Press release

Belgian researcher Louis Morias wins European award for master's thesis on GenAI as a solution to knowledge loss in industry

Luleå, 24 June 2026 — **The Belgian researcher Louis Morias has won the European Master Thesis Award for his research into how artificial intelligence can help companies retain technical knowledge when experienced employees leave. The award was presented on 24 June 2026 during the EuroMaintenance conference in Luleå, Sweden, by the Salvetti Foundation and the European Federation of National Maintenance Societies (EFNMS).**

Morias was nominated as the Belgian candidate by BEMAS, the Belgian professional association for maintenance and asset management, and was ultimately selected by the jury as the European winner. He wins the award with a master's thesis on generative AI in industrial maintenance organisations. Louis Morias completed the Master's in Smart Operations and Maintenance in Industry, an inter-university programme run by KU Leuven and Ghent University. He graduated in 2025 with his master's thesis "Exploring the Potential of Generative AI in Maintenance and Asset Management", supervised by Prof. Dr Pradeep Kundu and MSc Peter Decaigny. The thesis addresses a pressing issue in many companies: how do you retain technical knowledge when experienced staff leave, installations become more complex and new technicians need quicker access to reliable information?

Prestigious award

The European Master's Thesis Award forms part of the EuroMaintenance Awards, organised by the Salvetti Foundation in collaboration with EFNMS, the European Federation of National Maintenance Societies. With this award, the organisers recognise master's research that contributes to the development of maintenance, reliability and industrial asset management in Europe. The jury consists of European academics specialising in this field.

GenAI in maintenance

Morias's award-winning thesis explores how generative AI can help companies make better use of existing knowledge. This includes technical manuals, maintenance reports, inspection reports, work orders and procedures, which are often scattered across different systems and documents today. AI can help retrieve that information more quickly and present it in a more understandable way to technicians and maintenance teams. A concrete example is a technician who, when faced with a faulty machine, no longer has to search through various manuals and previous maintenance reports themselves. Using a digital assistant, they can ask in plain language what the possible causes are and which points need to be checked. The AI extracts the relevant information from the available documents and summarises it in a practical checklist for the intervention.

At the same time, Morias emphasises that AI must be applied with care in industry. In maintenance environments, wrong decisions can have major consequences for safety, production and reliability. That is why his research advocates an approach in which AI supports humans, but does not replace them.

Delighted with the recognition

“I feel very honoured,” says Louis Morias. “For me, this award also demonstrates that the subject of my thesis is truly relevant. Generative AI is not a minor or temporary topic, but part of a broader evolution that industrial organisations must address today.” Louis Morias has been working at Axians since September 2025. As an IT Consultant in Data Analytics, he is putting the insights from his master’s thesis on Generative AI in Maintenance and Asset Management into practice. In his role, he supports industrial clients in exploring and implementing data-driven and AI-supported solutions for maintenance and asset management. In this way, he helps translate academic research into concrete applications that can contribute to greater reliability, efficiency and sustainability in industrial environments.

Co-supervisor Peter Decaigny, partner at Mainnovation and practice assistant at Ghent University and visiting lecturer at KU Leuven for the Master’s in Smart Operations and Maintenance in Industry, is also proud: “This thesis demonstrates that maintenance is a field where new technologies such as AI can add significant value and that companies and organisations can still make progress in this area. Maintenance & Asset Management certainly deserve the necessary attention, including within the academic world. This is a perfect example of that.”

Importance of digital transformation for Belgian industry

According to BEMAS, the award highlights the growing importance of digital transformation in maintenance, reliability and asset management. Wim Vancauwenberghe, director of BEMAS, emphasises: “This recognition shows that young Belgian professionals are contributing to the discussion on one of the major challenges facing the industry: how do we retain technical expertise and make it usable for the next generation of maintenance teams?” The award highlights how quickly AI is shifting from experimental technology to a practical tool for industrial companies seeking to future-proof their knowledge and maintenance processes.

End of press release

<u>Additional information</u>:

About the Master's thesis

Generative AI is a form of artificial intelligence that can generate new text, summaries, answers, instructions or other content based on existing information. Louis Morias' Master's thesis "Exploring the Potential of Generative AI in Maintenance and Asset Management" investigates how generative AI can create value within the maintenance and management of technical installations. The central question is how companies can better access and apply their existing technical knowledge. In many industrial organisations, valuable information is scattered across manuals, maintenance reports, inspection reports, work orders, checklists, procedures and expert knowledge. As a result, it is not always easy for technicians and maintenance engineers to quickly find the right information when they need it.

Generative AI can play a supporting role here. The technology makes it possible to query technical information in plain language, summarise it and convert it into practical, actionable support. Consider, for example, a maintenance team that, following a series of recurring faults, automatically receives a summary of previous interventions, spare parts used, checks carried out and possible patterns in the reports. In this way, AI can help to identify connections more quickly and make better-informed decisions, without replacing human expertise.

The master's thesis positions generative AI as a digital co-pilot for maintenance professionals. Potential applications include conversational assistants for maintenance documentation, automatic summaries of technical reports, support for root-cause analysis, the generation of work instructions or checklists, AI-supported training of new technicians, and reporting for audits or compliance.

The combination with predictive maintenance is also discussed, for example through synthetic data for rare failure modes or by making maintenance data more understandable for different user groups.

In addition to the technological possibilities, the research devotes considerable attention to the conditions for responsible use. Generative AI can only create value when the underlying data is sufficiently reliable, when answers remain traceable, and when technicians can critically assess the output. Topics such as data governance, cybersecurity, confidentiality of business information, AI literacy and human validation are therefore essential.

Based on a literature review, interviews with industry experts and a survey of organisations active in maintenance and asset management, Morias developed a practical roadmap for the implementation of generative AI. This roadmap helps organisations to evolve step by step from awareness and experimentation to concrete integration into maintenance processes. In doing so, the work offers a useful framework for companies wishing to deploy generative AI to enhance knowledge sharing, reliability, efficiency and sustainability in maintenance environments.

About Louis Morias

Louis Morias combines a strong technical and analytical background with experience in entrepreneurship, data and industrial innovation. He obtained a Master of Science in Smart Operations and Maintenance in Industry from KU Leuven and Ghent University, where he graduated

magna cum laude with a master's thesis on generative AI in maintenance and asset management. Previously, he also obtained a Master's in Business Engineering and Data Analytics cum laude from Ghent University. During his studies, Louis Morias also undertook a six-month Erasmus exchange at the Politecnico di Milano, one of Europe's leading technical universities.

In addition to his academic career, Morias was also active within UGent Racing, the university's Formula Student team. As Chief Business Officer and board member, he was responsible for business operations, partner management, administration and financial planning, and led a team of twelve people. Within the team, he also contributed to cost analysis, manufacturing planning and business plans for international Formula Student competitions. This experience yielded strong results in the Czech Republic and the Netherlands, among other places.

Since September 2025, Louis Morias has been working as an IT Consultant in Data Analytics at Axians Belgium. In this role, he focuses on projects involving data analysis, generative AI and predictive maintenance. In doing so, he applies the insights from his master's thesis directly in an industrial context, where he helps companies to use data and AI for more reliable, efficient and future-oriented maintenance.

www.linkedin.com/in/louis-morias

About BEMAS

BEMAS, the Belgian Maintenance Association vzw, is an independent, cross-sectoral non-profit professional association for maintenance managers, maintenance professionals and anyone active in maintenance, reliability and asset management. As a knowledge and networking platform, BEMAS promotes the exchange of expertise, practical experience and best practices between companies, organisations and professionals. In this way, the association contributes to higher technical competencies, more reliable installations, more sustainable business operations and the creation of added economic value in the Belgian business community.

www.bemas.org

About the Salvetti Foundation

The Salvetti Foundation supports scientists, students and young professionals in the field of industrial maintenance. The foundation helps young talent to build international contacts and further develop their skills within maintenance and asset management. In doing so, it works closely with EFNMS, the European Federation of National Maintenance Societies.

As part of this collaboration, the Salvetti Foundation supports and organises the European maintenance awards presented during the EuroMaintenance conference: the European Maintenance Manager Award, the M.Sc. Thesis Award and the Ph.D. Thesis Award. Through these awards, EFNMS and the Salvetti Foundation highlight outstanding professional achievements, academic research and new insights into maintenance at a European level. In this way, they contribute to the recognition of

excellence in the field and to the further development of the next generation of maintenance professionals.

www.salvettifoundation.org

About EFNMS and Euromaintenance

EFNMS, the European Federation of National Maintenance Societies, is the federation of national maintenance societies in Europe. The organisation was founded in 1970 and has grown into a European network with members from 24 countries. Since 2003, EFNMS has been formally organised as a Belgian non-profit organisation based in Brussels. EFNMS promotes the exchange and harmonisation of knowledge, guidelines and best practices within maintenance and asset management in Europe. In doing so, the organisation supports both industry and the professionals active in maintenance.

EFNMS is also the initiator of the biennial EuroMaintenance conference. EuroMaintenance brings together maintenance professionals, researchers, technology companies and industrial decision-makers to discuss current developments, practical experiences and innovations in maintenance. The conference is organised each time by one of the members of EFNMS. The 2026 edition will take place from 23 to 25 June in Luleå, Sweden, and is being organised by the Swedish Maintenance Society (SVUH) and Luleå University of Technology (LTU).

www.efnms.org

euromaintenance26.eu

About the Master's in Smart Operations and Maintenance in Industry

The Master of Science in Smart Operations and Maintenance in Industry is an inter-university English-language programme offered by KU Leuven and Ghent University, held at KU Leuven Campus Bruges and Ghent University Campus Kortrijk, but will no longer be offered from the 2025–2026 academic year onwards. The master's programme was aimed at engineers wishing to specialise in smart industrial processes, maintenance and production environments. Topics such as digital twins, smart sensors, Industrial IoT, data analysis, monitoring, prognostics and smart factory design were central to the programme.

https://studiekiezer.ugent.be/2025/master-of-science-in-smart-operations-and-maintenance-in-industry-en

https://www.kuleuven.be/programmes/master-smart-operations-maintenance-in-industry

About Axians

Axians is the ICT brand of VINCI Energies and supports companies and organisations in their digital transformation. The group operates in 37 countries, employs more than 16,000 people and achieved a turnover of €3.6 billion in 2023. Axians develops solutions in areas including cloud and data centre infrastructure, cybersecurity, business applications, data analytics, enterprise networks, telecoms infrastructure and digital workplaces. For industrial clients, Axians combines IT and OT expertise,

including in collaboration with sister company Actemium, to make production environments smarter, safer and more efficient. These solutions contribute to greater flexibility, productivity, reliability, quality and sustainability in industry.

www.axians.com

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