FREEWAVE

USE CASE

MANUFACTURING COMPOSITE · ELEMENTS™ ES1000 + ZENTRY™

The plant that couldn't see its own data.

How a multi-site North American food and beverage manufacturer turned 18-year-old plant floors into a real-time data layer. Without ripping out a single PLC.

INDUSTRY	FOOTPRINT	PLANT FLOOR	OT STACK
Food & beverage manufacturing	11 production facilities · North America	~400 serial & Ethernet devices · 18 yr avg age	Mixed: Schneider Electric, Rockwell, AVEVA

THE CHALLENGE

Data on the floor. Nothing flowing up.

The plant ran. Production hit its numbers. But the data the business needed to actually improve the plant lived locked inside aging PLCs, serial-connected machines, and historians that nobody outside the controls team could reach. Every modernization initiative ran into the same wall: a floor that had been built to be reliable, not to be visible.

90%[1]
of industrial data collected on the plant floor goes unused
IBM VIA IIOT WORLD, 2025

$260K[2]
average cost of a single hour of unplanned downtime in manufacturing
ABERDEEN STRATEGY & RESEARCH

15+ yr[3]
legacy OT asset age in roughly half of manufacturing organizations
IDC, CITED BY DASSAULT

61%[4]
surge in ransomware attacks on manufacturing in 2025; most-targeted sector four years running
DASSAULT DELMIA, 2026

Application engineers spent the majority of their week keeping legacy serial connections alive. Production data sat trapped on individual machines and got moved by USB stick when anyone needed it off the floor. MES and historian initiatives stalled because the data inputs they were built to consume were not flowing. The plant manager understood the math. The CFO did not.

THE APPROACH

One platform. Three customer wins. No rip and replace.

PILLAR 1

Productivity

Engineering hours back. Floor data unlocked.

Elements™ ES1000 dropped in front of existing legacy gear. Application engineers stopped writing custom protocol bridges. Production data trapped on aging PLCs and serial devices began flowing to the MES, historian, and analytics layer in real time. The thumb drive era ended.

PILLAR 2

Connectivity

Secured. From the floor up.

ES1000 bridged Modbus, Profibus, DNP3, and OPC UA into a single managed data layer. Long-distance wireless filled coverage gaps where cabling was not practical. Nothing in the SCADA stack was touched. Machine to PLC connectivity activated in days, not the six-month deployment cycle the customer had budgeted for.

PILLAR 3

Security

Zentry™. Built in.

Zero-trust policy enforcement runs on the same gateway that bridges the connectivity. Identity-based access. Four-layer defense. The cloaked network meets IT's standard for what gets to touch the enterprise. Maps to CMMC 2.0, NERC CIP, TSA, and IEC 62443. No second device. No second purchase.

THE OUTCOME · MODELED FROM THE ENGAGEMENT

What changes when the data starts flowing.

15% → 80%[5]
plant data utilization, from baseline to active flow into MES & historian

6 mo → 3 wks
time-to-deployment per line for new machine connectivity

~30%[6]
unplanned downtime avoided through IoT-based equipment monitoring

Audit ready
zero-trust posture mapped to CMMC 2.0, IEC 62443, NERC CIP

If this composite looks like your plant, it probably is your plant. Get your machines talking.

Sources. [1] IBM via IIoT World, 2025. [2] Aberdeen Strategy & Research. [3] IDC via Dassault DELMIA, 2026. [4] Dassault DELMIA, 2026. [5] Modeled from IBM 90%-unused baseline and IoT deployment benchmarks. [6] GE Digital, 2022; Deloitte Insights (30 to 50 percent predictive maintenance reduction).

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