Good food, Good life

Digital HACCP: The Nestlé Journey to a Connected Food Safety Ecosystem

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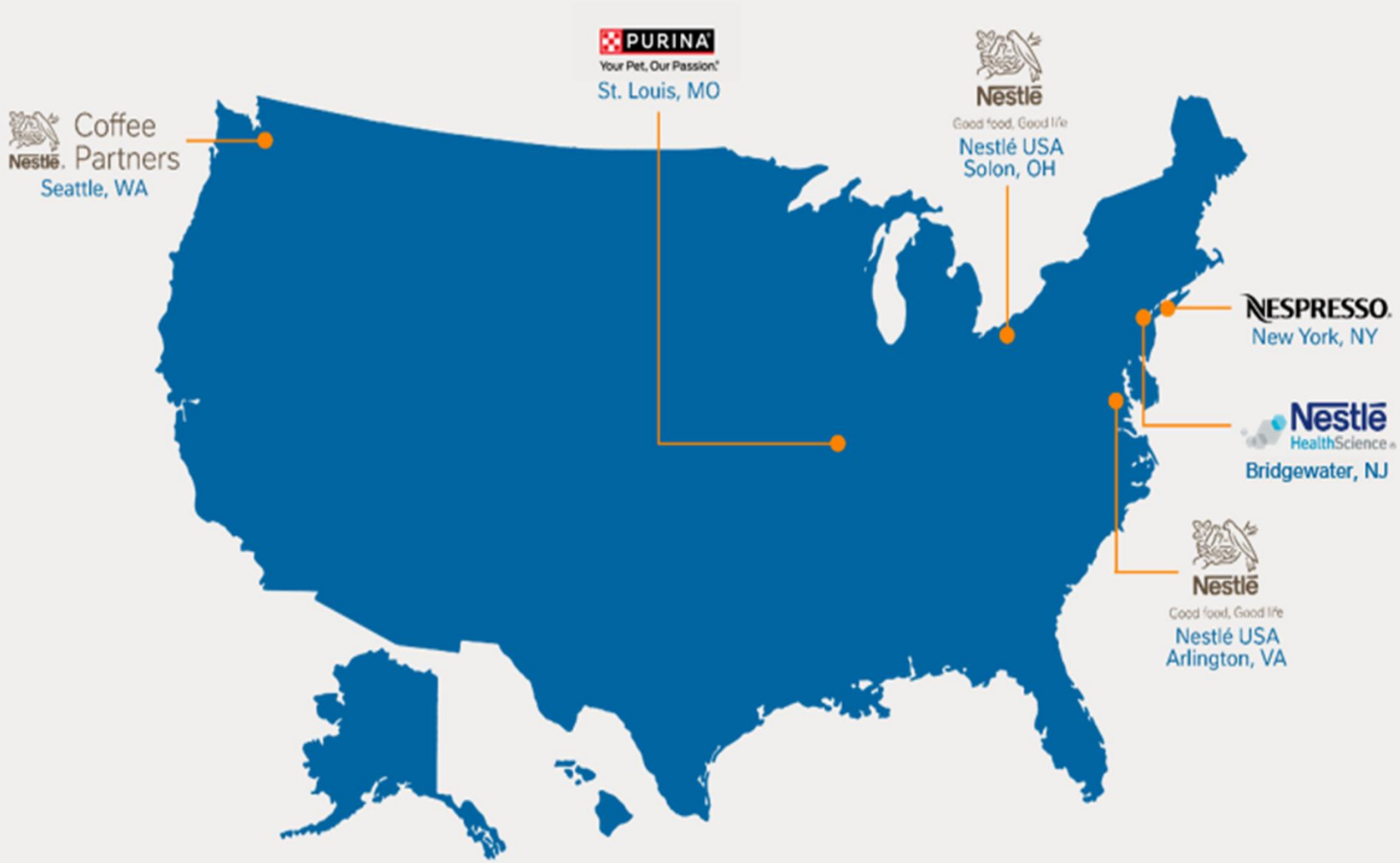
AllforQuality
Our foundation for trust

The U.S. is Nestlé's largest global market, with core operating units and globally managed businesses represented.



4 operating companies

28 states

113 Facilities *including*:

62 factories

36K employees

A portfolio with category-leading brands that consumers love, present in 97% of U.S. households.


FOOD SAFETY
ECOSYSTEM


Processing
People & Culture
Training
Teamwork
Digital & Data
Traceability
Analytics
FOOD SAFETY ECOSYSTEM
Processes & Systems
HACCP
GMP
Monitoring
External Partners
Regulators
Suppliers
Consumers
Climate Change
Supply Chain
Public Health

Food Safety Ecosystem: a practical definition

(not a buzzword)

- *Interconnected network of* ***people, processes, systems, data, and external partners*** *that collectively manage food safety risks* ***across the supply chain***.

- *Food Safety performance depends on* ***how these parts interact, not any single program***.

Why the ecosystem lens is necessary now?

- ***Shared responsibility across stakeholders*** *is increasingly explicit in the global frame (regulators, industry, consumers).*
- *Food safety is* ***not an isolated objective*** *and requires* ***holistic approaches*** *balancing risk, sustainability and supply.*
- *"Integration + data" enables a* ***more coordinated system****, necessary for increasing* ***system complexity and interdependence****.*

HACCP is the **core risk engine** – but it must be **connected** to work at scale

- HACCP remains the core food safety risk assessment tool; foundation of the food safety management system (Codex / CCP structure)
- Identifying hazards, control measures, and risk decisions
- Required for compliance and audit defensibility
- Traditionally standalone, document based, and fragmented

The aspiration:
An end-to-end digital ecosystem with HACCP at the core

So if HACCP is the risk engine – Digital HACCP is the connector that Links HACCP decisions to enterprise data, governance, and real-time signals.

Why digitalize HACCP?

*HACCP was not designed to operate as a **connected system***

*It inherently has **limited integration power** across:*

- *Supply Chain | Data Systems | Governance Workflows*

*Non-digitalized tools (e.g. Excel) are **no longer adequate***

- *inconsistency and interpretation risk.....high error risk*
- *limited scalability and integration*

Limited visibility across the network

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The compliance value proposition

- *Standardization ➔ Master Data & Governed Workflows*
- *Traceability; Management of Change*
- *Transparency across stakeholders; improved audit readiness*
- *Higher level risk management and RISK AGILITY*

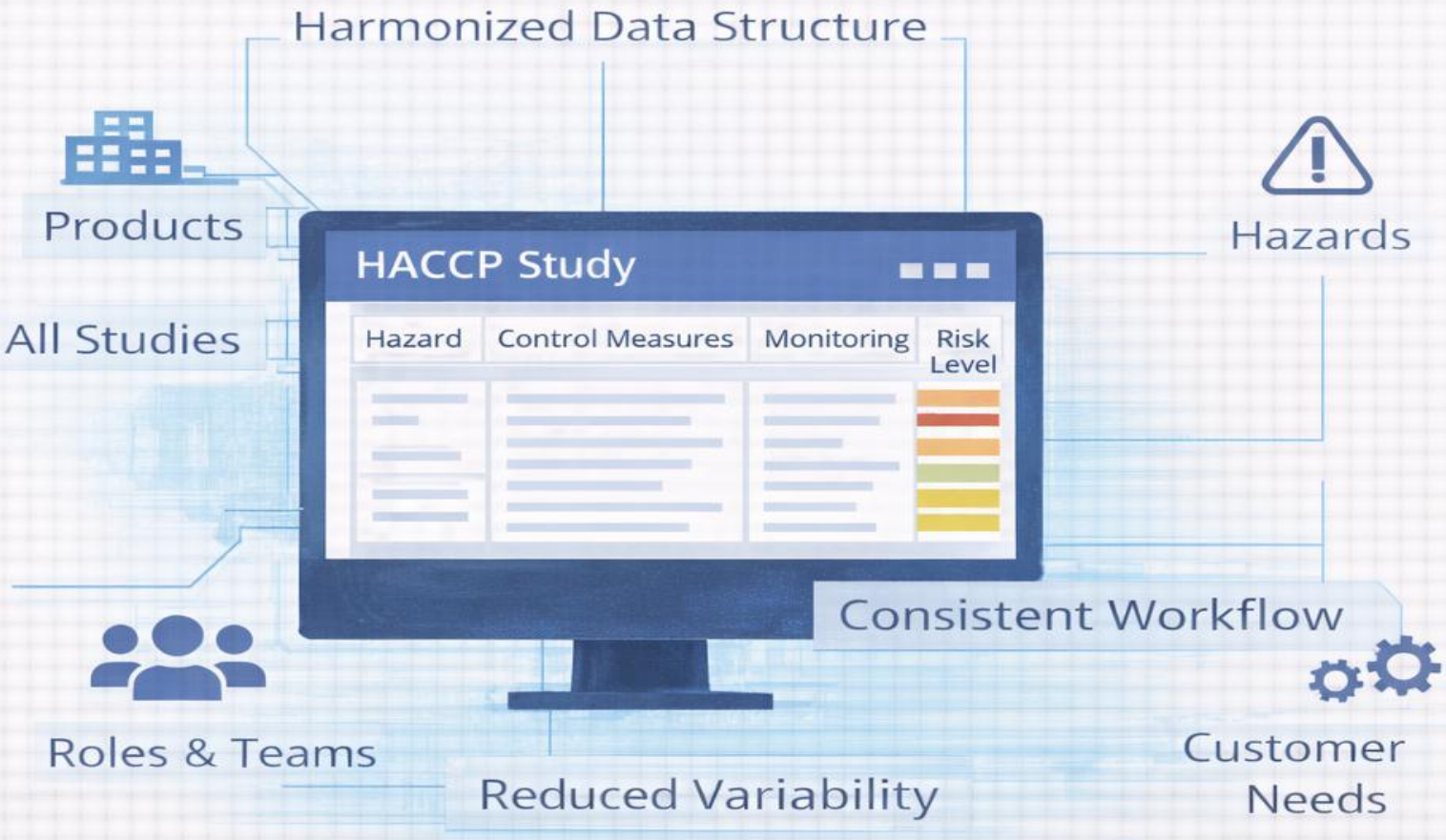
So if HACCP is the risk engine – Digital HACCP is the connector that Links HACCP decisions to enterprise data, governance, and real-time signals.


The vision: An integrated, dynamic food safety ecosystem
Master Data
Early Warning
Hazards Library
PLM / ERP
Monitoring & Controls


NEW TOOLS
SAME GOALS

What does it mean to digitalize HACCP?

- Single digital platform
- Harmonized data structure
- Consistent workflow system
- HACCP models to Master Data
- Clear definitions of hazards and control measures
- Improved alignment



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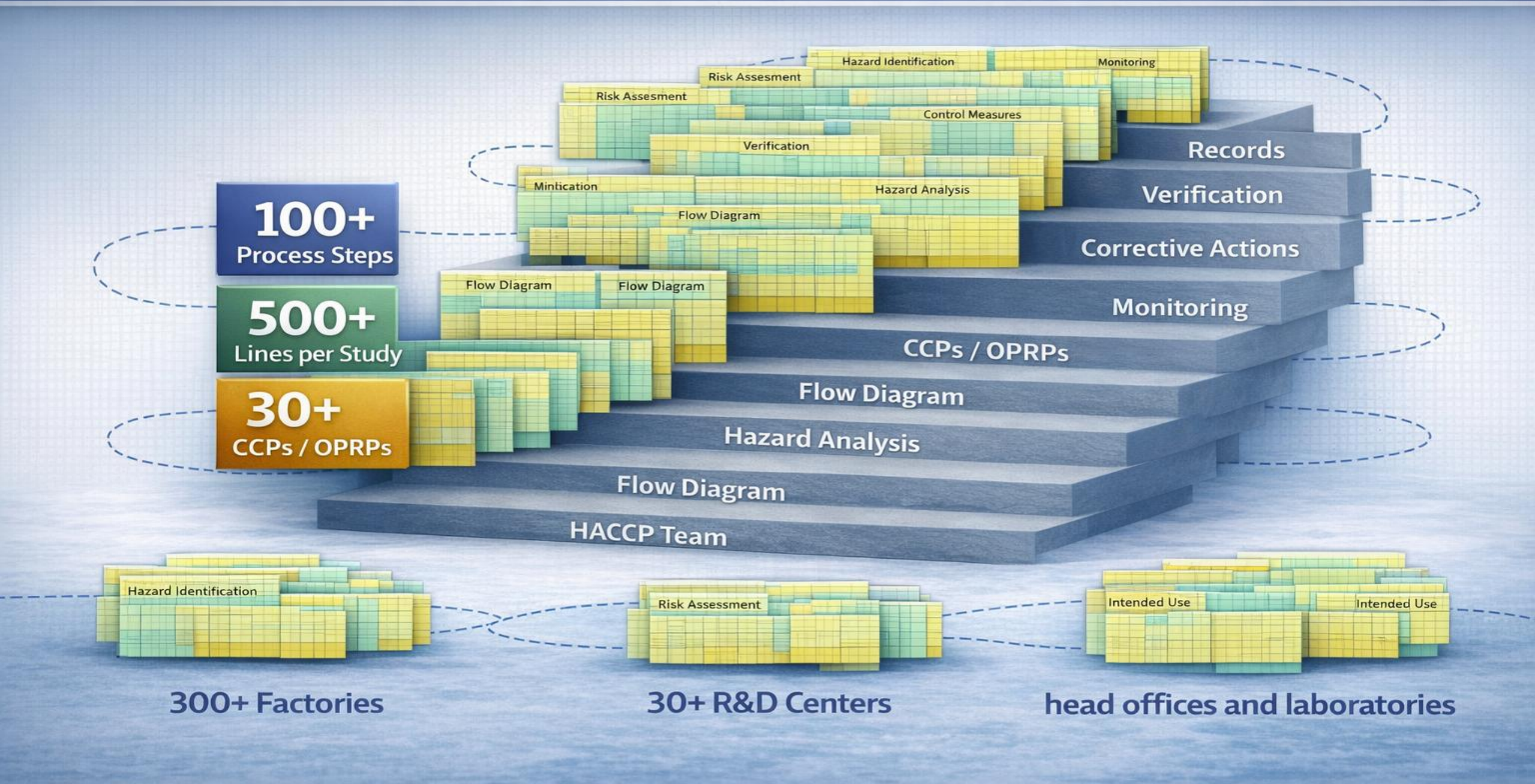
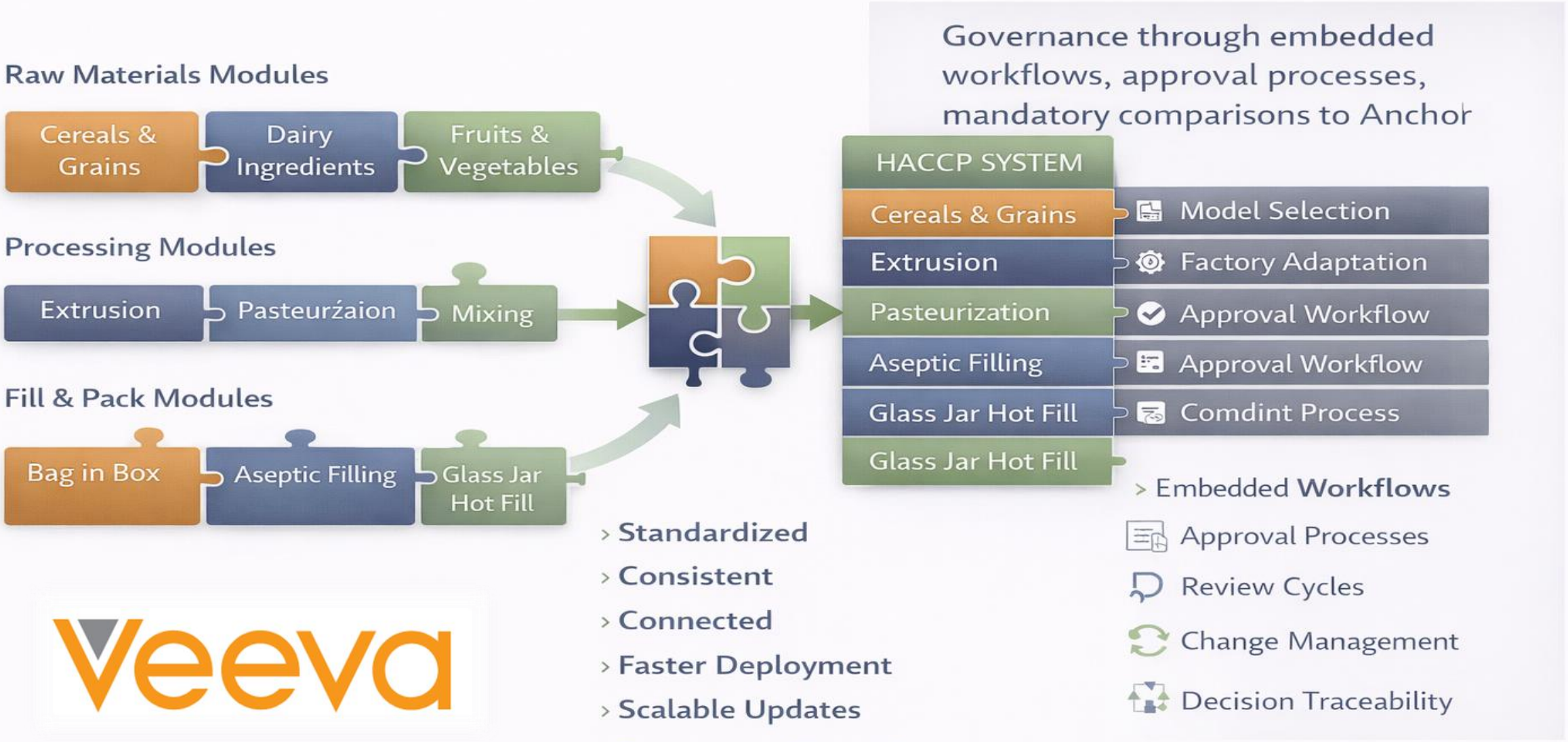
The Current State of HACCP: Fragmented & Complex



Modular Digital HACCP Approach



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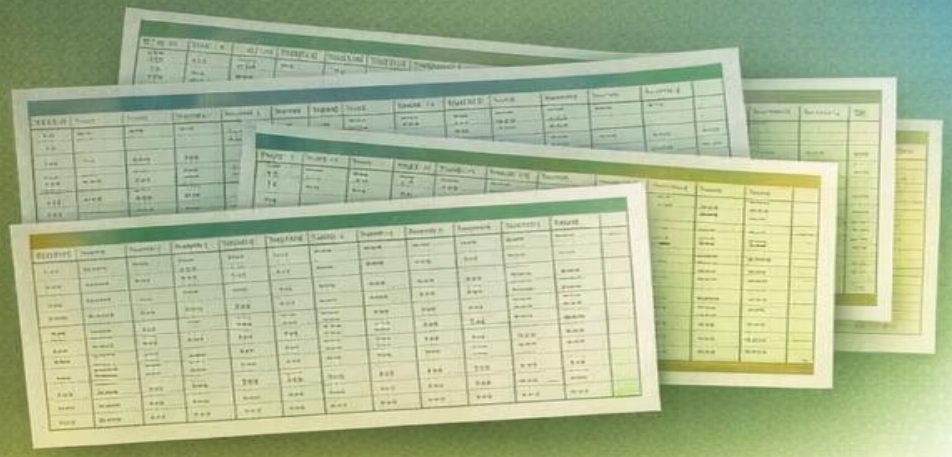
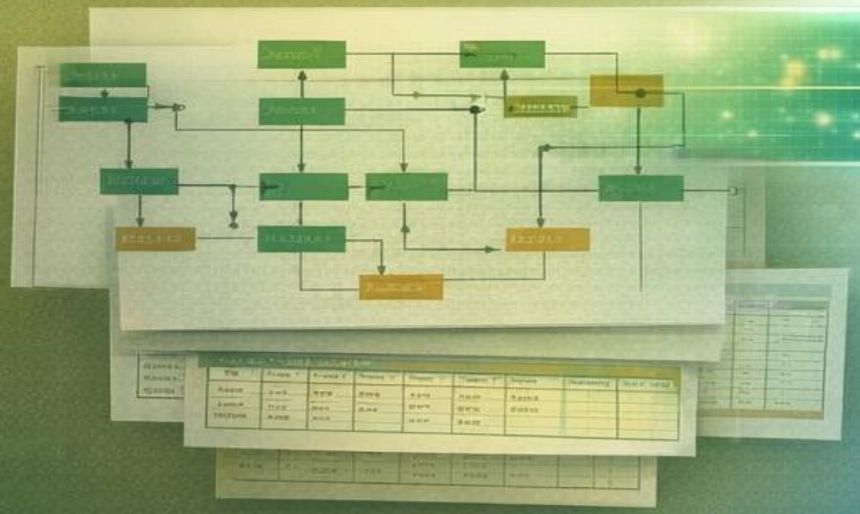
Static | Manual | Fragmented





Digital HACCP Cockpit

- Interactive Process Flow Diagrams
- Step-Level Guidance
- Operator-Centric Outputs
- Connected Data
- Real-Time Visibility
- Single Source of Truth

Improved Execution at Factory Level

How Did We Get It Done

4-Month HACCP Capability Build → **Pilot** at 4 Factories → **Global Scale-Up**

- 6 training modules
- Self-directed + guided learning
- 45 hours of training

2025: One HACCP per factory

2026: Full Digitalization

- Superuser Immersion Workshops

Superuser Network | Ongoing Training | IT Support | **Continuous Improvement**

Capability Infrastructure

What We Learned:

- Master data quality is critical
- HACCP complexity must be structured
- Continuous capability building required
- Integration across systems is essential
- Continuous capability building required
- Sustained IT support is critical

Harmonization Across the Enterprise

From fragmented HACCP studies → standardized digital building blocks

Consistent hazard identification and control measures across all sites

Enterprise Visibility & Control

From siloed site-level plans → real-time enterprise

Global view of food safety risk across business units and regions

Dynamic, Connected System

From static documentation → continuously updated system

Rapid response to emerging hazards and regulatory changes

Integrated Digital Ecosystem

From disconnected processes → Integrated with QMS, ERP & Alerts

Seamless data flow across upstream & downstream systems

Digital HACCP Platform

Industry Leadership

From internal system → Industry benchmark

Driving adoption & setting new standards in food safety

Operator-Centric Design

Interactive flow diagrams & real-time decision support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People & Culture
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FOOD SAFETY ECOSYSTEM
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Thank you

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