



Case Study: From Fragmented Forecasting to Unified Intelligence: Blueprinting an S/4HANA & IBP Transformation for Sunshine Foods

Executive Summary

Company: Sunshine Foods, a \$2.5B US packaged foods manufacturer with 8 production plants and 12 distribution centers.

Challenge: Fragmented planning across legacy AS/400 systems and manual Excel processes leading to 65% forecast accuracy, 35% inventory carrying costs, and frequent stockouts/overstocks.

Solution: A unified SAP S/4HANA & IBP implementation with a strategic blueprinting approach focused on planning transformation.

Results: Blueprint successfully established foundation for target 85% forecast accuracy, 25% inventory reduction, and \$50M in working capital optimization.

1. The Planning Crisis at Sunshine Foods

Sunshine Foods, known for its "ChumBites" snack line and "ChefPal" meal kits, operated on an architectural patchwork:

- **AS/400 systems (Green Screen)** at each manufacturing plant with localized MRP
- **Standalone warehouse management systems** at DCs with no integration
- **Manual demand planning** using 200+ Excel files consolidated weekly
- **S&OP process** conducted via PowerPoint and email collaboration

The Pain Points:

- Monthly forecast cycle took 14 business days
- 40% of planner time spent on data collection vs. analysis



- Frequent "fire drills" for promotional planning (e.g., back-to-school snack surges)
- Inability to sense demand signals during COVID-19 pantry-loading spikes
- Shelf-life challenges with 30% of SKUs (fresh ingredients)

The decision was made: Implement SAP S/4HANA as the digital core with **IBP for Demand, Response & Supply, and Inventory** to create an integrated planning nerve center.

2. The Blueprinting Philosophy: Planning-Led, Not System-Led

Instead of beginning with technical configuration, Sunshine adopted a "**Planning Excellence First**" blueprinting methodology over 16 weeks.

Phase 1: Current State Discovery & Pain Point Cataloging (Weeks 1-4)

Activities:

1. **Process Mining Workshops:** Documented "as-is" processes across:
 - **Demand Planning:** How statistical forecasting was done, manual overrides, promotion planning
 - **Supply Planning:** How plant schedules were created, constraint management
 - **Inventory Planning:** Safety stock methodologies (if any), service level trade-offs
 - **S&OP Process:** Current meeting structure, inputs/outputs, decision rights
2. **Data Archaeology:**
 - Mapped 15 data sources feeding planning decisions
 - Discovered 3 versions of "truth" for customer demand (EDI, shipments, bookings)
 - Analyzed 24 months of forecast vs. actual data to identify biggest error drivers
3. **Stakeholder Journey Mapping:**
 - Conducted "A Day in the Life" sessions with planners, plant schedulers, and sales analysts



- Identified key pain points: "I spend 4 hours Monday just gathering files from plants"

Key Finding: 70% of planning complexity came from **exception management** not core processes.

Phase 2: Future State Design - The "North Star" Planning Vision (Weeks 5-10)

The Guiding Principle: "One Plan, Multiple Views" - A single demand plan driving all execution.

Design Sprint 1: Demand Planning Blueprint

- **Statistical Model Selection:** Identified which of IBP's algorithms fit Sunshine's patterns:
 - **Causal Models** for promotion-heavy categories (30% of volume)
 - **Croston's Method** for slow-moving ingredients
 - **Multi-level forecasting** for ingredient-to-finished goods linkage
- **Collaboration Workbench Design:** Built mockups for how Sales would provide input on key accounts
- **New Product Introduction Process:** Designed stage-gate process for launch forecasting

Design Sprint 2: Supply & Response Planning Blueprint

- **Production Version Strategy:** Designed 3 planning Sunshines:
 - **24-month strategic** for capacity planning
 - **13-week tactical** for production scheduling
 - **4-week frozen** for execution
- **Constraint Modeling:** Identified 12 key constraints (oven time, packaging lines, cold storage)
- **Response Planning:** Designed "what-if" scenarios for promotional spikes (e.g., Super Bowl ads)

Design Sprint 3: Inventory Optimization Blueprint

- **Service Level Strategy:** Differentiated by customer/channel:



- 99.5% for key grocery retailers
- 98% for food service
- 95% for secondary channels
- **Shelf-Life Integration:** Designed alerts for items approaching 70% of shelf life
- **Safety Stock Methodology:** Transitioned from "rules of thumb" to statistical optimization

Design Sprint 4: Integrated Business Planning (S&OP) Blueprint

- **Monthly Business Rhythm:**
 - Week 1: Demand Review
 - Week 2: Supply Review
 - Week 3: Pre-Executive S&OP
 - Week 4: Executive S&OP
 - **IBP Analytics & Dashboard Design:** Created wireframes for each review meeting
 - **Decision Rights Matrix:** Clarified who could override forecasts at what level
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Phase 3: Gap Analysis & Roadmapping (Weeks 11-14)

The Integration Imperative:

1. **S/4HANA to IBP Data Flows:**
 - Master Data: Materials, Locations, BOMs, Resources
 - Transactional: Sales, Production, Inventory, Purchase Orders
2. **Critical Design Decisions:**
 - **Planning Level:** Decided on "Location by Day" granularity
 - **Time Profiles:** Aligned fiscal periods, promotional calendars
 - **Attribute-Based Planning:** Created attributes for "Organic," "Gluten-Free," "Seasonal"
 - **Real-Time Integration:** SAP PP/DS for detailed scheduling at plant level

Gap Resolution Approach:



- **Process Gaps:** 45 identified, 40 solved via IBP standard, 5 requiring business adaptation
 - **Data Gaps:** Clean-up program launched 6 months before technical implementation
 - **Organization Gaps:** New Planning Center of Excellence structure designed
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Phase 4: Blueprint Validation & Organizational Alignment (Weeks 15-16)

The "Proof of Concept" Pilot:

- Selected 2 product families (150 SKUs) representing 20% of revenue
- Built prototype in IBP sandbox using 18 months of historical data
- Demonstrated: Promotional lift planning, constrained capacity scenario, inventory optimization

Blueprint Deliverables Created:

1. **Business Process Design Documents** (87 processes)
 2. **Solution Design Documents** (IBP configuration specifications)
 3. **Data Migration Strategy** (AS/400 to S/4HANA to IBP)
 4. **Integration Design Documents** (CI-DS data flows)
 5. **Organizational Change Impact Assessment**
 6. **Training Curriculum Design**
 7. **Value Realization Roadmap** with KPIs
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3. Critical Success Factors in Blueprinting

1. Business Ownership from Day One

- **Planning CoE Director** was the business project lead, not IT



- Each design sprint had dedicated business SMEs (50% of their time)
- **"No design without user validation"** rule enforced

2. Data Foundation First

- Statistical analysis of forecast errors informed algorithm selection
- Master data governance council established before technical build
- **"Garbage in, garbage out"** mantra drove data quality investment

3. Phased Adoption Mindset

- Blueprint designed for **Wave 1** (Demand & Inventory) then **Wave 2** (Response & S&OP)
- Recognized cultural shift from "gut feel" to algorithmic planning
- Change management embedded in every design decision

4. IBP-S/4HANA Integration as a Single Design

- Single team designed both systems' planning-relevant processes
- Avoided "seams" between strategic (IBP) and operational (S/4HANA) planning
- PP/DS detailed scheduling designed as natural extension of IBP response planning

4. The Implementation Roadmap (Post-Blueprint)

Phase 1 (Months 1-6): S/4HANA Finance & Logistics core

Phase 2 (Months 7-12): IBP Demand & Inventory

Phase 3 (Months 13-18): IBP Response & Supply with S/4HANA PP/DS

Phase 4 (Months 19-24): IBP for Sales & Operations, Advanced Analytics

Expected Business Outcomes:



- Forecast accuracy: 65% → 85%
 - Planning cycle time: 14 days → 3 days
 - Inventory turns: 6 → 9
 - Planner productivity: 40% analysis time → 75% analysis time
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5. Lessons Learned for Other Manufacturers

1. **Start with the business question, not the software feature:** "How do we reduce stockouts?" not "How do we configure IBP?"
 2. **Blueprinting is 80% process design, 20% system design:** The organizational changes matter more than the configuration.
 3. **Invest disproportionately in data readiness:** Clean, harmonized data from legacy systems is the single biggest predictor of success.
 4. **Design for the planners, not the executives:** While executive dashboards are important, if planners don't trust the system, adoption fails.
 5. **IBP is a planning transformation program with software, not an IT project:** This mindset must be established in blueprinting.
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Conclusion

For Sunshine Foods, the blueprinting phase wasn't just documentation—it was the **strategic foundation** that aligned a fragmented organization around a new planning paradigm. By spending 16 weeks deeply understanding current pains, designing a compelling future state, and rigorously planning the journey, they transformed what could have been another failed planning system implementation into a catalyst for competitive advantage in the volatile packaged foods market.



**"The blueprint made us confront our planning dysfunctions before we could automate them.
That was uncomfortable but invaluable."**

— VP of Supply Chain, Sunshine Foods

This case study illustrates how a structured, business-led blueprinting approach can successfully bridge the gap between legacy planning systems and modern, integrated business planning with SAP IBP and S/4HANA.