

# CYRUS: your path to better cybersecurity



**A practical approach to adult learning**  
How CYRUS makes cybersecurity training relevant,  
engaging and effective for professionals

## Effective cybersecurity training

In today's fast-changing digital world, professionals face two major challenges: the growing demand for advanced skills and a chronic lack of dedicated learning time.

In cybersecurity, these challenges are intensified by the constantly evolving Tactics, Techniques and Procedures (TTPs) used by cybercriminals and state-sponsored campaigns (known as Advanced Persistent Threats – APTs). With the evolution of

Large Language Models (LLMs), the pace of change is accelerating even more. Defensive technologies must evolve just as quickly.

The CYRUS project addresses this challenge, making cybersecurity training more effective, adaptive and up to date by exploring alternative teaching methodologies for professionals in the transport and manufacturing sectors.

## Why andragogy works for professionals

Malcolm Knowles, a pioneer in adult education, introduced andragogy – the art and science of facilitating adult learning. Unlike pedagogy, which focuses on teaching children, andragogy recognises the unique needs and characteristics of adults:

- Self-concept: Adults are independent, autonomous and intrinsically motivated, actively shaping their own learning journey
- Experience: Adult learners bring diverse life and work experiences, knowledge and skills that enrich the learning process and support the acquisition of new skills
- Readiness to learn: Motivation increases for adults when the learning is directly relevant and immediately applicable to their personal or professional lives, emphasising relevance and practicality

- Orientation to learning: Adults prefer learning problem-centred, task-oriented approaches focused on real-world applications and tangible outcomes
- Motivation: Adult learners are driven primarily by internal factors such as autonomy, mastery and purpose rather than external rewards or punishments

Andragogy aligns naturally with lifelong learning, which treats education as a continuous, self-initiated process beyond formal schooling. Adopting these principles means creating learner-centred programmes that leverage adults' existing knowledge, prioritise relevance and foster lasting learning engagement.

## The CYRUS learning model

The training courses developed in the CYRUS project emphasise critical thinking, autonomy and problem-solving, enabling professionals to navigate complex information landscapes and deepen their understanding of cybersecurity. The approach draws on three models: the OODA Loop, the ATAC Model and the Learning Continuum.

- OODA Loop: Developed by military strategist John Boyd, the Observe-Orient-Decide-Act loop promotes adaptability and agility in decision-making. It encourages continuous assessment, reflection and adjustment, ensuring that learning remains relevant to evolving needs of learners.

- **ATAC Model:** Based on Dr Victor Vroom's work on motivation, the ATAC (Aim, Task, Action, Check) model integrates concepts of expectancy, value and instrumentality in driving individuals' efforts and outcomes. Aligning instructional strategies with learners' motivational factors fosters self-directed learning and sustained engagement.
- **Learning Continuum:** Inspired by theorists like Lev Vygotsky and Jean Piaget, the Learning Continuum sees learning as a lifelong journey characterised by continuous growth and development. It emphasises scaffolding – supporting learners at each stage – and gradual skill acquisition, building on existing knowledge and experiences to achieve mastery.

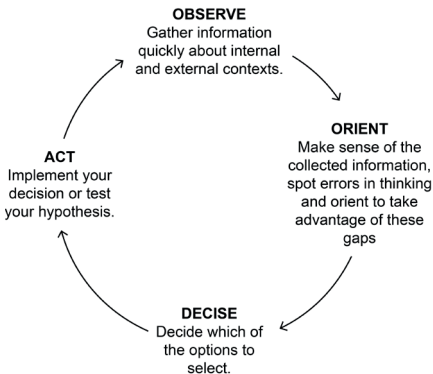


Figure: The OODA Loop

## Why this matters

By integrating andragogy, the OODA Loop, ATAC and the Learning Continuum, CYRUS creates dynamic, adaptive training courses that

- Respect time constraints
- Build directly relevant skills
- Adapt to evolving cyber threats
- Keep professionals engaged and motivated
- Reflect the realities of modern cybersecurity

## About CYRUS

The CYRUS project focuses on strengthening cybersecurity in the transport and manufacturing sectors with a special focus on SMEs. Through innovative learning methods, CYRUS empowers employees of all levels to mitigate cyber threats.



**OODA IS A DECISION-STRATEGY**  
**Decision-making under pressure.**  
 Originally developed to help pilots to win during air-to-air combat.



**DESIGNED FOR A QUICK REACTION**  
**Don't be caught off guard.**  
 Based on the truth that reacting faster to changing circumstances than your competition puts you at a competitive advantage.



**ACTING QUICKLY IS CRUCIAL IN CYBERSECURITY**  
**Applying OODA process to nowadays scenarios.**  
 Observing the cybercrime's methodologies and orienting oneself in the cybercrime's worldwide allows an actor to decide on a course of action and act upon it before it's too late.

The combination of real-world relevance, learner autonomy and continuous adaptability equips professionals to stay ahead in a fast-moving threat landscape – transforming training from a compliance exercise into a strategic advantage.



Visit our website to explore our full training catalogue and register for the free cybersecurity courses:

<https://cyrus-project.eu/cybersecurity-trainings>

## Project partners



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