WHAT IS THE #1 PLANNING TOOL IN THE WORLD?
EXCEL
APPRAOCH TO A BETTER PROCESS
DYNAMIC, CONTINUOUS, AND COLLABORATIVE S&OP PROCESS

- Eliminate decision making latency by focusing on excellence in demand visibility
  - Sense demand more frequently and closer to the point of consumption
  - Replace spreadsheets with one number demand management - Collaborate with all constituents

- Improve your forecast accuracy
  - Use advanced analytics and statistics

- Shape demand
  - Leverage granular demand signals (customer, channel, store, shelf)
  - Identify and simulate cross selling opportunities

- Evolve to dynamic S&OP
  - Profitable demand response
  - Identify supply side opportunities
  - Define and monitor customer based metrics
  - Get visibility to sales tactics (price breaks, promotions, deals)
CASE STUDIES
CASE STUDIES

<table>
<thead>
<tr>
<th>Product Complexity</th>
<th>High (ETO / CTO / MTO)</th>
<th>High (ETO / CTO / MTO)</th>
<th>High (ETO / CTO / MTO / MTS-F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Structure</td>
<td>Decentralized</td>
<td>Decentralized</td>
<td>Decentralized</td>
</tr>
<tr>
<td>Systems</td>
<td>Decentralized</td>
<td>Decentralized</td>
<td>Decentralized</td>
</tr>
<tr>
<td>Goals</td>
<td>▪ Imp. Service</td>
<td>▪ Imp. Service</td>
<td>▪ Imp. Service</td>
</tr>
<tr>
<td></td>
<td>▪ Reduce Inv.</td>
<td>▪ Reduce xInv.</td>
<td>▪ Imp. Visibility</td>
</tr>
<tr>
<td></td>
<td>▪ Imp. Visibility</td>
<td>▪ Imp. Visibility</td>
<td></td>
</tr>
<tr>
<td>Approach</td>
<td>▪ One Platform</td>
<td>▪ One Platform</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Demand</td>
<td>▪ Demand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ S&amp;OP</td>
<td>▪ S&amp;OP</td>
<td></td>
</tr>
</tbody>
</table>
CASE STUDY: EMERSON (1/4)
Global Industrial Manufacturer of Complex Equipment

Key Challenges

- Plant level planning not global supply chain level planning
- Improve and smooth forecast
- Better utilize supply chain capacity
CASE STUDY: EMERSON (2/4)

Approach

- Corporate Initiative
  - Sales, Mktg, Fin, Eng & Ops
  - Executive sponsorship
  - Standard processes & technologies

- Divisional rollout
  - Individual assessments
  - Pilot: Rosemount (Process Mgmt)
CASE STUDY: EMERSON (3/4)

Approach cont’d

- Started with a manual process
  - Led by President, MS Excel based
- Chose Oracle platform for DM & SOP
  - Scale, global view, CTO forecasting
- Grew into capabilities
  - Started with consolidated view of demand
  - Moved to a collaborative process & introduced supply planning analysis
CASE STUDY: EMERSON (4/4)

Results & Next Steps

- Reduced operations cost by optimizing asset mgt through better planning
- Increased sales and customer loyalty by improving RDSL & PDSL
- Provides global visibility across enterprise planning organization

- Rolling out to other divisions. Latest example: Climate Technologies
Key Challenges

- “How do we prepare for Growth?”
- Improve customer service
- Increase speed and flexibility
- Improve capacity and distribution
- Manage complexity via postponement
### Approach

- **Strategic 5yr plan: Drive Growth**
  - By better supply chain
- **Divisional approaches**
  - Individual assessments
  - Parallel engagements at Power Gen, Components (Turbo Tech, Filtration, Emissions Solutions)

### Five key drivers

- Growth mindset
- Multinational to Global
- Supply Chain
  - Vision: reliable market driven supply chains enable growth
  - “Becoming a supply chain company”
- Customer focus
- Leadership
CASE STUDY: CUMMINS (3/4)

Approach, Cont’d

• Standardize to best practices
• Think globally
  • Unified view of demand
  • Holistic supply plans
• Oracle: standardized supply chain management solution
  • Scale
  • Breath and depth (CTO, Postponement)

…Grouped in 5 Themes to Drive Growth

- **Improve Speed and Flexibility**
  - Build Global Enterprise Planning and Centralize Demand Planning
  - Create Responsiveness with End-to-End Supply Chain Visibility
  - Elevate Materials Planning Capability
  - Create Flexible Manufacturing Networks Optimized for Throughput

- **Improve Distribution Networks and Capacity**
  - Optimize Transportation, Freight and Duty
  - Centralize Warehousing Activities – Inbound and Outbound

- **Improve Customer Responsiveness**
  - Use Common Supply Chain Models Across Our Businesses
  - Select and Manage Suppliers to Enable Market-Focused Supply Chains
  - Use Simulation and Analytics in Supply Chain Design
  - Develop Cost-to-Serve Models for Each Supply Chain

- **Manage Product Complexity Through Postponed Differentiation**
  - Manage Product Complexity Through Postponed Differentiation

- **Functional Excellence**
  - Develop Our People to Create Supply Chain Expertise
Results & Next Steps

- “Significant contributions from supply chain over last 5 yrs” – VP Supply Chain
- Power Gen live (S&OP)
- 3 Components divisions live (S&OP)
- Engines live (Supply only)
- Distribution in flight (S&OP)
- **Corporate center of excellence**
CASE STUDY: SMITHS MEDICAL (1/4)
Global Manufacturer of Complex Medical Equipment

Key Challenges

• Large portfolio of products sold worldwide to multiple customer channels
• No connection between sales and ops
• Didn’t “plan the sale” or “sell the plan”
• High inventory levels for protection
• No global view
• No long term view

Smiths Medical: Bringing Technology to Life

Our mission is to help healthcare professionals make every intervention successful

Deliver Medication
- Reduce programming & delivery errors with intelligent pumps
- Relieve acute & chronic pain
- Treat cancer

Provide Vital Care
- Manage acute and chronic airway conditions
- Maintain correct body temperature
- Monitor vital signs
- Assist reproduction

Keep People Safe
- Provide safe treatment access
- Prevent needle stick injuries
- Reduce cross infections

Vision: Provide innovative, life-enhancing medical devices in the global markets we serve
CASE STUDY: SMITHS MEDICAL (2/4)

Approach

- IBP process led by executive mgt
  - Formed functional teams with sr. level
  - Built trust
  - Transformed meetings from “firefighting” to “risk avoidance”
- Realized technology was key enabler
  - Right tools for job
  - Start simply, build expertise as you go

Setting the Right Foundations

- IBP is 50% change management, 40% process and 10% technology
- People and Behaviours are the hardest to change – ensure there is a game plan!
- Technology is an enabler and without tools the other 90% is likely to fail
Results over 4 years

- 23% revenue growth
- Increased operating margins from 16.8% to 23.5%
- Improved forecast accuracy by 56%
- Increased service levels by 15%
- Reduced inventory by 26%
Results, Cont’d

- Demand - Supply visibility and alignment
- Quicker identification of gaps
- Sales pipeline management
- Improved decision making
- More effective allocation of resources
- Increased agility/risk mitigation

Identifying Risks

Examples include:
- Sales pipeline visibility
- New product development
- Product Registration
- Product end of life
- Component supplier related issues
- Internal supply related issues
- Stock allocation
LESSONS LEARNED
S&OP IS A JOURNEY
MATURITY LEVELS BASED ON GARTNER’S RECOMMENDATIONS

Stage 1
Reacting
- Business plan drive forecast
- Short-term forecast
- Aggregate S&OP Data
- Off-line Demand / Supply tactical balancing
- Volume focused
- Tribal knowledge dependency
- Manual Tools
- Silo focused

Stage 2
Anticipating
- Consensus Forecasting (volume and value)
- Capacity Constraints
- Demand, supply and inventory plans at aggregate level.
- Scenario planning using simulated plans
- New Product Plans
- Foundational dashboards
- Multiple sources of truth
- Conflicting metrics across functions

Stage 3
Capable S&OP
- Demand/supply tactical balancing on-line
- Financial projections – price, cost, inventory and margin projections
- IBP management dashboards & KPI suite
- Flexible Budgeting
- Supply Chain Segmentation
- Robust Long-Term Planning Processes

Stage 4
Optimized Planning
- Business simulation capability for demand shaping, financial reconciliation and cost to serve
- Demand Driven
- Product & Innovation Reviews
- Inventory Optimization
- Centers of Excellence
- Master Data Governance
- Digitization – IoT etc.
- Business wide focused
- Integrated suite of tools

Stage 5
Integrated Business Planning
- Plan drives the business, enabled and linked to strategy
- Market Driven
- Extended Integrations:
  - New Product Introduction
  - Extended / Integrated Analytics (Control Tower)
- Network Optimization
- Extended Enterprise focused
- IBP management reviews not an “event”
- Digitization – IoT etc.
- Business wide focused
- Centers of Excellence
- Master Data Governance
- Integrated suite of tools

Incremental Value

Efficiency
Effectiveness
Optimization
PEOPLE + PROCESS CAN ONLY TAKE YOU SO FAR

S&OP Process Maturity

People + Process

People + Process + Technology

I

II

III

IV

V

Note: Best-in-Class = top 25% of performers; Industry Average = middle 50%, and Laggards = bottom 25% of performers.

Source: Inspirage Benchmarking for Industrial Products industry group, leverages a database comprising 1800+ organizations across Industrial Products.
PROCESS
THE RIGHT SEQUENCE IS IMPORTANT

Source: “Managing Complex Change”, Ambrose 1987
ESTABLISH A CENTER OF EXCELLENCE

**Governing**
High-level decision making power over the direction of the business and IT initiatives

**Improving**
Continuous improvement across the different business and extended enterprise

**Supporting**
Collaborate with Internal; and external partners across the business

**Measuring**
Performance measurement across the S&OP Processes with improvement initiatives

**Self Funding**

**S&OP COE**

**Sustaining**
DATA IS CRUCIAL

Collaborative Systems for Cross Functional Discussions

Recurring Monthly Process

1. **Week 1**
   - Innovation & Demand Review

2. **Week 2**
   - Supply Review and Balance Supply and Demand

3. **Week 3**
   - What-if Scenarios and Trade-Off Analysis

4. **Week 4**
   - Executive Review and Monthly Cycle Output

Traditional ERP

Operational Systems for Functional Silos

Operational Systems for Functional Silos
HOW CAN I GET THERE?

S&OP typical implementation plan

Demand  Supply  Analytics  IBP
THANK YOU