

BC Automation

Adaptive AI/ML Augmentation for Legacy Control Systems

Tech Primer - 04/01/25

Unlock Scalable Intelligence Without Replacing

Infrastructure: Manufacturers are facing mounting pressure to modernize-yet many remain tied to legacy control systems that limit agility, insight, and innovation. At BC Automation, we bridge that gap with adaptive AI/ML overlays that deliver intelligence from edge to cloud. Our modular solutions enhance existing infrastructure, reduce manual intervention, and unlock new levels of control and performance.

PROBLEM: Legacy Control Systems Can't Adapt to Evolving Conditions

- Rely on fixed logic (PID loops, static formulas, rigid interlocks) that can't adjust in real time
- Demand constant manual tuning to compensate for process variability
- Struggle to respond to shifting inputs, loads, and environmental factors
- Provide limited visibility into system behavior and root causes of inefficiencies
- Prevent transition to predictive, autonomous, and data-driven operations

SOLUTION: Adaptive Intelligence for Legacy Control

- Modular AI/ML overlays enhance existing control systems
- Edge-deployed **MetaLoop models** deliver real-time tuning and diagnostics
- Enable **context-aware insights** that adapt to changing process conditions
- Scales from **guided optimization** to fully autonomous adaptive control

OUR IMPACT: Real Solutions. Real ROI.

- ✓ Unlock performance gains from your existing control hardware
- ✓ Gain real-time insights into tuning, inefficiencies, and operational risk
- ✓ Reduce downtime, increase stability, and **de-risk operations** with intelligent augmentation
- ✓ Preserve operator control while accelerating automation maturity
- ✓ Deploy scalable AI-start small, prove value, and expand with confidence



89+

clients served

610+

unique processes automated

\$2.9B+

client dollars saved


“A huge asset to any company looking to improve their cost and reliability.”


Chris Whitehair
SVP Global Operations at SunOpta


“[BC Automation's] solutions are most thorough and comprehensive.”

Ned Mitenius
Founder & Sr Consultant at Periscope Consulting

Let's Transform Your Manufacturing Together.

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