

One Truth, Every Site: Real-Time Sellable-Unit Visibility for a Global Seed Producer



The Challenge:

A global seed producer operating roughly 40 processing sites across North America needed a single, trustworthy count of sellable units for every SKU — in real time, throughout the compressed harvest window. Counts were stitched together after the fact from disconnected systems, and every site ran a little differently, making it impossible to know unified, up-to-date sellable inventory levels.

The Solution:

CONVERGIX used Inductive Automation's Ignition platform as the integration backbone between the customer's MES and their plant-floor equipment, unifying two operator interfaces into one, and giving Operations accurate production reporting and a live view of sellable inventory that the business could act on.



For a global seed producer, harvest is the production period that matters most. Sellable units of each SKU — finished, qualified, ready-to-ship inventory — are built in a compressed window across a network of conditioning, drying, and packaging sites. Yet visibility into how many sellable units actually existed at any given moment had historically lagged the floor. Counts were reconciled hours, sometimes days, after the fact, stitched together from disconnected sources: the MES for workflows, site PLCs and SCADA for what just ran, and analog measurements captured on legacy systems that never fed back into the inventory.

The cost of that lag was real. Orders were committed against stale numbers, equipment was shifted to the wrong run, and harvest decisions were made on yesterday's view of the warehouse. Our Controls & Digital Services (CDS) team had supported this customer for years, beginning with the installation and configuration of their MES software across facilities. About three years ago, the engagement evolved into something more ambitious: re-architecting how the plant floor and the MES talk to each other, with Ignition as the connective layer.

12 sites and counting:

The standardized SAL pattern has been deployed across the customer's network, with roughly 80% of the first pilot site's build still in use today.

One platform, many capabilities:

Moisture-content forecasting, historian data, vision systems, and third-party integrations all run on the same Ignition foundation.

A Common Problem:**The Same Process, Many Different Ways**

The customer's sites are, in the words of one of our engineers, "all the same, but different." Every facility runs the same fundamental process — receiving, drying, conditioning, packaging — but each one does it slightly differently, with its own mix of equipment and local practices. That variation is exactly what makes a single, enterprise-wide sellable-unit count so difficult to produce. Compounding the problem, operators worked across two separate systems: an MES platform built for workflows, and a separate, dated FactoryTalk environment used to operate the equipment.

The front end of the process — the Stabilization Automation Layer, or SAL, where material is received and dried — was the most problematic. It carried the most disparate collection of legacy systems, and was the clear place to start. CONVERGIX worked with the customer's data architects and MES product owners to assess it, design the future state, and deliver in production-safe, site-by-site increments.



Extending the Platform: Forecasting and Vision

Because Ignition is flexible, the customer has layered new capabilities onto the same foundation without major rework:

- **Forecasting:** Moisture-content forecasting was added as a straightforward calculation surfaced to operators, alongside the customer's existing forecasting tools, all accessible from one interface.
- **Vision (Husk Deduct):** A separate two-site pilot replaced a legacy Windows XP-era system with a standardized Ignition application driving Cognex cameras, estimating net usable corn in real time and feeding it back into the sellable-unit math.
- **Integration:** Historian data lives in the same environment, and because other vendors in the customer's ecosystem also use Ignition, sharing data between systems is straightforward.

Why This Matters for the Business

Each workstream serves the same outcome: when a dryer, sheller, or packaging line records a unit, the sellable-unit count for that SKU updates in real time. Together they give Operations, Supply, and Commercial a single number to act on, all harvest long. The business impact compounds across the network:

- **Real-time sellable-unit visibility** per SKU through the entire harvest window, replacing counts that once lagged the floor by hours or days.
- **A standardized, repeatable site template** that turns each deployment into days rather than a custom build.
- **Lower long-term cost and complexity** by reducing dependence on a rigid MES license and consolidating two operator interfaces into one.
- **A flexible data foundation** that absorbs new requirements — forecasting, vision, third-party integrations — without re-architecting the system each time.

A Trusting, Long-Term Partnership

What began as MES installation support has grown into a standardization program spanning the customer's North American footprint, with design work now underway on the conditioning and packaging layers of the process. The relationship endures because the work earns it: the customer drives what needs to happen, and CONVERGIX delivers a solution they can rely on. As one engineer put it simply, the reward for good work is more work.



Navigating Real-World Hurdles

Standardizing across dozens of sites surfaced challenges no upfront planning could fully predict. Midway through one contract, the team discovered several undocumented varieties of drying equipment, requiring new development on the fly to bring them into the standard. An inherited controls architecture, authored years earlier by another party, was more complex than the process required and made communicating with the controllers harder than it should have been. The team worked through it, with support from Inductive Automation, and folded the lessons into the standard.

The Approach:

A Standardized Bridge, Built Site by Site

Ignition serves as the integration backbone — it talks to the MES on one side and to the plant-floor equipment on the other, bridging a gap neither system could close on its own. Where the MES struggles with low-level device communication, and FactoryTalk struggles with databases and higher-end systems, Ignition does both well. The result for operators is a single, modern, user-friendly interface in place of two.

This approach also serves the customer's longer-term goals: better reliability and maintainability, a more user-friendly environment for operators, and reduced dependence on an MES license, which can be scaled back, or in some cases eliminated, where Ignition can carry the load.

"Ignition is kind of like glue. Anything you throw at it, it'll stick. FactoryTalk has limitations with databases and higher-end systems, and the MES is limited in talking to devices. Ignition is good at both. It's a perfect bridge."

— Solution Architect, CONVERGIX

