Release Notes: Fulvisol Food & Beverage v3.0

Platform: Aras Innovator (v32+)

Release Date: October 2025

Document Type: Full Functional & Technical Specification

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1. Core Infrastructure & Organisational Governance

This update establishes a "Top-Down" organisational structure, ensuring that product data is owned and governed by specific business entities.

- **Business Unit Hierarchy:** Introduction of the **Business Unit Item**, the ultimate parent of all organisational data. Supports multi-level sub-business units for global enterprise structures.
- **Geographic Visualisation:** Integrated **Google Maps** functionality.
    - **Purple Pins:** Approved Supplier locations.
    - **Orange Pins:** Sub-business unit locations.
- **Facility Site Planning:** A visual site-plan tool allows users to drag-and-drop specific zones/locations onto a facility blueprint, linking physical locations to digital records.
- **GS1 Membership Management:** Native fields for GS1 Company Prefixes, Location References, and Global Location Numbers (GLN) to ensure supply chain readiness.

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2. Innovation & Risk Management (Universal Items)

Universal relationships allow critical business items to be associated with any point in the product lifecycle (Products, Recipes, or Packaging).

- **Idea Management & The Innovation Funnel:**
    - **Funnel Visualisation:** Real-time tracking of Ideas through Draft, In Review, and Implementation states.

    - **Idea-to-NPD Thread:** Automatic creation of a **Product Brief** once an Idea moves to "Active," preventing data re-entry.

- **Integrated Risk Management:**
    - **Risk Priority Number (RPN):** Automated calculation based on Severity, Occurrence, and Detection inputs.
    - **Interactive Risk Matrix:** A heat-map visualisation that filters active risks based on their criticality.
    - **Mitigation & Contingency:** Dedicated tracking for proactive management and "Lessons Learned" for historical audit trails.

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3. Strategic Range & Portfolio Planning

Manage entire product categories rather than just single SKUs.

- **Granular Range Planning:** Define product categories aligned to **GS1 Global Product Classification (GPC)** standards (Family, Class, Brick, and Attributes).
- **The Range Calendar:**
    - **Global Trading Dates:** A database of regional retail and market dates, color-coordinated to synchronise product launches with peak consumer demand.
    - **Seasonal Intelligence:** Visual overlays for planting and harvesting dates, allowing R&D to plan recipes around crop availability and optimal contracting periods.
- **Strategic Sync:** The ability to overlay project milestones (Stage-Gate) onto the Range Calendar to identify timeline conflicts early.

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4. Advanced Product Hub & Classification

The Product Item acts as the "Central Container" for all technical and commercial data.

- **Digital Thread Integrity:** Direct linking between the Product, its Project Plan, its Recipe, and its Trade Units.
- **Version Control & Traceability:** Full versioning history initiated by **Change Requests**. Systems now display the "Originating Change Request" to provide a clear audit trail of *why* a product was modified.
- **GPC Automation:** Interactive lookup for GS1 Brick and Attribute codes, ensuring products are classified correctly for international trade.

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5. Formulation & Regulatory Science

The engine room of the F&B package, bridging the gap between a chef's kitchen and a scientist's lab.

- **Smart Formulation:**
    - **Dataset Integration:** Direct access to the **McCance and Widdowson's 'Composition of Foods'** integrated dataset.
    - **Auto-Calculations:** Live nutritional breakdown, **QUID** declarations, and automated allergen highlighting.
- **Instructional Intelligence:**
    - **@Tags:** Reference ingredients, equipment, and locations directly within instructional steps.
    - **Yield & Loss Logic:** Define start weights and cook losses per step for precise final output weights.
- **Regulatory Guardrails:**
    - **Inhibited Ingredient Checks:** Automated scanning against regulated additive lists.
    - **Nutritional Claims Eligibility:** The system identifies if a product is legally eligible for claims such as "High Protein" or "Low Sugar" based on final analytical data.

- **Environmental & Commercial Impact:** Automated **Carbon Footprinting** (Transit + Sourcing) and real-time **Recipe Costing** with multi-currency conversion.

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6. Food Safety & HACCP Governance

- **Integrated HACCP Planning:** By flagging a recipe step as a **Critical Control Point (CCP)**, the system automatically builds a product-specific HACCP Plan.
- **Hazard Analysis:** Define Physical, Biological, and Chemical hazards along with their respective critical limits.
- **Monitoring & Logs:** Association of digital logs (e.g., temperature checks, inspection documents) directly to the CCP, ensuring audit readiness at all times.

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7. Sensory Analysis & Sampling

- **Sampling Panels:** Designate internal and external tasters (Suppliers, Managers, Customers) and track their response status.
- **Quantitative Sensory Metrics:** Panellists score Appearance, Aroma, Flavour, and Texture.
- **The "Proceedable" Gate:** A mandatory scoring threshold (e.g., Score > 30) dictates whether a recipe can proceed to the next development gate.

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8. Trade Item & Packaging Execution

- **Trade Hierarchy:** Manage the link between Consumer Units, Orderable Units, and Shipping Units. Data (like weights and dimensions) aggregates automatically from child items to parent pallets.
- **Packaging Brief & Materials:**

    - **Die Line & Artwork Management:** Dedicated properties to manage templates and high-res artwork files.
    - **Recyclability Assessment:** Automated scoring of packaging sustainability.
- **Pack Copy Master:**
    - **Drag-and-Drop Layout:** Move assets from the "Back of Pack" and "Front of Pack" tabs directly onto the Die Line template.
    - **Integrated Markup:** Tools for adding text, arrows, and boxes directly onto artwork for designer feedback, with full version history in the **History Tab**.

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9. Project Management (NPD/EPD Execution)

- **Plan View (Gantt):** A visual project timeline with drag-and-drop dependency management.
- **Stage-Gate Control:** Specific **Gates** require digital checklist completion (Name, Date, and Identity automatically captured) before a project can advance.
- **Critical Path Analysis:** One-click highlighting of the tasks that dictate the final launch date.
- **Agile Kanban:** A board view for team members to promote/demote tasks from "To-Do" to "Complete" via a simple drag-and-drop interface.

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10. Support & Compliance

- **Export Engine:** All specification data (Product, Recipe, Packaging) can be exported to a standardised **PDF Technical Specification** for external stakeholders.
- **Audit Trail:** Every change across the system is timestamped and user-stamped, meeting BRCGS and IFS requirements for data integrity.