to use the bountiful resources available on-line to bolster their work.

Digital literacy is the means by which our students can access and gain fluency in the core skills we already teach: comprehension, synthesis, rhetoric, and argument.

Digital literacy is about many things, not just digitization projects.

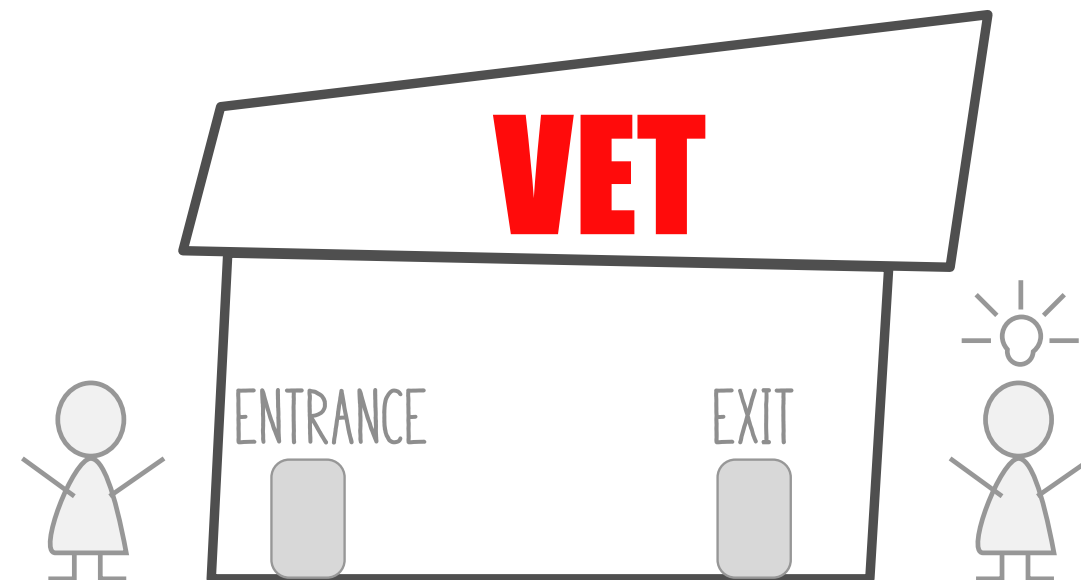
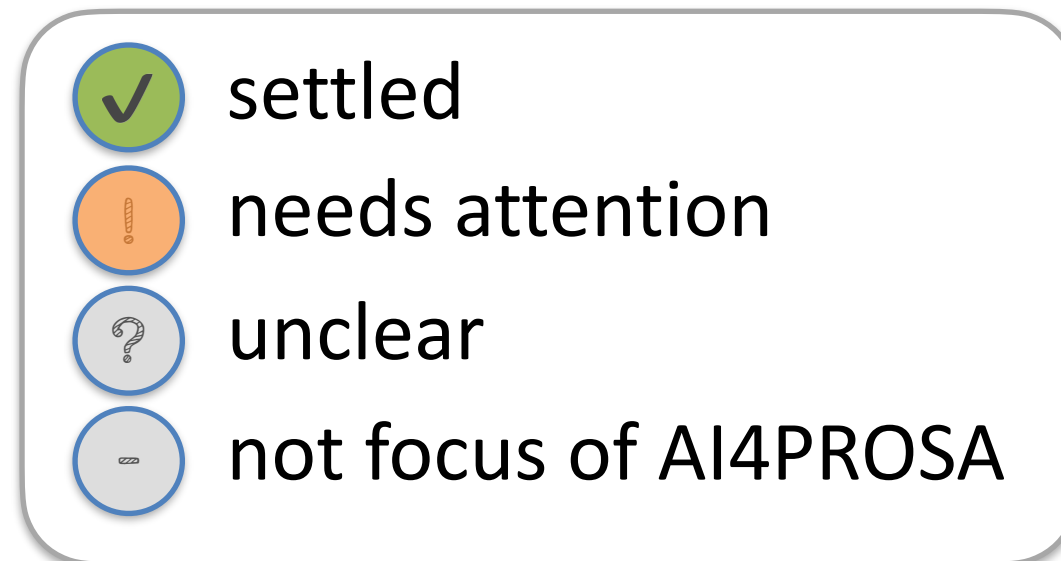
Digital literacy is an essential part of job-readiness, socialization and independence.

Digital literacy is the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers.

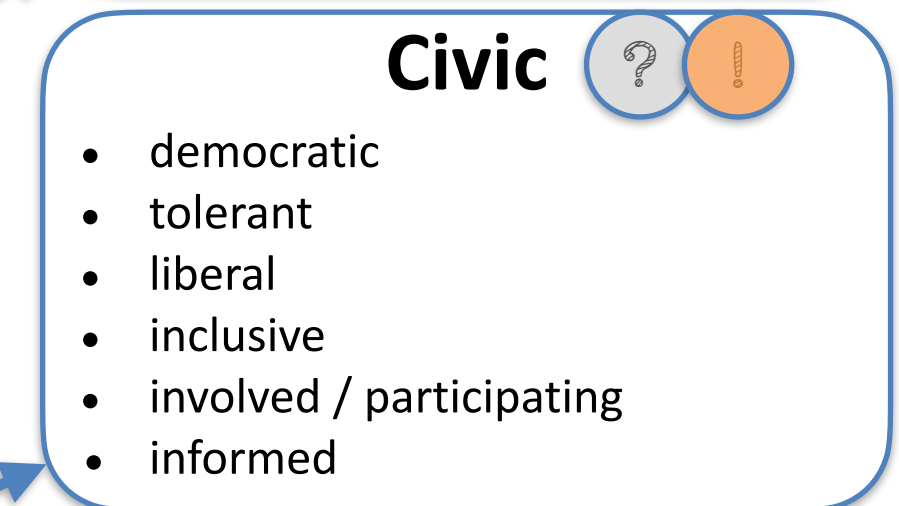
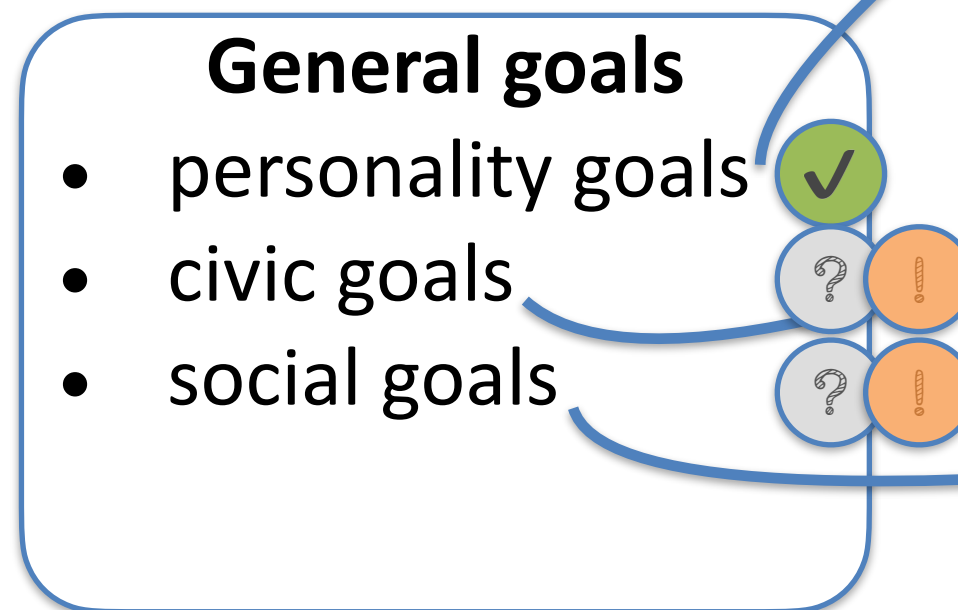
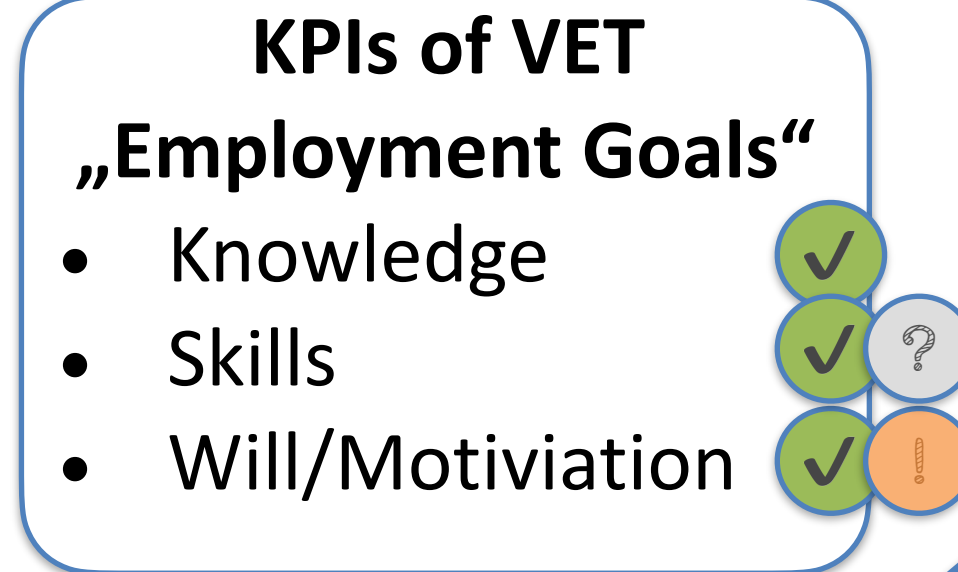
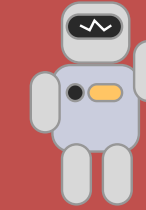
## WRAP-UP

# Goals of VET

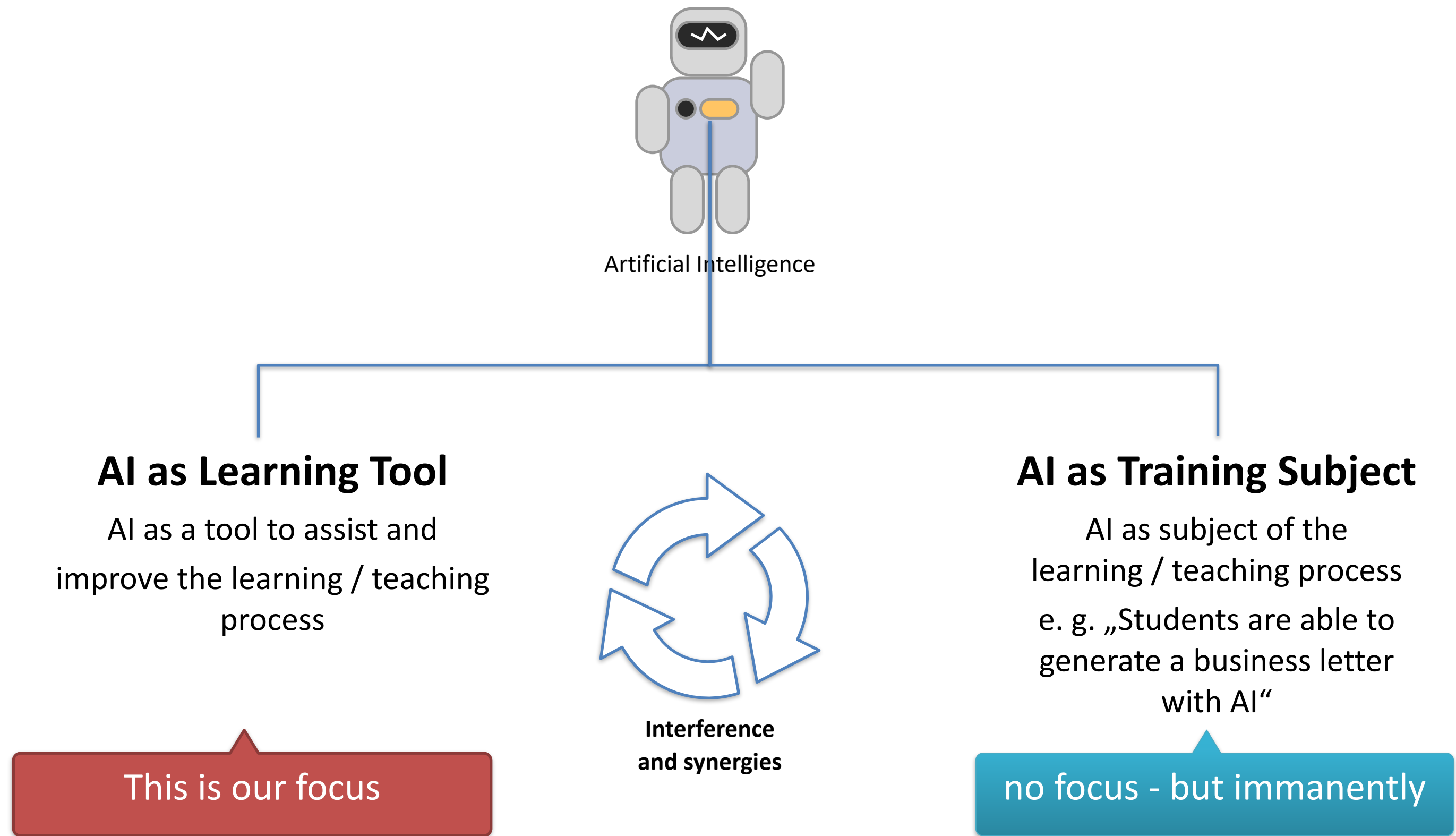
- VET is like going to the gym



AI agent should help reach these KPIs and goals







# Wrap-Up

- Many things have already been considered with Lean Learning Canvas
- Points to consider / challenges
  - product safety **skills** - is it possible to teach / assess with AI assistant?
  - motivation - already considered, but is essential for VET students
  - different learner types (visual / kinesthetic learners?)
  - emotional and social sides of learning? (e. g. Hattie)
- AI is used as a **learning tool**
- AI as a **learning subject**
  - many aspects of digital literacies are developed immanently
- are civic and social goals promoted or hindered by AI systems?

# AI as Training Subject



Digital literacy is about...

**POWER**

(just like all other forms of literacy)

Who „owns“ the AI?  
Which interests may be propagated by AI owners?...



♥ Thank you for asking these questions!

# Goals of VET

- This is good vet : )



<https://i0.wp.com/presserfitness.de/wp-content/uploads/2018/03/vorher-nachher-Bild.jpg>







## Contact information:

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<https://kbs-bth.de>



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