

Analytics in Consumer Products: The Kelsey-White Simulation

Lecture 3: Big Data & Analytics in the F&B Sector

- Focus Case: ‘Blue’ Detergent at Kelsey-White (K-W)
- Objective: Transforming raw data into strategic action using the ‘Vision’ system

The Data-Intensive Nature of Consumer Goods

Consumer products are a data-intensive industry. Almost every company in the sector is shifting toward analytical models; it is no longer optional.

- **The Data Source:** Primary customer data originates from point-of-sale systems (barcode scanners in supermarkets).
- **Strategic Application:** Executives use this data to validate four critical dimensions:
 1. **Targeting:** Are we reaching the right customers?
 2. **Strategy:** Are we pursuing the right long-term approach?
 3. **Operations:** Is the business operating efficiently?
 4. **Marketing:** Are campaigns and promotions executing correctly?



The Crisis at Kelsey-White



The Product Profile

Product: "Blue" Laundry Detergent

Status: Key revenue driver for K-W. Formats include Liquid, Powder, and Single-use Pods.

The Problem: Downward drift in market share and profitability. The customer base is aging, and the brand is failing to recruit new generations. "Pods" have slow sales, and the liquid format is perceived as "too modern" for legacy customers.

The Organizational Pivot

Historical Context: K-W historically lagged competitors in data usage.

The Intervention: A new CEO has mandated quantitative decision-making.

The Tool: Implementation of 'Vision'—a centralized system displaying market, financial, and operational performance.

Competitive Landscape Analysis

Competitor A: Turbo (Market Leader)	Competitor B: Fresh (The #2 Player)	Competitor C: Store Brands
<p>Positioning: Highest price point; focused on 'cleaning power'.</p> <p>Demographics: Heavily targets Millennials (35% of spend is on digital ads).</p> <p>Channels: Dominant in large retailers (Walmart/Target) and small urban stores.</p> <p>Innovation: First mover in pods and liquids.</p>	<p>Positioning: 'Fresh, clean smell'.</p> <p>Strategy Mismatch: Stated aim is younger customers, yet they rely on TV spots during daytime broadcasts.</p> <p>Channels: Strongest in mid-sized grocery chains.</p> <p>Product: Strong sales in powder formulation.</p>	<p>Strategy: Pure price competition.</p> <p>Positioning: Lowest prices in the market.</p>

Simulation Success Metrics

Defining the 'Win Condition' for the K-W Turnaround

Cumulative Profit

The bottom-line financial health over the simulation period.



Revenue

Top-line growth indicating sales volume and pricing power.



Market Share

Competitive dominance against Turbo and Fresh.



Discussion Point: Successful management requires balancing these three. Aggressive share growth (via price cuts) often destroys cumulative profit.

Phase 1: Descriptive Analytics (Looking Back)

Analyzing Historical Data via the 'Vision' Tool

- Historical Analysis Key Questions:
 - **Effort Analysis:** How much time was invested in exploring Blue's history before acting?
 - **Filtering:** Which specific data filters triggered a change in decision-making?

The Value of Hindsight:

Common Misconception:
'Past data is irrelevant to a turnaround.'

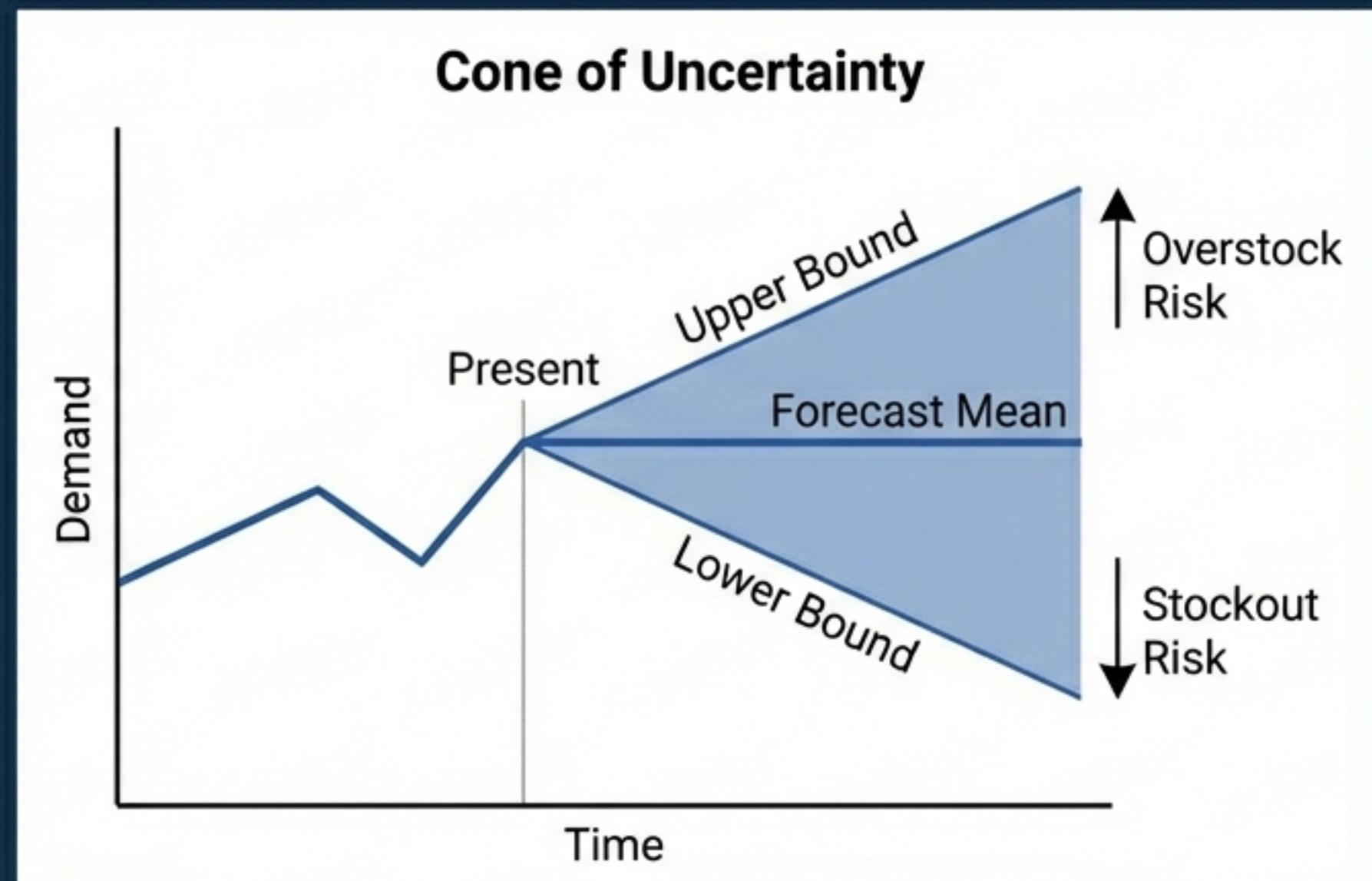
Correction: Understanding historical relationships among variables (e.g., how price impacted volume in the past) is a prerequisite for modeling the future.



Phase 2: Predictive Analytics (Forecasting)

The Challenge of Demand Planning

- **The Forecasting Challenge:** The outcome is always a probability range, not a specific number. Searching for false certainty is a strategic trap.
- **Inventory Risk Assessment:**
 - **Scenario A (Too Much):** Waste, holding costs.
 - **Scenario B (Too Little):** Stockouts, lost revenue, customer churn.



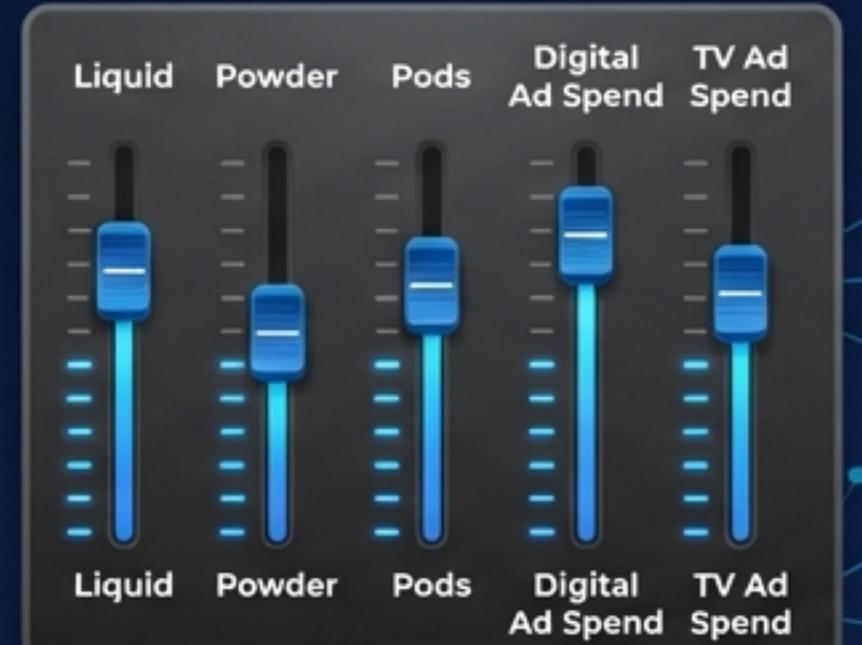
Phase 3: Prescriptive Decisions (Product & Promotion)

Making Decisions & Adjusting Levers in the Simulation

Product Levers

- ⌚ **Product Formulation:** Decisions to shift focus between liquid, powder, or pods.

- 📍 **Positioning:** Adjusting features to target specific demographics (e.g., shifting 'Blue' to appeal to Millennials).



Promotion Levers

- 🔊 **Media Channel:** Ad spend allocation (Digital vs. TV).
- 👉 **Trade Channel:** Retailer incentives.

Social Sentiment

Social Listening: Did you utilize Social Sentiment data? How did qualitative customer feedback influence quantitative decisions?

Phase 3: Prescriptive Decisions (Price & Geography)

Analyzing Aggressive Tactics

- **Price Strategy:** Did anyone lower price dramatically to gain market share? Note the impact on profitability.
- **Geographic Strategy:** Assessing the success of targeting specific regions versus a national approach.
- **Competitive Clash:** Attempts to go upmarket to compete directly with Turbo.



Deepening the Analysis: The ‘Why’

The What (Descriptive)

- Observing results (e.g., Sales dropped).



The Management Reality

- Management is a complex balancing act. Decisions involve multiple variables simultaneously.
- **Example:** Changing price affects volume -> affects inventory requirements -> affects holding costs. You cannot isolate variables; you must manage the ecosystem.

Theoretical Framework: Types of Analytics

Descriptive Analytics

Definition: What has happened?

Context: Historical reports and 'Vision' dashboard reviews.



Predictive Analytics

Definition: What could happen?

Context: Demand forecasting and probability ranges.



Prescriptive Analytics

Definition: What should we do?

Context: Optimization and selecting specific strategic levers (Price, Formulation, Channel)

Real World Implementation Barriers

Why isn't every company doing this perfectly?



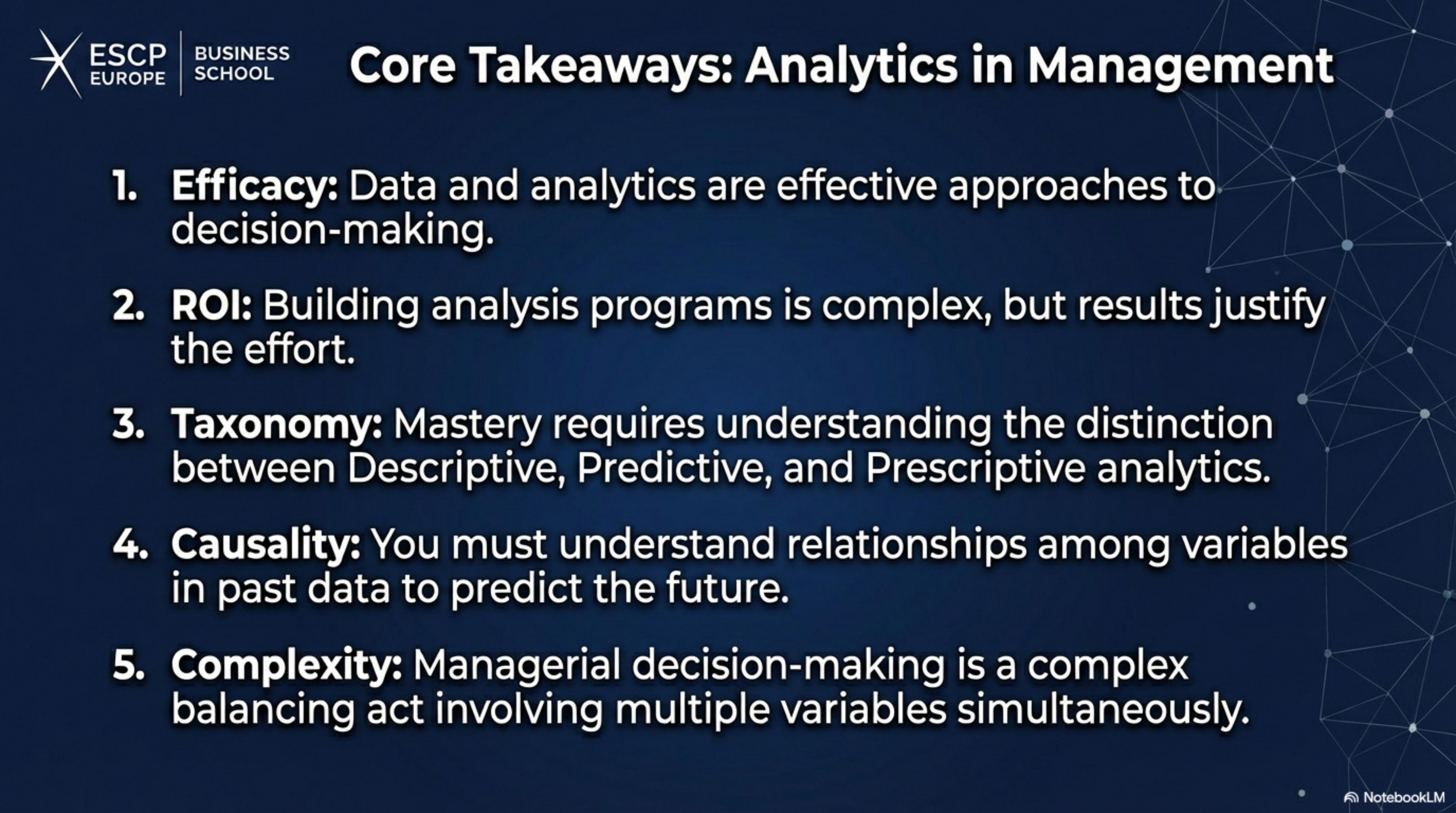
The Integration Challenge: How difficult is it to assemble disparate data sources (POS, supply chain, social media) into a single integrated system like "Vision"?

Threats to Validity: What factors might invalidate data-driven lessons?

- Structural market changes
- “Black Swan” events
- Flawed data collection

Value Proposition: What makes these systems valuable versus just “expensive effort”? (Speed of decision making, accuracy of targeting).

Core Takeaways: Analytics in Management

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1. **Efficacy:** Data and analytics are effective approaches to decision-making.
 2. **ROI:** Building analysis programs is complex, but results justify the effort.
 3. **Taxonomy:** Mastery requires understanding the distinction between Descriptive, Predictive, and Prescriptive analytics.
 4. **Causality:** You must understand relationships among variables in past data to predict the future.
 5. **Complexity:** Managerial decision-making is a complex balancing act involving multiple variables simultaneously.

Beyond Kelsey-White

What is another example of a real-world application of analytics for managing a company?

The principles of the 'Vision' system apply across F&B, Hospitality, and CPG sectors.
Identify similar data-integration opportunities in your own professional tracks.