

AI and the potential to transform personalised video-based learning

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Agenda

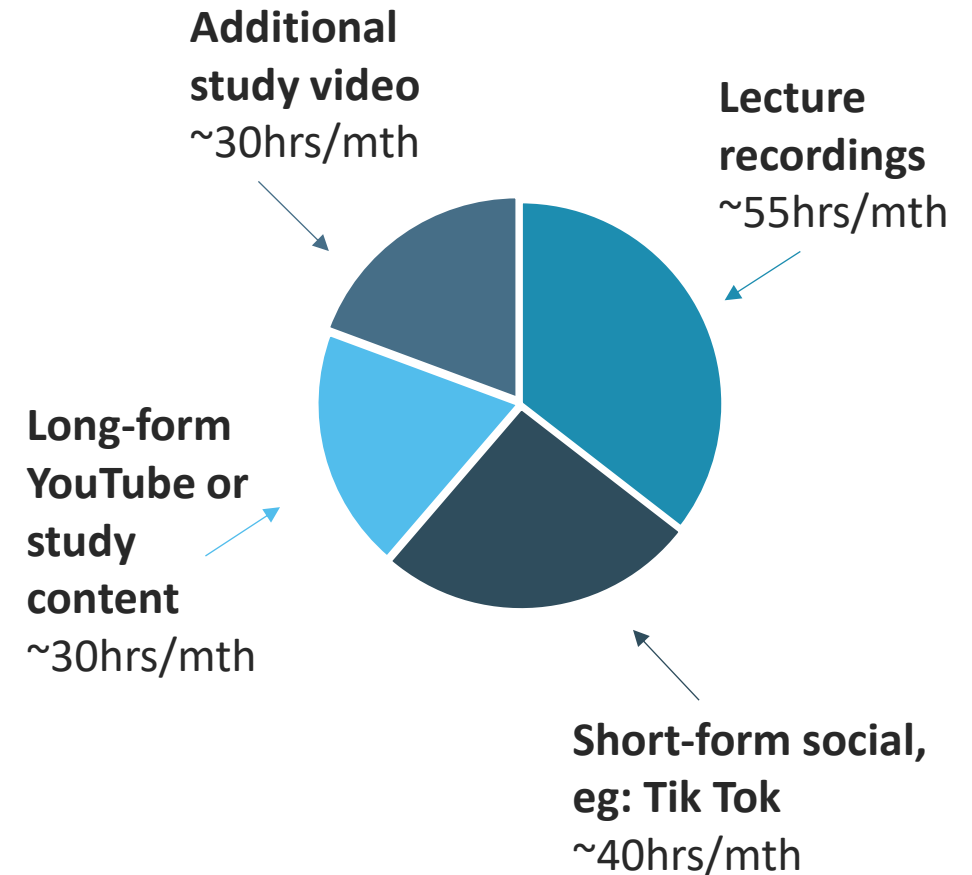
- Introductions
- Personalised learning and AI
- KULeuven AI Governance in Education
 - research and conclusions
- Workshop activity 30"
- KULeuven AI Governance in Education
 - framework and implementation
- Kaltura beta program Case study
- Discussion

“AI has the potential to revolutionise education itself by providing personalised learning experiences, automating administrative tasks, and supporting teachers in identifying students’ needs...

How can education systems leverage AI and other frontier technologies to enhance learning while addressing these ethical and practical challenges?”

OECD, Trends Shaping Education 2025

University student video viewing habits



Top Gen AI Use Cases



Most common AI uses in Higher Ed

- Personalised learning & Tutoring
 - 44% institutions are planning/trialling AI for personalized pathways
- AL Chatbots & virtual assistants
 - 36% say chatbots are in use for student services
- Automated feedback & assessment
 - 60% use plagiarism-checkers;
- Predictive analytics for students retention
 - 22% institutions use AI tools for early alerts
- Content summarisation and curation
 - 74% teaching staff; 61% students

Personalisation and student-centred education

Personalisation is key

“AI can adapt content and deliver individual student learning... This is a very strong opportunity for teachers; educators can focus more on the human dimension of their teaching practice...”

European Training Foundation (ETF), 2023

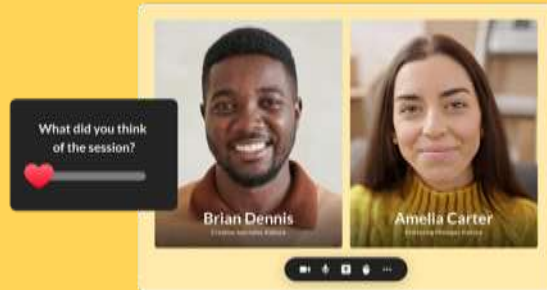
But humanly unscalable

- Pressure to personalise is immense, but faculty time is limited
- Large class sizes make it impossible to provide individual support
- Urgent academic challenges are difficult to address



AI-powered video solutions to boost engagement, student learning, and retention

Webinars



Virtual & hybrid events



Learning video hubs



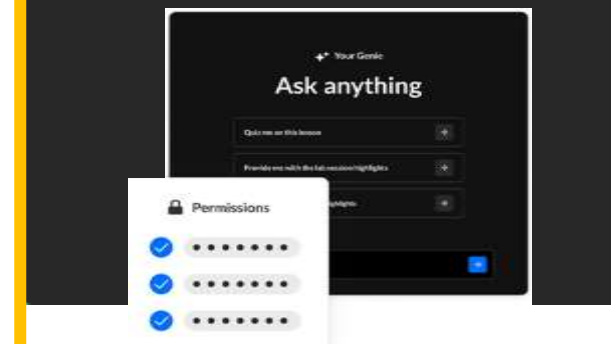
Virtual Classroom



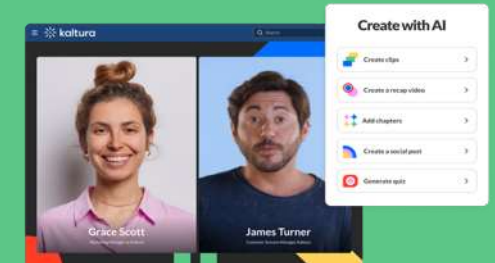
LMS video



Class Genie



Content lab



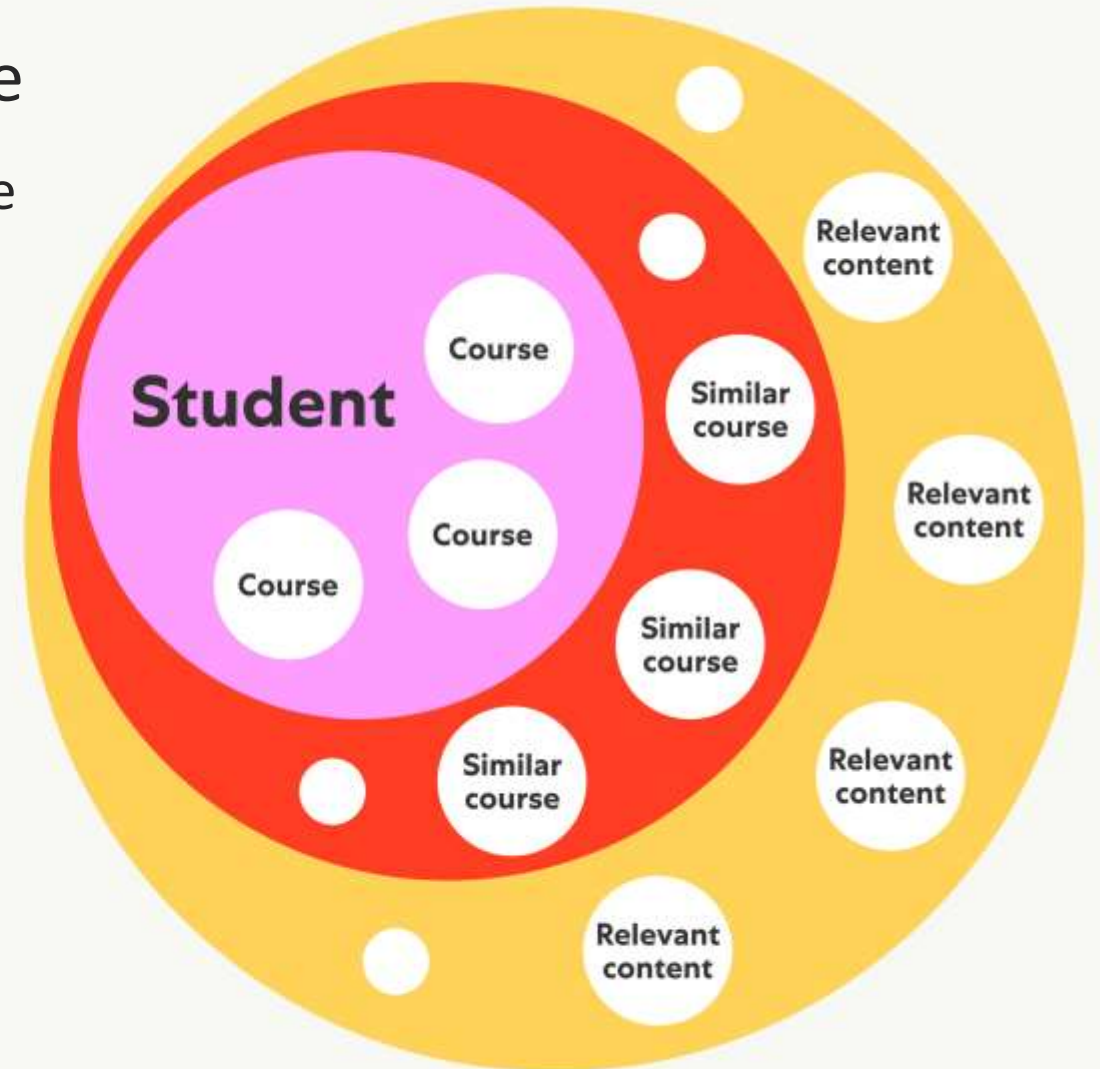
Leading higher education using Kaltura



Hyper-personalised content intelligence

Maintaining secure access to institutional knowledge

Important to focus on authentic institutional data only, avoid hallucinations, and harness the rich teaching resources created by your staff

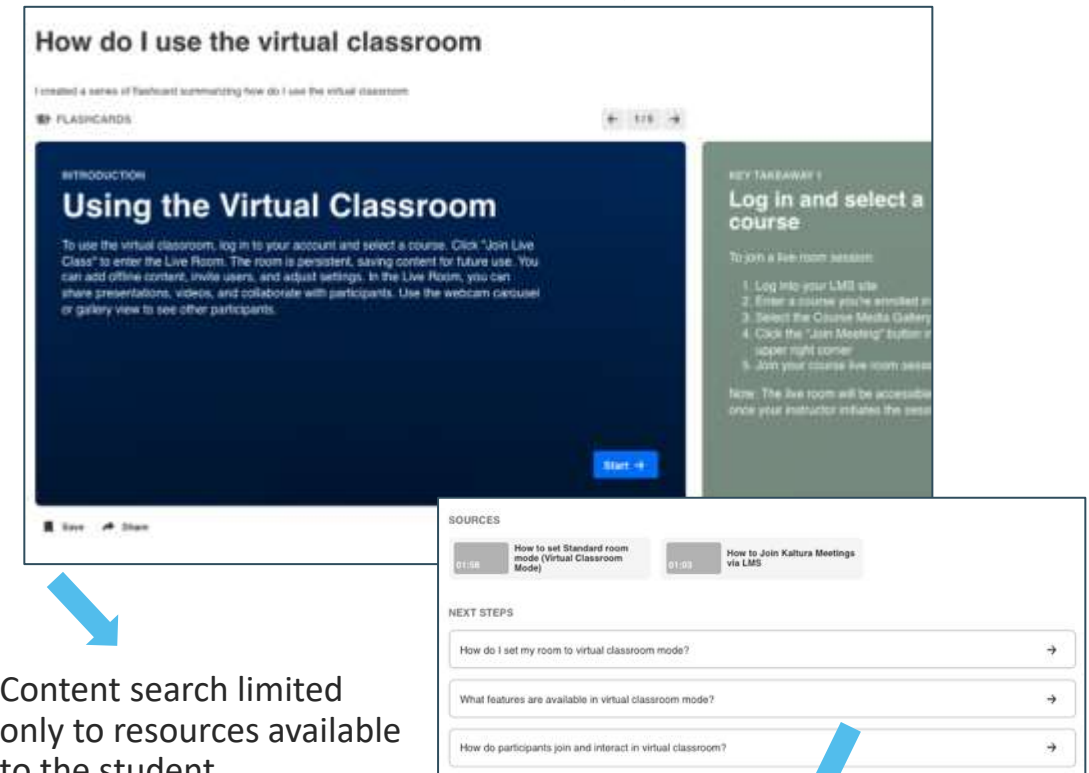
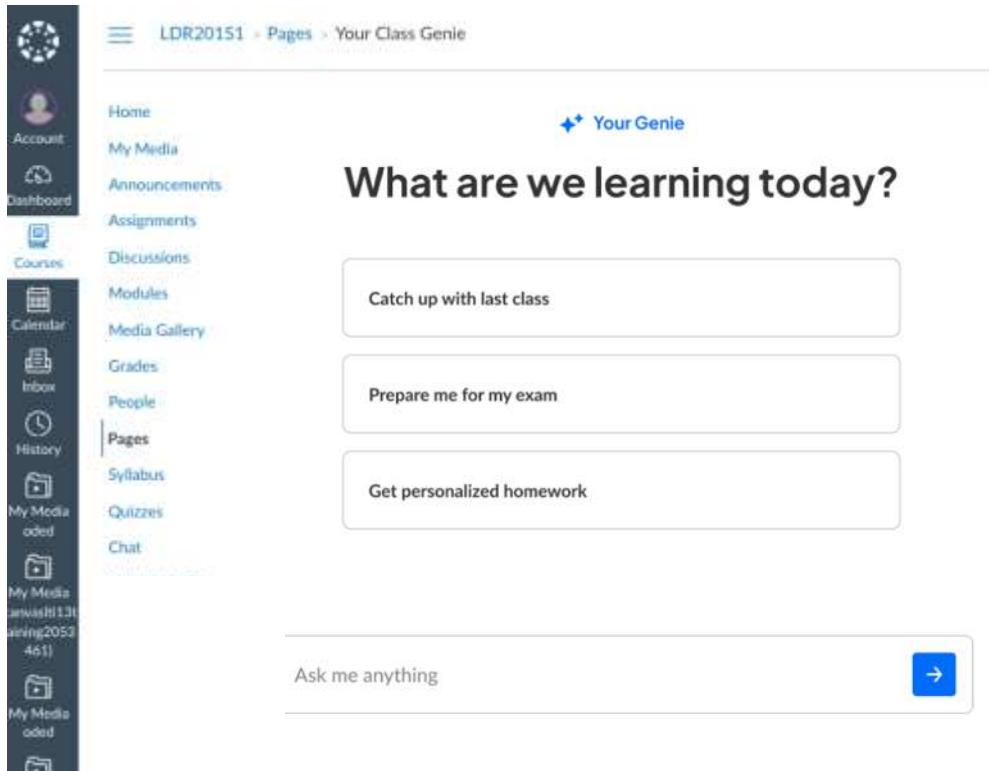


Hyper-personalised content intelligence

example using Kaltura's Class Genie

✦ Create with AI

Flashcards, video snippets and video quizzes



Content search limited only to resources available to the student

Suggestions for follow-up study

* Kaltura's Class Genie is available within your own LMS

Class Genie and key benefits for learners

Improved Learning Outcomes

- Adaptive pacing and sequencing improve test performance.

Learning suggestions based on quiz results and interaction history

Class Genie and key benefits for learners

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Increased Engagement & Motivation

- Tailored content and self-testing keeps student interest

Learning suggestions based on quiz results and interaction history

Interactive elements (quizzes, prompts), personalizes playlists.

Class Genie and key benefits for learners

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Enhanced Retention & Recall

- Helps reinforce concepts via tailored video segments

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Personalized recaps based on misunderstood content

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Self-Paced & Just-in-Time Learning

- Flexible pacing boosts learner control and confidence

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Interactive elements (quizzes, prompts), personalizes playlists.

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On-demand navigation, instant Q&A via chat interface, and self-paced video control.

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On-demand navigation, instant Q&A via chat interface, and self-paced video control.

Accessibility & Differentiation

- Supports diverse needs (ESL, special ed) via translation, captions, and simplified content

Multilingual captions, AI-generated transcripts, and can summarize videos

And what about staff?

1

Video analysis & metadata enrichment

Better search, content navigation, discoverability, and engagement.



Class Genie
(for students)

2

Content repurposing

Do more with less and increase your reach with content that's personalized and preferred.



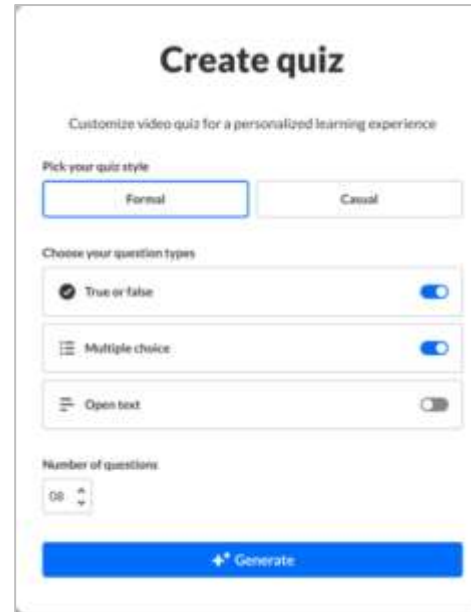
Content Lab
(for staff)



Content Lab

Content Lab helps educators turn existing video and audio into modular, high-impact learning assets—without editing or extra workload. It's a faster, smarter way to support personalization at scale.

- Enrich video **Metadata** for discovery and accessibility
- Generate bite-sized **Clips** from your class recordings
- Automatically generate interactive **Video Quizzes**
- Add **Chapters** and **Summaries** to your long-form videos



Create quiz

Customize video quiz for a personalized learning experience

Pick your quiz style

☐ Formal ☐ Casual

Choose your question types

☒ True or false ☐

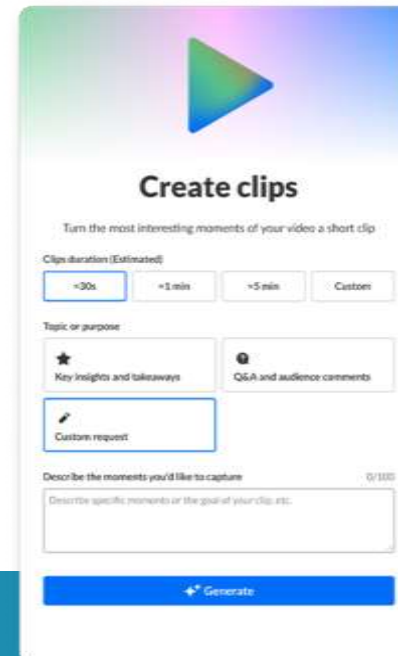
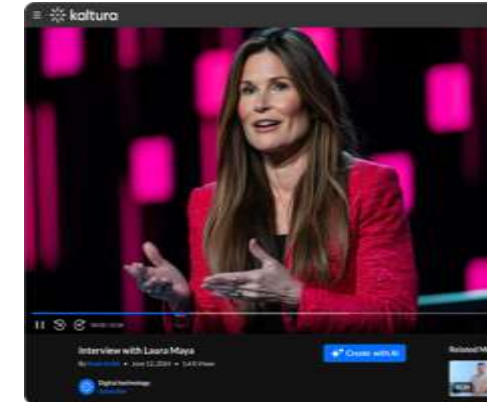
☒ Multiple choice ☐

☐ Open text ☐

Number of questions

08

[Generate](#)



Create clips

Turn the most interesting moments of your video a short clip

Clips duration (Estimated)

☒ <30s ☐ ~1 min ☐ ~5 min ☐ Custom

Topic or purpose

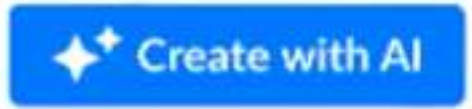
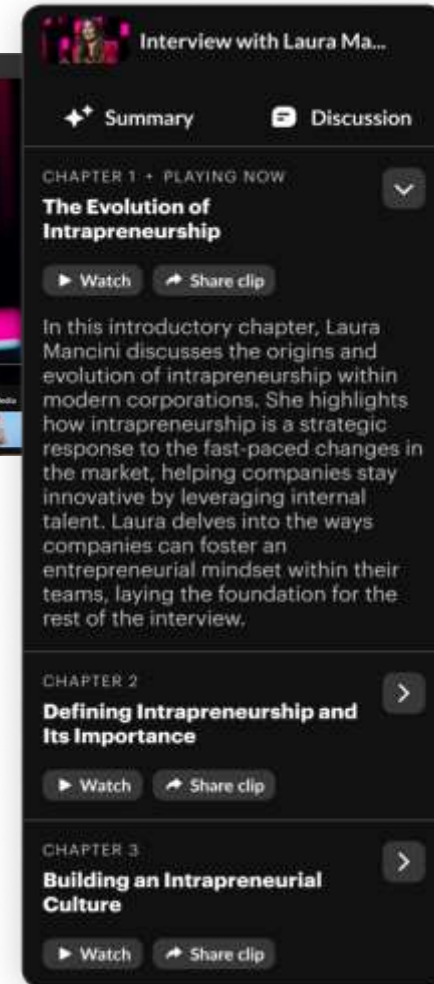
☒ Key insights and takeaways ☐ Q&A and audience comments

☐ Custom request

Describe the moments you'd like to capture

Describe specific moments or the goal of your clip, etc.

[Generate](#)



AI governance in the learning ecosystem



Research and conclusions

Short flashback

- 
- Sep '23: AI design Assistant in Bb
 - Okt '23: priority by IT governance steering committee
 - Fast, safe and well documented
 - Dec '24: First brainstorm advisory group “AI in the learning environment”
 - Jan '24: Tool exploration
 - Enthusiasm
 - Some bugs
 - Feb '24: Online Research & legal & first pilots & draft framework
 - March '24: AI design assistant live
 - Today: alignment with Kaltura AI principles



AI governance
learning ecosystem

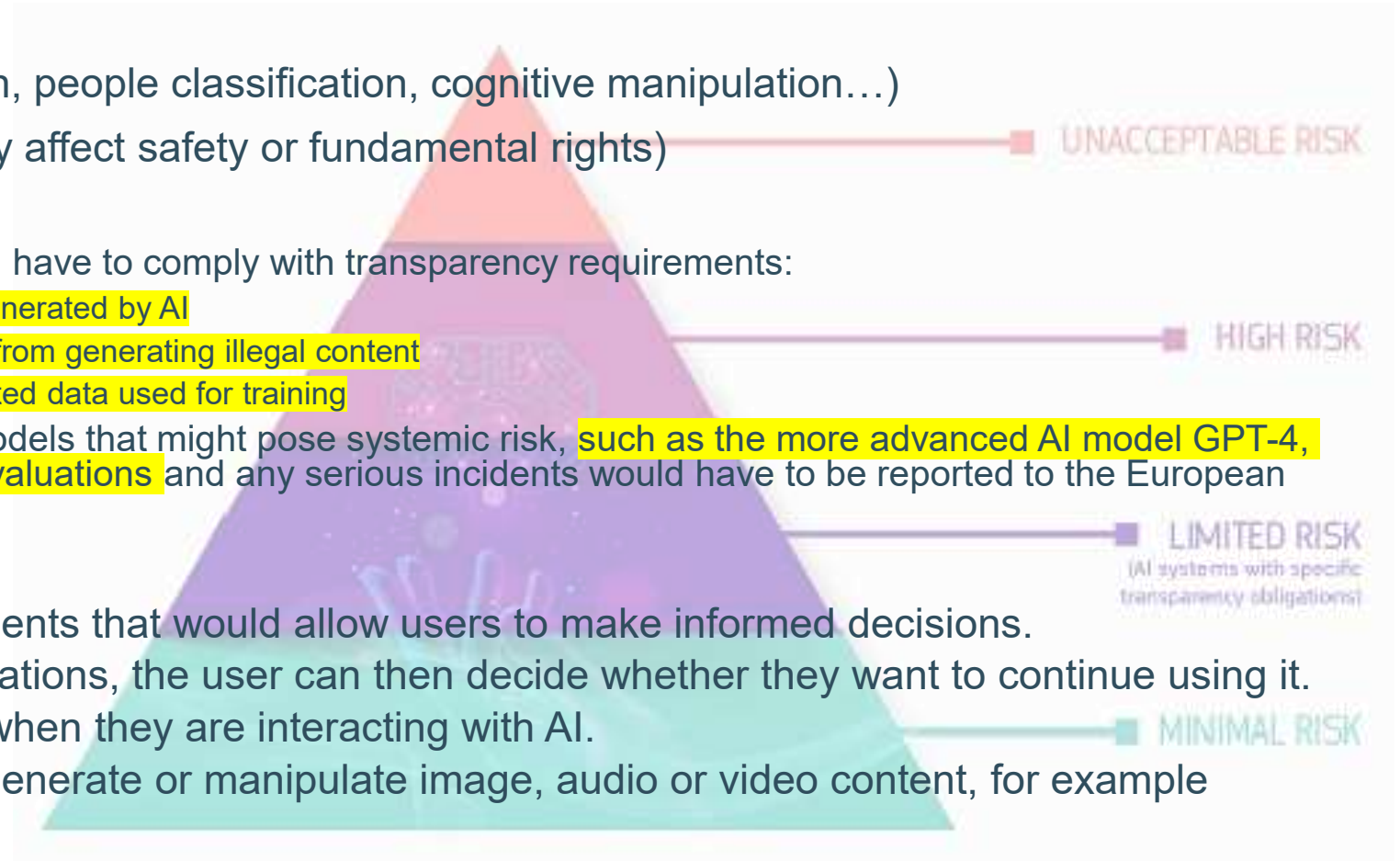
Framework conception

- WWW search (sources in slidefooters)
 - 1) EU AI Act (we are part of EU, right ?)
 - 2) Anthology Trust Center (Anthology refers to it)
 - Kaltura 's counterpart: "Kaltura Legal"
 - 3) Documentation closes the circle
 - 1) Public documentation for instructors
 - 2) Documentation at activation
- Legal Services

EU AI Act

EU AI Act

- Unacceptable risk (facial recognition, people classification, cognitive manipulation...)
- High risk (AI systems that negatively affect safety or fundamental rights)
- General purpose and generative AI
 - Generative AI, like ChatGPT, would have to comply with transparency requirements:
 - ✓ Disclosing that the content was generated by AI
 - ✓ Designing the model to prevent it from generating illegal content
 - ? Publishing summaries of copyrighted data used for training
 - High-impact general-purpose AI models that might pose systemic risk, such as the more advanced AI model GPT-4, would have to undergo thorough evaluations and any serious incidents would have to be reported to the European Commission.
- Limited risk
 - ✓ minimal transparency requirements that would allow users to make informed decisions.
 - ✓ After interacting with the applications, the user can then decide whether they want to continue using it.
 - ✓ Users should be made aware when they are interacting with AI.
 - ✓ This includes AI systems that generate or manipulate image, audio or video content, for example deepfakes.



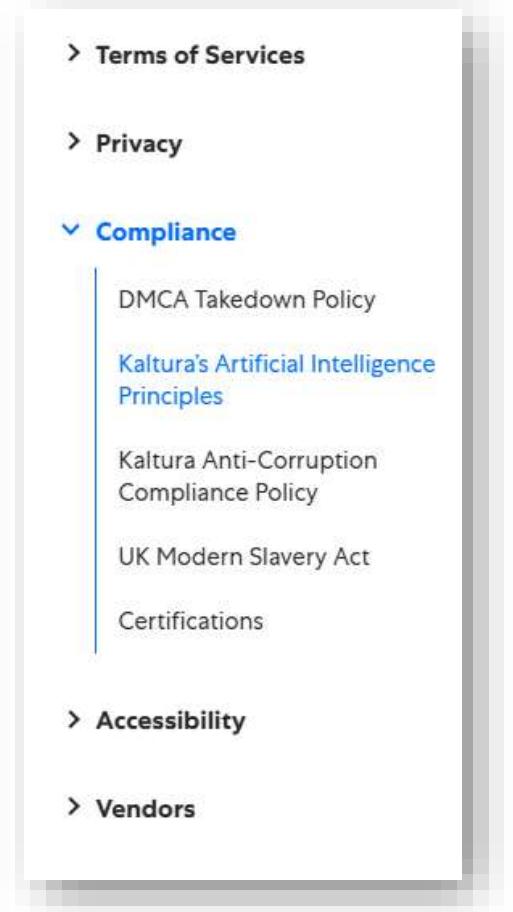
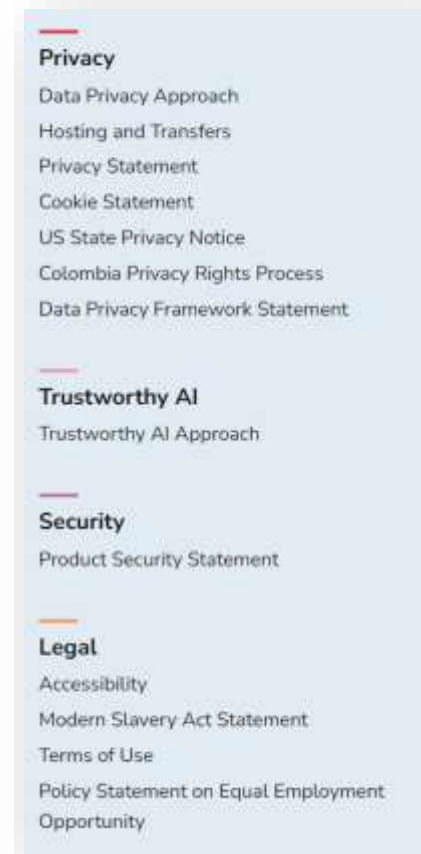
Anthology Trust Center & Kaltura Legal

Anthology Trust Center & Kaltura Legal

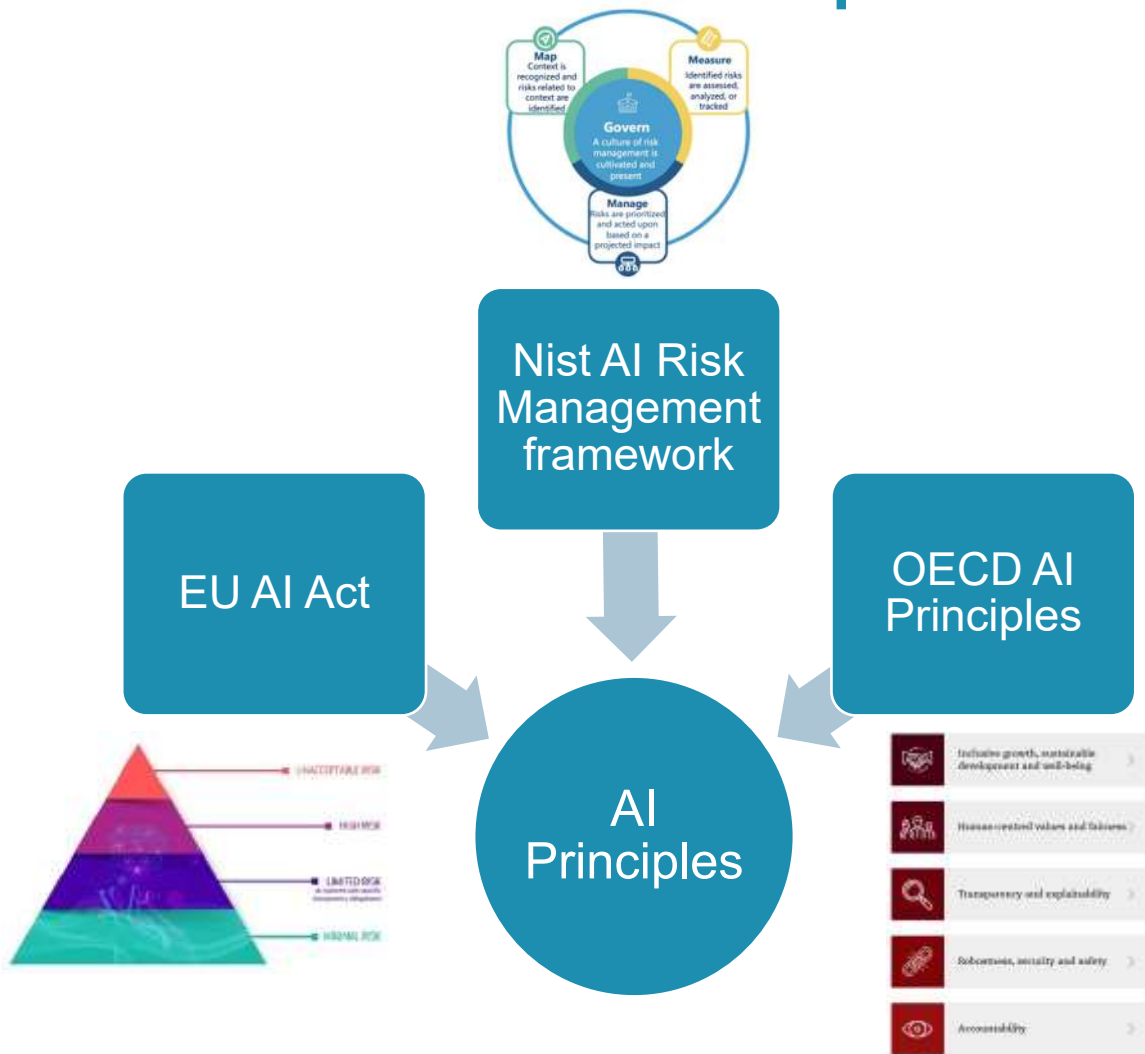
- Sites which describe the approach and measures concerning security and privacy of data
 - Privacy
 - AI principles
 - Accessibility
 - Legal

<https://www.anthology.com/trust-center>

<https://corp.kaltura.com/legal/compliance/>



Kaltura AI Principles



- **Customer Data Protection:** Customer's data is not used for training AI models or shared to 3rd parties for training
- **Accountability:** AI models, AI systems and AI features are designed to function properly and in accordance with regulatory frameworks
- **Transparency and Control:** indicate when AI is used, ability to opt out
- **Fairness and Bias Mitigation:** striving to develop and deploy AI that is fair, unbiased, and inclusive, respect for rule of law, human rights democratic values and diversity. Actively mitigate potential biases
- **Security And Reliability:** Secure and reliable approach to AI
- **Continuous Improvement:** Continually evaluating and refining our AI principles and practices
- **Usage of Third-Party GenAI Features:** e.g. AWS (Bedrock etc.) and a self-hosted model by OpenAI > identified, data not used for training



Table 1: Mapping of AI RMF taxonomy to AI policy documents.

AI RMF	OECD AI Recommendation	EU AI Act (Proposed)	EO 13960
Valid and reliable	Robustness	Technical robustness	Purposeful and performance driven Accurate, reliable, and effective Regularly monitored
Safe	Safety	Safety	Safe
Fair and bias is managed	Human-centered values and fairness	Non-discrimination Diversity and fairness Data governance	Lawful and respectful of our Nation's values
Secure and resilient	Security	Security & resilience	Secure and resilient
Transparent and accountable	Transparency and responsible disclosure Accountability	Transparency Accountability Human agency and oversight	Transparent Accountable Lawful and respectful of our Nation's values Responsible and traceable Regularly monitored
Explainable and interpretable	Explainability		Understandable by subject matter experts, users, and others, as appropriate
Privacy-enhanced	Human values; Respect for human rights	Privacy Data governance	Lawful and respectful of our Nation's values

Anthology Thrustworthy AI Framework

- Reliability
- Privacy, Security and Safety
- Fairness
- Privacy, Security and Safety
- Humans in Control
- Value alignment
- Accountability
- Transparency and Explainability
- Privacy, Security and Safety

Kaltura AI Principles

- Security and Reliability
- Continuous improvement
- Fairness and Bias Mitigation
- Fairness and Bias Mitigation
- Security and Reliability
- Accountability
- Transparency and Control
- Usage of Third-Party GenAI Features
- Transparency and Control
- Customer Data Protection

- AI RMF: AI Risk Management Framework NIST
- OECD: Organisation for Economic Co-operation and Development
- EO13960: Executive Order 13960 “Promoting the Use of Trustworthy Artificial Intelligence in the Federal Government”: US Chief Information Officers Council

Evolve Together

- Customer Responsibilities
 - Informed Consent
 - Obtaining necessary consent and permissions
 - Appropriate Use
 - Use AI features for their intended purposes
 - Human Oversight
 - AI outputs should be subject to human review
 - Feedback and Collaboration
 - Providing Kaltura with feedback on AI features to help improvement
- Evolving Together & Principles Updates

Public documentation for instructors and administrators

Documentation closes the circle

- Public documentation for instructors



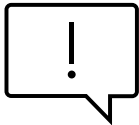
- Public documentation Anthology

- Principles (humans in control, fairness, privacy, security, and safety)
- Microsoft pages
 - [Microsoft's Responsible AI page](#)
 - [Microsoft's Transparency Note for Azure Open AI Service](#)
 - [Microsoft's page on Data, privacy, and security for Azure OpenAI Service](#)

- Public documentation Microsoft

- Same principles
- Solid background (not that transparent ;-))

- Documentation at activation



- Disclaimer at activation
- Public documentation for Administrators

Legal Services

- Explained the online research
 - Q: Can we activate this?
 - Q: What about future requests?

3 main concerns (covered)

- Data privacy
 - What happens in environment stays in environment
- Humans in control
 - Instructors carry final decision
 - When students interact, instructors should be able to monitor or to sample
- Transparency
 - Clear to everyone that AI is used

Workshop Activity

- What are the **minimal conditions** that an AI tool must meet in order to be accepted in an **educational context**?
- Consider these questions as
 - an IT lead,
 - an instructor,
 - a legal team
 - an academic policy maker...

Workshop Activity

- In an ideal world, what would be the **principles** that AI technologies must meet in order to be accepted in an **educational context**?

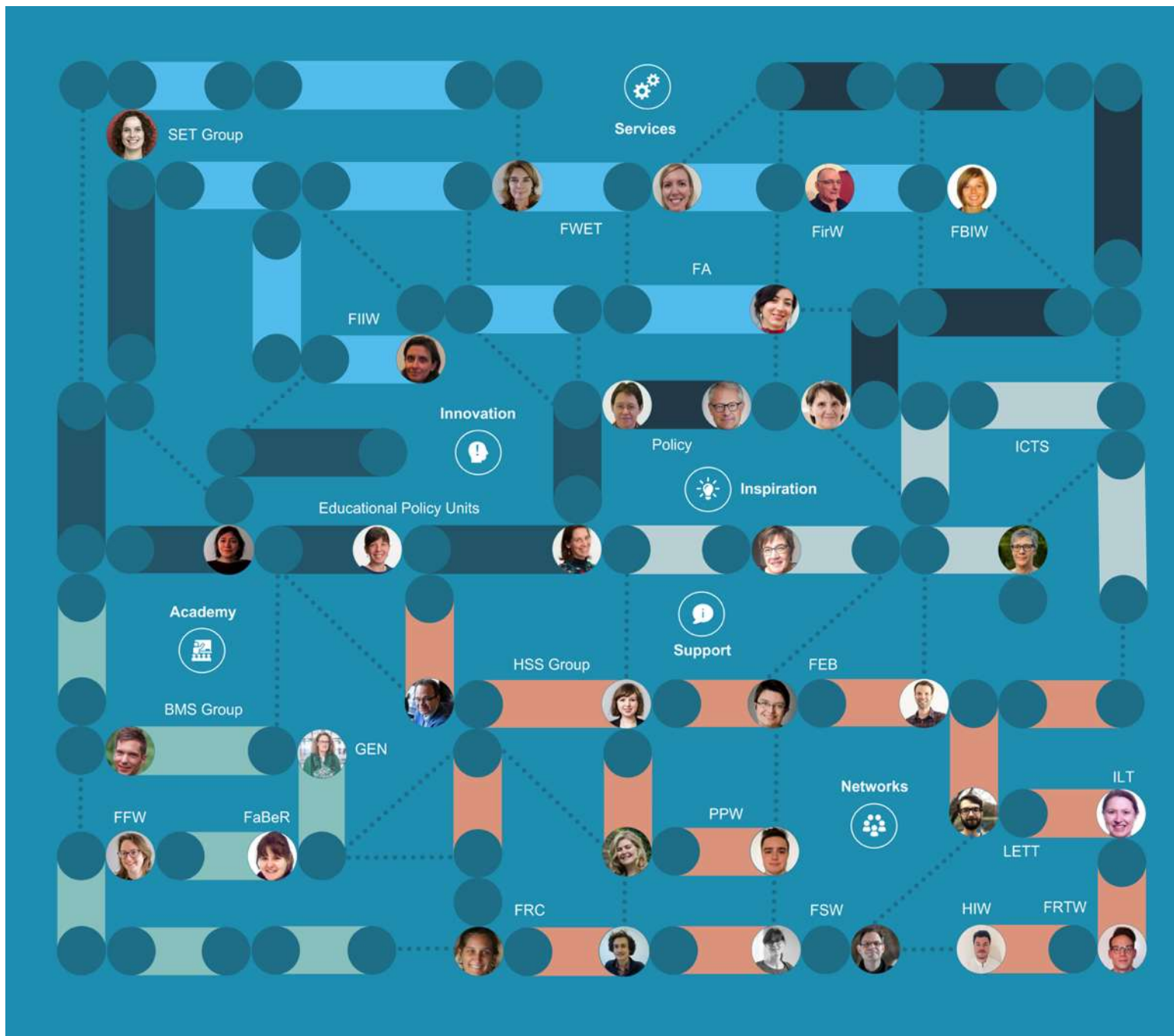
Workshop Activity

- What do we need to create this ideal scenario ?

AI governance in the learning ecosystem

Framework and implementation





University-wide network for educational development

- 150 educational developers in faculties and in the 3 science groups
- 190 study program directors
- 15 faculty boards (dean, vice-dean education, administrative director)



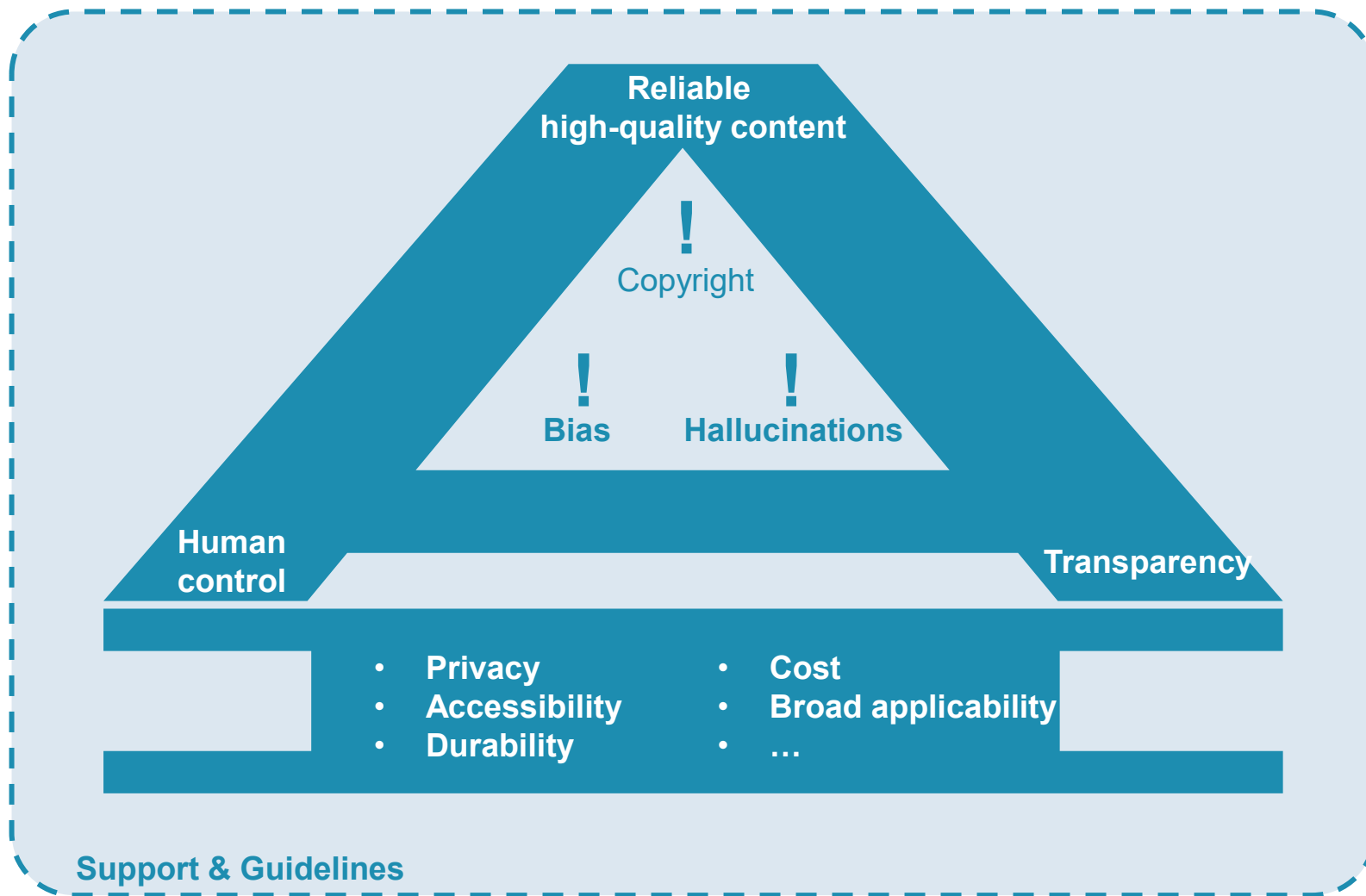
Advisory group: testing



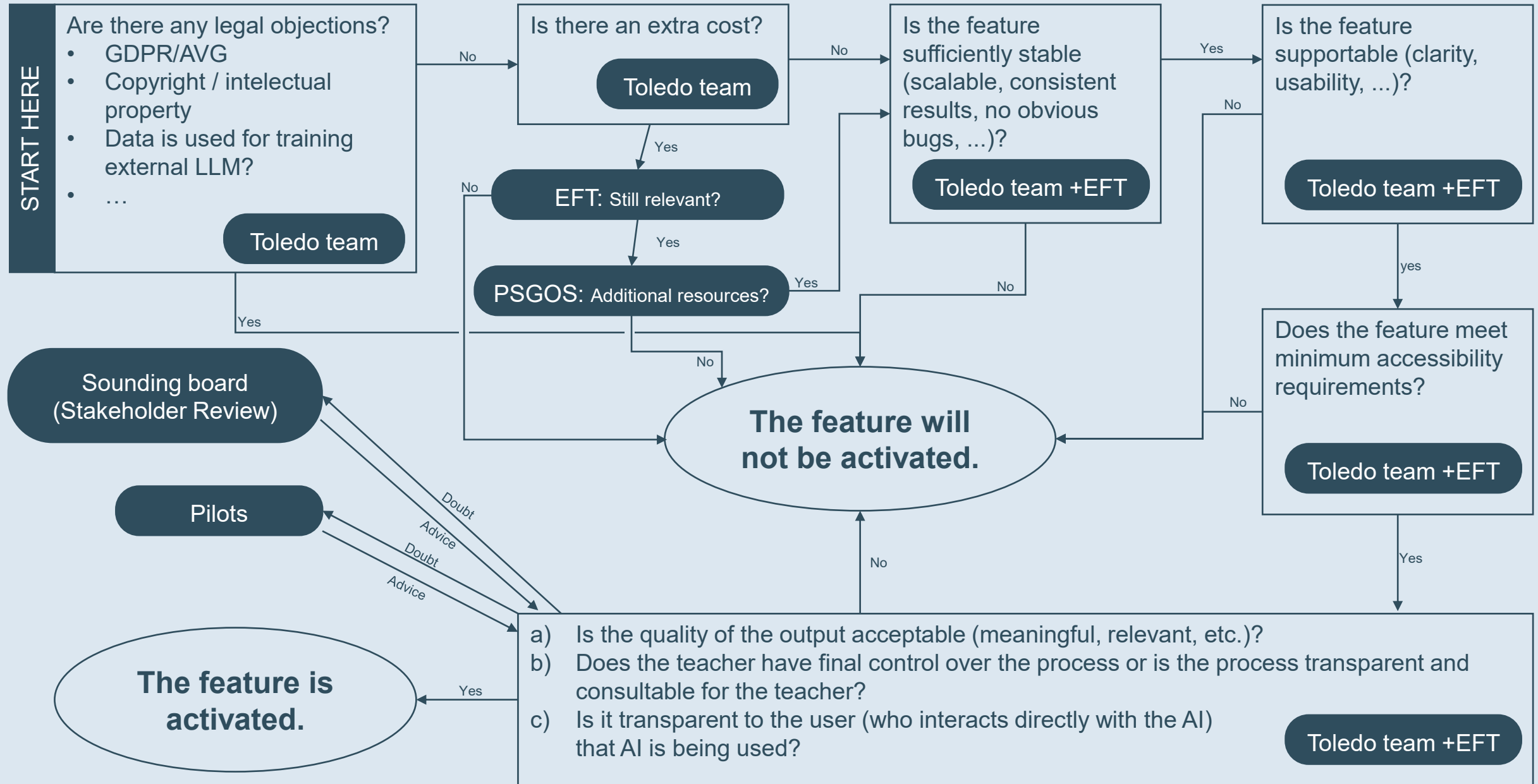
Pilots



First iteration of decision framework



Decision procedure for activating AI-based features in the learning environment



Guidelines and support

Guidelines

Guidelines

- › Protect confidential data
- › Check content before publication
- › Be vigilant



Guidelines

› Protect confidential data

It is important to protect confidential information when using AI tools. Using confidential information as a prompt (the command you give to the AI) could, among other things, lead to privacy or security risks. For example, if someone enters confidential research data in an AI tool as a prompt, the AI can 'learn' this data and then include it in generated content for external parties. Some tools protect your input and other (privacy) sensitive data better than others. That is why we assess the security of genAI tools in light of the three [confidentiality levels](#) of the KU Leuven data classification model.



Three Confidentiality Levels

The protection of your input and other data is better guaranteed in some tools than in others. It is important to see what level of confidentiality the entered data has.

1 Non-Confidential: This pertains to publicly available information and internal information that is not considered strictly confidential or confidential. The information does not need to be specifically shielded. Disclosing this information may be inappropriate but does not have a negative impact on the mission, security, finances, or reputation of KU Leuven, nor on natural people.

2 Confidential: This concerns information that has not been classified as strictly confidential and should only be accessible to a specific audience. Therefore, the information needs to be shielded. Leaking this information may have a negative impact on the mission, security, finances, or reputation of KU Leuven, or be concerning but not threatening to a limited number of natural people.

3 Strictly Confidential: This concerns information for which protection is required, based on legal and regulatory requirements, contractual and/or procedural/policy agreements, and should only be accessible to a specific group. Therefore, the information needs to be shielded. You should not use this information in any AI tool because security cannot be sufficiently guaranteed!

[Read more about these levels \(.pdf\)](#)

Guidelines

› Check content before publication

As a KU Leuven staff member, you are expected to ensure that content you publish or use is of high quality and accurate. When using AI-generated content, verification is all the more important as it can sometimes contain errors or inappropriate information.

› **Hallucinations**

Don't blindly trust GenAI's output. The more responsibility you place on the system, the more verification, control and justification is needed. Sometimes, AI output seems very convincing but it is still perfectly possible that the answer is incorrect or even completely made up.
For example: Imagine a chatbot that has no specific training data on KU Leuven's turnover. This chatbot may then generate a random number and possibly erroneously claim that KU Leuven's turnover is \$13.6 billion.

› **Bias**

AI tools are trained with datasets that are not representative. Moreover, there is no transparency about the filters applied. This raises a lot of ethical questions. When used unthinkingly, you run the risk of further spreading stereotypes or biases.
For example: If you ask an image generator for an image of 'a cleaner', you will get images of female cleaners. However, if you ask for an image of 'a strong cleaner' you suddenly get images of men fighting the dirt like superheroes.



Support

Guidelines for safe use of GenAI tools

The use of generative artificial intelligence (GenAI) provides several interesting possibilities for education and research. For example, GenAI can provide gains in time and efficiency, but it also requires some responsibility. These guidelines are designed to help you use AI tools responsibly and ethically.

On this page

- › [Guidelines](#)
- › [Three levels of confidentiality](#)
- › [Copyright](#)
- › [Supported tools](#)
- › [More about GenAI at your institution](#)

Guidelines

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- › Check content before publication
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Therefore, this information needs to be shielded. Disclosing this information may have a negative impact on the mission, security, finances, or reputation of KU Leuven, nor on natural people.

Ultra - AI Design Assistant

Available for staff of the KU Leuven Association

The **AI Design Assistant** is a tool in Ultra that inspires and supports teachers in designing their own course. The Design Assistant can be used to create learning modules, create test questions and assignments, or generate evaluation rubrics, among other things. As a teacher, you remain at the helm at all times. You decide which of the generated suggestions to include in the course and which not.



Note: When using content generated by GenAI, in many cases it is mandatory to correctly reference and/or indicate that the content was generated by AI.

- Learning modules
- Questions
- Question banks
- Assignments
- Discussion assignments
- Journal assignments
- Images
- Rubrics

Guidelines for safe use

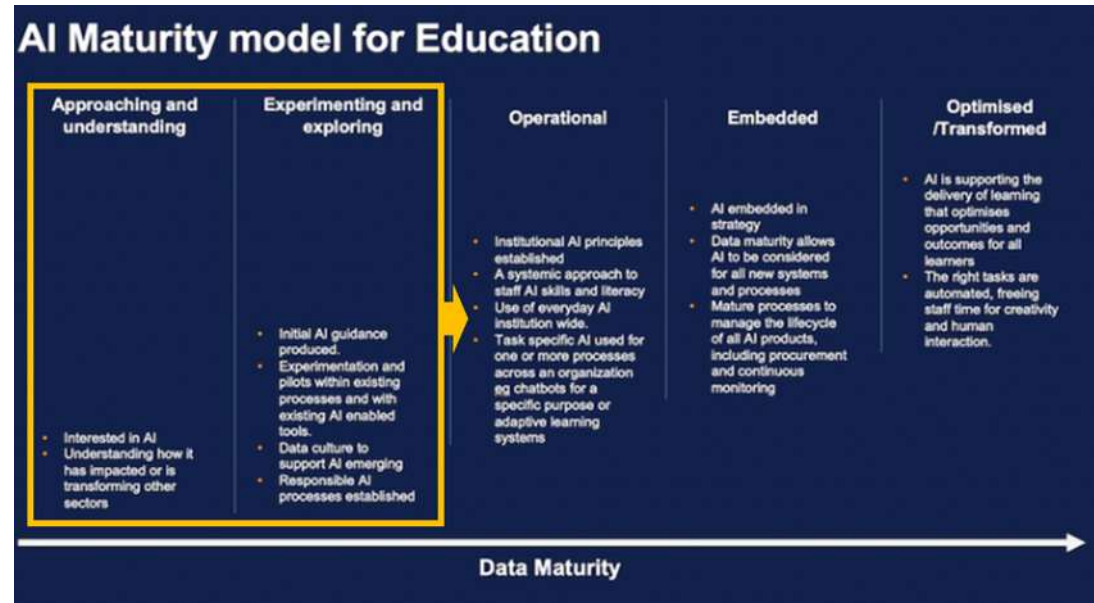
Using generative artificial intelligence (GenAI) as in this tool offers a lot of interesting possibilities. For example, GenAI can provide inspiration and save time and efficiency, but GenAI also brings responsibilities. Therefore, always keep the following guidelines in mind.

1. Protect confidential data
2. Please review generated content before publishing
3. Be vigilant

[Read more about these guidelines](#)

Kaltura's AI beta program for Class Genie

- Collaboration with nearly 100 global institutions
- Beta testing of Kaltura's Class Genie with educational testing scenarios defined by each institution
- Stakeholder groups share feedback with Kaltura
- Aim to review pedagogical, ethical, and technical challenges
- Aim for full product release later in 2025

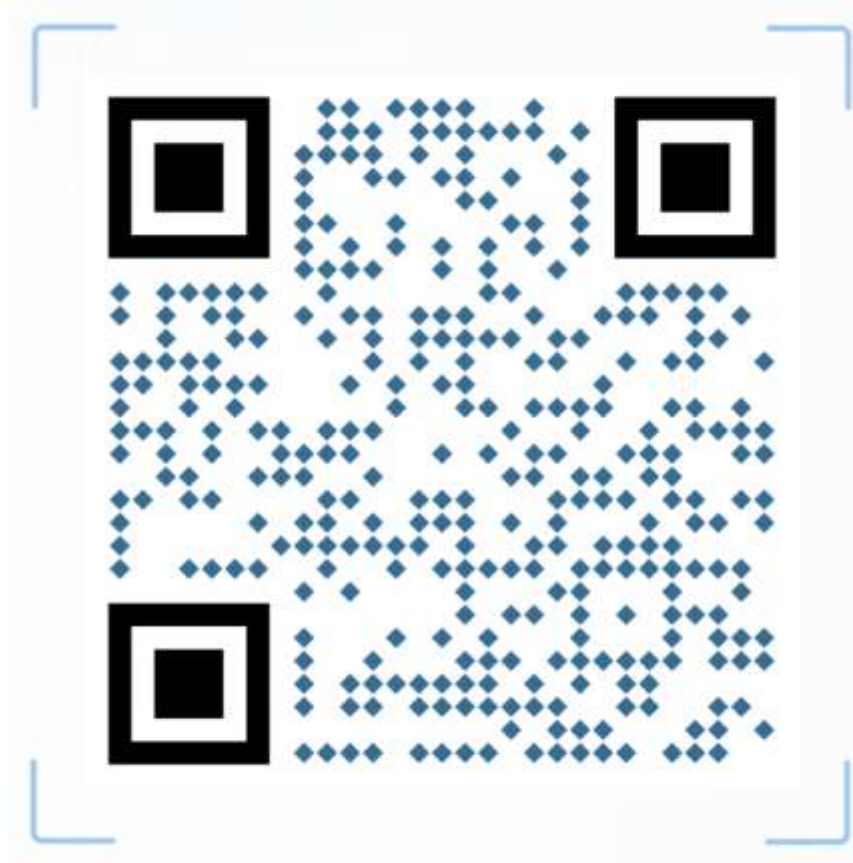


From: <https://www.jisc.ac.uk/ai-maturity-toolkit-for-tertiary-education>

Mayer's (2009) Principles of Multimedia Learning and Class Genie

- ✓ **Coherence Principle**
Remove extraneous words, pictures, and sounds to reduce cognitive overload and help learners focus on relevant material
- ✓ **Signaling Principle**
Use visual or auditory cues (e.g., highlights, arrows, bolding) to draw attention to key information and help guide learners
- ✓ **Redundancy Principle**
Avoid presenting the same information as spoken text and on-screen text simultaneously, as it can overwhelm learners
- ✓ **Spatial Contiguity Principle**
Place corresponding text and images close together on the screen to help learners make connections more easily
- ✓ **Temporal Contiguity Principle**
Present corresponding narration and visuals at the same time rather than successively to support understanding
- ✓ **Segmenting Principle**
Break content into user-controlled, bite-sized segments to improve engagement and learning outcomes
- ✓ **Pre-training Principle**
Introduce key terms and concepts before the main lesson to help learners build foundational knowledge in advance
- ✓ **Modality Principle**
Present words as spoken audio rather than written text when paired with visuals, to make better use of working memory
- ✓ **Multimedia Principle**
Use both words and relevant images rather than words alone, which enhances understanding and retention
- ✓ **Personalization Principle**
Use a conversational tone and virtual instructors to increase learner engagement and motivation
- ✓ **Voice Principle**
Use a human voice (rather than a machine or foreign-sounding voice) for narration to improve learner connection and comprehension
- ✓ **Image Principle**
The presence of a speaker's image doesn't necessarily improve learning and should only be included if it serves a clear instructional purpose

QR codes with link to documentation



AI Governance and the future

- Is the governance process light and transparant enough ?
 - Role of the stakeholder review board
- Is it flexible enough to cover new AI developments ?
- Did we cover all "risks" in our current assessment cycle ?
- What else should we be concerned about ?