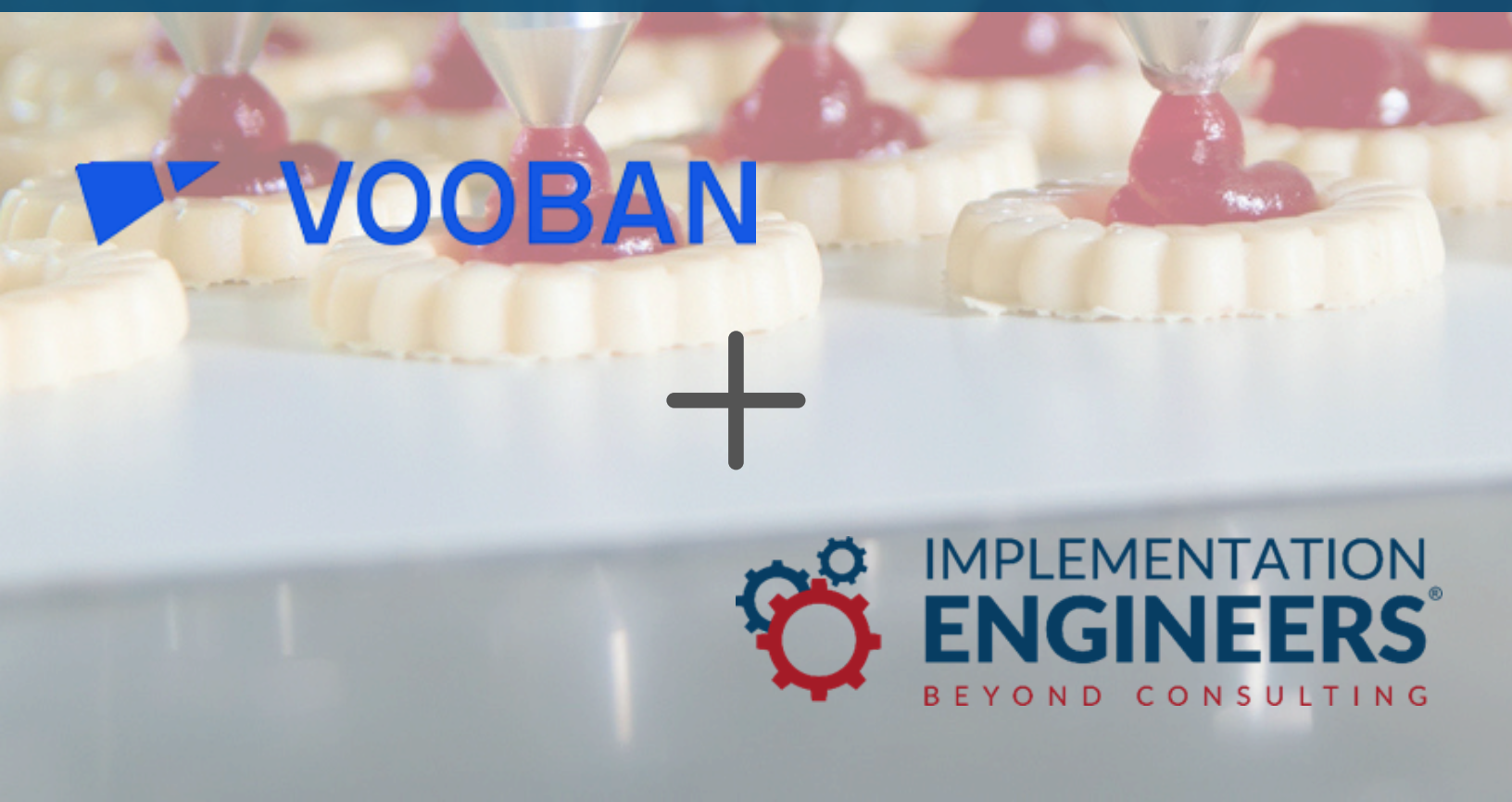


IX[®] Case Study

Agentic AI for Master Data Governance
in Food & Beverage



 **VOOBAN**



IMPLEMENTATION
ENGINEERS[®]
BEYOND CONSULTING



**Fewer
production
disruptions
from incorrect
data**

**Improved yield
and inventory
accuracy**

Food & beverage and consumer goods manufacturers operate in one of the most data-intensive environments in industry. Every SKU carries hundreds of attributes across ERP systems, recipe platforms, quality systems, and retailer portals. When that data is wrong, the impact isn't just operational, it's regulatory, financial, and reputational.

A single error can result in:

- Production running on the wrong formulation
- Incorrect allergen labeling
- Retailer compliance failures
- Product recalls

The Challenge

Master data is one of the highest-risk areas in F&B and one of the least controlled.

- Mismatched formulations across R&D, ERP, and production
- Incorrect or incomplete allergen data
- Missing GS1 / GTIN attributes for retail compliance
- Supplier certification gaps
- Unit-of-measure inconsistencies impacting yield and inventory
- Duplicate or fragmented SKU records

Most organizations still rely on audits, spreadsheets, and reactive fixes which don't scale with the pace of the business.

AI Implementation

We implement an AI-powered, continuous master data governance layer that monitors, validates, and improves data across systems in real time without replacing existing platforms.

A multi-agent system operates continuously across the data landscape:

Metadata Agent

- Catalogs all product, ingredient, supplier, and packaging data
- Creates a live, cross-system data dictionary

Gap Detection Agent

- Identifies missing or incomplete data:
 - Allergen declarations
 - Nutritional data
 - GS1 attributes
 - Supplier certifications

Anomaly Detection Agent

- Detects inconsistencies across systems:
 - Recipe vs. ERP mismatches
 - Ingredient substitutions not reflected in allergen data
 - Specification version conflicts
 - Out-of-range nutritional values

Standardization Agent

- Enforces naming conventions and data standards
- Harmonizes unit-of-measure and conflicting values
- Ensures compliance with GS1 and regulatory requirements

Orchestrator Agent

- Prioritizes issues based on regulatory and business risk
- Routes tasks and manages escalation workflows
- Maintains full audit trail for compliance (FSMA, SFCA)

Operational Implementation

AI alone does not fix data governance. It must be embedded into how the business operates. We implement the operating model around it:

Data Governance Operating Model

- Define ownership across R&D, Quality, Regulatory, Procurement
- Establish data standards, workflows, and escalation paths
- Align governance with compliance and operational requirements

System Integration & Architecture

- Connect ERP (SAP, JDE, Infor), QMS, and retailer platforms
- Ensure seamless data flow without disrupting operations
- Enable real-time monitoring across IT landscape

Process & Workflow Implementation

- Replace manual audits with continuous governance workflows
- Embed AI-driven alerts into daily routines
- Standardize how data is created, updated, and validated

Change Management & Training

- Train teams to operate within the new governance model
- Shift from reactive correction to proactive control
- Reduce dependency on manual data stewardship

How It Works in Practice

Instead of periodic audits and reactive fixes:

- New SKUs, ingredient changes, and supplier updates are monitored in real time
- Data issues are automatically detected and prioritized
- Low-risk issues are resolved autonomously
- High-risk issues are escalated to the right teams with full context

Human teams focus only on decisions that require judgment. Everything else is handled automatically.

Let's Turn Your Vision Into Results

Implementation Engineers and Vooban deliver together — turning strategy into operational reality through AI-enabled execution.

Our proven **Align-Design-Execute** framework ensures your strategy doesn't stall at planning. From aligning leadership around priorities, to designing AI-driven operating models, to executing change inside your operations, we work side-by-side to deliver results that scale.

Ready to Get Started?

Let's explore how we deliver together. Contact us today to schedule a conversation. Together, we'll chart the path from vision to execution.

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