

# Supply Chain Optimization: Cost-Effective Inventory Management, a Value Opportunity

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- Background
- Value Constructs
- Opportunities
- Tool & Benefits
- Results
- Wrap-up

- Mike Griswold – Strategic Process Leader
  - Present the process perspective

- History
  - 1850
    - ▶ George C. Shaw opens small tea shop in Portland, ME
    - ▶ Maynard Davis opens BPM stores in MA
  - 1919
    - ▶ Davis buys Shaw as subsidiary of BPM
  - 1978
    - ▶ BPM stores change to Shaw's Supermarket, Inc.
  - 1987
    - ▶ Acquired by J. Sainsbury Plc

- History (cont'd)

- 1995

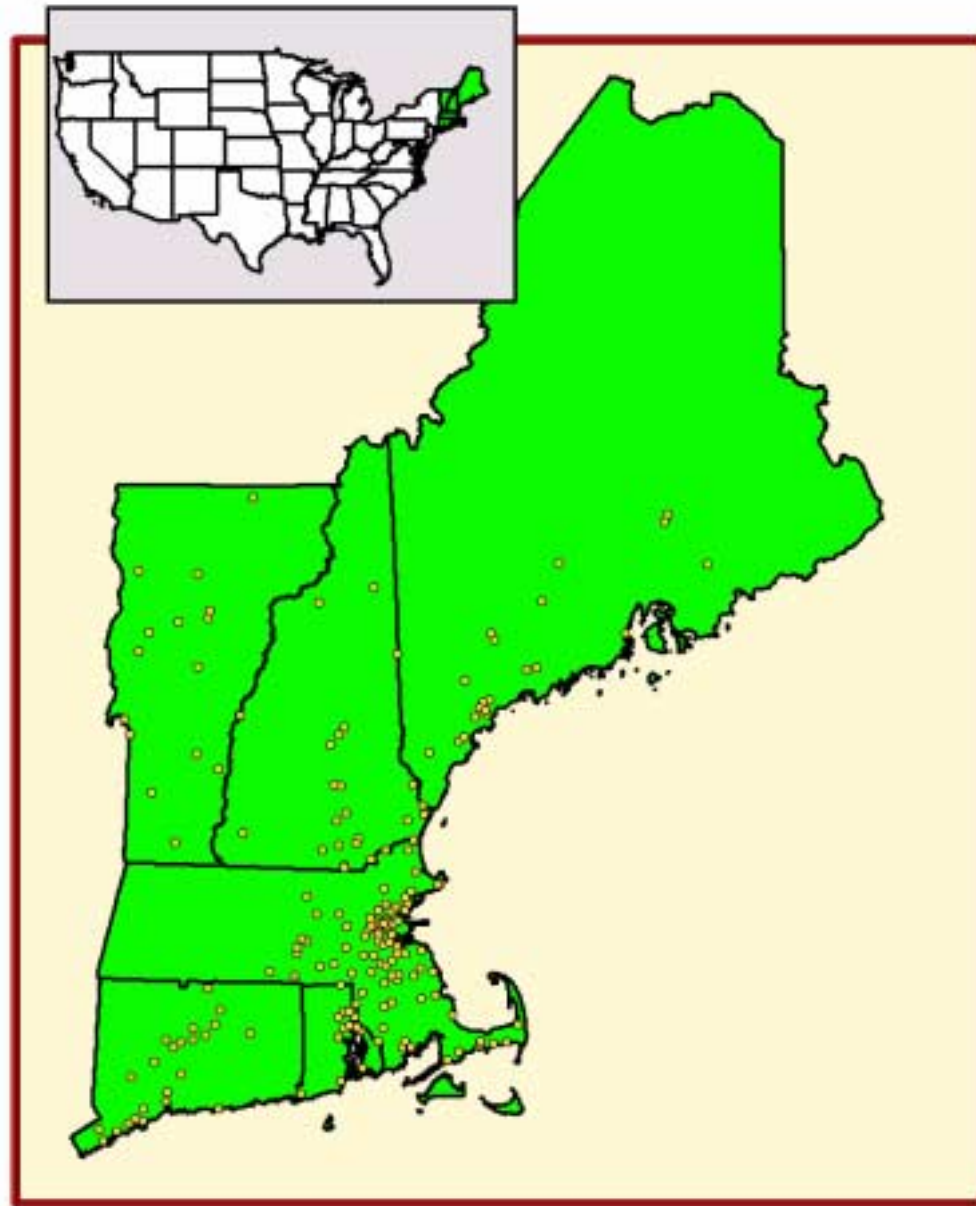
- Shaw's opens first CT store (23 today)

- 1998

- Acquired Star Markets (Boston)

- 2000

- Acquired 18 Grand Union stores (VT, CT)



- Physical
  - Movement/flows within/between firms
- Financial
  - Flows of cash between firms, use of investment
- Informational
  - Processes, systems enablers
- Relational
  - Linkage between supplier, organization & customers

- Mike Lech – Vice President, Supply Chain
  - Present the business perspective



- 185 stores
- Almost 30,000 associates
- Over \$4B in sales
- Number 1 or 2 in all markets
- 3 Distribution Centers
- 1 major wholesaler

## Shaw's Background

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### Physical Pre-October 2001

- Ambient Grocery - East Bridgewater, MA
- HBC, GM Slow Moving, Cross-dock – Lakeville, MA
- Ambient Grocery, Frozen Food – Wells, ME
- Perishables – Methuen, MA

## Shaw's Background

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### Financial Pre-October 2001

- Distribution costs as % of sales higher than desired
  - High cost
  - Older facility
  - Temporary slow moving DC

## Shaw's Background

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### Informational Pre-October 2001

- Limited analytical tools
- Unsophisticated modeling
- Local optimization

## Shaw's Background

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### Relational Pre-October 2001

- Outdated, poorly located facilities
- Functional (silo) organization
- Limited 3<sup>rd</sup> party relationships

### Post October 2001 – What Changed

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#### Physical

- Closed 2 distribution centers
- Added wholesaler capacity
- Introduced Cross-dock facility

#### Financial

- Increased dependency on wholesaler
  - Reduced inventory charges
  - Upcharges
  - Shrink/damage issues

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### Post October 2001 – What Changed

#### Informational

- More powerful decision support tools
- Data exchange challenges

#### Relational

- Decision to close facility
- Wholesaler dynamic
- Want to migrate to process based organization

### Physical

- Item/store alignment
- Delivery alternative

### Financial

- Cost model (upcharge based)
- Savings
  - Upcharges
  - Transportation costs



### Informational

- Speed
- Optimization
- Cost of decisions

### Relational

- More efficient processes
- Improve strategic decision making process

- A strategic and tactical planning tool used for:
  - Strategic Network Design with seasonal demand, capacity, and costs
  - Network Expansion Models
  - Capital Capacity Planning

Also...

- Constructs and manipulates “what-if” scenarios
  - Combines LP/MIP optimization and discrete event simulation
  - Supports rapid strategic planning with an intuitive graphical user interface

### Physical

- Improved ability to pre-position assets
- Better utilization of assets
- Intelligent capital and operating investments

### Financial

- Increased margins because of reduced fixed and operating costs
- Increased asset utilization and low inventory investments

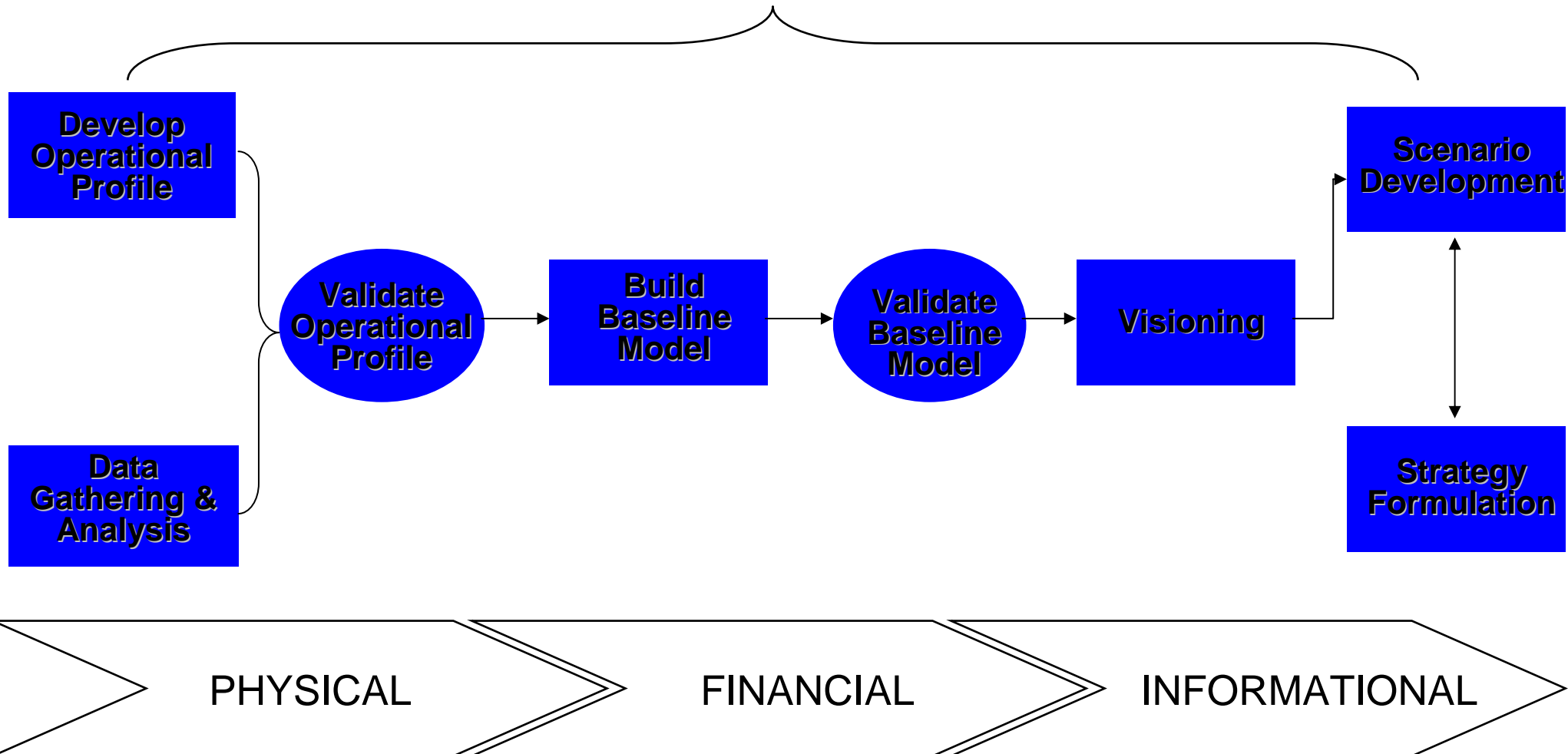
### Informational

- Ability to make optimal, high-impact strategic decisions
- Ability to quickly implement strategic decisions with confidence

### Relational

- Better management of wholesaler relationship

## Six – Eight Weeks



- Determine scope of the opportunity
- Assemble cross-functional team
- Finalize guidelines

- Develop Operational Profile
  - Understand characteristics of current Supply Chain
  - Any new issues that should be considered
- Data Gathering & Analysis
  - Collect transactional data
  - Usually most challenging part of process
- Validate Operational Profile
  - Review data for accuracy

- Build Baseline Model
  - Build baseline that reflects current characteristics and costs
- Validate Baseline
  - Build consensus that baseline represents reality
  - Second most challenging part of the process



# Process - Baseline Components

Cost Item
Shaws-Wells DC Fixed Cost
Shaws-Wells DC Inventory Carrying Cost
Shaws-Wells DC Handling Cost
<b>Total Shaws-Wells DC Cost</b>
<b>Total Shaws-Wells Freight Cost</b>
<b>Total Wells DC Throughput</b>
Wholesaler Freight Cost
Wholesaler Throughput
Wholesaler Shaws-EB Freight Cost
Wholesaler Shaws-EB Throughput
Wholesaler Shaws-Wells Freight Cost
Wholesaler Shaws-Wells Throughput

<b>Total Wholesaler DC Cost</b>
<b>Total Wholesaler Freight Cost</b>
<b>Total Wholesaler Throughput</b>
Wholesaler Freight Cost
Wholesaler Throughput
Wholesaler Shaws-EB Freight Cost
Wholesaler Shaws-EB Throughput
Wholesaler Shaws-Wells Freight Cost
Wholesaler Shaws-Wells Throughput
<b>Total Wholesaler DC Cost</b>
<b>Total Wholesaler Freight Cost</b>
<b>Total Wholesaler DC Throughput</b>
<b>Total Supply Chain Throughput</b>
<b>Total DC Costs</b>
<b>Total Freight Cost</b>
<b>Total Supply Chain Cost</b>

### Informational

- Visioning
  - Develop alternative courses of action that should be considered as part of the analysis
- Scenario Development
  - Build scenarios that support alternatives identified during visioning
  - Allow time for iterations
- Strategy Formulation
  - Build execution plans for appropriate scenario(s)

### Informational

- 11,300 grocery items
  - Modeled 6,140 items (90% dollar movement, 87% case movement, 92% cube movement)
  - Grouped items into 47 cube/cost/movement segments

### Physical

- Realigned stores & DCs
- Determined different transportation modes
- Suggested re-positioning of items

### Financial

- Optimized volume between suppliers of fast moving items
  - Over \$2.M savings opportunity
    - Distribution costs
    - Transportation savings

### Relational

- Change in relationship with wholesaler
- Desire to address more strategic “questions”
- Holistic view of network alternatives
- Different way to make decisions

**Wrap Up**

- Physical: 4 DCs,
- Financial: Higher than desired cost base
- Informational: Limited tools & modeling capabilities
- Relational: Silos, limited wholesaler interaction



- Physical: Changed network configuration
- Financial: Increased dependency on wholesaler
- Informational: Improvement in decision support capabilities
- Relational: Wholesaler relationship

- Powerful tool
- Structured process
- Cross functional team

- Modeling of competitors supply chain
- Economics of internal vs. external distribution
- Consolidation of network

**Thank-You**