Sales & Operations Planning

A workshop on:

• what it is
• how it can help
• how to make it work

by

Tom Wallace

for

OMTEC – Chicago – June 16, 2010
Objectives of this Session

Enable each attendee to:

- Understand where Executive S&OP fits, what it does, why it’s important
- Understand and explain the logic and mechanics of Executive S&OP
- Explain the elements of the monthly process
- Be exposed to a highly effective implementation process.
- Other?
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<th>Description</th>
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<tr>
<td>1</td>
<td>Successfully implemented</td>
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<td>2</td>
<td>Implemented but not working well</td>
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<td>3</td>
<td>Implementing now</td>
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<td>4</td>
<td>Not yet implementing</td>
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Outline XXXXX

• Sales & Operations Planning  
  Role, Scope, Benefits
• Display of S&OP Information
• The Executive S&OP Process  
  – Demand Planning (Forecasting)  
  – Supply (Capacity) Planning  
  – Pre-meeting  
  – Exec Meeting
• Global Executive S&OP
• Risk Management
• Implementation
• Problem Solving Session
• The Future of Sales & Operations Planning
COMPLEXITY AND THE RATE OF CHANGE

NEED FOR EFFECTIVE COORDINATION PROCESSES: S&OP

Impact of:
- Lean Mfg?
- Global Businesses?
- Lengthy Supply Chains?
EXPERT INPUT

ADAM SCZCEPANSKI

Vice President, Corporate Strategy and Operations
Forum Oil Technologies

Annual Sales: ~ $400 million

Main Products: Capitol Equipment and Tooling for drilling contractors

Alan was formerly CFO, V&M Star (another oil field equipment company)
EXPERT INPUT

CONOR MCDONALD

Supply Chain Manager
Microsoft Corporation

Annual Sales: ~ $50 billion

Main Products: Software, Games, and Computer Accessories

Conor is based in Ireland
The Four Fundamentals

Demand → Volume → Supply
Mix

Sales & Operations Planning

How Much?
Rates

The Big Picture
Product Families
Monthly/18 months+
Strategy/Policies/Risk
Top Management

Which Ones?
Timing/Sequence

The Details
Products, SKUs, Orders
Weekly/Daily .5-6 mos
Tactics/Execution
Middle Management
Sales & Operations Planning

**Executive S&OP**
Volume Planning for Demand and Supply
Medium to Long-Term Financial Planning
Support for Earnings Calls, Risk Mgmt, Strategy

**Operational S&OP**
Master Scheduling
Plant, Supplier and Distribution Scheduling
(Kanban, APS, etc.)
I think the key thing to hit is "what is Executive S&OP"? Should we have some bullet points somewhere that give some basic description? And can we link this back to some key points:

1) This is about Executive" Decision Making"
2) This is about" Business Performance" (not just demand/supply balancing)
3) This is not "detailed execution review"

bodell, 8/16/2006
Executive S&OP . . .

- Is an executive decision-making process
- Balances demand and supply
- Deals with volume in both units and $$$
- Links operational plans to financial plans: one set of numbers
- Facilitates risk management
- Is the forum for setting relevant strategy and policy
Executive S&OP . . .

. . . is essential for the elements within Operational S&OP –

Master Scheduling

Distribution Requirements Planning

Plant Scheduling – APS, Kanban, etc.

Supplier Scheduling

– to function well and contribute to their full potential.
From 5,000 Feet

Executive S&OP
A process to reconcile, agree upon, and communicate the company game plan --

Sales/Marketing
(Units/$$$ by Family)

Finance
(Dollars)

Operations
(Units/hours/Material)

Product Development
(New Product Issues)

Centripetal
Shared View
Teamwork
Where Executive S&OP Fits

- Strategic Planning
  - Business Planning
    - Executive S&OP
      - Detailed Planning, Scheduling & Execution
Business Plan Characteristics

- Dollars
- 3 to 5 Years
- Annual Budget
- Entire Business
- Ownership
Levels of Business Planning

Long Range Planning

Annual $$$ Plan

Executive S&OP (units and $$$

Rolling monthly check on the Business Plan
The Role of Top Management

The Leader of the Business Unit (General Manager, President, COO) Needs to be Hands-On with Executive S&OP:

1. Stewardship
Strategic Planning

Business Planning

Disconnect!!!

Detailed Planning, Scheduling & Execution
The Role of Top Management

The Leader of the Business Unit (General Manager, President, COO) Needs to be Hands-On with Executive S&OP:

1. Stewardship
2. Leadership
   - Break ties
The Role of The President (CEO, COO, GM, MD, etc.)

- Sales/Marketing (Units/$$$ by Family)
- Operations (Units/hours/Material)
- Finance (Dollars)
- Product Development (New Product Issues)

Executive S&OP

President
The Role of Top Management

The Leader of the Business Unit (General Manager, President, COO) Needs to be Hands-On with Executive S&OP:

1. Stewardship
2. Leadership
   - Break ties
   - Set high standards
   - Motivate

Monthly Time Commitment: 1.5 hours
## Hard Benefits

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<td>Customer Service</td>
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<td>Inventory</td>
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<td>Obsolescence</td>
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<td>Plant Productivity</td>
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CATHY BUDD

Director, Demand Driven Business Operations
The Dow Chemical Company

Annual Sales: ~ $54 billion

Main Products: Chemicals

Cathy serves as a senior consultant to operating businesses within Dow
DEAN SMETANA

Director of Materials, North America
Office Products of Newell Rubbermaid

Annual Sales: ~ $1 billion

Main Products: Pens & Pencils, Desk Accessories
Soft Benefits

- Enhanced Teamwork
- Improved Communications – Institutionalized
- Better Decisions with Less Effort and Time
- Better $$ Plans with Less Effort and Time
- Greater Accountability
- Greater Control
- Window into the Future

Top Management’s Handle on the Business
DEAN SMETANA

Director of Materials, North America
Office Products of Newell Rubbermaid

Annual Sales: ~ $1 billion

Main Products: Pens & Pencils, Desk Accessories
Bad Day at Acme Widget

Product Manager, reviewing forecast for 1st time in 3 mos.

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Product Manager revises the forecast downward.

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# Production Plan

## Current Production Plan.

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## Plant Manager gets bad news & adjusts Production Plan.

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CFO observes the high inventories.

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Average Standard Cost ~ $100 per unit
April Ending Inventory ~ $13,200,000
**Inventory Review**

CFO gets new Forecast and Production Plan.

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Current Inventory 132
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Outline

• Sales & Operations Planning  
  Role, Scope, Benefits
• Display of S&OP Information
• The Executive S&OP Process  
  – Demand Planning (Forecasting)  
  – Supply (Capacity) Planning  
  – Pre-meeting  
  – Exec Meeting
• Global Executive S&OP
• Implementation
• Problem Solving Session
• The Future of Sales & Operations Planning
The Executive S&OP Process

**Step #1**
Data Gathering
End of Month

**Step #2**
Demand Planning

**Step #3**
Supply Planning

**Step #4**
Pre-Meeting
Conflict Resolution, Recommendations & Agenda for Exec. Mtg.

**Step #5**
Executive Meeting
Decisions & Game Plan

**Sales Actuals, Statistical Forecasts & Supply Actuals**

**Management Forecast 1st-pass spreadsheets**

**Capacity constraints 2nd-pass spreadsheets**

**Heavy Lifting**

**The Executive S&OP Process**
Role of Finance and New Product Development

- Data Gathering
- Demand Planning
- Supply Planning
- Pre-Meeting
- Exec Meeting

Finance Department Involvement

New Product Development Involvement
ADAM SCZCEPANSKI

Vice President, Corporate Strategy and Operations
Forum Oil Technologies

Annual Sales: ~ $400 million

Main Products: Capitol Equipment and Tooling for drilling contractors

Alan was formerly CFO, V&M Star (another oil field equipment company)
BRIAN HARLIN
Director of Demand and Fulfillment
Johnsonville Sausage LLC

Annual Sales: ~ $500 Million

Main Product: Sausage

Brian’s Prior Company: a semi-conductor manufacturer
## Alternative Scenarios

Situation: Indiana plant is heavily overloaded, can’t meet the newly-increased demand plan

<table>
<thead>
<tr>
<th>Alternatives</th>
<th>Cost Issues</th>
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<tr>
<td>a. Add a shift at Indiana</td>
<td>Supervision, hiring, training</td>
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<td>Total cost to acquire</td>
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## Alternative Scenarios

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Other implementation issues: time, duration

Other operational issues: quality, lead time, flexibility etc.
Where Will The Decision Be Made?

Step 1 Data Gathering

Step 2 Demand Planning

Step 3 Supply Planning

Step 4 Pre-Meeting

Step 5 Exec Meeting
The 5-Step Executive S&OP Process

1. **Step 1: Data Gathering**
   - End of Month
   - Actual Demand, Supply, Inventory, & Backlog + Statistical Forecasts and Worksheets

2. **Step 2: Demand Planning**
   - Management Forecast
   - 1st-pass spreadsheets

3. **Step 3: Supply Planning**
   - Resource Requirements Plan
   - Capacity Constraints
   - 2nd-pass spreadsheets

4. **Step 4: Pre-Meeting**
   - Decisions, Recommendations, Scenarios, & Agenda for Exec Meeting

5. **Step 5: Exec Meeting**
   - Decisions & Updated Game Plan

**Heavy Lifting**

- Step 2: Demand Planning
- Step 3: Supply Planning
- Step 4: Pre-Meeting
- Step 5: Exec Meeting
Sample Agenda – Exec Meeting

• Macro $$$ Review – All Families Combined
• Customer Service Performance – Order Fill
• New Product Issues
• Family-by-Family Review and Decisions
• Production/Procurement Rate Changes
• Collective Impact on Business Plan
• Recap of Decisions Made
• Critique of Meeting
Exec Meeting Participants

**Essential:**
- SBU Leader (Pres./GM)
- VP Sales
- VP Marketing
- VP Operations/Logistics
- VP Product Development
- VP Finance

**Probable:**
- Exec. S&OP Process Owner
- Pre-Meeting Facilitator
- Demand Manager
- Supply Chain Manager

**Possible:**
- Controller
- Customer Service Manager
- Forecast Analyst
- Human Resource Manager
- Master Scheduler
- Plant Manager
- Product Development Manager
- Product Manager
- Purchasing Manager
- ????
# Executive S&OP Timetable

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- **Working Day of the Month**
Strategic or Tactical?

Strategy

Executive S&OP

Tactics
CATHY BUDD

Director, Demand Driven Business Operations
The Dow Chemical Company

Annual Sales: ~ $54 billion

Main Products: Chemicals

Cathy serves as a senior consultant to operating businesses within Dow
Executive S&OP and Risk

The 21st Century Supply Chain:
• Extended
• Brittle
• Longer lead times
• More variable lead times

Supply Chain disruptions:
• Potential
• Actual
Types of Supply Chain Disruptions

- Supply crash
- Demand spike
- Demand crash
- Supply spike
Executive S&OP and Risk

The 21st Century Supply Chain:
• Extended
• Brittle
• Longer lead times
• More variable lead times

Supply Chain disruptions:
• Potential
• Actual

Executive S&OP can help with:
• Anticipating potential disruptions
• Recovering from actual disruptions
Executive S&OP’s Role in Anticipation

• Initially set hedges:
  - safety stock
  - safety time
  - location
  - consignment
  - finished products
  - components/raw materials

• Review and revise hedges during the Executive S&OP cycle

• Permanent agenda item – Pre-Meeting and Exec Meeting
Executive S&OP’s Role in Recovery

- Minor Disruption: probably no role

- Moderate to Major Disruption:

The “Mini-S&OP Cycle”
The Mini-S&OP Cycle

- Focus on affected parts of the business
- Solve the problem at the earliest step possible:

1. **Step 2** Demand Planning
2. **Step 3** Supply Planning
3. **Step 4** Pre-Meeting
4. **Step 5** Exec Meeting
The Mini-S&OP Cycle

- Focus on affected parts of the business
- Solve the problem at the earliest step possible:
  
  Step 2
  Demand Planning

  Step 3
  Supply Planning

  Step 4
  Pre-Meeting

  Step 5
  Exec Meeting

- Use the same people, report formats, and processes as in the regular monthly cycle
Outline

- Sales & Operations Planning
  Role, Scope, Benefits
- Display of S&OP Information
- The Executive S&OP Process
  - Demand Planning (Forecasting)
  - Supply (Capacity) Planning
  - Pre-meeting
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Executive S&OP Process

Step #1 Data Gathering
End of Month

Step #2 Demand Planning
Sales Actuals, Statistical Forecasts & Supply Actuals

Step #3 Supply Planning
Management Forecast
Capacity constraints

Step #4 Pre-Meeting
Conflict Resolution, Recommendations & Agenda for Exec. Mtg.

Step #5 Executive Meeting
Decisions & Game Plan
The Global Challenge:

To coordinate an organization doing business in many different countries, on many different continents . . .

. . . without inhibiting accountability, and stifling local initiatives and ways of doing business.
How One Company Does It:

- Entities: areas (regions) where demand and supply align
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## Regions & Entities: Example

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Global Executive S&OP

How One Company Does It:

• Entities: areas (regions) where demand and supply align
• Executive S&OP occurs within each Entity – up to and including the Exec S&OP meeting
**Global Executive S&OP**

1. **Step #1** Data Gathering
2. **Step #2** Demand Planning
3. **Step #3** Supply Planning
4. **Step #4** Pre-S&OP Meeting
5. **Step #5** Executive Meeting

Entity A
Global Executive S&OP

How One Company Does It:

• Entities: areas (regions) where demand and supply align
• Executive S&OP occurs within each Entity – up to and including the Exec S&OP meeting
• Inter-entity Coordination – primarily within Demand Planning and Supply Planning, also at Pre-Meeting
Global Executive S&OP

Step #1
Data Gathering

Step #2
Demand Planning

Step #3
Supply Planning

Step #4
Pre-Meeting

Step #5
Executive Meeting

Entity A  Entity B  Entity C
How One Company Does It:

- Entities: areas (regions) where demand and supply align
- Executive S&OP occurs within each Entity – up to and including the Exec S&OP meeting
- Inter-entity Coordination – primarily within the Demand Planning and Supply Planning phases
- Global Consolidation – at world HQ, following Exec meetings in the Entities
- Global Exec Meeting – primarily, but not exclusively, financial
Question:
If you sell products around the world but have supply in only one region, do you need Global S&OP?
Question:
If you sell products around the world but have supply in only one region, do you need Global S&OP?
The Global Challenge

“We are a series of organizations doing business locally, with intense global coordination.” – Percy Barnevik
Former CEO
ABB

Executive S&OP should support these dual objectives.
CONOR Mcdonald

Supply Chain Manager
Microsoft Corporation

Annual Sales: ~ $50 billion

Main Products: Software, Games, and Computer Accessories

Conor is based in Ireland
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Implementing Executive S&OP

Bad News

• Change

• 8-12 Months

Good News

• Few People
  (several dozen)

• Early Results
  (2-3 Months)

• Low Cost
  (< $100K)
The ABC’s of Implementation

C – Computer

B – Data

A – People
Traditional: Spreadsheet Software

- Advantages:
  - Ultra low cost
  - Quick to come up
  - No learning curve

- Disadvantages:
  - Simulation > Slow
  - Unit and Dollar Alignment > Weak
  - Volume and Mix Alignment > Weak
  - "Blood, Sweat, and Excel"
  - Dead End
New: S&OP Specific Software

- Disadvantages:
  - Can Slow Down the Implementation
  - Cost
  - Learning Curve

- Advantages:
  - Simulation > Rapid, Real Time
  - Unit and Dollar Alignment > Strong, Constant
  - Volume and Mix Alignment > Strong, Constant
  - Fast Preparation
  - Supports Growth and Greater Complexity
Options:

1. Use spreadsheet software
2. Use S&OP specific software
3. Hybrid: start with spreadsheet switch to specific later

*When in doubt, pick 3.*
B Item: DATA ISSUES

- Families and Sub-families
- Resources
# Product Families and Supply Resources

**Product Families**
- Customers
- Markets
- Application
- How the Product is Used

**Supply Resources**
- Plants
- Departments
- Suppliers
- How the Product is Made

What works best for Marketing and Sales
What works best for Operations, Supply Chain, Logistics, etc.
B Item: DATA ISSUES

- Families and Sub-families
- Resources
- Units of Measure
- Load Profiles/Bills of Resources
- Average Selling Prices and Gross Margins
- Actuals: Sales, Bookings, Production, Inventories, Backlog
- Demand/Supply Strategies:
  Where “Meet the Customer” – (MTS, MTO, FTO)
  Target Fill Rates
  Target Finished Goods Inv: Days On Hand
  Target Customer Order Backlog: Days On Hand
  Target Module Inv: Days On Hand
The problem is not understanding Executive S&OP. It’s simple.

The hard part is

**Organizational Behavior Change**

... changing how we collectively manage the business.

**Issues:**
- Discipline/Self-discipline
- Accountability
- Conflict Management
Implementing Executive S&OP Is Different

The president must provide:
- Support
- Funding
- Commitment
- Leadership

So what’s new?
Active, Hands-on Participation by the President and Staff Each and Every Month
Implementation Principles

• People are the A item

• Implementation begins and ends with the Leader of the business

• “Hold the high ground” – involve top management at the very outset of the implementation, and throughout – and you will probably succeed

• “Build it and they will come” – design it first, get the mechanics working, and then try to sell it to top management – carries a lower probability for success
Implementation Path

- **Executive Briefing**
  - Go/No-Go #1

- **Phase I**
  - Live Pilot
  - Kickoff Session
  - Go/No-Go #2

- **Phase II**
  - Expansion
  - Phase III Financial Integration

- **Phase III**
  - Financial Integration

**Months:**
1  2  3  4  5  6  7  8  9

**Key Phases:**
- **Low Risk**
- **Low Cost**
- **High Impact**
Executive S&OP is “broken” if:

- Top management is not involved
- Teamwork has not visibly improved
- Meeting attendance is poor
- Focus is on mix and the short term
- Conflict is not resolved
- Finger-pointing is not “off limits”
- Decisions are not made
- and so on
Fixing a Broken Executive S&OP Process

- Convene a group, including a member of the executive staff
- Conduct a self-audit
- Answer the question: do the President and staff participate each month?
- If yes, fix problems shown in self-audit
- If no, begin a re-implementation
Re-implementing Executive S&OP

- Will top management agree to an Executive Briefing?
- If yes, proceed on the Implementation Path
- If no, will they agree to an “Outsider Audit”?
- If they agree:
  - present audit results to top management
  - include a “mini Executive Briefing”
  - get agreement to do one product family correctly
- If no, don’t give up
- Keep it alive, improve it, and keep the executive staff member involved.
The Future of S&OP: Growth Factors

- Success breeds success
- Lean Manufacturing and S&OP
- Globalization
- New users outside traditional manufacturing
- S&OP specific software
- Greater financial integration, power and utility
- A growing presence in the executive suite
EXPERT INPUT

MARK COVAS

Global Innovation Manager
The Procter & Gamble Company

Annual Sales: ~ $70 billion

Main Products: Health Care, Household Products

Mark came to P&G via the Gillette acquisition
Thanks for Being Here!

Go to www.tfwallace.com for:

• S&OP 101 (free)
• Implementation Information (free)
• Periodic newsletters (free)
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• Books and videos ($$$)

To talk: 513-281-0500

Good Luck and Godspeed