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The Continuous Food & Beverage Safety Playbook

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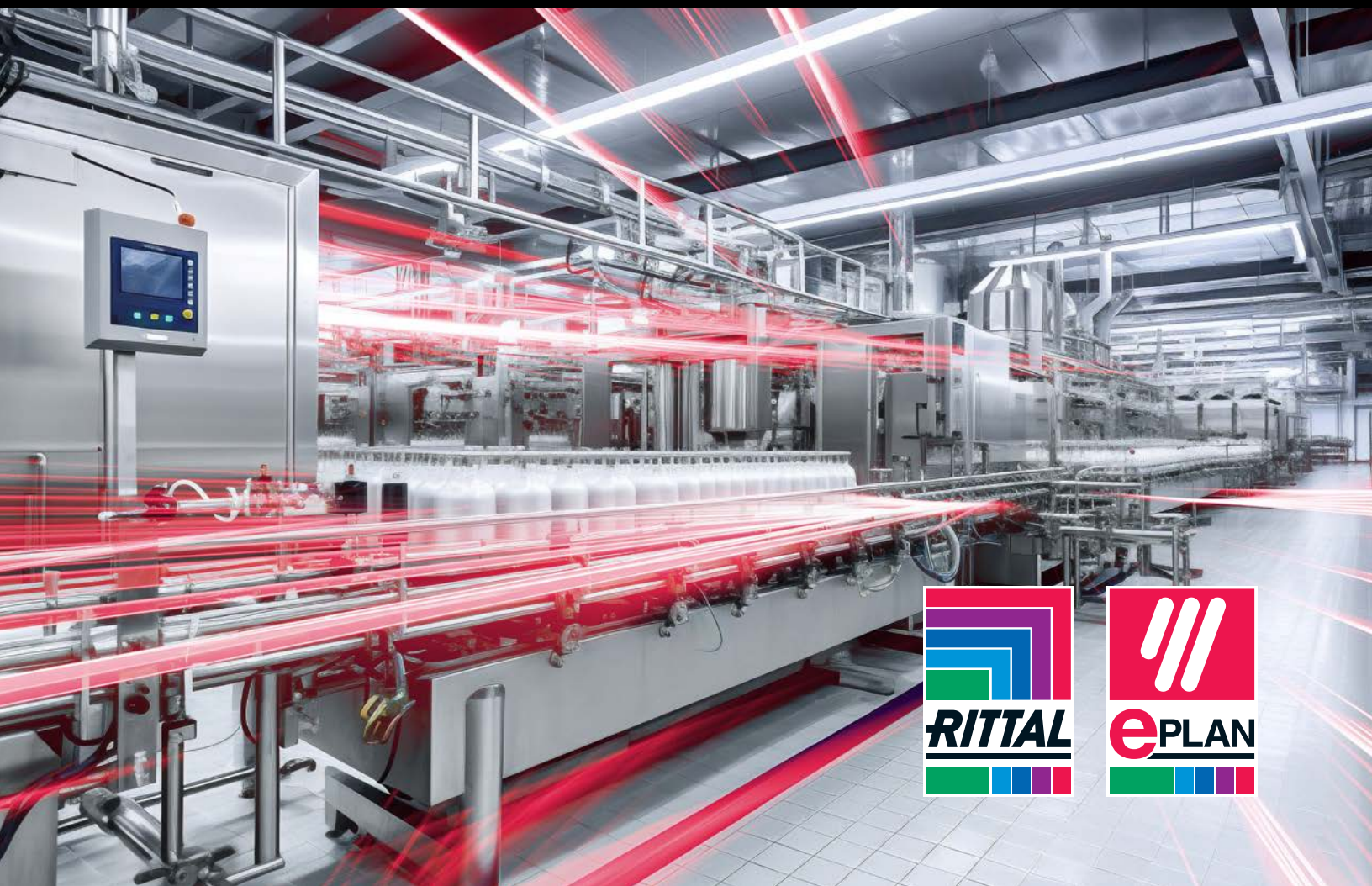

Food & Beverage Manufacturers Are Solving the Wrong Problems

Most companies invest in CAPEX and faster equipment, but the facilities achieving the greatest operational gains are improving something less visible: the infrastructure behind every line.

Food and beverage manufacturers are expected to:

- Improve traceability
- Increase throughput
- Reduce energy consumption
- Automate more processes
- Maintain sanitary conditions across facilities

However, each item depends on a foundation that most capital plans treat as an afterthought.

The devices inside an electrical enclosure run the process. **The infrastructure surrounding it determines how reliably, efficiently, and consistently your processes can operate:** through every washdown, every expansion, and every audit.

This playbook presents five Plays for addressing five real, operational problems with practical frameworks, and what the physical and digital infrastructure must do to support the outcomes.



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Executive Summary: Infrastructure as an Operational Discipline

Often, food plants tackle food safety, uptime, maintenance, expansion, and energy as separate initiatives, but **production depends on one shared foundation:** electrical enclosures, climate control, power distribution, and digital infrastructure.

When that infrastructure isn't standardized, the consequences quickly spread across the plant:

- Repeated equipment failures that maintenance can't get ahead of
- Sanitation windows that stretch because enclosures are difficult to clean
- Unplanned downtime from condensation and corrosion that built up quietly
- Line expansions that take longer and cost more because every project starts from scratch
- Traceability gaps that surface during an audit rather than at the point of capture

The opportunity is to **treat infrastructure as a plant-wide operating system.**

This playbook presents five Plays for doing so:

PLAY 1	PLAY 2	PLAY 3	PLAY 4	PLAY 5
The Zone-First Principle	Make Thermal Management a Calculation, Not an Assumption	Build a Standard Before the Next Line Launch	Design Traceability Infrastructure, Not Just Traceability Software	Govern Change so the Standard Holds



Section 1
Food & Beverage Plants Continue to Evolve

Food and beverage plants have always operated under demanding conditions. Today, those pressures are increasing with:

- More automation and flexible production
- Evolving food safety and sanitation requirements
- Greater traceability expectations
- Fewer experienced engineering and maintenance resources
- Higher throughput and energy-reduction targets

Most plants address these needs one project at a time by adding automation, upgrading lines, replacing aging equipment, or implementing traceability and production-data systems.

Yet the same issues often return because the infrastructure supporting production was not designed for today's operating demands.

Engineering teams spend more time reacting than improving, maintenance teams inherit inconsistent systems, and every expansion introduces more complexity instead of greater capability.

The question is not whether to modernize. It is whether the infrastructure behind production can support modernization.



Section 2: Five Infrastructure Challenges Holding Food Plants Back

Each Play in this playbook addresses one of these challenges.

Challenge 1: Infrastructure Is Not Designed Around Risk

Washdown areas, dry packaging, utilities, refrigerated storage, and processing zones have different environmental demands.

Using the same enclosure, cooling, and installation standards everywhere can lead to:

- Premature equipment failure
- Sanitation and cleaning challenges
- Corrosion and moisture damage
- Higher maintenance and lifecycle costs

Play 1: Zone Your Plant Before You Spec Your Enclosure

Challenge 2: Thermal Performance Is an Afterthought

Enclosure cooling is often selected after the panel design is complete.

Without calculating heat loads and operating conditions, plants risk:

- Nuisance trips
- Shortened component life
- Condensation
- Excess energy use
- Avoidable downtime

Thermal management should begin with engineering, not after equipment selection.

Play 2: Make Thermal Management a Calculation, Not an Assumption

Challenge 3: Every Project Reinvents the Standard

Years of OEM projects, system integrations, retrofits, and plant modifications create a patchwork of platforms, components, documentation, and engineering practices.

The result:

- More engineering hours
- More spare parts
- Longer commissioning
- Greater maintenance complexity

Play 3: Build a Standard Before Your Next Line Launch

Challenge 4: Traceability Depends on Infrastructure Few People See

Traceability is often treated as a software project, but reliable data capture also depends on infrastructure that detects, connects, processes, and preserves it:

- PLCs, I/O, scanners, sensors and vision systems
- Industrial networks and hardware
- Edge computing and local data buffering
- Accurate engineering and as-built documentation

Without that foundation, traceability systems become harder to scale, maintain, and defend during an audit.

Play 4: Design Traceability Infrastructure, Not Just Traceability Software

Challenge 5: Engineering Knowledge Disappears Over Time

Every expansion, retrofit, equipment replacement, and field modification changes the plant.

When those changes are not documented and governed:

- Standards erode
- Drawings become outdated
- Maintenance becomes harder
- Future projects start with less knowledge

What begins as a documentation problem eventually becomes an operational risk.

Play 5: Govern Change So the Standard Holds

Section 3:
The Five Plays

Play 1: The Zone-First Principle

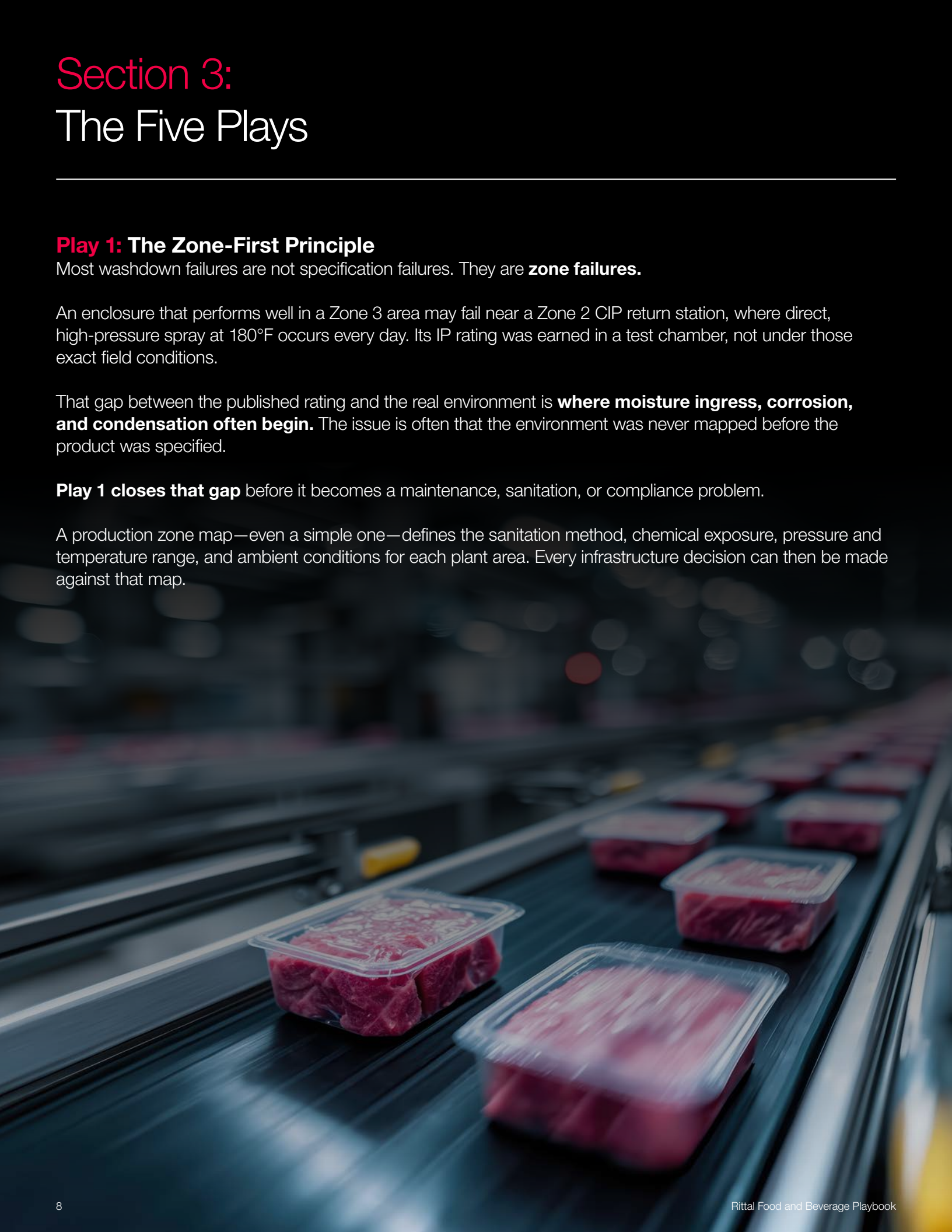
Most washdown failures are not specification failures. They are **zone failures.**

An enclosure that performs well in a Zone 3 area may fail near a Zone 2 CIP return station, where direct, high-pressure spray at 180°F occurs every day. Its IP rating was earned in a test chamber, not under those exact field conditions.

That gap between the published rating and the real environment is **where moisture ingress, corrosion, and condensation often begin.** The issue is often that the environment was never mapped before the product was specified.

Play 1 closes that gap before it becomes a maintenance, sanitation, or compliance problem.

A production zone map—even a simple one—defines the sanitation method, chemical exposure, pressure and temperature range, and ambient conditions for each plant area. Every infrastructure decision can then be made against that map.



Key Actions

1. **Map the Facility into Four Zones:** Direct contact surface (Zone 1), non-contact surface (Zone 2), remote non-contact surface (Zone 3), and general non-contact surface (Zone 4)
2. **Document Each Zone's Conditions:** Maximum washdown pressure, water temperature, chemical type and concentration, and ambient temperature and humidity range
3. **Audit Existing Installations Against the Map:** Identify mismatches, such as splash-rated enclosures in direct-spray areas or standard gaskets in chemical-intensive environments
4. **Make Zone Classification Mandatory:** Require it in every new line specification or capital project before enclosure selection begins
5. **Assess Condensation Risk:** Identify where washdown water temperature, ambient temperature, or door-cycling patterns could create internal moisture

Bonus Tip!

Carry Engineering Intent Forward

Zone classification should live inside the engineering project, not in a checklist that's easy to skip.

Eplan Data Portal and project templates can make zone classification a required field before component selection begins. This keeps the environmental record with the project from day one.

That record guides every downstream decision, from enclosure selection and gasket material to cooling strategy. **Rittal supports the process** with appropriately rated enclosure platforms, hygienic designs, stainless-steel solutions, and coordinated thermal management matched to the actual environment.

When zone classification becomes part of the engineering record, it survives the next line expansion, the next integrator, and the next audit.



Play 2: Make Thermal Management a Calculation, Not an Assumption

Thermal issues are one of the most common causes of unplanned electrical downtime in food and beverage plants. But most panel cooling failures are not simply cooling failures—they are **selection failures.** The system was not sized for the actual heat load or matched to its environment.

Sizing failures usually begin with assumptions: a panel is specified, a cooling unit is selected from a catalog, and anything close to the expected load is considered sufficient. Three years later, a VFD trips on thermal overload every afternoon in July. Maintenance replaces the unit, but the problem returns because the replacement was **sized by feel, not by calculation.**

In food and beverage plants, the stakes are higher than in a typical industrial environment. Panels near fryers, cookers, steam-injection systems, and hot-fill processes face higher ambient temperatures than a catalog selection may account for. Cold-to-ambient transitions create condensation. High-humidity environments can make fan-and-filter cooling unsuitable, regardless of the enclosure's IP rating.

When thermal management fails, plants may face product loss, shelf-life pressure, sanitation delays, and difficult production restarts.

Play 2 replaces assumptions with a defensible thermal calculation. By documenting the internal heat load and actual operating environment, teams can size cooling correctly and verify the design when conditions change.



Key Actions

1. **Calculate the Internal Heat Load:** Add the power dissipation of every heat-generating component at full load, including VFDs, power supplies, controllers, and transformers
2. **Document the Actual Environment:** Record temperature, humidity, seasonal variation, and proximity to ovens, cookers, fryers, steam lines, and other heat sources
3. **Determine Whether Air Exchange Is Appropriate:** In wet, humid, or contact-level zones, closed-loop cooling is typically required regardless of ambient temperature
4. **Design for Peak Conditions:** Include adequate capacity for the peak hottest operating conditions
5. **Recalculate When the Panel Changes:** Every added VFD, controller, or power component increases the heat load and may exceed the original cooling specification

Bonus Tip!

Keep Cooling Correct as the Panel Changes

A thermal calculation only works if it stays connected to the panel design and build.

Eplan Pro Panel calculates heat load from the component placement in the panel and enclosure and compares it with documented ambient conditions. When the design changes, the calculation updates with it.

Rittal thermal management solutions can then be accurately matched to the actual heat load and plant environment.

Blue e+ adaptive cooling responds to real-time demand instead of running continuously at fixed capacity, which reduces energy use and thermal cycling. IoT-capable cooling units also provide temperature, runtime, and alarm data to support condition-based maintenance before a thermal failure interrupts production.



Play 3: Build a Standard Before the Next Line Launch

One of the **most expensive** infrastructure decisions a food and beverage manufacturer can make is **letting every project start from a blank sheet.**

It happens gradually: one integrator uses one enclosure platform; another uses something different; a line installed eight years ago has a different panel layout from one installed four years ago; spare parts are spread across multiple component families.

Then, at 2 a.m., a technician is troubleshooting Line 4 and has never seen that panel layout before because the original vendor has not been on site in years.

Standardization does not mean every panel must be identical. Rather, it means every panel starts from an approved architecture that defines:

- Enclosure family
- Preferred dimensions
- Thermal management approach
- Power distribution architecture
- Cable management practices
- Documentation requirements

When a project moves outside the standard, a formal change-control process can still apply.

The plants that launch lines faster are often the ones with **greater engineering reuse, stronger procurement leverage, and more familiar systems.** Those are all outcomes of standardization.



Key Actions

1. **Audit the Installed Base:** Identify how many enclosure platforms, cooling families, and panel layout approaches exist across lines and sites
2. **Map Who Specifies Infrastructure:** Document which integrators, OEMs, and internal engineers make design decisions and what standards they are required to follow
3. **Pilot the Standard:** Apply a governed architecture to one upcoming line project, then measure engineering hours, commissioning time, and field changes
4. **Control Components and Documentation:** Create approved-vendor and approved-component lists, and require external partners to deliver as-built documentation in a standard format
5. **Track Spare-Parts Reduction:** Compare inventory before and after standardization to quantify one of its clearest operational benefits

Bonus Tip!

Make the Standard the Starting Point

Standards fail when they live only in PDFs.

Eplan turns approved engineering decisions into reusable macro libraries, cloud project templates, and approved-component lists. This creates the standard part of the engineering environment for every engineer, integrator, and OEM.

Rittal modular enclosure and power distribution support those governed designs across lines and sites.

The result is faster engineering, more consistent builds, fewer one-off components, and repeatable designs.



Play 4: Design Traceability Infrastructure, Not Just Traceability Software

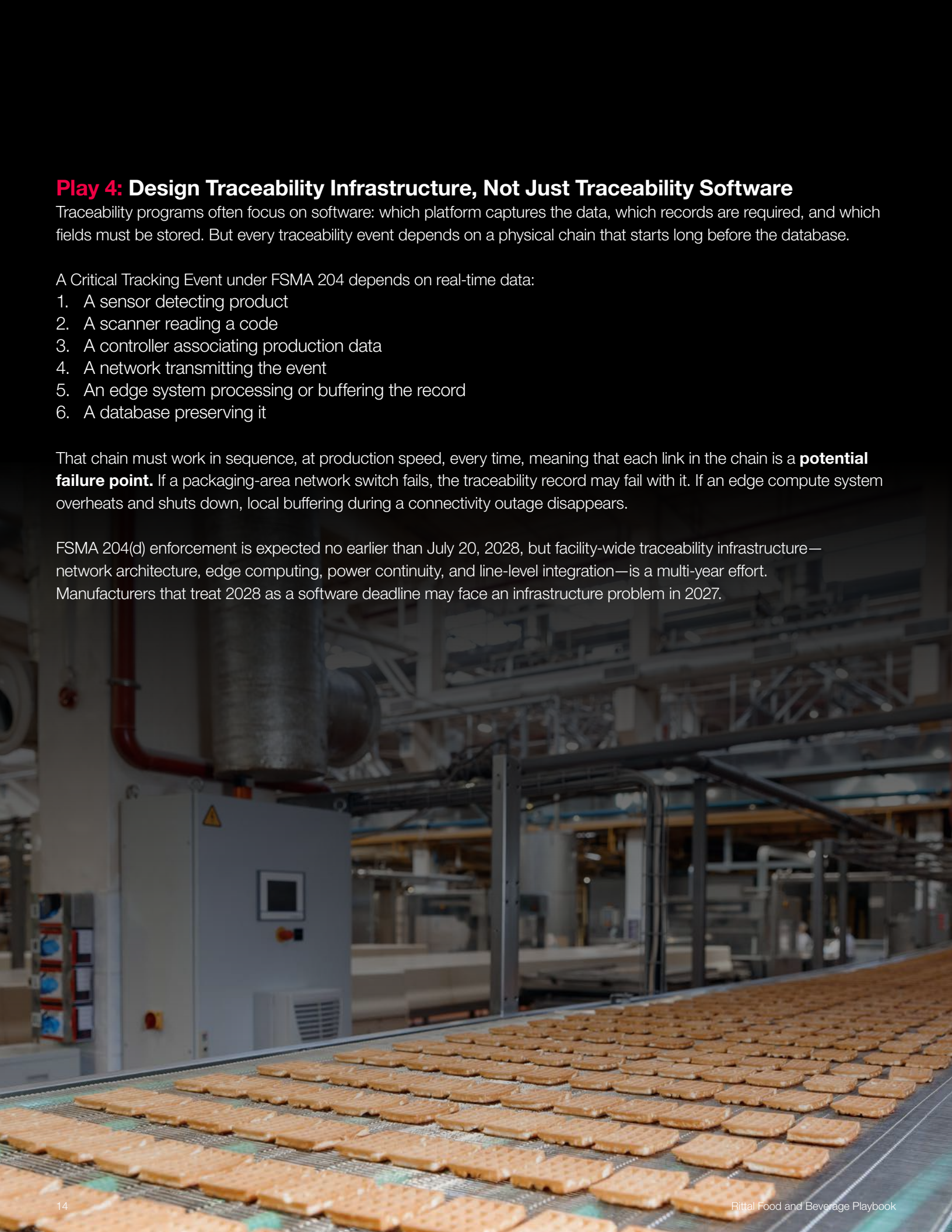
Traceability programs often focus on software: which platform captures the data, which records are required, and which fields must be stored. But every traceability event depends on a physical chain that starts long before the database.

A Critical Tracking Event under FSMA 204 depends on real-time data:

1. A sensor detecting product
2. A scanner reading a code
3. A controller associating production data
4. A network transmitting the event
5. An edge system processing or buffering the record
6. A database preserving it

That chain must work in sequence, at production speed, every time, meaning that each link in the chain is a **potential failure point.** If a packaging-area network switch fails, the traceability record may fail with it. If an edge compute system overheats and shuts down, local buffering during a connectivity outage disappears.

FSMA 204(d) enforcement is expected no earlier than July 20, 2028, but facility-wide traceability infrastructure—network architecture, edge computing, power continuity, and line-level integration—is a multi-year effort. Manufacturers that treat 2028 as a software deadline may face an infrastructure problem in 2027.



Key Actions

1. **Map the Data Flow:** For high-risk products, identify every point where traceability data is captured, transmitted, processed, or stored, and every infrastructure dependency at each step
2. **Identify Local Compute Dependencies:** Document where local processing or storage is required and what happens to the record if that infrastructure becomes unavailable
3. **Audit the Physical Environment:** Check every production-area network switch, edge device, and compute system for temperature, humidity, and protection gaps
4. **Define Continuity Requirements:** Determine which records must be buffered if the connection to the enterprise system is interrupted
5. **Include Traceability in Capital Projects:** Build infrastructure requirements into new line scopes before commissioning

Bonus Tip!

Protect the Full Traceability Chain

A traceability program is only as reliable as the infrastructure beneath it.

Eplan Preplanning maps traceability data flows before detailed electrical design begins.

Eplan Electric P8 then converts those requirements into panel designs, network diagrams, and cable schedules that document the physical chain.

Rittal RiMatrix Micro Data Centers place protected, scalable edge compute and networking infrastructure on the plant floor right where data is generated, providing local buffering when connectivity is disrupted.



Play 5: Govern Change so the Standard Holds

Most infrastructure standards fail because **no one governs them after launch.**

A standard is established for a new line. Six months later, an engineer adds a VFD to a panel sized for the original heat load. A year later, an integrator uses a different enclosure family because the preferred platform has an extended lead time. Then a technician modifies a cable entry during a sanitation repair and does not replace the gland seal. The standard still exists on paper, but **the plant no longer matches it.**

This type of drift rarely happens all at once. It accumulates:

- Panels exceed their original thermal capacity
- Protection ratings degrade through unsealed modifications
- Engineering data falls out of sync with the installed condition
- Audits and failures expose the gap between specification and reality

Play 5 treats the standard as a living system, not a static document.

That means defining which changes require review, who approves them, and which records must be updated before the work is closed. It also means making the as-built condition recoverable from a digital record.



Key Actions

1. **Define Which Changes Require Review:** Include added panel components, modified cable entries, replacement cooling units, and changes to enclosure placement
2. **Track Thermal Headroom:** Document available cooling capacity for each critical panel so engineers can evaluate additions before installation
3. **Require Current As-Built Documentation:** Make updated drawings and records a condition of project closeout
4. **Audit the Installed Condition:** Compare five to ten panels each quarter against their as-built records; the gap measures change-control effectiveness
5. **Include Infrastructure in Preventive-Control Reviews:** Modifications to enclosures in food-zone environments may change the conditions the food-safety plan was built around

Bonus Tip!

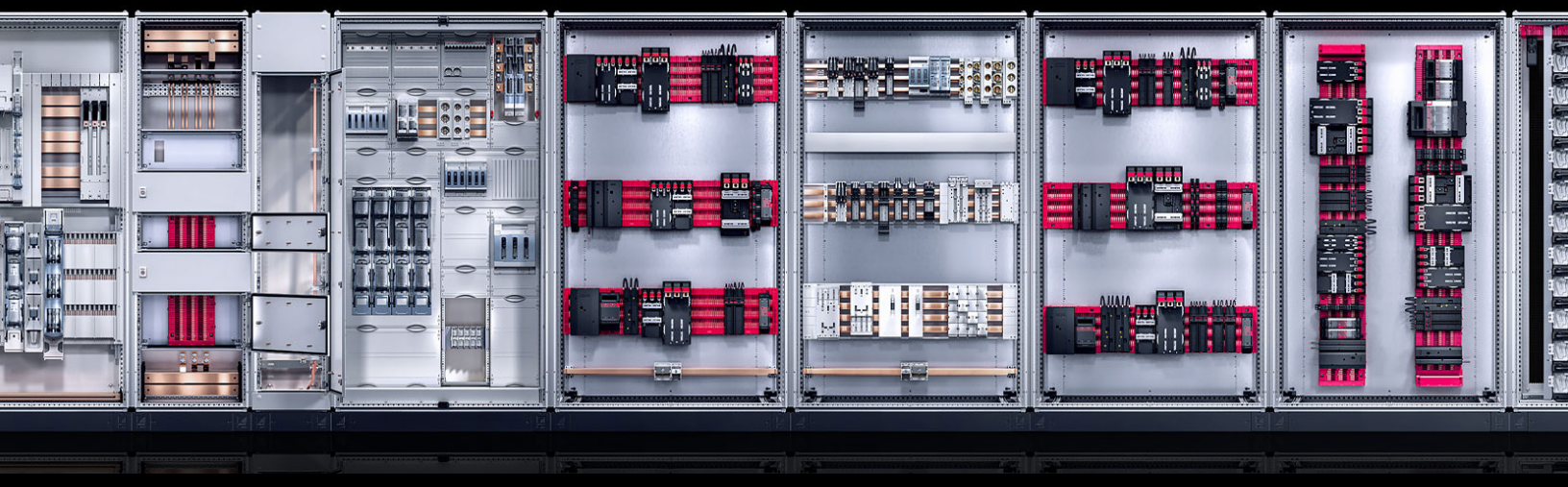
Keep the Installed Condition Visible

Small plant-floor changes quickly create a gap between the engineering record and the actual installation.

Eplan eVIEW captures redlines and field modifications against the current documentation. Approved changes can then be fed back into the master Eplan project, keeping the as-built record aligned with the installed condition and available to engineers, technicians, integrators, and future project teams.

Rittal ePOCKET gives plant-floor access to current wiring diagrams, certificates, and panel documentation from any device.

These solutions keep maintenance teams, service technicians, and auditors working from the same version of the record.



Section 4:
The Infrastructure Maturity Assessment

Score each statement from 1 to 5. Use 1 for not established, 3 for defined but inconsistent, and 5 for measured and continuously improved.

PLAY 1: Know Your Zones

- Enclosure selection is based on documented environmental conditions by production zone
- Washdown method, pressure, temperature, and chemistry are defined for each zone
- Condensation risk is evaluated during the design phase
- Materials are selected for expected chemical exposure
- Modifications are controlled to preserve enclosure integrity and IP rating

PLAY 2: Thermal Management

- Thermal loads are calculated and documented for critical panels
- Cooling selections are made against calculated load, not catalog rules of thumb
- Ambient conditions — including seasonal peaks and proximity to heat sources — are documented
- Cooling condition and alarms are monitored for critical systems
- Available thermal capacity is known before components are added to existing panels

PLAY 3: Build a Standard

- Approved enclosure and cooling platforms are defined and enforced
- Panel layouts follow reusable design standards
- Common spare parts are used across lines and sites
- External integrators and OEMs are required to follow enterprise specifications
- Engineering data is maintained in reusable formats and updated as built



PLAY 4: Traceability Infrastructure

- Traceability data flow is mapped to identify physical infrastructure dependencies
- Critical plant-floor network infrastructure is protected and environmentally rated
- Continuity requirements for traceability systems are defined
- Edge computing needs are included in capital planning for new lines
- Traceability infrastructure is included in the scope of compliance readiness planning

PLAY 5: Govern Change

- A change-control process applies to infrastructure modifications
- As-built panel documentation is updated as a condition of project closeout
- Thermal headroom is tracked and evaluated before components are added
- Infrastructure is audited periodically against as-built documentation
- Infrastructure changes in food zones are reviewed as part of preventive-controls maintenance

Scoring: 25–49 = Reactive. 50–74 = Developing. 75–99 = Standardized. 100–125 = Resilient.

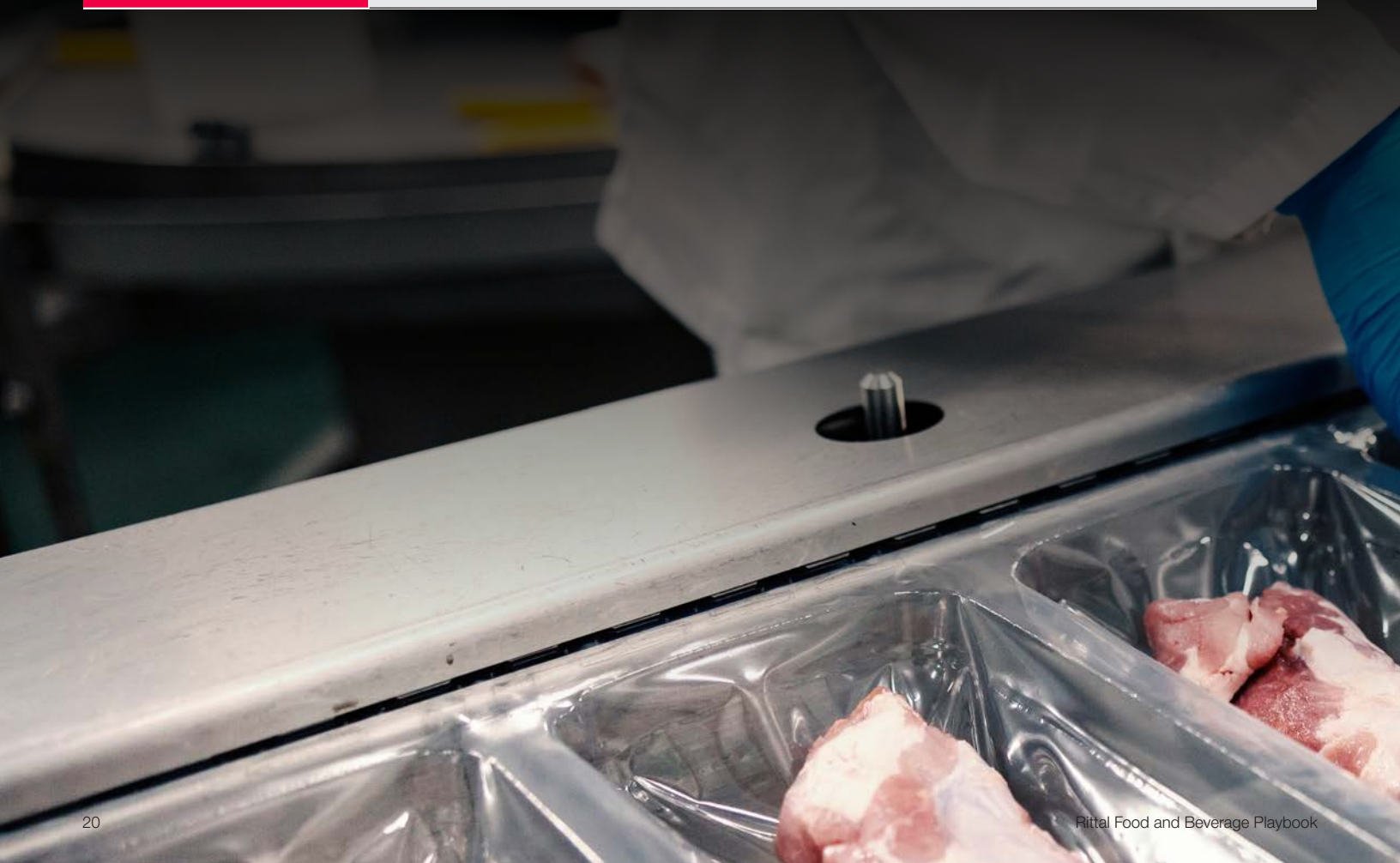
Use your score to identify which play to start with. A low score on Play 1 or Play 2 indicates immediate operational risk. A low score on Play 3 or Play 5 indicates that existing infrastructure is not being sustained. A low score on Play 4 requires attention before the FSMA 204(d) enforcement date.



Section 5:
A Practical Roadmap

The five plays do not need to be implemented simultaneously. The roadmap below sequences them based on risk exposure and operational impact.

This Quarter	Begin Play 1 by mapping production zones for your highest-risk lines. This requires no capital investment, only engineering time and a decision to do it before the next specification.
Next 90 Days	Apply Play 2 to your three to five most critical panels. Document thermal loads, audit cooling unit selections, and identify mismatches. Commission Play 3 by auditing your installed base and identifying a pilot project for a governed standard.
6–12 Months	Launch Play 3 on a new line project. Apply the governed standard, measure the results, and use the data to build the business case for enterprise adoption. Begin Play 4 by mapping traceability data flows and identifying infrastructure gaps.
12–24 Months	Scale Play 3 across lines and sites. Incorporate infrastructure specifications into standard contracts for integrators and OEMs. Implement Play 5's change governance and begin tracking compliance through quarterly audits. Address Play 4 infrastructure gaps ahead of the FSMA 204(d) enforcement timeline.



Section 6:
Five Conversations to Start This Week

The plays in this playbook cut across organizational boundaries, therefore each one requires alignment between functions that typically operate independently. These five conversations—each one specific to a pair of functions—are where that alignment begins.

Quality + Engineering	Are equipment and infrastructure standards aligned with sanitation and food-safety risk zones, and is there a process for keeping them aligned when either changes?
Engineering + Maintenance	Which custom designs create the greatest maintenance and spare-parts burden, and what would it take to standardize the next project?
Operations + Engineering	Which infrastructure failures have the largest production consequence, and are those systems on a thermal and reliability plan or a replace-when-it-breaks plan?
OT + IT	Which production and traceability applications require protected local computing, and what is the plan for FSMA 204(d) infrastructure readiness before the enforcement date?
Capital Projects + Leadership	Can new lines and facilities reuse a governed infrastructure standard, or does every project start from scratch? What does that cost us in engineering hours, commissioning time, and spare-parts inventory?



Conclusion: Resilient Production Starts with the Infrastructure Behind It

The future of food manufacturing will be more automated, more connected, and more accountable than the plants most manufacturers operate today. **Progress will depend on the infrastructure** that protects controls through every wash-down, removes heat reliably through every production run, distributes power to growing automation loads, supports data capture at the pace of traceability requirements, and allows proven designs to be replicated rather than reinvented.

No single Play in this playbook requires a major capital commitment to begin. Instead, start each one with a question that can be asked this week. Move away from reactive decisions and take control of your growth.

Food safety starts with the process. Resilient production starts with the infrastructure behind it.

About Rittal LLC

Rittal LLC is a global manufacturer of industrial and IT enclosures, racks, and accessories, including cooling solutions and power management systems for industrial, data center, outdoor, and hybrid applications. As the largest manufacturer of enclosures in the world, Rittal provides innovative, high-quality solutions for practically any industrial or IT infrastructure application, from single enclosures to comprehensive, mission critical systems. Products are tested and certified to the appropriate standards that apply, including UL, CSA, ATEX, NEMA, and more.
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About Eplan

Eplan is a global leader in software and service solutions for electrical, automation, and mechatronic engineering. Specializing in cutting-edge design software for machine and panel builders, Eplan supports 68,000 customers worldwide via standardized and customized interfaces to ERP and PLM/PDM systems. As part of the Friedhelm Loh Group along with Rittal, Eplan is dedicated to pushing efficiency, integration, and automation in engineering forward.
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THE F&B INFRASTRUCTURE FRAMEWORK

A CONTINUOUS DISCIPLINE FROM ENGINEERING INTENT TO PLANT PERFORMANCE

Five disciplines work together across the asset lifecycle to create safer, more resilient, and more **audit-ready** food and beverage operations.

	THE FIVE DISCIPLINES	THE CONNECTED LIFECYCLE	BUSINESS OUTCOMES
1	**Zone Before You Spec** Washdown failures start with wrong zone specs. Map exposure before selecting a single component.	**ENGINEERING INTENT** Translate food safety and sanitation requirements into governed infrastructure decisions — before the first component is specified.	**Protect Sanitary Operations** Infrastructure that survives washdown, sanitation, and audit scrutiny.
2	**Calculate Cooling. Don't Guess It.** Thermal failures puts product at risk. Calculate actual heat loads against real conditions before selecting cooling.	**DIGITAL ENGINEERING** Design, simulate, and document in a connected environment — so zone maps, thermal calculations, and traceability data flows travel with the project.	**Eliminate Preventable Downtime** Thermal failures, moisture ingress, and corrosion are specification problems. Solve at engineering, not at 2 AM.
3	**Build a Standard Before the Next Line Launch** Starting anew adds complexity with every new line. Governed standards makes each line faster to engineer, deploy, and maintain.	**PHYSICAL INFRASTRUCTURE** Use enclosures, thermal management, and power distribution rated for the actual production environment.	**Reduce Complexity Across Lines & Sites** Fewer enclosure families, fewer spare-parts SKUs, faster commissioning, less emergency maintenance.
4	**Build the Infrastructure Behind Traceability** Build the infrastructure that enables reliable traceability.	**PRODUCTION PERFORMANCE** Reliable uptime and continuous food safety, supported by infrastructure that survives washdowns and audits.	**Be Audit-Ready** Traceable documentation, governed change, and infrastructure that matches the conditions your food safety plan.
5	**Govern Change So the Standard Holds** Standards fail when changes aren't documented. Auditors find the gaps between spec and installed conditions.	**CONTINUOUS IMPROVEMENT** Capture field changes, govern modifications, and keep engineering records synchronized with what's in use.	**Launch New Lines Faster** Governed standards mean every new line, new customer, and new co-pack program starts from a proven design.

! FSMA 204(d) ENFORCEMENT: NO EARLIER THAN JULY 2028

Building reliable traceability infrastructure across a multi-line facility is a multi-year program. Manufacturers who treat 2028 as a software deadline will face an infrastructure problem in 2027.

The discipline is continuous. The food safety case is urgent

When the five disciplines work together, infrastructure becomes the competitive advantage your auditors, customers, and traceability program all depend on.

Score your plant's infrastructure maturity in 10 minutes.

The F&B Infrastructure Playbook includes a self-scoring assessment across all five disciplines — and a sequenced roadmap for deciding what to fix first

Get the playbook + take the self assessment

RITTAL EPLAN

F&B INFRASTRUCTURE SELF-ASSESSMENT

How well does your infrastructure support food safety, uptime, traceability, and growth?

Score your plant across the five disciplines. Identify where infrastructure risk is building and where to act next.

	DISCIPLINE	KEY QUESTIONS TO ASK	CURRENT STATE	PRIORITY ACTIONS
1	**Zone Before You Spec** Design infrastructure for the environment, not the average.	• Do we have a documented zone map for our facility? • Are enclosure types, materials, and ratings aligned to each zone? • Do zones account for sanitation method, pressure, temperature, and chemical exposure? • Is the zone map used in engineering and procurement?	○ STRONG - 3 Fully implemented ○ IN PROGRESS - 2 Partially implemented ○ WEAK - 1 Minimal or not implemented	○ _____ ○ _____ ○ _____ ○ _____
2	**Calculate Cooling. Don't Guess It.** Base cooling on real conditions and verified calculations.	• Do we calculate heat load for every enclosure? • Are cooling selections based on calculated load and environment? • Do calculations account for worst-case ambient conditions? • Do we validate performance after installation?	○ STRONG - 3 Fully implemented ○ IN PROGRESS - 2 Partially implemented ○ WEAK - 1 Minimal or not implemented	○ _____ ○ _____ ○ _____ ○ _____
3	**Build a Standard Before the Next Line Launch** Create repeatable designs that scale across the plant.	• Do we have approved standard enclosures and components? • Are designs reused and adaptedinstead of recreated? • Are documentation and naming standards enforced? • Are OEMs and integrators required to follow the standard?	○ STRONG - 3 Fully implemented ○ IN PROGRESS - 2 Partially implemented ○ WEAK - 1 Minimal or not implemented	○ _____ ○ _____ ○ _____ ○ _____
4	**Build the Infrastructure Behind Traceability** Build the infrastructure that enables reliable traceability.	• Is data captured reliably at the source? • Does the network and edge infrastructure support traceability needs? • Are systems integrated across OT and IT? • Is data secure, available, and auditable?	○ STRONG - 3 Fully implemented ○ IN PROGRESS - 2 Partially implemented ○ WEAK - 1 Minimal or not implemented	○ _____ ○ _____ ○ _____ ○ _____
5	**Govern Change So the Standard Holds** Keep engineering knowledge current and standards intact.	• Do engineering records reflect what's actually installed? • Are standards updated and communicated? • Do we have version control for engineering data? • Do we review changes for impact on operations?	○ STRONG - 3 Fully implemented ○ IN PROGRESS - 2 Partially implemented ○ WEAK - 1 Minimal or not implemented	○ _____ ○ _____ ○ _____ ○ _____

Tally your current state score to learn overall rating — Total Score: ○ Strong foundation (12–15) ○ Developing (8–11) ○ Priority gaps (5–7)

The discipline is continuous. The food safety case is urgent

When the five disciplines work together, infrastructure becomes the competitive advantage your auditors, customers, and traceability program all depend on.

You've identified the gaps. Now build the plan.

See how to strengthen each discipline according to your Current State score

Get the playbook + see the framework

RITTAL ePLAN