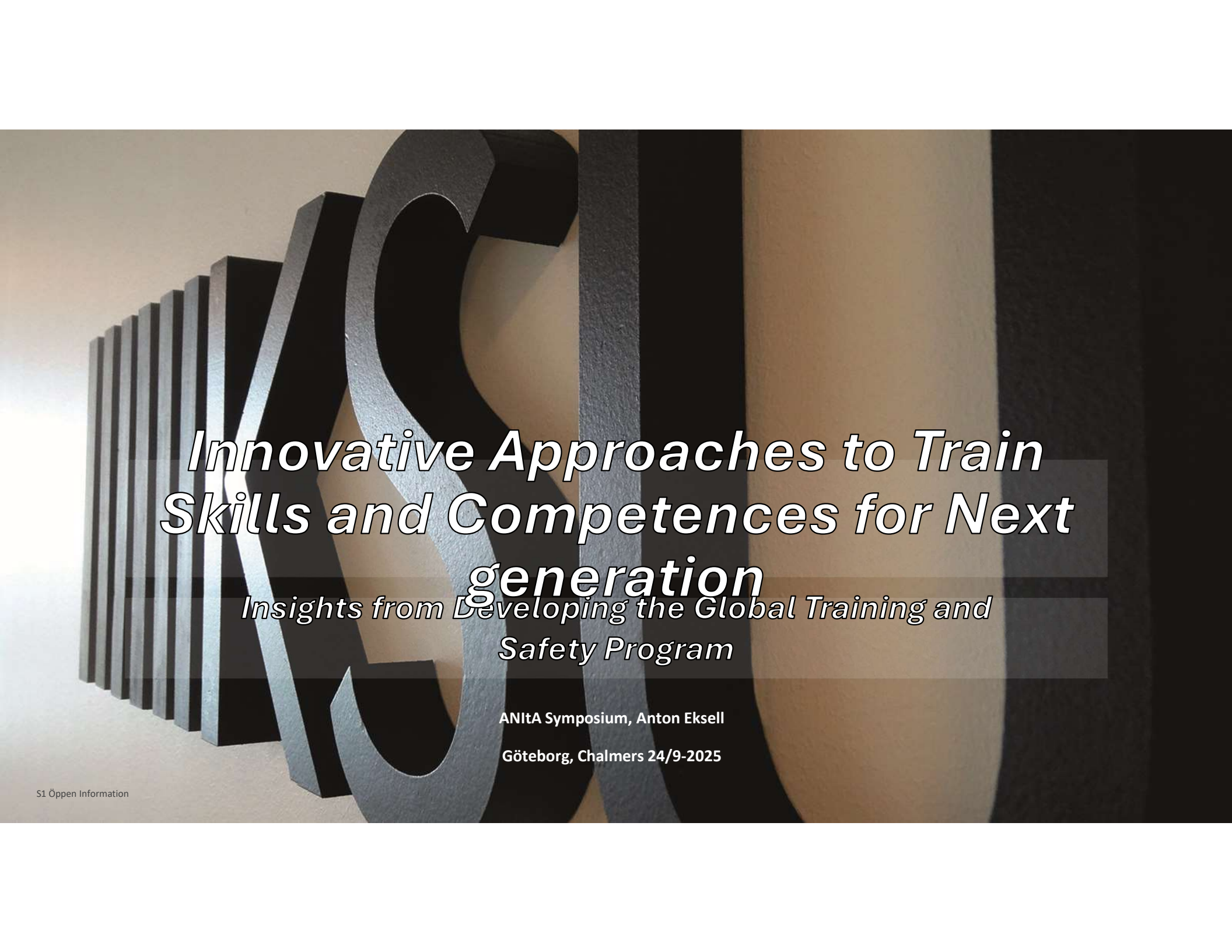


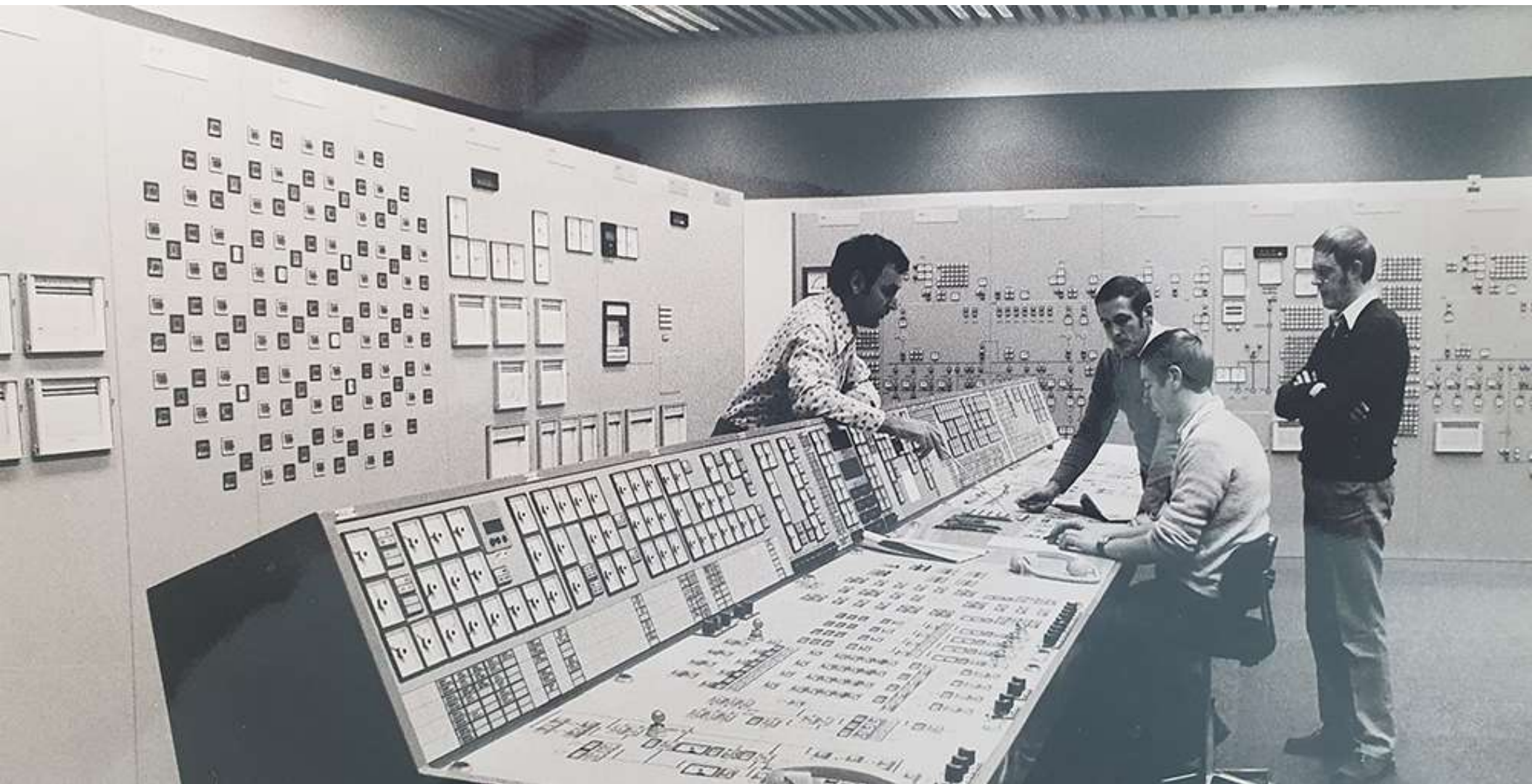


Innovative Approaches to Train Skills and Competences for Next generation

*Insights from Developing the Global Training and
Safety Program*

ANItA Symposium, Anton Eksell

Göteborg, Chalmers 24/9-2025



IIIIIKSU

July 20, 1972

PART OF VATTENFALL GROUP (2000)



180

Our vision

To be a world leader in nuclear training.

Our business idea

Nuclear training and competence in unique learning environments.

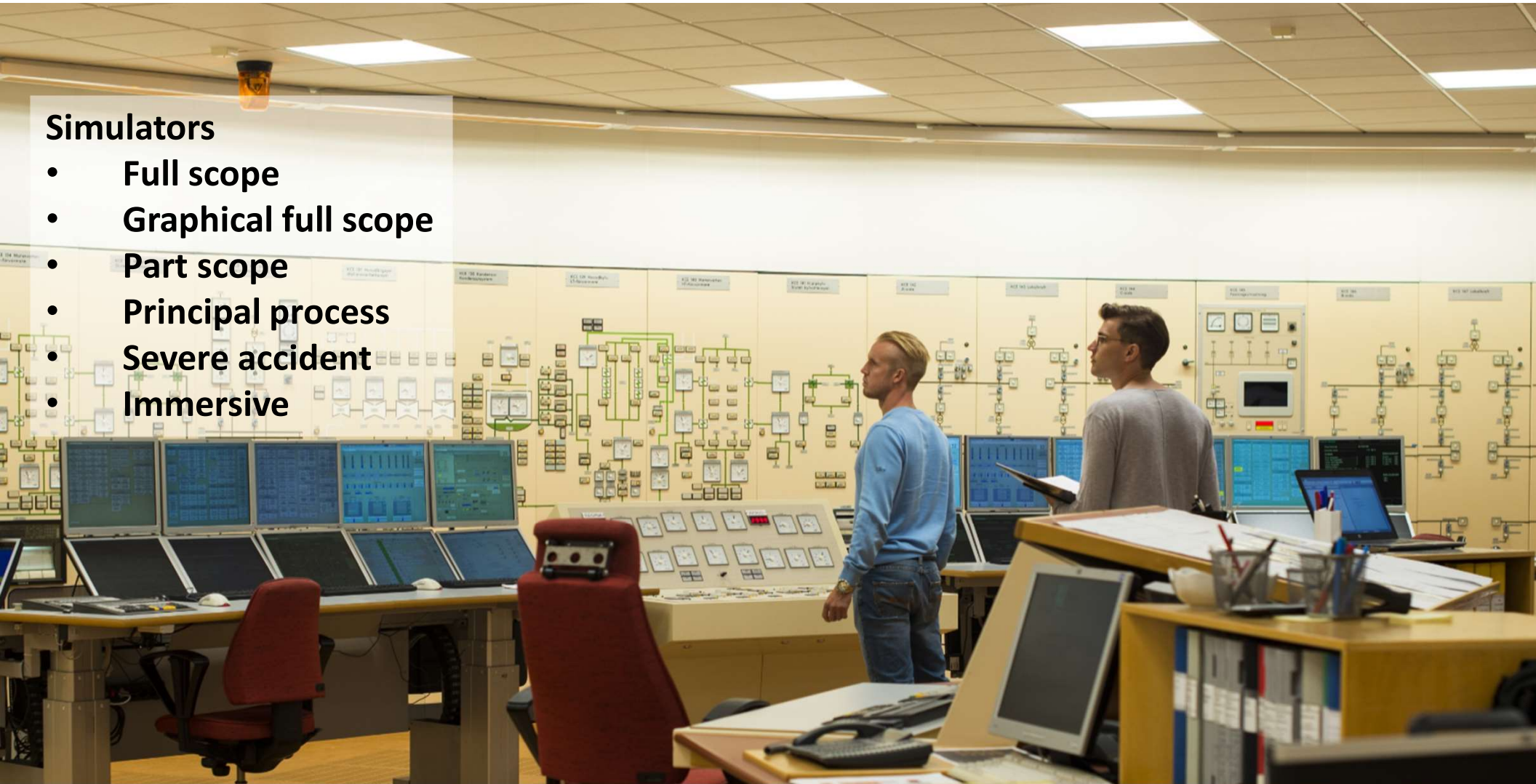
4 KEY DEPARTMENTS

- TRAINING
- TECHNOLOGY
- BUSINESS DEVELOPMENT
- BUSINESS SUPPORT



Simulators

- Full scope
- Graphical full scope
- Part scope
- Principal process
- Severe accident
- Immersive





Up until now



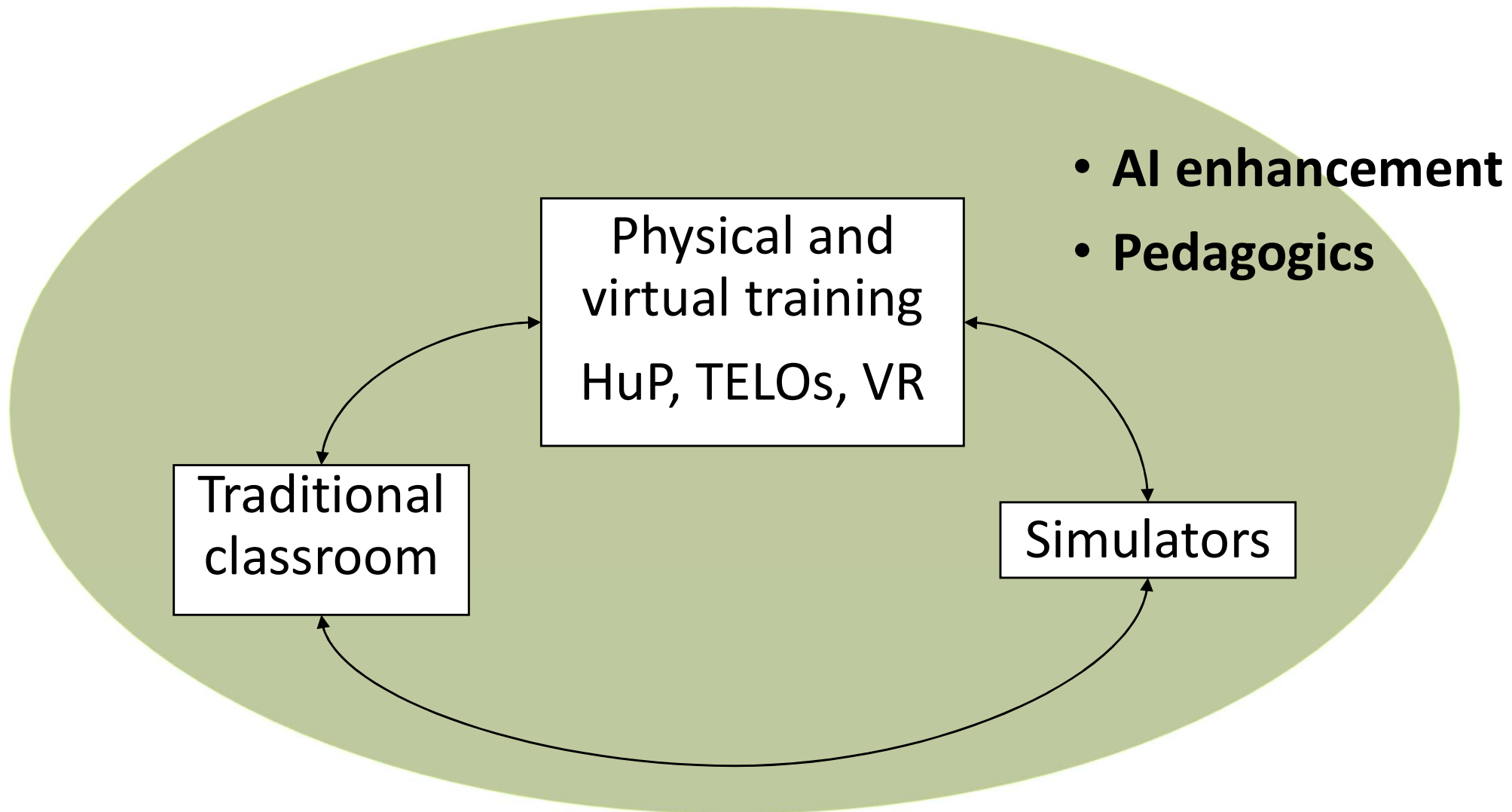
Immersive training



Hands-on training

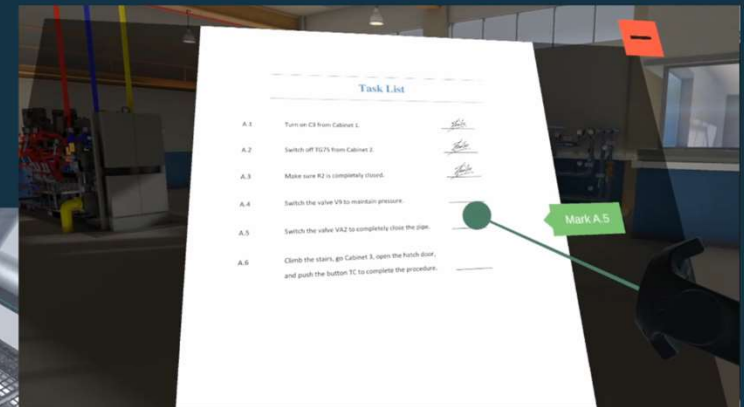
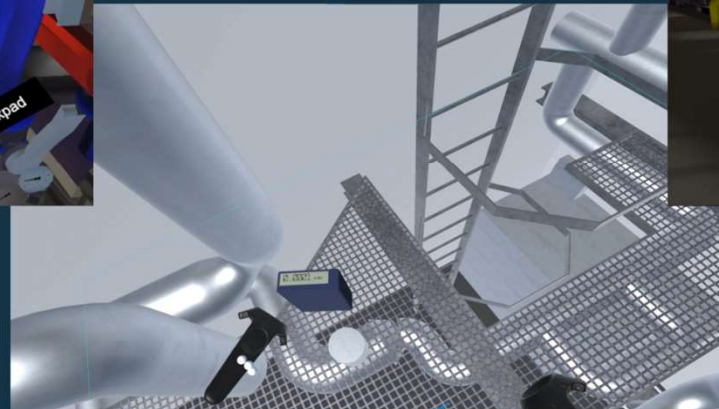


Digital training



Virtual Environment

- Show/Teach/Test-Me
- Objective evaluation
- Simulated radioactivity & ALARA





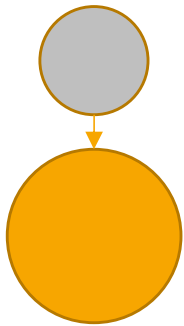
Innovating training

- Cross section between restrictions and aspirations
- Supporting the old ways and allowing for the new
- The importance of safety and security
 - No cloud
 - Export control
 - Business confidentiality



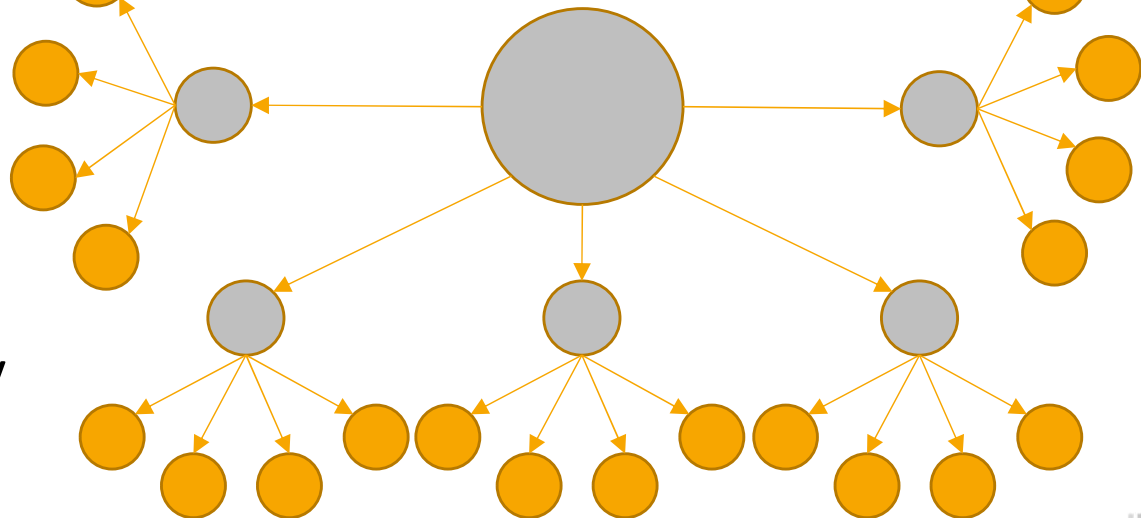
Scalability and the nuclear industry

- Current model 1:1, or at times 1:2.
- Local and same owner



- Now add regional borders and company borders

- Requirement for SMRs 1:~4 and 1:<30
- Distributed over country borders and several owners



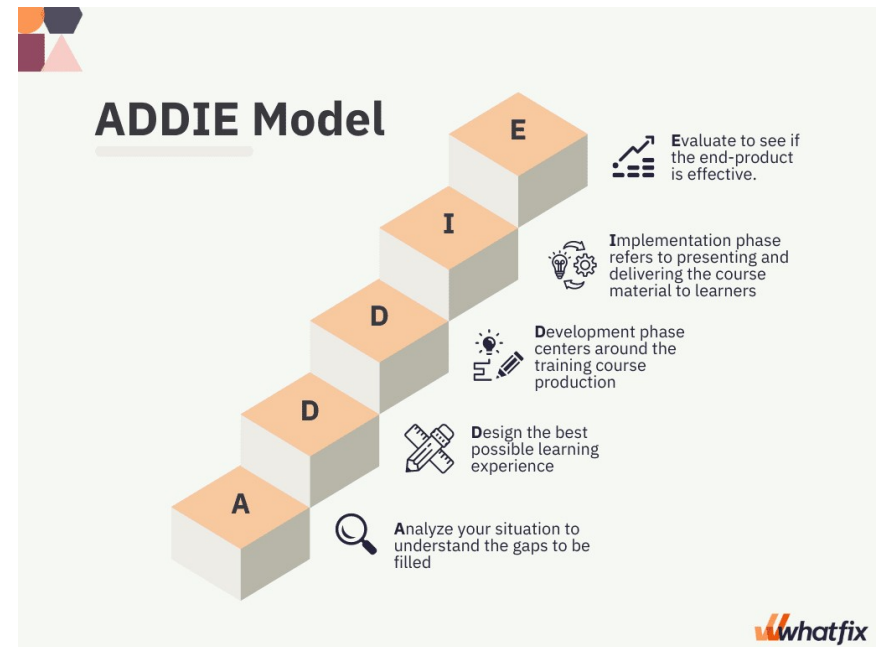
Scaling and Target groups

- Delivery methods
 - Green field
 - Academics
 - Other industries
 - Nuclear transitioning

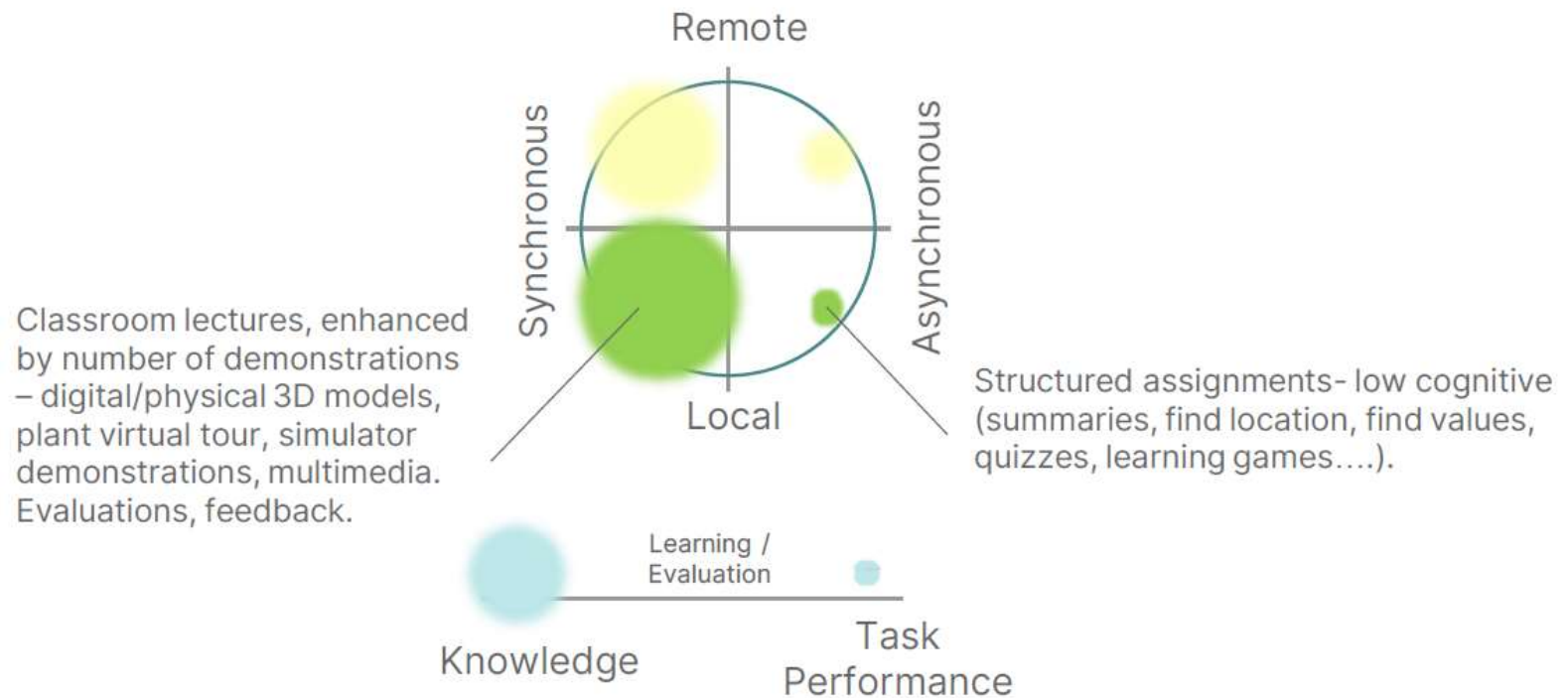


Training as a subject

- New builds – classic concept
- IAEA's SAT methodology (Systematic Approach to Training)
 - Not bad at all
 - Strong resemblance to ADDIE
- We are the same
 - Our patterns and expectations are different
 - The technology is there



Designing training





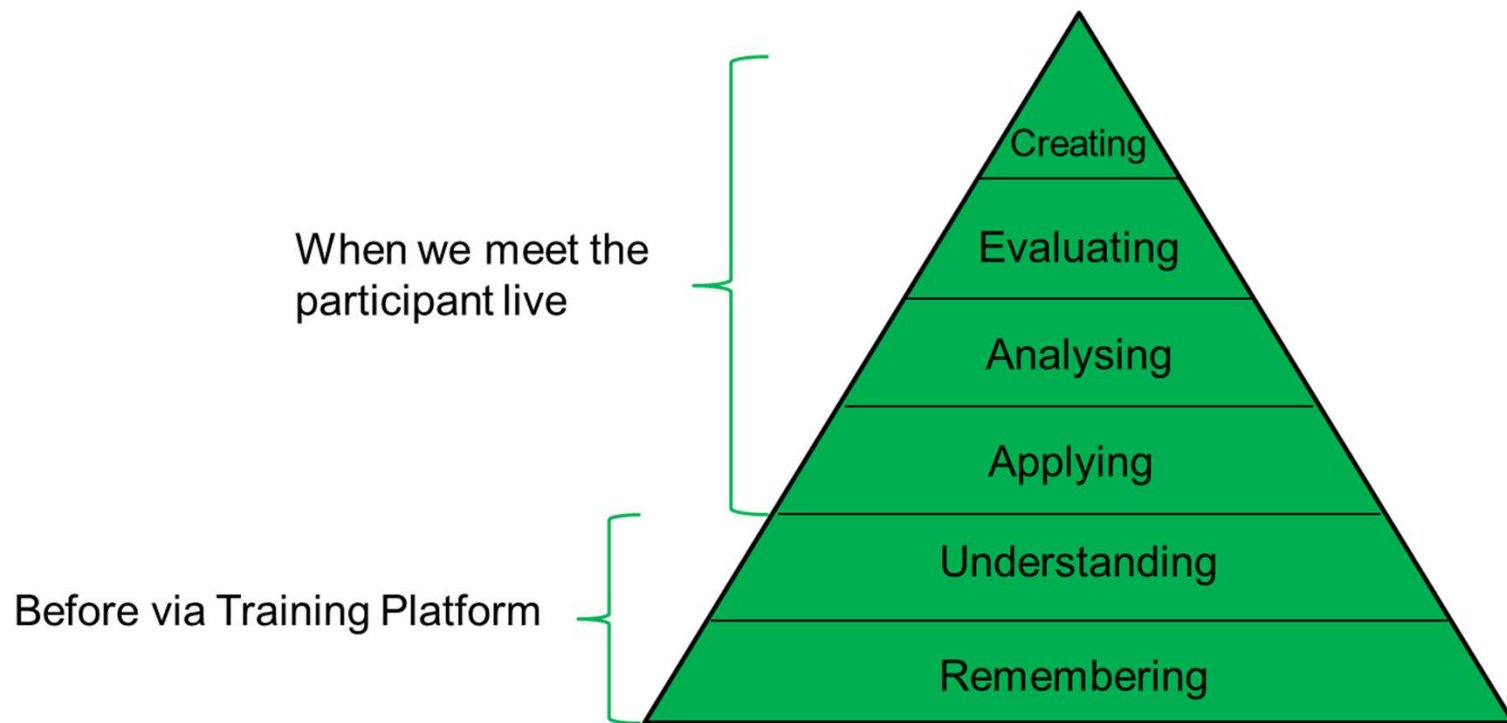
Training is moving outside the classroom

- Navigating the work area
- Design verification
- PJB
- JIT
- PJD

Generational patterns: How you learn



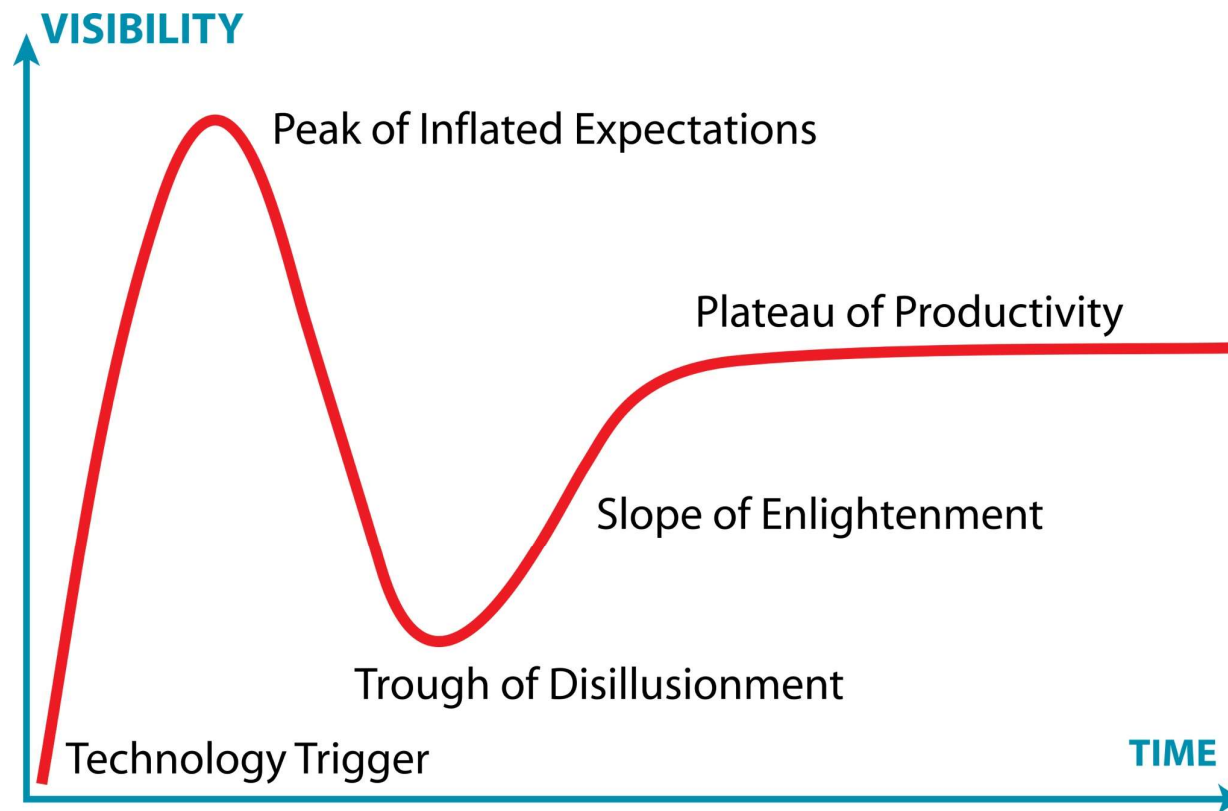
Blooms Taxonomy - Flipped Classroom



Industry trends & expectations

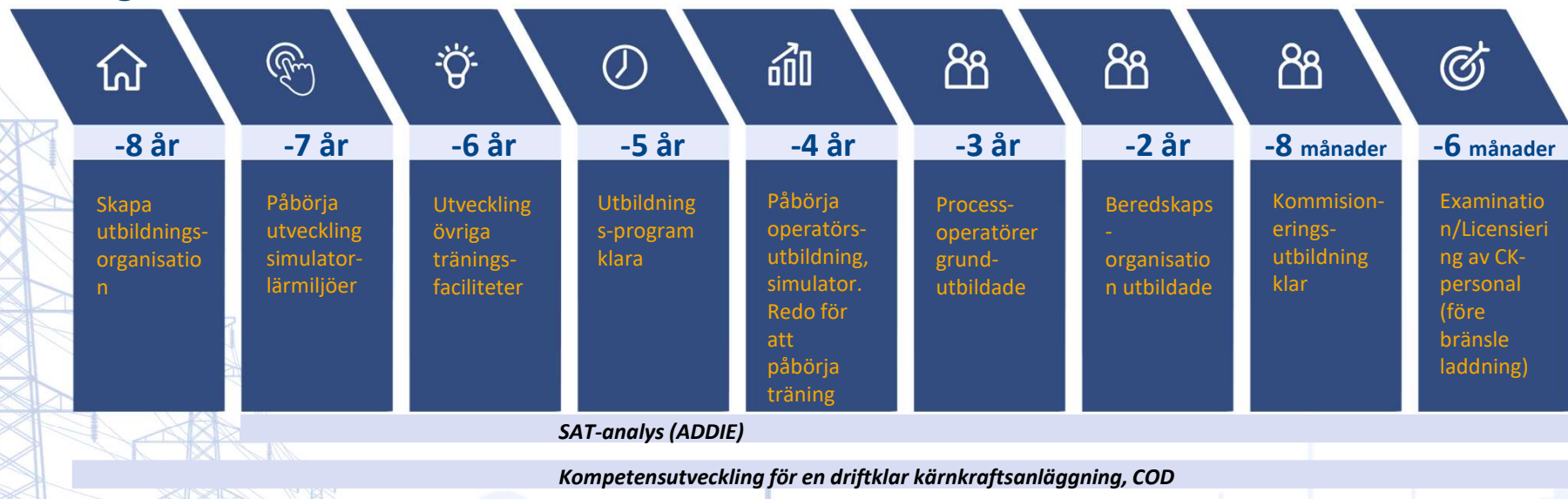
- SMRs count on a way larger scale - reliant on standardization and digitalization
- Tooling, there is no "one size fits all" in training
 - Presentation, Examination, Exercises, Developing
 - GTP strategy is "all to each one"
- With technology advances – new possibilities but also new challenges
 - Training must adapt
 - AI usage in production, training, operation
- Future control rooms may look similar - but the people within it won't be
- Upcoming nuclear debate on who to trust; man or machine

Hype curve



- VR
- Digitalization
- AI
- ...
- SMRs
- Nuclear

KSU – utbildning och träning för nästa generation ny kärnkraft i Sverige (WANO)



Looking forward to

- High quality training and simulators more accessible
- Redundancy in competences
- Training quality - new possibilities to gather and access material

The obvious long term win – cheap, fossil free and reliable energy





Thank you!

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