

Vernaio Revolutionizes Process Optimization with Groundbreaking Causal-AI Solution, Process Booster X

MUNICH, GERMANY, March 31, 2025 /EINPresswire.com/ -- <u>Vernaio</u>, a pioneering innovator in causal-AI technologies, today announced substantial market traction for its flagship solution, Process Booster X. Commercially launched late last year, Process Booster X is the first-ever causal-AI-driven system capable of delivering real-time countermeasure capabilities, essential for optimizing time-critical industrial processes. Since its introduction, Process Booster X has

	Process Booster X			© numufacturing Unit West 2 - KPts → P PR-17 A 52				[+ 10000
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	10.0 10.0	34.4 35.0		Drying Unit #4 Profile	10	216	215	Lower 4
1309 - Elasticity	143.8 100.0 100.0	138.0 158.0	27%	Venical Speed	m/min	45.3	457	Lower 4
1323 - Length Variation	21.3 20.0 21.6	25.4 25.0		Drying Unit #5: Profile	10	212		Raise 🕈
1348 - Expension	85.0 72.0 76.6			Drying Unit #6 Profile Ventilation Speed	10 Umin	216 300		Lower 4 Raise 1
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garnered intense interest from leading global enterprises across multiple industries, including automotive, non-woven fabrics, textiles, paper manufacturing, heated tobacco products, glass fabrication, among others.

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We proudly offer the only proven causal-AI solution worldwide that delivers realtime countermeasures, optimizing production outcomes even in highly dynamic and conflicting operational environments." *Henry Monzon, CEO* Uniquely positioned to benefit both process industries and discrete manufacturing, Process Booster X leverages Vernaio's proprietary causal-AI technology to understand and act upon explicit cause-and-effect relationships in realtime—capabilities beyond conventional correlation-based AI systems. This groundbreaking innovation enables immediate and precise interventions, maintaining optimal conditions across critical manufacturing metrics, such as Overall Equipment Effectiveness (OEE), yield, and uptime.

"We are proud to offer the only proven causal-Al solution worldwide that delivers immediate real-time

countermeasures, optimizing production outcomes even amidst highly dynamic and conflicting operational environments," said Henry Monzon, CEO and Managing Director of Vernaio. "Process Booster X redefines industry standards, it autonomously adapts to new data streams

instantaneously, proactively preventing process disruptions and ensuring an optimal balance among conflicting priorities such as cost efficiency, sustainability, parameter stability, and overall operational reliability."

Process Booster X uniquely manages multiple Key Performance Indicators (KPIs) simultaneously—even when these metrics conflict—through a single, unified causal-AI model. It requires no prior or limited domain knowledge or extensive data preprocessing, drastically reducing deployment complexity and time. Vernaio's proprietary self-supervised learning approach also addresses fundamental limitations of traditional neural-network AI systems, enabling rapid, scalable, highly explainable deployments that autonomously evolve with changing conditions. The solution uniquely operates either on-cloud or on-premise without the need for GPUs, utilizing standard CPUs, and effortlessly manages large datasets comprising thousands of signals largely autonomously, enabling the fastest insights and deployments possible.

"Our technology utilizes a groundbreaking self-supervised learning approach that applies stochastic differential geometry to uncover the causal structure of a system by identifying all of its conserved quantities," explained Dr. Christian Paleani, Chief Al Officer at Vernaio.

Recognizing the unique needs of R&D and Engineering teams, Vernaio also offers "Process Booster X for R&D," tailored specifically to accelerate in-depth understanding of causal-AI and Vernaio's distinct innovations, greatly speeding R&D efforts. This solution is particularly valuable for teams supporting production optimization or developing new products where time-series data is available.

According to Gartner's 2024 report, causal-AI is projected to reach widespread adoption within 2 to 5 years. However, Vernaio anticipates faster adoption, driven by accelerated global AI uptake. Early adopters of Process Booster X have already reported significant improvements in production consistency, sharply reduced downtime, and optimized resource utilization, underscoring Vernaio's leadership in this emerging technology.

About Vernaio

Vernaio is the global leader in causal-AI solutions, transforming industries through advanced technology that precisely identifies and acts upon root causes in real-time. The company's flagship solution, Process Booster X, supports diverse sectors, setting new standards in operational excellence and sustainable manufacturing. Additionally, Vernaio's advanced technologies hold immense potential to positively impact sectors beyond industrial production and manufacturing domains.

For further information, please visit <u>www.vernaio.com</u>.

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