

Göppingen, March 31, 2026

## **PRESS RELEASE**

### **AI Meets Bioeconomy: KlckBio Project Reports Successful Outcomes**

Technikum Laubholz presents project results and explores industrial opportunities at the KlckBio Innovation Day

**Göppingen, March 31, 2026** – The KlckBio research project at Technikum Laubholz (TLH) in Göppingen has successfully completed its second project phase. The central question was whether Artificial Intelligence (AI) could make the production of microfibrillated cellulose (MFC) from hardwood more efficient, scalable, and economically viable. The answer is clearly yes – laying the foundation for industrial application.

#### **From Idea to Fully Automated Pilot Plant**

KlckBio was launched with the goal of building a fully automated pilot plant for the production of microfibrillated cellulose, complemented by a digital twin and AI-based process optimization. MFC is considered a sustainable, bio-based alternative to synthetic additives used in cosmetics, food, and material applications. However, its production has so far been labor-intensive, costly, and difficult to scale.

The first project phase, successfully completed in November 2023, focused on the construction and commissioning of the fully automated plant. The second phase was dedicated to AI-supported optimization and digital process modeling.

#### **Key Project Results at a Glance**

The project results are compelling on multiple levels:

**AI-supported recipe optimization:** Various AI models were tested and compared. The results show that automated recipe optimization is fundamentally feasible. In addition, product quality can be reliably predicted over time – a decisive advantage for quality assurance and increased efficiency.

**Digital twin successfully implemented:** A complete digital twin of the plant, including simulation, was successfully developed. The associated process model is ready for integration into the *CELLUPORTAL* platform – an important step toward broader application and connectivity.

**Solid process understanding as a basis for scaling:** The in-depth understanding of process workflows gained during the project is of significant value for the potential scaling and industrialization of MFC production. It provides a sound basis for decision-making for future investors and plant operators.

**Key learnings for future AI projects:** KlckBio has shown that AI projects thrive on systematic testing and learning. The project offered ideal conditions for this and therefore creates a valuable base of experience from which future projects in the process industry can directly benefit.

*"KlckBio has shown us the potential that lies in combining bioeconomy and Artificial Intelligence. The results are an important step toward economically viable, sustainable material production."*

Dr.-Ing. Wolfgang Wenzel | Project Lead KlckBio, Technikum Laubholz

### **KlckBio Innovation Day: Looking Back at March 24, 2026**

On March 24, 2026, industry experts, project partners, and interested stakeholders gathered at hive Göppingen (Böhringer Areal) to experience the results of the KlckBio project publicly for the first time. In addition to a keynote speech and hands-on technical presentations, the closing event also offered exclusive insights into the KlckBio pilot plant.

Discussions focused on AI in the process industry, digital twins, and the future of bio-based materials – areas in which KlckBio has provided important momentum..

### **Funding and Project Partners**

The KlckBio project was funded by the Ministry of Food, Rural Affairs and Consumer Protection of Baden-Württemberg as part of the European Regional Development Fund (ERDF/REACT-EU).

Key suppliers and technology partners in the project included NETZSCH, Rey Technology, PTS – Institute for Fibres & Paper, Pixact, CADFEM, ITficient, and iDIP Solutions.

The project's advisory board included experts from industry and academia, including representatives from Festo, Felix Schoeller Holding, Sappi Ehingen, ISF Industrie-Service Fricktal, Advyce & Company, and Grenoble INP (Pagora).

### **About Technikum Laubholz**

Technikum Laubholz (TLH), based in Göppingen, is an application-oriented research institution focusing on sustainable materials, biotechnology, and plant-based polymers. In 2024, TLH received the Bioeconomy Innovation Award of Baden-Württemberg for its work on the AI-optimized production of microfibrillated cellulose from hardwood..

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