

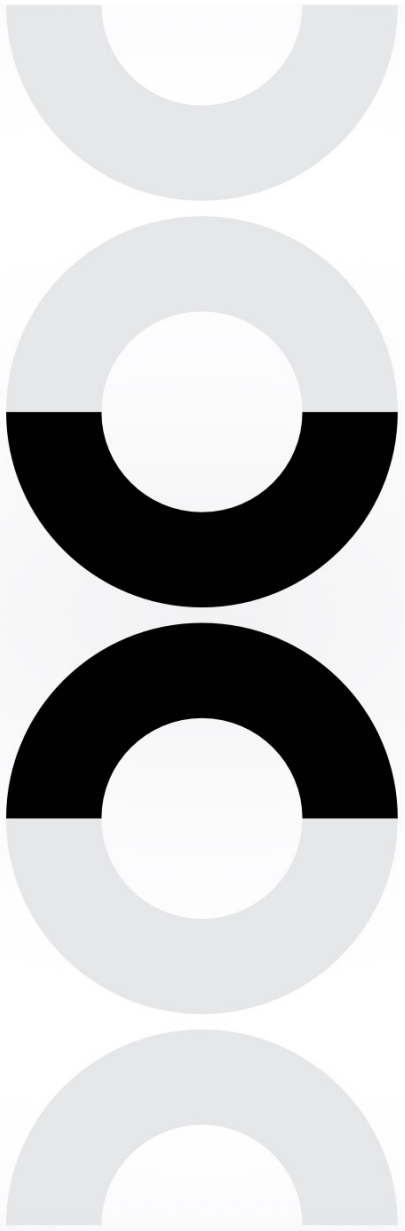


From Chalkboards to Chatbots: GenAI Adoption at NOVA Policy, Research & Faculty Development

Manuela Aparicio, Ph.D.

NOVA University of Lisbon, Portugal | UNICA Session 1

Queen's University Belfast · 19-20 of October 2026



Agenda

- Main discussion questions (MDQ)
- Case of NOVA University of Lisbon
- People: Professors & Students
- Processes: Governance | Pedagogical Practices
- Technology
- Future

Main discussion questions (MDQ) identified by UNICA



1. *How should we **train students** to use AI tools in their work?*
2. *Beyond the question of **academic integrity**, what **practical knowledge** and experience do students-, and their teachers, need to have?*
3. *How should **universities prepare** students for a world in which they are likely to encounter and need to use AI tools/agents?*
4. *Is it likely that we will use **AI widely** as teaching or assessment tools?*

(UNICA, 2026)

The path to adoption

Rectorate actions of support:

- Distinguished the pedagogical innovation portfolio
- Continued actions of reinforcement between groups of the rectory and the nine schools
- Adopted in the democratized National GenAI platform IAEdu
- Created collaboratively the NOVA University GenAI usage Policy
- Integrates a National Consortium of Pedagogical Innovation CNIPES
- Provides training for professors of all schools of the university
- Conducts research on the professors & students needs

What schools go through? three stages of GenAI

1 • Cognitive — expectation-driven

Scepticism, misaligned expectations, limited pedagogical integration.

2 • Experiential — satisfaction-driven

Adjusted expectations, usage strategies, value realised in practice.

3 • Ethical — trust-driven

Ethical awareness, policy, curriculum integration and professional competence.

NOVA GenAI Use Policy (approved on 30th July 2026)

Guidelines for professors, researchers, students and academic staff - principle-based, not tool-specific

Main sections

- Purpose, **scope** and **definitions**
- Guiding principles: **human oversight**, transparency, **integrity**, privacy, **fairness**
- **Guidelines for professors**: teaching, learning design and assessment
- **Guidelines for researchers**: research integrity, authorship, data
- **Guidelines for students**: use, academic integrity
- **Guidelines for academic & administrative staff**: institutional processes
- **Data protection**, security and approved tools
- **Training**, support and governance / review

Professors

Decide and state the GenAI regime per activity; redesign assessment towards proof of learning; model transparent use.

Researchers

GenAI is never an author; disclose use; verify outputs; keep unpublished data and personal data off external tools.

Students

Use only where permitted; disclose; remain accountable for the work; GenAI must not replace foundational learning.

Academic staff

Use approved tools for institutional tasks; protect personal data; follow procurement and security rules.

NOVA GenAI Policy: https://www.unl.pt/wp-content/uploads/2026/09/NOVA_GenAI_use_Policy_30July2026.pdf

The path to adoption: top management support

A case of an early adoption school at NOVA University

NOVA IMS 2022→2026



(Aparicio, 2026)

Professors: how GenAI adoption really happens

Case study of a pioneering bachelor's programme at NOVA IMS (Pereira & Aparicio, 2026)

Design

Qualitative, semi-structured interviews with professors of different disciplines and levels of GenAI familiarity.

GenAI as both a teaching tool and a learning outcome in 1st year, 1st semester.

Findings

Positive attitudes, but integration is cautious, experimental and uneven.

Opportunities: feedback, content generation, personalised learning.

Risks: integrity, student overreliance, bias and opacity.

Enabling conditions

Institutional policy and clear guidance.

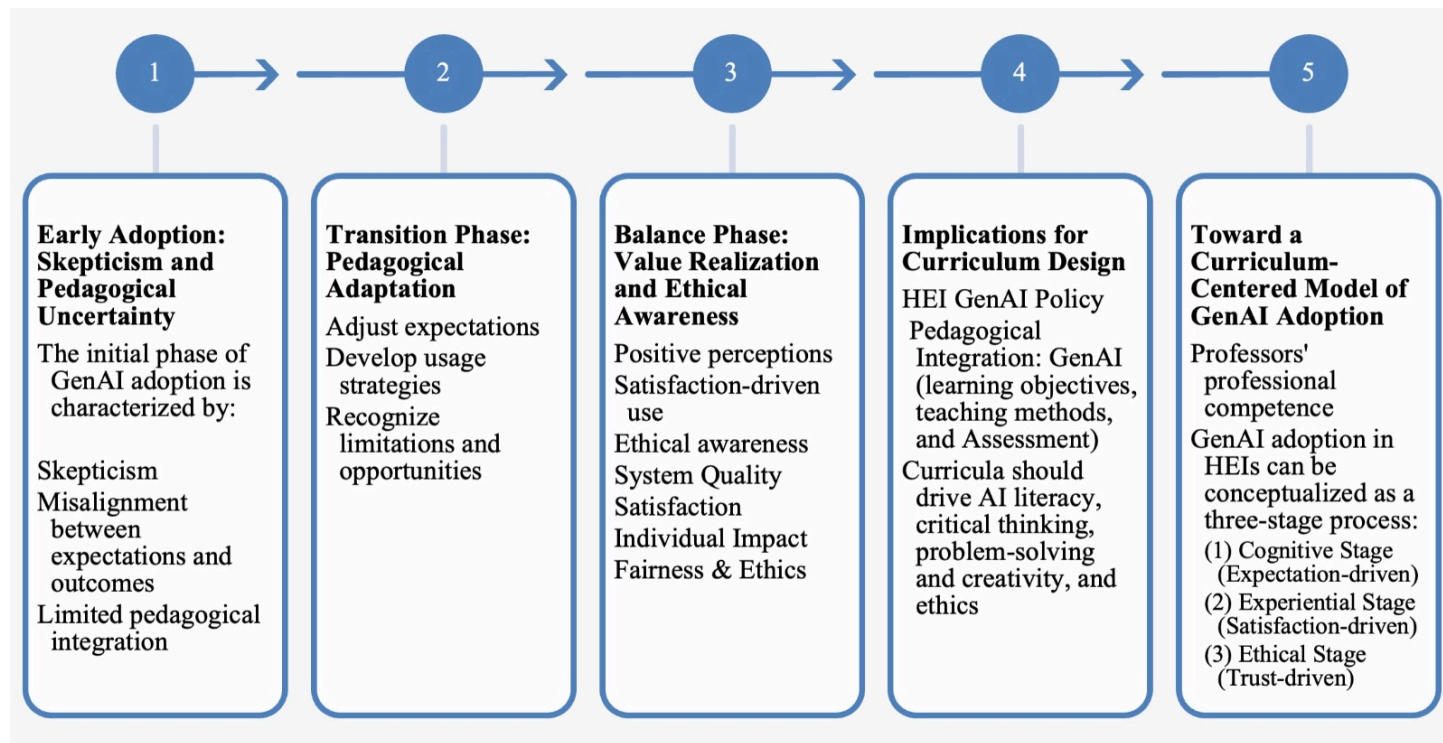
Professional development and time.

Shared infrastructure and communities of practice (CoP).

Competencies embedded in the curriculum

- GenAI literacy as a graduate competency: how models work, limits, prompting, verification.
- Critical thinking, problem-solving and creativity with GenAI as a partner, not a substitute.
- Ethics and responsible use aligned with the labour market's expectations of new graduates.

Professors: how GenAI adoption really happens



NOVA IMS 2022→2026 and the adoption phases schools go through (Pereira & Aparicio, 2026)

Teachers: which GenAI skills do professors need?

GAICS-TR — GenAI Competency Self-Efficacy Scale for Professors & Researchers, Portuguese validation (Cruz, Pereira, Aparicio & Cristóvão, ICERI 2026 · PRODIGIA)

35

items · 9 dimensions · 4 domains

105

faculty & researchers, 2 universities

95%

hold a PhD · 82% teach as main role

PLS-SEM

all dimensions reliable ($\alpha \geq 0.79$, AVE ≥ 0.61)

1 · Basic GenAI understanding

GenAI knowledge (AIK): identify tools, generate and judge content.

GenAI ethics (AIE): bias, privacy, responsible use.

2 · Teaching with GenAI

Student interaction (GSI): feedback, tutoring, communication.

Learning design (GLD): activities, materials, differentiation.

Assessment (GAS): design and evaluate with/against GenAI.

3 · Research with GenAI

Research design (GRD): topics, questions, literature.

Data analysis (GDA): analysis, coding, interpretation support.

4 · Professional engagement

Professional development (GPD): training, communities.

Keeping up (GKG): regularly update GenAI knowledge.

A validated diagnostic of where professors feel (un)prepared — it informs the PRODIGIA pilot and the design of NOVA's faculty training plan.

AI for teaching & assessment: under what conditions?

The Hermit-Squire-Oracle framework

The Hermit-Squire-Oracle Framework

Three Modes of Pedagogical GenAI Governance

Mode	Student's Role	GenAI Role	Educational Objective	Professor Role	Type of Evidence
 Hermit	The Solitary Sage	Inexistent	Foundational Knowledge	Teach, instruct, help, validate.	Document & viva-voce discussion
 Squire	The Active Warrior	The Limited Assistant	Procedural Autonomy	Coach and monitor	Document & Strength on viva-voce discussion
 Oracle	The Strategic Leader	The Universal Assistant	Strategic Overview	Strategic advice and challenge	

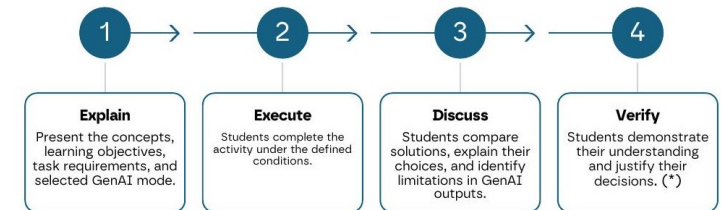
CAAIE 2026, 6th August 2026, Cardiff, UK

C. J. Costa, Ph.D.; J. T. Aparicio, Ph.D. & M. Aparicio, Ph.D.

7

From Framework to Classroom Practice

A Four-Stage Pedagogical Process



(*) The mode defines the conditions of GenAI use; verification determines whether the work can be accepted as evidence of learning.

(Kaldaras et al., 2024; Crompton and Burke, 2024; Alkhouk and Khalif, 2024)

CAAIE 2026, 6th August 2026, Cardiff, UK

C. J. Costa, Ph.D.; J. T. Aparicio, Ph.D. & M. Aparicio, Ph.D.

8

Same tool, three regimes · Explain → Execute → Discuss → Verify · "Professors evaluate students, not essays"

(Costa et al., 2026)

AI for teaching & assessment: under what conditions?

The Hermit-Squire-Oracle framework

Conclusions & Implications

Three Key Takeaways

1. Move from rules to pedagogical governance

- It is not enough to state whether GenAI is permitted, restricted, or prohibited.

2. Align GenAI use with competence development

- Hermit for **foundational** knowledge;
- Squire for **procedural** autonomy;
- Oracle for **strategic** orchestration.

3. Redesign assessment around proof of learning

- Assessment must evaluate the learning process, understanding, judgement, and student responsibility.

(Costa et al., 2026)

University-wide faculty development plan 2025/26–2026/27

Centre for Pedagogical Innovation (CIP): training open to all professors from nine NOVA schools

Practical AI Seminars : 10 monthly hands-on sessions (90 min)

- Demystifying AI and creating curricular content quickly
- Efficient assessment and personalised feedback with AI
- Pedagogical differentiation and inclusion
- Image design and visual resources for the classroom
- Advanced prompts: AI as assistant and debate partner
- Designing pedagogical activities and games
- AI as a learning tutor for students
- Automating administrative tasks and productivity
- Ethics, academic integrity and the future with AI

Structured offer: 8 accredited courses (9–15 h)

- Introduction to Pedagogy in Higher Education (workshop, 9 h)
- Doctoral Supervision (9 h)
- Curriculum Design (15 h, blended)
- Mentoring in Faculty Development (9 h)
- Identity and Personal Development (9 h)
- Differentiated Pedagogy — Multiculturality (9 h)
- Frequent Specific Educational Needs (9 h)
- The Inclusive Professor's Profile (9 h)

GenAI embedded transversally not a separate track

Students: adoption, continued use and access

Study with university students conducted in two phases PLS-SEM, N=207 / N=202

Early adoption (2023): expectations dominate

Drivers: educational level, effort & performance expectancy.

Trust and social influence not significant; higher-educated students are more critical.

R²: GenAI use 47% · engagement 42.5% · performance 29% · upskilling 29%.

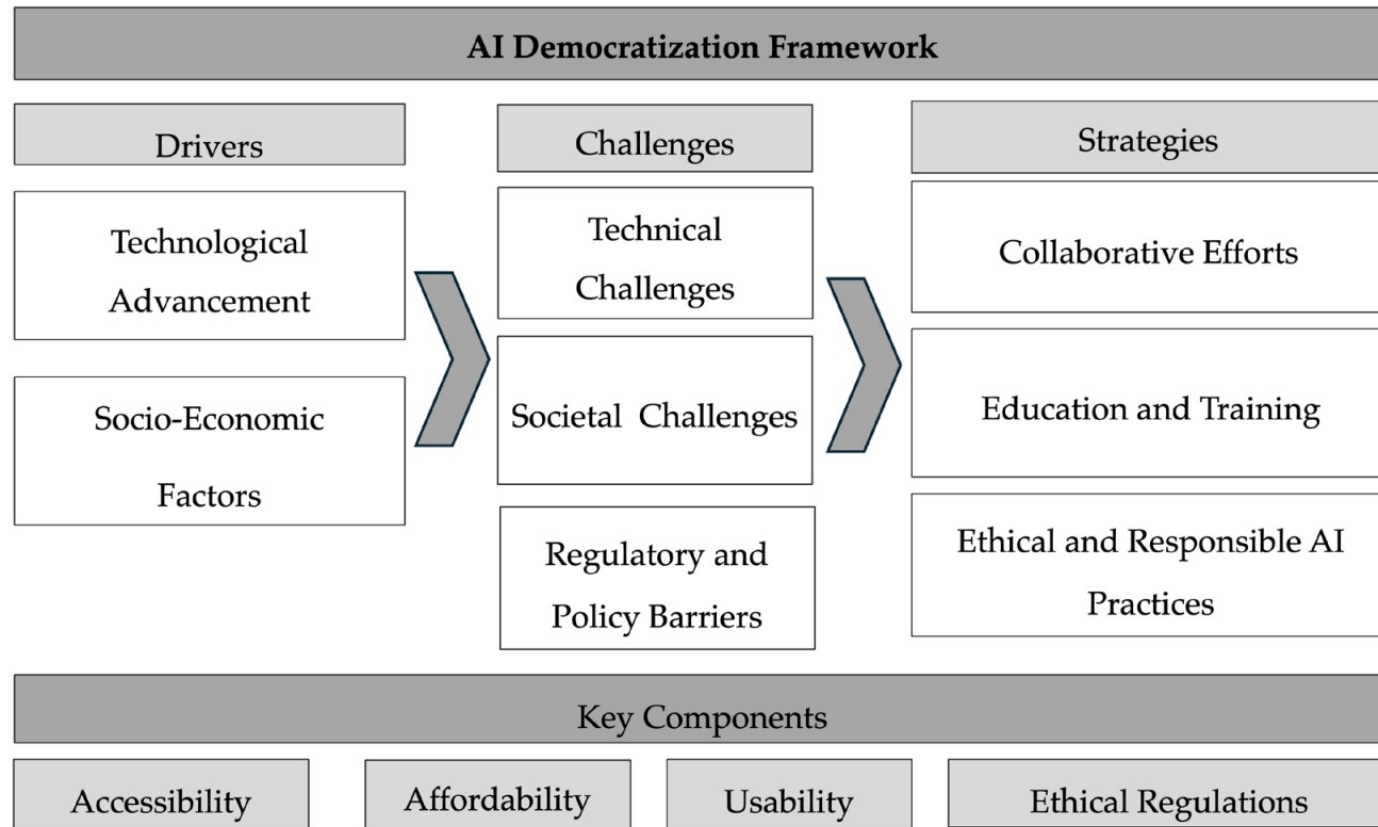
Continued use (2025): benefits, ethics and habit sustain

Drivers: system quality, satisfaction, individual impact, ethical perceptions.

Trust acts indirectly, through fairness and ethics; habit reinforces engagement.

All constructs positive and significant on continuance intention.

(Aparicio, Schroll & Bernardo, 2026)



(Costa, Aparicio, Aparicio & Aparicio, 2024)

Process considerations

1 • From rules to pedagogical governance

It is not enough to state whether GenAI is permitted, restricted or prohibited, define the conditions of use for each learning situation.

2 • Align GenAI use with competence development

Hermit for foundational knowledge · Squire for procedural autonomy · Oracle for strategic orchestration.

3 • Redesign assessment around proof of learning

Assessment must evaluate the learning process, understanding, judgement and student responsibility, not only the final artefact.

Institutional Key takeaway from NOVA: policy sets the conditions, research tells us where students and teachers actually are, and a university-wide training plan turns both into practice.

Technological considerations

Democratising AI with sovereignty: access for every student and professor

Accessibility

Open-source models, institutional platforms, training.

Affordability

Institutional licences & national infrastructure (IAedu/FCCN).

Usability

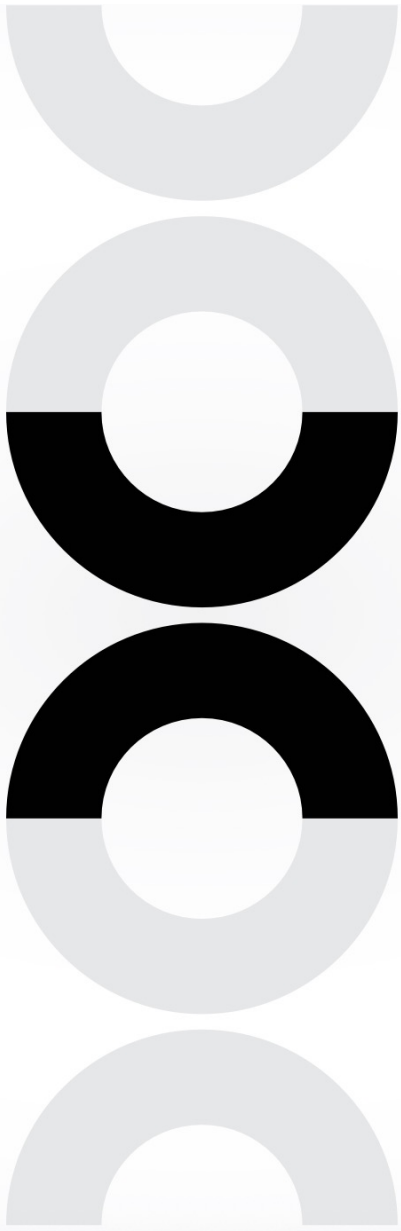
Tutors, agents and templates faculty can reuse.

Ethics & sovereignty

EU AI Act; universities govern their own data and models.

(Costa, Aparicio, Aparicio & Aparicio, 2024)

Implication: set realistic expectations early, embed GenAI in regular coursework with explicit ethical rules, and build on students' critical stance, through public/open infrastructure, not only paid tools.



MDQ

NOVA University of Lisbon

People

Processes

Technology

Future

The more capable AI becomes, the more important the university mission becomes

In Learning

In Research

In value creation
to society and
economy

The more capable AI becomes, the more important the professor's role becomes

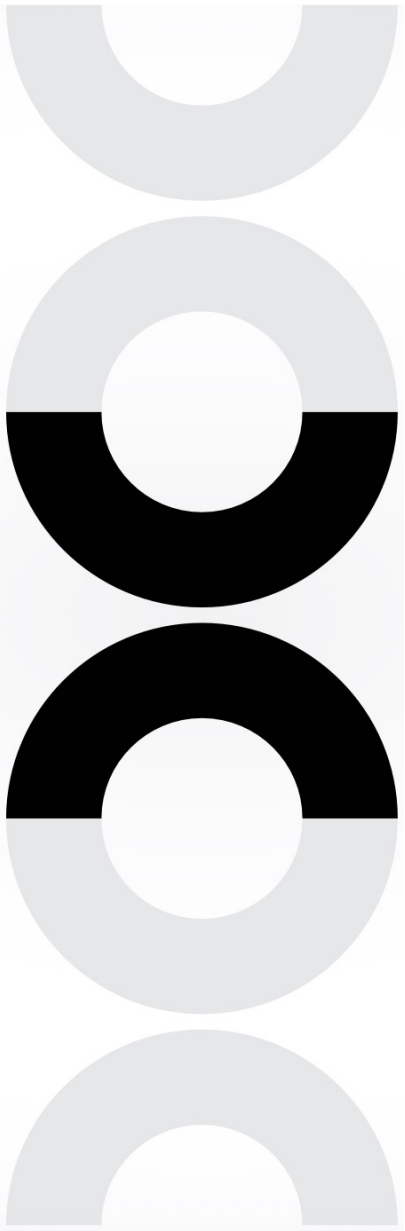
The professor's role is reinforced as

Designer of
learning
conditions

Supervisor of
GenAI use

Facilitator of
critical thinking

Guardian of
assessment
validity



References

- Aparicio, M. (2026) GenAI in HEI, UNICA Event at Alcalá de Henares, Madrid Spain, 24-26 June 2026, Available at: https://www.unica-network.eu/wp-content/uploads/2025/06/UNICA_Painel3_UniversidadeAlcala_20260626_MA.pdf
- Aparicio, M., Schroll, K., Bernardo, D.F.D. (2027). GenAI Usage in Higher Education: The Evolution of Students' Perceptions. In: Rocha, A., Adeli, H., Moreira, F. (eds) Recent Trends and Challenges in Information Systems and Technologies. WorldCIST 2026. Lecture Notes in Networks and Systems, vol 2105. Springer, Cham. https://doi.org/10.1007/978-3-032-32035-3_3_1
- Costa, C. J., Aparicio, J.T. & Aparicio, M. (2026) Generative AI in Higher Education: Pedagogical Governance, Proof of Learning, and the Hermit-Squire-Oracle Framework (in press), Information Systems Engineering and Management, 6th Conference on Advanced Artificial Intelligence and Education (CAAIE), 5-7 August, CAAIE 2026 Cardiff, UK
- Costa, C. J., Aparicio, M., Aparicio, S., & Aparicio, J. T. (2024). The democratization of artificial intelligence: Theoretical framework. *Applied Sciences*, 14(18), 8236, <https://doi.org/10.3390/app14188236>
- Cruz, E., Pereira, C., Aparicio, M. & Cristovao, A. M. (2026) Validating A Generative Ai Competency Self-efficacy Scale For Higher Education Faculty: A PLS/SEM Study, (in Press) to be presented at **19th International Conference of Education, Research and Innovation, 9-11 November 2026, Seville, Spain**
- NOVA (2026) Policy for the Use of Generative AI (GenAI) at NOVA University of Lisbon; Available at: https://www.unl.pt/wp-content/uploads/2026/09/NOVA_GenAI_use_Policy_30July2026.pdf
- Pereira, C. & Aparicio, M. (2026) GenAI Adoption in HEI as a Curriculum and Pedagogical Practice: A Case Study, *Frontiers in Education*, (in press) <https://www.frontiersin.org/journals/education/articles/10.3389/feduc.2026.1894035/abstract>
- UNICA (2026), Conference "Building the AI-Ready University", hosted by Queen's University Belfast, 19-20 October 2026, available at: <https://www.unica-network.eu/event/ai-unica-qub-conference/>



Thank you

Manuela Aparicio, Ph.D.
manuela.aparicio@unl.pt
NOVA University of Lisbon,
Portugal



UNICA Session 1 · From Chalkboards to Chatbots · Queen's University Belfast, October 2026 |
NOVA University of Lisbon | Manuela Aparicio, Ph.D.