

NETWORK BUILDERS IT

INDUSTRY 4.0 RESOURCE | APRIL 2026

Industry 4.0 Self-Assessment Checklist

Food & Beverage Manufacturing

40 items across 5 sections · Covers Levels 1 through 4 · Includes scoring guide

Use this checklist to place your organization on the Industry 4.0 maturity roadmap and identify your highest-priority gaps. Work through each section honestly. Your score is less important than the specific items you cannot check — those are your action list.

Self-Assessment Checklist

Use this checklist alongside the *Industry 4.0 in Food & Beverage Manufacturing* report. Work through each section honestly. Your score matters less than the specific items you cannot check — those are your action list.

HOW TO SCORE

- Check every item that is fully implemented, tested, and documented. Do not check items in progress or planned.
- Count checked items per section. Section scores indicate domain-specific maturity.
- Your overall maturity level is the highest level where you can check all items in that level's sections.

LEVEL 1: Security and Visibility	
<input type="checkbox"/>	A complete IT asset inventory exists and was updated within the past 6 months. <i>Includes all workstations, servers, network devices, and cloud systems.</i>
<input type="checkbox"/>	A complete OT asset inventory exists and was updated within the past 6 months. <i>Includes all PLCs, HMIs, SCADA systems, IoT gateways, and production-floor endpoints.</i>
<input type="checkbox"/>	MFA is enforced on all email accounts without exception.
<input type="checkbox"/>	MFA is enforced on all remote access (VPN, RDP, remote support tools) without exception.
<input type="checkbox"/>	No shared or generic user accounts exist on any system with access to business or production data.
<input type="checkbox"/>	Endpoint protection (antivirus or EDR) is deployed and actively monitored on all managed endpoints.
<input type="checkbox"/>	Backups are performed daily for all critical systems.
<input type="checkbox"/>	A backup restore has been tested within the past 12 months with documented results.
<input type="checkbox"/>	RTO and RPO have been defined for business systems.
<input type="checkbox"/>	A document retention policy exists and is followed for compliance records.
LEVEL 2A: Network and Access Control	
<input type="checkbox"/>	Production/OT systems and business/IT systems are on separate network segments. <i>Verified by firewall rules, not just VLAN assignment.</i>
<input type="checkbox"/>	IoT and sensor devices are isolated in a dedicated network segment.

<input type="checkbox"/>	Vendor remote access uses time-limited, individually scoped credentials rather than permanent shared VPN accounts.
<input type="checkbox"/>	All vendor remote access sessions are logged and reviewed monthly.
<input type="checkbox"/>	Role-based access controls are in place on all business systems, reflecting actual job functions.
<input type="checkbox"/>	Privileged access (admin accounts) is reviewed and recertified at least annually.
<input type="checkbox"/>	All employee accounts are deprovisioned within 24 hours of termination.
<input type="checkbox"/>	A written incident response plan exists covering both IT and OT systems.
<input type="checkbox"/>	The incident response plan has been reviewed and tested within the past 12 months.
<input type="checkbox"/>	Security awareness training has been completed by all employees within the past 12 months with documented records.
LEVEL 2B: Regulatory Documentation	
<input type="checkbox"/>	A written FSMA Preventive Controls food safety plan exists and is current.
<input type="checkbox"/>	CCP monitoring records are captured electronically with automatic timestamps.
<input type="checkbox"/>	Automated alerts are configured for CCP limit deviations.
<input type="checkbox"/>	Corrective action records are maintained electronically and linked to specific CCP deviation events.
<input type="checkbox"/>	Electronic records used for FDA compliance meet 21 CFR Part 11 requirements (audit trails, access controls, unique signatures).
<input type="checkbox"/>	Lot-level traceability covers receiving, production transformation, and shipping. <i>Can you produce a complete forward and backward trace for any lot within 24 hours?</i>
<input type="checkbox"/>	FSMA 204 KDE/CTE data is captured in your ERP or WMS at the lot level. <i>Spreadsheet-based traceability does not satisfy this requirement.</i>
<input type="checkbox"/>	SQF or BRC certification is current and audit findings are tracked to closure.
LEVEL 3: Data and Integration	
<input type="checkbox"/>	Production data flows automatically into the ERP with no manual shift-end entry for yield, downtime, or batch data.
<input type="checkbox"/>	ERP is integrated with the WMS for real-time lot-level inventory visibility.
<input type="checkbox"/>	A full forward and backward lot trace can be produced within 10 minutes from the ERP or WMS.

<input type="checkbox"/>	RTO and RPO have been defined and tested for production systems separately from business systems.
<input type="checkbox"/>	On-premises Active Directory is integrated with Entra ID for consistent identity governance.
<input type="checkbox"/>	Cloud data retention policies are configured by record type to match regulatory requirements.
<input type="checkbox"/>	Security monitoring (SIEM or managed detection) is active across both IT and OT environments.
<input type="checkbox"/>	OT network traffic is monitored for anomalies using OT-aware tools. <i>Standard IT monitoring tools do not detect industrial protocol anomalies.</i>
<input type="checkbox"/>	Network segmentation has been validated (penetration test or segmentation verification) within the past 18 months.
LEVEL 4: Technology Alignment	
<input type="checkbox"/>	A formal technology roadmap exists covering a 3-year horizon, reviewed annually.
<input type="checkbox"/>	A vCIO function (internal or external) is actively engaged in technology strategy decisions.
<input type="checkbox"/>	Predictive maintenance is active on at least one critical production asset using sensor data and analytics.
<input type="checkbox"/>	Energy consumption data from production equipment is captured and reportable. <i>Supports sustainability reporting and ESG-linked requirements.</i>
<input type="checkbox"/>	The organization can satisfy customer ESG questionnaires with verified production data.
<input type="checkbox"/>	ERP, QMS, and production systems are integrated with automated data flows across all three.
<input type="checkbox"/>	Technology investment decisions are made against a documented business case with defined success metrics.
<input type="checkbox"/>	An Industry 5.0 readiness assessment has been completed or is scheduled.

Interpreting Your Results

Section Score	What It Means
Level 1: 8-10 checked	Strong foundation. Proceed to Level 2A and 2B priorities.
Level 1: 5-7 checked	Address unchecked Level 1 items before investing in higher-level capabilities. These are your highest-risk gaps.
Level 1: Below 5 checked	Immediate action required. Level 1 gaps represent active cyber insurance, regulatory, and operational risk.

Section Score	What It Means
Level 2A: 8-10 checked	Network and access controls are solid. Proceed to Level 2B compliance documentation.
Level 2A: 5-7 checked	Meaningful gaps in access control or segmentation remain. Address before advancing to Level 3.
Level 2A: Below 5 checked	Significant exposure. Prioritize network segmentation and MFA enforcement as immediate actions.
Level 2B: 6-8 checked	Regulatory posture is foundational. Prioritize FSMA 204 traceability and 21 CFR Part 11 if unchecked.
Level 2B: 3-5 checked	Compliance documentation gaps create audit and enforcement exposure. Treat as a parallel priority alongside Level 2A work.
Level 2B: Below 3 checked	Regulatory risk is high. FSMA 204 non-compliance and certification gaps should be treated as immediate priorities.
Level 3: 7-9 checked	Operational maturity is strong. Ready to invest in Level 4 strategic capabilities.
Level 3: 4-6 checked	Partially operational. Focus on OT monitoring, ERP integration, and tested DR before advancing.
Level 3: Below 4 checked	Foundation work from Levels 1 and 2 may be incomplete. Revisit earlier sections before investing in Level 3 capabilities.
Level 4: 6-8 checked	Strategic alignment achieved. Conduct an Industry 5.0 readiness assessment to define the next horizon.
Level 4: 3-5 checked	Technology strategy is emerging. Prioritize the vCIO function and formal roadmap to drive the remaining gaps to closure.
Level 4: Below 3 checked	Level 4 capabilities are early-stage. Confirm Level 3 is fully complete before significant Level 4 investment.

Ready to discuss your results?

NBIT works with food and beverage manufacturers at every point on this maturity curve.

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This checklist is a companion to the Industry 4.0 in Food & Beverage Manufacturing report, available at nbit.com/resources. Published April 2026 by Network Builders IT. Regulatory requirements evolve — verify specific compliance requirements against current FDA, USDA, and standards body publications for your product categories.