Data Logging Case Study

Plant-wide data collection with multi-language support and embedded SQL logging for dairy operations.
Industry: *Food & Beverage (Dairy)*

Quick Facts

Attribute	Value
Customer	Zenchenko IK
Products	Yogurt, Milk, Kefir, Sour Cream
PLCs	4 Siemens S7 (each with local HMI)
Development	3 weeks
Languages	Russian, German, English
Integrator	KSA (Germany)
Database	Embedded-encrypted SQL (included)

The Challenge

Challenge: Create an automated system to collect data from across the entire dairy, including the milk supply, flash pasteurizer, tank farm, and CIP-station (cleaning) sections from four independent PLCs.

Specific pain points:

- Four independent Siemens S7 PLCs with local HMIs needed unified monitoring
- Production areas wet — not a good environment for PC stations
- Production Manager, Foreman, and office personnel needed remote overview
- Required production and efficiency reports for pasteurization of milk and cream
- CIP documentation needed for compliance and operator awareness
- Multi-language operators (Russian, German, English)

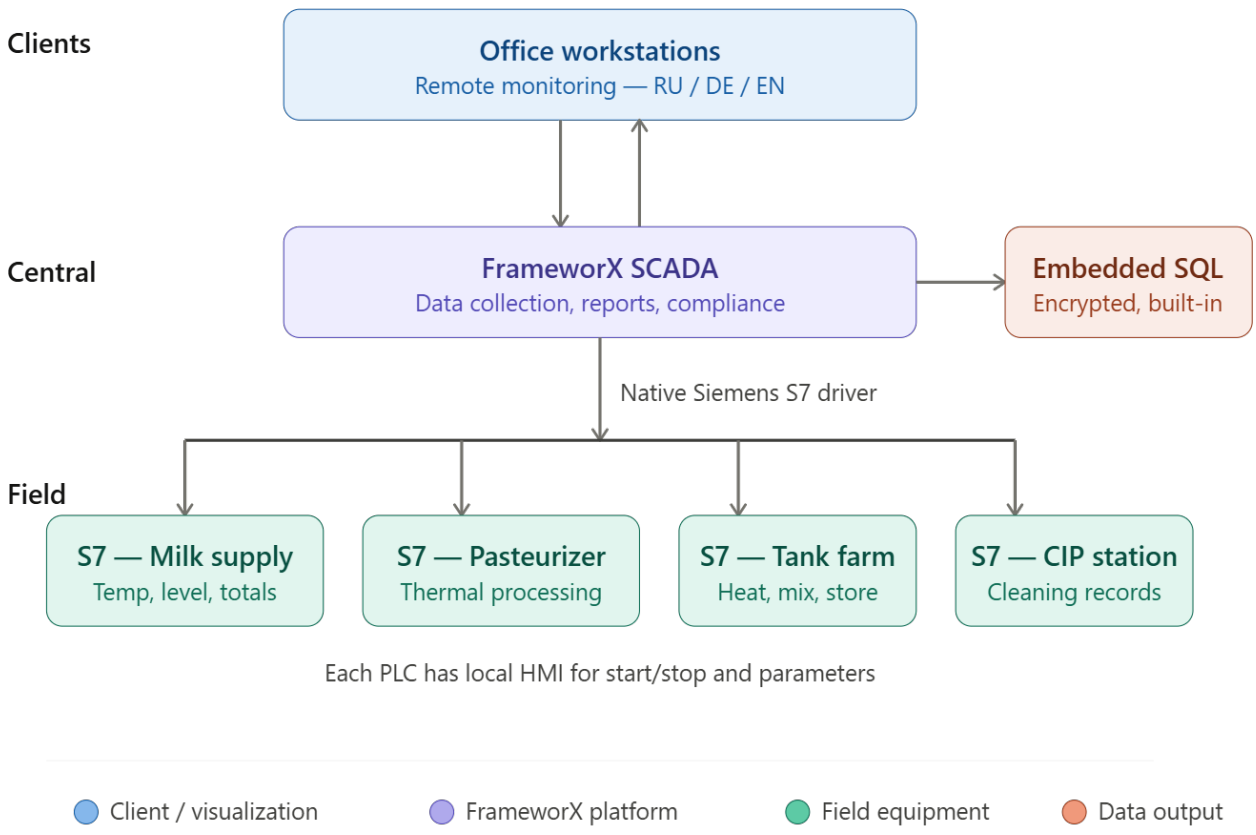
Project Goals:

1. Provide operations overview for management away from wet production areas
2. Generate production and efficiency reports for pasteurization processes
3. Record CIP settings (acid, caustic, or both) with historical documentation
4. Demonstrate proper heating and thermal processing procedures were followed

---

The Solution

Architecture



Tier	Component	Capabilities
Field	4 Siemens S7 PLCs	Local HMI for Start/Stop, parameters
Central	FrameworX SCADA	Plant-wide data collection, reports
Database	Embedded-encrypted SQL	All data logging (no additional DB needed)
Clients	Office workstations	Remote monitoring away from wet areas

Process Areas Monitored

Process	Function	Key Data
Milk Supply	Milk delivery to two tanks	Temperature, level, total processed
Flash Pasteurizer	Heat to reduce germ count	Temperature control, circulation
Tank Farm	Heating/mixing for milk, cream, products	Storage monitoring
CIP Station	Clean-in-place for pipes, tanks, heaters	Acid/caustic settings, cleaning records

Development Efficiency Features

Feature	Benefit

Excel Copy/Paste	Tag, alarm, data collection configuration
Symbol Library	Graphical objects linked for global changes
Native PLC Drivers	Siemens S7 communication built-in
Integrated Suite	No additional software needed

Key Enablers

FrameworX capabilities that made this solution possible:

Capability	Application
Multi-Language Support	Russian, German, English switching for operators
Embedded SQL Database	Encrypted data logging included — no external DB cost
State-of-the-Art Engineering	Reduced development to 3 weeks
Excel Integration	Copy/paste configuration tables
Symbol Library	Linked graphical objects for global updates
Integrated Suite	Graphics, data collection, .NET scripting, diagnostics, reports, PLC drivers

The Results

- **3-Week Development** — State-of-the-art tools dramatically reduced SCADA development time
- **Cost Savings** — Embedded-encrypted SQL database eliminated external database costs
- **Multi-Language Operations** — Operators learn system quickly in native language
- **Remote Monitoring** — Management oversight away from wet production areas
- **Compliance Documentation** — Reports demonstrate proper thermal processing procedures
- **CIP Tracking** — Operators know what's been cleaned with historical documentation
- **No Training Required** — Project completed successfully without attending training classes

Customer Testimonials:

> "I selected FactoryStudio from Tatsoft for the project, because of the modern technologies at its core, and my desire to get away from using old legacy products like InTouch or WinCC. I wanted to work with a really new product. KSA trusted in me to choose the right software to serve the purpose, and FactoryStudio greatly satisfied our needs."
>
> *— Alexander Berthel, Berthel Automatisierungstechnik*

> "All my questions to the Tatsoft support were answered within 24 hours. Without attending a single FactoryStudio training class, I was able to finish the project successfully!"
>
> *— Alexander Berthel*

Resources:

Download Case Study: CaseStudy_DataLogging.pdf

This case demonstrates dairy plant data collection with multi-language support and embedded database for compliance documentation.

In this section...