

LEADING THE AUTONOMOUS MANUFACTURING REVOLUTION

As the wood-panel industry embraces the era of AI, SMARTECH now fully focused on its AI/ML platform under Hexion Inc, is emerging as a pioneer driving mills toward true autonomy, productivity, and sustainability. SMARTECH updates WBPI readers on its latest developments

In 2025, SMARTECH enters a bold new chapter. The company has re-split its operations, with the smart-systems business that created SmartWax and SmartMDI moving under Hexion's portfolio, while SMARTECH now commercialises purely AI-driven solutions for industrial manufacturing.

This transition comes as Hexion significantly increases its investment in innovation- tripling SMARTECH's R&D team

over the past six months to accelerate the development of new AI modules and strengthen its position as the technological core of Hexion's digital strategy.

At the same time, a fresh leadership team has been appointed to steer this transformation: Mercer Rowe, general manager, brings global experience spanning Fortune 500 and startup environments, turning AI innovation into sustainable

industrial growth. Brian Richmond, VP sales Americas, combines deep operational expertise from the wood products sector with advanced AI insight to enhance mill performance. Thibault Straumann, VP sales Europe, applies over 15 years in industrial automation to help manufacturers capture measurable value through digital optimisation.

This is a brand-new SMARTECH aligned with the future of autonomous and sustainable manufacturing.

FROM MATERIAL OPTIMISATION TO INDUSTRIAL AI

To understand why this matters, it helps to look back at SMARTECH's roots. The company built its reputation on Smart Systems such as SmartWax and SmartMDI (reducing wax and resin usage), delivering compelling ROI in panel-production plants. The innovations proved that technology could yield real raw material savings.

Today's challenge is deeper: mills face growing pressure from margin erosion, labour shortages, tighter sustainability targets, and the need for ever-higher throughput without compromising quality. The question is no longer just how we save material but rather how to transform the way the mill operates- every cycle, every shift, every day. SMARTECH's new focus is precisely that- applying AI to orchestrate machines, operators and processes into a self-optimising, adaptive system.

THE AI-POWERED AUTONOMOUS MANUFACTURING PLATFORM

At the heart of this transformation is the Autonomous Manufacturing platform - a globally recognized, multi-award-winning



Top: A control room operator Above: SMARTECH is playing a leading role in the AI evolution of the wood-based panels industry

AI breakthrough that unifies real-time process data, operator behavior insights, and machine learning to deliver advanced decision support and full autonomous closed-loop control.

Key highlights:

- **Modular architecture:** Clients can deploy one or more modules (SmartQuality, SmartPress, SmartForming) depending on their line configuration and maturity.
- **Continuous learning:** As the line runs, the system refines its models, reducing variance, improving consistency, and adapting to raw-material shifts or operator changes.
- **Dual-mode operation:** Mills can elect "co-pilot" mode (AI offers set-value suggestions) or full autonomous mode (AI executes adjustments actively).
- **Targeted for wood-based panel (OSB, MDF, particleboard) production lines** where variability, complex interactions and legacy equipment are the norm.
- **Sustainability built-in:** Beyond performance, it directly supports energy efficiency, resource savings, and waste reduction, helping mills meet both production targets and ESG commitments.

SMARTECH's flagship modules that are now available:

SMARTPRESS - AUTONOMY IN ACTION

The SmartPress module focuses on the press process of panel manufacturing. The press remains one of the most critical — and often most constrained — assets in any production line, and SMARTECH's AI engine is purpose-built to unlock its full potential. The solution is designed for both continuous and multi-opening presses to increase press performance, ensure board quality and reduce production costs at the same time. Among the measurable benefits: higher productivity (uplift of ~10%), tighter quality control, reduced manual intervention and stabilised performance across shifts.

What sets SmartPress apart is its closed-loop architecture. It ingests real-time data and feeds back optimised adjustments continually learning the line's unique behaviour. That level of granularity gives SMARTECH a differentiator over many automation vendors who still deliver fixed templates rather than adaptive control.

SMARTFORMING - COMPLETING THE AUTONOMOUS LOOP

Recognising that efficiency must begin upstream, SMARTECH introduced SmartForming in late 2023. The operation of the forming line in a panel plant is traditionally highly manual and subject to numerous subtle inefficiencies. SmartForming brings autonomous control to this segment, synchronising forming



Above: Mercer Rowe, General Manager of SMARTECH

behaviour with the press and downstream quality systems.

By optimising mat weight distribution, layer composition, moisture variation and interface to the press, SmartForming extends SMARTECH's influence across the full production cycle from raw-fibre arrival through to final board. That end-to-end scope positions the Autonomous Manufacturing Platform as truly a whole line solution, not just an add-on module.

SMARTQUALITY - SMART INSIGHTS FOR SUSTAINABLE EFFICIENCY

Quality control is one of the perennial trade-offs in panel production: run the line fast and risk defects; slow down and sacrifice throughput. SMARTECH's SmartQuality module is designed to break that cycle.

Launched at LIGNA in May 2025, SmartQuality brings AI-driven real-time quality prediction.

It allows operators monitor board quality continuously, adjust in real-time and learn from the entire production history. SmartQuality can deliver up to a 3% increase in line speed while maintaining or improving quality, especially when combined with other SMARTECH modules. This signals that sustainability and productivity can move in tandem.

From a strategic standpoint, SmartQuality is particularly important for mills with rising feedstock variability (e.g., recycled wood content, shifting fibre characteristics) or tight spec obligations. By embedding AI insights into the quality workflow, SMARTECH helps turn what used to be reactive operator judgement into proactive control with measurable impact on yield, scrap rate and energy usage.

STRATEGIC PARTNERSHIPS - BUILDING THE ECOSYSTEM OF AUTONOMY

SMARTECH's vision extends beyond its own products, it's about creating an

ecosystem where industrial AI bridges OEM technologies and unifies mill operations.

Through its collaboration with Siempelkamp, the Prod-IQ · SmartPress solution offers a co-engineered product combining Siempelkamp's pressing-expertise and SMARTECH's AI intelligence to deliver real-time closed-loop optimization.

In recent partnership with Kadant Carmanah Design, Smartech will combine Kadant's stranding expertise to develop the SmartStrander and provide continuous visibility from the wood room to the press line helping OSB producers enhance strand quality, increase productivity, and reduce downtime.

These partnerships demonstrate how SMARTECH's AI serves as the intelligence layer connecting all key process equipment in a mill from the first strand to the final board.

THE HUMAN DIMENSION - FROM OPERATORS TO AI CO-PILOTS

One of the biggest challenges in the wood panel industry today isn't mechanical- it's human: ageing workforce, operator drift, knowledge loss, and variability between shifts. SMARTECH addresses this not by replacing the operator, but by capturing their expertise and transforming it into an AI co-pilot that supports real-time decision-making in the control room.

The Autonomous Manufacturing platform records operator actions, links them to production outcomes, and uses this data to continuously train the AI model. Over time the system reduces gaps between operators and creates consistency across shifts and personnel changes.

This approach resonates with mill operators and executives: delivering fewer surprises, less dependence on individual experience, and more robust performance.

THE ROAD AHEAD

With its sharpened focus, leadership team, and industry-specific AI platform, SMARTECH is playing a leading role in defining the wood-panel industry's evolution. The operational split under Hexion, the launch of multiple AI modules, and deep OEM partnerships all signal a company poised to scale rapidly as mills embrace the next generation of smart manufacturing. Most importantly, this evolution isn't about replacing human expertise, it's about augmenting it. By giving control operators, process engineers, and mills managers the tools that empower them to make faster and better decisions.

Through its multiple AI Modules, SMARTECH delivers not just digital tools but a comprehensive roadmap to the autonomous, sustainable mill of the future- where every process learns, adapts, and performs with greater precision and efficiency. ●