Cloud ERP Survivability Use Case

Local database autonomy enabling 24/7 production during cloud ERP outages.
Industry: Food Manufacturing

Quick Facts

Attribute	Value
ERP	Microsoft D365 (Cloud)
MES	GE Plant Applications
Historian	GE Proficy Historian
Front End	FrameworX dashboards
PLCs	Rockwell Automation
Scope	2 plants, 100+ clients, redundant servers per plant
Autonomy	2-3 days without ERP connectivity

The Challenge

Challenge: After moving ERP to Microsoft D365 in the cloud, protect highly automated 24/7 production from cloud ERP unavailability (scheduled maintenance, system updates, or unplanned outages).

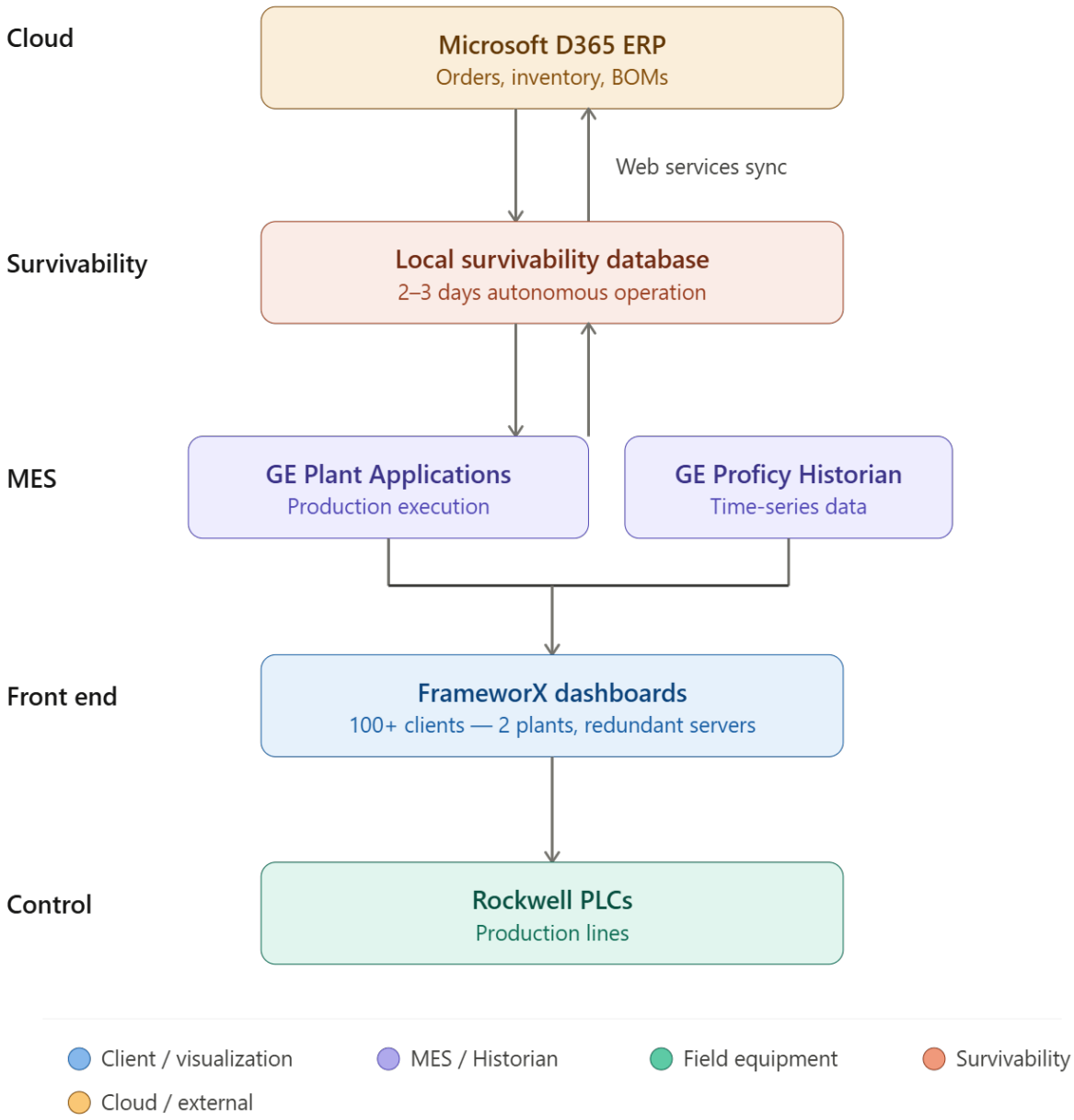
Specific pain points:

- Cloud ERP outages could stop 24/7 production
- Even 2-3 day disruption would result in millions of dollars in lost revenue
- Customer orders would be disrupted during any ERP downtime
- No local autonomy — plant floor fully dependent on cloud connectivity

Impact: Without survivability layer, any cloud ERP outage directly halts production and causes significant revenue loss.

The Solution

Architecture



Tier	Component	Capabilities
Cloud	Microsoft D365 ERP	Enterprise orders, inventory, BOMs
Survivability	Local Database + Web Services	2-3 days autonomous operation
MES	GE Plant Applications	Production execution
Historian	GE Proficy Historian	Time-series data
Front End	FrameworX Dashboards	Operator interface, scheduling, adjustments
Control	Rockwell PLCs	Production lines

Survivability Capabilities

Function	Description

Production Orders	Local management during ERP outage
BOMs/Formulas	Cached locally for production continuity
Inventory	Lot-level tracking maintained offline
Genealogy	Full traceability preserved during disconnection
Synchronization	Automatic sync when ERP connectivity restored

Scale

- 2 plants
- 100+ clients
- Redundant servers per plant

Key Enablers

FrameworX capabilities that made this solution possible:

Capability	Application
Local Database Survivability	2-3 days of autonomous operation without ERP
Web Services Synchronization	ERP MES Plant floor data exchange
Flexible GUI	Scheduling, order execution, and adjustments
Genealogy Preservation	Full lot-level traceability maintained during disconnection

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The Results

- **Uninterrupted Production** — 24/7 operations continue during ERP outages
- **Revenue Protection** — Millions in potential daily losses avoided
- **Extended D365 Capability** — Enabled true shop-floor continuity for cloud ERP
- **Compliance-Ready Traceability** — Full genealogy across orders and materials maintained

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This case demonstrates ERP survivability architecture enabling production continuity during cloud system outages.

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